

**FOURTH QUARTER 2008
GROUNDWATER MONITORING REPORT
TASKS 1.0, 2.2 AND 2.3 OF AQUIFER CHARACTERIZATION PLAN
MITIGATION ORDER ON CONSENT DOCKET NO. P-121-07
COCHISE COUNTY, ARIZONA**

Prepared for:

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January 23, 2009

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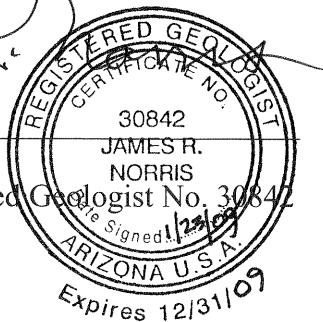
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January 23, 2009

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1. INTRODUCTION

This data report provides the results of groundwater monitoring conducted in the fourth quarter of 2008 in the vicinity of the Freeport-McMoRan Copper Queen Branch (CQB) pursuant to the Mitigation Order on Consent Docket No. P-121-07 (MO). Groundwater monitoring was conducted by CQB for Tasks 1, 2.2, and 2.3 of the Work Plan (Hydro Geo Chem, Inc. [HGC], 2008a) to characterize sulfate in the vicinity of the Concentrator Tailing Storage Area (CTSA). Pursuant to the MO, the Work Plan was submitted to Arizona Department of Environmental Quality (ADEQ) on December 17, 2007 (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 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 2008 for Tasks 1, 2.2, and 2.3 of the Work Plan. Groundwater monitoring for Task 1 consisted of identifying private drinking water supply wells and public water supply system wells within one mile downgradient and crossgradient of the outer edge of the sulfate plume. Groundwater monitoring for Task 2.2 consisted of water elevation measurement and collection of groundwater samples from wells in the vicinity of the

CTSA. Task 2.3 involved the installation and sampling of wells to define the extent of the sulfate plume and to further evaluate conditions in the former source area. Figure 1 presents a generalized geologic map of the study area and well locations where data were collected during this reporting period.

On December 18, 2008, a measuring point elevation survey was completed by Arizona Land Specialists, Inc. (ALS) for private wells that had a measurable water level, Naco Water Company (NWC) wells, and the newly installed Bisbee Mitigation Order (BMO) wells. A copy of the survey report completed by ALS is included as Appendix A.1.

1.1.1 Groundwater Monitoring for Task 1

Task 1 of the Work Plan consisted of a well inventory to identify and sample potential private drinking water supply wells and public water supply systems located one mile downgradient and crossgradient of the sulfate plume from the CTSA and in the footprint of the plume. Samples for drinking water supply wells are analyzed for sulfate. The results of the initial sampling of drinking water supply wells were reported in the well inventory report (HGC, 2008b). Ongoing monitoring of drinking water supply wells is conducted as described in Section 4 of the Work Plan. Table 1 lists wells sampled for the well inventory for Task 1. Section 2 presents the results of groundwater monitoring for Task 1.

1.1.2 Groundwater Monitoring for Task 2.2

The Work Plan identifies two purposes for the Task 2.2 groundwater monitoring program: regional monitoring and plume monitoring. Regional monitoring which encompasses wells that are generally more than a mile from the sulfate plume and plume monitoring which encompasses wells that are in the plume or generally within a mile of the plume. Regional monitoring was performed on a semiannual basis during the first and third quarters of 2008 to characterize regional hydrologic conditions and any seasonality in water elevations. Samples for regional monitoring were analyzed for a suite of major element constituents to characterize general water quality conditions in addition to sulfate. Regional monitoring was completed in the third quarter 2008.

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. Samples for plume monitoring are analyzed for sulfate only. Table 1 lists wells identified in the Work Plan for plume monitoring, their availability for sampling in the fourth quarter of 2008, and their sampling status.

Pursuant to the Work Plan, HGC and CQB contacted owners of wells identified for sampling in the Work Plan in order to obtain access for sampling. As described in Table 1, not all owners responded to the request for sampling and not all wells were suitable for sampling and water level measurements. In many cases, alternate wells were identified in lieu of wells that were unsuitable for sampling.

In the fourth quarter of 2008, HGC collected groundwater samples at wells identified for groundwater monitoring in Table 1 of the Work Plan. In addition, HGC collected groundwater samples from wells belonging to La Comisión Nacional del Agua and Ejido Naco in Sonora, Mexico. Groundwater monitoring in Sonora, Mexico was not a Mitigation Order requirement, but was conducted to further define groundwater flow and sulfate conditions south of the Mitigation Order study area.

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 Task 2.2 are presented in Section 2.

1.1.3 Groundwater Monitoring for Task 2.3

Section 2.3 of the Work Plan proposed the installation of additional monitor wells to define the extent of the sulfate plume, to provide installations for ongoing monitoring, to characterize aquifer materials and hydraulic properties, and to determine bedrock depth. During the fourth quarter 2008 wells BMO-2008-4B, BMO-2008-8B, BMO-2008-8M, and BMO-2008-13M, were installed, developed, pump tested and water level and water quality samples collected according to Sections 4.2 and 4.3 of the QAPP. Wells installed pursuant to Task 2.3 of the Work Plan were initially sampled for a suite of major element ions. Afterwards, the wells were added to the quarterly plume monitoring list for Task 2.2. Results of groundwater monitoring for Task 2.3 are presented in Section 2.

2. GROUNDWATER MONITORING RESULTS

2.1 Results of Monitoring for Tasks 1, 2.2 and 2.3

Analytical results and groundwater elevation data for the fourth quarter of 2008 are tabulated in Table 2. Figure 2 shows the concentrations of dissolved sulfate in the wells sampled in the fourth quarter of 2008. The highest sulfate concentration measured at co-located wells was used for concentration contouring. Figure 3 shows groundwater elevations in the fourth quarter of 2008. Groundwater elevations were calculated using the depth to water measurements made under static (nonpumping) conditions for all wells shown.

2.2 Groundwater Monitoring in Naco, Sonora

During October 2008, HGC collected groundwater samples from City of Naco and Ejido, Naco wells to augment the data collected for the Work Plan sampling. Groundwater samples were collected from four Urbano Naco and four Ejido Naco wells. Figure 4 shows the dissolved sulfate concentrations for wells sampled and groundwater elevations from two Urbano Naco wells where water level measurements were collected under static conditions in the fourth quarter 2008.

2.3 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 for data collected by HGC during the fourth quarter of 2008 is included in Appendix A.

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

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

3. DISCUSSION

This data report provides the results of groundwater monitoring conducted in the vicinity of the CTSA for the fourth quarter of 2008. During the fourth quarter 2008, groundwater samples were collected from 88 plume, well inventory, and Naco, Sonora wells. Depth to water measurements were made at 89 wells as presented in Table 1.

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

3.1 Hydrogeologic Setting

Water quality samples have been collected from wells completed in three principal water-bearing units in the area: basin fill, Morita Formation, and Glance Conglomerate. Figure 1 shows that the Morita Formation and Glance Conglomerate outcrop on the east side of the study area. The Morita Formation consists of red to buff siltstone and sandstone. The Glance

Conglomerate is a polymictic conglomerate with a silty to sandy matrix. The Morita Formation and Glance Conglomerate are indurated bedrock. The basin fill unconformably overlies the bedrock units and consists of unconsolidated sand and gravel except in zones of cemented caliche. The bedrock units are believed to be transected by at least two faults; the northeast trending Black Gap fault and the northwest trending Abrigo fault (Savci Environmental Technologies, 1998). East of the Black Gap fault, the basin fill is largely unsaturated and groundwater occurs in the Morita Formation and Glance Conglomerate. West of the Black Gap fault the basin fill is saturated and comprises a key hydrostratigraphic unit overlying the Morita Formation and Glance Conglomerate hydrostratigraphic units. The results of monitoring need to be considered in the context of the hydrogeologic setting of the study area to interpret the apparent spatial distribution of sulfate and the patterns of groundwater elevation. Table 4 includes the well completion depth, screen interval, and screened lithology of wells sampled.

3.2 Sulfate Distribution

The results of groundwater monitoring show the lateral and vertical extent of the sulfate plume in the study area as defined by the 250 mg/L sulfate concentration contour. The distribution of sulfate can appear complex in plan maps because the sulfate plume is three-dimensional and plume water can be underlain or overlain by groundwater with lower sulfate concentrations. The lateral and vertical distributions of sulfate are discussed below.

3.2.1 Lateral Distribution of Sulfate

Figure 2 is a contour map showing the areal distribution of sulfate in the fourth quarter 2008. The sulfate concentration contours on Figure 2 are inferred based on the maximum sulfate concentration at locations where closely spaced wells display different concentrations.

Based on the sulfate concentration data the sulfate plume extends to the southwest from the vicinity of the former evaporation pond to the vicinity of Naco, Arizona and to the south to the vicinity of Bisbee Junction. The groundwater monitoring data indicate that the sulfate plume extends over an area of approximately 2.8 miles by 3.6 miles and is contained primarily in the basin fill and Morita Formation except near the former evaporation pond, where wells in the Glance Conglomerate have sulfate concentrations greater than 250 mg/L. West of the Black Gap fault, the sulfate plume is contained primarily within the basin fill. East of the fault, where the basin fill is largely unsaturated, the sulfate plume is within the Morita Formation and Glance Conglomerate.

3.2.2 Vertical Distribution of Sulfate

Evaluation of the vertical distribution of sulfate is based on sampling data for wells located in close proximity but completed with screened intervals at different elevations in the aquifer or in different hydrostratigraphic units. Two patterns are observed with respect to the vertical distribution of sulfate. First, some wells completed in the uppermost few tens of feet of

the basin fill aquifer have lower concentrations than wells completed at deeper portions of the basin fill. Second, the sulfate plume in certain areas is observed to be underlain by groundwater with lower concentrations of sulfate. Examples of the vertical distribution of sulfate are discussed below.

Sulfate stratification between the basin fill and Morita Formation along and north of Purdy Lane near Naco is displayed between wells HOBAN, FRANCO, COB MW-1 and BMO-2008-8B screened in basin fill and nearby wells GARNER 635, TM-19A, BMO-2008-7M and BMO-2008-8M screened in Morita Formation. Sulfate concentrations in the basin fill wells HOBAN, FRANCO, COB MW-1 and BMO-2008-8B were 692 mg/L, 680 mg/L, 750 mg/L and 1890 mg/L, respectively (Figure 5). Sulfate concentrations in Morita Formation wells GARNER 635, TM-19A, BMO-2008-7M and BMO-2008M were 36 mg/L, 66.3 mg/L, 34.5 mg/L and 197 mg/L, respectively. These data indicate that the underlying Morita Formation exhibits sulfate concentrations approximately an order of magnitude lower than concentrations in the basin fill at those locations. A similar relationship was observed in the first, second, and third quarters of 2008 (HGC, 2008c and 2008d).

However, about one mile northwest of the aforementioned wells, at co-located wells BMO-2008-6B and BMO-2008-6M on the west end of the study area, sulfate concentrations are three times higher in the Morita Formation than the basin fill. Well BMO-2008-6M screened from 350 to 440 ft bgs completed in the Morita Formation reported a sulfate concentration of 199 mg/L and BMO-2008-6B screened from 195 to 255 ft bgs completed in basin fill had a sulfate concentration of 60.3 mg/L.

Stratification of sulfate is also present at wells BF-01 and TM-02A west of the former evaporation pond. Well BF-01 is completed to a depth of 400 ft bgs and is screened across the basin fill and Morita Formation; although the water levels collected indicate that the basin fill is probably unsaturated. BF-01 had a sulfate concentration of 1490 mg/L while TM-02A, located approximately 500 feet south of BF-01 and screened from 825 to 925 ft bgs in the Morita Formation and Gance Conglomerate had a sulfate concentration of 21.9 mg/L. The sulfate concentrations in the Gance Conglomerate at TM-02A are approximately two orders of magnitude lower than those in the overlying Morita Formation at that location.

In the fourth quarter 2008, sulfate also appears to be stratified in the vicinity of co-located wells BMO-2009-10GU and BMO-2006-10GL screened at different depths in the Gance Conglomerate located south of the Abrigo fault and east of the Black Gap fault in the north central portion of the study area. BMO-2008-10GU was completed at a total depth of 449 feet below ground surface (ft bgs) and screened from 340 to 440 ft bgs while BMO-2008-10GL was completed at 810 ft bgs and screened from 700 to 800 ft bgs. Thus, the BMO-2008-10GL sample represents groundwater approximately 360 feet deeper in the Gance Conglomerate than the BMO-2008-10GU sample. Sulfate concentrations in BMO-2008-10GU and BMO-2008-10GL were 1890 mg/L and 1290 mg/L, respectively, in the fourth quarter of 2008 (Figure 2). These data indicate that sulfate concentrations were stratified with the lower concentration at greater depths in the Gance Conglomerate at this location.

3.3 Groundwater Elevation

Groundwater elevations are shown on Figures 3 and 4. In general, groundwater elevations decrease from north to south east of the Black Gap fault in the region between the Bisbee airport and Bisbee Junction, and from east to west across the central portion of the study area west of the Black Gap fault. Groundwater levels in wells in Naco, Sonora indicate groundwater elevations that decrease northward toward Greenbush Draw. Comparison of the fourth quarter 2008 water elevations with those observed in previous quarters indicates an average increase of about 0.25-foot in groundwater elevations and only minor differences in the apparent groundwater flow directions indicated by water level data.

The water level relationships are relatively complex due to the multiple hydrostratigraphic units monitored and the complicated structural geology of the area. The apparent hydraulic gradient is steeper east of the Black Gap fault, where groundwater is in bedrock units of the Morita Formation and Glance Conglomerate, than is the hydraulic gradient west of the fault where groundwater elevation measurements are primarily from wells in basin fill. The higher hydraulic gradient may be due to a lower average hydraulic conductivity in the bedrock compared to basin fill. The apparent groundwater flow direction east of the Black Gap fault is southerly to the vicinity of Bisbee Junction and then westerly. Convergent groundwater flow is suggested by the V-shaped contours pointed in the vicinity of Bisbee Junction. West of the Black Gap fault, the apparent hydraulic gradient is shallower than east of the fault and the apparent groundwater flow direction is westerly. In the vicinity of the Arizona Water Company

wellfield northwest of Naco and along Purdy Lane there are apparent groundwater depressions, most likely associated with groundwater pumping.

The relationship between water levels east and west of the Black Gap fault is uncertain due to the different apparent hydraulic gradients and groundwater flow directions and the variability of water level data east of the Black Gap fault. The variability of water levels east of the Black Gap fault is indicated by the large differences in water elevation (sometimes up to several hundred feet) between wells in relatively close proximity to one another. This variability in water elevation is particularly evident in the Bisbee Junction area and in the area of the BIMA and NOTEMAN wells east of the former evaporation pond. The variability of water elevations east of the Black Gap fault indicates that the hydraulic properties of the bedrock are heterogeneous and that certain portions of the bedrock may not be hydraulically connected. The heterogeneity in hydraulic properties in bedrock is probably due to the restriction of groundwater flow to permeable features such as permeable beds, bedding planes, or fracture systems within bedrock, which are not uniformly distributed throughout the area.

The water level elevations in co-located wells screened at different depths in basin fill and Morita Formation vary by less than three feet in the west part of the study area. In the northeast part of the study area the water level varies over 200 feet at co-located wells BMO-2008-10GU and BMO-2008-10GL, screened at different depths in the Glance Conglomerate.

Anomalous low water elevations are also observed west of the Black Gap fault at the SRC, BURKE, and BMO-2008-11G wells in the northwest portion of the study area. According

to well driller logs, SRC and BURKE are screened in a shale bedrock and BMO-2008-11G is screened in the Glance Conglomerate all at depths greater than 600 ft bgs. The water level in SRC, BURKE, and BMO-2008-11G are anomalously low compared to the levels in wells completed in basin fill and/or Morita Formation to the south. The existing data suggest that SRC, BURKE, and BMO-2008-11G are within a hydrostratigraphic unit with a poor hydraulic connection to the aquifers to the south.

Although complex, the water level data provide important information on the direction and magnitude of hydraulic gradients, which control the direction and movement of the sulfate plume. The results also display the effects of aquifer heterogeneities that need to be accounted for in the site conceptual model. This discussion of water level data is preliminary and will be verified by ongoing monitoring and augmented with data being collected by other Work Plan tasks.

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 of Aquifer Characterization Plan for Mitigation Order on Consent No. P-121-07, Cochise County, Arizona. July 3, 2008.
- HGC. 2008c. First and Second Quarters 2008, Groundwater Monitoring Report, Task 2.2 of Aquifer Characterization Plan, Mitigation Order on Consent Docket No. P-121-07, Cochise County, Arizona. July 30, 2008.
- HGC. 2008d. Third Quarter 2008, Groundwater Monitoring Report, Tasks 1.0, 2.2 and 2.3 of Aquifer Characterization Plan, Mitigation Order on Consent Docket No. P-121-07, Cochise County, Arizona. October 27, 2008.
- Savci Environmental Technologies. 1998a. Groundwater Flow and Transport Report, CTSA APP Project Area, Bisbee, Arizona. June 19, 1998.

TABLES

TABLE 1
Summary of Groundwater Monitoring For Fourth Quarter 2008

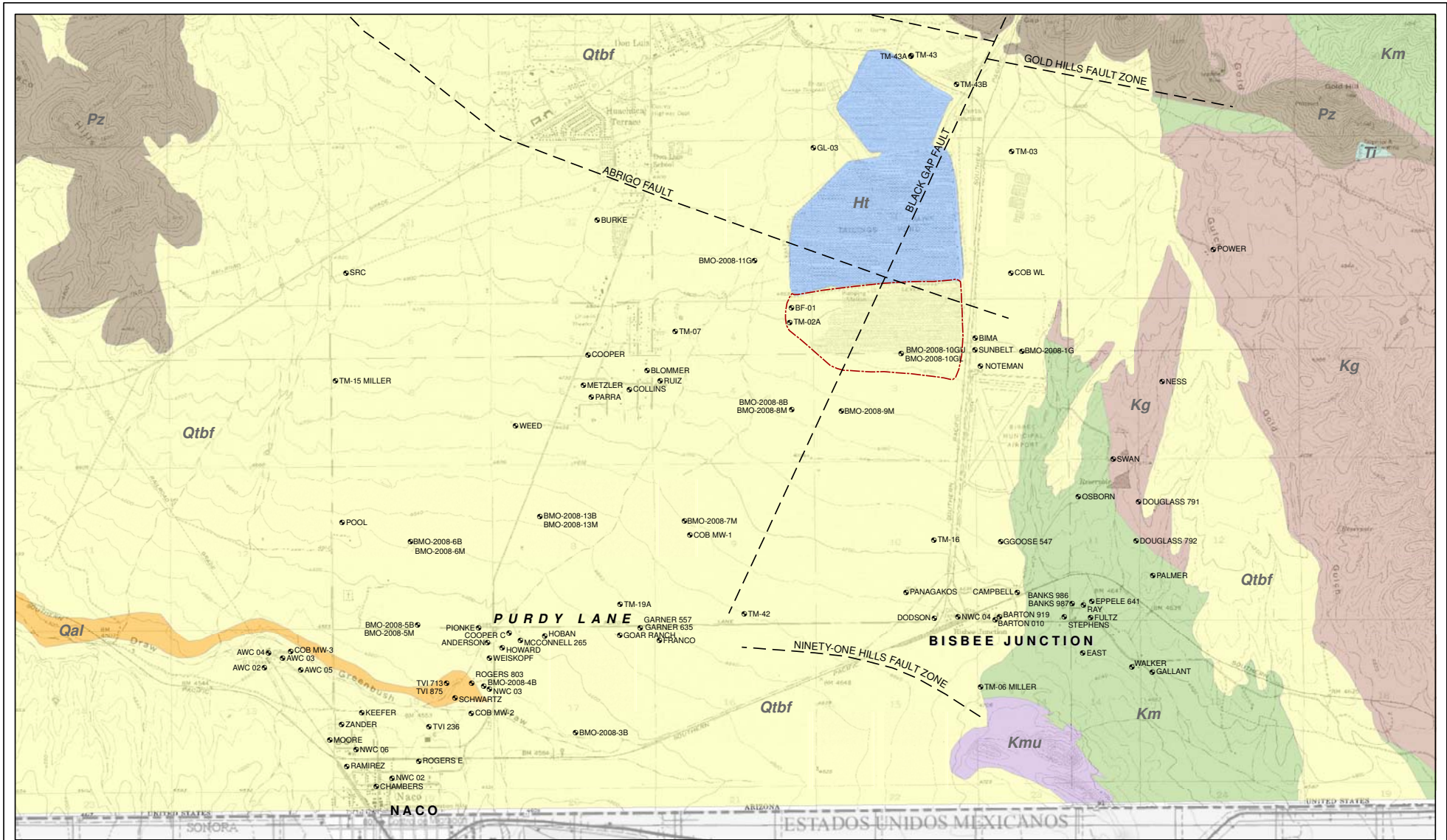
| Well Name | ADWR 55 Registry No. | Owner | Monitoring Purpose | Casing Depth (feet) | Q4-2008 Monitoring | | Status |
|--|----------------------|---------------------------------|--------------------|---------------------|-----------------------|---------------------------------|---|
| | | | | | Water Level Measured? | Water Quality Sample Collected? | |
| WELLS FOR QUARTERLY MONITORING | | | | | | | |
| AWC 03 | 616585 | Arizona Water Company | Plume | 269 | YES | YES | Water quality sample collected in October 2008 |
| AWC 05 | 590620 | Arizona Water Company | Plume | 1183 | YES | YES | Water quality sample collected in October 2008 |
| BF-01 | 539783 | CQB | Plume | 400 | YES | YES | Water quality sample collected in November 2008 |
| BIMA | 577927 | Bisbee Municipal Airport | Plume | 465 | YES | YES | Water quality sample collected in October 2008 |
| BULLARD | 602134 | Bullard | Plume | 300 | NO | NO | Well not operational; unable to collect water levels due to obstruction |
| BURKE | 212268 | Burke | Plume | 781 | YES | YES | Water quality sample collected in October 2008 |
| COB MW-1 | 903992 | City of Bisbee | Plume | 420 | YES | YES | Water quality sample collected in October 2008 |
| COB MW-2 | 903984 | City of Bisbee | Plume | 170 | YES | YES | Water quality sample collected in October 2008 |
| COB WL | 593116 | City of Bisbee | Plume | 150 | YES | YES | Water quality sample collected in October 2008 |
| COOPER | 623564 | Cooper, Teresa | Plume | 325 | NO | YES | Water quality samples collected in October 2008; unable to collect water level due to obstruction |
| COOPER C | 637069 | Cooper, Charles | Plume | 220 | YES | YES | Water quality sample collected in October 2008 |
| CROWLEY | 510298 | Crowley | Plume | 788 | NO | NO | Dry |
| DODSON | 644927 | Dodson | Plume | 200 | YES | YES | Water quality sample collected in October 2008 |
| 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 2008 |
| GGOOSE 546 | 628546 | Galloping Goose Properties | Plume | 800 | NO | NO | Well not operational, unable to obtain water levels due to obstruction |
| GGOOSE 547 | 628547 | Galloping Goose Properties | Plume | 800 | YES | YES | Water quality sample collected in October 2008 |
| GL-03 | 539782 | CQB | Plume | 820 | YES | YES | Water quality sample collected in November 2008 |
| GREGG | 630852 | Gregg | Plume | ND | NO | NO | Dry |
| HULL 584 | 606854 | Hull | Plume | 25 | NO | NO | Unable to locate well |
| MILLER 340 | 641340 | Miller | Plume | 200 | NO | NO | Dry |
| MILLER 341 | 641341 | Miller | Plume | 100 | NO | NO | Dry |
| NWC 02 | 562944 | Naco Water Company | Plume | 312 | YES | YES | Water quality sample collected in October 2008 |
| NWC 03 | 203321 | Naco Water Company | Plume | 312 | YES | YES | Water quality sample collected in October 2008 |
| NWC 04 CAP | 627685 | Naco Water Company | Plume | 379 | NO | NO | Well Capped |
| NWC 05 | 627696 | Naco Water Company ¹ | Plume | 175 | NO | NO | No data |
| OSBORN | 643436 | Osborn | Plume | 150 | YES | YES | Water quality sample collected in October 2008 |
| PARRA | 576415 | Parra | Plume | 355 | NO | YES | Water quality sample collected in October 2008; unable to collect water level due to obstruction |
| ROGERS 803 | 641803 | Rogers, Ernest D | Plume | 140 | YES | YES | Water quality sample collected in October 2008 |
| TM-02 | 522573 | CQB | Plume | 640 | NO | NO | Pump intake above water level; unable to collect water levels due to obstruction |
| TM-02A | 522574 | CQB | Plume | 925 | YES | YES | Water quality sample collected in October 2008 |
| TM-03 | 522575 | CQB | Plume | 200 | YES | YES | Water quality sample collected in November 2008 |
| TM-06 MILLER | 522695 | Miller | Plume | 200 | YES | YES | Water quality sample collected in October 2008 |
| TM-07 | 522576 | CQB | Plume | 350 | NO | YES | Water quality sample collected in November 2008; unable to collect water level due to obstruction |
| TM-10 USBP | 522696 | U.S. Border Patrol | Plume | 290 | NO | NO | Owner declined participation |
| TM-11 PIONKE | 522815 | Pionke | Plume | 160 | NO | NO | Dry |
| TM-13 MILLER | 522698 | Miller | Plume | 200 | NO | NO | Dry |
| TM-16 | 522578 | CQB | Plume | 115 | YES | YES | Water quality sample collected in November 2008 |
| TM-17 | 522700 | CQB | Plume | 200 | NO | NO | Dry |
| TM-19 | 522581 | CQB | Plume | 210 | NO | NO | Dry |
| TM-19A | 522580 | CQB | Plume | 700 | YES | YES | Water quality sample collected in November 2008 |
| TM-41 | 562555 | CQB | Plume | 210 | NO | NO | Dry |
| TM-42 | 562554 | CQB | Plume | 250 | YES | YES | Water quality sample collected in November 2008 |
| TVI 875 | 568875 | Turquoise Valley, Inc. | Plume | 330 | NO | YES | Water quality sample collected in October 2008, no access to well casing for water level measurements |
| WEED | 544535 | Weed | Plume | 320 | NO | YES | Water quality sample collected in October 2008; no access to well casing for water level measurements |
| WEISKOPF | 641802 | Weiskopf | Plume | 200 | YES | YES | Water quality sample collected in October 2008 |
| MITIGATION ORDER WELLS INSTALLED IN 2008 FOR QUARTERLY MONITORING | | | | | | | |
| BMO-2008-1G | 909474 | CQB | Plume | 310 | YES | YES | Water quality sample collected in November 2008 |
| BMO-2008-3B | 909147 | CQB | Plume | 260 | YES | YES | Water quality sample collected in November 2008 |
| BMO-2008-4B | 910096 | CQB | Plume | 610 | YES | YES | Water quality sample collected in December 2008 |
| BMO-2008-5B | 909653 | CQB | Plume | 285 | YES | YES | Water quality sample collected on September 30, 2008 |
| BMO-2008-5M | 909552 | CQB | Plume | 450 | YES | YES | Water quality sample collected in October 2008 |
| BMO-2008-6B | 909146 | CQB | Plume | 265 | YES | YES | Water quality sample collected in November 2008 |
| BMO-2008-6M | 909019 | CQB | Plume | 450 | YES | YES | Water quality sample collected in November 2008 |
| BMO-2008-7M | 908794 | CQB | Plume | 670 | YES | YES | Water quality sample collected in November 2008 |
| BMO-2008-8B | 910097 | CQB | Plume | 480 | YES | YES | Water quality sample collected in December 2008 |
| BMO-2008-8M | 909711 | CQB | Plume | 1210 | YES | YES | Water quality sample collected in December 2008 |
| BMO-2008-9M | 909255 | CQB | Plume | 775 | YES | YES | Water quality sample collected in November 2008 |
| BMO-2008-10GU | 909272 | CQB | Plume | 449 | YES | YES | Water quality sample collected in November 2008 |
| BMO-2008-10GL | 909435 | CQB | Plume | 810 | YES | YES | Water quality sample collected in November 2008 |
| BMO-2008-11G | 909434 | CQB | Plume | 760 | YES | YES | Water quality sample collected in November 2008 |
| BMO-2008-13B | 909551 | CQB | Plume | 474 | YES | YES | Water quality sample collected in October 2008 |
| BMO-2008-13M | 909760 | CQB | Plume | 1030 | YES | YES | Water quality sample collected in December 2008 |
| WELLS FOR SEMIANNUAL MONITORING | | | | | | | |
| COB WL ABND | 570012 | City of Bisbee | Regional | 148 | NO | NO | Well Abandoned |
| CONNOR | 516399 | Connor | Regional | 220 | NO | NO | Well Abandoned |
| EAST | 599796 | East | Regional | 125 | YES | YES | Water quality sample collected in October 2008 |
| GALLANT | 502527 | Gallant | Regional | 190 | YES | NO | Well identified for water level measurements only |
| MILLER 342 | 641342 | Miller | Regional | 200 | NO | NO | Dry |
| NSD 02 | 527587 | Naco Sanitary District | Regional | 120 | NO | NO | Regional Monitoring Only |
| NSD 03 | 527586 | Naco Sanitary District | Regional | 100 | NO | NO | Regional Monitoring Only |
| NWC 01 | 627682 | Naco Water Company ¹ | Regional | 215 | ND | ND | No data |
| NWC 06 | 575700 | Naco Water Company | Regional | 410 | ND | YES | Water quality sample collected in October 2008 |
| PALMER | 578819 | Palmer | Regional | 220 | NO | YES | Water quality sample collected in October 2008; no access to well casing for water level measurements |
| POWER | 624535 | Power | Regional | 100 | YES | NO | Well identified for water level measurements only |
| TM-05 MILLER | 522694 | Miller | Regional | 160 | NO | NO | Dry |
| TM-08 SWAN | 522817 | Swan, George | Regional | 817 | NO | NO | Owner has declined further participation in monitoring program |
| TM-12 MILLER | 522697 | Miller | Regional | 175 | NO | NO | Dry |
| TM-14 NELSON | 522816 | Nelson | Regional | 215 | NO | YES | Dry |
| TM-15 MILLER | 522699 | Miller | Regional | 325 | NO | YES | Water quality sample collected in October 2008 |

TABLE 1
Summary of Groundwater Monitoring For Fourth Quarter 2008

| Well Name | ADWR 55 Registry No. | Owner | Monitoring Purpose | Casing Depth (feet) | Q4-2008 Monitoring | | Status |
|---|----------------------|---|--------------------|---------------------|-----------------------|---------------------------------|---|
| | | | | | Water Level Measured? | Water Quality Sample Collected? | |
| TM-43 | 564729 | CQB | Regional | 830 | YES | NO | Well identified for water level measurements only |
| TM-43A | 564726 | CQB | Regional | 215 | YES | NO | Well identified for water level measurements only |
| TM-43B | 565004 | CQB | Regional | 215 | YES | NO | Well identified for water level measurements only |
| TM-45 | 564728 | CQB | Regional | 520 | NO | NO | Dry |
| WALKER | 200393 | Walker | Regional | 120 | YES | NO | Well identified for water level measurements only |
| ADDITIONAL WELLS SAMPLED FOR Q4-08 MONITORING THAT WERE NOT IDENTIFIED IN THE WORK PLAN | | | | | | | |
| ANDERSON | 613396 | Anderson | Well Inventory | 236 | YES | YES | Water quality sample collected in October 2008 |
| AWC 02 | 616586 | Arizona Water Company | Plume | 330 | YES | YES | Water quality sample collected in October 2008 |
| AWC 04 | 616584 | Arizona Water Company | Plume | 250 | YES | YES | Water quality sample collected in October 2008 |
| NOTEMAN | 212483 | Noteman | Well Inventory | 400 | YES | YES | Water quality sample collected in October 2008 |
| BANKS 986 | 647986 | Banks | Well Inventory | 435 | NO | YES | Water quality sample collected in October 2008; unable to collect water level measurements 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 | YES | NO | Well not operational; identified for water level measurements only |
| BLOMMER | 633472 | Blommer | Well Inventory | 380 | YES | YES | Water quality sample collected in October 2008 |
| CAMPBELL | 215509 | Campbell | Well Inventory | 350 | NO | NO | Well identified for water level measurements only; unable to collect water level measurement due to obstruction |
| CHAMBERS | 629807 | Chambers | Well Inventory | 245 | NO | YES | Water quality samples collected in October 2008; no access to well casing for water level measurements |
| COB MW-3 | 906823 | City of Bisbee | Plume | 269 | YES | YES | Water quality sample collected in October 2008 |
| COLLINS ² | 565260 | Collins | Well Inventory | 320 | YES | YES | Water quality sample collected in October 2008 |
| DOUGLASS 791 | 592791 | Douglass | Well Inventory | 200 | YES | NO | Well not operational; identified for water level measurements only |
| DOUGLASS 792 | 529792 | Douglass | Well Inventory | 200 | YES | NO | Well not operational; identified for water level measurements only |
| EN-01 | NA | Ejido Naco | Regional | ND | NO | NO | Well not operational |
| EN-02 | NA | Ejido Naco | Regional | 490 | NO | YES | Water quality sample collected in October 2008 |
| EN-03 | NA | Ejido Naco | Regional | 460 | NO | YES | Water quality sample collected in October 2008 |
| EN-05 | NA | Ejido Naco | Regional | 490 | NO | YES | Water quality sample collected in October 2008 |
| EN-06 | NA | Ejido Naco | Regional | ND | NO | YES | Water quality sample collected in October 2008 |
| EPPELE 641 | 805641 | Eppele | Well Inventory | 265 | YES | YES | Water quality sample collected in October 2008 |
| FRANCO | 500101 | Franco | Well Inventory | 200 | NO | YES | Water quality sample collected in October 2008; unable to collect water level measurements due to obstruction |
| FULTZ | 212447 | Fultz | Well Inventory | 300 | YES | YES | Water quality sample collected in October 2008 |
| GOAR RANCH | 610695 | Goar | Well Inventory | 250 | YES | NO | Well identified for water level measurement only |
| HOBAN | 805290 | Hoban | Well Inventory | 316 | YES | YES | Water quality sample collected in October 2008 |
| HOWARD | NR | Howard | Well Inventory | 200 | YES | YES | Water quality sample collected in October 2008 |
| KEEFER | 209744 | Keefer | Well Inventory | 245 | YES | YES | Water quality sample collected in October 2008 |
| MCCONNELL 265 | 539265 | McConnell | Well Inventory | 216 | YES | YES | Water quality sample collected in October 2008 |
| METZLER | 35-71891 | Metzler | Well Inventory | 351 | YES | YES | Water quality sample collected in October 2008 |
| MINOR 317 | 063317 | Minor | Well Inventory | 155 | NO | NO | New owner declined participation |
| MOORE | 538847 | Moore | Well Inventory | 220 | NO | YES | Water quality sample collected in October 2008; unable to collect water levels because sounder diameter too large for access port |
| NESS | 509127 | Ness | Well Inventory | 812 | YES | YES | Water quality sample collected in October 2008 |
| NWC 04 | 551849 | Naco Water Company | Well Inventory | 795 | NO | YES | Water quality sample collected in October 2008 |
| PANAGAKOS | 35-76413 | Panagakos | Well Inventory | 200 | NO | YES | Water quality sample collected in October 2008; no access to well casing for water level measurement |
| PIONKE | 613395 | Pionke | Well Inventory | 300 | YES | YES | Water quality sample collected in October 2008 |
| POOL | 509518 | Pool | Well Inventory | 313 | YES | YES | Water quality sample collected in October 2008 |
| RAMIREZ | 216425 | Ramirez | Well Inventory | 300 | YES | YES | Water quality sample collected in October 2008 |
| RAY | 803772 | Ray | Well Inventory | 100 | YES | YES | Water quality sample collected in October 2008 |
| ROGERS E | 216018 | Rogers, Ernest M | Well Inventory | 290 | YES | YES | Water quality sample collected in October 2008 |
| RUIZ | 531770 | Ruiz | Well Inventory | 312 | YES | YES | Water quality sample collected in October 2008 |
| SCHWARTZ | 210865 | Schwartz | Well Inventory | 305 | YES | YES | Water quality sample collected in October 2008 |
| SRC | 211345 | Specialty Restaurants Corporation, Inc. | Regional | 965 | YES | NO | Well identified for water level measurement only |
| STEPHENS | 808560 | Stephens | Well Inventory | NR | YES | NO | Well identified for water level measurement only |
| SUNBELT | 201531 | Sunbelt Marketing, Inc. | Plume | 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 2008 |
| TVI 236 | 802236 | Turquoise Valley, Inc. | Plume | 222 | YES | YES | Water quality sample collected in October 2008 |
| TVI 713 | 567713 | Turquoise Valley, Inc. | Well Inventory | 200 | YES | NO | Well identified for water level measurements only |
| UN-01 | NA | OOMAPAS-Naco | Regional | ND | YES | NO | Well not operational; identified for water level measurements only |
| UN-02 | NA | OOMAPAS-Naco | Regional | 490 | NO | YES | Water quality sample collected in October 2008 |
| UN-03 | NA | OOMAPAS-Naco | Regional | 490 | NO | YES | Water quality sample collected in October 2008 |
| UN-04 | NA | OOMAPAS-Naco | Regional | 328 | NO | YES | Water quality sample collected in October 2008 |
| UN-05 | NA | OOMAPAS-Naco | Regional | 328 | YES | YES | Water quality sample collected in October 2008 |
| ZANDER | 205126 | Zander | Well Inventory | 280 | YES | YES | Water quality sample collected in October 2008 |

ADWR = Arizona Department of Water Resources
 AWC = Arizona Water Company
 BIMA = Bisbee Municipal Airport
 COB WL = City of Bisbee Warren Lagoon
 CQB = Freeport-McMoRan Copper Queen Branch
 ft amsl = feet above mean sea level
 NA = Not Applicable
 ND = No Data
 NR = No Record
 NSD = Naco Sanitary District
 NWC = Naco Water Company
 OOMAPAS = Organismo Operador Municipal de Agua Potable, Alcantarillado y Saneamiento de Naco
 SRC = Specialty Restaurants Corporation, Inc.
 TVI = Turquoise Valley Inc.
 35-71891 = ADWR 35 Database
¹ Naco Water Company sold well, personnel communication with NWC, 2008
² former owner ENGLUND

FIGURES

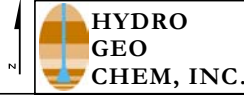


- Legend**
- Well ID
 - Faults
 - Former Evaporation Ponds

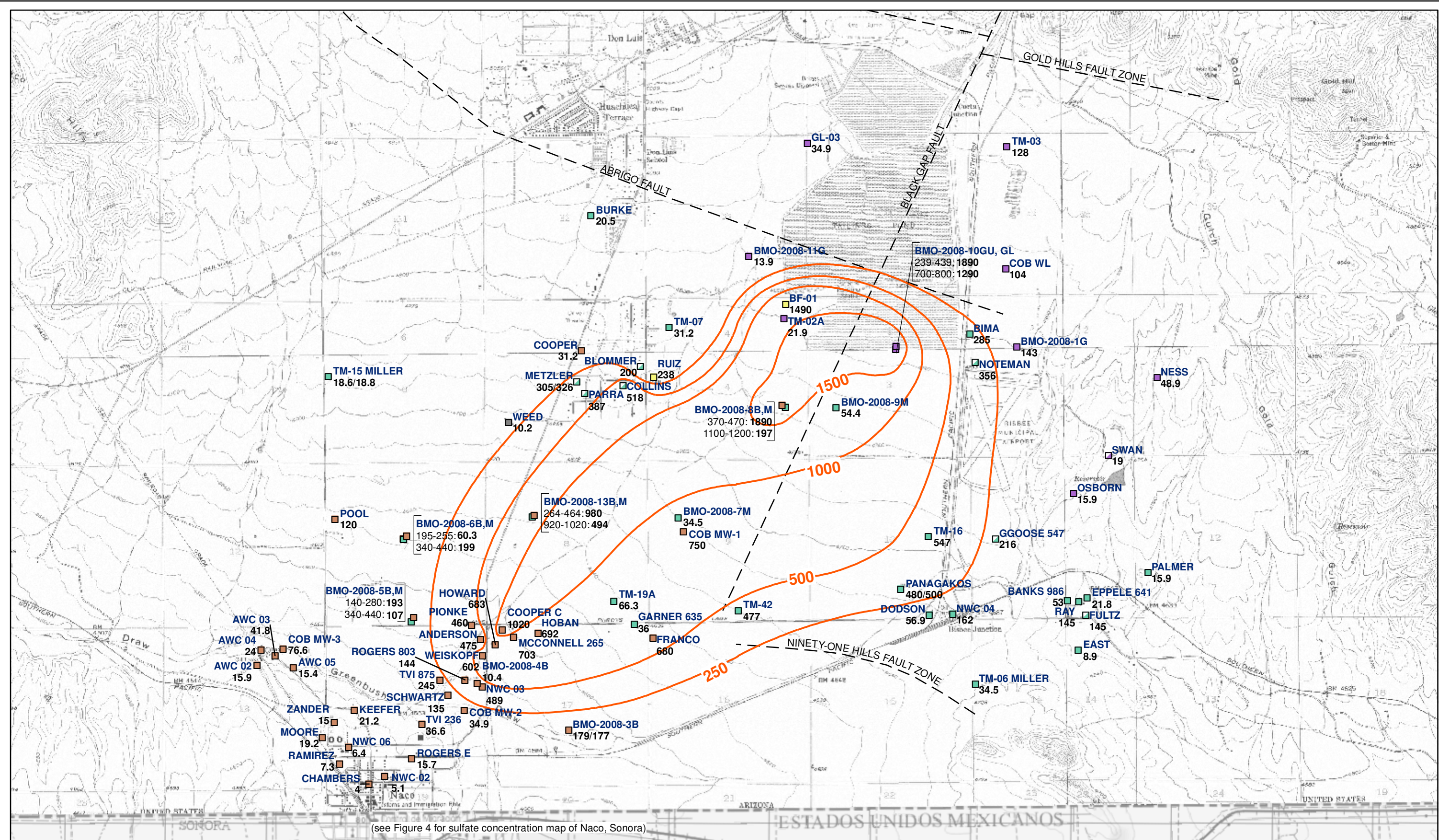
- Recent Alluvium**
- Ht Holocene Tailings
 - Qal Quaternary Alluvium
 - Qtbf Quaternary - Tertiary Basin Fill
 - Bedrock Complex
 - Ti Tertiary Intrusive

- Cretaceous Bisbee Group**
- Kmu Mural Limestone
 - Km Morita Formation
 - Kg Glance Conglomerate
 - Pz Paleozoic Sedimentary Formations, Undifferentiated

0 1000 2000 3000 Feet
 PROJECTION:
 UTM Zone 12N NAD83

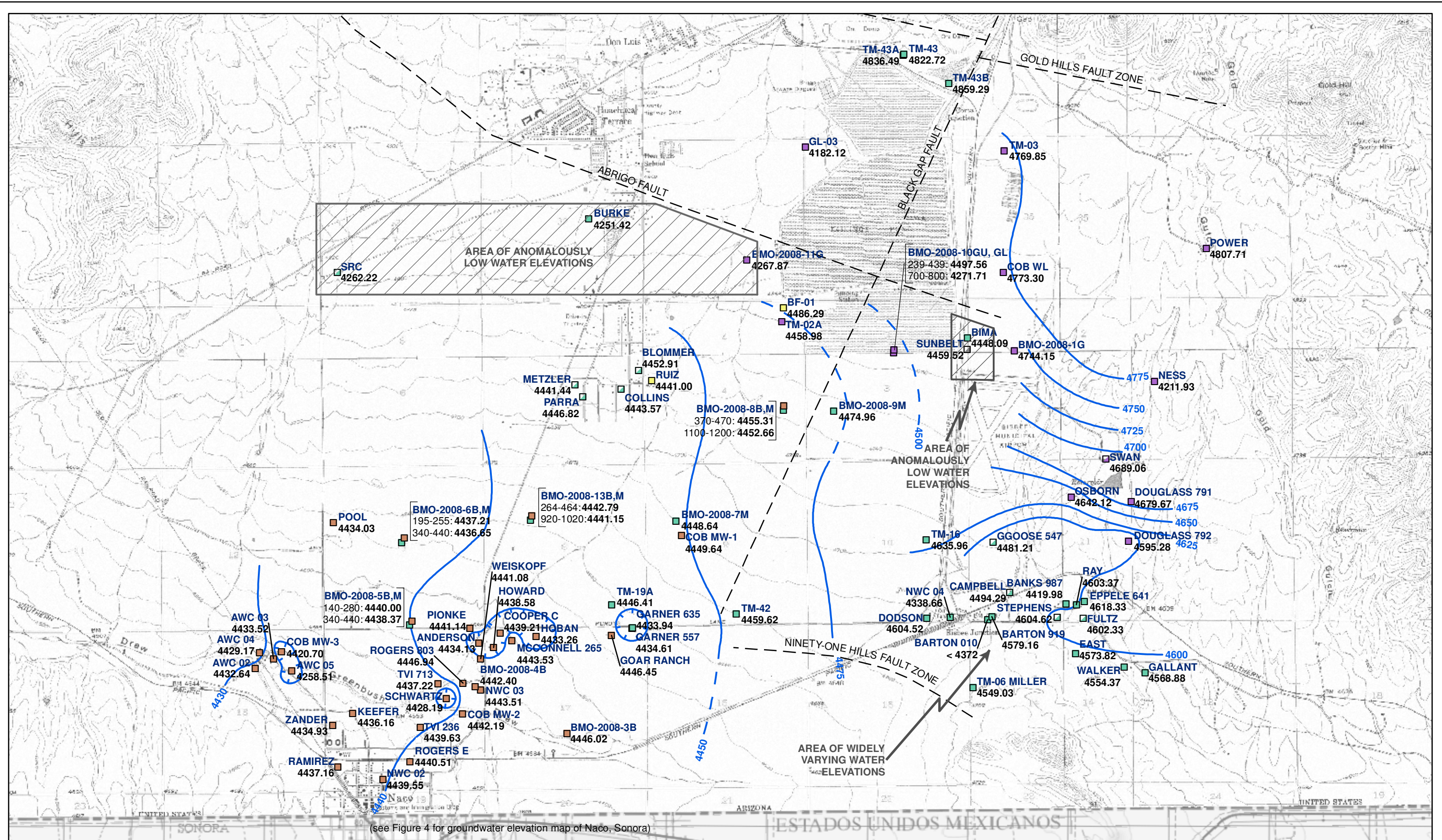


| GENERALIZED GEOLOGY AND WELL LOCATIONS | | | | | |
|--|----------|--------|----------|-----------|--------|
| Approved | Date | Author | Date | File Name | Figure |
| DRS | 01/23/09 | RAM | 01/23/09 | 8720114G | 1 |



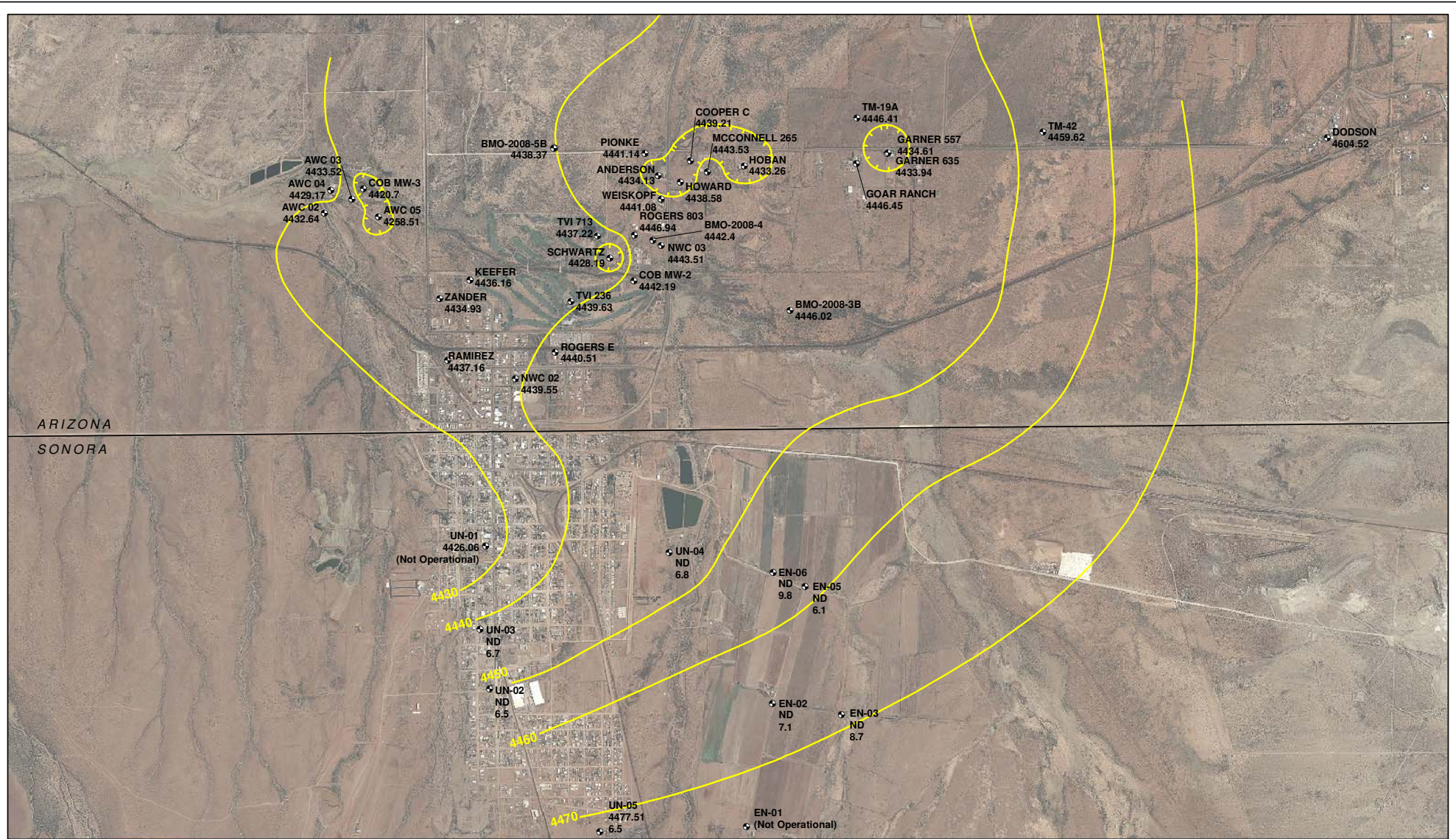
(see Figure 4 for sulfate concentration map of Naco, Sonora)

| | | | | | | | | | | | | | |
|---|--|---|--|---|--|--|--|---------------------------------------|-------------------------|---|--|----------------------|-------------------------|
| Legend ■ TM-19A Well ID 66.3 Sulfate Concentration (mg/L) —250— Sulfate Isoline (mg/L) - - - Faults (inferred) | | Co-located Wells ■ Well ID Screen (ft bgs): Sulfate Concentration (mg/L) (Duplicate results separated by "/") | | Screened Formation ■ Basin Fill ■ Basin Fill and Morita Formation ■ Morita Formation ■ Morita Formation- Estimated | | ■ Morita Formation and Glance Conglomerate ■ Glance Conglomerate ■ Glance Conglomerate- Estimated | | PROJECTION: UTM Zone 12N NAD83 | | SULFATE CONCENTRATIONS FOR FOURTH QUARTER 2008 | | | |
| | | | | | | | | Approved DRS | Date 01/23/09 | | | Author RAM | Date 01/23/09 |



(see Figure 4 for groundwater elevation map of Naco, Sonora)

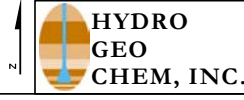
| | | | | | | | | | | | | | | | |
|---|----------|--|----------|---|--------|---|--|--|--|--|--|---|--|--|--|
| Legend ■ TVI-713 Well ID 4440.92 Groundwater Elevation (ft amsl) — Groundwater Elevation Contours (dashed where inferred) — Groundwater Depression | | --- Faults (inferred) □ Co-located Wells □ Well ID □ Screen (ft bgs): Water Elevation (ft amsl) | | Screened Formation ■ Basin Fill ■ Basin Fill and Morita Formation ■ Morita Formation ■ Morita Formation- Estimated | | ■ Morita Formation and Glance Conglomerate ■ Glance Conglomerate ■ Glance Conglomerate- Estimated | | 0 1000 2000 3000 Feet PROJECTION: UTM Zone 12N NAD83 | | | | GROUNDWATER ELEVATIONS FOR FOURTH QUARTER 2008 | | | |
| Approved | Date | Author | Date | File Name | Figure | | | | | | | | | | |
| DRS | 01/23/09 | RAM | 01/23/09 | 8720115G | 3 | | | | | | | | | | |



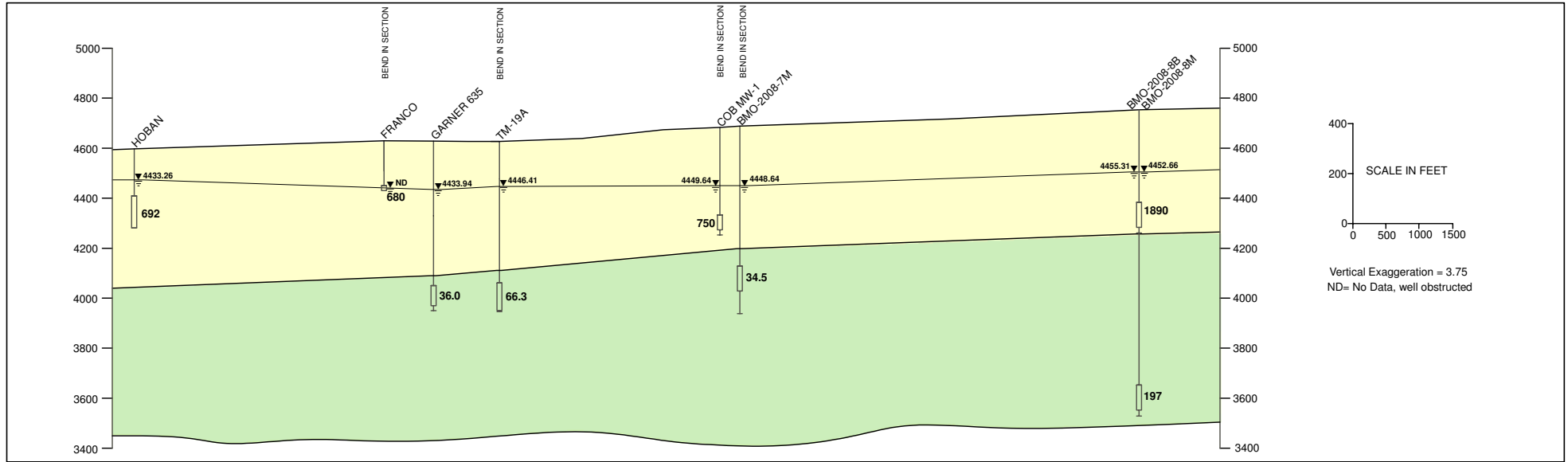
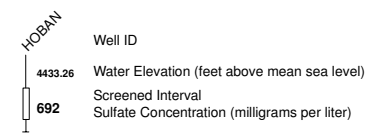
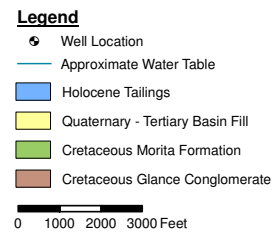
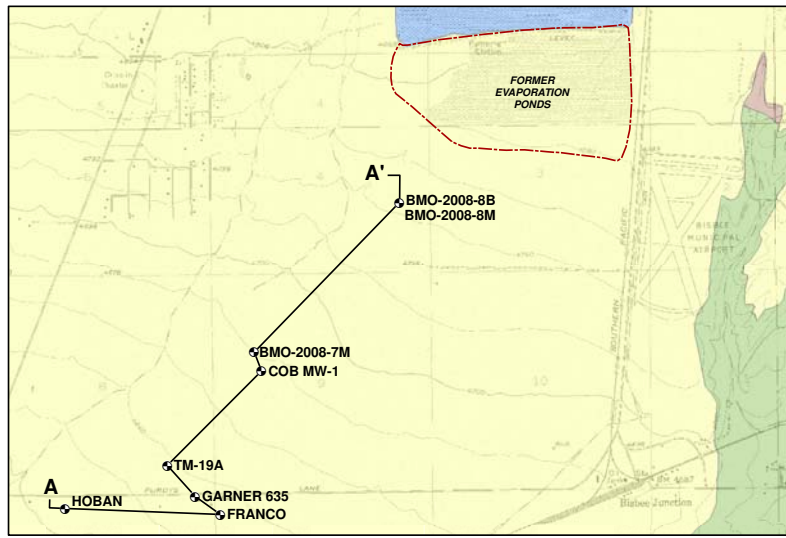
Legend
 TVI-713 Well ID
 4440.92 Groundwater Elevation (feet above mean sea level)
 10 Sulfate Concentration (milligrams per liter)
 Groundwater Contours

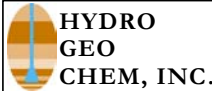
ND = No Data, no sounding tube
 EN = Ejido Naco
 UN = Urbano Naco

0 1000 2000 Feet
 PROJECTION:
 UTM Zone 12N NAD83



| SULFATE CONCENTRATIONS AND GROUNDWATER ELEVATIONS FOR NACO, ARIZONA AND NACO, SONORA OCTOBER 2008 | | | | | |
|---|----------|--------|----------|-----------|--------|
| Approved | Date | Author | Date | File Name | Figure |
| DRS | 01/12/09 | RAM | 01/12/09 | 8720116G | 4 |





**HYDRO
GEO
CHEM, INC.**

**CROSS SECTION A-A'
SULFATE STRATIFICATION
BETWEEN BASIN FILL AND MORITA FORMATION**

| Approved | Date | Author | Date | File Name | Figure |
|----------|----------|--------|----------|-----------|--------|
| DRS | 01/12/09 | RAM | 01/12/09 | 8720109G | 5 |

APPENDIX A

**FOURTH QUARTER 2008
DATA VERIFICATION REPORT**

APPENDIX A

**FOURTH QUARTER 2008
DATA VERIFICATION 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
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(520) 293-1500

January 23, 2009

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TABLE

A.1 ACZ Project ID and Associated Wells

APPENDIX

A.1 Arizona Land Specialists, Inc. Well Survey

1. INTRODUCTION

This report summarizes the data verification review of groundwater samples collected and analyzed during the fourth quarter 2008 (Q4-2008) by Hydro Geo Chem, Inc. (HGC) pursuant to Mitigation Order on Consent Docket No. P-121-07 (MO) (ADEQ, 2007). HGC collected groundwater samples from wells identified in for Tasks 1, 2.2, and 2.3 of the Work Plan (HGC, 2008a). All analytical results for groundwater samples collected for this project during the fourth quarter of 2008 were provided to HGC by ACZ Laboratories, Inc. (ACZ) for preparation of the Fourth Quarter 2008 Groundwater Monitoring Report.

Quality assurance (QA) and quality control (QC) procedures are specified in the *Quality Assurance Project Plan for Aquifer Characterization Plan (QAPP)* (Appendix 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.

Appendix C of the main text contains laboratory reports for Q4-2008 samples collected by HGC including COC forms, laboratory correspondence, QC summaries, data qualifiers, and any case narratives. The Q4-2008 analytical results for all 88 samples collected by HGC are contained in 17 reports having the ACZ Project numbers identified in Table A.1.

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

2. HGC FIELD OPERATIONS

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

- Static water level measurement,
- Well purging,
- Collection of water quality field parameters (pH in standard units [SU], specific conductance [SC] in microsiemens per centimeter [μ S/cm], and temperature in degrees Celsius [$^{\circ}$ 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 (well inventory), Task 2.2 (groundwater monitoring), and Task 2.3 (new monitoring well installation and testing) of the Work Plan. More detailed information regarding the wells sampled for water quality and water level measurements is listed in Table 1 of the main text.

2.2.1 Pre-Sampling Field Activities

On each day of sampling, the pH¹ and SC² 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

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 $\mu\text{S}/\text{cm}$

well, and 5) obtaining the appropriate field notebook in order to document field activities related to the groundwater monitoring program.

2.2.2 Well Purging, Field Measurements, and Sample Collection

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

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

During this monitoring period, filtered and unfiltered groundwater samples were collected for analysis from 88 plume monitor wells. Groundwater for filtered and unfiltered samples was collected using a single container to collect an initial sample for separation into bottles for filtered and unfiltered analyses. After collecting the initial sample, the unfiltered sample was collected by pouring a 500 milliliter (mL) aliquot of the initial sample into a non-preserved bottle for alkalinity analysis. Then each filtered sample was collected by filtering the remaining portion of the initial sample into a 250 mL bottle using a clean filtration apparatus and one unused, disposable 0.45-micron filter. All bottles were provided by ACZ. Bottles were

checked for the correct preservative and maintained in a clean and secure work area, until used in the field.

2.2.3 Post-Sampling Field Activities

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

2.3 Well Survey

On December 18, 2008 a measuring point elevation surveys was completed for newly installed Bisbee Mitigation Order (BMO) wells BMO-2008-4B, BMO-2008-5B, BMO-2008-5M, BMO-2008-8B, BMO-2008-8M, BMO-2008-13B, and BMO-2008-13M. In addition, Naco Water Company (NWC) wells NWC02, NWC03, NWC04, and NWC06 and private wells BLOMMER, FULTZ, and RAMIREZ were surveyed. The survey was conducted by Arizona Land Specialists, Inc. (ALS). These data are shown in Table 3 and Figure 2 of the main report.

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, and in good condition.

The temperature of the following shipping container (identified by its laboratory login number) exceeded 4 °C upon receipt at the laboratory.

| ACZ Project ID | Sample Collection Date | Sample Relinquished Date | Sample Received Date by ACZ | Temperature Upon Receipt (°C) |
|----------------|------------------------|--------------------------|-----------------------------|-------------------------------|
| L73158 | 11/18/08 | 11/19/08 | 11/20/08 | 5.5 |

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

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 Methods

The following list identifies the approved U.S. Environmental Protection Agency (EPA) methods that meet the requirements stated in section 5.3 of the QAPP regarding target methods and target MDLs:

- EPA 300.0 (Ion-Chromatography [IC]): sulfate, chloride, fluoride
- EPA 200.7 (Inductively Coupled Plasma [ICP]): calcium, magnesium, potassium, sodium
- EPA 353.2 (Automated Cadmium Reduction [ACR]): nitrate/nitrite
- SM2320B (Titration): alkalinity
- EPA 160.1 (Gravimetric): total dissolved solids

Two of these methods, IC (EPA 300.0) and ICP (EPA 200.7), involve direct injection of the sample into the analytical instrument, which does not require the analysis of preparation blanks. The other methods listed are classical wet chemistry techniques that require the use of preparation blanks under the ACZ quality assurance plan and the QAPP.

4.3 Method Detection Limits (MDLs) and Practical Quantification Limits (PQLs)

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

| Method | MDL (mg/L) | PQL (mg/L) | Target MDL ¹ (mg/L) |
|-----------|------------|------------|--------------------------------|
| EPA 300.0 | 0.5 | 3 | 10 |
| EPA 200.7 | 0.2 | 1 | 0.2 |
| EPA 200.7 | 0.3 | 2 | 0.3 |
| SM2320B | 2 | 20 | 2 |
| EPA 300.0 | 0.5 | 5 | 1 |
| EPA 300.0 | 0.1 | 0.5 | 0.1 |
| EPA 352.2 | 0.02 | 0.1 | 0.02 |
| EPA 160.1 | 10 | 20 | 10 |

mg/L = milligrams per liter

¹ Target MDL from Table F.2 of QAPP

4.4 Timeliness

Holding times were derived from the EPA methods utilized and were calculated beginning from the time of sample collection. The majority of samples submitted to the laboratory were analyzed within their recommended method specific holding time except for fluoride, nitrate/nitrite, nitrite, and sulfate analyses in the following: Samples collected on October 27 and 28, 2008 (PIONKE, RAMIREZ, ROGERS E, and ZANDER) and December 3, 2008 (BMO-2008-13M) were qualified with an “H1” flag, indicating analysis was performed past the holding time.³ One sample collected on December 5, 2008 (BMO-2008-8B) was qualified with an “HE” flag, indicating analysis was performed past the method holding time which is less than or equal to 7 days and sample was received with less than half of the holding time remaining. No data were rejected on the basis of the holding time exceedances and were accepted as usable.

4.5 Quality Control Measurements

The following QC samples were prepared and analyzed:

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

³ Chemist noted that initial data indicated a co-elution peak from an unknown source. The sample was reanalyzed outside the hold time and reported. Data may be qualified as estimated.

4.5.1 Preparation Blanks, Calibration Blanks, and Calibration Verification Standards

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

Results from the analyses of the initial calibration blanks and initial calibration verification standards conducted by EPA Methods 300.0, 200.7, and 353.2 also were reviewed. The results of each initial calibration blank analyzed showed no detections of the target analyte. All analytical results for the initial calibration verification standards and laboratory fortified blanks that were analyzed showed percent recoveries that were within the acceptance criteria specified by the ACZ QA plan and the QAPP.

4.5.2 Analytical Spikes and Analytical Spike Duplicates

Analytical spike and spike duplicate samples were analyzed for the following EPA Methods: 300.0, 200.7, and 353.2. Spike recoveries for most analytes were within the range of acceptability based on the acceptance criteria set by ACZ. Instances in which analytical spike recoveries were either high, low, or unusable were qualified with an “M1”, “M2”, or “M3” flag, respectively. However, in each case the method control sample recoveries were acceptable.

4.5.3 Laboratory Control Samples

Laboratory control samples were run for each group of samples submitted for alkalinity and total dissolved solids. Recoveries for all laboratory control samples were within the acceptance criteria specified by ACZ.

4.5.4 Laboratory Duplicate Samples

Analyses of laboratory duplicate samples were also reviewed as part of this quality data verification report. Field duplicate samples are discussed in Section 5.1. The RPDs for most laboratory duplicate samples were within 20 percent, which is the tolerance range set by the laboratory. In many instances, the data were qualified with an “RA” flag indicating that the RPD was not used for data validation because the sample concentration was less than ten times the MDL, which is too low for accurate evaluation according to ACZ. In all cases where the RPD could be calculated, the results met QA criteria and demonstrate an appropriate level of precision in laboratory analysis of these samples.

4.5.5 Field Blank Samples

During the fourth quarter of 2008, eight field blank samples were collected. Four field blank samples using unfiltered deionized water (FB101308, FB102008, FB102808, and FB110408) and four equipment blanks using filtered deionized water (EQB101308, EQB102008, EQB102808, and EQB110408). Samples were collected in the field 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 with the exception of equipment blank sample EQB110408H with sulfate detected a 0.7 mg/L, which is between the MDL and PQL. The low level detection of sulfate is not considered significant given the concentrations of this constituent in the samples.

5. DATA QUALITY INDICATORS

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

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

Each of these DQIs is discussed below in relation to the Q4-2008 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, a total of four field duplicate samples (DUP101308, DUP102008, DUP102808, and DUP110408) were collected by HGC for filtered analysis. The collection of four 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 four duplicate samples collected are provided in the table below. The range of RPD values was between 1.07 and 6.66 percent, all within the 20 percent acceptance criteria for field duplicates, as stated in Section 3.3.1 of the QAPP. Overall, the DQI for precision is deemed to be met.

| Well ID | Duplicate Sample ID | ACZ Project ID | Sulfate (mg/L) | Sulfate Duplicate (mg/L) | RPD (%) |
|--------------|---------------------|----------------|----------------|--------------------------|---------|
| PANAGAKOS | DUP101308 | L72466 | 480 | 500 | 4.08 |
| METZLER | DUP102008 | L72665 | 305 | 326 | 6.66 |
| TM-15 MILLER | DUP102808 | L72779 | 18.6 | 18.8 | 1.07 |
| BMO-2008-3B | DUP110408 | L72918 | 179 | 177 | 1.12 |

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

5.2 Bias

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

5.3 Accuracy

Accuracy is a measure of the agreement of a measurement to a known value and is measured using the recoveries from laboratory control samples. As discussed in Sections 4.5.1, 4.5.2, and 4.5.3 respectively, there were no significant exceedances of the recovery QA criteria for any of the calibration standards, analytical spikes, or laboratory control standards. Based on this information, the overall accuracy of the data is judged sufficient for the purpose of aquifer characterization.

5.4 Representativeness

All samples were taken from locations specified in the Work Plan (HGC, 2008a) using 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, 2008a) 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 were 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 methods 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.

5.8 Auxiliary Data Quality Indicators

Auxiliary DQIs are indicators that, although not mentioned in the QAPP, are useful for assessing the reliability of the laboratory analyses. These auxiliary DQIs include the laboratory measured cation-anion balance and the ratio between measured and calculated TDS. Each of these auxiliary indicators is discussed below.

5.8.1 Cation-Anion Balance

The concentration in milliequivalents per liter (meq/L) of cations and of anions in groundwater should theoretically be approximately the same. Therefore, the balance between anions and cations is one measure of the overall quality of the laboratory measurements.

The cation-anion balance can be expressed as the difference between the milliequivalents of cations and the milliequivalents of anions divided by the sum of the milliequivalents of both cations and anions. When computed in this manner, a cation-anion balance of 5 percent is considered good (Scott Habermahl, ACZ project manager, personal communication). The cation-anion balance for all samples is presented in Table 2 and was below 5 percent for all samples except for the samples listed below. Overall, the cation-anion balance for all samples does not indicate any analytical errors. Cation-anion balances outside of 5 percent may indicate the presence of other ions not included in the analysis and ion balance.

| Well and Sample ID | Sum of Anions (meq/L) | Sum of Cations (meq/L) | Cation-Anion Balance (%) |
|---------------------------|------------------------------|-------------------------------|---------------------------------|
| BMO-2008-4B | | | |
| BMO-2008-5B | 7.7 | 8.6 | 5.5 |
| BMO-2008-5M | 5.5 | 6.2 | 6.0 |
| BMO-2008-8B | 54.7 | 44.9 | -9.8 |
| BMO-2008-8M | 9.8 | 11.0 | 5.8 |

meq/L = milliequivalents per liter

5.8.2 TDS Ratio

The ratio between the measured and computed concentration of TDS is also an indicator of the overall quality of the sample analyses. A TDS ratio between 0.8 and 1.2 is considered good (Scott Habermahl, ACZ project manager, personal communication). The ratios for all samples are presented in Table 2 and fall inside the acceptance criteria specified by ACZ. Overall, the low TDS ratios for all samples indicate no apparent analytical errors.

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. (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 of Aquifer Characterization Plan for Mitigation Order on Consent No. P-121-07, Cochise County, Arizona. July 28, 2008.

TABLE

**TABLE A.1
ACZ PROJECT ID AND ASSOCIATED WELLS**

| ACZ Project ID | Wells Reported |
|--|---|
| <i>Number of wells sampled: 88 Number of duplicate samples collected: 4 Number of field blank samples collected: 8</i> | |
| L72149 | BMO-2008-0B |
| L72217 | BMO-2008-0M |
| L72231 | BMO-2008-13B |
| L72466 | BANKS 896, DODSON, PANAGAKOS, EPPELE 641, EAST, DUP101308, EQB101308 FB101308 |
| L72549 | HOWARD, GARNER 635, FRANCO, MCCONNELL 265, CHAMBERS, TVI 236 TVI 875, ANDERSON, PALMER, NESS, SWAN, OSBORN, HOBAN, COOPER C |
| L72620 | UN-02, UN-03, UN-04, UN-05, EN-02, EN-03, EN-05, EN-06 |
| L72654 | BLOMMER, ROGERS 803, SCHWARTZ, RAY, FULTZ, BIMA |
| L72665 | PARRA, METZLER, RUIZ, COLLINS, COOPER, WEED, BURKE, POOL, COB MW-1 COB MW-2, COB MW-3, COB WL, NOTEMAN, AWC 02, AWC 03, AWC 04, AWC 05 DUP102008, EQB102008, FB102008 |
| L72696 | NWC 02, NWC 03, NWC 04, NWC 06 |
| L72779 | PIONKE, RAMIREZ, ROGERS E, TM-15 MILLER, DUP102808, EQB102808, TM-02A FB102808, ZANDER, KEEFER, WEISKOPF, MOORE, TM-06 MILLER, GGOOSE 547 |
| L72918 | BMO-2008-3B, BMO-2008-6B, BMO-2008-6M, BMO-2008-7M, BMO-2008-9M BMO-2008-10GU, BMO-2008-10GL, BF-01, TM-07, TM-16, TM-42, DUP110408 EQB110408, FB110408 |
| L73030 | BMO-2008-1G, BMO-2008-11G, TM-03, GL-03 |
| L73158 | TM-19A |
| L73393 | BMO-2008-13M |
| L73402 | BMO-2008-8B |
| L73444 | BMO-2008-8M |
| L73523 | BMO-2008-4B |

APPENDIX A.1

ARIZONA LAND SPECIALISTS, INC. WELL SURVEY

ARIZONA LAND SPECIALISTS, INC.
FREEPORT-MCMORAN COPPER QUEEN BRANCH MONITOR WELL SURVEY

| ALS POINT No. | DESCRIPTION | ELEVATION NAVD88 (FEET) | UTM NAD83 NORTHING | UTM NAD83 EASTING |
|---------------|------------------------|-------------------------|--------------------|-------------------|
| 6902 | AMARILLAS (PID DG9433) | 4895.67 | 3473292.330 | 601929.297 |
| 7019 | BLOMMER * | 4753.69 | 3,471,529.090 | 602725.876 |
| 7018 | FULTZ * | 4642.92 | 3469063.892 | 607153.306 |
| 7017 | RAMIREZ * | 4596.61 | 3467584.363 | 599730.649 |
| 7015 | NWC 02 * | 4600.44 | 3467474.673 | 600177.435 |
| 7013 | NWC 03 * | 4574.99 | 3468350.838 | 601153.857 |
| 7012 | NWC 04 * | 4690.77 | 3469071.959 | 605829.808 |
| 7014 | NWC 06 * | 4592.50 | 3467749.954 | 599822.821 |
| 7033 | BMO-2008-4B TOC | 4573.17 | 3468383.430 | 601099.405 |
| 7032 | BMO-2008-4B PAD | 4572.67 | X | X |
| 7029 | BMO-2008-5B TOC | 4585.10 | 3468994.715 | 600438.159 |
| 7028 | BMO-2008-5B PAD | 4584.61 | X | X |
| 7031 | BMO-2008-5M TOC | 4585.02 | 3468994.282 | 600445.071 |
| 7030 | BMO-2008-5M PAD | 4584.59 | X | X |
| 7021 | BMO-2008-8B TOC | 4753.25 | 3471141.719 | 604171.347 |
| 7020 | BMO-2008-8B PAD | 4751.95 | X | X |
| 7023 | BMO-2008-8M TOC | 4752.45 | 3471127.902 | 604167.912 |
| 7022 | BMO-2008-8M PAD | 4751.95 | X | X |
| 7025 | BMO-2008-13B TOC | 4649.21 | 3470076.358 | 601657.612 |
| 7024 | BMO-2008-13B PAD | 4648.68 | X | X |
| 7027 | BMO-2008-13M TOC | 4647.15 | 3470040.455 | 601650.495 |
| 7026 | BMO-2008-13M PAD | 4646.67 | X | X |

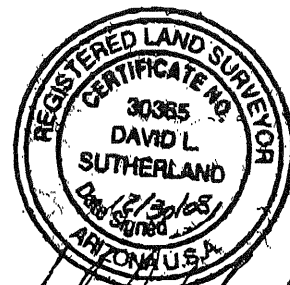
UTM = Universal Transverse Mercator Zone 12, Band R

* = Measuring Point Elevation

ST = Sounding Tube

TOC = Top of Casing

PAD = Concrete Pad



[Handwritten Signature]
 EXP 9/31/11

APPENDIX B

ANALYTICAL REPORTS FROM ACZ LABORATORIES, INC.

January 14, 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: L73523

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on December 12, 2008. This project has been assigned to ACZ's project number, L73523. Please reference this number in all future inquiries.

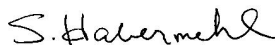
All analyses were performed according to ACZ's Quality Assurance Plan, version 12.0. The enclosed results relate only to the samples received under L73523. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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 February 14, 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.



Scott Habermehl has reviewed
and approved this report.



Hydro Geo Chem, Inc.

Project ID: 8720002.2
Sample ID: BMO-2008-4B

ACZ Sample ID: **L73523-01**
Date Sampled: 12/11/08 14:35
Date Received: 12/12/08
Sample Matrix: Ground Water

Metals Analysis

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|----------------------|------------|--------|------|----|-------|-----|-----|----------------|---------|
| Calcium, dissolved | M200.7 ICP | 49.2 | | | mg/L | 0.2 | 1 | 12/15/08 18:05 | ear |
| Magnesium, dissolved | M200.7 ICP | 7.1 | | | mg/L | 0.2 | 1 | 12/16/08 22:15 | ear |
| Potassium, dissolved | M200.7 ICP | 1.4 | B | | mg/L | 0.3 | 2 | 12/15/08 18:05 | ear |
| Sodium, dissolved | M200.7 ICP | 33.4 | | | mg/L | 0.3 | 2 | 12/15/08 18:05 | ear |

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------------------------------|--------------------------------------|--------|------|----|-------|------|------|----------------|---------|
| Alkalinity as CaCO3 | SM2320B - Titration | | | | | | | | |
| Bicarbonate as CaCO3 | | 183 | | | mg/L | 2 | 20 | 12/19/08 0:00 | abm |
| Carbonate as CaCO3 | | | U | | mg/L | 2 | 20 | 12/19/08 0:00 | abm |
| Hydroxide as CaCO3 | | | U | | mg/L | 2 | 20 | 12/19/08 0:00 | abm |
| Total Alkalinity | | 183 | | | mg/L | 2 | 20 | 12/19/08 0:00 | abm |
| Cation-Anion Balance | Calculation | | | | | | | | |
| Cation-Anion Balance | | 3.4 | | | % | | | 01/14/09 0:00 | calc |
| Sum of Anions | | 4.2 | | | meq/L | 0.1 | 0.5 | 01/14/09 0:00 | calc |
| Sum of Cations | | 4.5 | | | meq/L | 0.1 | 0.5 | 01/14/09 0:00 | calc |
| Chloride | M300.0 - Ion Chromatography | 4.3 | | * | mg/L | 0.5 | 3 | 12/23/08 11:37 | aml |
| Fluoride | M300.0 - Ion Chromatography | 0.2 | B | * | mg/L | 0.1 | 0.5 | 01/06/09 14:38 | ccp |
| Nitrate as N, dissolved | Calculation: NO3NO2 minus NO2 | 0.78 | | | mg/L | 0.02 | 0.1 | 01/14/09 0:00 | calc |
| Nitrate/Nitrite as N, dissolved | M353.2 - Automated Cadmium Reduction | 0.78 | | * | mg/L | 0.02 | 0.1 | 12/12/08 20:21 | neb |
| Nitrite as N, dissolved | M353.2 - Automated Cadmium Reduction | | U | * | mg/L | 0.01 | 0.05 | 12/12/08 20:21 | neb |
| Residue, Filterable (TDS) @180C | SM2540C | 240 | | | mg/L | 10 | 20 | 12/16/08 14:56 | abm |
| Sulfate | 375.4 - Turbidimetric | 10 | H | * | mg/L | 1 | 5 | 01/09/09 10:42 | aml |
| Sulfate | 300.0 - Ion Chromatography | 9.4 | | | mg/L | 0.5 | 3 | 01/06/09 14:38 | ccp |
| TDS (calculated) | Calculation | 228 | | | mg/L | 10 | 50 | 01/14/09 0:00 | calc |
| TDS (ratio - measured/calculated) | Calculation | 1.05 | | | | | | 01/14/09 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.

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: **L73523**

Alkalinity as CaCO3 SM2320B - Titration

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|--------|-------|------|-------|-------|-----|-------|------|
| WG257531 | | | | | | | | | | | | | |
| WG257531PBW1 | PBW | 12/19/08 15:41 | | | | 15.8 | mg/L | | -20 | 20 | | | |
| WG257531LCSW2 | LCSW | 12/19/08 15:52 | WC081209-1 | 820.0001 | | 786.9 | mg/L | 96 | 90 | 110 | | | |
| WG257531PBW2 | PBW | 12/19/08 19:09 | | | | 3 | mg/L | | -20 | 20 | | | |
| WG257531LCSW5 | LCSW | 12/19/08 19:20 | WC081209-1 | 820.0001 | | 767 | mg/L | 93.5 | 90 | 110 | | | |
| L73534-04DUP | DUP | 12/19/08 21:48 | | | 2850 | 2838.4 | mg/L | | | | 0.4 | 20 | |
| WG257531PBW3 | PBW | 12/19/08 23:57 | | | | 3 | mg/L | | -20 | 20 | | | |
| WG257531LCSW8 | LCSW | 12/20/08 0:07 | WC081209-1 | 820.0001 | | 765.4 | mg/L | 93.3 | 90 | 110 | | | |
| WG257531PBW4 | PBW | 12/20/08 3:27 | | | | U | mg/L | | -20 | 20 | | | |
| WG257531LCSW11 | LCSW | 12/20/08 3:39 | WC081209-1 | 820.0001 | | 769.1 | mg/L | 93.8 | 90 | 110 | | | |
| WG257531LCSW14 | LCSW | 12/20/08 6:14 | WC081209-1 | 820.0001 | | 767.3 | mg/L | 93.6 | 90 | 110 | | | |

Calcium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG257254 | | | | | | | | | | | | | |
| WG257254ICV | ICV | 12/15/08 16:38 | II081119-1 | 100 | | 101.16 | mg/L | 101.2 | 95 | 105 | | | |
| WG257254ICB | ICB | 12/15/08 16:42 | | | | U | mg/L | | -0.6 | 0.6 | | | |
| WG257254LFB | LFB | 12/15/08 16:54 | II081212-2 | 67.97008 | | 73.73 | mg/L | 108.5 | 85 | 115 | | | |
| L73485-02AS | AS | 12/15/08 17:48 | II081212-2 | 67.97008 | 41.6 | 114.68 | mg/L | 107.5 | 85 | 115 | | | |
| L73485-02ASD | ASD | 12/15/08 17:51 | II081212-2 | 67.97008 | 41.6 | 114.99 | mg/L | 108 | 85 | 115 | 0.27 | 20 | |

Chloride M300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|-------|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG257562 | | | | | | | | | | | | | |
| WG257562ICV | ICV | 12/19/08 17:04 | WI081031-2 | 19.94 | | 20.13 | mg/L | 101 | 90 | 110 | | | |
| WG257562ICB | ICB | 12/19/08 17:22 | | | | .5 | mg/L | | -1.5 | 1.5 | | | |
| WG257562ICV1 | ICV | 12/20/08 13:22 | WI081031-2 | 19.94 | | 20.16 | mg/L | 101.1 | 90 | 110 | | | |
| WG257562ICB1 | ICB | 12/20/08 13:22 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG257562ICB2 | ICB | 12/20/08 13:40 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG257604 | | | | | | | | | | | | | |
| WG257604ICV | ICV | 12/19/08 17:04 | WI081031-2 | 19.94 | | 20.13 | mg/L | 101 | 90 | 110 | | | |
| WG257604ICB | ICB | 12/19/08 17:22 | | | | .5 | mg/L | | -1.5 | 1.5 | | | |
| WG257604ICV1 | ICV | 12/23/08 2:34 | WI081031-2 | 19.94 | | 20.24 | mg/L | 101.5 | 90 | 110 | | | |
| WG257604ICB1 | ICB | 12/23/08 2:52 | | | | 1.14 | mg/L | | -1.5 | 1.5 | | | |
| WG257604LFB | LFB | 12/23/08 3:10 | WI081125-2 | 30 | | 31.06 | mg/L | 103.5 | 90 | 110 | | | |
| L73404-11AS | AS | 12/23/08 8:00 | WI081125-2 | 30 | .8 | 30.97 | mg/L | 100.6 | 90 | 110 | | | |
| L73404-11DUP | DUP | 12/23/08 8:18 | | | .8 | .87 | mg/L | | | | 8.4 | 20 | RA |

Fluoride M300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|-----|--------|-------|-------|-------|-------|-------|------|-------|------|
| WG258047 | | | | | | | | | | | | | |
| WG258047ICV | ICV | 01/06/09 10:14 | WI081218-1 | 4 | | 3.88 | mg/L | 97 | 90 | 110 | | | |
| WG258047ICB | ICB | 01/06/09 10:32 | | | | U | mg/L | | -0.3 | 0.3 | | | |
| WG258047ICV1 | ICV | 01/06/09 13:08 | WI081218-1 | 4 | | 3.89 | mg/L | 97.3 | 90 | 110 | | | |
| WG258047ICB1 | ICB | 01/06/09 13:26 | | | | U | mg/L | | -0.3 | 0.3 | | | |
| WG258047LFB | LFB | 01/06/09 14:20 | WI081125-2 | 1.5 | | 1.44 | mg/L | 96 | 90 | 110 | | | |
| L73523-01DUP | DUP | 01/06/09 14:56 | | | .2 | .18 | mg/L | | | | 10.5 | 20 | RA |
| L73547-01AS | AS | 01/06/09 15:33 | WI081125-2 | 1.5 | U | 1.64 | mg/L | 109.3 | 90 | 110 | | | |

Hydro Geo Chem, Inc.
 Project ID: 8720002.2

ACZ Project ID: **L73523**

Magnesium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|-------|-------|-------|-------|-------|------|-------|------|
| WG257295 | | | | | | | | | | | | | |
| WG257295ICV | ICV | 12/16/08 20:50 | II081119-1 | 100 | | 96.33 | mg/L | 96.3 | 95 | 105 | | | |
| WG257295ICB | ICB | 12/16/08 20:53 | | | | U | mg/L | | -0.6 | 0.6 | | | |
| WG257295LFB | LFB | 12/16/08 21:08 | II081212-2 | 49.96908 | | 50.8 | mg/L | 101.7 | 85 | 115 | | | |
| L73509-02AS | AS | 12/16/08 22:07 | II081212-2 | 49.96908 | 27.3 | 78.05 | mg/L | 101.6 | 85 | 115 | | | |
| L73509-02ASD | ASD | 12/16/08 22:11 | II081212-2 | 49.96908 | 27.3 | 79.35 | mg/L | 104.2 | 85 | 115 | 1.65 | 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 |
|-----------------|------|----------------|------------|-------|--------|-------|-------|-------|-------|-------|------|-------|------|
| WG257204 | | | | | | | | | | | | | |
| WG257204ICV | ICV | 12/12/08 20:00 | WI080916-5 | 2.416 | | 2.42 | mg/L | 100.2 | 90 | 110 | | | |
| WG257204ICB | ICB | 12/12/08 20:01 | | | | U | mg/L | | -0.06 | 0.06 | | | |
| WG257204LFB | LFB | 12/12/08 20:06 | WI080913-4 | 2 | | 2.059 | mg/L | 103 | 90 | 110 | | | |
| L73505-01AS | AS | 12/12/08 20:09 | WI080913-4 | 2 | U | 2.047 | mg/L | 102.4 | 90 | 110 | | | |
| L73506-08DUP | DUP | 12/12/08 20:11 | | | .03 | .027 | mg/L | | | | 10.5 | 20 | RA |

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 |
|-----------------|------|----------------|------------|------|--------|-------|-------|------|-------|-------|-----|-------|------|
| WG257204 | | | | | | | | | | | | | |
| WG257204ICV | ICV | 12/12/08 20:00 | WI080916-5 | .609 | | .603 | mg/L | 99 | 90 | 110 | | | |
| WG257204ICB | ICB | 12/12/08 20:01 | | | | U | mg/L | | -0.03 | 0.03 | | | |
| WG257204LFB | LFB | 12/12/08 20:06 | WI080913-4 | 1 | | 1 | mg/L | 100 | 90 | 110 | | | |
| L73505-01AS | AS | 12/12/08 20:09 | WI080913-4 | 1 | .01 | .992 | mg/L | 98.2 | 90 | 110 | | | |
| L73506-08DUP | DUP | 12/12/08 20:11 | | | .01 | 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 |
|-----------------|------|----------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG257254 | | | | | | | | | | | | | |
| WG257254ICV | ICV | 12/15/08 16:38 | II081119-1 | 20 | | 20.09 | mg/L | 100.5 | 95 | 105 | | | |
| WG257254ICB | ICB | 12/15/08 16:42 | | | | U | mg/L | | -0.9 | 0.9 | | | |
| WG257254LFB | LFB | 12/15/08 16:54 | II081212-2 | 99.76186 | | 106.16 | mg/L | 106.4 | 85 | 115 | | | |
| L73485-02AS | AS | 12/15/08 17:48 | II081212-2 | 99.76186 | 9.4 | 116.72 | mg/L | 107.6 | 85 | 115 | | | |
| L73485-02ASD | ASD | 12/15/08 17:51 | II081212-2 | 99.76186 | 9.4 | 117.8 | mg/L | 108.7 | 85 | 115 | 0.92 | 20 | |

Residue, Filterable (TDS) @180C SM2540C

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|----------|-----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG257320 | | | | | | | | | | | | | |
| WG257320PBW | PBW | 12/16/08 14:50 | | | | U | mg/L | | -20 | 20 | | | |
| WG257320LCSW | LCSW | 12/16/08 14:50 | PCN31030 | 260 | | 270 | mg/L | 103.8 | 80 | 120 | | | |
| L73527-03DUP | DUP | 12/16/08 15:00 | | | 5360 | 5368 | mg/L | | | | 0.1 | 20 | |

Hydro Geo Chem, Inc.
 Project ID: 8720002.2

ACZ Project ID: **L73523**

Sodium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG257254 | | | | | | | | | | | | | |
| WG257254 CV | ICV | 12/15/08 16:38 | II081119-1 | 100 | | 100.97 | mg/L | 101 | 95 | 105 | | | |
| WG257254 CB | ICB | 12/15/08 16:42 | | | | U | mg/L | | -0.9 | 0.9 | | | |
| WG257254 LFB | LFB | 12/15/08 16:54 | II081212-2 | 98.21624 | | 104.67 | mg/L | 106.6 | 85 | 115 | | | |
| L73485-02AS | AS | 12/15/08 17:48 | II081212-2 | 98.21624 | 47.5 | 146.88 | mg/L | 101.2 | 85 | 115 | | | |
| L73485-02ASD | ASD | 12/15/08 17:51 | II081212-2 | 98.21624 | 47.5 | 148.37 | mg/L | 102.7 | 85 | 115 | 1.01 | 20 | |

Sulfate 300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----|--------|-------|-------|------|-------|-------|-----|-------|------|
| WG258047 | | | | | | | | | | | | | |
| WG258047 CV | ICV | 01/06/09 10:14 | WI081218-1 | 50 | | 49.23 | mg/L | 98.5 | 90 | 110 | | | |
| WG258047 CB | ICB | 01/06/09 10:32 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG258047 CV1 | ICV | 01/06/09 13:08 | WI081218-1 | 50 | | 49.31 | mg/L | 98.6 | 90 | 110 | | | |
| WG258047 CB1 | ICB | 01/06/09 13:26 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG258047 LFB | LFB | 01/06/09 14:20 | WI081125-2 | 30 | | 28.81 | mg/L | 96 | 90 | 110 | | | |
| L73523-01DUP | DUP | 01/06/09 14:56 | | | 9.4 | 9.3 | mg/L | | | | 1.1 | 20 | |
| L73547-01AS | AS | 01/06/09 15:33 | WI081125-2 | 30 | 6.5 | 36.29 | mg/L | 99.3 | 90 | 110 | | | |

Sulfate 375.4 - Turbidimetric

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----|--------|-------|-------|------|-------|-------|-----|-------|------|
| WG258203 | | | | | | | | | | | | | |
| WG258203 CB | ICB | 01/09/09 10:16 | | | | U | mg/L | | -3 | 3 | | | |
| WG258203 CV | ICV | 01/09/09 10:16 | WI081217-2 | 20 | | 19.9 | mg/L | 99.5 | 90 | 110 | | | |
| WG258203 LFB | LFB | 01/09/09 10:42 | WI081015-3 | 10 | | 9.2 | mg/L | 92 | 90 | 110 | | | |
| L73523-01DUP | DUP | 01/09/09 10:42 | | | 10 | 9.3 | mg/L | | | | 7.3 | 20 | |
| L73760-02AS | AS | 01/09/09 10:42 | WI081015-3 | 10 | 6 | 15.9 | mg/L | 99 | 90 | 110 | | | |

Hydro Geo Chem, Inc.

ACZ Project ID: **L73523**

| ACZ ID | WORKNUM | PARAMETER | METHOD | QUAL | DESCRIPTION |
|-----------|----------|---------------------------------|--------------------------------------|------|---|
| L73523-01 | WG257604 | Chloride | 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). |
| | WG258047 | Fluoride | 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). |
| | WG257204 | 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). |
| | WG258203 | Sulfate | 375.4 - Turbidimetric | HC | Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis. |

Hydro Geo Chem, Inc.

ACZ Project ID: **L73523**

Wet Chemistry

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

Sulfate

375.4 - Turbidimetric

Hydro Geo Chem, Inc.
 8720002.2

ACZ Project ID: L73523
 Date Received: 12/12/2008
 Received By:
 Date Printed: 12/12/2008

Receipt Verification

| | YES | NO | NA |
|--|-----|----|----|
| 1) Does this project require special handling procedures such as CLP protocol? | | | X |
| 2) Are the custody seals on the cooler intact? | | | X |
| 3) Are the custody seals on the sample containers intact? | | | X |
| 4) Is there a Chain of Custody or other directive shipping papers present? | X | | |
| 5) Is the Chain of Custody complete? | X | | |
| 6) Is the Chain of Custody in agreement with the samples received? | X | | |
| 7) Is there enough sample for all requested analyses? | X | | |
| 8) Are all samples within holding times for requested analyses? | X | | |
| 9) Were all sample containers received intact? | X | | |
| 10) Are the temperature blanks present? | | | X |
| 11) 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) |
|-----------|-----------|-------------|
| NA7540 | 3.2 | 16 |
| | | |
| | | |

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

Notes



Laboratories, Inc. L73523

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

ANALYSES REQUESTED (attach list or use quote number)

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

Table with columns for # of Containers and various analysis types. Row 1: FMCQB-GW, 3, X

SAMPLE IDENTIFICATION DATE:TIME Matrix

Table with columns for Sample ID, Date:Time, and Matrix. Row 1: BMO-2008-4, 12/11/08:1435, GW

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

REMARKS/ SAMPLE DISCLOSURES

Empty box for remarks and disclosures.

PAGE 1 of 1

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

Table with columns: RELINQUISHED BY, DATE:TIME, RECEIVED BY, DATE:TIME. Row 1: Travis Taylor, 12/11/08:1515, MYS, 12-12-08 10:51

January 06, 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: L73444

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on December 10, 2008. This project has been assigned to ACZ's project number, L73444. 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 L73444. 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 February 06, 2009. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



Scott Habermehl has reviewed
and approved this report.



Hydro Geo Chem, Inc.

Project ID: 8720002.2
Sample ID: BMO-2008-8M

ACZ Sample ID: **L73444-01**
Date Sampled: 12/09/08 14:40
Date Received: 12/10/08
Sample Matrix: Ground Water

Metals Analysis

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|----------------------|------------|--------|------|----|-------|-----|-----|----------------|---------|
| Calcium, dissolved | M200.7 ICP | 88.5 | | * | mg/L | 0.2 | 1 | 12/12/08 19:29 | ear |
| Magnesium, dissolved | M200.7 ICP | 43.0 | | | mg/L | 0.2 | 1 | 12/12/08 19:29 | ear |
| Potassium, dissolved | M200.7 ICP | 5.8 | | | mg/L | 0.3 | 2 | 12/12/08 19:29 | ear |
| Sodium, dissolved | M200.7 ICP | 64.9 | | | mg/L | 0.3 | 2 | 12/12/08 19:29 | ear |

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------------------------------|--------------------------------------|--------|------|----|-------|------|------|----------------|---------|
| Alkalinity as CaCO3 | SM2320B - Titration | | | | | | | | |
| Bicarbonate as CaCO3 | | 260 | | | mg/L | 2 | 20 | 12/19/08 0:00 | abm |
| Carbonate as CaCO3 | | | U | | mg/L | 2 | 20 | 12/19/08 0:00 | abm |
| Hydroxide as CaCO3 | | | U | | mg/L | 2 | 20 | 12/19/08 0:00 | abm |
| Total Alkalinity | | 260 | | | mg/L | 2 | 20 | 12/19/08 0:00 | abm |
| Cation-Anion Balance | Calculation | | | | | | | | |
| Cation-Anion Balance | | 5.8 | | | % | | | 01/06/09 0:00 | calc |
| Sum of Anions | | 9.8 | | | meq/L | 0.1 | 0.5 | 01/06/09 0:00 | calc |
| Sum of Cations | | 11.0 | | | meq/L | 0.1 | 0.5 | 01/06/09 0:00 | calc |
| Chloride | M300.0 - Ion Chromatography | 13 | | * | mg/L | 3 | 10 | 12/23/08 1:21 | aml |
| Fluoride | SM4500F-C | 0.3 | B | | mg/L | 0.1 | 0.5 | 01/05/09 15:55 | gkj |
| Nitrate as N, dissolved | Calculation: NO3NO2 minus NO2 | 1.78 | | | mg/L | 0.02 | 0.1 | 01/06/09 0:00 | calc |
| Nitrate/Nitrite as N, dissolved | M353.2 - Automated Cadmium Reduction | 1.78 | | * | mg/L | 0.02 | 0.1 | 12/10/08 17:56 | pjb |
| Nitrite as N, dissolved | M353.2 - Automated Cadmium Reduction | | U | * | mg/L | 0.01 | 0.05 | 12/10/08 17:56 | pjb |
| Residue, Filterable (TDS) @180C | SM2540C | 640 | | | mg/L | 10 | 20 | 12/11/08 16:06 | abm |
| Sulfate | 300.0 - Ion Chromatography | 197 | | | mg/L | 3 | 10 | 12/23/08 1:21 | aml |
| TDS (calculated) | Calculation | 576 | | | mg/L | 10 | 50 | 01/06/09 0:00 | calc |
| TDS (ratio - measured/calculated) | Calculation | 1.11 | | | | | | 01/06/09 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.

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: **L73444**

Alkalinity as CaCO3 SM2320B - Titration

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG257465 | | | | | | | | | | | | | |
| WG257465PBW1 | PBW | 12/18/08 18:35 | | | | U | mg/L | | -20 | 20 | | | |
| WG257465LCSW2 | LCSW | 12/18/08 18:59 | WC081209-1 | 820.0001 | | 753.7 | mg/L | 91.9 | 90 | 110 | | | |
| WG257465PBW2 | PBW | 12/18/08 21:40 | | | | 8.7 | mg/L | | -20 | 20 | | | |
| WG257465LCSW5 | LCSW | 12/18/08 21:51 | WC081209-1 | 820.0001 | | 760 | mg/L | 92.7 | 90 | 110 | | | |
| L73444-01DUP | DUP | 12/19/08 0:57 | | | 260 | 258.4 | mg/L | | | | 0.6 | 20 | |
| WG257465PBW3 | PBW | 12/19/08 1:01 | | | | U | mg/L | | -20 | 20 | | | |
| WG257465LCSW8 | LCSW | 12/19/08 1:13 | WC081209-1 | 820.0001 | | 834.2 | mg/L | 101.7 | 90 | 110 | | | |
| WG257465PBW4 | PBW | 12/19/08 4:48 | | | | 3.4 | mg/L | | -20 | 20 | | | |
| WG257465LCSW11 | LCSW | 12/19/08 4:58 | WC081209-1 | 820.0001 | | 796.7 | mg/L | 97.2 | 90 | 110 | | | |
| WG257465LCSW14 | LCSW | 12/19/08 8:08 | WC081209-1 | 820.0001 | | 836.7 | mg/L | 102 | 90 | 110 | | | |

Calcium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG257175 | | | | | | | | | | | | | |
| WG257175ICV | ICV | 12/12/08 17:46 | II081119-1 | 100 | | 101.25 | mg/L | 101.3 | 95 | 105 | | | |
| WG257175ICB | ICB | 12/12/08 17:50 | | | | U | mg/L | | -0.6 | 0.6 | | | |
| WG257175LFB | LFB | 12/12/08 18:02 | II081125-2 | 67.97008 | | 70.76 | mg/L | 104.1 | 85 | 115 | | | |
| L73434-03AS | AS | 12/12/08 18:56 | II081125-2 | 339.8504 | 1950 | 2157.8 | mg/L | 61.1 | 85 | 115 | | | M3 |
| L73434-03ASD | ASD | 12/12/08 18:59 | II081125-2 | 339.8504 | 1950 | 2152.5 | mg/L | 59.6 | 85 | 115 | 0.25 | 20 | M3 |

Chloride M300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|-------|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG257563 | | | | | | | | | | | | | |
| WG257563ICV | ICV | 12/19/08 17:04 | WI081031-2 | 19.94 | | 20.13 | mg/L | 101 | 90 | 110 | | | |
| WG257563ICB | ICB | 12/19/08 17:22 | | | | .5 | mg/L | | -1.5 | 1.5 | | | |
| WG257563ICV1 | ICV | 12/22/08 16:36 | WI081031-2 | 19.94 | | 20.24 | mg/L | 101.5 | 90 | 110 | | | |
| WG257563ICB1 | ICB | 12/22/08 16:54 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG257563LFB | LFB | 12/22/08 17:13 | WI081125-2 | 30 | | 28.5 | mg/L | 95 | 90 | 110 | | | |
| L73284-02AS | AS | 12/22/08 22:02 | WI081125-2 | 150 | 269 | 397.7 | mg/L | 85.8 | 90 | 110 | | | M2 |
| L73284-02DUP | DUP | 12/22/08 22:20 | | | 269 | 272.2 | mg/L | | | | 1.2 | 20 | |

Fluoride SM4500F-C

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG258013 | | | | | | | | | | | | | |
| WG258013ICV | ICV | 01/05/09 15:11 | WC081230-1 | 2 | | 1.99 | mg/L | 99.5 | 95 | 105 | | | |
| WG258013ICB | ICB | 01/05/09 15:19 | | | | U | mg/L | | -0.3 | 0.3 | | | |
| WG258013LFB1 | LFB | 01/05/09 15:26 | WC081121-5 | 5 | | 5.12 | mg/L | 102.4 | 90 | 110 | | | |
| L73299-01AS | AS | 01/05/09 15:32 | WC081121-5 | 5 | .8 | 5.95 | mg/L | 103 | 90 | 110 | | | |
| L73299-02DUP | DUP | 01/05/09 15:39 | | | 1.6 | 1.53 | mg/L | | | | 4.5 | 20 | |

Hydro Geo Chem, Inc.
 Project ID: 8720002.2

ACZ Project ID: **L73444**

Magnesium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG257175 | | | | | | | | | | | | | |
| WG257175ICV | ICV | 12/12/08 17:46 | II081119-1 | 100 | | 101.67 | mg/L | 101.7 | 95 | 105 | | | |
| WG257175ICB | ICB | 12/12/08 17:50 | | | | U | mg/L | | -0.6 | 0.6 | | | |
| WG257175LFB | LFB | 12/12/08 18:02 | II081125-2 | 49.96908 | | 51.19 | mg/L | 102.4 | 85 | 115 | | | |
| L73434-03AS | AS | 12/12/08 18:56 | II081125-2 | 249.8454 | 171 | 402.4 | mg/L | 92.6 | 85 | 115 | | | |
| L73434-03ASD | ASD | 12/12/08 18:59 | II081125-2 | 249.8454 | 171 | 399.5 | mg/L | 91.5 | 85 | 115 | 0.72 | 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 |
|-----------------|------|----------------|------------|-------|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG257065 | | | | | | | | | | | | | |
| WG257065ICV | ICV | 12/10/08 17:48 | WI080916-5 | 2.416 | | 2.427 | mg/L | 100.5 | 90 | 110 | | | |
| WG257065ICB | ICB | 12/10/08 17:49 | | | | U | mg/L | | -0.06 | 0.06 | | | |
| WG257065LFB | LFB | 12/10/08 17:54 | WI080913-4 | 2 | | 2.009 | mg/L | 100.5 | 90 | 110 | | | |
| L73444-01AS | AS | 12/10/08 17:57 | WI080913-4 | 2 | 1.78 | 3.757 | mg/L | 98.9 | 90 | 110 | | | |
| L73460-01DUP | DUP | 12/10/08 18:00 | | | .07 | .077 | mg/L | | | | 9.5 | 20 | RA |

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 |
|-----------------|------|----------------|------------|------|--------|-------|-------|------|-------|-------|-----|-------|------|
| WG257065 | | | | | | | | | | | | | |
| WG257065ICV | ICV | 12/10/08 17:48 | WI080916-5 | .609 | | .604 | mg/L | 99.2 | 90 | 110 | | | |
| WG257065ICB | ICB | 12/10/08 17:49 | | | | U | mg/L | | -0.03 | 0.03 | | | |
| WG257065LFB | LFB | 12/10/08 17:54 | WI080913-4 | 1 | | .984 | mg/L | 98.4 | 90 | 110 | | | |
| L73444-01AS | AS | 12/10/08 17:57 | WI080913-4 | 1 | U | .976 | mg/L | 97.6 | 90 | 110 | | | |
| L73460-01DUP | DUP | 12/10/08 18:00 | | | 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 |
|-----------------|------|----------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG257175 | | | | | | | | | | | | | |
| WG257175ICV | ICV | 12/12/08 17:46 | II081119-1 | 20 | | 19.93 | mg/L | 99.7 | 95 | 105 | | | |
| WG257175ICB | ICB | 12/12/08 17:50 | | | | U | mg/L | | -0.9 | 0.9 | | | |
| WG257175LFB | LFB | 12/12/08 18:02 | II081125-2 | 99.76186 | | 101.39 | mg/L | 101.6 | 85 | 115 | | | |
| L73434-03AS | AS | 12/12/08 18:56 | II081125-2 | 498.8093 | 26 | 508.2 | mg/L | 96.7 | 85 | 115 | | | |
| L73434-03ASD | ASD | 12/12/08 18:59 | II081125-2 | 498.8093 | 26 | 508.4 | mg/L | 96.7 | 85 | 115 | 0.04 | 20 | |

Residue, Filterable (TDS) @180C SM2540C

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|----------|-----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG257123 | | | | | | | | | | | | | |
| WG257123PBW | PBW | 12/11/08 16:00 | | | | 16 | mg/L | | -20 | 20 | | | |
| WG257123LCSW | LCSW | 12/11/08 16:00 | PCN31030 | 260 | | 270 | mg/L | 103.8 | 80 | 120 | | | |
| L73445-03DUP | DUP | 12/11/08 16:10 | | | 2060 | 2076 | mg/L | | | | 0.8 | 20 | |

Hydro Geo Chem, Inc.
 Project ID: 8720002.2

ACZ Project ID: **L73444**

Sodium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG257175 | | | | | | | | | | | | | |
| WG257175ICV | ICV | 12/12/08 17:46 | II081119-1 | 100 | | 101.79 | mg/L | 101.8 | 95 | 105 | | | |
| WG257175ICB | ICB | 12/12/08 17:50 | | | | U | mg/L | | -0.9 | 0.9 | | | |
| WG257175LFB | LFB | 12/12/08 18:02 | II081125-2 | 98.21624 | | 100.52 | mg/L | 102.3 | 85 | 115 | | | |
| L73434-03AS | AS | 12/12/08 18:56 | II081125-2 | 491.0812 | 610 | 1035.5 | mg/L | 86.6 | 85 | 115 | | | |
| L73434-03ASD | ASD | 12/12/08 18:59 | II081125-2 | 491.0812 | 610 | 1032.3 | mg/L | 86 | 85 | 115 | 0.31 | 20 | |

Sulfate 300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|-----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG257563 | | | | | | | | | | | | | |
| WG257563ICV | ICV | 12/19/08 17:04 | WI081031-2 | 50 | | 50.64 | mg/L | 101.3 | 90 | 110 | | | |
| WG257563ICB | ICB | 12/19/08 17:22 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG257563ICV1 | ICV | 12/22/08 16:36 | WI081031-2 | 50 | | 52.24 | mg/L | 104.5 | 90 | 110 | | | |
| WG257563ICB1 | ICB | 12/22/08 16:54 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG257563LFB | LFB | 12/22/08 17:13 | WI081125-2 | 30 | | 30.59 | mg/L | 102 | 90 | 110 | | | |
| L73284-02AS | AS | 12/22/08 22:02 | WI081125-2 | 150 | 57 | 192.9 | mg/L | 90.6 | 90 | 110 | | | |
| L73284-02DUP | DUP | 12/22/08 22:20 | | | 57 | 59.5 | mg/L | | | | 4.3 | 20 | |

Hydro Geo Chem, Inc.

ACZ Project ID: **L73444**

| ACZ ID | WORKNUM | PARAMETER | METHOD | QUAL | DESCRIPTION |
|-----------|----------|---------------------------------|--------------------------------------|------|---|
| L73444-01 | WG257175 | Calcium, dissolved | M200.7 ICP | M3 | The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable. |
| | WG257563 | Chloride | M300.0 - Ion Chromatography | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| | WG257065 | 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). |

Hydro Geo Chem, Inc.

ACZ Project ID: **L73444**

No certification qualifiers associated with this analysis

Hydro Geo Chem, Inc.
 8720002.2

ACZ Project ID: L73444
 Date Received: 12/10/2008
 Received By:
 Date Printed: 12/10/2008

Receipt Verification

| | YES | NO | NA | |
|--|-----|----|----|---|
| 1) Does this project require special handling procedures such as CLP protocol? | | | X | |
| 2) Are the custody seals on the cooler intact? | | | X | |
| 3) Are the custody seals on the sample containers intact? | | | X | |
| 4) Is there a Chain of Custody or other directive shipping papers present? | X | | | |
| 5) Is the Chain of Custody complete? | X | | | |
| 6) Is the Chain of Custody in agreement with the samples received? | | X | | |
| 7) Is there enough sample for all requested analyses? | X | | | |
| 8) Are all samples within holding times for requested analyses? | X | | | |
| 9) Were all sample containers received intact? | X | | | |
| 10) Are the temperature blanks present? | | | | X |
| 11) 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

The following items were not in agreement: sampleid. The sample containers have an ID of "BMO-2008-8M" and the COC is "BMO-2008-8B". The sample ID was entered per the chain of custody.

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

The client was not contacted.

Shipping Containers

| Cooler Id | Temp (°C) | Rad (µR/hr) |
|-----------|-----------|-------------|
| NA7510 | 1.2 | 15 |
| | | |
| | | |

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

Notes

Hydro Geo Chem, Inc.
 8720002.2

ACZ Project ID: L73444
 Date Received: 12/10/2008
 Received By:

Sample Container Preservation

| SAMPLE | CLIENT ID | R < 2 | G < 2 | BK < 2 | Y < 2 | YG < 2 | B < 2 | O < 2 | T > 12 | N/A | RAD | ID |
|-----------|-------------|-------|-------|--------|-------|--------|-------|-------|--------|-----|-----|--------------------------|
| L73444-01 | BMO-2008-8B | | Y | | | | | | | | | <input type="checkbox"/> |

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____



Laboratories, Inc.

L73444

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

ANALYSES REQUESTED (attach list or use quote number)

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

Table with columns for analyses requested, including FMCQB-GW.

Main data table with columns: SAMPLE IDENTIFICATION, DATE:TIME, Matrix, # of Containers, and analysis results.

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.

Table for RELINQUISHED BY, DATE:TIME, RECEIVED BY, DATE:TIME with handwritten entries.

January 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: L73402

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on December 06, 2008. This project has been assigned to ACZ's project number, L73402. 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 L73402. 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 February 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.



Scott Habermehl has reviewed
and approved this report.



Hydro Geo Chem, Inc.

Project ID: 8720002.2
Sample ID: BMO-2008-8B

ACZ Sample ID: **L73402-01**
Date Sampled: 12/05/08 14:05
Date Received: 12/06/08
Sample Matrix: Ground Water

Metals Analysis

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|----------------------|------------|--------|------|----|-------|-----|-----|----------------|---------|
| Calcium, dissolved | M200.7 ICP | 529 | | | mg/L | 0.2 | 1 | 12/10/08 17:37 | ear |
| Magnesium, dissolved | M200.7 ICP | 195 | | | mg/L | 0.4 | 2 | 12/11/08 23:42 | ear |
| Potassium, dissolved | M200.7 ICP | 14.4 | | | mg/L | 0.3 | 2 | 12/10/08 17:37 | ear |
| Sodium, dissolved | M200.7 ICP | 46.4 | | * | mg/L | 0.3 | 2 | 12/10/08 17:37 | ear |

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------------------------------|--------------------------------------|--------|------|----|-------|------|------|----------------|---------|
| Alkalinity as CaCO3 | SM2320B - Titration | | | | | | | | |
| Bicarbonate as CaCO3 | | 630 | | | mg/L | 2 | 20 | 12/10/08 0:00 | gkj |
| Carbonate as CaCO3 | | | U | | mg/L | 2 | 20 | 12/10/08 0:00 | gkj |
| Hydroxide as CaCO3 | | | U | | mg/L | 2 | 20 | 12/10/08 0:00 | gkj |
| Total Alkalinity | | 630 | | | mg/L | 2 | 20 | 12/10/08 0:00 | gkj |
| Cation-Anion Balance | Calculation | | | | | | | | |
| Cation-Anion Balance | | -9.8 | | | % | | | 01/05/09 0:00 | calc |
| Sum of Anions | | 54.7 | | | meq/L | 0.1 | 0.5 | 01/05/09 0:00 | calc |
| Sum of Cations | | 44.9 | | | meq/L | 0.1 | 0.5 | 01/05/09 0:00 | calc |
| Chloride | M300.0 - Ion Chromatography | 80 | B | * | mg/L | 30 | 100 | 12/23/08 0:45 | aml |
| Fluoride | SM4500F-C | 0.1 | BH | * | mg/L | 0.1 | 0.5 | 01/03/09 12:37 | kah |
| Nitrate as N, dissolved | Calculation: NO3NO2 minus NO2 | 2.91 | | | mg/L | 0.02 | 0.1 | 01/05/09 0:00 | calc |
| Nitrate/Nitrite as N, dissolved | M353.2 - Automated Cadmium Reduction | 2.93 | | | mg/L | 0.02 | 0.1 | 12/06/08 13:09 | pjb |
| Nitrite as N, dissolved | M353.2 - Automated Cadmium Reduction | 0.02 | B | * | mg/L | 0.01 | 0.05 | 12/06/08 13:09 | pjb |
| Residue, Filterable (TDS) @180C | SM2540C | 3080 | | | mg/L | 10 | 20 | 12/09/08 11:29 | abm |
| Sulfate | 300.0 - Ion Chromatography | 1890 | | | mg/L | 30 | 100 | 12/23/08 0:45 | aml |
| TDS (calculated) | Calculation | 3150 | | | mg/L | 10 | 50 | 01/05/09 0:00 | calc |
| TDS (ratio - measured/calculated) | Calculation | 0.98 | | | | | | 01/05/09 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.

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: **L73402**

Alkalinity as CaCO3 SM2320B - Titration

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG256983 | | | | | | | | | | | | | |
| WG256983PBW1 | PBW | 12/09/08 18:26 | | | | 8.1 | mg/L | | -20 | 20 | | | |
| WG256983LCSW2 | LCSW | 12/09/08 18:36 | WC081209-1 | 820.0001 | | 796.4 | mg/L | 97.1 | 90 | 110 | | | |
| WG256983PBW2 | PBW | 12/09/08 20:11 | | | | 2.9 | mg/L | | -20 | 20 | | | |
| WG256983LCSW5 | LCSW | 12/09/08 20:22 | WC081209-1 | 820.0001 | | 807.8 | mg/L | 98.5 | 90 | 110 | | | |
| WG256983PBW3 | PBW | 12/09/08 22:17 | | | | U | mg/L | | -20 | 20 | | | |
| WG256983LCSW8 | LCSW | 12/09/08 22:27 | WC081209-1 | 820.0001 | | 804 | mg/L | 98 | 90 | 110 | | | |
| L73404-04DUP | DUP | 12/10/08 1:58 | | | 60 | 59.3 | mg/L | | | | 1.2 | 20 | |
| WG256983PBW4 | PBW | 12/10/08 2:04 | | | | U | mg/L | | -20 | 20 | | | |
| WG256983LCSW11 | LCSW | 12/10/08 2:16 | WC081209-1 | 820.0001 | | 825.2 | mg/L | 100.6 | 90 | 110 | | | |
| WG256983LCSW14 | LCSW | 12/10/08 5:26 | WC081209-1 | 820.0001 | | 837.2 | 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 |
|-----------------|------|----------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG257027 | | | | | | | | | | | | | |
| WG257027ICV | ICV | 12/10/08 16:53 | II081119-1 | 100 | | 100.18 | mg/L | 100.2 | 95 | 105 | | | |
| WG257027ICB | ICB | 12/10/08 16:57 | | | | U | mg/L | | -0.6 | 0.6 | | | |
| WG257027LFB | LFB | 12/10/08 17:10 | II081125-2 | 67.97008 | | 72.68 | mg/L | 106.9 | 85 | 115 | | | |
| L73296-01AS | AS | 12/10/08 17:23 | II081125-2 | 67.97008 | 3.5 | 75.8 | mg/L | 106.4 | 85 | 115 | | | |
| L73296-01ASD | ASD | 12/10/08 17:27 | II081125-2 | 67.97008 | 3.5 | 75.91 | mg/L | 106.5 | 85 | 115 | 0.15 | 20 | |

Chloride M300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|-------|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG257563 | | | | | | | | | | | | | |
| WG257563ICV | ICV | 12/19/08 17:04 | WI081031-2 | 19.94 | | 20.13 | mg/L | 101 | 90 | 110 | | | |
| WG257563ICB | ICB | 12/19/08 17:22 | | | | .5 | mg/L | | -1.5 | 1.5 | | | |
| WG257563ICV1 | ICV | 12/22/08 16:36 | WI081031-2 | 19.94 | | 20.24 | mg/L | 101.5 | 90 | 110 | | | |
| WG257563ICB1 | ICB | 12/22/08 16:54 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG257563LFB | LFB | 12/22/08 17:13 | WI081125-2 | 30 | | 28.5 | mg/L | 95 | 90 | 110 | | | |
| L73284-02AS | AS | 12/22/08 22:02 | WI081125-2 | 150 | 269 | 397.7 | mg/L | 85.8 | 90 | 110 | | | M2 |
| L73284-02DUP | DUP | 12/22/08 22:20 | | | 269 | 272.2 | mg/L | | | | 1.2 | 20 | |

Fluoride SM4500F-C

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG257959 | | | | | | | | | | | | | |
| WG257959ICV | ICV | 01/03/09 12:11 | WC081230-1 | 2 | | 1.95 | mg/L | 97.5 | 95 | 105 | | | |
| WG257959ICB | ICB | 01/03/09 12:18 | | | | U | mg/L | | -0.3 | 0.3 | | | |
| WG257959LFB1 | LFB | 01/03/09 12:24 | WC081121-5 | 5 | | 5.03 | mg/L | 100.6 | 90 | 110 | | | |
| L73393-01AS | AS | 01/03/09 12:31 | WC081121-5 | 5 | .7 | 5.42 | mg/L | 94.4 | 90 | 110 | | | |
| L73393-01DUP | DUP | 01/03/09 12:34 | | | .7 | .66 | mg/L | | | | 5.9 | 20 | RA |
| WG257959LFB2 | LFB | 01/03/09 14:44 | WC081121-5 | 5 | | 5.03 | mg/L | 100.6 | 90 | 110 | | | |

Hydro Geo Chem, Inc.
 Project ID: 8720002.2

ACZ Project ID: **L73402**

Magnesium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG257099 | | | | | | | | | | | | | |
| WG257099ICV | ICV | 12/11/08 23:01 | II081119-1 | 100 | | 97.1 | mg/L | 97.1 | 95 | 105 | | | |
| WG257099ICB | ICB | 12/11/08 23:05 | | | | U | mg/L | | -0.6 | 0.6 | | | |
| WG257099LFB | LFB | 12/11/08 23:20 | II081125-2 | 49.96908 | | 49.04 | mg/L | 98.1 | 85 | 115 | | | |
| L73404-08AS | AS | 12/11/08 23:57 | II081125-2 | 49.96908 | 60 | 107.56 | mg/L | 95.2 | 85 | 115 | | | |
| L73404-08ASD | ASD | 12/12/08 0:00 | II081125-2 | 49.96908 | 60 | 114.71 | mg/L | 109.5 | 85 | 115 | 6.43 | 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 |
|-----------------|------|----------------|------------|-------|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG256846 | | | | | | | | | | | | | |
| WG256846ICV | ICV | 12/06/08 13:00 | WI080916-5 | 2.416 | | 2.391 | mg/L | 99 | 90 | 110 | | | |
| WG256846ICB | ICB | 12/06/08 13:01 | | | | U | mg/L | | -0.06 | 0.06 | | | |
| WG256846LFB | LFB | 12/06/08 13:05 | WI080913-4 | 2 | | 1.977 | mg/L | 98.9 | 90 | 110 | | | |
| L73402-01DUP | DUP | 12/06/08 13:10 | | | 2.93 | 2.941 | mg/L | | | | 0.4 | 20 | |
| WG256846ICV1 | ICV | 12/06/08 13:22 | WI080916-5 | 2.416 | | 2.388 | mg/L | 98.8 | 90 | 110 | | | |
| WG256846ICB1 | ICB | 12/06/08 13:23 | | | | U | mg/L | | -0.06 | 0.06 | | | |
| L73400-01AS | AS | 12/06/08 13:25 | WI080913-4 | 30 | 16.8 | 46.92 | mg/L | 100.4 | 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 |
|-----------------|------|----------------|------------|------|--------|-------|-------|------|-------|-------|------|-------|------|
| WG256846 | | | | | | | | | | | | | |
| WG256846ICV | ICV | 12/06/08 13:00 | WI080916-5 | .609 | | .609 | mg/L | 100 | 90 | 110 | | | |
| WG256846ICB | ICB | 12/06/08 13:01 | | | | U | mg/L | | -0.03 | 0.03 | | | |
| WG256846LFB | LFB | 12/06/08 13:05 | WI080913-4 | 1 | | .989 | mg/L | 98.9 | 90 | 110 | | | |
| L73400-01AS | AS | 12/06/08 13:08 | WI080913-4 | 1 | U | .996 | mg/L | 99.6 | 90 | 110 | | | |
| L73402-01DUP | DUP | 12/06/08 13:10 | | | .02 | .016 | mg/L | | | | 22.2 | 20 | RA |
| WG256846ICV1 | ICV | 12/06/08 13:22 | WI080916-5 | .609 | | .621 | mg/L | 102 | 90 | 110 | | | |
| WG256846ICB1 | ICB | 12/06/08 13:23 | | | | U | mg/L | | -0.03 | 0.03 | | | |

Potassium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG257027 | | | | | | | | | | | | | |
| WG257027ICV | ICV | 12/10/08 16:53 | II081119-1 | 20 | | 19.68 | mg/L | 98.4 | 95 | 105 | | | |
| WG257027ICB | ICB | 12/10/08 16:57 | | | | U | mg/L | | -0.9 | 0.9 | | | |
| WG257027LFB | LFB | 12/10/08 17:10 | II081125-2 | 99.76186 | | 102.06 | mg/L | 102.3 | 85 | 115 | | | |
| L73296-01AS | AS | 12/10/08 17:23 | II081125-2 | 99.76186 | U | 103.08 | mg/L | 103.3 | 85 | 115 | | | |
| L73296-01ASD | ASD | 12/10/08 17:27 | II081125-2 | 99.76186 | U | 103.26 | mg/L | 103.5 | 85 | 115 | 0.17 | 20 | |

Residue, Filterable (TDS) @180C SM2540C

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|----------|-----|--------|-------|-------|-----|-------|-------|-----|-------|------|
| WG256945 | | | | | | | | | | | | | |
| WG256945PBW | PBW | 12/09/08 11:25 | | | | U | mg/L | | -20 | 20 | | | |
| WG256945LCSW | LCSW | 12/09/08 11:25 | PCN31030 | 260 | | 260 | mg/L | 100 | 80 | 120 | | | |
| L73412-01DUP | DUP | 12/09/08 11:35 | | | 700 | 712 | mg/L | | | | 1.7 | 20 | |

Hydro Geo Chem, Inc.
 Project ID: 8720002.2

ACZ Project ID: **L73402**

Sodium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG257027 | | | | | | | | | | | | | |
| WG257027ICV | ICV | 12/10/08 16:53 | II081119-1 | 100 | | 100.92 | mg/L | 100.9 | 95 | 105 | | | |
| WG257027ICB | ICB | 12/10/08 16:57 | | | | U | mg/L | | -0.9 | 0.9 | | | |
| WG257027LFB | LFB | 12/10/08 17:10 | II081125-2 | 98.21624 | | 100.73 | mg/L | 102.6 | 85 | 115 | | | |
| L73296-01AS | AS | 12/10/08 17:23 | II081125-2 | 98.21624 | 668 | 701.21 | mg/L | 33.8 | 85 | 115 | | | M3 |
| L73296-01ASD | ASD | 12/10/08 17:27 | II081125-2 | 98.21624 | 668 | 702.1 | mg/L | 34.7 | 85 | 115 | 0.13 | 20 | M3 |

Sulfate 300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|-----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG257563 | | | | | | | | | | | | | |
| WG257563ICV | ICV | 12/19/08 17:04 | WI081031-2 | 50 | | 50.64 | mg/L | 101.3 | 90 | 110 | | | |
| WG257563ICB | ICB | 12/19/08 17:22 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG257563CV1 | ICV | 12/22/08 16:36 | WI081031-2 | 50 | | 52.24 | mg/L | 104.5 | 90 | 110 | | | |
| WG257563CB1 | ICB | 12/22/08 16:54 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG257563LFB | LFB | 12/22/08 17:13 | WI081125-2 | 30 | | 30.59 | mg/L | 102 | 90 | 110 | | | |
| L73284-02AS | AS | 12/22/08 22:02 | WI081125-2 | 150 | 57 | 192.9 | mg/L | 90.6 | 90 | 110 | | | |
| L73284-02DUP | DUP | 12/22/08 22:20 | | | 57 | 59.5 | mg/L | | | | 4.3 | 20 | |

Hydro Geo Chem, Inc.

ACZ Project ID: **L73402**

| ACZ ID | WORKNUM | PARAMETER | METHOD | QUAL | DESCRIPTION |
|-----------|-------------------------|--------------------------------------|-----------------------------|---|---|
| L73402-01 | WG257027 | Sodium, dissolved | M200.7 ICP | M3 | The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable. |
| | WG257563 | Chloride | M300.0 - Ion Chromatography | DC | Sample required dilution. Non-target analyte exceeded calibration range. |
| | | | M300.0 - Ion Chromatography | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| | WG257959 | Fluoride | SM4500F-C | H1 | Sample analysis performed past holding time. |
| SM4500F-C | | | RA | Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL). | |
| WG256846 | 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). | |

Hydro Geo Chem, Inc.

ACZ Project ID: **L73402**

No certification qualifiers associated with this analysis

Hydro Geo Chem, Inc.
 8720002.2

ACZ Project ID: L73402
 Date Received: 12/6/2008
 Received By:
 Date Printed: 12/6/2008

Receipt Verification

| | YES | NO | NA |
|--|-----|----|----|
| 1) Does this project require special handling procedures such as CLP protocol? | | | X |
| 2) Are the custody seals on the cooler intact? | | | X |
| 3) Are the custody seals on the sample containers intact? | | | X |
| 4) Is there a Chain of Custody or other directive shipping papers present? | X | | |
| 5) Is the Chain of Custody complete? | X | | |
| 6) Is the Chain of Custody in agreement with the samples received? | X | | |
| 7) Is there enough sample for all requested analyses? | X | | |
| 8) Are all samples within holding times for requested analyses? | X | | |
| 9) Were all sample containers received intact? | X | | |
| 10) Are the temperature blanks present? | | | X |
| 11) 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) |
|-----------|-----------|-------------|
| NA7502 | 3.6 | 14 |
| | | |
| | | |

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

Notes

Hydro Geo Chem, Inc.
 8720002.2

ACZ Project ID: L73402
 Date Received: 12/6/2008
 Received By:

Sample Container Preservation

| SAMPLE | CLIENT ID | R < 2 | G < 2 | BK < 2 | Y < 2 | YG < 2 | B < 2 | O < 2 | T > 12 | N/A | RAD | ID |
|-----------|-------------|-------|-------|--------|-------|--------|-------|-------|--------|-----|-----|--------------------------|
| L73402-01 | BMO-2008-8B | | Y | | | | | | | | | <input type="checkbox"/> |

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____



Laboratories, Inc.

L73402

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: Sim Norris
Company: HGC, Inc

E-mail: simn@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

ANALYSES REQUESTED (attach list or use quote number)

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

Table with columns for # of Containers, FMCQB-GW, and multiple empty columns for analysis results.

Table with columns: SAMPLE IDENTIFICATION, DATE:TIME, Matrix. Row 1: BMO-2008-8B, 12/05/08:14:05, GW.

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

REMARKS/ SAMPLE DISCLOSURES

Empty box for remarks and disclosures.

PAGE 1 of 1

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

RELINQUISHED BY: Travis Taylor DATE:TIME: 12/05/08:1515 RECEIVED BY: [Signature] DATE:TIME: 12-10-08 11:13

January 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: L73393

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on December 05, 2008. This project has been assigned to ACZ's project number, L73393. 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 L73393. 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 February 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.



Scott Habermehl has reviewed
and approved this report.



Hydro Geo Chem, Inc.

Project ID: 8720002.2
Sample ID: BMO-2008-13M

ACZ Sample ID: **L73393-01**
Date Sampled: 12/03/08 15:45
Date Received: 12/05/08
Sample Matrix: Ground Water

Metals Analysis

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|----------------------|------------|--------|------|----|-------|-----|-----|---------------|---------|
| Calcium, dissolved | M200.7 ICP | 35.1 | | | mg/L | 0.2 | 1 | 12/09/08 2:19 | aeH |
| Magnesium, dissolved | M200.7 ICP | 13.2 | | | mg/L | 0.2 | 1 | 12/09/08 2:19 | aeH |
| Potassium, dissolved | M200.7 ICP | 3.4 | | | mg/L | 0.3 | 2 | 12/09/08 2:19 | aeH |
| Sodium, dissolved | M200.7 ICP | 286 | | | mg/L | 0.3 | 2 | 12/09/08 2:19 | aeH |

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------------------------------|--------------------------------------|--------|------|----|-------|------|------|----------------|---------|
| Alkalinity as CaCO3 | SM2320B - Titration | | | | | | | | |
| Bicarbonate as CaCO3 | | 259 | | | mg/L | 2 | 20 | 12/10/08 0:00 | gkj |
| Carbonate as CaCO3 | | 3 | B | | mg/L | 2 | 20 | 12/10/08 0:00 | gkj |
| Hydroxide as CaCO3 | | | U | | mg/L | 2 | 20 | 12/10/08 0:00 | gkj |
| Total Alkalinity | | 262 | | | mg/L | 2 | 20 | 12/10/08 0:00 | gkj |
| Cation-Anion Balance | Calculation | | | | | | | | |
| Cation-Anion Balance | | -2.2 | | | % | | | 01/05/09 0:00 | calc |
| Sum of Anions | | 16.2 | | | meq/L | 0.1 | 0.5 | 01/05/09 0:00 | calc |
| Sum of Cations | | 15.5 | | | meq/L | 0.1 | 0.5 | 01/05/09 0:00 | calc |
| Chloride | M300.0 - Ion Chromatography | 20 | B | * | mg/L | 5 | 30 | 12/23/08 0:27 | aml |
| Fluoride | SM4500F-C | 0.7 | H | * | mg/L | 0.1 | 0.5 | 01/03/09 12:27 | kah |
| Nitrate as N, dissolved | Calculation: NO3NO2 minus NO2 | 0.02 | B | | mg/L | 0.02 | 0.1 | 01/05/09 0:00 | calc |
| Nitrate/Nitrite as N, dissolved | M353.2 - Automated Cadmium Reduction | 0.02 | HB | * | mg/L | 0.02 | 0.1 | 12/05/08 19:03 | pjb |
| Nitrite as N, dissolved | M353.2 - Automated Cadmium Reduction | | HU | * | mg/L | 0.01 | 0.05 | 12/05/08 19:03 | pjb |
| Residue, Filterable (TDS) @180C | SM2540C | 970 | | | mg/L | 10 | 20 | 12/08/08 16:23 | abm |
| Sulfate | 300.0 - Ion Chromatography | 494 | | | mg/L | 5 | 30 | 12/23/08 0:27 | aml |
| TDS (calculated) | Calculation | 1010 | | | mg/L | 10 | 50 | 01/05/09 0:00 | calc |
| TDS (ratio - measured/calculated) | Calculation | 0.96 | | | | | | 01/05/09 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.

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: L73393

Alkalinity as CaCO3 SM2320B - Titration

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG256983 | | | | | | | | | | | | | |
| WG256983PBW1 | PBW | 12/09/08 18:26 | | | | 8.1 | mg/L | | -20 | 20 | | | |
| WG256983LCSW2 | LCSW | 12/09/08 18:36 | WC081209-1 | 820.0001 | | 796.4 | mg/L | 97.1 | 90 | 110 | | | |
| WG256983PBW2 | PBW | 12/09/08 20:11 | | | | 2.9 | mg/L | | -20 | 20 | | | |
| WG256983LCSW5 | LCSW | 12/09/08 20:22 | WC081209-1 | 820.0001 | | 807.8 | mg/L | 98.5 | 90 | 110 | | | |
| WG256983PBW3 | PBW | 12/09/08 22:17 | | | | U | mg/L | | -20 | 20 | | | |
| WG256983LCSW8 | LCSW | 12/09/08 22:27 | WC081209-1 | 820.0001 | | 804 | mg/L | 98 | 90 | 110 | | | |
| L73404-04DUP | DUP | 12/10/08 1:58 | | | 60 | 59.3 | mg/L | | | | 1.2 | 20 | |
| WG256983PBW4 | PBW | 12/10/08 2:04 | | | | U | mg/L | | -20 | 20 | | | |
| WG256983LCSW11 | LCSW | 12/10/08 2:16 | WC081209-1 | 820.0001 | | 825.2 | mg/L | 100.6 | 90 | 110 | | | |
| WG256983LCSW14 | LCSW | 12/10/08 5:26 | WC081209-1 | 820.0001 | | 837.2 | 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 |
|-----------------|------|---------------|------------|----------|--------|-------|-------|------|-------|-------|------|-------|------|
| WG256907 | | | | | | | | | | | | | |
| WG256907ICV | ICV | 12/09/08 0:37 | II081119-1 | 100 | | 95.13 | mg/L | 95.1 | 95 | 105 | | | |
| WG256907ICB | ICB | 12/09/08 0:40 | | | | U | mg/L | | -0.6 | 0.6 | | | |
| WG256907LFB | LFB | 12/09/08 0:53 | II081125-2 | 67.97008 | | 65.94 | mg/L | 97 | 85 | 115 | | | |
| L73379-02AS | AS | 12/09/08 1:46 | II081125-2 | 67.97008 | 1.4 | 68.95 | mg/L | 99.4 | 85 | 115 | | | |
| L73379-02ASD | ASD | 12/09/08 1:49 | II081125-2 | 67.97008 | 1.4 | 68.91 | mg/L | 99.3 | 85 | 115 | 0.06 | 20 | |

Chloride M300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|-------|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG257563 | | | | | | | | | | | | | |
| WG257563ICV | ICV | 12/19/08 17:04 | WI081031-2 | 19.94 | | 20.13 | mg/L | 101 | 90 | 110 | | | |
| WG257563ICB | ICB | 12/19/08 17:22 | | | | .5 | mg/L | | -1.5 | 1.5 | | | |
| WG257563ICV1 | ICV | 12/22/08 16:36 | WI081031-2 | 19.94 | | 20.24 | mg/L | 101.5 | 90 | 110 | | | |
| WG257563ICB1 | ICB | 12/22/08 16:54 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG257563LFB | LFB | 12/22/08 17:13 | WI081125-2 | 30 | | 28.5 | mg/L | 95 | 90 | 110 | | | |
| L73284-02AS | AS | 12/22/08 22:02 | WI081125-2 | 150 | 269 | 397.7 | mg/L | 85.8 | 90 | 110 | | | M2 |
| L73284-02DUP | DUP | 12/22/08 22:20 | | | 269 | 272.2 | mg/L | | | | 1.2 | 20 | |

Fluoride SM4500F-C

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG257959 | | | | | | | | | | | | | |
| WG257959ICV | ICV | 01/03/09 12:11 | WC081230-1 | 2 | | 1.95 | mg/L | 97.5 | 95 | 105 | | | |
| WG257959ICB | ICB | 01/03/09 12:18 | | | | U | mg/L | | -0.3 | 0.3 | | | |
| WG257959LFB1 | LFB | 01/03/09 12:24 | WC081121-5 | 5 | | 5.03 | mg/L | 100.6 | 90 | 110 | | | |
| L73393-01AS | AS | 01/03/09 12:31 | WC081121-5 | 5 | .7 | 5.42 | mg/L | 94.4 | 90 | 110 | | | |
| L73393-01DUP | DUP | 01/03/09 12:34 | | | .7 | .66 | mg/L | | | | 5.9 | 20 | RA |
| WG257959LFB2 | LFB | 01/03/09 14:44 | WC081121-5 | 5 | | 5.03 | mg/L | 100.6 | 90 | 110 | | | |

Hydro Geo Chem, Inc.
 Project ID: 8720002.2

ACZ Project ID: **L73393**

Magnesium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|---------------|------------|----------|--------|-------|-------|------|-------|-------|------|-------|------|
| WG256907 | | | | | | | | | | | | | |
| WG256907ICV | ICV | 12/09/08 0:37 | II081119-1 | 100 | | 96.54 | mg/L | 96.5 | 95 | 105 | | | |
| WG256907ICB | ICB | 12/09/08 0:40 | | | | U | mg/L | | -0.6 | 0.6 | | | |
| WG256907LFB | LFB | 12/09/08 0:53 | II081125-2 | 49.96908 | | 48.84 | mg/L | 97.7 | 85 | 115 | | | |
| L73379-02AS | AS | 12/09/08 1:46 | II081125-2 | 49.96908 | 1.8 | 51.49 | mg/L | 99.4 | 85 | 115 | | | |
| L73379-02ASD | ASD | 12/09/08 1:49 | II081125-2 | 49.96908 | 1.8 | 51.26 | mg/L | 99 | 85 | 115 | 0.45 | 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 |
|-----------------|------|----------------|------------|-------|--------|-------|-------|------|-------|-------|-----|-------|------|
| WG256833 | | | | | | | | | | | | | |
| WG256833ICV | ICV | 12/05/08 18:20 | WI080916-5 | 2.416 | | 2.347 | mg/L | 97.1 | 90 | 110 | | | |
| WG256833ICB | ICB | 12/05/08 18:21 | | | | U | mg/L | | -0.06 | 0.06 | | | |
| WG256833LFB | LFB | 12/05/08 18:26 | WI080913-4 | 2 | | 1.958 | mg/L | 97.9 | 90 | 110 | | | |
| L73338-01AS | AS | 12/05/08 19:09 | WI080913-4 | 10 | 4 | 13.98 | mg/L | 99.8 | 90 | 110 | | | |
| L73373-01DUP | DUP | 12/05/08 19:16 | | | 14.1 | 14.17 | mg/L | | | | 0.5 | 20 | |

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 |
|-----------------|------|----------------|------------|------|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG256833 | | | | | | | | | | | | | |
| WG256833ICV | ICV | 12/05/08 18:20 | WI080916-5 | .609 | | .606 | mg/L | 99.5 | 90 | 110 | | | |
| WG256833ICB | ICB | 12/05/08 18:21 | | | | U | mg/L | | -0.03 | 0.03 | | | |
| WG256833LFB | LFB | 12/05/08 18:26 | WI080913-4 | 1 | | .989 | mg/L | 98.9 | 90 | 110 | | | |
| L73338-01AS | AS | 12/05/08 18:49 | WI080913-4 | 1 | .05 | 1.065 | mg/L | 101.5 | 90 | 110 | | | |
| L73373-01DUP | DUP | 12/05/08 18:52 | | | .38 | .381 | mg/L | | | | 0.3 | 20 | |

Potassium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|---------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG256907 | | | | | | | | | | | | | |
| WG256907ICV | ICV | 12/09/08 0:37 | II081119-1 | 20 | | 19.76 | mg/L | 98.8 | 95 | 105 | | | |
| WG256907ICB | ICB | 12/09/08 0:40 | | | | U | mg/L | | -0.9 | 0.9 | | | |
| WG256907LFB | LFB | 12/09/08 0:53 | II081125-2 | 99.76186 | | 99.7 | mg/L | 99.9 | 85 | 115 | | | |
| L73379-02AS | AS | 12/09/08 1:46 | II081125-2 | 99.76186 | U | 102.56 | mg/L | 102.8 | 85 | 115 | | | |
| L73379-02ASD | ASD | 12/09/08 1:49 | II081125-2 | 99.76186 | U | 102.24 | mg/L | 102.5 | 85 | 115 | 0.31 | 20 | |

Residue, Filterable (TDS) @180C SM2540C

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|----------|-----|--------|-------|-------|------|-------|-------|-----|-------|------|
| WG256921 | | | | | | | | | | | | | |
| WG256921PBW | PBW | 12/08/08 16:10 | | | | U | mg/L | | -20 | 20 | | | |
| WG256921LCSW | LCSW | 12/08/08 16:10 | PCN31030 | 260 | | 244 | mg/L | 93.8 | 80 | 120 | | | |
| L73407-04DUP | DUP | 12/08/08 16:29 | | | 1280 | 1288 | mg/L | | | | 0.6 | 20 | |

Hydro Geo Chem, Inc.
 Project ID: 8720002.2

ACZ Project ID: **L73393**

Sodium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|---------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG256907 | | | | | | | | | | | | | |
| WG256907ICV | ICV | 12/09/08 0:37 | II081119-1 | 100 | | 99.2 | mg/L | 99.2 | 95 | 105 | | | |
| WG256907ICV | ICV | 12/09/08 0:37 | II081119-1 | 100 | | 98.16 | mg/L | 98.2 | 95 | 105 | | | |
| WG256907ICB | ICB | 12/09/08 0:40 | | | | U | mg/L | | -6 | 6 | | | |
| WG256907ICB | ICB | 12/09/08 0:40 | | | | U | mg/L | | -0.9 | 0.9 | | | |
| WG256907LFB | LFB | 12/09/08 0:53 | II081125-2 | 98.21624 | | 96.6 | mg/L | 98.4 | 85 | 115 | | | |
| WG256907LFB | LFB | 12/09/08 0:53 | II081125-2 | 98.21624 | | 97.81 | mg/L | 99.6 | 85 | 115 | | | |
| L73379-02AS | AS | 12/09/08 1:46 | II081125-2 | 98.21624 | 200 | 299.86 | mg/L | 101.7 | 85 | 115 | | | |
| L73379-02ASD | ASD | 12/09/08 1:49 | II081125-2 | 98.21624 | 200 | 294.98 | mg/L | 96.7 | 85 | 115 | 1.64 | 20 | |

Sulfate 300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|-----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG257563 | | | | | | | | | | | | | |
| WG257563ICV | ICV | 12/19/08 17:04 | WI081031-2 | 50 | | 50.64 | mg/L | 101.3 | 90 | 110 | | | |
| WG257563ICB | ICB | 12/19/08 17:22 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG257563ICV1 | ICV | 12/22/08 16:36 | WI081031-2 | 50 | | 52.24 | mg/L | 104.5 | 90 | 110 | | | |
| WG257563ICB1 | ICB | 12/22/08 16:54 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG257563LFB | LFB | 12/22/08 17:13 | WI081125-2 | 30 | | 30.59 | mg/L | 102 | 90 | 110 | | | |
| L73284-02AS | AS | 12/22/08 22:02 | WI081125-2 | 150 | 57 | 192.9 | mg/L | 90.6 | 90 | 110 | | | |
| L73284-02DUP | DUP | 12/22/08 22:20 | | | 57 | 59.5 | mg/L | | | | 4.3 | 20 | |

Hydro Geo Chem, Inc.

ACZ Project ID: **L73393**

| ACZ ID | WORKNUM | PARAMETER | METHOD | QUAL | DESCRIPTION |
|-----------|----------|---------------------------------|--------------------------------------|------|---|
| L73393-01 | WG257563 | Chloride | M300.0 - Ion Chromatography | DC | Sample required dilution. Non-target analyte exceeded calibration range. |
| | | | M300.0 - Ion Chromatography | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| | WG257959 | Fluoride | SM4500F-C | H1 | Sample analysis performed past holding time. |
| | | | SM4500F-C | RA | Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL). |
| | WG256833 | Nitrate/Nitrite as N, dissolved | M353.2 - Automated Cadmium Reduction | HE | Analysis performed past holding time. Method holding time is less than or equal to 7 days and sample was received with less than half of the holding time remaining (refer to item C5 of ACZ's Terms & Conditions). |
| | | | | HE | Analysis performed past holding time. Method holding time is less than or equal to 7 days and sample was received with less than half of the holding time remaining (refer to item C5 of ACZ's Terms & Conditions). |
| | | Nitrite as N, dissolved | M353.2 - Automated Cadmium Reduction | HE | Analysis performed past holding time. Method holding time is less than or equal to 7 days and sample was received with less than half of the holding time remaining (refer to item C5 of ACZ's Terms & Conditions). |

Hydro Geo Chem, Inc.

ACZ Project ID: **L73393**

No certification qualifiers associated with this analysis

Hydro Geo Chem, Inc.
 8720002.2

ACZ Project ID: L73393
 Date Received: 12/5/2008
 Received By:
 Date Printed: 12/5/2008

Receipt Verification

| | YES | NO | NA |
|--|-----|----|----|
| 1) Does this project require special handling procedures such as CLP protocol? | | | X |
| 2) Are the custody seals on the cooler intact? | | | X |
| 3) Are the custody seals on the sample containers intact? | | | X |
| 4) Is there a Chain of Custody or other directive shipping papers present? | X | | |
| 5) Is the Chain of Custody complete? | X | | |
| 6) Is the Chain of Custody in agreement with the samples received? | X | | |
| 7) Is there enough sample for all requested analyses? | X | | |
| 8) Are all samples within holding times for requested analyses? | X | | |
| 9) Were all sample containers received intact? | X | | |
| 10) Are the temperature blanks present? | | | X |
| 11) 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) |
|-----------|-----------|-------------|
| NA7498 | 0.6 | 14 |
| | | |
| | | |

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

Notes

Hydro Geo Chem, Inc.
 8720002.2

ACZ Project ID: L73393
 Date Received: 12/5/2008
 Received By:

Sample Container Preservation

| SAMPLE | CLIENT ID | R < 2 | G < 2 | BK < 2 | Y < 2 | YG < 2 | B < 2 | O < 2 | T > 12 | N/A | RAD | ID |
|-----------|--------------|-------|-------|--------|-------|--------|-------|-------|--------|-----|-----|--------------------------|
| L73393-01 | BMO-2008-13M | | Y | | | | | | | | | <input type="checkbox"/> |

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____



Laboratories, Inc.

L73393

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

Copy of Report to:

Name: Sim Norris
Company: HGC, Inc.

E-mail: Simn@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

ANALYSES REQUESTED (attach list or use quote number)

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

Table with columns for Matrix, # of Containers, and various analysis codes (FMCQB-GW, etc.)

Table with columns: SAMPLE IDENTIFICATION, DATE:TIME, Matrix

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

REMARKS/ SAMPLE DISCLOSURES

Empty box for remarks and disclosures.

PAGE 1 of 1

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

Table with columns: RELINQUISHED BY, DATE:TIME, RECEIVED BY, DATE:TIME

December 15, 2008

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: 8720005.0

ACZ Project ID: L73159

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 20, 2008. This project has been assigned to ACZ's project number, L73159. 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 L73159. 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 15, 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.



Scott Habermehl has reviewed
and approved this report.



Hydro Geo Chem, Inc.Project ID: 8720005.0
Sample ID: SCHWARTZACZ Sample ID: **L73159-01**
Date Sampled: 11/19/08 10:35
Date Received: 11/20/08
Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 140 | | * | mg/L | 1 | 5 | 12/13/08 16:21 | aml |

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

Hydro Geo Chem, Inc.
 Project ID: 8720005.0

ACZ Project ID: **L73159**

Sulfate 300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----|--------|-------|-------|-------|-------|-------|------|-------|------|
| WG257019 | | | | | | | | | | | | | |
| WG257019ICV | ICV | 12/09/08 14:20 | WI081031-2 | 50 | | 50.51 | mg/L | 101 | 90 | 110 | | | |
| WG257019ICB | ICB | 12/09/08 14:38 | | | | .59 | mg/L | | -1.5 | 1.5 | | | |
| WG257019ICV1 | ICV | 12/10/08 11:43 | WI081031-2 | 50 | | 50.78 | mg/L | 101.6 | 90 | 110 | | | |
| WG257019ICB1 | ICB | 12/10/08 12:02 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG257019LFB | LFB | 12/10/08 12:20 | WI081125-2 | 30 | | 31.39 | mg/L | 104.6 | 90 | 110 | | | |
| L73120-04AS | AS | 12/10/08 17:09 | WI081125-2 | 30 | 1.3 | 32.6 | mg/L | 104.3 | 90 | 110 | | | |
| L73120-04DUP | DUP | 12/10/08 17:27 | | | 1.3 | 1.47 | mg/L | | | | 12.3 | 20 | RA |
| WG257019ICV2 | ICV | 12/12/08 3:06 | WI081031-2 | 50 | | 51.56 | mg/L | 103.1 | 90 | 110 | | | |
| WG257019ICB2 | ICB | 12/12/08 3:24 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG257019ICV3 | ICV | 12/13/08 14:27 | WI081031-2 | 50 | | 51.05 | mg/L | 102.1 | 90 | 110 | | | |
| WG257019ICB3 | ICB | 12/13/08 14:45 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG257019ICV4 | ICV | 12/13/08 15:27 | WI081031-2 | 50 | | 50.76 | mg/L | 101.5 | 90 | 110 | | | |
| WG257019ICB4 | ICB | 12/13/08 15:45 | | | | U | mg/L | | -1.5 | 1.5 | | | |

Hydro Geo Chem, Inc.

ACZ Project ID: **L73159**

| ACZ ID | WORKNUM | PARAMETER | METHOD | QUAL | DESCRIPTION |
|-----------|----------|-----------|----------------------------|------|---|
| L73159-01 | WG257019 | 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). |

Hydro Geo Chem, Inc.

ACZ Project ID: **L73159**

No certification qualifiers associated with this analysis

Hydro Geo Chem, Inc.
 8720005.0

ACZ Project ID: L73159
 Date Received: 11/20/2008
 Received By:
 Date Printed: 11/20/2008

Receipt Verification

| | YES | NO | NA |
|--|-----|----|----|
| 1) Does this project require special handling procedures such as CLP protocol? | | | X |
| 2) Are the custody seals on the cooler intact? | | | X |
| 3) Are the custody seals on the sample containers intact? | | | X |
| 4) Is there a Chain of Custody or other directive shipping papers present? | X | | |
| 5) Is the Chain of Custody complete? | X | | |
| 6) Is the Chain of Custody in agreement with the samples received? | X | | |
| 7) Is there enough sample for all requested analyses? | X | | |
| 8) Are all samples within holding times for requested analyses? | X | | |
| 9) Were all sample containers received intact? | X | | |
| 10) Are the temperature blanks present? | | | X |
| 11) 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) |
|-----------|-----------|-------------|
| NA7388 | 5.5 | 14 |
| | | |
| | | |

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

Notes

Hydro Geo Chem, Inc.
8720005.0

ACZ Project ID: L73159
 Date Received: 11/20/2008
 Received By:

Sample Container Preservation

| SAMPLE | CLIENT ID | R < 2 | G < 2 | BK < 2 | Y < 2 | YG < 2 | B < 2 | O < 2 | T > 12 | N/A | RAD | ID |
|-----------|-----------|-------|-------|--------|-------|--------|-------|-------|--------|-----|-----|--------------------------|
| L73159-01 | SCHWARTZ | | | | | | | | | X | | <input type="checkbox"/> |

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____



Laboratories, Inc.

L73159

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

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

Table with columns: Quote #, Project/PO #, Reporting state, Sampler's Name, Matrix, # of Containers, EPA 300.0, and multiple columns for analyses requested. Includes handwritten entries for Sulfate-Trend project and Schwartz sample.

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.

Table for Relinquished By and Received By with handwritten signatures and dates: Chad Murich, 11/19/08, WPL, 11-20-08 9:46.

December 04, 2008

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: L73158

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 20, 2008. This project has been assigned to ACZ's project number, L73158. Please reference this number in all future inquiries.

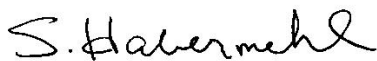
All analyses were performed according to ACZ's Quality Assurance Plan, version 12.0. The enclosed results relate only to the samples received under L73158. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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 04, 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.



Scott Habermehl has reviewed
and approved this report.



Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: TM-19A

ACZ Sample ID: **L73158-01**

Date Sampled: 11/18/08 15:45

Date Received: 11/20/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 66.3 | | | mg/L | 0.5 | 3 | 12/01/08 6:22 | ccp |

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

Hydro Geo Chem, Inc.

ACZ Project ID: **L73158**

Project ID: 8720002.2

Sulfate 300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG256474 | | | | | | | | | | | | | |
| WG256474ICV | ICV | 11/26/08 19:05 | WI081031-2 | 50 | | 51.23 | mg/L | 102.5 | 90 | 110 | | | |
| WG256474ICB | ICB | 11/26/08 19:23 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG256474ICV1 | ICV | 11/30/08 19:48 | WI081031-2 | 50 | | 50.45 | mg/L | 100.9 | 90 | 110 | | | |
| WG256474ICB1 | ICB | 11/30/08 20:06 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG256474LFB1 | LFB | 11/30/08 20:24 | WI081125-2 | 30 | | 28.18 | mg/L | 93.9 | 90 | 110 | | | |
| WG256474LFB2 | LFB | 12/01/08 5:10 | WI081125-2 | 30 | | 29 | mg/L | 96.7 | 90 | 110 | | | |
| L73036-03AS | AS | 12/01/08 5:46 | WI081125-2 | 30 | 27.6 | 55.3 | mg/L | 92.3 | 90 | 110 | | | |
| L73036-03DUP | DUP | 12/01/08 6:04 | | | 27.6 | 27.2 | mg/L | | | | 1.5 | 20 | |
| WG256474LFB1 | LFB | 12/01/08 12:46 | WI081125-2 | 30 | | 29.82 | mg/L | 99.4 | 90 | 110 | | | |

Hydro Geo Chem, Inc.

ACZ Project ID: **L73158**

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

No extended qualifiers associated with this analysis

Hydro Geo Chem, Inc.

ACZ Project ID: **L73158**

No certification qualifiers associated with this analysis

Hydro Geo Chem, Inc.
 8720002.2

ACZ Project ID: L73158
 Date Received: 11/20/2008
 Received By:
 Date Printed: 11/20/2008

Receipt Verification

| | YES | NO | NA |
|--|-----|----|----|
| 1) Does this project require special handling procedures such as CLP protocol? | | | X |
| 2) Are the custody seals on the cooler intact? | | | X |
| 3) Are the custody seals on the sample containers intact? | | | |
| 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) |
|-----------|-----------|-------------|
| NA7388 | 5.5 | 14 |
| | | |
| | | |

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

Notes

Hydro Geo Chem, Inc.
 8720002.2

ACZ Project ID: L73158
 Date Received: 11/20/2008
 Received By:

Sample Container Preservation

| SAMPLE | CLIENT ID | R < 2 | G < 2 | BK < 2 | Y < 2 | YG < 2 | B < 2 | O < 2 | T > 12 | N/A | RAD | ID |
|-----------|-----------|-------|-------|--------|-------|--------|-------|-------|--------|-----|-----|--------------------------|
| L73158-01 | TM-19A | | | | | | | | | X | | <input type="checkbox"/> |

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____



Laboratories, Inc.

L73158

CHAIN of CUSTODY

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

Report to:

| | |
|-------------------------------|-------------------------------|
| Name: DAN SIMPSON | Address: 51 W. WETMORE RD. |
| Company: HYDRO GEO CHEM, INC. | TUCSON, AZ 85705 |
| 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. |
| Company: HGC, INC. | TUCSON, AZ 85705 |
| 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 NO

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

| | | | | | | | | | | | | | | | | | | | | | | |
|---|-----------------|---------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Quote #: 504-IC | # of Containers | 504-IC EPA 300.0 | | | | | | | | | | | | | | | | | | | | |
| Project/PO #: 8720002.2 | | | | | | | | | | | | | | | | | | | | | | |
| Reporting state for compliance testing: AZ | | | | | | | | | | | | | | | | | | | | | | |
| Sampler's Name: Chad Munich | | | | | | | | | | | | | | | | | | | | | | |
| Are any samples NRC licensable material? No | | | | | | | | | | | | | | | | | | | | | | |

| SAMPLE IDENTIFICATION | DATE:TIME | Matrix | # of Containers | 504-IC EPA 300.0 | | | | | | | | | | | | | | | | |
|-----------------------|-----------------|--------|-----------------|-------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| TM-19A | 11/18/08 : 1545 | GW | 1 | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | |
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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 |
|--------------------------------|-----------------|--------------|---------------|
| Chad Munich <i>Chad Munich</i> | 11/19/08 : 1115 | <i>NPL</i> | 11-20-08 9:46 |
| | | | |
| | | | |

December 04, 2008

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: L73030

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 13, 2008. This project has been assigned to ACZ's project number, L73030. 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 L73030. 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 04, 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.



Scott Habermehl has reviewed
and approved this report.



Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: BMO-2008-01G

ACZ Sample ID: **L73030-01**

Date Sampled: 11/11/08 13:56

Date Received: 11/13/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 143 | | * | mg/L | 2 | 8 | 12/01/08 15:11 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: TM-03

ACZ Sample ID: **L73030-02**

Date Sampled: 11/12/08 08:40

Date Received: 11/13/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 128 | | * | mg/L | 2 | 8 | 12/01/08 15:29 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: GL-03

ACZ Sample ID: **L73030-03**

Date Sampled: 11/12/08 10:40

Date Received: 11/13/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 34.9 | | * | mg/L | 0.5 | 3 | 12/01/08 16:23 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.Project ID: 8720002.2
Sample ID: BMO-2008-11GACZ Sample ID: **L73030-04**
Date Sampled: 11/12/08 12:55
Date Received: 11/13/08
Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 13.9 | | * | mg/L | 0.5 | 3 | 12/01/08 4:51 | ccp |

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

Hydro Geo Chem, Inc.

ACZ Project ID: **L73030**

Project ID: 8720002.2

Sulfate 300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG256474 | | | | | | | | | | | | | |
| WG256474ICV | ICV | 11/26/08 19:05 | WI081031-2 | 50 | | 51.23 | mg/L | 102.5 | 90 | 110 | | | |
| WG256474ICB | ICB | 11/26/08 19:23 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG256474ICV1 | ICV | 11/30/08 19:48 | WI081031-2 | 50 | | 50.45 | mg/L | 100.9 | 90 | 110 | | | |
| WG256474ICB1 | ICB | 11/30/08 20:06 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG256474LFB1 | LFB | 11/30/08 20:24 | WI081125-2 | 30 | | 28.18 | mg/L | 93.9 | 90 | 110 | | | |
| L72918-09AS | AS | 12/01/08 1:14 | WI081125-2 | 30 | 54.4 | 80.69 | mg/L | 87.6 | 90 | 110 | | | M2 |
| L72918-09DUP | DUP | 12/01/08 1:32 | | | 54.4 | 53.41 | mg/L | | | | 1.8 | 20 | |
| WG256474LFB2 | LFB | 12/01/08 5:10 | WI081125-2 | 30 | | 29 | mg/L | 96.7 | 90 | 110 | | | |
| WG256474LFB1 | LFB | 12/01/08 12:46 | WI081125-2 | 30 | | 29.82 | mg/L | 99.4 | 90 | 110 | | | |

Hydro Geo Chem, Inc.

ACZ Project ID: **L73030**

| ACZ ID | WORKNUM | PARAMETER | METHOD | QUAL | DESCRIPTION |
|-----------|----------|-----------|----------------------------|------|---|
| L73030-01 | WG256474 | Sulfate | 300.0 - Ion Chromatography | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| L73030-02 | WG256474 | Sulfate | 300.0 - Ion Chromatography | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| L73030-03 | WG256474 | Sulfate | 300.0 - Ion Chromatography | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| L73030-04 | WG256474 | Sulfate | 300.0 - Ion Chromatography | 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: **L73030**

No certification qualifiers associated with this analysis

Hydro Geo Chem, Inc.
 8720002.2

ACZ Project ID: L73030
 Date Received: 11/13/2008
 Received By:
 Date Printed: 11/13/2008

Receipt Verification

| | YES | NO | NA |
|--|-----|----|----|
| 1) Does this project require special handling procedures such as CLP protocol? | | | X |
| 2) Are the custody seals on the cooler intact? | | | X |
| 3) Are the custody seals on the sample containers intact? | | | X |
| 4) Is there a Chain of Custody or other directive shipping papers present? | X | | |
| 5) Is the Chain of Custody complete? | X | | |
| 6) Is the Chain of Custody in agreement with the samples received? | X | | |
| 7) Is there enough sample for all requested analyses? | X | | |
| 8) Are all samples within holding times for requested analyses? | X | | |
| 9) Were all sample containers received intact? | X | | |
| 10) Are the temperature blanks present? | | | |
| 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) |
|-----------|-----------|-------------|
| NA7352 | 2.9 | 14 |
| | | |
| | | |

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

Notes

Hydro Geo Chem, Inc.
 8720002.2

ACZ Project ID: L73030
 Date Received: 11/13/2008
 Received By:

Sample Container Preservation

| SAMPLE | CLIENT ID | R < 2 | G < 2 | BK < 2 | Y < 2 | YG < 2 | B < 2 | O < 2 | T > 12 | N/A | RAD | ID |
|-----------|--------------|-------|-------|--------|-------|--------|-------|-------|--------|-----|-----|--------------------------|
| L73030-01 | BMO-2008-016 | | | | | | | | | X | | <input type="checkbox"/> |
| L73030-02 | TM-03 | | | | | | | | | X | | <input type="checkbox"/> |
| L73030-03 | GL-03 | | | | | | | | | X | | <input type="checkbox"/> |
| L73030-04 | BMO-2008-116 | | | | | | | | | X | | <input type="checkbox"/> |

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____



Laboratories, Inc.

L72030

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 [checked]
NO []

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO"

is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: FMCQB - GW
Project/PO #: 8720002.2
Reporting state for compliance testing: AZ
Sampler's Name: Chad Munich
Are any samples NRC licensable material? No

Table with columns: SAMPLE IDENTIFICATION, DATE:TIME, Matrix, # of Containers, EPA 300.0 SO4, and multiple empty columns for analysis results.

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

REMARKS/ SAMPLE DISCLOSURES

Empty box for remarks and disclosures.

PAGE 1 of

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

Table with columns: RELINQUISHED BY, DATE:TIME, RECEIVED BY, DATE:TIME. Includes signatures and dates.

December 04, 2008

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: L72918

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 07, 2008. This project has been assigned to ACZ's project number, L72918. Please reference this number in all future inquiries.

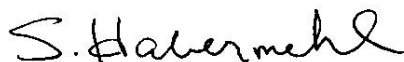
All analyses were performed according to ACZ's Quality Assurance Plan, version 12.0. The enclosed results relate only to the samples received under L72918. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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 04, 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.



Scott Habermehl has reviewed
and approved this report.



Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: BMO-2008-03B

ACZ Sample ID: **L72918-01**

Date Sampled: 11/04/08 10:40

Date Received: 11/07/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 179 | | | mg/L | 2 | 8 | 12/01/08 13:04 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2
Sample ID: EQB 110408

ACZ Sample ID: **L72918-02**
Date Sampled: 11/04/08 07:25
Date Received: 11/07/08
Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 0.7 | B | | mg/L | 0.5 | 3 | 11/30/08 22:13 | ccp |

Arizona license number: **AZ0102**

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: FB 110408

ACZ Sample ID: **L72918-03**

Date Sampled: 11/04/08 07:25

Date Received: 11/07/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | | U | | mg/L | 0.5 | 3 | 11/30/08 22:31 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.Project ID: 8720002.2
Sample ID: DUP 110408ACZ Sample ID: **L72918-04**
Date Sampled: 11/04/08 07:25
Date Received: 11/07/08
Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 177 | | | mg/L | 2 | 8 | 12/01/08 13:22 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: BMO-2008-06B

ACZ Sample ID: **L72918-05**

Date Sampled: 11/04/08 12:50

Date Received: 11/07/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 60.3 | | | mg/L | 0.5 | 3 | 11/30/08 23:07 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.Project ID: 8720002.2
Sample ID: BMO-2008-06MACZ Sample ID: **L72918-06**
Date Sampled: 11/04/08 14:40
Date Received: 11/07/08
Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 199 | | | mg/L | 2 | 8 | 12/01/08 13:40 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: TM-07

ACZ Sample ID: **L72918-07**

Date Sampled: 11/04/08 16:40

Date Received: 11/07/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 31.2 | | | mg/L | 0.5 | 3 | 12/01/08 0:20 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: TM-16

ACZ Sample ID: **L72918-08**

Date Sampled: 11/05/08 07:40

Date Received: 11/07/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 547 | | | mg/L | 5 | 30 | 12/01/08 13:58 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.Project ID: 8720002.2
Sample ID: BMO-2008-09MACZ Sample ID: **L72918-09**
Date Sampled: 11/05/08 11:40
Date Received: 11/07/08
Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 54.4 | | * | mg/L | 0.5 | 3 | 12/01/08 0:56 | ccp |

Arizona license number: **AZ0102**

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: BMO-2008-10GU

ACZ Sample ID: **L72918-10**

Date Sampled: 11/05/08 13:30

Date Received: 11/07/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 1890 | | * | mg/L | 10 | 50 | 12/01/08 14:16 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: BMO-2008-10GL

ACZ Sample ID: **L72918-11**

Date Sampled: 11/05/08 15:35

Date Received: 11/07/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 1290 | | * | mg/L | 10 | 50 | 12/01/08 2:09 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: BF-01

ACZ Sample ID: **L72918-12**

Date Sampled: 11/05/08 16:45

Date Received: 11/07/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 1490 | | * | mg/L | 30 | 100 | 12/01/08 14:34 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: BMO-2008-07M

ACZ Sample ID: **L72918-13**

Date Sampled: 11/06/08 08:35

Date Received: 11/07/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 34.5 | | * | mg/L | 0.5 | 3 | 12/01/08 2:45 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: TM-42

ACZ Sample ID: **L72918-14**

Date Sampled: 11/06/08 09:55

Date Received: 11/07/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 477 | | * | mg/L | 3 | 10 | 12/01/08 14:53 | ccp |

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

Hydro Geo Chem, Inc.
 Project ID: 8720002.2

ACZ Project ID: **L72918**

Sulfate 300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG256474 | | | | | | | | | | | | | |
| WG256474ICV | ICV | 11/26/08 19:05 | WI081031-2 | 50 | | 51.23 | mg/L | 102.5 | 90 | 110 | | | |
| WG256474ICB | ICB | 11/26/08 19:23 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG256474ICV1 | ICV | 11/30/08 19:48 | WI081031-2 | 50 | | 50.45 | mg/L | 100.9 | 90 | 110 | | | |
| WG256474ICB1 | ICB | 11/30/08 20:06 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG256474LFB1 | LFB | 11/30/08 20:24 | WI081125-2 | 30 | | 28.18 | mg/L | 93.9 | 90 | 110 | | | |
| L72824-02AS | AS | 11/30/08 21:01 | WI081125-2 | 30 | 18.4 | 45.66 | mg/L | 90.9 | 90 | 110 | | | |
| L72824-02DUP | DUP | 11/30/08 21:19 | | | 18.4 | 18.25 | mg/L | | | | 0.8 | 20 | |
| L72918-09AS | AS | 12/01/08 1:14 | WI081125-2 | 30 | 54.4 | 80.69 | mg/L | 87.6 | 90 | 110 | | | M2 |
| L72918-09DUP | DUP | 12/01/08 1:32 | | | 54.4 | 53.41 | mg/L | | | | 1.8 | 20 | |
| WG256474LFB2 | LFB | 12/01/08 5:10 | WI081125-2 | 30 | | 29 | mg/L | 96.7 | 90 | 110 | | | |
| WG256474LFB1 | LFB | 12/01/08 12:46 | WI081125-2 | 30 | | 29.82 | mg/L | 99.4 | 90 | 110 | | | |

Hydro Geo Chem, Inc.

ACZ Project ID: **L72918**

| ACZ ID | WORKNUM | PARAMETER | METHOD | QUAL | DESCRIPTION |
|-----------|----------|-----------|--|----------|--|
| L72918-09 | WG256474 | Sulfate | 300.0 - Ion Chromatography | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| L72918-10 | WG256474 | Sulfate | 300.0 - Ion Chromatography | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| L72918-11 | WG256474 | Sulfate | 300.0 - Ion Chromatography 300.0 - Ion Chromatography | DD M2 | Sample required dilution due to matrix color or odor. Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| L72918-12 | WG256474 | Sulfate | 300.0 - Ion Chromatography | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| L72918-13 | WG256474 | Sulfate | 300.0 - Ion Chromatography | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| L72918-14 | WG256474 | Sulfate | 300.0 - Ion Chromatography | 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: **L72918**

No certification qualifiers associated with this analysis

Hydro Geo Chem, Inc.
 8720000 2.3

ACZ Project ID: L72918
 Date Received: 11/7/2008
 Received By:
 Date Printed: 11/7/2008

Receipt Verification

| | YES | NO | NA |
|--|-----|----|----|
| 1) Does this project require special handling procedures such as CLP protocol? | | | X |
| 2) Are the custody seals on the cooler intact? | | | X |
| 3) Are the custody seals on the sample containers intact? | | | X |
| 4) Is there a Chain of Custody or other directive shipping papers present? | X | | |
| 5) Is the Chain of Custody complete? | X | | |
| 6) Is the Chain of Custody in agreement with the samples received? | X | | |
| 7) Is there enough sample for all requested analyses? | X | | |
| 8) Are all samples within holding times for requested analyses? | X | | |
| 9) Were all sample containers received intact? | X | | |
| 10) Are the temperature blanks present? | | | X |
| 11) 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) |
|-----------|-----------|-------------|
| NA7310 | -0.1 | 14 |
| | | |
| | | |

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

Notes

Hydro Geo Chem, Inc.
 8720000 2.3

ACZ Project ID: L72918
 Date Received: 11/7/2008
 Received By:

Sample Container Preservation

| SAMPLE | CLIENT ID | R < 2 | G < 2 | BK < 2 | Y < 2 | YG < 2 | B < 2 | O < 2 | T > 12 | N/A | RAD | ID |
|-----------|---------------|-------|-------|--------|-------|--------|-------|-------|--------|-----|-----|--------------------------|
| L72918-01 | BMO-2008-03B | | | | | | | | | X | | <input type="checkbox"/> |
| L72918-02 | EQB-11042008 | | | | | | | | | X | | <input type="checkbox"/> |
| L72918-03 | FB-11042008 | | | | | | | | | X | | <input type="checkbox"/> |
| L72918-04 | DUP-11042008 | | | | | | | | | X | | <input type="checkbox"/> |
| L72918-05 | BMO-2008-06B | | | | | | | | | X | | <input type="checkbox"/> |
| L72918-06 | BMO-2008-06M | | | | | | | | | X | | <input type="checkbox"/> |
| L72918-07 | TM-07 | | | | | | | | | X | | <input type="checkbox"/> |
| L72918-08 | TM-16 | | | | | | | | | X | | <input type="checkbox"/> |
| L72918-09 | BMO-2008-09M | | | | | | | | | X | | <input type="checkbox"/> |
| L72918-10 | BMO-2008-10GU | | | | | | | | | X | | <input type="checkbox"/> |
| L72918-11 | BMO-2008-10GL | | | | | | | | | X | | <input type="checkbox"/> |
| L72918-12 | BF-01 | | | | | | | | | X | | <input type="checkbox"/> |
| L72918-13 | BMO-2008-07M | | | | | | | | | X | | <input type="checkbox"/> |
| L72918-14 | TM-42 | | | | | | | | | X | | <input type="checkbox"/> |

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

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

Report to:

| | |
|-------------------|------------|
| Name: Dan Simpson | Address: |
| Company: HGC | |
| E-mail: | Telephone: |

Copy of Report to:

| | |
|------------------|------------|
| Name: Jim Norris | E-mail: |
| Company: HGC | Telephone: |

Invoice to:

| | |
|-------------------|------------|
| Name: Dan Simpson | Address: |
| Company: HGC | |
| E-mail: | Telephone: |

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses?

| | |
|-----|-------------------------------------|
| YES | <input checked="" type="checkbox"/> |
| NO | <input type="checkbox"/> |

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO"

is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

| Quote #: FACQB-GW | | | | | | | | | | | | | | |
|---|-----------------|--------|-----------------|-----|--|--|--|--|--|--|--|--|--|--|
| Project/PO #: 8720000 2.3 | | | | | | | | | | | | | | |
| Reporting state for compliance testing: AZ | | | | | | | | | | | | | | |
| Sampler's Name: Chad Munich | | | | | | | | | | | | | | |
| Are any samples NRC licensable material? No | | | | | | | | | | | | | | |
| | | | # of Containers | | | | | | | | | | | |
| | | | | 504 | | | | | | | | | | |
| SAMPLE IDENTIFICATION | DATE:TIME | Matrix | | | | | | | | | | | | |
| BMO-2008-03B | 11/4/2008: 1040 | GW | 1 | X | | | | | | | | | | |
| EQB-11042008 | 11/4/2008: 0725 | GW | 1 | X | | | | | | | | | | |
| FB-11042008 | 11/4/2008: 0725 | GW | 1 | X | | | | | | | | | | |
| DVP-11042008 | 11/4/2008: 0725 | GW | 1 | X | | | | | | | | | | |
| BMO-2008-06B | 11/4/2008: 1250 | GW | 1 | X | | | | | | | | | | |
| BMO-2008-06M | 11/4/2008: 1440 | GW | 1 | X | | | | | | | | | | |
| TM-07 | 11/4/2008: 1640 | GW | 1 | X | | | | | | | | | | |
| TM-16 | 11/5/2008: 0740 | GW | 1 | X | | | | | | | | | | |
| BMO-2008-09M | 11/5/2008: 1140 | GW | 1 | X | | | | | | | | | | |
| BMO-2008-10BU | 11/5/2008: 1330 | 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 |
|-------------------------|---------------|--------------|--------------|
| Chad Munich Chad Munich | 11/6/08: 1030 | CEG | 11/7/08 9:50 |
| | | | |



Laboratories, Inc.

L72918

CHAIN of CUSTODY

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

Report to:

Name: Dan Simpson
 Company: HGC
 E-mail:

Address:
 Telephone:

Copy of Report to:

Name: Jim Norris
 Company: HGC

E-mail:
 Telephone:

Invoice to:

Name: Dan Simpson
 Company: HGC
 E-mail:

Address:
 Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses?

YES
 NO

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO"

is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: FMCQB-GW
 Project/PO #: 872000 2.3
 Reporting state for compliance testing: AZ
 Sampler's Name: Chad Muirch
 Are any samples NRC licensable material? No

| Matrix | # of Containers | ANALYSES REQUESTED | | | | | | | | | | | | | | | | | | |
|---------------|-----------------|--------------------|---|---|---|---|---|---|---|---|----|--|--|--|--|--|--|--|--|--|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | | | | | | | | |
| BMO-2008-106L | 1 | X | | | | | | | | | | | | | | | | | | |
| BF-01 | 1 | X | | | | | | | | | | | | | | | | | | |
| BMO-2008-07M | 1 | X | | | | | | | | | | | | | | | | | | |
| TM-42 | 1 | X | | | | | | | | | | | | | | | | | | |

| SAMPLE IDENTIFICATION | DATE:TIME | Matrix |
|-----------------------|---------------|--------|
| BMO-2008-106L | 11/5/08: 1535 | GW |
| BF-01 | 11/5/08: 1645 | GW |
| BMO-2008-07M | 11/6/08: 0835 | GW |
| TM-42 | 11/6/08: 0955 | GW |

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

REMARKS/ SAMPLE DISCLOSURES

Empty box for remarks and 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 |
|---------------------------|---------------|--------------|--------------|
| Chad Muirch Chad J Muirch | 11/6/08: 1030 | [Signature] | 11/4/08 9:50 |

December 01, 2008

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: L72779

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 31, 2008. This project has been assigned to ACZ's project number, L72779. 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 L72779. 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 01, 2009. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



Scott Habermehl has reviewed
and approved this report.



Hydro Geo Chem, Inc.

December 01, 2008

Project ID: 8720002.2

ACZ Project ID: L72779

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 14 ground water samples from Hydro Geo Chem, Inc. on October 31, 2008. 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 L72779. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

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

Sample Analysis

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

1. Some of the Sulfate data has been qualified with the N1 flag on the extended qual report. The chemist noted that the initial data indicated a co-elution peak from an unknown source. The sample was re-analyzed (outside hold time) and reported. Data may be qualified as estimated.

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: PIONKE

ACZ Sample ID: **L72779-01**

Date Sampled: 10/27/08 10:36

Date Received: 10/31/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 460 | H | * | mg/L | 5 | 30 | 11/25/08 18:05 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: RAMIREZ

ACZ Sample ID: **L72779-02**

Date Sampled: 10/27/08 16:15

Date Received: 10/31/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 7.3 | H | * | mg/L | 0.5 | 3 | 11/28/08 11:22 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: ROGERS E

ACZ Sample ID: **L72779-03**

Date Sampled: 10/27/08 17:32

Date Received: 10/31/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 15.7 | H | * | mg/L | 0.5 | 3 | 11/28/08 11:58 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: TM-15 MILLER

ACZ Sample ID: **L72779-04**

Date Sampled: 10/28/08 08:50

Date Received: 10/31/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 18.6 | | | mg/L | 0.5 | 3 | 11/25/08 19:36 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.Project ID: 8720002.2
Sample ID: DUP-102808ACZ Sample ID: **L72779-05**
Date Sampled: 10/28/08 08:50
Date Received: 10/31/08
Sample Matrix: Ground Water

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 18.8 | | | mg/L | 0.5 | 3 | 11/25/08 19:54 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2
Sample ID: EQB-102808

ACZ Sample ID: **L72779-06**
Date Sampled: 10/28/08 09:20
Date Received: 10/31/08
Sample Matrix: Ground Water

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | | U | | mg/L | 0.5 | 3 | 11/25/08 20:48 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: FB-102808

ACZ Sample ID: **L72779-07**

Date Sampled: 10/28/08 09:10

Date Received: 10/31/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | | U | | mg/L | 0.5 | 3 | 11/25/08 21:06 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: ZANDER

ACZ Sample ID: **L72779-08**

Date Sampled: 10/28/08 10:45

Date Received: 10/31/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 15.0 | H | * | mg/L | 0.5 | 3 | 11/28/08 12:34 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: KEEFER

ACZ Sample ID: **L72779-09**

Date Sampled: 10/28/08 12:30

Date Received: 10/31/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 21.2 | | | mg/L | 0.5 | 3 | 11/25/08 21:42 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: WEISKOPF

ACZ Sample ID: **L72779-10**

Date Sampled: 10/28/08 13:40

Date Received: 10/31/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 602 | | | mg/L | 5 | 30 | 11/25/08 22:37 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: MOORE

ACZ Sample ID: **L72779-11**

Date Sampled: 10/29/08 09:10

Date Received: 10/31/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 19.2 | | | mg/L | 0.5 | 3 | 11/25/08 22:55 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: TM-06 MILLER

ACZ Sample ID: **L72779-12**

Date Sampled: 10/29/08 14:55

Date Received: 10/31/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 34.5 | | | mg/L | 0.5 | 3 | 11/25/08 23:13 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.Project ID: 8720002.2
Sample ID: GGOOSE 547ACZ Sample ID: **L72779-13**
Date Sampled: 10/30/08 12:40
Date Received: 10/31/08
Sample Matrix: Ground Water

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 216 | | | mg/L | 5 | 30 | 11/25/08 23:31 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: TM-2A

ACZ Sample ID: **L72779-14**

Date Sampled: 10/30/08 14:45

Date Received: 10/31/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 21.9 | | | mg/L | 0.5 | 3 | 11/25/08 23:49 | ccp |

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

Hydro Geo Chem, Inc.
 Project ID: 8720002.2

ACZ Project ID: **L72779**

Sulfate 300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG256365 | | | | | | | | | | | | | |
| WG256365ICV | ICV | 11/25/08 12:54 | WI081031-2 | 50 | | 51.41 | mg/L | 102.8 | 90 | 110 | | | |
| WG256365ICB | ICB | 11/25/08 13:12 | | | | .59 | mg/L | | -1.5 | 1.5 | | | |
| WG256365ICV1 | ICV | 11/25/08 14:46 | WI081031-2 | 50 | | 50.63 | mg/L | 101.3 | 90 | 110 | | | |
| WG256365ICB1 | ICB | 11/25/08 15:04 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG256365LFB | LFB | 11/25/08 15:22 | WI081125-2 | 30 | | 30.32 | mg/L | 101.1 | 90 | 110 | | | |
| L72639-01AS | AS | 11/25/08 15:58 | WI081125-2 | 30 | 39.5 | 68.08 | mg/L | 95.3 | 90 | 110 | | | |
| L72639-01DUP | DUP | 11/25/08 16:16 | | | 39.5 | 38.9 | mg/L | | | | 1.5 | 20 | |
| L72779-05AS | AS | 11/25/08 20:12 | WI081125-2 | 30 | 18.8 | 49.21 | mg/L | 101.4 | 90 | 110 | | | |
| L72779-05DUP | DUP | 11/25/08 20:30 | | | 18.8 | 19.09 | mg/L | | | | 1.5 | 20 | |
| WG256365ICV2 | ICV | 11/26/08 19:05 | WI081031-2 | 50 | | 51.23 | mg/L | 102.5 | 90 | 110 | | | |
| WG256365ICB2 | ICB | 11/26/08 19:23 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| L72779-02AS | AS | 11/28/08 11:40 | WI081125-2 | 30 | 7.3 | 44.03 | mg/L | 122.4 | 90 | 110 | | | M2 |
| L72779-03AS | AS | 11/28/08 12:16 | WI081125-2 | 30 | 15.7 | 44.75 | mg/L | 96.8 | 90 | 110 | | | |
| L72779-08AS | AS | 11/28/08 12:52 | WI081125-2 | 30 | 15 | 44.06 | mg/L | 96.9 | 90 | 110 | | | |

Hydro Geo Chem, Inc.

ACZ Project ID: **L72779**

| ACZ ID | WORKNUM | PARAMETER | METHOD | QUAL | DESCRIPTION |
|-----------|----------|-----------|----------------------------|------|---|
| L72779-01 | WG256365 | Sulfate | 300.0 - Ion Chromatography | H1 | Sample analysis performed past holding time. |
| L72779-02 | WG256365 | Sulfate | 300.0 - Ion Chromatography | H1 | Sample analysis performed past holding time. |
| | | | 300.0 - Ion Chromatography | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| L72779-03 | WG256365 | Sulfate | 300.0 - Ion Chromatography | H1 | Sample analysis performed past holding time. |
| | | | 300.0 - Ion Chromatography | N1 | See Case Narrative. |
| L72779-08 | WG256365 | Sulfate | 300.0 - Ion Chromatography | H1 | Sample analysis performed past holding time. |
| | | | 300.0 - Ion Chromatography | N1 | See Case Narrative. |

Hydro Geo Chem, Inc.

ACZ Project ID: **L72779**

No certification qualifiers associated with this analysis

Hydro Geo Chem, Inc.
 8720002.2

ACZ Project ID: L72779
 Date Received: 10/31/2008
 Received By:
 Date Printed: 10/31/2008

Receipt Verification

| | YES | NO | NA |
|--|-----|----|----|
| 1) Does this project require special handling procedures such as CLP protocol? | | | X |
| 2) Are the custody seals on the cooler intact? | | | X |
| 3) Are the custody seals on the sample containers intact? | | | X |
| 4) Is there a Chain of Custody or other directive shipping papers present? | X | | |
| 5) Is the Chain of Custody complete? | X | | |
| 6) Is the Chain of Custody in agreement with the samples received? | X | | |
| 7) Is there enough sample for all requested analyses? | X | | |
| 8) Are all samples within holding times for requested analyses? | X | | |
| 9) Were all sample containers received intact? | X | | |
| 10) Are the temperature blanks present? | | | X |
| 11) 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) |
|-----------|-----------|-------------|
| NA7256 | 2.7 | 15 |
| | | |
| | | |

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

Notes

Hydro Geo Chem, Inc.
8720002.2

ACZ Project ID: L72779
 Date Received: 10/31/2008
 Received By:

Sample Container Preservation

| SAMPLE | CLIENT ID | R < 2 | G < 2 | BK < 2 | Y < 2 | YG < 2 | B < 2 | O < 2 | T > 12 | N/A | RAD | ID |
|-----------|--------------|-------|-------|--------|-------|--------|-------|-------|--------|-----|-----|--------------------------|
| L72779-01 | PIONKE | | | | | | | | | X | | <input type="checkbox"/> |
| L72779-02 | RAMIREZ | | | | | | | | | X | | <input type="checkbox"/> |
| L72779-03 | ROGERS E | | | | | | | | | X | | <input type="checkbox"/> |
| L72779-04 | TM-15 MILLER | | | | | | | | | X | | <input type="checkbox"/> |
| L72779-05 | DUP-102808 | | | | | | | | | X | | <input type="checkbox"/> |
| L72779-06 | EQB-102808 | | | | | | | | | X | | <input type="checkbox"/> |
| L72779-07 | FB-102808 | | | | | | | | | X | | <input type="checkbox"/> |
| L72779-08 | ZANDER | | | | | | | | | X | | <input type="checkbox"/> |
| L72779-09 | KEEFER | | | | | | | | | X | | <input type="checkbox"/> |
| L72779-10 | WEISKOPF | | | | | | | | | X | | <input type="checkbox"/> |
| L72779-11 | MOORE | | | | | | | | | X | | <input type="checkbox"/> |
| L72779-12 | TM-06 MILLER | | | | | | | | | X | | <input type="checkbox"/> |
| L72779-13 | GGOOSE 547 | | | | | | | | | X | | <input type="checkbox"/> |
| L72779-14 | TM-2A | | | | | | | | | X | | <input type="checkbox"/> |

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

Report to:

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

Copy of Report to:

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

Invoice to:

| | |
|------------------------|-------------------------------|
| Name: Dan Simpson | Address: 51 W. Wetmore |
| Company: HGC Inc. | Tucson, AZ 85705 |
| E-mail: dans@hginc.com | Telephone: 520-293-1500 x 113 |

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

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

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

| Quote #: FMCQB-GW | | | | | | | | | | | | | | |
|---|----------------|--------|-----------------|-----|--|--|--|--|--|--|--|--|--|--|
| Project/PO #: FT 872000 2.2 | | | | | | | | | | | | | | |
| Reporting state for compliance testing: AZ | | | | | | | | | | | | | | |
| Sampler's Name: Chad Murch | | | | | | | | | | | | | | |
| Are any samples NRC licensable material? No | | | | | | | | | | | | | | |
| SAMPLE IDENTIFICATION | DATE-TIME | Matrix | # of Containers | 504 | | | | | | | | | | |
| PIONKE | 10/27/08: 1036 | GW | 1 | X | | | | | | | | | | |
| RAMIREZ | 10/27/08: 1615 | GW | 1 | X | | | | | | | | | | |
| ROGERS E | 10/27/08: 1732 | GW | 1 | X | | | | | | | | | | |
| TM-15 MILLER | 10/28/08: 0850 | GW | 1 | X | | | | | | | | | | |
| DUP-102808 | 10/28/08: 0850 | GW | 1 | X | | | | | | | | | | |
| ERB-102808 | 10/28/08: 0920 | GW | 1 | X | | | | | | | | | | |
| FB-102808 | 10/28/08: 0910 | GW | 1 | X | | | | | | | | | | |
| ZANDER | 10/28/08: 1045 | GW | 1 | X | | | | | | | | | | |
| KEEFER | 10/28/08: 1230 | GW | 1 | X | | | | | | | | | | |
| WEISKOPF | 10/28/08: 1340 | GW | 1 | X | | | | | | | | | | |

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

REMARKS/ SAMPLE DISCLOSURES

PAGE
 of

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

| RELINQUISHED BY: | DATE-TIME | RECEIVED BY: | DATE-TIME |
|------------------|----------------|--------------|-------------------|
| Chad Murch | 10/28/08: 1515 | MSS | 10/28/08 10:10 |
| | | | |

ACZ Laboratories, Inc.

L72779

CHAIN of CUSTODY

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

Report to:

| | |
|------------------------------|-------------------------------|
| Name: Dan Simpson | Address: 51 W. Wetmore Rd. |
| Company: Hydro Geo Chem Inc. | Tucson, AZ 85705 |
| E-mail: dans@hgcinc.com | 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. |
| Company: HGC Inc. | Tucson AZ 85705 |
| E-mail: dans@hgcinc.com | Telephone: 520-293-1500 x 113 |

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
 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. NO

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

| Quote #: FMCQB - GW | | | | | | | | | | | | | | | | | | |
|---|----------------|--------|-----------------|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Project/PO #: 872000 - 2.2 | | | | | | | | | | | | | | | | | | |
| Reporting state for compliance testing: AZ | | | | | | | | | | | | | | | | | | |
| Sampler's Name: Chad Munich | | | | | | | | | | | | | | | | | | |
| Are any samples NRC licensable material? No | | | | | | | | | | | | | | | | | | |
| SAMPLE IDENTIFICATION | DATE:TIME | Matrix | # of Containers | | | | | | | | | | | | | | | |
| MOORE | 10/29/08: 0910 | GW | 1 | X | | | | | | | | | | | | | | |
| TM-06 MILLER | 10/29/08: 1455 | GW | 1 | X | | | | | | | | | | | | | | |
| CGDOSE 547 | 10/30/08: 1240 | GW | 1 | X | | | | | | | | | | | | | | |
| TM-2A | 10/30/08: 1945 | GW | 1 | X | 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 |
|--------------------|----------------|--------------|-------------------|
| <i>Chad Munich</i> | 10/30/08: 1515 | <i>MSS</i> | 10/31/08 10:10 |

November 13, 2008

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: 87200002.2

ACZ Project ID: L72696

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 28, 2008. This project has been assigned to ACZ's project number, L72696. 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 L72696. 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, 2008. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



Scott Habermehl has reviewed
and approved this report.



Hydro Geo Chem, Inc.

Project ID: 87200002.2
Sample ID: NWC-06

ACZ Sample ID: **L72696-01**
Date Sampled: 10/27/08 11:28
Date Received: 10/28/08
Sample Matrix: Ground Water

Metals Analysis

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|----------------------|------------|--------|------|----|-------|-----|-----|----------------|---------|
| Calcium, dissolved | M200.7 ICP | 54.5 | | | mg/L | 0.2 | 1 | 11/04/08 11:31 | ear |
| Magnesium, dissolved | M200.7 ICP | 7.4 | | | mg/L | 0.2 | 1 | 11/04/08 11:31 | ear |
| Potassium, dissolved | M200.7 ICP | 1.4 | B | | mg/L | 0.3 | 2 | 11/04/08 11:31 | ear |
| Sodium, dissolved | M200.7 ICP | 26.4 | | | mg/L | 0.3 | 2 | 11/05/08 14:17 | aeh |

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------------------------------|--------------------------------------|--------|------|----|-------|------|------|----------------|---------|
| Alkalinity as CaCO3 | SM2320B - Titration | | | | | | | | |
| Bicarbonate as CaCO3 | | 173 | | | mg/L | 2 | 20 | 10/30/08 0:00 | abm |
| Carbonate as CaCO3 | | | U | | mg/L | 2 | 20 | 10/30/08 0:00 | abm |
| Hydroxide as CaCO3 | | | U | | mg/L | 2 | 20 | 10/30/08 0:00 | abm |
| Total Alkalinity | | 174 | | | mg/L | 2 | 20 | 10/30/08 0:00 | abm |
| Cation-Anion Balance | Calculation | | | | | | | | |
| Cation-Anion Balance | | 4.7 | | | % | | | 11/12/08 0:00 | calc |
| Sum of Anions | | 4.1 | | | meq/L | 0.1 | 0.5 | 11/12/08 0:00 | calc |
| Sum of Cations | | 4.5 | | | meq/L | 0.1 | 0.5 | 11/12/08 0:00 | calc |
| Chloride | M300.0 - Ion Chromatography | 13.4 | | | mg/L | 0.5 | 3 | 11/10/08 18:57 | aml |
| Fluoride | M300.0 - Ion Chromatography | 0.2 | B | * | mg/L | 0.1 | 0.5 | 11/10/08 18:57 | aml |
| Nitrate as N, dissolved | Calculation: NO3NO2 minus NO2 | 1.86 | | | mg/L | 0.02 | 0.1 | 11/12/08 0:00 | calc |
| Nitrate/Nitrite as N, dissolved | M353.2 - Automated Cadmium Reduction | 1.86 | | * | mg/L | 0.02 | 0.1 | 10/28/08 18:49 | pjb |
| Nitrite as N, dissolved | M353.2 - Automated Cadmium Reduction | | U | * | mg/L | 0.01 | 0.05 | 10/28/08 18:49 | pjb |
| Residue, Filterable (TDS) @180C | SM2540C | 260 | | | mg/L | 10 | 20 | 10/30/08 17:04 | gkj |
| Sulfate | 300.0 - Ion Chromatography | 6.4 | | * | mg/L | 0.5 | 3 | 11/10/08 18:57 | aml |
| TDS (calculated) | Calculation | 222 | | | mg/L | 10 | 50 | 11/12/08 0:00 | calc |
| TDS (ratio - measured/calculated) | Calculation | 1.17 | | | | | | 11/12/08 0:00 | calc |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 87200002.2
Sample ID: NWC-02

ACZ Sample ID: **L72696-02**
Date Sampled: 10/27/08 12:20
Date Received: 10/28/08
Sample Matrix: Ground Water

Metals Analysis

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|----------------------|------------|--------|------|----|-------|-----|-----|----------------|---------|
| Calcium, dissolved | M200.7 ICP | 63.6 | | | mg/L | 0.2 | 1 | 11/04/08 11:34 | ear |
| Magnesium, dissolved | M200.7 ICP | 8.3 | | | mg/L | 0.2 | 1 | 11/04/08 11:34 | ear |
| Potassium, dissolved | M200.7 ICP | 1.1 | B | | mg/L | 0.3 | 2 | 11/04/08 11:34 | ear |
| Sodium, dissolved | M200.7 ICP | 20.2 | | | mg/L | 0.3 | 2 | 11/05/08 14:27 | aeh |

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------------------------------|--------------------------------------|--------|------|----|-------|------|------|----------------|---------|
| Alkalinity as CaCO3 | SM2320B - Titration | | | | | | | | |
| Bicarbonate as CaCO3 | | 176 | | | mg/L | 2 | 20 | 10/30/08 0:00 | abm |
| Carbonate as CaCO3 | | | U | | mg/L | 2 | 20 | 10/30/08 0:00 | abm |
| Hydroxide as CaCO3 | | | U | | mg/L | 2 | 20 | 10/30/08 0:00 | abm |
| Total Alkalinity | | 176 | | | mg/L | 2 | 20 | 10/30/08 0:00 | abm |
| Cation-Anion Balance | Calculation | | | | | | | | |
| Cation-Anion Balance | | 3.3 | | | % | | | 11/12/08 0:00 | calc |
| Sum of Anions | | 4.4 | | | meq/L | 0.1 | 0.5 | 11/12/08 0:00 | calc |
| Sum of Cations | | 4.7 | | | meq/L | 0.1 | 0.5 | 11/12/08 0:00 | calc |
| Chloride | M300.0 - Ion Chromatography | 20.7 | | | mg/L | 0.5 | 3 | 11/10/08 19:15 | aml |
| Fluoride | M300.0 - Ion Chromatography | 0.1 | B | * | mg/L | 0.1 | 0.5 | 11/10/08 19:15 | aml |
| Nitrate as N, dissolved | Calculation: NO3NO2 minus NO2 | 2.74 | | | mg/L | 0.02 | 0.1 | 11/12/08 0:00 | calc |
| Nitrate/Nitrite as N, dissolved | M353.2 - Automated Cadmium Reduction | 2.74 | | * | mg/L | 0.02 | 0.1 | 10/28/08 18:50 | pjb |
| Nitrite as N, dissolved | M353.2 - Automated Cadmium Reduction | | U | * | mg/L | 0.01 | 0.05 | 10/28/08 18:50 | pjb |
| Residue, Filterable (TDS) @180C | SM2540C | 280 | | | mg/L | 10 | 20 | 10/30/08 17:06 | gkj |
| Sulfate | 300.0 - Ion Chromatography | 5.1 | | * | mg/L | 0.5 | 3 | 11/10/08 19:15 | aml |
| TDS (calculated) | Calculation | 237 | | | mg/L | 10 | 50 | 11/12/08 0:00 | calc |
| TDS (ratio - measured/calculated) | Calculation | 1.18 | | | | | | 11/12/08 0:00 | calc |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 87200002.2
 Sample ID: NWC-03

ACZ Sample ID: **L72696-03**
 Date Sampled: 10/27/08 12:45
 Date Received: 10/28/08
 Sample Matrix: Ground Water

Metals Analysis

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|----------------------|------------|--------|------|----|-------|-----|-----|----------------|---------|
| Calcium, dissolved | M200.7 ICP | 222 | | | mg/L | 0.2 | 1 | 11/04/08 11:37 | ear |
| Magnesium, dissolved | M200.7 ICP | 34.1 | | | mg/L | 0.2 | 1 | 11/04/08 11:37 | ear |
| Potassium, dissolved | M200.7 ICP | 3.5 | | | mg/L | 0.3 | 2 | 11/04/08 11:37 | ear |
| Sodium, dissolved | M200.7 ICP | 47.2 | | | mg/L | 0.3 | 2 | 11/05/08 14:31 | aeh |

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------------------------------|--------------------------------------|--------|------|----|-------|------|------|----------------|---------|
| Alkalinity as CaCO3 | SM2320B - Titration | | | | | | | | |
| Bicarbonate as CaCO3 | | 181 | | | mg/L | 2 | 20 | 10/30/08 0:00 | abm |
| Carbonate as CaCO3 | | | U | | mg/L | 2 | 20 | 10/30/08 0:00 | abm |
| Hydroxide as CaCO3 | | | U | | mg/L | 2 | 20 | 10/30/08 0:00 | abm |
| Total Alkalinity | | 181 | | | mg/L | 2 | 20 | 10/30/08 0:00 | abm |
| Cation-Anion Balance | Calculation | | | | | | | | |
| Cation-Anion Balance | | 3.2 | | | % | | | 11/12/08 0:00 | calc |
| Sum of Anions | | 15.1 | | | meq/L | 0.1 | 0.5 | 11/12/08 0:00 | calc |
| Sum of Cations | | 16.1 | | | meq/L | 0.1 | 0.5 | 11/12/08 0:00 | calc |
| Chloride | M300.0 - Ion Chromatography | 30.3 | | | mg/L | 0.5 | 3 | 11/10/08 19:34 | aml |
| Fluoride | M300.0 - Ion Chromatography | | U | * | mg/L | 0.1 | 0.5 | 11/10/08 19:34 | aml |
| Nitrate as N, dissolved | Calculation: NO3NO2 minus NO2 | 4.41 | | | mg/L | 0.06 | 0.3 | 11/12/08 0:00 | calc |
| Nitrate/Nitrite as N, dissolved | M353.2 - Automated Cadmium Reduction | 4.41 | | * | mg/L | 0.06 | 0.3 | 10/28/08 18:58 | pjb |
| Nitrite as N, dissolved | M353.2 - Automated Cadmium Reduction | | U | * | mg/L | 0.01 | 0.05 | 10/28/08 18:52 | pjb |
| Residue, Filterable (TDS) @180C | SM2540C | 1010 | | | mg/L | 10 | 20 | 10/30/08 17:08 | gkj |
| Sulfate | 300.0 - Ion Chromatography | 489 | | | mg/L | 5 | 30 | 11/11/08 16:48 | aml |
| TDS (calculated) | Calculation | 954 | | | mg/L | 10 | 50 | 11/12/08 0:00 | calc |
| TDS (ratio - measured/calculated) | Calculation | 1.06 | | | | | | 11/12/08 0:00 | calc |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 87200002.2
 Sample ID: NWC-04

ACZ Sample ID: **L72696-04**
 Date Sampled: 10/27/08 12:50
 Date Received: 10/28/08
 Sample Matrix: Ground Water

Metals Analysis

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|----------------------|------------|--------|------|----|-------|-----|-----|----------------|---------|
| Calcium, dissolved | M200.7 ICP | 91.5 | | | mg/L | 0.2 | 1 | 11/04/08 11:47 | ear |
| Magnesium, dissolved | M200.7 ICP | 36.7 | | | mg/L | 0.2 | 1 | 11/04/08 11:47 | ear |
| Potassium, dissolved | M200.7 ICP | 6.2 | | | mg/L | 0.3 | 2 | 11/04/08 11:47 | ear |
| Sodium, dissolved | M200.7 ICP | 41.5 | | | mg/L | 0.3 | 2 | 11/05/08 14:34 | aeh |

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------------------------------|--------------------------------------|--------|------|----|-------|------|------|----------------|---------|
| Alkalinity as CaCO3 | SM2320B - Titration | | | | | | | | |
| Bicarbonate as CaCO3 | | 182 | | | mg/L | 2 | 20 | 10/30/08 0:00 | abm |
| Carbonate as CaCO3 | | | U | | mg/L | 2 | 20 | 10/30/08 0:00 | abm |
| Hydroxide as CaCO3 | | | U | | mg/L | 2 | 20 | 10/30/08 0:00 | abm |
| Total Alkalinity | | 182 | | | mg/L | 2 | 20 | 10/30/08 0:00 | abm |
| Cation-Anion Balance | Calculation | | | | | | | | |
| Cation-Anion Balance | | 5.0 | | | % | | | 11/12/08 0:00 | calc |
| Sum of Anions | | 8.6 | | | meq/L | 0.1 | 0.5 | 11/12/08 0:00 | calc |
| Sum of Cations | | 9.5 | | | meq/L | 0.1 | 0.5 | 11/12/08 0:00 | calc |
| Chloride | M300.0 - Ion Chromatography | 41.4 | | | mg/L | 0.5 | 3 | 11/10/08 20:28 | aml |
| Fluoride | M300.0 - Ion Chromatography | 0.1 | B | * | mg/L | 0.1 | 0.5 | 11/10/08 20:28 | aml |
| Nitrate as N, dissolved | Calculation: NO3NO2 minus NO2 | 6.54 | | | mg/L | 0.06 | 0.3 | 11/12/08 0:00 | calc |
| Nitrate/Nitrite as N, dissolved | M353.2 - Automated Cadmium Reduction | 6.54 | | * | mg/L | 0.06 | 0.3 | 10/28/08 19:03 | pjb |
| Nitrite as N, dissolved | M353.2 - Automated Cadmium Reduction | | U | * | mg/L | 0.01 | 0.05 | 10/28/08 18:53 | pjb |
| Residue, Filterable (TDS) @180C | SM2540C | 540 | | | mg/L | 10 | 20 | 10/30/08 17:09 | gkj |
| Sulfate | 300.0 - Ion Chromatography | 162 | | | mg/L | 3 | 10 | 11/11/08 17:43 | aml |
| TDS (calculated) | Calculation | 518 | | | mg/L | 10 | 50 | 11/12/08 0:00 | calc |
| TDS (ratio - measured/calculated) | Calculation | 1.04 | | | | | | 11/12/08 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.

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.

Hydro Geo Chem, Inc.

ACZ Project ID: **L72696**

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 |
|-----------------|------|----------------|------------|----------|--------|-------|-------|------|-------|-------|-----|-------|------|
| WG254837 | | | | | | | | | | | | | |
| WG254837PBW1 | PBW | 10/30/08 13:26 | | | | U | mg/L | | -20 | 20 | | | |
| WG254837LCSW2 | LCSW | 10/30/08 13:36 | WC081022-2 | 820.0001 | | 782.5 | mg/L | 95.4 | 90 | 110 | | | |
| WG254837PBW2 | PBW | 10/30/08 16:23 | | | | U | mg/L | | -20 | 20 | | | |
| WG254837LCSW5 | LCSW | 10/30/08 16:34 | WC081022-2 | 820.0001 | | 789.3 | mg/L | 96.3 | 90 | 110 | | | |
| WG254837PBW3 | PBW | 10/30/08 19:35 | | | | U | mg/L | | -20 | 20 | | | |
| WG254837LCSW8 | LCSW | 10/30/08 19:46 | WC081022-2 | 820.0001 | | 792.6 | mg/L | 96.7 | 90 | 110 | | | |
| L72697-01DUP | DUP | 10/30/08 22:52 | | | 125 | 126.1 | mg/L | | | | 0.9 | 20 | |
| WG254837PBW4 | PBW | 10/30/08 22:58 | | | | U | mg/L | | -20 | 20 | | | |
| WG254837LCSW11 | LCSW | 10/30/08 23:09 | WC081022-2 | 820.0001 | | 802.3 | mg/L | 97.8 | 90 | 110 | | | |
| WG254837LCSW14 | LCSW | 10/31/08 2:19 | WC081022-2 | 820.0001 | | 808.5 | mg/L | 98.6 | 90 | 110 | | | |

Calcium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG254880 | | | | | | | | | | | | | |
| WG254880ICV | ICV | 11/04/08 10:34 | II080818-1 | 100 | | 100.17 | mg/L | 100.2 | 95 | 105 | | | |
| WG254880ICB | ICB | 11/04/08 10:37 | | | | U | mg/L | | -0.6 | 0.6 | | | |
| WG254880LFB | LFB | 11/04/08 10:49 | II081023-4 | 67.97008 | | 72.04 | mg/L | 106 | 85 | 115 | | | |
| L72678-05AS | AS | 11/04/08 10:56 | II081023-4 | 67.97008 | U | 72.44 | mg/L | 106.6 | 85 | 115 | | | |
| L72678-05ASD | ASD | 11/04/08 10:59 | II081023-4 | 67.97008 | U | 73.22 | mg/L | 107.7 | 85 | 115 | 1.07 | 20 | |
| L72696-03AS | AS | 11/04/08 11:40 | II081023-4 | 67.97008 | 222 | 284.53 | mg/L | 92 | 85 | 115 | | | |
| L72696-03ASD | ASD | 11/04/08 11:44 | II081023-4 | 67.97008 | 222 | 284.6 | mg/L | 92.1 | 85 | 115 | 0.02 | 20 | |

Chloride M300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|-------|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG255362 | | | | | | | | | | | | | |
| WG255362ICV | ICV | 11/10/08 12:04 | WI081031-2 | 19.94 | | 20.06 | mg/L | 100.6 | 90 | 110 | | | |
| WG255362ICB | ICB | 11/10/08 12:22 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG255362ICV1 | ICV | 11/10/08 14:26 | WI081031-2 | 19.94 | | 20.1 | mg/L | 100.8 | 90 | 110 | | | |
| WG255362ICB1 | ICB | 11/10/08 14:44 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG255362LFB | LFB | 11/10/08 15:02 | WI081007-3 | 30 | | 32.96 | mg/L | 109.9 | 90 | 110 | | | |
| L72561-01AS | AS | 11/10/08 15:38 | WI081007-3 | 30 | 8.3 | 40.8 | mg/L | 108.3 | 90 | 110 | | | |
| L72561-01DUP | DUP | 11/10/08 15:56 | | | 8.3 | 8.3 | mg/L | | | | 0 | 20 | |
| L72696-03AS | AS | 11/10/08 19:52 | WI081007-3 | 30 | 30.3 | 61.43 | mg/L | 103.8 | 90 | 110 | | | |
| L72696-03DUP | DUP | 11/10/08 20:10 | | | 30.3 | 30.21 | mg/L | | | | 0.3 | 20 | |
| WG255362ICV2 | ICV | 11/11/08 16:12 | WI081031-2 | 19.94 | | 19.91 | mg/L | 99.8 | 90 | 110 | | | |
| WG255362ICB2 | ICB | 11/11/08 16:30 | | | | U | mg/L | | -1.5 | 1.5 | | | |

Hydro Geo Chem, Inc.
 Project ID: 87200002.2

ACZ Project ID: L72696

Fluoride M300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|-----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG255362 | | | | | | | | | | | | | |
| WG255362 CV | ICV | 11/10/08 12:04 | WI081031-2 | 4 | | 4.13 | mg/L | 103.3 | 90 | 110 | | | |
| WG255362 CB | ICB | 11/10/08 12:22 | | | | U | mg/L | | -0.3 | 0.3 | | | |
| WG255362 CV1 | ICV | 11/10/08 14:26 | WI081031-2 | 4 | | 3.98 | mg/L | 99.5 | 90 | 110 | | | |
| WG255362 CB1 | ICB | 11/10/08 14:44 | | | | U | mg/L | | -0.3 | 0.3 | | | |
| WG255362 LFB | LFB | 11/10/08 15:02 | WI081007-3 | 1.5 | | 1.57 | mg/L | 104.7 | 90 | 110 | | | |
| L72561-01AS | AS | 11/10/08 15:38 | WI081007-3 | 1.5 | .7 | 2.25 | mg/L | 103.3 | 90 | 110 | | | |
| L72561-01DUP | DUP | 11/10/08 15:56 | | | .7 | .69 | mg/L | | | | 1.4 | 20 | RA |
| L72696-03AS | AS | 11/10/08 19:52 | WI081007-3 | 1.5 | U | 1.64 | mg/L | 109.3 | 90 | 110 | | | |
| L72696-03DUP | DUP | 11/10/08 20:10 | | | U | .1 | mg/L | | | | 0 | 20 | RA |
| WG255362 CV2 | ICV | 11/11/08 16:12 | WI081031-2 | 4 | | 3.76 | mg/L | 94 | 90 | 110 | | | |
| WG255362 CB2 | ICB | 11/11/08 16:30 | | | | U | mg/L | | -0.3 | 0.3 | | | |

Magnesium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG254880 | | | | | | | | | | | | | |
| WG254880 CV | ICV | 11/04/08 10:34 | II080818-1 | 100 | | 100.33 | mg/L | 100.3 | 95 | 105 | | | |
| WG254880 CB | ICB | 11/04/08 10:37 | | | | U | mg/L | | -0.6 | 0.6 | | | |
| WG254880 LFB | LFB | 11/04/08 10:49 | II081023-4 | 49.96908 | | 52.12 | mg/L | 104.3 | 85 | 115 | | | |
| L72678-05AS | AS | 11/04/08 10:56 | II081023-4 | 49.96908 | U | 52.5 | mg/L | 105.1 | 85 | 115 | | | |
| L72678-05ASD | ASD | 11/04/08 10:59 | II081023-4 | 49.96908 | U | 53.93 | mg/L | 107.9 | 85 | 115 | 2.69 | 20 | |
| L72696-03AS | AS | 11/04/08 11:40 | II081023-4 | 49.96908 | 34.1 | 87.44 | mg/L | 106.7 | 85 | 115 | | | |
| L72696-03ASD | ASD | 11/04/08 11:44 | II081023-4 | 49.96908 | 34.1 | 87.86 | mg/L | 107.6 | 85 | 115 | 0.48 | 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 |
|-----------------|------|----------------|------------|-------|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG254717 | | | | | | | | | | | | | |
| WG254717 CV | ICV | 10/28/08 18:28 | WI080916-5 | 2.416 | | 2.395 | mg/L | 99.1 | 90 | 110 | | | |
| WG254717 CB | ICB | 10/28/08 18:29 | | | | U | mg/L | | -0.06 | 0.06 | | | |
| WG254717 LFB | LFB | 10/28/08 18:34 | WI080913-4 | 2 | | 2.006 | mg/L | 100.3 | 90 | 110 | | | |
| L72686-01AS | AS | 10/28/08 18:37 | WI080913-4 | 2 | U | 2.057 | mg/L | 102.9 | 90 | 110 | | | |
| L72691-01DUP | DUP | 10/28/08 18:39 | | | .15 | .15 | mg/L | | | | 0 | 20 | RA |
| L72701-01DUP | DUP | 10/28/08 18:55 | | | 3.54 | 3.568 | mg/L | | | | 0.8 | 20 | |
| L72701-01AS | AS | 10/28/08 19:05 | WI080913-4 | 6 | 3.56 | 9.83 | mg/L | 104.5 | 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 |
|-----------------|------|----------------|------------|------|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG254717 | | | | | | | | | | | | | |
| WG254717 CV | ICV | 10/28/08 18:28 | WI080916-5 | .609 | | .612 | mg/L | 100.5 | 90 | 110 | | | |
| WG254717 CB | ICB | 10/28/08 18:29 | | | | U | mg/L | | -0.03 | 0.03 | | | |
| WG254717 LFB | LFB | 10/28/08 18:34 | WI080913-4 | 1 | | .979 | mg/L | 97.9 | 90 | 110 | | | |
| L72686-01AS | AS | 10/28/08 18:37 | WI080913-4 | 1 | U | .986 | mg/L | 98.6 | 90 | 110 | | | |
| L72691-01DUP | DUP | 10/28/08 18:39 | | | U | U | mg/L | | | | 0 | 20 | RA |
| L72701-01DUP | DUP | 10/28/08 18:55 | | | | U | mg/L | | | | 0 | 20 | RA |
| L72701-01AS | AS | 10/28/08 18:57 | WI080913-4 | 1 | | .996 | mg/L | 99.6 | 90 | 110 | | | |

Hydro Geo Chem, Inc.

ACZ Project ID: **L72696**

Project ID: 87200002.2

Potassium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG254880 | | | | | | | | | | | | | |
| WG254880ICV | ICV | 11/04/08 10:34 | II080818-1 | 20 | | 20.81 | mg/L | 104.1 | 95 | 105 | | | |
| WG254880ICB | ICB | 11/04/08 10:37 | | | | U | mg/L | | -0.9 | 0.9 | | | |
| WG254880LFB | LFB | 11/04/08 10:49 | II081023-4 | 99.76186 | | 105.79 | mg/L | 106 | 85 | 115 | | | |
| L72678-05AS | AS | 11/04/08 10:56 | II081023-4 | 99.76186 | U | 106.44 | mg/L | 106.7 | 85 | 115 | | | |
| L72678-05ASD | ASD | 11/04/08 10:59 | II081023-4 | 99.76186 | U | 106.79 | mg/L | 107 | 85 | 115 | 0.33 | 20 | |
| L72696-03AS | AS | 11/04/08 11:40 | II081023-4 | 99.76186 | 3.5 | 112.52 | mg/L | 109.3 | 85 | 115 | | | |
| L72696-03ASD | ASD | 11/04/08 11:44 | II081023-4 | 99.76186 | 3.5 | 113.25 | mg/L | 110 | 85 | 115 | 0.65 | 20 | |

Residue, Filterable (TDS) @180C SM2540C

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|----------|-----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG254892 | | | | | | | | | | | | | |
| WG254892PBW | PBW | 10/30/08 16:50 | | | | U | mg/L | | -20 | 20 | | | |
| WG254892LCSW | LCSW | 10/30/08 16:51 | PCN29990 | 260 | | 282 | mg/L | 108.5 | 80 | 120 | | | |
| L72696-01DUP | DUP | 10/30/08 17:05 | | | 260 | 256 | mg/L | | | | 1.6 | 20 | |
| L72710-02DUP | DUP | 10/30/08 17:19 | | | 2100 | 2130 | mg/L | | | | 1.4 | 20 | |

Sodium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG255180 | | | | | | | | | | | | | |
| WG255180ICV | ICV | 11/05/08 13:48 | II080818-1 | 100 | | 101.47 | mg/L | 101.5 | 95 | 105 | | | |
| WG255180ICB | ICB | 11/05/08 13:52 | | | | U | mg/L | | -0.9 | 0.9 | | | |
| WG255180LFB | LFB | 11/05/08 14:04 | II081023-4 | 98.21624 | | 101.5 | mg/L | 103.3 | 85 | 115 | | | |
| L72696-01AS | AS | 11/05/08 14:21 | II081023-4 | 98.21624 | 26.4 | 126.71 | mg/L | 102.1 | 85 | 115 | | | |
| L72696-01ASD | ASD | 11/05/08 14:24 | II081023-4 | 98.21624 | 26.4 | 127.18 | mg/L | 102.6 | 85 | 115 | 0.37 | 20 | |

Sulfate 300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|-----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG255362 | | | | | | | | | | | | | |
| WG255362ICV | ICV | 11/10/08 12:04 | WI081031-2 | 50 | | 50.89 | mg/L | 101.8 | 90 | 110 | | | |
| WG255362ICB | ICB | 11/10/08 12:22 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG255362ICV1 | ICV | 11/10/08 14:26 | WI081031-2 | 50 | | 50.57 | mg/L | 101.1 | 90 | 110 | | | |
| WG255362ICB1 | ICB | 11/10/08 14:44 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG255362LFB | LFB | 11/10/08 15:02 | WI081007-3 | 30 | | 33.05 | mg/L | 110.2 | 90 | 110 | | | |
| L72561-01AS | AS | 11/11/08 0:05 | WI081007-3 | 300 | 457 | 797.2 | mg/L | 113.4 | 90 | 110 | | | M1 |
| L72561-01DUP | DUP | 11/11/08 0:23 | | | 457 | 474.1 | mg/L | | | | 3.7 | 20 | |
| WG255362ICV2 | ICV | 11/11/08 16:12 | WI081031-2 | 50 | | 50.13 | mg/L | 100.3 | 90 | 110 | | | |
| WG255362ICB2 | ICB | 11/11/08 16:30 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| L72696-03AS | AS | 11/11/08 17:06 | WI081007-3 | 300 | 489 | 800.7 | mg/L | 103.9 | 90 | 110 | | | |
| L72696-03DUP | DUP | 11/11/08 17:25 | | | 489 | 521.9 | mg/L | | | | 6.5 | 20 | |

Hydro Geo Chem, Inc.

ACZ Project ID: **L72696**

| ACZ ID | WORKNUM | PARAMETER | METHOD | QUAL | DESCRIPTION |
|------------------|----------|---------------------------------|--------------------------------------|------|---|
| L72696-01 | WG255362 | Fluoride | 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). |
| | WG254717 | 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). |
| | WG255362 | Sulfate | 300.0 - Ion Chromatography | M1 | Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| L72696-02 | WG255362 | Fluoride | 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). |
| | WG254717 | 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). |
| | WG255362 | Sulfate | 300.0 - Ion Chromatography | M1 | Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| L72696-03 | WG255362 | Fluoride | 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). |
| | WG254717 | 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). |
| L72696-04 | WG255362 | Fluoride | 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). |
| | WG254717 | 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). |

Hydro Geo Chem, Inc.

ACZ Project ID: **L72696**

No certification qualifiers associated with this analysis

Hydro Geo Chem, Inc.
 87200002.2

ACZ Project ID: L72696
 Date Received: 10/28/2008
 Received By:
 Date Printed: 10/28/2008

Receipt Verification

| | YES | NO | NA |
|--|-----|----|----|
| 1) Does this project require special handling procedures such as CLP protocol? | | | X |
| 2) Are the custody seals on the cooler intact? | | | X |
| 3) Are the custody seals on the sample containers intact? | | | X |
| 4) Is there a Chain of Custody or other directive shipping papers present? | X | | |
| 5) Is the Chain of Custody complete? | X | | |
| 6) Is the Chain of Custody in agreement with the samples received? | X | | |
| 7) Is there enough sample for all requested analyses? | X | | |
| 8) Are all samples within holding times for requested analyses? | X | | |
| 9) Were all sample containers received intact? | X | | |
| 10) Are the temperature blanks present? | | | X |
| 11) 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) |
|-----------|-----------|-------------|
| CLIENT | 0 | 15 |
| | | |
| | | |

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

Notes

Hydro Geo Chem, Inc.
 87200002.2

ACZ Project ID: L72696
 Date Received: 10/28/2008
 Received By:

Sample Container Preservation

| SAMPLE | CLIENT ID | R < 2 | G < 2 | BK < 2 | Y < 2 | YG < 2 | B < 2 | O < 2 | T > 12 | N/A | RAD | ID |
|-----------|-----------|-------|-------|--------|-------|--------|-------|-------|--------|-----|-----|--------------------------|
| L72696-01 | NWC-06 | | Y | | | | | | | | | <input type="checkbox"/> |
| L72696-02 | NWC-02 | | Y | | | | | | | | | <input type="checkbox"/> |
| L72696-03 | NWC-03 | | Y | | | | | | | | | <input type="checkbox"/> |
| L72696-04 | NWC-04 | | Y | | | | | | | | | <input type="checkbox"/> |

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

L726910

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

Report to:

Name: *HGC, Dan Simpson*
 Company: *Hydro Geo Chem Inc.*
 E-mail: *dans@hgcinc.com*

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: *Jim Norris Dan Simpson*
 Company: *HGC Inc.*
 E-mail: *jimn@hgcinc.com dans@hgcinc.com*

Address: *51 W. Wetmore Rd.*
Tucson, AZ 85705
 Telephone: *520-293-1500 x 113*

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses?

YES
 NO

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: *FMCQB-GW*
 Project/PO #: *87200092.2*
 Reporting state for compliance testing: *AZ*
 Sampler's Name: *John Villinski, Chad Murich*
 Are any samples NRC licensable material? *No*

| # of Containers | FMCQB-GW | | | | | | | | |
|-----------------|----------|--|--|--|--|--|--|--|--|
| 3 | X | | | | | | | | |
| 3 | X | | | | | | | | |
| 3 | X | | | | | | | | |
| 3 | X | | | | | | | | |

| SAMPLE IDENTIFICATION | DATE:TIME | Matrix |
|-----------------------|------------------------|-----------|
| <i>NWC - 06</i> | <i>10/27/08 : 1128</i> | <i>GW</i> |
| <i>NWC - 02</i> | <i>10/27/08 : 1220</i> | <i>GW</i> |
| <i>NWC - 03</i> | <i>10/27/08 : 1245</i> | <i>GW</i> |
| <i>NWC - 04</i> | <i>10/27/08 : 1250</i> | <i>GW</i> |

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

REMARKS/ SAMPLE DISCLOSURES

Blank area for remarks and disclosures.

PAGE
of

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

| RELINQUISHED BY: | DATE:TIME | RECEIVED BY: | DATE:TIME |
|--------------------|------------------------|--------------|-----------------------|
| <i>Chad Murich</i> | <i>10/27/08 : 1430</i> | <i>JPL</i> | <i>10-28-08 10:00</i> |

November 20, 2008

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: L72665

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 24, 2008. This project has been assigned to ACZ's project number, L72665. 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 L72665. 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 20, 2008. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



Scott Habermehl has reviewed
and approved this report.



Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: PARRA

ACZ Sample ID: **L72665-01**

Date Sampled: 10/20/08 11:20

Date Received: 10/24/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 387 | | * | mg/L | 5 | 30 | 11/11/08 4:37 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: METZLER

ACZ Sample ID: **L72665-02**

Date Sampled: 10/20/08 12:20

Date Received: 10/24/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 305 | | * | mg/L | 5 | 30 | 11/11/08 5:31 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.Project ID: 8720002.2
Sample ID: DUP102008ACZ Sample ID: **L72665-03**
Date Sampled: 10/20/08 00:00
Date Received: 10/24/08
Sample Matrix: Ground Water

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 326 | | * | mg/L | 5 | 30 | 11/11/08 5:49 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.Project ID: 8720002.2
Sample ID: EQB102008ACZ Sample ID: **L72665-04**
Date Sampled: 10/20/08 12:25
Date Received: 10/24/08
Sample Matrix: Ground Water

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | | U | * | mg/L | 0.5 | 3 | 11/13/08 19:09 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: FB102008

ACZ Sample ID: **L72665-05**

Date Sampled: 10/20/08 12:25

Date Received: 10/24/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | | U | * | mg/L | 0.5 | 3 | 11/13/08 19:27 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: RUIZ

ACZ Sample ID: **L72665-06**

Date Sampled: 10/20/08 12:55

Date Received: 10/24/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 238 | | * | mg/L | 5 | 30 | 11/11/08 6:07 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: COLLINS

ACZ Sample ID: **L72665-07**

Date Sampled: 10/20/08 13:30

Date Received: 10/24/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 518 | | * | mg/L | 5 | 30 | 11/11/08 6:25 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: COOPER

ACZ Sample ID: **L72665-08**

Date Sampled: 10/20/08 14:05

Date Received: 10/24/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 31.2 | | * | mg/L | 0.5 | 3 | 11/13/08 19:45 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: WEED

ACZ Sample ID: **L72665-09**

Date Sampled: 10/20/08 14:25

Date Received: 10/24/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 10.2 | | * | mg/L | 0.5 | 3 | 11/13/08 20:03 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: BURKE

ACZ Sample ID: **L72665-10**

Date Sampled: 10/20/08 15:45

Date Received: 10/24/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 20.5 | | * | mg/L | 0.5 | 3 | 11/13/08 20:57 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: POOL

ACZ Sample ID: **L72665-11**

Date Sampled: 10/21/08 14:30

Date Received: 10/24/08

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 | 11/11/08 6:43 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.Project ID: 8720002.2
Sample ID: COB MW-1ACZ Sample ID: **L72665-12**
Date Sampled: 10/23/08 08:10
Date Received: 10/24/08
Sample Matrix: Ground Water

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 750 | | * | mg/L | 10 | 50 | 11/11/08 8:14 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: COB WL

ACZ Sample ID: **L72665-13**

Date Sampled: 10/23/08 09:00

Date Received: 10/24/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 104 | | * | mg/L | 1 | 5 | 11/11/08 8:32 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.Project ID: 8720002.2
Sample ID: COB MW-2ACZ Sample ID: **L72665-14**
Date Sampled: 10/23/08 09:40
Date Received: 10/24/08
Sample Matrix: Ground Water

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 34.9 | | * | mg/L | 0.5 | 3 | 11/13/08 21:15 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.Project ID: 8720002.2
Sample ID: COB MW-3ACZ Sample ID: **L72665-15**
Date Sampled: 10/23/08 10:20
Date Received: 10/24/08
Sample Matrix: Ground Water

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 76.6 | | * | mg/L | 0.5 | 3 | 11/13/08 21:33 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: AWC-05

ACZ Sample ID: **L72665-16**

Date Sampled: 10/23/08 10:35

Date Received: 10/24/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 15.4 | | * | mg/L | 0.5 | 3 | 11/07/08 8:57 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: AWC-03

ACZ Sample ID: **L72665-17**

Date Sampled: 10/23/08 10:55

Date Received: 10/24/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 41.8 | | * | mg/L | 0.5 | 3 | 11/07/08 9:15 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: AWC-04

ACZ Sample ID: **L72665-18**

Date Sampled: 10/23/08 11:10

Date Received: 10/24/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 24.0 | | * | mg/L | 0.5 | 3 | 11/07/08 9:33 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720002.2

Sample ID: AWC-02

ACZ Sample ID: **L72665-19**

Date Sampled: 10/23/08 11:25

Date Received: 10/24/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 15.9 | | * | mg/L | 0.5 | 3 | 11/07/08 9:51 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.Project ID: 8720002.2
Sample ID: NOTEMANACZ Sample ID: **L72665-20**
Date Sampled: 10/23/08 13:40
Date Received: 10/24/08
Sample Matrix: Ground Water

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 356 | | * | mg/L | 5 | 30 | 11/11/08 8:50 | aml |

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

Hydro Geo Chem, Inc.
 Project ID: 8720002.2

ACZ Project ID: **L72665**

Sulfate 300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|-----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG255279 | | | | | | | | | | | | | |
| WG255279ICV | ICV | 10/28/08 19:48 | WI081031-2 | 50 | | 50.85 | mg/L | 101.7 | 90 | 110 | | | |
| WG255279ICB | ICB | 10/28/08 20:06 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG255279ICV1 | ICV | 11/07/08 1:06 | WI081031-2 | 50 | | 52.94 | mg/L | 105.9 | 90 | 110 | | | |
| WG255279ICB1 | ICB | 11/07/08 1:24 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG255279ICV2 | ICV | 11/10/08 12:04 | WI081031-2 | 50 | | 50.89 | mg/L | 101.8 | 90 | 110 | | | |
| WG255279ICB2 | ICB | 11/10/08 12:22 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG255279ICV3 | ICV | 11/11/08 3:42 | WI081031-2 | 50 | | 49.84 | mg/L | 99.7 | 90 | 110 | | | |
| WG255279ICB3 | ICB | 11/11/08 4:01 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG255279LFB | LFB | 11/11/08 4:19 | WI081007-3 | 30 | | 29.87 | mg/L | 99.6 | 90 | 110 | | | |
| L72665-01AS | AS | 11/11/08 4:55 | WI081007-3 | 300 | 387 | 649 | mg/L | 87.3 | 90 | 110 | | | M2 |
| L72665-01DUP | DUP | 11/11/08 5:13 | | | 387 | 411 | mg/L | | | | 6 | 20 | |
| L72665-11AS | AS | 11/11/08 7:02 | WI081007-3 | 150 | 120 | 252.5 | mg/L | 88.3 | 90 | 110 | | | M2 |
| L72665-11DUP | DUP | 11/11/08 7:56 | | | 120 | 124.3 | mg/L | | | | 3.5 | 20 | |
| WG255362 | | | | | | | | | | | | | |
| WG255362ICV | ICV | 11/10/08 12:04 | WI081031-2 | 50 | | 50.89 | mg/L | 101.8 | 90 | 110 | | | |
| WG255362ICB | ICB | 11/10/08 12:22 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG255362ICV1 | ICV | 11/10/08 14:26 | WI081031-2 | 50 | | 50.57 | mg/L | 101.1 | 90 | 110 | | | |
| WG255362ICB1 | ICB | 11/10/08 14:44 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG255362ICV2 | ICV | 11/11/08 16:12 | WI081031-2 | 50 | | 50.13 | mg/L | 100.3 | 90 | 110 | | | |
| WG255362ICB2 | ICB | 11/11/08 16:30 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG255715 | | | | | | | | | | | | | |
| WG255715ICV | ICV | 11/10/08 12:04 | WI081031-2 | 50 | | 50.89 | mg/L | 101.8 | 90 | 110 | | | |
| WG255715ICB | ICB | 11/10/08 12:22 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG255715ICV1 | ICV | 11/13/08 16:44 | WI081031-2 | 50 | | 50.33 | mg/L | 100.7 | 90 | 110 | | | |
| WG255715ICB1 | ICB | 11/13/08 17:02 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG255715LFB | LFB | 11/13/08 17:20 | WI081007-3 | 30 | | 29.2 | mg/L | 97.3 | 90 | 110 | | | |
| L72630-01AS | AS | 11/13/08 18:14 | WI081007-3 | 600 | U | 627 | mg/L | 104.5 | 90 | 110 | | | |
| L72630-01DUP | DUP | 11/13/08 18:32 | | | U | 13 | mg/L | | | | 200 | 20 | RA |
| WG255715ICV2 | ICV | 11/14/08 11:26 | WI081031-2 | 50 | | 50.42 | mg/L | 100.8 | 90 | 110 | | | |
| WG255715ICB2 | ICB | 11/14/08 11:44 | | | | U | mg/L | | -1.5 | 1.5 | | | |

Hydro Geo Chem, Inc.

ACZ Project ID: **L72665**

| ACZ ID | WORKNUM | PARAMETER | METHOD | QUAL | DESCRIPTION |
|-----------|----------|-----------|----------------------------|------|---|
| L72665-01 | WG255279 | Sulfate | 300.0 - Ion Chromatography | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| L72665-02 | WG255279 | Sulfate | 300.0 - Ion Chromatography | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| L72665-03 | WG255279 | Sulfate | 300.0 - Ion Chromatography | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| L72665-04 | WG255715 | 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). |
| L72665-05 | WG255715 | 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). |
| L72665-06 | WG255279 | Sulfate | 300.0 - Ion Chromatography | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| L72665-07 | WG255279 | Sulfate | 300.0 - Ion Chromatography | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| L72665-08 | WG255715 | 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). |
| L72665-09 | WG255715 | 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). |
| L72665-10 | WG255715 | 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). |
| L72665-11 | WG255279 | Sulfate | 300.0 - Ion Chromatography | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| L72665-12 | WG255279 | Sulfate | 300.0 - Ion Chromatography | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| L72665-13 | WG255279 | Sulfate | 300.0 - Ion Chromatography | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| L72665-14 | WG255715 | 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). |
| L72665-15 | WG255715 | 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). |
| L72665-16 | WG255279 | Sulfate | 300.0 - Ion Chromatography | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| L72665-17 | WG255279 | Sulfate | 300.0 - Ion Chromatography | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| L72665-18 | WG255279 | Sulfate | 300.0 - Ion Chromatography | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| L72665-19 | WG255279 | Sulfate | 300.0 - Ion Chromatography | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| L72665-20 | WG255279 | Sulfate | 300.0 - Ion Chromatography | 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: **L72665**

No certification qualifiers associated with this analysis

Hydro Geo Chem, Inc.
 8720002.2

ACZ Project ID: L72665
 Date Received: 10/24/2008
 Received By:
 Date Printed: 10/24/2008

Receipt Verification

| | YES | NO | NA |
|--|-----|----|----|
| 1) Does this project require special handling procedures such as CLP protocol? | | | X |
| 2) Are the custody seals on the cooler intact? | | | X |
| 3) Are the custody seals on the sample containers intact? | | | X |
| 4) Is there a Chain of Custody or other directive shipping papers present? | X | | |
| 5) Is the Chain of Custody complete? | X | | |
| 6) Is the Chain of Custody in agreement with the samples received? | X | | |
| 7) Is there enough sample for all requested analyses? | X | | |
| 8) Are all samples within holding times for requested analyses? | X | | |
| 9) Were all sample containers received intact? | X | | |
| 10) Are the temperature blanks present? | | | X |
| 11) 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) |
|-----------|-----------|-------------|
| NA7221 | 1.7 | 14 |
| | | |
| | | |

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

Notes

Hydro Geo Chem, Inc.
 8720002.2

ACZ Project ID: L72665
 Date Received: 10/24/2008
 Received By:

Sample Container Preservation

| SAMPLE | CLIENT ID | R < 2 | G < 2 | BK < 2 | Y < 2 | YG < 2 | B < 2 | O < 2 | T > 12 | N/A | RAD | ID |
|-----------|-----------|-------|-------|--------|-------|--------|-------|-------|--------|-----|-----|--------------------------|
| L72665-01 | PARRA | | | | | | | | | X | | <input type="checkbox"/> |
| L72665-02 | METZLER | | | | | | | | | X | | <input type="checkbox"/> |
| L72665-03 | DUP102008 | | | | | | | | | X | | <input type="checkbox"/> |
| L72665-04 | EQB102008 | | | | | | | | | X | | <input type="checkbox"/> |
| L72665-05 | FB102008 | | | | | | | | | X | | <input type="checkbox"/> |
| L72665-06 | RUIZ | | | | | | | | | X | | <input type="checkbox"/> |
| L72665-07 | COLLINS | | | | | | | | | X | | <input type="checkbox"/> |
| L72665-08 | COOPER | | | | | | | | | X | | <input type="checkbox"/> |
| L72665-09 | WEED | | | | | | | | | X | | <input type="checkbox"/> |
| L72665-10 | BURKE | | | | | | | | | X | | <input type="checkbox"/> |
| L72665-11 | POOL | | | | | | | | | X | | <input type="checkbox"/> |
| L72665-12 | COB MW-1 | | | | | | | | | X | | <input type="checkbox"/> |
| L72665-13 | COB WL | | | | | | | | | X | | <input type="checkbox"/> |
| L72665-14 | COB MW-2 | | | | | | | | | X | | <input type="checkbox"/> |
| L72665-15 | COB MW-3 | | | | | | | | | X | | <input type="checkbox"/> |
| L72665-16 | AWC-05 | | | | | | | | | X | | <input type="checkbox"/> |
| L72665-17 | AWC-03 | | | | | | | | | X | | <input type="checkbox"/> |
| L72665-18 | AWC-04 | | | | | | | | | X | | <input type="checkbox"/> |
| L72665-19 | AWC-02 | | | | | | | | | X | | <input type="checkbox"/> |
| L72665-20 | NOTEMAN | | | | | | | | | X | | <input type="checkbox"/> |

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____



Laboratories, Inc.

L72665

CHAIN of CUSTODY

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

Report to:

Name: Dan Simpson
Company: Hydro Geo Chem
E-mail: dans@hginc.com

Address: 50 W Wetmore
Tucson AZ 85705
Telephone: 520-293-1500 x123

Copy of Report to:

Name: Jim Norris
Company: HGC

E-mail: jimn@hginc.com
Telephone: 520-293-1500 x112

Invoice to:

Name: Dan Simpson
Company: Hydro Geo Chem
E-mail: dans@hginc.com

Address: 50 W Wetmore
Tucson AZ 85705
Telephone: 520-293-1500 x133

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

ANALYSES REQUESTED (attach list or use quote number)

Quote #: FMCQB-GW
Project/PO #: 8720002.2
Reporting state for compliance testing: AZ
Sampler's Name: John Villinski
Are any samples NRC licensable material? NO

Table with columns for # of Containers, Sulfate, and multiple analysis columns. Rows include PARRA, METZLER, DUP102008, EQB102008, RB102008, RUIZ, COLLINS, COOPER, WEED, BURKE.

Table with columns: SAMPLE IDENTIFICATION, DATE:TIME, Matrix. Rows include PARRA, METZLER, DUP102008, EQB102008, RB102008, RUIZ, COLLINS, COOPER, WEED, BURKE.

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.

Table with columns: RELINQUISHED BY, DATE:TIME, RECEIVED BY, DATE:TIME. Includes signatures and dates like 10-23-08/15:30 and 10-14-08 10:38.



Laboratories, Inc.

L721605

CHAIN of CUSTODY

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

Report to:

Name: Dan Simpson
Company: Hydro Geochem
E-mail: dan@s-hgcinc.com

Address: 51 W Wetmore
Tucson AZ 85705
Telephone: 520-293-1500 x133

Copy of Report to:

Name: Jim Norris
Company: HGL

E-mail: jimn@hgcinc.com
Telephone: 520-293-1500 x112

Invoice to:

Name: Dan Simpson
Company: HGL
E-mail: dans@hgcinc.com

Address: 51 W Wetmore
Tucson AZ 85705
Telephone: 520-293-1500 x133

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

ANALYSES REQUESTED (attach list or use quote number)

Quote #: FMCQB-GW
Project/PO #: 8720002.2
Reporting state for compliance testing: AZ
Sampler's Name: John Villinski
Are any samples NRC licensable material? NO

Table with columns: # of Containers, Sulfate, and multiple empty columns for analysis results.

Table with columns: SAMPLE IDENTIFICATION, DATE:TIME, Matrix. Rows include POOL, COB MW-1, COB WL, COB MW-2, COB MW-3, AWC-05, AWC-03, AWC-04, AWC-02, and NOTEMAN.

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

REMARKS/ SAMPLE DISCLOSURES

Empty box for remarks and disclosures.

PAGE 2 of 2

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

Table with columns: RELINQUISHED BY, DATE:TIME, RECEIVED BY, DATE:TIME. Includes signatures and dates.

November 05, 2008

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: 8720005.0

ACZ Project ID: L72654

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 24, 2008. This project has been assigned to ACZ's project number, L72654. 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 L72654. 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, 2008. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



Scott Habermehl has reviewed
and approved this report.



Hydro Geo Chem, Inc.Project ID: 8720005.0
Sample ID: BLOMMERACZ Sample ID: **L72654-01**
Date Sampled: 10/22/08 08:20
Date Received: 10/24/08
Sample Matrix: Ground Water

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 200 | | | mg/L | 3 | 10 | 11/02/08 3:22 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.Project ID: 8720005.0
Sample ID: ROGERS 803ACZ Sample ID: **L72654-02**
Date Sampled: 10/22/08 10:00
Date Received: 10/24/08
Sample Matrix: Ground Water

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 144 | | | mg/L | 3 | 10 | 11/02/08 3:40 | aml |

Arizona license number: **AZ0102**

Hydro Geo Chem, Inc.Project ID: 8720005.0
Sample ID: SCHWARZACZ Sample ID: **L72654-03**
Date Sampled: 10/22/08 11:45
Date Received: 10/24/08
Sample Matrix: Ground Water

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 135 | | | mg/L | 3 | 10 | 11/02/08 4:35 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720005.0

Sample ID: RAY

ACZ Sample ID: **L72654-04**

Date Sampled: 10/22/08 14:25

Date Received: 10/24/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 145 | | | mg/L | 3 | 10 | 11/02/08 4:53 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720005.0

Sample ID: FULTZ

ACZ Sample ID: **L72654-05**

Date Sampled: 10/22/08 15:15

Date Received: 10/24/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 145 | | | mg/L | 3 | 10 | 11/02/08 5:11 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720005.0

Sample ID: BIMA

ACZ Sample ID: **L72654-06**

Date Sampled: 10/22/08 16:50

Date Received: 10/24/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 285 | | | mg/L | 3 | 10 | 11/02/08 5:29 | aml |

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

Hydro Geo Chem, Inc.

ACZ Project ID: **L72654**

Project ID: 8720005.0

Sulfate 300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|-----|--------|-------|-------|-------|-------|-------|------|-------|------|
| WG254921 | | | | | | | | | | | | | |
| WG254921ICV | ICV | 10/28/08 19:48 | WI081031-2 | 50 | | 50.85 | mg/L | 101.7 | 90 | 110 | | | |
| WG254921ICB | ICB | 10/28/08 20:06 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG254921ICV1 | ICV | 11/01/08 1:06 | WI081031-2 | 50 | | 52.43 | mg/L | 104.9 | 90 | 110 | | | |
| WG254921ICB1 | ICB | 11/01/08 1:24 | | | | .84 | mg/L | | -1.5 | 1.5 | | | |
| WG254921LFB | LFB | 11/01/08 1:42 | WI081007-3 | 30 | | 31.91 | mg/L | 106.4 | 90 | 110 | | | |
| L72620-01AS | AS | 11/01/08 2:37 | WI081007-3 | 30 | 6.5 | 37.65 | mg/L | 103.8 | 90 | 110 | | | |
| L72620-01DUP | DUP | 11/01/08 2:55 | | | 6.5 | 6.6 | mg/L | | | | 1.5 | 20 | |
| L72654-02AS | AS | 11/02/08 3:59 | WI081007-3 | 150 | 144 | 303.5 | mg/L | 106.3 | 90 | 110 | | | |
| L72654-02DUP | DUP | 11/02/08 4:17 | | | 144 | 175 | mg/L | | | | 19.4 | 20 | |

Hydro Geo Chem, Inc.

ACZ Project ID: **L72654**

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

No extended qualifiers associated with this analysis

Hydro Geo Chem, Inc.

ACZ Project ID: **L72654**

No certification qualifiers associated with this analysis

Hydro Geo Chem, Inc.
 8720005.0

ACZ Project ID: L72654
 Date Received: 10/24/2008
 Received By:
 Date Printed: 10/24/2008

Receipt Verification

| | YES | NO | NA |
|--|-----|----|----|
| 1) Does this project require special handling procedures such as CLP protocol? | | | X |
| 2) Are the custody seals on the cooler intact? | | | X |
| 3) Are the custody seals on the sample containers intact? | | | X |
| 4) Is there a Chain of Custody or other directive shipping papers present? | X | | |
| 5) Is the Chain of Custody complete? | X | | |
| 6) Is the Chain of Custody in agreement with the samples received? | X | | |
| 7) Is there enough sample for all requested analyses? | X | | |
| 8) Are all samples within holding times for requested analyses? | X | | |
| 9) Were all sample containers received intact? | X | | |
| 10) Are the temperature blanks present? | | | X |
| 11) 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) |
|-----------|-----------|-------------|
| 1756 | 3.7 | 16 |
| | | |
| | | |

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

Notes

Hydro Geo Chem, Inc.
 8720005.0

ACZ Project ID: L72654
 Date Received: 10/24/2008
 Received By:

Sample Container Preservation

| SAMPLE | CLIENT ID | R < 2 | G < 2 | BK < 2 | Y < 2 | YG < 2 | B < 2 | O < 2 | T > 12 | N/A | RAD | ID |
|-----------|------------|-------|-------|--------|-------|--------|-------|-------|--------|-----|-----|--------------------------|
| L72654-01 | BLOMMER | | | | | | | | | X | | <input type="checkbox"/> |
| L72654-02 | ROGERS 803 | | | | | | | | | X | | <input type="checkbox"/> |
| L72654-03 | SCHWARZ | | | | | | | | | X | | <input type="checkbox"/> |
| L72654-04 | RAY | | | | | | | | | X | | <input type="checkbox"/> |
| L72654-05 | FULTZ | | | | | | | | | X | | <input type="checkbox"/> |
| L72654-06 | BIMA | | | | | | | | | X | | <input type="checkbox"/> |

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc.

CHAIN of CUSTODY

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

L72054

Report to:

Name: Dan Simpson
 Company: Hydro Geo Chem
 E-mail: danso@hgcinc.com

Address: 51 W Wetmore
 Tucson AZ 85705
 Telephone: 520-293-1500 x133

Copy of Report to:

Name: Jim Norris
 Company: HGC

E-mail: jimn@hgcinc.com
 Telephone: 520-293-1500 x112

Invoice to:

Name: Dan Simpson
 Company: HGC
 E-mail: danso@hgcinc.com

Address: 51 W Wetmore
 Tucson AZ 85705
 Telephone: 520-293-1500 x133

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses?

| | |
|-----|-------------------------------------|
| YES | <input checked="" type="checkbox"/> |
| NO | <input type="checkbox"/> |

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO"

is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: FMCQB-GW
 Project/PO #: Y720050
 Reporting state for compliance testing: AZ
 Sampler's Name: John Villinski
 Are any samples NRC licensable material? NO

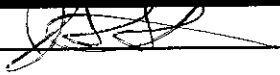
| # of Containers | | | | | | | | | | | |
|-----------------|--|--|--|--|--|--|--|--|--|--|--|
| Sulfate | | | | | | | | | | | |

| SAMPLE IDENTIFICATION | DATE:TIME | Matrix |
|-----------------------|----------------|--------|
| BLOMMER | 10-22-08/8:20 | GW |
| ROGERS 803 | 10-22-08/10:00 | GW |
| SCHWARZ | 10-22-08/11:45 | GW |
| RAY | 10-22-08/14:25 | GW |
| FULTZ | 10-22-08/15:15 | GW |
| BIMA | 10-22-08/16:50 | GW |

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 |
|---|----------------|--------------|----------------|
|  | 10-23-08/15:30 | CEG | 10-24-08/10:45 |

November 05, 2008

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: 8720000

ACZ Project ID: L72620

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 23, 2008. This project has been assigned to ACZ's project number, L72620. 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 L72620. 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, 2008. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



Scott Habermehl has reviewed
and approved this report.



Hydro Geo Chem, Inc.

Project ID: 8720000

Sample ID: UN-02

ACZ Sample ID: **L72620-01**

Date Sampled: 10/14/08 11:35

Date Received: 10/23/08

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 | 11/01/08 2:19 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720000

Sample ID: UN-03

ACZ Sample ID: **L72620-02**

Date Sampled: 10/14/08 11:15

Date Received: 10/23/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 6.7 | | | mg/L | 0.5 | 3 | 11/01/08 3:13 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720000

Sample ID: UN-04

ACZ Sample ID: **L72620-03**

Date Sampled: 10/14/08 12:25

Date Received: 10/23/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 6.8 | | | mg/L | 0.5 | 3 | 11/01/08 3:31 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720000

Sample ID: UN-05

ACZ Sample ID: **L72620-04**

Date Sampled: 10/14/08 11:55

Date Received: 10/23/08

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 | 11/01/08 3:49 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720000

Sample ID: EN-02

ACZ Sample ID: **L72620-05**

Date Sampled: 10/21/08 08:25

Date Received: 10/23/08

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 | 11/01/08 4:07 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720000

Sample ID: EN-06

ACZ Sample ID: **L72620-06**

Date Sampled: 10/21/08 09:00

Date Received: 10/23/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 9.8 | | | mg/L | 0.5 | 3 | 11/01/08 4:25 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720000

Sample ID: EN-05

ACZ Sample ID: **L72620-07**

Date Sampled: 10/21/08 09:15

Date Received: 10/23/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 6.1 | | | mg/L | 0.5 | 3 | 11/01/08 5:20 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720000

Sample ID: EN-03

ACZ Sample ID: **L72620-08**

Date Sampled: 10/21/08 09:40

Date Received: 10/23/08

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 | 11/01/08 5:38 | aml |

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

Hydro Geo Chem, Inc.

ACZ Project ID: **L72620**

Project ID: 8720000

Sulfate 300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG254921 | | | | | | | | | | | | | |
| WG254921ICV | ICV | 10/28/08 19:48 | WI081031-2 | 50 | | 50.85 | mg/L | 101.7 | 90 | 110 | | | |
| WG254921ICB | ICB | 10/28/08 20:06 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG254921ICV1 | ICV | 11/01/08 1:06 | WI081031-2 | 50 | | 52.43 | mg/L | 104.9 | 90 | 110 | | | |
| WG254921ICB1 | ICB | 11/01/08 1:24 | | | | .84 | mg/L | | -1.5 | 1.5 | | | |
| WG254921LFB | LFB | 11/01/08 1:42 | WI081007-3 | 30 | | 31.91 | mg/L | 106.4 | 90 | 110 | | | |
| L72620-01AS | AS | 11/01/08 2:37 | WI081007-3 | 30 | 6.5 | 37.65 | mg/L | 103.8 | 90 | 110 | | | |
| L72620-01DUP | DUP | 11/01/08 2:55 | | | 6.5 | 6.6 | mg/L | | | | 1.5 | 20 | |

Hydro Geo Chem, Inc.

ACZ Project ID: **L72620**

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

No extended qualifiers associated with this analysis

Hydro Geo Chem, Inc.

ACZ Project ID: **L72620**

No certification qualifiers associated with this analysis

Hydro Geo Chem, Inc.
 8720000

ACZ Project ID: L72620
 Date Received: 10/23/2008
 Received By:
 Date Printed: 10/23/2008

Receipt Verification

| | YES | NO | NA |
|--|-----|----|----|
| 1) Does this project require special handling procedures such as CLP protocol? | | | X |
| 2) Are the custody seals on the cooler intact? | | | X |
| 3) Are the custody seals on the sample containers intact? | | | X |
| 4) Is there a Chain of Custody or other directive shipping papers present? | X | | |
| 5) Is the Chain of Custody complete? | X | | |
| 6) Is the Chain of Custody in agreement with the samples received? | X | | |
| 7) Is there enough sample for all requested analyses? | X | | |
| 8) Are all samples within holding times for requested analyses? | X | | |
| 9) Were all sample containers received intact? | X | | |
| 10) Are the temperature blanks present? | | | X |
| 11) 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) |
|-----------|-----------|-------------|
| NA7195 | 3.5 | 15 |
| | | |
| | | |

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

Notes

L72620

Wpl 10-23-08

ACZ Laboratories, Inc. CHAIN of CUSTODY

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5498

Report to:

| | |
|-------------------------|------------------------------|
| Name: Dan Simpson | Address: 51 W. Wetmore |
| Company: Hydro Geo Chem | Tucson AZ 85705 |
| E-mail: dans@hginc.com | Telephone: 520-293-1500 x133 |

Copy of Report to:

| | |
|-----------------------------------|-----------------------------------|
| Name: Jim Morris / Rebecca Sawyer | E-mail: jimn@hginc.com |
| Company: HGC FMI | Telephone: rebecca-sawyer@FMI.com |

Invoice to:

| | |
|------------------------|------------------------------|
| Name: Jim Morris | Address: 51 W. Wetmore |
| Company: HGC | Tucson AZ 85705 |
| E-mail: jimn@hginc.com | Telephone: 520-293-1500 x112 |

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

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

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

| | | | | | | | | | | | | |
|---|-----------------|---------|----------|--|--|--|--|--|--|--|--|--|
| Quote #: FMCQB-GW | # of Containers | sulfate | FMCQB-GW | | | | | | | | | |
| Project/PO #: 8720000 22 | | | | | | | | | | | | |
| Reporting state for compliance testing: AZ | | | | | | | | | | | | |
| Sampler's Name: John Villinski | | | | | | | | | | | | |
| Are any samples NRC licensable material? NO | | | | | | | | | | | | |

| SAMPLE IDENTIFICATION | DATE: TIME | Matrix | # of Containers | sulfate | FMCQB-GW | | | | | |
|-----------------------|------------------|--------|-----------------|---------|----------|--------|--|--|--|--|
| BANKS 986 | 10-13-08 / 13:23 | GW | 1 | X | | | | | | |
| DODSON | 10-13-08 / 14:45 | GW | 1 | X | | | | | | |
| DUP 101308 | 10-13-08 | GW | 1 | X | | | | | | |
| EQB 101308 | 10-13-08 / 16:50 | GW | 1 | X | | | | | | |
| FB 101308 | 10-13-08 / 16:50 | GW | 1 | X | | | | | | |
| PANAGA-KOS | 10-13-08 / 16:45 | GW | 1 | X | | | | | | |
| POZO-02 | 10-14-08 / 11:35 | GW | 3 | | X | UID-02 | | | | |
| POZO-03 | 10-14-08 / 11:15 | GW | 3 | | X | UID-03 | | | | |
| POZO-04 | 10-14-08 / 12:25 | GW | 3 | | X | UID-04 | | | | |
| POZO-05 | 10-14-08 / 11:55 | GW | 3 | | X | UID-05 | | | | |

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

REMARKS

COPY

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 |
| | 10-14-08 / 13:30 | | 10-13-08 95) |

10/10/2308 Percilent emul x x x x

Report to:

Name: Dan Simpson
Company: HydraGeo Chem
E-mail: dans@hgainc.com

Address: 51 W Webmore
Tucson AZ 85705
Telephone: 520-293-1500 x133

Copy of Report to:

Name: Jim Norris
Company: HGC

E-mail: jimn@hgainc.com
Telephone: 520-293-1500 x112

Invoice to:

Name: Jim Norris
Company: HGC
E-mail: jimn@hgainc.com

Address: 51 W Webmore
Tucson AZ 85705
Telephone: 520-293-1500 x133

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses?

YES
NO

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: FMCA B-GW
Project/PO #: 872000 2.2
Reporting state for compliance testing: AZ
Sampler's Name: John Villinski
Are any samples NRC licensable material? -

| # of Containers | FMCA B-GW | | | | | | | | |
|-----------------|-----------|--------|--|--|--|--|--|--|--|
| 3 | X | E10-02 | | | | | | | |
| 3 | X | E10-04 | | | | | | | |
| 3 | X | E10-05 | | | | | | | |
| 3 | X | E10-03 | | | | | | | |

L726 10-23-08
per client email

| SAMPLE IDENTIFICATION | DATE:TIME | Matrix | # of Containers | FMCA B-GW | | | | | | |
|--------------------------|-----------------|--------|-----------------|-----------|--------|--|--|--|--|--|
| EJIDO NACO 02 | 10/21/08 - 8:25 | GW | 3 | X | E10-02 | | | | | |
| EJIDO NACO 06 | 10/21/08 - 9:00 | GW | 3 | X | E10-04 | | | | | |
| EJIDO NACO 05 | 10/21/08 - 9:15 | GW | 3 | X | E10-05 | | | | | |
| EJIDO NACO 03 | 10/21/08 - 9:40 | GW | 3 | X | E10-03 | | | | | |

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 |
|------------------|------------------|--------------|---------------|
| | 10/21/08 - 13:30 | | 10/22/08 9:56 |

October 28, 2008

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: 8720000

ACZ Project ID: L72549

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 17, 2008. This project has been assigned to ACZ's project number, L72549. Please reference this number in all future inquiries.

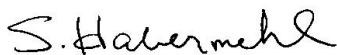
All analyses were performed according to ACZ's Quality Assurance Plan, version 12.0. The enclosed results relate only to the samples received under L72549. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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



Scott Habermehl has reviewed
and approved this report.



Hydro Geo Chem, Inc.Project ID: 8720000
Sample ID: HOWARDACZ Sample ID: **L72549-01**
Date Sampled: 10/15/08 08:05
Date Received: 10/17/08
Sample Matrix: Ground Water

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 683 | | | mg/L | 5 | 30 | 10/20/08 20:01 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.Project ID: 8720000
Sample ID: GARNER 635ACZ Sample ID: **L72549-02**
Date Sampled: 10/15/08 08:45
Date Received: 10/17/08
Sample Matrix: Ground Water

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 36.0 | | | mg/L | 0.5 | 3 | 10/19/08 20:41 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.Project ID: 8720000
Sample ID: FRANCOACZ Sample ID: **L72549-03**
Date Sampled: 10/15/08 09:40
Date Received: 10/17/08
Sample Matrix: Ground Water

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 680 | | | mg/L | 5 | 30 | 10/20/08 20:19 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720000

Sample ID: MCCONNELL 265

ACZ Sample ID: **L72549-04**

Date Sampled: 10/15/08 10:40

Date Received: 10/17/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 703 | | | mg/L | 5 | 30 | 10/20/08 20:37 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.Project ID: 8720000
Sample ID: CHAMBERSACZ Sample ID: **L72549-05**
Date Sampled: 10/15/08 11:35
Date Received: 10/17/08
Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 4.0 | | | mg/L | 0.5 | 3 | 10/25/08 17:11 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720000

Sample ID: TVI236

ACZ Sample ID: **L72549-06**

Date Sampled: 10/15/08 12:25

Date Received: 10/17/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 36.6 | | | mg/L | 0.5 | 3 | 10/25/08 17:29 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720000

Sample ID: TVI875

ACZ Sample ID: **L72549-07**

Date Sampled: 10/15/08 13:10

Date Received: 10/17/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 245 | | | mg/L | 3 | 10 | 10/27/08 21:12 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.Project ID: 8720000
Sample ID: ANDERSONACZ Sample ID: **L72549-08**
Date Sampled: 10/15/08 16:50
Date Received: 10/17/08
Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 475 | | | mg/L | 5 | 30 | 10/27/08 21:30 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720000

Sample ID: PALMER

ACZ Sample ID: **L72549-09**

Date Sampled: 10/16/08 08:05

Date Received: 10/17/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 15.9 | | | mg/L | 0.5 | 3 | 10/25/08 18:59 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720000

Sample ID: NESS

ACZ Sample ID: **L72549-10**

Date Sampled: 10/16/08 08:30

Date Received: 10/17/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 48.9 | | | mg/L | 0.5 | 3 | 10/25/08 19:17 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720000

Sample ID: SWAN

ACZ Sample ID: **L72549-11**

Date Sampled: 10/16/08 09:15

Date Received: 10/17/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 19.0 | | | mg/L | 0.5 | 3 | 10/25/08 20:12 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.Project ID: 8720000
Sample ID: OSBORNACZ Sample ID: **L72549-12**
Date Sampled: 10/16/08 10:05
Date Received: 10/17/08
Sample Matrix: Ground Water

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 15.9 | | | mg/L | 0.5 | 3 | 10/25/08 20:30 | ccp |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720000

Sample ID: HOBAN

ACZ Sample ID: **L72549-13**

Date Sampled: 10/16/08 13:15

Date Received: 10/17/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 692 | | | mg/L | 5 | 30 | 10/27/08 21:49 | ccp |

Arizona license number: **AZ0102**

Hydro Geo Chem, Inc.Project ID: 8720000
Sample ID: COPPERCACZ Sample ID: **L72549-14**
Date Sampled: 10/16/08 14:20
Date Received: 10/17/08
Sample Matrix: Ground Water

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 1020 | | | mg/L | 30 | 100 | 10/27/08 22:07 | ccp |

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

Hydro Geo Chem, Inc.
 Project ID: 8720000

ACZ Project ID: **L72549**

Sulfate 300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|-----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG254077 | | | | | | | | | | | | | |
| WG254077ICV | ICV | 10/14/08 13:25 | WI081007-1 | 50 | | 50.62 | mg/L | 101.2 | 90 | 110 | | | |
| WG254077ICB | ICB | 10/14/08 13:43 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG254077ICV1 | ICV | 10/19/08 16:28 | WI081007-1 | 50 | | 51.81 | mg/L | 103.6 | 90 | 110 | | | |
| WG254077ICB1 | ICB | 10/19/08 16:46 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| L72400-01DUP | DUP | 10/19/08 17:59 | | | 6.8 | 6.84 | mg/L | | | | 0.6 | 20 | |
| L72400-01AS | AS | 10/19/08 18:17 | WI081007-3 | 30 | 6.8 | 39.24 | mg/L | 108.1 | 90 | 110 | | | |
| WG254077ICV2 | ICV | 10/20/08 19:07 | WI081007-1 | 50 | | 52.48 | mg/L | 105 | 90 | 110 | | | |
| WG254077ICB2 | ICB | 10/20/08 19:25 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG254077LFB | LFB | 10/20/08 19:43 | WI081007-3 | 30 | | 30.77 | mg/L | 102.6 | 90 | 110 | | | |
| WG254537 | | | | | | | | | | | | | |
| WG254537ICV | ICV | 10/14/08 13:25 | WI081007-1 | 50 | | 50.62 | mg/L | 101.2 | 90 | 110 | | | |
| WG254537ICB | ICB | 10/14/08 13:43 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG254537ICV1 | ICV | 10/25/08 12:21 | WI081007-1 | 50 | | 52.2 | mg/L | 104.4 | 90 | 110 | | | |
| WG254537ICB1 | ICB | 10/25/08 12:39 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG254537LFB | LFB | 10/25/08 12:57 | WI081007-3 | 30 | | 32.19 | mg/L | 107.3 | 90 | 110 | | | |
| L72549-06AS | AS | 10/25/08 17:47 | WI081007-3 | 30 | 36.6 | 64.76 | mg/L | 93.9 | 90 | 110 | | | |
| L72549-06DUP | DUP | 10/25/08 18:05 | | | 36.6 | 36.67 | mg/L | | | | 0.2 | 20 | |
| WG254537ICV2 | ICV | 10/27/08 17:59 | WI081007-1 | 50 | | 50.25 | mg/L | 100.5 | 90 | 110 | | | |
| WG254537ICB2 | ICB | 10/27/08 18:17 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| L72482-01AS | AS | 10/27/08 20:18 | WI081007-3 | 150 | 175 | 318.5 | mg/L | 95.7 | 90 | 110 | | | |
| L72482-01DUP | DUP | 10/27/08 20:36 | | | 175 | 173.9 | mg/L | | | | 0.6 | 20 | |

Hydro Geo Chem, Inc.

ACZ Project ID: **L72549**

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

No extended qualifiers associated with this analysis

Hydro Geo Chem, Inc.

ACZ Project ID: **L72549**

No certification qualifiers associated with this analysis

Hydro Geo Chem, Inc.
 8720000

ACZ Project ID: L72549
 Date Received: 10/17/2008
 Received By:
 Date Printed: 10/17/2008

Receipt Verification

| | YES | NO | NA |
|--|-----|----|----|
| 1) Does this project require special handling procedures such as CLP protocol? | | | X |
| 2) Are the custody seals on the cooler intact? | | | X |
| 3) Are the custody seals on the sample containers intact? | | | X |
| 4) Is there a Chain of Custody or other directive shipping papers present? | X | | |
| 5) Is the Chain of Custody complete? | X | | |
| 6) Is the Chain of Custody in agreement with the samples received? | X | | |
| 7) Is there enough sample for all requested analyses? | X | | |
| 8) Are all samples within holding times for requested analyses? | X | | |
| 9) Were all sample containers received intact? | X | | |
| 10) Are the temperature blanks present? | | | X |
| 11) 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) |
|-----------|-----------|-------------|
| 1905 | 2.5 | 15 |
| | | |
| | | |

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

Notes

Hydro Geo Chem, Inc.
 8720000

ACZ Project ID: L72549
 Date Received: 10/17/2008
 Received By:

Sample Container Preservation

| SAMPLE | CLIENT ID | R < 2 | G < 2 | BK < 2 | Y < 2 | YG < 2 | B < 2 | O < 2 | T > 12 | N/A | RAD | ID |
|-----------|---------------|-------|-------|--------|-------|--------|-------|-------|--------|-----|-----|--------------------------|
| L72549-01 | HOWARD | | | | | | | | | X | | <input type="checkbox"/> |
| L72549-02 | GARNER 635 | | | | | | | | | X | | <input type="checkbox"/> |
| L72549-03 | FRANCO | | | | | | | | | X | | <input type="checkbox"/> |
| L72549-04 | MCCONNELL 265 | | | | | | | | | X | | <input type="checkbox"/> |
| L72549-05 | CHAMBERS | | | | | | | | | X | | <input type="checkbox"/> |
| L72549-06 | TVI236 | | | | | | | | | X | | <input type="checkbox"/> |
| L72549-07 | TVI875 | | | | | | | | | X | | <input type="checkbox"/> |
| L72549-08 | ANDERSON | | | | | | | | | X | | <input type="checkbox"/> |
| L72549-09 | PALMER | | | | | | | | | X | | <input type="checkbox"/> |
| L72549-10 | NESS | | | | | | | | | X | | <input type="checkbox"/> |
| L72549-11 | SWAN | | | | | | | | | X | | <input type="checkbox"/> |
| L72549-12 | OSBORN | | | | | | | | | X | | <input type="checkbox"/> |
| L72549-13 | HOBAN | | | | | | | | | X | | <input type="checkbox"/> |
| L72549-14 | COPPERC | | | | | | | | | X | | <input type="checkbox"/> |

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

Report to:

| | |
|-------------------------|------------------------------|
| Name: Dan Simpson | Address: 51 W Wetmore |
| Company: Hydro Geo Chem | Tucson AZ 85705 |
| E-mail: dans@hgcinc.com | Telephone: 520-293-1500 x133 |

Copy of Report to:

| | |
|---------------------------------|-----------------------------------|
| Name: Jim Norris/Rebecca Sawyer | E-mail: jimn@hgcinc.com |
| Company: HGC/FMI | Telephone: rebecca-sawyer@FMI.com |

Invoice to:

| | |
|-------------------------|------------------------------|
| Name: Jim Norris | Address: 51 W Wetmore |
| Company: HGC | Tucson AZ 85705 |
| E-mail: jimn@hgcinc.com | Telephone: 520-293-1500 x112 |

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

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

| | | | | | | | | | | | | | | | | | | | | |
|---|------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Quote #: 872000 FMCQB-GW | # of Containers 504 | | | | | | | | | | | | | | | | | | | |
| Project/PO #: 8720000 | | | | | | | | | | | | | | | | | | | | |
| Reporting state for compliance testing: AZ | | | | | | | | | | | | | | | | | | | | |
| Sampler's Name: John Villinski | | | | | | | | | | | | | | | | | | | | |
| Are any samples NRC licensable material? NO | | | | | | | | | | | | | | | | | | | | |

| SAMPLE IDENTIFICATION | DATE:TIME | Matrix | # of Containers | | | | | | | | | | | | | | | | | |
|-----------------------|----------------|--------|-----------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| HOWARD | 10-15-08/8:05 | GW | 1 | X | | | | | | | | | | | | | | | | |
| GARNER 635 | 10-15-08/8:45 | GW | 1 | X | | | | | | | | | | | | | | | | |
| FRANCO | 10-15-08/9:40 | GW | 1 | X | | | | | | | | | | | | | | | | |
| MCCONNELL 265 | 10-15-08/10:40 | GW | 1 | X | | | | | | | | | | | | | | | | |
| CHAMBERS | 10-15-08/11:35 | GW | 1 | X | | | | | | | | | | | | | | | | |
| TVI 236 | 10-15-08/12:25 | GW | 1 | X | | | | | | | | | | | | | | | | |
| TVI 875 | 10-15-08/13:10 | GW | 1 | X | | | | | | | | | | | | | | | | |
| ANDERSON | 10-15-08/16:50 | GW | 1 | X | | | | | | | | | | | | | | | | |
| PALMER | 10-16-08/8:05 | GW | 1 | X | | | | | | | | | | | | | | | | |
| NESS | 10-16-08/8:30 | 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
102

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

| RELINQUISHED BY: | DATE:TIME | RECEIVED BY: | DATE:TIME |
|------------------|---------------|--------------|---------------|
| | 10-16-08/1530 | | 10-17-08 9:30 |

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

Report to:

| | |
|----------------------------|------------------------------|
| Name: Dan Simpson | Address: 51 W Wetmore |
| Company: HydroGeo Chem Inc | Tucson AZ 85705 |
| E-mail: dans@hgcinc.com | Telephone: 520-293-1500 x133 |

Copy of Report to:

| | |
|---------------------------------|-----------------------------------|
| Name: Jim Norris/Rebecca Sawyer | E-mail: jimn@hgcinc.com |
| Company: HGC / FMI | Telephone: rebecca-sawyer@FMI.com |

Invoice to:

| | |
|-------------------------|------------------------------|
| Name: Jim Norris | Address: 51 W Wetmore |
| Company: HGC | Tucson AZ 85705 |
| E-mail: jimn@hgcinc.com | Telephone: 520-293-1500 x112 |

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

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

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



| Quote #: FMCQB-GW | # of Containers 504 | | | | | | | | | | | | | | | | | | | |
|---|------------------------|--------|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Project/PO #: 8720000 | | | | | | | | | | | | | | | | | | | | |
| Reporting state for compliance testing: AZ | | | | | | | | | | | | | | | | | | | | |
| Sampler's Name: John Villinski | | | | | | | | | | | | | | | | | | | | |
| Are any samples NRC licensable material? NO | | | | | | | | | | | | | | | | | | | | |
| SAMPLE IDENTIFICATION | DATE:TIME | Matrix | | | | | | | | | | | | | | | | | | |
| SWAN | 10-16-08/9:15 | GW | 1 | X | | | | | | | | | | | | | | | | |
| OSBORN | 10-16-08/10:05 | GW | 1 | X | | | | | | | | | | | | | | | | |
| HOBAN | 10-16-08/13:15 | GW | 1 | X | | | | | | | | | | | | | | | | |
| COOPER C | 10-16-08/14:20 | 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 |
|---|----------------|--|---------------|
|  | 10-16-08/15:36 |  | 10-17-08 9:30 |

October 27, 2008

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: 8720000

ACZ Project ID: L72466

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 15, 2008. This project has been assigned to ACZ's project number, L72466. Please reference this number in all future inquiries.

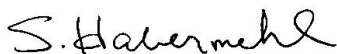
All analyses were performed according to ACZ's Quality Assurance Plan, version 12.0. The enclosed results relate only to the samples received under L72466. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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 27, 2008. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



Scott Habermehl has reviewed
and approved this report.



Hydro Geo Chem, Inc.

Project ID: 8720000

Sample ID: BANKS 986

ACZ Sample ID: **L72466-01**

Date Sampled: 10/13/08 13:23

Date Received: 10/15/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 53 | | * | mg/L | 1 | 5 | 10/23/08 17:51 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.Project ID: 8720000
Sample ID: DODSONACZ Sample ID: **L72466-02**
Date Sampled: 10/13/08 14:45
Date Received: 10/15/08
Sample Matrix: Ground Water

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 56.9 | | * | mg/L | 0.5 | 3 | 10/23/08 5:35 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.Project ID: 8720000
Sample ID: DUP101308ACZ Sample ID: **L72466-03**
Date Sampled: 10/13/08 00:00
Date Received: 10/15/08
Sample Matrix: Ground Water

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 500 | | * | mg/L | 10 | 50 | 10/23/08 18:27 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.Project ID: 8720000
Sample ID: EQB101308ACZ Sample ID: **L72466-04**
Date Sampled: 10/13/08 16:50
Date Received: 10/15/08
Sample Matrix: Ground Water

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | | U | * | mg/L | 0.5 | 3 | 10/23/08 6:11 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.Project ID: 8720000
Sample ID: FB101308ACZ Sample ID: **L72466-05**
Date Sampled: 10/13/08 16:50
Date Received: 10/15/08
Sample Matrix: Ground Water

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | | U | * | mg/L | 0.5 | 3 | 10/23/08 7:06 | aml |

Arizona license number: **AZ0102**

Hydro Geo Chem, Inc.Project ID: 8720000
Sample ID: PANAGAKOSACZ Sample ID: **L72466-06**
Date Sampled: 10/13/08 16:45
Date Received: 10/15/08
Sample Matrix: Ground Water

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 480 | | * | mg/L | 10 | 50 | 10/23/08 18:45 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.Project ID: 8720000
Sample ID: EPPELE 641ACZ Sample ID: **L72466-11**
Date Sampled: 10/14/08 09:52
Date Received: 10/15/08
Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 21.8 | | * | mg/L | 0.5 | 3 | 10/23/08 19:03 | aml |

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 8720000

Sample ID: EAST

ACZ Sample ID: **L72466-12**

Date Sampled: 10/14/08 14:05

Date Received: 10/15/08

Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|---------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 8.9 | | * | mg/L | 0.5 | 3 | 10/23/08 8:00 | aml |

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

Hydro Geo Chem, Inc.
 Project ID: 8720000

ACZ Project ID: **L72466**

Sulfate 300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG254343 | | | | | | | | | | | | | |
| WG254343 CV | ICV | 10/14/08 13:25 | WI081007-1 | 50 | | 50.62 | mg/L | 101.2 | 90 | 110 | | | |
| WG254343 CB | ICB | 10/14/08 13:43 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG254343 CV1 | ICV | 10/22/08 23:15 | WI081007-1 | 50 | | 51.67 | mg/L | 103.3 | 90 | 110 | | | |
| WG254343 CB1 | ICB | 10/22/08 23:33 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG254343 LFB1 | LFB | 10/22/08 23:51 | WI081007-3 | 30 | | 31.52 | mg/L | 105.1 | 90 | 110 | | | |
| L72429-04AS | AS | 10/23/08 4:41 | WI081007-3 | 30 | 1.3 | 32.09 | mg/L | 102.6 | 90 | 110 | | | |
| L72429-04DUP | DUP | 10/23/08 4:59 | | | 1.3 | U | mg/L | | | | 200 | 20 | RA |
| WG254343 LFB2 | LFB | 10/23/08 8:36 | WI081007-3 | 30 | | 30.88 | mg/L | 102.9 | 90 | 110 | | | |
| WG254343 CV2 | ICV | 10/23/08 16:20 | WI081007-1 | 50 | | 50.23 | mg/L | 100.5 | 90 | 110 | | | |
| WG254343 CB2 | ICB | 10/23/08 16:38 | | | | U | mg/L | | -1.5 | 1.5 | | | |

Hydro Geo Chem, Inc.

ACZ Project ID: **L72466**

| ACZ ID | WORKNUM | PARAMETER | METHOD | QUAL | DESCRIPTION |
|-----------|----------|-----------|----------------------------|------|---|
| L72466-01 | WG254343 | 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). |
| L72466-02 | WG254343 | 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). |
| L72466-03 | WG254343 | 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). |
| L72466-04 | WG254343 | 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). |
| L72466-05 | WG254343 | 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). |
| L72466-06 | WG254343 | 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). |
| L72466-11 | WG254343 | 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). |
| L72466-12 | WG254343 | 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). |

Hydro Geo Chem, Inc.

ACZ Project ID: **L72466**

No certification qualifiers associated with this analysis

Hydro Geo Chem, Inc.
 8720000

ACZ Project ID: L72466
 Date Received: 10/15/2008
 Received By:
 Date Printed: 10/15/2008

Receipt Verification

| | YES | NO | NA |
|--|-----|----|----|
| 1) Does this project require special handling procedures such as CLP protocol? | | | X |
| 2) Are the custody seals on the cooler intact? | | | X |
| 3) Are the custody seals on the sample containers intact? | | | X |
| 4) Is there a Chain of Custody or other directive shipping papers present? | X | | |
| 5) Is the Chain of Custody complete? | X | | |
| 6) Is the Chain of Custody in agreement with the samples received? | X | | |
| 7) Is there enough sample for all requested analyses? | X | | |
| 8) Are all samples within holding times for requested analyses? | X | | |
| 9) Were all sample containers received intact? | X | | |
| 10) Are the temperature blanks present? | | | X |
| 11) 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) |
|-----------|-----------|-------------|
| na7153 | 1.4 | 15 |
| | | |
| | | |

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

Notes

Hydro Geo Chem, Inc.
 8720000

ACZ Project ID: L72466
 Date Received: 10/15/2008
 Received By:

Sample Container Preservation

| SAMPLE | CLIENT ID | R < 2 | G < 2 | BK < 2 | Y < 2 | YG < 2 | B < 2 | O < 2 | T > 12 | N/A | RAD | ID |
|-----------|------------|-------|-------|--------|-------|--------|-------|-------|--------|-----|-----|--------------------------|
| L72466-01 | BANKS 986 | | | | | | | | | X | | <input type="checkbox"/> |
| L72466-02 | DODSON | | | | | | | | | X | | <input type="checkbox"/> |
| L72466-03 | DUP101308 | | | | | | | | | X | | <input type="checkbox"/> |
| L72466-04 | EQB101308 | | | | | | | | | X | | <input type="checkbox"/> |
| L72466-05 | FB101308 | | | | | | | | | X | | <input type="checkbox"/> |
| L72466-06 | PANAGAKOS | | | | | | | | | X | | <input type="checkbox"/> |
| L72466-07 | POZO-02 | | Y | | | | | | | | | <input type="checkbox"/> |
| L72466-08 | POZO-03 | | Y | | | | | | | | | <input type="checkbox"/> |
| L72466-09 | POZO-04 | | Y | | | | | | | | | <input type="checkbox"/> |
| L72466-10 | POZO-05 | | Y | | | | | | | | | <input type="checkbox"/> |
| L72466-11 | EPPELE 641 | | | | | | | | | X | | <input type="checkbox"/> |
| L72466-12 | EAST | | | | | | | | | X | | <input type="checkbox"/> |

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc.

CHAIN of CUSTODY

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5498

L-724106

Report to:

| | |
|-------------------------|------------------------------|
| Name: Dan Simpson | Address: 51 W. Wetmore |
| Company: Hydro Geo Chem | Tucson AZ 85705 |
| E-mail: dans@hgcmc.com | Telephone: 520-293-1500 x133 |

Copy of Report to:

| | |
|-----------------------------------|-----------------------------------|
| Name: Jim Norris / Rebecca Sawyer | E-mail: jimn@hgcmc.com |
| Company: HGC FMI | Telephone: rebecca-sawyer@FMI.com |

Invoice to:

| | |
|------------------------|------------------------------|
| Name: Jim Norris | Address: 51 W. Wetmore |
| Company: HGC | Tucson AZ 85705 |
| E-mail: jimn@hgcmc.com | Telephone: 520-293-1500 x112 |

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

| | | | | | | | | | | |
|---|----|--|--|--|--|--|--|--|--|--|
| Quote #: FMCQB-GW | | | | | | | | | | |
| Project/PO #: 8720000 | 22 | | | | | | | | | |
| Reporting state for compliance testing: AZ | | | | | | | | | | |
| Sampler's Name: John Villinski | | | | | | | | | | |
| Are any samples NRC licensable material? NO | | | | | | | | | | |

| SAMPLE IDENTIFICATION | DATE:TIME | Matrix | # of Containers | sulfate | FMCQB-GW | | | | | |
|-----------------------|------------------|--------|-----------------|---------|----------|--|--|--|--|--|
| BANKS 986 | 10-13-08 / 13:23 | GW | 1 | X | | | | | | |
| DODSON | 10-13-08 / 14:45 | GW | 1 | X | | | | | | |
| DUP 101308 | 10-13-08 | GW | 1 | X | | | | | | |
| EQB 101308 | 10-13-08 / 16:50 | GW | 1 | X | | | | | | |
| FB 101308 | 10-13-08 / 16:50 | GW | 1 | X | | | | | | |
| PANAGAKOS | 10-13-08 / 16:45 | GW | 1 | X | | | | | | |
| POZO-02 | 10-14-08 / 11:35 | GW | 3 | | X | | | | | |
| POZO-03 | 10-14-08 / 11:15 | GW | 3 | | X | | | | | |
| POZO-04 | 10-14-08 / 12:25 | GW | 3 | | X | | | | | |
| POZO-05 | 10-14-08 / 11:55 | GW | 3 | | X | | | | | |

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

REMARKS

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 |
|------------------|------------------|--------------|---------------|
| | 10-14-08 / 13:30 | | 10-15-08 9:51 |
| | | | |

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

Report to:

| | |
|----------------------------------|-------------------------------------|
| Name: <u>Dan Simpson</u> | Address: <u>51 W Wetmore</u> |
| Company: <u>Hydro Geo Chem</u> | <u>Tucson AZ 85705</u> |
| E-mail: <u>danse_hgc@inc.com</u> | Telephone: <u>520-293-1500 x133</u> |

Copy of Report to:

| | |
|--|--|
| Name: <u>Jim Norris / Rebecca Sawyer</u> | E-mail: <u>jimn@hgcinc.com</u> |
| Company: <u>HGC FMI</u> | Telephone: <u>rebecca-sawyer@FMI.com</u> |

Invoice to:

| | |
|--------------------------------|-------------------------------------|
| Name: <u>Jim Norris</u> | Address: <u>51 W Wetmore</u> |
| Company: <u>HGC</u> | <u>Tucson AZ 85705</u> |
| E-mail: <u>jimn@hgcinc.com</u> | Telephone: <u>520-293-1500 x112</u> |

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

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

| | | | | | | | | | | | | | | | | | | | | |
|--|-------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Quote #: <u>FMCQB-GW</u> | # of Containers <u>THAT TEST</u> | | | | | | | | | | | | | | | | | | | |
| Project/PO #: <u>8720000</u> | | | | | | | | | | | | | | | | | | | | |
| Reporting state for compliance testing: <u>AZ</u> | | | | | | | | | | | | | | | | | | | | |
| Sampler's Name: <u>John Villinski</u> | | | | | | | | | | | | | | | | | | | | |
| Are any samples NRC licensable material? <u>NO</u> | | | | | | | | | | | | | | | | | | | | |

| SAMPLE IDENTIFICATION | DATE:TIME | Matrix | # of Containers | THAT TEST | | | | | | | | | | | | | | | | |
|-----------------------|-----------------------|-----------|-----------------|-----------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| <u>EPPELE 641</u> | <u>10/14/08/9:52</u> | <u>GW</u> | <u>1</u> | <u>X</u> | | | | | | | | | | | | | | | | |
| <u>EAST</u> | <u>10/14/08/14:05</u> | <u>GW</u> | <u>1</u> | <u>Y</u> | | | | | | | | | | | | | | | | |
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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: <u>[Signature]</u> | DATE:TIME: <u>10/14/08/15:30</u> | RECEIVED BY: <u>[Signature]</u> | DATE:TIME: <u>10/15/08/9:51</u> |
| | | | |

October 20, 2008

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: 8720000

ACZ Project ID: L72231

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 04, 2008. This project has been assigned to ACZ's project number, L72231. 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 L72231. 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 20, 2008. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



Scott Habermehl has reviewed
and approved this report.



Hydro Geo Chem, Inc.

Project ID: 8720000
Sample ID: BMO-2008-13B

ACZ Sample ID: **L72231-01**
Date Sampled: 10/03/08 13:45
Date Received: 10/04/08
Sample Matrix: Ground Water

Metals Analysis

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|----------------------|------------|--------|------|----|-------|-----|-----|----------------|---------|
| Calcium, dissolved | M200.7 ICP | 420 | | | mg/L | 0.2 | 1 | 10/09/08 19:38 | neb/aeH |
| Magnesium, dissolved | M200.7 ICP | 79.8 | | | mg/L | 0.2 | 1 | 10/09/08 19:38 | neb/aeH |
| Potassium, dissolved | M200.7 ICP | 6.8 | | | mg/L | 0.3 | 2 | 10/09/08 19:38 | neb/aeH |
| Sodium, dissolved | M200.7 ICP | 53.0 | | | mg/L | 0.3 | 2 | 10/09/08 19:38 | neb/aeH |

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------------------------------|--------------------------------------|--------|------|----|-------|------|------|----------------|---------|
| Alkalinity as CaCO3 | SM2320B - Titration | | | | | | | | |
| Bicarbonate as CaCO3 | | 347 | | | mg/L | 2 | 20 | 10/11/08 0:00 | kah |
| Carbonate as CaCO3 | | | U | | mg/L | 2 | 20 | 10/11/08 0:00 | kah |
| Hydroxide as CaCO3 | | | U | | mg/L | 2 | 20 | 10/11/08 0:00 | kah |
| Total Alkalinity | | 347 | | | mg/L | 2 | 20 | 10/11/08 0:00 | kah |
| Cation-Anion Balance | Calculation | | | | | | | | |
| Cation-Anion Balance | | 3.1 | | | % | | | 10/20/08 0:00 | calc |
| Sum of Anions | | 28.3 | | | meq/L | 0.1 | 0.5 | 10/20/08 0:00 | calc |
| Sum of Cations | | 30.1 | | | meq/L | 0.1 | 0.5 | 10/20/08 0:00 | calc |
| Chloride | M300.0 - Ion Chromatography | 23 | | * | mg/L | 1 | 5 | 10/13/08 12:22 | ccp |
| Fluoride | M300.0 - Ion Chromatography | | U | * | mg/L | 0.2 | 1 | 10/13/08 12:22 | ccp |
| Nitrate as N, dissolved | Calculation: NO3NO2 minus NO2 | 1.92 | | | mg/L | 0.02 | 0.1 | 10/20/08 0:00 | calc |
| Nitrate/Nitrite as N, dissolved | M353.2 - Automated Cadmium Reduction | 1.92 | | | mg/L | 0.02 | 0.1 | 10/04/08 15:35 | pjb |
| Nitrite as N, dissolved | M353.2 - Automated Cadmium Reduction | | U | * | mg/L | 0.01 | 0.05 | 10/04/08 15:35 | pjb |
| Residue, Filterable (TDS) @180C | SM2540C | 2040 | | | mg/L | 10 | 20 | 10/09/08 15:49 | abm |
| Sulfate | 300.0 - Ion Chromatography | 980 | | * | mg/L | 10 | 50 | 10/16/08 11:10 | aml |
| TDS (calculated) | Calculation | 1780 | | | mg/L | 10 | 50 | 10/20/08 0:00 | calc |
| TDS (ratio - measured/calculated) | Calculation | 1.15 | | | | | | 10/20/08 0:00 | calc |

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

Hydro Geo Chem, Inc.
 Project ID: 8720000

ACZ Project ID: **L72231**

Alkalinity as CaCO3 SM2320B - Titration

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|-------|-------|------|-------|-------|-----|-------|------|
| WG253590 | | | | | | | | | | | | | |
| WG253590PBW2 | PBW | 10/11/08 17:54 | | | | U | mg/L | | -20 | 20 | | | |
| WG253590LCSW5 | LCSW | 10/11/08 18:06 | WC081008-2 | 820.0001 | | 744.9 | mg/L | 90.8 | 90 | 110 | | | |
| L72242-06DUP | DUP | 10/11/08 19:46 | | | 49 | 48.8 | mg/L | | | | 0.4 | 20 | |
| WG253590PBW3 | PBW | 10/11/08 21:10 | | | | U | mg/L | | -20 | 20 | | | |
| WG253590LCSW8 | LCSW | 10/11/08 21:23 | WC081008-2 | 820.0001 | | 741.4 | mg/L | 90.4 | 90 | 110 | | | |
| WG253590PBW4 | PBW | 10/11/08 22:36 | | | | U | mg/L | | -20 | 20 | | | |
| WG253590LCSW11 | LCSW | 10/11/08 22:48 | WC081008-2 | 820.0001 | | 751.6 | mg/L | 91.7 | 90 | 110 | | | |
| WG253590LCSW14 | LCSW | 10/12/08 2:02 | WC081008-2 | 820.0001 | | 742.3 | mg/L | 90.5 | 90 | 110 | | | |

Calcium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG253487 | | | | | | | | | | | | | |
| WG253487ICV | ICV | 10/09/08 17:59 | II080818-1 | 100 | | 99.54 | mg/L | 99.5 | 95 | 105 | | | |
| WG253487ICB | ICB | 10/09/08 18:03 | | | | U | mg/L | | -0.6 | 0.6 | | | |
| WG253487LFB | LFB | 10/09/08 18:15 | II081003-2 | 67.97008 | | 70.08 | mg/L | 103.1 | 85 | 115 | | | |
| L72171-03AS | AS | 10/09/08 19:12 | II081003-2 | 67.97008 | 32.3 | 101.56 | mg/L | 101.9 | 85 | 115 | | | |
| L72171-03ASD | ASD | 10/09/08 19:15 | II081003-2 | 67.97008 | 32.3 | 101.08 | mg/L | 101.2 | 85 | 115 | 0.47 | 20 | |

Chloride M300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|-------|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG253606 | | | | | | | | | | | | | |
| WG253606ICV | ICV | 10/11/08 11:26 | WI081007-1 | 19.98 | | 20.12 | mg/L | 100.7 | 90 | 110 | | | |
| WG253606ICB | ICB | 10/11/08 11:44 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG253606ICV1 | ICV | 10/13/08 3:19 | WI081007-1 | 19.98 | | 20.13 | mg/L | 100.8 | 90 | 110 | | | |
| WG253606ICB1 | ICB | 10/13/08 3:37 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG253606LFB | LFB | 10/13/08 3:55 | WI081007-3 | 30 | | 29.5 | mg/L | 98.3 | 90 | 110 | | | |
| L72132-05DUP | DUP | 10/13/08 8:45 | | | 16500 | 16500 | mg/L | | | | 0 | 20 | |
| L72132-06AS | AS | 10/13/08 9:21 | WI081007-3 | 300 | 87 | 376.3 | mg/L | 96.4 | 90 | 110 | | | |

Fluoride M300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|-----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG253606 | | | | | | | | | | | | | |
| WG253606ICV | ICV | 10/11/08 11:26 | WI081007-1 | 4 | | 4.14 | mg/L | 103.5 | 90 | 110 | | | |
| WG253606ICB | ICB | 10/11/08 11:44 | | | | U | mg/L | | -0.3 | 0.3 | | | |
| WG253606ICV1 | ICV | 10/13/08 3:19 | WI081007-1 | 4 | | 4.17 | mg/L | 104.3 | 90 | 110 | | | |
| WG253606ICB1 | ICB | 10/13/08 3:37 | | | | U | mg/L | | -0.3 | 0.3 | | | |
| WG253606LFB | LFB | 10/13/08 3:55 | WI081007-3 | 1.5 | | 1.51 | mg/L | 100.7 | 90 | 110 | | | |
| L72132-05DUP | DUP | 10/13/08 8:45 | | | 4390 | 4393 | mg/L | | | | 0.1 | 20 | |
| L72132-06AS | AS | 10/13/08 9:21 | WI081007-3 | 15 | 3 | 16.5 | mg/L | 90 | 90 | 110 | | | |

Hydro Geo Chem, Inc.
 Project ID: 8720000

ACZ Project ID: **L72231**

Magnesium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|-------|-------|-------|-------|-------|------|-------|------|
| WG253487 | | | | | | | | | | | | | |
| WG253487ICV | ICV | 10/09/08 17:59 | II080818-1 | 100 | | 100 | mg/L | 100 | 95 | 105 | | | |
| WG253487ICB | ICB | 10/09/08 18:03 | | | | U | mg/L | | -0.6 | 0.6 | | | |
| WG253487LFB | LFB | 10/09/08 18:15 | II081003-2 | 49.96908 | | 50.45 | mg/L | 101 | 85 | 115 | | | |
| L72171-03AS | AS | 10/09/08 19:12 | II081003-2 | 49.96908 | 10.3 | 62.42 | mg/L | 104.3 | 85 | 115 | | | |
| L72171-03ASD | ASD | 10/09/08 19:15 | II081003-2 | 49.96908 | 10.3 | 62.22 | mg/L | 103.9 | 85 | 115 | 0.32 | 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 |
|-----------------|------|----------------|------------|-------|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG253154 | | | | | | | | | | | | | |
| WG253154ICV | ICV | 10/04/08 15:28 | WI080916-5 | 2.416 | | 2.31 | mg/L | 95.6 | 90 | 110 | | | |
| WG253154ICB | ICB | 10/04/08 15:30 | | | | U | mg/L | | -0.06 | 0.06 | | | |
| WG253154LFB | LFB | 10/04/08 15:34 | WI080913-4 | 2 | | 1.9 | mg/L | 95 | 90 | 110 | | | |
| L72231-01DUP | DUP | 10/04/08 15:36 | | | 1.92 | 1.928 | mg/L | | | | 0.4 | 20 | |
| WG253154ICV1 | ICV | 10/04/08 15:50 | WI080916-5 | 2.416 | | 2.244 | mg/L | 92.9 | 90 | 110 | | | |
| WG253154ICB1 | ICB | 10/04/08 15:51 | | | | U | mg/L | | -0.06 | 0.06 | | | |
| L72231-01AS | AS | 10/04/08 15:54 | WI080913-4 | 4 | 1.8 | 6.193 | mg/L | 109.8 | 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 |
|-----------------|------|----------------|------------|------|--------|-------|-------|------|-------|-------|-----|-------|------|
| WG253154 | | | | | | | | | | | | | |
| WG253154ICV | ICV | 10/04/08 15:28 | WI080916-5 | .609 | | .6 | mg/L | 98.5 | 90 | 110 | | | |
| WG253154ICB | ICB | 10/04/08 15:30 | | | | U | mg/L | | -0.03 | 0.03 | | | |
| WG253154LFB | LFB | 10/04/08 15:34 | WI080913-4 | 1 | | .973 | mg/L | 97.3 | 90 | 110 | | | |
| L72231-01DUP | DUP | 10/04/08 15:36 | | | U | U | mg/L | | | | 0 | 20 | RA |
| L72231-01AS | AS | 10/04/08 15:37 | WI080913-4 | 1 | U | .963 | mg/L | 96.3 | 90 | 110 | | | |

Potassium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG253487 | | | | | | | | | | | | | |
| WG253487ICV | ICV | 10/09/08 17:59 | II080818-1 | 20 | | 19.91 | mg/L | 99.6 | 95 | 105 | | | |
| WG253487ICB | ICB | 10/09/08 18:03 | | | | U | mg/L | | -0.9 | 0.9 | | | |
| WG253487LFB | LFB | 10/09/08 18:15 | II081003-2 | 99.76186 | | 100.64 | mg/L | 100.9 | 85 | 115 | | | |
| L72171-03AS | AS | 10/09/08 19:12 | II081003-2 | 99.76186 | .9 | 104.69 | mg/L | 104 | 85 | 115 | | | |
| L72171-03ASD | ASD | 10/09/08 19:15 | II081003-2 | 99.76186 | .9 | 104.31 | mg/L | 103.7 | 85 | 115 | 0.36 | 20 | |

Residue, Filterable (TDS) @180C SM2540C

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|----------|-----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG253479 | | | | | | | | | | | | | |
| WG253479PBW | PBW | 10/09/08 15:30 | | | | U | mg/L | | -20 | 20 | | | |
| WG253479LCSW | LCSW | 10/09/08 15:31 | PCN29987 | 260 | | 270 | mg/L | 103.8 | 80 | 120 | | | |
| L72295-01DUP | DUP | 10/09/08 15:59 | | | 1030 | 1032 | mg/L | | | | 0.2 | 20 | |

Hydro Geo Chem, Inc.
 Project ID: 8720000

ACZ Project ID: **L72231**

Sodium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG253487 | | | | | | | | | | | | | |
| WG253487ICV | ICV | 10/09/08 17:59 | II080818-1 | 100 | | 100.54 | mg/L | 100.5 | 95 | 105 | | | |
| WG253487ICB | ICB | 10/09/08 18:03 | | | | U | mg/L | | -0.9 | 0.9 | | | |
| WG253487LFB | LFB | 10/09/08 18:15 | II081003-2 | 98.21624 | | 99.86 | mg/L | 101.7 | 85 | 115 | | | |
| L72171-03AS | AS | 10/09/08 19:12 | II081003-2 | 98.21624 | 6.2 | 108.63 | mg/L | 104.3 | 85 | 115 | | | |
| L72171-03ASD | ASD | 10/09/08 19:15 | II081003-2 | 98.21624 | 6.2 | 107.72 | mg/L | 103.4 | 85 | 115 | 0.84 | 20 | |

Sulfate 300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG253845 | | | | | | | | | | | | | |
| WG253845ICV | ICV | 10/14/08 13:25 | WI081007-1 | 50 | | 50.62 | mg/L | 101.2 | 90 | 110 | | | |
| WG253845ICB | ICB | 10/14/08 13:43 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG253845ICV1 | ICV | 10/15/08 18:14 | WI081007-1 | 50 | | 50.45 | mg/L | 100.9 | 90 | 110 | | | |
| WG253845ICB1 | ICB | 10/15/08 18:32 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG253845LFB | LFB | 10/15/08 18:50 | WI081007-3 | 30 | | 32.51 | mg/L | 108.4 | 90 | 110 | | | |
| L71994-01AS | AS | 10/15/08 19:26 | WI081007-3 | 30 | 23 | 59.49 | mg/L | 121.6 | 90 | 110 | | | M1 |
| L71994-01DUP | DUP | 10/15/08 19:45 | | | 23 | 22.85 | mg/L | | | | 0.7 | 20 | |
| WG253845ICV2 | ICV | 10/16/08 9:40 | WI081007-1 | 50 | | 49.95 | mg/L | 99.9 | 90 | 110 | | | |
| WG253845ICB2 | ICB | 10/16/08 9:58 | | | | U | mg/L | | -1.5 | 1.5 | | | |

Hydro Geo Chem, Inc.

ACZ Project ID: **L72231**

| ACZ ID | WORKNUM | PARAMETER | METHOD | QUAL | DESCRIPTION |
|-----------|----------|-------------------------|--------------------------------------|------|---|
| L72231-01 | WG253606 | Chloride | M300.0 - Ion Chromatography | DH | Sample required dilution due to high TDS and/or EC value. |
| | | Fluoride | M300.0 - Ion Chromatography | DH | Sample required dilution due to high TDS and/or EC value. |
| | WG253154 | 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). |
| | WG253845 | Sulfate | 300.0 - Ion Chromatography | M1 | Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable. |

Hydro Geo Chem, Inc.

ACZ Project ID: **L72231**

No certification qualifiers associated with this analysis

Hydro Geo Chem, Inc.
 8720000

ACZ Project ID: L72231
 Date Received: 10/4/2008
 Received By:
 Date Printed: 10/4/2008

Receipt Verification

| | YES | NO | NA |
|--|-----|----|----|
| 1) Does this project require special handling procedures such as CLP protocol? | | | X |
| 2) Are the custody seals on the cooler intact? | | | X |
| 3) Are the custody seals on the sample containers intact? | | | X |
| 4) Is there a Chain of Custody or other directive shipping papers present? | X | | |
| 5) Is the Chain of Custody complete? | X | | |
| 6) Is the Chain of Custody in agreement with the samples received? | X | | |
| 7) Is there enough sample for all requested analyses? | X | | |
| 8) Are all samples within holding times for requested analyses? | X | | |
| 9) Were all sample containers received intact? | X | | |
| 10) Are the temperature blanks present? | | | X |
| 11) 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) |
|-----------|-----------|-------------|
| NA7078 | 2.1 | 14 |
| | | |
| | | |

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

Notes

Hydro Geo Chem, Inc.
 8720000

ACZ Project ID: L72231
 Date Received: 10/4/2008
 Received By:

Sample Container Preservation

| SAMPLE | CLIENT ID | R < 2 | G < 2 | BK < 2 | Y < 2 | YG < 2 | B < 2 | O < 2 | T > 12 | N/A | RAD | ID |
|-----------|--------------|-------|-------|--------|-------|--------|-------|-------|--------|-----|-----|--------------------------|
| L72231-01 | BMO-2008-13B | | Y | | | | | | | | | <input type="checkbox"/> |

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____



Laboratories, Inc.

L72031

CHAIN of CUSTODY

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

Report to:

Name: Dan Simpson
Company: HGC Inc (HydroGeoChem)
E-mail: dans@hgcinc.com

Address: 51 W Wetmore
Tucson AZ 85705
Telephone: 520-293-1500 x133

Copy of Report to:

Name: Jim Norris
Company: HGC Inc

E-mail: jimn@hgcinc.com
Telephone: 520-293-1500 x112

Invoice to:

Name: Jim Norris
Company: HGC Inc
E-mail: jimn@hgcinc.com

Address: 51 W Wetmore Rd
Tucson AZ 85705
Telephone: 520-293-1500 x133

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

ANALYSES REQUESTED (attach list or use quote number)

Quote #: FMCQB-GW
Project/PO #: 8720000
Reporting state for compliance testing: AZ
Sampler's Name: John Villinski
Are any samples NRC licensable material? NO

Table with columns for # of Containers, FMCQB-GW, and multiple empty columns for analysis requests.

Table with columns: SAMPLE IDENTIFICATION, DATE:TIME, Matrix. Row 1: BMU-2008-13B, 10-3-08/13:45, GW.

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

REMARKS/ SAMPLE DISCLOSURES

Empty box for remarks and disclosures.

PAGE 1 of 1

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

Table with columns: RELINQUISHED BY, DATE:TIME, RECEIVED BY, DATE:TIME. Includes signatures and dates.

October 16, 2008

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: 8720000 T2.3 JEV

ACZ Project ID: L72217

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 03, 2008. This project has been assigned to ACZ's project number, L72217. 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 L72217. 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 16, 2008. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



Scott Habermehl has reviewed
and approved this report.



Hydro Geo Chem, Inc.

Project ID: 8720000 T2.3 JEV
 Sample ID: BMO-2008-5M

ACZ Sample ID: **L72217-01**
 Date Sampled: 10/02/08 13:45
 Date Received: 10/03/08
 Sample Matrix: Ground Water

Metals Analysis

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|----------------------|------------|--------|------|----|-------|-----|-----|----------------|---------|
| Calcium, dissolved | M200.7 ICP | 75.8 | | | mg/L | 0.2 | 1 | 10/09/08 19:25 | neb/aeH |
| Magnesium, dissolved | M200.7 ICP | 11.4 | | | mg/L | 0.2 | 1 | 10/09/08 19:25 | neb/aeH |
| Potassium, dissolved | M200.7 ICP | 2.6 | | | mg/L | 0.3 | 2 | 10/09/08 19:25 | neb/aeH |
| Sodium, dissolved | M200.7 ICP | 34.1 | | | mg/L | 0.3 | 2 | 10/09/08 19:25 | neb/aeH |

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------------------------------|--------------------------------------|--------|------|----|-------|------|------|----------------|---------|
| Alkalinity as CaCO3 | SM2320B - Titration | | | | | | | | |
| Bicarbonate as CaCO3 | | 138 | | | mg/L | 2 | 20 | 10/14/08 0:00 | jlf |
| Carbonate as CaCO3 | | | U | | mg/L | 2 | 20 | 10/14/08 0:00 | jlf |
| Hydroxide as CaCO3 | | | U | | mg/L | 2 | 20 | 10/14/08 0:00 | jlf |
| Total Alkalinity | | 138 | | | mg/L | 2 | 20 | 10/14/08 0:00 | jlf |
| Cation-Anion Balance | Calculation | | | | | | | | |
| Cation-Anion Balance | | 6.0 | | | % | | | 10/15/08 0:00 | calc |
| Sum of Anions | | 5.5 | | | meq/L | 0.1 | 0.5 | 10/15/08 0:00 | calc |
| Sum of Cations | | 6.2 | | | meq/L | 0.1 | 0.5 | 10/15/08 0:00 | calc |
| Chloride | M300.0 - Ion Chromatography | 15.1 | | | mg/L | 0.5 | 3 | 10/13/08 12:04 | ccp |
| Fluoride | M300.0 - Ion Chromatography | 0.2 | B | | mg/L | 0.1 | 0.5 | 10/13/08 12:04 | ccp |
| Nitrate as N, dissolved | Calculation: NO3NO2 minus NO2 | 1.85 | | | mg/L | 0.02 | 0.1 | 10/15/08 0:00 | calc |
| Nitrate/Nitrite as N, dissolved | M353.2 - Automated Cadmium Reduction | 1.85 | | * | mg/L | 0.02 | 0.1 | 10/03/08 19:01 | pjb |
| Nitrite as N, dissolved | M353.2 - Automated Cadmium Reduction | | U | * | mg/L | 0.01 | 0.05 | 10/03/08 19:01 | pjb |
| Residue, Filterable (TDS) @180C | SM2540C | 390 | | | mg/L | 10 | 20 | 10/09/08 15:43 | abm |
| Sulfate | 300.0 - Ion Chromatography | 107 | | | mg/L | 1 | 5 | 10/13/08 22:17 | ccp |
| TDS (calculated) | Calculation | 337 | | | mg/L | 10 | 50 | 10/15/08 0:00 | calc |
| TDS (ratio - measured/calculated) | Calculation | 1.16 | | | | | | 10/15/08 0:00 | calc |

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

Hydro Geo Chem, Inc.

ACZ Project ID: **L72217**

Project ID: 8720000 T2.3 JEV

Alkalinity as CaCO3 SM2320B - Titration

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|-------|-------|------|-------|-------|-----|-------|------|
| WG253726 | | | | | | | | | | | | | |
| WG253726PBW1 | PBW | 10/14/08 14:30 | | | | 17.2 | mg/L | | -20 | 20 | | | |
| WG253726LCSW2 | LCSW | 10/14/08 14:41 | WC081008-2 | 820.0001 | | 751.3 | mg/L | 91.6 | 90 | 110 | | | |
| L72272-01DUP | DUP | 10/14/08 17:10 | | | 273 | 274 | mg/L | | | | 0.4 | 20 | |
| WG253726PBW2 | PBW | 10/14/08 17:16 | | | | U | mg/L | | -20 | 20 | | | |
| WG253726LCSW5 | LCSW | 10/14/08 17:28 | WC081008-2 | 820.0001 | | 758.6 | mg/L | 92.5 | 90 | 110 | | | |
| WG253726PBW3 | PBW | 10/14/08 19:53 | | | | U | mg/L | | -20 | 20 | | | |
| WG253726LCSW8 | LCSW | 10/14/08 20:04 | WC081008-2 | 820.0001 | | 750.8 | mg/L | 91.6 | 90 | 110 | | | |

Calcium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG253487 | | | | | | | | | | | | | |
| WG253487ICV | ICV | 10/09/08 17:59 | II080818-1 | 100 | | 99.54 | mg/L | 99.5 | 95 | 105 | | | |
| WG253487ICB | ICB | 10/09/08 18:03 | | | | U | mg/L | | -0.6 | 0.6 | | | |
| WG253487LFB | LFB | 10/09/08 18:15 | II081003-2 | 67.97008 | | 70.08 | mg/L | 103.1 | 85 | 115 | | | |
| L72171-03AS | AS | 10/09/08 19:12 | II081003-2 | 67.97008 | 32.3 | 101.56 | mg/L | 101.9 | 85 | 115 | | | |
| L72171-03ASD | ASD | 10/09/08 19:15 | II081003-2 | 67.97008 | 32.3 | 101.08 | mg/L | 101.2 | 85 | 115 | 0.47 | 20 | |

Chloride M300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|-------|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG253606 | | | | | | | | | | | | | |
| WG253606ICV | ICV | 10/11/08 11:26 | WI081007-1 | 19.98 | | 20.12 | mg/L | 100.7 | 90 | 110 | | | |
| WG253606ICB | ICB | 10/11/08 11:44 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG253606ICV1 | ICV | 10/13/08 3:19 | WI081007-1 | 19.98 | | 20.13 | mg/L | 100.8 | 90 | 110 | | | |
| WG253606ICB1 | ICB | 10/13/08 3:37 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG253606LFB | LFB | 10/13/08 3:55 | WI081007-3 | 30 | | 29.5 | mg/L | 98.3 | 90 | 110 | | | |
| L72132-05DUP | DUP | 10/13/08 8:45 | | | 16500 | 16500 | mg/L | | | | 0 | 20 | |
| L72132-06AS | AS | 10/13/08 9:21 | WI081007-3 | 300 | 87 | 376.3 | mg/L | 96.4 | 90 | 110 | | | |

Fluoride M300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|-----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG253606 | | | | | | | | | | | | | |
| WG253606ICV | ICV | 10/11/08 11:26 | WI081007-1 | 4 | | 4.14 | mg/L | 103.5 | 90 | 110 | | | |
| WG253606ICB | ICB | 10/11/08 11:44 | | | | U | mg/L | | -0.3 | 0.3 | | | |
| WG253606ICV1 | ICV | 10/13/08 3:19 | WI081007-1 | 4 | | 4.17 | mg/L | 104.3 | 90 | 110 | | | |
| WG253606ICB1 | ICB | 10/13/08 3:37 | | | | U | mg/L | | -0.3 | 0.3 | | | |
| WG253606LFB | LFB | 10/13/08 3:55 | WI081007-3 | 1.5 | | 1.51 | mg/L | 100.7 | 90 | 110 | | | |
| L72132-05DUP | DUP | 10/13/08 8:45 | | | 4390 | 4393 | mg/L | | | | 0.1 | 20 | |
| L72132-06AS | AS | 10/13/08 9:21 | WI081007-3 | 15 | 3 | 16.5 | mg/L | 90 | 90 | 110 | | | |

Magnesium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|-------|-------|-------|-------|-------|------|-------|------|
| WG253487 | | | | | | | | | | | | | |
| WG253487ICV | ICV | 10/09/08 17:59 | II080818-1 | 100 | | 100 | mg/L | 100 | 95 | 105 | | | |
| WG253487ICB | ICB | 10/09/08 18:03 | | | | U | mg/L | | -0.6 | 0.6 | | | |
| WG253487LFB | LFB | 10/09/08 18:15 | II081003-2 | 49.96908 | | 50.45 | mg/L | 101 | 85 | 115 | | | |
| L72171-03AS | AS | 10/09/08 19:12 | II081003-2 | 49.96908 | 10.3 | 62.42 | mg/L | 104.3 | 85 | 115 | | | |
| L72171-03ASD | ASD | 10/09/08 19:15 | II081003-2 | 49.96908 | 10.3 | 62.22 | mg/L | 103.9 | 85 | 115 | 0.32 | 20 | |

Hydro Geo Chem, Inc.
 Project ID: 8720000 T2.3 JEV

ACZ Project ID: **L72217**

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 |
|-----------------|------|----------------|------------|-------|--------|-------|-------|------|-------|-------|------|-------|------|
| WG253125 | | | | | | | | | | | | | |
| WG253125ICV | ICV | 10/03/08 18:38 | WI080916-5 | 2.416 | | 2.401 | mg/L | 99.4 | 90 | 110 | | | |
| WG253125ICB | ICB | 10/03/08 18:39 | | | | U | mg/L | | -0.06 | 0.06 | | | |
| WG253125LFB | LFB | 10/03/08 18:43 | WI080913-4 | 2 | | 1.958 | mg/L | 97.9 | 90 | 110 | | | |
| L72202-01AS | AS | 10/03/08 18:46 | WI080913-4 | 2 | | 1.901 | mg/L | 95.1 | 90 | 110 | | | |
| L72202-02DUP | DUP | 10/03/08 18:48 | | | .04 | .036 | mg/L | | | | 10.5 | 20 | RA |

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 |
|-----------------|------|----------------|------------|------|--------|-------|-------|------|-------|-------|-----|-------|------|
| WG253125 | | | | | | | | | | | | | |
| WG253125ICV | ICV | 10/03/08 18:38 | WI080916-5 | .609 | | .604 | mg/L | 99.2 | 90 | 110 | | | |
| WG253125ICB | ICB | 10/03/08 18:39 | | | | U | mg/L | | -0.03 | 0.03 | | | |
| WG253125LFB | LFB | 10/03/08 18:43 | WI080913-4 | 1 | | .986 | mg/L | 98.6 | 90 | 110 | | | |
| L72202-01AS | AS | 10/03/08 18:46 | WI080913-4 | 1 | | .965 | mg/L | 96.5 | 90 | 110 | | | |
| L72202-02DUP | DUP | 10/03/08 18:48 | | | | 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 |
|-----------------|------|----------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG253487 | | | | | | | | | | | | | |
| WG253487ICV | ICV | 10/09/08 17:59 | II080818-1 | 20 | | 19.91 | mg/L | 99.6 | 95 | 105 | | | |
| WG253487ICB | ICB | 10/09/08 18:03 | | | | U | mg/L | | -0.9 | 0.9 | | | |
| WG253487LFB | LFB | 10/09/08 18:15 | II081003-2 | 99.76186 | | 100.64 | mg/L | 100.9 | 85 | 115 | | | |
| L72171-03AS | AS | 10/09/08 19:12 | II081003-2 | 99.76186 | .9 | 104.69 | mg/L | 104 | 85 | 115 | | | |
| L72171-03ASD | ASD | 10/09/08 19:15 | II081003-2 | 99.76186 | .9 | 104.31 | mg/L | 103.7 | 85 | 115 | 0.36 | 20 | |

Residue, Filterable (TDS) @180C SM2540C

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|----------|-----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG253479 | | | | | | | | | | | | | |
| WG253479PBW | PBW | 10/09/08 15:30 | | | | U | mg/L | | -20 | 20 | | | |
| WG253479LCSW | LCSW | 10/09/08 15:31 | PCN29987 | 260 | | 270 | mg/L | 103.8 | 80 | 120 | | | |
| L72218-01DUP | DUP | 10/09/08 15:45 | | | 1430 | 1396 | mg/L | | | | 2.4 | 20 | |

Sodium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG253487 | | | | | | | | | | | | | |
| WG253487ICV | ICV | 10/09/08 17:59 | II080818-1 | 100 | | 100.54 | mg/L | 100.5 | 95 | 105 | | | |
| WG253487ICB | ICB | 10/09/08 18:03 | | | | U | mg/L | | -0.9 | 0.9 | | | |
| WG253487LFB | LFB | 10/09/08 18:15 | II081003-2 | 98.21624 | | 99.86 | mg/L | 101.7 | 85 | 115 | | | |
| L72171-03AS | AS | 10/09/08 19:12 | II081003-2 | 98.21624 | 6.2 | 108.63 | mg/L | 104.3 | 85 | 115 | | | |
| L72171-03ASD | ASD | 10/09/08 19:15 | II081003-2 | 98.21624 | 6.2 | 107.72 | mg/L | 103.4 | 85 | 115 | 0.84 | 20 | |

Hydro Geo Chem, Inc.

ACZ Project ID: **L72217**

Project ID: 8720000 T2.3 JEV

Sulfate 300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|-----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG253606 | | | | | | | | | | | | | |
| WG253606ICV | ICV | 10/11/08 11:26 | WI081007-1 | 50 | | 51.09 | mg/L | 102.2 | 90 | 110 | | | |
| WG253606ICB | ICB | 10/11/08 11:44 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG253606ICV1 | ICV | 10/13/08 3:19 | WI081007-1 | 50 | | 50.54 | mg/L | 101.1 | 90 | 110 | | | |
| WG253606ICB1 | ICB | 10/13/08 3:37 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG253606LFB | LFB | 10/13/08 3:55 | WI081007-3 | 30 | | 30.08 | mg/L | 100.3 | 90 | 110 | | | |
| L72132-05DUP | DUP | 10/13/08 8:45 | | | 3100 | 3110 | mg/L | | | | 0.3 | 20 | |
| L72132-06AS | AS | 10/13/08 9:21 | WI081007-3 | 300 | 269 | 539.1 | mg/L | 90 | 90 | 110 | | | |

Hydro Geo Chem, Inc.

ACZ Project ID: **L72217**

| ACZ ID | WORKNUM | PARAMETER | METHOD | QUAL | DESCRIPTION |
|-----------|----------|---------------------------------|--------------------------------------|------|---|
| L72217-01 | WG253125 | 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). |

Hydro Geo Chem, Inc.

ACZ Project ID: **L72217**

No certification qualifiers associated with this analysis

Hydro Geo Chem, Inc.
 8720000 T2.3 JEV

ACZ Project ID: L72217
 Date Received: 10/3/2008
 Received By:
 Date Printed: 10/3/2008

Receipt Verification

| | YES | NO | NA |
|--|-----|----|----|
| 1) Does this project require special handling procedures such as CLP protocol? | | | X |
| 2) Are the custody seals on the cooler intact? | | | X |
| 3) Are the custody seals on the sample containers intact? | | | X |
| 4) Is there a Chain of Custody or other directive shipping papers present? | X | | |
| 5) Is the Chain of Custody complete? | X | | |
| 6) Is the Chain of Custody in agreement with the samples received? | X | | |
| 7) Is there enough sample for all requested analyses? | X | | |
| 8) Are all samples within holding times for requested analyses? | X | | |
| 9) Were all sample containers received intact? | X | | |
| 10) Are the temperature blanks present? | | | X |
| 11) 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) |
|-----------|-----------|-------------|
| NA7072 | 0.9 | 15 |
| | | |
| | | |

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

Notes

Hydro Geo Chem, Inc.
 8720000 T2.3 JEV

ACZ Project ID: L72217
 Date Received: 10/3/2008
 Received By:

Sample Container Preservation

| SAMPLE | CLIENT ID | R < 2 | G < 2 | BK < 2 | Y < 2 | YG < 2 | B < 2 | O < 2 | T > 12 | N/A | RAD | ID |
|-----------|-------------|-------|-------|--------|-------|--------|-------|-------|--------|-----|-----|--------------------------|
| L72217-01 | BMO-2008-5M | | Y | | | | | | | | | <input type="checkbox"/> |

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____



Laboratories, Inc.

L72217

CHAIN of CUSTODY

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

Report to:

Name: Dan Simpson
Company: Hydro Geo Chem
E-mail: dans@hgcinc.com

Address: 51 W Wetmore
Tucson AZ 85705
Telephone: 520-293-1500 x133

Copy of Report to:

Name: Jim Norris
Company: HGC

E-mail: jimn@hgcinc.com
Telephone: 520-293-1500 x112

Invoice to:

Name: Jim Norris
Company: HGC
E-mail: jimn@hgcinc.com

Address: 51 W Wetmore
Tucson AZ 85705
Telephone: 520-293-1500 x112

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

ANALYSES REQUESTED (attach list or use quote number)

Quote #: 8 FMCQB-GW
Project/PO #: 872000 T2.3 JEV
Reporting state for compliance testing: AZ
Sampler's Name: John Villinski
Are any samples NRC licensable material? NO

Table with columns for # of Containers, FMCQB-GW, and other analysis categories.

Table with columns: SAMPLE IDENTIFICATION, DATE:TIME, Matrix, # of Containers, FMCQB-GW, and other analysis categories.

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

REMARKS/ SAMPLE DISCLOSURES

Empty box for remarks and disclosures.

PAGE of

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

Table with columns: RELINQUISHED BY, DATE:TIME, RECEIVED BY, DATE:TIME. Includes signatures and dates.

October 14, 2008

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: 8720000

ACZ Project ID: L72149

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 01, 2008. This project has been assigned to ACZ's project number, L72149. 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 L72149. 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 14, 2008. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



Scott Habermehl has reviewed
and approved this report.



Hydro Geo Chem, Inc.

Project ID: 8720000
Sample ID: BMO-2008-5B

ACZ Sample ID: **L72149-01**
Date Sampled: 09/30/08 12:30
Date Received: 10/01/08
Sample Matrix: Ground Water

Metals Analysis

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|----------------------|------------|--------|------|----|-------|-----|-----|---------------|---------|
| Calcium, dissolved | M200.7 ICP | 108 | | * | mg/L | 0.2 | 1 | 10/09/08 0:57 | aeH |
| Magnesium, dissolved | M200.7 ICP | 17.0 | | | mg/L | 0.2 | 1 | 10/09/08 0:57 | aeH |
| Potassium, dissolved | M200.7 ICP | 2.8 | | | mg/L | 0.3 | 2 | 10/09/08 0:57 | aeH |
| Sodium, dissolved | M200.7 ICP | 40.1 | | | mg/L | 0.3 | 2 | 10/09/08 0:57 | aeH |

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------------------------------|--------------------------------------|--------|------|----|-------|------|------|----------------|---------|
| Alkalinity as CaCO3 | SM2320B - Titration | | | | | | | | |
| Bicarbonate as CaCO3 | | 155 | | | mg/L | 2 | 20 | 10/08/08 0:00 | jlf |
| Carbonate as CaCO3 | | | U | | mg/L | 2 | 20 | 10/08/08 0:00 | jlf |
| Hydroxide as CaCO3 | | | U | | mg/L | 2 | 20 | 10/08/08 0:00 | jlf |
| Total Alkalinity | | 155 | | | mg/L | 2 | 20 | 10/08/08 0:00 | jlf |
| Cation-Anion Balance | Calculation | | | | | | | | |
| Cation-Anion Balance | | 5.5 | | | % | | | 10/14/08 0:00 | calc |
| Sum of Anions | | 7.7 | | | meq/L | 0.1 | 0.5 | 10/14/08 0:00 | calc |
| Sum of Cations | | 8.6 | | | meq/L | 0.1 | 0.5 | 10/14/08 0:00 | calc |
| Chloride | M300.0 - Ion Chromatography | 15 | | * | mg/L | 2 | 8 | 10/11/08 18:45 | aml |
| Fluoride | M300.0 - Ion Chromatography | 0.3 | B | * | mg/L | 0.3 | 2 | 10/11/08 18:45 | aml |
| Nitrate as N, dissolved | Calculation: NO3NO2 minus NO2 | 2.02 | | | mg/L | 0.02 | 0.1 | 10/14/08 0:00 | calc |
| Nitrate/Nitrite as N, dissolved | M353.2 - Automated Cadmium Reduction | 2.02 | | | mg/L | 0.02 | 0.1 | 10/01/08 21:44 | pjb |
| Nitrite as N, dissolved | M353.2 - Automated Cadmium Reduction | | U | * | mg/L | 0.01 | 0.05 | 10/01/08 21:44 | pjb |
| Residue, Filterable (TDS) @180C | SM2540C | 510 | | | mg/L | 10 | 20 | 10/07/08 15:08 | abm |
| Sulfate | 300.0 - Ion Chromatography | 193 | | * | mg/L | 2 | 8 | 10/11/08 18:45 | aml |
| TDS (calculated) | Calculation | 478 | | | mg/L | 10 | 50 | 10/14/08 0:00 | calc |
| TDS (ratio - measured/calculated) | Calculation | 1.07 | | | | | | 10/14/08 0:00 | calc |

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

Hydro Geo Chem, Inc.
 Project ID: 8720000

ACZ Project ID: **L72149**

Alkalinity as CaCO3 SM2320B - Titration

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|-------|-------|------|-------|-------|-----|-------|------|
| WG253409 | | | | | | | | | | | | | |
| WG253409PBW2 | PBW | 10/08/08 21:32 | | | | U | mg/L | | -20 | 20 | | | |
| WG253409LCSW5 | LCSW | 10/08/08 21:45 | WC080916-1 | 820.0001 | | 799.7 | mg/L | 97.5 | 90 | 110 | | | |
| L72150-03DUP | DUP | 10/08/08 23:13 | | | 326 | 325.1 | mg/L | | | | 0.3 | 20 | |
| WG253409PBW3 | PBW | 10/09/08 0:42 | | | | U | mg/L | | -20 | 20 | | | |
| WG253409LCSW8 | LCSW | 10/09/08 0:55 | WC080916-1 | 820.0001 | | 820.4 | mg/L | 100 | 90 | 110 | | | |
| WG253409PBW4 | PBW | 10/09/08 4:06 | | | | U | mg/L | | -20 | 20 | | | |
| WG253409LCSW11 | LCSW | 10/09/08 4:18 | WC081008-2 | 820.0001 | | 817.8 | mg/L | 99.7 | 90 | 110 | | | |

Calcium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG253325 | | | | | | | | | | | | | |
| WG253325ICV | ICV | 10/08/08 23:22 | II080818-1 | 100 | | 99.77 | mg/L | 99.8 | 95 | 105 | | | |
| WG253325ICB | ICB | 10/08/08 23:26 | | | | U | mg/L | | -0.6 | 0.6 | | | |
| WG253325LFB | LFB | 10/08/08 23:38 | II081003-2 | 67.97008 | | 75.16 | mg/L | 110.6 | 85 | 115 | | | |
| L72147-02AS | AS | 10/09/08 0:31 | II081003-2 | 67.97008 | 172 | 227.97 | mg/L | 82.3 | 85 | 115 | | | M2 |
| L72147-02ASD | ASD | 10/09/08 0:35 | II081003-2 | 67.97008 | 172 | 229.15 | mg/L | 84.1 | 85 | 115 | 0.52 | 20 | M2 |

Chloride M300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|-------|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG253162 | | | | | | | | | | | | | |
| WG253162ICV | ICV | 10/08/08 14:00 | WI081007-1 | 19.98 | | 20.19 | mg/L | 101.1 | 90 | 110 | | | |
| WG253162ICB | ICB | 10/08/08 14:19 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG253162ICV1 | ICV | 10/08/08 20:02 | WI081007-1 | 19.98 | | 19.97 | mg/L | 99.9 | 90 | 110 | | | |
| WG253162ICB1 | ICB | 10/08/08 20:20 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG253162LFB | LFB | 10/08/08 20:38 | WI081007-3 | 30 | | 29.12 | mg/L | 97.1 | 90 | 110 | | | |
| L72133-01AS | AS | 10/08/08 21:15 | WI081007-3 | 300 | 11 | 277.6 | mg/L | 88.9 | 90 | 110 | | | M2 |
| L72133-01DUP | DUP | 10/08/08 21:33 | | | 11 | 11.5 | mg/L | | | | 4.4 | 20 | RA |
| WG253162ICV1 | ICV | 10/11/08 11:26 | WI081007-1 | 19.98 | | 20.12 | mg/L | 100.7 | 90 | 110 | | | |
| WG253162ICB1 | ICB | 10/11/08 11:44 | | | | U | mg/L | | -1.5 | 1.5 | | | |

Hydro Geo Chem, Inc.
 Project ID: 8720000

ACZ Project ID: L72149

Fluoride M300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|-----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG253162 | | | | | | | | | | | | | |
| WG253162ICV | ICV | 10/08/08 14:00 | WI081007-1 | 4 | | 3.97 | mg/L | 99.3 | 90 | 110 | | | |
| WG253162ICB | ICB | 10/08/08 14:19 | | | | U | mg/L | | -0.3 | 0.3 | | | |
| WG253162ICV1 | ICV | 10/08/08 20:02 | WI081007-1 | 4 | | 3.94 | mg/L | 98.5 | 90 | 110 | | | |
| WG253162ICB1 | ICB | 10/08/08 20:20 | | | | U | mg/L | | -0.3 | 0.3 | | | |
| WG253162LFB | LFB | 10/08/08 20:38 | WI081007-3 | 1.5 | | 1.39 | mg/L | 92.7 | 90 | 110 | | | |
| L72133-01AS | AS | 10/08/08 21:15 | WI081007-3 | 15 | 17 | 32.1 | mg/L | 100.7 | 90 | 110 | | | |
| L72133-01DUP | DUP | 10/08/08 21:33 | | | 17 | 18.7 | mg/L | | | | 9.5 | 20 | |
| WG253162ICV1 | ICV | 10/11/08 11:26 | WI081007-1 | 4 | | 4.14 | mg/L | 103.5 | 90 | 110 | | | |
| WG253162ICB1 | ICB | 10/11/08 11:44 | | | | U | mg/L | | -0.3 | 0.3 | | | |
| WG253407 | | | | | | | | | | | | | |
| WG253407ICV | ICV | 10/08/08 14:00 | WI081007-1 | 4 | | 3.97 | mg/L | 99.3 | 90 | 110 | | | |
| WG253407ICB | ICB | 10/08/08 14:19 | | | | U | mg/L | | -0.3 | 0.3 | | | |
| WG253407ICV1 | ICV | 10/08/08 16:07 | WI081007-1 | 4 | | 3.92 | mg/L | 98 | 90 | 110 | | | |
| WG253407ICB1 | ICB | 10/08/08 16:25 | | | | U | mg/L | | -0.3 | 0.3 | | | |
| WG253407ICV1 | ICV | 10/11/08 11:26 | WI081007-1 | 4 | | 4.14 | mg/L | 103.5 | 90 | 110 | | | |
| WG253407ICB1 | ICB | 10/11/08 11:44 | | | | U | mg/L | | -0.3 | 0.3 | | | |
| WG253407ICV1 | ICV | 10/11/08 12:18 | WI081007-1 | 4 | | 4.13 | mg/L | 103.3 | 90 | 110 | | | |
| WG253407ICB1 | ICB | 10/11/08 12:36 | | | | U | mg/L | | -0.3 | 0.3 | | | |

Magnesium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG253325 | | | | | | | | | | | | | |
| WG253325ICV | ICV | 10/08/08 23:22 | II080818-1 | 100 | | 100.45 | mg/L | 100.5 | 95 | 105 | | | |
| WG253325ICB | ICB | 10/08/08 23:26 | | | | U | mg/L | | -0.6 | 0.6 | | | |
| WG253325LFB | LFB | 10/08/08 23:38 | II081003-2 | 49.96908 | | 54.65 | mg/L | 109.4 | 85 | 115 | | | |
| L72147-02AS | AS | 10/09/08 0:31 | II081003-2 | 49.96908 | 50.7 | 100.39 | mg/L | 99.4 | 85 | 115 | | | |
| L72147-02ASD | ASD | 10/09/08 0:35 | II081003-2 | 49.96908 | 50.7 | 100.95 | mg/L | 100.6 | 85 | 115 | 0.56 | 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 |
|-----------------|------|----------------|------------|-------|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG252969 | | | | | | | | | | | | | |
| WG252969ICV | ICV | 10/01/08 20:46 | WI080916-5 | 2.416 | | 2.369 | mg/L | 98.1 | 90 | 110 | | | |
| WG252969ICB | ICB | 10/01/08 20:48 | | | | U | mg/L | | -0.06 | 0.06 | | | |
| WG252969LFB1 | LFB | 10/01/08 20:53 | WI080913-4 | 2 | | 1.979 | mg/L | 99 | 90 | 110 | | | |
| WG252969LFB2 | LFB | 10/01/08 21:31 | WI080913-4 | 2 | | 2.088 | mg/L | 104.4 | 90 | 110 | | | |
| L72136-05AS | AS | 10/01/08 21:38 | WI080913-4 | 2 | .06 | 2.182 | mg/L | 106.1 | 90 | 110 | | | |
| L72136-06DUP | DUP | 10/01/08 21:40 | | | .21 | .206 | mg/L | | | | 1.9 | 20 | |

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 |
|-----------------|------|----------------|------------|------|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG252969 | | | | | | | | | | | | | |
| WG252969ICV | ICV | 10/01/08 20:46 | WI080916-5 | .609 | | .605 | mg/L | 99.3 | 90 | 110 | | | |
| WG252969ICB | ICB | 10/01/08 20:48 | | | | U | mg/L | | -0.03 | 0.03 | | | |
| WG252969LFB1 | LFB | 10/01/08 20:53 | WI080913-4 | 1 | | .988 | mg/L | 98.8 | 90 | 110 | | | |
| WG252969LFB2 | LFB | 10/01/08 21:31 | WI080913-4 | 1 | | 1.023 | mg/L | 102.3 | 90 | 110 | | | |
| L72136-05AS | AS | 10/01/08 21:38 | WI080913-4 | 1 | U | 1.038 | mg/L | 103.8 | 90 | 110 | | | |
| L72136-06DUP | DUP | 10/01/08 21:40 | | | U | U | mg/L | | | | 0 | 20 | RA |

Hydro Geo Chem, Inc.
 Project ID: 8720000

ACZ Project ID: **L72149**

Potassium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG253325 | | | | | | | | | | | | | |
| WG253325ICV | ICV | 10/08/08 23:22 | II080818-1 | 20 | | 19.9 | mg/L | 99.5 | 95 | 105 | | | |
| WG253325ICB | ICB | 10/08/08 23:26 | | | | U | mg/L | | -0.9 | 0.9 | | | |
| WG253325LFB | LFB | 10/08/08 23:38 | II081003-2 | 99.76186 | | 108.27 | mg/L | 108.5 | 85 | 115 | | | |
| L72147-02AS | AS | 10/09/08 0:31 | II081003-2 | 99.76186 | 2 | 112.57 | mg/L | 110.8 | 85 | 115 | | | |
| L72147-02ASD | ASD | 10/09/08 0:35 | II081003-2 | 99.76186 | 2 | 113 | mg/L | 111.3 | 85 | 115 | 0.38 | 20 | |

Residue, Filterable (TDS) @180C SM2540C

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|----------|-----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG253298 | | | | | | | | | | | | | |
| WG253298PBW | PBW | 10/07/08 14:45 | | | | U | mg/L | | -20 | 20 | | | |
| WG253298LCSW | LCSW | 10/07/08 14:46 | PCN29986 | 260 | | 276 | mg/L | 106.2 | 80 | 120 | | | |
| L72173-02DUP | DUP | 10/07/08 15:14 | | | 300 | 308 | mg/L | | | | 2.6 | 20 | |

Sodium, dissolved M200.7 ICP

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|--------|-------|-------|-------|-------|------|-------|------|
| WG253325 | | | | | | | | | | | | | |
| WG253325ICV | ICV | 10/08/08 23:22 | II080818-1 | 100 | | 100.71 | mg/L | 100.7 | 95 | 105 | | | |
| WG253325ICB | ICB | 10/08/08 23:26 | | | | U | mg/L | | -0.9 | 0.9 | | | |
| WG253325LFB | LFB | 10/08/08 23:38 | II081003-2 | 98.21624 | | 106.68 | mg/L | 108.6 | 85 | 115 | | | |
| L72147-02AS | AS | 10/09/08 0:31 | II081003-2 | 98.21624 | 20.9 | 126.21 | mg/L | 107.2 | 85 | 115 | | | |
| L72147-02ASD | ASD | 10/09/08 0:35 | II081003-2 | 98.21624 | 20.9 | 126.18 | mg/L | 107.2 | 85 | 115 | 0.02 | 20 | |

Sulfate 300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|-----|--------|-------|-------|-------|-------|-------|-----|-------|------|
| WG253162 | | | | | | | | | | | | | |
| WG253162ICV | ICV | 10/08/08 14:00 | WI081007-1 | 50 | | 49.6 | mg/L | 99.2 | 90 | 110 | | | |
| WG253162ICB | ICB | 10/08/08 14:19 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG253162ICV1 | ICV | 10/08/08 20:02 | WI081007-1 | 50 | | 49.04 | mg/L | 98.1 | 90 | 110 | | | |
| WG253162ICB1 | ICB | 10/08/08 20:20 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG253162LFB | LFB | 10/08/08 20:38 | WI081007-3 | 30 | | 28.96 | mg/L | 96.5 | 90 | 110 | | | |
| L72133-01AS | AS | 10/08/08 21:15 | WI081007-3 | 300 | U | 244.9 | mg/L | 81.6 | 90 | 110 | | | M2 |
| L72133-01DUP | DUP | 10/08/08 21:33 | | | U | U | mg/L | | | | 0 | 20 | RA |
| WG253162ICV1 | ICV | 10/11/08 11:26 | WI081007-1 | 50 | | 51.09 | mg/L | 102.2 | 90 | 110 | | | |
| WG253162ICB1 | ICB | 10/11/08 11:44 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG253407 | | | | | | | | | | | | | |
| WG253407ICV | ICV | 10/08/08 14:00 | WI081007-1 | 50 | | 49.6 | mg/L | 99.2 | 90 | 110 | | | |
| WG253407ICB | ICB | 10/08/08 14:19 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG253407ICV1 | ICV | 10/08/08 16:07 | WI081007-1 | 50 | | 49.12 | mg/L | 98.2 | 90 | 110 | | | |
| WG253407ICB1 | ICB | 10/08/08 16:25 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG253407ICV1 | ICV | 10/11/08 11:26 | WI081007-1 | 50 | | 51.09 | mg/L | 102.2 | 90 | 110 | | | |
| WG253407ICB1 | ICB | 10/11/08 11:44 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG253407ICV1 | ICV | 10/11/08 12:18 | WI081007-1 | 50 | | 50.65 | mg/L | 101.3 | 90 | 110 | | | |
| WG253407ICB1 | ICB | 10/11/08 12:36 | | | | U | mg/L | | -1.5 | 1.5 | | | |

Hydro Geo Chem, Inc.

ACZ Project ID: **L72149**

| ACZ ID | WORKNUM | PARAMETER | METHOD | QUAL | DESCRIPTION |
|----------------------------|----------|-------------------------|--------------------------------------|---|---|
| L72149-01 | WG253325 | Calcium, dissolved | M200.7 ICP | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| | WG253162 | Chloride | M300.0 - Ion Chromatography | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| | | | 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). |
| | | Fluoride | M300.0 - Ion Chromatography | D1 | Sample required dilution due to matrix. |
| | WG252969 | 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). |
| | WG253162 | Sulfate | 300.0 - Ion Chromatography | M2 | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable. |
| 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). | |

Hydro Geo Chem, Inc.

ACZ Project ID: **L72149**

No certification qualifiers associated with this analysis

Hydro Geo Chem, Inc.
 8720000

ACZ Project ID: L72149
 Date Received: 10/1/2008
 Received By:
 Date Printed: 10/1/2008

Receipt Verification

| | YES | NO | NA |
|--|-----|----|----|
| 1) Does this project require special handling procedures such as CLP protocol? | | | X |
| 2) Are the custody seals on the cooler intact? | | | X |
| 3) Are the custody seals on the sample containers intact? | | | X |
| 4) Is there a Chain of Custody or other directive shipping papers present? | X | | |
| 5) Is the Chain of Custody complete? | X | | |
| 6) Is the Chain of Custody in agreement with the samples received? | X | | |
| 7) Is there enough sample for all requested analyses? | X | | |
| 8) Are all samples within holding times for requested analyses? | X | | |
| 9) Were all sample containers received intact? | X | | |
| 10) Are the temperature blanks present? | | | X |
| 11) 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) |
|-----------|-----------|-------------|
| NA7028 | 1.4 | 16 |
| | | |
| | | |

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

Notes

Hydro Geo Chem, Inc.
 8720000

ACZ Project ID: L72149
 Date Received: 10/1/2008
 Received By:

Sample Container Preservation

| SAMPLE | CLIENT ID | R < 2 | G < 2 | BK < 2 | Y < 2 | YG < 2 | B < 2 | O < 2 | T > 12 | N/A | RAD | ID |
|-----------|-------------|-------|-------|--------|-------|--------|-------|-------|--------|-----|-----|--------------------------|
| L72149-01 | BMD-2008-5B | | Y | | | | | | | | | <input type="checkbox"/> |

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____



Laboratories, Inc.

72149

CHAIN of CUSTODY

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

Report to:

Name: Dan Simpson
Company: Hydro Geo Chem
E-mail: dan.s@hgcinc.com

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

Copy of Report to:

Name: Jim Norris
Company: HGC

E-mail: jimn@hgcinc.com
Telephone: 520-293-1500 x112

Invoice to:

Name: Jim Norris
Company: HGC
E-mail: jimn@hgcinc.com

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

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

ANALYSES REQUESTED (attach list or use quote number)

Quote #: FMCQB-GW
Project/PO #: 8720000
Reporting state for compliance testing: AZ
Sampler's Name: John Villinski
Are any samples NRC licensable material? no

Table with columns for # of Containers, FMCQB-GW, and multiple empty columns for analysis results.

Table with columns for SAMPLE IDENTIFICATION, DATE:TIME, Matrix, and multiple empty columns for analysis results.

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

REMARKS/ SAMPLE DISCLOSURES

Empty box for remarks and sample disclosures.

PAGE of

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

Table with columns for RELINQUISHED BY, DATE:TIME, RECEIVED BY, DATE:TIME. Includes signatures and dates.

January 14, 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: 8720005.0

ACZ Project ID: L73594

Dan Simpson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on December 18, 2008. This project has been assigned to ACZ's project number, L73594. 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 L73594. 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 February 14, 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.



Scott Habermehl has reviewed
and approved this report.



Hydro Geo Chem, Inc.Project ID: 8720005.0
Sample ID: SCHWARTZACZ Sample ID: **L73594-01**
Date Sampled: 12/17/08 12:40
Date Received: 12/18/08
Sample Matrix: *Ground Water*

Wet Chemistry

| Parameter | EPA Method | Result | Qual | XQ | Units | MDL | PQL | Date | Analyst |
|-----------|----------------------------|--------|------|----|-------|-----|-----|----------------|---------|
| Sulfate | 300.0 - Ion Chromatography | 144 | | | mg/L | 2 | 8 | 01/07/09 12:11 | ccp |

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

Hydro Geo Chem, Inc.
 Project ID: 8720005.0

ACZ Project ID: **L73594**

Sulfate 300.0 - Ion Chromatography

| ACZ ID | Type | Analyzed | PCN/SCN | QC | Sample | Found | Units | Rec | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----|--------|-------|-------|------|-------|-------|-----|-------|------|
| WG258047 | | | | | | | | | | | | | |
| WG258047ICV | ICV | 01/06/09 10:14 | WI081218-1 | 50 | | 49.23 | mg/L | 98.5 | 90 | 110 | | | |
| WG258047ICB | ICB | 01/06/09 10:32 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG258047ICV1 | ICV | 01/06/09 13:08 | WI081218-1 | 50 | | 49.31 | mg/L | 98.6 | 90 | 110 | | | |
| WG258047ICB1 | ICB | 01/06/09 13:26 | | | | U | mg/L | | -1.5 | 1.5 | | | |
| WG258047LFB | LFB | 01/06/09 14:20 | WI081125-2 | 30 | | 28.81 | mg/L | 96 | 90 | 110 | | | |
| L73523-01DUP | DUP | 01/06/09 14:56 | | | 9.4 | 9.3 | mg/L | | | | 1.1 | 20 | |
| L73547-01AS | AS | 01/06/09 15:33 | WI081125-2 | 30 | 6.5 | 36.29 | mg/L | 99.3 | 90 | 110 | | | |
| L73644-03AS | AS | 01/06/09 19:46 | WI081125-2 | 30 | 38.5 | 66.74 | mg/L | 94.1 | 90 | 110 | | | |
| L73644-02DUP | DUP | 01/07/09 13:05 | | | 206 | 205.4 | mg/L | | | | 0.3 | 20 | |

Hydro Geo Chem, Inc.

ACZ Project ID: **L73594**

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

No extended qualifiers associated with this analysis

Hydro Geo Chem, Inc.

ACZ Project ID: **L73594**

No certification qualifiers associated with this analysis

Hydro Geo Chem, Inc.
 8720005.0

ACZ Project ID: L73594
 Date Received: 12/18/2008
 Received By:
 Date Printed: 12/18/2008

Receipt Verification

| | YES | NO | NA |
|--|-----|----|----|
| 1) Does this project require special handling procedures such as CLP protocol? | | | X |
| 2) Are the custody seals on the cooler intact? | | | X |
| 3) Are the custody seals on the sample containers intact? | | | X |
| 4) Is there a Chain of Custody or other directive shipping papers present? | X | | |
| 5) Is the Chain of Custody complete? | X | | |
| 6) Is the Chain of Custody in agreement with the samples received? | X | | |
| 7) Is there enough sample for all requested analyses? | X | | |
| 8) Are all samples within holding times for requested analyses? | X | | |
| 9) Were all sample containers received intact? | X | | |
| 10) Are the temperature blanks present? | | | X |
| 11) 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) |
|-----------|-----------|-------------|
| NA7566 | 4.6 | 14 |
| | | |
| | | |

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

Notes

Hydro Geo Chem, Inc.
 8720005.0

ACZ Project ID: L73594
 Date Received: 12/18/2008
 Received By:

Sample Container Preservation

| SAMPLE | CLIENT ID | R < 2 | G < 2 | BK < 2 | Y < 2 | YG < 2 | B < 2 | O < 2 | T > 12 | N/A | RAD | ID |
|-----------|-----------|-------|-------|--------|-------|--------|-------|-------|--------|-----|-----|--------------------------|
| L73594-01 | SCHWARTZ | | | | | | | | | X | | <input type="checkbox"/> |

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

L73594



Laboratories, Inc.

L7358H

CHAIN of CUSTODY

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493 WPL 11-18-08

Report to:

Name: Dan Simpson
Company: Hydro Geo Chem, Inc
E-mail: dansa@hgcinc.com

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

ANALYSES REQUESTED (attach list or use quote number)

Quote #: 504-IC
Project/PO #: 8720005.0
Reporting state for compliance testing: AZ
Sampler's Name: Travis Taylor
Are any samples NRC licensable material? No

Table with columns for # of Containers and analysis results. Row 1: 504-IC, X

Table with columns: SAMPLE IDENTIFICATION, DATE:TIME, Matrix, # of Containers, and analysis results. Row 1: SEHWARTZ, 12/17/08, 1240, 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

Empty box for remarks and disclosures.

PAGE 1 of 1

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

Table with columns: RELINQUISHED BY, DATE:TIME, RECEIVED BY, DATE:TIME. Row 1: Travis Taylor, 12/17/08, 1315, [Signature], 12/18/08, 1:20

APPENDIX C

HYDRO GEO CHEM, INC. GROUNDWATER SAMPLING FORMS



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | | | |
|-------------|----------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-15-08 |
| Well ID: | ANDERSON | Weather: | Sunny |
| ADWR No: | 613396 | Collected By: | John Villinski |

WELL DATA

| | | | |
|------------------------------|-------|------------------------------|---------------|
| Well Depth (ft bls): | 285 | Time: | 14:20 |
| Casing Diameter (in): | 8" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 142.2 | Pump on @ 14:25 @ 7.5 gpm | |
| 1 Casing Volume (gals): | 371 | open after 4 - 8 gpm @ 14:40 | |
| 3 Casing Volumes (gals): | 1114 | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 14:30 | 7.5 | 37.5 | 7.14 | 20.5 | 1092 | clear | no | |
| 14:40 | 7.5 | 112.5 | 7.15 | 20.7 | 1107 | " | " | |
| 14:55 | 8 | 232.5 | 7.20 | 21.0 | 1171 | " | " | |
| 15:10 | 8 | 352.5 | 7.12 | 21.1 | 1186 | " | " | |
| 15:25 | 8 | 472.5 | 7.08 | 21.2 | 1211 | " | " | |
| 15:40 | 8 | 592.5 | 7.07 | 21.4 | 1227 | " | " | |
| 15:55 | 8 | 712.5 | 7.09 | 21.3 | 1239 | " | " | |
| 16:10 | 8 | 832.5 | 7.08 | 21.4 | 1248 | " | " | |
| 16:25 | 8 | 952.5 | 7.09 | 21.3 | 1251 | " | " | |
| 16:40 | 8 | 1072.5 | 7.10 | 21.3 | 1252 | " | " | |
| 16: | | | | | | | | |

SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| ANDERSON | 16:50 | Plastic | 250 ml | 1 | EPA 300.0 | None | |

Additional Comments: Almost no water usage since the night before. Should be good static WL

9 2 1911, 215 3017 6.586 2 1111



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | |
|---------------------|--------------------------------------|
| Project No: 8720000 | Client: Freeport Copper Queen Branch |
| Task No: 2.2 | Date: 10-23-08 |
| Well ID: AWC-02 | Weather: Sunny |
| ADWR No: 616 586 | Collected By: John Villinski |

| WELL DATA | |
|------------------------------|--|
| Well Depth (ft bls): | Time: |
| Casing Diameter (in): | Point of Measurement: <u>Top of Casing</u> |
| Static Water Level (ft bmp): | |
| 1 Casing Volume (gals): | |
| 3 Casing Volumes (gals): | |

| FIELD SAMPLING DATA | | | | | | | | |
|---------------------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
| 11:25 | 90 | — | 7.31 | 23.1 | 464 | clear | no | — |
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| SAMPLE INFORMATION | | | | | | | |
|--------------------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
| AWC-02 | 11:25 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: _____



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-23-08 |
| Well ID: | AWC-03 | Weather: | Sunny |
| ADWR No: | 616585 | Collected By: | John Villinski |

WELL DATA

| | | | |
|------------------------------|--|-----------------------|---------------|
| Well Depth (ft bls): | | Time: | |
| Casing Diameter (in): | | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | | | |
| 1 Casing Volume (gals): | | | |
| 3 Casing Volumes (gals): | | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 10:50 | 768 | — | 7.48 | 21.0 | 462 | clear | no | — |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| AWC-03 | 10:55 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |
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Additional Comments: pump running



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-23-08 |
| Well ID: | AWC-04 | Weather: | Sunny |
| ADWR No: | 616J84 | Collected By: | John Villinsky |

| WELL DATA | | | |
|------------------------------|--------|-------------------------|---------------|
| Well Depth (ft bls): | 231 | Time: | 11:05 |
| Casing Diameter (in): | 10 (?) | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 111.31 | pump on 11:05 @ 700 gpm | |
| 1 Casing Volume (gals): | 501 | | |
| 3 Casing Volumes (gals): | 1505 | | |

| FIELD SAMPLING DATA | | | | | | | | |
|---------------------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
| 11:10 | 700 | 3500 | 6.91 | 22.2 | 616 | clear | no | |
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| SAMPLE INFORMATION | | | | | | | |
|--------------------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
| AWC-04 | 11:10 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
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Additional Comments: Pump was off overnight.



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-23-08 |
| Well ID: | AWC-05 | Weather: | Sunny |
| ADWR No: | 590620 | Collected By: | John J. Ninski |

WELL DATA

| | | | |
|------------------------------|-------|-----------------------|---------------|
| Well Depth (ft bls): | _____ | Time: | _____ |
| Casing Diameter (in): | _____ | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | _____ | | |
| 1 Casing Volume (gals): | _____ | | |
| 3 Casing Volumes (gals): | _____ | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 9:35 | 430 | ✓ | 7.45 | 21.0 | 422 | clear | no | — |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| AWC-05 | 9:35 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |
| | | | | | | | |

Additional Comments: Pump has been running 4 hrs



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|-----------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-13-08 |
| Well ID: | Banks 986 | Weather: | Sunny, warm |
| ADWR No: | 647 986 | Collected By: | John Dillinski |

WELL DATA

| | | | |
|------------------------------|--------------|-----------------------|---------------|
| Well Depth (ft bls): | 435.8 | Time: | 12:20 |
| Casing Diameter (in): | 6" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 228.20 (987) | | |
| 1 Casing Volume (gals): | 342 | | |
| 3 Casing Volumes (gals): | 937 | | |

FIELD SAMPLING DATA

on @ 12:40 *14 min purge*

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---|
| 12:42 | 6.7 | 13.3 | 7.12 | 20.9 | 1034 | clear | no | |
| 12:47 | 6.7 | 46.9 | 7.21 | 21.6 | 1015 | " | " | |
| 12:52 | 6.7 | 80.0 | 7.26 | 21.5 | 1002 | " | " | |
| 12:57 | 6.7 | 111.3 | 7.26 | 21.7 | 993 | " | " | |
| 13:02 | 6.7 | 146.7 | 7.27 | 21.7 | 990 | " | " | |
| 13:07 | 6.7 | 180.0 | 7.28 | 21.8 | 972 | " | " | |
| 13:13 | 6.7 | 220 | 7.27 | 21.7 | 981 | " | " | |
| 13:20 | 6.7 | 267 | 7.28 | 21.7 | 980 | " | " | |
| | | | | | | | | Readings stable - made m3 calculation did not catch till later |

SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| BANKS 986 | 13:23 | Plastic | 250 ml | 1 | EPA 300.0 | None | Filter |

Additional Comments: *986 is personal well - has been in use for various household functions today. WH is measured @ 987 - ~~was~~ unused well*



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|------------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | |
| Well ID: | BARTON 010 | Weather: | |
| ADWR No: | | Collected By: | |

WELL DATA

| | | | |
|------------------------------|---------------|-----------------------|---------------|
| Well Depth (ft bls): | | Time: | 16:25 |
| Casing Diameter (in): | | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | > 310 ft: DRY | | |
| 1 Casing Volume (gals): | | | |
| 3 Casing Volumes (gals): | | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| | | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: Used both sounders. Blue skinny Slope Indicator hung @ 150' - Solinst to 310' - no water. The probe came back up w/ just a bit of wet mud on the tip - no sign of any other liquid



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|-------------------|---------------|-------------------------------------|
| Project No: | <u>8720000</u> | Client: | <u>Freeport Copper Queen Branch</u> |
| Task No: | <u>2.2</u> | Date: | <u>10/16/08</u> |
| Well ID: | <u>BARTON 919</u> | Weather: | <u>Clear, Cool</u> |
| ADWR No: | <u>644919</u> | Collected By: | <u>BJT</u> |

WELL DATA

| | | | |
|------------------------------|---------------|-----------------------|----------------------|
| Well Depth (ft bls): | <u>130</u> | Time: | <u>1250</u> |
| Casing Diameter (in): | | Point of Measurement: | <u>Top of Casing</u> |
| Static Water Level (ft bmp): | <u>113.20</u> | | |
| 1 Casing Volume (gals): | | | |
| 3 Casing Volumes (gals): | | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-------------------------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| <u>Water Level Only</u> | | | | | | | |
| | | | | | | | |

Additional Comments: _____



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|-----------|----------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 11/5/98 |
| Well ID: | BF-01 | Weather: | Clear |
| ADWR No: | 55-539783 | Sampler: | CTM |

WELL DATA

| | | | |
|------------------------------|--------|--|-------------------------|
| Well Depth (ft bls): | 400 | Casing Capacity | |
| | | Nominal Size (inches) | Gallons per Linear Foot |
| Casing Diameter (in): | 4 | 2 | 0.16 |
| | | 4 | 0.65 |
| | | 5 | 1.02 |
| | | 6 | 1.47 |
| | | 8 | 2.61 |
| Static Water Level (ft bmp): | 348.94 | 10 | 4.08 |
| Casing Volume (gals): | 33 | Casing Volume = gallons/foot * water column (feet) | |
| 3 Casing Volumes (gals): | 99 | | |

FIELD SAMPLING DATA

| Time | Elapsed Time (min) | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Comments |
|------|--------------------------|----------------------|---------------------------|---------|-----------|------------------------------|-------------|
| 1615 | | | | | | | |
| 1619 | 4 | 20 | 80 | 6.33 | 19.9 | 3027 | DR Measured |
| 1622 | Well runs dry | | | | | | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comments |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|----------|
| BF-01 | 1645 | Plastic | 250ml | 1 | EPA 300.0 | None | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Additional Comments: Well ran dry after 7 minutes, will wait ~ 20 minutes for sample based on prior sampling runs.

Extension cord, 4 prong male to 3 prong female adaptor, + ± junction piping needed.



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-22-08 |
| Well ID: | BIMA | Weather: | Sunny |
| ADWR No: | 577927 | Collected By: | John Villinski |

WELL DATA

| | | | |
|------------------------------|--|-----------------------------|------------------|
| Well Depth (ft bls): | 460 | Time: | 13:59 / 10-23-08 |
| Casing Diameter (in): | 4" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 353.96 353.96 measured 10/23/08 | Value open @ 16:25 - 10 gpm | |
| 1 Casing Volume (gals): | 67 | | |
| 3 Casing Volumes (gals): | 200 | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 16:30 | 10 | 50 | 6.38 | 22.4 | 1760 | clear | no | |
| 16:35 | 10 | 100 | 6.38 | 22.4 | 1776 | 1 | " | |
| 16:40 | 10 | 150 | 6.41 | 22.2 | 1777 | | | |
| 16:45 | 10 | 200 | 6.41 | 22.3 | 1801 | | | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| BIMA | 16:50 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |
| | | | | | | | |

Additional Comments: used Avg WL of 360



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-22-08 |
| Well ID: | BLOMMER | Weather: | Sunny |
| ADWR No: | 633472 | Collected By: | John Villingski |

WELL DATA

| | | | |
|------------------------------|--------|---------------------------|----------------------|
| Well Depth (ft bls): | 350 | Time: | 7:42 7:42 |
| Casing Diameter (in): | 6" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 300.28 | valve open, #49 @ 4.5 gpm | |
| 1 Casing Volume (gals): | 74 | | |
| 3 Casing Volumes (gals): | 222 | | |

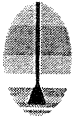
FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|--------|------|-------------|
| 7:51 | 4.5 | 9 | 7.24 | 17.1 | 853 | clear | no | some small |
| 8:01 | 4.5/12 | 84 | 7.30 | 20.1 | 847 | cloudy | " | black scale |
| 8:04 | 12 | 120 | 7.25 | 20.9 | 872 | clear | " | particles |
| 8:07 | 12 | 156 | 7.26 | 20.7 | 868 | " | " | |
| 8:10 | 6.67 | 176 | 7.21 | 20.7 | 859 | " | " | |
| 8:16 | 6.67 | 216 | 7.17 | 21.3 | 873 | " | " | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| BLOMMER | 8:20 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: Mrs Blommer said water was not used yet today - static



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | |
|-----------------------|--------------------------------------|
| Project No: 8720000 | Client: Freeport Copper Queen Branch |
| Task No: 2.2 | Date: 11/11/08 |
| Well ID: BMO-2008-01G | Weather: Clear |
| ADWR No: 909474 | Sampler: CM |

WELL DATA

| | | |
|------------------------------------|--|-------------------------|
| Well Depth (ft bls): 310 | Casing Capacity | |
| | Nominal Size (inches) | Gallons per Linear Foot |
| Casing Diameter (in): 5 | 2 | 0.16 |
| | 4 | 0.65 |
| Static Water Level (ft bmp): 60.95 | 5 | 1.02 |
| | 6 | 1.47 |
| Casing Volume (gals): 250 | 8 | 2.61 |
| | 10 | 4.08 |
| 3 Casing Volumes (gals): 760 | Casing Volume = gallons/foot * water column (feet) | |

FIELD SAMPLING DATA

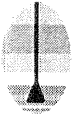
| Time | Elapsed Time (min) | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Comments |
|------|--------------------|----------------------|---------------------------|---------|-----------|------------------------------|--------------------------------|
| 1206 | | | | | | | |
| 1208 | 2 | 7 | 14 | 6.71 | 20.5 | 751 | Coloration noted. DR measured. |
| 1218 | 10 | 7 | 84 | 7.10 | 20.8 | 791 | |
| 1228 | 10 | 7 | 154 | 7.06 | 20.9 | 705 | |
| 1238 | 10 | 7 | 224 | 7.01 | 20.4 | 724 | |
| 1248 | 10 | 7 | 294 | 7.01 | 20.6 | 722 | DR measured |
| 1258 | 10 | 7 | 364 | 7.01 | 20.7 | 710 | |
| 1308 | 10 | 7 | 434 | 7.01 | 21.0 | 716 | |
| 1318 | 10 | 7 | 504 | 7.00 | 21.0 | 718 | |
| 1328 | 10 | 7 | 574 | 7.02 | 20.9 | 717 | DR measured |
| 1338 | 10 | 7 | 644 | 7.03 | 20.6 | 714 | |
| 1348 | 10 | 7 | 714 | 7.00 | 20.8 | 721 | |

SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comments |
|--------------|------|----------------|--------|-------------------|-----------------|--------------|----------|
| BMO-2008-01G | 1356 | Plastic | 250 ml | 1 | EPA 300.0 | None | Filtered |
| | | | | | | | |
| | | | | | | | |

Additional Comments: 4 prong 30 AMP male to 3 prong 20 AMP female adaptor needed.

* Gross Alpha/Beta, Ra 226, Ra 228 and Uranium Isotopes U 234, U 235 and U 238



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|--------------|----------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 11/3/08, 11/4/08 |
| Well ID: | BM0-2008-03B | Weather: | Clear |
| ADWR No: | 909147 | Sampler: | CTM |

WELL DATA

| | | | |
|------------------------------|----------------------------|--|-------------------------|
| Well Depth (ft bls): | 260 | Casing Capacity | |
| | | Nominal Size (inches) | Gallons per Linear Foot |
| Casing Diameter (in): | 5 | 2 | 0.16 |
| | | 4 | 0.65 |
| | | 5 | 1.02 |
| | | 6 | 1.47 |
| | | 8 | 2.61 |
| Static Water Level (ft bmp): | 11/3: 138.02, 11/4: 137.95 | 10 | 4.08 |
| Casing Volume (gals): | 120 | Casing Volume = gallons/foot * water column (feet) | |
| 3 Casing Volumes (gals): | 360 | | |

FIELD SAMPLING DATA

| Time | Elapsed Time (min) | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Comments |
|------|--------------------|----------------------|---------------------------|---------|-----------|------------------------------|-------------|
| 0945 | | | | | | | |
| 0945 | 0 | 11 | 0 | 7.34 | 20.9 | 599 | DR Measured |
| 0951 | 6 | 11 | 66/166 | 7.36 | 21.1 | 594 | |
| 0957 | 6 | 11 | 66/132 | 7.37 | 21.2 | 598 | |
| 1003 | 6 | 11 | 66/198 | 7.36 | 21.2 | 596 | |
| 1012 | 5 | 11 | 99/297 | 7.29 | 21.0 | 597 | DR Measured |
| 1018 | 5 | 11 | 66/363 | 7.37 | 21.2 | 599 | |
| 1024 | 5 | 11 | 66/429 | 7.32 | 21.3 | 600 | |
| 1030 | 5 | 11 | 66/495 | 7.34 | 21.1 | 599 | |
| 1036 | 5 | 11 | 66/561 | 7.36 | 21.4 | 599 | DR Measured |
| | | | | | | | |
| | | | | | | | |
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SAMPLE INFORMATION

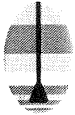
| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comments |
|-------------------------------------|------|----------------|--------|-------------------|-----------------|--------------|----------|
| BM0-2008-03B | 1040 | Plastic | 250ml | 1 | EPA 300.0 | None | |
| DUP- BM0-2008-03B 110408 | 1040 | Plastic | 250ml | 1 | EPA 300.0 | None | |
| | | | | | | | |
| | | | | | | | |

Additional Comments: Incorrect plug for 6KW generator, had to make adaptor.

Pump is wired with yellow as ground, plug had to be rewired accordingly.

Entrance is on Naco Highway E side, N. of RR tracks.

587



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|-------------|----------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 12-11-08 |
| Well ID: | BMO-2008-4B | Weather: | Sunny, cool |
| ADWR No: | | Sampler: | Travis Taylor |

WELL DATA

| Well Depth (ft bls): | 610 | Casing Capacity | |
|------------------------------|---------|--|-------------------------|
| | | Nominal Size (inches) | Gallons per Linear Foot |
| Casing Diameter (in): | 5.25 | 2 | 0.16 |
| Static Water Level (ft bmp): | 130.77' | 4 | 0.65 |
| Casing Volume (gals): | 538.9 | 5 | 1.02 |
| 3 Casing Volumes (gals): | 1616.8 | 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 |
|------|--------------------|----------------------|---------------------------|---------|-----------|------------------------------|-----------------------|
| 1130 | 0 | 62.5 | 11294 | 7.13 | 23.2 | 377 | total discharge began |
| 1200 | 30 | 62.5 | 13169 | 7.28 | 22.8 | 373 | 12-10-08 @ 1304 |
| 1230 | 60 | 64.3 | 15098 | 7.29 | 23.0 | 372 | |
| 1300 | 90 | 64.3 | 17027 | 7.33 | 23.1 | 375 | |
| 1330 | 120 | 64.3 | 18956 | 7.35 | 23.0 | 374 | |
| 1400 | 150 | 64.3 | 20885 | 7.37 | 23.1 | 375 374 | |
| 1430 | 180 | 64.3 | 22814 | 7.34 | 22.8 | 374 | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comments |
|------------|------|----------------|----------|-------------------|----------------------------------|--------------|----------|
| BMO-2008-4 | 1435 | * Plastic | * 250 ml | 3 | FMCQB-GW EPA 300.0 | * None | |
| BMO-2008-4 | 1435 | * | * | 3 | FMCQB-GW | * | |
| | | | | | | | |

Additional Comments:

* 1 (250 ml) Filtered, Plastic
 1 (125 ml) HNO₃, Filtered, Plastic
 1 (500 ml) Raw, plastic



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|-------------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.3 | Date: | 09/30/08 |
| Well ID: | BMO-2008-5B | Weather: | |
| ADWR No: | | Collected By: | John Villinski |

WELL DATA

| | | | |
|------------------------------|--------|-----------------------|---------------|
| Well Depth (ft bls): | 290 | Time: | 0727 |
| Casing Diameter (in): | 5-inch | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 145.21 | | |
| 1 Casing Volume (gals): | NA | | |
| 3 Casing Volumes (gals): | NA | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|--|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 1220 | | | 7.08 | 22.0 | 688 | - | - | - |
| Sample Collected after Aquifer Testing | | | | | | | | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-------------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| BMO-2008-5B | 1230 | Plastic | * | 3 | FMCQB-GW | * | -- |

Additional Comments: * 500 ml Raw, 125 ml Filtered HNO3 and 250 ml Filtered



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | | | |
|-------------|--------------------|---------------|-------------------------------------|
| Project No: | <u>8720000</u> | Client: | <u>Freeport Copper Queen Branch</u> |
| Task No: | <u>2.3</u> | Date: | <u>10/02/08</u> |
| Well ID: | <u>BMO-2008-5M</u> | Weather: | |
| ADWR No: | | Collected By: | <u>John Villinski</u> |

WELL DATA

| | | | |
|------------------------------|---------------|-----------------------|----------------------|
| Well Depth (ft bls): | <u>450</u> | Time: | <u>0715</u> |
| Casing Diameter (in): | <u>5-inch</u> | Point of Measurement: | <u>Top of Casing</u> |
| Static Water Level (ft bmp): | <u>146.54</u> | | |
| 1 Casing Volume (gals): | <u>NA</u> | | |
| 3 Casing Volumes (gals): | <u>NA</u> | | |

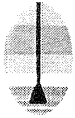
FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|---|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 1340 | | | 7.13 | 23.6 | 551 | - | - | - |
| Sample Collected after Aquifer Testing | | | | | | | | |
| | | | | | | | | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|--------------------|-------------|----------------|----------|-------------------|-----------------|--------------|-----------|
| <u>BMO-2008-5M</u> | <u>1345</u> | <u>Plastic</u> | <u>*</u> | <u>3</u> | <u>FMCQB-GW</u> | <u>*</u> | <u>--</u> |

Additional Comments: * 500 ml Raw, 125 ml Filtered HNO3 and 250 ml Filtered



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | | | |
|-------------|--------------|----------|------------------------------|
| Project No: | 8720900 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 11/4/08 |
| Well ID: | BMO-2008-06B | Weather: | Partly cloudy |
| ADWR No: | 909146 | Sampler: | CTM |

WELL DATA

| | | | |
|------------------------------|--------|--|-------------------------|
| Well Depth (ft bls): | 265 | Casing Capacity | |
| | | Nominal Size (inches) | Gallons per Linear Foot |
| Casing Diameter (in): | 5 | 2 | 0.16 |
| Static Water Level (ft bmp): | 190.23 | 4 | 0.65 |
| | | 5 | 1.02 |
| Casing Volume (gals): | 76 | 6 | 1.47 |
| | | 8 | 2.61 |
| 3 Casing Volumes (gals): | 230 | 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 |
|------|--------------------|----------------------|---------------------------|---------|-----------|------------------------------|-------------|
| 1148 | | | | | | | |
| 1151 | 3 | 6 | 18/18 | 7.09 | 21.2 | 384 | DR Measured |
| 1157 | 6 | 6 | 36/154 | 7.22 | 21.4 | 385 | |
| 1205 | 8 | 6 | 48/102 | 7.36 | 21.4 | 389 | |
| 1211 | 6 | 6 | 36/138 | 7.38 | 21.5 | 400 | |
| 1217 | 6 | 5 | 30/168 | 7.39 | 21.4 | 401 | DR Measured |
| 1223 | 6 | 5 | 30/198 | 7.41 | 21.4 | 395 | |
| 1229 | 6 | 5 | 30/228 | 7.40 | 21.6 | 395 | |
| 1238 | 9 | 5 | 45/273 | 7.42 | 21.3 | 398 | DR Measured |
| 1244 | 6 | 5 | 30/303 | 7.41 | 21.5 | 398 | |
| | | | | | | | |
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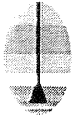
SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comments |
|--------------|------|----------------|--------|-------------------|-----------------|--------------|----------|
| BMO-2008-06B | 1250 | Plastic | 250 ml | 1 | EPA-800.0 | None | |
| | | | | | | | |
| | | | | | | | |

Additional Comments: Entrance is on Neco Highway, W side, N of Purdy Lane

* Gross Alpha/Beta, Ra 226, Ra 228 and Uranium Isotopes U 234, U 235 and U 238

4 prang 30 AMP male to 3 prang 20 AMP female adaptor needed.



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | | | |
|-------------|--------------|----------|------------------------------|
| Project No: | 872000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 11/4/08 |
| Well ID: | BMO-2008-06M | Weather: | Scattered Clouds |
| ADWR No: | 909019 | Sampler: | CTM |

WELL DATA

| | | | |
|------------------------------|--------|--|-------------------------|
| Well Depth (ft bls): | 450 | Casing Capacity | |
| | | Nominal Size (inches) | Gallons per Linear Foot |
| Casing Diameter (in): | 5 | 2 | 0.16 |
| | | 4 | 0.65 |
| | | 5 | 1.02 |
| | | 6 | 1.47 |
| | | 8 | 2.61 |
| Static Water Level (ft bmp): | 190.25 | 10 | 4.08 |
| Casing Volume (gals): | 260 | Casing Volume = gallons/foot * water column (feet) | |
| 3 Casing Volumes (gals): | 780 | | |

FIELD SAMPLING DATA

| Time | Elapsed Time (min) | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Comments |
|------|--------------------|----------------------|---------------------------|---------|-----------|------------------------------|-------------|
| 1307 | | | | | | | |
| 1311 | 4 | 12 | 48/48 | 7.33 | 21.6 | 619 | DR Measured |
| 1321 | 10 | 13 | 130/178 | 7.38 | 21.3 | 622 | |
| 1331 | 10 | 13 | 130/308 | 7.35 | 21.8 | 622 | |
| 1341 | 10 | 13 | 130/438 | 7.35 | 21.7 | 622 | DR Measured |
| 1351 | 10 | 13 | 130/568 | 7.31 | 21.7 | 619 | |
| 1401 | 10 | 13 | 130/698 | 7.40 | 21.6 | 622 | DR Measured |
| 1411 | 10 | 13 | 130/828 | 7.32 | 21.7 | 624 | |
| 1421 | 10 | 13 | 130/958 | 7.40 | 21.6 | 621 | DR Measured |
| 1433 | 12 | 13 | 156/1114 | 7.31 | 21.8 | 621 | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

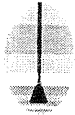
SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comments |
|--------------|------|----------------|--------|-------------------|-----------------|--------------|----------|
| BMO-2008-06M | 1440 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Additional Comments: Entrance is on Naco Highway, W side, N of Purdy Lane

* Gross Alpha/Beta, Ra 226, Ra 228 and Uranium Isotopes U 234, U 235 and U 238

4 prong male 30 AMP to 3 prong 20 AMP female plug adapter needed.



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|--------------|----------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 11/6/08 |
| Well ID: | BMO-2008-07M | Weather: | Clear |
| ADWR No: | 908794 | Sampler: | OTM |

WELL DATA

| | | | |
|------------------------------|--------|--|-------------------------|
| Well Depth (ft bis): | 670 | Casing Capacity | |
| | | Nominal Size (inches) | Gallons per Linear Foot |
| Casing Diameter (in): | 5 | 2 | 0.16 |
| Static Water Level (ft bmp): | 239.69 | 4 | 0.65 |
| Casing Volume (gals): | 440 | 5 | 1.02 |
| 3 Casing Volumes (gals): | 1300 | 6 | 1.47 |
| | | 8 | 2.61 |
| | | 10 | 4.08 |
| | | Casing Volume = gallons/foot * water column (feet) | |

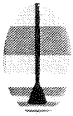
FIELD SAMPLING DATA

| Time | Elapsed Time (min) | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Comments |
|------|--------------------|----------------------|---------------------------|---------|-----------|------------------------------|-------------------------|
| 0743 | | | | | | | |
| 0745 | 2 | 17 | 34/34 | 8.31 | 17.9 | 297 | DR Measured, Foam noted |
| 0755 | 10 | 17 | 170/204 | 7.94 | 20.8 | 335 | |
| 0800 | 5 | 17 | 85/289 | 7.59 | 22.0 | 373 | |
| 0810 | 10 | 16 | 160/449 | 7.49 | 22.1 | 381 | DR Measured |
| 0816 | 6 | 16 | 96/545 | 7.51 | 22.5 | 381 | |
| 0820 | 4 | 16 | 64/609 | 7.52 | 22.5 | 381 | |
| 0825 | 5 | 16 | 80/689 | 7.53 | 22.6 | 380 | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comments |
|--------------|------|----------------|--------|-------------------|-----------------|--------------|----------|
| BMO-2008-07M | 0835 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |
| | | | | | | | |

Additional Comments: 4 prong male 30 AMP to 3 prong 20 AMP female adaptor, key needed.



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | |
|----------------------|--------------------------------------|
| Project No: 8720000 | Client: Freeport Copper Queen Branch |
| Task No: 2.2 | Date: 12-5-08 |
| Well ID: BMO-2008-8B | Weather: Partly cloudy, cool |
| ADWR No: | Sampler: Travis Taylor |

WELL DATA

| | | |
|-------------------------------------|--|-------------------------|
| Well Depth (ft bls): 480 | Casing Capacity | |
| | Nominal Size (inches) | Gallons per Linear Foot |
| Casing Diameter (in): 5.25 | 2 | 0.16 |
| | 4 | 0.65 |
| Static Water Level (ft bmp): 297.94 | 5 | 1.02 |
| | 6 | 1.47 |
| Casing Volume (gals): 204.7 | 8 | 2.61 |
| | 10 | 4.08 |
| 3 Casing Volumes (gals): 614.2 | Casing Volume = gallons/foot * water column (feet) | |

FIELD SAMPLING DATA

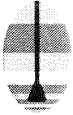
| Time | Elapsed Time (min) | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Comments |
|------|--------------------|----------------------|---------------------------|---------|-----------|------------------------------|-----------------------|
| 1210 | 0 | 53.2 | 12918 | 6.23 | 20.5 | 2980 | Total discharge began |
| 1230 | 20 | 53.2 | 13982 | 6.36 | 20.6 | 2480 | @ 12/04/08: 1355 |
| 1250 | 40 | 53.5 | 15046 | 6.39 | 20.9 | 2470 | |
| 1315 | 65 | 53.5 | 16384 | 6.41 | 21.3 | 2460 | |
| 1535 | 85 | 53.5 | 23874 | 6.47 | 20.4 | 2470 | |
| 1604 | 114 | 52.6 | 25426 | 6.49 | 20.5 | 2480 | |
| 1634 | 144 | 52.6 | 27004 | 6.50 | 20.1 | 2490 | |
| 1700 | 170 | 52.6 | 28372 | 6.47 | 20.1 | 2480 | |

SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comments |
|-------------|------|--------------------|-------------------|-------------------|----------------------|-----------------|----------|
| | | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| BMO-2008-8B | H05 | * | * | 3 | * | * | |

Additional Comments:

| | |
|---|----------|
| * 1 (125 ml) HNO ₃ , Filtered, plastic | FMCQB-GW |
| 1 (250 ml) Filtered, plastic | FMCQB-GW |
| 1 (500 ml) Raw, plastic | FMCQB-GW |



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | | | |
|-------------|-------------|----------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 12-9-08 |
| Well ID: | BMO-2008-8M | Weather: | Partly cloudy, cold, windy |
| ADWR No: | | Sampler: | Travis Taylor |

WELL DATA

| | | | |
|------------------------------|--------|--|-------------------------|
| Well Depth (ft bls): | 1210 | Casing Capacity | |
| | | Nominal Size (inches) | Gallons per Linear Foot |
| Casing Diameter (in): | 5.25 | 2 | 0.16 |
| Static Water Level (ft bmp): | 299.79 | 4 | 0.65 |
| Casing Volume (gals): | 1023.6 | 5 | 1.02 |
| 3 Casing Volumes (gals): | 3070.7 | 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 |
|------|--------------------|----------------------|---------------------------|---------|-----------|------------------------------|-----------------------|
| 1320 | 0 | 14.6 | 3769 | 6.95 | 24.0 | 887 | Total discharge began |
| 1350 | 30 | 14.4 | 4155 | 7.09 | 24.3 | 867 | 12-8-08 @ 1710 |
| 1428 | 68 | 14.3 | 4669 | 7.21 | 22.8 | 859 | |
| 1600 | 160 | 13.9 | 5865 | 7.16 | 23.7 | 850 | |
| 1625 | 185 | 13.7 | 6243 | 7.14 | 23.9 | 851 | |
| 1725 | 245 | 13.9 | 7072 | 7.16 | 23.4 | 852 | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comments |
|-------------|------|--------------------|-------------------|-------------------|----------------------|-----------------|----------|
| | | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| BMO-2008-8M | 1440 | * | * | 3 | * | * | |
| | | | | | | | |
| | | | | | | | |

Additional Comments:

| | |
|---|----------|
| * 1 (250ml) Filtered , plastic | FMCQB-GW |
| 1 (500ml) Raw, plastic | FMCQB-GW |
| 1 (125ml) Filtered, plastic, HNO ₃ | FMCQB-GW |

1. The first part of the document discusses the importance of maintaining accurate records of all transactions.

2. The second part of the document discusses the importance of maintaining accurate records of all transactions.

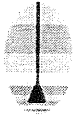
3. The third part of the document discusses the importance of maintaining accurate records of all transactions.

1

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3

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HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | | | |
|-------------|--------------|----------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 11/5/08 |
| Well ID: | BM0-2008-09M | Weather: | Mostly clear |
| ADWR No: | 909 255 | Sampler: | CTM |

WELL DATA

| | | | |
|------------------------------|--------|--|-------------------------|
| Well Depth (ft bls): | 77.5 | Casing Capacity | |
| | | Nominal Size (inches) | Gallons per Linear Foot |
| Casing Diameter (in): | 5 | 2 | 0.16 |
| | | 4 | 0.65 |
| | | 5 | 1.02 |
| | | 6 | 1.47 |
| | | 8 | 2.61 |
| Static Water Level (ft bmp): | 287.65 | 10 | 4.08 |
| Casing Volume (gals): | 500 | Casing Volume = gallons/foot * water column (feet) | |
| 3 Casing Volumes (gals): | 1500 | | |

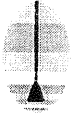
FIELD SAMPLING DATA

| Time | Elapsed Time (min) | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Comments |
|------|--------------------|----------------------|---------------------------|---------|-----------|------------------------------|--------------------------|
| 0948 | | | | | | | |
| 0948 | 0 | 15 | 0 | 8.67 | 18.4 | 385 | DR Measured, Foam noted. |
| 1003 | 5 | 15 | 75 | 8.67 | 21.8 | 402 | Foam noted. |
| 1018 | 5 | 15 | 150 | 7.89 | 23.0 | 442 | DR Measured. |
| 1033 | 5 | 15 | 225 | 7.83 | 23.0 | 445 | |
| 1048 | 5 | 14 | 295 | 7.84 | 23.0 | 442 | DR Measured |
| 1103 | 5 | 14 | 365 | 7.92 | 21.6 | 441 | |
| 1118 | 5 | 14 | 435 | 7.89 | 21.4 | 444 | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comments |
|--------------|------|----------------|--------|-------------------|-----------------|--------------|----------|
| BM0-2008-09M | 1140 | Plastic | 250ml | 1 | EPA 300.0 | None | |
| | | | | | | | |
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Additional Comments: 4 prong male 30 AMP to 3 prong female 20 AMP adaptor needed, key needed.



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|----------------|----------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 11/5/08 |
| Well ID: | BMO-2008-10 GU | Weather: | Mostly clear. |
| ADWR No: | 909272 | Sampler: | CM |

WELL DATA

| | | | |
|------------------------------|--------|--|-------------------------|
| Well Depth (ft bls): | 449 | Casing Capacity | |
| | | Nominal Size (inches) | Gallons per Linear Foot |
| Casing Diameter (in): | 5 | 2 | 0.16 |
| Static Water Level (ft bmp): | 295.89 | 4 | 0.65 |
| | | 5 | 1.02 |
| Casing Volume (gals): | 160 | 6 | 1.47 |
| | | 8 | 2.61 |
| 3 Casing Volumes (gals): | 480 | 10 | 4.08 |
| | | Casing Volume = gallons/foot * water column (feet) | |

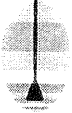
FIELD SAMPLING DATA

| Time | Elapsed Time (min) | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Comments |
|------|--------------------|----------------------|---------------------------|---------|-----------|------------------------------|-------------|
| 1240 | | | | | | | |
| 1242 | 2 | 6 | 12 | 6.32 | 18.7 | 3308 | DR Measured |
| 1247 | 5 | 6 | 30/72 | 6.18 | 20.1 | 3321 | |
| 1252 | 5 | 6 | 30/72 | 6.11 | 20.0 | 3319 | |
| 1302 | 10 | 6 | 60/132 | 6.12 | 20.4 | 3306 | |
| 1312 | 10 | 6 | 60/192 | 6.19 | 20.4 | 3347 | |
| 1322 | 10 | 6 | 60/252 | 6.15 | 20.2 | 3343 | DR Measured |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comments |
|----------------|------|----------------|--------|-------------------|-----------------|--------------|----------|
| BMO-2008-10 GU | 1330 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |
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| | | | | | | | |

Additional Comments: 4 prang male 30 AMP to 3 prang female 20 AMP adapter needed.



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|----------------|----------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 11/5/08 |
| Well ID: | BMO-2008-10 GL | Weather: | Scattered clouds |
| ADWR No: | 909435 | Sampler: | CTM |

WELL DATA

| | | | |
|------------------------------|--------|--|-------------------------|
| Well Depth (ft bls): | 810 | Casing Capacity | |
| | | Nominal Size (inches) | Gallons per Linear Foot |
| Casing Diameter (in): | 5 | 2 | 0.16 |
| | | 4 | 0.65 |
| | | 5 | 1.02 |
| | | 6 | 1.47 |
| | | 8 | 2.61 |
| Static Water Level (ft bmp): | 520.50 | 10 | 4.08 |
| Casing Volume (gals): | 300 | Casing Volume = gallons/foot * water column (feet) | |
| 3 Casing Volumes (gals): | 900 | | |

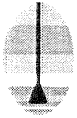
FIELD SAMPLING DATA

| Time | Elapsed Time (min) | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Comments |
|------|--------------------|----------------------|---------------------------|---------|-----------|------------------------------|--------------|
| 1402 | | | | | | | |
| 1404 | 2 | 5 | 10 / 10 | 6.66 | 18.6 | 3016 | DR Measured. |
| 1414 | 10 | 5 | 50 / 160 | 6.53 | 24.0 | 3079 | |
| 1419 | 5 | 5 | 25 / 85 | 6.48 | 24.8 | 3039 | |
| 1429 | 10 | 5 | 50 / 135 | 6.48 | 25.1 | 3012 | |
| 1439 | 10 | 5 | 50 / 185 | 6.47 | 25.0 | 2948 | |
| 1449 | 10 | 4 | 40 / 225 | 6.48 | 24.6 | 2796 | DR Measured. |
| 1459 | 10 | 4 | 40 / 265 | 6.53 | 25.0 | 2663 | |
| 1509 | 10 | 4 | 40 / 305 | 6.51 | 24.7 | 2609 | |
| 1519 | 10 | 4 | 40 / 345 | 6.48 | 25.2 | 2601 | |
| 1524 | 5 | 4 | 20 / 365 | 6.49 | 25.0 | 2580 | |
| 1529 | 5 | 4 | 20 / 385 | 6.47 | 25.3 | 2573 | |

SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comments |
|---------------|------|----------------|--------|-------------------|-----------------|--------------|----------|
| BMO-2008-10GL | 1535 | Plastic | 250ml | 1 | EPA 300.0 | None | |
| | | | | | | | |
| | | | | | | | |

Additional Comments: 4 prong male 30 AMP to 3 prong 20 AMP female adaptor needed.



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|--------------|----------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 11/12/08 |
| Well ID: | BMO-2008-116 | Weather: | Clear |
| ADWR No: | 909434 | Sampler: | CTM |

WELL DATA

| | | | |
|------------------------------|--------|--|-------------------------|
| Well Depth (ft bls): | 760 | Casing Capacity | |
| | | Nominal Size (inches) | Gallons per Linear Foot |
| Casing Diameter (in): | 5 | 2 | 0.16 |
| Static Water Level (ft bmp): | 576.80 | 4 | 0.65 |
| | | 5 | 1.02 |
| Casing Volume (gals): | 190 | 6 | 1.47 |
| | | 8 | 2.61 |
| 3 Casing Volumes (gals): | 560 | 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 |
|------|--------------------|----------------------|---------------------------|---------|-----------|------------------------------|-------------|
| 1138 | | | | | | | |
| 1140 | 2 | 8 | 16 | 7.84 | 20.5 | 262 | DR Measured |
| 1150 | 10 | 8 | 96 | 7.91 | 23.7 | 256 | |
| 1200 | 10 | 8 | 176 | 7.95 | 24.4 | 253 | |
| 1210 | 10 | 8 | 256 | 7.97 | 24.5 | 255 | |
| 1220 | 10 | 7 | 326 | 7.95 | 24.7 | 255 | DR Measured |
| 1230 | 10 | 7 | 396 | 7.98 | 24.7 | 256 | |
| 1240 | 10 | 7 | 466 | 7.97 | 24.2 | 256 | |
| 1250 | 10 | 8 | 546 | 7.96 | 24.2 | 257 | DR Measured |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comments |
|--------------|------|----------------|--------|-------------------|-----------------|--------------|----------|
| BMO-2008-116 | 1255 | Plastic | 250 ml | 1 | EPA 300.0 | None | Filtered |
| | | | | | | | |
| | | | | | | | |

Additional Comments: 4 prong 30 AMP male adaptor to 3 prong 20 AMP female plug needed.
 * Gross Alpha/Beta, Ra 226, Ra 228 and Uranium Isotopes U 234, U 235 and U 238



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | | | |
|-------------|--------------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.3 | Date: | 10/03/08 |
| Well ID: | BMO-2008-13B | Weather: | |
| ADWR No: | | Collected By: | John Villinski |

WELL DATA

| | | | |
|------------------------------|--------|-----------------------|---------------|
| Well Depth (ft bls): | 470 | Time: | 0720 |
| Casing Diameter (in): | 5-inch | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 206.95 | | |
| 1 Casing Volume (gals): | NA | | |
| 3 Casing Volumes (gals): | NA | | |

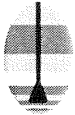
FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|--|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 1328 | | | 6.49 | 21.6 | 2180 | - | - | - |
| Sample Collected after Aquifer Testing | | | | | | | | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|--------------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| BMO-2008-13B | 1345 | Plastic | * | 3 | FMCQB-GW | * | -- |
| | | | | | | | |

Additional Comments: * 500 ml Raw, 125 ml Filtered HNO3 and 250 ml Filtered



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | |
|-----------------------|--------------------------------------|
| Project No: 8720000 | Client: Freeport Copper Queen Branch |
| Task No: 2.2 | Date: 12-3-06 |
| Well ID: BMO-2008-13M | Weather: Sunny, Cool |
| ADWR No: | Sampler: Travis Taylor |

WELL DATA

| | | |
|--|-----------------------|-------------------------|
| Well Depth (ft bls): 1030 | Casing Capacity | |
| | Nominal Size (inches) | Gallons per Linear Foot |
| Casing Diameter (in): 5.25 | 2 | 0.16 |
| Static Water Level (ft bmp): 206 | 4 | 0.65 |
| Casing Volume (gals): 926.63 | 5 | 1.02 |
| 3 Casing Volumes (gals): 2779.9 | 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 | 0 | 3.64 | 901.5 | 7.40 | 24.0 | 1534 | total Discharge began 12/2/06 |
| 1300 | 60 | 3.64 | 1119.9 | 7.61 | 24.5 | 1516 | ⊕ 1420 |
| 1400 | 120 | 3.58 | 1337.3 | 7.59 | 24.4 | 1492 | |
| 1430 | 150 | 3.58 | 1445 | 7.57 | 24.5 | 1481 | |
| 1500 | 180 | 3.38 | 1546 | 7.69 | 23.9 | 1460 | |
| 1530 | 210 | 3.48 | 1650 | 7.72 | 24.1 | 1463 | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comments |
|--------------|------|--------------------|-------------------|-------------------|----------------------|-----------------|----------|
| | | Plastic | 250 ml | 1 | EPA 300.6 | None | |
| BMO-2008-13M | 1545 | * | * | 3 | * | * | |
| | | | | | | | |
| | | | | | | | |

Additional Comments:

| | |
|--|----------|
| * 1 (125ml) HNO ₃ , Filtered, Plastic | FMCQB-GW |
| 1 (250ml) Filtered, Plastic | FMCQB-GW |
| 1 (500ml) Raw, Plastic | FMCQB-GW |

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HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-20-08 |
| Well ID: | BURKE | Weather: | Sunny |
| ADWR No: | 212268 | Collected By: | J. Villinski |

WELL DATA

| | | | |
|------------------------------|-----------------|-----------------------|---------------|
| Well Depth (ft bls): | 780 | Time: | |
| Casing Diameter (in): | 6" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 604.88 10/28/08 | | |
| 1 Casing Volume (gals): | | | |
| 3 Casing Volumes (gals): | | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 15:45 | | | 7.57 | 26.0 | 466 | | | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| BURKE | 15:45 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: 1000' sounder - went down past 700', w/o the sounder hitting water - not inside inner casing? Sounder got stuck, was removed on 10-22-08. Will recheck week of 10-27-08



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|----------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-15-08 |
| Well ID: | CHAMBERS | Weather: | Sunny |
| ADWR No: | 629807 | Collected By: | John Villinski |

WELL DATA

| | | | |
|------------------------------|-----|-----------------------|---------------|
| Well Depth (ft bls): | 245 | Time: | 11:08 |
| Casing Diameter (in): | 6 | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | N/A | Valve opened @ 11:08 | |
| 1 Casing Volume (gals): | | 15 gpm | |
| 3 Casing Volumes (gals): | | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 11:09 | 15 | 15 | 7.45 | 21.3 | 425 | clear | no | — |
| 11:14 | 5 | 40 | 7.40 | 22.4 | 419 | " | " | — |
| 11:22 | 5 | 80 | 7.39 | 22.3 | 422 | " | " | — |
| 11:30 | 5 | 120 | 7.41 | 22.5 | 420 | " | " | — |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| CHAMBERS | 11:35 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |
| | | | | | | | |

Additional Comments: Watering the plants - 15 gpm is too strong
cut back to 5 gpm, Purge until stable



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|----------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-23-08 |
| Well ID: | COB MW-1 | Weather: | Sunny |
| ADWR No: | 903992 | Collected By: | J. Villinski |

WELL DATA

| | | | |
|------------------------------|--------|-------------------------|---------------|
| Well Depth (ft bls): | 420 | Time: | 7:28 |
| Casing Diameter (in): | 8 | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 233.62 | 730 - valve open 65 gpm | |
| 1 Casing Volume (gals): | 448 | | |
| 3 Casing Volumes (gals): | 1442 | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 7:33 | 15 | 45 | 7.00 | 19.3 | 1559 | clear | no | |
| 7:38 | 15 | 120 | 6.96 | 20.8 | 1613 | " | " | |
| 7:42 | 15 | 180 | 7.00 | 20.9 | 1595 | " | " | |
| 7:47 | 15 | 255 | 6.96 | 21.1 | 1664 | " | " | 7 |
| 7:52 | 15 | 330 | 6.93 | 21.3 | 1669 | " | " | 1 |
| 7:57 | 15 | 405 | 6.96 | 21.3 | 1677 | " | " | 1 |
| 8:02 | 12 | 465 | 6.95 | 21.3 | 1689 | " | " | 1 |
| 8:07 | 12 | 525 | 6.95 | 21.2 | 1690 | " | " | 1 |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| COB MW-1 | 8:10 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: since pump is used constantly for the WWTB
purge only until stable



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|----------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-23-08 |
| Well ID: | COB-MW-2 | Weather: | Sunny |
| ADWR No: | 903984 | Collected By: | John D. Vlnsky |

WELL DATA

| | | | |
|------------------------------|--------|--------------------------|---------------|
| Well Depth (ft bls): | 162 | Time: | 9:25 |
| Casing Diameter (in): | 4" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 124.02 | pump on @ 9:28 - 7.5 gpm | |
| 1 Casing Volume (gals): | 25 | 11 min purge | |
| 3 Casing Volumes (gals): | 76 | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 9:29 | 7.5 | 7.5 | 7.23 | 19.6 | 505 | clear | no | — |
| 9:31 | 7.5 | 22.5 | 7.34 | 20.0 | 497 | " | " | — |
| 9:34 | 7.5 | 45 | 7.34 | 20.2 | 501 | " | " | |
| 9:38 | 7.5 | 75 | 7.36 | 20.3 | 498 | " | " | — |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| COB MW-2 | 9:40 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |
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Additional Comments: _____



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|----------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-23-08 |
| Well ID: | COB MW-3 | Weather: | Sunny |
| ADWR No: | 906823 | Collected By: | John Villinski |

WELL DATA

| | | | |
|------------------------------|--------|-----------------------|---------------|
| Well Depth (ft bls): | 300' | Time: | 9:57 |
| Casing Diameter (in): | 4 | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 117.93 | Pump @ 10:00 - 25 gpm | |
| 1 Casing Volume (gals): | 122 | 15 min purge | |
| 3 Casing Volumes (gals): | 365 | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------------|
| 10:02 | 25 | 50 | 7.26 | 19.8 | 469 | Clear | no | lots of small |
| 10:06 | 25 | 150 | 7.40 | 20.4 | 509 | " | " | particles |
| 10:10 | 25 | 250 | 7.42 | 20.7 | 507 | " | " | no particles |
| 10:13 | 25 | 325 | 7.42 | 20.8 | 506 | " | " | " |
| 10:16 | 25 | 400 | 7.43 | 20.8 | 507 | " | " | " |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| COB MW-3 | 10:20 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: looks like some small metallic flakes in w/ other sand. cleared up right away



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-23-08 |
| Well ID: | COB WL | Weather: | Sunny |
| ADWR No: | 593116 | Collected By: | John Millonster |

WELL DATA

| | | | |
|------------------------------|-------|------------------------|---------------|
| Well Depth (ft bis): | 150 | Time: | 8:31 |
| Casing Diameter (in): | 4" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 58.76 | PUMP on 8:34 @ 7.5 gpm | |
| 1 Casing Volume (gals): | 61 | | |
| 3 Casing Volumes (gals): | 183 | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-----------------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 8:36 | 7.5 | 15 | 6.93 | 18.9 | 1059 | clear | no | — |
| 8:40 | 7.5 | 45 | 7.00 | 20.4 | 1078 | " | " | |
| 8:44 | 7 | 73 | 6.99 | 20.6 | 1086 | " | " | |
| 8:49 | 2 | 83 | 7.06 | 20.7 | 1072 | " | " | |
| 8:52 | 2 | 89 | 7.22 | 21.2 | 1076 | " | " | |
| 8:55 | 2 | 95 | 7.23 | 21.4 | 1075 | " | " | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| COB WL | 9:00 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: At 8:47 - pumped well almost dry - surging at 7 gpm. Casing must be emptied at this point



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-20-08 |
| Well ID: | COLLINS | Weather: | P. Cloudy |
| ADWR No: | 565260 | Collected By: | J. Villinski |

WELL DATA

| | | | |
|------------------------------|--------|---------------------------|---------------|
| Well Depth (ft bls): | 320 | Time: | 13:11 |
| Casing Diameter (in): | 4 1/2 | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 290.15 | valve open 13:18 @ 12 gpm | |
| 1 Casing Volume (gals): | 25 | 6+ min purge | |
| 3 Casing Volumes (gals): | 76 | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 13:19 | 12 | 12 | 6.71 | 21.8 | 1510 | clear | no | |
| 13:21 | 12 | 36 | 6.78 | 21.7 | 1503 | 1- | 4 | |
| 13:23 | 12 | 60 | 6.78 | 21.7 | 1503 | | | |
| 13:24 | 12 | 96 | 6.78 | 21.7 | 1510 | | | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| COLLINS | 13:30 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
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Additional Comments: water not used since early am



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|--------------------------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-20-08 |
| Well ID: | COOPER W | Weather: | Mostly sunny |
| ADWR No: | 637069 623546 | Collected By: | J. Villinski |

WELL DATA

| | | | |
|------------------------------|--------------------|-----------------------------|---------------|
| Well Depth (ft bls): | 325 325 | Time: | |
| Casing Diameter (in): | 6" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | N/A | valve open 13:41 @ 8.33 gpm | |
| 1 Casing Volume (gals): | | | |
| 3 Casing Volumes (gals): | | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|----------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 13:44 | 8.33 | 25 | 8.39 | 23.4 | 447 | clear | no | - |
| 13:50 | 8.33 | 35 | 8.42 | 24.2 | 447 | " | " | |
| 13:56 | 8.33 | 125 | 8.45 | 24.5 | 448 | " | " | |
| 14:02 | 8.33 | 175 | 8.44 | 24.7 | 448 | | | |
| ↳ Stable | | | | | | | | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| COOPER | 14:05 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
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Additional Comments: cannot measure WL - pump til stable
No one home. However some of the garbage in
the yard has been cleaned up



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|----------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-16-08 |
| Well ID: | COOPER C | Weather: | Bunny |
| ADWR No: | 637069 | Collected By: | John Villinski |

WELL DATA

| | | | |
|------------------------------|--------|------------------------------|---------------|
| Well Depth (ft bls): | 220 | Time: | 13:27 |
| Casing Diameter (in): | 6" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 155.85 | Valve open @ 13:34 @ 6.7 gpm | |
| 1 Casing Volume (gals): | 96 | 43 min purge | |
| 3 Casing Volumes (gals): | 289 | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 13:35 | 6.7 | 6.7 | 6.85 | 21.9 | 2075 | clear | no | - |
| 13:41 | 6.7 | 13.4 | 6.84 | 21.6 | 2076 | " | " | - |
| 13:46 | 6.7 | 20.1 | 6.80 | 21.5 | 2078 | " | " | |
| 13:52 | 6.7 | 26.8 | 6.81 | 21.5 | 2082 | " | " | |
| 13:58 | 6.7 | 33.5 | 6.81 | 21.5 | 2080 | " | " | |
| 14:04 | 6.7 | 40.2 | 6.83 | 21.5 | 2077 | " | " | |
| 14:10 | 6.7 | 46.9 | 6.79 | 21.5 | 2078 | " | " | - |
| 14:17 | 6.7 | 53.6 | 6.80 | 21.4 | 2078 | " | " | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| COOPER C | 14:20 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: Some usage in the morning, Teenager at home - school break



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-13-08 |
| Well ID: | DODSON | Weather: | Sunny/Warm |
| ADWR No: | 644927 | Collected By: | J. Villinski |

NEEDS FAIR IN BLUE GROUNDWELL DATA

| | | | |
|------------------------------|-------|--------------------------|---------------|
| Well Depth (ft bls): | 200' | Time: | 13:55 |
| Casing Diameter (in): | 6" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 81.82 | pump on @ 14:01 @ 13 gpm | |
| 1 Casing Volume (gals): | 177.8 | = 41 min purge | |
| 3 Casing Volumes (gals): | 534 | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|-------------------|
| 14:04 | 13 | 39 | 7.12 | 20.6 | 986 | clear | no | |
| 14:09 | 13 | 104 | 7.18 | 20.8 | 994 | " | " | some black flakes |
| 14:14 | 13 | 169 | 7.19 | 20.5 | 1038 | " | " | |
| 14:19 | 13 | 234 | 7.16 | 20.6 | 1058 | " | " | |
| 14:24 | 13 | 299 | 7.14 | 20.5 | 1075 | " | " | |
| 14:29 | 13 | 364 | 7.13 | 20.7 | 1087 | " | " | |
| 14:34 | 13 | 429 | 7.13 | 20.6 | 1088 | " | " | |
| 14:39 | 13 | 494 | 7.14 | 20.6 | 1092 | " | " | |
| 14:43 | 13 | 536 | 7.15 | 20.5 | 1095 | " | " | |

SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|-------|----------------|--------|-------------------|-----------------|--------------|----------|
| DODSON | 14:45 | Plastic | 250 ml | 1 | EPA 300.0 | None | Filtered |

Additional Comments: No one home. Pump appears to have been off. Dodson still in process of remodel.



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | |
|-----------------------------|---|
| Project No: <u>8720000</u> | Client: <u>Freeport Copper Queen Branch</u> |
| Task No: <u>2.2</u> | Date: <u>10/16/08</u> |
| Well ID: <u>DOUGLAS 791</u> | Weather: <u>Clear, Cool</u> |
| ADWR No: <u>592791</u> | Collected By: <u>BJT</u> |

| WELL DATA | |
|---|--|
| Well Depth (ft bls): <u>200</u> | Time: <u>1030</u> |
| Casing Diameter (in): _____ | Point of Measurement: <u>Top of Casing</u> |
| Static Water Level (ft bmp): <u>23.60</u> | |
| 1 Casing Volume (gals): _____ | |
| 3 Casing Volumes (gals): _____ | |

| FIELD SAMPLING DATA | | | | | | | | |
|---------------------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
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| SAMPLE INFORMATION | | | | | | | |
|-------------------------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
| Water Level Only | | | | | | | |
| | | | | | | | |

Additional Comments: _____



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | |
|-----------------------------|---|
| Project No: <u>8720000</u> | Client: <u>Freeport Copper Queen Branch</u> |
| Task No: <u>2.2</u> | Date: <u>10/16/08</u> |
| Well ID: <u>DOUGLAS 792</u> | Weather: <u>Clear, Cool</u> |
| ADWR No: <u>592792</u> | Collected By: <u>BJT</u> |

WELL DATA

| | |
|---|--|
| Well Depth (ft bls): <u>200</u> | Time: <u>1035</u> |
| Casing Diameter (in): _____ | Point of Measurement: <u>Top of Casing</u> |
| Static Water Level (ft bmp): <u>86.45</u> | |
| 1 Casing Volume (gals): _____ | |
| 3 Casing Volumes (gals): _____ | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-------------------------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| Water Level Only | | | | | | | |
| | | | | | | | |

Additional Comments: _____



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-14-08 |
| Well ID: | EAST | Weather: | Sunny |
| ADWR No: | 599796 | Collected By: | John Dillinski |

WELL DATA

| | | | |
|------------------------------|-------|--------------------------|---------------|
| Well Depth (ft bls): | 125' | Time: | 13:15 |
| Casing Diameter (in): | 6" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 52.19 | 13:19 pump on @ 8.33 gpm | |
| 1 Casing Volume (gals): | 110 | 40 min purge | |
| 3 Casing Volumes (gals): | 329 | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 13:20 | 8.3 | 8.3 | 7.32 | 21.0 | 519 | clear | no | |
| 13:25 | 8.33 | 50 | 7.33 | 20.0 | 519 | " | " | |
| 13:30 | 8.33 | 92 | 7.34 | 20.2 | 521 | " | " | |
| 13:35 | 8.33 | 133 | 7.32 | 20.3 | 524 | " | " | |
| 13:40 | 8.33 | 175 | 7.33 | 20.4 | 525 | " | " | |
| 13:46 | 8.33 | 225 | 7.36 | 20.3 | 528 | " | " | |
| 13:52 | 8.33 | 275 | 7.34 | 20.3 | 529 | " | " | |
| 13:58 | 8.33 | 325 | 7.33 | 20.3 | 531 | | | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| EAST | 14:05 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: light water usage in the AM (couple showers)



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | | | |
|-------------|-----------------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-21-08 |
| Well ID: | EJIDO NACO - 02 | Weather: | Sunny |
| ADWR No: | — | Collected By: | J. Billinski |

WELL DATA

| | | | |
|------------------------------|------------------|-----------------------|---------------|
| Well Depth (ft bls): | 165' | Time: | 8:25 |
| Casing Diameter (in): | — | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | ~ 115 | | |
| 1 Casing Volume (gals): | | | |
| 3 Casing Volumes (gals): | | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 8:25 | — | — | 7.24 | 22.5 | 361 | clear | no | — |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|---------------|------|----------------|--------|-------------------|-----------------|---------------|---------|
| EJIDO NACO 02 | 8:25 | Plastic | 250 ml | 3 | EPA 300.0 | y/n/n None | |
| | | | | | | | |
| | | | | | | | |

Additional Comments:



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-21-08 |
| Well ID: | EJIDO NACO 03 | Weather: | Sunny |
| ADWR No: | | Collected By: | John Villinski |

WELL DATA

| | | | |
|------------------------------|-------|-----------------------|---------------|
| Well Depth (ft bis): | _____ | Time: | _____ |
| Casing Diameter (in): | _____ | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | _____ | | |
| 1 Casing Volume (gals): | _____ | | |
| 3 Casing Volumes (gals): | _____ | | |

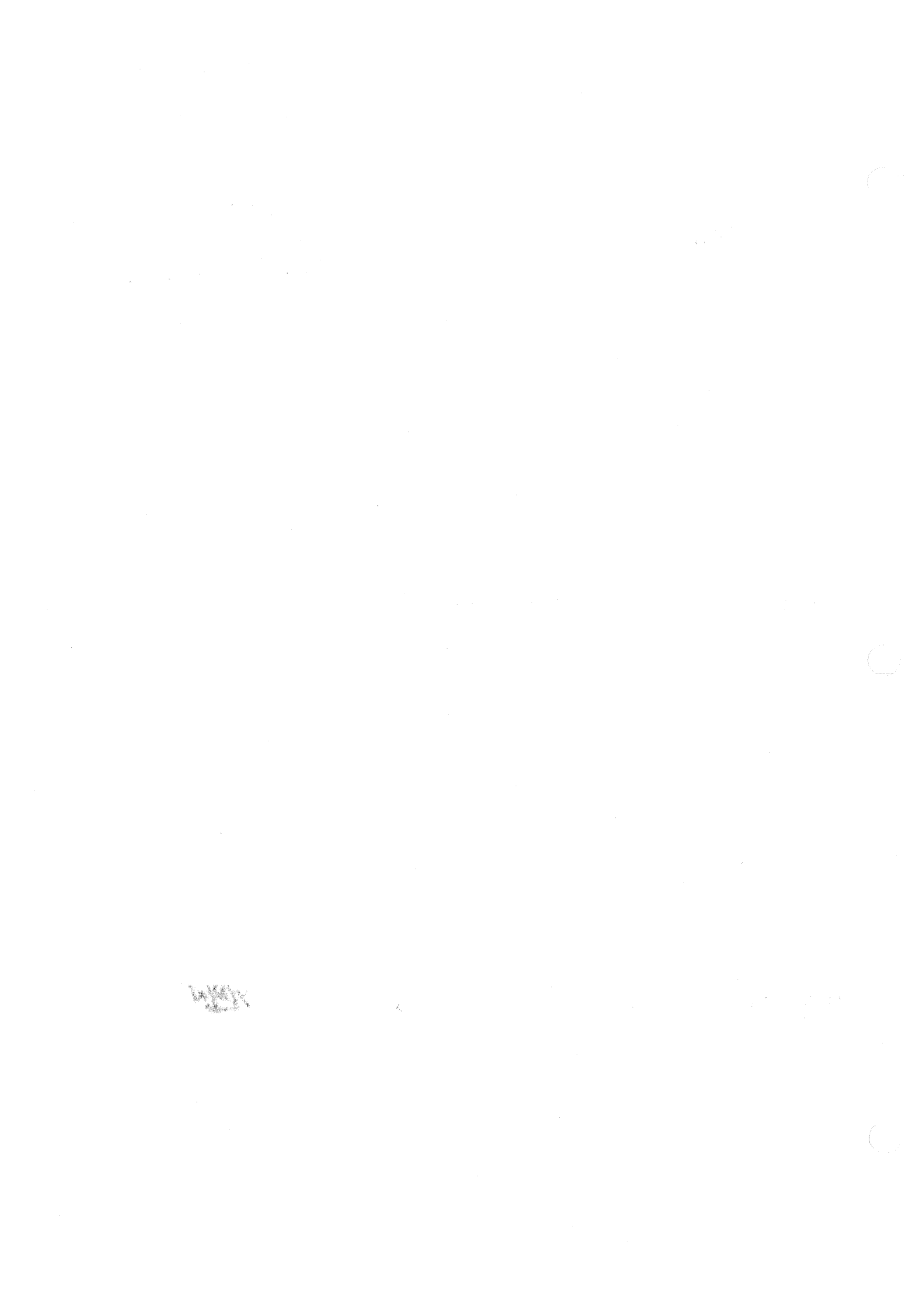
FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 9:40 | | | 7.39 | 23.9 | 346 | | | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|--------------|------|----------------|--------|-------------------|-----------------|---------------|---------|
| EJIDONACO 03 | 940 | Plastic | 250 ml | 3 | EPA 300.0 | Y/M/W None | |
| | | | | | | | |
| | | | | | | | |

Additional Comments: _____





HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-21-08 |
| Well ID: | EJIDO NACO 05 | Weather: | Sunny |
| ADWR No: | | Collected By: | John Villinski |

WELL DATA

| | | | |
|------------------------------|--|-----------------------|---------------|
| Well Depth (ft bls): | | Time: | N/A |
| Casing Diameter (in): | | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | | | |
| 1 Casing Volume (gals): | | | |
| 3 Casing Volumes (gals): | | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 915 | | | 7.34 | 22.4 | 391 | | | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|---------------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| EJIDO NACO 05 | 915 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: _____



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | |
|------------------------------|---|
| Project No: <u>8720000</u> | Client: <u>Freeport Copper Queen Branch</u> |
| Task No: <u>2.2</u> | Date: <u>10-21-08</u> |
| Well ID: <u>EJIDONACO 06</u> | Weather: <u>Sunny</u> |
| ADWR No: _____ | Collected By: <u>John Villinski</u> |

WELL DATA

| | |
|--|--|
| Well Depth (ft bls): _____ | Time: _____ |
| Casing Diameter (in): _____ | Point of Measurement: <u>Top of Casing</u> |
| Static Water Level (ft bmp): <u>~115</u> | _____ |
| 1 Casing Volume (gals): _____ | _____ |
| 3 Casing Volumes (gals): _____ | _____ |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------------|----------------------|---------------------------|-------------|-------------|------------------------------|--------------|-----------|----------|
| <u>9:00</u> | | | <u>7.35</u> | <u>22.5</u> | <u>349</u> | <u>clear</u> | <u>no</u> | <u>—</u> |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|---------------------|-------------|----------------|---------------|-------------------|------------------|-----------------------|---------|
| <u>EJIDONACO 06</u> | <u>9:00</u> | <u>Plastic</u> | <u>250 ml</u> | <u>3</u> | <u>EPA 300.0</u> | <u>X/N/W None</u> | |
| | | | | | | | |

Additional Comments: _____



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|------------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-14-08 |
| Well ID: | EPPELE 641 | Weather: | Sunny / Cool |
| ADWR No: | 805641 | Collected By: | J. Villinski |

WELL DATA

| | | | |
|------------------------------|-------|-------------------------------|---------------|
| Well Depth (ft bls): | 265 | Time: | 7:30 |
| Casing Diameter (in): | 8" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 24.53 | pump on @ 7:42 (5g/35s = 8.3) | |
| 1 Casing Volume (gals): | 643 | = 250 mins! | |
| 3 Casing Volumes (gals): | 1930 | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 7:44 | 8.3 | 16.7 | 7.14 | 18.3 | 643 | clear | no | |
| 7:50 | 8.3 | 66.7 | 7.22 | 19.8 | 639 | " | " | |
| 8:02 | 9 | 176 | 7.25 | 19.5 | 636 | " | " | |
| 8:15 | 9 | 293 | 7.20 | 19.9 | 637 | " | " | |
| 8:27 | 10 | 413 | 7.26 | 19.8 | 635 | " | " | |
| 8:39 | 10 | 533 | 7.24 | 19.9 | 633 | " | " | |
| 8:51 | 10 | 653 | 7.28 | 19.6 | 644 | " | " | |
| 9:07 | 10 | 803 | 7.35 | 19.7 | 671 | " | " | |
| 9:22 | 10 | 953 | 7.53 | 19.4 | 659 | | | |
| 9:32 | 10 | 1053 | 7.61 | 19.3 | 641 | | | |
| 9:37 | | shut valve - flow stopped | | | | | | |
| 9:50 | N/A | 71060 | 7.56 | 20.4 | 642 | | | |

SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|------------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| EPPELE 641 | 9:52 | Plastic | 250 ml | 1 | EPA 300.0 | None | |

Additional Comments:



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-15-08 |
| Well ID: | FRANCO | Weather: | Sunny |
| ADWR No: | 500101 | Collected By: | John Villinski |

WELL DATA

| | | | |
|------------------------------|------|-----------------------|-------------------|
| Well Depth (ft bls): | 200' | Time: | |
| Casing Diameter (in): | 6" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | N/A | | probe open @ 9:12 |
| 1 Casing Volume (gals): | | | 4 gpm |
| 3 Casing Volumes (gals): | | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|--------------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 9:14 | 4 | 8 | 7.31 | 20.1 | 1567 | clear | no | |
| 9:20 | 4 | 32 | 7.25 | 20.1 | 1557 | " | " | |
| 9:28 | 4 | 52 | 7.21 | 20.0 | 1549 | " | " | |
| 9:30 | 4 | 72 | 7.21 | 20.2 | 1557 | " | " | |
| 9:35 | 4 | 92 | 7.20 | 20.5 | 1560 | " | " | |
| seems stable | | | | | | | | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| FRANCO | 9:40 | Plastic | 250 ml | 1 | EPA 300.0 | None | |

Additional Comments: used hose-bib on House #4. Water in use b/c well is shared by 4 houses. Will purge until field parameters are stable



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-22-08 |
| Well ID: | FULTZ | Weather: | Sunny |
| ADWR No: | 22447 | Collected By: | John Villinski |

WELL DATA

| | | | |
|------------------------------|-------|----------------------------|---------------|
| Well Depth (ft bis): | 300 | Time: | 14:35 |
| Casing Diameter (in): | 8 | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 40.59 | Too much purge volume - | |
| 1 Casing Volume (gals): | 695 | purge still reading stable | |
| 3 Casing Volumes (gals): | 2087 | valve open 14:40 @ 10 gpm | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------------|
| 14:45 | 10 | 50 | 6.78 | 21.7 | 1937 | clear | no | few blk parts |
| 14:50 | 10 | 100 | 6.81 | 21.6 | 1931 | " | " | |
| 14:55 | 10 | 150 | 6.80 | 21.5 | 1938 | " | " | |
| 15:00 | 10 | 200 | 6.82 | 21.4 | 1943 | | | |
| 15:05 | 10 | 250 | 6.83 | 21.3 | 1941 | | | |
| 15:10 | 10 | 300 | 6.80 | 21.4 | 1940 | | | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| FULTZ | 15:15 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: They have not used this well in some time. static WL



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | |
|----------------------------|---|
| Project No: <u>8720000</u> | Client: <u>Freeport Copper Queen Branch</u> |
| Task No: <u>2.2</u> | Date: <u>10/16/08</u> |
| Well ID: <u>GALLANT</u> | Weather: <u>Clear, Warm</u> |
| ADWR No: <u>502527</u> | Collected By: <u>BJT</u> |

| WELL DATA | |
|---|--|
| Well Depth (ft bls): <u>190</u> | Time: <u>1345</u> |
| Casing Diameter (in): _____ | Point of Measurement: <u>Top of Casing</u> |
| Static Water Level (ft bmp): <u>30.70</u> | |
| 1 Casing Volume (gals): _____ | |
| 3 Casing Volumes (gals): _____ | |

| FIELD SAMPLING DATA | | | | | | | | |
|---------------------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
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| SAMPLE INFORMATION | | | | | | | |
|-------------------------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
| Water Level Only | | | | | | | |
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Additional Comments: _____



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | | | |
|-------------|------------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-15-08 |
| Well ID: | GARNER 635 | Weather: | bunny |
| ADWR No: | 587635 | Collected By: | John Villinski |

WELL DATA

| | | | |
|------------------------------|--------|-------------------------|---------------|
| Well Depth (ft bls): | 680 | Time: | 8:15 |
| Casing Diameter (in): | 12" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 194.35 | Pump on @ 8:24 - 20 gpm | |
| 1 Casing Volume (gals): | 2923 | | |
| 3 Casing Volumes (gals): | 8770 | | |

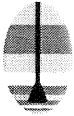
FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 8:25 | 20 | 20 | 7.72 | 19.8 | 215 | clear | ND | |
| 8:30 | 20 | 120 | 7.65 | 22.2 | 470 | " | " | |
| 8:35 | 20 | 220 | 7.66 | 23.2 | 471 | " | " | |
| 8:40 | 20 | 320 | 7.65 | 23.7 | 486 | " | " | |
| 8:45 | 20 | 420 | 7.65 | 29.1 | 472 | | | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|------------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| GARNER 635 | 8:50 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
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Additional Comments: _____



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | | | |
|-------------|---------|----------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 11/12/08 |
| Well ID: | GL-03 | Weather: | Clear |
| ADWR No: | 539782 | Sampler: | CTM |

WELL DATA

| | | | |
|------------------------------|----------------------|--|-------------------------|
| Well Depth (ft bls): | 825 | Casing Capacity | |
| | | Nominal Size (inches) | Gallons per Linear Foot |
| Casing Diameter (in): | 4 | 2 | 0.16 |
| | | 4 | 0.65 |
| | | 5 | 1.02 |
| | | 6 | 1.47 |
| | | 8 | 2.61 |
| Static Water Level (ft bmp): | Obstruction @ ~23.5' | 10 | 4.08 |
| | H: 659.79 (8/4/08) | | |
| Casing Volume (gals): | 108 | Casing Volume = gallons/foot * water column (feet) | |
| 3 Casing Volumes (gals): | 320 | | |

FIELD SAMPLING DATA

| Time | Elapsed Time (min) | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Comments |
|---------------------------------|--------------------|----------------------|---------------------------|---------|-----------|------------------------------|-------------|
| 1002 | | | | | | | |
| 1005 | 3 | 9 | 27 | 7.30 | 21.7 | 475 | DR Measured |
| 1010 | 5 | 9 | 72 | 7.26 | 25.1 | 456 | |
| 1015 | 5 | 9 | 117 | 7.16 | 25.7 | 482 | |
| 1020 | 5 | 9 | 162 | 7.15 | 26.0 | 486 | DR Measured |
| 1025 | 5 | 0.5 | 164 | 7.21 | 25.2 | 478 | |
| Stopped purge to allow recharge | | | | | | | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comments |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|----------|
| GL-03 | 1040 | Plastic | 250 ml | 1 | EPA 300.0 | None | Filtered |
| | | | | | | | |
| | | | | | | | |

Additional Comments: T-junction, 4 prong 30 AMP male to 3 prong 20 AMP female extension cord needed.
 Generator would not restart after ~2 minutes.



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|------------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10/29/08 Scattered |
| Well ID: | GG005E 547 | Weather: | Clear → Partly Cloudy |
| ADWR No: | SS-628547 | Collected By: | CTM, JV |

WELL DATA

| | | | |
|------------------------------|---------------------------------------|-----------------------|---------------|
| Well Depth (ft bls): | 800 | Time: | 1013 - 1240 |
| Casing Diameter (in): | 6 | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 235.90 | | |
| 1 Casing Volume (gals): | $(564.1)(36)(0.0408) = 830 \text{ g}$ | | |
| 3 Casing Volumes (gals): | 2500 g | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|-------------------------|
| 1016 | 19 | 561/56 | 7.23 | 22.5 | 876 | Yes | Yes | Discharge Rate Measured |
| 1026 | 19 | 190/1246 | 7.26 | 22.4 | 868 | No | No | |
| 1036 | 17 | 170/416 | 7.27 | 22.4 | 885 | " | " | DR Measured |
| 1051 | 17 | 255/671 | 7.25 | 22.4 | 895 | " | " | |
| 1106 | 17 | 926 | 7.28 | 22.5 | 901 | " | " | DR Measured |
| 1121 | 17 | 255/1181 | 7.26 | 22.5 | 901 | " | " | |
| 1136 | 16 | 240/1421 | 7.26 | 22.5 | 901 | " | " | DR Measured |
| 1151 | 16 | 240/1661 | 7.22 | 22.7 | 900 | " | " | |
| 1206 | 16 | 240/1901 | 7.23 | 22.8 | 900 | " | " | DR Measured |
| 1221 | 16 | 240/2141 | 7.26 | 22.8 | 898 | " | " | |
| 1236 | 16 | 240/2381 | 7.27 | 22.6 | 897 | " | " | |

SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|------------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| GG005E 547 | 1240 | Plastic | 250 ml | 1 | EPA 300.0 | None | |

Additional Comments: Obstruction at ~141' can be passed. 240 V 3 phase generator w/ 10 gauge wiring (Black, Red, Yellow, Ground solid 1/8" diameter per wire w/ 2-1/8" N 2-3 gallons/min leaking, will add to total discharge.



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | | | |
|-------------|------------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-22-08 |
| Well ID: | Goar Ranch | Weather: | Sunny |
| ADWR No: | 810695 | Collected By: | John Villinski |

WELL DATA

| | | | |
|------------------------------|--------|-----------------------|---------------|
| Well Depth (ft bls): | 250 | Time: | 13:05 |
| Casing Diameter (in): | 7" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 184.68 | | |
| 1 Casing Volume (gals): | | | |
| 3 Casing Volumes (gals): | | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| | | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: WL only



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-16-08 |
| Well ID: | HOBAN | Weather: | Sunny |
| ADWR No: | 805290 | Collected By: | John Villinski |

WELL DATA

| | | | |
|------------------------------|--------|-----------------------|--------------------|
| Well Depth (ft bis): | 316 | Time: | 12:05 |
| Casing Diameter (in): | 6 | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 163.95 | | 1215 pump @ 12 gpm |
| 1 Casing Volume (gals): | 229 | | 57 |
| 3 Casing Volumes (gals): | 686 | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 12:17 | 12 | 29 | 6.92 | 22.8 | 1582 | clear | no | |
| 12:22 | 12 | 84 | 7.00 | 21.4 | 1549 | " | " | |
| 12:27 | 12 | 144 | 7.01 | 21.9 | 1511 | " | " | |
| 12:35 | 12 | 240 | 7.00 | 22.0 | 1623 | " | " | |
| 12:45 | 12 | 360 | 6.96 | 22.2 | 1614 | " | " | |
| 12:55 | 12 | 480 | 6.95 | 22.7 | 1588 | " | " | |
| 13:02 | 12 | 564 | 7.00 | 22.4 | 1638 | " | " | |
| 13:10 | 12 | 660 | 6.98 | 22.4 | 1624 | " | " | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| HOBAN | 13:15 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments:



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-15-08 |
| Well ID: | HOWARD | Weather: | Sunny |
| ADWR No: | | Collected By: | J. J. Vlachy |

WELL DATA

| | | | |
|------------------------------|--------|-------------------------|---------------|
| Well Depth (ft bls): | 220 | Time: | 720 |
| Casing Diameter (in): | 6" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 151.12 | pump on @ 7:28 - 10 gpm | |
| 1 Casing Volume (gals): | 103.65 | | |
| 3 Casing Volumes (gals): | 311 | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 729 | 10 | 10 | 6.76 | 18.5 | 1643 | clear | no | |
| 735 | 10 | 20 | 7.00 | 20.0 | 1514 | " | " | |
| 740 | 10 | 30 | 6.94 | 20.7 | 1755 | " | " | |
| 745 | 10 | 40 | 6.98 | 20.6 | 1562 | " | " | |
| 750 | 10 | 50 | 6.94 | 20.6 | 1714 | " | " | |
| 755 | 10 | 60 | 7.02 | 20.4 | 1588 | " | " | |
| 800 | 10 | 100 | 7.00 | 20.6 | 1598 | " | " | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| HOWARD | 8:05 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |
| | | | | | | | |

Additional Comments: water is in normal domestic use
shower, dishes



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10/28/08 |
| Well ID: | KEEFER | Weather: | Clear |
| ADWR No: | 209744 | Collected By: | CTM, JV |

WELL DATA

| | | | |
|------------------------------|-------------------|-----------------------|---------------|
| Well Depth (ft bls): | 250 | Time: | 115 - 1227 |
| Casing Diameter (in): | NA | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 135.87' | | |
| 1 Casing Volume (gals): | Purge till stable | | |
| 3 Casing Volumes (gals): | " " " | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|----------------------|-----------------------|---------------------------|---------|-----------|------------------------------|-------|------|-------------------------|
| 1117 | 10 | 20/20 | 7.25 | 18.5 | 464 | None | None | Discharge Rate Measured |
| 1122 | 10 | 50/70 | 7.35 | 19.5 | 459 | " | " | |
| 1128 | 10 10/12.5 | 50/120 | 7.37 | 20.2 | 473 | " | " | DR MEASURED |
| 1133 | 12.5 | 63/183 | 7.37 | 20.1 | 473 | " | " | DR Measured |
| 1138 1142 | 12.5 | 63 296 | 7.33 | 20.3 | 478 | " | " | |
| 1147 | 12 | 60/386 | 7.30 | 20.2 | 513 | " | " | DR Measured |
| 1152 | 12 | 60/416 | 7.32 | 20.3 | 493 | " | " | |
| 1159 | 12 | 60/476 | 7.29 | 20.3 | 507 | " | " | |
| 1204 | 12 | 60/536 | 7.33 | 20.1 | 522 | None | None | |
| 1209 | 12 | 60/596 | 7.29 | 20.3 | 518 | None | None | |
| 1214 | 12 | 60/656 | 7.33 | 20.1 | 533 | " | " | |
| 1219 | 12 | 60/716 | 7.29 | 20.3 | 519 | " | " | |
| 1224 | 12 | 60/776 | 7.32 | 20.1 | 534 | " | " | DR MEASURED |

SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| KEEFER | 1230 | Plastic | 250 ml | 1 | EPA 300.0 | None | |

Additional Comments: Light toilet, sink usage.



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | | | |
|-------------|---------------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-15-08 |
| Well ID: | MCCONNELL 265 | Weather: | Sunny |
| ADWR No: | 539265 | Collected By: | John Dillinski |

WELL DATA

| | | | |
|------------------------------|-------------------|--------------------------------|---------------|
| Well Depth (ft bls): | 216 | Time: | |
| Casing Diameter (in): | 6" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | could not measure | take purge volume from 2-20-08 | |
| 1 Casing Volume (gals): | 2 | valve open @ 10:11 - 10 gpm | |
| 3 Casing Volumes (gals): | ~ 265 gallons | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 10:12 | 10 | 10 | 6.88 | 20.7 | 1699 | clear | no | |
| 10:17 | 10 | 60 | 6.86 | 21.0 | 1691 | " | " | " |
| 10:22 | 10 | 110 | 6.83 | 21.3 | 1692 | " | " | " |
| 10:27 | 10 | 160 | 6.86 | 21.3 | 1688 | " | " | " |
| 10:32 | 10 | 210 | 6.84 | 21.3 | 1690 | " | " | " |
| 10:38 | 10 | 270 | 6.82 | 21.3 | 1686 | " | " | " |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|--------------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| MCCONNELL265 | 10:40 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: well obstructed ~ 114' - tried both sanders multiple times



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|----------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-20-08 |
| Well ID: | METZLER | Weather: | Sunny |
| ADWR No: | 35-71891 | Collected By: | John Villinski |

WELL DATA

| | | | |
|------------------------------|--------|---------------------------|---------------|
| Well Depth (ft bls): | 351 | Time: | 11:31 |
| Casing Diameter (in): | 6 | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 287.09 | valve open @ 11:35 @ 6.67 | |
| 1 Casing Volume (gals): | 95 | gpm - 43 min pure | |
| 3 Casing Volumes (gals): | 285 | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 11:37 | 6.67 | 13.3 | 7.19 | 22.5 | 1078 | clear | no | - |
| 11:41 | 6.67 | 40 | 7.24 | 22.1 | 1072 | " | " | |
| 11:47 | 6.67 | 80 | 7.25 | 22.3 | 1066 | " | " | |
| 11:53 | 6.67 | 120 | 7.29 | 22.4 | 1076 | " | " | |
| 11:59 | 6.67 | 160 | 7.22 | 22.4 | 1076 | " | " | |
| 12:05 | 6.67 | 200 | 7.22 | 22.4 | 1079 | " | " | |
| 12:11 | 6.67 | 240 | 7.27 | 22.3 | 1082 | " | " | |
| 12:17 | 6.67 | 280 | 7.24 | 22.2 | 1080 | " | " | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| METZLER | 12:20 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| DUP102008 | 12:20 | | | | | | |

Additional Comments: No one home. do not know how much water has been used today.



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|-----------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10/29/08 |
| Well ID: | Moore | Weather: | Clear |
| ADWR No: | 55-538847 | Collected By: | CTM, JV |

WELL DATA

| | | | |
|------------------------------|--|-----------------------|---------------|
| Well Depth (ft bls): | 220 | Time: | 0826 - 0909 |
| Casing Diameter (in): | 6 | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | No sounding hole will use historic level of 125' | | |
| 1 Casing Volume (gals): | 139.5 | | |
| 3 Casing Volumes (gals): | 420 | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|-------------------------|
| 0826 | 9 | — | 7.15 | 20.0 | 432 | None | None | Discharge Rate Measured |
| 0831 | 9 | 45/45 | 7.32 | 20.7 | 439 | " | " | |
| 0837 | 9 | 54/99 | 7.30 | 21.7 | 445 | " | " | |
| 0842 | 11 | 55/154 | 7.32 | 21.6 | 441 | " | " | DR Measured |
| 0847 | 11 | 55/209 | 7.31 | 21.7 | 447 | " | " | |
| 0852 | 11 | 55/264 | 7.34 | 22.0 | 449 | " | " | |
| 0857 | 11 | 55/319 | 7.33 | 22.0 | 449 | " | " | |
| 0902 | 11 | 55/374 | 7.34 | 22.2 | 454 | " | " | |
| 0907 | 9 | 45/419 | 7.32 | 22.4 | 452 | " | " | DR Measured |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| MOORE | 0910 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: _____



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

26-8-30

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-16-08 |
| Well ID: | NESS | Weather: | Sunny |
| ADWR No: | 509127 | Collected By: | John Villinski |

WELL DATA

| | | | |
|------------------------------|-----------------------|-----------------------|-----------------------|
| Well Depth (ft bis): | 549.30 | Time: | 11:40 (Barry Johnson) |
| Casing Diameter (in): | N/A | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | N/A 549.30 | | |
| 1 Casing Volume (gals): | | | |
| 3 Casing Volumes (gals): | | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 8:30 | N/A | N/A | 7.47 | 21.4 | 542 | clear | no | — |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| NESS | 8:30 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: Take sample directly from Bio near pressure pumps. This pump is serving 6 houses & runs all the time.



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-23-08 |
| Well ID: | NOTEMAN | Weather: | Sunny |
| ADWR No: | 212 483 | Collected By: | John Villinger / Chad Munch |

WELL DATA

| | | | |
|------------------------------|-----------------|--------------------------|---------------|
| Well Depth (ft bls): | 470 | Time: | — |
| Casing Diameter (in): | 5" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | use 330 322.26 | valve @ 12:59 @ 15 gpm | |
| 1 Casing Volume (gals): | 125 on 11/22/08 | water was very muddy for | |
| 3 Casing Volumes (gals): | 375 | ~ 1 min | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|--------|-------|-------------------|
| 13100 | 15 | 15 | 6.56 | 22.3 | 1623 | cloudy | no | ————— |
| 1305 | 15 | 750 ^{gpm} | 6.55 | 23.4 | 1636 | " | " | ————— |
| 1310 | 15 | 16575 ^{gpm} | 6.56 | 23.3 | 1650 | " | " | ————— |
| 1315 | 9 | 21045 ^{gpm} | 6.57 | 23.1 | 1641 | Cloudy | " | Flow rate |
| 1320 | 8 | 40 / 250 | ← NOT | MEASURED | ————— | ————— | ————— | Flow rate checked |
| 1325 | 8 | 40 / 290 | 6.49 | 23.2 | 1649 | Cloudy | No | ————— |
| 1330 | 8 | 40 / 330 | 6.52 | 23.3 | 1651 | Cloudy | No | ————— |
| 1336 | 8 | 46 ^{gpm} 378 | 6.57 | 23.2 | 1643 | Cloudy | No | Flow rate checked |
| | | | | | | | | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| Noteman | 1340 | Plastic | 250 ml | 1 | EPA 300.0 | None | ————— |
| | | | | | | | |

Additional Comments: Mr Noteman indicated that he purged the well of ~ 3000 gal on 10-21-08. Was "dirty" the whole time. He complained that he is not receiving bottled water. Could not get either sounder past 320' - dry at that depth use 12-07 WL at 330'



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10/27/08 |
| Well ID: | NWC-02 | Weather: | Clear, windy |
| ADWR No: | 562944 | Collected By: | John Villinski, Chad Munich |

WELL DATA

| | | | |
|------------------------------|--------|-----------------------|-----------------|
| Well Depth (ft bls): | | Time: | 1203 (Pump On) |
| Casing Diameter (in): | | Point of Measurement: | Top of Casing # |
| Static Water Level (ft bmp): | 160.51 | | |
| 1 Casing Volume (gals): | | | |
| 3 Casing Volumes (gals): | | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 1210 | 115 | 8050 | 7.39 | 23.0 | 447 | None | None | |
| 1212 | 115 | 1035 | 7.46 | 22.4 | 437 | " | " | |
| 1214 | 115 | 1265 | 7.47 | 22.2 | 438 | " | " | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------------------|---------|
| NWC-02 | 1220 | Plastic | 250 ml | 13 | EPA 300.0 | VINYL None | |
| | | | | | | | |
| | | | | | | | |

Additional Comments: _____



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10/27/08 |
| Well ID: | NWC-03 | Weather: | Clear, Windy |
| ADWR No: | 203321 | Collected By: | John Villinski, Chad Murtich |

WELL DATA

| | | | |
|------------------------------|---------------------|-----------------------|---------------|
| Well Depth (ft bls): | NA | Time: | 1234 |
| Casing Diameter (in): | NA 6" 4" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | No access * | pump on @ 1234 | |
| 1 Casing Volume (gals): | NA | | |
| 3 Casing Volumes (gals): | | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 12:37 | 56 | 168 | 7.11 | 22.4 | 1380 | clear | No | |
| 12:41 | 56 | 224/392 | 7.05 | 21.9 | 1373 | clear | No | |
| 12:44 | 56 | 168/560 | 7.07 | 21.9 | 1374 | clear | No | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|-------|----------------|--------|-------------------|-----------------|---------------|---------|
| NWC-03 | 12:45 | Plastic | 250 ml | 3 | EPA 300.0 | Y/N/N None | |
| | | | | | | | |

Additional Comments:

~~Recorded @ NWC03 (627084)~~
 @ 131.48 11/3/08
 * 30' FROM NWC03 (203321) Replacement Well



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10/27/08 |
| Well ID: | NWC-04 | Weather: | Clear, Windy |
| ADWR No: | 551849 | Collected By: | John Villinski |

WELL DATA

| | | | |
|------------------------------|-----------------------------------|-----------------------|-------------------|
| Well Depth (ft bls): | 460 | Time: | 1321 purge begins |
| Casing Diameter (in): | | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | Could not be found w/ 2 sounders. | | |
| 1 Casing Volume (gals): | | | |
| 3 Casing Volumes (gals): | | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|--------------------|
| 1322 | 30 gpm | 30 | 7.31 | 27.2 | 923 | None | None | |
| 1326 | 30 | 120/150 | 7.32 | 26.4 | 899 | " | " | |
| 1330 | 30 | 120/270 | 7.32 | 25.6 | 896 | " | " | |
| 1334 | 30 | 120/390 | 7.34 | 25.4 | 872 | " | " | |
| 1338 | 30 | 120/510 | 7.34 | 25.2 | 857 | " | " | Measured at 30 gpm |
| 1342 | 30 | 120/630 | 7.34 | 25.2 | 851 | " | " | |
| 1346 | 30 | 120/750 | 7.32 | 25.0 | 856 | " | " | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|---------------|---------|
| NWC-04 | 1250 | Plastic | 250 ml | 43 | EPA 300.0 | Y/N/N None | |
| | | | | | | | |

Additional Comments: _____



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|-------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10/27/08 |
| Well ID: | NWC-06 | Weather: | Hot , Windy, Clear |
| ADWR No: | 575700 | Collected By: | John Villinski, Chad Merrick |

WELL DATA

| | | | |
|------------------------------|-------|-----------------------|---------------|
| Well Depth (ft bis): | _____ | Time: | _____ |
| Casing Diameter (in): | _____ | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | _____ | | |
| 1 Casing Volume (gals): | _____ | | |
| 3 Casing Volumes (gals): | _____ | | |

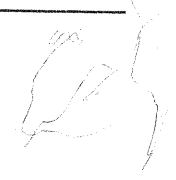
FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 1141 | NA | NA | 7.35 | 23.3 | 414 | None | None | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------------------|---------|
| NWC-06 | 1128 | Plastic | 250 ml | 13 ^{cm} | EPA 300.0 | Y/N/N None | |
| | | | | | | | |
| | | | | | | | |

Additional Comments: Pump has been on for approximately 05 hours. No
purge necessary.





HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-16-08 |
| Well ID: | OSBORN | Weather: | Sunny |
| ADWR No: | 643436 | Collected By: | John Villinski |

WELL DATA

| | | | |
|------------------------------|-----------|---------------------------|---------------|
| Well Depth (ft bls): | 258 | Time: | 9:35 |
| Casing Diameter (in): | 8 | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | N/A 69.83 | Value open @ 9:40 @ 12gpm | |
| 1 Casing Volume (gals): | | | |
| 3 Casing Volumes (gals): | | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 9:42 | 12 | 24 | 7.45 | 16.9 | 595 | clear | no | |
| 9:46 | 12 | 72 | 7.39 | 21.8 | 601 | " | " | |
| 9:51 | 12 | 132 | 7.39 | 22.2 | 601 | " | " | |
| 9:56 | 12 | 192 | 7.33 | 22.7 | 601 | " | " | |
| 10:00 | 10 | 232 | 7.39 | 22.4 | 595 | | | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| OSBORN | 10:05 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: Appears as if no one is at home. No new tracks on driveway. Assume static



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | | | |
|-------------|--------------------------------|---------------|------------------------------|
| Project No: | 8720000 <i>Pat & Janet</i> | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-16-08 |
| Well ID: | PALMER | Weather: | Sunny |
| ADWR No: | 578819 | Collected By: | John Villinski |

| WELL DATA | |
|------------------------------|---------------|
| Well Depth (ft bls): | 220 |
| Casing Diameter (in): | 6" |
| Static Water Level (ft bmp): | N/A obs. |
| 1 Casing Volume (gals): | |
| 3 Casing Volumes (gals): | |
| Time: | |
| Point of Measurement: | Top of Casing |

| FIELD SAMPLING DATA | | | | | | | | |
|---------------------|----------------------|---------------------------|---------|-----------|------------------------------|-----------------|------|---------|
| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
| 805 | NA | NA | 7.61 | 17.0 | 527 | None | NO | |
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| SAMPLE INFORMATION | | | | | | | |
|--------------------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
| PALMER | 805 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: *Can Mr Palmer get a map of the area? w/ top levels? Sample directly from water tank per owner.*



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|-----------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-13-08 |
| Well ID: | PANAGAKOS | Weather: | Sunny |
| ADWR No: | 35-76413 | Collected By: | J. Williams |

WELL DATA

| | | | |
|------------------------------|-----------|-----------------------|---------------|
| Well Depth (ft bis): | 200' | Time: | 15:15 |
| Casing Diameter (in): | 8" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | no access | Spigot open @ 15:15. | |
| 1 Casing Volume (gals): | | Flow rate = 6.67 gpm | |
| 3 Casing Volumes (gals): | | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 15:17 | 6.67 | 13.3 | 6.84 | 21.3 | 1435 | clear | no | |
| 15:23 | 6.67 | 53.3 | 6.91 | 20.7 | 1346 | " | " | |
| 15:31 | 6.67 | 106.7 | 6.93 | 20.9 | 1245 | " | " | |
| 15:38 | 6.67 | 153.3 | 6.88 | 21.1 | 1276 | | | |
| 15:45 | 7.5 | 206 | 6.85 | 21.2 | 1308 | | | |
| 15:51 | 7.5 | 251 | 6.84 | 21.3 | 1339 | | | |
| 15:57 | 7.5 | 296 | 6.81 | 21.2 | 1350 | | | |
| 16:03 | 7.5 | 341 | 6.83 | 21.3 | 1356 | | | |
| 16:09 | 7.5 | 386 | 6.85 | 21.2 | 1368 | | | |
| 16:15 | 7.5 | 431 | 6.86 | 21.3 | 1373 | | | |
| 16:21 | 7.5 | 476 | 6.85 | 21.5 | 1381 | | | |
| 16:29 | 7.5 | 536 | 6.86 | 21.3 | 1384 | | | |
| 16:35 | 7.5 | 596 | 6.86 | 21.2 | 1386 | | | |

SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|-------|----------------|--------|-------------------|-----------------|--------------|----------|
| PANAGAKOS | 16:45 | Plastic | 250 ml | 1 | EPA 300.0 | None | filtered |
| DUP101308 | 16:45 | " | " | " | " | " | " |

Additional Comments:

only on drip for quail & trees.



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-20-08 |
| Well ID: | PARRA | Weather: | Sunny |
| ADWR No: | 576415 | Collected By: | J. Villaseca |

WELL DATA

| | | | |
|------------------------------|--------------------|------------------------------|---------------|
| Well Depth (ft bls): | 355 | Time: | NA |
| Casing Diameter (in): | 6" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | (from 1999) 263' * | valve open @ 10:25 @ 7.5 gpm | |
| 1 Casing Volume (gals): | 135 | 55 min purge | |
| 3 Casing Volumes (gals): | 405 | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 10:30 | 7.5 | 37.5 | 6.97 | 22.2 | 1240 | clear | no | |
| 10:35 | 7.5 | 75 | 7.00 | 22.1 | 1246 | " | " | |
| 10:40 | 7.5 | 112.5 | 7.06 | 22.1 | 1248 | " | " | |
| 10:45 | 7.5 | 150 | 7.02 | 22.4 | 1250 | " | " | |
| 10:50 | 7.5 | 187.5 | 7.01 | 22.5 | 1247 | " | " | |
| 10:55 | 7.5 | 225 | 7.05 | 22.4 | 1248 | " | " | |
| 11:00 | 7.5 | 262.5 | 7.07 | 22.6 | 1247 | " | " | |
| 11:05 | 7.5 | 300 | 7.07 | 22.7 | 1244 | " | " | |
| 11:10 | 7.5 | 337.5 | 7.04 | 22.6 | 1242 | " | " | |
| 11:15 | 7.5 | 375 | 7.07 | 22.9 | 1246 | " | " | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| PARRA | 11:20 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments:

since well is obstructed - using old data to determine.

* ∇ @ 280.39 11/3/08



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10/27/08 |
| Well ID: | PIONKE | Weather: | Clear, windy |
| ADWR No: | 613395 | Collected By: | John Villinski, Chad Merich |

WELL DATA

| | | | |
|------------------------------|------------------------------|-----------------------|---------------|
| Well Depth (ft bls): | 330 | Time: | NA |
| Casing Diameter (in): | 6 | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 150.99 (11-3-08) | | |
| 1 Casing Volume (gals): | No access, purge till stable | | |
| 3 Casing Volumes (gals): | | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|--------------------|
| 0954 | 17 | 0 | 6.93 | 21.1 | 1298 | Clear | None | Discharge Measured |
| 0959 | 17 | 85 | 7.13 | 20.4 | 1172 | " | " | |
| 1004 | 17 | 85 / 170 | 7.15 | 20.6 | 1167 | " | None | Discharge Measured |
| 1009 | 17 | 85 / 255 | 7.08 | 20.2 | 1166 | " | " | |
| 1014 | 20 | 100 / 356 | 7.15 | 20.3 | 1172 | " | " | Discharge Measured |
| 1021 | 20 | 100 / 455 | 7.23 | 20.2 | 1142 | " | " | |
| 1028 | 4 | 28 / 483 | 7.03 | 20.8 | 1175 | " | " | Discharge Measured |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| PIONKE | 1036 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: No one is home.



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-21-08 |
| Well ID: | POOL | Weather: | Sunny / Warm |
| ADWR No: | 509518 | Collected By: | John Villings |

WELL DATA

| | | | |
|------------------------------|--------|---------------------------|---------------|
| Well Depth (ft bls): | 313 | Time: | 13:44 |
| Casing Diameter (in): | 6" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 205.06 | Valve open 13:50 @ 15 gpm | |
| 1 Casing Volume (gals): | 162 | 33 min purge | |
| 3 Casing Volumes (gals): | 487 | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 13:52 | 15 | 30 | 7.34 | 22.6 | 595 | clear | no | |
| 13:57 | 15 | 105 | 7.52 | 21.5 | 596 | " | " | |
| 14:02 | 15 | 180 | 7.47 | 21.5 | 596 | " | " | |
| 14:07 | 15 | 255 | 7.51 | 21.8 | 595 | " | " | |
| 14:12 | 15 | 330 | 7.51 | 21.5 | 596 | " | " | |
| 14:17 | 15 | 405 | 7.50 | 21.5 | 599 | " | " | |
| 14:22 | 15 | 480 | 7.51 | 21.4 | 598 | | | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| POOL | 14:30 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: no one home - pump off since early morning



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | |
|----------------------------|---|
| Project No: <u>8720000</u> | Client: <u>Freeport Copper Queen Branch</u> |
| Task No: <u>2.2</u> | Date: <u>10-21-08</u> |
| Well ID: <u>POWER</u> | Weather: <u>Sunny</u> |
| ADWR No: <u>624535</u> | Collected By: <u>John Villinski</u> |

WELL DATA

| | |
|---|--|
| Well Depth (ft bis): <u>100</u> | Time: <u>17:00</u> |
| Casing Diameter (in): <u>7</u> | Point of Measurement: <u>Top of Casing</u> |
| Static Water Level (ft bmp): <u>32.66</u> | |
| 1 Casing Volume (gals): <u>WL only</u> | |
| 3 Casing Volumes (gals): | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| | | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: Measured level in unused well



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|-----------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10/27/08 |
| Well ID: | Ramirez | Weather: | Clear, Windy |
| ADWR No: | 55-216425 | Collected By: | John Villinski, Chad Marich |

WELL DATA

| | | | |
|------------------------------|--------|-----------------------|---------------|
| Well Depth (ft bls): | 300' | Time: | 1520-1613 |
| Casing Diameter (in): | 6" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 159.45 | | |
| 1 Casing Volume (gals): | 206 | | |
| 3 Casing Volumes (gals): | 617 | | |

140.55-36
4008
0.0408

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|--------------------|
| 1520 | 12.5 | - | 7.51 | 22.8 | 419 | No | No | |
| 1529 | 12.5 | 112.5/112.5 | 7.44 | 22.2 | 418 | No | No | |
| 1539 | 12.5 | 112.5/112.5 | 7.36 | 22.1 | 416 | No | No | Discharge Measured |
| 1548 | 12.5 | 112.5/350.5 | 7.45 | 22.4 | 413 | No | No | |
| 1559 | 12.5 | 138.1/488.0 | 7.47 | 22.2 | 412 | No | No | |
| 1608 | 12.5 | 112.5/500.5 | 7.41 | 22.2 | 412 | No | No | Discharge Measured |
| | | | | | | | | |
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49 min
average

SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| RAMIREZ | 1615 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: Water has been used for 3 showers, 1 load of laundry, dishes, and toilet according to Mrs. Ramirez.



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 11-22-08 |
| Well ID: | RAY | Weather: | Sunny |
| ADWR No: | 803772 | Collected By: | John Vilkinski |

WELL DATA

| | | | |
|------------------------------|-------|-----------------------|---------------|
| Well Depth (ft bls): | 100 | Time: | 13:24 |
| Casing Diameter (in): | 8 | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 44.54 | pump on 13:27 @ 8 gpm | |
| 1 Casing Volume (gals): | 148 | 56 min purge | |
| 3 Casing Volumes (gals): | 445 | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment | | |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|--|--|
| 13:32 | 8 | 40 | 6.84 | 22.0 | 1759 | clear | no | — | | |
| 13:37 | 8 | 80 | 6.92 | 22.2 | 1769 | " | " | — | | |
| 13:42 | 8 | 120 | 6.96 | 20.9 | 1705 | " | " | — | | |
| 13:47 | 8 | 160 | 6.94 | 20.8 | 1736 | " | " | | | |
| 13:52 | 8 | 200 | 6.96 | 20.7 | 1684 | } | } | | | |
| 13:57 | 8 | 240 | 6.95 | 21.2 | 1706 | | | | | |
| 14:02 | 8 | 280 | 6.95 | 20.8 | 1640 | | | | | |
| 14:07 | 8 | 320 | 6.93 | 21.2 | 1653 | | | | | |
| 14:12 | 8 | 360 | 6.97 | 20.8 | 1644 | | | | | |
| 14:17 | 8 | 400 | 6.96 | 20.7 | 1622 | | | | | |
| 14:22 | 8 | 440 | 6.96 | 20.8 | 1604 | | | | | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| RAY | 14:25 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: light water usage. was not home from 10 til 1, so WL should be static



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|------------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-22-08 |
| Well ID: | ROGERS 803 | Weather: | Sunny |
| ADWR No: | 641 803 | Collected By: | John Villinski |

WELL DATA

| | | | |
|------------------------------|-------|-------------------------|---------------|
| Well Depth (ft bls): | 300 | Time: | 8:37 |
| Casing Diameter (in): | 6" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 13208 | 8:44 valve open @ 12gpm | |
| 1 Casing Volume (gals): | 252 | | |
| 3 Casing Volumes (gals): | 758 | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 8:46 | 12 | 74 | 7.34 | 19.9 | 648 | clear | nd | — |
| 8:51 | 12 | 84 | 7.38 | 20.2 | 641 | " | " | |
| 8:56 | 12 | 144 | 7.34 | 20.7 | 643 | | | |
| 9:01 | 12 | 204 | 7.39 | 20.8 | 648 | | | |
| 9:06 | 10 | 254 | 7.37 | 20.9 | 646 | | | |
| 9:13 | 10 | 314 | 7.41 | 21.0 | 653 | | | |
| 9:20 | 10 | 384 | 7.39 | 21.1 | 651 | | | |
| 9:27 | 10 | 454 | 7.37 | 21.0 | 650 | | | |
| 9:34 | 10 | 524 | 7.38 | 21.3 | 652 | | | |
| 9:41 | 10 | 594 | 7.39 | 21.5 | 652 | | | |
| 9:49 | 10 | 674 | 7.36 | 21.4 | 654 | | | |
| 9:57 | 10 | 754 | | 21.6 | 650 | | | |

SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|------------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| ROGERS 803 | 10:00 | Plastic | 250 ml | 1 | EPA 300.0 | None | |

Additional Comments: Slight water usage this morning.



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | | | |
|-------------|-----------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-27-04 |
| Well ID: | Rogers E | Weather: | Sunny / Windy |
| ADWR No: | 55-216018 | Collected By: | Chad Monich |

WELL DATA

| | | | |
|------------------------------|--|-----------------------|------------------------|
| Well Depth (ft bls): | 285 | Time: | 1639 - 1728 purge time |
| Casing Diameter (in): | 6" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | * NM (OBSTRUCTION @ 19') | | |
| 1 Casing Volume (gals): | | | |
| 3 Casing Volumes (gals): | Estimating ~580 g via Ramirez @ 160 ft | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|----------------------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|-------------------------|
| 1639 | 11 | - | 7.30 | 21.0 | 435 | None | None | Measured Discharge |
| 1649 1646 | 11 | 77/77 | 7.39 | 21.7 | 435 | None | None | _____ |
| 1652 | 12 | 72/144 | 7.43 | 21.8 | 436 | None | None | Measured Discharge |
| 1658 | 12 | 72/221 | 7.43 | 21.6 | 436 | None | None | _____ |
| 1706 | 12 | 96/317 | 7.44 | 21.5 | 437 | None | None | _____ |
| 1712 | 12 | 72/389 | 7.42 | 21.5 | 437 | None | None | Measured Discharge Rd |
| 1718 | 12 | 72/461 | 7.41 | 21.6 | 436 | None | None | _____ |
| 1724 | 12 | 72/533 | 7.38 | 21.4 | 434 | None | None | Discharge Rate Measured |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| ROGERS E | 1732 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments:

~~Static~~
 * $\frac{150.15}{11/3/08}$

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HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-20-08 |
| Well ID: | RUIZ | Weather: | Sunny |
| ADWR No: | 531770 | Collected By: | J. Villinski |

WELL DATA

| | | | |
|------------------------------|--------|-----------------------|---------------|
| Well Depth (ft bls): | 312 | Time: | 12:33 |
| Casing Diameter (in): | 6 | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 294.18 | valve open @ 12:36 @ | |
| 1 Casing Volume (gals): | 26.8 | 4 gpm - 20 min purge | |
| 3 Casing Volumes (gals): | 80.4 | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 12:38 | 4 | 20 | 6.96 | 21.8 | 989 | clear | no | |
| 12:43 | 4 | 40 | 7.02 | 21.7 | 990 | " | " | |
| 12:48 | 4 | 60 | 7.01 | 21.9 | 991 | " | " | |
| 12:53 | 4 | 80 | 7.04 | 22.0 | 995 | " | " | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| RUIZ | 12:55 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |
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Additional Comments: ~~WST~~



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|----------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-22-08 |
| Well ID: | SCHWARTZ | Weather: | Sunny |
| ADWR No: | 210865 | Collected By: | John Dittusler |

WELL DATA

| | | | |
|------------------------------|--------|-----------------------------|---------------|
| Well Depth (ft bls): | 305 | Time: | 10:14 |
| Casing Diameter (in): | 6" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 123.39 | 10:20 - valve open @ 10 gpm | |
| 1 Casing Volume (gals): | 273 | | |
| 3 Casing Volumes (gals): | 820 | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 10:23 | 10 | 30 | 7.40 | 21.1 | 644 | clear | no | - |
| 10:30 | 10 | 100 | 7.35 | 21.7 | 645 | " | " | |
| 10:40 | 10 | 200 | 7.37 | 21.6 | 643 | " | " | |
| 10:50 | 10 | 300 | 7.34 | 21.7 | 645 | " | " | |
| 11:00 | 10 | 400 | 7.32 | 21.8 | 646 | " | " | - |
| 11:10 | 10 | 500 | 7.35 | 21.8 | 646 | " | " | - |
| 11:20 | 10 | 600 | 7.33 | 21.9 | 644 | " | " | |
| 11:30 | 10 | 700 | 7.30 | 22.0 | 652 | " | " | - |
| 11:42 | 10 | 820 | 7.31 | 22.0 | 653 | " | " | - |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| SCHWARTZ | 11:45 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: Mrs Schwarz indicated only used for toilets/cleaning. No laundry, showers, or watering done.



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-16-08 |
| Well ID: | SWAN | Weather: | Sunny |
| ADWR No: | - | Collected By: | John Dillinski |

WELL DATA

| | | | |
|------------------------------|-------|------------------------------|-----------------------|
| Well Depth (ft bis): | 98 | Time: | 27.53 8:49 |
| Casing Diameter (in): | 8 | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 27.53 | Valve open @ 8:53 - 10:45 PM | |
| 1 Casing Volume (gals): | 47 | | |
| 3 Casing Volumes (gals): | 141 | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 854 | 10 | 10 | 7.32 | 20.1 | 505 | clear | no | - |
| 858 | 10 | 50 | 7.31 | 20.4 | 499 | " | " | |
| 901 | 10 | 80 | 7.32 | 20.7 | 487 | | | |
| 905 | 10 | 120 | 7.35 | 20.7 | 487 | | | |
| 908 | 10 | 150 | 7.32 | 20.7 | 489 | | | |
| 913 | 10 | 200 | 7.32 | 20.7 | 488 | | | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| SWAN | 915 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: Pump was running when I arrived. waited until it stopped to take W/L. Casing looks like 8" to me - so that



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10/30/08 |
| Well ID: | TM-02A | Weather: | Scattered Clouds |
| ADWR No: | 522574 | Collected By: | C. Munich / J. Villinski |

WELL DATA

| | | | |
|------------------------------|--------|-----------------------|---------------|
| Well Depth (ft bls): | 925 | Time: | 1328 |
| Casing Diameter (in): | 4-inch | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 349.45 | | |
| 1 Casing Volume (gals): | 376 | | |
| 3 Casing Volumes (gals): | 1128 | | |

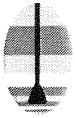
FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 1339 | 9 | 27 | 8.47 | 21.1 | 317 | Yes | Yes | - |
| 1342 | 9 | 54 | 8.19 | 22.3 | 374 | Yes | No | - |
| 1346 | 8 | 86 | 8.07 | 22.9 | 376 | No | No | - |
| 1356 | 8 | 166 | 7.99 | 23.6 | 377 | No | No | - |
| 1406 | 8 | 246 | 8.07 | 23.9 | 375 | No | No | - |
| 1411 | Ran Dry | | | | | | | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| TM-02A | 1445 | Plastic | 250 ml | 1 | EPA 300.0 | HNO3 | |
| | | | | | | | |

Additional Comments: _____



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|----------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 11/12/08 |
| Well ID: | TM-03 | Weather: | Clear |
| ADWR No: | 522575 | Sampler: | CTM |

WELL DATA

| | | | |
|------------------------------|--------|--|-------------------------|
| Well Depth (ft bls): | 200 | Casing Capacity | |
| | | Nominal Size (inches) | Gallons per Linear Foot |
| Casing Diameter (in): | 4 | 2 | 0.16 |
| | | 4 | 0.65 |
| Static Water Level (ft bmp): | 128.00 | 5 | 1.02 |
| | | 6 | 1.47 |
| Casing Volume (gals): | 47 | 8 | 2.61 |
| | | 10 | 4.08 |
| 3 Casing Volumes (gals): | 140 | 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 |
|------|--------------------|----------------------|---------------------------|---------|-----------|------------------------------|-------------|
| 0823 | | | | | | | |
| 0825 | 2 | 12.5 | 25 | 6.51 | 18.6 | 603 | DR Measured |
| 0827 | 2 | 12.5 | 50 | 7.45 | 20.1 | 600 | |
| 0829 | 2 | 12.5 | 75 | 7.50 | 20.5 | 593 | |
| 0831 | 2 | 12.5 | 100 | 7.46 | 20.5 | 592 | |
| 0833 | 2 | 12 | 124 | 7.50 | 20.3 | 592 | DR Measured |
| 0835 | 2 | 12 | 148 | 7.47 | 20.5 | 590 | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comments |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|----------|
| TM-03 | 0840 | Plastic | 250 ml | 1 | EPA 300.0 | None | Filtered |
| | | | | | | | |
| | | | | | | | |

Additional Comments: Master key, small diameter sounder, extension cord w/4 prong 30 AMP male to 3 prong 20 AMP female, t-junction needed.



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|--------------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10/28/08 10/29/08 |
| Well ID: | TM-06 MILLER | Weather: | Clear, light breeze |
| ADWR No: | 55-522576 | Collected By: | CTM, JV |

WELL DATA

| | | | |
|------------------------------|---|-----------------------|---------------|
| Well Depth (ft bls): | 350 | Time: | 1420 - 1457 |
| Casing Diameter (in): | 4" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 158.85 | | |
| 1 Casing Volume (gals): | $(91.15)(16) 0.0408 = 120 \text{ gals}$ | | |
| 3 Casing Volumes (gals): | 360 | | |

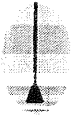
FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|----------------------|
| 1421 | 10 | 10/10 | 7.13 | 21.4 | 565 | None | None | |
| 1426 | 10 | 50/60 | 7.49 | 20.5 | 534 | " | " | Discharge Rate Meas. |
| 1431 | 10 | 50/110 | 7.52 | 20.3 | 533 | " | " | |
| 1437 | 10 | 60/170 | 7.53 | 20.3 | 533 | " | " | DR Measured |
| 1442 | 10 | 50/220 | 7.55 | 20.2 | 531 | " | " | |
| 1447 | 10 | 50/270 | 7.56 | 20.2 | 533 | " | " | |
| 1452 | 10 | 50/320 | 7.58 | 20.2 | 531 | " | " | DR Measured |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|--------------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| TM-06 MILLER | 1455 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: _____



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|-----------|----------|-------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 11/4/08 |
| Well ID: | TM-07 | Weather: | Windy, building storm system. |
| ADWR No: | 55-522576 | Sampler: | CM |

WELL DATA

| | | | |
|------------------------------|-----------------------|--|-------------------------|
| Well Depth (ft bls): | 350 | Casing Capacity | |
| | | Nominal Size (inches) | Gallons per Linear Foot |
| Casing Diameter (in): | 4 | 2 | 0.16 |
| Static Water Level (ft bmp): | NA, obstruction @ 20' | 4 | 0.65 |
| | | 5 | 1.02 |
| Casing Volume (gals): | NA | 6 | 1.47 |
| | | 8 | 2.61 |
| 3 Casing Volumes (gals): | NA 147 based on '89. | 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 |
|------|--------------------|----------------------|---------------------------|---------------|-----------|------------------------------|--------------|
| 1618 | | | | | | | |
| 1620 | 2 | 9 | 18/18 | 7.76 | 20.6 | 347 | DR Measured. |
| 1621 | ~~~~~ | | | Well runs dry | ~~~~~ | | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comments |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|----------|
| TM-07 | 1640 | Plastic | 250ml | 1 | EPA 300.0 | None | |
| | | | | | | | |
| | | | | | | | |
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Additional Comments: 4 prong 30 AMP male to 3 prong female extension cord, key needed. FM key needed.



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|--------------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10/28/08 |
| Well ID: | TM-15 MILLER | Weather: | Clear |
| ADWR No: | S22699 | Collected By: | Chad Munich, John Villinski |

WELL DATA

| | | | |
|------------------------------|---|-----------------------|---------------|
| Well Depth (ft bls): | 325 | Time: | 0838 - 0851 |
| Casing Diameter (in): | 4" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | Could not sound, obstruction will use previous DTW of 294.90 | | |
| 1 Casing Volume (gals): | 20 $(325 - 294.90) \cdot (4^2) \cdot (0.0408)$ | | |
| 3 Casing Volumes (gals): | 60 | | |

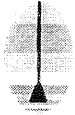
FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|-------------------------|
| 0840 | 6.7 | 14/14 | 7.32 | 20.7 | 385 | None | None | Measured Discharge Rate |
| 0845 | 7 | 35/49 | 7.65 | 22.3 | 386 | " | " | |
| 0847 | 7 | 35/63 | 7.64 | 22.6 | 389 | " | " | |
| 0849 | 7 | 14/77 | 7.63 | 22.6 | 387 | " | " | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|--------------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| TM-15 MILLER | 0850 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| DUP-102808 | 0850 | " | " | 1 | " | " | |

Additional Comments: _____



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|-------------|----------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 11/5/08 |
| Well ID: | TM-16 | Weather: | Mostly clear. |
| ADWR No: | 55-S 22 578 | Sampler: | GM |

WELL DATA

| Well Depth (ft bls): | 115 | Casing Capacity | |
|------------------------------|-------|--|-------------------------|
| | | Nominal Size (inches) | Gallons per Linear Foot |
| Casing Diameter (in): | 4 | 2 | 0.16 |
| Static Water Level (ft bmp): | 81.75 | 4 | 0.65 |
| Casing Volume (gals): | 22 | 5 | 1.02 |
| 3 Casing Volumes (gals): | 66 | 6 | 1.47 |
| | | 8 | 2.61 |
| | | 10 | 4.08 |
| | | Casing Volume = gallons/foot * water column (feet) | |

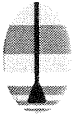
FIELD SAMPLING DATA

| Time | Elapsed Time (min) | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Comments |
|------|--------------------|----------------------|---------------------------|---------|-----------|------------------------------|--------------|
| 0731 | | | | | | | |
| 0732 | 1 | 16 | 16/16 | 7.03 | 18.9 | 1143 | DR Measured. |
| 0734 | 2 | 16 | 32/48 | 7.12 | 19.3 | 1157 | |
| 0736 | 2 | 16 | 32/80 | 7.12 | 19.7 | 1159 | |
| 0738 | 2 | 16 | 32/112 | 7.14 | 19.7 | 1162 | |
| 0740 | 2 | 16 | 32/144 | 7.14 | 19.8 | 1162 | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comments |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|----------|
| TM-16 | 0740 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |
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Additional Comments: Well, FM keys needed. T pipe junction.



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

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|-------------|---------|----------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 11/18/08 |
| Well ID: | TM-19A | Weather: | Clear |
| ADWR No: | 522580 | Sampler: | CTM |

WELL DATA

| | | | |
|------------------------------|--------|--|-------------------------|
| Well Depth (ft bls): | 700 | Casing Capacity | |
| | | Nominal Size (inches) | Gallons per Linear Foot |
| Casing Diameter (in): | 4" | 2 | 0.16 |
| | | 4 | 0.65 |
| | | 5 | 1.02 |
| | | 6 | 1.47 |
| | | 8 | 2.61 |
| Static Water Level (ft bmp): | 199.46 | 10 | 4.08 |
| Casing Volume (gals): | 330 | Casing Volume = gallons/foot * water column (feet) | |
| 3 Casing Volumes (gals): | 980 | | |

FIELD SAMPLING DATA

| Time | Elapsed Time (min) | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Comments |
|------|--------------------|----------------------|---------------------------|---------|-----------|------------------------------|-------------|
| 1509 | | | | | | | |
| 1510 | 1 | 33 | 33 | 7.80 | 23.1 | 370 | DR Measured |
| 1515 | 6 | 33 | 198 | 7.80 | 24.0 | 365 | |
| 1520 | 11 | 33 | 363 | 7.80 | 24.1 | 364 | |
| 1525 | 16 | 33 | 528 | 7.79 | 24.2 | 365 | |
| 1530 | 21 | 33 | 693 | 7.80 | 24.3 | 365 | |
| 1535 | 26 | 33 | 858 | 7.80 | 24.3 | 365 | |
| 1540 | 31 | 33 | 1023 | 7.79 | 24.3 | 365 | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comments |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|----------|
| TM-19A | 1545 | Plastic | 250 ml | 1 | EPA 300.0 | None | Filtered |
| | | | | | | | |
| | | | | | | | |

Additional Comments: 30 KW generator, extension cord for TM wells needed.
Generator end of extension cord should be hard wired in for 240 V (L1, L2 + Ground).



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | | | |
|-------------|----------------|---------------|-------------------------------------|
| Project No: | <u>8720000</u> | Client: | <u>Freeport Copper Queen Branch</u> |
| Task No: | <u>2.2</u> | Date: | <u>10/30/08</u> |
| Well ID: | <u>TM-41</u> | Weather: | <u>Sunny</u> |
| ADWR No: | <u>562555</u> | Collected By: | <u>J. Villinski</u> |

WELL DATA

| | | | |
|------------------------------|-------------------------------------|-----------------------|----------------------|
| Well Depth (ft bls): | _____ | Time: | <u>1149</u> |
| Casing Diameter (in): | _____ | Point of Measurement: | <u>Top of Casing</u> |
| Static Water Level (ft bmp): | <u>Dry at 198.80, tagged bottom</u> | | |
| 1 Casing Volume (gals): | _____ | | |
| 3 Casing Volumes (gals): | _____ | | |

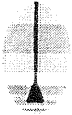
FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-------------------------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| <u>Water Level Only</u> | | | | | | | |
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Additional Comments: _____



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|-----------|----------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 11/6/08 |
| Well ID: | TM-42 | Weather: | Clear |
| ADWR No: | 55-562554 | Sampler: | GM |

WELL DATA

| | | | |
|--|--------|-----------------------|-------------------------|
| Well Depth (ft bis): | 250 | Casing Capacity | |
| | | Nominal Size (inches) | Gallons per Linear Foot |
| Casing Diameter (in): | 5 | 2 | 0.16 |
| Static Water Level (ft bmp): | 207.05 | 4 | 0.65 |
| Casing Volume (gals): | 43 | 5 | 1.02 |
| 3 Casing Volumes (gals): | 130 | 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 |
|------|--------------------|----------------------|---------------------------|---------|-----------|------------------------------|--------------|
| 0926 | | | | | | | |
| 0927 | 1 | 6 | 616 | 6.88 | 20.3 | 1035 | DR Measured. |
| 0930 | 3 | 6 | 18124 | 6.90 | 20.8 | 1056 | |
| 0934 | 4 | 6 | 24148 | 6.86 | 21.2 | 1039 | |
| 0938 | 4 | 6 | 24172 | 6.88 | 21.2 | 1024 | |
| 0942 | 4 | 6 | 24196 | 6.88 | 21.2 | 1032 | |
| 0946 | 4 | 5 | 20116 | 6.90 | 21.0 | 1025 | DR Measured |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comments |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|----------|
| TM-42 | 0955 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |
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Additional Comments: 4 prong 30 AMP male to 3 prong female extension cord, well key needed.



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|----------------|---------------|-------------------------------------|
| Project No: | <u>8720000</u> | Client: | <u>Freeport Copper Queen Branch</u> |
| Task No: | <u>2.2</u> | Date: | <u>10/30/08</u> |
| Well ID: | <u>TM-43</u> | Weather: | <u>Sunny</u> |
| ADWR No: | <u>564729</u> | Collected By: | <u>J. Villinski</u> |

WELL DATA

| | | | |
|------------------------------|---------------|-----------------------|----------------------|
| Well Depth (ft bls): | _____ | Time: | <u>1110</u> |
| Casing Diameter (in): | _____ | Point of Measurement: | <u>Top of Casing</u> |
| Static Water Level (ft bmp): | <u>148.72</u> | | |
| 1 Casing Volume (gals): | _____ | | |
| 3 Casing Volumes (gals): | _____ | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-------------------------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| <u>Water Level Only</u> | | | | | | | |
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Additional Comments: _____



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

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|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10/30/08 |
| Well ID: | TM-43B | Weather: | Sunny |
| ADWR No: | 565004 | Collected By: | J. Villinski |

WELL DATA

| | | | |
|------------------------------|-------|-----------------------|---------------|
| Well Depth (ft bls): | | Time: | 1124 |
| Casing Diameter (in): | | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 62.89 | | |
| 1 Casing Volume (gals): | | | |
| 3 Casing Volumes (gals): | | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|------------------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| Water Level Only | | | | | | | |
| | | | | | | | |

Additional Comments: _____



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | |
|----------------------------|---|
| Project No: <u>8720000</u> | Client: <u>Freeport Copper Queen Branch</u> |
| Task No: <u>2.2</u> | Date: <u>10-15-08</u> |
| Well ID: <u>TVI 236</u> | Weather: <u>Clear</u> |
| ADWR No: <u>802236</u> | Collected By: <u>John Villinger</u> |

WELL DATA

| | |
|--|--|
| Well Depth (ft bls): <u>222</u> | Time: <u>12:12</u> |
| Casing Diameter (in): <u>12"</u> | Point of Measurement: <u>Top of Casing</u> |
| Static Water Level (ft bmp): <u>122.35</u> | <u>Pump on @ 12:14 @ 700 gpm</u> |
| 1 Casing Volume (gals): <u>670</u> | <u>1/2 from each well</u> |
| 3 Casing Volumes (gals): <u>2004</u> | <u>purge 6 min</u> |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|--------------|----------------------|---------------------------|-------------|-------------|------------------------------|-------|------|---------|
| <u>12:20</u> | <u>200</u> | <u>4200</u> | <u>7.45</u> | <u>22.3</u> | <u>490</u> | | | |
| <u>R</u> | | | | | | | | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|----------------|--------------|----------------|---------------|-------------------|------------------|--------------|---------|
| <u>TVI 236</u> | <u>12:25</u> | <u>Plastic</u> | <u>250 ml</u> | <u>1</u> | <u>EPA 300.0</u> | <u>None</u> | |
| | | | | | | | |

Additional Comments: _____



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | |
|----------------------------|---|
| Project No: <u>8720000</u> | Client: <u>Freeport Copper Queen Branch</u> |
| Task No: <u>2.2</u> | Date: <u>10/15/08</u> |
| Well ID: <u>TVI 713</u> | Weather: <u>Sunny</u> |
| ADWR No: <u>567713</u> | Collected By: <u>J. Villinski</u> |

WELL DATA

| | |
|--|--|
| Well Depth (ft bls): <u>200</u> | Time: <u>1345</u> |
| Casing Diameter (in): _____ | Point of Measurement: <u>Top of Casing</u> |
| Static Water Level (ft bmp): <u>130.00</u> | |
| 1 Casing Volume (gals): _____ | |
| 3 Casing Volumes (gals): _____ | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-------------------------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| <u>Water Level Only</u> | | | | | | | |
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Additional Comments: _____



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

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|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-15-08 |
| Well ID: | JVI 875 | Weather: | Sunny |
| ADWR No: | 568875 | Collected By: | John Villinski |

WELL DATA

| | | | |
|------------------------------|------------------|--------------------------|---------------|
| Well Depth (ft bls): | 330' | Time: | 12:49 |
| Casing Diameter (in): | 12 | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 30.00 | pumps 550 gpm on @ 12:50 | |
| 1 Casing Volume (gals): | 1203 | | |
| 3 Casing Volumes (gals): | 3600 | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 12:55 | 550 | 3300 | 7.26 | 22.1 | 878 | clear | no | — |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| JVI 875 | 13:10 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: _____



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|----------------------------|---------------|-------------------------------------|
| Project No: | <u>8720000</u> | Client: | <u>Freeport Copper Queen Branch</u> |
| Task No: | <u>2.2</u> | Date: | <u>10/14/08</u> |
| Well ID: | <u>UN-02 (URBANO NACO)</u> | Weather: | <u>Sunny</u> |
| ADWR No: | <u>NA</u> | Collected By: | <u>J. Villinski</u> |

WELL DATA

| | | | |
|------------------------------|-------|-----------------------|-------------|
| Well Depth (ft bls): | _____ | Time: | <u>1345</u> |
| Casing Diameter (in): | _____ | Point of Measurement: | _____ |
| Static Water Level (ft bmp): | _____ | | |
| 1 Casing Volume (gals): | _____ | | |
| 3 Casing Volumes (gals): | _____ | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 1125 | | | 7.63 | 22.6 | 356 | Clear | No | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| UN-02 | 1135 | Plastic | 250 ml | 3 | FMCQB-GW | | |
| | | | | | | | |

Additional Comments: _____

Well Pumping



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | |
|-------------------------------------|---|
| Project No: <u>8720000</u> | Client: <u>Freeport Copper Queen Branch</u> |
| Task No: <u>2.2</u> | Date: <u>10/14/08</u> |
| Well ID: <u>UN-03 (URBANO NACO)</u> | Weather: <u>Sunny</u> |
| ADWR No: _____ | Collected By: <u>J. Villinski</u> |

WELL DATA

| | |
|------------------------------------|-----------------------------|
| Well Depth (ft bls): _____ | Time: <u>1100</u> |
| Casing Diameter (in): _____ | Point of Measurement: _____ |
| Static Water Level (ft bmp): _____ | |
| 1 Casing Volume (gals): _____ | |
| 3 Casing Volumes (gals): _____ | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 1105 | | | 7.59 | 22.1 | 356 | | | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| UN-03 | 1115 | Plastic | 250 | 3 | FMCQB-GW | | |
| | | | | | | | |

Additional Comments: _____



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | |
|-------------------------------------|---|
| Project No: 8720000 | Client: Freeport Copper Queen Branch |
| Task No: 2.2 | Date: 10/14/08 |
| Well ID: UN-04 (URBANO NACO) | Weather: Sunny |
| ADWR No: NA | Collected By: J. Villinski |

| WELL DATA | |
|------------------------------------|-----------------------------|
| Well Depth (ft bls): _____ | Time: 1100 |
| Casing Diameter (in): _____ | Point of Measurement: _____ |
| Static Water Level (ft bmp): _____ | |
| 1 Casing Volume (gals): _____ | |
| 3 Casing Volumes (gals): _____ | |

| FIELD SAMPLING DATA | | | | | | | | |
|---------------------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
| 1217 | | | 7.39 | 21.4 | 376 | Clear | No | |
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| SAMPLE INFORMATION | | | | | | | |
|--------------------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
| UN-04 | 1225 | Plastic | 250 ml | 3 | FMCQB-GW | | |
| | | | | | | | |

Additional Comments: _____

Well Pumping



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | | | |
|-------------|----------------------------|---------------|-------------------------------------|
| Project No: | <u>8720000</u> | Client: | <u>Freeport Copper Queen Branch</u> |
| Task No: | <u>2.2</u> | Date: | <u>10/14/08</u> |
| Well ID: | <u>UN-05 (URBANO NACO)</u> | Weather: | <u>Sunny</u> |
| ADWR No: | <u>NA</u> | Collected By: | <u>J. Villinski</u> |

WELL DATA

| | | | |
|------------------------------|------------------------|-----------------------|-------------|
| Well Depth (ft bls): | _____ | Time: | <u>1145</u> |
| Casing Diameter (in): | _____ | Point of Measurement: | <u>TOC</u> |
| Static Water Level (ft bmp): | <u>272.0 (10/2/08)</u> | | |
| 1 Casing Volume (gals): | _____ | | |
| 3 Casing Volumes (gals): | _____ | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| 1150 | | | 7.44 | 22.8 | 351 | Clear | No | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| UN-05 | 1155 | Plastic | 250 ml | 3 | FMCQB-GW | | |
| | | | | | | | |

Additional Comments: _____

Well Pumping

Water Level Measurement from City of Naco



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

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|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-21-08 |
| Well ID: | WALKER | Weather: | Sunny |
| ADWR No: | 200393 | Collected By: | J. Villinski |

WELL DATA

| | | | |
|------------------------------|-------|-----------------------|---------------|
| Well Depth (ft bls): | 120 | Time: | 16:10 |
| Casing Diameter (in): | 5 1/2 | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 47.18 | | |
| 1 Casing Volume (gals): | | | |
| 3 Casing Volumes (gals): | | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| WALKER | | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: _____



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|---------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10-20-08 |
| Well ID: | WEED | Weather: | P. Cloudy / Windy |
| ADWR No: | 544535 | Collected By: | J. Villinski |

WELL DATA

| | | | |
|------------------------------|-----|-----------------------|---------------|
| Well Depth (ft bls): | 300 | Time: | NA |
| Casing Diameter (in): | NA | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | NA | | |
| 1 Casing Volume (gals): | | | |
| 3 Casing Volumes (gals): | | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|-------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------------------|
| 14:25 | — | — | 8.10 | 31.6 | 405 | clear | no | some scale deposits |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|-------|----------------|--------|-------------------|-----------------|--------------|---------|
| WEED | 14:25 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |
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Additional Comments: take sample from discharge pipe per owner. Not much water comes out of the pipe - careful!



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|----------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10/28/08 |
| Well ID: | WEISKOPF | Weather: | Clear, light breeze |
| ADWR No: | 641802 | Collected By: | CTM, John Villinski |

WELL DATA

| | | | |
|------------------------------|--------|-----------------------|---------------|
| Well Depth (ft bls): | 200 | Time: | 1309 - 1337 |
| Casing Diameter (in): | 6" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 145.81 | | |
| 1 Casing Volume (gals): | 80 | | |
| 3 Casing Volumes (gals): | 240 | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|-------------------------|
| 1310 | 11 | 11/11 | 6.93 | 21.3 | 1398 | None | None | Discharge rate measured |
| 1315 | 11 | 55/66 | 6.99 | 20.9 | 1336 | " | " | |
| 1320 | 11 | 55/121 | 7.01 | 20.8 | 1414 | " | " | |
| 1325 | 11 | 55/176 | 6.99 | 20.9 | 1418 | " | " | DR Measured |
| 1330 | 11 | 55/231 | 7.00 | 21.0 | 1395 | " | " | |
| 1335 | 11 | 55/286 | 6.98 | 20.8 | 1401 | " | " | |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| WEISKOPF | 1340 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: Pump was running on arrival.



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

| | | | |
|-------------|------------------------|---------------|------------------------------|
| Project No: | 8720000 | Client: | Freeport Copper Queen Branch |
| Task No: | 2.2 | Date: | 10/28/08 |
| Well ID: | ZANDER | Weather: | Clear |
| ADWR No: | 205126 3535 Metzler | Collected By: | CTM, JV |

WELL DATA

| | | | |
|------------------------------|--|-----------------------|---------------|
| Well Depth (ft bls): | 280 | Time: | 0951 - 1042 |
| Casing Diameter (in): | 6" | Point of Measurement: | Top of Casing |
| Static Water Level (ft bmp): | 146.01 | | |
| 1 Casing Volume (gals): | $196 (133.99) \cdot (36) \cdot 0.0408$ | | |
| 3 Casing Volumes (gals): | 590 | | |

FIELD SAMPLING DATA

| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
|----------------------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|-------------------------|
| 0951 | 12.5 | 0 | 7.40 | 21.5 | 409 | None | None | Discharge Rate Measured |
| 0957 | 12.5 | 75/75 | 7.42 | 21.2 | 416 | " | " | |
| 1052 1052 | 12.5 | 63/138 | 7.40 | 21.1 | 416 | " | " | |
| 1007 | 12.5 | 63/201 | 7.42 | 21.2 | 415 | " | " | |
| 1012 | 12.5 | 63/264 | 7.41 | 21.2 | 414 | " | " | DR Measured |
| 1017 | 12.5 | 63/327 | 7.41 | 21.2 | 413 | " | " | |
| 1022 | 12.5 | 63/390 | 7.41 | 21.2 | 413 | " | " | |
| 1028 | 12.5 | 75/465 | 7.42 | 21.1 | 411 | " | " | |
| 1033 | 12.5 | 63/528 | 7.42 | 21.0 | 415 | " | " | |
| 1039 | 12 | 72/1600 | 7.40 | 21.2 | 415 | " | " | DR Measured |
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
|-----------|------|----------------|--------|-------------------|-----------------|--------------|---------|
| ZANDER | 1045 | Plastic | 250 ml | 1 | EPA 300.0 | None | |
| | | | | | | | |

Additional Comments: I shower today.



HYDRO GEO CHEM, INC.

Groundwater Sampling Form

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|----------------------------|--|
| Project No: <u>8720000</u> | Client: <u>Freeport Copper Queen Branch</u> |
| Task No: <u>2.2</u> | Date: <u>10/28/98</u> |
| Well ID: <u>ERB, FB</u> | Weather: <u>Clear</u> |
| ADWR No: | Collected By: <u>Chad Munich, John Villaseca</u> |

| WELL DATA | |
|--|--|
| Well Depth (ft bls): <u>NA</u> | Time: <u>NA</u> |
| Casing Diameter (in): <u>NA</u> | Point of Measurement: <u>Top of Casing</u> |
| Static Water Level (ft bmp): <u>NA</u> | |
| 1 Casing Volume (gals): <u>NA</u> | |
| 3 Casing Volumes (gals): <u>NA</u> | |

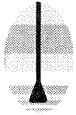
| FIELD SAMPLING DATA | | | | | | | | |
|---------------------|----------------------|---------------------------|---------|-----------|------------------------------|-------|------|---------|
| Time | Discharge Rate (gpm) | Total Discharge (gallons) | pH (SU) | Temp (°C) | Specific Conductance (µS/cm) | Color | Odor | Comment |
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QA/QC

| SAMPLE INFORMATION | | | | | | | |
|--------------------|-------------|----------------|---------------|-------------------|------------------|--------------|---------|
| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comment |
| <u>ERB-102808</u> | <u>0920</u> | <u>Plastic</u> | <u>250 ml</u> | <u>1</u> | <u>EPA 300.0</u> | <u>None</u> | |
| <u>FB-102808</u> | <u>0910</u> | <u>tr</u> | <u>tr</u> | <u>tr</u> | <u>tr</u> | <u>tr</u> | |

Additional Comments: _____

0510



HYDRO GEO CHEM, INC.
Groundwater Sampling Form

| | |
|----------------------------|---|
| Project No: <u>8720000</u> | Client: <u>Freeport Copper Queen Branch</u> |
| Task No: <u>2.2</u> | Date: <u>11/3/08</u> |
| Well ID: _____ | Weather: <u>Clear</u> |
| ADWR No: _____ | Sampler: <u>CFM</u> |

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 |
|------|--------------------|----------------------|---------------------------|---------|-----------|------------------------------|----------|
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SAMPLE INFORMATION

| Sample ID | Time | Container Type | Volume | No. of Containers | Analysis Method | Preservative | Comments |
|------------------------------------|-------------|----------------|--------------|-------------------|------------------|--------------|----------|
| EQB-03408 <u>110308</u> | <u>0725</u> | <u>Plastic</u> | <u>250ml</u> | <u>1</u> | <u>EPA 300.0</u> | <u>None</u> | |
| FB-03408 <u>110308</u> | <u>0725</u> | <u>Plastic</u> | <u>250ml</u> | <u>1</u> | <u>EPA 300.0</u> | <u>None</u> | |
| | | | | | | | |
| | | | | | | | |

Additional Comments: _____
