KENNECOTT UTAH COPPER CORPORATION

SOUTH FACILITIES GROUNDWATER REMEDIAL ACTION PROGRESS REPORT

2002-2004

JULY 2005

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1. INTRODUCTION

Kennecott Utah Copper Corporation (KUCC) is conducting groundwater remediation at its South Facilities as selected by the U.S. Environmental Protection Agency (EPA) and the Utah Department of Environmental Quality (DEQ) in a Record of Decision (ROD) dated December 13, 2000 for the Kennecott South Zone, Operable Unit 2. In response to the ROD, KUCC submitted a Final Design for Remedial Action (RDRA) for the groundwater remediation in December 2002. EPA and DEQ approved the remedial design and issued an Explanation of Significant Differences (ESD) in June 2003.

KUCC committed in the RDRA to prepare annual reports on remedial activities and remedial progress. This report describes remedial activities and results for calendar years 2003 and 2004 and also reports data collected during 2002.

Groundwater contamination at the South Facilities, referred to as the Zone A Plume or the Acid Plume, is immediately downgradient of the old Bingham Reservoir and waste-rock piles and consists of a core area with low pH and elevated metals which is surrounded by a partially to fully neutralized zone of elevated (>1,500 mg/l) sulfate groundwater.

The technical components of the selected South Facilities groundwater remedy include:

- Maintaining source control measures
- Containing the acid plume in Zone A through extraction from barrier wells at the leading edge of the contamination and wells in the core of the plume.
- Remediating the Zone A plume through extraction of heavily contaminated waters from the core of the plume.
- Treatment of extracted barrier well water by reverse osmosis (RO) technology for barrier well water and by neutralization of acid well water in the tailings pipeline.
- Monitoring and reporting progress.

Additionally, the selected remedy includes preventing human exposure to unacceptably high concentrations of hazardous substances and/or pollutants through point-of-use management. KUCC responded to five requests in 2003 and seven request in 2004 by third-party groundwater users in the area to have well water sampled and analyzed. Results indicated point-of-use management was not needed.

2. REMEDIAL OPERATIONS

2.1 Groundwater Remediation System

KUCC has largely completed construction of groundwater extraction and treatment systems necessary to implement the remedy. Constructed components of this system are:

- Barrier well extraction system consisting of three wells, B2G1193, BFG1200, and LTG1147, and conveyance lines to deliver water to an RO treatment plant.

- Acid well extraction system comprised of two wells, ECG1146 and BSG1201, and conveyance to the beginning of the tailings pipeline at the Copperton Concentrator.

- Acid plume water treatment system which relies on operating KUCC milling facilities, specifically a) the tailings pipeline, which serves as a 17-mile plug-type treatment reactor; b) the Copperton Concentrator lime plant, which has ability to add hydrated lime directly to the tailings line as needed, and c) the North Tailings Impoundment, which provides a repository for non-hazardous treatment residuals.

KUCC has constructed and operated a demonstration reverse osmosis treatment plant near Copperton. A full-scale RO plant will be completed in 2005.

2.2 Extraction and Treatment

Annual calendar-year extractions from the remedial wells in Zone A are reported in Table 2.1.

Table 2.1 Annual Zone A Groundwater Extraction (ac-ft)

	2002	**2003**	**2004**
Barrier Well Extraction			
B2G1193	2808.03	2666.86	1936.47
BFG1200	2778.48	2654.22	2389.62
LTG1147	103.83	639.05	1106.32
Total	*5690.34*	*5960.13*	*5432.41*
Acid Well Extraction			
ECG1146	1021.72	954.40	1114.54
BSG1201	0	550.83	1281.94
Total	*1021.72*	*1505.23*	*2396.48*

Flow from the barrier wells was used as process water in KUCC's operations during 2002-2004. A portion of the flow was diverted to the Demonstration RO Plant for ongoing testing. Treated volumes are indicated in Table 2.2. Treated water was also utilized in KUCC's process water system.

Table 2.2 Annual Pilot Plant RO Treatment (ac-ft)

	2002	2003	2004
RO Treatment	361.7	843.7	813.6

In March 2003, KUCC installed a second acid well, BSG1201 near the leading edge of the low pH plume. Extraction from this well began in August 2003. All groundwater extracted from acid wells was conveyed to the KUCC tailings line at Box NP-5 where it was treated in the tailings system.

3. REMEDIAL PROGRESS

Analysis of groundwater monitoring data indicates that the remedial extraction program is achieving progress in terms of both contracting the groundwater plume and reducing contaminant levels within the plume. KUCC monitors a large suite of water quality parameters, among which several are specifically useful in assessing remedial progress including sulfate, aluminum, other selected metals, and pH. Changes in concentrations of these parameters in Zone A groundwater are discussed below.

All water chemistry data collected during 2002, 2003, and 2004 are reported in Appendix A. Samples were analyzed at Kennecott Environmental Laboratory, a State of Utah certified analytical laboratory. There are 100 wells included in the groundwater monitoring program which sampled on a frequency and for the parameters listed in the RDRA Monitoring Plan (KUCC 2002, Section 3.2.3). In addition, chemistry data from wells sampled as part of other KUCC monitoring programs are included in the evaluation below.

KUCC's Groundwater Monitoring and Characterization Plan (GCMP; KUCC 2005a) and associated Standard Operating Procedures (SOPs; KUCC 2005b) are followed for all sampling and water level measurements. The GCMP has been approved by the Division of Water Quality and is updated on an annual basis. Quality-control procedures, as documented in KUCC's Quality Assurance Project Plan (QAPP; KUCC 2005c) for the GCMP program, are followed for all data collected. KUCC submits quarterly Quality Assurance Reports to the Division of Water Quality. These reports discuss quality assurance for the data utilized below to assess remedial progress.

3.1 Sulfate

The distribution of sulfate in Zone A is represented on Figure 3.1 which compares contoured sulfate concentrations[1] for both 1996[2] and 2004[3]. Data from 1996 are used as a baseline because 1) this is the earliest dataset available which thoroughly represents the spatial distribution of sulfate, and 2) the data represent the time frame prior to installation and operation of the first acid extraction well (ECG1146) and initiation of active remediation.

On Figure 3.1, areas where the plume has contracted for a particular contour interval are indicated by green hatching; areas of expansion are indicated by orange hatching. It is apparent from Figure 3.1 that there has been significant contraction of the plume. Specific areas of the plume are discussed below.

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[1] The highest sulfate concentration at any depth for each nested well site was used to draw contour lines.

[2] The 1996 contours were drawn predominantly with data from 1996, but some data from wells drilled and first sampled in 1997 and 1998 were also used in support of the 1996 contours.

[3] Data used in the placement of the 2004 contours are predominantly 2004 analytical data. For wells that were not sampled in 2004, sulfate trends as well as changes in the induction logs of wells between 1996 and 2003 were used to estimate water quality.

3.1.1 Plume Core

In 1996, 15 wells had sulfate concentrations greater than 20,000 mg/l, which then generally defined the plume core. In 2004, only four wells remain with a sulfate concentration greater than 20,000 mg/l. Of these four wells, ECG1146 and ECG1128A have both declined in concentration from above 30,000 mg/l to just above 20,000 mg/l (Figures 3.2 and 3.3). ECG1115A has remained relativity constant at above 30,000 mg/l (Figure 3.4), and ECG1115C has seen a significant increase from 4,660 to 31,200 mg/l (Figure 3.4). It should be noted that ECG1115B (located at the same geographic location as ECG1115A and C) has also seen a significant increase in sulfate from 2,240 to 12,800 mg/l (Figure 3.4).

Increasing sulfate concentration in wells ECG1115C and ECG1115B, which is located west and upgradient of the acid production well ECG1146, is attributed to poor quality water moving downward in the aquifer due to pumping at ECG1146. This water should eventually report to and be captured by ECG1146.

3.1.2 Leading Edge of Plume

The leading edge of the sulfate plume, defined by 1,500 mg/l sulfate, has contracted substantially since 1996. Well P191B, which reached a peak measured sulfate concentration of 2,180 mg/l in 1998, now has 1,230 mg/l of sulfate (Figure 3.5). Likewise, well BSG1132A has decreased from approximately 2,400 mg/l in the late 1990s to 816 mg/l in 2004 (Figure 3.6).

Wells located close to barrier wells B2G1193 and BFG1200 generally show an increase in sulfate. Well B2G1194A located to the immediate east of the production wells has increased significantly in 2003 from 1,070 to 1,520 mg/l sulfate. However, B2G1194B has decreased in 2003 from 1,800 to 724 mg/l sulfate. Wells B2G1157A and B, located next to production well B2G1193, have increased in sulfate since the most recent sample in 2000 (A from 1,360 to 1,830 mg/l; and B from 2,530 to 4,590 mg/l). B2G1193 has increased from an average sulfate concentration of 1,635 mg/l in 2002 to 1,782 mg/l in 2003. Well BFG1155C located next to production well BFG1200 has increased significantly from 412 in 1999 to 733 mg/l in 2003. Well P277 located approximately 1,000 feet west of production well B2G1193 has increased from 1,570 to 1,750 mg/l sulfate between 2002 and 2003.

One area that calls for increased vigilance is the location of nested wells BSG1133A and BSG1133B. As shown on Figure 3.7, sulfate in the shallow A completion has decreased from 3,370 mg/l in 1996 to 1,140 in 2004. Meanwhile sulfate in BSG1133B, the deeper completion, has increased from 356 mg/l in 1996 to 2,210 in 2004. Increasing sulfate in the deeper completion may be due to downward movement of higher-sulfate water from the shallow horizon resulting from water level drawdown (Section 4.2) or changed hydrodynamics in the aquifer due to pumping. If sulfate levels continue to increase, a more thorough evaluation of this area may be necessary.

On the western margin, within the 1,500 mg/l contour, sulfate concentrations have remained relatively steady. An example of this would be ECG1152A with 2,730 mg/l in 1996 and 2,770 mg/l in 2003 (well was not sampled in 2004).

3.1.3 Adjacent to West Jordan Well Field

KUCC remains watchful of sulfate concentrations around the West Jordan Well Field (wells W363, W387, and W361 shown on Figure 3.1 and W420 not shown). Heavy extraction from these wells in the 1990s caused migration of elevated-sulfate groundwater toward this area. Well W363 saw increasing sulfate throughout the 1990s (Figure 3.8). Sulfate concentrations at this location have declined since 2000 and correspond to reduced annual extraction by West Jordan and increased extraction by KUCC.

Monitoring wells located between the leading edge of the sulfate plume and the West Jordan Well field showed steady to increasing sulfate concentrations. WJG1154A located 3,400 feet south of W363 also saw elevated concentrations through the late 1990s and has shown fairly consistent sulfate concentrations through the 2004 marked by seasonal highs and lows (Figure 3.9). Sulfate in well WJG1154B, has shown a slight increase from 57 mg/l in 2001 to 91 mg/l 2004. Sulfate in monitoring well WJG1170A has been increasing steadily from 172 mg/l in 1998 to 501 mg/l in 2004 (Figure 3.10).

3.1.4 Discussion

KUCC's groundwater extractions since 1997 have removed over 272,000 tons of sulfate from the alluvial aquifer in the South West Jordan Valley. The removal of this mass has resulted in declining sulfate concentrations throughout much of Zone A, especially in the core of the plume near acid extraction wells ECG1146 and BSG1201. Sulfate concentrations have increased in the area around the barrier wells B2G1193 and BFG1200, as well as in several other areas as noted above. Nevertheless, KUCC remains in compliance with the performance standard set out in the ROD of containing sulfate concentrations above 1,500 mg/l within KUCC property. KUCC remains optimistic that sulfate levels will continue to decline with ongoing extraction and mass removal and that the containment performance standard will continue to be met.

3.2 Aluminum

Aluminum is elevated in the low-pH core of the acid plume. The parameter is watched because it is a significant contributor to mineral acidity and hence influences treatment strategies for acid plume water.

The distribution of aluminum in groundwater is shown on Figure 3.11. The aluminum concentration contours from 1996 and 2004 on this figure were drawn in a similar manner as the change in sulfate contour map (Section 3.1; Figure 3.1). The area outside the heavy metals plume has not had consistent sampling for aluminum and different detection limits have been reported so a change in aluminum concentration contour for values less than 1.0 mg/l is not possible. However, a line enclosing detectable aluminum in 2004 was created using wells that had any reportable aluminum.

In general, aluminum concentrations have decreased significantly since 1996. Originally in 1996 there were two distinct areas of greater than 1,500 mg/l: one on the east nose of the low pH plume at BSG1177B with a concentration of 1,550 mg/l; the other centered in the core of the low pH plume around ECG1146 (Acid Well #1). Since pumping has commenced on both acid extraction wells (ECG1146 and BSG1201), the aluminum concentration in BSG1177B has decreased to 655 mg/l eliminating the eastern area of aluminum concentrations greater than 1,500 mg/l. In the area of ECG1146 only one well, ECG1115A at 2,650 mg/l, continues to have aluminum concentrations greater than 1,500 mg/l. Decreases in aluminum concentration in the Zone A plume generally appear to mimic the decreases in sulfate concentrations.

Two areas are noted where the aluminum concentrations have increased. The aluminum concentration at ECG1128A has increased (Figure 3.12) from 428 to 937 mg/l and in well BSG1119B aluminum has increased (Figure 3.13) from 0.044 to 43 mg/l. Aluminum solubility is dependant on pH and it is thought that the rise in aluminum in well BSG1119B reflects a condition where a slight pH change greatly increased aluminum solubility.

3.3 Other Metals

In general, the concentrations of heavy metals have been declining in the acid plume. Specific metals including arsenic, cadmium and copper were selected for this discussion. These metals are prevalent where groundwater has a pH less than or equal to 4.5 and are monitored closely at the leading edge of the 4.5 pH plume. Production and monitoring wells located in neutral pH water generally have less than or near the detection limit concentrations of arsenic, aluminum, cadmium, and copper.

Arsenic concentrations are generally declining in the low pH plume core and core perimeter. Overall changes, increasing or decreasing, are relatively small, usually less than 0.010 mg/l. The exception to this small change includes the following wells, all of which show decreasing arsenic from 2003 to 2004: ECG1146 (0.047 to 0.034 mg/l), ECG1115A (0.063 to 0.020 mg/l), ECG1115C (0.088 to 0.020 mg/l), ECG1121A (0.034 to 0.024 mg/l), and BSG1180B (0.063 to 0.046 mg/l). Arsenic increased from 0.035 to 0.042 mg/l in well BSG1177B located adjacent to acid extraction well BSG1201.

Cadmium concentrations in the low pH plume are varied and generally decreasing. Most changes between 2003 and 2004 are less than 0.10 mg/l. The decreasing exceptions to this small change includes BSG1177A (1.40 to 1.18 mg/l), BSG1177B (2.08 to 1.90) mg/l and P279 (0.468 to 0.388 mg/l). Increasing exceptions (changes greater than 0.100 mg/l) include BSG1119B at the leading edge of the low pH plume (0.531 to 0.646 mg/l) and ECG1145 (1.30 to 1.50 mg/l). Production Well ECG1146 also saw a small increase from 0.884 to 0.900 mg/l.

Copper concentrations also are generally decreasing in the low pH plume. Changes between 2003 and 2004 are generally less than 1.0 mg/l. Those wells showing decreasing changes greater than 1.0 mg/l include: B1G951 (located adjacent and down gradient from the Large Bingham Reservoir; 58.3 to 52.4 mg/l), BSG1177B (53.8 to 43.3 mg/l), BSG1179C (72.9 to 71.6 mg/l), ECG1117A (46.4 to 43.3 mg/l), ECG1121A (49.6 to 47.6 mg/l), ECG1144A (38.1 to 35.4 mg/l), ECG1145A (37.5 to 34.5 mg/l), acid extraction well ECG1146 (99.3 to 98 mg/l), and SRG946 (located down gradient and adjacent to the Small Bingham Reservoir; 68.5 to 60.8 mg/l). Wells showing an increase of greater than 1.0 mg/l copper include: ECG1115A (149 to 152 mg/l), ECG1115C (9.5 to 26.0 mg/l), and P279 (62.0 to 63.4 mg/l).

In the leading edge of the low pH plume, BSG1119B shows a small increase of 0.056 to 0.064 mg/l. Other wells showing decreases or increases in the 0.100 mg/l range for copper are not considered significant enough for further discussion.

3.4 pH

In general, pH values within Zone A have not changed dramatically, unlike sulfate or aluminum. However, this response was predicted by test work conducted for the RI (KUCC 1998). Current groundwater pH is illustrated graphically on Figure 3.14. This map shows the pH contours for 2004 and highlights areas where there has been a change, albeit minor, in pH since the previous measurement that has caused the contour line for a given interval to shift. Specific portions of the low-pH plume are discussed below.

3.4.1 Plume Core

There were 38 wells that were sampled in 2004 that had a pH less than 4.5, which defines the plume core. Sixteen of these samples had a pH slightly less than the previous sample. Those samples with a higher pH than the most recent sample were for the most part only slightly higher. Exceptions are wells ECG1156B and C located 1,500 feet northwest of acid extraction well ECG1146. Well ECG1115B water decreased (Figure 3.15) in pH from 6.9 in 2001 to 5.9 in 2004 and ECG1115C decreased (Figure 3.16) in pH from 4.1 in 2003 to 3.6 in 2004. Lowering of the water table in the vicinity of ECG1115 due to pumping of ECG1146 could be driving the poorer quality water to deeper depths resulting in the lower pH in the B and C completions.

Water from well ECG1124B, located next to ECG1146, has increased (Figure 3.17) in pH from 3.1 in 1995 to 4.1 in 2004. The ECG1124 A and C completions have remained relatively stable during this time period. Water from well ECG1145A has increased steadily (Figure 3.18) in pH from 3.3 in 1996 to 3.7 in 2004. This well is located only 500 feet southwest of acid extraction well ECG1146 and has no doubt been affected by pumping.

3.4.2 Leading Edge of Plume

Samples collected in 2004 from wells located on the eastern leading edge of the plume have changed little in pH; however, more wells have decreased than increased. A few exceptions are BFG1156B, C and D located between KUCC production wells BFG1200 and B2G1193. BFG1156B has decreased from 7.2 in 2003 to 6.9 in 2004, BFG1156C has decreased from 7.2 in 2003 to 7.0 in 2004 and BFG1156D has decreased from 7.5 in 2003 to 7.1 in 2004.

There were four 2004 samples collected from wells near the southeast leading edge of the plume. Three of these samples had a lower pH than the previous sample: BSG1130A (7.5 in 2003 to 7.2 in 2004), P241C (7.2 in 2003 to 7.0 in 2004), and BSG1148B (7.5 in 2002 to 7.3 in 2004). The pH of BSG1148A has been steadily decreasing (Figure 3.19) from a high of 7.4 in 1996 to 6.8 in 2004. Although this drop is not great, the steady decline in pH values suggests a true change in water quality at this location.

Water from well ECG1128A has decreased (Figure 3.20) in pH from 5.5 in 1995 to 3.6 in 2004. However, most of the change occurred between 1995 and 2002, and the pH has remained relatively constant between 2002 and 2004.

Four 2004 samples from wells bordering the West Jordan well field decreased in pH compared to the most recent 2003 sample. These wells are WJG1169A and B, and WJG1154A and B. These decreases are generally small with the largest decrease at less than 0.22 standard pH units. Two other West Jordan well field border wells increased in 2004: WJG1170A from 6.9 in 2003 to 7.3 in 2004 and WJG1171A from 7.2 in 2003 to 7.6 in 2004.

3.5 Discussion

As noted above, it was predicted that pH would respond more slowly than sulfate or metals to remedial extraction. Column test work (RI Section 5.2.1; KUCC, 1998), indicates that hydrogen ions slowly desorb from amorphous iron hydroxide found in the aquifer matrix and result in a prolonged generation of low-pH water as clean water moves into the aquifer. The 2003 – 2004 data do not indicate any changes to understanding of the system and are considered to be consistent with the rest of the observed aqueous chemistry.

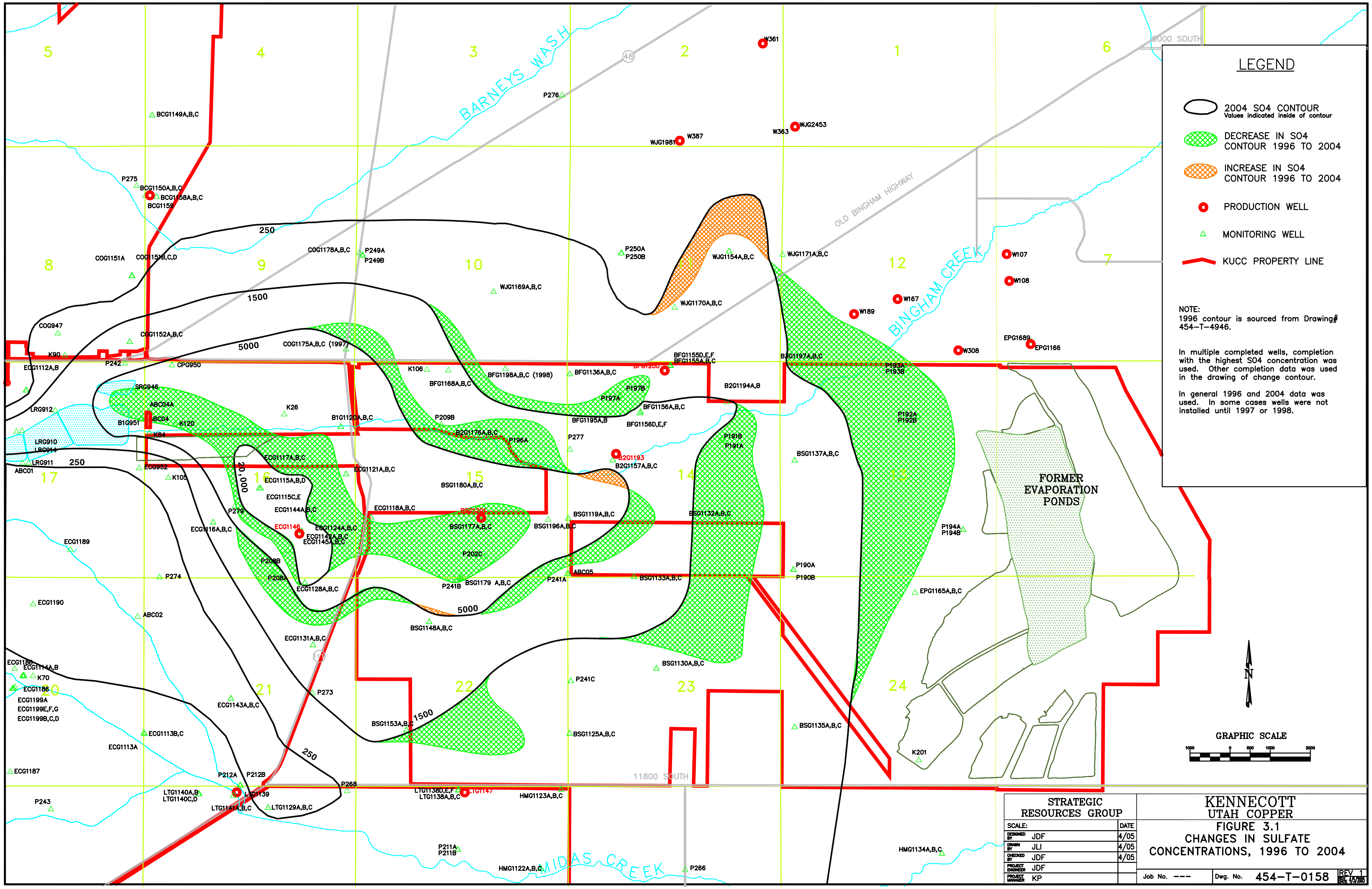

LEGEND
2004 SO4 CONTOUR
Values indicated inside of contour
DECREASE IN SO4 CONTOUR 1996 TO 2004
INCREASE IN SO4 CONTOUR 1996 TO 2004
PRODUCTION WELL
MONITORING WELL
KUCC PROPERTY LINE
NOTE:
1996 contour is sourced from Drawing# 454-T-4946.
In multiple completed wells, completion with the highest SO4 concentration was used. Other completion data was used in the drawing of change contour.
In general 1996 and 2004 data was used. In some cases wells were not installed until 1997 or 1998.
BARNEYS WASH
BINGHAM CREEK
MIDAS CREEK
OLD BINGHAM HIGHWAY
9000 SOUTH
11800 SOUTH
FORMER EVAPORATION PONDS
250
1500
5000
20,000
N
GRAPHIC SCALE
1000 0 500 1000 2000
STRATEGIC RESOURCES GROUP
SCALE:
DATE
DESIGNED BY JDF 4/05
DRAWN BY JLI 4/05
CHECKED BY JDF 4/05
PROJECT ENGINEER JDF
PROJECT MANAGER KP
KENNECOTT UTAH COPPER
FIGURE 3.1
CHANGES IN SULFATE CONCENTRATIONS, 1996 TO 2004
Job No. ---
Dwg. No. 454-T-0158
REV 1
REV. DATE 4/5/2005

Figure 3.2 Well ECG1146 Sulfate Concentration

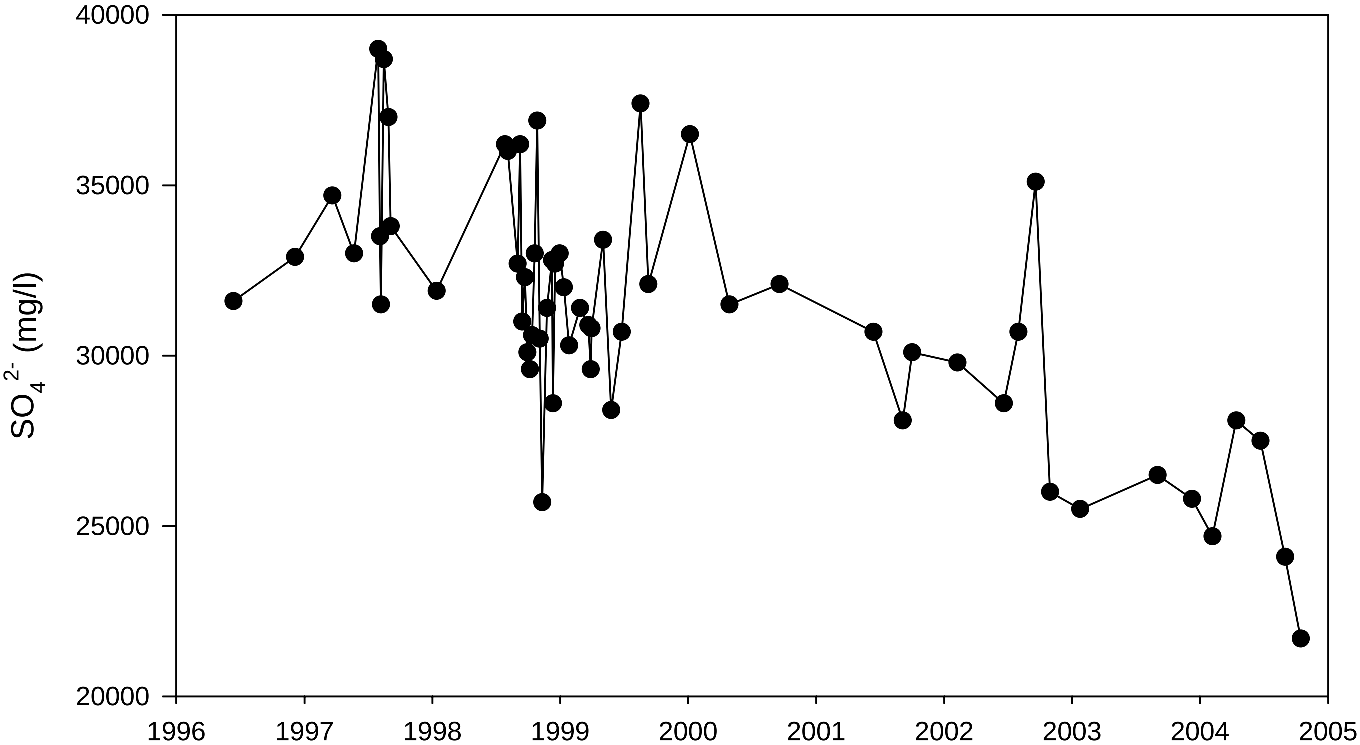


Figure 3.3 Well ECG1128A Sulfate Concentration

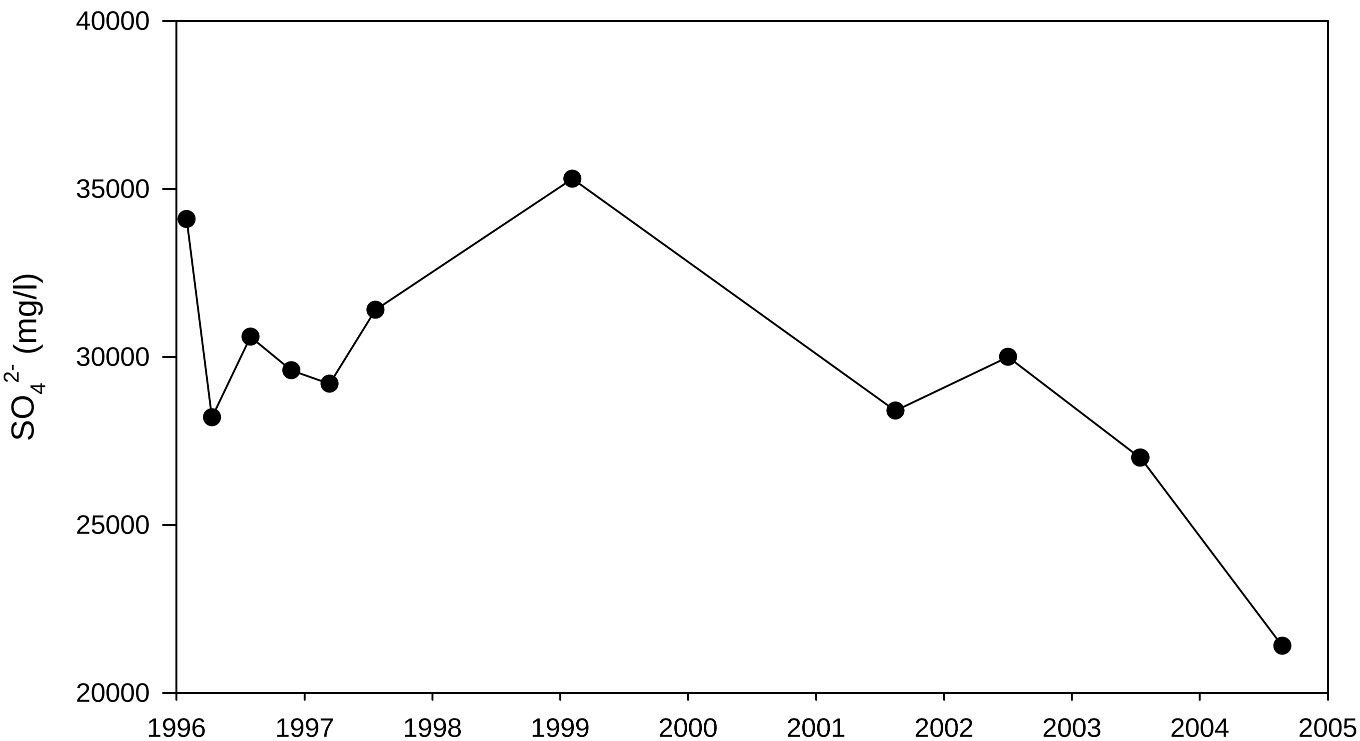


Figure 3.4 Wells ECG1115A, B, and C Sulfate Concentrations

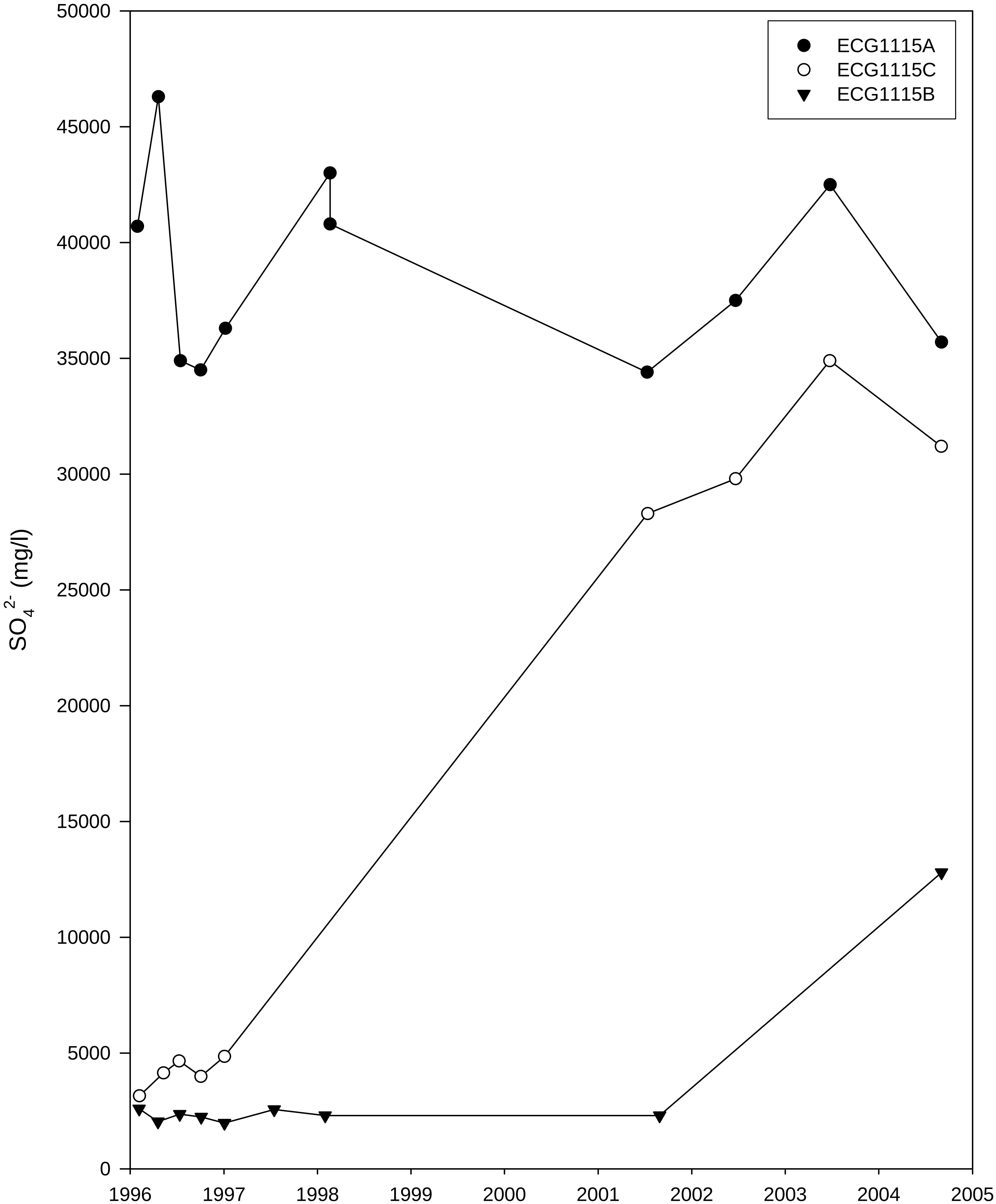


Figure 3.5 Well P191 Sulfate Concentration

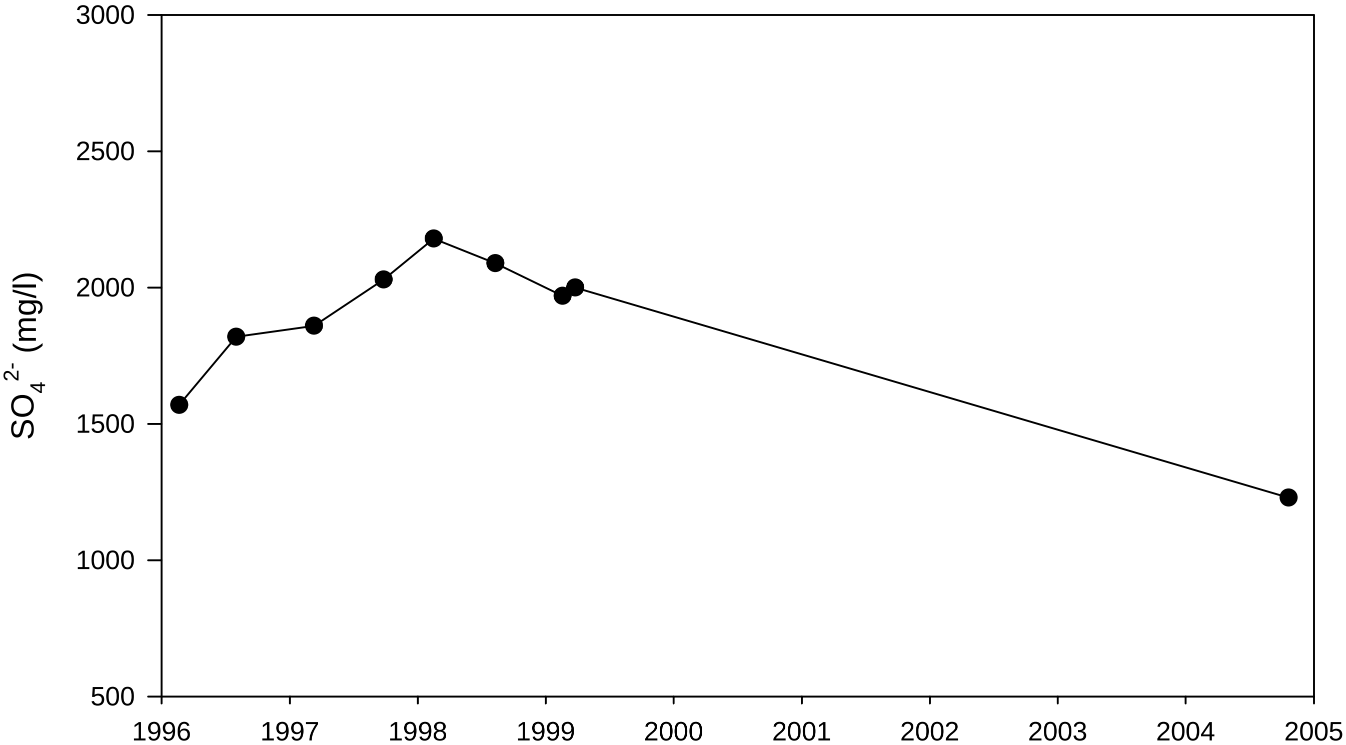


Figure 3.6 Well BSG1132A Sulfate Concentration

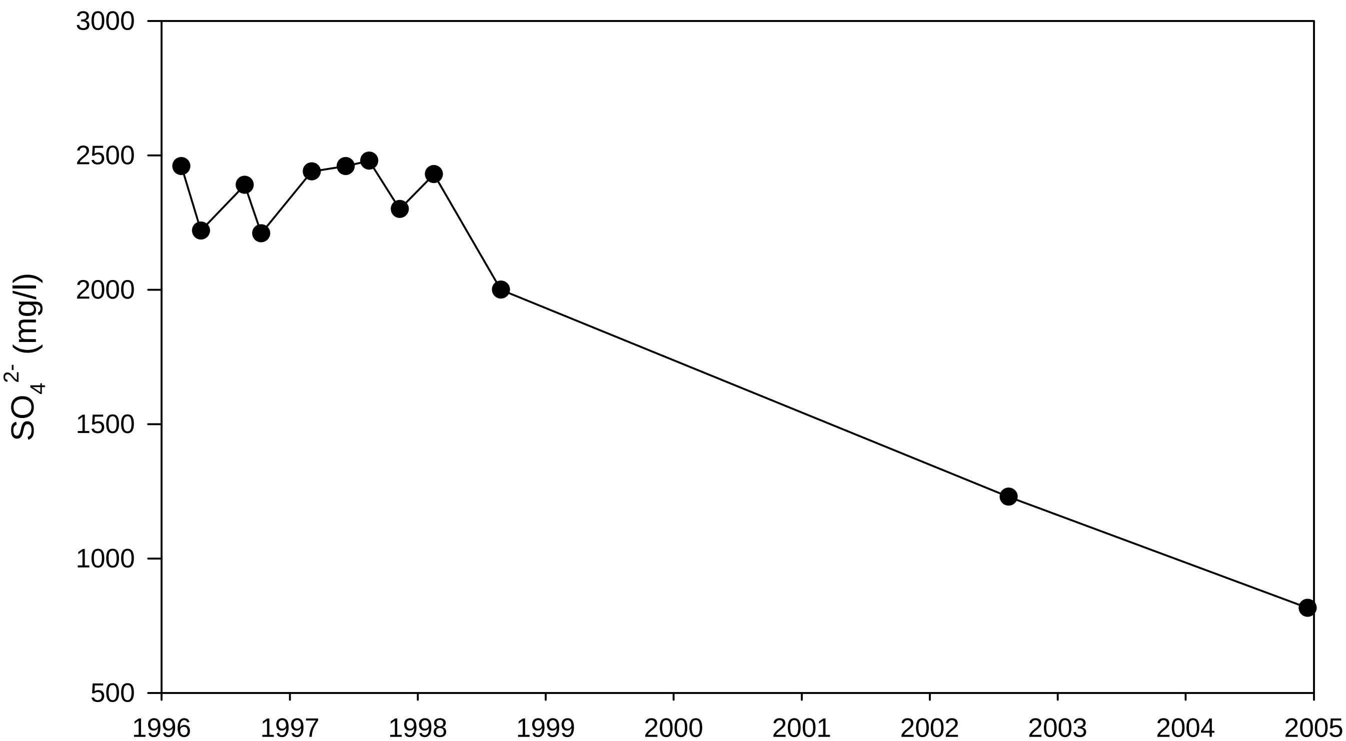


Figure 3.7 Wells BSG1133A and B Sulfate Concentrations

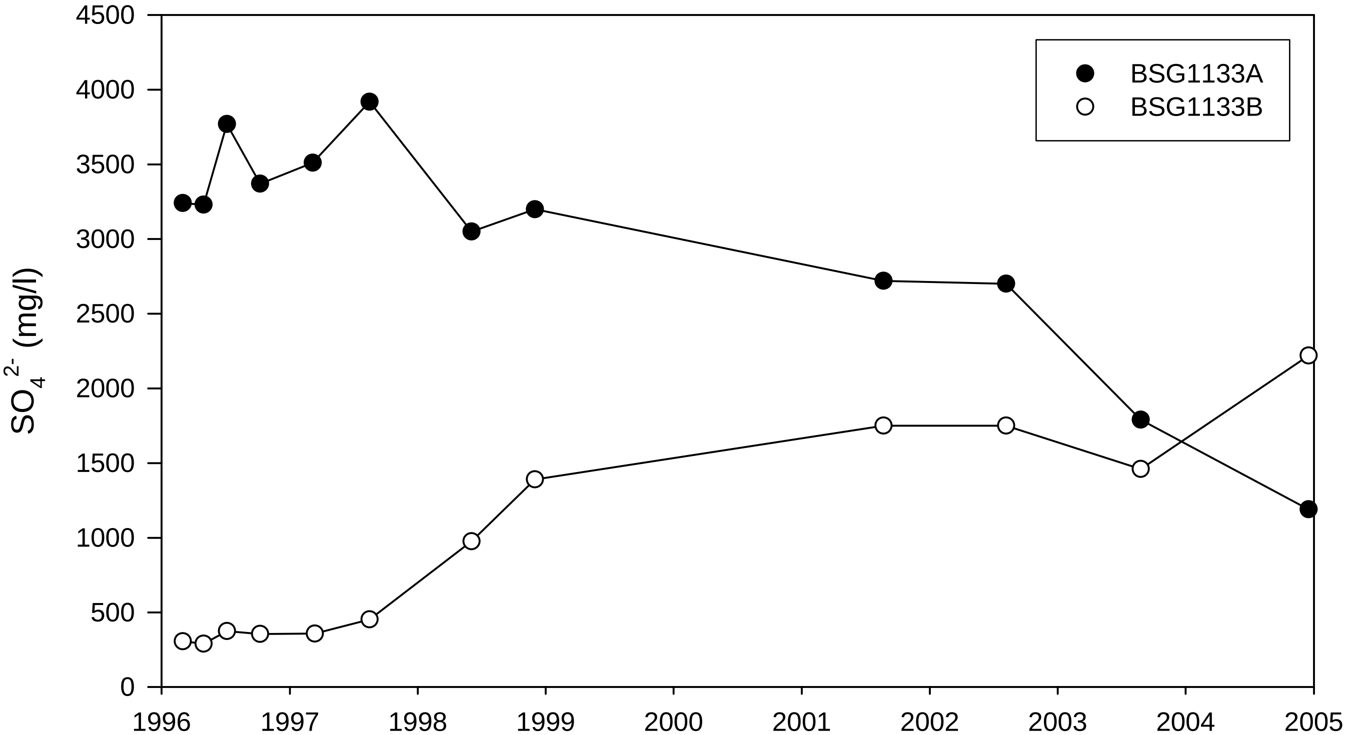


Figure 3.8 Well W363 Sulfate Concentration

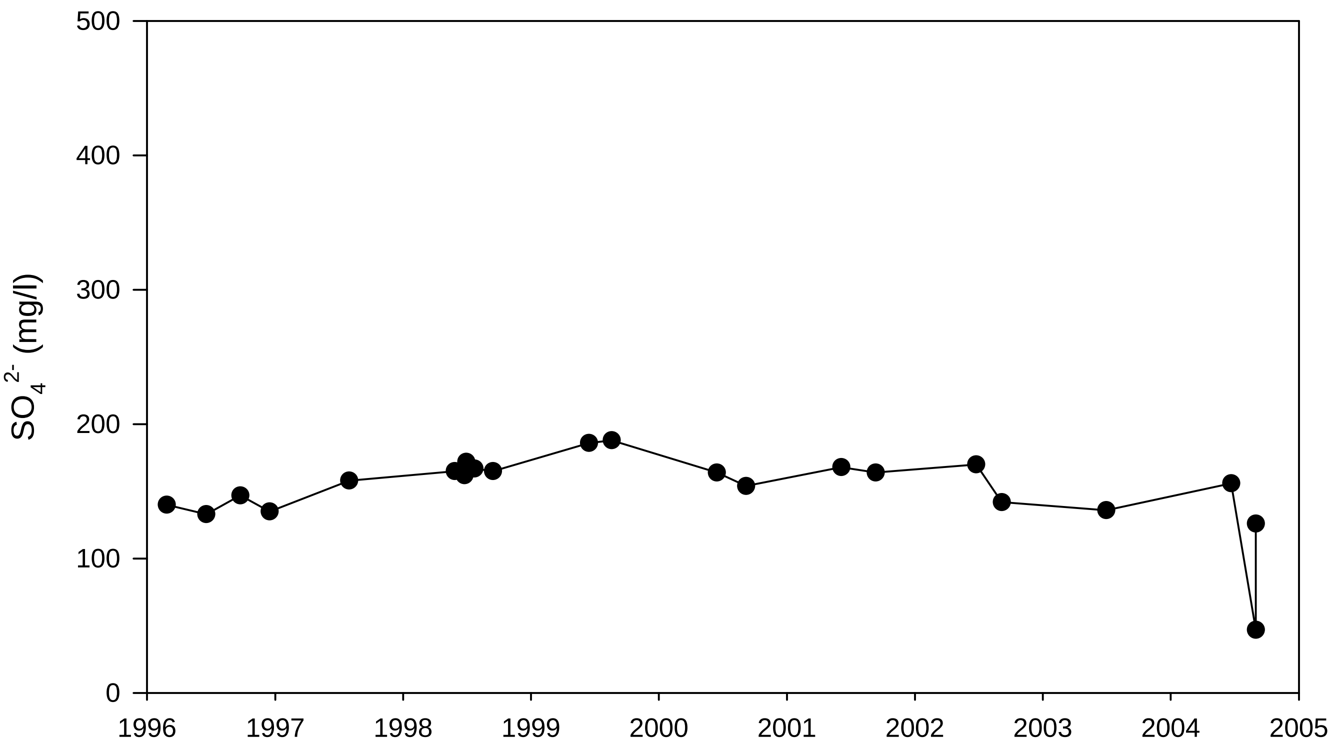


Figure 3.9 Well WJG1154A Sulfate Concentration

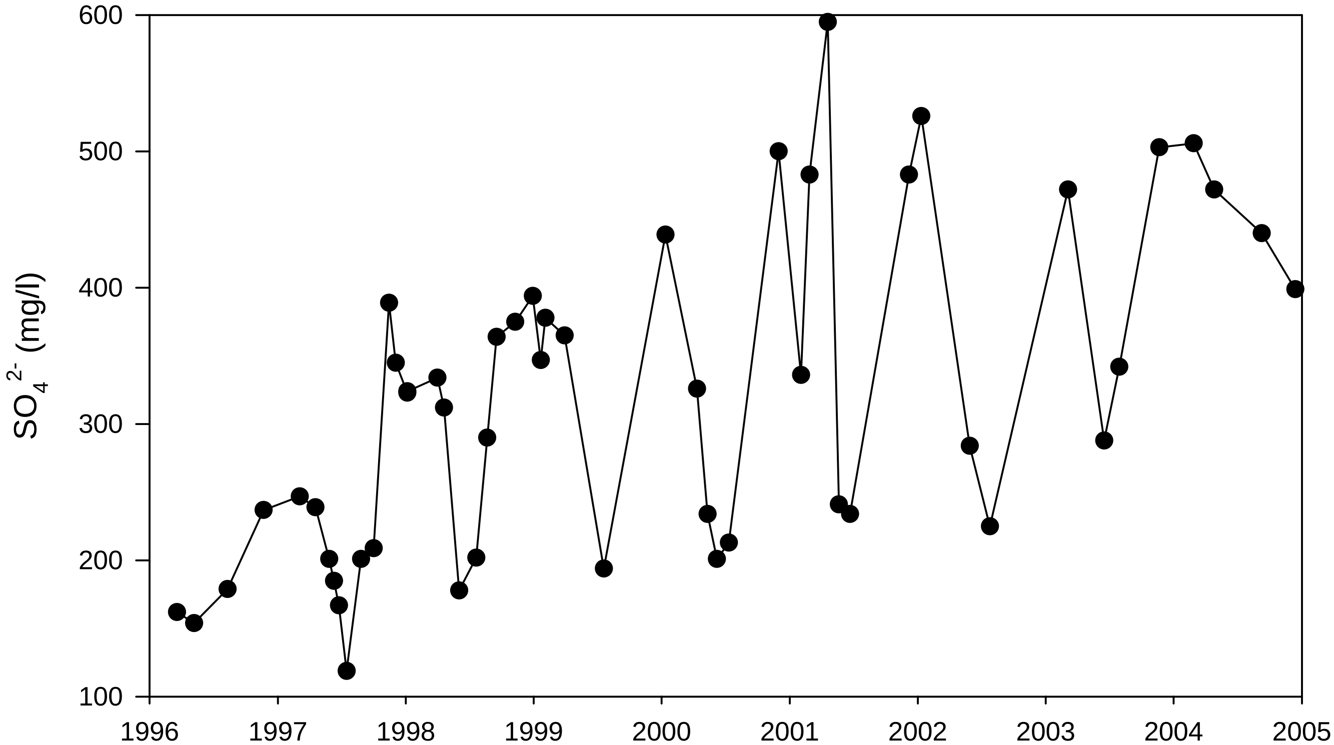
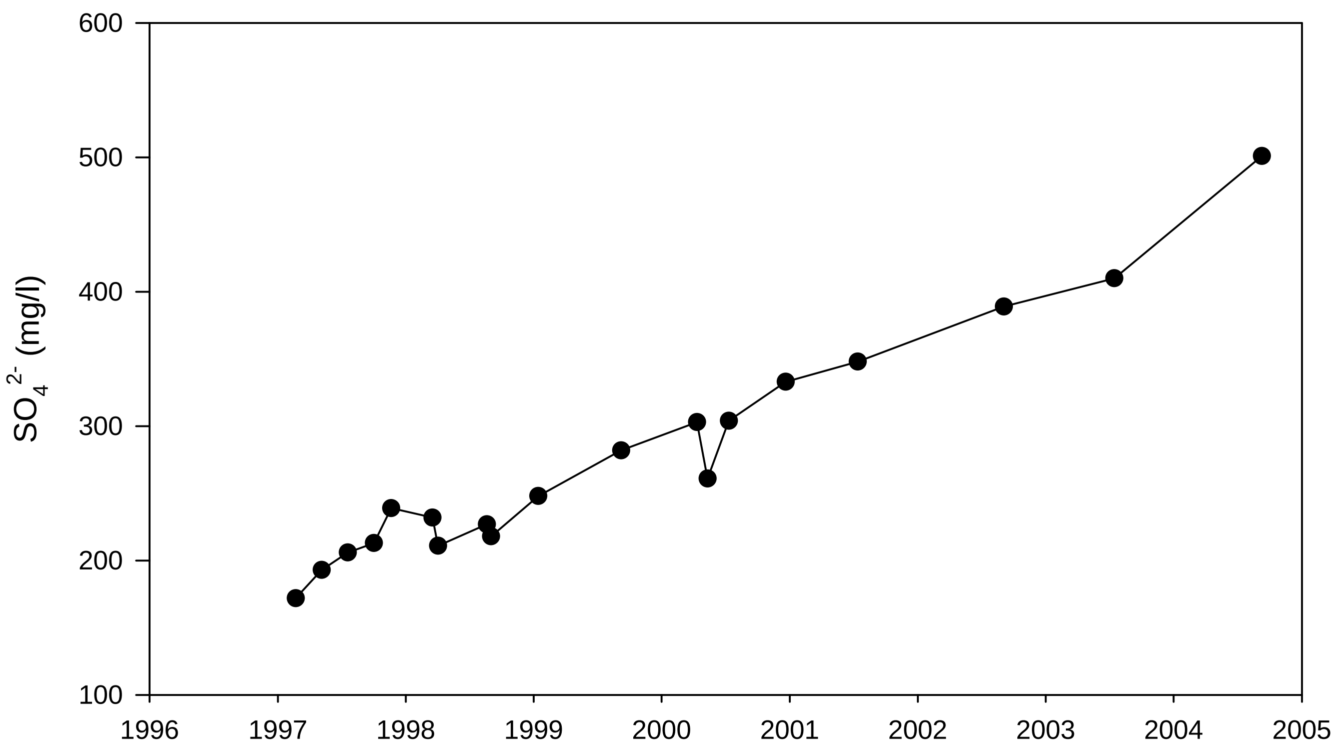


Figure 3.10 Well WJG1170A Sulfate Concentration



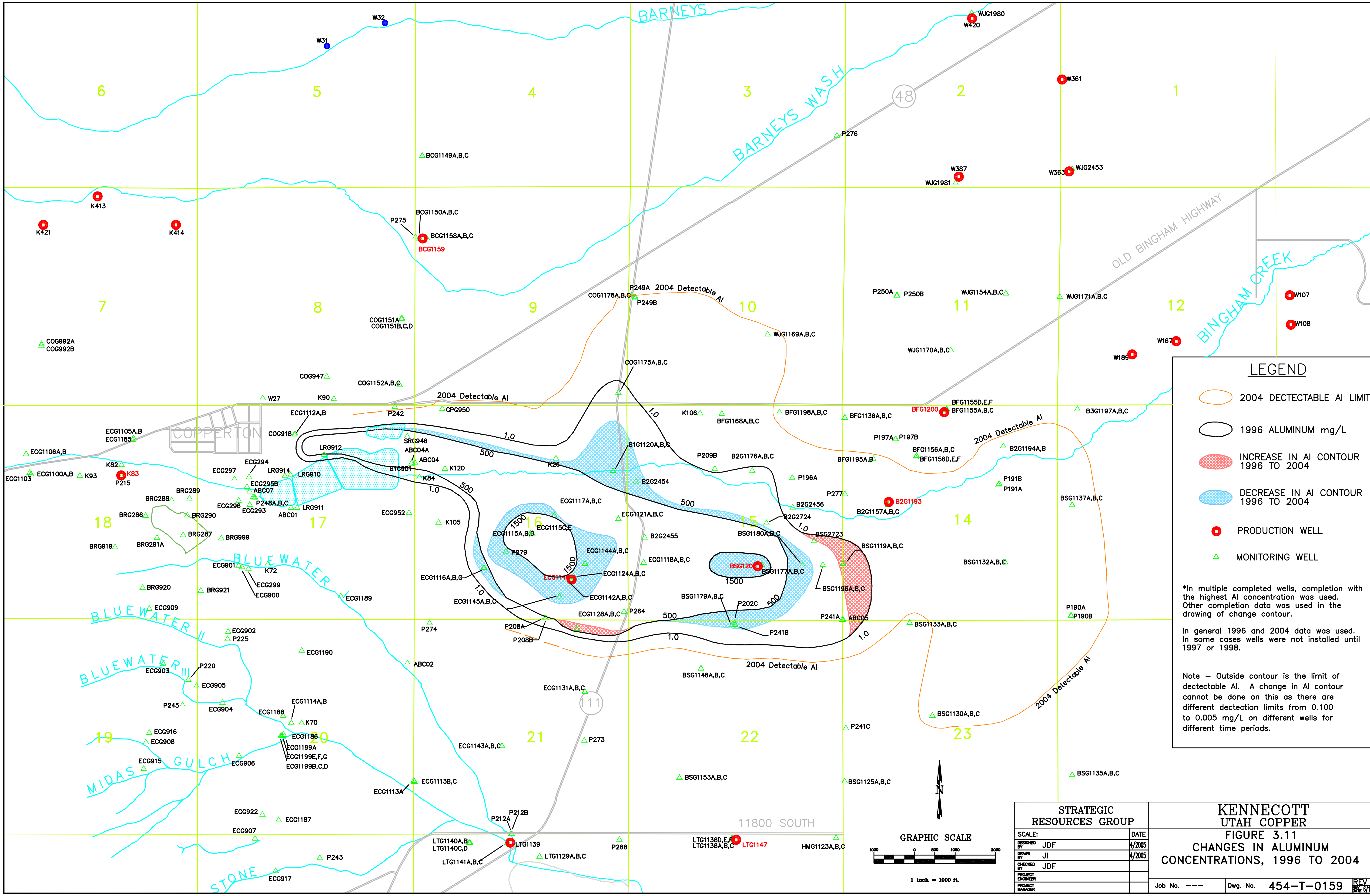

LEGEND
2004 DECTECTABLE Al LIMIT
1996 ALUMINUM mg/L
INCREASE IN Al CONTOUR 1996 TO 2004
DECREASE IN Al CONTOUR 1996 TO 2004
PRODUCTION WELL
MONITORING WELL
*In multiple completed wells, completion with the highest Al concentration was used. Other completion data was used in the drawing of change contour.
In general 1996 and 2004 data was used. In some cases wells were not installed until 1997 or 1998.
Note – Outside contour is the limit of dectectable Al. A change in Al contour cannot be done on this as there are different dectection limits from 0.100 to 0.005 mg/L on different wells for different time periods.
BARNEYS
BARNEYS WASH
OLD BINGHAM HIGHWAY
BINGHAM CREEK
COPPERTON
BLUEWATER
BLUEWATER II
BLUEWATER III
MIDAS GULCH
STONE
11800 SOUTH
48
111
2004 Detectable Al
1.0
500
1500
GRAPHIC SCALE
1 inch = 1000 ft.
N
STRATEGIC RESOURCES GROUP
SCALE:
DESIGNED BY JDF
DRAWN BY JI
CHECKED BY JDF
DATE 4/2005
KENNECOTT UTAH COPPER
FIGURE 3.11
CHANGES IN ALUMINUM CONCENTRATIONS, 1996 TO 2004
Job No. ---
Dwg. No. 454-T-0159
REV 1

Figure 3.12 Well ECG1128A Aluminum Concentration

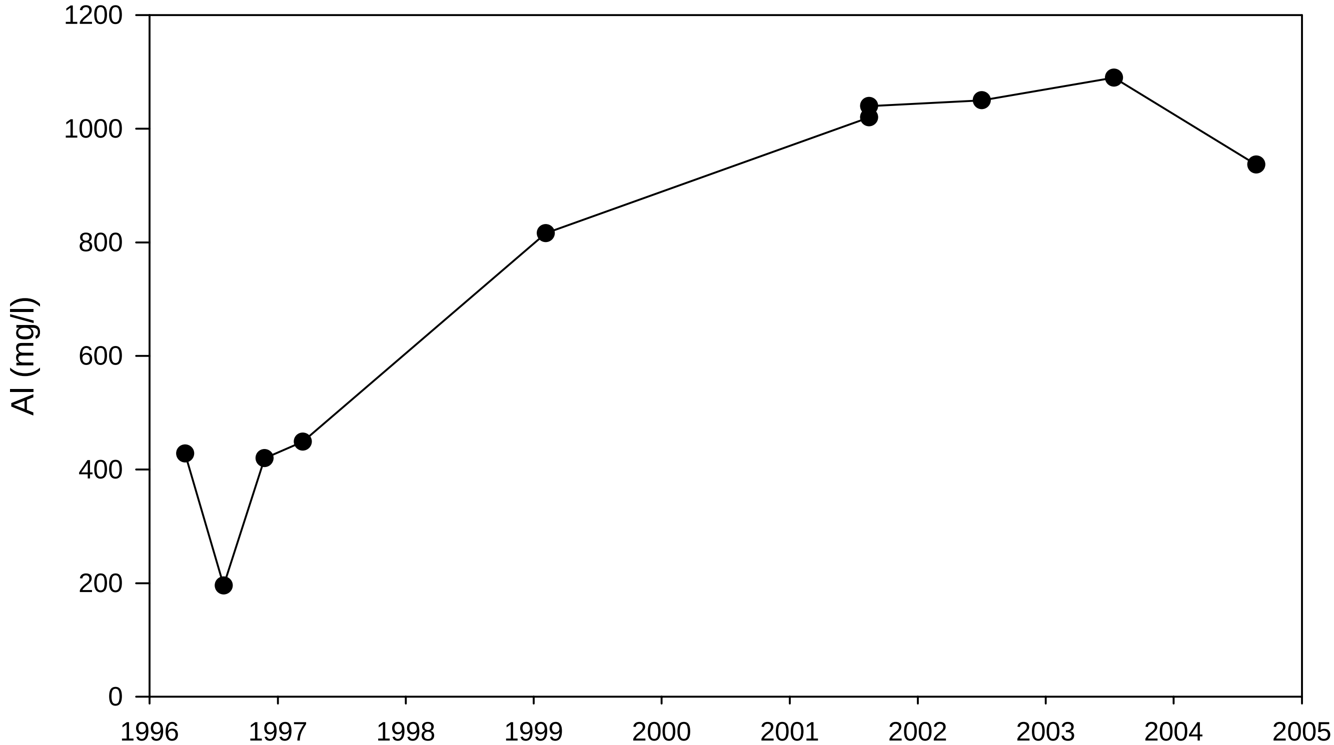
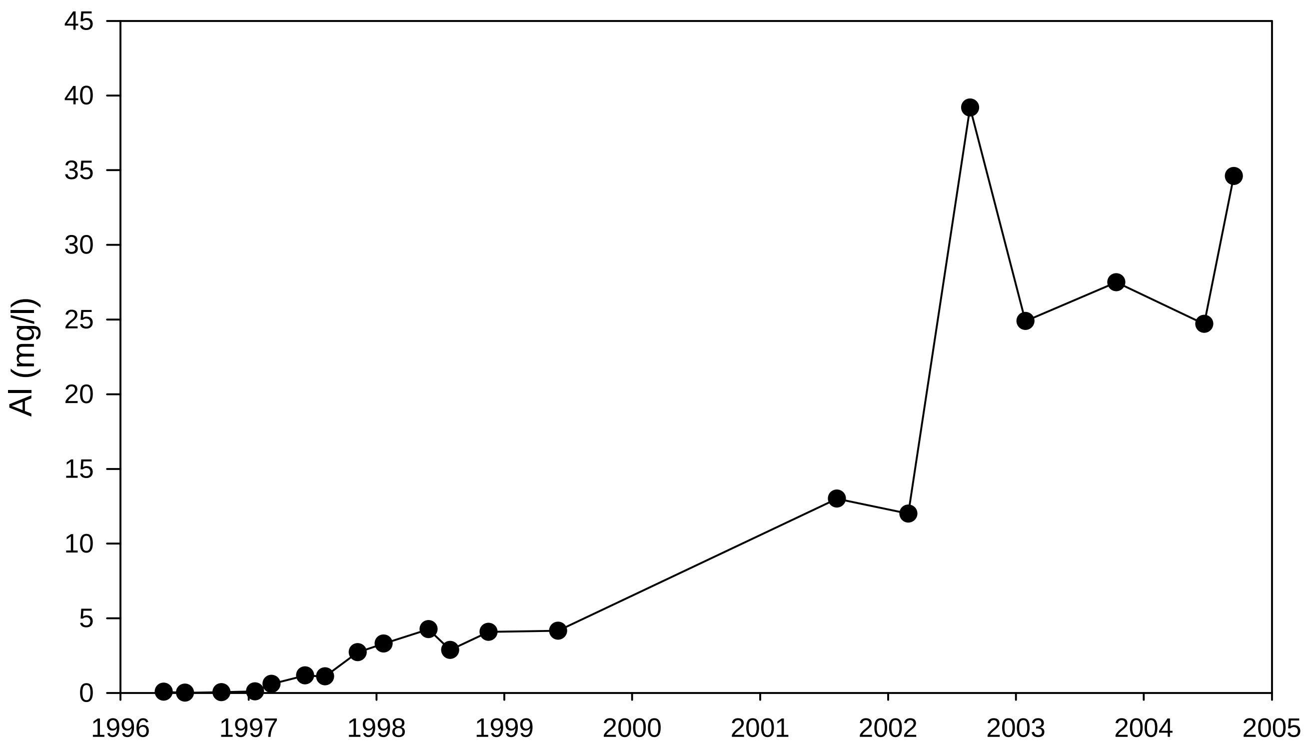
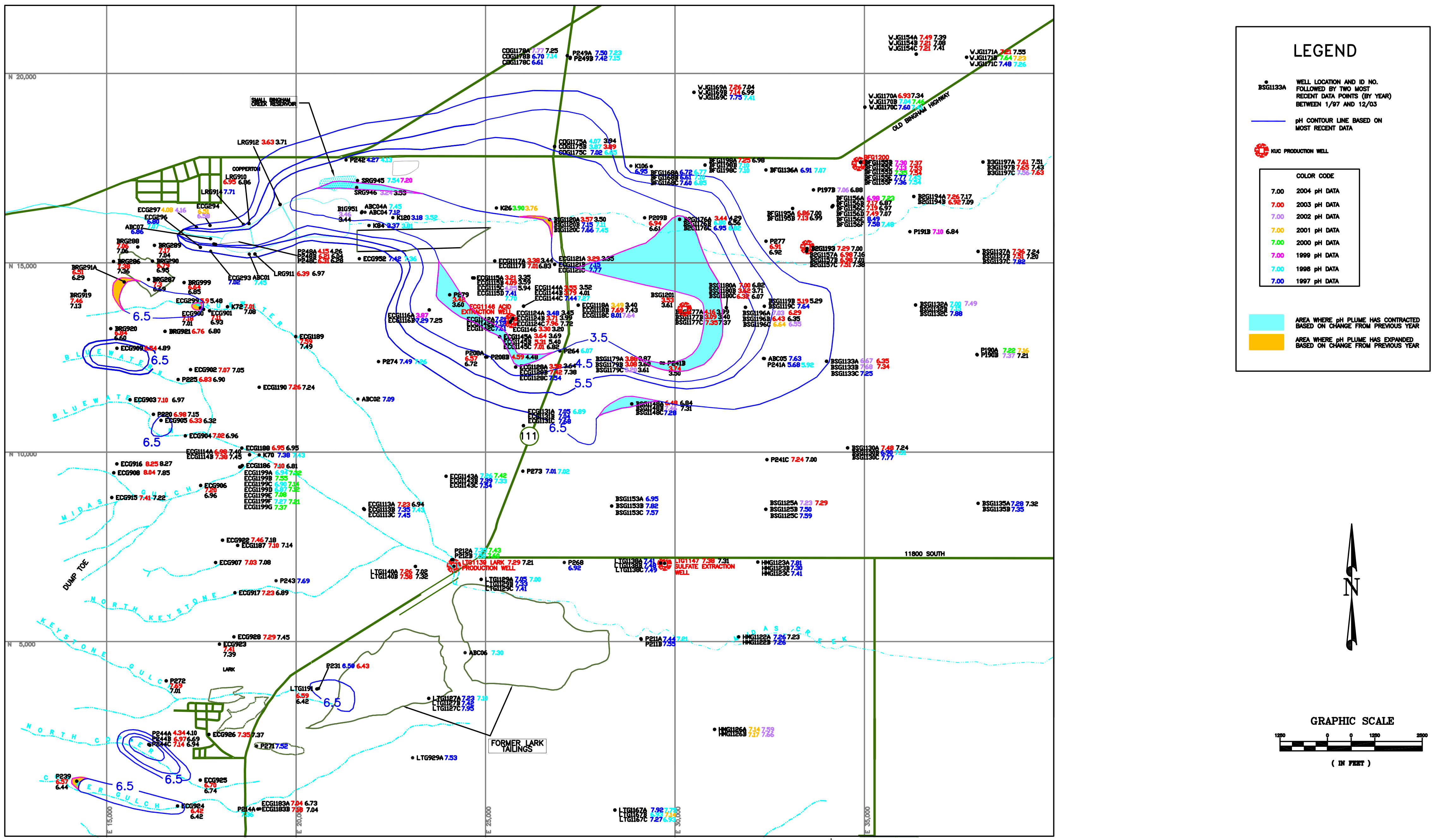


Figure 3.13 Well ECG1119B Aluminum Concentration





COORDINATES SHOWN ARE IN KENNECOTT TRUE NORTH GRID

STRATEGIC RESOURCES GROUP		KENNECOTT UTAH COPPER
SCALE:	DATE	FIGURE 3.14 pH CONTOURS AND TWO MOST RECENT MEASUREMENTS BETWEEN 1/97 TO 12/04
DESIGNED BY LBE	1/20/05	
DRAWN BY LBE	4/12/05	
CHECKED BY		
PROJECT ENGINEER		
PROJECT MANAGER KLP		Job No. --- Dwg. No. 454-T-0169 REV 1 REV. DATE 6/10/05

Figure 3.15 Well ECG1115B pH

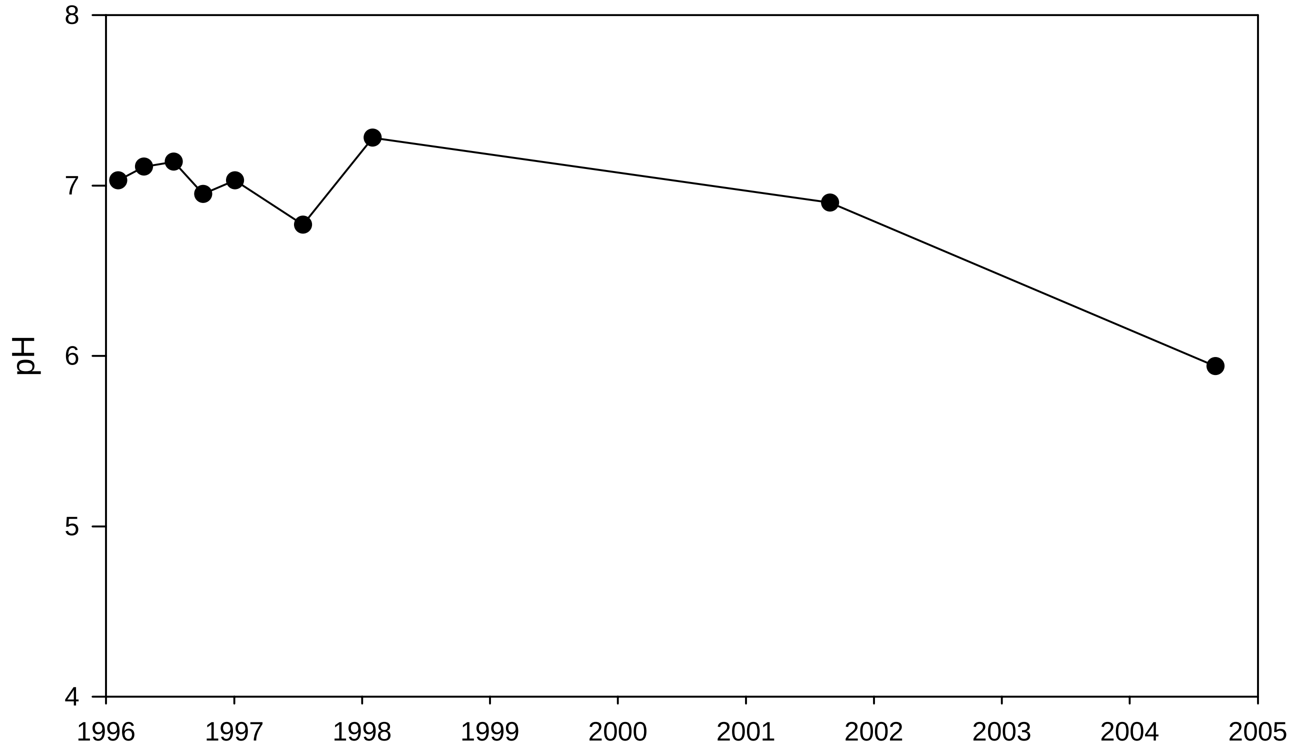


Figure 3.16 Well ECG1115C pH

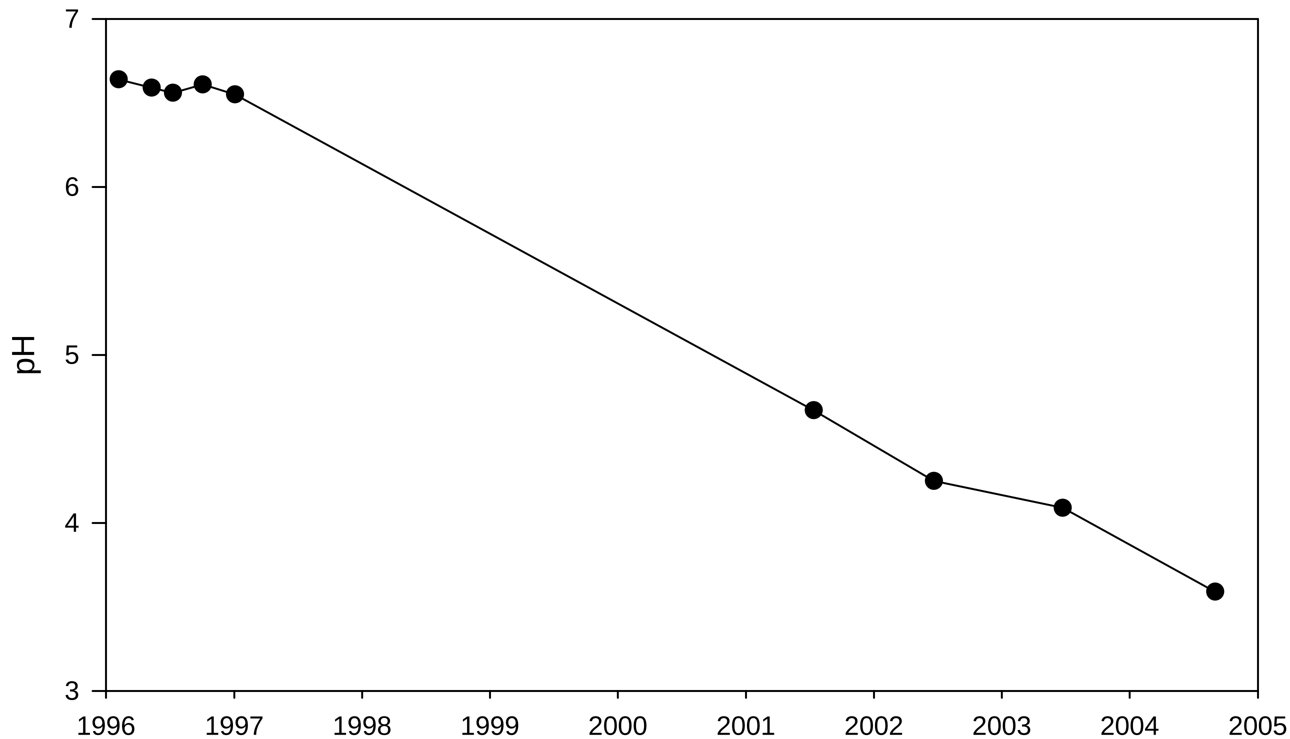


Figure 3.17 Well ECG1124B pH

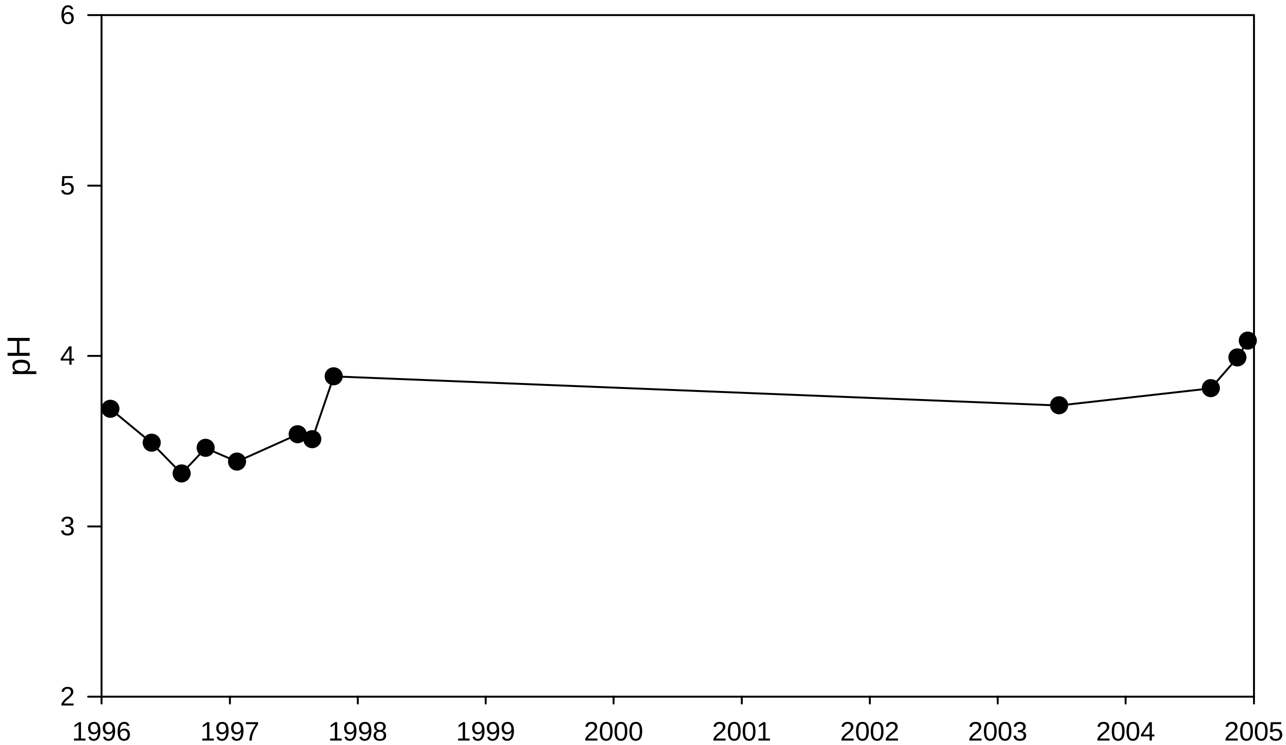


Figure 3.18 Well ECG1145A pH

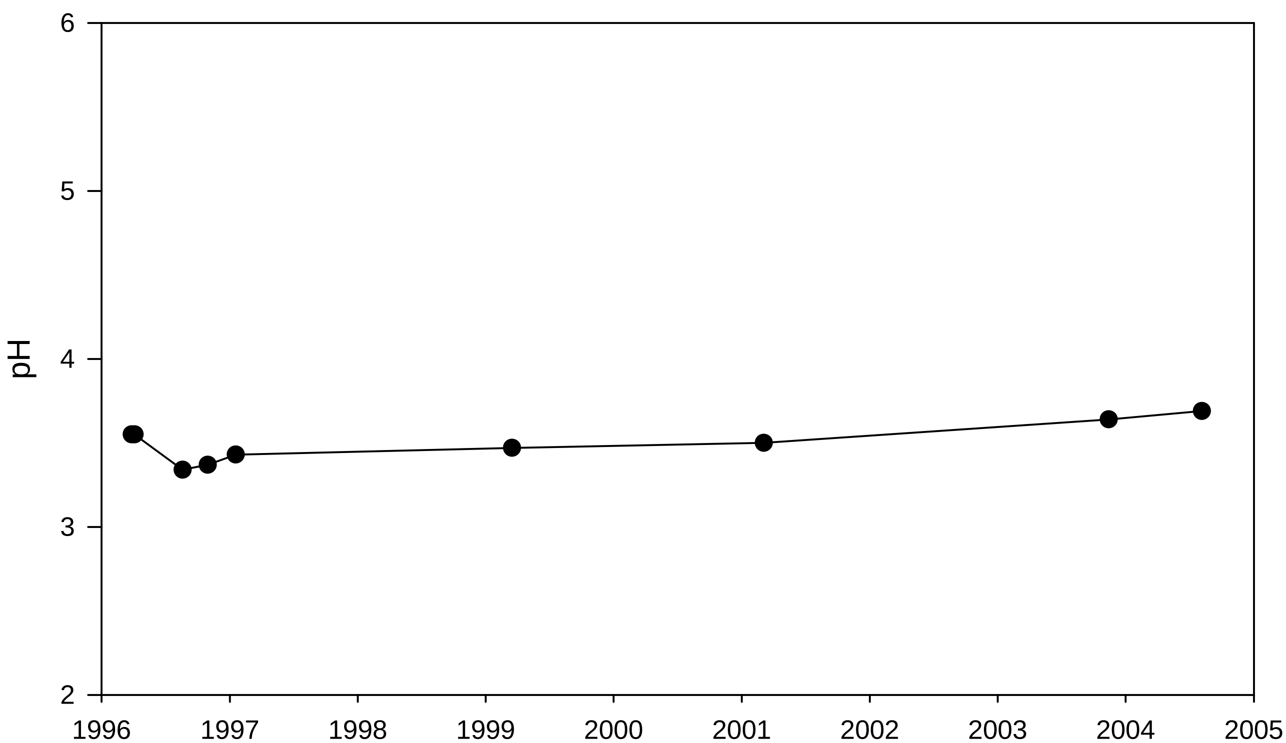


Figure 3.19 Well BSG1148A pH

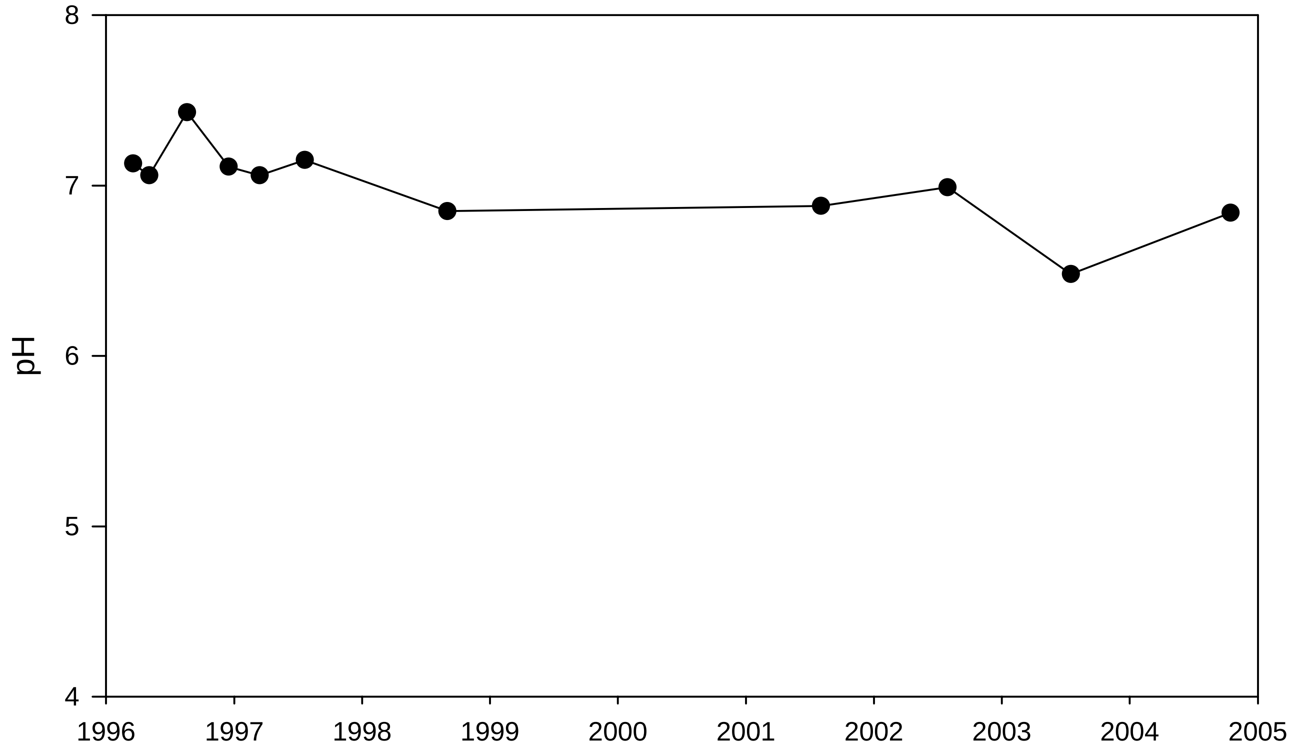
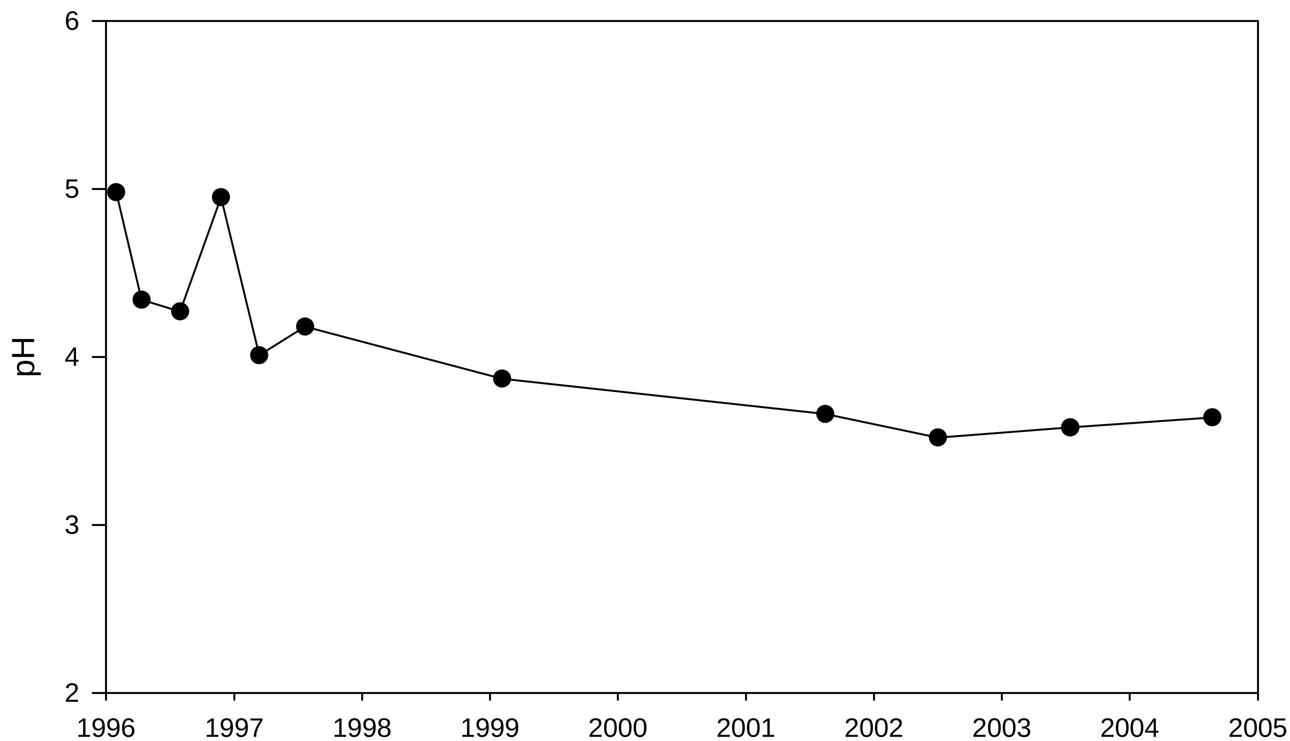


Figure 3.20 Well ECG1128A pH4



4. GROUNDWATER ELEVATION

KUCC gathers water level data to 1) assess groundwater gradients and flow paths, which are used in ongoing planning and evaluation, and 2) assess the effects of groundwater extraction on water table elevation.

The RDRA Monitoring Plan (KUCC 2002, Section 3.2.3) designates 317 wells for water level monitoring according to the following schedule:

1. Annual monitoring of all wells (occurs in September)
2. Springtime monitoring of shallow completions (occurs in April)
3. More-frequent monitoring around pumping wells.

The April measurements are taken before seasonal pumping of non-KUCC production wells begins. The September measurements show water levels at the end of the irrigation season but while large production wells in surrounding communities were still pumping. Water level monitoring data are reported in Appendix B.

4.1 Groundwater Gradient

Water table elevation data are presented on Figure 4.1 for April 2004 and Figure 4.2 for September 2004. The water-table gradient in the southwestern Jordan Valley drops steeply from the east side mine waste-rock dumps eastwardly, to approximately 2000 feet east of Highway 111. The water table shows an abrupt flattening from there to approximately 3000 feet to the east, and then becomes steep again to the easting of the KUCC production wells. The gradient is again flatter from the production wells east to the KUCC property line. Variations in the water table due to production well pumping are observed locally.

4.2 Water-Table Changes

Changes in water levels for the April 2004 and September 2004 measuring events compared to the previous year are shown on Figures 4.3 and 4.4.

4.2.1 April 2003 to April 2004

There were 149 wells monitored in both April 2003 and April 2004. These wells are the single completion wells and the first completion or highest elevation of nested wells within the study area. One hundred twenty-two of these wells show a drop in the water level between April 2003 and April 2004.

Twenty of the 27 wells that showed an increase in the depth to water between April 2003 and April 2004 are located just to the east of the waste rock piles with the majority of these wells located in the Lark area. The remaining seven wells are scattered across the investigation area with two in Herriman, two near the former Evaporation Ponds site and three in the vicinity of the clean water well LTG1139.

The largest water level drops (>10 feet) are in wells located in the vicinities of production wells LTG1147 and BSG1201. The zone of water level decline from the pumping of these two wells covers an area that is approximately 17,000 feet north - south between WJG1169 on the north and HMG1126 on the south and 4,000 to 5,000 feet east to west roughly mimicking the area between the 4650 and 4750 potentiometric contour shown on Figure 4.1.

Decreases in the water table of between 1 to 4 feet extend approximately 27,000 feet south from the West Jordan Well field north-most well, W420, to monitoring well W131A. This area is influenced by the pumping of the Kennecott production wells B3G1193, BFG1200, and the West Jordan wells. This decline roughly mimics the area between the 4,600 and 4,650 potentiometric contour shown on Figure 4.1.

Pumping from acid extraction well ECG1146, located to the west of acid extraction well BSG1201 has dropped the water table approximately 2 to 8 feet over an area covering approximately 6500 feet north-south by 3000 feet east-west. The area seeing water table decline influenced by this well roughly mimics the area between the potentiometric contours of 4,850 and 5,000 as shown on Figure 4.1.

There is a small drop (3 feet) in the water table as a result of pumping from the clean water production well LTG1139 located near the intersection of State Highway 111 and 11800 South. The zone of influence of this of this well is approximately 1000 feet by 3000 feet.

There are two smaller areas located to the immediate east of the waste rock piles where the water table has dropped up to 6 feet. These decreases are localized and are generally defined by only two to three wells. These may be a result of the cessation of leaching operations in October 2000.

4.2.2 September 2003 to September 2004

There were 282 wells monitored in both September 2003 and September 2004. These include most of the wells in the study area including all completions of nested wells. Two hundred thirty-five of these wells show a drop in the water level between September 2003 and 2004.

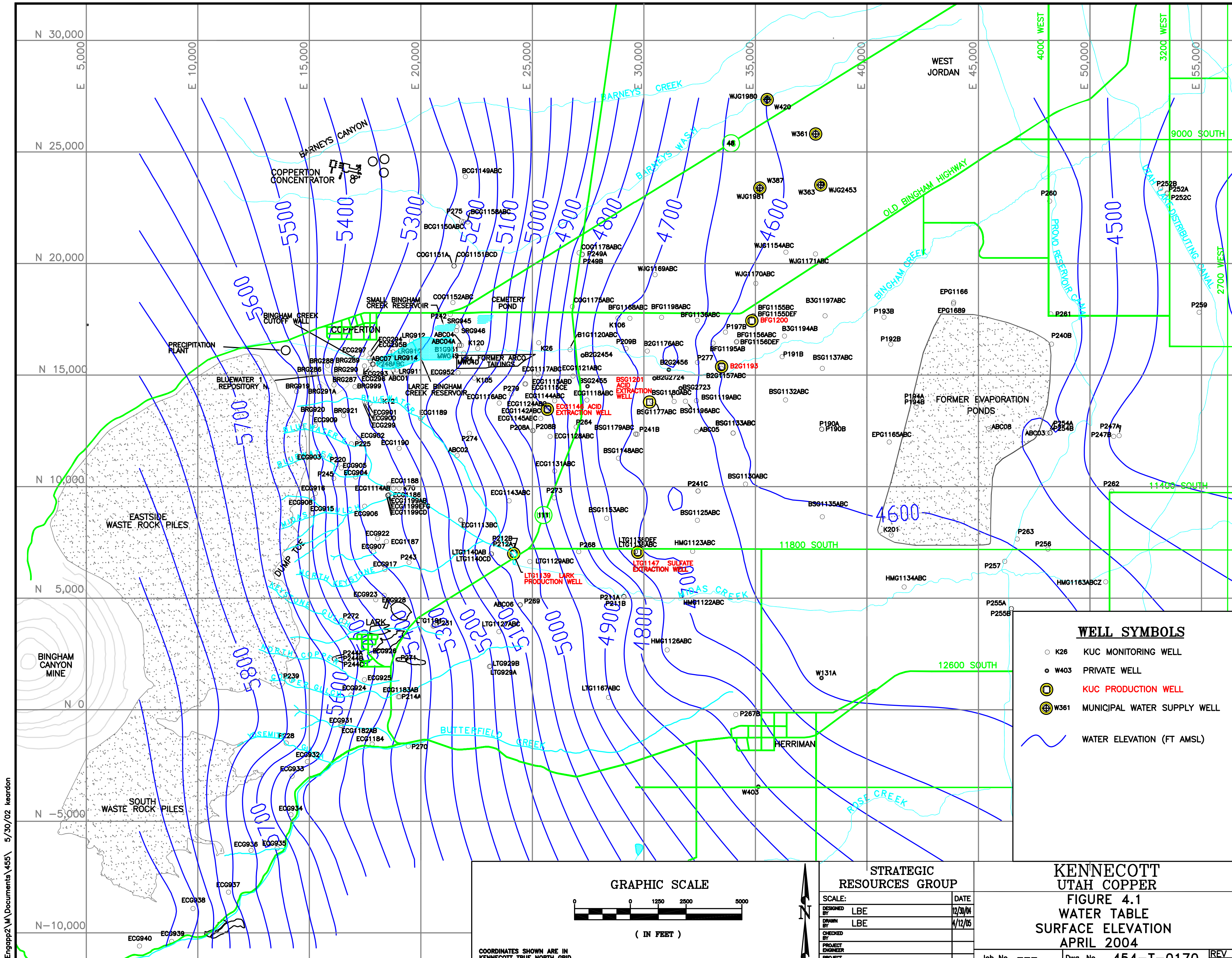
Water level changes between September 2003 and September 2004 are similar to the changes observed from April 2003 to April 2004; however, the water table drops are much greater. Decreases up to 30 feet were recorded in the immediate vicinity of sulfate extraction well LTG1147 and the clean water production well LTG1139 and decreases of 15 and 14 feet in acid extraction wells ECG1146 and BSG1201, respectively. On the north, the zone of influence of the Kennecott production wells BFG1200 and B2G1193 has deepened slightly particularly in the area to the immediate east and southeast of these wells. Drawdown in this area is also attributed to summer-time pumping by West Jordan.

Collectively the water table has dropped due to pumping over an area covering approximately 25,000 feet north to south and 25,000 feet east to west.

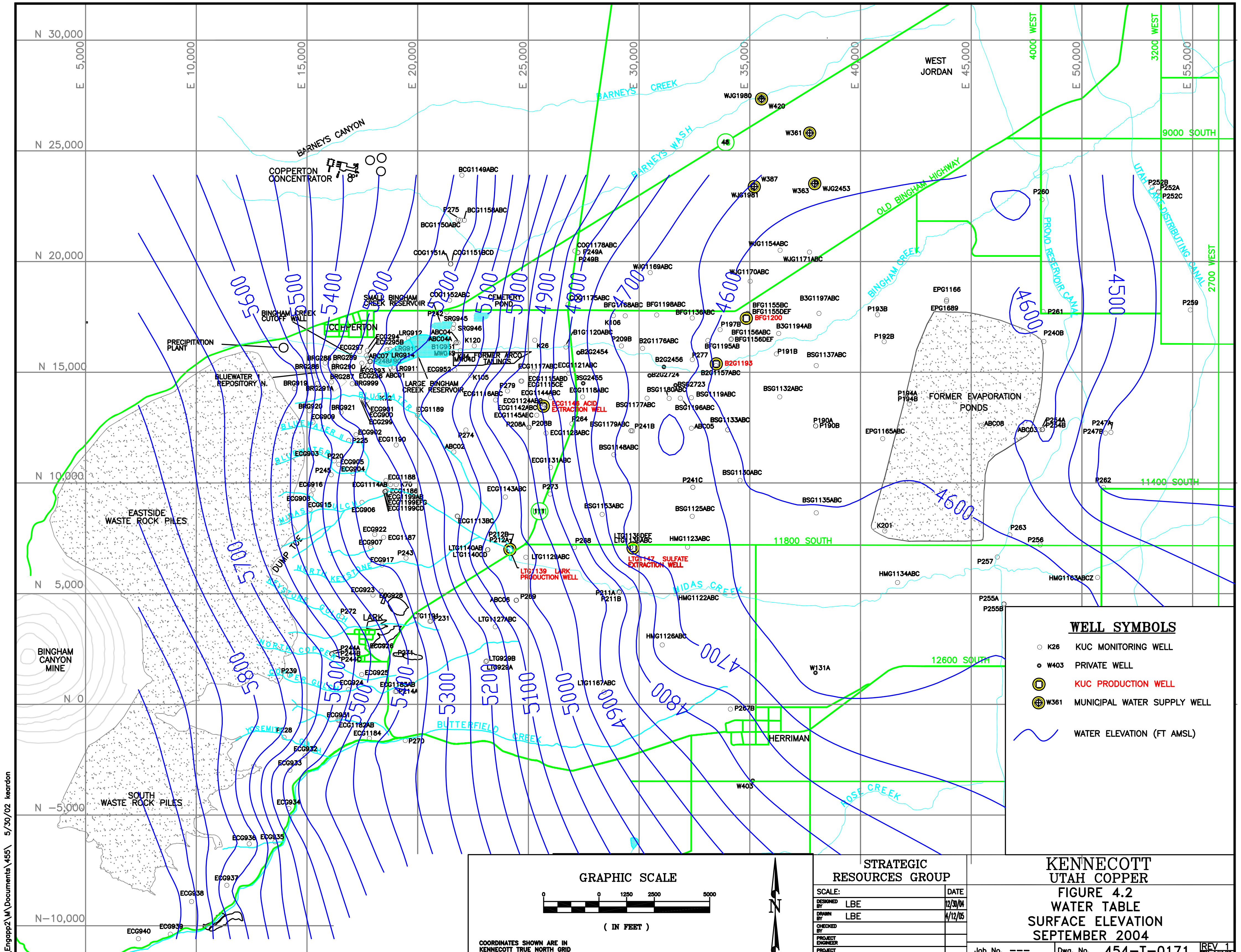
Many of the changes seen in the LTG1147, LTG1139, and Herriman area are due to pumping that was taking place in and up to September 2004 that did not take place in and up to September 2003. Production wells that influenced the drop in this area are LTG1147, LTG1139, and Herriman's new production well. It should be noted that later in 2004, production at LTG1139 and LTG1147 decreased dramatically.

Although there are few monitor wells for this investigation in the Herriman area, there appears to be a marked drop in the water table in this area. It is suspected that increased pumping from a municipal well in Herriman is responsible for this change.

There are some areas located to the immediate east of the Kennecott waste rock piles where the water table has risen in the last year. Changes of up to 4 feet in the Bluewater 1 Repository area and changes of up to 2 feet from the repository south to Butterfield Canyon have been measured.



KENNECOTT
UTAH COPPER
FIGURE 4.1
WATER TABLE
SURFACE ELEVATION
APRIL 2004
STRATEGIC
RESOURCES GROUP
Dwg. No. 454-T-0170
GRAPHIC SCALE
(IN FEET)
COORDINATES SHOWN ARE IN
KENNECOTT TRUE NORTH GRID
WELL SYMBOLS
K26 KUC MONITORING WELL
W403 PRIVATE WELL
KUC PRODUCTION WELL
W361 MUNICIPAL WATER SUPPLY WELL
WATER ELEVATION (FT AMSL)
BINGHAM CANYON MINE
EASTSIDE WASTE ROCK PILES
SOUTH WASTE ROCK PILES
COPPERTON CONCENTRATOR
COPPERTON
FORMER EVAPORATION PONDS
WEST JORDAN
HERRIMAN
LARK



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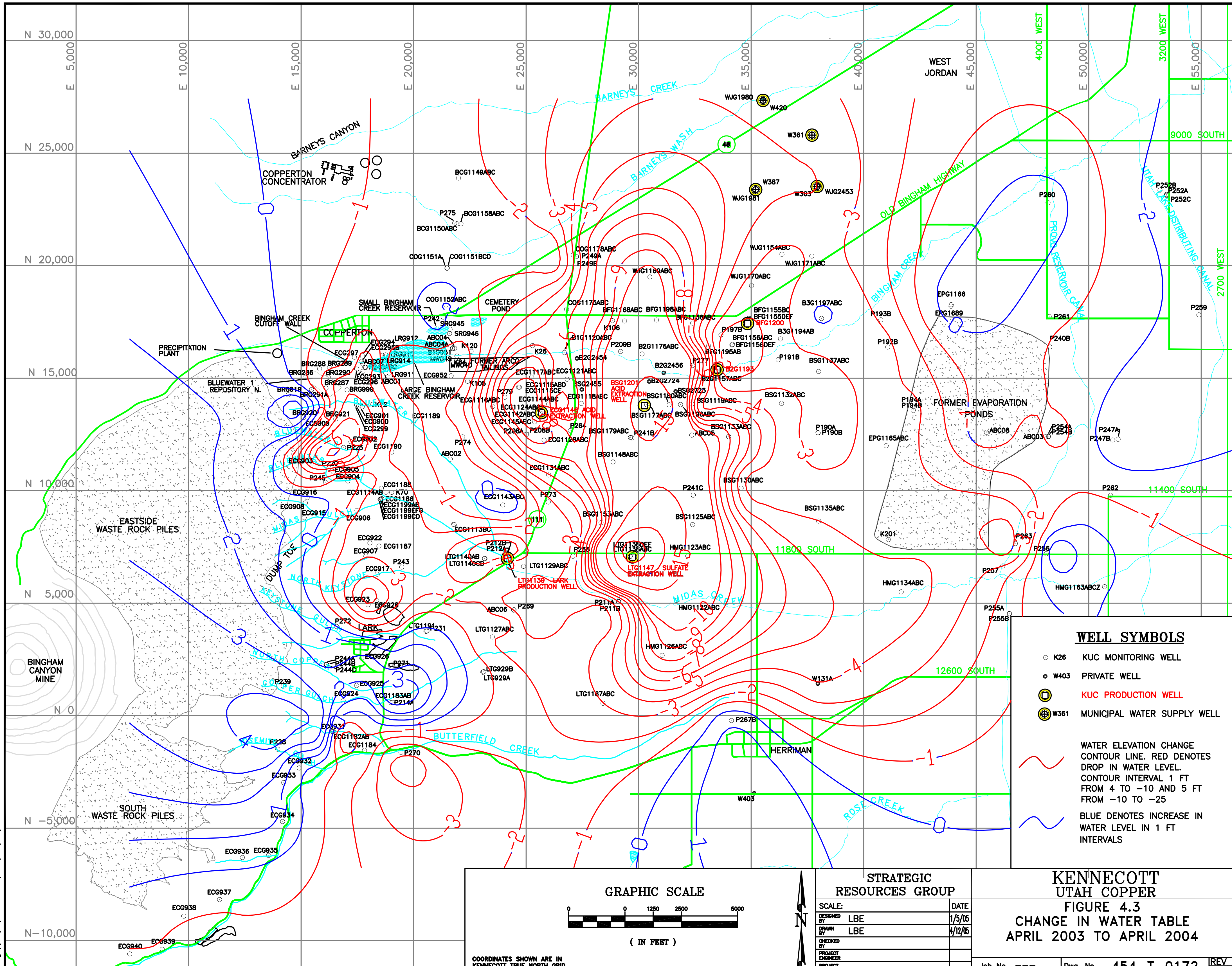

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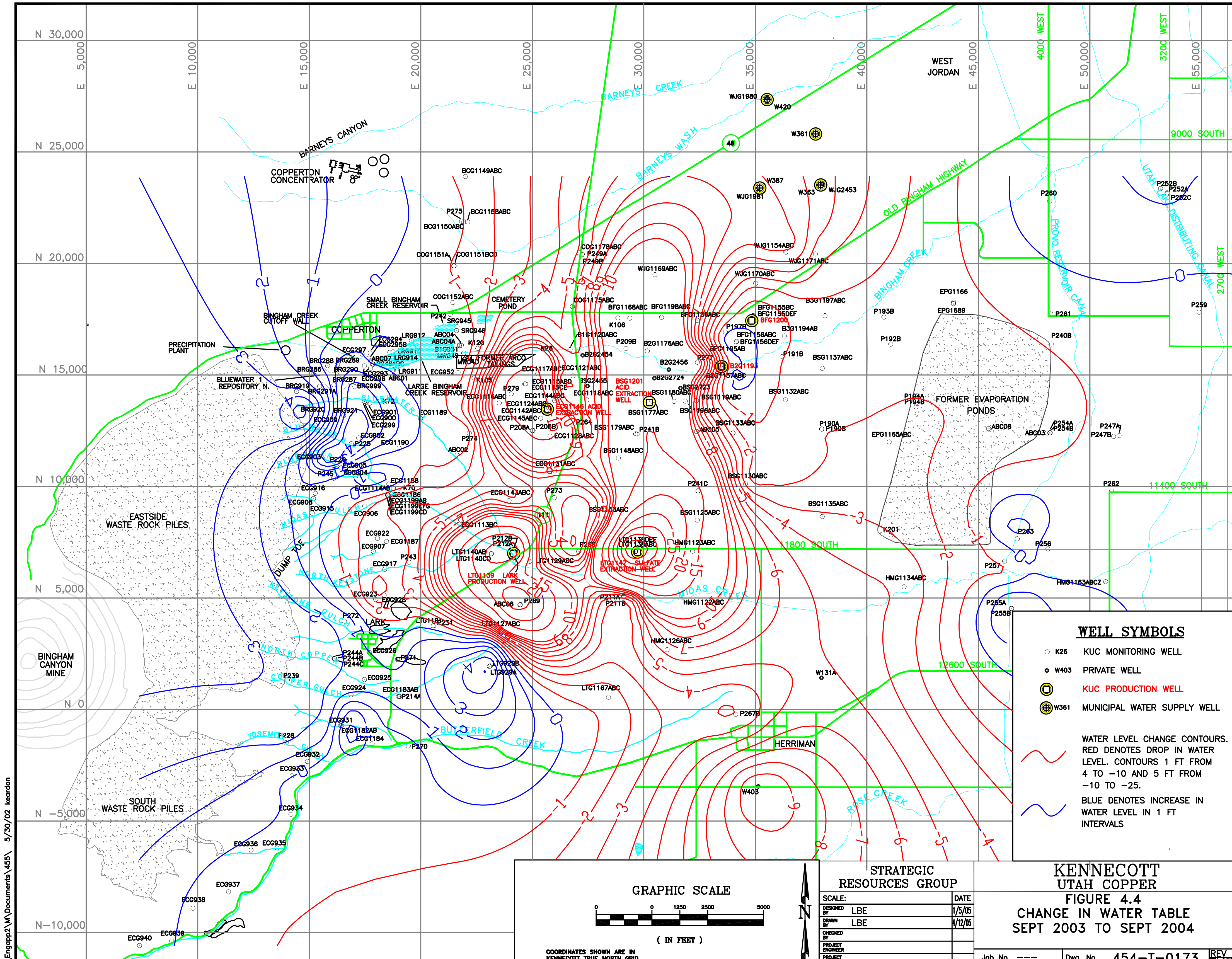

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5. SUBSIDENCE

The RDRA Monitoring Plan calls for measuring ground surface elevation in Zone A to assess possible ground subsidence caused by groundwater extraction from the plume area. KUCC monitored ground elevation at seven survey sites in December 2002 and March 2004.

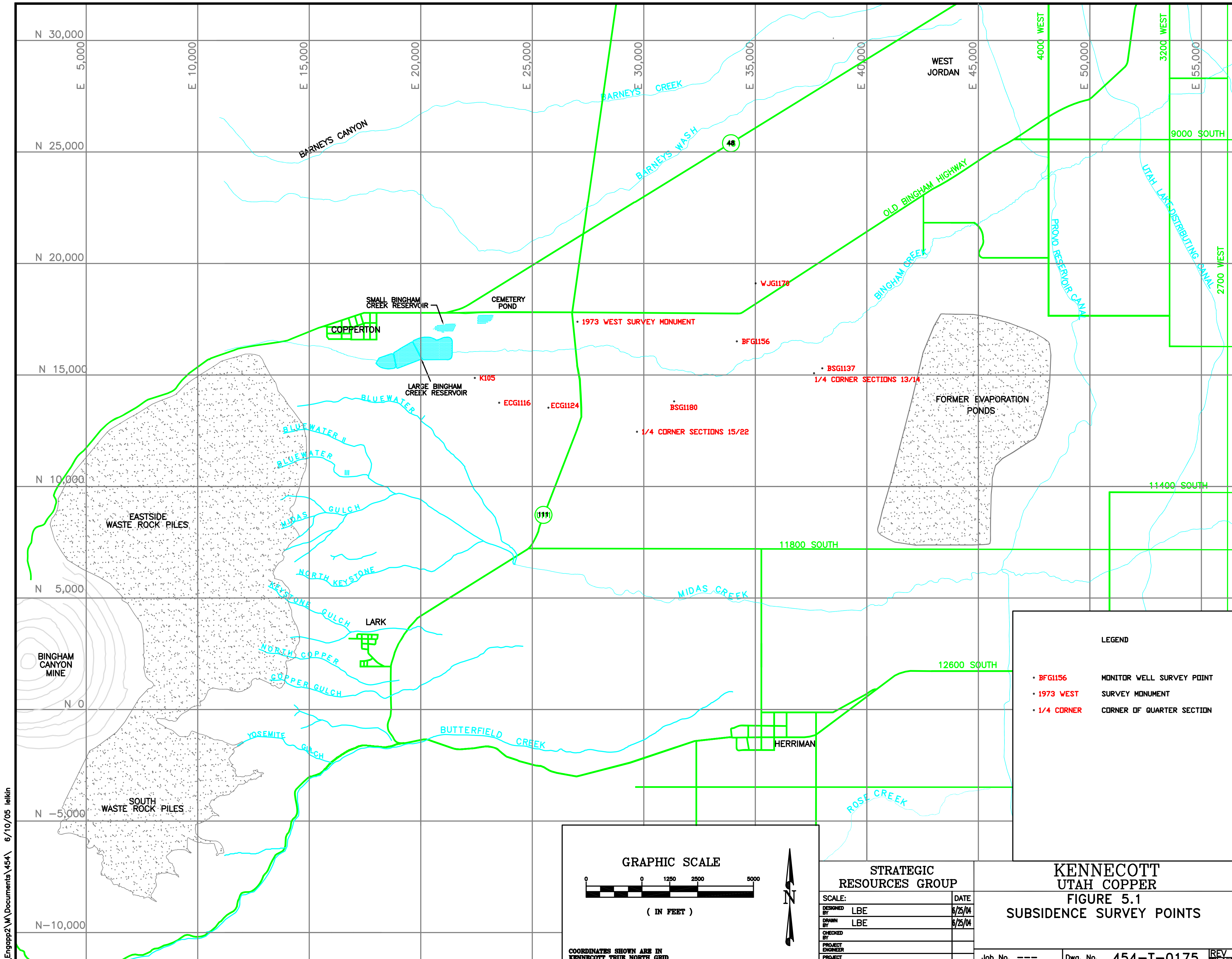
Seven wells were chosen as survey sites. Six of the selected sites are located in or near the plume core and one site is located south of the West Jordan well field. Each well has a cement pad that surrounds the steel surface casing and each pad has a steel bolt cemented into it. The steel bolt was the survey point for six of the wells. The seventh well was surveyed on top of the steel surface casing. Three additional survey sites were added for the March 2004 survey. These include two quarter-section corners (Township 3S, Range 2W, Sections 13/14 and Sections 15/22) and one survey monument (1973 West). These sites are also located near the plume core area. Survey site locations are shown on Figure 6.1.

The sites were surveyed using a global positioning system (GPS) unit (Leica System 530). The degree of accuracy of this GPS unit is approximately 0.25 centimeters (0.098 inches or 0.008 feet). Table 6.1 lists the surveyed points, the survey data and shows the change in elevation between the two survey events.

The data show no notable ground elevations changes. Three of the surveyed sites were higher in elevation in March 2004 than in December 2002. The site with the greatest change was 0.150 feet lower in March 2004 than December 2002. This site is monitor well WJG1170 located to the south of the West Jordan well field and north of the KUCC production wells. The elevation changes for the other six sites were between 0.041 feet lower and 0.046 feet higher for the March 2004 survey.

Table 5.1 Subsidence Survey Data (Elevation Feet AMSL)

Site	12/19/02	3/11/04	Difference
ECG1116	5318.519	5318.518	-0.001
ECG1124	5250.985	5250.969	-0.016
BSG1137	4941.591	4941.549	-0.041
BFG1156a	4997.262	4997.275	0.013
WJG1170	4968.166	4968.016	-0.150
BSG1180	5078.004	5078.010	0.005
K105	5341.950	5341.996	0.046
1973 West	---	5205.333	---
1/4 Section 13/14	---	4943.947	---
1/4 Section 15/22	---	5104.350	---



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6. TAILINGS CHEMISTRY

KUCC manages groundwater extracted from the acid plume and other mining-affected waters in the tailings pipeline and the North Tailings Impoundment. Other waters managed in this circuit include meteoric drainage from the Eastside Collection System, RO concentrate from treatment of the Zone A sulfate plume, and water from dewatering of the mine pit. Acid plume water, meteoric leach water, and RO concentrate are commingled in and pumped through the Wastewater Disposal Pump Station (WDPS) to the beginning of the tailings pipeline. The mine dewatering flows are pumped directly to the process circuit through two different lines.

KUCC monitors the chemistry of the tailings system in real time to assure that acid plume waters and other mining-affected waters do not adversely impact the process water system or the long-term acid-generating potential of the tailings.

6.1 Performance Criteria

With respect to the disposal of acid waters in the tailings system, the RDRA proposed performance criteria. The rationale for the performance criteria is provided in Section 3 of the RDRA Report and elaborated with supporting data in Appendix C to that report. The performance criteria are listed below.

6.1.1 Flow

When fully operational, the tailings process circuit must be able to handle the following maximum flows with 90% availability:

- Tailings: 120,000 to 200,000 tpd
- Acid Plume Water: 1000 to 2500 gpm
- Meteoric Leach Water: 800 to 1,500 gpm
- Zone A RO Treatment Concentrates: 600 to 800 gpm

6.1.2 Solution Chemistry in the Tailings Line

The system must be able to maintain a fluid pH of 6.7 or greater as measured at the North Splitter Box (Sample Point MCP2536) with 90% availability to ensure dissolved metal precipitation and sequestration in the tailings impoundment.

6.1.3 Integration with Tailings Disposal System

KUCC will meet all UPDES discharge criteria at Outfall 012 from the North Impoundment to Great Salt Lake (or other permitted outfalls).

If the monthly average Net Neutralization Potential (NNP), calculated using the Modified Sobek Procedures, of the Copperton Concentrator General Mill Tailings (GMT) is less than 5 t $CaCO_3$/kt or if the Neutralization Potential Ratio (NPR) is less than 1.1, then the average monthly NNP of samples collected from the tailings North Splitter Box (NSB; an accessible point near the end of the tailings line) must have an NNP and NPR that are equal to or higher than the Copperton Mill Tailings for the month.

If the monthly average NNP of the Copperton Concentrator GMT is greater than 5 t CaCO3/kt or the NPR is more than 1.1, then the average monthly NNP of tailings samples collected from the NSB must have an NNP of at least 5 t CaCO3/kt.

The monthly NNP value will be determined based on a rolling six-month average from monthly composite samples collected at the GMT and tailings impoundment discharge locations.

6.2 Flow and Tailings pH

KUCC continuously monitors pH at the North Splitter Box and flow through the WDPS. Daily data for 2003 and 2004 are reported in Appendix C. These data are plotted on Figures 6.1 and 6.2 using a 7-day rolling average. Also plotted on these figures is ore throughput through Copperton Concentrator which directly correlates to tailings production reporting to tailings line. The correlations between WDPS flow, mill throughput, and tailings pH are readily apparent in these graphs.

The data presented in Appendix C and Figures 6.1 and 6.2 indicate that the tailings process circuit can routinely handle flows that meet or exceed the stipulated criteria. The Remedial Design specified the ability to handle acidic flows from WDPS up to 3,500 gpm. During 2003 and 2004, the system readily managed flows up to 6,500 gpm. There are operational interruptions, including scheduled events such as Concentrator maintenance and unscheduled interruptions due to power failures. In all cases, the flow cutoff is rapid; the system re-builds flow in an orderly manner; and the operational conditions are re-established rapidly.

The monitoring data show that the tailings process circuit maintained the pH at North Splitter Box above pH 6.7 for at least 362 of 365 days in 2003. This is 99.2% availability, greatly exceeding the design-basis 90%-availability requirement. In 2004, the pH at the North Splitter Box was above 6.7 each day, achieving 100% availability.

6.3 Tailings Chemistry

As required by the monitoring program described in the Remedial Design Report (KUCC, 2002, Section 3.4.2.4, p. 67), KUCC collects aqueous metals concentrations in tailings at NSP to confirm that the geochemical processes identified during the Remedial Design investigations are maintained.

There are no numeric criteria for the specific chemical conditions – other than pH and NNP – within the process circuit. Inspection of the data presented in Appendix C shows that the pH-driven solubility controls on dissolved metals identified in laboratory and field-scale pilot testing continue to operate.

6.4 UPDES Permit Compliance

KUCC maintained compliance with discharge limits for metals concentrations during 2003 and 2004 with the exception of a daily and monthly exceedance for arsenic in March 2004. This exceedance was attributed to an operational upset rather than acid water treatment.

6.5 Tailings Net Neutralization Potential

KUCC monitors NNP monthly in general mill tailings (GMT), which provides tailings neutralization characteristics prior to introduction of acid water flows, and NNP at the North Splitter Box (NSB), which shows the characteristics of reacted tailings. These data are used to measure performance against performance criteria and assess the impact of acid water neutralization on the long-term acid rock drainage potential of the tailings.

Monthly and 6-month rolling average NNP data are presented in Table 6.3 and plotted in Figures 6.3 and 6.4. What is observed in these data are some months in which the NNP value at NSB is greater than that at GMT and other months in which GMT is greater. There is no general trend of these results, neither with respect to time, nor with the value of NNP. Applying the tests listed in Section 6.1 indicates that the performance criteria were met less than half of the months during 2003 and 2004. However, despite some failing of the performance criteria, KUCC is convinced that utilization of tailings for acid water treatment had not prejudiced the long-term acid generating potential of the tailings. Rather, KUCC holds that the criteria were not appropriately structured to allow for analytical uncertainty in measuring NNP.

The analysis of a broader data set which leads to the conclusion that acid water addition to tailings is not impacting the acid-generating potential of the tailings is presented in Appendix D. Factors which support this conclusion are:

1. Gross acidity of the combined acid flows reporting to the tailings line has decreased by approximately 30% since the Remedial Design period indicating lower neutralization demand by the acid flows.

2. There has been no discernible change in the aqueous alkalinity of the tailings. However, a comparison of tailings production shows that the operational ore processing has increased by 50% since the period of the Remedial Design, and slurry water has increased from approximately 13,000 gpm in 2001 to 28,000 gpm in 2004. Thus the total aqueous alkalinity of un-reacted tailings has increased by more than 100%.

3. The absolute values of neutralization potential (a component of NNP) measured at GMT and NSB are randomly distributed with respect to one another, and there is there is no meaningful difference between the empirical distributions.

4. The alkalinity at NSB has remained within the range of alkalinity during the Remedial Design period, and there is excess aqueous alkalinity present at NSB capable of buffering the solution pH to circum-neutral.

Table 6.1 Tailings NNP (t $CaCO_3$ eq/1000 t)

	Monthly		6-Month Average	
	GMT	**NSP**	**GMT**	**NSP**
Jan-03	2	3	2.0	3.0
Feb-03	-2	3	0.0	3.0
Mar-03	-1	-4	-0.3	0.7
Apr-03	-10	-3	-2.8	-0.3
May-03	-10	-9	-4.2	-2.0
Jun-03	7	7	-2.3	-0.5
Jul-03	1	-3	-2.5	-1.5
Aug-03	-2	-1	-2.5	-2.2
Sep-03	6	6	-1.3	-0.5
Oct-03	15	10	2.8	1.7
Nov-03	22	10	8.2	4.8
Dec-03	9	2	8.5	4.0
Jan-04	15	5	10.8	5.3
Feb-04	2	-2	11.5	5.2
Mar-04	5	2	11.3	4.5
Apr-04	7	9	10.0	4.3
May-04	2	8	6.7	4.0
Jun-04	-6	-6	4.2	2.7
Jul-04	-4	-9	1.0	0.3
Aug-04	4	3	1.3	1.2
Sep-04	5	-1	1.3	0.7
Oct-04	12	15	2.2	1.7
Nov-04	-11	-8	0.0	-1.0
Dec-04	21	15	4.5	2.5

In light of this discussion, KUCC proposes to amend the performance criteria of the Remedial Design relative to integration with the Tailings Disposal System. The essence of this proposal is a more meaningful metric—neutralization potential (NP) rather than net neutralization potential (NNP)—and a provision for uncertainty in analytical measurements.

NNP is defined as the difference between Neutralization Potential (NP) and Acid Generating Potential (AP):

$$NNP = NP - AP$$

NP and AP are two separate analytical measurements. The analytical uncertainty in NNP values is the combined uncertainty of these measurements. AP is based on a measurement of the sulfide-sulfur content of a solid sample. The quantity of solid-form sulfide sulfur in tailings is not expected to change as a result of acid water addition. The only effect of acid water addition can be a reduction of NP. Thus, KUCC proposes using NP as a performance metric to eliminate the added uncertainty associated with AP determinations.

The estimated precision of the NP value measured in tailings samples to date is approximately 2 t $CaCO_3$ eq/kt, based on an acceptable RPD of +/- 10% for Sobek NP and detection limits for total inorganic carbon. Thus, KUCC's proposed criteria for integration with the tailings disposal system are as follows:

1. KUCC will meet all UPDES discharge criteria at Outfall 012 from the North Impoundment to Great Salt Lake (or other permitted outfalls).

2. The monthly Neutralization Potential (NP) value of samples collected from the tailings North Splitter Box must be either greater than or equal to the NP of Copperton Mill Tailings for the month or at least 5 t CaCO3eq/kt. The monthly NP value will be determined based on a rolling six-month average from monthly composite samples collected at the GMT and tailings impoundment discharge locations. In making comparisons, the uncertainty in both GMT and NSB will be taken to be 10% of the average value, and a significant difference must lie outside the joint uncertainty.

3. The aqueous pH at North Splitter Box must be greater than or equal to 6.7 with 90% availability over a calendar year and the aqueous alkalinity must be greater than or equal to 10 mg CaCO3eq/L with 90% availability over a calendar year. These parameters, too, will be evaluated as rolling six-month averages.

Figure 6.1 2003 Tailings Circuit Monitoring Data (7-Day Average)

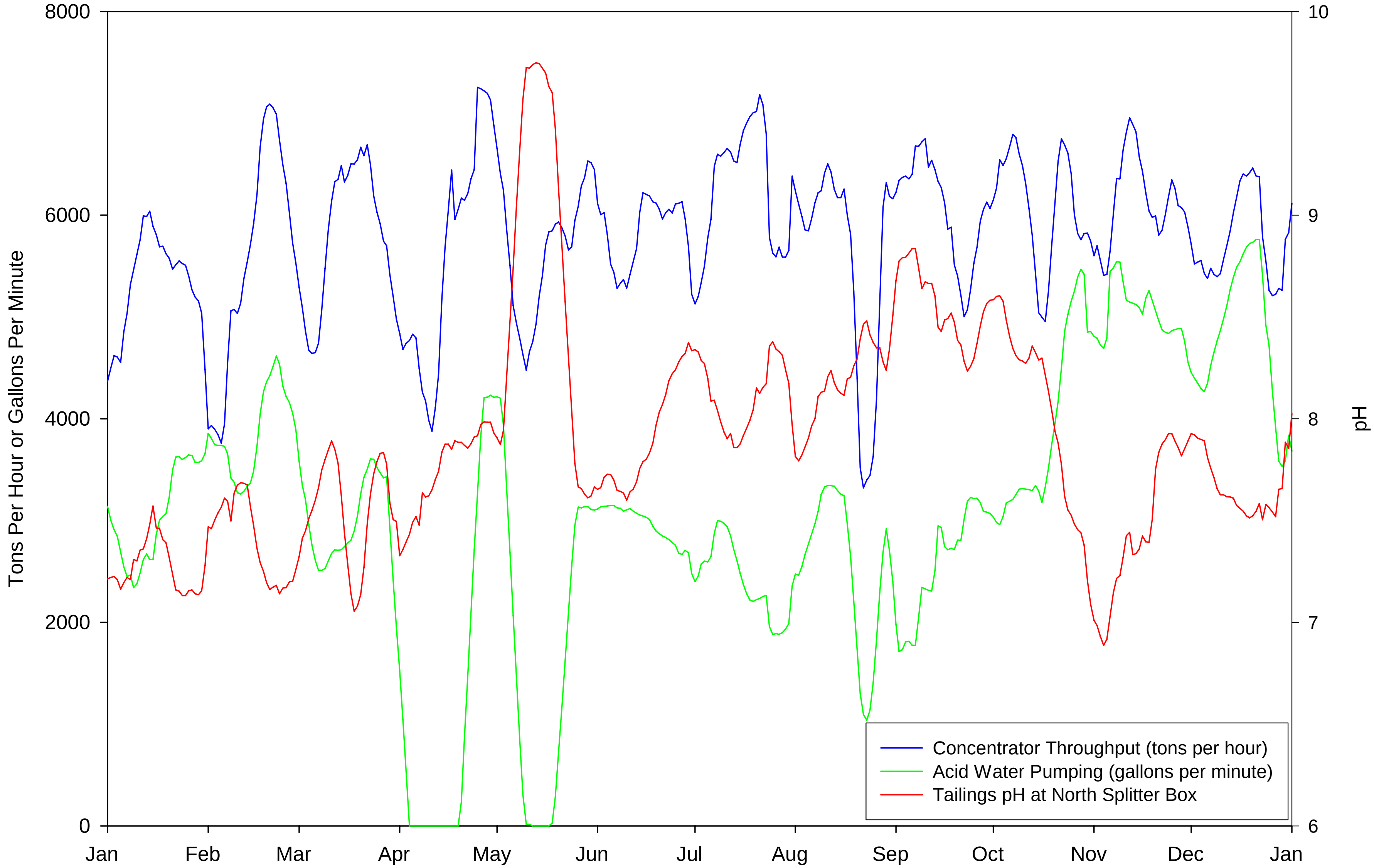


Figure 6.2 2004 Tailings Circuit Monitoring Data (7-Day Average)

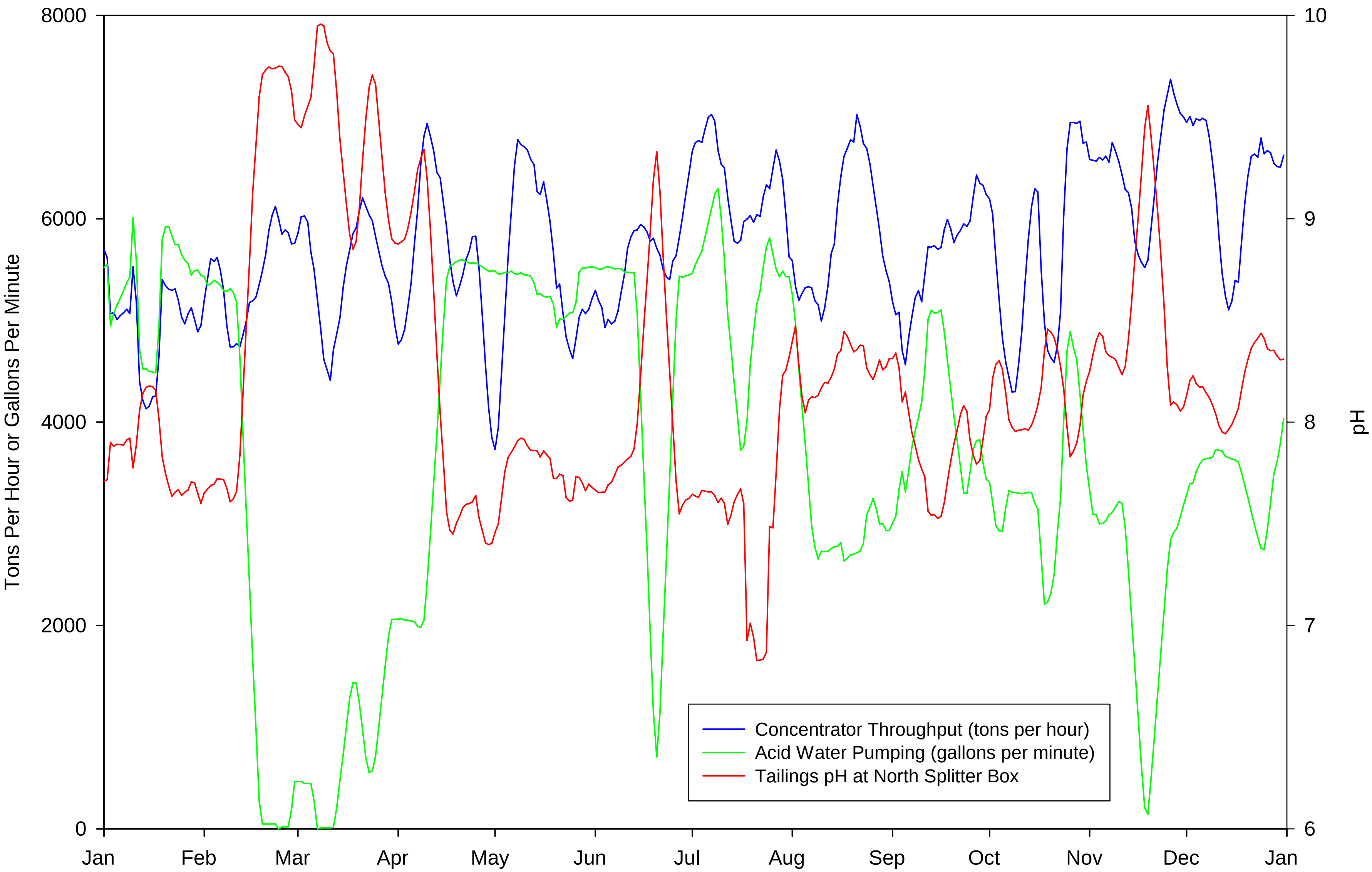


Figure 6.3 Tailings Net Neutralization Potential Data

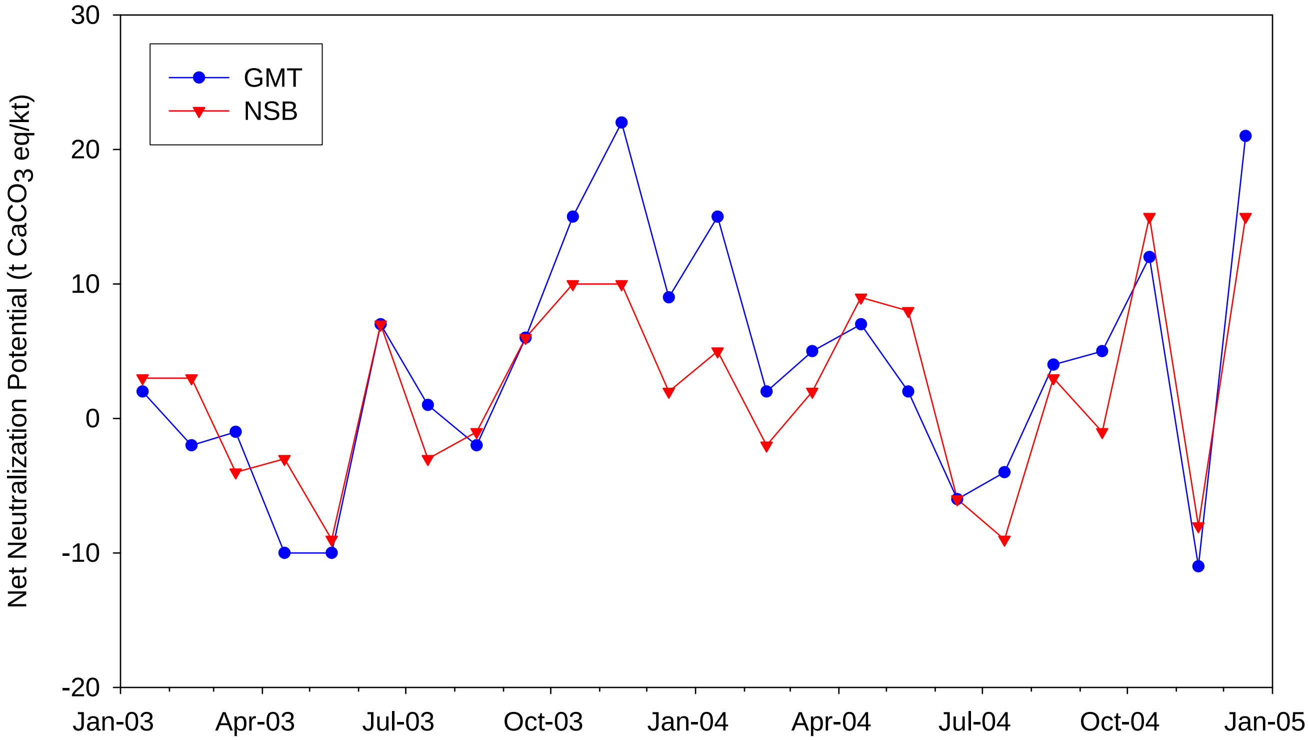
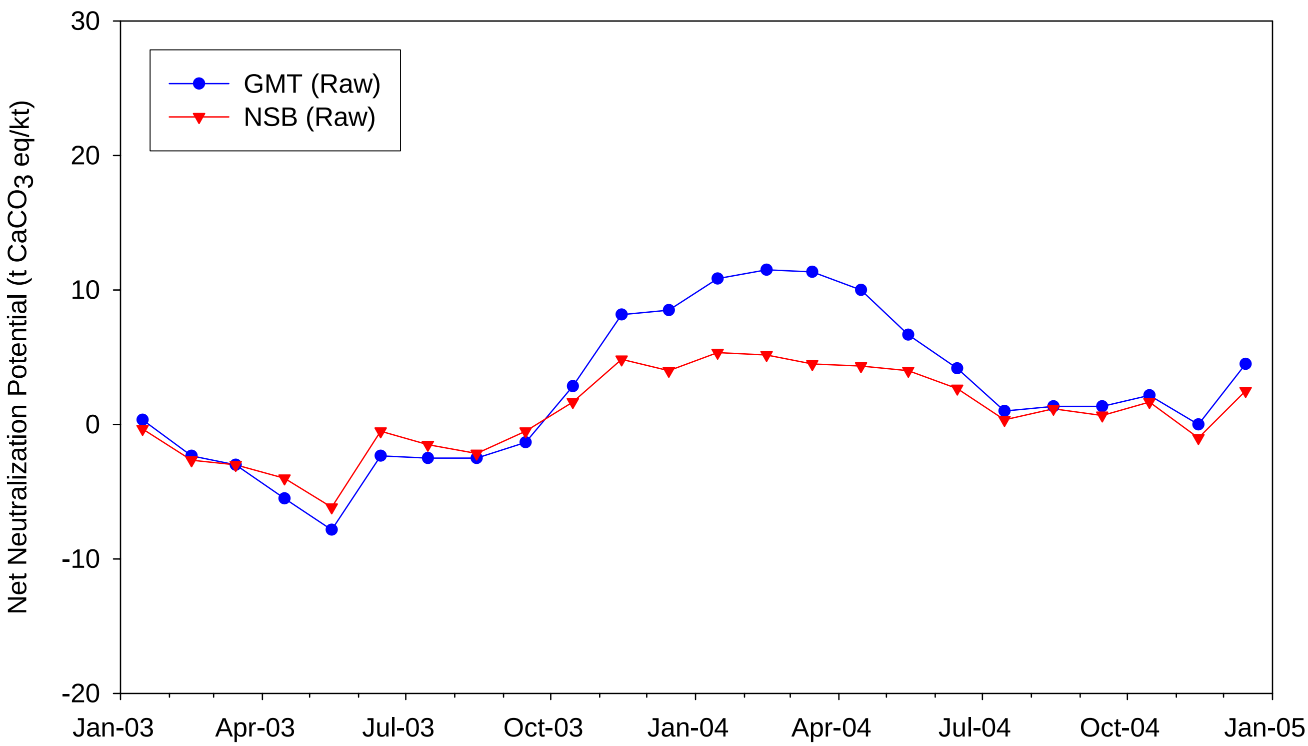


Figure 6.4 6-Month Average Tailings Net Neutralization Potential Data



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APPENDIX A

Water Chemistry Data, 2002-2004

Table A-1 Water Quality Data 2002-20004

		pH	Cond	Temp	DTW	TDS	Ca-T	Mg-T	Na-T	K-T	SO4	Cl	F	Alk	Acidity	Al-D	As-D	Ba-D	Cd-D	Cr-D	Cu-D	Fe-D	Pb-D	Mn-D	Hg-T	Ni-D	Se-D	Se-D (DRC)	Se-D (hyd)	Ag-D	Zn-D
Well	Date	su	uS/cm	C	Ft	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l CaCO3	mg/l CaCO3	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
W22	3/8/02					970	213	60	55	5.4	278	158		280			<0.005		<0.001		<0.02		<0.005				<0.003				<0.01
W22	6/14/02	7.0	1181	15		865	162	52	50	4.5	232	150	0.2	272		<0.015	0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					0.01
W22	9/19/02					864	178	53	51	4.8	218	146	0.2	257		0.188	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	0.031		<0.04					0.018
W22	12/20/02	7.3	1267	13	31	905	137	57	55	5.3	247	152	0.2	266		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					0.011
W22	3/28/03	7.2	1328	12	31	970	189	55	51	5.2	248	153	0.2	281		0.017	0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.002			0.034
W22	6/27/03	6.9	1188	13	31	830	167	45.7	42	4.2	219	149	0.2	266		0.067	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.002			<0.01
W22	9/29/03	7.2	1239	15	31	790	158	45	44	4.2	204	149	0.2	261		<0.015	0.01		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002			<0.01
W22	12/24/03	7.0	1284	13	31	880	179	52	53	5	176	146	0.2	264		<0.015	0.008		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			<0.01
W22	3/30/04	7.1	1269	14	31	830	184	54	52	5.1	244	148	0.2	276		<0.015	0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			<0.01
W22	5/21/04	7.2	1322	15	31	890	195	55	50	4.8	254	146	0.2	283		0.037	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.005			<0.01
W22	9/28/04	7.0	1186	14	31	800	152	42	42	4	175	141	0.2	265		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.002			<0.01
W22	12/21/04	7.1	1246	12	31	920	175	53	53	4.7	200	143	0.3	275		<0.02	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.002			<0.01
K26	9/12/02				DRY																										
K72	6/18/02	7.2	1800	13.5	201.68	1170	209	56	80	5.6	177	385	0.2	186		<0.015	<0.005	0.057	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			0.002	<0.001	<0.01
K72	6/12/03	7.0	1750	15	144.4	1080	205	51	71	5.7	160	380	0.2	164		<0.015	<0.005	0.06	<0.001	<0.01	<0.02	<0.3	<0.005	0.03		<0.04		0.003		<0.001	<0.01
K72	9/29/04	7.0	1684	16	215	1070	208	53	72	5.7	127	382	0.3	179		<0.015	<0.005	0.066	<0.001	<0.01	<0.02	<0.3	<0.005	0.021		<0.04		0.002		<0.001	<0.01
K72	12/13/04	7.1	1740	14.5		1140	206	56	81	6.1	135	356	0.3	184		<0.02	<0.005	0.061	<0.001	<0.01	<0.02	<0.3	<0.005	0.015		<0.04		0.003		<0.001	<0.01
W189	3/8/02					500	94	35	42	3.4	119	98		160			0.007		<0.001		<0.02		<0.005				<0.003				0.013
W189	3/28/03	7.7	807	16	200	550	89	35	42	3.3	112	100	0.1	179		<0.015	0.007		<0.001	<0.01	0.026	<0.3	<0.005	<0.01		<0.04		<0.002			0.042
W189	3/29/04	7.2	816	18	200	470	88	35	41	3.1	111	101	0.2	164		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.002			0.104
P190A	9/10/02				DRY																										
P190A	9/29/03				DRY																										
P190A	9/23/04				DRY																										
P190B	9/5/02					1150	203	70	57	5	306	248	0.1	188		0.038	<0.005		<0.001	<0.01	<0.02	0.348	<0.005	<0.01		<0.04					0.615
P190B	7/29/04	7.2	1468	17	309.48	1050	243	67	54	3.4	324	237	0.1	195		0.019	<0.005		<0.001	<0.01	<0.02	0.345	<0.005	<0.01		<0.04		0.005			0.73
P208A	7/3/02	6.4	4260	18	273.43	4680	570	495	97	7.7	3150	137	0.2	194		<0.015	<0.005		0.008	<0.01	<0.02	<0.3	<0.005	1.77	0.0012	0.193					0.132
P208A	7/3/03	6.6	4100	18	282.36	4600	665	502	94	6.4	3184	150	0.3	193		0.055	<0.005		0.009	<0.01	0.024	<0.3	<0.005	2.02		0.172		0.005			0.149
P208A	9/7/04	6.7	4150	20	295.93	4950	542	639	89	6.1	3400	158	0.5	175		0.054	<0.005		0.009	<0.01	<0.02	<0.3	<0.005	2.58	0.0016	0.205		0.006			0.21
P208B	6/27/02	4.5	6250	16	274.1	8100	463	1190	103	15.3	7070	168	61.3	<5		483	0.012		0.879	<0.01	52.3	<0.3	0.021	549	0.0005	20.9					75.5
P208B	7/3/03	4.6	5840	16	276.21	7060	495	1020	90	12.5	5960	188	47.5	<5		39.8	0.009		0.763	<0.01	0.778	<0.3	0.023	67		5.38		0.014			53.8
P208B	9/7/04	4.5	5150	16	302.98	6580	475	906	82	11.5	4570	201	54	<5		39.8	0.008		0.753	<0.01	1.12	<0.3	0.023	63.5	0.0017	5.81		0.022			46.3
P241B	7/11/02	3.6	7390	16	391.57	10600	486	1260	90	14.1	8180	116	59.3	<5		263	0.019		0.601	<0.01	12.8	14.4	0.009	139	0.0008	6.52					32.6
P241B	6/27/03	3.7	7480	16	392.06	10700	473	1290	74	9.2	7200	115	53	<5		254	0.011		0.563	<0.01	12.2	18.1	0.012	123	0.0006	5.51		0.058			29.8
P241B	10/16/03	3.7	6850	13	400	9740	413	1310	63	7.4	6600	120	52	<5		254	0.012		0.506	<0.01	13	18.1	0.01	121	0.0007	5.73		0.019			30
P241B	6/23/04	3.5	6760	16	409.88	10700	399	1220	66	7.7	6610	119	57	<5		209.22	0.013		0.525	<0.01	13.24	15.4	0.013	127.06	0.0007	5.72		0.073			30.01
P241C	11/6/02	7.2	1791	14	298.04	1150	249	70	54	7	440	257	0.2	159		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
P241C	7/8/03	7.2	1816	16	301.28	1440	261	71	53	4.3	453	264	0.2	162		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.005			<0.01
P241C	10/14/04	7.0	1844	15	320.4	1640	324	76	54	4.6	629	266	0.2	191		<0.02	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.005			<0.01
P244A	2/27/02					7820	565	1070	406	8.6	4180	1290		<5	467		0.007	0.016	0.197	<0.01	4.17		0.007						0.003	<0.001	5.8
P244A	3/27/03	4.3	7030	8	45.95	7250	567	1020	414	9	4190	1330	14.9	<5	416	39	0.007		0.187	0.023	3.45	<0.3	0.006	45.4	<0.0002	1.67		0.009			4.75
P244A	2/4/04	4.1	8100	8	46.65	7290	580	900	378	8.3	3390	1660	17	<5	402	34.9	<0.005		0.209	0.013	3.04	<0.3	<0.005	42.9	0.001	1.65		0.08			5.22
P244B	2/27/02					4190	782	215	380	9.1	1570	1040		482			<0.005	0.02	<0.001	<0.01	<0.02		<0.005						<0.002	<0.001	0.022
P244B	4/25/02					4130	904	197	303	7.4	1360	975	0.2	507		<0.015	<0.005	0.021	<0.001	<0.01	<0.02	<0.3	<0.005	0.018	<0.0002	0.045			0.003	<0.001	0.02
P244B	9/11/02					4870	856	210	341	9.1	1660	1030	0.2	502		0.016	<0.005	0.019	<0.001	<0.01	<0.02	<0.3	<0.005	0.017		0.071			0.004	<0.001	0.017
P244B	12/5/02	6.8	5110	12	49.23	4440	952	210	346	9.2	1540	1060	0.2	489		<0.015	<0.005	0.021	<0.001	<0.01	<0.02	<0.3	<0.005	0.025	<0.0002	0.057			0.004	<0.001	0.021
P244B	1/20/03	6.9	5080	13	49.39	5320	946	237	364	9.7	1610	1010	0.2	496		<0.015	<0.005	0.022	<0.001	<0.01	<0.02	<0.3	0.01	0.012	<0.0002	0.054			0.005	<0.001	0.016
P244B	6/5/03	6.7	5450	16	49.78	4640	950	212	331	8.3	1600	1040	0.2	509		<0.015	<0.005	0.021	<0.001	<0.01	<0.02	<0.3	<0.005	0.013	<0.0002	0.051		0.005		<0.001	0.024
P244B	7/23/03	6.7	4350			4380	977	206	295	7.7	1590	1000	0.2	507		0.024	<0.005	0.023	<0.001	<0.01	<0.02	<0.3	<0.005	0.013	<0.0002	0.041		<0.002		<0.001	0.023
P244B	7/29/03	6.8	3250	16		3090	677	158	194	6.9	889	863	0.2	370		0.018	<0.005	0.027	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002		0.001	0.01
P244B	10/9/03	7.0	4770	15	49.75	4170	889	193	295	7.9	1370	975	0.2	433		<0.015	<0.005	0.024	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004		<0.001	0.013
P244B	2/2/04	6.9	5100	11	50.08	4580	935	203	342	8.2	1550	1050	0.2	501		<0.015	<0.005	0.021	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	0.068		0.004		<0.001	<0.01
P244B	6/12/04	6.4	6390	14	47.13	5600	917	209	471	8.2	1930	1220	0.2	511		<0.015	<0.005	0.023	0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	0.05		0.005		<0.001	0.024
P244B	9/16/04	6.5	5320	15	47.72	4830	1010	240	394	8.9	1730	1110	0.3	530		<0.015	<0.005	0.024	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.006		<0.001	0.029

Well	Date	pH	Cond	Temp	DTW	TDS	Ca-T	Mg-T	Na-T	K-T	SO4	Cl	F	Alk	Acidity	Al-D	As-D	Ba-D	Cd-D	Cr-D	Cu-D	Fe-D	Pb-D	Mn-D	Hg-T	Ni-D	Se-D	Se-D (DRC)	Se-D (hyd)	Ag-D	Zn-D
		su	uS/cm	C	Ft	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l CaCO3	mg/l CaCO3	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
P244B	12/6/04	6.7	5370	11	48.08	4970	1080	234	391	9.1	1740	1130	0.3	537		<0.02	<0.005	0.023	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.005		<0.001	0.017
P244C	2/27/02					2340	447	119	153	9	554	753		301			<0.005	0.089	<0.001	<0.01	<0.02		<0.005						<0.002	<0.001	0.01
P244C	3/27/03	7.1	4010	11	53.67	2880	565	148	160	9.7	828	829	0.2	376		0.039	<0.005	0.077	<0.001	<0.01	<0.02	<0.3	<0.005	0.013	<0.0002	<0.04		0.003		<0.001	<0.01
P244C	2/4/04	6.9	4410	11	54.28	3340	769	160	172	9.6	1100	843	0.2	426		<0.015	<0.005	0.064	<0.001	<0.01	<0.02	<0.3	<0.005	0.024	<0.0002	<0.04		0.005		<0.001	0.01
P248A	3/12/02	4.0	2350	13	84.61	1960	222	200	63	4.7	1120	188		<5	238		<0.005	<0.01	0.038	<0.01	10.7		0.013		<0.0002				<0.002	<0.001	4.34
P248A	5/31/02	3.9	2330	16	85	2010	208	183	62	4	1150	186	3	<5	250	29.1	<0.005	<0.01	0.035	<0.01	10.9	<0.3	0.015	7.52	<0.0002	0.505			<0.002	<0.001	4.57
P248A	9/21/02					1880	219	185	65	4.4	1200	188	2.9	<5	247	26.9	<0.005	<0.01	0.032	<0.01	11.4	<0.3	0.017	6.41	<0.0002	0.471			<0.002	<0.001	4.51
P248A	11/21/02	4.2	2370	12	84.94	2000	213	180	60	3.8	1130	184	5.7	<5	353	26.6	<0.005	<0.01	0.035	<0.01	10	<0.3	0.015	6.92	0.0004	0.509			<0.002	<0.001	4.64
P248A	3/21/03	4.0	2250	13	85.92	1810	214	173	62	4.2	1070	196	5.3	<5	263	23.2	<0.005	<0.01	0.031	<0.01	10.2	<0.3	0.015	6.17	0.0005	0.449		0.004		<0.001	4.13
P248A	6/9/03	4.1	210	17	86.25	1830	218	168	51	4.2	1013	188	2.6	<5	276	23	<0.005	<0.01	0.036	<0.01	8.79	<0.3	0.019	6.74	0.0009	0.436		0.007		<0.001	3.95
P248A	9/15/03	4.2	3350	13	86.78	1730	199	152	51	3.8	905	194	6	<5	262	21.7	<0.005	<0.01	0.032	0.011	8.48	<0.3	0.017	6.17	0.0002	0.397		0.005		<0.001	3.71
P248A	12/23/03	4.2	2050	13	86.83	1580	184	133	49	3.4	924	190	7.5	<5	183	19.9	<0.005	<0.01	0.027	0.016	8.06	<0.3	0.015	5.15	0.0005	0.384		0.005		<0.001	3.32
P248A	2/11/04	4.2	2020	11	86.58	1650	214	144	52	3.6	900	197	8.1	<5	205	19.4	0.006	<0.01	0.03	<0.01	8.04	<0.3	0.018	5.51	<0.0002	0.371		0.011		0.002	3.18
P248A	6/3/04	4.2	2030	15	87.3	2130	192	132	58	3.4	1000	194	5.8	<5	180	19.1	<0.005	<0.01	0.029	<0.01	7.96	<0.3	0.02	4.7	0.0002	0.376		0.023		<0.001	3.46
P248A	8/20/04	4.3	2040	15	87.56	1640	195	131	51	3.4	1000	193	9.2	<5	272	18.2	<0.005	<0.01	0.032	<0.01	7.79	<0.3	0.017	5.62	<0.0002	0.354		0.004		<0.001	3.26
P248A	12/10/04	4.3	2030	11	87.07	1620	207	127	61	3.8	916	192	8	<5	135	17	<0.005	<0.01	0.026	<0.01	7.62	<0.3	0.019	4.82	<0.0002	0.337		0.004		<0.001	3.3
P248B	3/12/02	6.4	3090	13	85.02	3280	525	336	73	11	2040	110		<5	31		<0.005	<0.01	0.038	<0.01	1.25		<0.005		<0.0002				<0.002	<0.001	3.49
P248B	9/21/02					3270	498	313	70	10.3	2430	107	2.4	114	67	0.74	<0.005	0.013	0.049	<0.01	1.94	<0.3	<0.005	15.4	<0.0002	0.539			0.002	<0.001	4.99
P248B	3/21/03	6.2	3170	12	86.13	3220	507	305	67	10.8	2050	112	2.3	130	110	0.747	<0.005	0.011	0.038	<0.01	1.48	<0.3	<0.005	13.4	<0.0002	0.466		0.003		<0.001	3.53
P248B	9/15/03	6.2	3350	14	87.1	3170	464	282	66	9.2	2000	113	2.2	168	119	0.625	<0.005	0.011	0.033	<0.01	1.38	<0.3	<0.005	12.5	0.0004	0.393		0.003		<0.001	3.24
P248B	2/11/04	6.6	3030	9	87.08	3200	430	256	64	9.2	2080	114	4	111	46	0.949	<0.005	0.013	0.043	<0.01	3.37	<0.3	<0.005	11.7	<0.0002	0.453		0.022		<0.001	3.79
P248B	8/20/04	6.0	2710	17	87.93	2940	439	248	62	9	1990	109	2.3	143	80	0.527	<0.005	0.013	0.034	<0.01	1.11	<0.3	<0.005	10.4	<0.0002	0.377		0.003		<0.001	2.6
P248C	3/12/02	6.5	1307	12	80.41	940	183	72	38	3.9	422	119		120			<0.005		0.003		0.237		<0.005						<0.002		0.247
P248C	9/21/02					966	167	66	38	5.4	448	116	0.6	120		0.018	<0.005		0.003	<0.01	0.217	<0.3	<0.005	0.109		<0.04			0.002		0.238
P248C	3/21/03	6.5	1301	12	81.37	940	157	61	34	3.9	450	122	0.2	122		0.028	<0.005		0.003	<0.01	0.207	<0.3	<0.005	0.111		<0.04		<0.002			0.245
P248C	9/15/03	6.3	1221	14	82.73	940	165	64	35	3.4	407	126	0.6	117		0.041	<0.005		0.003	<0.01	0.214	<0.3	<0.005	0.113		<0.04		<0.002			0.245
P248C	2/10/04	6.5	1017	12	82.93	970	179	69	39	3.7	431	120	0.5	118		0.024	<0.005	0.017	0.003	0.015	0.198	<0.3	<0.005	0.095	<0.0002	<0.04		0.002		<0.001	0.247
P248C	8/20/04	6.3	1202	14	83.8	927	164	59	33	3.2	410	122	0.7	122		0.029	<0.005	0.017	0.003	<0.01	0.187	<0.3	<0.005	0.081	<0.0002	<0.04		<0.002		<0.001	0.237
P279	11/22/02		13320	13	353.43	25900	440	3330	86	10.2	20300	97	117	<5	7030	1000	0.03		0.584	0.012	61.5	172	<0.005	197	0.0005	13.8					85.8
P279	11/11/03	3.4	13340	13	371.17	24400	385	3150	65	7.3	14800	213	107	<5	11800	1040	0.024		0.468	<0.01	62		<0.005	148	0.0003	10.9		0.05			79.2
P279	8/24/04	3.6	11590	14	381.53	23200	368	2480	65	5.8	15600	208	103	<5	6160	889	0.022		0.388	<0.01	63.4	340	<0.005	135	0.0002	11.2		0.061			73
W361	6/25/02	7.4	1047	20		678	81	41.4	57.5	4.31	47	208	0.2	153		<0.015	0.008		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					0.033
W361	9/6/02					591	105	39	51	3.8	40	197	0.2	153		<0.015	0.009		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					0.068
W363	6/25/02	7.5	966	20		695	119	41.5	48.8	4.3	170	119	0.2	156		0.133	0.007		<0.001	<0.01	<0.02	<0.3	<0.005	0.06		<0.04					0.024
W363	9/6/02					573	107	38	43	3.6	142	109	0.1	155		<0.015	0.008		<0.001	<0.01	0.03	<0.3	<0.005	<0.01		<0.04					0.048
W363	7/1/03	7.5	883	3	184	680	113	36	40	3	136	109	0.2	158		<0.015	0.007		<0.001	<0.01	0.039	<0.3	<0.005	0.086		<0.04		0.002			0.007
W363	6/22/04	7.3	884	9	184	600	98	34	39	2.9	156	117	0.2	158		<0.015	0.008		<0.001	<0.01	0.027	<0.3	<0.005	<0.01		<0.04		0.004			0.043
W363	8/31/04	7.6	961	15	184	600	111	35	42	2.8	126	125	0.2	159		<0.015	0.008		<0.001	<0.01	0.03	<0.3	0.005	<0.01		<0.04		0.004			0.103
W387	6/25/02	7.5	1119	20		760	117	39	63	5	44	229	0.2	153		<0.015	0.007		<0.001	<0.01	0.072	<0.3	0.012	<0.01		<0.04					0.092
W387	9/6/02					631	119	39	60	4.3	42	225	0.2	158		<0.015	0.008		<0.001	<0.01	0.042	<0.3	<0.005	<0.01		<0.04					0.05
W387	7/1/03	7.4	1076	3	251.03	790	125	38	56	3.2	41	227	0.2	159		0.038	0.007		<0.001	<0.01	0.031	<0.3	<0.005	<0.01		<0.04		0.002			0.053
W387	9/19/03	7.5	1138			730	112	37	55	3.1	44	230	0.2	155		<0.015	0.009		<0.001	<0.01	0.04	<0.3	<0.005	<0.01		<0.04		0.003			0.15
W387	6/22/04	7.2	1106	10	251.03	750	110	36	53	3	52	235	0.2	158		<0.015	0.009		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.005			0.016
W387	8/31/04	7.6	1084	15	251.03	676	104	35	53	2.8	47	233	0.2	158		<0.015	0.008		<0.001	<0.01	0.021	<0.3	<0.005	<0.01		<0.04		0.003			0.027
W409	5/21/04	7.2	2050	15	119	1660	257	71	76	5.4	263	428	0.2	221		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.007			<0.01
LRG910	2/27/02					1500	286	85	83	3.7	821	159		154		0.162	<0.005	0.021	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002				<0.002	<0.001	0.017
LRG910	9/16/02					1570	301	83	79	3.9	778	160	0.1	160		<0.015	0.005	0.021	<0.001	0.014	0.022	<0.3	<0.005	<0.01	<0.0002	<0.04			0.002	0.002	0.027
LRG910	3/24/03	7.1	1646	12	141.43	1560	295	80	77	4.4	726	160	0.1	160		<0.015	<0.005	0.021	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004		<0.001	<0.01
LRG910	12/22/03	6.9	1790	13	81.16	1480	285	76	73	3.3	746	156	0.2	158		<0.015	<0.005	0.02	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004		<0.001	<0.01
LRG910	6/10/04	7.0	1933	13	81.39	1680	281	73	72	3.2	697	163	0.2	162		<0.015	<0.005	0.023	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.003		<0.001	<0.01
LRG910	12/13/04	6.9	1960	15	81.26	1500	310	74	67	3	724	158	0.2	162		<0.02	<0.005	0.021	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.003		<0.001	<0.01
LRG911	2/27/02					2100	461	126	64	10.5	1250	152		156		0.053	0.005	0.026	0.002	<0.01	0.094	<0.3	<0.005	0.207	<0.0002				<0.002	<0.001	0.237
LRG911	4/3/02					2130	454	121	59.7	8.54	1220	148	0.2	172		<0.015	<0.005		<0.001	<0.01	0.021	<0.3	<0.005	0.036	<0.0002	<0.04			0.005		0.036
LRG911	12/13/02	6.9	2410	14	127.17	2260	494	138	71	11.5	1330	152	0.2	170		0.018	<0.005	0.024	<0.001	<0.01	<0.02	<0.3	<0.005	0.051	<0.0002	<0.04			0.004	<0.001	0.071
LRG911	3/24/03	7.2	2110	13	78.78	2260	454	124	64	10.9	1250	154	0.2	179		0.036	<0.005	0.026	<0.001	<0.01	0.036	<0.3	<0.005	<0.01	<0.0002	<0.04		0.005		<0.001	0.031
LRG911	4/8/03	6.4	2380	12	127.27	2180	470	131	66	12.1	1380	148	0.2	175		0.023	<0.005	0.024	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.005		<0.001	0.02

Well	Date	pH	Cond	Temp	DTW	TDS	Ca-T	Mg-T	Na-T	K-T	SO4	Cl	F	Alk	Acidity	Al-D	As-D	Ba-D	Cd-D	Cr-D	Cu-D	Fe-D	Pb-D	Mn-D	Hg-T	Ni-D	Se-D	Se-D (DRC)	Se-D (hyd)	Ag-D	Zn-D
		su	uS/cm	C	Ft	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l CaCO3	mg/l CaCO3	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
LRG911	2/11/04	7.3	2380	9	127.6	2240	444	117	57	9.1	1280	154	0.2	173		0.033	<0.005	0.024	<0.001	<0.01	0.026	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004		<0.001	0.028
LRG911	4/12/04	6.8	2430	14	127.63	2240	461	124	63	10	1220	155	0.2	178		0.016	<0.005	0.027	<0.001	<0.01	0.057	<0.3	<0.005	0.043	<0.0002	<0.04		0.005		<0.001	0.069
LRG911	12/13/04	7.0	2600	15	127.8	2350	457	128	61	9.4	1180	150	0.4	158		0.022	<0.005	0.022	0.003	<0.01	0.141	<0.3	<0.005	0.32	<0.0002	0.053		0.004		<0.001	0.37
LRG912	4/3/02					6660	432	637	169	6.5	4810	213	9.7	<5	1170	153	0.008		0.239	<0.01	33.1	0.187	<0.005	38.4	0.0003	2.82			<0.002		20.1
LRG912	4/7/03	3.6	5420	12	97.9	6020	386	568	158	7.2	4100	213	25	<5	1100	137	0.006	<0.01	0.222	<0.01	32.9	<0.3	<0.005	39.6	<0.0002	2.77		0.019		<0.001	19.9
LRG912	4/12/04	3.7	5010	15	98.97	5540	408	505	161	7.6	3120	219	24	<5	897	115	<0.005	<0.01	0.211	<0.01	31.5	<0.3	<0.005	32	<0.0002	2.41		0.149		<0.001	19.1
ECG917	1/28/02					1060	215	62	94	5.3	133	400		184			<0.005	0.138	<0.001	<0.01	<0.02		<0.005						<0.002	<0.001	<0.01
ECG917	5/24/02	7.2	1764	13	116.79	1120	229	54	84	4.6	135	389	0.2	189		<0.015	<0.005	0.133	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			0.002	<0.001	<0.01
ECG917	6/19/02	7.0	1790	15	117.15	1210	207	56	92	6.6	140	410	0.2	185		<0.015	<0.005	0.136	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	<0.01
ECG917	7/22/02	7.2	1546	15	117.4	1130	227	58	90	5.7	136	415	0.2	188		<0.015	<0.005	0.134	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			0.002	<0.001	<0.01
ECG917	8/22/02					1240	172	49	76	4.8	137	402	0.2	188		<0.015	<0.005	0.141	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	<0.01
ECG917	9/12/02					1190	208	52	81	4.8	132	410	0.2	186		<0.015	<0.005	0.136	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			0.003	<0.001	<0.01
ECG917	10/28/02	7.2	1764	13	118.23	1077	210	58	96	7.6	137	408	0.2	188		<0.015	<0.005	0.134	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	<0.01
ECG917	11/14/02	7.2	1826	12	118.51	1260	230	58	88	4.3	137	380	0.2	188		<0.015	<0.005	0.134	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			0.002	<0.001	0.026
ECG917	12/17/02	7.2	1826	12	118.47	1310	213	57	89	5.8	140	412	0.2	190		<0.015	<0.005	0.128	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			0.003	<0.001	<0.01
ECG917	1/7/03	7.3	1710	12	119.22	1120	220	59	95	6.1	142	398	0.2	186		<0.015	<0.005	0.132	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			0.003	<0.001	<0.01
ECG917	2/17/03	7.3	1705	13	119.58	1050	235	59	94	5.6	150	413	0.2	186		<0.015	<0.005	0.13	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			0.003	<0.001	<0.01
ECG917	3/27/03	6.9	1780	14	119.95	1080	224	55	88	4.4	142	407	0.2	191		0.015	<0.005	0.135	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003		<0.001	0.016
ECG917	4/26/03	7.4	1756	13	120.27	1100	209	52	82	5	126	399	0.2	189		0.015	<0.005	0.131	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003		<0.001	<0.01
ECG917	5/20/03	7.2	1690	15	120.52	1210	218	56	83	4.7	128	403	0.2	189		<0.015	<0.005	0.133	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002		<0.001	<0.01
ECG917	6/26/03	7.2	1761	14	120.97	1180	232	52	81	4.8	125	398	0.2	184		<0.015	<0.005	0.131	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.002		<0.001	<0.01
ECG917	9/8/03	7.2	1698	13	121.31	1240	217	54	86	5	130	388	0.2	182		<0.015	<0.005	0.127	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003		<0.001	<0.01
ECG917	10/10/03	7.1	1820	12	121.83	1220	233	57	90	5.1	133	408	0.2	189		0.023	<0.005	0.13	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003		<0.001	<0.01
ECG917	11/12/03	7.2	1533	13	122.18	1100	214	52	86	4.5	127	420	0.2	189		<0.015	0.006	0.135	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003		<0.001	<0.01
ECG917	12/19/03	7.2	1784	13	122.47	1020	205	55	77	4.2	136	386	0.2	183		<0.015	<0.005	0.128	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004		<0.001	<0.01
ECG917	1/7/04	7.1	1585	12	122.5	1050	212	52	83	4.7	137	396	0.3	181		<0.015	<0.005	0.131	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004		<0.001	<0.01
ECG917	2/5/04	6.9	1713	12	123.12	1090	214	47	70	3.9	128	405	0.2	185		<0.015	<0.005	0.138	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004		<0.001	<0.01
ECG917	3/19/04	7.1	1790	13.5	123.4	1200	207	52	87	4.4	137	394	0.3	189		<0.015	<0.005	0.131	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003		<0.001	<0.01
ECG917	4/21/04	6.9	1786	14	123.69	1120	225	55	90	5	136	391	0.2	188		<0.015	0.009	0.134	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003		<0.001	0.014
ECG917	9/22/04	6.9	1760	14	125.16	1090	221	51	84	4.7	129	404	0.3	190		<0.015	<0.005	0.147	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.002		<0.001	<0.01
ECG917	10/29/04	6.9	1772	12	125.49	1060	232	51	81	4.5	138	386	0.2	190		<0.02	<0.005	0.135	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004		<0.001	<0.01
ECG922	2/21/02					1080	216	67	53	3.7	118	385		200			0.006	0.069	<0.001	<0.01	<0.02		<0.005						<0.002	<0.001	<0.01
ECG922	6/4/02	7.3	1680	14	104.33	910	207	34	52	3.6	114	384	0.3	194		<0.015	<0.005	0.064	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	<0.01
ECG922	7/22/02	7.4	1430	14	104.55	1040	211	67	55	4	101	383	0.3	196		<0.015	<0.005	0.066	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	0.014
ECG922	12/3/02	7.4	1585	12	105.53	1010	224	69	59	4.9	96	384	0.3	203		<0.015	0.005	0.066	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			0.002	<0.001	<0.01
ECG922	3/13/03	7.4	1418	13	106.29	981	218	68	55	3.8	93	384	0.3	198		<0.015	<0.005	0.064	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.002		<0.001	<0.01
ECG922	5/20/03	7.4	1536	14	106.9	1150	194	64	49	3.4	88	368	0.3	196		<0.015	<0.005	0.064	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002		<0.001	<0.01
ECG922	9/8/03	7.4	1528	13	107.5	1090	210	62	50	3.3	92	360	0.3	191		<0.015	<0.005	0.063	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003		<0.001	0.01
ECG922	12/19/03	7.5	1598	12	108.33	960	186	56	45	3	98	350	0.3	185		<0.015	<0.005	0.061	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003		<0.001	<0.01
ECG922	2/20/04	7.1	1633	11	107.88	1020	186	54	43	2.8	102	362	0.3	186		<0.015	<0.005	0.064	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002		<0.001	0.012
ECG922	5/14/04	7.2	1471	15	107.42	1030	183	56	48	3.1	94	357	0.3	188		<0.015	<0.005	0.068	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.027		<0.001	<0.01
ECG922	9/21/04	7.0	1533	13	110.24	1060	202	60	52	3.5	93	356	0.3	191		<0.015	<0.005	0.069	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003		<0.001	<0.01
ECG922	11/5/04	7.2	1571	12	110.15	950	208	60	50	3.2	92	338	0.3	187		<0.02	<0.005	0.066	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003		<0.001	<0.01
SRG946	3/21/02					27700	430	3450	218	4.3	20800	161		<5	7020	1070	0.032		0.548		69.2	123	<0.005	230					<0.002		82.2
SRG946	4/3/03		13900	13	122.15	26000	402	3210	218	4.4	18800	173	106	<5	7360	970	0.022		0.531	0.075	68.5	84.3	<0.005	215		13.1		0.016			76.6
SRG946	4/8/04	3.5	13360	14	125.25	26400	386	2750	181	4.6	18200	164	110	<5	7300	1020	0.019		0.518	0.081	60.8	79.1	<0.005	188	<0.0002	12.9		0.813			76
B1G951	4/3/02					25400	458	2830	115	4.2	17500	184	42.9	<5	7050	1030	0.027		0.413	0.064	60	259	<0.005	165		12			0.005		75.8
B1G951	4/3/03		12780	14	63.68	22700	399	2690	122	5.4	16200	207	95	<5	6580	828	0.018		0.414	0.047	58.3	196	<0.005	149		10.6		0.013			67
B1G951	4/12/04	3.4	11440	15	63.47	20000	392	2120	125	5.5	14000	209	89	<5	5650	726	0.015		0.422	0.04	52.4	132	<0.005	133	<0.0002	9.31		0.5			68.5
ECG1113A	2/21/02					2080	463	101	69	5.8	1180	169		286			0.006		<0.001		<0.02		<0.005				0.005				<0.01
ECG1113A	7/11/03	7.2	2300	15	87.74	2070	389	94	63	5.2	892	155	0.2	287		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			0.012
ECG1113A	9/28/04	6.9	2430	17	89.56	2020	442	89	63	5.1	896	168	0.3	292		0.016	0.007		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			<0.01
ECG1115A	6/21/02	3.3	20200	18	337.08	53700	440	3760	58	9.4	37500	178	174	<5		2540	0.06		0.773	0.08	141	528	<0.005	311	0.0002	26.3					160
ECG1115A	6/25/03	3.2	21500	16	344.13	52600	463	5510	53	7.2	42500	184	110	<5	20300	2520	0.063		0.846	0.094	149	890	<0.005	311	<0.0002	24.7	0.101				151
ECG1115A	9/2/04	3.4	19000	15	364.45	52200	336	5120	43	6.4	35700	184	182	<5		2650			0.83	<0.02	152	703	<0.05	328	0.001	27		0.212			158
ECG1115B	9/2/04	5.9	10500	17	354.57	18500	435	3040	198	11.8	12800	158	17.6	372		8.015	0.038		0.048	<0.02	0.11	<0.3	<0.00005	149.56	0.058	4.94		0.017			0.22

Well	Date	pH su	Cond uS/cm	Temp C	DTW Ft	TDS mg/l	Ca-T mg/l	Mg-T mg/l	Na-T mg/l	K-T mg/l	SO4 mg/l	Cl mg/l	F mg/l	Alk mg/l CaCO3	Acidity mg/l CaCO3	Al-D mg/l	As-D mg/l	Ba-D mg/l	Cd-D mg/l	Cr-D mg/l	Cu-D mg/l	Fe-D mg/l	Pb-D mg/l	Mn-D mg/l	Hg-T mg/l	Ni-D mg/l	Se-D mg/l	Se-D (DRC) mg/l	Se-D (hyd) mg/l	Ag-D mg/l	Zn-D mg/l
ECG1115C	6/21/02	4.3	18480	16	338.08	43400	415	3760	153	35.3	29800	151	298	<5		437	0.07		1.38	<0.01	3.09	0.338	0.009	1000	0.0028	39.8					72.3
ECG1115C	6/24/03	4.1	19260	15	344.18	38500	400	2050	100	25.8	34900	156	272	<5		620	0.088		1.91	0.014	9.51	0.416	0.009	1020	<0.0002	42.5	<0.02				109
ECG1115C	9/1/04	3.6	19220	18	374.06	45400	363	6420	92	28.6	31200	163	313	<5		916			1.95	<0.02	26	6.38	<0.05	1060	0.0072	45.7					151
ECG1117A	6/24/02	3.2	14990	19	313.43	29500	420	3760	90	2.5	21800	162	124	<5		1190	0.036		0.589	0.081	61.3	406	<0.005	219	0.0014	15.5					61.3
ECG1117A	7/1/03	3.4	13100	18	321.11	23000	442	3020	103	3	15100	156	60.5	<5	7040	859	0.02		0.595	0.051	46.4	220	<0.005	203	0.0065	11.3		0.055			60.9
ECG1117A	8/27/04	3.4	11840	15	340.05	20100	397	2240	100	2.6	14400	176	95	<5	4880	692	0.018		0.613	0.047	43.3	193	<0.005	217	0.005	11.3		0.069			55.6
ECG1117B	6/24/02	6.8	3840	18	301.62	4050	798	257	75	8.7	2530	131	0.1	307		0.784	<0.005		<0.001	<0.01	0.046	<0.3	<0.005	0.113	0.001	<0.04					0.052
ECG1117B	7/1/03	7.0	3760	18	310.2	4080	714	242	73	8.3	2600	122	0.1	336		0.05	<0.005		<0.001	<0.01	0.021	<0.3	<0.005	<0.01	0.0044	<0.04		0.008			0.056
ECG1117B	8/27/04	6.8	3880	15	330.51	4180	851	255	81	9.4	2340	137	0.3	365		<0.015	0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.009			<0.01
ECG1118A	11/7/02		11830	14	383.43	19800	390	2370	97	8	17000	183	104	<5	5110	689	0.031		0.895	<0.01	43.1	72.1	<0.005	275	0.0053	13.1					66.5
ECG1118A	1/24/03		11580	13	384.57	20000	448	2510	120	10	12900	172	103	<5	5670	659	0.026		0.894	0.014	43	37.9	<0.005	279	0.0034	13.3					67.8
ECG1118A	2/20/04	3.4	11090	13	389.47	18600	386	1870	90	6.2	12900	178	97	<5	4450	637	0.025		0.823	<0.01	40.6	72.7	<0.005	<0.01	0.0043	11		0.634			59.4
ECG1118B	6/25/02	7.6	775	18	374.5	592	96.6	30.2	44.3	7.81	181	58	0.2	140		0.304	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	0.046	<0.0002	<0.04					0.02
ECG1118B	1/27/03	7.7	840	14	376.7	520	96	31	40	6.9	193	60	0.2	135		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
ECG1118B	2/23/04	7.4	941	15	382.13	620	114	36	41	6.5	270	54	0.2	139		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		<0.002			<0.01
BSG1119B	2/28/02					10900	462	2000	125	9	8060	160		53		12	0.011		0.339		0.03	<0.3	<0.005	134					0.007		0.266
BSG1119B	8/23/02					11200	410	1860	127	13.5	8340	153	26.5	43		39.2	0.01		0.422	<0.01	0.036	<0.3	<0.005	76.2	0.0062	2.94					0.301
BSG1119B	1/28/03	5.3	8460	13	429.95	11500	439	2040	127	10.8	8130	163	37.8	32		24.9	0.011		0.487	<0.01	0.048	<0.3	<0.005	161		5.603					0.393
BSG1119B	10/15/03	5.2	8820	15	433.98	11200	429	2150	105	8.1	8150	165	42	23		275	0.01		0.531	<0.01	0.056	<0.3	<0.005	147		5.58		0.008			0.513
BSG1119B	6/22/04	4.9	7480	16	434.67	11200	386	1730	99	8.1	8350	166	42	23		24.7	0.019		0.602	<0.01	0.05	<0.3	0.008	164	0.0079	6.47		0.015			0.65
BSG1119B	9/14/04	5.3	9980	15	389	10800	451	1610	96	7.9	7970	167	46.7	17		34.6	0.012		0.689	<0.01	0.078	<0.3	0.006	156	0.0074	5.97		0.011			0.802
B1G1120A	6/25/02	3.7	9920	17	319	15400	435	1990	140	16.5	12000	204	85.6	<5		254	0.018		1.03	<0.01	12.6	1.335	<0.005	166	0.0008	7.15					28.6
B1G1120A	7/16/03	3.6	10160	16	323.37	14300	414	2250	113	11.2	9190	226	1.1	<5		349	0.017		1.04	<0.01	16.6	1.28	<0.005	235	0.0025	10.3		0.093			39.1
B1G1120A	9/7/04	3.5	8100	16	327.37	13100	421	1570	117	11.3	9490	207	83	<5		318	0.014		1.04	<0.01	16.8	1.21	<0.005	222	0.0024	9.07		0.145			29
ECG1121A	11/8/02		12620	13	403.69	21900	390	2670	104	10.7	19100	171	120	<5	5270	690	0.045		1.18	<0.01	52.1	37.4	<0.005	367	0.0077	16.3					83.7
ECG1121A	9/4/03	3.3	12110	31	405.8	21500	451	2240	102	9.1	14900	170	115	<5	5320	675	0.034		1.11	0.065	49.6	37.7	<0.005	338		14.1		0.051			75.4
ECG1121A	8/26/04	3.4	11570	14	409.71	19800	414	2370	95	8.4	14500	173	107	<5	4440	648	0.024		1.14	0.007	47.6	36.4	<0.005	329	0.005	14		0.205			70.5
BSG1125A	8/2/02	7.2	2040	15	286.54	1580	305	85	81	7.9	654	218	0.2	177		0.258	<0.005		<0.001	<0.01	0.024	<0.3	<0.005	0.042		<0.04					0.017
BSG1125A	8/26/03	7.3	1955	15	291.57	1530	302	79	67	4.7	587	224	0.2	171		0.026	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004			<0.01
BSG1125A	12/22/04	7.1	1940	11	311.86	1600	314	84	65	4.9	653	214	0.2	180		<0.02	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.005			<0.01
HMG1126A	8/15/02					1400	255	82	69	7.9	594	192	0.2	220		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
HMG1126A	12/22/04	7.2	1680	10	297.83	1320	292	76	55	2.9	528	161	0.2	244		<0.02	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.002			0.021
HMG1126B	8/15/02					910	160	49	57	6	236	161	0.1	248		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
HMG1126B	12/22/04	7.2	1298	10	297.8	920	223	50	48	2.7	253	149	0.2	256		0.124	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	0.014		<0.04		0.003			0.022
ECG1128A	7/3/02	3.5	17860	17	255.58	43450	400	6030	112	23.2	30000	148	273	<5		1050	0.102		4.78	0.012	30.3	<0.3	0.066	882	0.0038	37					165
ECG1128A	7/15/03	3.6	21200	16	254.13	39200	399	5810	84	17.1	27000	168	9.5	147		1090	0.083		3.99	<0.01	31.4	<0.3	0.094	781	0.0162	33.5					177
ECG1128A	8/24/04	3.6	14960	14	282.21	32300	360	4050	74	15.1	21400	155	194	<5		937	0.054		3.25	0.011	32.1	<0.3	0.095	626	<0.0002	27.8		0.421			161
BSG1130A	9/5/02					1300	262	89	69	5.2	527	246	0.1	205		0.034	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
BSG1130A	12/2/03	7.5	1795	14	342.21	1510	308	81	64	4.2	612	247	0.1	206		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.005			<0.01
BSG1130A	7/30/04	7.2	1843	16	342.47	1450	372	89	67	4.7	639	257	0.1	218		0.027	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.005			0.017
BSG1133A	8/7/02					4260	547	455	76	8.9	2700	217	0.1	136		<0.015	<0.005		0.01	<0.01	<0.02	<0.3	<0.005	2.83	0.0005	0.071					0.024
BSG1133A	8/26/03	6.4	3370	15	393.7	3410	504	292	56	4.7	1790	203	0.1	134		<0.015	<0.005		0.008	<0.01	<0.02	<0.3	<0.005	1.95		0.06		0.004			0.02
BSG1133A	12/17/04	6.4	2430	11	399.2	2270	371	196	66	4.4	1190	181	0.1	129		<0.02	<0.005		0.005	<0.01	<0.02	<0.3	<0.005	0.76	<0.0002	<0.04		0.004			0.012
BSG1133B	8/7/02					3040	619	195	79	7.4	1750	125	0.1	257		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04					0.01
BSG1133B	8/26/03	7.3	2920	15	393.25	2840	562	164	63	4.8	1460	125	0.1	245		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004			<0.01
BSG1133B	12/17/04	7.3	3450	12	398.82	3810	858	225	84	5.6	2220	131	0.2	295		<0.02	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.006			0.012
HMG1134A	7/30/02	6.5	1120	18	170.85	728	140	32	42	3.7	149	184	<0.1	195		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
HMG1134A	7/17/03	6.7	1173	21	176.2	810	131	34	41	3.1	159	185	0.2	188		<0.015	0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			0.014
HMG1134A	9/19/04				DRY																										
BSG1137A	3/19/02					970	204	56	51	3.3	335	205		173			<0.005		<0.001		<0.02		<0.005				0.006				<0.01
BSG1137A	7/9/03	7.4	1418	16	339.7	1010	205	52	49	2.8	254	210	0.2	178		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			<0.01
BSG1137A	9/13/04	7.2	1329	16	344.44	860	194	48	47	2.7	266	195	0.2	181		<0.015	0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004			<0.01
BSG1137B	3/19/02					810	134	55	41	4	312	115		146			<0.005		<0.001		<0.02		<0.005				0.003				0.024
BSG1137B	7/9/03	7.5	1148	17	341.6	870	146	53	40	3.6	262	116	0.2	149		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			<0.01
BSG1137B	9/13/04	7.2	1093	16	346.63	760	145	52	40	3.5	321	118	0.2	147		0.039	0.006		<0.001	<0.01	0.029	<0.3	<0.005	<0.01		<0.04		0.003			0.011
LTG1139	2/1/02					510	78	27	47	9.9	28	140		161		<0.015	<0.005	0.138	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04	<0.003		<0.002	<0.001	<0.01

Well	Date	pH	Cond	Temp	DTW	TDS	Ca-T	Mg-T	Na-T	K-T	SO4	Cl	F	Alk	Acidity	Al-D	As-D	Ba-D	Cd-D	Cr-D	Cu-D	Fe-D	Pb-D	Mn-D	Hg-T	Ni-D	Se-D	Se-D (DRC)	Se-D (hyd)	Ag-D	Zn-D
		su	uS/cm	C	Ft	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l CaCO3	mg/l CaCO3	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
LTG1139	6/14/02	7.3	708	17		517	72	26	63	15.9	34	144		155		<0.015	0.005	0.122	<0.001	<0.01	<0.02	<0.3	<0.005	0.025	<0.0002	<0.04	0.003			0.002	<0.01
LTG1139	9/19/02					532	69	26	58	16.9	30	144		157		<0.015	<0.005	0.123	<0.001	<0.01	<0.02	<0.3	<0.005	0.026	<0.0002	<0.04	<0.003			<0.001	<0.01
LTG1139	2/27/03	7.6	794	9	110.3	513	75	28	57	17.3	32	145		160		<0.015	<0.005	0.114	<0.001	<0.01	<0.02	<0.3	<0.005	0.023	<0.0002	<0.04	<0.003			<0.001	<0.01
LTG1139	6/5/03	7.5	839	17	110.3	547	72	26	60	15.5	35	148		157		<0.015	<0.005	0.12	<0.001	<0.01	<0.02	<0.3	<0.005	0.032	<0.0002	<0.04	<0.003			<0.001	<0.01
LTG1139	9/22/03	7.4	2200	21	110.3	540	74	27	60	16	32	144		159		0.018	0.005	0.122	<0.001	<0.01	<0.02	<0.3	<0.005	0.011	<0.0002	<0.04	<0.003			<0.001	<0.01
LTG1139	12/9/03	7.3	804	15	110.3	550	65	24	54	13.9	32	143		157		0.021	0.008	0.121	<0.001	<0.01	0.028	<0.3	<0.005	0.013	<0.0002	<0.04	<0.003			<0.001	0.012
LTG1139	3/29/04	7.3	789	21	110.3	460	81	29	53	12.1	32	139	0.3	160		<0.015	<0.005	0.126	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.003		0.001	<0.01
LTG1139	5/28/04	7.1	834	18	110.3	550	69	25	45	9.9	30	125	0.3	160		<0.015	<0.005	0.146	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.007		<0.001	<0.01
LTG1139	9/27/04	7.2	785	18		550	80	25	45	8.9	32	146	0.3	160		<0.015	<0.005	0.135	<0.001	<0.01	<0.02	<0.3	<0.005	0.012	<0.0002	<0.04		0.002		<0.001	<0.01
LTG1139	12/15/04	7.3	845	12.5	110.3	490	83	27	50	11.4	26	142	0.4	162		<0.02	<0.005	0.134	<0.001	<0.01	<0.02	<0.3	<0.005	0.012	<0.0002	<0.04		0.004		<0.001	<0.01
LTG1140A	6/18/02	7.2	1920	17.5	184	1440	248	78	76	6.6	574	250	0.3	204		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
LTG1140A	9/17/03	7.3	2060	14	162.62	1580	282	100	88	6	631	248	0.3	220		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.002			0.011
LTG1140A	9/28/04	7.0	2250	17.5	189.35	1720	313	86	88	7.6	637	365	0.3	238		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.002			<0.01
LTG1140B	6/18/02	7.4	731	17	183.8	440	74	25	35	5.6	34	112	0.3	161		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
LTG1140B	9/17/03	7.6	717	14	162.42	440	73	37	26	6.6	32	110	0.3	162		0.029	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.002			<0.01
LTG1140B	9/29/04	7.3	735	17.5	188.41	440	77	26	35	6	30	119	0.4	162		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.002			<0.01
ECG1144A	6/27/02	3.5	11370	17	380.93	19400	428	2390	78	9.9	15400	151	101	<5		707	0.024		0.497	<0.01	44.6	143	<0.005	194	0.0008	10.9					59.8
ECG1144A	8/27/03	3.6	10620	16	384.85	16700	508	2160	88	9.2	11000	167	83.3	<5		609	0.021		0.407	0.014	38.1	84.1	0.005	153		8.55		0.022			48.9
ECG1144A	8/25/04	3.5	9690	17	387.81	15100	440	1620	74	6.8	9940	176	75.1	<5		517	0.015		0.412	<0.01	35.4	112	<0.005	142	0.001	7.94		0.067			43.1
ECG1144B	6/27/02	3.7	12830	17	278.23	21800	414	2960	88	24.5	18300	113	127	<5		469	0.037		1.1	<0.01	50.6	12.8	0.005	542	0.0046	21.6					74.9
ECG1144B	8/27/03	3.8	14200	16	275.88	24500	416	3590	80	20.9	17000	123	133	<5		588	0.033		1.33	0.01	57.5	9.84	0.007	596		24.1		0.056			83.4
ECG1144B	8/25/04	4.0	9710	16	306.84	15100	361	1940	58	14.5	10700	102	87.6	<5		310	0.019		0.803	<0.01	36.1	8.63	<0.005	372	0.008	14.5		0.192			48.9
ECG1145A	11/15/02		12030	13	291.68	21200	429	2740	94	14.9	13500	133	117	<5	5150	708	0.033		1.32	0.011	53.3	4.19	0.163	389	0.0057	16.2					102
ECG1145A	11/14/03	3.6	10890	12	317.27	16100	380	2030	82	12.9	11500	148	97	<5	6300	463	0.02		1.3	0.017	37.5	0.464	0.195	313		12.1		0.054			76.3
ECG1145A	8/6/04	3.7	9540	17	324.13	15900	389	1850	77	12.2	11100	168	95	<5	2870	388	0.013		1.5	<0.01	34.5	0.318	0.175	318	0.0062	13.8		0.159			77.1
ECG1145B	11/15/02	4.8	10780	13	288.98	16900	450	2750	123	17.8	11400	144	102	<5	1970	146	0.025		0.564	<0.01	5.89	0.596	<0.005	349	0.0166	11.1					26.4
ECG1145B	11/13/03	5.3	7120	12	316.31	9030	472	1550	92	10.4	6690	146	19	133	304	25.8	<0.005		0.217	<0.01	1.45	0.368	<0.005	155	<0.0002	4.34		0.017			9.8
ECG1145B	8/6/04	5.4	5420	17	326.07	7720	477	1020	83	9	5640	149	11.6	206	233	7.96	<0.005		0.148	<0.01	0.455	<0.3	<0.005	109	0.0109	2.99		0.017			5.552
ECG1145C	11/18/02	7.2	3430	13	297.27	3420	673	228	61	9.1	1930	119	0.1	320		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	0.0047	0.043					0.018
ECG1145C	11/14/03	7.0	3120	13	309.57	3330	659	208	54	7.9	1920	126	0.2	336		0.02	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.005			0.015
ECG1145C	8/5/04	6.8	3030	17	319.13	3220	715	199	52	7.8	1770	616	0.2	338		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	0.0056	<0.04		0.006			0.015
ECG1146	2/8/02					42600	428	4890	65	12.5	29800	153		<5	12900	1830	0.063		0.969		127	439	<0.005	388	0.0075				<0.002		133
ECG1146	6/20/02	3.4	18770	15	0	42300	440	4450	81	18.2	28600	162	77	<5	14900	1760	0.049		0.889	0.013	114	394	<0.005	396	0.0029	23.2					122
ECG1146	9/19/02					40600	495	4870	85	17.4	35100	160	159	<5	12000	1770	0.066		0.955	0.014	121	358	<0.005	41.7	0.0056	24.9					130
ECG1146	10/30/02		18670	14	264	41400	446	4970	72	14	26000	171	158	<5	11900	1650	0.072		0.94	0.016	111	355	<0.005	389	0.0066	22.9					119
ECG1146	1/24/03		17860	13	264	40200	457	4800	83	16.8	25500	158	187		12100	1580	0.034		0.931	0.011	111	325	<0.005	401	0.0061	21.34					121
ECG1146	9/2/03	3.2	18300	15	264	40100	435	4420	58	10.7	26500	172	155	<5	12100	1510	0.057		0.894	0.011	103	284	<0.005	362	0.0068	20.6		0.127			109
ECG1146	12/9/03	3.3	17880	15	264	37600	363	4230	59	10.2	25800	158	153	<5	11400	1610	0.047		0.884	0.017	99.3	306	<0.005	377	0.0077	19.9		0.11			104
ECG1146	2/6/04	3.4	16990	15	264	36400	459	4390	90	12.5	24700	161	162	<5	10800	1470	0.04		0.935	<0.01	99	298	<0.005	372	0.0086	20.2		1.076			107
ECG1146	4/14/04	3.5	16700	17	264	38400	356	3950	64	11.8	28100	165	149	<5	12400	1480	0.036		0.903	<0.01	96.9	260	<0.005	344	0.0059	20.3		1.116			109
ECG1146	6/22/04	3.3	19360	12	264	38100	343	4280	55	10.5	27500	169	162	<5	10500	1460	0.042		0.895	0.01	101	293	<0.005	365	0.007	21.5		0.435			113
ECG1146	8/31/04	3.3	16470	16	264	35800	356	3690	56	10	24100	164	155	<5	9560	1500			0.9	<0.02	99	345	<0.05	389	0.006	21.3		0.234			108
ECG1146	10/15/04	3.2	16620		351	34300	397	3900	60	10.7	21700	164	159	<5	10000	1090	0.033		0.866	<0.01	94.4	269	<0.005	356	0.008	20.4		0.112			99.8
LTG1147	11/8/02	7.3	2330	15	312.88	1730	317	84	106	5.9	918	215	0.2	239		0.173	0.008		<0.001	<0.01	0.025	<0.3	<0.005	0.054		<0.04					0.026
LTG1147	1/13/03	7.5	2180	17	312.88	1700	329	90	106	7.6	604	204	0.2	261		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					0.013
LTG1147	9/22/03	7.4	2200	14	312.88	1670	363	91	106	6.3	770	240	0.2	239		<0.015	0.016		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004			0.037
LTG1147	2/6/04	7.3	2240	15	312.88	1680	343	86	104	5.8	689	233	0.2	231		0.16	<0.005		<0.001	<0.01	0.034	<0.3	<0.005	0.028		<0.04		0.005			0.026
LTG1147	4/14/04	7.4	2170	15	312.88	1670	316	83	100	5.7	720	238	0.2	233		0.181	<0.005		<0.001	<0.01	0.027	<0.3	<0.005	0.018		<0.04		0.004			0.024
LTG1147	9/27/04	7.3	1931	14	312.88	1570	302	72	88	5.3	620	245	0.2	228		<0.015	0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			0.013
LTG1147	12/15/04	7.4	2010	16.5	312.88	1420	318	70	79	4.8	490	234	0.2	232		<0.02	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	0.012		<0.04		0.004			0.016
BSG1148A	7/30/02	7.0	3720	17	399.62	3960	800	220	92	6.2	2410	162	0.2	338		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	0.054	0.0003	0.043					0.017
BSG1148A	7/17/03	6.5	3720	17	403.16	4110	944	223	85	5.1	2450	168	0.1	353		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	0.203	<0.0002	<0.04		0.006			0.018
BSG1148A	10/15/04	6.8	3710	16	422.27	4170	953	248	110	6	2620	163	0.3	363		<0.02	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	0.74	<0.0002	0.043		0.006			0.016
BSG1148B	7/30/02	7.5	1318	17	399.68	994	190	57	48	4.8	477	93	0.2	189		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
BSG1148B	10/15/04	7.3	1067	16	423.19	760	156	42	41	3.7	316	84	0.2	192		<0.02	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.003			0.022
WJG1154A	1/11/02	7.2	1619	14	310.85	1110	220	70	55	4.2	526	143		163			0.009		<0.001		<0.02		<0.005						0.003		<0.01

Well	Date	pH	Cond	Temp	DTW	TDS	Ca-T	Mg-T	Na-T	K-T	SO4	Cl	F	Alk	Acidity	Al-D	As-D	Ba-D	Cd-D	Cr-D	Cu-D	Fe-D	Pb-D	Mn-D	Hg-T	Ni-D	Se-D	Se-D (DRC)	Se-D (hyd)	Ag-D	Zn-D
		su	uS/cm	C	Ft	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l CaCO3	mg/l CaCO3	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
WJG1154A	5/29/02	7.1	1245	19		936	145	50	49	3.7	284	140	0.2	148		<0.015	0.006		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
WJG1154A	7/26/02	7.6	1080	17	320.52	753	138	45	48	4.5	225	138	0.2	152		<0.015	0.012		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
WJG1154A	3/6/03	7.6	1421	15.5	317.33	1070	207	67	51	3.6	472	142	0.2	161		<0.015	0.008		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
WJG1154A	6/17/03	7.3	1110	17	320.47	798	145	46.4	40	3	288	140	0.2	149		<0.015	0.007		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			<0.01
WJG1154A	7/30/03	7.4	1219	18	326.11	850	181	55	48	3.4	342	137	0.2	156		<0.015	0.008		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			0.033
WJG1154A	11/21/03	7.5	1383	14	323.85	1140	192	60	47	3.3	503	143	0.2	160		<0.015	0.009		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			<0.01
WJG1154A	2/27/04	7.2	1397	14	318.97	1120	199	62	50	3.5	506	142	0.2	162		<0.015	0.007		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004			<0.01
WJG1154A	4/26/04	7.3	1381	17	317.98	1040	206	64	61	3.8	472	139	0.2	164		<0.015	0.008		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004			<0.01
WJG1154A	9/8/04	7.1	1393	18	287.77	1090	199	57	46	3.4	440	138	0.3	170		<0.015	0.009		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			<0.01
WJG1154A	12/13/04	7.4	1430	14	325.29	1060	216	59	45	3.3	399	136	0.2	162		<0.02	0.009		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			<0.01
WJG1154B	2/12/02					453	79	27	42	3.9	74	92		152			0.006		<0.001		<0.02		<0.005						0.002		<0.01
WJG1154B	3/27/03	7.2	648	12	316.9	410	73	26	41	3.8	82	92	0.3	155		0.019	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002			<0.01
WJG1154B	2/26/04	7.4	718	13	318.87	498	79	28	41	3	91	96	0.3	147		<0.015	<0.005		<0.001	0.011	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			0.016
WJG1154C	7/29/02	7.3	813	18	321.11	500	77	31	54	3.8	101	92	0.3	176		<0.015	0.011		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
WJG1154C	6/17/03	7.2	802	19	320.93	486	75.7	30.2	49	3.2	112	100	0.3	176		<0.015	0.012		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.002			<0.01
WJG1154C	6/3/04	7.1	878	19	317.63	620	81	32	55	3.3	132	98	0.3	177		0.024	0.012		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			<0.01
LTG1167B	7/31/02					1180	213	69	72	4.2	523	129	0.2	244		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04					<0.01
LTG1167B	12/16/04	7.2	1568	11	206.32	1160	246	72	76	3.2	499	138	0.2	259		<0.02	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			<0.01
WJG1169A	8/19/02					1970	382	98	114	4.1	966	266	0.2	201		<0.015	0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04					<0.01
WJG1169A	8/4/03	7.3	2390	16	368.73	1950	413	99	117	4.3	890	281	0.2	198		0.016	0.006		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004			<0.01
WJG1169A	9/8/04	7.0	2410	16	328.73	2060	394	88	102	4	849	351	0.3	200		0.028	0.007		<0.001	<0.01	<0.02	<0.3	<0.005	0.01	<0.0002	<0.04		0.004			<0.01
WJG1169B	8/19/02					1740	331	95	92	3.7	705	280	0.1	175		<0.015	0.006		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04					<0.01
WJG1169B	8/4/03	7.1	2140	17	368.61	1700	345	94	92	4	715	288	0.1	177		0.021	0.007		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004			<0.01
WJG1169B	9/8/04	7.0	2060	16	382.53	1620	312	81	82	3.6	573	318	0.2	175		0.017	0.008		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004			<0.01
WJG1170A	9/4/02					1040	183	59	49	3.9	389	147	0.2	151		<0.015	0.007		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
WJG1170A	7/16/03	6.9	1419	17	378.4	1090	204	65	52	3.9	410	160	0.3	153		<0.015	0.007		<0.001	<0.01	<0.02	<0.3	<0.005	0.019		<0.04		0.004			0.018
WJG1170A	9/9/04	7.3	1488	17	383.29	1140	218	64	51	3.8	501	154	0.2	160		<0.015	0.009		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004			<0.01
WJG1171A	8/30/02					455	82	27	35	1.9	83	81	0.2	152		<0.015	0.009		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
WJG1171A	11/7/02	7.6	685	15	303.37	420	81	26	41	3.8	103	87	0.2	151		<0.015	0.007		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
WJG1171A	6/17/03	7.3	710	17	305.57	434	79.2	25.9	33	2.8	94	84	0.2	154		<0.015	0.006		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002			<0.01
WJG1171A	12/4/03	7.2	727	15	302.2	480	79	26	34	2.4	88	82	0.2	148		<0.015	0.006		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002			<0.01
WJG1171A	12/13/04	7.6	741	14	303.57	480	88	26	31	2.2	92	82	0.2	150		<0.02	0.007		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.002			<0.01
COG1175A	8/1/02					4080	549	336	102	7.2	2660	300	2.6	<5		34	0.007		0.076	<0.01	4.09	<0.3	0.017	10.5	0.0004	0.617					3.5
COG1175A	9/14/04	3.9	3730	13	384.1	3970	589	305	77	4.5	2370	322	7.1	<5		28.3	0.007		0.059	<0.01	3.41	<0.3	0.01	7.44	0.0005	0.462		0.011			2.71
COG1175B	8/1/02					10400	402	1350	111	16.7	7910	173	38.6	<5		152	0.031		0.851	<0.01	17.3	<0.3	0.036	210	0.0024	10.2					42
COG1175B	7/17/03	3.9	7170	17	379.17	9890	518	1500	100	15.3	6200	180	6.6	<5	1080	137	0.023		0.75	<0.01	15	<0.3	0.038	184	0.0026	8.86		0.069			36.2
COG1175B	9/14/04	9.6	6540	13	384.92	9050	467	1300	90	13	6320	179	53.6	<5		120	0.026		0.792	0.012	14.8	<0.3	0.035	180	0.0023	8.57		0.109			34.7
B2G1176A	8/2/02		6260		372.38	7480	431	896	116	12.5	5200	175	16.4	<5		61.5	0.016		0.36	<0.01	0.219	<0.3	0.02	67.1	0.0054	3.41					10.7
B2G1176A	8/12/03	3.4	6160	16	374.58	7420	470	967	122	10.8	4510	177	3	<5		63.3	0.012		0.358	<0.01	0.198	<0.3	0.02	66.5	0.0051	3.43		0.025			10.1
B2G1176A	2/27/04	3.9	5980	13	382.88	7030	437	952	119	10.3	4800	178	23.8	<5		53.6	0.011		0.35	<0.01	0.172	<0.3	0.018	65.6	0.0062	2.89		0.217			8.97
B2G1176A	10/19/04	4.3	5530		391.51	7040	455	882	104	9.7	3990	163	28.1	<5		38.1	0.011		0.365	<0.01	0.138	<0.3	0.012	60	0.005	3.64		0.019			11.7
BSG1177A	8/12/02					16800	431	2730	92	23	13000	131	142	<5		336	0.045		1.61	<0.01	0.36	<0.3	0.08	264	0.0034	14.6					53.7
BSG1177A	1/31/03	3.8	10390	13	392.6	16000	416	2550	68	16.8	11700	135	130	<5		322	0.033		1.51	<0.01	0.354	<0.3	<0.005	252	0.0033	13.4					52.7
BSG1177A	10/14/03	4.2	9980	13	401.63	13700	400	2410	75	13.1	10300	136	104	<5		163	0.019		1.4	<0.01	0.208	<0.3	0.046	199	0.0044	9.72		0.023			24.5
BSG1177A	3/5/04	4.0	9120	13	402.47	13100	411	1930	73	14.3	9120	126	106	<5		208	0.022		1.18	<0.01	0.247	<0.3	0.065	182	0.0059	8.65		0.559			32
BSG1177B	8/2/02		15830	15	395.29	31500	415	3580	105	14.7	22400	155	150	<5		1400	0.048		1.45	<0.01	68	81.5	0.033	380	0.0026	20.2					95.1
BSG1177B	2/10/03		15230	13	395.8	29800	411	3740	84	9	28600	164	141	<5		1160	0.038		1.38	<0.01	64.4	113	0.025	375	0.0069	19.9					91.4
BSG1177B	10/13/03	3.1	16470	14	405.94	37700	362	4040	79	4.2	22200	193	148	<5		1070	0.035		2.08	<0.01	53.8	3.29	0.015	452	0.0099	19.4		0.091			86.6
BSG1177B	3/9/04	3.4	13640	15	405.88	24800	356	3310	79	5.7	18700	151	148	<5		844	0.042		1.9	<0.01	43.3	3.61	0.018	399	0.0107	17.8		1.098			68.5
COG1178A	8/6/02					1390	269	83	71	6	423	344	0.1	158		<0.015	0.007		<0.001	0.071	<0.02	<0.3	<0.005	<0.01		0.041					<0.01
COG1178A	9/9/04	7.3	2010	16	331.37	1600	283	79	67	3.9	450	328	0.2	151		0.113	0.012		<0.001	<0.01	0.102	<0.3	<0.005	<0.01		<0.04		0.005			0.011
BSG1179A	7/17/02	3.7	9170	16	390.43	13800	412	1990	107	19	10600	149	91.7	<5		336	0.033		0.935	<0.01	7.14	<0.3	0.028	239	0.0022	9.24					49.8
BSG1179A	2/21/03	3.4	9190	12	391.68	12700	439	1750	114	17.8	9210	145	81	<5		241	0.027		0.86	0.012	5.06	0.53	0.025	196	0.0031	8.25					42.3
BSG1179A	10/14/03	3.9	9160	14	397.51	12600	415	1800	95	13.7	9640	157	81	<5		232	0.022		0.845	<0.01	3.86	<0.3	0.028	177	0.0039	6.32		0.031			41.8
BSG1179A	3/25/04	3.9	9210	14	403.6	12500	426	1760	102	15	10000	152	82	<5		239	0.018		0.829	<0.01	4.38	<0.3	0.025	190	0.0062	7.77		0.517			37.6
BSG1179B	7/16/02	3.5	9270	16	392.52	13900	390	1880	79	20.8	11800	140	83.8	<5		362	0.028		0.822	<0.01	7.67	<0.3	0.075	181	0.0035	8.57					37.7

		pH	Cond	Temp	DTW	TDS	Ca-T	Mg-T	Na-T	K-T	SO4	Cl	F	Alk	Acidity	Al-D	As-D	Ba-D	Cd-D	Cr-D	Cu-D	Fe-D	Pb-D	Mn-D	Hg-T	Ni-D	Se-D	Se-D (DRC)	Se-D (hyd)	Ag-D	Zn-D
Well	Date	su	uS/cm	C	Ft	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l CaCO3	mg/l CaCO3	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
BSG1179B	2/21/03		8980	12	393.8	12700	441	1620	85	20.9	9020	135	74	<5		327	0.024		0.74	0.011	7.36	<0.3	0.065	171	0.0073	8.24					35.1
BSG1179B	10/14/03	3.1	8630	14	400.98	11800	437	1590	78	16.9	9110	144	69	<5		300	0.018		0.695	0.013	5.95	<0.3	0.07	147	0.0099	5.74		0.024			34.1
BSG1179B	3/25/04	3.7	8010	15	406.71	11200	457	1460	86	18.4	8500	137	64	<5		275	0.014		0.639	<0.01	5.69	<0.3	0.066	144	0.0061	6.84		0.421			26.6
BSG1179C	7/15/02	3.2	14730	17	397.39	29000	397	3240	60	12.8	20400	33	134	<5		1270	0.038		0.748	<0.01	78.6	47.7	0.013	261	0.0012	17.3					100
BSG1179C	2/20/03		13670	13	398.45	28000	445	3200	67	13	20800	151	123	<5	8960	1080	0.031		0.663	<0.01	72.9	243	0.009	230	0.0032	15.1					88.9
BSG1179C	3/24/04	3.6	13270	15	411.13	27600	402	3160	56	10.4	18100	147	130	<5	7720	1120	0.022		0.67	<0.01	71.6	180	0.007	223	0.0041	14.4		0.954			82.5
BSG1180B	10/3/02					31400	433	4470	127	24.7	19600	166	205	<5	6750	943	0.084		2.37	0.014	2.71	<0.3	0.048	517	0.0208	25.5					94.4
BSG1180B	1/29/03	3.1	15810	13	371.84	29900	417	4450	125	22.8	18000	168	199	<5	6690	820	0.071		1.987	0.014	3.35	<0.3	0.043	505	0.022	24.7					89.6
BSG1180B	10/15/03	3.6	15590	14	379.39	28600	420	4110	115	18.3	18200	196	194	<5	5570	785	0.063		2	0.014	2.84	<0.3	0.037	435	0.0209	20.2	0.064	0.136			83.6
BSG1180B	3/1/04	3.7	15430	14	382.32	27500	374	4490	111	16.1	20300	165	172	<5	4520	657	0.048		2.01	0.012	3.03	<0.3	0.04	440	0.073	20.3	0.044	6.61			62.7
BSG1180B	5/19/04	3.7	14070	15		26600	411	4590	125	19.8	16100	161	163	<5	4460	573	0.045		1.99	0.011	2.88	<0.3	0.037	384	0.022	19.6		0.022			64.8
BSG1180C	10/2/02					7680	528	1160	148	8.7	4850	152	30.2	252		11.4	0.007		0.117	<0.01	0.021	<0.3	0.005	96.1		3.35					0.236
BSG1180C	1/28/03		6210	12	365.62	7320	551	1090	158	8.9	4820	154	31	255		13	<0.005		0.118	<0.01	<0.02	<0.3	<0.005	94.6		2.831					0.24
BSG1180C	2/26/04	6.1	6290	13	376.56	9320	503	1320	138	7.5	6910	157	47.2	198		26.7	<0.005		0.239	<0.01	0.021	<0.3	<0.005	142	0.0296	5.12	0.022	0.236			0.786
ECG1183A	3/4/02					2790	466	134	219	8.3	910	689		311			0.006		<0.001		<0.02		<0.005						0.007		<0.01
ECG1183A	9/23/02					2380	418	129	209	8.5	713	700	0.2	296		0.65	0.009		<0.001	<0.01	<0.02	1.75	0.007	0.042		<0.04	<0.02				<0.01
ECG1183A	3/31/03	6.7	3330	15	44.43	2580	483	126	202	8.1	728	677	0.2	294		0.03	0.006		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04	<0.02	0.005			<0.01
ECG1183A	11/25/03	7.0	2850	10	43.25	2390	432	109	168	7.3	573	672	0.3	276		<0.015	0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004			<0.01
ECG1183A	6/9/04	6.7	3480	15	42	2830	489	115	183	7.4	731	700	0.3	308		0.032	0.006		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04	0.059				<0.01
ECG1183A	12/14/04	6.7	3680	13.5	42.94	2490	541	124	196	7.1	709	663	0.4	307		<0.02	0.006		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04	<0.05				<0.01
ECG1184	2/4/02					968	116	85	62	3.2	362	107		287			<0.005	0.021	<0.001	<0.01	<0.02		<0.005						<0.002	<0.001	<0.01
ECG1184	5/28/02	6.9	1250	13.5	42.1	906	119	73	53	2.7	335	97	0.9	288		<0.015	<0.005	0.02	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	<0.01
ECG1184	9/13/02					1030	120	78	55	3	342	105	0.5	275		<0.015	<0.005	0.022	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	0.013
ECG1184	12/4/02	7.0	1268	9	44.13	886	126	83	57	2.8	327	100	0.9	278		<0.015	<0.005	0.022	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	0.017
ECG1184	3/6/03	7.2	1228	11	42.88	880	130	76	53	2.6	325	90	0.8	295		<0.015	<0.005	0.022	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	<0.01
ECG1184	5/15/03	7.0	1460	15	40.52	1080	168	95	66	3.1	358	130	0.8	287		<0.015	<0.005	0.022	<0.001	<0.01	0.022	<0.3	<0.005	0.02		<0.04		0.002		0.001	0.015
ECG1184	8/13/03	7.1	1276	13	46.46	928	133	72	51	2.5	268	89	0.8	280		<0.015	<0.005	0.021	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.002		<0.001	<0.01
ECG1184	12/17/03	6.9	1160	10	44.15	833	116	64	48	2.4	302	84	0.8	284		0.043	<0.005	0.02	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002		<0.001	<0.01
ECG1184	3/8/04	6.9	1322	13	43.37	937	147	77	57	2.7	332	96	0.8	285		<0.015	<0.005	0.022	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.002		<0.001	<0.01
ECG1184	5/20/04	6.9	1389	13	41.06	1150	150	78	61	2.9	361	114	0.8	295		<0.015	<0.005	0.023	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003		<0.001	0.024
ECG1184	9/16/04	7.0	1447	13	49.13	1050	191	86	61	3	368	148	0.8	288		0.017	<0.005	0.025	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003		<0.001	<0.01
ECG1184	12/2/04	6.9	1413	10	44.01	1010	168	81	60	2.8	351	125	0.8	291		<0.02	<0.005	0.022	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.002		<0.001	<0.01
ECG1186	1/17/02					1570	334	76	142	5.3	487	395		204			<0.005	0.024	<0.001	<0.01	<0.02		<0.005						<0.002	<0.001	<0.01
ECG1186	4/8/02					1670	325	71	131	4.3	594	392	0.2	202		0.016	0.006	0.025	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			0.002	<0.001	0.117
ECG1186	7/15/02	6.8	2340	14	39.13	1640	301	69	127	5.5	558	371	0.2	202		<0.015	0.005	0.026	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	<0.01
ECG1186	11/8/02	7.1	2400	12	39.64	1590	293	67	124	5.2	650	392	0.2	197		<0.015	0.006	0.025	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			0.002	<0.001	<0.01
ECG1186	1/16/03	7.1	2080	12	40.56	1580	300	70	131	5.1	486	380	0.2	197		<0.015	<0.005	0.026	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	0.011
ECG1186	4/8/03	6.9	2190	12	41.13	1540	322	75	137	5.3	568	372	0.2	195		<0.015	0.005	0.026	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002		0.001	<0.01
ECG1186	9/4/03	7.0	2140	14	42	1600	328	72	134	4.8	485	386	0.2	192		<0.015	<0.005	0.028	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002		<0.001	0.01
ECG1186	11/12/03	7.1	1889	12	42.5	1490	302	68	128	4.4	440	401	0.2	202		0.016	0.006	0.029	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002		<0.001	<0.01
ECG1186	2/6/04	7.0	2070	12	43.18	1560	303	63	113	4	511	368	0.3	191		0.021	<0.005	0.028	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002		<0.001	<0.01
ECG1186	4/8/04	6.8	1930	14	43.29	1470	281	61	115	4.2	422	376	0.2	197		0.018	<0.005	0.029	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002		<0.001	<0.01
ECG1186	8/23/04	7.0	1816	14	44.06	1620	284	59	115	4.1	482	377	0.2	193		<0.015	<0.005	0.03	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002		<0.001	<0.01
ECG1186	11/3/04	6.8	2200	13	44.22	1480	266	56	106	3.8	437	382	0.2	193		<0.02	<0.005	0.03	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002		<0.001	<0.01
ECG1187	1/16/02					1070	230	58	72	4.9	86	456		157			<0.005	0.116	<0.001	<0.01	<0.02		<0.005						0.003	<0.001	<0.01
ECG1187	4/5/02					1220	233	56	68	4.4	96	462	0.3	156		<0.015	<0.005	0.114	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			0.003	<0.001	<0.01
ECG1187	7/16/02	7.0	1807	14	56.62	1170	205	53	67	5.5	97	476	0.3	157		<0.015	0.005	0.124	<0.001	<0.01	<0.02	<0.3	<0.005	0.019		<0.04			<0.002	<0.001	<0.01
ECG1187	11/14/02	7.2	1870	12	57.47	1150	228	62	75	4.6	88	433	0.3	156		0.072	<0.005	0.126	<0.001	<0.01	<0.02	<0.3	<0.005	0.056		<0.04			0.002	<0.001	0.021
ECG1187	1/15/03	7.3	1778	12	57.92	1270	238	60	73	4.8	79	466	0.3	157		<0.015	<0.005	0.126	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			0.003	<0.001	<0.01
ECG1187	4/10/03	7.2	1751	14	58.35	1260	236	61	75	5.4	91	464	0.3	155		<0.015	<0.005	0.126	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.002		<0.001	<0.01
ECG1187	9/5/03	7.2	1820	13	59.43	1200	248	60	73	4.7	93	469	0.3	150		0.109	<0.005	0.124	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003		<0.001	0.012
ECG1187	11/13/03	7.1	1871	12	59.77	1170	236	58	70	4.5	92	467	0.3	161		<0.015	<0.005	0.122	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003		<0.001	<0.01
ECG1187	2/17/04	7.1	1596	13	59.55	1260	240	59	70	4.6	94	460	0.3	154		<0.015	<0.005	0.138	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.002		<0.001	0.018
ECG1187	4/13/04	7.0	1904	14	60.85	1290	240	60	75	4.9	90	475	0.3	156		<0.015	<0.005	0.128	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.005		<0.001	<0.01
ECG1187	9/15/04	6.8	1885	14	61.83	1380	268	60	74	4.7	100	481	0.3	155		<0.015	<0.005	0.15	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004		<0.001	<0.01
ECG1187	10/29/04	7.1	1992	11	62.2	1030	258	58	70	4.5	104	477	0.3	157		<0.02	<0.005	0.14	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.005		<0.001	<0.01

		pH	Cond	Temp	DTW	TDS	Ca-T	Mg-T	Na-T	K-T	SO4	Cl	F	Alk	Acidity	Al-D	As-D	Ba-D	Cd-D	Cr-D	Cu-D	Fe-D	Pb-D	Mn-D	Hg-T	Ni-D	Se-D	Se-D (DRC)	Se-D (hyd)	Ag-D	Zn-D
Well	**Date**	su	uS/cm	C	Ft	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l CaCO3	mg/l CaCO3	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
ECG1188	1/9/02					3370	724	142	246	6.8	1720	432		285			0.005	0.031	<0.001	<0.01	<0.02		<0.005						<0.002	<0.001	<0.01
ECG1188	4/26/02					3560	696	139	238	6	1640	469	0.2	283		<0.015	0.006	0.03	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			0.003	<0.001	<0.01
ECG1188	7/12/02	6.8	3960	16	38.97	3570	773	156	268	9.3	1820	482	0.2	279		<0.015	0.005	0.03	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	<0.01
ECG1188	10/31/02	7.0	3630	12	39.72	3436	745	151	256	7.9	1580	492	0.2	271		<0.015	<0.005	0.03	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			0.002	<0.001	0.01
ECG1188	1/14/03	7.1	3700	13	40.12	3490	735	140	240	7.9	1600	484	0.2	274		<0.015	<0.005	0.03	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	<0.01
ECG1188	5/6/03	7.1	3710	13	40.82	3520	610	137	220	5.3	1650	478	0.2	283		<0.015	0.005	0.03	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002		<0.001	<0.01
ECG1188	9/4/03	6.9	3790	14	41.63	3500	709	133	231	5.9	1640	478	0.2	279		<0.015	0.005	0.03	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002		<0.001	0.012
ECG1188	10/30/03	7.0	3780	12	42.63	3470	736	145	258	6.4	1750	487	0.2	274		0.024	<0.005	0.028	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002		<0.001	0.01
ECG1188	1/9/04	7.0	3850	13	42.61	3440	694	134	238	6.1	1770	450	0.4	267		<0.015	<0.005	0.028	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002		<0.001	<0.01
ECG1188	4/23/04	6.9	3710	14	43.18	3580	701	135	235	6.4	1670	473	0.2	275		0.022	<0.005	0.03	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		0.041		<0.002		<0.001	<0.01
ECG1188	8/27/04	6.6	3980	14	40.2	3550	711	132	237	5.9	1640	489	0.3	277		<0.015	<0.005	0.031	<0.001	<0.01	0.026	<0.3	<0.005	<0.01		<0.04		<0.002		<0.001	<0.01
ECG1188	11/17/04	7.0	3500	12	44.37	3390	732	135	236	6.1	1630	468	0.2	276		<0.02	<0.005	0.027	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002		<0.001	<0.01
ECG1189	1/7/02	7.6	961	13	225.23	575	114	34	32	5	18	197		138			<0.005	0.334	<0.001	<0.01	<0.02		<0.005						<0.002	<0.001	<0.01
ECG1189	5/24/02	7.5	942	13	225.06	638	119	34	32	4.7	16	222	0.3	131		<0.015	<0.005	0.318	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	<0.01
ECG1189	7/3/02	7.2	966	15	225.07	610	96	35	34	6	18	202	0.3	124		0.025	<0.005	0.328	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	<0.01
ECG1189	10/31/02	7.6	896	12	225.03	599	95	34	29	4.1	15	222	0.3	131		<0.015	<0.005	0.325	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	<0.01
ECG1189	1/9/03	7.7	947	12	225.07	751	114	35	34	5.3	17	212	0.3	137		<0.015	<0.005	0.324	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	<0.01
ECG1189	5/6/03	7.6	943	13	225.03	620	80	31	28.6	4	14	213	0.2	133		<0.015	<0.005	0.326	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002		<0.001	<0.01
ECG1189	9/3/03	7.5	852	14	225.28	620	120	33	29	4.7	14	214	0.3	130		<0.015	<0.005	0.327	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002		<0.001	<0.01
ECG1189	10/29/03	7.6	907	14	225.1	610	117	35	31	4.8	16	218	0.3	132		<0.015	<0.005	0.33	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003		<0.001	<0.01
ECG1189	1/9/04	7.2	953	13	225.42	580	110	34	32	4.8	17	198	0.3	129		<0.015	<0.005	0.329	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003		<0.001	<0.01
ECG1189	4/23/04	7.6	924	14	225.32	560	111	33	31	5	15	209	0.3	132		0.02	<0.005	0.359	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.007		<0.001	<0.01
ECG1189	8/26/04	7.3	1000	13	226.19	630	119	33	29	4.5	12	211	0.3	132		0.019	<0.005	0.371	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.005		<0.001	0.011
ECG1189	11/30/04	7.5	954	11	225.44	627	117	34	30	4.6	13	206	0.3	133		<0.02	<0.005	0.353	<0.001	0.015	<0.02	<0.3	<0.005	<0.01		<0.04		0.004		<0.001	<0.01
ECG1190	1/9/02					730	157	43	28	3.2	56	236		161			<0.005	0.158	<0.001	<0.01	<0.02		<0.005						<0.002	<0.001	<0.01
ECG1190	4/8/02					850	162	43	27	2.9	59	269	0.3	160		0.023	0.006	0.165	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			0.002	<0.001	<0.01
ECG1190	7/12/02	7.1	1221	15	128.41	774	170	47	31	3.7	60	264	0.3	161		<0.015	0.005	0.161	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	0.01
ECG1190	10/31/02	7.4	1109	12	127.27	794	169	46	33	4.6	49	272	0.3	156		<0.015	<0.005	0.162	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	<0.01
ECG1190	1/9/03	7.5	1190	13	122.07	960	162	44	29	3.4	58	262	0.3	158		<0.015	<0.005	0.16	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	<0.01
ECG1190	4/10/03	7.4	1182	14	127.87	860	169	47	30	3.8	54	268	0.3	160		<0.015	<0.005	0.165	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002		<0.001	<0.01
ECG1190	9/3/03	7.4	1085	14	128.62	870	174	44	25	3.1	54	277	0.3	155		<0.015	<0.005	0.16	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.002		<0.001	<0.01
ECG1190	10/30/03	7.3	1243	13	128.53	850	163	44	27	3	60	284	0.3	157		0.016	<0.005	0.164	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003		<0.001	<0.01
ECG1190	1/9/04	7.2	1232	13	128.42	780	157	43	27	2.9	60	265	0.3	155		<0.015	<0.005	0.161	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.002		<0.001	<0.01
ECG1190	4/13/04	7.1	1246	14	129.54	825	165	45	28	3.3	49	278	0.3	157		0.059	<0.005	0.163	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004		<0.001	<0.01
ECG1190	8/26/04	7.1	1324	13	130.21	850	183	44	26	2.8	52	285	0.3	158		<0.015	0.005	0.179	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003		<0.001	<0.01
ECG1190	11/17/04	7.2	1126	12	130.57	790	165	42	25	2.8	53	282	0.3	156		<0.02	<0.005	0.158	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003		<0.001	<0.01
LTG1191	1/16/02					4890	575	490	266	8.7	2850	373		315			<0.005	0.019	0.061	<0.01	0.023		<0.005						0.004	<0.001	12.6
LTG1191	4/8/02					4780	573	459	249	7.3	3050	190	2.9	316		<0.015	0.006	0.02	0.062	<0.01	0.02	<0.3	<0.005	0.79		0.195			0.006	<0.001	11.8
LTG1191	7/16/02	6.3	4980	14	23.2	4800	522	422	237	8.4	2940	383	3.1	319		0.021	<0.005	0.02	0.059	<0.01	<0.02	<0.3	<0.005	0.546		0.161			0.003	<0.001	11.2
LTG1191	11/13/02	6.6	5010	13	23.97	4810	567	451	262	9	3160	390	3.1	312		0.55	<0.005	0.02	0.06	<0.01	0.034	<0.3	<0.005	0.565		0.179			0.005	<0.001	11.7
LTG1191	1/16/03	6.6	4660	14	24.06	4760	584	462	272	9.9	2560	377	3.1	306		<0.015	<0.005	0.02	0.056	<0.01	<0.02	<0.3	<0.005	0.462		0.148			0.006	<0.001	10.8
LTG1191	4/8/03	6.4	4550	13	24.11	4820	591	460	262	8.7	2890	376	3	307		0.015	<0.005	0.019	0.057	<0.01	<0.02	<0.3	<0.005	0.526		0.138		0.005		<0.001	11.2
LTG1191	9/17/03	6.1	4800	14	24.49	4590	598	460	278	10	2750	396	3	306		0.054	0.014	0.018	0.053	<0.01	0.05	<0.3	<0.005	0.483		0.156		0.005		<0.001	9.85
LTG1191	10/10/03	6.6	4890	13	24.07	4790	606	445	258	8.3	2640	388	3	318		<0.015	<0.005	0.019	0.051	<0.01	<0.02	<0.3	<0.005	0.401		0.137		0.004		<0.001	9.96
LTG1191	2/16/04	6.4	4600	13	24.58	4660	648	439	242	7.8	2650	396	3.1	300		0.024	<0.005	0.02	0.05	<0.01	<0.02	<0.3	<0.005	0.371		0.117		0.005		<0.001	9.12
LTG1191	4/8/04	6.4	4630	14	23.48	4610	556	377	222	7.1	2390	382	3.2	300		<0.015	<0.005	0.02	0.063	<0.01	<0.02	<0.3	<0.005	0.052		0.127		0.008		<0.001	11.8
LTG1191	9/16/04	6.5	4270	16	24.17	4510	652	411	247	7.6	2660	418	3	300		<0.015	<0.005	0.022	0.062	<0.01	0.028	<0.3	<0.005	0.034		0.128		0.007		<0.001	10.2
LTG1191	11/19/04	6.4	4570	12	23.59	4460	603	388	247	7.5	2460	392	2.8	288		<0.02	0.006	0.02	0.059	<0.01	0.033	<0.3	<0.005	0.027		0.12		0.006		<0.001	8.74
B2G1193	3/26/02					2880	545	187	83	5.2	1650	172		218		0.027	<0.005		<0.001		<0.02	<0.3	<0.005	<0.01			0.006				0.029
B2G1193	6/14/02	6.8	2620	16		2940	567	188	86	4.5	1720	171	0.1	208		<0.015	<0.005		0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04					0.015
B2G1193	7/29/02	6.9	3040	15	390.63	2970	542	187	83	5.2	1620	172	0.1	218		<0.015	0.006		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04					0.016
B2G1193	8/23/02		3080			3030	542	189	84	7.5	1730	168	0.2	214		0.094	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	0.023	<0.0002	<0.04					0.024
B2G1193	11/5/02	7.3	3020	14	390.63	2870	353	214	91	5.5	1710	152	0.1	214		<0.015	0.011		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04					0.026
B2G1193	2/19/03	7.2	3070	13		3000	570	213	88	5.4	1690	179	0.1	219		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04					0.018
B2G1193	6/13/03	7.2	3040	16	390.63	3020	532	207	78	4.5	1770	183	0.1	216		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004			0.014
B2G1193	9/18/03	7.1	3140	14	390.63	2950	510	201	76	4.2	1900	174	0.2	222		0.039	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004			0.018

		pH	Cond	Temp	DTW	TDS	Ca-T	Mg-T	Na-T	K-T	SO4	Cl	F	Alk	Acidity	Al-D	As-D	Ba-D	Cd-D	Cr-D	Cu-D	Fe-D	Pb-D	Mn-D	Hg-T	Ni-D	Se-D	Se-D (DRC)	Se-D (hyd)	Ag-D	Zn-D
Well	Date	su	uS/cm	C	Ft	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l CaCO3	mg/l CaCO3	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
B2G1193	11/10/03	7.3	2850	14	390.63	3050	565	223	84	4.5	1770	189	0.2	216		<0.015	0.01		<0.001	<0.01	0.029	<0.3	<0.005	<0.01		0.042		0.005			0.016
B2G1193	12/31/03	6.9	3260	14	390.63	3040	535	210	79	4.5	1710	179	0.2	213		<0.015	0.006		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004			0.016
B2G1193	1/29/04	7.2	3240	19	390.63	3050	537	209	79	4.4	1940	183	0.2	212		0.049	0.011		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004			0.028
B2G1193	2/4/04	6.9	3020	14	390.63	3010	542	221	87	4.9	1700	184	0.2	218		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.005			0.03
B2G1193	3/4/04	6.9	3140	15	390.63	3110	551	225	86	4.6	1830	177	0.2	214		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.005			0.1
B2G1193	3/25/04	7.0	3230	15	390.63	3220	584	245	83	4.8	2010	165	0.2	221		0.089	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	0.022	<0.0002	<0.04		0.005			0.06
B2G1193	4/16/04	7.1	2440	14	390.63	3020	540	223	87	5	1670	174	0.1	221		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004			<0.01
B2G1193	7/16/04	6.7	2770	16	390.63	3040	542	198	74	4.1	1950	160	0.2	215		<0.015	<0.005		<0.001	0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004			0.012
B2G1193	8/4/04	6.7	2580	16	390.63	3000	555	210	81	4.8	1630	172	0.2	216		<0.015	<0.005		<0.001	<0.01	0.031	<0.3	<0.005	0.013	<0.0002	<0.04		0.005			0.011
B2G1193	9/16/04	7.1	3600		390.63	3030	551	214	73	4.4	1760	168	0.2	217		0.016	0.006		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004			0.014
B2G1193	10/15/04	7.1	2970		443	3120	552	211	71	4.2	1640	170	0.2	212		<0.02	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	0.012	<0.0002	<0.04		0.004			0.037
B2G1193	11/10/04	7.0	2950		390.63	3090	548	219	79	4.6	1760	167	0.2	219		<0.02	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004			0.012
B2G1193	12/10/04	7.0	2970	17	390.63	3150	557	219	74	4.3	1790	173	0.2	222		<0.02	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004			0.057
BFG1195A	7/19/02	7.1	2960	16	424.11	2750	553	154	99	5.4	1540	181	0.2	228		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04					<0.01
BFG1195A	9/18/03	6.9	2790	15	433.33	2620	515	142	89	4.2	1460	183	0.2	226		0.032	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004			<0.01
BFG1195A	2/19/04	7.0	2750	12	424.57	2620	533	143	88	4.2	1540	181	0.2	220		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.003			<0.01
BFG1195B	7/19/02	7.4	1977	16	423.3	1610	301	87	69	4.4	749	150	0.2	184		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04					<0.01
BFG1195B	9/16/03	7.1	2060	16		1600	294	75	55	3.1	762	147	0.2	179		0.053	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			0.018
BFG1195B	7/27/04	7.0	1988	16	430.03	1760	370	93	66	3.3	972	146	0.2	183		0.016	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.003			0.012
BSG1196B	11/5/02	6.3	7640	14	354.73	9475	479	1430	125	6	7000	176	0.2	209		<0.015	0.006		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04					0.033
BSG1196B	6/18/03	6.3	6530	16	356.53	9450	434	1530	118	7.2	7130	139	0.3	213		<0.015	0.006		0.016	<0.01	0.038	<0.3	<0.005	5.9		0.108		0.005			0.067
BSG1196B	12/3/03	6.3	6090	14	364.05	8560	448	1490	119	6.9	5980	138	0.2	222		0.021	<0.005		0.009	<0.01	0.032	<0.3	<0.005	1.98		0.064		0.006			0.045
BSG1196B	6/8/04	6.4	6430	16	371.68	7970	459	1230	114	6.5	5720	137	0.2	236		<0.015	0.005		0.006	<0.01	0.018	<0.3	<0.005	0.681	0.0023	0.048		0.008			0.037
BSG1196B	12/13/04	6.3	5540	13	378.96	7380	469	1190	103	5.7	5170	140	0.3	240		<0.02	0.006		0.006	<0.01	<0.02	<0.3	<0.005	0.67	<0.0002	0.05		0.006			0.036
BSG1196C	11/6/02	6.6	5980	14	352.39	6740	733	805	155	7	4910	171	9.9	347		2.12	<0.005		0.106	<0.01	<0.02	<0.3	<0.005	0.338	0.0483	1.68					0.418
BSG1196C	12/4/03	6.4	5360	14	362	7010	755	906	189	6.9	4560	161	3.2	386		0.76	<0.005		0.06	<0.01	0.024	<0.3	<0.005	26.2		1.12		0.009			0.215
B3G1197A	1/11/02	7.5	927	12	312.24	627	116	40	43	2.9	208	95		153			0.006		<0.001		<0.02		<0.005				0.003				<0.01
B3G1197A	2/15/02					640	110	38	41	3.1	212	92		154			<0.005		<0.001		<0.02		<0.005				<0.003				<0.01
B3G1197A	3/14/02					580	107	37	43	2.8	185	90		152			0.006		<0.001		<0.02		<0.005				<0.003				<0.01
B3G1197A	4/23/02					590	101	35	39	2.7	150	88	0.2	152		0.043	0.006		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
B3G1197A	5/24/02	7.5	918	14	311.74	650	115	38	42	2.9	208	90	0.2	155		0.041	0.006		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
B3G1197A	6/19/02	7.4	917	16	311.66	640	95	39	43	3.7	246	99	0.2	148		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
B3G1197A	7/17/02	7.5	1067	17	317.43	770	127	45	48	4.1	271	106	0.2	152		0.066	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	0.048		<0.04					0.016
B3G1197A	8/22/02		1025		321.42	724	108	41	40	3.1	278	98	0.2	154		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
B3G1197A	9/13/02					790	127	43	43	3	283	103	0.1	149		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					0.042
B3G1197A	10/25/02	7.6	1019	14	321.81	690	131	48	56	5.8	258	101	0.2	153		0.026	0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					0.011
B3G1197A	11/22/02	7.6	971	14	320.53	760	120	42	42	2.3	238	173	0.2	150		0.029	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
B3G1197A	12/17/02	7.5	905	13	319.75	663	124	43	46	3.6	234	97	0.2	152		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
B3G1197A	1/7/03	7.7	899	13	319.24	630	103	43	44	3.7	208	94	0.2	146		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
B3G1197A	2/19/03	7.7	859	13		528	109	38	47	3.9	177	98	0.2	154		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
B3G1197A	3/26/03	7.2	870	15	317.75	553	106	37	42	2.4	188	93	0.2	152		0.055	<0.005		<0.001	<0.01	0.023	<0.3	<0.005	<0.01		<0.04		<0.002			<0.01
B3G1197A	6/2/03	7.5	905	16	318	630	109	37	43	2.9	196	98	0.2	153		0.057	0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			0.016
B3G1197A	12/19/03	7.6	959	14	323.2	604	108	36	38	2.6	218	94	0.2	150		<0.015	0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.002			<0.01
B3G1197A	6/10/04	7.5	863	14	319.06	620	93	31	37	2.6	164	93	0.2	155		0.019	0.006		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			<0.01
B3G1197A	12/28/04	7.5	903	13	325.23	610	128	38	39	2.6	210	102	0.2	152		<0.02	0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			<0.01
B3G1197B	3/14/02					490	87	35	37	3.4	87	108		155			0.01		<0.001		<0.02		<0.005				0.003				<0.01
B3G1197B	9/25/02		880		322.25	529	80	32	39	5.9	85	112	0.2	150		0.025	0.01		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
B3G1197B	6/2/03	7.7	793	16	317.93	500	89	33	37	3.2	88	115	0.2	156		<0.015	0.01		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.002			<0.01
B3G1197B	6/9/04	7.4	814	18	319.03	510	86	32	33	3.1	146	110	0.2	156		<0.015	0.01		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			<0.01
BFG1198A	3/5/02					1740	315	97	108	4.6	805	273		163			0.005		<0.001		<0.02		<0.005				0.006				<0.01
BFG1198A	6/18/03	7.3	2120	15	373.73	1810	330	91.3	111	4.2	828	273	0.2	163		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004			<0.01
BFG1198A	12/13/04	7.0	2110	13	393.45	1700	350	85	103	3.5	829	260	0.3	165		<0.02	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004			<0.01
BFG1200	3/26/02					1600	318	96	61	4.1	874	142		181		0.166	0.006		<0.001		0.028	<0.3	<0.005	<0.01	<0.0002				<0.002		0.015
BFG1200	6/14/02	7.0	1708	16		1590	313	96	62	3.8	813	140	0.2	175		<0.015	0.007		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04					<0.01
BFG1200	7/29/02	7.3	2010	16		1640	316	97	62	4.3	854	148	0.2	185		<0.015	0.008		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04					0.016
BFG1200	8/23/02					1730	342	104	67	6.1	933	143	0.2	186		<0.015	0.006		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04					<0.01

		pH	Cond	Temp	DTW	TDS	Ca-T	Mg-T	Na-T	K-T	SO4	Cl	F	Alk	Acidity	Al-D	As-D	Ba-D	Cd-D	Cr-D	Cu-D	Fe-D	Pb-D	Mn-D	Hg-T	Ni-D	Se-D	Se-D (DRC)	Se-D (hyd)	Ag-D	Zn-D
Well	**Date**	su	uS/cm	C	Ft	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l CaCO3	mg/l CaCO3	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
BFG1200	11/5/02	7.7	2010	14		1740	335	107	66	4.2	919	145	0.1	178		<0.015	0.006		0.015	<0.01	0.027	<0.3	<0.005	4.82	0.0088	0.117					0.059
BFG1200	2/19/03	7.4	2020	15		1630	352	106	68	4.3	923	154	0.1	183		<0.015	0.006		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04					<0.01
BFG1200	6/13/03	7.2	1975	16		1670	317	95.3	58	3.7	1010	155	0.2	177		<0.015	0.006		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004			<0.01
BFG1200	9/18/03	7.2	2030	15		1770	335	100	62	3.8	863	157	0.2	180		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.003			<0.01
BFG1200	12/9/03	7.2	2010	15		1710	319	92	59	3.5	904	156	0.2	179		0.103	0.008		<0.001	0.013	<0.02	<0.3	<0.005	0.023	<0.0002	<0.04		0.003			0.021
BFG1200	2/4/04	7.0	200	14		1710	324	96	65	4	815	162	0.2	181		0.036	0.007		<0.001	<0.01	<0.02	<0.3	<0.005	0.033	<0.0002	<0.04		0.004			0.022
BFG1200	6/28/04	7.1	1942	16		1540	295	87	58	4	736	158	0.2	187		<0.015	0.007		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004			0.01
BFG1200	9/13/04	7.0	2000	16		1740	353	90	58	3.3	914	165	0.2	185		0.015	0.008		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004			0.011
BFG1200	9/16/04	7.2	2230			1770	354	96	60	3.8	909	163	0.2	185		<0.015	0.006		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.003			<0.01
BFG1200	12/10/04	7.1	2100	14		1750	354	96	60	3.6	883	166	0.2	186		<0.02	0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.003			<0.01
HMG1856	8/15/02					1380	230	65	118	15.1	299	320	0.2	295		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
BSG1177C	2/11/03	7.4	1014	13	384.79	720	144	46	36	3.9	299	84		147		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					0.019
BSG1177C	3/10/04	7.4	1179	14	395.52	920	159	50	33	3.4	390	88	0.2	146		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004			0.013
W41A	3/8/02					870					293	96					<0.005		<0.001		<0.02		<0.005				<0.003				0.121
W41A	6/14/02	6.8	1158	17		907	150	64	59	2.9	302	102	0.3	296		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					0.146
W41A	9/19/02					900	168	65	57	3.7	281	87	0.3	287		0.03	<0.005		<0.001	<0.01	0.022	<0.3	<0.005	<0.01		<0.04					0.142
W41A	12/20/02	7.2	955	8	13	769	117	58	52	3.2	242	71	0.3	286		<0.015	<0.005		<0.001	<0.01	0.026	<0.3	<0.005	<0.01		<0.04					0.12
W41A	3/28/03	7.2	1098	8		810	144	57	51	3.6	250	81	0.3	290		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002			0.15
W41A	6/27/03	6.9	1431	17	13	1060	190	63.7	57	2.8	359	155	0.2	302		0.089	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004			0.22
W41A	9/29/03	7.2	1300	19	13	860	156	58	53	2.7	274	111	0.3	296		0.086	0.006		<0.001	<0.01	<0.02	0.347	<0.005	<0.01		<0.04		0.002			0.122
W41A	12/24/03	7.1	1056	10	31	710	136	50	45	2.9	198	60	0.3	267		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002			0.143
W41A	3/30/04	6.9	1179	11	13	850	160	64	56	3	287	97	0.3	309		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.006			0.215
W41A	5/21/04	7.0	1454	15	13	1160	198	71	66	3.1	358	135	0.3	303		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.005			0.216
W41A	9/28/04	7.0	1382	18	13	1010	174	56	53	2.8	294	132	0.3	297		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			0.135
W41A	12/21/04	6.9	1172	7	13	850	148	60	56	2.9	240	87	0.4	300		<0.02	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002			0.087
W171	6/11/03															<0.015	0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.006			<0.01
W171	6/19/03	7.3	1466	14	95	990	182	44.9	64	9.5	87	302	0.2	227																	
W185	3/12/02	7.1	914	8		595	117	31	54	8.6	51	151		208			0.006		<0.001		0.023		<0.005						<0.002		0.05
W185	3/28/03	7.3	689	7	135	470	82	21	40	6.9	35	94	0.2	186		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002			0.075
W185	3/29/04	7.1	752	11	135	450	94	23	43	7.3	46	106	0.2	188		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			0.064
P197B	7/2/02	7.1	2760	16	41.67	2415	486	138	120	11.1	1280	225	0.1	207		<0.015	0.006		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04					<0.01
P197B	2/25/04	6.9	2380	13	413.55	2030	386	107	77	3.7	984	243	0.2	195		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.005			0.012
P209B	12/23/03	6.9	3780	13	394.08	3970	809	219	117	5.2	2520	181		239			<0.005	0.018	<0.001	<0.01	<0.02		<0.005					0.006		<0.001	<0.01
P209B	10/19/04	6.6	3540		404.98	3870	805	197	103	4.7	2090	187	0.2	247		<0.02	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004			<0.01
P277	2/19/03	7.2	2960	13		2900	608	163	101	5.8	1570	201		237			<0.005	0.018	<0.001	<0.01	<0.02		<0.005						0.004	<0.001	0.012
P277	10/15/03	6.9	3280	14	345.63	3000	661	173	102	5	1750	194		242			<0.005	0.017	<0.001	<0.01	<0.02		<0.005					0.004		<0.001	0.012
P277	2/23/04	6.9	3080	15	350.56	2920	621	166	98	4.4	1660	186	0.2	233		<0.015	<0.005	0.018	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.005		<0.001	0.012
ECG1116A	2/7/03	5.4	3000	15	372.52	3100	432	233	75	6.4	1740	171		31		2.358	<0.005	0.041	0.083	<0.01	1.444	<0.3	<0.005	7.26			0.006			<0.001	5.62
HMG1122A	4/5/04	7.2	1426	15	289.27	1070	212	55	45	2.9	411	156	0.1	232		<0.015	<0.005	0.028	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			<0.01
ECG1124A	8/31/04	3.5	10450	17	326.65	18000	415	1870	80	6.3	11500	203	93	<5		629	0.014		0.287	0.01	46.2	91.3	0.005	99.8		8.51		0.047			52.9
ECG1124A	11/15/04	3.5	11650		334.56	18300	396	1960	79	6.5	12600	201	228	<5		650	0.016		0.25	0.014	47.1	146	0.038	100		7.96		0.028			51.9
ECG1124B	6/25/03	3.7	12510	16	290.73	19700	46	201	<1	<0.5	13900	87		<5	5880	724	0.026	0.078	0.391	0.058	44.9	186	<0.005	150				0.05		<0.001	53.1
ECG1124B	8/31/04	3.8	8240	17	331.12	13600	539	1360	53	10.1	9150	81	6	<5		420	0.02		0.272	0.045	27	77.7	<0.005	111		6.97		0.114			35
ECG1124B	11/15/04	4.0	7200		343.31	11400	436	1260	50	8.9	7620	75	177	<5		340	0.02		0.21	0.043	23.4	229	0.032	96.8		5.45		0.092			29.9
ECG1124B	12/15/04	4.1	7390	16	344.42	11600	425	1350	48	8.2	8240	80	69.9	<5		410	0.024		0.26	0.048	25.6	83.6	<0.005	106		6.16		0.095			34.4
ECG1124C	6/26/03	8.0	458	16	284.45	290	47.4	12.3	36	4.1	84	24		91		0.075	<0.005	0.027	<0.001	0.037	<0.02	<0.3	<0.005	<0.01				0.018		<0.001	<0.01
ECG1124C	8/31/04	7.7	484	17	306.24	320	41	11	34	3.6	90	38	0.3	90		0.763	<0.02		<0.00001	0.057	0.057	<0.3	<0.00005	0.127		<0.05		0.017			0.022
ECG1128B	7/15/03	7.4	805	16	255.1	590	101	32	30	3.3	99	117		147		0.072	<0.005		<0.001	<0.01	0.062	<0.3	0.008	0.046		0.05		0.003			0.107
ECG1128B	8/24/04	7.4	846	13	276.95	570	94	30	29	3.3	98	117	0.2	153		0.14	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	0.034	<0.0002	<0.04		0.003			0.016
BSG1132A	8/14/02					2210	398	122	88	5.2	1230	214	0.1	232		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04					<0.01
BSG1132A	12/14/04	7.1	2320	12	363.47	1850	396	108	85	3.7	816	230	0.2	213		0.12	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004			<0.01
BSG1135A	3/17/04	7.3	1731	16	258.26	1360	282	68	56	4.1	391	297	1.6	215		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004			<0.01
COG1152A	8/19/02					4780	574	452	205	6.6	2560	531	<0.1	118		<0.015	<0.005		0.01	<0.01	<0.02	<0.3	<0.005	14	<0.0002	0.161					0.033
COG1152A	8/6/03	5.5	4580	16	208.63	4590	632	488	201	6.5	2770	548	0.1	<5		0.14	<0.005		0.011	<0.01	0.022	<0.3	<0.005	15.5		0.166		0.008			0.035
COG1152A	12/14/04	5.7	5110	14	209.76	4780	626	438	187	5	2570	528	0.2	116		<0.02	0.005		0.011	<0.01	<0.02	<0.3	<0.005	17.4	<0.0002	0.15		0.008			0.033
BSG1153A	12/20/04	6.9	3380	11	350.54	3610	722	228	77	5.8	1920	261	0.3	175		<0.02	<0.005		0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			0.04

Well	Date	pH	Cond	Temp	DTW	TDS	Ca-T	Mg-T	Na-T	K-T	SO4	Cl	F	Alk	Acidity	Al-D	As-D	Ba-D	Cd-D	Cr-D	Cu-D	Fe-D	Pb-D	Mn-D	Hg-T	Ni-D	Se-D	Se-D (DRC)	Se-D (hyd)	Ag-D	Zn-D
		su	uS/cm	C	Ft	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l CaCO3	mg/l CaCO3	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
BSG1153B	12/20/04	7.8	491	13	362.85	330	61	19	26	2.9	36	48	0.3	146		0.103	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002			<0.01
BFG1156B	2/3/03	7.2	3300	13	403.92	3230	767	204	95	5.8	2010	169		232		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	0.012		<0.04					<0.01
BFG1156B	3/10/04	6.9	3140	15	404.33	3180	656	176	83	4.6	1880	173	0.2	219		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	0.053		0.007			<0.01
BFG1156C	8/6/02		3180		402.32	3110	646	173	91	7.2	1710	178	0.1	232		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04					<0.01
BFG1156C	2/4/03	7.2	3010	13	403.57	2880	615	179	95	5.8	1670	188	0.1	234		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04					0.019
BFG1156C	3/8/04	7.0	2930	15	404.83	2740	562	146	81	4.2	1590	202	0.2	216		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.006			0.029
BFG1156D	2/6/03	7.5	1271	13	403.93	961	184	56	52	4.6	420	119		148		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04					<0.01
BFG1156D	3/9/04	7.1	1541	15	404.95	1280	216	64	50	3	584	116	0.2	144		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004			<0.01
B2G1157A	2/11/03	7.2	2730	12	422.03	2710	540	146	91	5.7	1830	138		211			<0.005	0.02	<0.001	<0.01	0.022	<0.3	<0.005	<0.01		<0.04			0.004	<0.001	0.016
B2G1157A	10/8/03	6.9	2890	15	427.2	2730	563	151	90	4.9	1580	145		204			<0.005	0.02	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004		<0.001	0.011
B2G1157A	11/10/03	7.0	2610	13	426.57	2790	580	153	89	4.4	1670	153		209			<0.005	0.019	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.005		<0.001	<0.01
B2G1157A	1/6/04	6.9	3080	10	384.69	2890	597	157	91	4.7	1600	151		215		<0.015	<0.005	0.02	<0.001	0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004		<0.001	<0.01
B2G1157A	2/4/04	6.8	2870	12	424.93	2840	576	147	84	4.5	1580	147		212		<0.015	<0.005	0.022	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.005		<0.001	0.028
B2G1157A	3/4/04	6.8	2940	13	422.88	2970	588	156	89	4.5	1750	141	0.2	218		0.029	<0.005	0.022	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.005		<0.001	<0.01
B2G1157A	4/16/04	6.8	2310	14	421.75	2960	596	161	95	5	1710	144	0.2	224		<0.015	0.005	0.029	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004		<0.001	0.016
B2G1157A	6/8/04	6.8	3120	15	420.57	3000	642	162	94	4.8	1720	143	0.2	233		<0.015	<0.005	0.022	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.005		<0.001	<0.01
B2G1157A	7/16/04	6.8	2660	16	424.2	2960	624	149	88	4.4	1900	134	0.2	223		<0.015	<0.005	0.021	<0.001	0.012	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004		<0.001	0.01
B2G1157A	8/3/04	6.8	2740	14	426.52	2830	612	152	87	4.4	1670	143	0.2	218		0.019	<0.005	0.021	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.005		<0.001	0.017
B2G1157A	9/16/04	7.2	3540	13	427.12	2910	616	154	87	4.7	1610	145	0.2	220		<0.015	<0.005	0.022	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004		<0.001	<0.01
B2G1157A	10/15/04	7.2	2820		426.15	2900	634	155	85	4.5	1630	144	0.2	222		<0.02	<0.005	0.021	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004		<0.001	0.013
B2G1157A	11/10/04	7.2	2800		426.25	2970	602	148	86	4.5	1680	143	0.2	218		<0.02	<0.005	0.02	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004		<0.001	0.043
B2G1157A	12/10/04	7.2	2830	16	426.51	2950	631	158	89	4.6	1630	141	0.2	223		<0.02	<0.005	0.022	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004		<0.001	0.011
B2G1157B	2/11/03	7.1	4760	12	425.45	5720	715	795	117	7.9	4340	149		331			0.005	0.024	<0.001	<0.01	0.028	<0.3	<0.005	<0.01		<0.04			0.005	<0.001	0.022
B2G1157B	10/9/03	6.9	5380	16	430.67	6330	544	877	93	5.6	4400	151		345			0.006	0.024	<0.001	<0.01	0.032	<0.3	<0.005	<0.01		<0.04		0.005		<0.001	0.027
B2G1157B	11/10/03	7.0	4930	13	429.7	6570	589	994	103	6.3	4590	161		341			0.006	0.024	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		0.042		0.006		<0.001	0.023
B2G1157B	1/5/04	6.9	5650	12	426.08	6790	549	988	95	6.2	4310	152		258		0.033	0.005	0.024	<0.001	0.012	0.02	<0.3	<0.005	<0.01		<0.04		0.005		<0.001	0.021
B2G1157B	2/5/04	6.8	5460	12	427.85	6670	534	800	73	4.8	4200	149		349		<0.015	0.005	0.026	<0.001	<0.01	0.022	<0.3	<0.005	<0.01	<0.0002	<0.04		0.005		<0.001	0.042
B2G1157B	3/4/04	6.8	5680	15	425.77	6870	570	1000	101	6.3	4770	147	0.2	352		0.019	<0.005	0.025	<0.001	<0.01	<0.02	<0.3	<0.005	0.02	<0.0002	<0.04		0.005		<0.001	0.017
B2G1157B	4/16/04	6.8	4380	15	424.93	6810	548	959	100	6.5	4600	148	0.3	350		<0.015	0.008	0.026	<0.001	<0.01	0.023	<0.3	<0.005	<0.01	<0.0002	<0.04		0.005		<0.001	0.019
B2G1157B	6/8/04	6.8	5840	16	424.83	6970	579	999	103	6.4	4830	148	0.2	362		<0.015	0.008	0.026	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.005		<0.001	0.02
B2G1157B	7/16/04	6.5	5090	17	428	7260	590	947	101	6.1	5680	143	0.3	359		<0.015	0.005	0.025	<0.001	0.017	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.005		<0.001	0.033
B2G1157B	8/3/04	6.6	5100	16	430.92	7070	577	1030	101	6.2	5210	149	0.2	361		0.025	0.006	0.025	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.006		<0.001	0.022
B2G1157B	9/16/04	7.1	6400		430.86	7160	558	1030	98	6.3	4660	148	0.3	356		<0.015	0.006	0.026	<0.001	<0.01	0.021	<0.3	<0.005	<0.01	<0.0002	<0.04		0.005		<0.001	0.025
B2G1157B	10/15/04	7.0	5850		424.51	7260	550	966	88	58.7	4640	148	0.3	367		<0.02	<0.005	0.023	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.005		<0.001	0.02
B2G1157B	11/10/04	7.0	5800		425	7550	542	1030	95	6.3	5090	146	0.4	364		<0.02	0.005	0.023	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.005		<0.001	0.082
B2G1157B	12/9/04	7.0	5850	16	425.21	7350	581	1110	104	6.6	4990	151	0.4	369		<0.02	0.005	0.025	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.005		<0.001	0.034
B2G1157C	2/14/03	7.6	599	14	425.83	370	70	26	36	3.5	51	79		157			<0.005	0.07	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			0.002	<0.001	<0.01
B2G1157C	10/10/03	7.5	640	13	429.96	370	73	26	32	2.6	46	77		158			<0.005	0.076	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002		<0.001	<0.01
B2G1157C	6/7/04	7.3	1383	15	425.5	1070	196	58	38	2.8	498	101	0.2	172		0.023	<0.005	0.091	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004		<0.001	<0.01
B2G1157C	8/4/04	7.3	1520	17	432.1	786	171	49	35	2.7	353	88	0.2	167		<0.015	<0.005	0.111	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.004		<0.001	<0.01
B2G1157C	9/15/04	7.5	1635	16	432.1	1070	212	62	39	3.2	458	100	0.2	173		<0.015	0.005	0.095	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		<0.002		<0.001	0.014
B2G1157C	10/15/04	7.5	1030		431.32	810	152	44	31	2.5	387	88	0.2	168		<0.02	<0.005	0.092	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.003		<0.001	<0.01
B2G1157C	11/10/04	7.5	958			660	123	37	32	2.6	239	83	0.2	165		<0.02	<0.005	0.088	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.002		<0.001	0.045
B2G1157C	12/9/04	7.4	740	15	432	560	112	35	32	2.6	168	83	0.2	164		<0.02	<0.005	0.094	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		<0.002		<0.001	<0.01
B2G1176B	10/18/04	6.6	3590		390.62	3960	896	229	102	5.4	2360	155		292		<0.02	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.006			<0.01
B2G1194A	7/31/02		2230		357.53	1980	391	119	86	5.9	1070	206	0.1	202		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04					<0.01
B2G1194A	9/11/03	7.3	2090	15	366.75	2760	517	145	79	4.4	1520	158	0.1	216		<0.015	0.006		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004			0.018
B2G1194A	7/28/04	7.2	1980	16	363.53	1630	329	91	70	3.6	816	224	0.1	194		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.005			<0.01
B2G1194B	7/31/02		2830		357.91	3000	599	181	98	6.5	1800	155	0.1	235		0.027	0.007		<0.001	<0.01	<0.02	<0.3	0.005	0.01	<0.0002	<0.04					0.012
B2G1194B	9/10/03	6.9	2710	14	365.93	1750	336	96	68	3.7	724	223	0.1	195		0.081	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004			0.011
B2G1194B	7/28/04	7.1	2610	16	363.85	2810	522	144	85	4.6	1580	157	0.1	223		0.016	0.007		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.005			<0.01
BSG1201	4/2/03		12500	15		20700	440	2700	85	16.2	15000	145	118	<5	5090	604	0.038		1.018	<0.01	24.5	27.9	0.078	252		13		0.015			67.8
BSG1201	8/6/03	3.7	11860	16		20300	467	2820	78	15.7	14100	144	123	107	4170	569	0.032		1.08	<0.01	20.4	11.3	0.052	247	0.0043	11.8		0.033			58.5
BSG1201	10/13/03	3.6	12200	14		19500	383	2570	79	12.1	13700	161	108	<5	4340	563	0.068		0.942	<0.01	23.2	23	0.044	219	0.0056	9.8		0.063			64.1
BSG1201	2/6/04	3.6	11170	15		18400	469	2430	98	13.7	12200	147	109	<5	3380	529	0.022		0.921	<0.01	22.5	29.4	0.035	211		10.3		0.553			51
BSG1201	4/14/04	3.6	10850	18		18000	376	2140	96	13.1	12300	148	95	<5	4000	516	0.022		0.947	<0.01	21.8	27.5	0.038	198		10.2		0.054			50.3

		pH	Cond	Temp	DTW	TDS	Ca-T	Mg-T	Na-T	K-T	SO4	Cl	F	Alk	Acidity	Al-D	As-D	Ba-D	Cd-D	Cr-D	Cu-D	Fe-D	Pb-D	Mn-D	Hg-T	Ni-D	Se-D	Se-D (DRC)	Se-D (hyd)	Ag-D	Zn-D
Well	Date	su	uS/cm	C	Ft	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l CaCO3	mg/l CaCO3	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
BSG1201	6/22/04	3.5	11780	13		17900	363	2150	88	11.7	13600	152	102	<5	3860	421	0.02		0.842	<0.01	22.1	30.5	0.039	204	0.0064	10.4		0.188			51
BSG1201	12/10/04	3.5	9980	14		16600	423	2070	94	11.3	11600	164	92.9	<5	3240	452	0.02		0.78	<0.01	21	25.4	0.03	188	0.0066	9.6		0.116			47.2
ABC08	6/24/02	6.5	1986	17	215.4	1530	245	107	80	3.3	680	109		412			<0.005	0.086	<0.001	0.012	<0.02		<0.005						<0.002	<0.001	0.03
P253A	9/29/03	6.7	2380	16	60.35	1870	258	98	224	5.5	811	224	0.1	312		0.179	<0.005		<0.001	<0.01	<0.02		<0.005	<0.01		<0.04		0.006			<0.01
P254A	3/5/02					1080	135	80	84	4.4	417	139		247			<0.005	0.018	<0.001	<0.01	<0.02		<0.005						0.005	<0.001	<0.01
P255A	9/23/03	6.7	1750	19	39.58	1170	209	58	153	4.7	257	289	0.2	276		0.115	<0.005		<0.001	0.025	<0.02		<0.005	<0.01		<0.04		<0.002			0.038
P256	3/28/03	7.0	2100	14	48.85	1800	346	111	69	4.6	770	178	0.1	377		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.006			0.013
P256	9/23/03															0.019	0.008		<0.001	<0.01	0.027		<0.005	<0.01		<0.04		<0.002			0.106
P258A	10/3/03	6.9	2900	16	<1.75	2460	371	122	234	6	1000	363	0.1	209		<0.015	0.007	0.014	<0.001	<0.01	<0.02		<0.005	<0.01		<0.04		0.024		<0.001	0.023
P259	9/23/03	7.1	1280	17	162.92	860	107	56	129	7.6	191	189	0.4	254																	
P261	3/12/02					1700	300	81	174	6.6	614	390		146			<0.005	0.021	<0.001	0.011	<0.02		<0.005						<0.002	<0.001	0.04
W325	3/28/03	7.2	2950	18		2100	407	107	85	10.9	120	903	0.1	179		<0.015	<0.005		<0.001	<0.01	0.238	<0.3	<0.005	<0.01		<0.04		0.009			0.622
W408	6/14/02	7.0	1189	16		1120	166	53	54	5.6	255	150	0.2	275		<0.015	0.006		<0.001	<0.01	0.03	<0.3	<0.005	<0.01		<0.04					0.054
W408	6/19/03	7.1	1267	16	220	900	181	51.1	49	4.6	250	152	0.2	267		<0.015	<0.005		<0.001	<0.01	0.031	<0.3	<0.005	<0.01		<0.04		0.002			0.054
W408	12/21/04	7.1	1222	5	220	880	167	52	54	4.8	187	141	0.3	265		<0.02	<0.005		<0.001	<0.01	0.027	<0.3	<0.005	<0.01		<0.04		0.002			0.062
HMG1163A	6/24/03	6.7	2040	14	14.44	1860	371	98.8	85	4.6	931	282	0.1	269		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.009			<0.01
BSG1180A	10/4/02					3630	616	217	216	8.3	2030	162	0.2	349		<0.015	0.005		0.001	0.027	<0.02	<0.3	<0.005	0.04		0.137					0.012
BSG1180A	1/30/03	7.0	3760	12	366.56	3620	618	210	204	6	2010	163	0.2	362		<0.015	<0.005		0.001	<0.01	<0.02	<0.3	<0.005	0.028	0.0015	<0.04					0.013
BSG1180A	3/4/04	6.8	3600	13	377.77	3560	667	202	187	5.3	2120	157	0.2	345		0.03	<0.005		0.001	<0.01	<0.02	<0.3	<0.005	0.013	0.0018	<0.04		0.007			<0.01
ECG1183B	3/4/02					1350	191	79	99	9.5	138	501		185			0.005		<0.001		<0.02		<0.005						0.004		<0.01
ECG1183B	9/23/02					1220	191	80	99	9.7	135	497	0.2	181		<0.015	0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04	<0.02				0.015
ECG1183B	3/31/03	7.1	2030	15.5	33.82	1380	229	81	101	9.6	136	495	0.2	183		0.04	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04	<0.02	0.003			<0.01
ECG1183B	11/25/03	7.2	1891	14	34.86	1330	219	75	94	8.8	133	509	0.2	178		<0.015	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003			<0.01
ECG1183B	6/9/04	7.0	2060	17	32.27	1340	224	73	92	8.7	148	494	0.2	183		0.069	0.012		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04	<0.02				<0.01
ECG1183B	12/14/04	7.0	2120	15	33.12	1250	248	76	90	8.4	125	482	0.3	183		<0.02	<0.005		<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04	<0.05				0.012
ECG1114A	9/23/03	7.0	911	19	33.82	650	90	35	64	13.7	51	182		171			0.006	0.214	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002		<0.001	<0.01
ECG1114A	11/4/04	7.4	1016	16	40.33	622	93	34	66	13.6	37	190		169			0.006	0.248	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003		<0.001	<0.01
ECG1114B	9/24/03	7.4	387	18	385.56	240	46	15	13	2.6	26	41		115			0.014	0.204	<0.001	<0.01	0.037	<0.3	<0.005	0.016		<0.04		0.002		<0.001	<0.01
ECG1114B	11/5/04	7.5	419	15	386.07	240	52	16	15	2.9	23	41		122			0.01	0.227	<0.001	<0.01	<0.02	<0.3	<0.005	0.014		<0.04		<0.002		<0.001	<0.01
ECG1182A	12/3/03	8.0	795	17	48.48	520	18	6	158	2.3	72	85		198			<0.005	0.06	<0.001	<0.01	<0.02	0.404	<0.005	0.051		<0.04		<0.002		<0.001	0.016
ECG1182A	12/10/04	8.1	717	16	52.16	430	16	5	130	1.9	58	68		188		1.71	<0.005		<0.001	<0.01	<0.02	0.401	<0.005	0.037		<0.04		<0.002			<0.01
ECG1182B	12/2/03	7.3	901	18	42.21	600	106	44	40	3.3	109	120		235			0.007	0.063	<0.001	<0.01	<0.02	0.819	<0.005	0.048		<0.04		<0.002		<0.001	<0.01
ECG1182B	12/10/04	7.1	987	16	44.97	540	113	43	38	3.2	101	121		240		<0.02	0.007		<0.001	<0.01	<0.02	0.903	<0.005	0.04	<0.0002	<0.04		<0.002			<0.01
W31	2/12/02					600	97	36	32	9.1	31	145		191			0.009	0.191	<0.001	<0.01	<0.02		<0.005		<0.0002				0.002	<0.001	0.015
W31	4/11/02					590	104	40	31	6.3	30	173		190			0.008	0.208	<0.001	<0.01	0.022		<0.005		<0.0002				<0.002	<0.001	0.033
W31	8/26/02					568	86	35	29	7.4	31	135		195			0.007	0.202	<0.001	<0.01	<0.02		<0.005		0.0002				<0.002	<0.001	0.02
W31	11/19/02	7.5	826	10	140	540	92	37	34	10.2	22	149		177			0.008	0.166	<0.001	<0.01	<0.02		<0.005		<0.0002				0.002	<0.001	<0.01
W31	2/26/03	7.7	893	7	140	580	106	42	36	8.5	28	173		189			0.007	0.209	<0.001	<0.01	<0.02		<0.005		0.0002				0.003	<0.001	0.013
W31	6/9/03	7.3	925	17	140	590	110	42	28	5.9	31	175		185			0.006	0.219	<0.001	<0.01	<0.02		<0.005		0.0002			0.004		<0.001	0.021
W31	8/19/03	7.3	893	14	140	560	93	34	28	7.9	24	149		185			0.008	0.195	<0.001	<0.01	<0.02		<0.005		<0.0002			0.002		<0.001	0.011
W31	11/19/03	7.3	862	12	140	580	90	32	25	5.9	28	161		185			0.011	0.193	<0.001	<0.01	<0.02		<0.005		<0.0002			0.002		<0.001	<0.01
W31	1/29/04	7.3	859	11	140	570	93	34	28	6.4	29	158		182											<0.0002						
W31	4/2/04	7.1	865	14	140	603	90	33	27	6.4	30	154		185			0.007	0.213	<0.001	<0.01	<0.02		<0.005		<0.0002			0.005		<0.001	<0.01
W31	7/8/04	7.9	853	21	140	576	97	39	28	5.6	28	152		174			0.007	0.223	<0.001	<0.01	<0.02		<0.005		0.0007			0.004		<0.001	<0.01
W31	11/15/04	7.2	921	10	140	570	107	39	28	5.2	27	177		185			0.006	0.222	<0.001	<0.01	<0.02		<0.005		<0.0002			0.004		<0.001	0.011
P272	2/28/02					3160	492	175	214	13.8	1680	226		493			0.009	0.027	<0.001	<0.01	<0.02		<0.005						0.002	<0.001	0.026
P272	5/28/02	7.3	3250	23	77.65	3240	516	148	199	12.1	1580	229		494			0.016	0.025	0.001	<0.01	0.061		<0.005						<0.002	<0.001	0.012
P272	9/13/02					3190	496	151	180	11.9	1570	233		477			0.009	0.026	0.001	<0.01	0.024		<0.005						<0.002	<0.001	0.036
P272	11/25/02	7.0	3550	13	79.14	3280	642	169	205	13	1620	247		476			0.007	0.027	<0.001	<0.01	<0.02		<0.005						<0.002	<0.001	0.015
P272	3/3/03	7.0	3330	14	79.89	3340	469	179	200	15.1	1620	247		493			0.006	0.026	<0.001	<0.01	<0.02		<0.005						<0.002	<0.001	0.012
P272	5/23/03	7.7	3380	16	80.52	3180	610	161	201	12.8	1630	238		474			0.02	0.022	<0.001	<0.01	<0.02		<0.005					<0.002		<0.001	<0.01
P272	9/3/03	7.6	3600	19	81.49	3240	593	156	185	11.8	1620	245		473			0.011	0.027	<0.001	<0.01	0.03		<0.005					<0.002		<0.001	0.012
P272	12/23/03	7.7	3250	12	82.6	3280	601	149	182	11.4	1610	241		471			0.012	0.026	<0.001	<0.01	0.021		<0.005					<0.002		<0.001	<0.01
P272	2/18/04	7.6	3410	11	82.92	3170	587	141	162	10.6	1710	247		487			<0.005	0.022	<0.001	<0.01	<0.02		<0.005					<0.002		<0.001	0.014
P272	5/20/04	7.4	3520	17	80.08	3480	697	176	216	13.7	1720	258		487			<0.005	0.028	<0.001	<0.01	<0.02		<0.005					0.005		<0.001	0.011
P272	8/18/04	7.5	3310	18	79.86	3120	671	156	197	12.6	1690	271		498			0.006	0.03	<0.001	<0.01	<0.02		<0.005					<0.002		<0.001	0.056

Well	Date	pH	Cond	Temp	DTW	TDS	Ca-T	Mg-T	Na-T	K-T	SO4	Cl	F	Alk	Acidity	Al-D	As-D	Ba-D	Cd-D	Cr-D	Cu-D	Fe-D	Pb-D	Mn-D	Hg-T	Ni-D	Se-D	Se-D (DRC)	Se-D (hyd)	Ag-D	Zn-D
		su	uS/cm	C	Ft	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l CaCO3	mg/l CaCO3	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
P272	12/7/04	7.0	3670	8	79.12	3530	713	164	200	12.8	1760	288		494			0.006	0.03	<0.001	<0.01	<0.02		<0.005					<0.002		<0.001	0.01
COG1149B	3/15/02	7.6	776	13	150.13	511	90	33	16	4.9	9	151		162			0.012	0.288	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	0.004	<0.01
COG1149B	4/24/02					500	91	33	16	4.8	9	151		165			0.007	0.269	<0.001	0.01	<0.02	<0.3	<0.005	<0.01		<0.04			0.002	<0.001	<0.01
COG1149B	5/21/02					518	95	33	16	4.9	7	147		164			0.005	0.278	<0.001	0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	<0.01
COG1149B	6/20/02	7.3	780	15	150.39	510	86	35	21	7.4	10	148		157			0.007	0.255	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	<0.01
COG1149B	8/20/02					537	96	36	15	4.4	9	144		163			0.007	0.281	<0.001	0.011	<0.02	<0.3	<0.005	<0.01		<0.04			0.002	<0.001	<0.01
COG1149B	9/12/02					460	87	32	15	4.8	9	142		158			0.007	0.277	<0.001	0.012	<0.02	<0.3	<0.005	<0.01		<0.04			0.002	<0.001	0.028
COG1149B	10/23/02	7.5	784	13	150.75	485	72	35	21	6.7	8	147		159			0.006	0.276	<0.001	0.011	<0.02	<0.3	<0.005	<0.01		<0.04			0.002	<0.001	<0.01
COG1149B	11/25/02	7.6	661	12	151.08	499	95	35	18	5.6	11	156		160			0.006	0.271	<0.001	0.011	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	<0.01
COG1149B	12/16/02	7.6	704	11	150.92	519	96	36	18	5.6	11	152		158			0.006	0.268	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			0.002	<0.001	<0.01
COG1149B	1/8/03	7.7	758	13	151.43	590	92	34	18	5.3	11	144		162			0.006	0.276	<0.001	0.011	<0.02	<0.3	<0.005	<0.01		<0.04			0.002	<0.001	
COG1149B	2/18/03	7.7	755	12	150.82	492	99	37	19	5.9	14	151		164			0.006	0.27	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			0.002	<0.001	<0.01
COG1149B	3/26/03	7.6	624	12	150.76	460	92	34	16	4.5	12	151		162			0.006	0.273	<0.001	<0.01	<0.02	<0.3	<0.005	0.012		<0.04		0.002		<0.001	0.01
COG1149B	6/12/03	7.5	773	14	150.46	500	90	31	14	4.4	9	150		161			0.006	0.265	<0.001	0.014	<0.02	<0.3	<0.005	<0.01		<0.04		0.004		<0.001	<0.01
COG1149B	7/28/03	7.5	747	15	150.5	490	92	34	16	4.8	10	152		162			0.016	0.28	0.003	0.013	<0.02	<0.3	<0.005	0.095		<0.04		<0.002		0.002	0.034
COG1149B	11/24/03	7.5	730	12	151.18	530	89	33	16	4.8	5	148		162			0.006	0.266	<0.001	0.011	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002		<0.001	<0.01
COG1149B	3/19/04	7.2	747	15	151	520	89	33	16	4.6	8	150	0.2	160			<0.005	0.277	<0.001	0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.005		<0.001	<0.01
COG1149B	6/2/04	7.4	788	15	151.45	480	81	30	15	4.5	9	150	0.2	165			0.006	0.309	<0.001	0.012	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.008		<0.001	<0.01
COG1149B	8/17/04	7.4	731	15	151.22	509	97	32	15	4.6	8	148	0.3	166			0.009	0.31	<0.001	0.011	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.006		<0.001	<0.01
COG1149B	11/24/04	7.6	774	12	151.09	480	74	32	17	5.3	9	149	0.2	150			0.006	0.282	<0.001	0.014	<0.02	<0.3	<0.005	<0.01		<0.04		0.005		<0.001	<0.01
COG1149B	12/6/04	7.5	721	12	151.09																										
COG1149A	3/15/02																<0.005	0.215	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	<0.01
COG1149A	4/24/02					923	142	45	27	3	23	341		150			<0.005	0.208	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	<0.01
COG1149A	5/21/02					836	162	52	32	3.6	17	334		152			<0.005	0.218	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	<0.01
COG1149A	6/20/02	7.3	1320	14	123.89	835	145	55	31	3.5	21	337		151			<0.005	0.208	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	<0.01
COG1149A	8/20/02					887	168	56	32	3.1	23	326		151			<0.005	0.212	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			0.002	<0.001	<0.01
COG1149A	9/12/02	7.4	1289	13	123.5	837	146	50	30	3.5	23	316		148			<0.005	0.207	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	0.044
COG1149A	10/23/02	7.4	1367	12	123.58	818	146	53	41	5.4	20	334		148			<0.005	0.205	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			0.002	<0.001	<0.01
COG1149A	11/25/02	7.4	1146	11	123.81	725	165	54	35	4.3	25	335		154			<0.005	0.202	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	<0.01
COG1149A	12/16/02	7.5	1210	11	123.48	1091	164	55	34	4.3	24	338		148			<0.005	0.201	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			0.002	<0.001	<0.01
COG1149A	1/8/03	7.5	1297	12	123.92	1010	164	53	35	4.1	24	325		155			<0.005	0.205	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	<0.01
COG1149A	2/18/03	7.5	1287	12	123.92	774	177	58	35	3.8	29	341		152			<0.005	0.201	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04			<0.002	<0.001	<0.01
COG1149A	3/26/03	7.4	1065	12	123.98	770	164	53	31	2.9	24	335		152			<0.005	0.209	<0.001	<0.01	0.022	<0.3	<0.005	0.055		<0.04		<0.002		<0.001	0.032
COG1149A	6/12/03	7.4	1329	14	124.13	810	164	48	27	3.2	22	335		152			<0.005	0.199	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.003		<0.001	<0.01
COG1149A	7/28/03	7.4	1264	15	124.48	800	163	52	31	3.4	22	334		152			0.013	0.207	0.003	<0.01	0.034	<0.3	0.008	0.094		<0.04		<0.002		0.002	0.052
COG1149A	11/24/03	7.4	1242	11	124.58	870	158	51	33	3.5	24	335		148			<0.005	0.191	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		<0.002		<0.001	<0.01
COG1149A	3/19/04	7.3	1288	14	124	879	158	51	31	3.3	23	342	0.2	150			<0.005	0.207	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.003		<0.001	<0.01
COG1149A	6/2/04	7.2	1367	14	125.31	770	147	47	29	3.2	26	338	0.2	157			<0.005	0.227	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01	<0.0002	<0.04		0.006		<0.001	0.012
COG1149A	8/17/04	7.1	1216	13	125.54	860	176	50	29	3.3	23	339	0.2	153			0.006	0.232	<0.001	<0.01	0.012	<0.3	<0.005	<0.01	<0.0002	<0.04		0.005		<0.001	<0.01
COG1149A	11/24/04	7.3	1343	11	125.88	760	171	54	33	4	20	337	0.2	154			<0.005	0.213	<0.001	<0.01	<0.02	<0.3	<0.005	<0.01		<0.04		0.004		<0.001	<0.01
COG1149A	12/6/04	7.3	1239	11	125.88																										
P247A	10/3/03	6.7	1960	16.5	207.91	1580	239	110	110	4.4	694	113		354		0.088	<0.005	<0.01	<0.001	<0.01	<0.02		<0.005	<0.01		<0.04		0.005		<0.001	0.01

APPENDIX B

Water Level Monitoring Data, 2002-2004

Table B-1 Water Elevation Data 2002-2004

Measurements are reported in feet above mean sea level

Well	April 2002	Sept 02	April 2003	Sept 2003	April 2004	Sept 2004
ABC01	5248.62	5247.94	5247.67	5246.12	5245.22	5244.5
ABC02	BLOCKED	BLOCKED	BLOCKED	BLOCKED	BLOCKED	BLOCKED
ABC03	NM	4520.47	4519.87	4519.23	4518.16	4517.67
ABC04	BLOCKED	5161.1	5146.69	BLOCKED	BLOCKED	5144.95
ABC04A	5154.09	5153.32	5153.68	BLOCKED	BLOCKED	BLOCKED
ABC05	4709.72	4709.27	NM	4702.51	4694.36	4687.92
ABC06	5014.39	5031.25	5041.58	5045.02	5035.31	5010.05
ABC07	5251.51	5250.62	5250.12	5248.79	5247.95	5247.21
ABC08	NM	4598.63	4590.58	4597.64	4590.38	4595.73
B1G1120A	4815.2	4815.5	4811.64	4809.02	4806.25	4805.52
B1G1120B	NM	4815.05	NM	4810.32	NM	4806.6
B1G1120C	NM	4815.85	NM	4810.83	NM	4807.25
B1G951	5177.16	5176.59	5176.07	5175.75	5176.23	5174.98
B2G1157A	4595.75	4588.46	4589.2	4581.33	4587.25	4582.16
B2G1157B	NM	4585.75	NM	4579.43	NM	4579.96
B2G1157C	NM	4583.45	NM	4578.62	NM	4577.67
B2G1176A	4707.4	4709.02	4704.75	4701.96	4694.05	4688.11
B2G1176B	NM	4708.69	NM	4702.55	NM	4688.61
B2G1176C	NM	4708.79	NM	4702.96	NM	4689.05
B2G1193	NM	NM	NM	NM	NM	4569.09
B2G1194A	4599.98	4590.79	4593.7	NM	4591.05	4583.64
B2G1194B	NM	4590.71	NM	NM	NM	4583.58
B3G1197A	4605.11	4594.48	4599.66	NM	4595.29	4589.76
B3G1197B	NM	4593.98	NM	NM	NM	4591.46
B3G1197C	NM	4593.93	NM	NM	NM	4592.13
BCG1149A	NM	NM	NM	NM	NM	5238.72
BCG1149B	NM	NM	NM	NM	NM	5213.32
BCG1149C	NM	NM	NM	NM	NM	5212.49
BCG1150A	5215.14	NM	5214.63	5214.31	5213.66	5213.86
BCG1150B	NM	NM	NM	5213.54	NM	5213.11
BCG1150C	NM	NM	NM	5039.13	NM	5043.71
BCG1158A	5238.93	NM	5238.7	5238.13	5237.23	5236.83
BCG1158B	NM	NM	NM	5229.97	NM	5229.67
BCG1158C	NM	NM	NM	5222.71	NM	5222.26
BFG1136A	4706.21	4705.58	4703.85	4700.35	DRY	DRY
BFG1136B	NM	4705.41	NM	4700.43	4692.68	4686.48
BFG1136C	NM	4705.78	NM	4700.65	NM	4686.72
BFG1155B	4595.65	4584.87	4588.84	4579.31	4586.89	4579.02
BFG1155C	NM	4583.84	NM	4578.26	NM	4578.01
BFG1155D	NM	4582.83	NM	4577.9	NM	4577.65
BFG1155E	NM	4583.13	NM	4578.75	NM	4578.23
BFG1155F	NM	4583.09	NM	4578.8	NM	4578.41
BFG1156A	4590.98	DRY	DRY	DRY	DRY	DRY
BFG1156B	NM	4588.38	NM	4581.97	4588.38	4581.61
BFG1156C	NM	4589.04	NM	4583.05	NM	4582.8
BFG1156D	NM	4588.15	NM	4582.63	NM	4582.31
BFG1156E	NM	4591.18	NM	4583.48	NM	4583.57
BFG1156F	NM	4588.2	NM	4583.14	NM	4582.12
BFG1168A	4708.4	4708.65	4706.44	4702.81	4695.09	4688.86
BFG1168B	NM	4707.98	NM	4703.16	NM	4689.2
BFG1168C	NM	4708.19	NM	4703.22	NM	4689.33
BFG1195A	4596.6	4587.45	4589.97	4581.35	4588.13	4581.37
BFG1195B	NM	4587.32	NM	4581.59	NM	4581.54
BFG1198A	4708.1	4707.65	4706.08	4702.33	NM	4688.36

Well	April 2002	Sept 02	April 2003	Sept 2003	April 2004	Sept 2004
BFG1198B	NM	4707.62	NM	4702.51	NM	4688.59
BFG1198C	NM	4707.59	NM	4702.64	NM	4688.78
BFG1200	NM	NM	NM	NM	4548.55	NM
BSG1201	NM	NM	NM	NM	4675.02	NM
BRG286	5574.29	5573.29	NM	5569.4	5568.59	5569.37
BRG287	5348.26	5347.06	NM	5340.96	5339.96	5281.55
BRG288	5348.69	5347.66	5345.96	5344.95	5344.1	5344.25
BRG289	5348.41	5347.34	5345.62	5344.62	5343.85	5343.95
BRG290	5318.65	5317.75	5314.51	5313.12	5311.35	5310.62
BRG291A	5530.73	5529.93	5527.34	5525.41	5526.98	5527.72
BRG919	5601.46	5600.64	5599.41	5598.44	5600.17	5601.05
BRG920	5535.54	5534.64	5530.2	5528.3	5536.44	5534.55
BRG921	5330.07	5326.9	5324.81	5322.75	5320.58	5317.59
BRG999	5328.68	5326.86	5323.74	5321.67	5319.45	5318.2
BSG1119A	4626.4	4623.45	4620.15	4615.97	4615.01	4611.38
BSG1119B	NM	4625.29	NM	4616.71	NM	4613.26
BSG1119C	NM	4719.31	NM	4715.71	NM	4707.68
BSG1125A	4714.25	4714.88	4712.5	4707.97	4698.72	4691.75
BSG1125B	NM	4714.13	NM	4707.4	NM	4691.53
BSG1125C	NM	4713.2	NM	4705.94	NM	4690.46
BSG1130A	4612.27	4608.41	4605.08	4601.84	4601.71	4599.52
BSG1130B	NM	4604.41	NM	4598.19	NM	4595.82
BSG1130C	NM	4601.33	NM	4595.8	NM	4593.77
BSG1132A	4604.47	4597.86	4598.96	4591.72	4595.37	4590.07
BSG1132B	NM	4596.57	NM	4590.61	NM	4589.02
BSG1132C	NM	4591.91	NM	4586.61	NM	4584.79
BSG1133A	4610.6	4607.09	4609.55	4599.54	4600.58	4597.14
BSG1133B	NM	4607.05	NM	4600.33	NM	4597.79
BSG1133C	NM	4591.63	NM	4586.27	NM	4584.17
BSG1135A	4614.08	4611.47	4607.17	4604.89	4603.14	4601.74
BSG1135B	NM	4607.65	NM	4601.33	NM	4598.72
BSG1135C	NM	4599.88	NM	4594.35	NM	4592.41
BSG1137A	4605.93	4599.63	4599.61	4592.97	4595.84	4591.36
BSG1137B	NM	4596.56	NM	4591.18	NM	4589.45
BSG1137C	NM	4595.52	NM	4590.42	NM	4588.57
BSG1148A	4712.72	4713.99	NM	4706.23	4697.5	4690.89
BSG1148B	NM	4712.76	NM	4704.56	NM	4689.77
BSG1148C	NM	4712.57	NM	4704.74	NM	4689.67
BSG1153A	4770.99	4770.66	4767.71	4765.97	4762.25	4761.42
BSG1153B	NM	4733.98	NM	4727.42	NM	4741.41
BSG1153C	NM	4784.94	NM	4776.8	NM	4777.65
BSG1177A	4709.12	4711.98	4706.71	4697.83	4689.39	4683.42
BSG1177B	NM	4712.34	NM	4698.8	NM	4684.22
BSG1177C	NM	4713.48	NM	4706.25	NM	4691.98
BSG1179A	4710	4714.49	NM	4704.21	4695.72	4689.07
BSG1179B	NM	4714.34	NM	4702.99	NM	4688.24
BSG1179C	NM	4712.22	NM	4704.36	NM	4689.54
BSG1180A	4708.59	4709.1	4706.79	4700.56	4692.07	4685.83
BSG1180B	NM	4712.29	NM	4701.99	NM	4687.06
BSG1180C	NM	4711.44	NM	4704.1	NM	4689.84
BSG1196A	4708.32	4708.93	4706.4	4700.31	4691.96	DRY
BSG1196B	NM	4710.24	NM	4700.79	NM	4686.33
BSG1196C	NM	4701.41	NM	4702.9	NM	4688.05
COG1151A	5222.5	NM	NM	NM	5220.71	5220.41
COG1151B	NM	NM	NM	NM	NM	5231.9
COG1151C	NM	NM	NM	NM	NM	5213.55
COG1151D	NM	NM	NM	NM	NM	5211.2
COG1152A	5177.73	NM	NM	NM	5175.41	5175.79

Well	April 2002	Sept 02	April 2003	Sept 2003	April 2004	Sept 2004
COG1152B	NM	NM	NM	NM	NM	5205.52
COG1152C	NM	NM	NM	NM	NM	5174.59
COG1175A	4829.96	4829.11	4825.11	4822.43	4819.32	4817.27
COG1175B	NM	4829.73	NM	4823.08	NM	4817.93
COG1175C	NM	4829.5	NM	4823.84	NM	4818.93
COG1178A	4832.71	4830.91	4827.54	4824.86	4821.7	4819.89
COG1178B	NM	4830.92	NM	4824.92	NM	4819.63
COG1178C	NM	4830.96	NM	4825.06	NM	4819.76
COG918	NM	NM	NM	NM	NM	5219.07
ECG1112A	NM	NM	NM	NM	NM	5239.4
ECG1112B	NM	NM	NM	NM	NM	5252.61
ECG1113A	5174.57	5173.3	5172.39	5171.84	5171.03	5170.26
ECG1113B	NM	5141.91	NM	5143.65	NM	5139.66
ECG1113C	NM	5142.88	NM	5144.92	NM	5140.68
ECG1114A	5330.34	5324.96	5328.5	5327.31	5325.77	5324.94
ECG1114B	NM	4980.05	NM	4979.55	NM	4978.81
ECG1115A	4962.95	4958.67	4946.96	4945.42	4937.51	4927.49
ECG1115B	NM	4958.06	NM	4948.99	NM	4930.81
ECG1115C	NM	4952.36	NM	4948.7	NM	4931.24
ECG1115D	NM	4967.12	NM	4958.33	NM	4939.96
ECG1115E	NM	4933.18	NM	4932.44	NM	4931.73
ECG1116A	4951.65	4945.95	4938.31	4937.55	DRY	DRY
ECG1116B	NM	4947.57	NM	4940.94	4936.01	4929.84
ECG1116C	NM	5114.35	NM	5117.15	NM	5114.8
ECG1117A	4961.95	4956.61	4945.98	4943.76	4936.03	4926.05
ECG1117B	NM	4961.56	NM	4952.91	NM	4935.08
ECG1117C	NM	4968.01	NM	4958.96	NM	4941.35
ECG1118A	4808.61	4808.28	4804.76	4803.79	4798.54	4774.04
ECG1118B	NM	4810.25	NM	4805.18	NM	4777.85
ECG1118C	NM	4812.49	NM	4807.55	NM	4781.03
ECG1121A	4812.47	4813.62	4808.36	4806.48	4803.27	4800.29
ECG1121B	NM	4811.81	NM	4807.01	NM	4801.4
ECG1121C	NM	4812.17	NM	4807.16	NM	4801.52
ECG1124A	4951.8	4954.3	4938.69	4937.78	4929.35	4917.36
ECG1124B	NM	4949.63	NM	4935.66	NM	4912.98
ECG1124C	NM	4964.63	NM	4955.68	NM	4937.23
ECG1128A	4951.68	4945.77	4936.06	4934.65	4926.24	4915.13
ECG1128B	NM	4939.18	NM	4932.08	NM	4916.66
ECG1128C	NM	4950.31	NM	4940.6	NM	4920.71
ECG1131A	4910.13	4908.24	4905.21	4903.83	4900.22	4897.72
ECG1131B	NM	4918.58	NM	4913.07	NM	4882.39
ECG1131C	NM	4926.81	NM	4920.14	NM	4905.79
ECG1142A	4962.26	4953.4	4944.45	4943.49	4933.69	4923.63
ECG1142B	NM	4973.42	NM	4967.92	NM	4961.3
ECG1142C	NM	4965.85	NM	4963.76	NM	4961.73
ECG1143A	5050.37	5050.07	5051.49	5052.95	5053.13	5049.58
ECG1143B	NM	5038.93	NM	5050.78	NM	5025.48
ECG1143C	NM	5067.69	NM	5076.99	NM	5048.94
ECG1144A	4852.6	4854.57	4847.78	4845.8	4843.91	4842.48
ECG1144B	NM	4952.46	NM	4942.32	NM	4922.41
ECG1144C	NM	4955.61	NM	4946.67	NM	4928.33
ECG1145A	4953.17	4946	4935.64	4934.72	4925.62	4915.23
ECG1145B	NM	4942.83	NM	4937.76	NM	4916.54
ECG1145C	NM	4940.23	NM	4940.27	NM	4920.11
ECG1146	4945.99	4929.92	4921.8	4921.28	4908.4	4898.52
ECG1182A	5569.33	5570.89	5571.77	5571.76	5567.55	5567.23
ECG1182B	NM	5575.16	NM	5574.82	NM	5574.33
ECG1183A	5419.22	5417.99	5418.56	5417.16	5421.02	5419.11

Well	April 2002	Sept 02	April 2003	Sept 2003	April 2004	Sept 2004
ECG1183B	NM	5428.58	NM	5427.85	NM	5429.15
ECG1184	5411.23	5405.2	5414.45	5404.15	5413.79	5404.19
ECG1186	5330.31	5329.24	5327.98	5326.78	5325.3	5324.71
ECG1187	5333.59	5332.56	5331.08	5329.99	5328.45	5327.66
ECG1188	5329.03	5327.75	5326.77	5319.59	5324.16	5323.53
ECG1189	NM	5156.86	NM	5156.72	5156.37	5156.65
ECG1190	5282.09	5281.25	5280.45	5279.65	5278.66	5278.19
ECG1199A	5330.3	5329.34	5328.03	5326.88	5325.43	5324.73
ECG1199B	NM	5315.41	NM	5314.24	NM	5314.19
ECG1199C	NM	5329.3	NM	5326.74	NM	5324.58
ECG1199D	NM	5329.3	NM	5327.06	NM	5324.62
ECG1199E	NM	5329.32	NM	5326.81	NM	5324.68
ECG1199F	NM	5329.44	NM	5326.97	NM	5324.84
ECG1199G	NM	5328.97	NM	5326.48	NM	5324.32
ECG293	5260.64	5260.47	5259.57	5258.21	5257.63	5256.85
ECG294	5280.77	5279.8	5278.13	5276.6	5275.18	5275.64
ECG295B	NM	5268.24	5266.79	5265.57	5264.69	5265.09
ECG296	5294.23	5293.74	5292.44	BLOCKED	5290.55	BLOCKED
ECG297	5305.53	5306.94	5302.47	5301.53	5300.62	5300.35
ECG299	5326.62	5324.77	5321.82	5319.88	5317.58	5316.43
ECG900	5327.44	5325.45	5322.61	5320.61	5318.38	5317.1
ECG901	5327.24	5325.31	5322.43	5320.39	5318.1	5316.91
ECG902	BLOCKED	BLOCKED	BLOCKED	BLOCKED	BLOCKED	5339.71
ECG903	5480.61	5477.85	5472.96	5470.06	5466.37	5465.51
ECG904	5352.92	5351.37	5348.2	5346.9	5349.54	5347.4
ECG905	5374.93	5373.4	5374.7	5367.76	5368.35	5368.9
ECG906	5331.33	5330.4	5328.82	5327.59	5325.94	5325.35
ECG907	5331.62	5330.66	5328.81	5327.6	5325.97	5325.16
ECG908	5578.15	5567.96	5576.98	5574.58	5577.96	NM
ECG909	5475.79	NM	5473.78	5473.04	5475.24	5476.53
ECG915	FLOWING	FLOWING	FLOWING	FLOWING	FLOWING	FLOWING
ECG916	5563.82	5561.08	5564.17	5562.08	5563.58	LID DAMAGE
ECG917	5350.68	5349.22	5346.82	5345.29	5342.9	5341.85
ECG920	NM	NM	NM	NM	NM	NM
ECG921	NM	NM	NM	NM	NM	NM
ECG922	5331.68	5330.72	5328.94	5328.08	5326.12	5325.36
ECG923	5420.37	5417.83	5413.84	5411.25	5408.05	5408.2
ECG924	5556.91	5556.57	5555.9	5555.82	5557.69	5556.77
ECG925	5520.83	5518	5520.45	5517.19	5521.7	5518.77
ECG926	5510.84	5508.48	5509.5	5507.61	5512.58	5508.5
ECG928	5419.98	5417.58	5413.17	5411.1	5407.85	5408.11
ECG931	5569.68	5568.92	5569.16	5568.48	5573.06	5569.62
ECG932	5631.61	5631.18	5630.45	5628.68	5630.36	NM
ECG933	NM	5572.69	5572.99	5572.15	5573.51	5571.79
ECG934	5579.02	5577.84	5577.88	5576.57	5578.89	5576.52
ECG935	5707.94	5707.58	NM	5707.58	5708.85	5707.84
ECG936	5841.1	5840.84	5840.33	NM	NM	5841.88
ECG937	5806.7	5804.44	5802.93	5802	5802.1	5801.37
ECG938	5983.64	5982.74	5984.42	5982.51	5983.42	5982.31
ECG939	5984.55	5982.07	5984.31	5982.22	5983.29	LID DAMAGE
ECG940	6079.63	6074.43	6081.07	6075.73	6080	6076.25
ECG952	5142.93	NM	5142.54	5142.25	5142.08	5131.29
EPG1165A	4609.6	4605.08	4602.68	4598.88	4599.21	4596.56
EPG1165B	NM	4602.98	NM	4597.03	NM	4595.02
EPG1165C	NM	4599.36	NM	4594.17	NM	4592.28
EPG1166	4589.42	4566.37	4583.61	4561.65	4584.42	4563.35
EPG1689	4604.41	NM	NM	NM	NM	NM
HMG1122A	4717.4	4717.77	4715.53	4710.95	4702.72	4696.63

Well	April 2002	Sept 02	April 2003	Sept 2003	April 2004	Sept 2004
HMG1122B	NM	4716.38	NM	4709.26	NM	4694.88
HMG1122C	NM	4753.46	NM	4750.62	NM	4743.39
HMG1123A	4715.19	4715.96	4713.46	4708.5	4699.77	4692.73
HMG1123B	NM	4715.37	NM	4707.85	NM	4692.78
HMG1123C	NM	4714.5	NM	4707.08	NM	4692.09
HMG1126A	4735.2	4733.71	4731.73	4723.74	4722.5	4716.91
HMG1126B	NM	4732.92	NM	4727.17	NM	4716.31
HMG1126C	NM	4728.98	NM	4722.12	NM	4709.22
HMG1134A	4612.4	4616.39	4612.23	4610.35	4607.47	4606.45
HMG1134B	NM	4608.29	NM	4602.09	NM	4599.75
HMG1134C	NM	4603.9	NM	4598.04	NM	4596.46
HMG1163A	4575.29	4588.06	4575.29	NM	4575.27	4587.94
HMG1163B	NM	4588.65	NM	NM	NM	4588.36
HMG1163C	NM	4492.61	NM	NM	NM	4491.28
HMG1163Z	4575.94	4587.27	NM	NM	NM	4586.92
HMG1164A	NM	NM	NM	4499.83	NM	ABANDONED
RVG1164Z	NM	NM	NM	4499.15	NM	ABANDONED
K105	5111.79	5113.95	5113.93	5113.19	5113.02	5115.75
K106	4708.55	4706.96	4703.73	4702.98	4695.32	4689.26
K120	5139.39	5140.94	5139.32	5138.91	5138.77	5146.52
K201	4616.34	4613.9	4609.7	NM	NM	4605.63
K26	4965.4	DRY	DRY	DRY	DRY	DRY
K70	5326.16	5325	5324.15	5322.75	5321.15	BLOCKED
K72	BLOCKED	BLOCKED	BLOCKED	5259.69	BLOCKED	BLOCKED
K84	5174.97	5174.98	5174.81	5174.29	NM	5172.67
LRG910	5244.43	5243.22	5242.07	5241.25	5241.36	5240.27
LRG911	5203.44	5203.32	5201.64	5201.2	5201.3	5201.12
LRG912	5223.75	5223.5	5222.68	5222.23	5221.54	5221.48
LRG914	5257.61	5256.64	5256.47	5254.8	5253.56	5252.78
LTG1127A	5175.11	5174.07	5172.72	5171.63	5170.32	5169.5
LTG1127B	NM	5180.76	NM	5178.32	NM	5176.28
LTG1127C	NM	5183.06	NM	5182.29	NM	5180.22
LTG1129A	5022.08	5024.37	5029.21	5031.65	5031.71	5025.95
LTG1129B	NM	5029.5	NM	5043.68	NM	5013
LTG1129C	NM	5033.17	NM	5047.18	NM	5010.72
LTG1138A	4719.5	4720.14	4716.82	4696.71	4685.77	DRY
LTG1138B	NM	4719.54	NM	4688.23	NM	4669.13
LTG1138C	NM	4719.57	NM	4693.63	NM	4675.67
LTG1138D	NM	4720.09	NM	4695.82	NM	4678.01
LTG1138E	NM	4720.06	NM	4696.6	NM	4678.86
LTG1138F	NM	4716.95	NM	4704	NM	4688.01
LTG1139	5013.91	5028.72	5039.22	5044.55	NM	5013.53
LTG1140A	5011.54	5029.79	5040.63	5044.17	5034.85	5014.97
LTG1140B	NM	5030.4	NM	5044.43	NM	5015.37
LTG1140C	NM	5032.99	NM	5046.64	NM	5016.54
LTG1140D	NM	5065.56	NM	5075.6	NM	5048.01
LTG1141A	NM	5026.71	5031.65	5034.23	5034.31	5028.2
LTG1141B	NM	5029.9	NM	5043.8	NM	5015.54
LTG1141C	NM	5032.31	NM	5046.19	NM	5016.24
LTG1147	4719.19	4720.87	4716.52	NM	NM	NM
LTG1167A	4903.62	4908.3	4903.6	4902.3	4900.64	4900.93
LTG1167B	NM	4909.09	NM	4904.39	NM	4903.09
LTG1167C	NM	4911.26	NM	4906.26	NM	4905.23
LTG1191	5308.5	5307.62	5307.78	5307.23	5308.65	5307.64
LTG929A	5209.6	5210.23	5209.01	5206.81	5208.37	5211.77
LTG929B	NM	5206.41	NM	5204.38	NM	5206.42
P190A	4607.71	4603.36	4600.25	4596.84	DRY	DRY
P190B	NM	4603.64	4601.02	4597.05	4598.61	4594.67

Well	April 2002	Sept 02	April 2003	Sept 2003	April 2004	Sept 2004
P191A	DRY	DRY	DRY	DRY	DRY	DRY
P191B	4600.63	4592.44	4594.74	4586.49	4592.12	4585.05
P192A	NM	NM	DRY	DRY	DRY	DRY
P192B	4605.96	4597.2	4599.62	4591.87	4596.28	4593.66
P193A	DRY	DRY	DRY	DRY	DRY	DRY
P193B	NM	4595.71	NM	4590.64	4595.72	4587.86
P194A	4608.86	4604.09	4601.95	4598.05	4598.63	4595.98
P194B	NM	4603.78	NM	4597.69	NM	4595.62
P197B	4587.82	4586.94	4590.08	4580.86	4588.04	4582.52
P208A	4950.33	4943.31	4936.36	4936.53	4928.76	4923.16
P208B	NM	4942.36	NM	4932.97	NM	4916
P209B	4710.11	4708.21	4706.1	4701.55	4693.58	4695.79
P211A	4895.23	4894.71	4893.07	4892.06	4890.78	4878.16
P211B	NM	4895.42	NM	4892.88	NM	4878.52
P212A	5039.57	NM	5039.45	5043.09	5034.36	5027
P212B	NM	NM	NM	5044.66	NM	5025.24
P214A	5420.23	5419.07	5416.07	5419.36	5422.06	5420.88
P220	5492.54	5489.7	5484.64	5481.65	5478.09	5476.72
P225	5455.63	5452.47	5447.94	5444.62	5440.57	5439.12
P228	5760.62	5760.25	5759.7	5758.67	5763.95	5760.91
P231	5306.05	5307.34	5307.37	5306.68	5307.91	5335.64
P239	5900.41	5828.91	NM	NM	NM	NM
P240B	4596.61	NM	NM	NM	4595.48	4592.58
P241A	NM	NM	NM	NM	NM	4726.82
P241B	4710.27	4713.38	4708.7	4702.5	4693.95	4688.9
P241C	4713.66	NM	4713.27	4710.18	4700.47	4690.73
P242	5182.88	NM	NM	5181.76	5180.59	5181.43
P243	NM	5335.54	5334.28	5333.47	5332.1	5334.88
P244A	5628.96	5629.16	5627.92	5627.76	5629.64	5639.45
P244B	NM	5624.3	NM	5623.53	NM	5637.44
P244C	NM	5620.55	NM	5619.38	NM	5635.01
P245	NM	5441.04	5439.59	5434.23	5439.67	5438.36
P247A	NM	4428.82	4421.1	4425.43	4418.26	4428.19
P248A	5252.29	5252.1	5255.36	5250.13	5250.06	5249.62
P248B	NM	5252.97	NM	5251.06	NM	5251.52
P248C	NM	5256.97	NM	5255.04	NM	5257.36
P249A	4835.64	4833.75	4828.14	NM	NM	NM
P249B	NM	4833.82	NM	4827.81	NM	NM
P252A	4418.23	NM	NM	NM	4415.6	4421.31
P252B	NM	NM	NM	NM	NM	4416.5
P252C	NM	NM	NM	NM	NM	4419.26
P253A	NM	4420.9	4412.96	4417.47	4410.79	4417.01
P253B	NM	4418.36	NM	4415.15	NM	4414.83
P254A	NM	4585.29	4576.9	4585.37	4576.52	4583.98
P254B	NM	4591.23	NM	4590.45	NM	4590.13
P255A	NM	4651.56	4627.71	4646.62	4626.26	4649.17
P255B	NM	4647.17	NM	4642.99	NM	4644.86
P256	NM	4593.39	4583.18	4597.67	4585	4596.64
P257	4624.32	4627.97	4620.29	4623.5	4617.7	4621.61
P259	NM	4420.25	4412.87	4413.8	4410.63	4416.26
P260	4597.69	4599.22	4596.64	4599.3	4597.15	4600.07
P261	4615.79	4609.85	4609.33	NM	NM	4616.96
P262	NM	4442.33	NM	4439.5	NM	4439.25
P263	4594.09	4594.39	4594.58	4594.78	4589.41	4597.12
P264	4809.71	4806.62	4802.76	4800.37	4797.23	4794.86
P267B	4788.02	4780.22	4782.74	4779.27	4784.05	4777.3
P268	4901.07	4903.39	4901.57	4900.08	4898.74	4898.22
P269	5038.39	NM	NM	5041.8	5037.08	DRY

Well	April 2002	Sept 02	April 2003	Sept 2003	April 2004	Sept 2004
P270	5384.74	5380.36	5391.81	5381.31	5386.64	5380.7
P271	5439.04	5438.47	5438.86	5438.05	5440.48	5438.66
P272	5529.22	5528.38	5526.25	5524.86	5526.56	5526.66
P273	4914.37	NM	NM	NM	4906.14	4904.35
P274	5082.85	NM	5082.36	5082.18	5081.99	5079.51
P277	4710.58	4710.12	4708.83	4703.81	4696.78	4691.26
P279	4955.66	4952.92	4939.48	4938.39	4930.37	4919.92
SRG945	5151.69	5151.61	5151.48	NM	5150.96	NM
SRG946	5171.2	5171.58	5168.76	NM	5165.58	NM
W131A	4640.37	4637.82	5151.48	4630.85	4630.24	4625.66
W32	NM	NM	NM	NM	NM	NM
W403	4808.16	4798.02	4805.78	4806.26	4807.61	4795.88
WJG1154A	4599.25	4584.11	4592.78	4584.4	4590.15	4577.53
WJG1154B	NM	4584.11	NM	4580.21	NM	4577.56
WJG1154C	NM	4584.54	NM	4584.4	NM	4577.12
WJG1169A	4709.32	4708.69	4707.61	4704.4	4696.63	4690.9
WJG1169B	NM	4708.65	NM	4704.5	NM	4691.03
WJG1169C	NM	4708.45	NM	4704.56	NM	4691.1
WJG1170A	4598.36	4585.55	4591.93	4580.4	4589.35	4578.68
WJG1170B	NM	4585.09	NM	4580.25	NM	4578.38
WJG1170C	NM	4584.81	NM	4580.11	NM	4578.28
WJG1171A	4601.88	4573.04	4595.93	4576.65	4592.79	4573.28
WJG1171B	NM	4569.86	NM	4576.36	NM	4572.47
WJG1171C	NM	4569.06	NM	4576.4	NM	4572.42
WJG1980	4596.52	4574.64	NM	4578.34	4592.94	4570.89
WJG1981	NM	NM	NM	NM	NM	NM
WJG2453	4596.5	NM	NM	NM	4592.38	NM

NM=Not Measured

APPENDIX C

Tailings Monitoring Data, 2003-2004

Table C-1 Daily Tailings Monitoring Data 2003-2004

	Tailings pH at North Splitter Box	Acid Water Pumping through WDPS	Concentrator Throughput
	(su)	(gpm)	(TPH)
1/1/2003	7.4	3532	4359
1/2/2003	7.0	3472	3827
1/3/2003	7.2	3091	4864
1/4/2003	7.3	2456	4422
1/5/2003	7.3	2469	5016
1/6/2003	7.3	2434	5247
1/7/2003	7.1	2462	4512
1/8/2003	7.1	2451	3996
1/9/2003	7.2	2436	5934
1/10/2003	7.4	2448	6118
1/11/2003	7.2	2539	6407
1/12/2003	7.9	1616	6036
1/13/2003	7.2	2701	6304
1/14/2003	7.5	3202	5521
1/15/2003	7.1	3381	5640
1/16/2003	7.6	2817	5892
1/17/2003	7.9	2060	6480
1/18/2003	7.8	2533	5380
1/19/2003	7.2	3353	5441
1/20/2003	7.2	3670	5480
1/21/2003	7.1	3470	5566
1/22/2003	7.0	3580	5108
1/23/2003	7.1	3942	5592
1/24/2003	7.3	3917	5719
1/25/2003	7.3	3440	5688
1/26/2003	7.1	3382	5709
1/27/2003	7.0	3469	5290
1/28/2003	7.1	3595	5458
1/29/2003	7.1	3768	4352
1/30/2003	7.1	3900	4656
1/31/2003	7.2	3452	5217
2/1/2003	7.3	3422	5428
2/2/2003	7.3	3506	4854
2/3/2003	7.9	3951	1427
2/4/2003	8.4	4996	1372
2/5/2003	7.1	3413	4569
2/6/2003	7.4	3473	4395
2/7/2003	7.4	3406	4865
2/8/2003	7.5	3418	4834
2/9/2003	7.6	3439	6188
2/10/2003	7.8	3441	5621
2/11/2003	7.8	3334	4953
2/12/2003	8.0	3128	4667
2/13/2003	7.7	2746	4121
2/14/2003	7.5	3317	5575
2/15/2003	7.5	3602	6522
2/16/2003	7.5	3778	7315
2/17/2003	7.1	3673	6835
2/18/2003	7.1	4155	6389
2/19/2003	7.3	4823	6644
2/20/2003	7.2	4986	7409
2/21/2003	7.2	4855	7506
2/22/2003	7.1	4285	7345
2/23/2003	7.3	4196	7517

	Tailings pH at North Splitter Box	Acid Water Pumping through WDPS	Concentrator Throughput
2/24/2003	7.1	4320	6567
2/25/2003	7.2	4862	5962
2/26/2003	7.0	4253	4841
2/27/2003	7.4	3478	5722
2/28/2003	7.2	4159	6252
3/1/2003	7.3	3849	5295
3/2/2003	7.3	3474	5457
3/3/2003	7.5	3182	5193
3/4/2003	7.6	2665	4271
3/5/2003	7.6	2600	3444
3/6/2003	7.6	2525	4128
3/7/2003	7.6	2429	4935
3/8/2003	7.6	2427	5076
3/9/2003	7.7	2419	5511
3/10/2003	8.0	2514	5848
3/11/2003	8.2	2660	6524
3/12/2003	8.0	2721	6314
3/13/2003	8.0	3054	6783
3/14/2003	7.9	2945	6902
3/15/2003	7.3	2671	6427
3/16/2003	7.2	2389	5674
3/17/2003	6.8	2556	6787
3/18/2003	6.9	2870	5397
3/19/2003	6.9	2964	6758
3/20/2003	6.9	3248	7593
3/21/2003	7.3	3572	6891
3/22/2003	7.4	3734	6713
3/23/2003	7.6	3887	6528
3/24/2003	7.8	3692	6219
3/25/2003	8.5	3431	6160
3/26/2003	7.9	3670	5362
3/27/2003	7.6	3216	5429
3/28/2003	7.7	3013	5794
3/29/2003	7.7	3363	5915
3/30/2003	7.6	3556	5331
3/31/2003	7.4	3752	5903
4/1/2003	7.1	0	4199
4/2/2003	7.4	0	3842
4/3/2003	7.6	0	3879
4/4/2003	6.6	0	4800
4/5/2003	7.9	0	4824
4/6/2003	7.9	0	5740
4/7/2003	7.6	0	6092
4/8/2003	7.5	0	4646
4/9/2003	7.5	0	3580
4/10/2003	7.3	0	1774
4/11/2003	7.7	0	3171
4/12/2003	7.8	0	4220
4/13/2003	7.9	0	4391
4/14/2003	7.8	0	5355
4/15/2003	7.9	0	6284
4/16/2003	7.8	0	5865
4/17/2003	7.9	0	6967
4/18/2003	7.9	0	6750
4/19/2003	7.8	0	6724
4/20/2003	7.7	0	7155
4/21/2003	8.1	0	1960

	Tailings pH at North Splitter Box	Acid Water Pumping through WDPS	Concentrator Throughput
4/22/2003	7.8	0	6985
4/23/2003	7.8	1655	6631
4/24/2003	7.8	4452	6825
4/25/2003	7.9	4241	7207
4/26/2003	7.9	4305	7751
4/27/2003	8.0	4319	7767
4/28/2003	8.2	3916	7627
4/29/2003	8.2	3874	6896
4/30/2003	7.9	4359	6475
5/1/2003	7.8	4473	6666
5/2/2003	7.9	4365	6743
5/3/2003	7.6	4178	6008
5/4/2003	7.8	4346	6192
5/5/2003	7.9	3828	5885
5/6/2003	8.7	1995	5751
5/7/2003	9.8	0	3784
5/8/2003	9.7	114	4181
5/9/2003	9.7	0	3977
5/10/2003	9.7	0	4820
5/11/2003	9.7	0	5133
5/12/2003	9.7	0	4770
5/13/2003	9.8	0	4675
5/14/2003	9.8	0	5070
5/15/2003	9.8	0	4844
5/16/2003	9.8	0	5202
5/17/2003	9.6	0	6742
5/18/2003	9.6	0	6498
5/19/2003	9.5	0	6918
5/20/2003	9.3	0	5582
5/21/2003	9.6	187	5135
5/22/2003	8.6	1842	5309
5/23/2003	7.7	3065	5344
5/24/2003	7.7	3076	6340
5/25/2003	7.7	3166	5956
5/26/2003	7.6	3317	5960
5/27/2003	7.5	3184	5771
5/28/2003	7.7	3036	6966
5/29/2003	7.8	3074	6270
5/30/2003	7.6	3012	6751
5/31/2003	7.5	3167	6901
6/1/2003	7.5	3154	7115
6/2/2003	7.7	3122	5834
6/3/2003	7.8	3149	5301
6/4/2003	7.6	3121	4641
6/5/2003	7.8	3217	5496
6/6/2003	8.0	3034	6895
6/7/2003	7.6	3198	5383
6/8/2003	7.5	3192	5074
6/9/2003	7.5	3125	5285
6/10/2003	7.5	2981	4192
6/11/2003	7.6	3086	5005
6/12/2003	7.8	3028	5748
6/13/2003	7.8	3123	6295
6/14/2003	7.9	3275	6328
6/15/2003	7.6	3029	5956
6/16/2003	7.7	2975	6181
6/17/2003	7.9	2860	6691

	Tailings pH at North Splitter Box	Acid Water Pumping through WDPS	Concentrator Throughput
6/18/2003	7.8	3016	6356
6/19/2003	7.9	2933	5627
6/20/2003	8.0	2976	6178
6/21/2003	8.2	2811	5931
6/22/2003	8.3	2707	5879
6/23/2003	8.2	2785	5765
6/24/2003	8.2	2710	5997
6/25/2003	8.2	2903	6800
6/26/2003	8.3	2795	5864
6/27/2003	8.2	2774	5908
6/28/2003	8.4	2627	6557
6/29/2003	8.5	2144	5929
6/30/2003	8.4	2713	5878
7/1/2003	8.3	2988	4802
7/2/2003	8.5	2740	4891
7/3/2003	8.0	1367	2604
7/4/2003	8.3	2213	5246
7/5/2003	8.3	3012	7064
7/6/2003	8.2	2975	6884
7/7/2003	8.3	2901	6997
7/8/2003	7.8	2940	6744
7/9/2003	7.8	3107	6179
7/10/2003	8.1	2966	6242
7/11/2003	7.9	3090	6075
7/12/2003	7.9	2972	6938
7/13/2003	7.9	2832	7137
7/14/2003	8.0	2658	7285
7/15/2003	8.0	2324	6496
7/16/2003	7.3	2159	5556
7/17/2003	8.1	2210	6137
7/18/2003	8.0	2220	7322
7/19/2003	8.2	2199	7884
7/20/2003	8.1	2199	7658
7/21/2003	8.3	2217	7733
7/22/2003	8.3	2232	6756
7/23/2003	8.0	2276	5639
7/24/2003	7.9	2300	7305
7/25/2003	8.2	2349	6629
7/26/2003	8.3	2276	5872
7/27/2003	9.4	55	548
7/28/2003	8.5	1672	6642
7/29/2003	8.1	2293	6503
7/30/2003	7.9	2223	6303
7/31/2003	7.8	2422	6626
8/1/2003	7.7	2599	6626
8/2/2003	7.8	2648	6331
8/3/2003	8.0	2631	5654
8/4/2003	7.4	2494	5640
8/5/2003	7.9	2213	5575
8/6/2003	8.1	2830	5467
8/7/2003	8.0	3241	5691
8/8/2003	8.0	3329	6565
8/9/2003	8.3	3330	7178
8/10/2003	8.3	3334	6733
8/11/2003	8.1	3362	6342
8/12/2003	8.1	3363	5705
8/13/2003	8.2	3341	6689

	Tailings pH at North Splitter Box	Acid Water Pumping through WDPS	Concentrator Throughput
8/14/2003	8.5	3344	6329
8/15/2003	8.2	3320	5998
8/16/2003	7.8	3283	5978
8/17/2003	8.0	3041	6161
8/18/2003	8.0	3116	6343
8/19/2003	8.0	3254	6310
8/20/2003	8.7	1417	4893
8/21/2003	8.6	1093	5008
8/22/2003	8.6	206	2038
8/23/2003	8.1	0	11
8/24/2003	8.7	0	9
8/25/2003	8.5	1691	4966
8/26/2003	8.1	2858	6858
8/27/2003	8.3	2111	5206
8/28/2003	8.3	2973	6307
8/29/2003	8.4	3146	5992
8/30/2003	8.1	3234	6553
8/31/2003	8.2	2804	6684
9/1/2003	8.2	3303	6649
9/2/2003	8.9	1350	5905
9/3/2003	9.4	0	5041
9/4/2003	9.6	0	6764
9/5/2003	9.1	1301	6793
9/6/2003	8.2	3364	6770
9/7/2003	8.2	3332	6775
9/8/2003	8.4	3347	6447
9/9/2003	9.0	1068	6223
9/10/2003	9.4	0	6985
9/11/2003	8.9	1981	6751
9/12/2003	8.4	3316	7093
9/13/2003	8.4	3251	6999
9/14/2003	8.2	3245	4804
9/15/2003	8.4	3297	6932
9/16/2003	8.6	2460	5570
9/17/2003	8.3	3085	6173
9/18/2003	8.7	1861	6325
9/19/2003	8.8	2009	6057
9/20/2003	8.5	3022	5176
9/21/2003	8.4	3362	4948
9/22/2003	8.1	3206	4324
9/23/2003	8.0	3114	4840
9/24/2003	8.2	3052	4812
9/25/2003	8.2	3324	4867
9/26/2003	8.5	3258	6547
9/27/2003	8.7	3274	6593
9/28/2003	8.6	3284	6712
9/29/2003	8.6	3221	5446
9/30/2003	8.5	2814	6601
10/1/2003	8.7	2,447	5,636
10/2/2003	8.4	3,277	5,366
10/3/2003	8.6	3,173	6,114
10/4/2003	8.7	3,011	7,182
10/5/2003	8.7	2,928	7,529
10/6/2003	8.6	3,069	7,384
10/7/2003	8.4	3,371	6,213
10/8/2003	8.0	3,381	6,092
10/9/2003	7.9	3,388	6,194

	Tailings pH at North Splitter Box	Acid Water Pumping through WDPS	Concentrator Throughput
10/10/2003	8.2	3,293	6,968
10/11/2003	8.4	3,356	6,946
10/12/2003	8.6	3,305	6,398
10/13/2003	8.6	3,091	6,607
10/14/2003	8.3	3,347	4,982
10/15/2003	8.2	3,345	4,380
10/16/2003	8.3	3,310	4,361
10/17/2003	7.9	3,662	4,294
10/18/2003	8.2	2,956	4,272
10/19/2003	8.6	2,528	6,092
10/20/2003	8.0	4,157	6,316
10/21/2003	7.7	4,651	7,078
10/22/2003	7.5	5,006	7,607
10/23/2003	7.6	4,722	7,240
10/24/2003	7.5	5,175	7,104
10/25/2003	7.4	5,257	5,823
10/26/2003	7.6	5,052	5,665
10/27/2003	7.5	5,319	5,769
10/28/2003	7.5	5,548	5,653
10/29/2003	7.2	5,705	4,782
10/30/2003	7.4	5,706	5,945
10/31/2003	7.4	5,706	6,683
11/1/2003	7.0	4,921	6,246
11/2/2003	6.3	1,056	5,695
11/3/2003	6.7	5,359	5,218
11/4/2003	7.0	5,228	4,643
11/5/2003	7.0	5,572	5,463
11/6/2003	7.0	5,244	4,967
11/7/2003	7.1	5,448	5,643
11/8/2003	7.2	5,646	6,290
11/9/2003	7.1	5,620	7,277
11/10/2003	7.5	5,624	7,818
11/11/2003	7.5	5,656	7,060
11/12/2003	7.1	5,542	5,448
11/13/2003	7.7	3,879	6,959
11/14/2003	7.9	4,197	6,860
11/15/2003	7.3	5,506	7,285
11/16/2003	6.3	5,548	6,793
11/17/2003	7.6	5,542	7,328
11/18/2003	7.6	5,435	5,338
11/19/2003	7.6	5,084	4,457
11/20/2003	7.5	5,016	5,465
11/21/2003	7.8	4,695	5,627
11/22/2003	8.1	4,824	6,846
11/23/2003	8.1	4,822	6,895
11/24/2003	8.1	4,865	6,004
11/25/2003	7.9	4,810	5,678
11/26/2003	7.7	4,921	5,521
11/27/2003	7.7	4,935	6,709
11/28/2003	7.8	4,895	6,771
11/29/2003	7.9	4,882	6,286
11/30/2003	7.8	4,896	5,696
12/1/2003	7.9	4,855	5,867
12/2/2003	8.2	3,939	5,365
12/3/2003	8.0	3,478	4,474
12/4/2003	7.9	4,238	5,536
12/5/2003	7.8	4,514	5,426

	Tailings pH at North Splitter Box	Acid Water Pumping through WDPS	Concentrator Throughput
12/6/2003	7.8	4,515	6,410
12/7/2003	7.8	4,544	5,815
12/8/2003	7.8	4,637	4,978
12/9/2003	7.6	4,513	5,008
12/10/2003	7.6	4,714	5,192
12/11/2003	7.6	5,133	5,117
12/12/2003	7.4	5,301	5,245
12/13/2003	7.5	5,225	6,627
12/14/2003	7.8	5,389	6,834
12/15/2003	7.8	5,511	5,896
12/16/2003	7.6	5,619	6,017
12/17/2003	7.6	5,547	6,437
12/18/2003	7.4	5,828	6,177
12/19/2003	7.3	5,675	6,381
12/20/2003	7.4	5,767	7,088
12/21/2003	7.6	5,862	6,701
12/22/2003	7.7	5,759	6,138
12/23/2003	7.7	5,704	6,315
12/24/2003	7.7	5,735	5,890
12/25/2003	7.6	5,846	6,135
12/26/2003	6.7	3,207	2,253
12/27/2003	8.0	2,323	5,431
12/28/2003	7.5	4,455	4,675
12/29/2003		2,639	5,776
12/30/2003		3,212	6,401
12/31/2003	8.4	3,387	6,304
1/1/2004	7.6	5490.09	5990.97
1/2/2004	7.7	5567.02	5570.28
1/3/2004	7.8	5539.90	5732.52
1/4/2004	7.8	5485.81	5512.47
1/5/2004	7.7	5663.44	5293.23
1/6/2004	8.8	1932.18	2302.36
1/7/2004	7.8	5810.77	5135.72
1/8/2004	7.7	6073.61	5521.11
1/9/2004	7.7	6014.69	5835.35
1/10/2004	7.7	6057.11	5927.31
1/11/2004	7.9	6053.14	5753.67
1/12/2004	7.8	6044.70	4992.67
1/13/2004	7.8	6010.50	5534.61
1/14/2004	8.6	2823.59	2712.64
1/15/2004	8.9	0.00	32.97
1/16/2004	8.3	4673.24	4520.66
1/17/2004	7.9	6080.31	5384.09
1/18/2004	8.0	5867.37	5928.34
1/19/2004	7.8	5987.33	5612.37
1/20/2004	7.7	5972.53	5628.38
1/21/2004	7.6	5979.84	5393.99
1/22/2004	7.6	6033.43	5342.91
1/23/2004	7.7	5530.10	4117.37
1/24/2004	7.5	6095.17	5126.60
1/25/2004	7.6	5217.06	5856.18
1/26/2004	7.9	5408.20	5715.13
1/27/2004	7.8	5945.34	4822.31
1/28/2004	7.4	5305.26	4257.57
1/29/2004	7.7	5646.74	4875.80
1/30/2004	7.8	5294.48	4813.81
1/31/2004	7.8	5317.79	5545.12

	Tailings pH at North Splitter Box	Acid Water Pumping through WDPS	Concentrator Throughput
2/1/2004	7.6	5508.53	5007.79
2/2/2004	7.6	5467.93	4902.62
2/3/2004	7.4	5562.85	5253.38
2/4/2004	7.8	5233.95	5995.40
2/5/2004	7.8	5034.26	6317.09
2/6/2004	7.9	5409.78	6248.28
2/7/2004	7.8	5559.80	5336.15
2/8/2004	7.8	5375.11	5286.88
2/9/2004	7.6	5246.70	4042.45
2/10/2004	7.4	5196.16	3852.63
2/11/2004	7.5	5185.54	3571.73
2/12/2004	7.3	5206.58	4844.25
2/13/2004	8.0	5151.54	6255.06
2/14/2004	8.1	4926.80	5561.32
2/15/2004	9.0	1553.93	5078.21
2/16/2004	9.7	0.00	4847.37
2/17/2004	9.7	0.00	4752.17
2/18/2004	9.7	0.00	4917.03
2/19/2004	9.7	0.00	4930.17
2/20/2004	9.7	331.23	6547.58
2/21/2004	9.7	0.00	6408.40
2/22/2004	9.8	0.00	6015.03
2/23/2004	9.8	0.00	5959.18
2/24/2004	9.8	0.00	6413.27
2/25/2004	9.7	0.00	5946.95
2/26/2004	9.8	0.00	5569.93
2/27/2004	9.7	0.00	5691.70
2/28/2004	9.7	130.49	5354.97
2/29/2004	9.6	0.00	6294.20
3/1/2004	9.7	0.00	5777.13
3/2/2004	9.3	1197.93	5637.12
3/3/2004	8.7	1922.04	6001.35
3/4/2004	9.6	0.00	6251.14
3/5/2004	9.6	0.00	6823.82
3/6/2004	10.1	0.00	5409.77
3/7/2004	9.9	0.00	5873.98
3/8/2004	10.0	0.00	3722.75
3/9/2004	10.4	0.00	4427.95
3/10/2004	10.0	0.00	3969.27
3/11/2004	9.7	71.03	4262.60
3/12/2004	9.6	0.00	4651.26
3/13/2004	9.5	0.00	4691.19
3/14/2004	9.7	0.00	5137.03
3/15/2004	9.9	23.12	5857.81
3/16/2004	9.0	1360.86	5518.11
3/17/2004	8.4	1902.08	5078.05
3/18/2004	8.6	1871.56	6382.93
3/19/2004	8.4	1919.02	6127.80
3/20/2004	8.5	1931.49	5752.94
3/21/2004	9.1	1054.19	6280.30
3/22/2004	10.1	0.00	6223.21
3/23/2004	10.2	0.00	6684.70
3/24/2004	10.1	0.00	5995.91
3/25/2004	10.0	0.00	5789.28
3/26/2004	9.5	890.16	5556.08
3/27/2004	8.9	2049.59	5347.45
3/28/2004	8.8	2048.39	5185.36

	Tailings pH at North Splitter Box	Acid Water Pumping through WDPS	Concentrator Throughput
3/29/2004	8.9	2045.84	5224.92
3/30/2004	9.0	2071.29	5684.91
3/31/2004	8.8	2069.93	5279.01
4/1/2004	9.0	2061.87	5280.68
4/2/2004	8.9	2059.51	4311.25
4/3/2004	8.8	2061.98	3640.47
4/4/2004	8.8	2063.15	3964.29
4/5/2004	8.9	2072.26	5490.77
4/6/2004	9.0	1981.85	6419.49
4/7/2004	9.2	2064.43	6795.30
4/8/2004	9.6	2004.37	6913.09
4/9/2004	9.6	2020.95	7017.96
4/10/2004	9.5	1723.95	5956.83
4/11/2004	9.2	1992.94	7276.23
4/12/2004	9.2	2569.44	7320.65
4/13/2004	8.0	4652.41	7272.04
4/14/2004	7.4	5434.75	5893.62
4/15/2004	7.5	5402.28	5932.54
4/16/2004	7.4	5421.85	5535.10
4/17/2004	7.5	5636.83	5589.23
4/18/2004	7.5	5657.54	5550.84
4/19/2004	7.5	5629.79	5667.90
4/20/2004	7.4	5549.54	4953.83
4/21/2004	7.3	5572.32	4427.79
4/22/2004	7.9	5580.09	4973.66
4/23/2004	7.7	5530.40	6211.80
4/24/2004	7.8	5653.30	6370.30
4/25/2004	7.6	5545.03	6607.06
4/26/2004	7.5	5545.29	6220.68
4/27/2004	7.4	5526.39	5968.04
4/28/2004	7.5	5584.62	4451.99
4/29/2004	7.1	5459.54	2825.11
4/30/2004	7.2	5380.85	2968.91
5/1/2004	7.4	5499.35	2889.27
5/2/2004	7.6	5386.58	3643.68
5/3/2004	7.6	5581.42	4163.76
5/4/2004	7.8	5508.81	5156.36
5/5/2004	7.8	5375.74	5981.01
5/6/2004	8.0	5491.47	6708.60
5/7/2004	8.1	5461.00	6817.50
5/8/2004	7.9	5478.89	6936.75
5/9/2004	7.8	5498.36	6798.30
5/10/2004	7.8	5415.91	7224.95
5/11/2004	8.0	5463.51	6972.18
5/12/2004	7.9	5480.53	5662.67
5/13/2004	8.0	5346.82	6548.62
5/14/2004	7.9	5456.76	6571.57
5/15/2004	7.7	5384.54	6324.84
5/16/2004	7.8	5049.08	6430.54
5/17/2004	7.8	4611.04	5359.66
5/18/2004	7.8	5520.97	6785.93
5/19/2004	8.1	5291.43	6525.23
5/20/2004	7.8	5297.21	5266.82
5/21/2004	7.7	5509.88	5103.66
5/22/2004	7.0	4871.19	4227.70
5/23/2004	7.7	3427.46	3955.77
5/24/2004	7.9	5189.17	5640.65

	Tailings pH at North Splitter Box	Acid Water Pumping through WDPS	Concentrator Throughput
5/25/2004	7.8	5499.30	4792.99
5/26/2004	7.3	5495.88	4876.01
5/27/2004	7.7	5525.52	4414.48
5/28/2004	7.8	5522.95	4468.34
5/29/2004	7.8	5567.32	5575.55
5/30/2004	7.7	5538.46	5472.50
5/31/2004	7.7	5454.49	6169.31
6/1/2004	7.5	5497.72	4492.07
6/2/2004	7.6	5570.29	5193.60
6/3/2004	7.6	5536.41	5135.91
6/4/2004	7.7	5493.59	5044.09
6/5/2004	7.8	5442.19	4854.81
6/6/2004	7.7	5541.49	5012.31
6/7/2004	7.7	5572.04	4799.36
6/8/2004	7.8	5550.79	5017.60
6/9/2004	7.6	5500.48	4916.19
6/10/2004	7.9	5452.03	5298.77
6/11/2004	8.0	5534.62	5734.40
6/12/2004	7.8	5399.30	6198.99
6/13/2004	7.8	5345.05	6232.36
6/14/2004	7.8	5541.88	6556.47
6/15/2004	7.9	5527.56	5814.72
6/16/2004	7.9	5500.44	5354.68
6/17/2004	8.7	2504.86	5353.01
6/18/2004	9.6	0.00	6102.19
6/19/2004	9.6	0.00	6027.66
6/20/2004	9.4	0.00	5874.28
6/21/2004	9.5	0.00	5944.64
6/22/2004	9.7	0.00	6008.06
6/23/2004	8.8	2448.87	4672.51
6/24/2004	7.4	5552.92	4885.37
6/25/2004	7.4	5411.37	5087.63
6/26/2004	7.5	5387.10	5534.13
6/27/2004	7.6	5336.38	5674.49
6/28/2004	7.7	5475.89	7227.33
6/29/2004	7.7	5432.69	6384.24
6/30/2004	7.7	5448.57	5939.68
7/1/2004	7.7	5495.77	6335.07
7/2/2004	7.5	5489.46	6607.86
7/3/2004	7.5	5470.21	6963.20
7/4/2004	7.7	5437.20	7226.55
7/5/2004	7.6	6093.01	7806.54
7/6/2004	7.6	5863.27	6502.73
7/7/2004	8.0	5934.30	5832.01
7/8/2004	7.7	6473.90	7234.37
7/9/2004	7.5	6443.09	7418.00
7/10/2004	7.5	6464.41	7167.46
7/11/2004	7.6	6431.30	6754.31
7/12/2004	7.4	6472.04	5775.65
7/13/2004	7.8	3813.65	5576.14
7/14/2004	7.8	3063.30	5592.67
7/15/2004	6.9	2704.15	5208.90
7/16/2004	7.8	4242.29	5835.48
7/17/2004	8.0	4007.31	5720.56
7/18/2004	7.8	4139.27	6609.96
7/19/2004	7.6	4093.77	5970.30
7/20/2004	7.3	4084.92	6857.11

	Tailings pH at North Splitter Box	Acid Water Pumping through WDPS	Concentrator Throughput
7/21/2004	3.1	4858.99	5784.25
7/22/2004	7.5	6562.37	5439.84
7/23/2004	7.3	6503.58	5376.89
7/24/2004	7.2	5882.33	6248.49
7/25/2004	7.8	5006.59	6483.96
7/26/2004	7.6	5842.53	7337.17
7/27/2004	7.5	5413.55	7671.15
7/28/2004	7.4	5457.06	5522.78
7/29/2004	7.5	5453.24	6824.61
7/30/2004	9.2	5479.10	6644.05
7/31/2004	9.4	5360.15	5494.34
8/1/2004	9.0	5385.27	5206.29
8/2/2004	7.8	5468.03	4929.01
8/3/2004	8.0	5415.50	4753.77
8/4/2004	7.9	4241.00	5283.95
8/5/2004	8.0	3499.36	5055.17
8/6/2004	7.9	2258.34	5663.05
8/7/2004	8.3	2788.41	5984.18
8/8/2004	8.5	2722.70	5588.59
8/9/2004	8.2	2674.11	5003.85
8/10/2004	8.1	2686.91	4668.43
8/11/2004	7.9	2738.61	4392.89
8/12/2004	8.1	2715.24	4788.86
8/13/2004	8.2	2776.31	4535.44
8/14/2004	8.5	2760.89	6893.16
8/15/2004	8.4	2754.65	7086.99
8/16/2004	8.4	2870.88	7249.03
8/17/2004	8.4	2793.75	5318.45
8/18/2004	8.4	2784.22	7115.47
8/19/2004	8.2	2958.63	6718.94
8/20/2004	8.8	1524.39	5927.44
8/21/2004	8.3	2939.58	7410.76
8/22/2004	8.1	2973.07	7704.73
8/23/2004	8.2	2928.44	7083.96
8/24/2004	8.4	2890.66	7217.61
8/25/2004	8.6	2912.59	6296.52
8/26/2004	8.2	3477.84	5542.25
8/27/2004	8.1	3498.15	5595.85
8/28/2004	8.1	3453.71	6356.76
8/29/2004	8.0	3571.25	6169.12
8/30/2004	8.5	2193.31	5521.13
8/31/2004	8.8	1862.67	5735.16
9/1/2004	8.2	2964.61	4515.02
9/2/2004	8.3	3006.39	4523.02
9/3/2004	8.3	3484.35	4854.18
9/4/2004	8.1	3955.23	4950.90
9/5/2004	8.2	4041.77	5301.96
9/6/2004	8.0	4023.46	5685.39
9/7/2004	7.6	3104.34	3095.42
9/8/2004	8.6	1588.05	3551.25
9/9/2004	7.6	4416.52	6367.61
9/10/2004	7.6	5151.66	6312.24
9/11/2004	7.7	5053.26	6242.34
9/12/2004	7.7	4961.56	5812.93
9/13/2004	7.7	5128.40	4909.44
9/14/2004	7.3	5233.54	4930.55
9/15/2004	7.4	5145.10	5497.67

	Tailings pH at North Splitter Box	Acid Water Pumping through WDPS	Concentrator Throughput
9/16/2004	7.5	5043.76	6350.80
9/17/2004	7.6	4939.90	6410.39
9/18/2004	7.5	5110.90	5983.90
9/19/2004	7.7	5126.27	5949.77
9/20/2004	8.1	3598.49	6137.77
9/21/2004	8.1	3280.74	5623.14
9/22/2004	8.1	3241.95	4871.85
9/23/2004	8.1	3109.97	5391.12
9/24/2004	8.1	3278.93	6918.09
9/25/2004	8.1	3317.28	6312.97
9/26/2004	8.0	3292.83	6395.26
9/27/2004	7.9	3573.32	5975.90
9/28/2004	7.1	4706.48	5974.03
9/29/2004	7.5	4864.60	6579.51
9/30/2004	7.8	3688.10	6862.19
10/1/2004	8.2	3340.49	6358.54
10/2/2004	8.8	1725.79	6148.25
10/3/2004	8.8	2153.41	5761.36
10/4/2004	8.2	3377.06	5682.17
10/5/2004	8.2	3301.91	4939.70
10/6/2004	8.0	3294.21	3522.31
10/7/2004	7.9	3316.91	3985.21
10/8/2004	7.9	3318.24	3783.23
10/9/2004	8.0	3335.86	4476.45
10/10/2004	7.9	3333.91	4714.87
10/11/2004	7.9	3280.52	4647.97
10/12/2004	8.0	3256.33	4981.70
10/13/2004	8.0	3263.00	5357.52
10/14/2004	7.9	3288.67	6238.54
10/15/2004	8.0	3354.18	7197.66
10/16/2004	7.9	3382.76	7406.80
10/17/2004	8.1	3322.95	7023.01
10/18/2004	8.2	2537.95	5865.24
10/19/2004	8.4	2862.08	4758.68
10/20/2004	8.6	0.00	6.11
10/21/2004	9.2	0.00	2617.80
10/22/2004	8.7	3500.00	5255.01
10/23/2004	7.8	4000.00	6896.05
10/24/2004	7.9	4600.00	6722.28
10/25/2004	7.8	5470.00	7047.85
10/26/2004	7.9	5200.00	7066.01
10/27/2004	7.8	5420.00	6685.22
10/28/2004	7.9	4750.00	7194.00
10/29/2004	7.7	4800.00	7022.97
10/30/2004	8.0	2915.00	6897.65
10/31/2004	8.2	3720.00	6656.22
11/1/2004	8.4	3100.00	7188.93
11/2/2004	8.9	2780.00	5565.36
11/3/2004	8.3	2900.00	6764.68
11/4/2004	8.2	3110.00	5995.06
11/5/2004	8.3	3125.00	6958.39
11/6/2004	8.5	2920.00	6851.70
11/7/2004	8.5	3070.00	6907.60
11/8/2004	8.3	3115.00	7018.19
11/9/2004	8.4	2940.00	5819.67
11/10/2004	8.2	3340.00	6355.69
11/11/2004	8.1	3275.00	7345.35

	Tailings pH at North Splitter Box	Acid Water Pumping through WDPS	Concentrator Throughput
11/12/2004	8.2	3480.00	6356.17
11/13/2004	8.2	3320.00	6134.68
11/14/2004	8.2	2920.00	5996.38
11/15/2004	8.6	1440.00	6024.79
11/16/2004	9.3	0.00	5594.47
11/17/2004	9.5	0.00	5265.23
11/18/2004	9.6	0.00	5065.65
11/19/2004	9.6	0.00	5448.28
11/20/2004	9.7	0.00	5623.56
11/21/2004	9.8	0.00	5647.17
11/22/2004	9.3	1000.00	6518.56
11/23/2004	8.3	2420.00	7714.45
11/24/2004	8.2	2860.00	7531.14
11/25/2004	8.3	2900.00	7402.47
11/26/2004	8.1	2880.00	7231.59
11/27/2004	7.9	2905.00	7442.99
11/28/2004	7.7	2880.00	6682.11
11/29/2004	8.0	3055.28	7601.37
11/30/2004	8.4	2919.97	6769.80
12/1/2004	8.1	3145.26	6786.45
12/2/2004	8.1	3661.79	6750.77
12/3/2004	8.2	3685.81	6992.02
12/4/2004	8.3	3652.79	7065.07
12/5/2004	8.3	3639.89	7081.35
12/6/2004	8.2	3119.42	6978.77
12/7/2004	8.1	3675.52	7244.89
12/8/2004	8.0	3642.75	6663.94
12/9/2004	8.1	3981.35	6890.55
12/10/2004	8.0	3771.28	6839.81
12/11/2004	8.1	3691.96	5965.52
12/12/2004	8.0	3676.79	5353.28
12/13/2004	7.8	3672.25	4845.95
12/14/2004	7.7	3637.19	4286.77
12/15/2004	7.8	3581.34	4087.55
12/16/2004	8.1	3602.84	5311.50
12/17/2004	8.2	3688.38	5877.78
12/18/2004	8.3	3605.16	6587.23
12/19/2004	8.3	3597.31	6776.35
12/20/2004	8.1	3545.18	4713.18
12/21/2004	8.4	2891.99	7066.16
12/22/2004	8.4	2705.74	6727.67
12/23/2004	8.5	2772.22	7221.91
12/24/2004	8.6	2682.94	7209.91
12/25/2004	8.5	2717.75	6748.24
12/26/2004	8.4	2756.50	6556.13
12/27/2004	8.3	2790.62	6035.11
12/28/2004	8.2	2783.77	5979.60
12/29/2004	8.0	4128.30	6944.73
12/30/2004	8.4	4634.08	7059.75
12/31/2004	8.6	4605.65	6512.52

Table C-2 Monthly Tailings Aqueous Chemistry Monitoring Data 2003-2004

		pH	TDS	Alk	Acidity	Ca-T	Mg-T	Cl	SO4	Al-D	Cd-D	Cu-D	Fe-D	Mn-D	Zn-D
Sample	**Date**	su	mg/l	mg/l CaCO3	mg/l CaCO3	mg/l	mg/l	mg/l	mg/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
BCP2739	1/15/03	8.03	7510	87		877	345	2130	2580	<100	4	11	663	2110	
BCP2739	2/19/03	7.81	7000	74		744	252	2030	3160		2	380	750		
BCP2739	3/19/03	8.3	7500	70		768	289	2040	2820	155	2	36	380	2260	
BCP2739	4/23/03	10.03	6130	79		871	163	1640	2540	<100	2	16	<30	1450	
BCP2739	5/14/03	8.82	8080	74		946	210	2500	2470	108	5	<10	40	1260	
BCP2739	6/25/03	8.81	7380	62		1270	9	2490	2830	105	5	<10	<30	570	39
BCP2739	7/29/03	8.86	7160	35		1010	118	2090	2350	170	3	<10	<30		27
BCP2739	8/27/03	8.69	6760	59		903	119	2110	2340	368	5	21	425000		49
BCP2739	9/16/03	7.78	7460	52		829	131	2210	2640	<100	6	<10	39000		137
BCP2739	10/1/03	8.5	8410	76		1100	221	2640	2440	230	9	46	28900		48
BCP2739	11/11/03	8.37	7240	78		919	150	2310	2350	138	5	<10	4390		33
BCP2739	12/16/03	7.95	6180	89		750	148	1690	2280		3	<10	23200	1480	<10
BCP2739	1/13/04	8.23	5210	86		651	94	1470	1940	<100	5	40	16140	1310	33
BCP2739	2/17/04	8.11	5730	106		679	164	1490	2210	<100	6	163	51900	2300	42
BCP2739	3/30/04	8.49	6610	79	11	790	142	2090	2460	27	<20	<20	<300	1040	21
BCP2739	4/20/04	8.08	6390	66		897	95	1880	2590	314	4	24	45300	624	70
BCP2739	5/18/04	7.61	5390	70		781	112	1420	1900	<100	<0.01	166	<300	805	111
BCP2739	6/15/04	8.36	5820	93		681	135	1640	2270	<100	<0.01	753	<300	710	<20
BCP2739	7/13/04	8.09	6490	79		769	151	1880	2560	<100	<0.01	<10	<20	892	78
BCP2739	8/24/04	8.12	7710	72		848	191	2240	2690	<100	<0.01	<10	<20	750	35
BCP2739	9/21/04	8.09	8270	58	10	920	249	2430	2940	<100	<0.01	<10	<20	1035	31
BCP2739	10/26/04	8.24	7110	75	18	887	215	2070	2930	<100	1.6	<15	<20	843	61
BCP2739	11/16/04	8.48	7810	66		940	224	2170	2760	<100	<0.01	<15	<20	888	27
BCP2739	12/21/04	8.48	8260	75		952	233	2220	2780	<100	<0.01	<15	46	980	<20
BCP2750	1/15/03	9.43	6850	34		887	197	1860	2660	<15	3	<20	<300	30	17
BCP2750	2/19/03	10.3	6850	26		1000	173	1880	3610	226	2				16
BCP2750	3/19/03	9.28	6550	32		1010	217	1800	2600	368	2	<20	<300	86	28
BCP2750	4/23/03	10.05	5790	44		1030	38	1520	2220	<15	2	<20	<300	25	13
BCP2750	5/14/03	9.93	6040	45		999	12	2050	2330	35	2	21	<300	30	14
BCP2750	6/25/03	10.2	7090	40		1410	14	2350	2600	<15	4	24	<300	<10	27
BCP2750	7/29/03	10.2	6640	46		1190	3	1960	2210	37	2	<20	<300	<10	24
BCP2750	8/27/03	10.6	6670	55		1170	4.1	2020	2150	63	4	<20	<300	<10	11
BCP2750	9/16/03	9.85	6560	36		1190	4.9	1920	2350	<15	4	<20	<300	<10	14

		pH	TDS	Alk	Acidity	Ca-T	Mg-T	Cl	SO4	Al-D	Cd-D	Cu-D	Fe-D	Mn-D	Zn-D
Sample	**Date**	su	mg/l	mg/l CaCO3	mg/l CaCO3	mg/l	mg/l	mg/l	mg/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
BCP2750	10/1/03	10.1	7400	41		1310	21	2430	2280	15	4	<20	<300	<10	<10
BCP2750	11/11/03	10	6280	31		974	33.3	2050	2220	<15	5	<20	<300	<10	<10
BCP2750	12/16/03	10.37	5980	41		1040	31	1650	2240	<15	3	<20	<300	<10	<10
BCP2750	1/13/04	9.8	5140	27		930	36	1390	1860	17	3	<20	<300	21	<10
BCP2750	2/17/04	10.05	5560	36		895	42	1370	2140	8	2	<20			<20
BCP2750	3/30/04	10.6	6440	54	<10	1090	6	2040	2310	218	<20	20	474		<40
BCP2750	4/20/04	10.19	6030	39		1070	11	1800	2420		3	<30	<300	<0.01	<10
BCP2750	5/18/04	10.3	5190	50		888	6	1340	1870	<100	<0.01	<10	<300	<0.01	<20
BCP2750	6/15/04	9.72	5500	42			15	1470	2000	<100	<0.01	2400	<300	<0.01	<20
BCP2750	7/13/04	9.91	5770	39		921	20.2	1690	2320		<0.01	<15	<20	<0.01	<20
BCP2750	8/24/04	10.09	7340	57		1220	25	2170	2800		<0.01	<10	<20	<0.01	<20
BCP2750	9/21/04	10.09	7620	26	<10	1200	34	2190	2560	<100	<0.01	<10	<20	<0.01	<20
BCP2750	10/26/04	10.3	6680	32	13	1100	44	1910	2660	<100	0.15	<15	<20	1.79	<20
BCP2750	11/16/04	10.17	7530	42		1150	101	2070	2560	<100	<0.01	<15	<20	<0.01	<20
BCP2750	12/21/04	10.36	7640	34		1090	89	2090	2760	<100	<0.01	<15	<20	<0.01	<20
BYP2535	1/15/03	6.87	8160	132		856	499	1730	3790	<15	2	20	329	13000	104
BYP2535	2/19/03	7.43	8020	122		909	431	1770	4510	222	2				43
BYP2535	3/19/03	7.68	8080	94		862	428	1780	3690	121	2	<20	<300	3850	29
BYP2535	4/23/03	7.96	6560	60		693	322	1380	3500	242	2	34	<300	2720	15
BYP2535	5/14/03	10	6660	59		756	10	2080	3500	<15	<1	22	<300	<10	34
BYP2535	6/25/03	8.49	7000	55		1040	201	2080	2280	299	3	34	<300	523	37
BYP2535	7/29/03	8.34	6950	46		979	123	1790	2680	185	2	<20	<300	321	25
BYP2535	8/27/03	7.53	7450	91		927	388	1760	3280	236	7	464	<300	6490	40
BYP2535	9/16/03	9.84	6460	34		1120	38	1880	2470	<15	3	32	<300	<10	16
BYP2535	10/1/03	8.55	7220	56		1420	209	2090	2780	27	4	20	<300	<10	<10
BYP2535	11/11/03	7.67	9830	110		1090	399	1890	3240	155	8	67	<300	6790	20
BYP2535	12/16/03	7.77	8350	84		1180	580	1410	3490	162	8	85	300	11700	18
BYP2535	1/13/04	6.7	7310	133		1110	571	1100	4390	60	21	77	608	36200	752
BYP2535	2/17/04	10.14	5600	35		930	43	1360	2370	<15	2	<20	<300	<0.01	18
BYP2535	3/30/04	8.99	7340	55		1180	147	1920	3280	218	3	28	<300	304	<10
BYP2535	4/20/04	7.26	8480	146		966	712	1370	4510	<100	12	436	403	19600	82
BYP2535	5/18/04	7.72	7250	88		1230	356	1190	3800	318	4	87	<300	3330	22
BYP2535	6/15/04	7.68	7340	81		1020	312	1380	3680	318	5	4440	<300	4850	19
BYP2535	7/13/04	6.74	8770	139		1100	349	1470	4280	71	3	<20	3010	20400	188
BYP2535	8/24/04	8.42	7700	57		1240	260	2050	3700	490	5	21	<300	1760	18

		pH	TDS	Alk	Acidity	Ca-T	Mg-T	Cl	SO4	Al-D	Cd-D	Cu-D	Fe-D	Mn-D	Zn-D
Sample	**Date**	su	mg/l	mg/l CaCO3	mg/l CaCO3	mg/l	mg/l	mg/l	mg/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
BYP2535	9/21/04	8.03	8390	94		1280	333	2050	3100	392	4	<20	<300	2710	16
BYP2535	10/26/04	7.76	8720	102	20	1340	541	1750	4140	244	8	108	<300	1190	20
BYP2535	11/16/04	10.16	7260	38		1120	101	2020	2480	<20	3	<20	<300	<0.01	29
BYP2535	12/21/04	9.34	8020	47		1160	202	1970	3120	110	3	<20	<300	350	<10
BYP2538	1/15/03	3.92	30700	<5	9860	533	3450	167	20100	1E+06	292	44300	467000	172000	79400
BYP2538	2/19/03	3.8	27400		9070	568	3410	179	24700		162	56000			
BYP2538	3/19/03	3.95	25500	<5	7940	520	3530	175	20000	1E+06	90	31000	478000	113000	73100
BYP2538	4/23/03	3.8	28900	NA	9770	547	3370	162	19600	1E+06	378	82000	316000	192000	88400
BYP2538	5/14/03	No sample collected - WDPS Pumping off													
BYP2538	6/25/03	3.38	15400	NA	5360	492	2290	141	14300	653000	228	60700	50200	108000	51800
BYP2538	7/29/03	3.74	38300		14400	505	4460	193	25200	2E+06	131	35000	1E+06	170000	78000
BYP2538	8/27/03	3.16	33400		10500	464	3650	194	21200	2E+06	30	90000	178000	176000	83000
BYP2538	9/16/03	No sample collected - WDPS Pumping off													
BYP2538	10/1/03	3.69	19200		5070	548	2290	150	11400	661000	480	41000	117000	196000	65000
BYP2538	11/11/03	3.59	31100		14700	497	3210	227	21900	1E+06	480	66000	261000	197000	75000
BYP2538	12/16/03	3.54	28500		8000	435	3230	207	21200	1E+06	360	64000	271000	187000	73000
BYP2538	1/13/04	3.56	19700		4550	537	2260	169	12900	735000	450	44000	128000	171000	60000
BYP2538	2/17/04	No sample collected - WDPS Pumping off													
BYP2538	3/30/04	3.71	30300		8750	345	3520	162	21600	1E+06	432	102000	347000	185000	49800
BYP2538	4/20/04	3.54	25300	<5	7930	412	3220	168	20300	1E+06	330	89000	223000	163000	56000
BYP2538	5/18/04	3.88	24100	<5	7080	451	2890	199	15600	940000	240	42800	312000	113600	51400
BYP2538	6/15/04	3.67	20500		7010	468	2350	185	15700	831000	326	43800	186910	132000	56200
BYP2538	7/13/04	3.51	26200	<5	7460	449	2710	215	20300	993000	443	59800	207000	175000	65200
BYP2538	8/24/04	3.33	28200	<5	7940	329	3050	166	18600	914000	626	86900	196000	223000	65300
BYP2538	9/21/04	3.59	30800	<5	8440	368	3260	176	22000	1E+06	515	68060	487000	243000	60890
BYP2538	10/26/04	3.37	32500		9770	463	3880	208	24300	1E+06	535	59900	306000	224000	82100
BYP2538	11/23/04	3.49	43500		13200	349	435	188	27900	2E+06	510	100000	665000	310000	78000
BYP2538	12/21/04	3.66	43200		13700	380	4230	215	29000	2E+06	485	85800	819000	278000	98200
MCP2536	1/15/03	6.87	8150	78		691	562	1740	3730	36	2	<20	1390	16200	121
MCP2536	2/19/03	7.81	7480	113		1060	438	1780	3740	353	3				26
MCP2536	3/19/03	7.69	8100	90		878	449	1780	3540	128	2	<20	<300	4010	26
MCP2536	4/23/03	8	6480	57		593	185	1370	3180	217	2	55	<300	1940	17
MCP2536	5/14/03	9.89	7010	42		756	8	2080	2350	<15	3	23	<300	<10	17
MCP2536	6/25/03	8.56	7240	45		964	186	2150	3070	139	3	34	<300	322	32
MCP2536	7/29/03	8.34	6860	37		874	110	1790	2540	144	2	<20	<300	278	18

		pH	TDS	Alk	Acidity	Ca-T	Mg-T	Cl	SO4	Al-D	Cd-D	Cu-D	Fe-D	Mn-D	Zn-D
Sample	**Date**	su	mg/l	mg/l CaCO3	mg/l CaCO3	mg/l	mg/l	mg/l	mg/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
MCP2536	8/27/03	10.3	6590	44		1130	4	1980	2210	181	4	<20	1050	20	17
MCP2536	9/16/03	9.66	6080	34		1100	46	1820	2190	16	3	<20	<300	<10	10
MCP2536	10/1/03	6.8	7100	47		1280	167	2090	2750	78	4	26	<300	703	11
MCP2536	11/11/03	7.86	7330	97		1120	365	1860	3320	246	6	<20	1160	4640	26
MCP2536	12/16/03	7.76	7830	75		1050	478	1380	3460	131	3	<20	<300	11100	23
MCP2536	1/13/04	7.78	6630	94		1080	379	1060	3720	127	2	<20	<300	12000	22
MCP2536	2/17/04	9.76	5570	32		959	43	1350	2260	<115	2	<30	<20	<10	<10
MCP2536	3/30/04	8.95	7000	53		1040	118	1880	3130	82	<20	12	<300	138	<60
MCP2536	4/20/04	7.69	7480	97		940	483	1540	4000	<100	3	11	<300	8410	16
MCP2536	5/18/04	7.85	6920	75		1000	316	1240	3520	<100	<0.01	<10	<300	3140	<20
MCP2536	6/15/04	7.52	6970	71		1060	297	1250	3610	131	<0.01	<10	<300	2990	<20
MCP2536	7/13/04	7.04	7310	89		829	443	1260	3950	106	<0.01	<10	<20	9545	<20
MCP2536	8/24/04	8.23	7690	42		1100	223	2020	3542	<100	<0.01	<10	<20	615	<20
MCP2536	9/21/04	7.88	8020	66	<10	1100	287	1900	3200	170	<0.01	<10	<20	1630	<20
MCP2536	10/27/04	7.74	8170	78		1050	472	1820	3860		<10	<15	<20	<0.01	<20
MCP2536	11/16/04	9.85	7050	35		1100	93	1970	2640	<100	<0.01	<15	<20	<0.01	<20
MCP2536	12/21/04	8.8	7910	50		1050	281	1560	2980	<100	<0.01	<15	<20	<0.01	<20

BCP2739 Inflow from Copperton Reservoir to Copperton Concentrator
BCP2750 Flow from Tailing Underflow 1 to NP-5
BYP2538 Flow from Wastewater pumping to NP-5
BYP2535 Flow into NP-6A
MCP2536 Flow into North Splitter Box

APPENDIX D

Tailings Monitoring Report

TECHNICAL MEMORANDUM

DATE: 24 April 2005

TO: **Kelly Payne (KUCC)**

FROM: Mark J. Logsdon (Geochimica)

SUBJECT: **MONITORING MANAGEMENT OF ACID-PLUME WATER THROUGH THE COPPERTON TAILING LINE -- 2003 - 2004 ANNUAL REPORT**

cc: *P. Doughty (KUCC), B. Vinton, B. Yeomans (NAMS)*

BACKGROUND

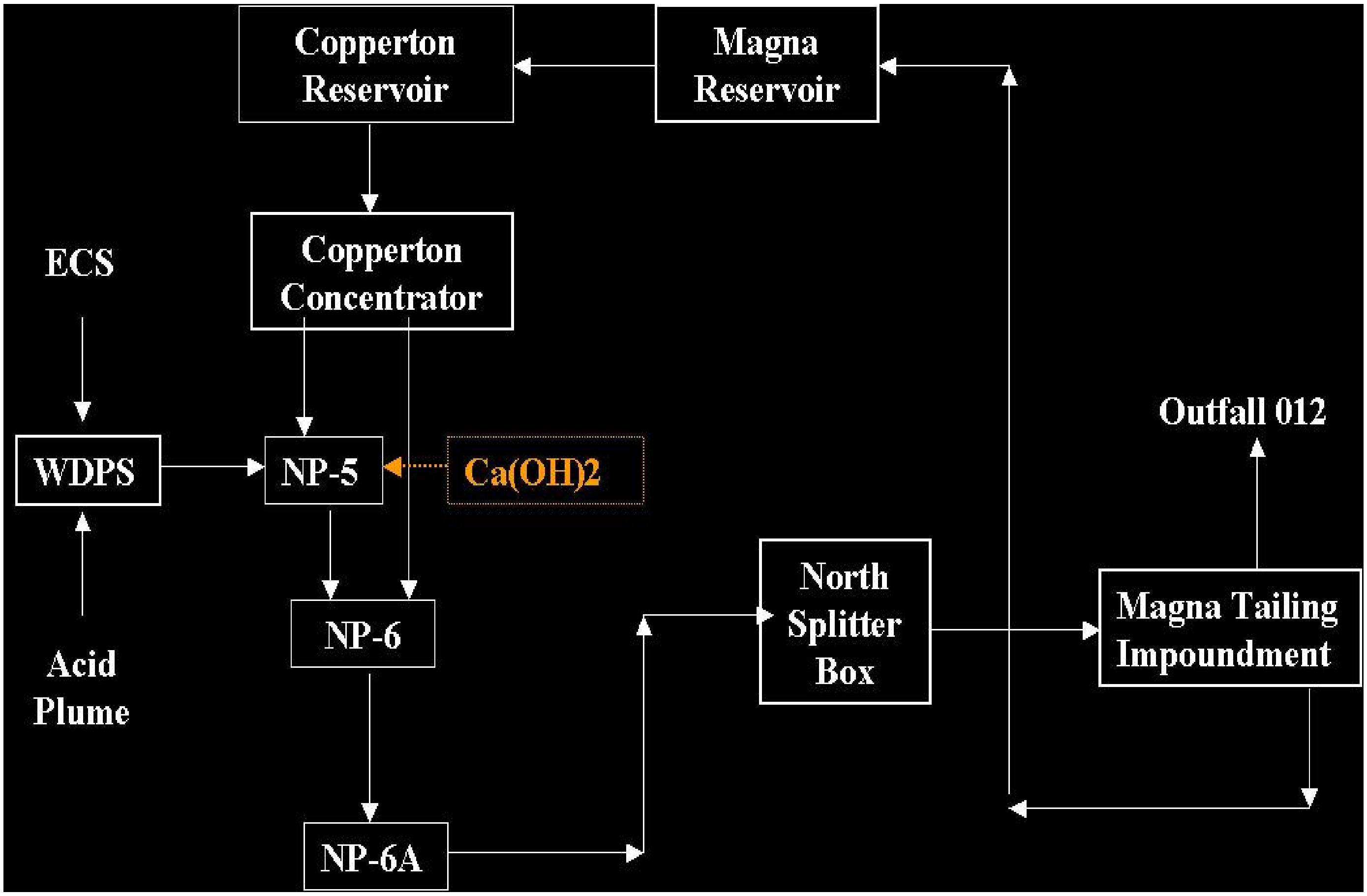
In December 2002, Kennecott Utah Copper Corporation (KUCC) submitted the "Final Design Report for Remedial Action at South Facilities Groundwater" to U.S. Environmental Protection Agency, Utah Department of Environmental Quality, the Technical Review Committee and the general public. KUCC organized the remedy into three functional, engineering units: 1) containment and extraction of contaminated groundwater, 2) treatment of sulfate contaminated water in the Zone A Reverse Osmosis (RO) facility to produce municipal quality water, and 3) neutralization of acidic groundwater in the tailings line using the naturally occurring neutralization potential of the tails and, if necessary or convenient, supplemental lime added to the tails. This report addresses the third component of the overall program.

While the mine is operating, KUCC conveys the following mining-affected waters to the Magna Tailings Impoundment in two existing tailings pipelines:

- Acid plume water;
- Meteoric drainage from the Eastside Collection System; and
- RO Concentrates from treatment of the Zone A sulfate plume.

These water are commingled in and pumped through the Wastewater Disposal Pump Station (WDPS).

Figure 1 Schematic Diagram of Acid-Water Addition to the Copperton Tailing System



The process diagram is discussed in detail in the Final Design Report. The colored box titled "Ca(OH)2" indicates KUCC's capacity to add additional lime ot the process circuit if needed to maintain pH at North Splitter Box.

With respect to the disposal of acid waters in the tailing system, the Remedial Design proposed three performance criteria:

- The system must be able to handle up to 3,500 gpm flow of acidic water from the Wastewater Disposal Pump Station (WDPS)
- The system must be able to maintain a fluid pH of 6.7 or greater as measured at the North Splitter Box (Sample Point MCP2536) with 90% availability to ensure dissolved metal precipitation and sequestration in the tailings impoundment
- The system must be integrated with the existing tailing disposal system so that:

    1. KUCC will meet all UPDES discharge criteria at Outfall 012 from the North Impoundment to Great Salt Lake (or other permitted outfalls).
    2. The acid-base balance of the tailing is not adversely affected by the addition of acidic flows from WDPS.

The Final Design Report proposed a complicated formula for the third criterion, involving comparisons of the Net Neutralization Potential values for the Copperton Concentrator General Mill Tailings (GMT) and samples of tailings collected at North Splitter Box, immediately before final routing to the Magna Impoundment.

Purpose and Objectives

The purpose of this memorandum is to evaluate management during Calendar-Years 2003 and 2004 of acid-plume water through the Copperton tailing line with respect to the performance criteria.

Specific objectives include:

- Summarizing the monitoring data;
- Evaluating the pH and Net Neutralization Potential criteria during 2003 and 2004;
- Describing the technical basis for proposing a simpler criterion for evaluating the acid-base balance, based on using a combination of pH and Neutralization Potential (not Net Neutralization Potential).

KUCC reports and manages the UPDES program separately. The performance objective related to UPDES discharge is outside the scope of this review.

RESULTS FOR 2003 - 2004

Attachment 1 summarizes the flow and the pH conditions at North Splitter Box. The graphs show 7-day-average values for tons of tailing produced per day, combined acid-water flows through the WDPS, and the output pH at North Splitter Box.

Attachment 2 summarizes the acid-base data (as net-neutralization potential) on a monthly basis, using the statistical process originally proposed in 2002. During 2003 and 2004, the Copperton Concentrator processed approximately 6,000 tons per hour of ore (Attachment 1). As shown in Appendix C to the Remedial Design Report, the tailing line behaves as a plug-flow reactor, meaning that flow of solids at NSB also is 6,000 tons per hour. This is equivalent to 144,000 tons per day, or 100 tons per minute. Under these flow conditions, grab samples have limitations. Following reviews of test data in 2003, KUCC installed a composite sampler at North Splitter Box to better represent the tailing properties there in future testing.

KUCC separately reports its UPDES discharge conditions, which are outside the scope of this discussion.

DISCUSSION

1. Flow

The data in Attachment 1 show that the tailing process circuit can routinely handle flows that meet or exceed the stipulated criteria. The Remedial Design required the ability to handle acidic flows from WDPS up to 3,500 gpm. During 2003, the system managed flows up to 6,100 gpm. There are operational interruptions, including scheduled events such as Concentrator maintenance and unscheduled interruptions due to power failures. In all cases, the flow cutoff is rapid; the system re-builds flow in an orderly manner, and the operational conditions are re-established rapidly.

2. pH at North Splitter Box

The data in Attachment 1 also show that the tailing process circuit maintained the pH at North Splitter Box above pH 6.7 su at all times in 2003 and 2004.

3. Acid-Base Balance

The tailing slurry discharged from the Copperton Concentrator provides a reservoir of neutralization potential in both the aqueous alkalinity of the slurry-water and in the intrinsic capacity of the tailing solids to neutralize acidity, as shown by the titratable Neutralization Potential. It is clear that acidic water added at Drop Box NP-5 (Figure 1) from the WDPS system will consume some of the total neutralization potential of the combined slurry flowing into and then through NP-5, ultimately reporting through North Splitter Box to the tailing impoundment. The premise of the Remedial Design with respect to this situation is that the total acidity added from WDPS would exert a small demand on the total neutralization such that the basic acid-base balance of the tailing at Magna would be indifferent from that had there been no acid-water addition. Calculations presented in the Final Design Report showed that the demand on NP due to acid-water addition was about 2 t $CaCO_3$eq/kt of solids, and tests work conducted during the Remedial Design phase showed that the median NP of tailing was 19 t $CaCO_3$ eq/kt. As discussed below an din the Design Report, the apparent demand lies within the analytical uncertainty of NP measurements, so there was no basis for considering that the acid-water addition would significantly and adversely affect the overall acid-base balance of the tailing at Magna. [This is not to say that the acid-base condition of the tailing is a matter of no significance; rather, the statement is that disposal of the South Facilities acidic waters would not significantly change the acid-base condition that would exist in any event because of the fundamental AP and NP of the tailing itself.]

In accordance with standard KUCC methodology, the Final Design Report proposed that the acid-base balance at GMT and NSB be evaluated in terms of a calculated parameter called Net Neutralization Potential.

3.1 Net Neutralization Potential

NNP is defined as the difference between Neutralization Potential (NP) and Acid Generating Potential (AP):

$$NNP = NP - AP.$$

The AP value in tons $CaCO_3$ eq/kt is calculated stoichiometrically from the sulfide-sulfur value (AP = 31.25 * [S wt%]). The Sobek NP value is calculated from an acid-base titration of a sample of the tailing to determine the intrinsic capacity of the tailing sample to neutralize a strong acid.

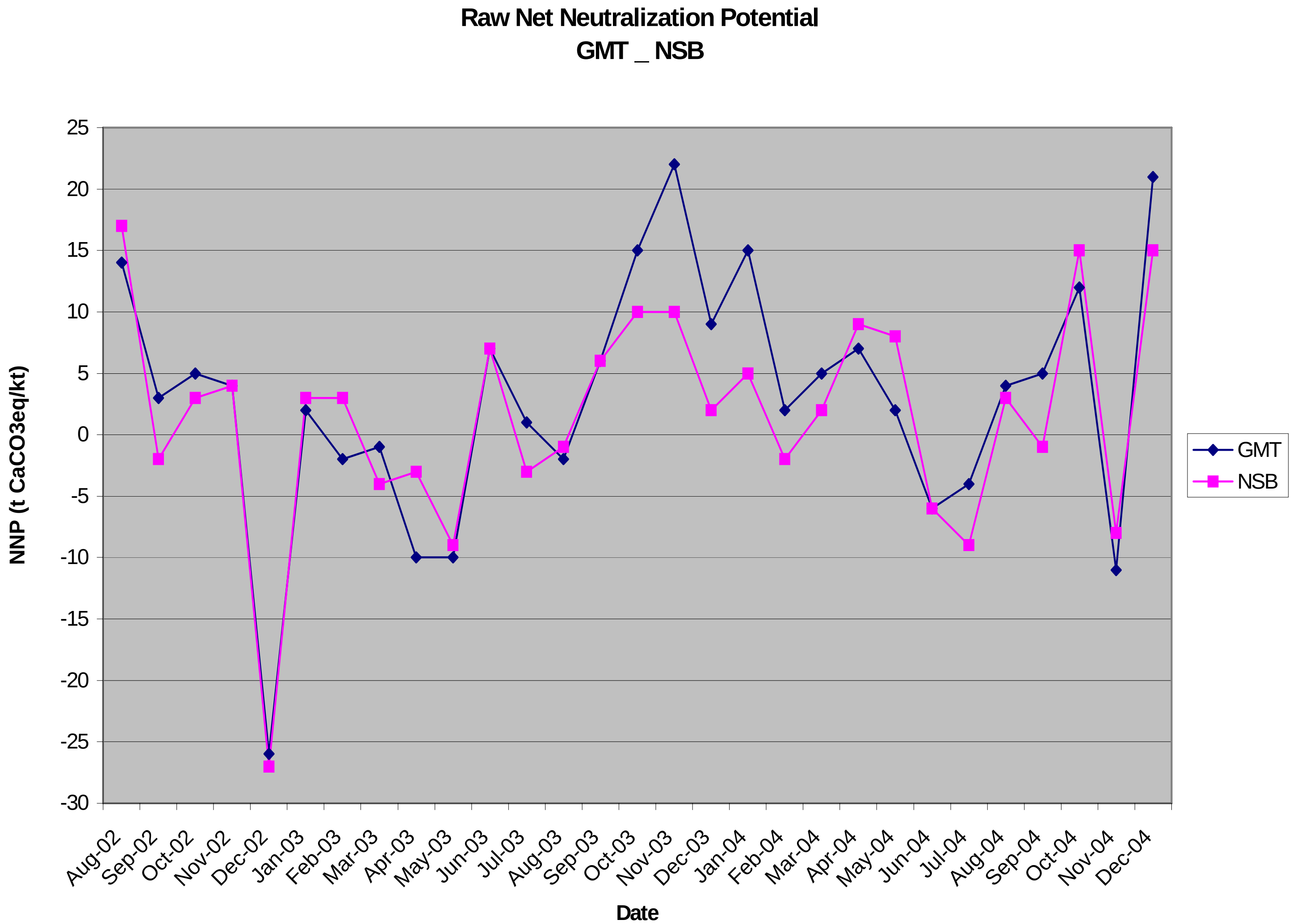
To quantitatively evaluate the composite NNP value, one must understand the analytical precision of the component measurements for AP and NP. The analytical precision (1s) of [S] is approximately 0.1 wt%, so the precision (1s) of AGP is 3.1 tons $CaCO_3$ eq/kt. The estimated precision of the NP value (determined from an acid-base titration) is approximately 2 t $CaCO_3$ eq/kt (0.2 wt%). The 1s joint uncertainty in NNP – for both GMT and NSB – samples is the square-root of the sum of the squares of the two uncertainties, or approximately 3.7 tons $CaCO_3$ eq/kt, and the 2s values (approximately the 95% confidence-interval value) would be 7.4 tons CaCO3eq/kt.

Figure 1 presents the month-by-month values for Net Neutralization Potential (NNP) as the tailing leaves the Copperton Concentrator (the standard sample called General Mill Tailings (GMT)) and at North Splitter Box (NSB).

Figure 2 shows two important features for 2003-2004:

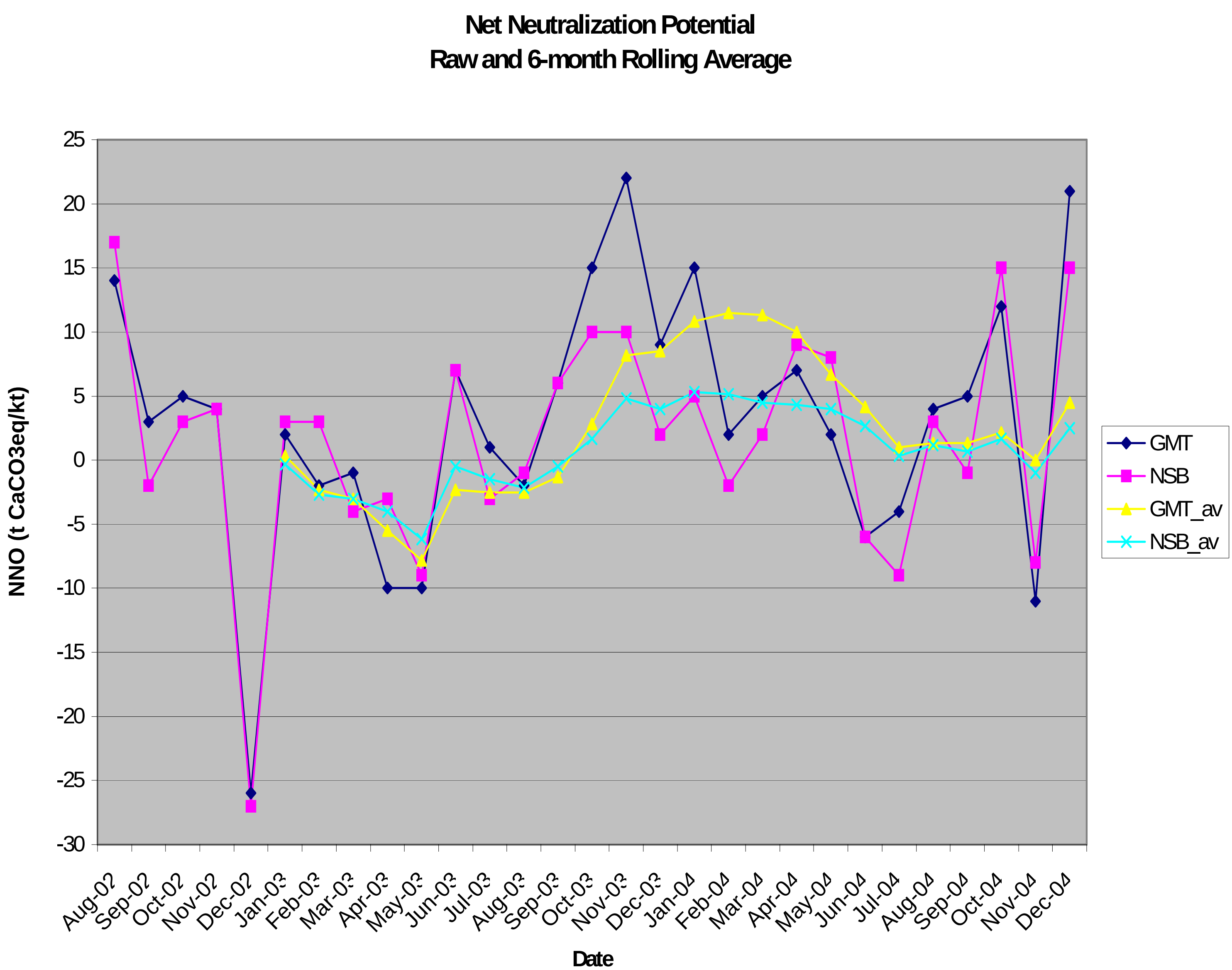
- There are some months in which the NNP value at NSB is greater than that at GMT and other months in which GMT is greater. There is no general trend of these results, neither with respect to time (the reversal of values is seen in both 2003 and 2004), nor with the value of NNP (the reversal can be seen in months wi9th both positive and negative NNP).
- There can be very large changes in NNP from one sampling period to another. The noisy NNP signal that makes visual evaluation of the data difficult.

Figure 2 Net Neutralization Potential Values at General Mill Tailings (GMT) and North Splitter Box (NSB), August 2002 – December 2004



A standard approach to addressing noisy data is to apply a smoothing routine that shows the long-term trends without emphasizing the outliers. In the Final Design Report, KUCC suggested using a six-month rolling average for NNP. The results of the six-month rolling average are shown in Figure 3, together with the raw NNP data.

Figure 3 Raw and Smoothed NNP data for GMT and NSB Tailings, 2003-2004



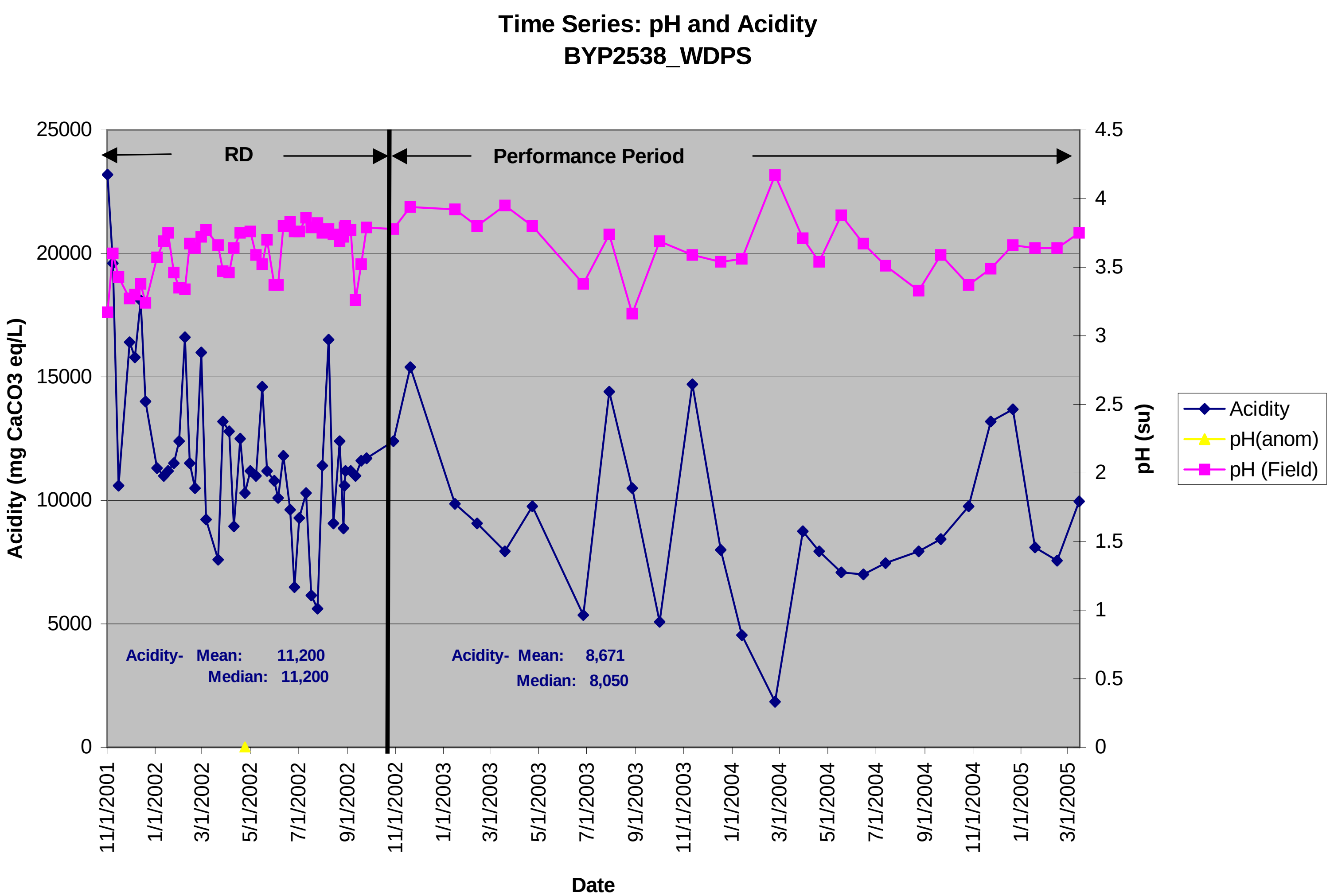
The smoothed data in Figure 3 allow one to see the general relationships more clearly (and also emphasize the noisiness of the raw data). However, the basic conclusions are the same: there are some periods in which NNP at NSB is greater than that at GMT, others in which GMT is greater. The meaning, if any, of the differences is not clear, but in this manner, also, one can see that there is no consistent depletion of NNP as a consequence of acid-water addition.

To understand the system behavior we look at the components.

3.2 Analysis of the Components: Acidity – Alkalinity – Neutralization Potential

Consider again the flow diagram, Figure 1. The only source of acidity to the system is the acid water flowing from WDPS to the tailing line at Drop Box NP-5. Figure 4 shows the time-series data for pH and acidity for WDPS flows.

Figure 4 pH and Acidity at Monitoring Station BYP2538: Wastewater Disposal Pump Station



With respect to the acid-base balance, the crucial result is that the aqueous acidity of the WDPS flows has declined by approximately 30%. This means that, per unit flow, the acid inputs have decline and, all else being eq1ual, there should be less impact in 2003-2004 than was observed in 2001-2002.

The overwhelmingly predominant source of Neutralization Potential with which the acid water can react is the trailing flow. The aqueous chemistry of this flow is monitored at the outflow of tailing-thickener underflow as it enters NP-5 immediately ahead of the acid waters from WDPS (see Figure 1). The pH and alkalinity of this flow is shown in Figure 5.

Figure 5 pH and Alkalinity at Monitoring Station BCP2750: Thickener Underflow

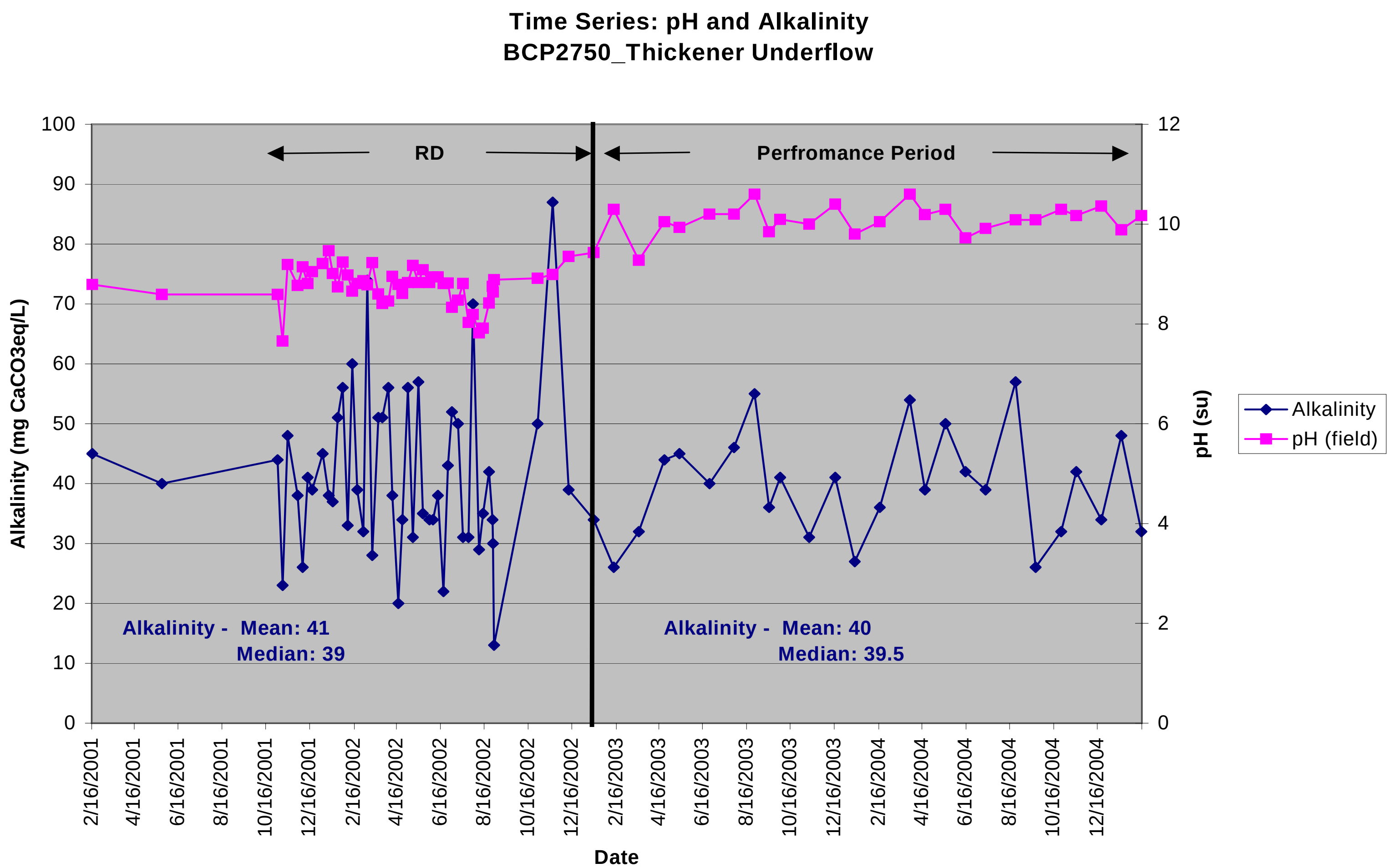
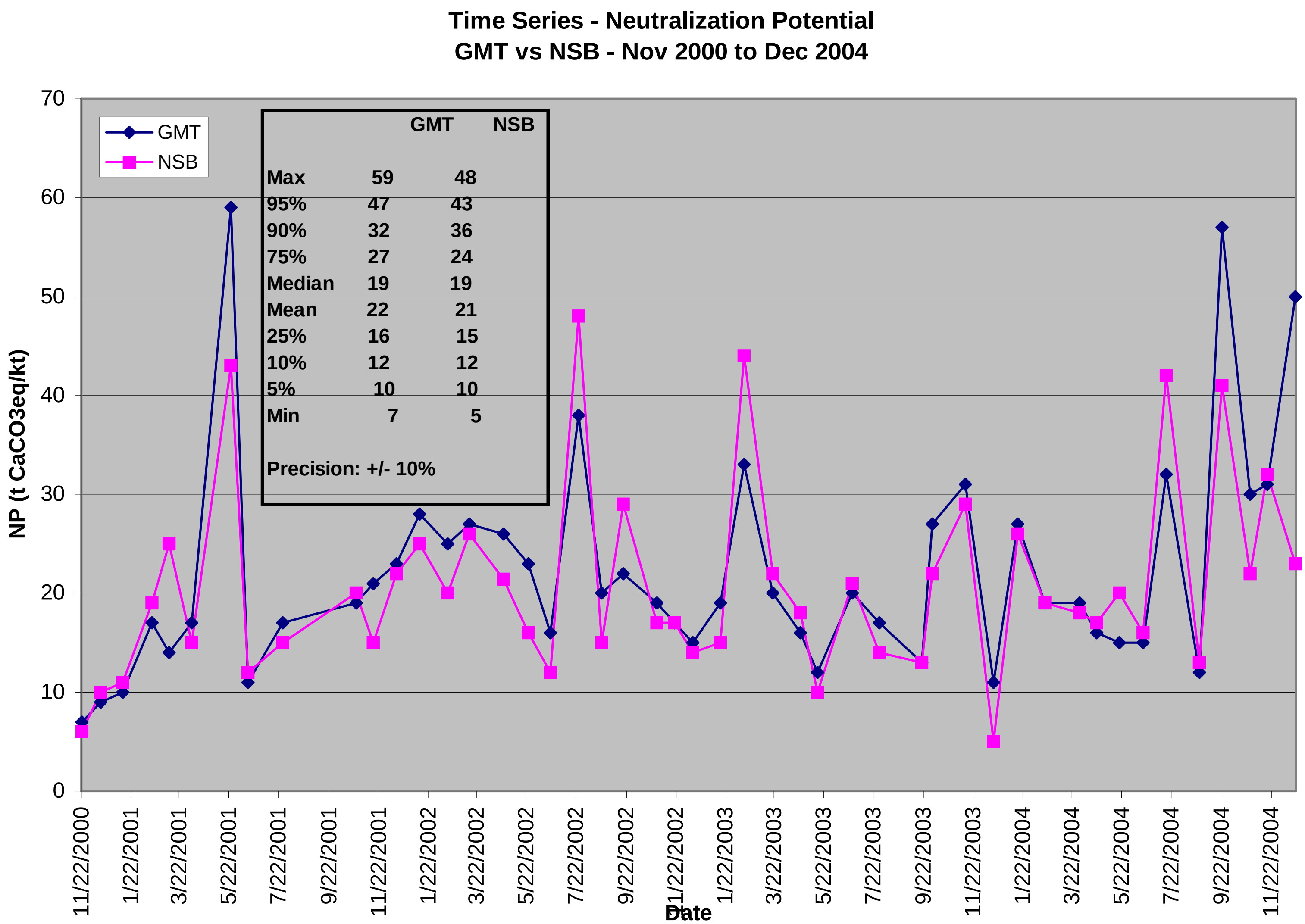


Figure 5 shows that there has been no discernible change in the aqueous alkalinity from the processed tailing. However, a comparison of tailing production shows that the operational ore processing has increased by 50% since the period of the Remedial Design, and slurry water has increased from approximately 13,000 gpm in 2001 to 28,000 gpm in 2004. Thus the total aqueous alkalinity has increased by more than 100%. Like the decline in aqueous acidity seen in the WDPS flows, the increase in total aqueous alkalinity is a favorable condition and indicates that there is less likelihood of impact during the performance period than during the design period.

The final component of the acid-base balance for the tailings system is the Neutralization Potential (NP) of the tailings solids themselves. Figure 6 shows the time series for NP.

Figure 6 Neutralization Potential of Tailing GMT and NSB, November 2000 to December 2004

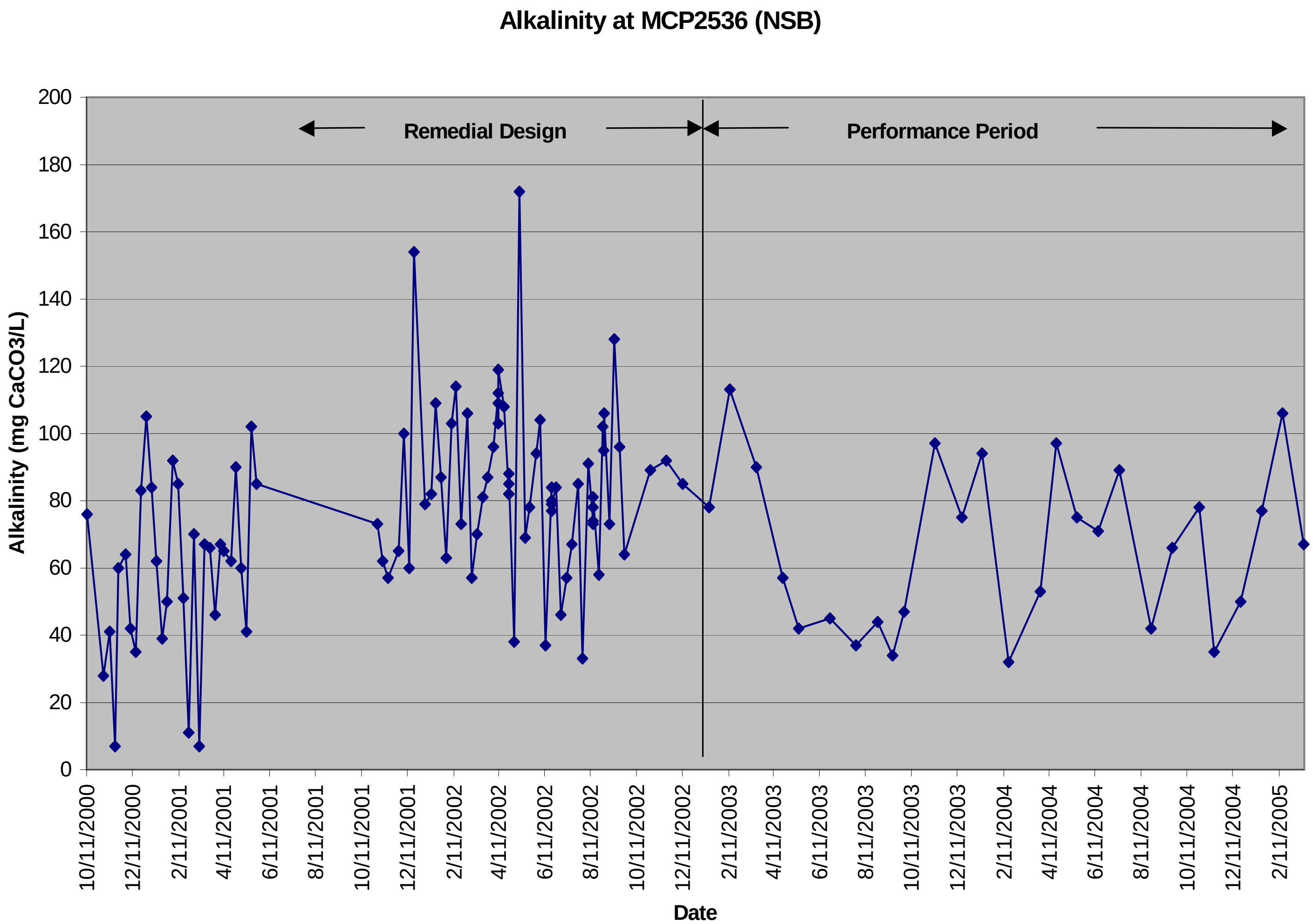


As with the NNP values, the time series NP data show that the absolute values of NP measured at GMT and NSB are randomly distributed with respect to one another: Some months GMT is greater, whereas in other months NSB is greater. When the percentiles of the measured values are compared (table in Figure 6), it is clear that there is no meaningful difference between the empirical distributions. As stated above, the output of tailing has increased by 50% since the Remedial Design was completed, meaning that there is 50% more total solid-phase Neutralization Potential available than previously.

Finally, if the data presented above show that the aqueous and solid alkalinity (capacity to neutralize strong acid) has increased, and the unit acidity of the WDPS water has decreased, then it should be the case that there is excess aqueous alkalinity present at

NSB, capable of buffering the solution pH to circum-neutral pH. This is examined in Figure 7.

Figure 7 Aqueous Alkalinity at Monitoring Station MCP2536: North Splitter Box, October 2000 to December 2004



The alkalinity data in Figure 7 show that throughout the performance period, aqueous alkalinity at NSB has remained between 30 mg $CaCO_3$eq/L and 110 mg $CaCO_3$eq/L, which is well within the range both before remedial action and during the Remedial Design activities. Thus, we conclude that the alkalinity and neutralization potential at NSB are adequate to preserve sufficient excess aqueous alkalinity that the pH at NSB will remain buffered in the circum-neutral range.

3.3 Net Neutralization Potential Revisited

The Final Design Report proposed comparing the NNP of tailing at North Splitter Box with that of tailing at GMT. Table XX presents that analysis, with a comparison of the results that includes the total uncertainty in the NNP values.

	NNP (t CaCO3/1000 t)		Rolling Average						
	GMT	NSB	**GMT**	**+14%**	**-14%**	**NSB**	**+14%**	**-14%**	
Aug-02	14	17							
Sep-02	3	-2							
Oct-02	5	3							
Nov-02	4	4							
Dec-02	-26	-27	**GMT**	**GMT+**	**GMT-**	**NSB**	**NSB+**	**NSB-**	**Condition**
Jan-03	2	3	0	0	0	0	0	0	P1
Feb-03	-2	3	-2	-2	-2	-3	-2	-3	P3
Mar-03	-1	-4	-3	-3	-3	-3	-3	-3	P1
Apr-03	-10	-3	-6	-5	-5	-4	-3	-4	P1
May-03	-10	-9	-8	-7	-8	-6	-5	-6	P1
Jun-03	7	7	-2	-2	-2	-1	0	0	P1
Jul-03	1	-3	-3	-2	-2	-2	-1	-1	P1
Aug-03	-2	-1	-3	-2	-2	-2	-2	-2	P1
Sep-03	6	6	-1	-1	-1	-1	0	0	P1
Oct-03	15	10	3	3	3	2	2	2	P3
Nov-03	22	10	8	9	8	5	6	5	P2
Dec-03	9	2	9	10	8	4	5	4	P2
Jan-04	15	5	11	12	11	5	6	5	P2
Feb-04	2	-2	12	13	11	5	6	5	P2
Mar-04	5	2	11	13	11	5	5	4	P2
Apr-04	7	9	10	11	10	4	5	4	P2
May-04	2	8	7	8	7	4	5	4	P2
Jun-04	-6	-6	4	5	4	3	3	3	P3
Jul-04	-4	-9	1	1	1	0	0	0	P3
Aug-04	4	3	1	2	1	1	1	1	P1
Sep-04	5	-1	1	2	1	1	1	1	P1
Oct-04	12	15	2	2	2	2	2	2	P1
Nov-04	-11	-8	0	0	0	-1	-1	-1	P3
Dec-04	21	15	5	5	4	3	3	2	P3

A.: Present at same significant figure as AP, NP, NNP
B: Assuming both NP and AP are +/- 10%, NNP is +/- 14% [Analytical uncertainty only]
Conditions:

Pass 1(P1): NSB > or = GMT
Pass 2 (P2): NSB range includes >or = NNP of 5
Pass 3 (P3): Apparent difference < or = 3.7 [To address sampling uncertainty also]

In 11 of the 24 months, the apparent absolute value at NSB is greater than that at GMT. In another 7 months, the NNP is greater than or equal to 5 t CasCO3eq/kt at both stations. In the remaining 6 months, the NSB value is apparently smaller, but falls within the range of +/- 3.7 tons CaCO3eq/kt uncertainty arising form sampling and analysis together. This in all 24 months of the performance period, once can analyze the NNP data to show that KUCC has met its acid-base balance criterion also.

3.4 <u>Proposed Modification</u>

Because of the noisiness of the NNP data, arising significantly from having to combine uncertainties in two factors (AP and NP), KUCC recommends that the RDRA criterion be revised to a simpler and more directly relevant test.

The addition of acid water cannot change the true AP in the tailing, because that is based on pyritic sulfur in solid form. The only effect can be a reduction of NP. Therefore, we recommend that the performance criterion related to tailing-system be modified to state:

<u>C. Integration with Tailing Disposal System</u>

1. KUCC will meet all UPDES discharge criteria at Outfall 012 from the North Impoundment to Great Salt Lake (or other permitted outfalls).
2. The monthly Neutralization Potential (NP) value of samples collected from the tailings North Splitter Box must be either greater than or equal to the NP of Copperton Mill Tailings for the month or at least 5 t $CaCO_3$eq/kt. The monthly NNP value will be determined based on a rolling six-month average from monthly composite samples collected at the GMT and tailings impoundment discharge locations. In making comparisons, the uncertainty in both GMT and NSB will be taken to be 10% of the average value, and a significant difference must lie outside the joint uncertainty.
3. The aqueous ph at North Splitter Box must be greater than or equal to 6.7 and the aqueous alkalinity must be greater than or equal to 10 mg $CaCO_3$eq/L. These parameters, too, will be evaluated as rolling six-month averages.

CONCLUSIONS

Based on the 2003 and 2004 data, KUCC concludes that all three components of the remedial-design requirements for use of the tailings line were met:

- The Copperton tailing line can routinely handle flows greater than or equal to 3,500 gpm of acidic water from Wastewater Disposal Pump Station (WDPS)
- The pH at North Splitter Box was greater than pH 6.7 throughout 2003 and 2004.
- The Net Neutralization Potential (NNP) values show that the addition of acidic water from WDPS did not compromise the intrinsic acid-base balance of the tailing compared ot discharge values from the processed ore itself.

KUCC recommends a slightly revised tailing criterion, using Neutralization Potential, pH and alkalinity, instead of the more complex and more uncertain NNP.

REFERENCES

Geochimica, Inc., 2002. Geochemical Revaluation: Treating Acid Waters in the Copperton Tailing Line (Version A.3, December 2002). Appendix C to KUCC (2002).

Kennecott Utah Copper Corporation (KUCC), 2002. *Final Design for Remedial Action at South Facilities Groundwater*, December 2002.