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The Natural Defenses of Copper Flat
Sierra County, New Mexico

By

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TABLE OF CONTENTS

μS/cm	microSiemens per centimeter
ABA	acid-base accounting
ABC	Adrian Brawn Consultants
Alta Gold	Alta Gold Corporation
AP	acid generating potential
Ar^{40}/AR^{39}	Argon-Argon age dating technique
BLM	U.S. Bureau of Land Management
$CaCO_3$	calcuium carbonate
CFQM	Copper Flat quartz monzonite
cm/s	centimeters per second
EA	Environmental Assessment
EIS	Environmental Impact Statement
ft	foot
ft/yr	feet per year
gpm	gallons per minute
Hydro Resources	Hydro Resources, Inc.
ICP	inductively coupled plasma
Inspiration	Inspiration Consolidated Copper
mg/L	milligram per liter
NAG	net acid generating
NMEIB	New Mexico Environmental Improvement Board
NMMMD	New Mexico Mining and Minerals Division
NP	acid neutralizing potential

QMC	Quintana Minerals Corporation
SHB	Sergent, Hauskins and Beckwith, Inc.
SRK	Steffen, Robertson, and Kirsten, Inc.
USBR	U.S. Bureau of Reclamation
WQCC	New Mexico Water Quality Control Commission
XRD	X-ray diffraction

The Natural Defenses

Of Copper Flat

Sierra County, New Mexico

Abstract

Copper Flat is located in southwestern New Mexico, approximately 23 miles southwest of Truth or Consequences and 5 miles northeast of Hillsboro. It is a porphyry copper deposit with associated gold, silver, molybdenum, and sulfide minerals. The stock contains a 75 million-year-old quartz monzonite breccia pipe forming the center of an eroded andesite strato-volcano. The breccia pipe is approximately 1,300 feet long, 600 feet wide, and 1,000 feet deep. Records indicated that the Sternberg Mine located at Copper Flat was mined as early as 1911, but it wasn't until 1982 that the mining occurred at a significant scale. Quintana Minerals Corporation mined the property for three months in 1982 producing 7.4 million pounds of copper, 2,306 ounces of gold, and 55,966 ounces of silver. Mining activities ceased because of low copper prices. The mining equipment was dismantled and sold. The Canadian Imperial Bank reclaimed the site. Subsequent efforts to permit mining operations by Gold Express of Denver, Colorado and Alta Gold of Henderson, Nevada were never completed. The property is now owned by Hydro Resources, Inc. of Albuquerque, New Mexico as a combination of fee simple properties and patented mining claims.

Since no mining activities have occurred since 1982, the site is an excellent field laboratory for studying the behavior of metals and sulfide minerals exposed with waste rock and tailings in the southwest. In addition, there is a 12.8-acre pit lake on site that is located near the center of the breccia pipe. This study focuses on the potential impact of the pit lake, the waste rock piles, and the tailing impoundment of the local surface and groundwater quality.

The pit lake has been sampled at least 65 times between 1980 and 1997. The pH of the lake is typically neutral to alkaline, with exception occurring in 1992 and 1993, where the pH dropped as low as 4.4. At least one intermittent seep from the pit wall has been sampled and the results reported a pH of 2.64, a total dissolved solid concentration (TDS) of 12,770 milligrams per liter (mg/L), and a sulfate concentration of 790 mg/L.

However, groundwater inflow into the pit lake is neutral to alkaline with pH ranging from 7.2 to 8, TDS of 920 mg/L, and sulfate less than 410 mg/L. The andesitic host rocks surrounding the ore body have a high acid buffering capacity as shown by the partial dissolution of calcite and the precipitation of gypsum and goethite. The alkalinity of the groundwater and host rocks quickly neutralizes and dilutes acidic discharges into the pit lake.

Samples collected from the waste rock piles and drill core indicated initially that the rocks produce more acid than they can neutralize. However, kinetic testing showed that leachate derived from the waste rock is predominantly alkaline and has low sulfate and metal concentrations. These results indicated that sulfide oxidation is slow and acid buffering through mineral water reactions and groundwater recharge is sufficient to maintain a non-acidic environment.

Samples collected from the tailings dam indicated a moderate potential for acid generation and high metals concentrations. However, paste pH values were all greater than 6.1 and leachate samples indicated the metals are not easily leached. A down-gradient monitoring well showed elevated concentrations of TDS and sulfate soon after tailings were slurried into the impoundment indicating a some leakage into the environment despite significant geotechnical information, which suggested leakage was not likely.

Significant data collection and analyses collected from Copper Flat over the last 35 years indicated that the production of acid mine drainage and metals mobilization is possible. However, because of the high acid neutralization capacity of the natural groundwater and host rocks, coarse, crystalline pyrite, a low volume of disseminated sulfides, and low humidity and precipitation, sulfide oxidation is slow and metal release from all lithologies is low.

1.0 Introduction

1.1 Purpose of the Copper Flat Investigation

The purpose of this investigation is to compile and assess the existing ground- and surface-water quality in the vicinity of an existing mine pit lake, waste rock piles, and mine tailings impoundment at Copper Flat, Hillsboro district, New Mexico, 25 miles southwest of Truth of Consequences and 5 miles northeast of Hillsboro (Fig. 1). Data from existing historical reports and documents have been reviewed and integrated. This report is intended to be a comprehensive source with respect to assessing the potential for environmental impacts of the mine pit lake, waste rock piles, and tailings impoundment based on existing conditions. Water quality data associated with this research have been incorporated into an electronic format that will become part of the New Mexico Mines Database.

1.2 Site Background

1.2.1 Geological History of the Hillsboro Mining District

1.2.1.1 Geology

The predominant geologic feature of the Hillsboro district is the Cretaceous Copper Flat strato-volcano (Fig. 2). This structure is eroded to a topographic low and is approximately 4 miles in diameter (Hedlund, 1985). The Hillsboro district comprises part of the Animas Hills, a low range formed by a horst at the western edge of the Rio Grande rift. The Animas hills are separated from the Black Range to the west by a graben, in which sits the town of Hillsboro. Faults that bound the Animas Hills horst are related to the to the tectonic activity of the Miocene-age Rio Grande rift (Dunn, 1982).

The 4-mile diameter circular block of andesite represents the central part of the Animas Hills, of which the eastern edge of the andesite block forms the eastern edge of the horst. At this location the andesite is in fault contact with Santa Fe Group sediments deposited in the ancestral Rio Grande rift. A drill hole in the southwest corner of T15S, R6W indicates that Santa Fe Group sediments are at least 2,000 ft thick (Dunn, 1982). The remaining periphery of the volcanic terrain is marked by nearly vertical faults along which the andesite has been down-dropped against Paleozoic sedimentary rocks. The vertical displacement along these faults is not known, but drill holes collared in andesite were still in andesite at depths greater than 3,000 ft from the surface. The thickness of the andesite and the concentric fault pattern suggest a deeply eroded Cretaceous-age volcanic complex (Dunn, 1982).

The core of the volcanic complex is intruded by a quartz monzonite stock, the Copper Flat Quartz Monzonite (CFQM). The CFQM stock has a surface expression of approximately 0.4 square miles. The CFQM has been dated by the argon-argon (^{40}Ar/^{39}Ar) techniques to be 74.93 +/- 0.66 million years old (McLemore et al., 2000). The surrounding andesites also have been dated using argon-argon techniques to be 75.4 +/- 3.5 million years old (McLemore et al., 2000). At least 34 dikes radiate out from the quartz monzonite intrusion. The quartz latite and low silica rhyolite dikes are generally oriented N 45-55 E and N 40-50 W and represent a late stage differentiation of the CFQM stock. The dikes are as much as 38 meters (m) (125 ft) wide and 1.6 km (5,200 ft) long (Hedlund 1985). The dikes are gray to tan, typically holocrystalline and porphyrytic. Two predominant types of dikes occur: a pohyrytic latite with large orthoclase phenocrysts and an aphanitic latite. The dikes contain quartz, potassium feldspar, plagioclase, biotite, magnetite, locally hornblende, pyrite, apatite, and rutile (McLemore et al., 2000). Polymetallic veins are associated with the latite and quartz latite dikes that radiate outwards from the CFQM. They are subparallel to the dikes.

The Copper Flat porphyry copper deposit is one of the older Laramide porhyry copper deposits in the Arizona-Sonora-New Mexico porphyry copper belt (Fig. 3) and is characterized by low-grade hypogene mineralization that is concentrated within a breccia pipe in the CFQM stock. The CFQM is a medium to coarse-grained, holocrystalline, porphyritic intrusion that consists of potassium feldspar, plagioclase, hornblende, biotite, and trace amounts of magnetite, apatite, zircon, and rutile with local concentrations of pyrite, chalcopyrite, and molybdenite (McLemore et al., 2000). Current proven and probable reserves are 50,210,000 tons of ore containing 0.45 percent copper (Hydro Resources, 2002).

1.2.1.2 Hydrothermal Alteration of Igneous Rocks

Andesite in the study area is typically altered adjacent to the CFQM, the latite/quartz latite dikes, and the polymetallic veins (Table 1). Three types of alteration mineral assemblages are recognized in the Copper Flat porphyry copper deposit: biotite-potassic, potassic, and sericitic alteration (Fowler, 1982). Biotite-potassic alteration coincides with the highest copper grades in the deposit, and is characterized by hydrothermal biotite, potassium feldspar, quartz, and pyrite occurring in veinlets and replacement of monzonite (McLemore et al., 2000). Potassic alteration is peripheral to the deposit and is characterized by large potassium feldspar phenocrysts and as rimming of plagioclase by potassium feldspar, chlorite, quartz, and pyrite (Fowler, 1982). Sericitic alteration is the outermost alteration zone of the deposit and is characterized by replacement of biotite and feldspar by sericite. Veinlets of quartz-sericite (+/- pyrite) are common (McLemore et al., 2000) and represent significant sources of Fe and S from the Copper Flat deposit.

The latite/quartz latite dikes are extensively altered and are commonly associated with polymetallic quartz veins. Quartz, potassium feldspar, chlorite, pyrite and locally epidote characterize alteration in the dikes, which have replaced biotite, hornblende, feldspars, and the groundmass. Local sericitic alteration is common, which consists of quartz and sericite. Two stages of pyrite are common in the dikes. Early pyrite is altered and corroded and later pyrite is fresh and unaltered. Some younger pyrite may contain chalcopyrite. A third stage of pyrite has been observed that is locally present as inclusions within younger chalcopyrite and quartz veinlets (McLemore et al., 2000).

Propylitic alteration is adjacent to the mineralized veins. Epidote, chlorite, sericite, pyrite, and locally magnetite characterize this alteration. Typically, pyrite and magnetite are altered to iron oxides. Epidote and chlorite locally replace plagioclase. Epidote-pyrite and pyrite veinlets are common along fractures within the andesite. Disseminated pyrite occurs in the andesite for a distance of several meters away from the contact with the latite/quartz latite dikes and polymetallic veins. Pyrite locally replaces hornblende and olivine grains (McLemore et al., 2000).

Adjacent to, and overlapping, the propylitic alteration is the argillic alteration zone. Sericite, chlorite, quartz, and pyrite characterize this zone. Chlorite has replaced mafic minerals and the groundmass within the andesite. Disseminated pyrite is present locally in the andesite. Calcite occurs in thin veins and also replaces feldspar crystals. Sercite also replaces potassium feldspar crystals (McLemore et al., 2000).

A second, less common, propylitic alteration is present in the andesite adjacent to a few dikes. This mineral assemblage consists of a white to greenish-gray fault gouge compose of chlorite, kaolinite, sericite, calcite, quartz, and pyrite. As observed in underground workings, these zones are locally thicker where polymetallic veins pinch out or form several small veinlets of quartz and pyrite (McLemore et al., 2000).

The andesite exhibits a variable prophylitic to argillic alteration where adjacent to the CFQM. Typically, the andesite is fractured and locally contains veinlets of chalcopyrite and pyrite in association with chrysocolla, malachite, and azurite. Chlorite, sericite, and iron oxides are common in the andesite (McLemore et al., 2000).

1.2.2 History of Hillsboro Mining District

Ore was first discovered in the Hillsboro district in April 1877 along one of the veins that extend southwest of the Copper Flat stock (Jones, 1904; Dunn, 1982). Placer gold was discovered in November of that same year in Snake and Wick Gulches. The town of Hillsboro was established in 1877 and a tent city named Gold Dust was founded in 1881.   Hillsboro was the county seat for Sierra County from 1884 to 1938 (Mclemore et al., 2000). Most underground mining was prior to 1893, but some efforts extended into the early 1990s (Hedlund, 1985; McLemore, 2003). Reflecting an increase in the price of gold, placer mining activity increased from 1932 to 1943 and still continues today on a small scale (Hedlund, 1985; McLemore, 2003).

At Copper Flat, the Sternberg Mine yielded 200 tons of copper ore between 1911 and 1934 from a weakly-developed oxidized zone in the Copper Flat stock (Harley, 1934; Hedlund, 1985). Newmont Mining Company explored the Copper Flat area in 1952 drilling six inclined holes totalling 3,396 feet. Hilltop Mining then operated a copper leach plant for a short time before Bear Creek Mining, in 1958 and 1959, drilled 20 additional holes that totaled 9,346 feet. Bear Creek Mining was credited with recognizing the potential of brecciated mineralized zone of the CFQM and that a supergene-enriched zone probably did not exist. Inspiration Consolidated Copper (Inspiration) drilled an additional 28 holes totaling 23,046 feet of core between 1967 and 1973. In addition, Inspiration proceeded with deep drilling in the andesite, drilled some shallow water wells, and prepared a preliminary feasibility study and mine plan for an open pit mine. Quintana Minerals Corporation (QMC) leased the property from Inspiration in 1974 and from 1974 to 1976, drilled another 127 holes for 94,097 feet of core. QMC developed 2,241 feet of underground workings to provide bulk samples for pilot plant metallurgical studies. Data from the underground workings were used to cross check the ore reserve calculations, which were calculated from the vertical drill holes. QMC also established a water supply and mapped the immediate area of the porphyry deposit at a scale of 1:2,400, completing a feasibility study in 1976 (Dunn, 1982; Hedlund, 1985).

In 1982, the Copper Flat Partnership, Ltd. with QMC as the mine operator, developed and operated an open pit copper mine, including a 15,000-ton-per-day flotation mill and a tailings impoundment, at the Copper Flat site (Figs. 4, 5, 6). The mine operated for 3 months before it ceased operation due to unfavorable economic conditions. During three months of operation, the mine produced 7.4 million pounds of copper, 2,306 ounces of gold, and 55,966 ounces of silver (Hedlund, 1985). The plant was placed on a “care and maintenance” status until 1986 when the facilities were sold and dismantled. The mining leases were returned to Inspiration and the site was partially reclaimed. Figure 7 presents an aerial photograph that shows the contoured property in 1988.

Gold Express Corporation of Denver, Colorado acquired the property from Inspiration in 1991 and prepared a draft environmental assessment (EA). In 1993, the Bureau of Land Management (BLM) notified Gold Express Corporation that an environmental impact statement (EIS) would be required due to concerns related to water resources issues (BLM, 1999).

In 1994, the Alta Gold Company (Alta Gold) of Henderson, Nevada acquired the Copper Flat Project from Gold Express. Alta Gold and consultant, Steffen, Robertson, and Kirsten, Inc. (SRK) of Reno, Nevada, prepared a draft EIS in 1996. Significant comments on the EIS were received and two years of additional study was required to address water resource issues. The final draft of the EIS was prepared for the BLM by ENSR of Fort Collins Colorado and completed in March 1999. However, the EIS was never finalized because Alta Gold declared bankruptcy in 1999 (BLM, 1999). Hydro Resources, Inc. (Hydro Resources) of Albuquerque, New Mexico now owns the property (Hydro Resources, 2002).

1.2.3 Previous Investigations

Some information from these early exploration activities dating to the 1950s is stored at Hydro Resources in Albuquerque, New Mexico. Hedlund (1985), briefly described the geology, mining history, porphyry copper deposit, vein deposits, and placer deposits associated with Copper Flat. Subsequently, Dunn (1992) described the field work done in support of the feasibility study prepared by QMC in 1976 including the diamond drilling results, sample preparation and assaying, ore reserve estimates, metallurgical sampling results, water supply information, and locating non-mineralized areas suitable for the location of the processing facilities. Dunn (1992) determined that the minable reserve is 60 million tons with an average grade of 0.42 percent Cu and 0.012 percent Mo plus trace, but economically significant silver and gold. The cost of the exploration work was estimated at $2.75 million (Dunn, 1992). QMC hired a civil engineering firm, Sergent, Hauskins, and Beckwith (SHB) of Albuquerque, New Mexico to design and to supervise the construction of the tailings starter dam. SHB performed geotechnical investigations and construction oversight activities from 1976 to 1981. The BLM with the assistance of Fred A. Glover of Fort Collins, Colorado prepared an EA on QMC's proposed open pit copper mine (BLM, 1978; Glover, 1977). QMC hired W. K. Summers and Associates of Socorro, New Mexico to perform step pumping test of water well CWQ-7 (Summers, 1981). Also, QMC hired Water Development Corporation of Tucson, Arizona to conduct pumping tests of the production water wells (WDC, 1975, 1976, 1980).

Gold Express prepared an EA for re-opening the copper mine at Copper Flat. The EA is based on the previous EA prepared by the BLM and Glover. Gold Express also contracted John W. Shomaker, Inc. of Albuquerque, New Mexico to complete a hydrologic assessment of the Copper Flat Project (Newcomer et al., 1993).

Alta Gold did a significant amount of work in support of obtaining a mining permit from the New Mexico Mining and Minerals Division (NMMMD) and approval by the BLM. Table 2 presents some of the more significant reports prepared for Alta Gold by their consultants, SRK, Adrian Brown Consultants (ABC), and ENSR. In addition, the NMMMD contracted an independent environmental evaluation report, which was prepared by Daniel B. Stephens and Associates, dated November 17, 1997.

Munroe (1999), Munroe et al. (1999, 2000) examined and reported on the geochemistry, minerology, and physical characteristics of mine waste rock piles in southwestern New Mexico. McLemore et al. (1999, 2000) examined the geology and evolution of the mineral deposits of the Hillsboro district and the geochemistry of the Copper Flat porphyry and the associated deposits. Bakkom and Salvas (1997) proposed a phased reclamation plan for the area of the former processing plant.

2.0 Study Area Investigations

2.1 Surface Features

Surface features of the Copper Flat mine area include a mine pit lake, rock storage piles, the former mine and mill areas, and a tailings impoundment area. Land disturbed by the Copper Flat mine includes 358 acres of public land managed by the BLM and 331 acres of private lands (Fig. 8). The pit lake is approximately 12.8 acres, with a depth of approximately 40 ft. The elevation of the pit bottom in 1986 was 5,380 ft. The surface water elevation in 1999 was 5,420 ft (BLM, 1999). The existing overburden waste rock piles have been identified as the north, west, south, and east (SRK, July 1998) (Fig. 8). The tailings dam is at an approximate elevation of 5220 ft, is 6,600 ft long , and has a maximum crest height of 60 ft. The tailings dam is divided into the north cell and the south cell. Approximately 1.2 million tons of tailings were deposited into the north cell during the 1982 mining activities, and cover an area of 60 acres (km^2) (SRK, May 1995).

There is an unpaved but well maintained road from New Mexico Highway 152 to the mill area and a primitive road to the pit area. A 115-kilovolt-power line exists from Highway 152 to a termination 300 feet short of the former mill facility. A 20-inch welded steel water line still exists for transporting water from the four production wells in the Caballo Basin, east of the area, to the mine site. This pipeline is buried 2 ft deep and was in good condition based on 1990 inspection (BLM, 1999). The primary drainage through the site is Greyback Wash, which has been diverted around the perimeter of the site.

2.2 Mine Pit Lake Investigations

The water chemistry of the waters of the mine pit lake is influenced by:

- surface water discharge to the pit, occurring almost exclusively during times of heavy precipitation,
- geochemistry of the pit wall rock and surrounding rock storage piles, and
- groundwater recharge.

This section presents the investigations and techniques used to collect surface water from springs and seeps and groundwater in the vicinity of the mine pit lake. Pit wall and waste rock sampling will be discussed in Section 2.3. Sample results will be presented and discussed in Section 3.0.

2.2.1 Mine Pit Lake and Grayback Gulch Surface Water

The pit lake has been sampled 65 times between 1989 and 1998 (BLM, 1999; Bakkom and Salvas, 1997). Sampling of the pit lake commenced on April 3, 1989 by the New Mexico Environmental Improvement Board (NMEIB), which collected two pit lake surface water samples. Gold Express funded the analyses of 16 pit lake samples between

February 11, 1991 and March 17, 1994. Following Gold Express, Alta Gold and/or their subcontractors, SRK and ABC, collected and analyzed 37 more samples between May 24, 1994 and October 1, 1997. Bakkom and Salvas (1997) collected 16 samples on a quarterly basis between November 15, 1996 and October 8, 1997, four samples per quarter. The samples were collected at various locations and depths. Typically, the samples were analyzed for pH, major cations and anions, and metals. Sample analytical suites varied and sometimes the samples were filtered and sometimes not. Notes on the surface sample collections accompany the associated sample results, which are tabulated in Appendix A.

There are several unnamed springs and seeps in the area west of the pit in the Animas Hills and along Grayback Gulch. As observed by Newcomer et al. (1993), these springs and seeps were flowing in March, but dry by early May and are therefore ephemeral. The springs west of the pit drain into the bowl-shaped Copper Flat area (Newcomer et al., 1993). In 1993, attempts were made to measure the discharge of these springs and seeps. Where possible, the flows were measured with a 60 degree-notch weir. In cases where the weir could not be used due to lack of flow or proper weir positioning, flow was estimated (Newcomer et al., 1993). Seeps and springs sampled by Newcomer et al (1993) are named SWQ-1, SWQ-2, SWQ-3, BG, BG-2, and Warm Spring (Figs. 9, 10), and a seep denoted as Acid Drainage. This seep appears to have been an intermittent seep slowly discharging from a rock storage pile, however, the map showing the location of this seep is not presently available. Table 3 presents the dates and estimated flow rates in gallons per minute (gpm) for the springs and seeps sampled by Newcomer et al (1993).

Surface-water samples were first collected from Grayback Gulch in 1977, prior to the mining activities of QMC (BLM, 1978). These surface water-samples appear to have been collected quarterly during 1976 and 1977, and sample locations are identified as Station A, where the creek enters the QMC property; Station B, approximately 300 feet east of the present mine pit rim; and Station C, where the creek leaves the QMC property (BLM, 1978). An accurate map showing the locations of Stations A, B, and C is not available.

Alta Gold's consultant, SRK, collected one surface water sample from Grayback Gulch, from the outfall of a culvert in a land bridge built to support the tailings slurry line from the tailings thickener. When the sample was collected on May 26, 1994, there was no visible flow in the creek and the water was stagnant (SRK, May, 1995). In August of 1997, SRK observed and sampled seeps in the pit wall at locations PW-1 and PW-2 (Fig. 11). These seeps are in the vicinity of the Sternberg Lode area. Also in August of 1997, SRK observed and sampled a seep from the toe of the West rock storage pile. These were the first recorded seeps in four years of site study by SRK (SRK, Dec., 1997, and July, 1998).

SRK and others conducted additional surface water sampling along Las Animas Creek, north of the site, and Percha Creek, south of the site. However, those data will not be discussed in this report because Grayback Wash, the principal drainage from Copper Flat, discharges to Greenhorn Arroyo approximately 10 miles east of the mine site. Greenhorn Arroyo discharge directly into the Rio Grande at Caballo Reservoir, approximately 3.5 miles beyond the confluence of Grayback Gulch and Greenhorn Arroyo (BLM, 1999).

2.2.2 Mine Pit Lake and Groundwater

Prior to 1996, only one well was available for sampling groundwater in the vicinity of the pit lake. This monitoring well, GWQ-4, is located approximately one-half mile east of the existing pit. Two other wells, EIW and WIW, are located in the existing pit; however, these wells are thought to have been drilled for in-situ leaching and are not appropriate for the characterization of natural groundwater underlying the pit area. SRK drilled two new monitoring wells, each with dual completion, in 1996. Monitoring well GWQ96-22 was drilled up-gradient of the mine pit and well GWQ96-23 was drilled down-gradient (Fig. 10). GWQ96-22A is the shallow completion and GWQ96-22B is the deep completion of the GWQ96-22 well cluster. GWQ96-23A is the shallow completion and GWQ96-23B is the deep completion of the GWQ96-23 well cluster (SRK, Dec., 1998). GWQ96-22A was sampled 16 times between July 13, 1996 and October 15, 1998. GWQ-22B was sampled twice, once on July 13, 1996 and once on February 5, 1997. GWQ-96-23A was sampled 16 times between July 14, 1996 to October 15, 1998. GWQ-23B was sampled four times from July 14, 1996 to April 1, 1997 (BLM, 1999). Sample dates and sampling notes are tabulated in Appendix B.

2.3 Rock Storage Piles and Pit Wall Investigations

Two phases of rock storage pile characterization have been completed at Copper Flat by SRK. A preliminary assessment of the waste rock was conducted in 1994 and a more detailed study was performed in 1997. Both studies were conducted to assess the existing rock pile geochemical characteristics and the potential for future acid generation.

Work performed in 1994 was to support the EIS. Work done in 1997 was for the preparation of the rock pile management plan (SRK, July, 1998).

In 1994, 19 samples were collected from the existing pit wall rock, rock storage piles, and archived drill core and cuttings (Fig. 11). The samples were subjected to:

- paste pH and conductivity measurements to determine if acid rock drainage is possible,
- determination of total metals concentrations,
- acid-base accounting (ABA) to assess the balance between potentially acid generating and potentially acid neutralizing minerals,
- agitated leach extraction tests to measure the amount of immediately soluble metals,
- humidity column testing to simulate long-term oxidation of the waste rock and evaluate drainage water quality,
- geotechnical testing to estimate the physical and hydraulic properties of the compacted rock storage materials (SRK, July 1998).

All waste rock samples were subjected to static testing, including sulfur speciation and neutralization potential tests, to assess the relationship of acid generating and acid neutralizing potential in the rock piles (Table 4). Samples indicated by the static tests as having the potential to generate acid were selected for kinetic testing. Based on the static tests, five samples were selected for the 29-week long kinetic column testing. These nineteen locations were considered by SRK to be typical of the rocks to be encountered during the mining operations (SRK, May 1995).

Of these 19 samples, five were selected based on paste pH results for further study using the kinetic column testing technique. The five samples selected were

- SW-1 and LGSSP-2 from the sulfide-bearing waste rock piles,
- PW-2, quartz breccia from the pit wall, in the vicinity of the Sternberg Lode,
- IDC24-222-241 and CF10 –190-199, CFQM from archived drill core (SRK, May, 1995).

Table 5 summarizes additional testing that was done on the above samples.

In August of 1997, field work was conducted to produce detailed geologic and geochemical maps of the waste rock piles and the mine pit. One hundred and twelve samples were collected from 6-ft long trenches along benches on the rock storage piles. Figure 13 shows the locations and values of the pH samples collected in the vicinity of the pit lake. Fifty-one samples were analyzed for ABA and 59 samples were analyzed for net acid generation (NAG) (SRK, July, 1998). Table 6 presents the sample numbers of samples analyzed in the rock pile characterization studies.

McLemore et al. (1996) collected 12 samples of pond sediment and sulfide material from the pit walls about the mine pit lake. These samples were run for whole rock analysis using atomic adsorption and inductively coupled plasma spectrometry (Table 8, Fig. 13).

2.4 Tailings Dam Investigations

The tailings impoundment consists of an earthen embankment constructed across a minor valley, and is approximately 6,600 ft long with a maximum toe to crest height of 60 ft (Fig. 14). The impoundment is divided into the north and south cells, into which tailings were to be deposited. During the three months of operation, approximately 1.2 million tons of tailings were deposited into the north cell of the impoundment. The existing tailings cover a surface area of 60 acres in the north cell and have a mean surface elevation of 5220 ft (SRK, May 1995).

Extensive engineering design, construction, and short- and long-term groundwater monitoring work was done on the tailings dam. Numerous reports have been prepared that describe the work conducted at the Copper Flat tailings impoundment. Table 7 summarizes the reports in terms of authors, dates, and purposes.

In 1976, SHB performed 37 soil borings along the starter dam centerline (Fig. 15), with boring depths varying from 45 to 1,100 ft below grade. Borings along the centerline were spaced approximately 300 ft apart. Standard penetration testing and open-end drive sampling were performed at 5-ft intervals in most borings. Five test borings, ranging from 40 to 75 ft in depth, were drilled in the pond area (SHB, Oct.14, 1980).

SHB excavated 46 test pits and one test trench within the pond area to investigate the nature of the near surface materials and explore for borrow sources for the starter dam construction. In 1980, several of the pits were reopened and sampled for additional laboratory testing (SHB, Oct. 14, 1980).

SHB performed three types of permeability tests:

- 15 constant head tests were performed in uncased open auger holes using the U.S. Bureau of Reclamation E-19 Method,
- five double packer tests in accordance to U.S. Bureau of Reclamation Method E-18. Permeability test were performed in both volcanic rock and the overlying soils of the Santa Fe Group, and
- three special in-place permeability tests were made by placing 10-ft long screen in boreholes 5-inches in diameter and filling the annular space with clean filter sand. Annular space above the sand was grouted for at least 25 ft to isolate the screened interval. Long term permeability tests were performed on these piezometers in accordance with the Navy Design Manual. Two of the tests were performed in screened intervals below the water table (SHB, Oct. 14, 1980).

Geotechnical testing during 1976 included moisure-density relations, grain size analysis, Atterberg Limits, permeabilty, consolidation, and direct shear tests. In addition, grain-size analysis, Atterberg Limits, and moisture-density relations were performed on a sample of tailings produced by a project pilot plant operated by the Colorado School of Mines Research Institute. Tailings slimes were tested for moisture-density relations and direct shear to investigate the range of shear strength, which might be present near the dam slope (SHB, Oct. 14, 1980). Laboratory permeability tests were performed on samples of the synthetic drain materials and conventional granular filter materials (SHB, Oct. 14, 1980; SHB, Aug 29, 1980).

During this investigation, SHB collected several samples of water and soils for chemical analyses. These samples included four water samples from wells down-gradient of the dam alignment. Figure 16 presents the locations of groundwater samples 1, 2, 3, and 4; however, the map does not identify the specific wells from which the groundwater samples were collected. SHB also collected a sample of the thickener underflow water, which is assumed to be a groundwater sample collected from below the proposed location of the thickener. These groundwater samples were analyzed for general chemistry and metals. Three soil samples were collected from boring #5 at depths of 4.5, 14.5, and 29.5 feet below grade and two more samples were collected from Pit A-1, and Pit C-2 (Fig. 16). These soil samples were analyzed for cyanide. Soil samples also were collected from test pits A-1, A-2, F-1, and F-2. Aqueous suspensions of these soils were made and the liquid was measured for soluble anions, cations, and metals. Finally, water samples collected from borings 29, 30, 31, 33, and 34 were analyzed for general chemistry and metals. No discussions of how the monitoring wells were constructed are associated with these borings (SHB, Oct., 1980).

In October 1980, an additional geotechnical investigation with respect to the decant line alignments and decant towers was conducted. Twelve additional soil borings were performed (Fig. 14), with borings drilled from 10 to 31 ft below grade. Standard penetration and open-end drive sampling were performed at selected intervals in the borings.

In April 1981, SHB produced a report responding to concerns by the New Mexico State Engineers office regarding potential settlement of the earthen dam structure. SHB elaborated on the original settlement analysis prepared in 1976 with additional dispersivity tests on two soil samples and verification of stress and strain calculations (SHB, Apr. 13, 1981). On September 4, 1981, SHB submitted a Geohydrological Evaluation to support the groundwater discharge to QMC. This report contains the results of the geohydrological field studies and data analyses, recommendations concerning the mitigation and monitoring of water quality effects, and a discussion of contingency measures (SHB, June 29, 1981). Unfortunately, this report was not located for review and incorporation into this study. It was not in the NMEIB files during a file review nor could it be found with the other files stored with Hydro Resources, Inc.

Two reports by SHB address the compacted clay plating that was placed to limit seepage through basaltic flow channels located adjacent to the impoundment divider dike. The exposed basalts were considered to be of higher permeability than the surrounding Santa Fe Group sediments. The purpose of the 1.5-ft thick clay plating was to minimize seepage in the northeast area of the south cell and in the southeast corner of the north cell

(Fig. 14). In addition, compacted clay was placed over six exploratory borings (nos. 4, 9, 10, 11, 14, and 15) to eliminate the possibility of the borings becoming seepage conduits. Monitoring well NP-5 was installed to monitor seepage within the basalt (SHB, Oct 13, 1981, SHB, Oct. 28, 1981).

John W. Shomaker, Inc. studied the ambient water quality underlying the tailings impoundment in 1993, approximately 11 years after the impoundment was filled (Newcomer, et al, 1993). From 1991 to 1993, groundwater samples from monitoring wells NP-1, NP-2, NP-3, NP-4, NP-5, GWQ-1, GWQ6, GWQ-7, GWQ-8, GWQ-10, GWQ-11, and McGravy-Greyback were collected and analyzed for general minerals, metals, and phenols (Fig. 10). Newcomer et al. (1993) identified a potential paleo-channel associated with the basalts noted by SHB near the center of the impoundment. Results are presented in Appendix B.

In 1994, SRK performed a study of the tailings impoundment (SRK, Aug., 1994). The study involved a review and interpretation of the tailings dam design, construction, operation, and monitoring activities and additional field investigations. In May and June 1994, SRK advanced two soil borings through the tailings and underlying alluvial and volcanic deposits (Fig. 10). The borings were converted to monitoring wells denoted as SRKBH-1-94 and SRKBH-2-94. One well was screened in the Santa Fe Group alluvial sediments and one well was screened in the basalts. Falling head permeability testing was done in both of the wells.

In 1994, Adrian Brown Consultants (ABC) was contracted by SRK to perform an aquifer test on well GWQ94-17 in order to estimate the lower of two near surface aquifers that receive recharge from areas impounded by the tailings dam and to determine if the two water bearing zones are hydraulically connected (ABC, 1996). SRK also described the conceptual subsurface hydrology in tailings seepage modeling that the performed in support of the proposed re-use of the tailings impoundment by Alta Gold (SRK, Aug., 1998).

In support of the EIS, SRK sampled numerous wells in tailings impoundment area as well as other wells associated with Copper Flat from 1994 to 1998. Notes on these sampling activities and the sample results are tabulated in Appendix B.

On April 3, 2003, the author and Dr. Virginia McLemore visited the area north of the tailings dam to collect samples clay from an exposure of the clay in an arroyo north of the tailings dam (SHB, Oct. 1976). The principal material that SHB described as using in the clay plating of the basalts exposed in the center of the impoundment appears to have been reddish brown, highly plastic, sandy clay. The author and Dr. McLemore collected three materials, denoted as SR-1, SR-2, and SR-3, in close proximity to each other at latitude of 32.97 degrees and a longitude of 107.50 degrees (R6W, T15S, Section 30) (Fig 11). Sample SR-1 is a red sandy silt; SR-2 is a white cemented material, and SR-3 is a brown sandy silt. Stratigaphically, SR-2 overlies SR-1, which overlies SR-3. These clay samples were analyzed for bulk mineralogy and clay mineralogy. Visual-manual classifications of the clay and the results of the mineralogical analyses are discussed in Section 3.0

3.0 Nature and Extent of Potential Environmental Issues

3.1 Mine Pit Lake Investigative Results

3.1.1 Mine Pit Lake Surface Water

Pit lake water analyses per sample varied from pH only to anions, cations, and metals. Only copper concentrations exceeded the New Mexico Water Quality Control Commission (WQCC) water quality standards for surface water (WQCC, 2001). The WQCC surface water standard for livestock and wildlife is 0.5 milligrams per liter (mg/L). The pit lake was sampled and analyzed for copper 31 times (Fig. 17). Three times the concentration exceeded livestock and wildlife surface water standards; August 29, 1991, December 15, 1992, and February 12, 1993. The concentrations of copper that were reported from these three sampling events are 0.64 mg/L, 3.21 mg/L, and 2.6 mg/L, respectively.

Typically, water pH has been neutral to alkaline and indicates that the pit lake has been in a neutral to alkaline state for the last ten years (Fig. 18). However, from March 1992 to October 1992, the pH of the pit lake dropped below 5, with a low of pH = 4.4 in July 1992 A steady increase in the TDS concentrations of the pit lake was observed from April 1989 to October 1997 from approximately 3500 mg/L to 5850 mg/L (Fig. 19). A gradual increase in sulfate in the pit lake waters over the same time from 2340 mg/L to 4300 mg/L (Fig. 20) was also recorded. The TDS and sulfate results show some water quality degradation; however, the WQCC does not regulate either TDS or sulfate in New Mexico surface waters. The chemistry of the pit lake does not change significantly laterally or with depth (SRK, Dec. 1997). Analytical results of pit lake sampling are tabulated in Appendix A.

Sources of water to the pit lake are groundwater inflow, direct precipitation, and surface runoff. The major sources of dissolved solids are from reactions between oxidizing pit lake waters and reduced minerals in the pit walls, surface water runoff, and evaporation of the pit lake water. The remainder of the sulfate must be derived directly from sulfide oxidation or from the dissolution of secondary minerals such as jarosite and gypsum (SRK, Dec. 1997).

Because the pit lake is a topographic low, it is a hydraulic sink. Historic seeps have been described and sampled along the mine pit wall and rock storage piles. Newcomer et al. (1993) described a seep initiating from a sulfide-bearing rock pile having a discharge rate less than 1 gpm. This seep was sampled on May 7, 1993, but the location of this seep is uncertain because the associated sample location map is apparently not available. However, SRK identified a small area of sulfate precipitation near the base of the East rock storage pile, which they suggest is the site of the seep that Newcomer reported (BLM, 1996). This seep water sample reported a pH of 1.9, a TDS concentration of 17,020 mg/L and a sulfate concentration of 10,000 mg/L (Newcomer et al., 1993); however, no water or evidence of significant flow was observed during the 1995 SRK site visit (BLM, 1996), suggesting that this seep is an ephemeral source of low-pH, sulfate-bearing solution.

Another small seep was identified by SRK during a site visit in 1997. This seep flowed into a small, acidic, ferruginous pool located below the Sternberg Lode. A pit wall sample was collected near this area and denoted as PW-1 (Fig. 11) (SRK, Dec. 1997). The pH of water sampled from this seep was reported to be 2.64; the TDS concentration was 11,430 mg/L; and the sulfate concentration was 16,850 mg/L (BLM, 1999). This seep, observed in August of 1997, was the first recorded seep in the pit wall in four years of study by SRK and is believed to be the result of unusually high precipitation in June and July 1997 (SRK, Dec. 1997). A second pit wall seep was sampled by SRK in August 1997, denoted as PW-2 (Fig. 11). The results of this sample show lower concentrations of sulfate (3,100) and TDS (5020) and a greater pH (8.16) than the PW-1 sample.

SRK collected a seep sample from the West rock storage pile also in August of 1997. This sample has a pH of 3.03, and concentrations of TDS and sulfate at 25,440 mg/L and 22,100 mg/L, respectively (SRK, July, 1998). Full results of the seep sample analytical suites are presented in Appendix A

3.1.2 Greyback Gulch Surface Water

Greyback Gulch is an ephemeral stream that is dry most of the year except for runoff from storm events. The earliest surface water sampling was in 1976 and 1977 in support of the EA prepared for QMC. These surface water samples pre-date the 1982 mining activities by QMC, but post-date less extensive historical mining activities. Surface water results are available for January, March, and July 1977. They were collected from 3 stations described as Station A, where the creek enters the QMC property; Station B, approximately 300 feet east of the estimated mine rim; and Station 3, where the creek leaves the QMC property (BLM, 1978). The water quality of these samples is good compared to post-mining samples collected from similar locations (Table 9).

Three surface water locations have been sampled frequently in Grayback Gulch. These locations are SWQ-1, upstream of the mine pit; SWQ-2, downstream of the pit in the former plant area; and SWQ-3, north of the tailing dam (Fig. 10). The SWQ-1 location was sampled five times between 1982 and 1993, SWQ-2 35 times between 1982 and 1998, and SWQ-3 26 times between 1991 and 1998.

All pH measurements at locations SWQ-1, SWQ-2, and SWQ–3 were neutral to alkaline (Fig. 21). Figure 23 presents the TDS measured in these three locations. Samples collected from SWQ-1 were all less than 1000 mg/L. A logarithmic trend line placed through the five points of the SWQ-1 data set indicates a gradual increase in TDS over time. Samples collected from SWQ-2 ranged from 1000 mg/L in the early 1980s to as high as approximately 4500 mg/L in the late 1990s. A logarithmic trend line placed through the 35 points of the SWQ-2 data set indicates a more pronounced increase in TDS over time. The 26 points from the SWQ-3 data set ranged from 1866 mg/L to 4432 mg/L. Sample frequencies and dates for sulfate are the same as the TDS (Fig. 23). Sulfate results for SWQ-1 were all less than 325 mg/L and the trend line increases slightly over time. The scatter of the data sets from SQW-2 and SWQ-3 was similar to the TDS results. Sulfate concentrations in waters sampled from SWQ-2 ranged from 445 mg/L to 2566 mg/L. The sulfate trend line increases with time. Sulfate concentrations in waters sampled from SWQ-3 ranged from 952 mg/L to 2382 mg/L, and sulfate appears to increase with time. The pH, TDS, sulfate and other constituent results are tabulated in Appendix A.

Figure 24 presents Stiff diagrams developed by Newcomer et al. (1993) from a sampling event that occurred in March and April of 1993. The patterns indicate that the water quality is higher at the up stream location, SWQ-1, not the downstream location SWQ-2 and SWQ-3. The increases in TDS and sulfate appear to be the result of mining, mineral processing, construction, and road building activities during the mining activities of the early 1980s (Newcomer et al., 1993). However, water pH has been consistently neutral to alkaline and the WQCC does not have numeric standards for TDS and sulfate.

3.1.3 Groundwater

A set of nested monitoring wells exists up gradient of the mine pit lake, GWQ-96-22A (shallow) and GWQ-96-22B (deep), and a set of nested wells exist down-gradient, GWQ-96-23A (shallow) and GWQ-96-23B (deep). The down-gradient wells are referred to as Well construction details and surveyed location are not available for these wells; however, they are shown on Figure 10.

Figures 25, 26, and 27 show the results of groundwater sample results for pH, TDS, and sulfate respectively. The wells were sampled several times from 1996 to 1998. The pH is neutral in the GWQ-96-22A and slightly alkaline in GWQ-96-22B (Fig. 25). TDS is below the WQCC groundwater numeric standard of 1000 mg/L (WQCC, 1995) (Fig. 26). TDS concentrations found in the samples collected from both GWQ-96-22A and B are below 700 mg/L. TDS concentrations found in groundwater sampled from GWQ-96-23A and B also are less than 1000 mg/L. However, there may be a trend showing that TDS is increased gradually over time in the shallow down-gradient well. Sulfate concentrations are below the WQCC numeric standard of 600 mg/L in both the up gradient and down-gradient wells both shallow and deep (Fig. 27). In groundwater sampled from GWQ-96-22A, sulfate concentrations do not exceed 300 mg/L. In GWQ-96-22B, the single sulfate concentration was found to be 79 mg/L. In groundwater sampled from GWQ-96-23A, sulfate concentrations do not exceed 450 mg/L. In GWQ-96-23B, the sulfate concentrations were found to be less than 240 mg/L. However, the sulfate concentrations from the down-gradient shallow well indicate that the sulfate concentrations are gradually increasing over time.

3.2 Rock Storage Pile Investigative Results

Section 2.3 describes the pit wall and rock storage pile investigations conducted in 1994 and 1997 for potential sulfide oxidation. Tables 4, 5 and 6 present the analyses done on the samples and Figures 11, 12, and 13 present sample locations.

3.2.1 Metal Content and Mineralogy

The mineralogy of the samples was determined visually. The most common sulfide mineral was coarse crystalline pyrite. Concentrations of pyrite were estimated between less than 1 percent and 10 percent. In one location in the North waste rock pile, the pyrite concentration was estimated to be as high as 20 percent (SRK, July 1998). Sulfides observed were chalcopyrite, bornite, tetrahedrite, enargite, covellite, and molybdenite. Gangue minerals associated with the sulfide mineralization include quartz, feldspars, and biotite. Other minerals include calcite, flourite, siderite, magnitite, sericite, epidote, and chlorite (SRK, July 1998).

Whole rock chemistry analyses of the samples collected by McLemore in 1996 and PW-3 and WD-1 collected by SRK in 1994 indicate high concentrations of aluminum, manganese, copper, and iron (Appendix C). Copper, molybdenum, sulfer, silver, zinc, and cadmium are enriched relative to typical crustal abundance (SRK, July 1998).

An extractable metals analysis was run on the WD-1 sample using EPA Method 1312 leaching method (Table 10). This sample was selected for the extractable metals because it was a transition waste rock that exhibited low field pH. Therefore the leachate constituent concentrations would be expected to be greater than the fresh unoxidized waste rock samples (SRK, July 1998).

3.2.2 Paste pH

Paste pH analysis was performed on 141 samples. The number of paste pH analyses run per rock type was:

- quartz monzonite - 94
- quartz breccia - 28
- biotite breccia – 10
- quartz vein – 8
- andesite – 1.

The pH results range between 3 and 9 for all rock types but the andesite (Fig. 28). The one paste pH result in Andesite was 9. The greater frequencies are acidic.

3.2.3 Acid Base Accounting

Acid Base Accounting tests were done in 1994 and 1997. The ABA tests indirectly estimate acid generation potential (AP) by comparing sulfide sulfur content to the acid neutralizing potential (NP) of the sample. The Sobek method was used to analyze the 1994 samples and the modified Sobek method was used to analyze the 1997 sample. The modified Sobek method is considered to be more conservative for estimating NP (SRK, July 1998). Figure 29 compares the NP versus AP. Figure 30 presents the NP versus AP by rock type for the 1997 data. The diagonal line on Figure 30 represents NP is equivalent to AP. The results of the 1997 acid base accounting indicate that most of the samples have the potential to produce more acid than they can neutralize (SRK, July 1998).

3.2.4 Net Acid Generation Testing

Fifty-nine samples were run for NAG pH. The NAG test underestimates the amount of sulfide in the sample, but assumes complete oxidation of the sulfide. The results provide a realistic indication of the amount of sulfide that may react in the field. For all rock types, the majority of the samples are acidic (Fig. 30) (SRK, July 1998). The raw data for paste pH, ABA, and NAG are found in Appendix D.

3.2.5 Kinetic Testing

Kinetic testing or humidity column testing was conducted on four quartz monzonite samples and a quartz breccia sample:

- samples SW-1 and LGSSP-2 were obtained from the sulfide waste rock piles,
- sample PW-2 was obtained from the pit wall in the vicinity of the former Sternberg Lode,
- samples IDC 24-222-224 and CF10-190-199 were obtained from archived drill core (Fig. 12).

The sulfide waste samples (SW-1 and LGSSP-2) are representative of previously mined unoxidized materials that have been exposed to weathering since 1982. The samples contain fresh pyrite and chalcopyrite which coat fractures and are disseminated throughout the rock. Sample PW-2 was collected from the wall on the south side of the pit. The sample was highly oxidized, but contained residual disseminated pyrite and chalcopyrite. The core samples (IDC 24-222-241 and CF10-190-199) are representative of the unoxidized quartz monzonite that may be mined in the future. They contain fresh pyrite and chalcopyrite.

3.2.5.1 Kinetic Test Results – pH

The kinetic tests were run initially for 19 weeks. A problem occurred in week 20 causing inconsistent results, which was later identified as contaminated deionized leachate water. The kinetic tests were halted for seven weeks while the problem was corrected and the tests were continued in week 27 and 28.

The results from all of the samples except PW-2 were neutral to alkaline ranging from 7 to 8.1 (Fig. 32). Sample PW-2 was slightly acidic with pH results ranging from 5.8 to 6.5 (SRK, July 1998; SRK, May 1995).

3.2.5.2 Kinetic Test Results – Electrical Conductivity

Leachate conductivity is an indicator of soluble metals and sulfate (TDS). Figure 33 indicates that electrical conductivity decreased over time. By week 20, the conductivity of all test leachates was less than 100 microSiemens per centimeter (μS/cm). This low conductivity suggest limited leaching of metals and sulfate (SRK, July 1998; SRK, May 1995).

3.2.5.3 Kinetic Test Results – Sulfate

After 15 weeks, the sulfate concentration in the leachate from all samples is less than 50 mg/L (Fig. 34). These results are well below the WQCC numeric groundwater standard of 600 mg/L.

3.2.5.4 Kinetic Test Results – Copper and Iron

Concentrations of copper and iron in the leachate were recorded during the kinetic testing (Fig. 35). Metal concentrations in both graphs drop off rapidly in all of the samples. Metal concentrations in most samples fall below the detection limits (SRK, July 1998; SRK, May 1995).

3.2.5.5 Kinetic Test Results – Alkalinity and Acidity

Concentrations of alkalinity and acidity (as milligrams of $CaCO_3$ per liter) in the leachate were recorded during the kinetic testing (Fig. 37). The concentrations of alkalinity gradually decrease over time; however, acidity concentrations are several times less than alkalinity and are stable over time. The gradual decrease of alkalinity suggests consumption during the neutralization of acid (SRK, July 1998; SRK, May 1995). The results of the kinetic tests are presented in Appendix D.

3.3 Results of Tailings Dam Investigations

The tailings system was reclaimed in 1986 in accordance with the requirements at that time. The reclamation included covering the existing tailings with topsoil. The topsoil was re-vegetated and the intermediate decant pipe intakes were sealed (SRK, May 1995).

3.3.1 Geochemical Investigative Results

During the 1976 geotechnical investigations conducted by SHB, several samples of groundwater and leachate from native soils were analyzed for chemical constituents. Four groundwater samples were collected from wells down-gradient from the tailings dam. The locations of these samples are shown on Figure 17; however, SHB did not identify the wells by name or reference. Theses samples were analyzed for general mineralogy and some metals. SHB collected soil samples from test pits A-1, A-2, F-1, and F-2 (Fig. 15). Aqueous suspensions containing the soluble components of the soils were made and analyzed for general chemistry and metals. Finally, groundwater was collected from soil borings 29, 30 31, 33, and 34 (Fig. 15) (SHB, Oct. 1980). The results are presented in Appendix B.

In 1996, SRK excavated five test pits in the in the existing tailings impoundment. Eleven tailings samples were collected from the five test pits and were grouped in accordance to their appearance; yellow tailings were assumed to be derived from oxidized or transition oxidized-reduced materials. These samples are identified with “TTLS” in the sample identification. Gray sample colors are assumed to be derived from unoxidized quartz monzonite protolith, and are denoted with “UTLS” in the sample identification. Black tailings are assumed to be derived from biotite breccia, and are denoted with “BTLS”.

The reactivity of the tailings samples are low, with paste pH for all of the samples varying from 6.2 to 7.8. ABA analyses indicate that five of the 11 samples had NP:AP ratios less than 1, indicating that these samples have moderate potential to generate acid. The remaining samples had an NP:AP greater than 1, indicating weak potential for generating acid (SRK, July 1998).

In 1994, SRK collected two samples from boring SRKBH-1-94 (Fig. 10). One of two samples, T-10-12, was analyzed for total metals by ICP and extractable metals by EPA Method 1312 (Table 11). The sample had high concentrations of aluminum (2,700 parts per million (ppm), copper (1,600 ppm), iron (19,000 ppm), magnesium (1,800 ppm), potassium (1,400 ppm), and zinc (418 ppm). The results of a single leach test indicate that these metals are not easily leached (SRK, May 1995).

3.3.2 Hydrogeological Investigative Results.

The subsurface hydrology beneath the tailings impoundment consists of three zones Fig. 38):

- The upper "perched" zone contains sands and gravels, which are located adjacent and down-gradient of the tailings impoundment. This unit dips and thickens to the east and groundwater in this zone is unconfined.
- Underlying the upper zone is a clay layer. This unit is up to 150 ft thick.
- The lower zone consists of clayey and silty sands of the Santa Fe Group. Groundwater in this zone is confined beneath the clay, but unconfined to the west, where the unit outcrops at the surface. This zone is assumed to be approximately 200 ft thick (SRK, Aug. 1998).

In 1994, ABC/SRK conducted a pumping test of monitoring well GWQ94-17. The results of this pumping test indicated that upper and lower water bearing zones are not hydraulically connected (ABC, Sept, 1996).

SHB (Oct 1980), Newcomer et al. (1993), and SRK (Aug. 1994) indicate a potential paleochannel buried near the surface in the vicinity of the levee bisecting the impoundment. SHB observed breciated basalts in this area and recommended that a compacted clay liner be installed in these areas (Fig. 14).

3.3.3 Permeability Testing

SHB performed 15 constant head permeability tests in uncased bore holes by the U.S. Bureau of Reclamation (USBR) E-19 Method, 5 USBR Method E-18 double packer permeability tests in volcanic rock and typical soils, and 3 long term falling head permeability tests in constructed piezometers. The results of the E-19 tests performed in the clayey sands and gravel averaged (14.6 ft per year (ft/yr) (1.4 x 10^{-5} centimeters per second (cm/s)). The E-18 tests in clay showed no measurable permeability and the basalts indicated average permeability values of 234 ft/yr (2.3 x 10^{-4} cm/s). The falling head piezometer permeability results in clayey sands and gravel were 61 ft/yr (5.9 x 10^{-5}

cm/s) (SHB, Oct. 1980). Remolded permeability sample results of the clay used in the exposed breccia compacted liner averaged 0.7 ft/yr (7.0 x 10^{-7} cm/s) (SHB, Oct. 1980). Results from the SHB permeability testing are in Appendix E.

SRK performed one additional falling head test in the Santa Fe Group and in the basalts. These tests were done in 1994 in wells SRKBH-1-94 and SRKBH-2-94 (Fig. 10). The results of these permeability tests are 279 ft/yr (2.7 x 10^{-4} cm/s) for the basalts and 383 ft/yr (3.7 x 10^{-4} cm/s) for Santa Fe Group sediments (SHB, Aug. 1994).

3.3.4 Groundwater Impacts

The two wells down-gradient of the tailings impoundment with the longest sampling history are NP-3 and NP-4. They are indicators of the effectiveness of the seepage control engineered for the existing impoundment. Figure 39 shows pH concentrations in NP-3 from October 1981 to July 1998 and in NP-4 from April 1982 to July 1998; this figure shows that groundwater sampled from these wells has always been neutral to alkaline. Figure 40 shows concentrations in TDS in groundwater sampled from the two wells over the same time periods. The TDS concentration from NP-3 groundwater exceeded the WQCC numeric groundwater standard of 1000 mg/L in early 1984 and apparently peaked at 1,880 mg/L in early 1987 and has been gradually decreasing since. However, the latest measurement of 1,433 mg/L taken on July 13, 1998 still exceeds the standard. TDS concentrations in NP-4 have stabilized at approximately 500 mg/L. There are anomalous readings in the TDS concentrations from the samples collected on September 24, 1994 from NP-3 and January 15, 1997 from NP-4. These measurements do not fit the trend of the data and must be suspect. Figure 41 shows similar trends to the TDS for sulfate concentrations. The sulfate concentrations in groundwater collected from NP-3 peaks at 971 mg/L in 1991 and then gradually decreases with time. The most recent measurement collected on July 28, 1998 is 718 mg/L, which is higher than the WQCC numeric standard of 600 mg/L. Sulfate concentrations in NP-4 never exceed the standard and most recently appear stable at less than 200 mg/L. NP-3 is the well that most consistently exceeds any WQCC numeric standards in the vicinity of the tailings impoundment other than GWQ-13. The three samples collected from this well are similar in TDS and sulfate concentration to NP-3, and they are adjacent to each other.

3.3.5 Liner Borrow Material Study

SHB recommended that compacted clay liners (approximately 1.5 ft thick) be placed where brecciated basalts are exposed at the surface in the center of the impoundment. Alta Gold accepted this recommendation and the lined areas are shown on Figure 14. The liner material was borrowed from the site and SHB observed that very similar materials were exposed in an arroyo north of the impoundment (SHB, Oct, 1976). On April 4, 2003, a sample of this material and two additional soils were collected. A global positioning reading was taken at the location of the sample collection (32.97613 degrees latitude and 107.50392 degrees longitude). That latitude and longitude was loaded in the ALL TOPO, a geographic software program, and the location was adjusted slightly to 32.96987 degrees latitude and 107.50239 degrees latitude (Fig. 10). A visual-manual description of the soils and the locations of the materials relative to each other were noted (Table 12).

The red sandy clay material was the predominant material borrowed and used in the compacted clay liner (Table 13). SHB conducted sieve analyses, Atterberg Limits, Proctor maximum density and optimum moisture content, and permeability testing on similar material. Sieve analyses also were performed on the brown sandy clay/silt. The locations of these samples can found on Figures 14 and 15. SHB boring/test pit logs and test worksheets are presented as Appendix F.

From April 28 to May 4, 2003, a hydrometer analysis was conducted to determine the clay fraction of red material (sample SR-1) in accordance with the U. S. Army Laboratory Soils Testing Manual (USACE, 1965). The results show that approximately 3.4 percent of the material is sand, approximately 2.5 percent of the material is clay, and the remainder is silt. A free swell test also was performed by adding 10 milliliters of the dry fines to a graduated cylinder, submerging in water, and allowing the material to expand in the cylinder. After 24 hours, the material had expanded to 16 ml, which is a swell of 60 percent. The natural moisture content on the sample was 6.3 percent (Appendix F).

On April 11, 2003, bulk mineralogy using X-ray diffraction (XRD) was performed on samples SR-1, SR-2, and SR-3. The predominant minerals present in sample SR-1 are quartz, calcite, feldspars and undifferentiated clays. The predominant mineral in sample SR-2 is calcite. The predominant minerals in sample SR-3 are quartz, muscovite, feldspar and undifferentiated clays. Clay slides were prepared for samples SR-1 and SR-3 (Table 14). Clay was not present in sample SR-2. The clay slides for samples SR-1 and SR-2 were run after air drying, after 24 hours in a glycol chamber, and after 30 minutes of heating at approximately 375 degrees centigrade (Hall, no date). The bulk XRD test scans, the clay test scans, and the clay mineralogy distribution calculations are presented as Appendix G.

4.0 Conclusions and Recommendations

4.1 Mine Pit Conclusions

4.1.1 Surface Water Quality, Mine Pit Lake

The water quality of the pit lake does not exceed New Mexico WQCC surface water numeric standards for livestock and wildlife as of 1998 (Table 15). Historically, only copper concentrations exceeded the WQCC numeric standard of 0.5 mg/L. The most recent surface water sample to exceed this standard was collected in February 1993, with a concentration of 2.6 mg/L. No other metal, cation, or anion exceeded any of these standards except chromium, once on November 16, 1994, a pit lake sample had a concentration of 0.2 mg/L, which exceeds the domestic and irrigation use numeric standard of 0.1 mg/L.

Since 1994, pH measurements have consistently remained neutral to alkaline (Fig. 18). Copper has not exceeded the numeric standard for livestock and wildlife since 1993 (Fig. 17). Although sulfate and TDS are gradually increasing over time; there are no numeric surface water quality standards for these parameters (Figs. 19, 20). The drop in the elevation of the surface of the lake in recent years may explain the increase in TDS. From 1993 to 1997, the water level in the lake dropped approximately 10 ft, which has caused the evaporative concentration of salts in the pit lake (SRK, Dec. 1997).

Analysis of the anions and cations from pit water sample data collected on April 3, 1989, September 21, 1995, and July 21, 1998 indicate that even though the water quality is poor, the pit water does not exceed any livestock or wildlife standards. Figure 42 presents a Piper diagram showing that the pit water has consistently high contents of calcium, chloride, and sulfate relative to surface water in Greyback Gulch and local groundwater.

The surface water chemistry found in the lake can be explained by:

- The inflow of neutral to alkaline groundwater has relatively low concentrations of TDS and sulfate.
- The composition of the host rock is acid buffering. The composition of the host rocks includes approximately 5 percent calcite, 30 percent feldspar, and one percent other carbonates. The dissolution of the calcite in the host rocks and the precipitation of gypsum and geothite around the pit lake indicates that acid buffering is occurring.
- There is a typical volume of disseminated pyrite in the rocks surrounding the pit lake, typically 1 to 5 percent. The pyrite is disseminated thoughout the groundmass of the host rock limiting access of water and air to allow oxidation. In addition the pyrite is coarse grained, which limits the surface area pyrite crystal, when it is exposed to oxidation (SRK, Dec. 1997).
- Low precipitation in the area is probably the most important reason for the relatively good quality of the pit lake surface water, with respect to pH and concentration of metals. Low precipitation limits the flushing of the oxidized products into the environment via runoff, seep, and discharges (Chavez, 2003).

The net effect is that while sulfide oxidation is occurring, the transport of the oxidation products is slow, except locally in the Copper Flat area.

4.1.2 Surface Water Quality, Greyback Gulch and Local Seeps

Surface water samples collected from locations along the ephemeral Greyback Gluch, SWQ-1, SWQ-2, and SWQ-3 indicate higher quality runoff upstream of the mine site (SWQ-1) than downstream (SWQ-2 and SWQ-3). Although pH measurements remain neutral to alkaline in samples collected from both upstream and downstream location (Fig. 21), TDS and sulfate concentrations are greater downstream and have increased over time (Figs. 22, 23). In SWQ-2, downstream of the mine pit, nitrate has exceeded domestic use WQCC numeric standard (10 mg/L) four times from 1981 to 1998, with a maximum nitrate concentration of was 14.5 mg/L. No numeric standard for livestock or wildlife has ever been exceeded in samples from these three locations.

The Piper diagram (Fig. 42) indicates that the downstream surface water in Greyback Gulch has higher proportions of calcium, chloride, and sulfate than upstream surface water for one set of data collected from SWQ-1, SWQ-2, and SWQ-3 in March/April 1993. The upstream surface water has a higher proportion of bicarbonate. This may indicate that some of the alkalinity upstream is being consumed by acid via neutralization as surface water move over and through the Copper Flat ore body.

Possible reasons for the lower surface water quality in the downstream sample locations in Greyback Gulch are:

- evaporative concentration of dissolved load of anions and cations,
- gypsum dissolution, which is regionally widespread,
- water-mineral interactions within the copper-porphyry deposit, and
- disturbance from the construction of roads and rock storage piles and stream diversion (SRK, Dec. 1997).

There have been a few intermittent seeps from the pit wall and rock storage piles. Typically, these seeps do not flow except following heavy precipitation. When they do flow, they are typically acidic and have high concentrations of anions, cations, and metals. Historically seeps have been identified on the southern wall of the mine pit (PW-1 and PW-2) and from the East and West waste rock piles (Fig. 11). Typically, surface water from these seeps are characterized with pH concentrations of 2 to 3, except PW-2 with a pH of 8.16, high TDS concentrations of 5,000 to 25,000 mg/L, and high sulfate concentrations of 3,000 to 22,000 mg/L. Concentrations of surface water from these seeps have exceeded WQCC surface water livestock and wildlife numeric standards for aluminum, cadmium, copper, cobalt, selenium, and zinc. Domestic numeric standards have been exceeded for arsenic, beryllium, chromium, cadmium, nickel, and selenium. Irrigation numeric standards have been exceeded for boron, chromium, and cadmium.

4.1.3 Ground Water Quality

The pH measurements both up- and down-gradient range from approximately 7 to 8.2 (Fig. 25). TDS is less than the WQCC numeric groundwater standard of 1,000 mg/L (Fig. 26). However the groundwater down-gradient of the mine pit is increasing gradually over time and approaching the numeric standard. Sulfate concentrations also are lower than the WQCC numeric groundwater standard of 600 mg/L (Fig. 29); however, the sulfate concentrations in the down-gradient well are increasing with time.

An appropriate conceptual model of the Copper Flat mine pit lake is that of a local hydraulic sink. Figure 43 presents groundwater contours below the mine area (BLM, 1999, ABC, 1997). Historical sampling of well GWQ-5, further to the east (Fig. 10), indicate that water quality in the vicinity may have been affected naturally by the presence of the ore body prior to mining in 1982 (BLM, 1999). Concentrations of sulfate sampled in 1981 by SHB from GWQ-5 range from 477 mg/L to 575 mg/L, which is higher than the sulfate concentrations in well GWQ-96-23A immediately down-gradient of the pit (<450 mg/L). Concentrations of TDS also sampled in 1981 by SHB from

GWQ-5 range from 1,070 mg/L to 1,260 mg/L, which is higher than the TDS concentrations in the well GWQ-96-23A (<1,000 mg/L).

The Piper diagram (Fig. 42) indicates that the groundwater up gradient of the mine pit (well GWQ-96-22A and B) is high quality with relatively high proportions of chloride and sulfate. Groundwater down-gradient of the pit (GWQ-96-23A and B) shows relatively higher proportions of bicarbonate and calcium and relatively lower proportions of sulfates. Pre-Quintana mining (June 15, 1981) groundwater data collected from down-gradient wells GWQ-5 and GWQ-6 show similar anions and cation distributions to post Quintana mining activities (1996 and 1998). This indicates that groundwater quality down-gradient of the ore body reflects the natural weathering of the Copper Flat porphyry system.

4.2 Recommendations for the Mine Pit

4.2.1 Mine Pit Lake

The mine pit lake appears to be geochemically stable under existing conditions. Presently, the surface water appears to be fit for livestock and wildlife. Although the surface water does not exceed WQCC domestic or irrigation standards, it is not recommended for that use because of occasional geochemical variability from irregular, heavy precipitation. Such heavy precipitation and water level fluctuation does affect the chemistry of pit lake water; therefore, periodic monitoring of water quality is reasonable, especially because it is currently a source of water for livestock and wildlife.

4.2.2 Surface Water Quality

The surface water quality in Greyback Gulch does not exceed any WQCC numeric standards. However, nitrate has been exceeded in the past at location SWQ-2.

The quality of the surface water is lower downstream of the mine pit; however, the contributing factors to the water quality degradation is probably from naturally occurring processes such as evaporation and weathering exposure to the copper porphyry ore body. Certain re-contouring, re-vegetation, and soil amendments might improve the surface water quality in downstream reaches, but such actions are difficult to justify considering the current land use of cattle grazing and potential mineral development.

Low water quality seeps only occur during times of high precipitation. Although infiltration of rainwater might be arrested by significant restoration program of re-contouring, re-vegetation, and soil amendments, most of the documented seeps drain into the bowl-shaped mine pit lake.

4.2.3 Groundwater

Groundwater quality down-gradient of the mine pit deteriorated with respect to sulfate and TDS from 1996 to 1998; however, more time-based sampling data would be required to ascertain whether this is a real trend or transient phenomenon. Annual monitoring of monitoring wells GWQ-96-22A, GWQ-96-22B, GWQ-96-23A, GWQ-96-23B, GWQ-5, and GWQ-6 would be very useful in establishing groundwater quality trends over time. It appears from the existing data that the ore body is likely the most significant contributor to water quality down-gradient of the pit, and that additional data would be useful in evaluating this hypothesis.

4.3 Rock Storage Pile Conclusions

4.3.1 Extractable Metals From Rock Storage Pile Sample WD-1

The results of the extractable metals analysis from the rock pile sample WD-1 (Fig. 12) indicate low leachate concentrations. This sample was selected because it represents a transition material having a low field pH. Leachate concentrations would be expected to be greater than fresh, unoxidized waste rock (SRK, July 1998). The WD-1 leachate had a pH of 3, a high sulfate concentration of 3,050 mg/L, high acidity (as $CaCO_3$) of 1050 mg/L, and no alkalinity (as $CaCO_3$). WQCC surface water numeric standards for livestock and wildlife were exceeded for two metals, aluminum and copper. The concentration of aluminum was reported as 151 mg/L, which exceeds the numeric standard of 5 mg/L. The concentration of copper was reported as 13.6 mg/L, which exceeded the numeric standard of 0.5 mg/L. Both aluminum and copper exceed the numeric standard by approximately 30 times.

4.3.2 Paste pH, Acid Base Accounting, and Net Acid Generation Testing

One hundred and forty-one paste pH analyses were run on the primary lithologies about the mine site, which include quartz monzonite, quartz breccia, biotite breccia, quartz vein, and andesite. The frequency distribution of pH measurements indicates that all of the rock types except andesite have the potential to generate acidic drainage (Fig. 28).

The 32 rock samples analyzed for acid base accounting by the modified Sobek method indicated that only 5 of the samples could produce enough alkalinity to buffer their potential to generate acid (Fig. 31). The remaining 27 rock samples had the potential to generate more acid than they could neutralize (SRK, July 1998).

The NAG pH frequency distribution (Fig. 32) indicates that the majority of the 59 rock samples have the potential to generate acidic NAG pH values. This is the case for all four rock types involved, quartz monzonite (33 samples), quartz breccia (17), biotite breccia (6), and quartz vein (3).

4.3.3 Kinetic Tests

Kinetic testing was conducted on four quartz monzonite samples and a quartz breccia sample, selected from 19 rock samples collected in 1994 and considered to be representative of unoxidized waste rock exposed to weathering since 1982, highly oxidized pit wall rock, and unoxidized quartz monzonite from within the ore body. The sample locations are presented on Figure 11 and are identified as:

- samples SW-1 and LGSSP-2 were obtained from the sulfide waste rock piles,
- sample PW-2 was obtained from the pit wall in the vicinity of the former Sternberg Lode,
- samples IDC 24-222-224 and CF10-190-199 were obtained from archived drill core.

The results from all of the samples except PW-2 were neutral to alkaline ranging from 7 to 8.1 (Fig. 32). Sample PW-2 was slightly acidic with pH results ranging from 5.8 to 6.5. (SRK, July 1998; SRK, May 1995).

By week 20, the electrical conductivity of all test leachates was less than 100 μS/cm (Fig. 33). This low conductivity suggests limited leaching of metals and sulfate (SRK, July 1998; SRK, May 1995).

After 15 weeks, the sulfate concentration in the leachate from all of samples is less than 50 mg/L (Fig. 34). These results are well below the WQCC numeric groundwater standard of 600 mg/L (SRK, July 1998; SRK, May 1995).

Copper and iron concentrations decrease rapidly over the duration of the tests (Figs. 35, 36). Metal concentrations in most samples fall below the detection limits (SRK, July 1998; SRK, May 1995).

Alkalinity gradually decreases over time; however, acidity values are several times less than alkalinity and are stable over time (Fig. 37). The gradual decrease of alkalinity suggests consumption of anions during the neutralization of acid (SRK, July 1998; SRK, May 1995).

4.4 Recommendations for the Rock Storage Pile

According to the results of the paste pH, acid base accounting, and net acid generating tests, all rock types except the andesite have a significant to moderate potential to generate acid. However, the extractable metals analysis of rock pile sample WD-1 and kinetic test results suggest that sulfide oxidation products are slowly released at the Copper Flat mine site.

Additional evidence of low oxidation rates is the abundance of sulfide minerals on the waste rock pile surfaces despite exposure to weathering since 1982. Potential explanations for the low oxidation rates are:

- low precipitation limits the access of water to the sulfide minerals and the flushing of the oxidation products,
- coarse grained pyrite crystals with low surface area to volume ratios,
- disseminated pyrite within the groundmass limits the opportunity for sulfide oxidation, and
- neutral to alkaline groundwater recharge assists in acid neutralization.

The disturbed area of the existing Copper Flat mine site consists of several hundred acres. Although, five kinetic samples and one extractable metals analysis suggest that sulfide oxidation is low in this environment, six samples is not enough to be representative of this site. The current physical, mineralogical, and climatic conditions are favorable to minimize sulfide oxidation and acid rock drainage; however, wetter seasons and/or land use changes may demand more characterization and monitoring at the Copper Flat site.

4.5 Tailings Dam Conclusions

Under the existing drained conditions, the tailings appear to be geochemically stable. Eleven tailings samples collected in 1994 indicate that tailings pH varies from 6.2 to 7.8. Leachate concentrations of extractable metals from a single tailings sample are low, and WQCC numeric standards for groundwater were only exceeded for sulfate and manganese in the leachate. Sulfate has a WQCC domestic use standard of 600 mg/L, which was exceeded in the leachate sample with a concentration of 940 mg/L. Manganese has a WQCC domestic numeric standard of 0.2 mg/L. The leachate sample was found to have a manganese concentration of 1.5 mg/L. No other metals exceeded WQCC groundwater standards.

Figures 40 and 41 indicate that TDS and sulfate concentrations in groundwater sampled from a down-gradient well (NP-3) exceed the WQCC groundwater numeric standards for domestic use of 600 mg/L and 1,000 mg/L, respectively. The concentrations of sulfate and TDS are very gradually decreasing over time, but still remain above standards, 16 years after initial tailings discharge into the tailings impoundment. This information indicates that the tailings dam leaks contaminants into the groundwater, in-spite of the significant study that accompanied the impoundment design.

Figure 14 shows areas where a compacted clay liner was placed in an effort to control seepage below the impoundment through exposed brecciated basalt. The predominant minerals present in clay liner material, as determined by x-ray diffraction, are quartz, calcite, feldspars and undifferentiated clays. The clays consist of 2/10 smectite, 6/10 mixed-layered smectite and illite, and 2/10 kaolinite.

The liner material appears to have a small clay fraction, approximately 2.5 percent, and a small sand fraction, approximately 3.4 percent. The remainder, 91.1 percent, is silt- sized particles. The material will compact into a low permeability layer with a conductivity of 10^{-6} to 10^{-8} cm/s. The clay is highly active, which is determined by dividing the percent clay by the plasticity index. Based on the plasticity indices (Table 13), the activity of the material is approximately 14. Clay is considered active if the activity is greater than 1.25 (Holtz and Kovacs, 1981). The high plasticity indices correlate with high free swell as shown by Table 16. These parameters combined with the fact that 80 percent of the clay fraction is composed of smectite and mixed layer illite and smectite raise concern with respect to the shrink and swell characteristics of the liner material. Smectite and illite are the most active clays with respect to expansion and contraction due to moisture content (Holtz and Kovacs, 1981). Figure 44 presents a relationship between liquid limit and maximum dry density with respect to swelling and collapse based on work done by the U.S. Bureau of Reclamation (Gibbs, 1969, Mitchell and Gardner, 1975, and Holtz and Kovacs, 1981). In this case, a maximum dry density of 105 pounds per cubic foot (1.7 Mega-gram per cubic meter) and a liquid limit of 50 (Table 13) would place the soil in the medium to high range for expansion. The moisture content of the clay material is unknown, although in 1994, the tailings were approximately 20 percent water at depths up to 12 ft below grade (SRK, Aug. 1994). Desiccation could occur if the clay layer dries out, which would compromise the compacted permeability.

4.6 Recommendations for the Tailings Dam

Both SHB, who designed the tailings impoundment, and SRK, who proposed re-using it, have recognized the potential leakage of the facility. SHB suggested and SRK proposed possible engineering modifications to the facility should leakage occur, which it has. SRK proposed a groundwater pump back system to hydraulically contain groundwater impacted by the tailings.

If the tailings dam is ever considered for reuse in the future, some engineering modification must be implemented to secure the impoundment. If not hydraulic containment, then a constructed liner should be considered. If the local red silt is to be considered for a liner material, additional geotechnical analyses should be performed to fully understand the shrinkage and swelling characteristics of the material and its suitability.

5.0 Summary of Conclusions

5.1 Waters

Analysis of the anions and cations from pit water indicate that even though the pit water does not exceed any WQCC numeric livestock or wildlife standards, the water is of marginal quality. The pit water has a consistently high concentration of calcium, chloride, and sulfate relative to surface water in Greyback Gulch and local groundwater. However, the pH is historically neutral to alkaline with some exceptions. Only copper has occasionally exceeded WQCC numeric standards for livestock and wildlife. The pit lake is a local hydraulic sink; therefore increases in TDS and sulfate concentrations could possibly be due to evaporation of the pit lake water concentrating soluble salts.

The surface water chemistry found in the lake can be explained by:

- The inflow of neutral to alkaline groundwater has relatively low concentrations of TDS and sulfate.
- The composition of the host rock is acid buffering. The composition of the host rocks includes approximately 5 percent calcite, 30 percent feldspar, and one percent other carbonates. The dissolution of the calcite in the host rocks and the precipitation of gypsum and geothite around the pit lake indicates that acid buffering is occurring.
- There is a low volume of disseminated pyrite in the rocks surrounding the pit lake, typically 1 to 5 percent. The pyrite is disseminated thoughout the groundmass of the host rock limiting access of water and air to allow oxidation. In addition the pyrite is coarse grained, which limits the surface area pyrite crystal to oxidation, when it is exposed (SRK, Dec. 1997).
- Low precipitation in the area is probably the most important reason for the relatively good quality of the pit lake surface water, with respect to pH and concentration of metals. Low precipitation limits the flushing of the oxidized products into the environment via runoff, seep, and discharges (Chavez, 2003).

The net effect is that while sulfide oxidation is occurring, the transport of the oxidation products is slow, except locally in the Copper Flat environment.

Surface water samples collected from locations along the perennial Greyback Glulch indicate higher quality runoff upstream of the mine site than downstream. Although pH measurements remain neutral to alkaline in samples collected from both upstream and downstream location, TDS and sulfate concentrations are greater down stream and concentrations have increased over time. No numeric standard for livestock or wildlife has ever been exceeded in samples from these three locations.

The Piper diagram (Fig. 42) indicates that the downstream surface water in Greyback Gulch has higher proportions of calcium, chloride, and sulfate than upstream surface water for one set of data collected from SWQ-1, SWQ-2, and SWQ-3 in March/April 1993. The upstream surface water has a higher proportion of bicarbonate. This may indicate that some of the alkalinity upstream is being consumed by acid neutralization as the water moves over and through the Copper Flat ore body.

Possible reasons for the lower surface water quality in the downstream sample locations in Greyback Gulch are:

- evaporative concentration of the dissolved load of anions and cations,
- gypsum dissolution, which is regionally widespread,
- water-mineral interactions within the copper-porphyry deposit, and
- disturbance from the construction of roads and rock storage piles and stream diversion (SRK, Dec. 1997).

There have been a few intermittent seeps from the pit wall and rock storage piles. Typically, these seeps do not flow except following heavy precipitation. When they do flow, they are typically acidic and have high concentrations of anions, cations, and metals. Historically seeps have been identified on the southern wall of the mine pit and from the East and West waste rock piles. Typically, surface water from these seeps are characterized with pH concentrations of 2 to 3, except PW-2 with a pH of 8.16, high TDS concentrations of 5,000 to 25,000 mg/L, and high sulfate concentrations of 3,000 to 22,000 mg/L. Concentrations of surface water from these seeps have exceeded WQCC surface water livestock and wildlife numeric standards for aluminum, cadmium, copper, cobalt, selenium, and zinc.

Groundwater pH measurements both up and down-gradient range from approximately 7 to 8.2. TDS is less than the WQCC numeric groundwater standard of 1,000 mg/L. However the groundwater down-gradient of the mine pit is increasing gradually over time and approaching the numeric standard. Sulfate concentrations are also lower than the WQCC numeric groundwater standard of 600 mg/L; however, sulfate concentrations in the down-gradient well are increasing with time.

Historical sampling of well GWQ-5, further to the east, indicate that water quality in the vicinity may have been affected naturally by the presence of the ore body prior to mining in 1982. Concentrations of sulfate sampled in 1981 from GWQ-5 range from 477 mg/L to 575 mg/L, which is higher than the sulfate concentrations in well GWQ-96-23A immediately down-gradient of the pit (<450 mg/L). Concentrations of TDS also sampled in 1981 from GWQ-5 range from 1,070 mg/L to 1,260 mg/L, which is also higher than the TDS concentrations in the well GWQ-96-23A (<1,000 mg/L).

The groundwater up gradient of the mine pit (GWQ-9622A and B) is high quality with relatively high proportions of chloride and sulfate. Groundwater down-gradient of the pit (GWQ-96-23A and B) shows relatively higher proportions of bicarbonate and calcium and relatively lower proportions of sulfates. Pre-Quintana mining (June 15, 1981) groundwater data collected from down-gradient wells GWQ-5 and GWQ-6 show similar anions and cation distributions to post Quintana mining activities (1996 and 1998). This indicates that groundwater quality down-gradient of the ore body reflects the natural weathering of the Copper Flat porphyry system.

5.2 Stored Rock and Pit Wall Rock

According to the results of the paste pH, acid base accounting, and net acid generating tests, all rock types except the andesite have a significant to moderate potential to generate acid. However, the extractable metals analysis of rock pile sample

WD-1 and kinetic test results suggest that sulfide oxidation products are slowly released at the Copper Flat mine site.

Additional evidence of low oxidation rates is the abundance of sulfide minerals on the waste rock pile surfaces despite exposure to weathering since 1982. Potential explanations for the low oxidation rates are:

- low precipitation limits the access of water to the sulfide minerals and the flushing of the oxidation products,
- coarse grained pyrite crystals with low surface area to volume ratios,
- disseminated pyrite within the groundmass limits the opportunity for sulfide oxidation, and

neutral to alkaline groundwater recharge assists in acid neutralization.

5.3 Tailings

Under the existing drained conditions, the tailings appear to be geochemically stable. Eleven tailings samples collected in 1994 indicate that tailings pH varies from 6.2 to 7.8. Leachate concentrations of extractable metals from a single tailings sample are low, and WQCC numeric standards for groundwater were only exceeded for sulfate and manganese in the leachate. Sulfate has a WQCC domestic use standard of 600 mg/L, which was exceeded in the leachate sample with a concentration of 940 mg/L. Manganese has a WQCC domestic numeric standard of 0.2 mg/L. The leachate sample was found to have a manganese concentration of 1.5 mg/L. No other metals exceeded WQCC groundwater standards.

TDS and sulfate concentrations in groundwater sampled from a down-gradient well (NP-3) exceed the WQCC groundwater numeric standards for domestic use of 600 mg/L and 1,000 mg/L, respectively. The concentrations of sulfate and TDS are very gradually decreasing over time, but still remain above standards, 16 years after initial tailings discharge into the tailings impoundment. This information indicates that the tailings dam leaks contaminants into the groundwater, in-spite of the significant study that accompanied the impoundment design.

A compacted clay liner was placed in an effort to control seepage below the impoundment through exposed brecciated basalt. The predominant minerals present in clay liner material, as determined by x-ray diffraction, are quartz, calcite, feldspars and undifferentiated clays. The clays consist of 2/10 smectite, 6/10 mixed-layered smectite and illite, and 2/10 kaolinite.

The liner material appears to have a small clay fraction, approximately 2.5 percent, and a small sand fraction, approximately 3.4 percent. The remainder, 91.1 percent, is silt- sized particles. The material will compact into a low permeability layer with a conductivity of 0.01 to 1.0 ft/yr (10^{-6} to 10^{-8} cm/s). The clay is highly active and 80 percent of the clay fraction is composed of smectite and mixed layer illite and smectite, which raises concern with respect to the shrink and swell characteristics of the liner material. Desiccation could occur if the clay layer dries out, which would compromise the compacted permeability.

5.4 Recommendations for Further Study

Further study that could aid in the more complete understanding of the physical processes occurring at Copper Flat are:

- Periodic water quality monitoring of the waters of the pit lake since the lake is a source of water supply for local wildlife and livestock.

- Periodic measurement of water level elevations of the pit lake and local precipitation so that a relationship can be developed between the quality of the pit lake waters and water level elevation and rainfall.
- Periodic observations to locate acidic seeps and determine their relationships with precipitation events, drainage water quality, and to evaluate corrective drainage control by various engineering and vegetation techniques.
- Periodic monitoring of surface and groundwater above and below the Copper Flat ore body to defend the hypothesis that the ore body is naturally contributing to the quality of waters below the mine pit area.
- Additional rock storage pile samples for extractable metals and more kinetic leachate testing of rock storage material, oxidized and unoxidized rock material is appropriate for a sit of this size. Results of previous leachate sample results are favorable with respect to release of oxidation products, but the frequency is inadequate.
- If used again, the tailings dam will require engineered alternatives to eliminate leakage of tailings liquids.
- If used for a tailings impoundment liner material, local materials should be analyzed for particle size distribution through the clay size fraction. The clay fraction should be analyzed by XRD for expansive clay content.

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Water Development Corporation, 1976, “Basic-Data Report, Quintana Minerals Corporation, Copper Flat Project Production Well #4, Hillsboro, New Mexico,” Water Development Corporation, Tucson, Arizona.

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TABLES 1-16

Table 1
Summary of Hydrothermal Alteration Associated with Mineralization in the Vicinity of Copper Flat
Copper Flat, New Mexico
(From Fowler, 1982; McLemore et al., 2000)

Host Rock/Type of Mineral Deposit	Alteration Mineral Assembly	Alteration Type
Quartz monzonite/porphyry copper deposit	Bitotite, potassium feldspar, quartz, pyrite,	Biotite-potassic
Quartz monzonite/porphyry copper deposit	Potassium feldspar, chlorite, quartz, pyrite	Potassic
Quartz monzonite/porphyry copper deposit	Sericite, quartz, pyrite	Sericitic
Andesites adjacent to latite dikes and polymetallic veins	Epidote, chlorite, sericite, pyrite, magnetite	Propylitic (1)
Andesites adjacent to latite dikes and polymetallic veins	Sericite, calcite, chlorite, quartz, pyrite.	Argillic
Andesites adjacent to latite dikes and polymetallic veins	Chlorite, kaolinite, sericite, quartz, pyrite	Propylitic (2)
Latite dikes associated with polymetallic veins	Quartz, potassium feldspar, pyrite, epidote, and chlorite	Propylitic (1)
Latite dikes associated with polymetallic veins	Quartz, sericite, chlorite, pyrite	Sericitic

Table 2
Investigative Reports Prepared for Alta Gold Corporation
Copper Flat, New Mexico

Copper Flat Tailings Study, Technical Memorandum	SRK	August 30, 1994
Characterization of Post-Closure Pit Water Quality, Copper Flat Project	SRK	December 22, 1994
Copper Flat Mine, Hydrological Studies	SRK	May 12, 1995
Copper Flat Mine Permit Application	SRK	February 20, 1996
Draft Environmental Impact Statement	BLM/SRK	February 1996
Tailings Dam Area Pumping Test	SRK/ABC	September 9, 1996
Copper Flat Mine, Compilation of Pit Lake Studies	SRK	December 1997
Background Groundwater Concentrations, Technical Memorandum	SRK	June 30, 1998
Copper Flat Mine, Waste Rock Management Plan	SRK	July 9, 1998
Tailings Seepage Modeling, Copper Flat Mine	SRK	August 7, 1998
Preliminary Final, Environmental Impact Statement, Copper Flat Project	BLM/ENSR	March 1999

Table 3
Dates and Estimated Flow Rates
For the Springs and Seeps Sampled by Newcomer et al., 1993
Copper Flat, New Mexico

Spring/Seep	**Date**	**Flow (gpm)**
SWQ-1	4/1/93	1 to 2
SWQ-1	5/7/93	Dry
SWQ-2	3/31/93	<1
SWQ-3	3/31/93	12.5
BG	4/1/93	1 to 2
BG	5/7/93	Dry
BG-2	4/1/93	<1
BG-2	5/7/93	<1
Acid Drainage	4/1/93	<1
Acid Drainage	5/7/93	<1
Acid Drainage	5/18/93	<1
Warm Spring	4/2/93	3.3

Table 4
Rock Storage Pile, Pit Wall, Drill Core, and Drill Cutting Samples
Copper Flat, New Mexico
(From SRK, May 1995)

Sample Identification	Sample Description
WD-1	West dump area, CFQM waste rock
PW-3	Pit wall, northwest of pit lake
SW-1	Sulfide waste pile, CFQM waste rock
PW-2	Pit wall, oxidized cap rock
PW-4	Pit wall, northeast of pit lake
SWP-1	Sulfide waste pile, CFQM rock
LGSSP-1	Sulfide waste pile, CFQM rock
LGSSP-2	Sulfide waste pile, CFQM rock
WD-2	West dump area, CFQM waste rock
IDC-24-222-241	CFQM from IDC-24 drill hole, 222-241 ft.
CF10-177.8-190	Andesite from CF10 drill hole, 177.8-190 ft.
CF10-177.8-190	CFQM from drill hole CF10, 190-199 ft.
CF10-214-220	CFQM from drill hole CF10, 214-220 ft.
H75-53-42	CFQM reverse circulation cuttings
H75-64-44	CFQM reverse circulation cuttings
H75-51-34	CFQM reverse circulation cuttings
H75-48-58	CFQM reverse circulation cuttings
H75-48-44	CFQM reverse circulation cuttings
PW-1	Pit wall, SW of pit, transition zone, CFQM

Table 5
Additional Sample Analysis Summary
Copper Flat, New Mexico
(From SRK, May 1995)

Sample Identification	**Analysis**
LGSSP-2	Gradation (ASTM D-422)
LGSSP-2	Atterberg Limits (ASTM D-4318)
LGSSP-2	Modified Procter compaction (ASTM (D-4318)
LGSSP-2	Hydraulic Conductivity in a fixed wall permeameter ant near maximum dry density
PW-3	Whole rock analysis (EPA 3051/ICP)
WD-1	Whole rock analysis (EPA 3051/ICP)
WD-1	Leachable metals (EPA 1312)

Table 6
Rock Storage Pile Characterization Sample Distribution
Copper Flat, New Mexico

Analysis	1994 EIS	1997 WMG	Total	Analytical Laboratory
Paste pH /Conductivity	19	0	19	SRK, Lakewood, Colorado
Paste pH /Conductivity	0	141	141	SRK, Field Parameters
Total Metals (ICP)	2	0	2	ACZ Laboratory, Steamboat Springs, Colorado
Acid-base accounting	19	0	19	ACZ Laboratory, Steamboat Springs, Colorado
Acid-base accounting	0	32	32	Sierra Environmental Monitoring Laboratory, Reno, Nevada
Net acid generating	0	59	59	School of Engineering, University College of Wales, Cardiff, UK
EPA 1312	1	0	1	ACZ Laboratory, Steamboat Springs, Colorado
Kinetic testing	5	0	5	Cominco Engineering Services Laboratory, Vancouver, BC, Canada
Physical testing	1	0	1	?

Table 7
Historical Tailings Impoundment Reports
Copper Flat, New Mexico

Report	Date	Authors	Purpose
Draft Geotechnical Investigation Report, Tailings Dam and Pond	10/14/1976	Sergent, Hauskins and Beckwith (SHB)	Geotechnical Investigation
Permeability Report on Materials Proposed for Impoundment Drains and Filters	8/29/1980	SHB	Geotechnical Investigation
Fianl Geotechnical and Design Development Report	10/14/1980	SHB	Geotechnical Investigation
Report on Filter Fabric Suitability	10/17/1980	SHB	Geotechnical Investigation
Decant System Design Recommendations	12/17/1980	SHB	Geotechnical Investigation
Comment Resolution to the New Mexico State Engineers Regarding Stress and Strain of the Dam Structure	4/13/1981	SHB	Geotechnical Investigation
Permeability, Placement, and Compaction of Clay Liner in South Cell	10/13/81	SHB	Geotechnical Investigation
Permeability, Placement, and Compaction of Clay Liner in South Cell and Monitoring Well Details for NP-5	10/28/81	SHB	Geotechnical Investigation
Hydrologic Assessment	5/1993	John W. Shomaker, Inc.	Hydrologic Assessment
Tailings Study	8/30/1994	SRK	Geological Investigation
Tailings Dam Area Pumping Test	9/9/1996	ABC/SRK	Aquifer Analysis
Tailings Seepage Modeling	8/7/1998	SRK	Hydrogeologic Conceptual Model and Seepage Modeling of Proposed Impoundment Re-use

Table 8
Whole Rock Analyses Summary
Pit Lake Sediment and Wall Rock Samples
Collected on November 20, 1996
Copper Flat, New Mexico
(From McLemore et al., 1996)

Sample ID	Sample Description	Analyses
POND03	brown precipitate	Metals by AA and ICP; Strontium by XRF
POND04	lake sediment, south pit	Metals by AA and ICP; Strontium by XRF
POND05	lake sediment, east pit	Metals by AA and ICP; Strontium by XRF
POND06	lake sediment, north pit	Metals by AA and ICP; Strontium by XRF
POND07	lake sediment, west pit	Metals by AA and ICP; Strontium by XRF
POND08	grab of pit wall, chalcocite veins	Metals by AA and ICP; Strontium by XRF
POND09	grab of pit wall, pyrite veins and disseminated	Metals by AA and ICP; Strontium by XRF
POND10	grab of pit wall, pyrite with molybdenite	Metals by AA and ICP; Strontium by XRF
POND11	select 1-2 inch chalcocite-quartz vein	Metals by AA and ICP; Strontium by XRF
POND12	grab of blue-brown precipitate from pit wall	Metals by AA and ICP; Strontium by XRF

Table 9
Summary of Surface Water Samples From Greyback Gulch Stations A, B, C, 1977
(From BLM 1978)

Para-Meter[1]		Jan 1977			Jan 1977			Mar 1977		July 1977
Station	A	B	C	A	B	C	A	B	C	A
pH	7.7	7.6	7.8	7.8	7.7	7.8	7.9	8.0	8.1	NA[2]
EC[3]	899	1159	7226	899	1178	1212	916.3	916.3	1260	NA
TDS	720	800	840	800	800	880	1000	1080	1320	NA
Alk	317.2	280.6	262.3	305.0	292.8	268.4	240.2	220.2	220.2	NA
Hard	1660.3	2394.8	2554.4	1596.4	2203.0	2477.7	434.53	567.63	667.15	NA
N	5.48	6.8	4.9	5.6	7.5	3.68	3.8	3.3	3.6	NA
P	0.4	0.49	0.47	0.43	0.5	0.47	0.46	0.41	0.38	NA
F	0.4	0.5	0.4	0.4	0.5	0.4	0.2	0.5	0.3	NA
Cu	0.04	0.4	0.03	0.03	0.05	0.05	-0.005	-0.005	-0.005	-0.005
Ag	0.01	0.01	0.01	0.01	0.01	0.01	-0.01	-0.01	-0.01	-0.005
Mo	0.01	0.03	0.03	0.01	0.03	0.02	0.01	0.08	0.08	0.05
Zn	0.05	0.04	0.04	0.04	0.04	0.04	-0.01	0.02	0.02	0.01
Fe	0.23	0.19	0.23	0.3	0.29	0.37	0.10	0.15	0.10	0.14
Mn	0.01	0.01	0.01	0.01	0.01	0.01	-0.01	-0.01	-0.01	0.07
K	3.0	2.9	3.8	2.6	2.7	3.5	3.0	2.5	3.1	1.8
Ca	NA	NA	NA	NA	NA	NA	NA	NA	NA	168.5
Mg	NA	NA	NA	NA	NA	NA	NA	NA	NA	29.0

Notes

1. All parameters except EC are reported in milligrams per liter,
   EC – Electrical Conductivity
   TDS – Total Dissolved Solids
   Alk – Alkalinity (as $CaCO_3$)
   Hard – Hardness (as $CaCO_3$)
   N – Nitrate
   P – Phosphorous
   F – Flouride
   Cu – Copper
   Ag – Silver
   Mo – Molybdenum
   Zn – Zinc
   Fe – Iron
   Mn – Manganese
   K – Potassium
   Ca – Calcium
   Mg – Magnesium.

2. Electrical Conductivity reported in micro ohms per centimeter.
3. NA – Not Analyzed

Table 10
Extractable Metals from Rock Storage Pile Sample WD-1
(From SRK, July 1998)

Parameter	Results (mg/L)
pH	3
Conductivity	5.6 (mmhos/cm)
Sulfate	3050
Acidity (as $CaCO_3$)	1050
Alkalinity (as $CaCO_3$)	0
Aluminum	151
Antimony	N/A
Arsenic	<0.1
Barium	0.09
Boron	0.1
Cadmium	0.019
Calcium	314
Chloride	6
Chromium	0.03
Cobalt	0.29
Copper	13.6
Flouride	1.2
Iron	102
Lead	<0.021
Magnesium	23
Manganese	3.35
Mercury	<0.0002
Molybdenum	<0.01
Nickel	0.11
Potassium	4
Selenium	<0.1
Silver	<0.01
Sodium	13
Vanadium	<0.01
Zinc	0.87

Table 11
Total and Extractable Metals in Tailings Sample T-10-12
(From SRK, July, 1998)

Parameter	Total Metals in Solid (ppm)	Extractable Metals (mg/L)
Aluminum	2,700	<0.05
Antimony	<0.5	N/A
Arsenic	1.3	<0.1
Barium	52	0.10
Boron	<2	0.07
Cadmium	1.8	<0.005
Calcium	8,500	300
Chloride	N/A	6
Chromium	5	<0.01
Cobalt	13	<0.02
Copper	1600	0.03
Flouride	N/A	1.4
Iron	19,000	<0.02
Lead	15	<0.021
Magnesium	1,800	22
Manganese	251	1.5
Mercury	<0.02	<0.0002
Molybdenum	34	0.19
Nickel	3	<0.02
Potassium	1400	44
Selenium	<0.03	<0.1
Silver	<1	<0.01
Sodium	200	44
Sulfate	N/A	940
Vanadium	7	<0.01
Zinc	418	0.42

Table 12
Physical and Relational Characteristics
Copper Flat Tailings Impoundment Liner Material

Sample ID	Lithology (Visual) (ASTM, 1993)	Physical Relationship
SR-1	Sandy Clay/Silt; red; medium plastic; sand fraction fine grained, poorly graded; weakly cemented	Overlies SR-3 and underlies SR-2
SR-2	Clay/Silt; buff; non plastic; < 10 % fine sand, cemented	Overlies SR-1
SR-3	Sandy Clay/Silt; brown, highly plastic, sand fraction fine grained, poorly graded; weakly cemented	Underlies SR-1

Table 13
Summary of Geotechnical Results
Copper Flat Tailings Impoundment Liner Material
(From SHB, Oct. 1980)

Material/ Similar to Sample ID	Location	Percent Passing #200 Sieve	Liquid Limit	Plastic Index	USCS Symbol	Max. Density (lb/ft^3)	Optimum Moisture (%)	Compacted Permeability (cm/s)
Red/ SR-1	Sta. 32 Sta. 13	57	61	38	CH	103.5	19.5	NA
Red/ SR-1	Sta. 0 Sta. 10	63	61	28	MH	98.2	20.9	NA
Red/ SR-1	Clay Borrow	65	46	28	CL	105.3	19.3	NA
Red/ SR-1	Pit A 2.5-6 ft	61	45	25	CL	118.2	11.4	1.8×10^{-6}
Red/ SR-1	Pit E 2-5 ft	76	38	14	CL	104.8	15.6	2.9×10^{-7}
Red/ SR-1	Pit F 2-5	99	58	34	CH	104.7	15.3	2.1×10^{-8}
Brown/ SR-3	Boring #1, 15 ft	74	49	20	ML	NA	NA	NA
Brown/ SR-3	Boring #18, 34.5 ft	68	40	20	CL	NA	NA	NA

Table 14
Clay Mineralogy and Distribution
Of Samples SR-1 and SR-3
Copper Flat Tailings Impoundment Liner Material

Sample ID	**Illite (parts in 10)**	**Smectite (parts in 10)**	**Mixed Layer (I/S) (parts in 10)**	**Kaolinite (Parts in 10)**
SR-1 (Red)	0	2	6	2
SR-3 (Brown)	2	0	6	2

Table 15
New Mexico Water Quality Control Commission Numeric Standards (From NMWQCC, 1995, 2001)

Discharge to Groundwater (mg/L)[1]/ Surface Water (mg/L)[2]

Parameter	Human Health	Domestic Use	Irrigation Use	Domestic Use	Irrigation Use	Livestock/ Wildlife
Aluminum			5.0		5.0	5.0
Antimony	0.006			0.006		
Arsenic	0.1			0.05	0.10	0.2
Barium	1.0			2.0		
Beryllium				0.004		
Boron			0.75		0.75	5.0
Cadmium	0.01			0.005	0.01	0.05
Chloride		250				
Chromium	0.05			0.1	0.1	1.0
Cobalt			0.05		0.05	1.0
Copper		1.0			0.2	0.5
Cyanide	0.2			0.2		
Fluoride	1.6					
Iron		1.0				
Lead	0.05			0.05	5.0	0.1
Manganese		0.2				
Mercury	0.002			0.002		0.01
Molybdenum			1.0		1.0	
Nitrate (as N)	10.0			10.0		
Nickel			0.2	0.1		
‘pH		6-9				
Radium	30			5		30
Selenium	0.05			0.05	0.13(0.25)[3]	0.05
Silver	0.05					
Sulfate		600				
Thallium				0.002		
TDS		1000				
Uranite	5.0			5.0		
Vanadium					0.1	0.1
Zinc		10			2.0	25

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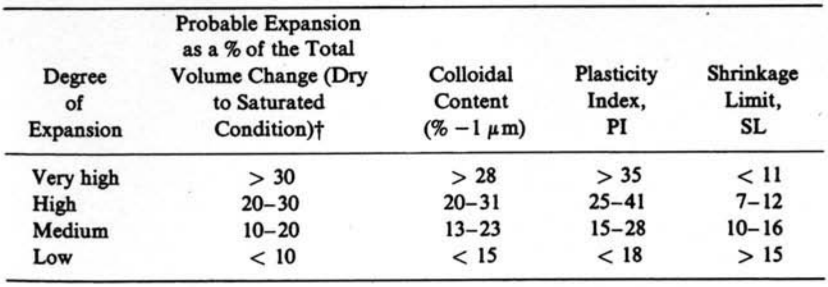
[1] New Mexico Water Quality Control Commission, Title 20, Chapter 6, Part 2, Ground and Surface Water Protection, December, 1995, Standards for groundwater of 10,000 mg/L or less.

[2] New Mexico Water Quality Control Commission, Title 20, Chapter 6, Part 1, Water Quality Standards for Interstate Streams in New Mexico, December, 2001.

[3] In presence of >500 mg/L sulfate.

Table 16
Probable Expansion Estimated
From Classification Test Data
(from Holtz and Kovacs, 1981, after Holtz, 1959 and USBR, 1974)



Degree of Expansion	Probable Expansion as a % of the Total Volume Change (Dry to Saturated Condition)†	Colloidal Content (% −1 μm)	Plasticity Index, PI	Shrinkage Limit, SL
Very high	> 30	> 28	> 35	< 11
High	20–30	20–31	25–41	7–12
Medium	10–20	13–23	15–28	10–16
Low	< 10	< 15	< 18	> 15

FIGURES

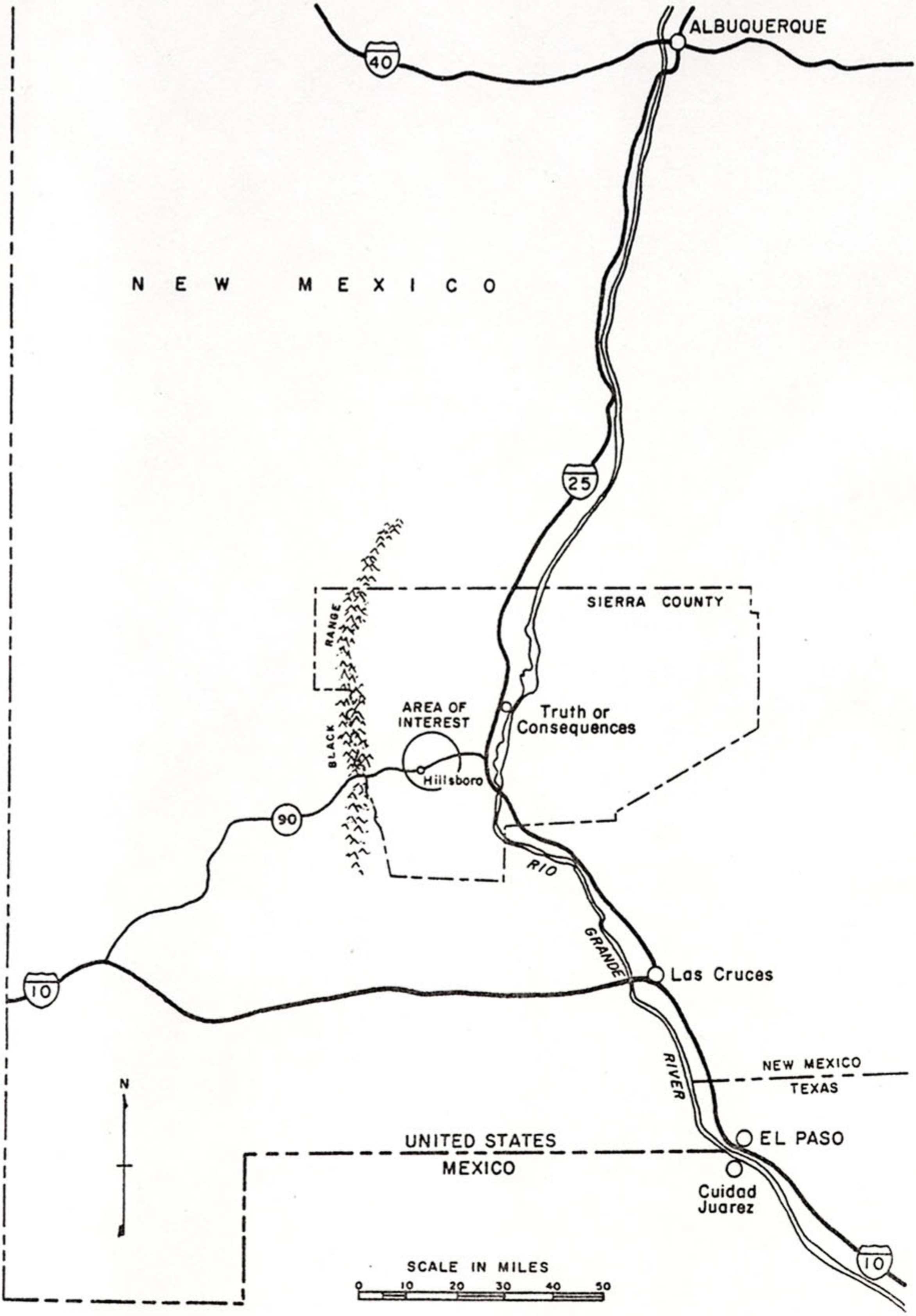


Figure 1
Site Location Map
Copper Flat, New Mexico
(from BLM, 1978)

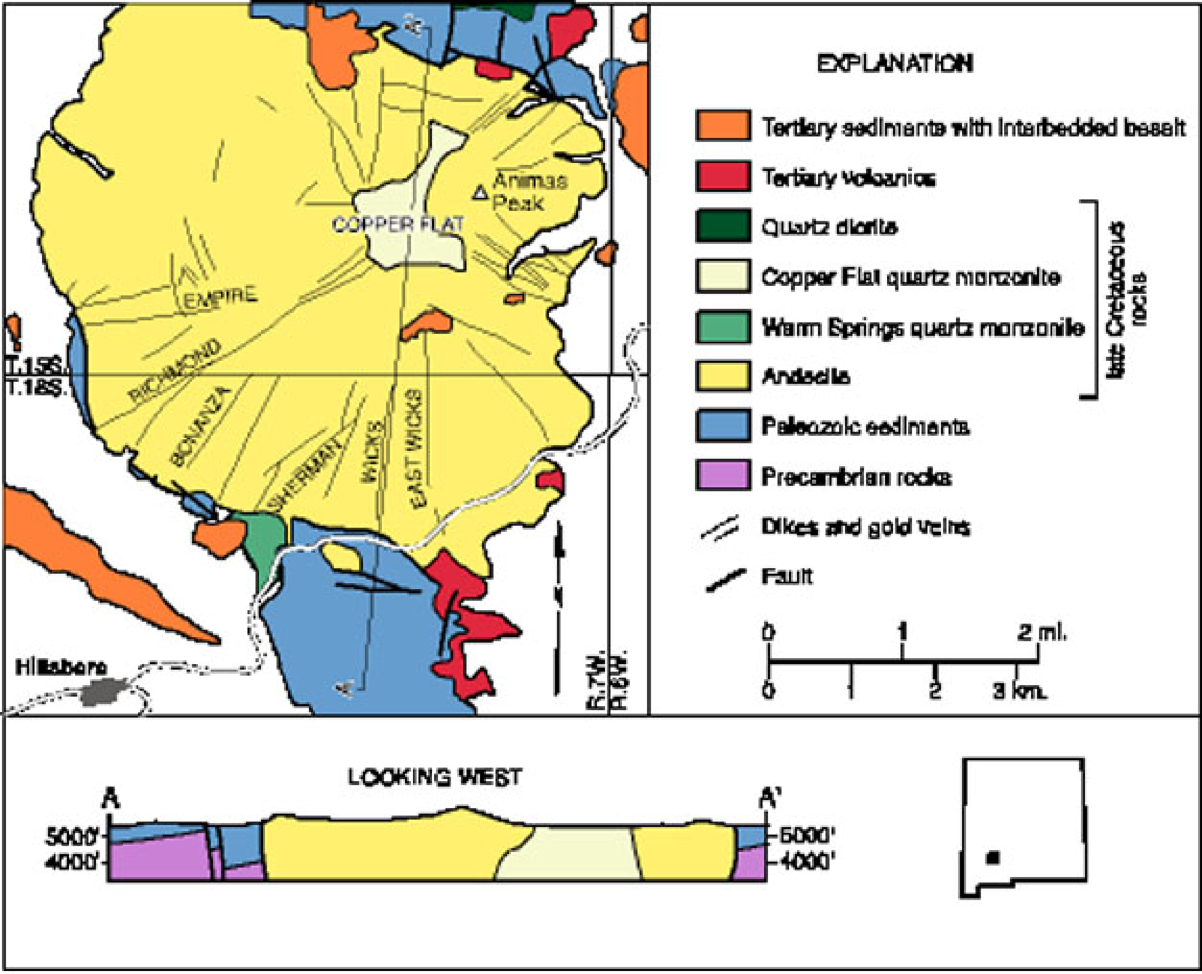


Figure 2
Geologic Schematic of the
Hillsboro Mining District, New Mexico
(from McLemore et al., 2000; Dunn, 1982; Hedlund, 1985)

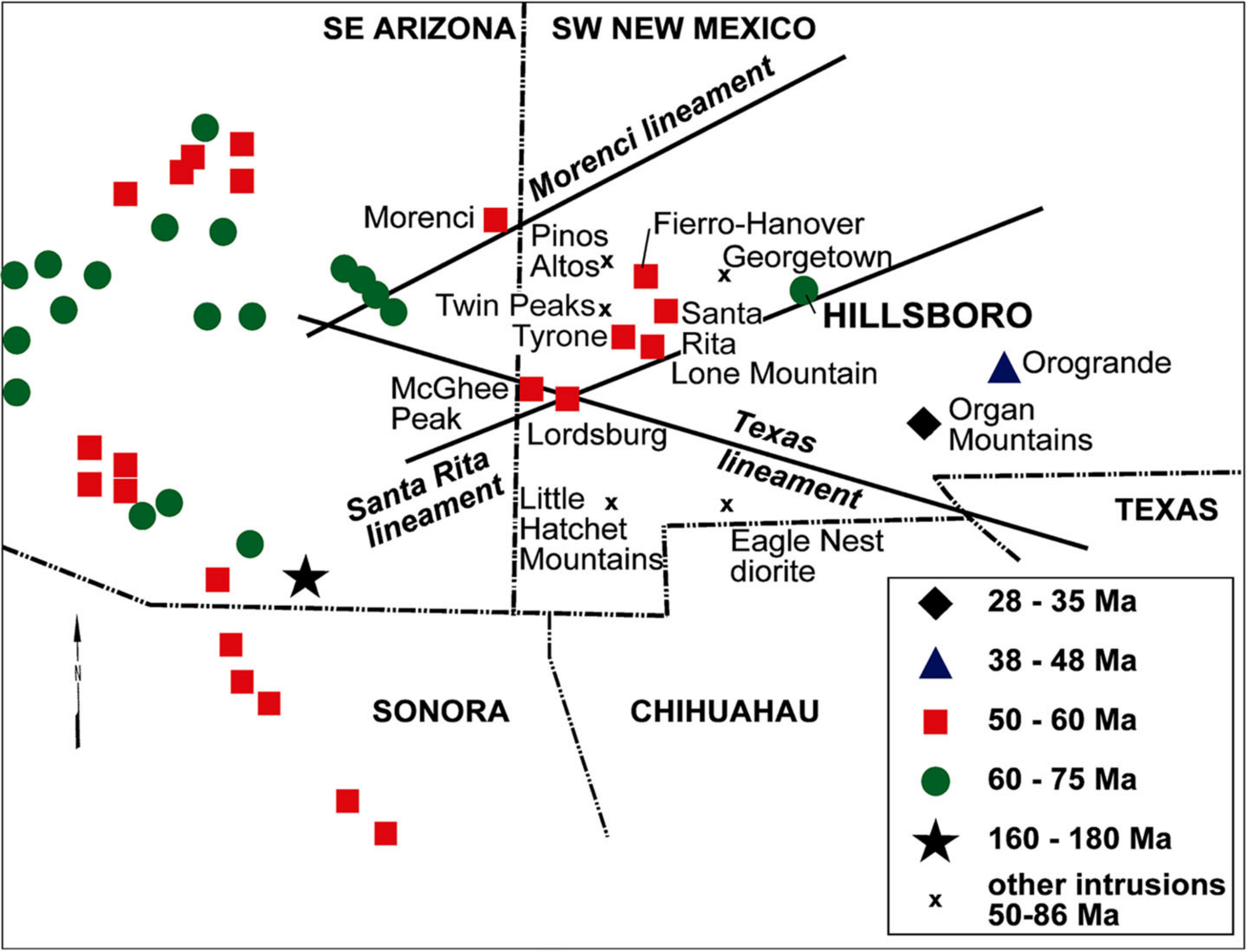


Figure 3
Arizona-Sonora-New Mexico Porphyry Copper Belt
(from McLemore et al., 2000)

Figure 4
Copper Flat Mine, 1982, View West
Copper Flat, New Mexico
(Courtesy of Hydro Resources, Inc.)

Figure 5
Copper Flat Mine, 1982, View East
Copper Flat, New Mexico
(Courtesy of Hydro Resources, Inc.)

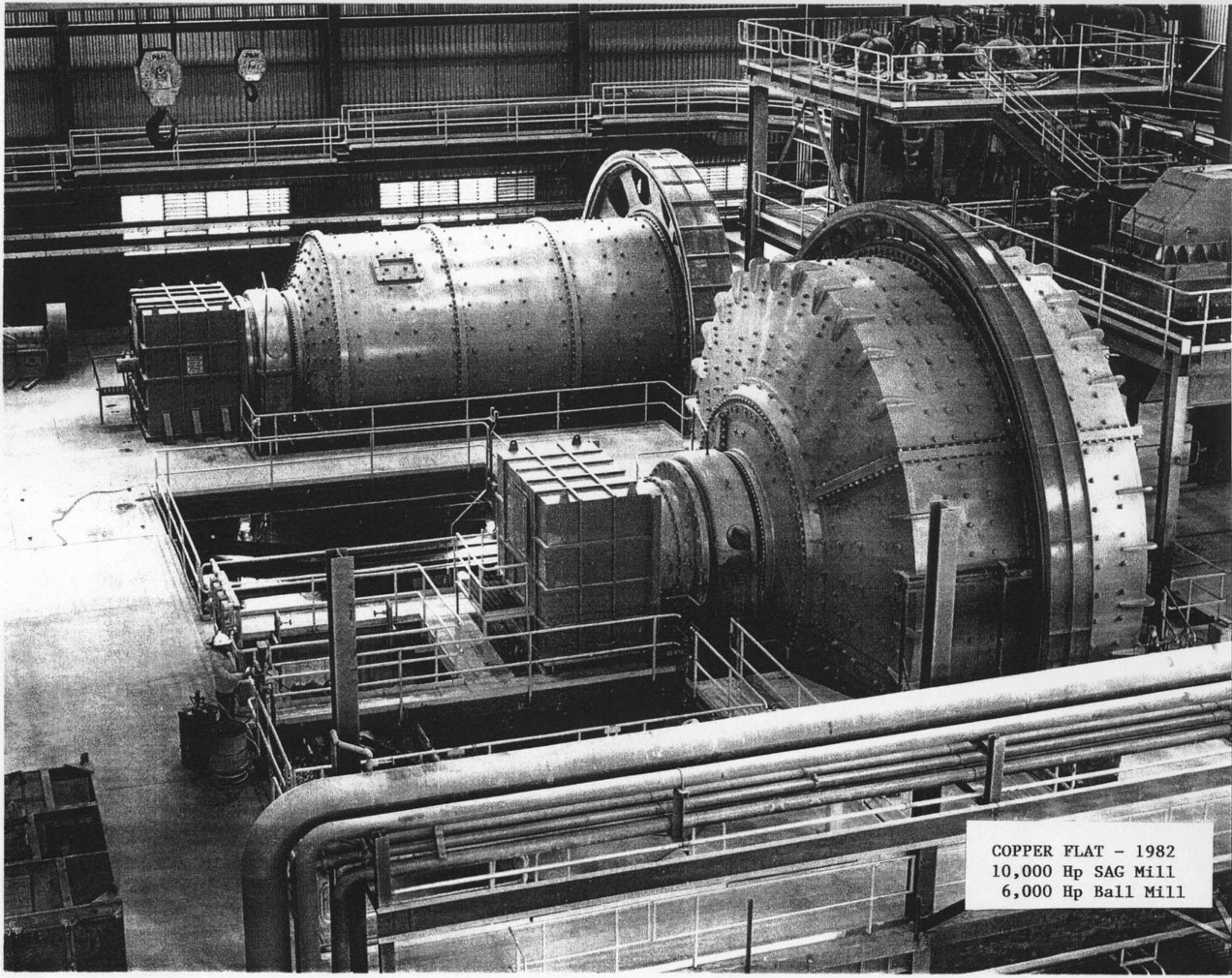


Figure 6
Copper Flat Mills, 1982
Copper Flat, New Mexico
(from Alta Gold Corporation, 1995)

Figure 7
Copper Flat Mine Site, 1988
Copper Flat, New Mexico
(from Alta Gold Corporation, 1995)

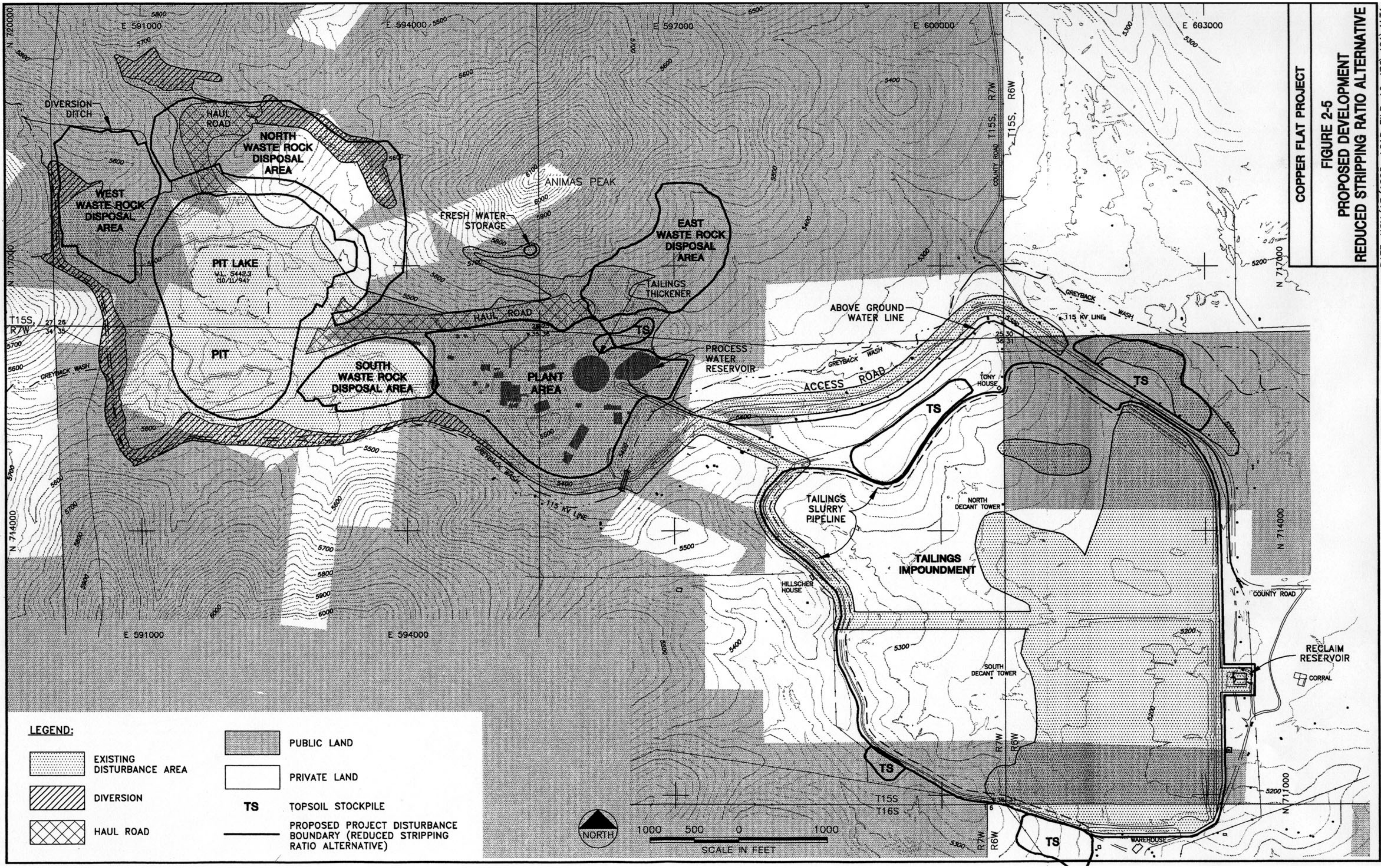


Figure 8
Copper Flat Mine Layout and Property Ownership
Copper Flat, New Mexico
(from BLM, 1999, after SRK)

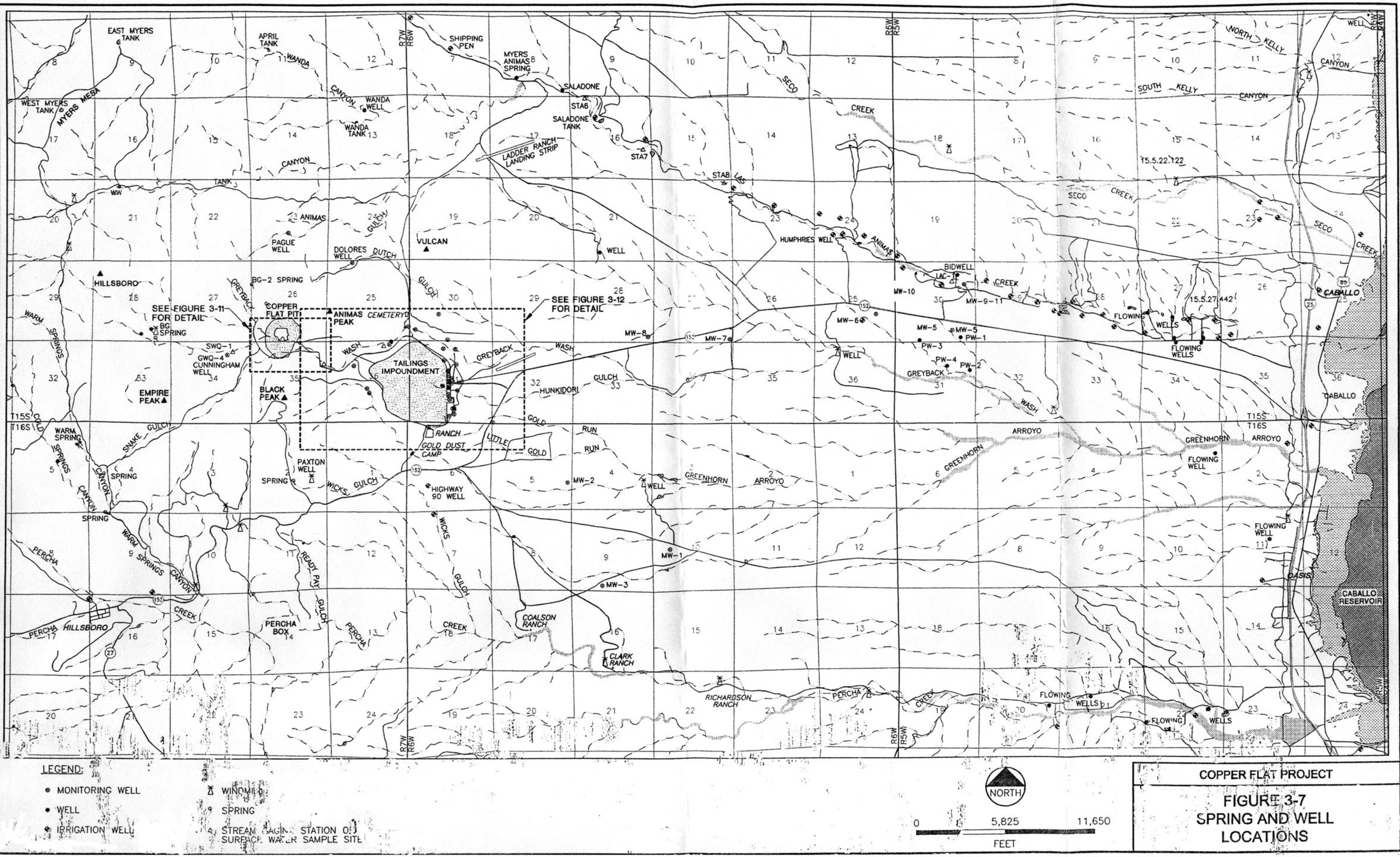


Figure 9
Well and Spring Locations
Copper Flat, New Mexico
(from BLM, 1999, after SRK)

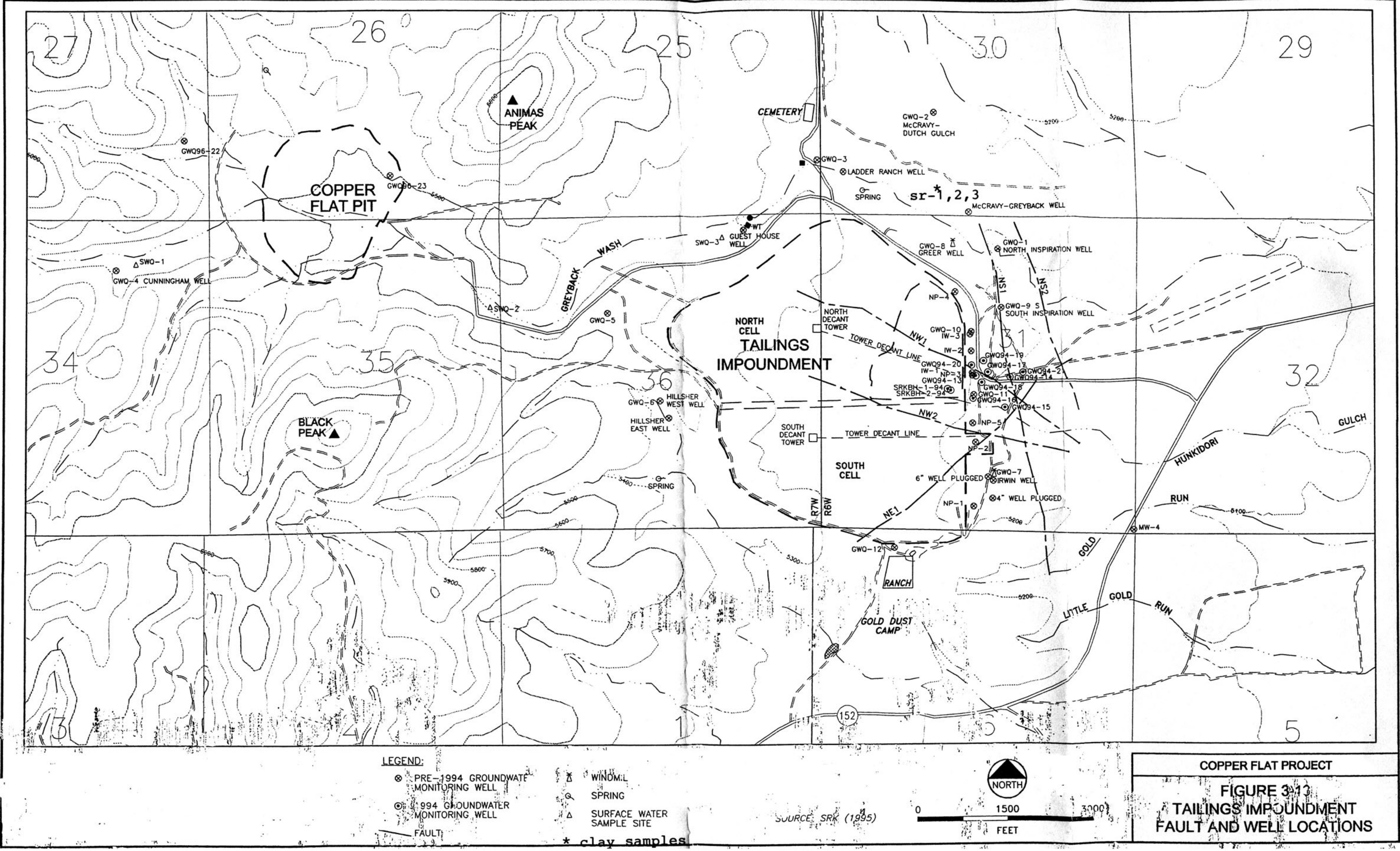


Figure 10
Well and Spring Locations, Pit and Tailings Impoundment Detail
Copper Flat, New Mexico
(from BLM, 1999, after SRK)

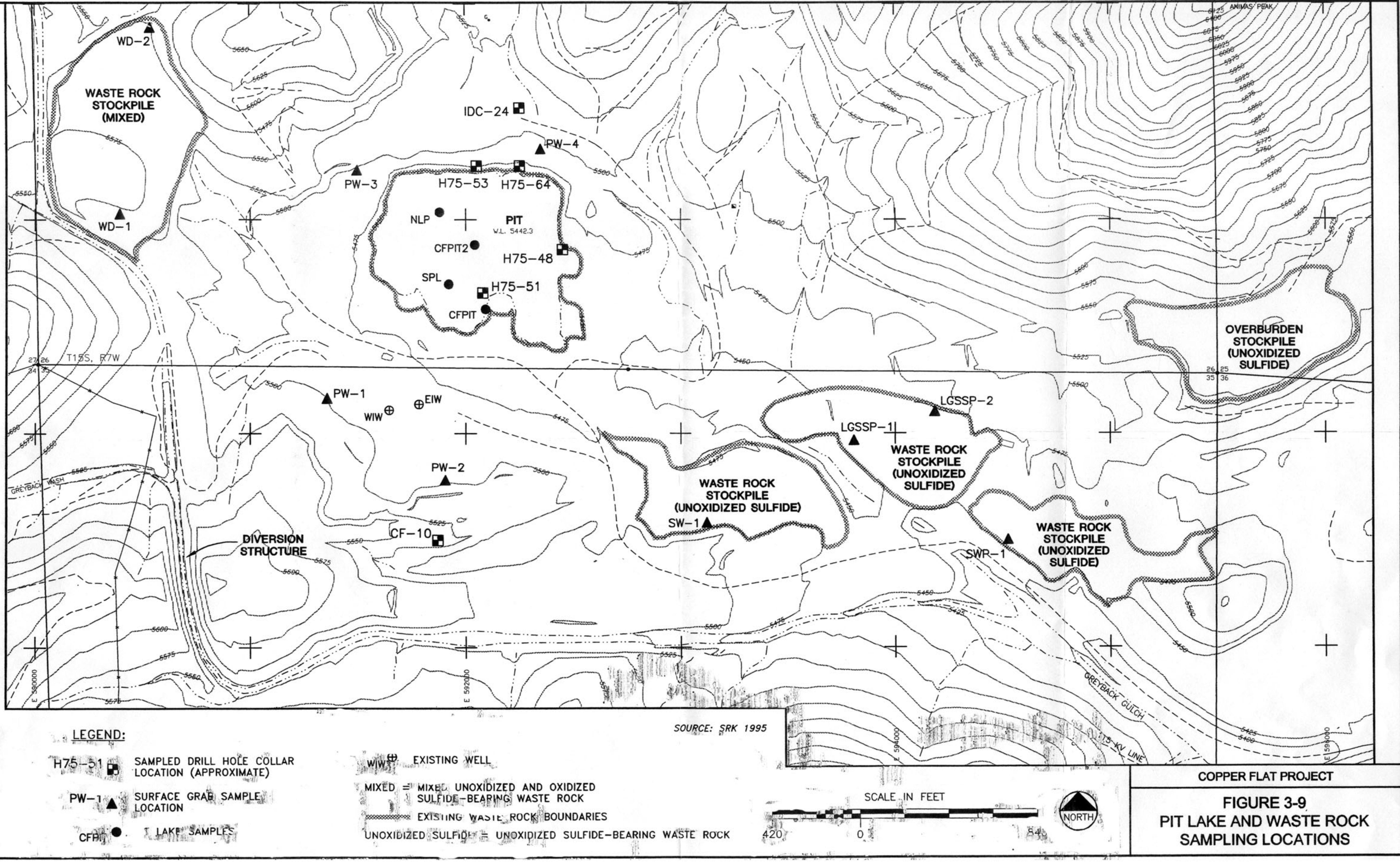


Figure 11
Pit Wall, Waste Rock, and Drill Core Locations
Copper Flat, New Mexico
(from BLM, 1999, after SRK)

Figure 12
Pit Area Paste pH Sample Locations
Copper Flat, New Mexico
(from BLM 1999, after SRK)

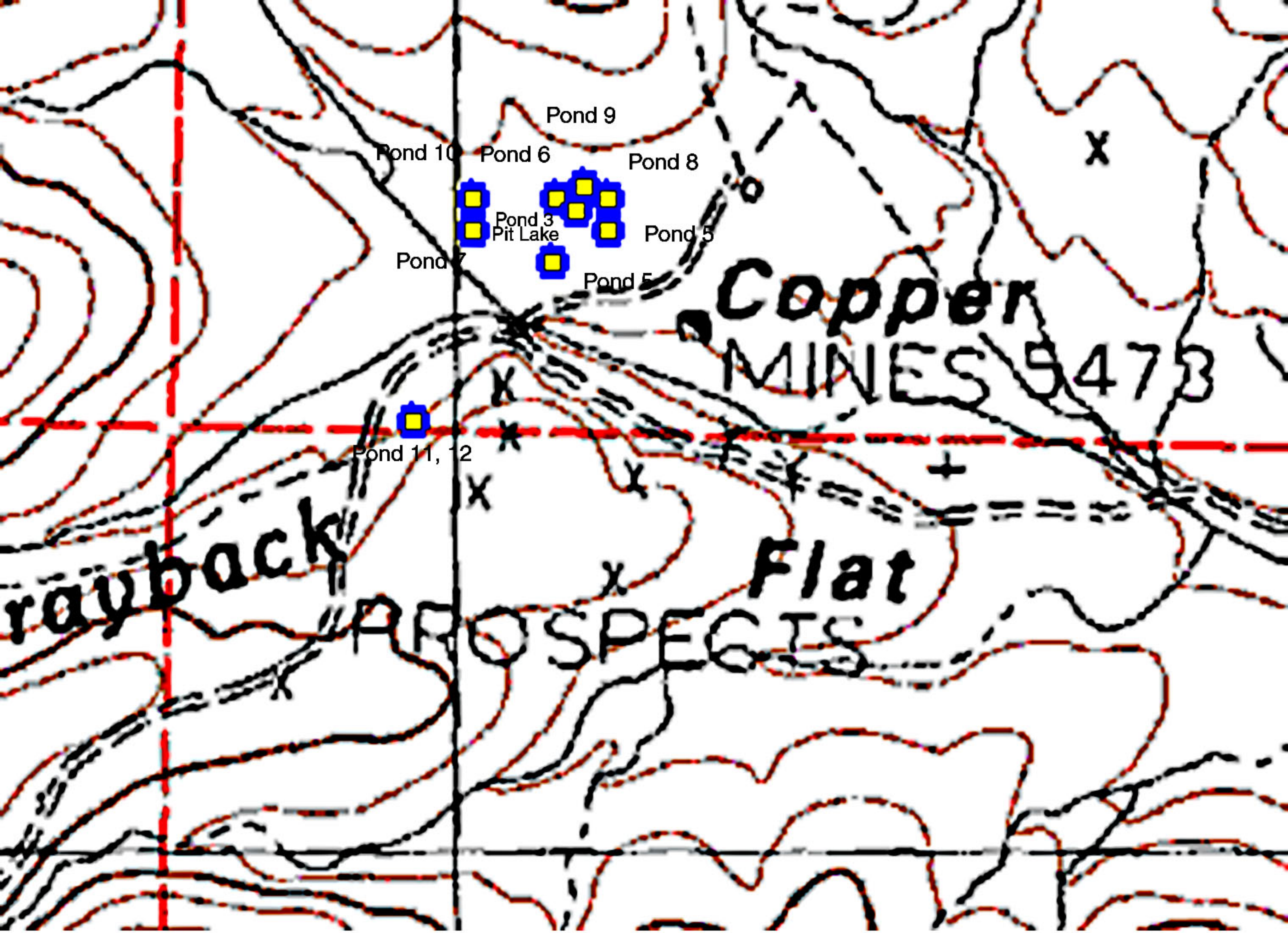
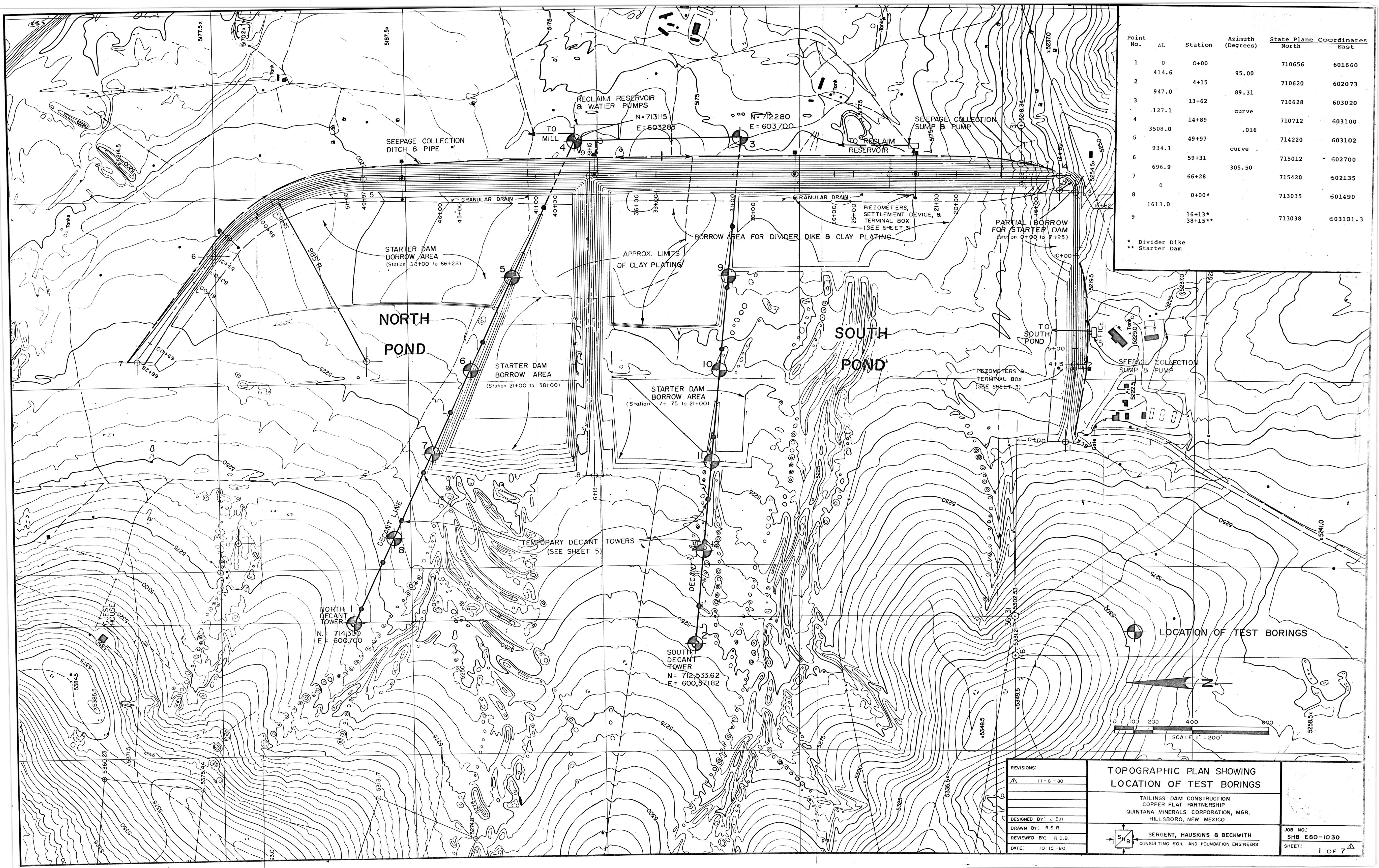


Figure 13
Approximate Pond Rock Sample Locations
Copper Flat, New Mexico
(Approximate Scale: 1": 500')



Point No.	ΔL	Station	Azimuth (Degrees)	State Plane Coordinates North	State Plane Coordinates East
1	0	0+00		710656	601660
	414.6		95.00		
2		4+15		710620	602073
	947.0		89.31		
3		13+62		710628	603020
	127.1		curve		
4		14+89		710712	603100
	3508.0		.016		
5		49+97		714220	603102
	934.1		curve		
6		59+31		715012	602700
	696.9		305.50		
7		66+28		715420	602135
	0				
8		0+00*		713035	601490
	1613.0				
9		16+13* 38+15**		713038	603101.3

* Divider Dike
** Starter Dam

REVISIONS:
⚠ 11-6-80
DESIGNED BY: J E.H
DRAWN BY: R.S.R.
REVIEWED BY: R.D.B.
DATE: 10-15-80

TOPOGRAPHIC PLAN SHOWING
LOCATION OF TEST BORINGS

TAILINGS DAM CONSTRUCTION
COPPER FLAT PARTNERSHIP
QUINTANA MINERALS CORPORATION, MGR.
HILLSBORO, NEW MEXICO

SERGENT, HAUSKINS & BECKWITH
CONSULTING SOIL AND FOUNDATION ENGINEERS

JOB NO.: SHB E80-1030
SHEET: 1 OF 7 ⚠

Figure 14
Tailings Impoundment Layout and Decant Alignment Boring Locations
Copper Flat, New Mexico
(from SHB, 1980)

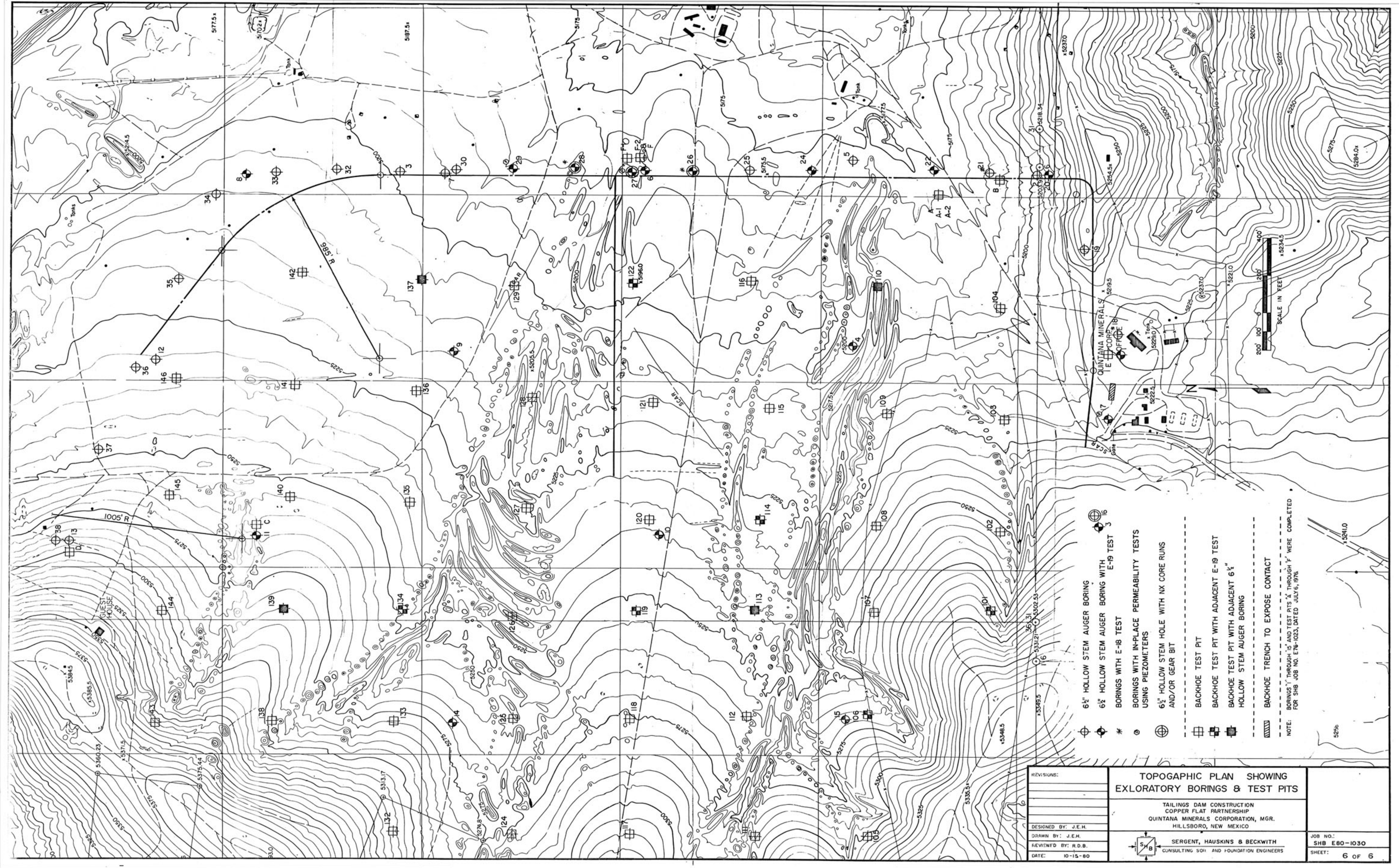


Figure 15
Geotechnical Soil Boring and Test Pit Locations
Copper Flat, New Mexico
(from SHB, 1980)

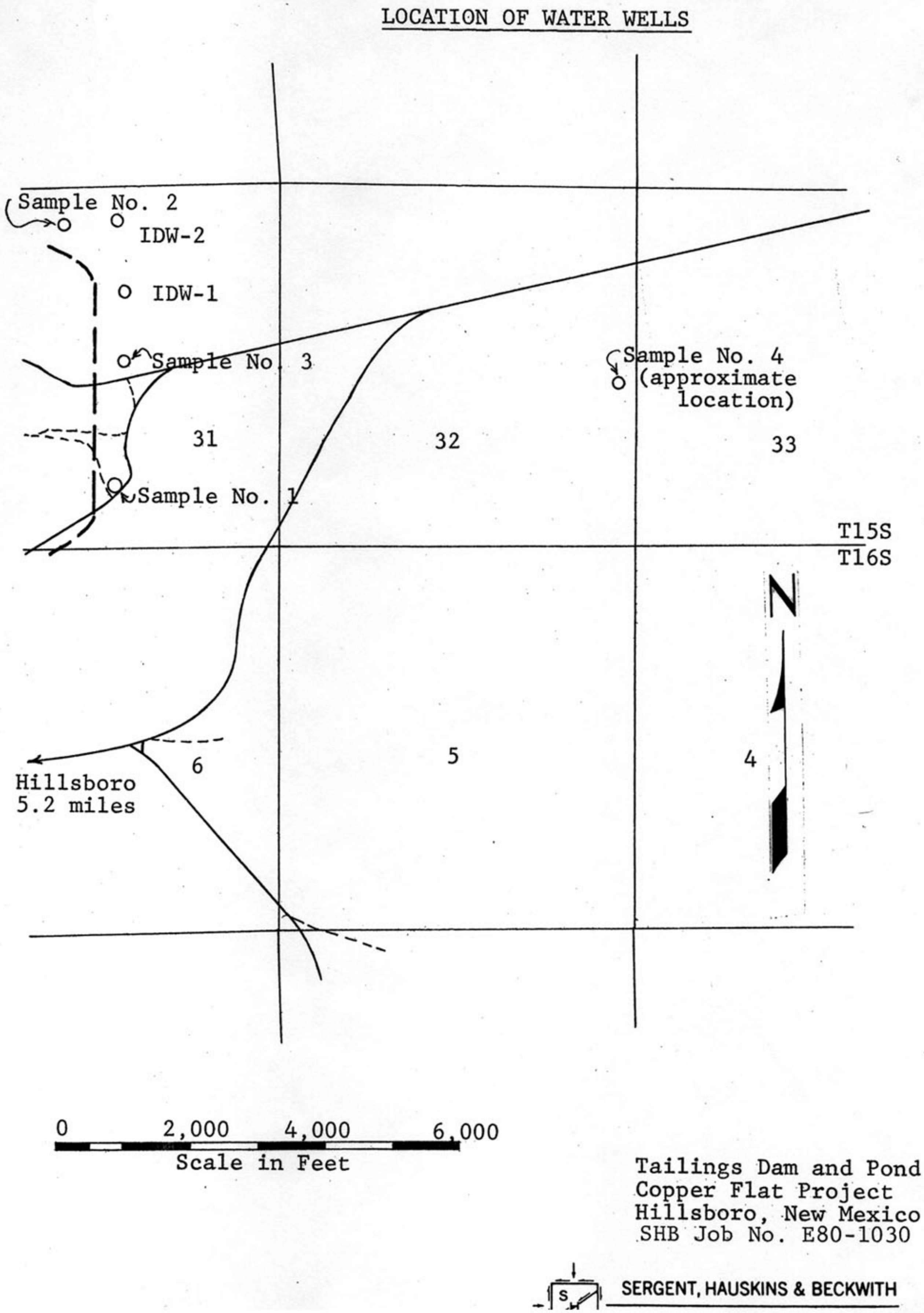


Figure 16
1976 Groundwater and Soil Sample Locations
Copper Flat, New Mexico
(from SHB, 1980)

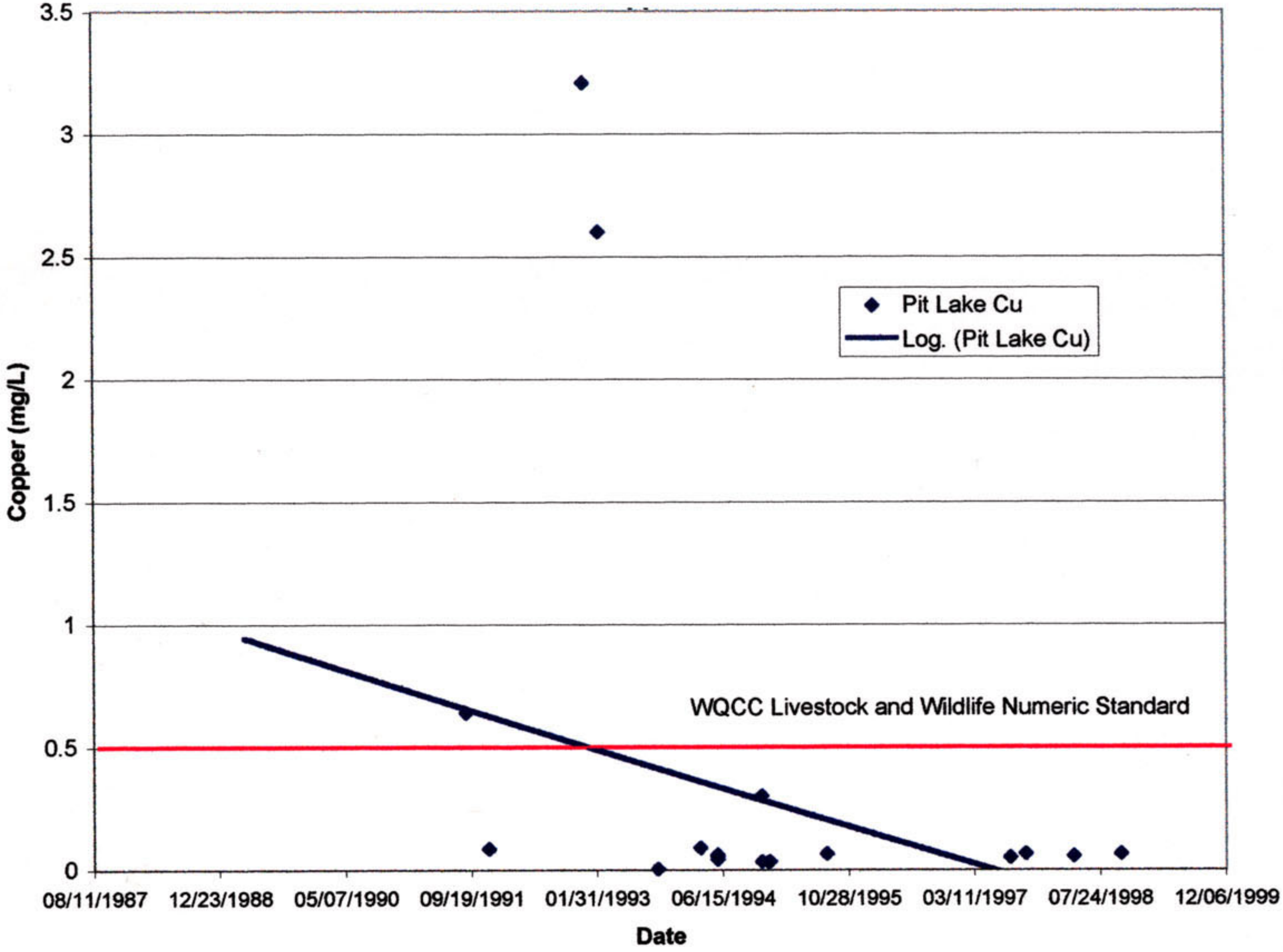


Figure 17
Copper Concentrations in the Mine Pit Lake
Copper Flat, New Mexico

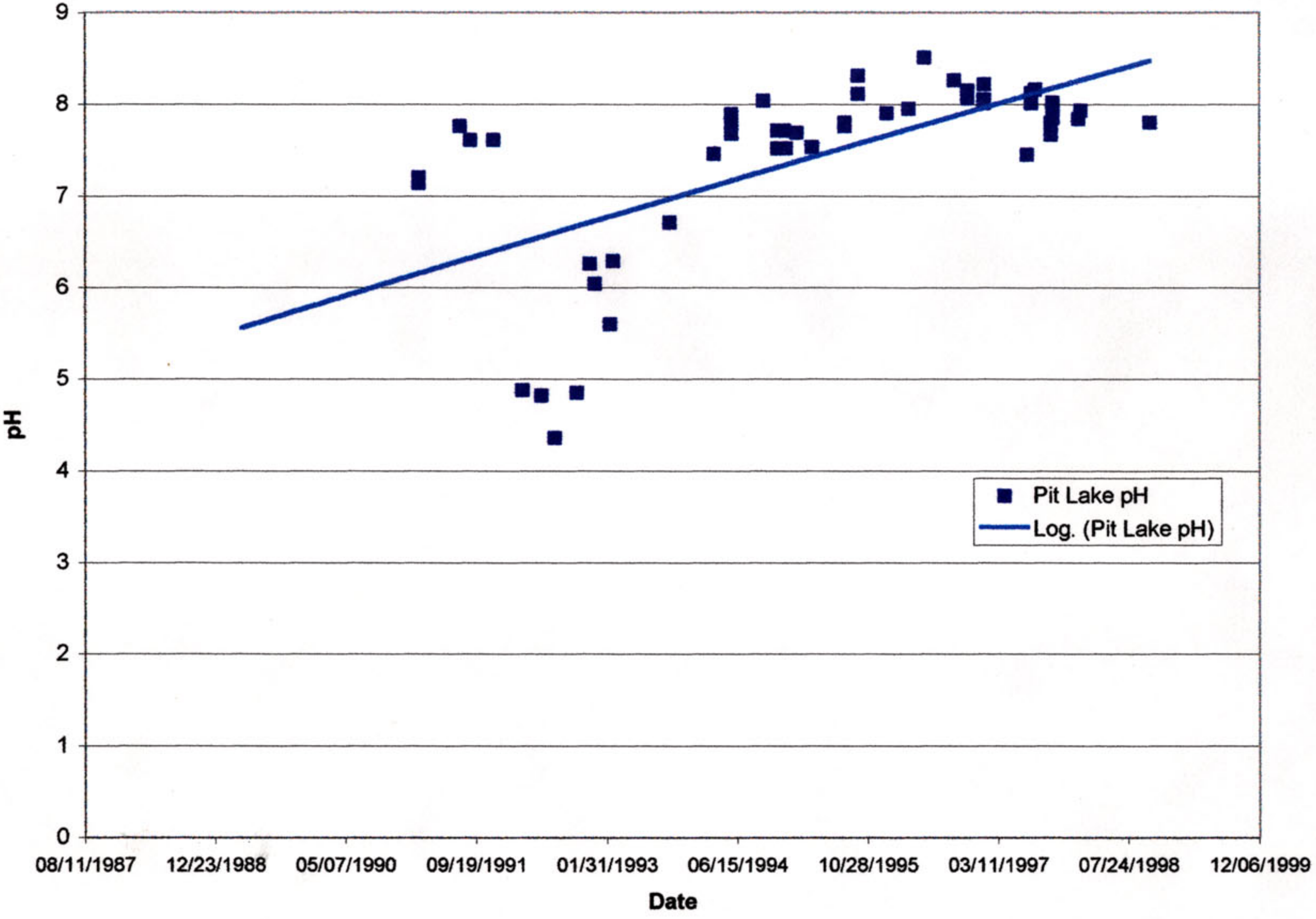


Figure 18
pH in the Mine Pit Lake
Copper Flat, New Mexico

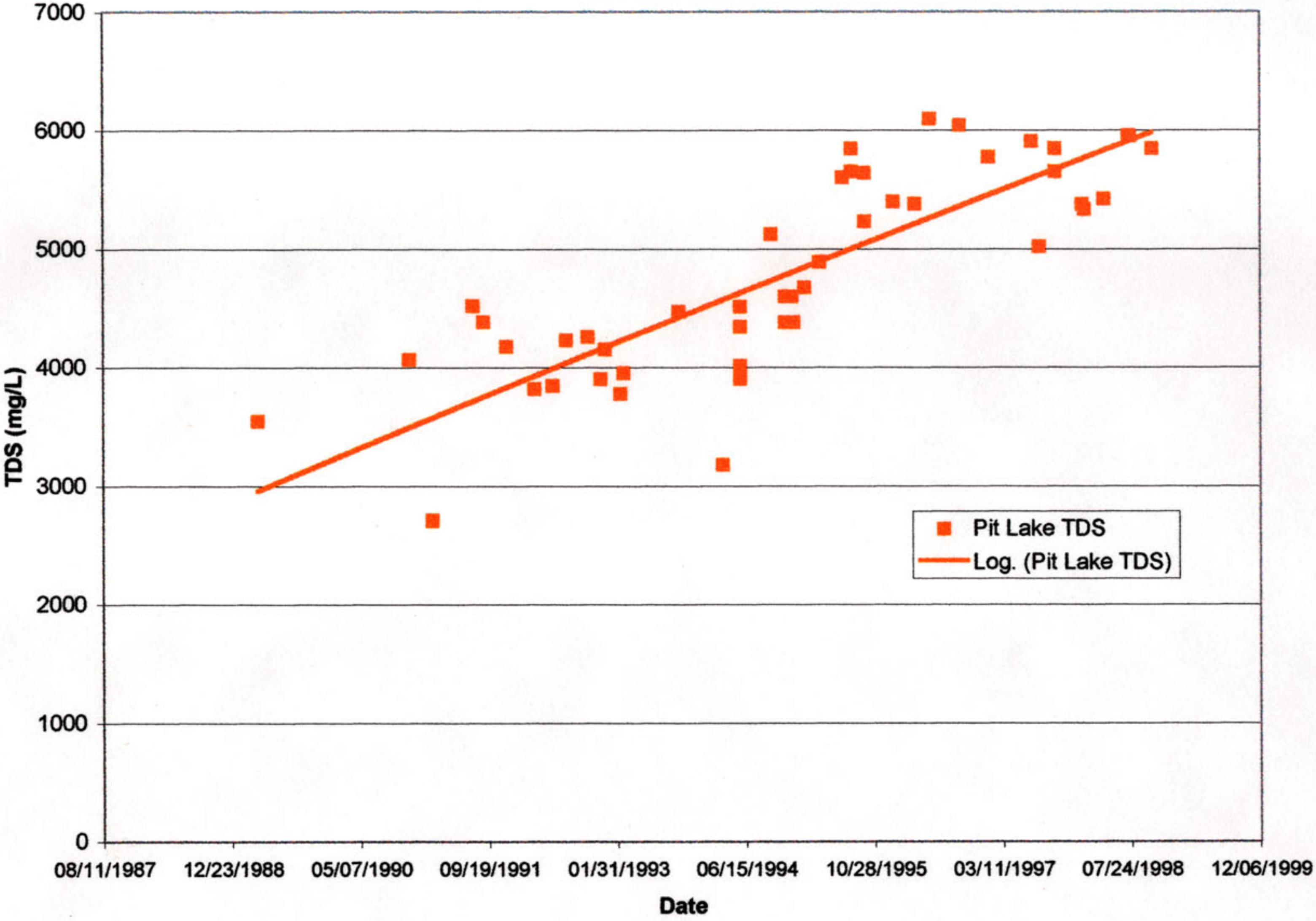


Figure 19
Total Dissolved Solid Concentrations in the Mine Pit Lake
Copper Flat, New Mexico

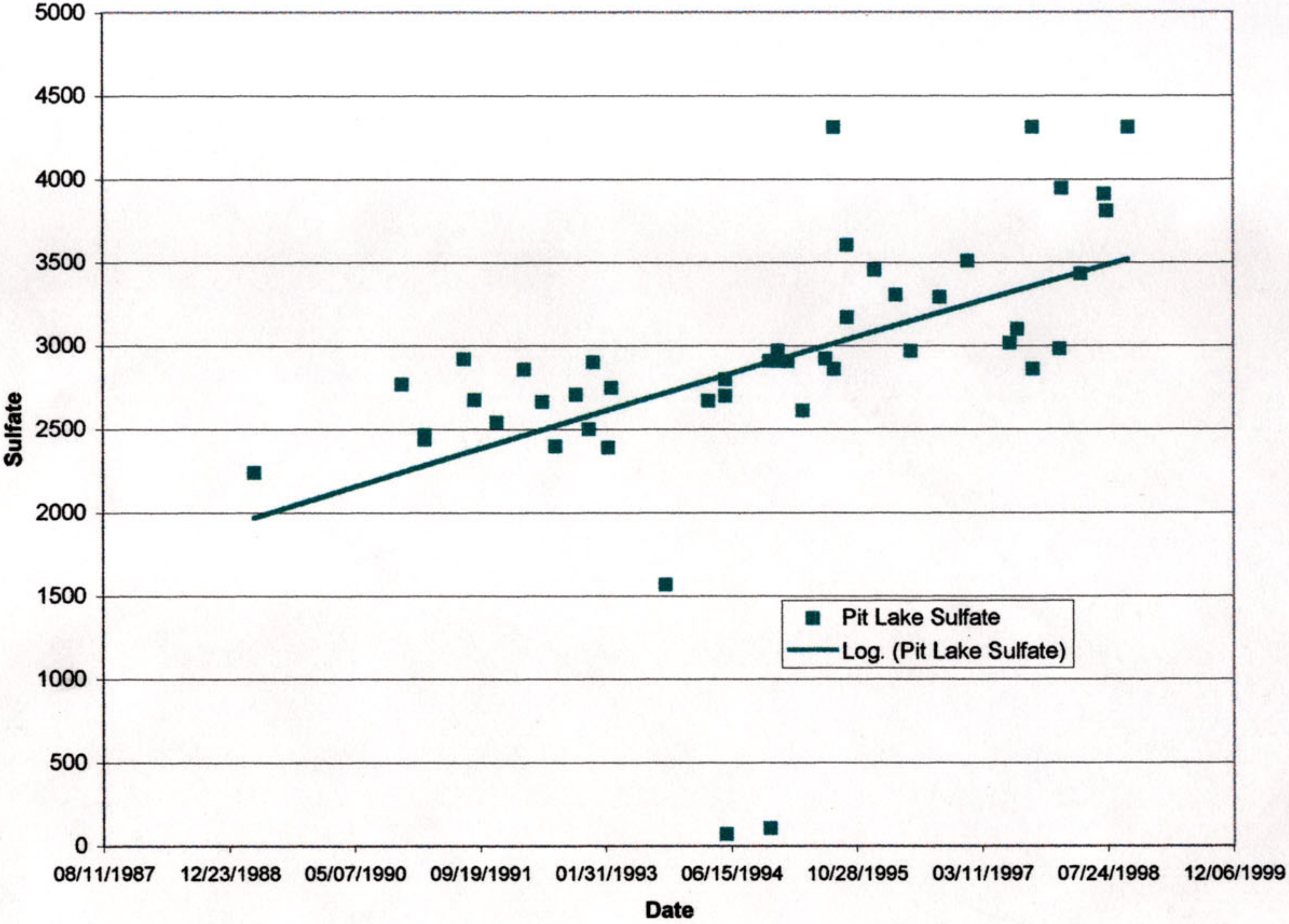


Figure 20
Sulfate Concentration in the Mine Pit Lake
Copper Flat, New Mexico

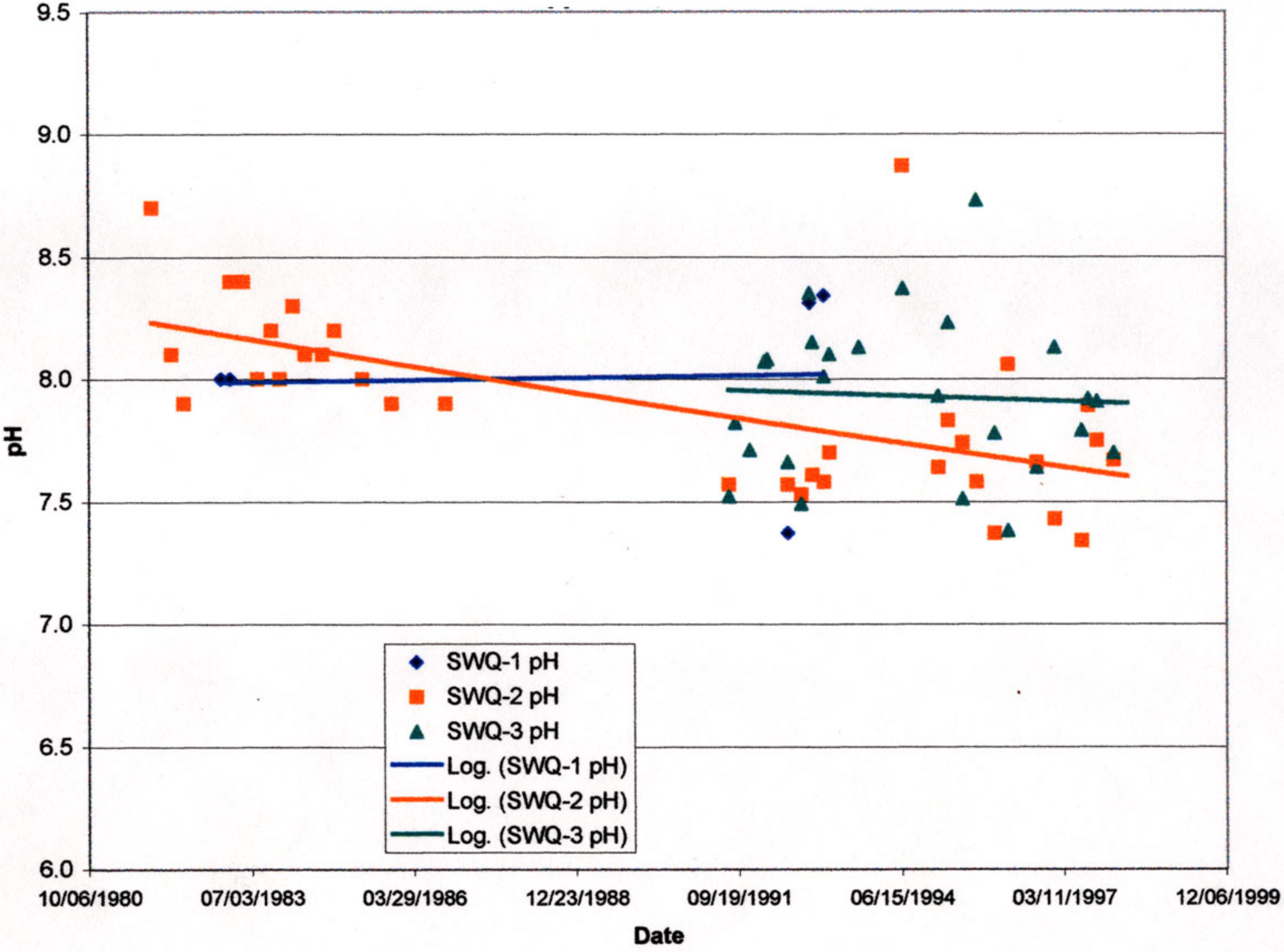


Figure 21
pH from Greyback Gulch Surface Water
Copper Flat, New Mexico

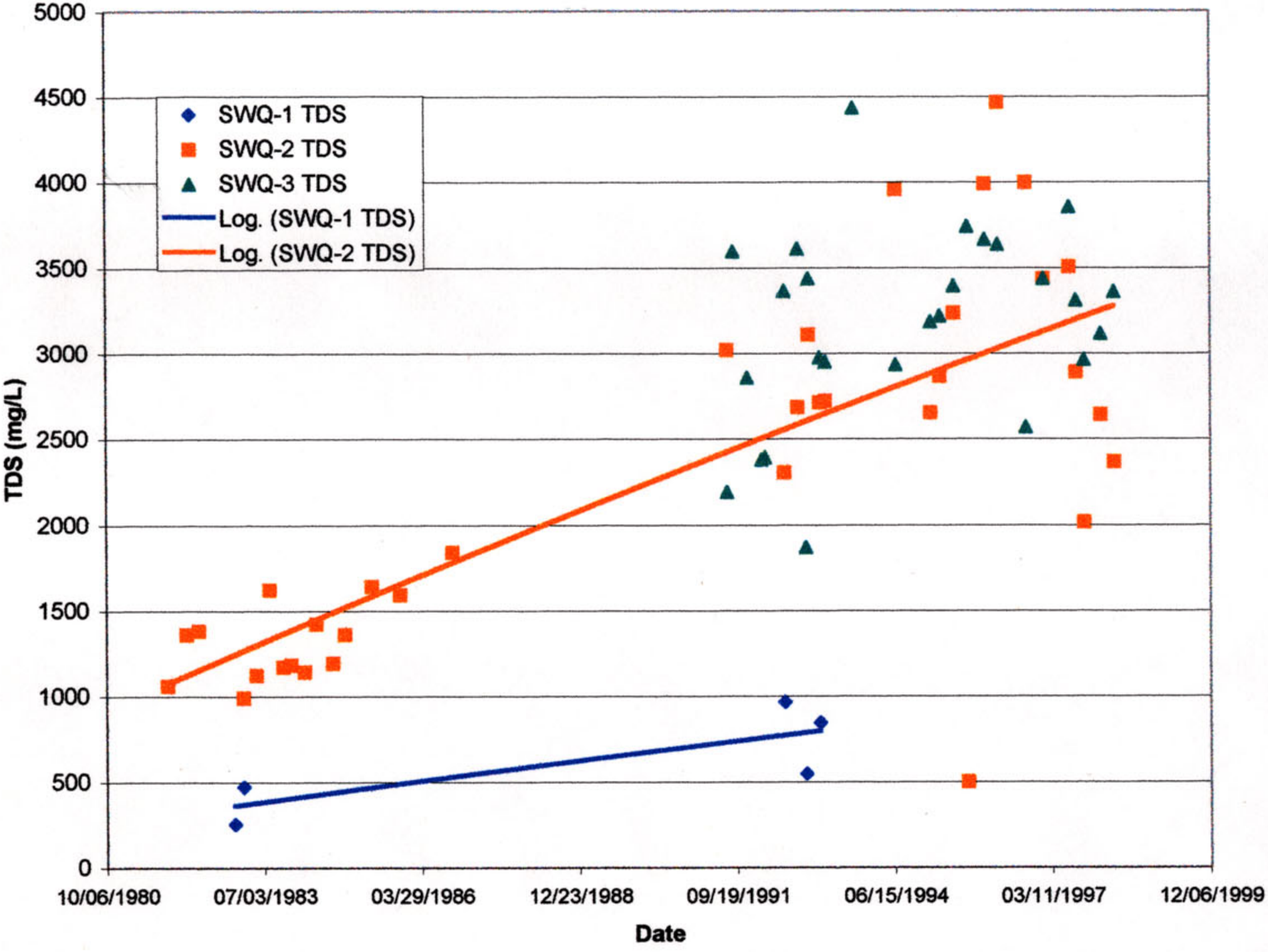


Figure 22
TDS Concentrations from Greyback Gulch Surface Water
Copper Flat, New Mexico

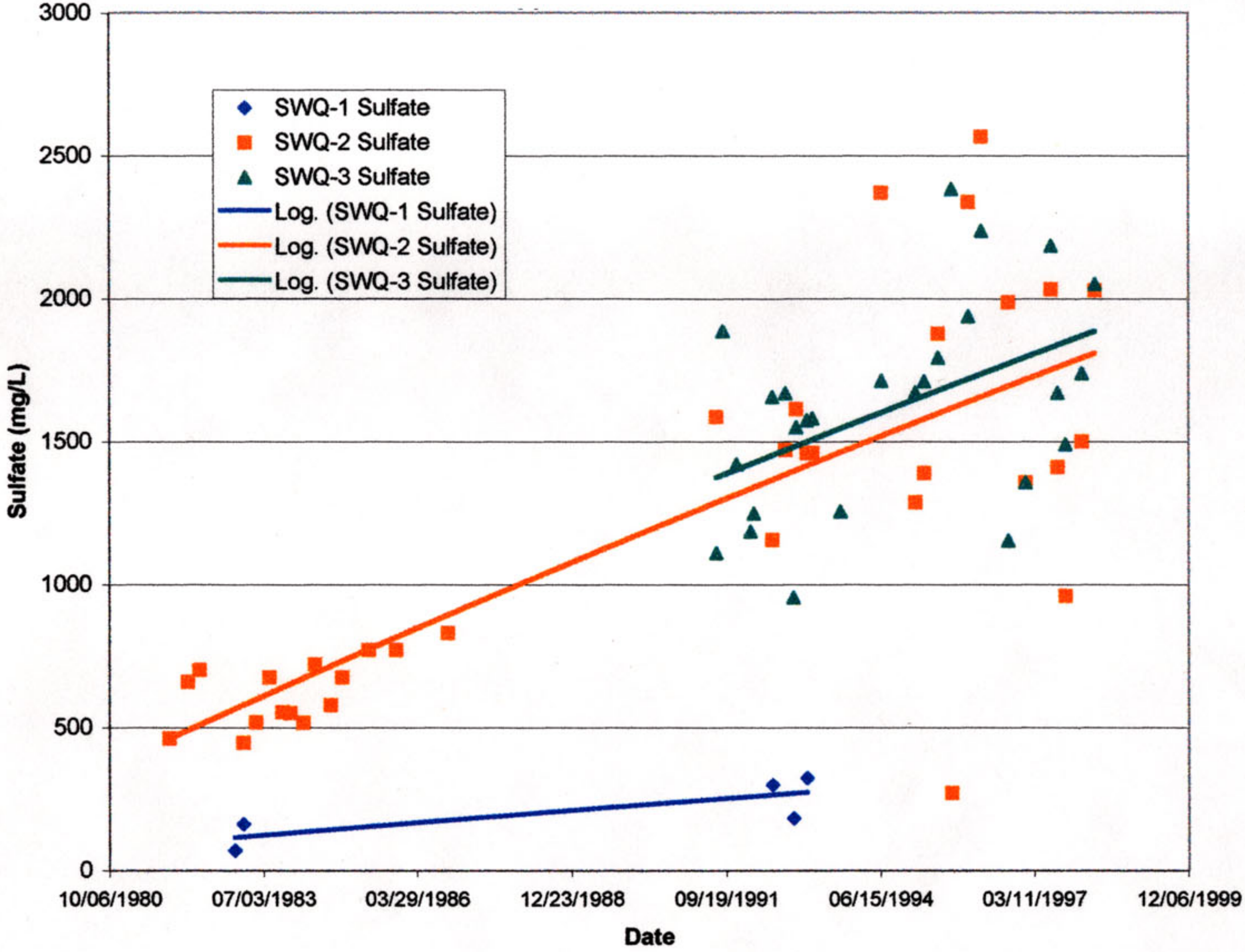


Figure 23
Sulfate Concentrations from Greyback Gulch Surface Water
Copper Flat, New Mexico

Chemical Constituents in Equivalents per Million

Sample	Date	NaK	Ca	Mg	Fe	CO3	SO4	HCO3	Cl
SWQ-1	1/ 4/1993	4.70	5.44	2.96	0.00	0.00	5.75	5.90	0.76
SWQ-2	31/ 3/1993	12.19	21.76	6.83	0.00	0.00	30.40	4.92	3.47
SWQ-3	31/ 3/1993	11.84	22.21	8.97	0.00	0.00	32.90	5.08	3.81

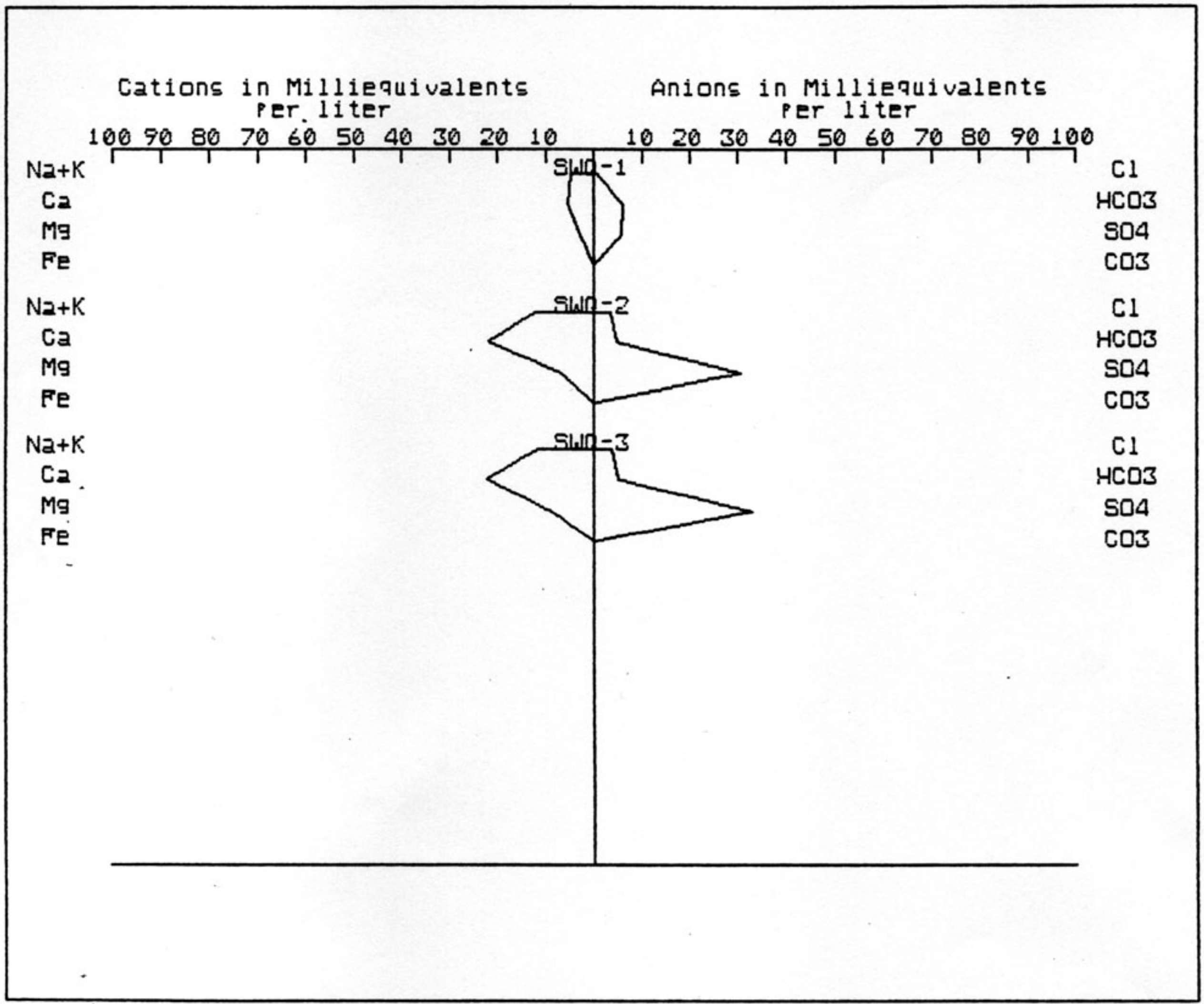


Figure 24
Greyback Gulch Surface Water Stiff Diagrams
Copper Flat, New Mexico
(from Newcomer et al., 1993)

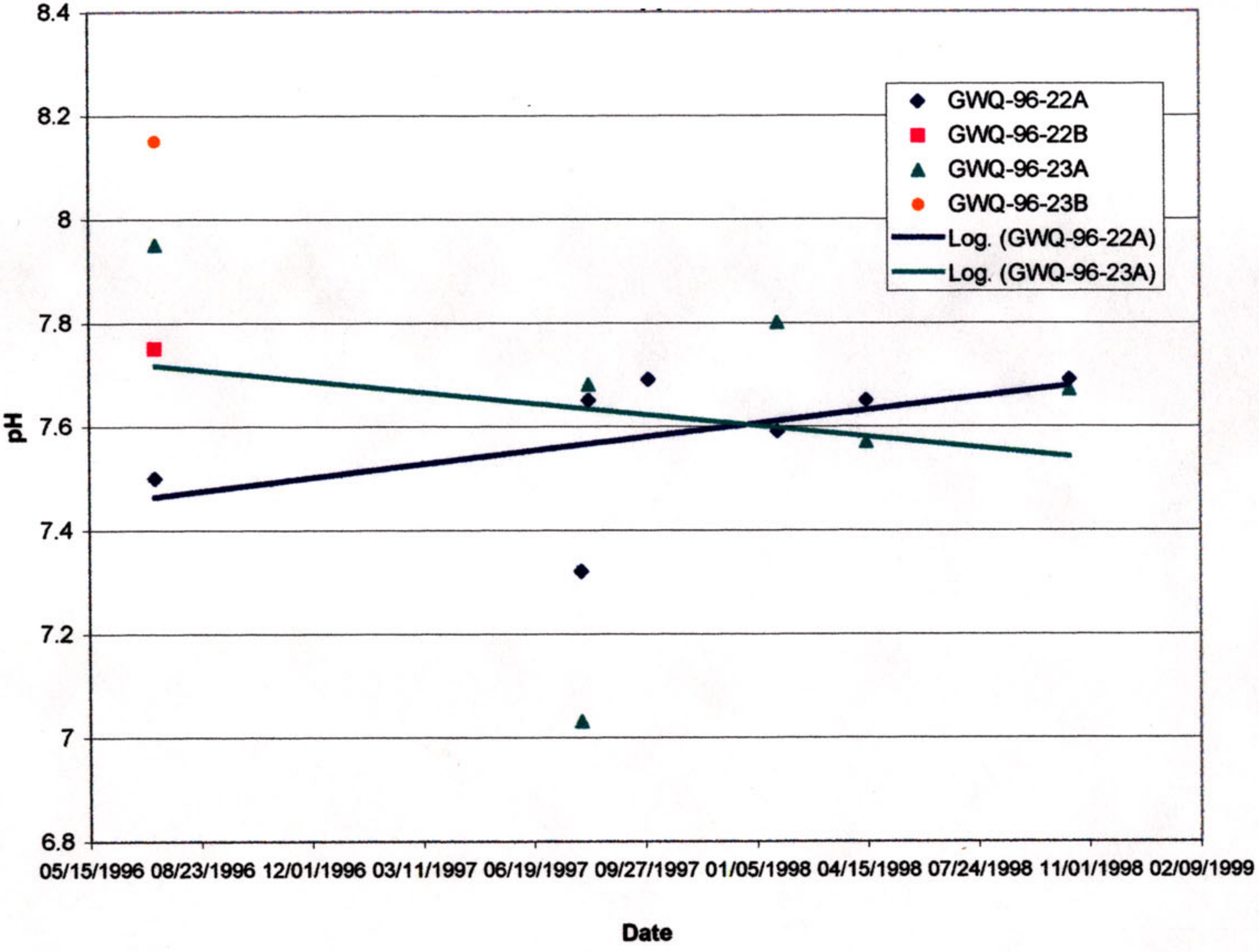


Figure 25
Groundwater pH, Mine Pit Vicinity
Copper Flat, New Mexico

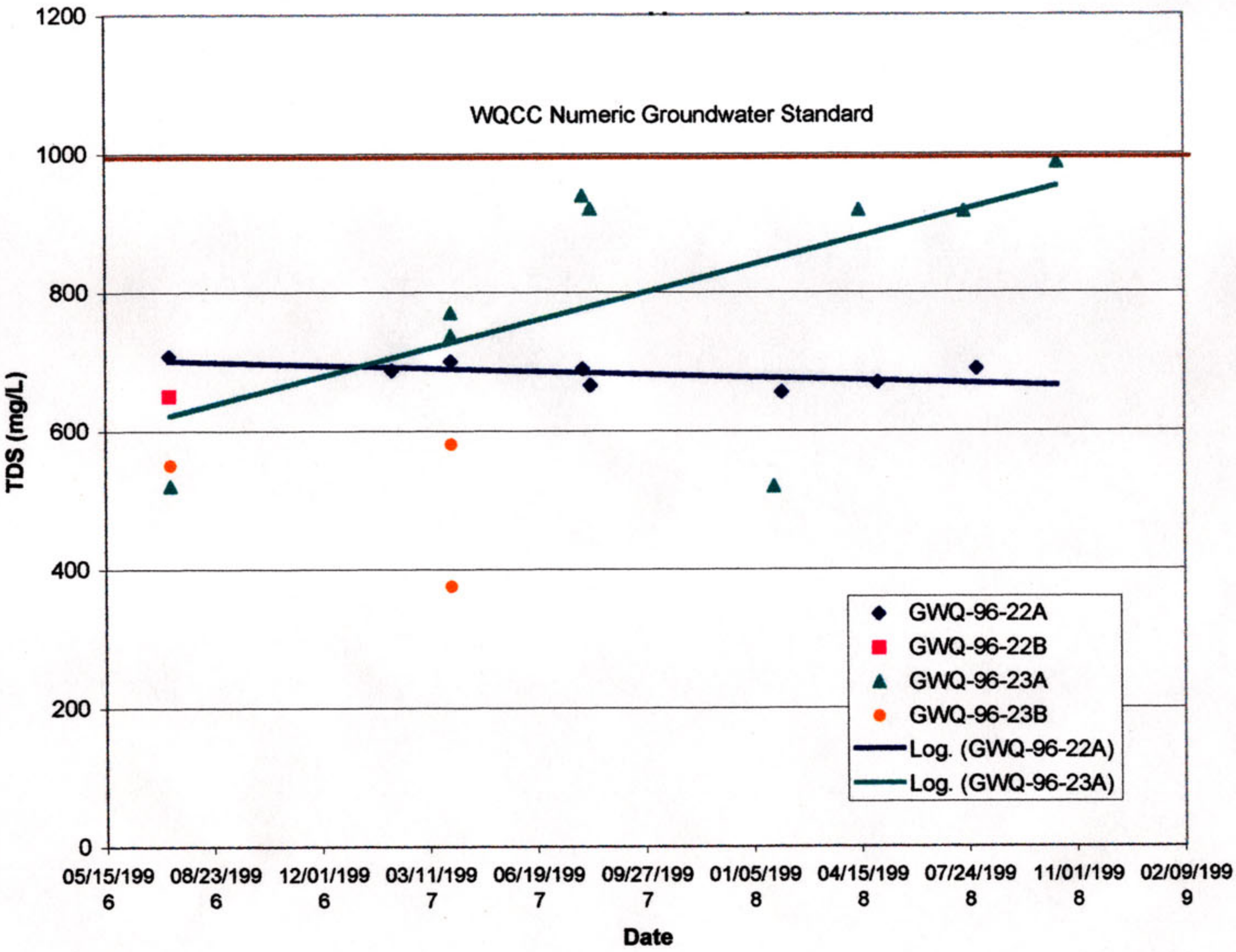


Figure 26
Groundwater TDS Concentrations, Mine Pit Vicinity
Copper Flat, New Mexico

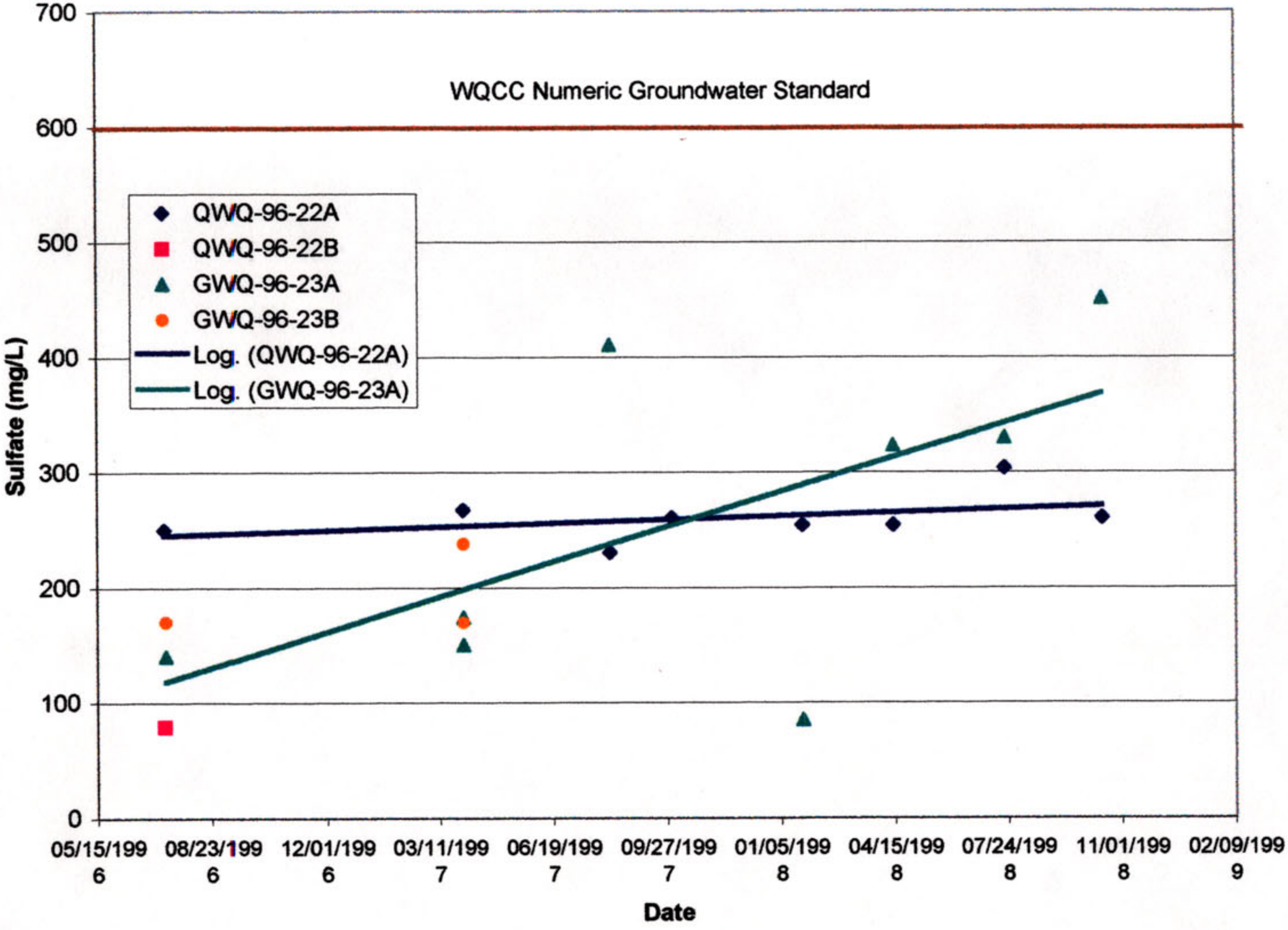


Figure 27
Groundwater Sulfate Concentrations, Mine Pit Vicinity
Copper Flat, New Mexico

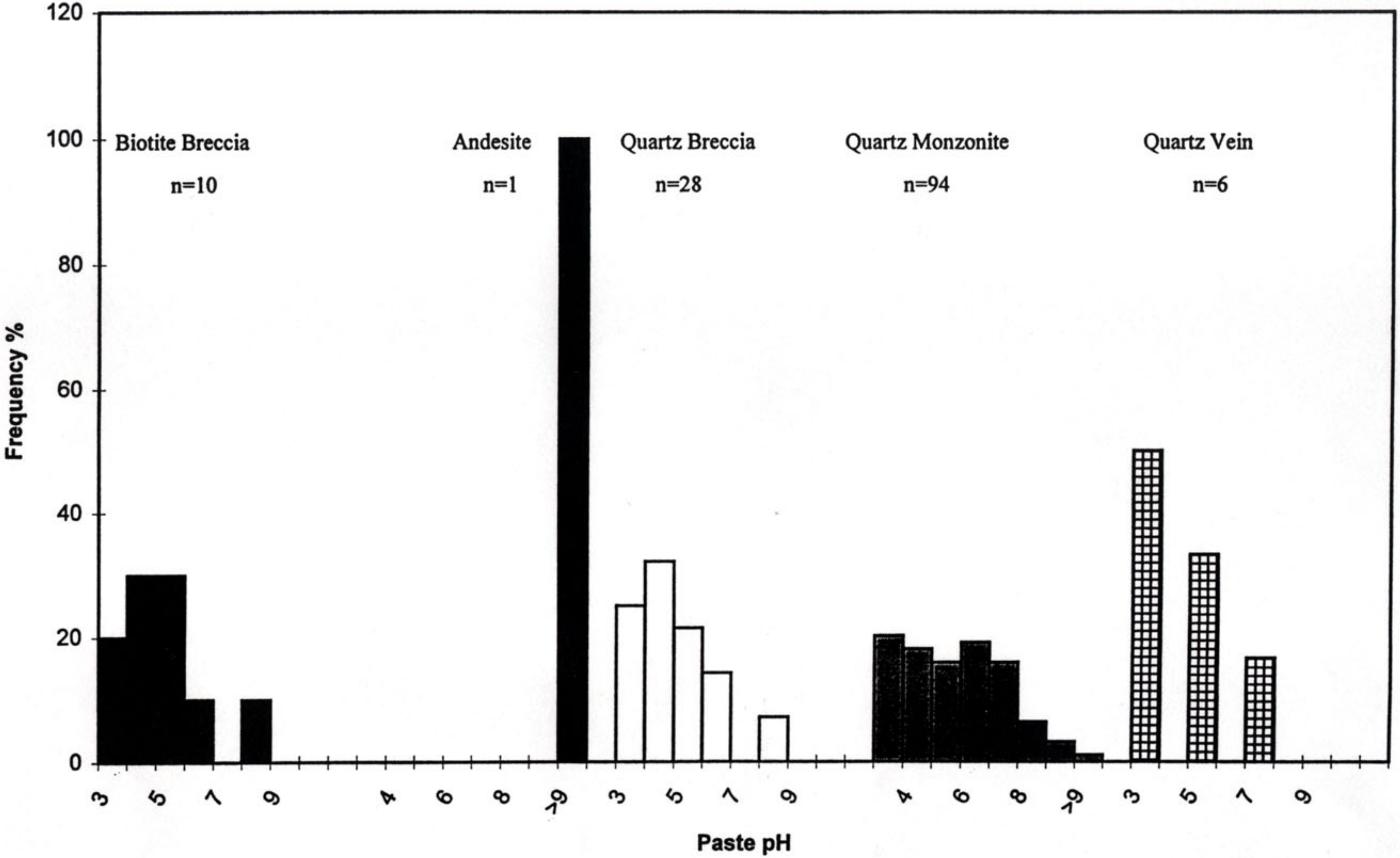


Figure 28
Paste pH Distributions by Rock Type
Copper Flat, New Mexico
(from SRK, July 1998)

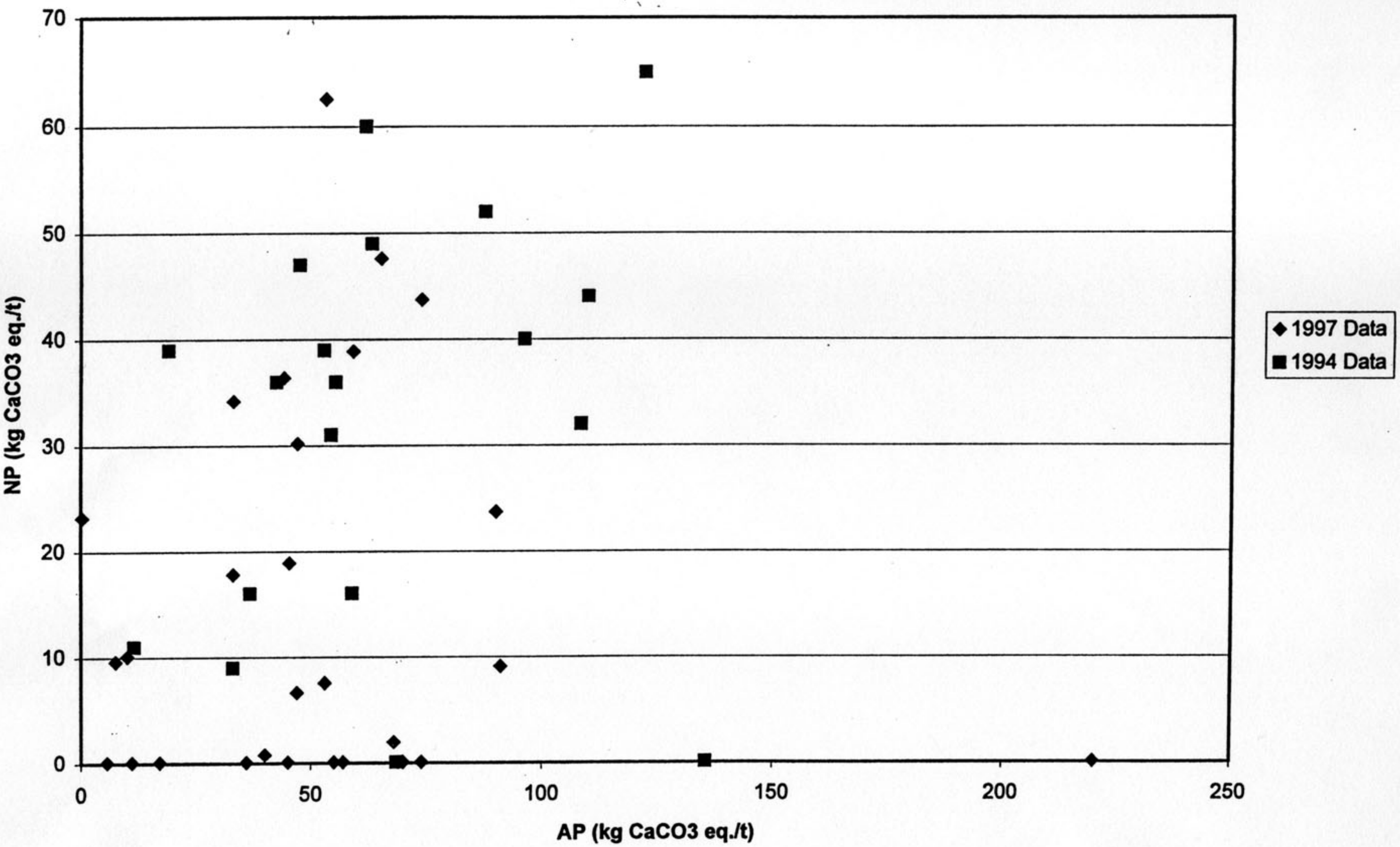


Figure 29
Comparison of Sobek vrs Modified Sobek Methods for
Estimating Acid Generation Potential vrs Neutralization Potential
Copper Flat, New Mexico
(from SRK, July 1998)

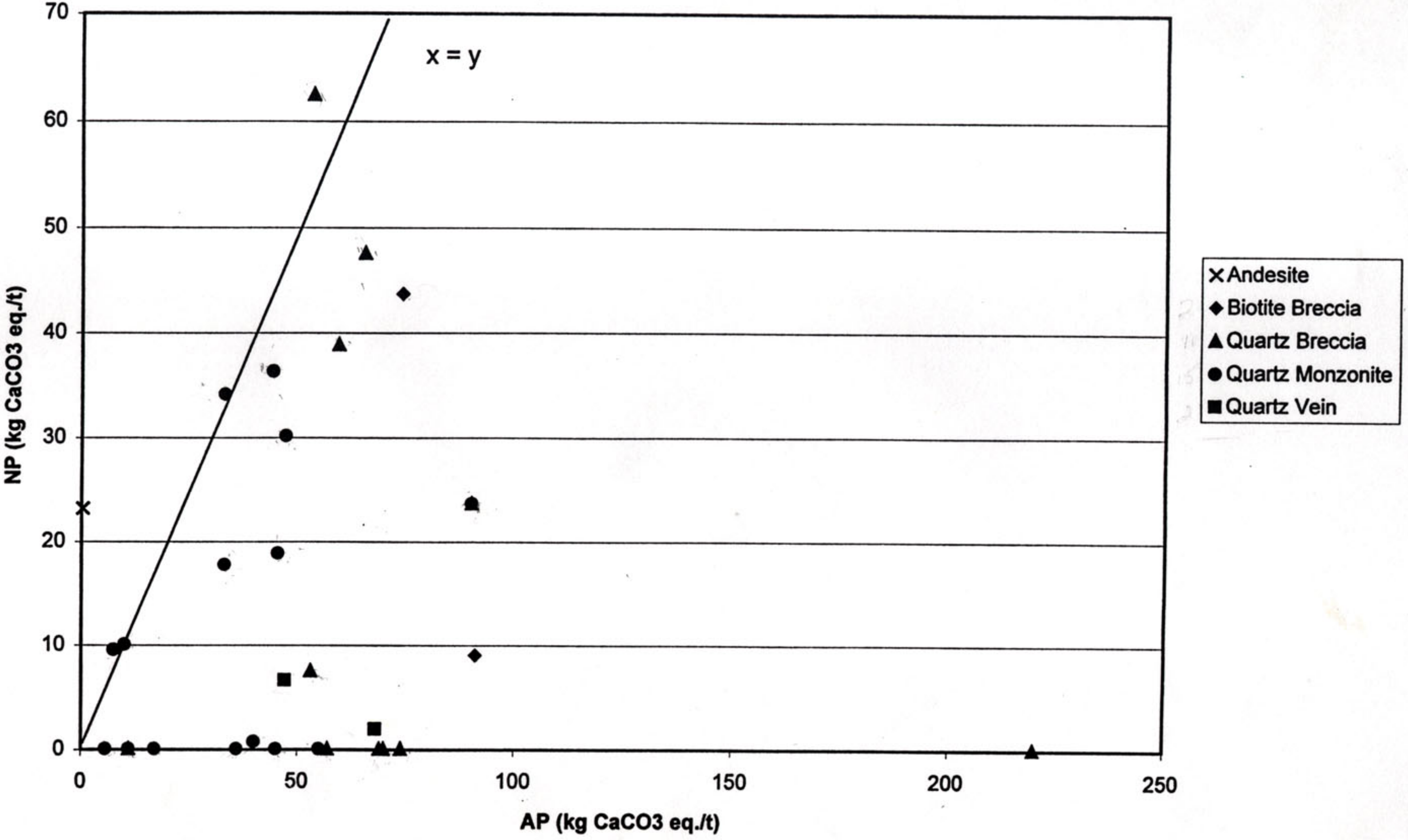


Figure 30
Acid Generation Potential vrs Neutralization Potential
Pit Wall and Waste Rock Samples
Copper Flat, New Mexico
(from SRK, July 1998)

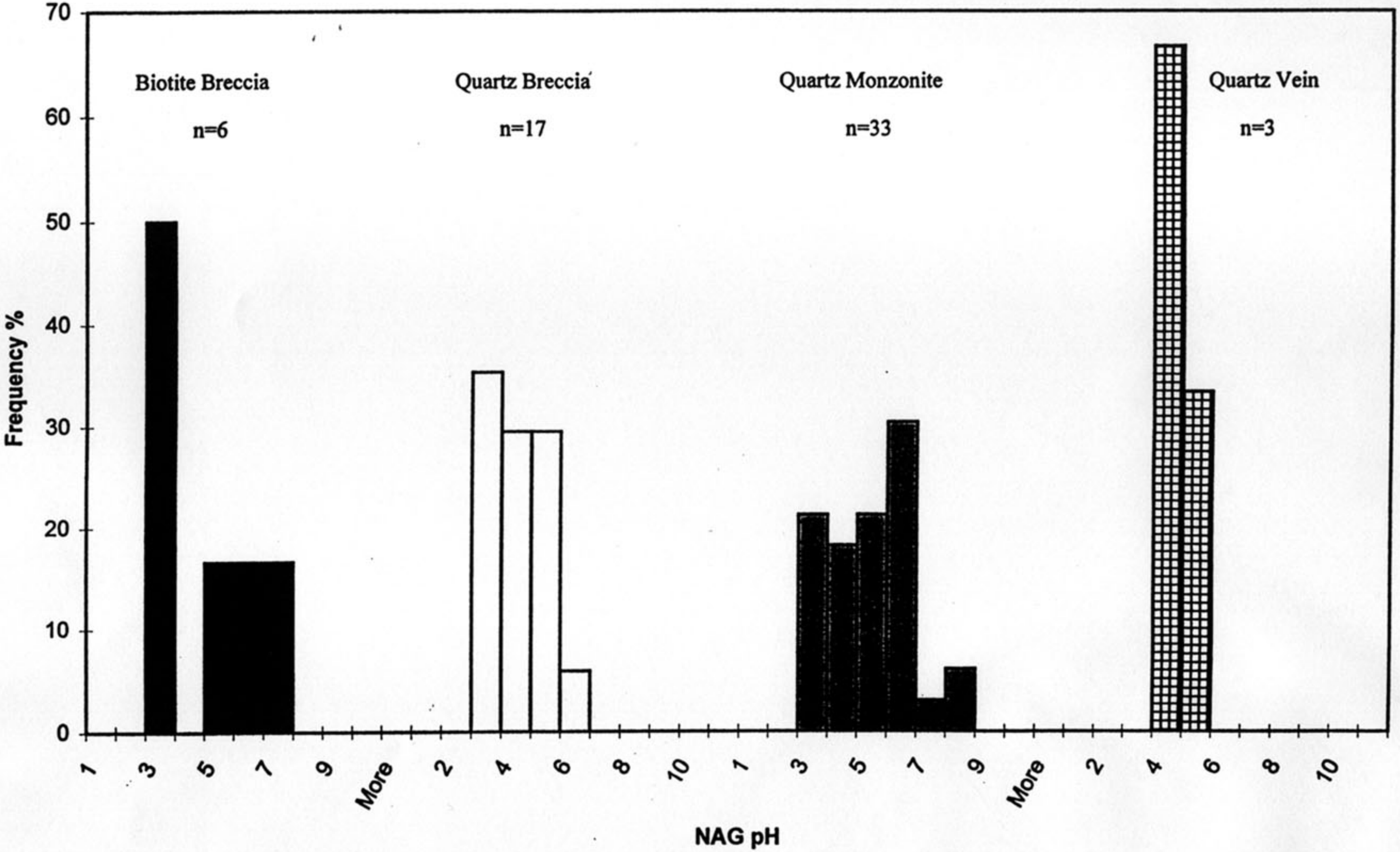


Figure 31
NAG pH Frequency Distribution by Rock Type
Copper Flat, New Mexico
(from SRK, July 1998)

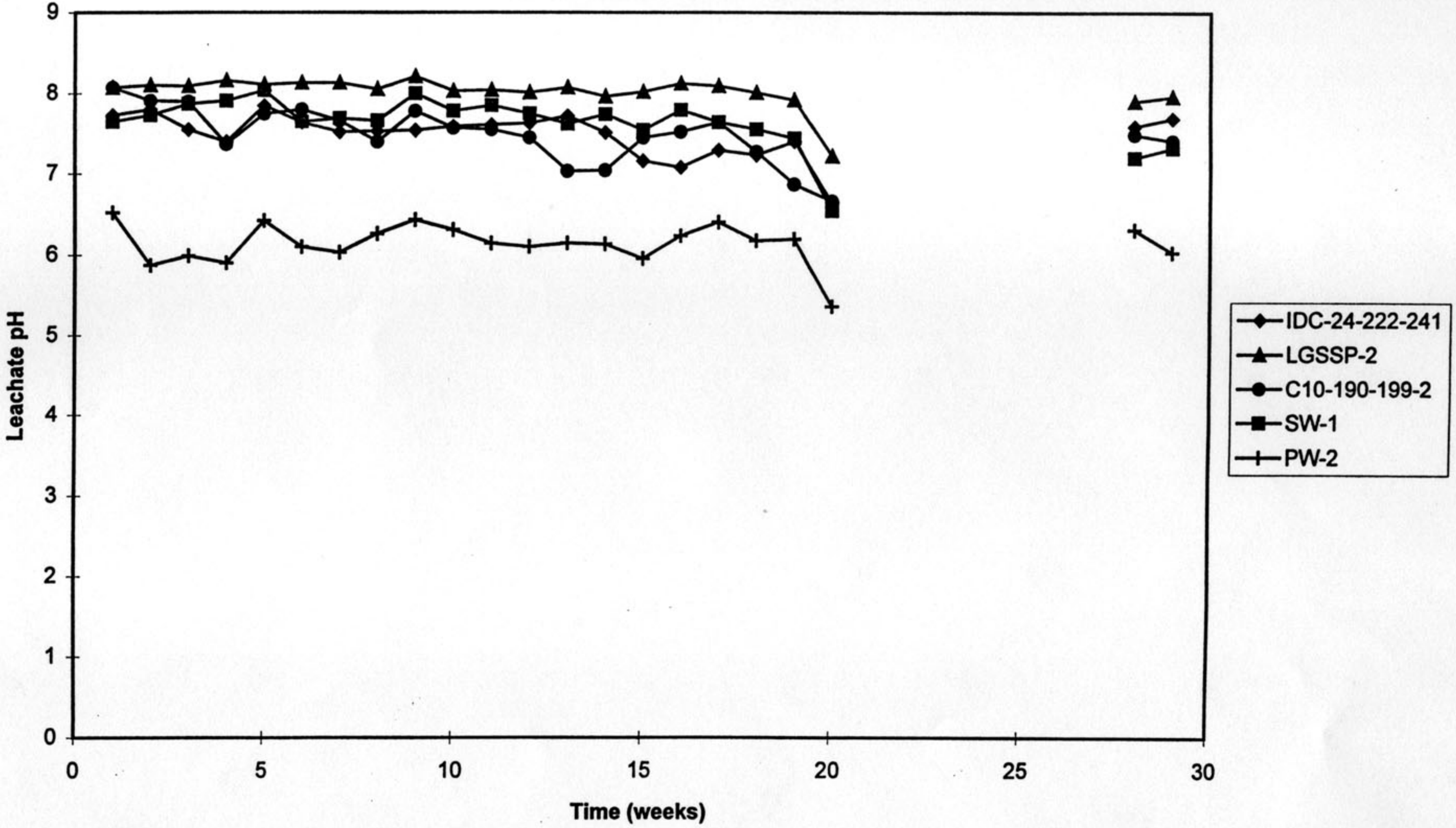


Figure 32
Kinetic Test, pH vrs Time
Copper Flat, New Mexico
(from SRK, July 1998)

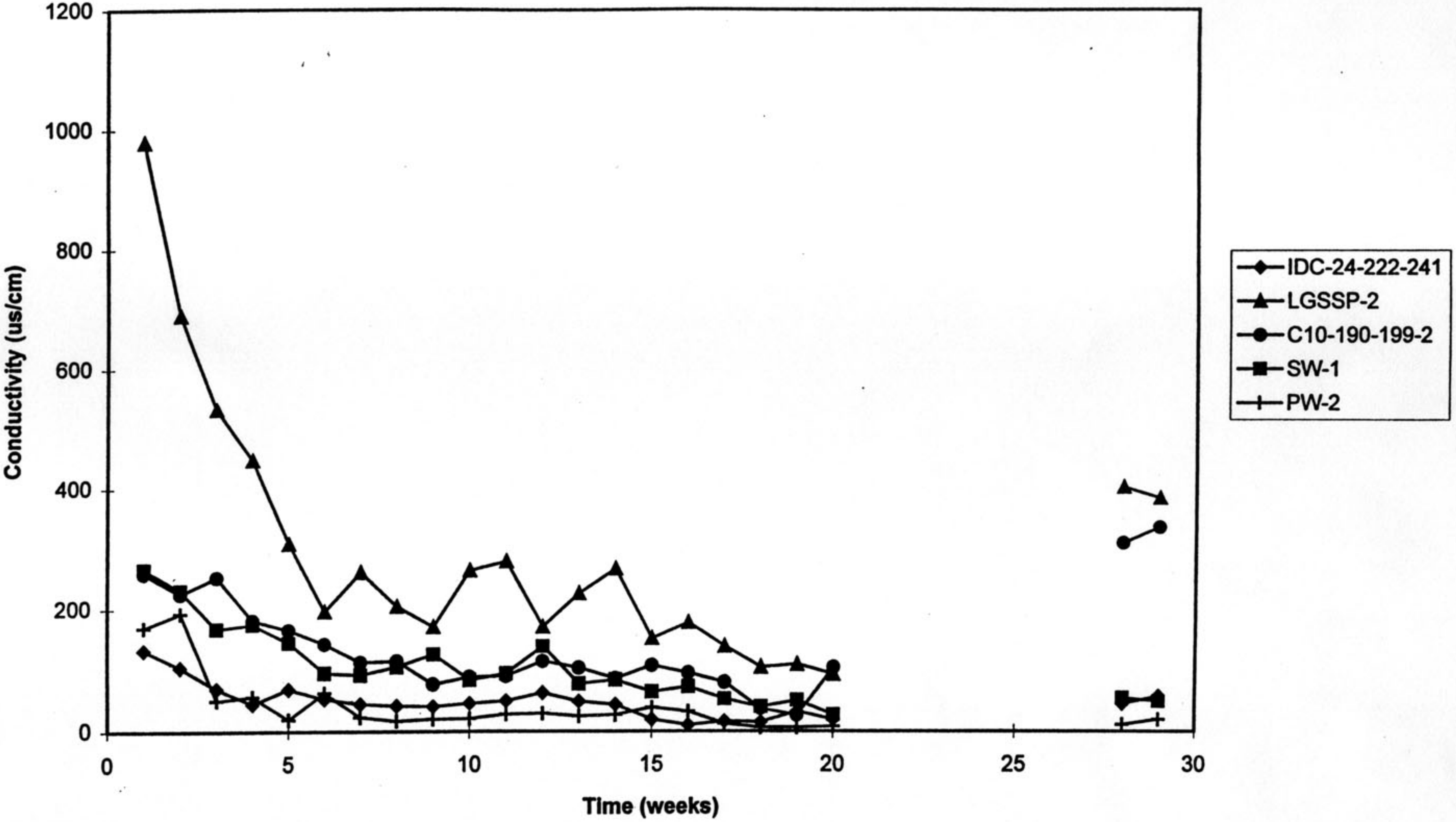


Figure 33
Kinetic Test, Electrical Conductivity vrs Time
Copper Flat, New Mexico
(from SRK, July 1998)

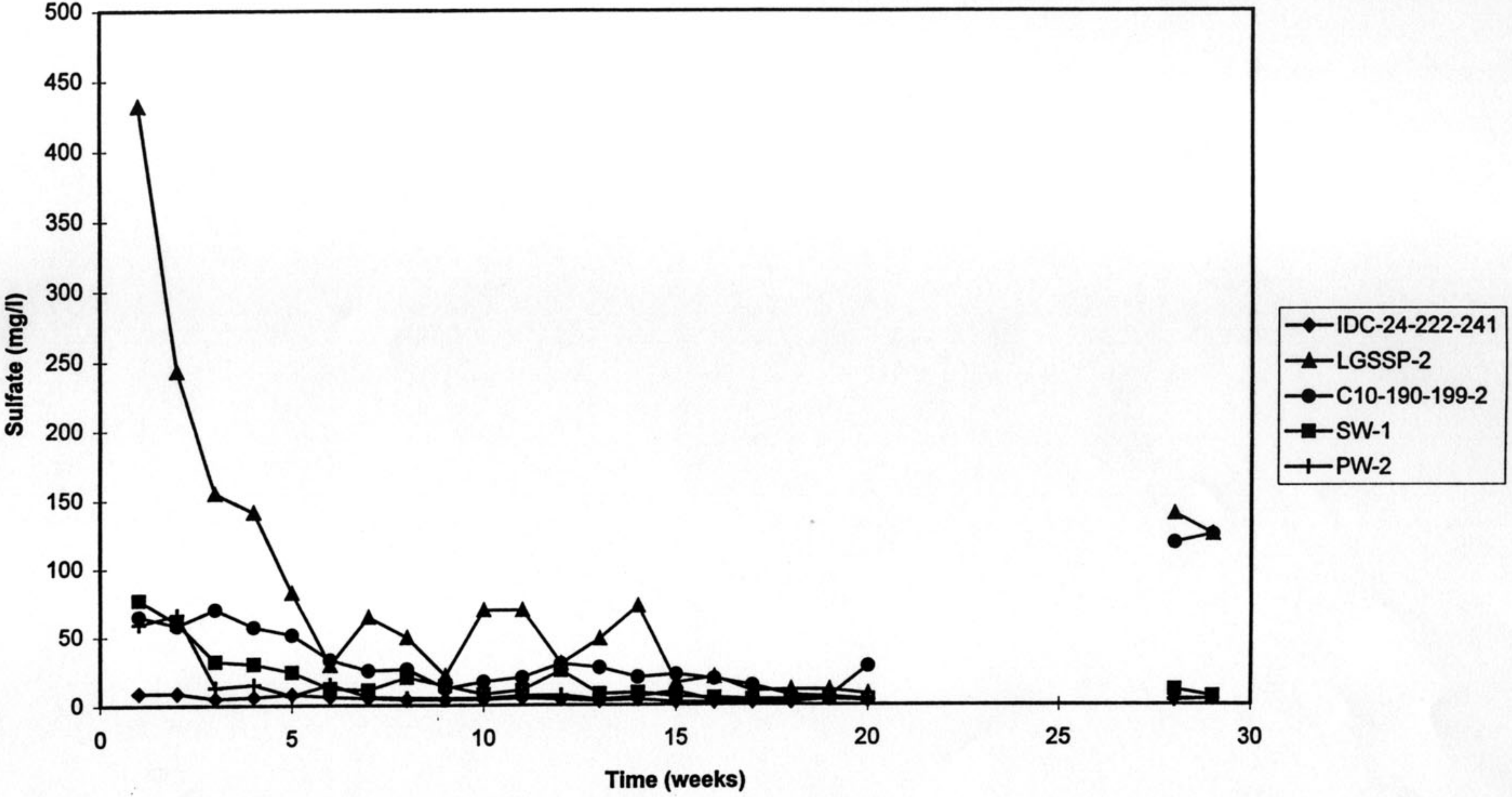


Figure 34
Kinetic Test, Sulfate vrs Time
Copper Flat, New Mexico
(from SRK, July 1998)

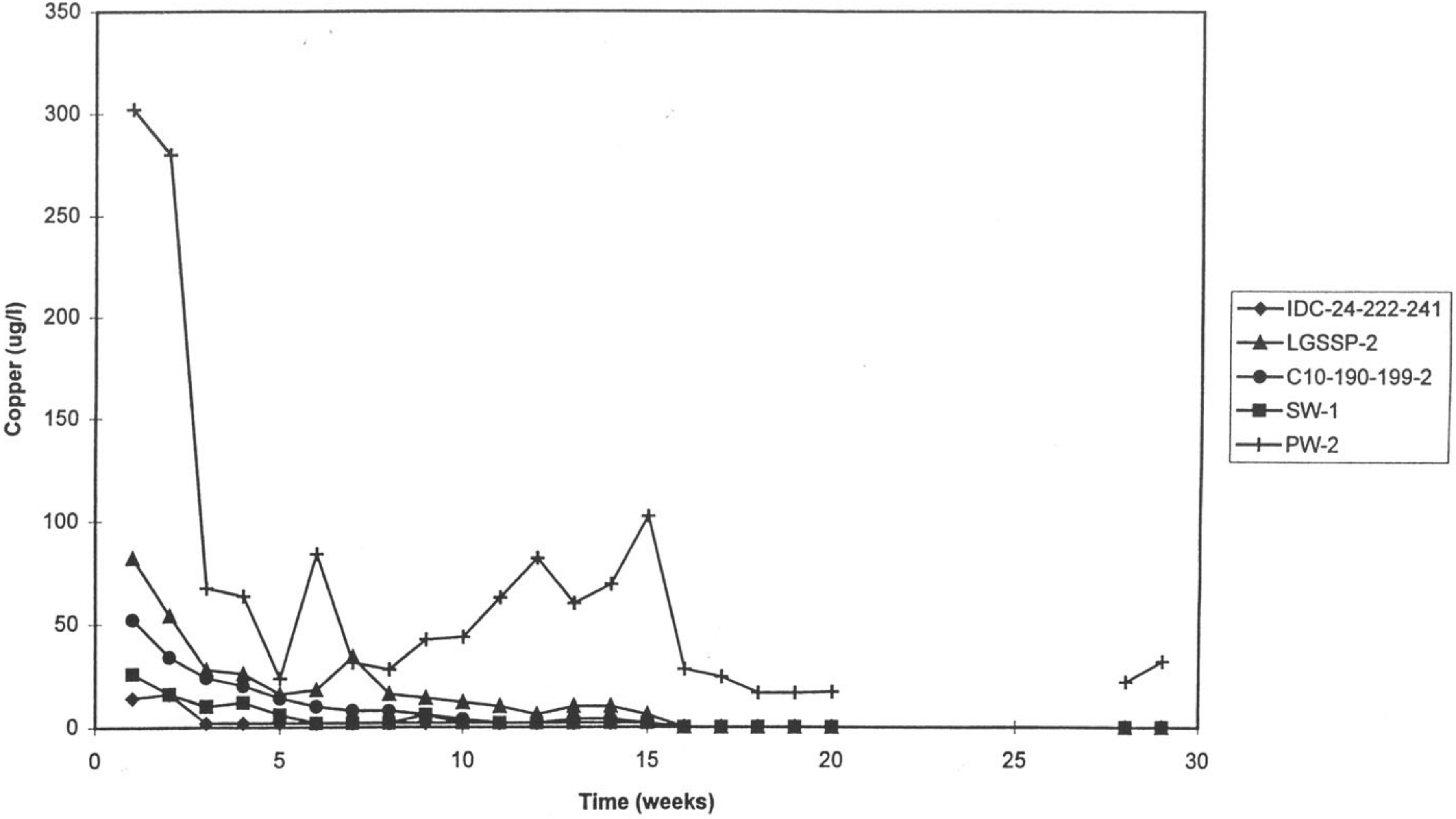


Figure 35
Kinetic Test, Copper vrs Time
Copper Flat, New Mexico
(from SRK, July 1998)

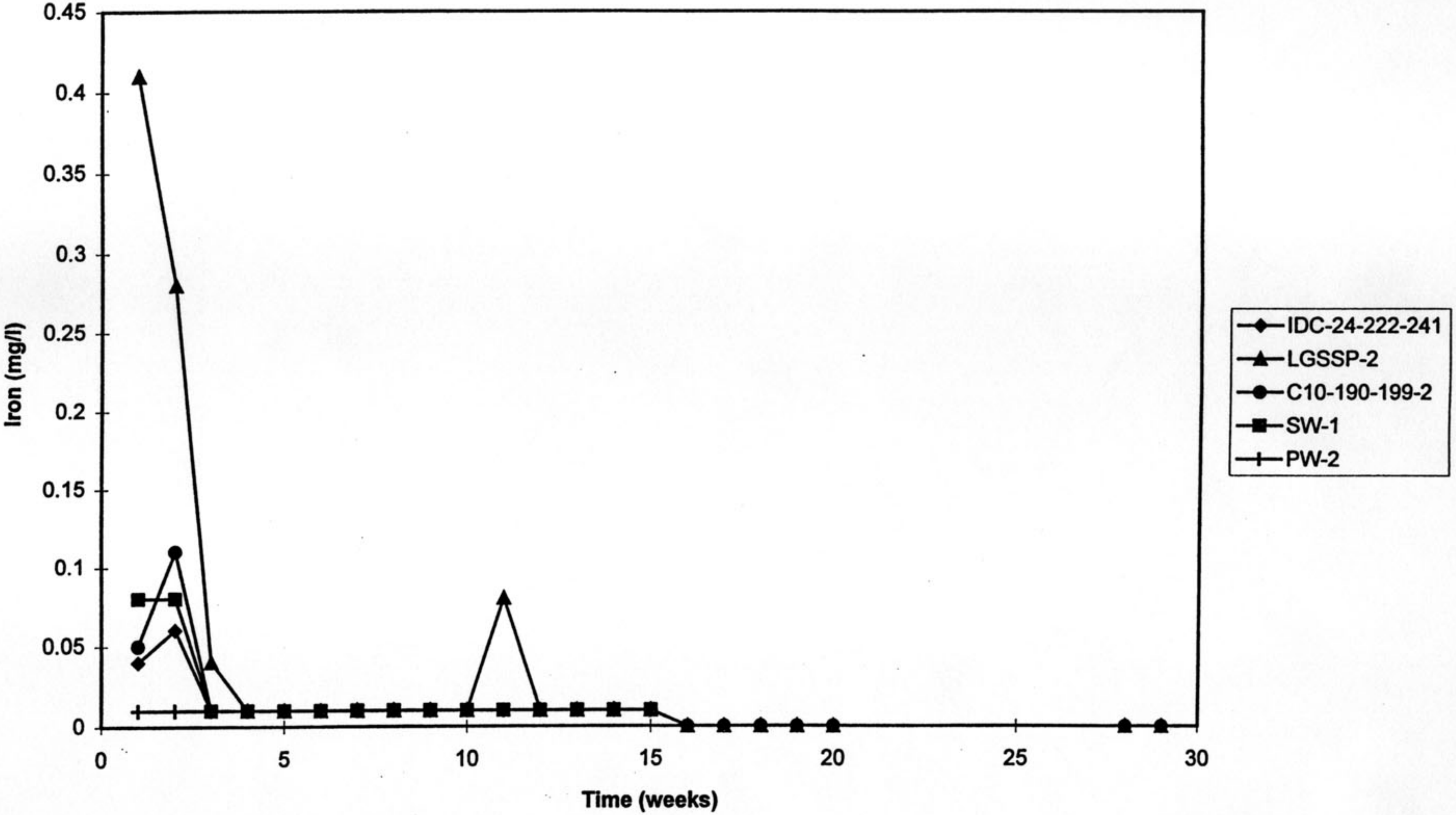


Figure 36
Kinetic Test, Iron vrs Time
Copper Flat, New Mexico
(from SRK, July 1998)

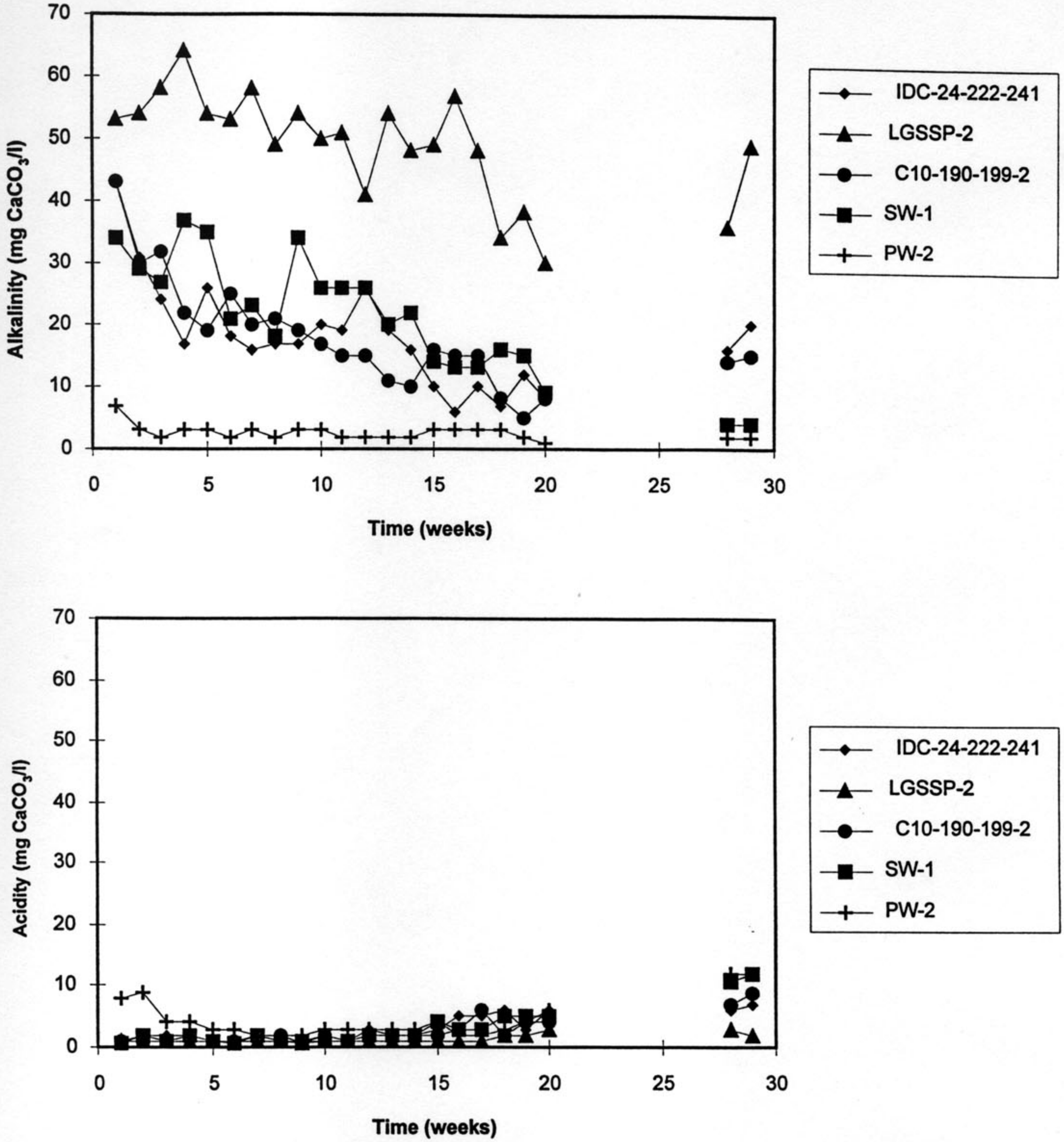


Figure 37
Kinetic Test, Alkalinity vrs Time
Copper Flat, New Mexico
(from SRK, July 1998)

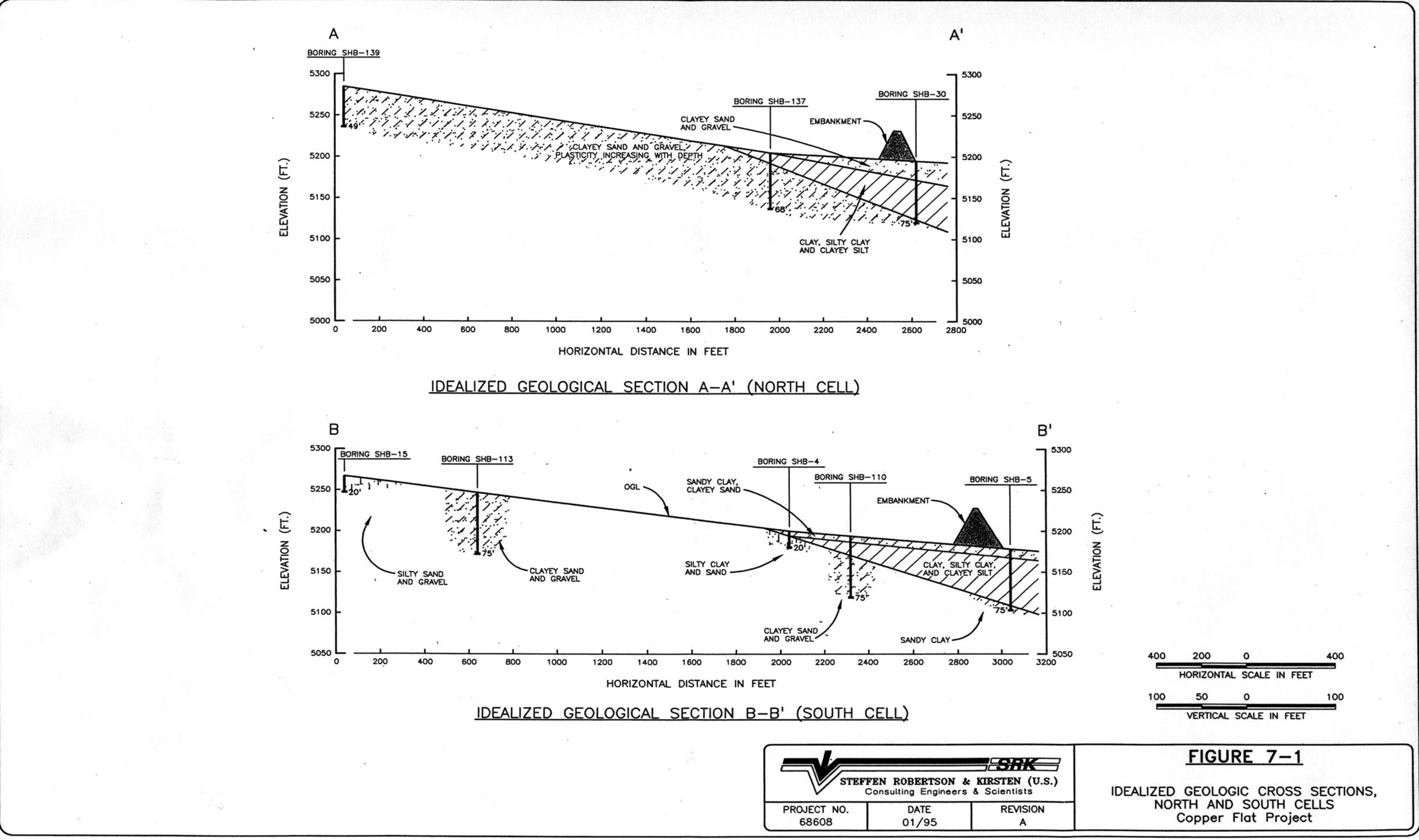


Figure 38
Subsurface Cross-Section Through the North and South Cells of the Tailings Impoundment
Copper Flat, New Mexico
(from SRK, May 1995)

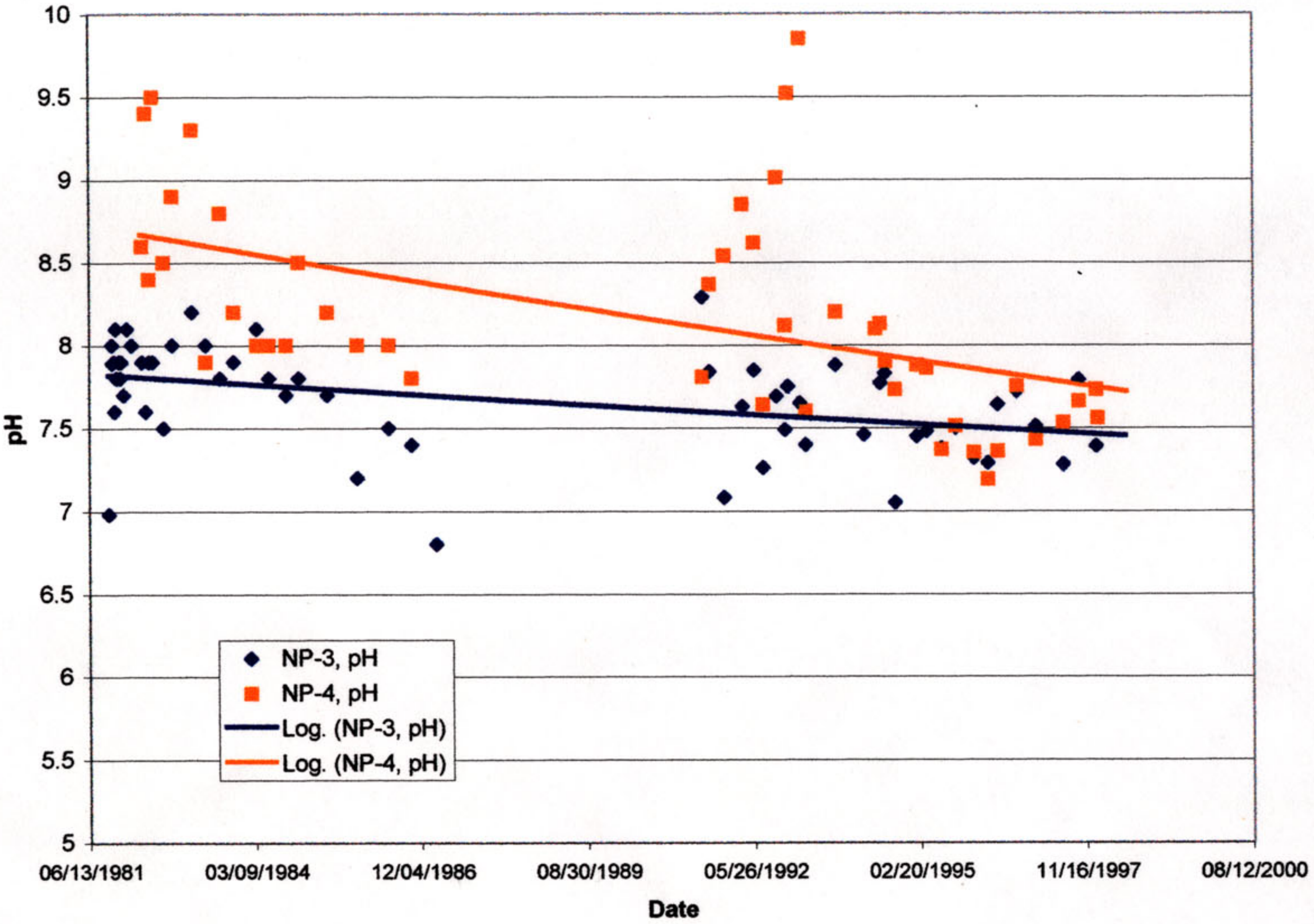


Figure 39
Groundwater pH, NP-3, NP-4
Copper Flat, New Mexico

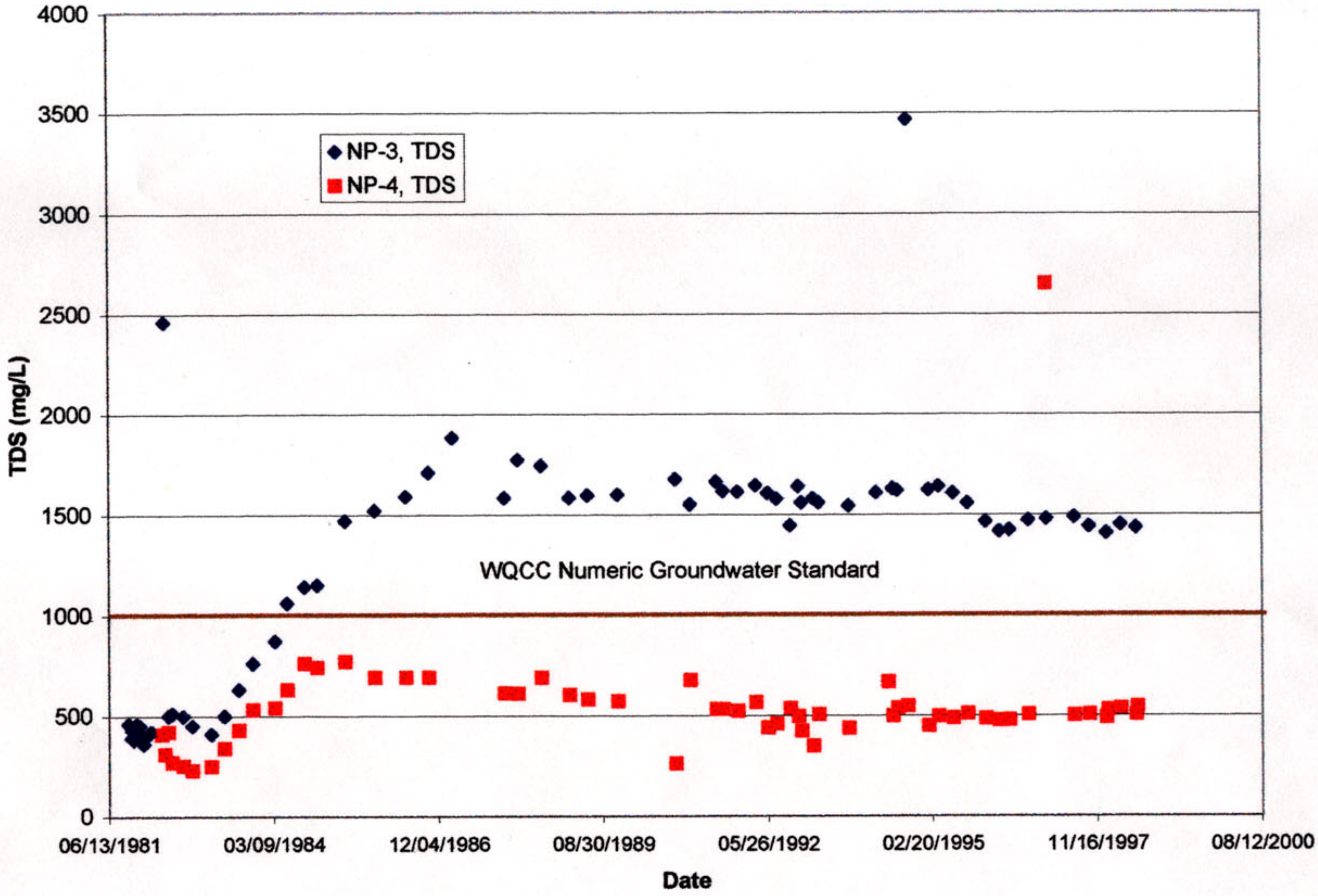


Figure 40
Groundwater TDS Concentrations, NP-3, NP-4
Copper Flat, New Mexico

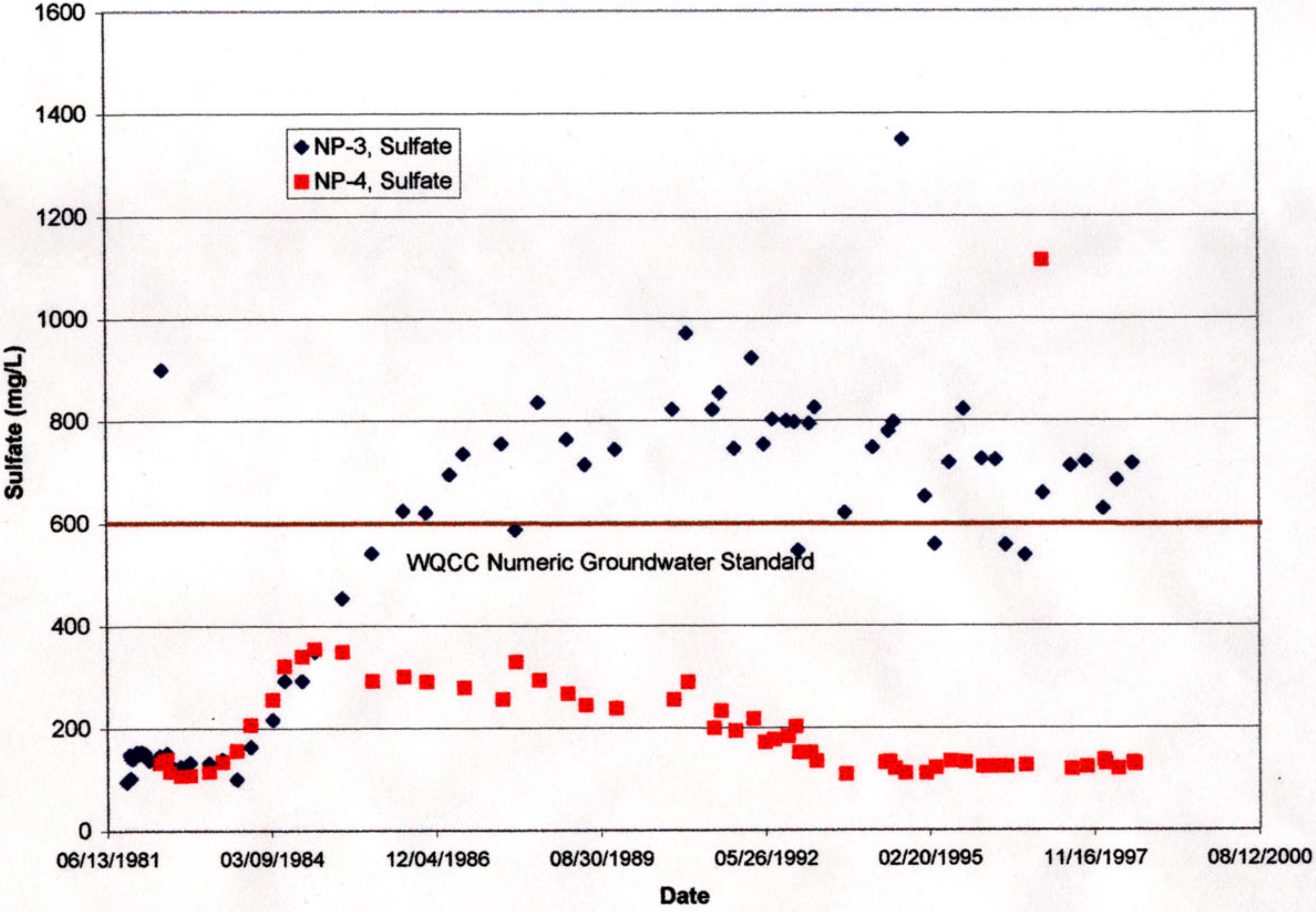


Figure 41
Groundwater Sulfate Concentrations, NP-3, NP-4
Copper Flat, New Mexico

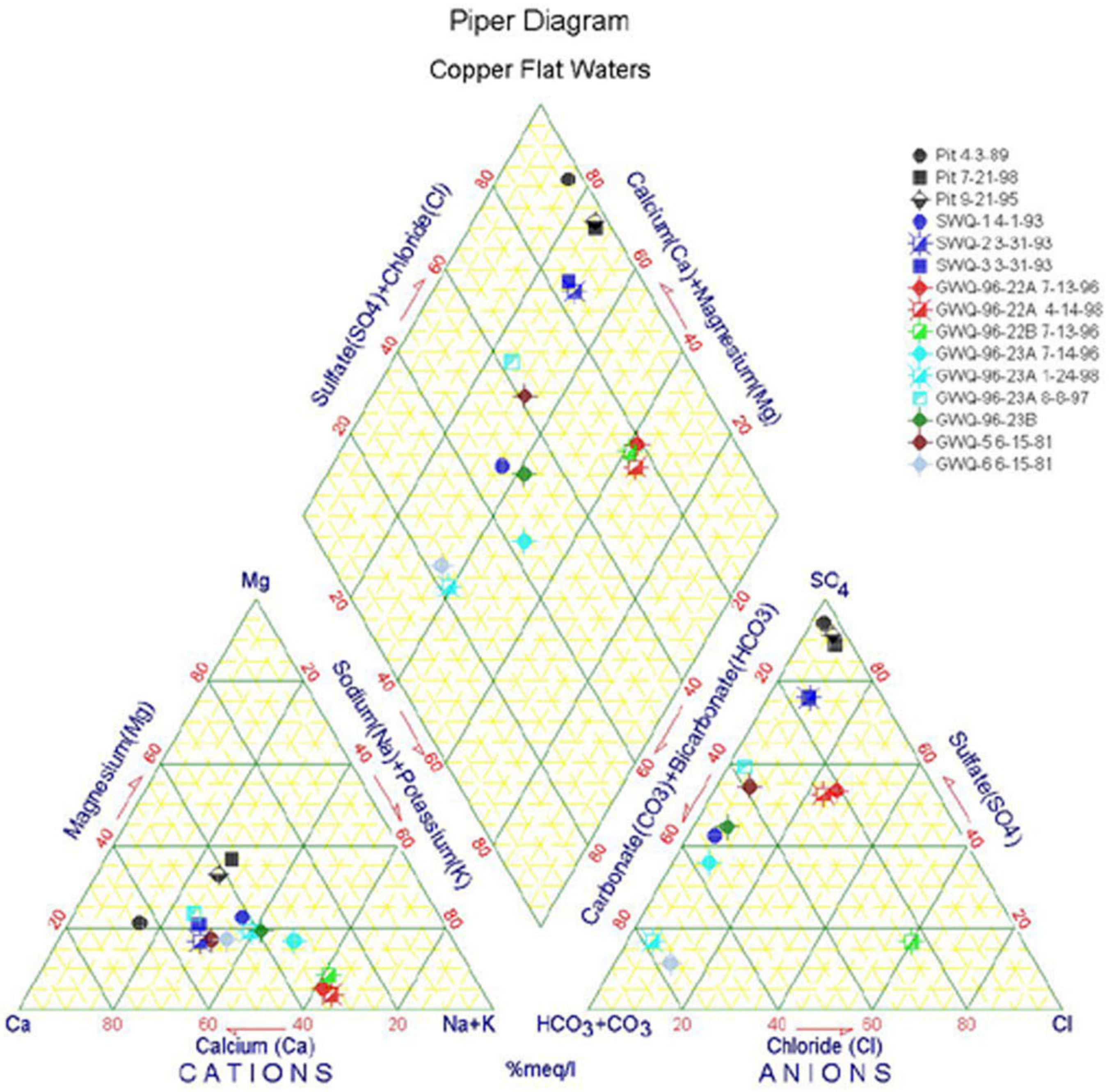


Figure 42
Piper Diagram, Copper Flat Surface Water and Groundwater
Copper Flat, New Mexico
(data from BLM, 1999, after SRK)

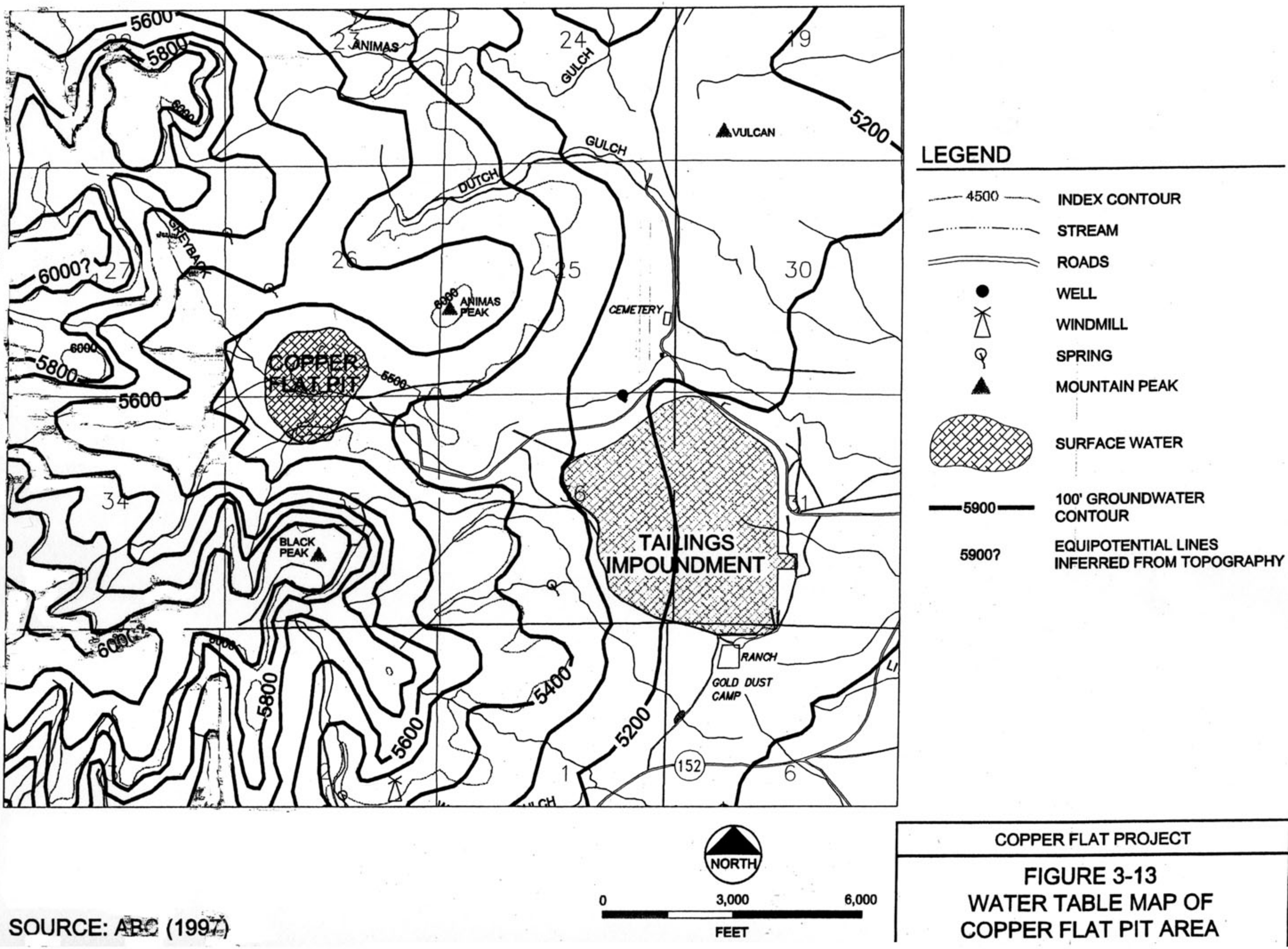


Figure 43
Groundwater Contours Beneath the Mine Site
Copper Flat, New Mexico
(from BLM, 1999; after ABC, 1997)

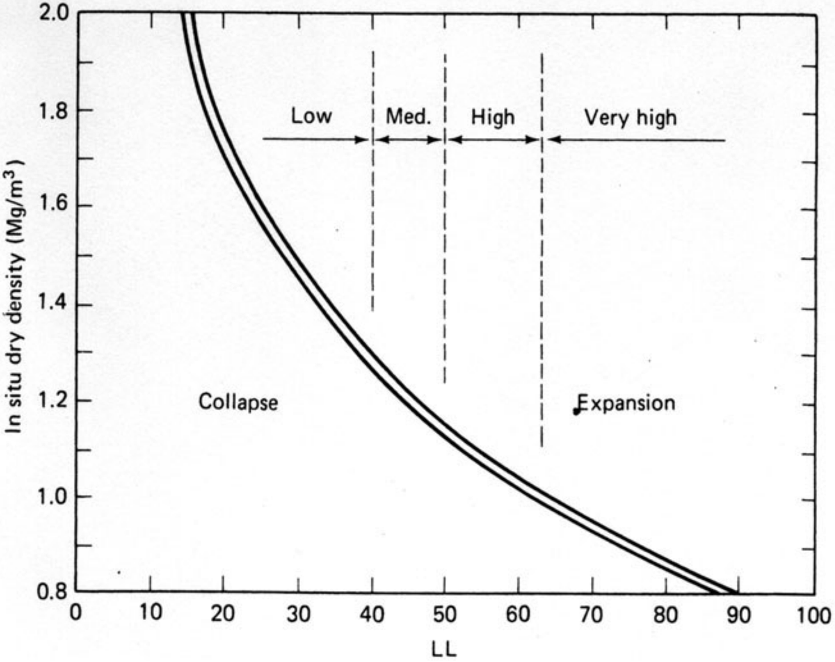


Figure 44
Guide to Collapsibility, Compressibility, and Expansion
Based on Insitu Dry Density and Liquid Limit
(from Holtz and Kovacs, after Mitchell and Gardner, 1975 and Gibbs, 1969)

Appendix A

Comprehensive Surface Water Chemistry Data

Well Name	Date	Sampler	Notes	Lat	Long
BG-2Spring	4/1/1993	Shomaker			
BG-2 Spring	7/1/1998		15.7.26.1.1.3	32.97897	107.53876
BG-2 Spring	8/1/1998		15.7.26.1.1.3	32.97897	107.53876
BG-2 Spring	9/1/1998		15.7.26.1.1.3	32.97897	107.53876
BG Spring	4/1/1993	Shomaker			
BG Spring	7/1/1998		15.7.28.4.4.3	32.96977	107.55911
BG Spring	8/1/1998		15.7.28.4.4.3	32.96977	107.55911
BG Spring	9/1/1998		15.7.28.4.4.3	32.96977	107.55911
Casa Moya Wier	6/1/1998		15.5.27.4.4.	32.9704	107.54251
Casa Moya Wier	7/1/1998		15.5.27.4.4.	32.9704	107.54251
Casa Moya Wier	8/1/1998		15.5.27.4.4.	32.9704	107.54251
Casa Moya Wier	9/1/1998		15.5.27.4.4.	32.9704	107.54251
Danfelser Spring	1/1/1998				
Danfelser Spring	2/1/1998				
Danfelser Spring	3/1/1998				
Danfelser Spring	4/15/1998	Goff			
Danfelser Spring	5/1/1998				
Danfelser Spring	6/1/1998				
Danfelser Spring	7/22/1998	Brownfield			
Danfelser Spring	8/1/1998				
Danfelser Spring	9/1/1998				
Due South of Pit	8/1/1997				
Erwin Wier	5/1/1998		15.7.30.2.4.2.	32.97627	107.59198
Erwin Wier	6/1/1998		15.7.30.2.4.2.	32.97627	107.59198
Erwin Wier	7/1/1998		15.7.30.2.4.2.	32.97627	107.59198
Erwin Wier	8/1/1998		15.7.30.2.4.2.	32.97627	107.59198
Erwin Wier	9/1/1998		15.7.30.2.4.2.	32.97627	107.59198
Greyback Station A	1/77	BLM	where Greyback enters QMC property		
Greyback Station A	1/77	BLM	where Greyback enters QMC property		
Greyback Station B	1/77	BLM	In greyback, 300 yards east of mine rim		
Greyback Station B	1/77	BLM	In greyback, 300 yards east of mine rim		
Greyback Station C	1/77	BLM	where Greyback leaves QMC property		
Greyback Station C	1/77	BLM	where Greyback leaves QMC property		
Greyback Station A	3/77	BLM	where Greyback enters QMC property		
Greyback Station B	3/77	BLM	In greyback, 300 yards east of mine rim		
Greyback Station C	3/77	BLM	where Greyback leaves QMC property		

Well Name	Date	Sampler	Notes	Lat	Long
Greyback Station B	7/77	BLM	In greyback, 300 yards east of mine rim		
Greyback	5/17/1982	QMC			
Greyback	2/11/1991	FTS/GE	W/mine site Greyback SHB 5		
Greyback	2/11/1991	FTS/GE	West of pit, ds Greyback SHB 2		
Greyback	2/11/1991	FTS/GE	E of GWQ-4, SHB 1	32.96599	107.54639
Greyback Outfall	8/1/1995				
Greyback Outfall	9/21/1995				
Greyback Wash	3/1/1997				
Humphries Wier	6/1/1998		15.6.24.31.1		
Humphries Wier	7/1/1998		15.6.24.31.1		
Humphries Wier	8/1/1998		15.6.24.31.1		
Humphries Wier	9/1/1998		15.6.24.31.1		
Las Animas Creek	10/1/1997		exact date not known		
Las Animas Creek	4/15/1998	Goff	LA Ck. At road crossing at Irwins		
Las Animas Creek	10/22/1998	Goff			
Las Animas/Seco Creek	7/31/1974		15.5.22.122		
Las Animas/Seco Creek	7/12/1974		15.5.27.333		
Las Animas/Seco Creek	5/7/1974		15.5.27.413		
Las Animas/Seco Creek	7/11/1974		15.5.27.442		
Las Animas/Seco Creek	7/11/1974		15.5.27.443		
Las Animas/Seco Creek	5/7/1974		15.5.29.424		
Las Animas/Seco Creek	7/9/1974		15.5.30.213		
Las Animas/Seco Creek	1/1/2001		LAC-1		
Las Animas/Seco Creek	11/16/1994		MW-9		
Las Animas/Seco Creek	11/16/1994		MW-10		
Las Animas/Seco Creek	11/16/1994		MW-11		
Left Side of Haul Road	8/1/1997		exact date not known		
Pit Lake	4/3/1989	EID	Dipped		
Pit Lake	4/3/1989	EID	Dipped, near the drive down to lake		
Pit Lake	11/14/1990	GE			
Pit Lake	2/11/1991	FTS/GE	5' down, SHB 4		
Pit Lake	2/11/1991	FTS/GE	25' down, SHB 3		
Pit Lake	7/19/1991	MT/GE			
Pit Lake	8/29/1991	BI/GE			
Pit Lake	11/26/1991	MH/GE			
Pit Lake	3/15/1992	BI/GE			

Well Name	Date	Sampler	Notes	Lat	Long
Pit Lake	3/15/1992	BI/GE			
Pit Lake	5/25/1992	BI/GE			
Pit Lake	7/16/1992	BI/GE			
Pit Lake	10/8/1992	BI/GE			
Pit Lake	11/27/1992	MH/GE			
Pit Lake	12/15/1992	BI/GE			
Pit Lake	2/12/1993	Shomaker			
Pit Lake	2/25/1993	BI/GE			
Pit Lake	9/28/1993	BI/GE			
Pit Lake	3/17/1994	BI/GE			
Pit Lake	5/24/1994	SRK	NLP8M-North Edge of Pit Lake, Sample at 8 meters, N elev		
Pit Lake	5/24/1994	SRK	SLP3M-South Edge of Pit lake, Sample at 3 meters , N elev		
Pit Lake	5/24/1994	SRK	SPL5M-South Edge of Pit Lake, Sample at 5 meters, N elev		
Pit Lake	5/24/1994	SRK	NLP3M-North Edge of Pit Lake, Sampled at 3 meters, N ele		
Pit Lake	9/22/1994	BI/GE	Sample loss - no sulfate analysis		
Pit Lake	11/16/1994	SRK	Samle at 3 meters		
Pit Lake	11/16/1994	SRK	Sample at 7 meters		
Pit Lake	12/12/1994	ABC	N elevated due to TDS		
Pit Lake	12/19/1994	ABC	N elevated due to TDS		
Pit Lake	1/29/1995	BI/GE			
Pit Lake	3/29/1995	BI/GE			
Pit Lake	6/27/1995	BI/GE			
Pit Lake	8/1/1995	UKN			
Pit Lake	8/1/1995		Duplicate		
Pit Lake	9/21/1995				
Pit Lake	9/21/1995	BI/GE			
Pit Lake	1/10/1996	BI/GE			
Pit Lake	4/3/1996	BI/GE			
Pit Lake	6/1/1996		exact date not known		
Pit Lake	9/25/1996	BI/GE			
Pit Lake	11/15/1996	Bakkom/Salvas	North Shore		
Pit Lake	11/15/1996	Bakkom/Salvas	South Shore		
Pit Lake	11/15/1996	Bakkom/Salvas	East Shore		
Pit Lake	11/15/1996	Bakkom/Salvas	West Shore		
Pit Lake	1/15/1997	BI/GE			
Pit Lake	1/18/1997	Bakkom/Salvas	North Shore		

Well Name	Date	Sampler	Notes	Lat	Long
Pit Lake	1/18/1997	Bakkom/Salvas	South Shore		
Pit Lake	1/18/1997	Bakkom/Salvas	East Shore		
Pit Lake	1/18/1997	Bakkom/Salvas	West Shore		
Pit Lake	7/1/1997		exact date not known		
Pit Lake	7/16/1997	Bakkom/Salvas	North Shore		
Pit Lake	7/16/1997	Bakkom/Salvas	South Shore		
Pit Lake	7/16/1997	Bakkom/Salvas	East Shore		
Pit Lake	7/16/1997	Bakkom/Salvas	West Shore		
Pit Lake	8/1/1997	SRK	exact date not known		
Pit Lake	10/1/1997		Duplicate		
Pit Lake	10/8/1997	Bakkom/Salvas	North Shore		
Pit Lake	10/8/1997	Bakkom/Salvas	South Shore		
Pit Lake	10/8/1997	Bakkom/Salvas	East Shore		
Pit Lake	10/8/1997	Bakkom/Salvas	West Shore		
Pit Lake	1/15/1998	BI			
Pit Lake	1/24/1998	Goff			
Pit Lake	2/1/1998				
Pit Lake	3/1/1998				
Pit Lake	4/9/1998	BI			
Pit Lake	5/1/1998				
Pit Lake	6/1/1998				
Pit Lake	7/13/1998	BI			
Pit Lake	7/21/1998	Brownfield			
Pit Lake	8/1/1998				
Pit Lake	9/1/1998				
Pit Lake	10/15/1998	Goff			
Pit Lake	10/1/1997		exact date not known		
PP	8/9/1997	SRK	Stagnant Water near Petroglyph		
PW-1	8/8/1997	SRK	Seep in NW corner of pit		
PW-1	8/9/1997	SRK	Seep in NW corner of pit		
PW-2	8/9/1997	SRK	Seep in SW corner of pit		
Seep	5/17/1982	QMC			
Seep	9/2/1982	EID			
Seep	12/23/1982	QMC			
Seep	2/21/1983	QMC			
Acid Rock Drianage	5/7/1993	Shomaker			

Bold exceeds livestock/wildlife standard
underline exceeds domestic standard
itlaic exceeds irrigation standard

Well Name	Date	North	East	Flow Rate	Filtered?	pH	Sp. Cond.	TDS	SO4	Bicarbonate
BG-2Spring	4/1/1993					8.2	1090	690	184	535
BG-2 Spring	7/1/1998	262745	3651627	0						
BG-2 Spring	8/1/1998	262745	3651627	0						
BG-2 Spring	9/1/1998	262745	3651627	0						
BG Spring	4/1/1993					8	1030	680	228	411
BG Spring	7/1/1998	260819	3650652	0						
BG Spring	8/1/1998	260819	3650652	0						
BG Spring	9/1/1998	260819	3650652	0						
Casa Moya Wier	6/1/1998	262372	3650684	0						
Casa Moya Wier	7/1/1998	262372	3650684	0						
Casa Moya Wier	8/1/1998	262372	3650684	0						
Casa Moya Wier	9/1/1998	262372	3650684	0						
Danfelser Spring	1/1/1998			26						
Danfelser Spring	2/1/1998			25.25						
Danfelser Spring	3/1/1998			21.25						
Danfelser Spring	4/15/1998			22.7	TRUE	7.66	405	241	33	
Danfelser Spring	5/1/1998			18						
Danfelser Spring	6/1/1998			13.6						
Danfelser Spring	7/22/1998			1.2	TRUE			257	32	
Danfelser Spring	8/1/1998			7.25						
Danfelser Spring	9/1/1998			10.8						
Due South of Pit	8/1/1997				TRUE	8.03		5710		
Erwin Wier	5/1/1998	257763	3651448	193						
Erwin Wier	6/1/1998	257763	3651448	38						
Erwin Wier	7/1/1998	257763	3651448	0						
Erwin Wier	8/1/1998	257763	3651448	367						
Erwin Wier	9/1/1998	257763	3651448	0						
Greyback Station A	1/77					7.7		720		
Greyback Station A	1/77					7.8		800		
Greyback Station B	1/77					7.6		800		
Greyback Station B	1/77					7.7		800		
Greyback Station C	1/77					7.8		840		
Greyback Station C	1/77					7.8		880		
Greyback Station A	3/77					7.9		1000		
Greyback Station B	3/77					8		1080		
Greyback Station C	3/77					8.1		1320		

Well Name	Date	North	East	Flow Rate	Filtered?	pH	Sp. Cond.	TDS	SO4	Bicarbonate
Greyback Station B	7/77									
Greyback	5/17/1982				TRUE	8.3		670	300	
Greyback	2/11/1991					7.83	1504	966	391.8	370
Greyback	2/11/1991					7.51	3380	2178	1510.6	314.8
Greyback	2/11/1991	261998	3650205			7.9	3190	2112	1248.2	338
Greyback Outfall	8/1/1995				TRUE	7.61		3450	1730	620
Greyback Outfall	9/21/1995				TRUE	7.61	3860	3450	1730	620
Greyback Wash	3/1/1997				TRUE	8.08		3200	1930	349
Humphries Wier	6/1/1998			0						
Humphries Wier	7/1/1998			0						
Humphries Wier	8/1/1998			0						
Humphries Wier	9/1/1998			0						
Las Animas Creek	10/1/1997				TRUE	8.31		238	16.6	
Las Animas Creek	4/15/1998				TRUE	8.09	260	190	12	127
Las Animas Creek	10/22/1998				TRUE	8.31	527	238	16.6	
Las Animas/Seco Creek	7/31/1974					8			49	
Las Animas/Seco Creek	7/12/1974					8			16	
Las Animas/Seco Creek	5/7/1974					8			61	
Las Animas/Seco Creek	7/11/1974					8			48	
Las Animas/Seco Creek	7/11/1974					8			25	
Las Animas/Seco Creek	5/7/1974					8.2			13	
Las Animas/Seco Creek	7/9/1974					7.9			29	
Las Animas/Seco Creek	1/1/2001					7.81		300	18	
Las Animas/Seco Creek	11/16/1994					8.11		190	12	
Las Animas/Seco Creek	11/16/1994					7.84		310	25	
Las Animas/Seco Creek	11/16/1994					7.79		314	21	
Left Side of Haul Road	8/1/1997				TRUE	7.91		217		
Pit Lake	4/3/1989				TRUE					
Pit Lake	4/3/1989				TRUE			3546	2240	96.4
Pit Lake	11/14/1990							4064	2770	
Pit Lake	2/11/1991					7.14	3980	2711	2437	54.9
Pit Lake	2/11/1991					7.2	3980	2704	2464	45.1
Pit Lake	7/19/1991					7.76	6340	4520	2920	87.9
Pit Lake	8/29/1991					7.61		4384	2674.2	
Pit Lake	11/26/1991					7.61		4175	2540	
Pit Lake	3/15/1992				TRUE	4.88		3819	2857	

Well Name	Date	North	East	Flow Rate	Filtered?	pH	Sp. Cond.	TDS	SO4	Bicarbonate
Pit Lake	3/15/1992				TRUE	4.88		3819	2857	
Pit Lake	5/25/1992				TRUE	4.82		3846	2665	
Pit Lake	7/16/1992				TRUE	4.36		4229	2397	
Pit Lake	10/8/1992				TRUE	4.85		4258	2706	
Pit Lake	11/27/1992					6.26		3900	2499.5	
Pit Lake	12/15/1992				TRUE	6.04		4151	2902	
Pit Lake	2/12/1993					5.6	3893	3776	2390	7
Pit Lake	2/25/1993				TRUE	6.29		3951	2748	
Pit Lake	9/28/1993				TRUE	6.71		4468	1566	
Pit Lake	3/17/1994				TRUE	7.46		3179	2670	
Pit Lake	5/24/1994				TRUE	7.68	4030	4340	71	550
Pit Lake	5/24/1994				TRUE	7.89	4310	4010	2800	73
Pit Lake	5/24/1994				TRUE	7.85	4320	3900	2700	68
Pit Lake	5/24/1994				TRUE	7.8	4170	4510	2700	72
Pit Lake	9/22/1994				TRUE	8.04		5124		
Pit Lake	11/16/1994					7.52	4690	4380	104	550
Pit Lake	11/16/1994					7.71	4720	4600	2910	102
Pit Lake	12/12/1994				TRUE	7.71	4720	4600	2910	102
Pit Lake	12/19/1994				TRUE	7.52	4690	4380	2970	104
Pit Lake	1/29/1995				TRUE	7.69		4675	2906	
Pit Lake	3/29/1995				TRUE	7.53		4891	2609.5	
Pit Lake	6/27/1995				TRUE			5604	2923.8	
Pit Lake	8/1/1995				TRUE	7.8		5846	4312	
Pit Lake	8/1/1995				TRUE	7.76		5651	2861	
Pit Lake	9/21/1995				TRUE	8.31	5230	5230	3170	122
Pit Lake	9/21/1995				TRUE	8.11		5642	3603.4	
Pit Lake	1/10/1996				TRUE	7.9		5398	3452.1	
Pit Lake	4/3/1996				TRUE	7.95		5378	3304.4	
Pit Lake	6/1/1996				TRUE	8.51		6095	2969	
Pit Lake	9/25/1996				TRUE	8.26		6041	3290	
Pit Lake	11/15/1996					8.15				
Pit Lake	11/15/1996					8.07				
Pit Lake	11/15/1996					8.06				
Pit Lake	11/15/1996					8.09				
Pit Lake	1/15/1997				TRUE	8.05		5772	3509	
Pit Lake	1/18/1997					8.01				

Well Name	Date	North	East	Flow Rate	Filtered?	pH	Sp. Cond.	TDS	SO4	Bicarbonate
Pit Lake	1/18/1997					8.05				
Pit Lake	1/18/1997					8.22				
Pit Lake	1/18/1997					8.04				
Pit Lake	7/1/1997				TRUE	7.45		5905	3017	
Pit Lake	7/16/1997					8.07				
Pit Lake	7/16/1997					8.12				
Pit Lake	7/16/1997					8.09				
Pit Lake	7/16/1997					8.01				
Pit Lake	8/1/1997					8.16	5530	5020	3100	172
Pit Lake	10/1/1997				TRUE	7.67		5651	2861	
Pit Lake	10/8/1997					7.96				
Pit Lake	10/8/1997					8.02				
Pit Lake	10/8/1997					7.87				
Pit Lake	10/8/1997					7.85				
Pit Lake	1/15/1998				TRUE	7.84	6920	5376	2981	
Pit Lake	1/24/1998			5437.48	TRUE	7.93	5720	5334	3946	201.9
Pit Lake	2/1/1998			5437.18						
Pit Lake	3/1/1998			5437.13						
Pit Lake	4/9/1998			5436.67	TRUE		5700	5422	3430	
Pit Lake	5/1/1998			5436.15						
Pit Lake	6/1/1998			5436.8						
Pit Lake	7/13/1998			5435.06	TRUE		7040	5956	3909	
Pit Lake	7/21/1998				TRUE			5952	3808	181
Pit Lake	8/1/1998			5434.72						
Pit Lake	9/1/1998			5435.09						
Pit Lake	10/15/1998				TRUE	7.8	7500	5846	4312	
Pit Lake	10/1/1997				TRUE	7.8		5846	4312	
PP	8/9/1997				TRUE	8.89	237	230	5.1	126
PW-1	8/8/1997				TRUE	2.64				
PW-1	8/9/1997				TRUE					
PW-2	8/9/1997				TRUE	8.16	5530	5020	3100	172
Seep	5/17/1982				TRUE	7.8		790	430	
Seep	9/2/1982				TRUE	7.5	1290	1010	525	219
Seep	12/23/1982				TRUE	8.3		1110	530	
Seep	2/21/1983					8.1		1130	517	
Acid Rock Drianage	5/7/1993					1.9		17020	10000	-1

Well Name	Date	Calcium(Ca)	Cl	Flouride(F)	Nitrate (NO_3)	Sodium(Na)	Potassium(K)	Aluminum(Al)
BG-2Spring	4/1/1993	49	15	0.82	0	124	1.1	-0.1
BG-2 Spring	7/1/1998							
BG-2 Spring	8/1/1998							
BG-2 Spring	9/1/1998							
BG Spring	4/1/1993	45	13	0.86	0	90	0.8	-0.1
BG Spring	7/1/1998							
BG Spring	8/1/1998							
BG Spring	9/1/1998							
Casa Moya Wier	6/1/1998							
Casa Moya Wier	7/1/1998							
Casa Moya Wier	8/1/1998							
Casa Moya Wier	9/1/1998							
Danfelser Spring	1/1/1998							
Danfelser Spring	2/1/1998							
Danfelser Spring	3/1/1998							
Danfelser Spring	4/15/1998	42.2	4.4	0.71	0.78	33.9	1.3	
Danfelser Spring	5/1/1998							
Danfelser Spring	6/1/1998							
Danfelser Spring	7/22/1998	40.7	4.8	0.7	0.83	32.5	2.5	
Danfelser Spring	8/1/1998							
Danfelser Spring	9/1/1998							
Due South of Pit	8/1/1997		232.8	10.3				
Erwin Wier	5/1/1998							
Erwin Wier	6/1/1998							
Erwin Wier	7/1/1998							
Erwin Wier	8/1/1998							
Erwin Wier	9/1/1998							
Greyback Station A	1/77			0.4	5.48		3	
Greyback Station A	1/77			0.4	5.6		2.6	
Greyback Station B	1/77			0.5	6.8		2.9	
Greyback Station B	1/77			0.5	7.5		2.7	
Greyback Station C	1/77			0.4	4.9		3.8	
Greyback Station C	1/77			0.4	3.68		3.5	
Greyback Station A	3/77			0.2	3.8		3	
Greyback Station B	3/77			0.5	3.3		2.5	
Greyback Station C	3/77			0.3	3.6		3.1	

Well Name	Date	Calcium(Ca)	Cl	Flouride(F)	Nitrate (NO$_3$)	Sodium(Na)	Potassium(K)	Aluminum(Al)
Greyback Station B	7/77	168.5					8.9	
Greyback	5/17/1982		46	1.2	0.3			
Greyback	2/11/1991	147.8	59.3	0.69	1.7	128.0	2.0	
Greyback	2/11/1991	443	160.9	0.56	22.0	226.5	5.5	
Greyback	2/11/1991	363.5	129.1	0.89	15.78	230.2	5.9	
Greyback Outfall	8/1/1995	490	94	1.4	6.2	360	2.1	0.033
Greyback Outfall	9/21/1995	490	94	1.4	6.2	360	2.1	0.033
Greyback Wash	3/1/1997		180	0.93	-5			
Humphries Wier	6/1/1998							
Humphries Wier	7/1/1998							
Humphries Wier	8/1/1998							
Humphries Wier	9/1/1998							
Las Animas Creek	10/1/1997		14.9		0.1			
Las Animas Creek	4/15/1998	35.9	9.3	0.46	-0.05	15.6	0.8	
Las Animas Creek	10/22/1998		14.9		0.1			
Las Animas/Seco Creek	7/31/1974	89	330	0.9	0.7	170	9.6	
Las Animas/Seco Creek	7/12/1974	22	26	0.6	0.6	46	4.9	
Las Animas/Seco Creek	5/7/1974		110	420	0.5	180	11.0	
Las Animas/Seco Creek	7/11/1974	85	380	0.7	0.6	200	9.1	
Las Animas/Seco Creek	7/11/1974	38	120	0.7	0.4	80	6.5	
Las Animas/Seco Creek	5/7/1974	43	16	0.4	0.1	46	3.1	
Las Animas/Seco Creek	7/9/1974	75	15	0.5	0.1	32	2.4	
Las Animas/Seco Creek	1/1/2001	72	15	0.46	-1.0	21	1.9	-0.05
Las Animas/Seco Creek	11/16/1994	12	12	1.4	-1.0	54	2.3	-0.05
Las Animas/Seco Creek	11/16/1994	59	14	0.43	-1.0	29	1.9	-0.05
Las Animas/Seco Creek	11/16/1994	63	15	0.45	-1.0	23	1.5	-0.05
Left Side of Haul Road	8/1/1997		4.1	0.96				
Pit Lake	4/3/1989	570						-0.1
Pit Lake	4/3/1989	640	47.3			165	11	
Pit Lake	11/14/1990		102.2					
Pit Lake	2/11/1991	600	79.8	4.58	0.10	223.6	16.4	
Pit Lake	2/11/1991	611.2	82.5	4.77	0.10	223.5	16.4	
Pit Lake	7/19/1991	684.1	88.6	6.25	0.03	248.0	20.3	
Pit Lake	8/29/1991		88.9					
Pit Lake	11/26/1991		86.6					
Pit Lake	3/15/1992		85.3					

Well Name	Date	Calcium(Ca)	Cl	Flouride(F)	Nitrate (NO$_3$)	Sodium(Na)	Potassium(K)	Aluminum(Al)
Pit Lake	3/15/1992		85.3					
Pit Lake	5/25/1992		89.7					
Pit Lake	7/16/1992		76.1					
Pit Lake	10/8/1992		90.1					
Pit Lake	11/27/1992		730.5					
Pit Lake	12/15/1992		88.5					
Pit Lake	2/12/1993	583	96	6.21		222	10	2
Pit Lake	2/25/1993		92.1					
Pit Lake	9/28/1993		111.2					
Pit Lake	3/17/1994		101.4					
Pit Lake	5/24/1994	100	7		-5	270	15	0.20
Pit Lake	5/24/1994	560	110	7.3	-5	270	15	0.18
Pit Lake	5/24/1994	540	110	7.2	-5	270	15	0.18
Pit Lake	5/24/1994	650	110	7.3	-5	290	16	0.19
Pit Lake	9/22/1994		140.9					
Pit Lake	11/16/1994	130	8.1		-5	320	18	-0.05
Pit Lake	11/16/1994	580	140		-5	350	17	-0.05
Pit Lake	12/12/1994	580	140	8.1	-5	350	17	-0.05
Pit Lake	12/19/1994	550	130	8.1	-5	320	18	-0.05
Pit Lake	1/29/1995		217.6					
Pit Lake	3/29/1995		108.6					
Pit Lake	6/27/1995		161.4					
Pit Lake	8/1/1995		237		-0.05			0.13
Pit Lake	8/1/1995		219					
Pit Lake	9/21/1995	620	150	10	-5	430	21	0.13
Pit Lake	9/21/1995		172.3					
Pit Lake	1/10/1996		182.8					
Pit Lake	4/3/1996		188.9					
Pit Lake	6/1/1996		210.6					
Pit Lake	9/25/1996		199.6					
Pit Lake	11/15/1996							
Pit Lake	11/15/1996							
Pit Lake	11/15/1996							
Pit Lake	11/15/1996							
Pit Lake	1/15/1997		216					
Pit Lake	1/18/1997							

Well Name	Date	Calcium(Ca)	Cl	Flouride(F)	Nitrate (NO_3)	Sodium(Na)	Potassium(K)	Aluminum(Al)
Pit Lake	1/18/1997							
Pit Lake	1/18/1997							
Pit Lake	1/18/1997							
Pit Lake	7/1/1997		228					
Pit Lake	7/16/1997							
Pit Lake	7/16/1997							
Pit Lake	7/16/1997							
Pit Lake	7/16/1997							
Pit Lake	8/1/1997	440	190	11	-3	410	20	0.14
Pit Lake	10/1/1997		219					
Pit Lake	10/8/1997							
Pit Lake	10/8/1997							
Pit Lake	10/8/1997							
Pit Lake	10/8/1997							
Pit Lake	1/15/1998		216	11.8	-0.05			
Pit Lake	1/24/1998	615.6	224	10.8		524.3	33.6	
Pit Lake	2/1/1998							
Pit Lake	3/1/1998							
Pit Lake	4/9/1998		222	12.4	-0.05			
Pit Lake	5/1/1998							
Pit Lake	6/1/1998							
Pit Lake	7/13/1998		245	12.85	-0.05			
Pit Lake	7/21/1998	638.3	244	13.6	-0.05	516.8	20.6	
Pit Lake	8/1/1998							
Pit Lake	9/1/1998							
Pit Lake	10/15/1998		237		-0.05			
Pit Lake	10/1/1997		237		-0.05			
PP	8/9/1997	30	1.8	0.37	-1	15	4.7	0.037
PW-1	8/8/1997				-1	10	-1	**410**
PW-1	8/9/1997							**640**
PW-2	8/9/1997	440	190	11	-3	410	20	0.14
Seep	5/17/1982		54	2.1	1.4			
Seep	9/2/1982	160.8	59.96	2.75	0.24	120		
Seep	12/23/1982		54	1.6	1.5			
Seep	2/21/1983		54	1.7	0.9			
Acid Rock Drianage	5/7/1993	446	35	11.1	0.9	93	3.1	**3720**

Well Name	Date	Arsenic(As)	Silver(Ag)	Boron(B)	Berrylium(Be)	Barium(Ba)	Cadmium(Cd)	Chromium(Cr)
BG-2Spring	4/1/1993	-0.005	-0.01	0.03		0.6	-0.002	-0.02
BG-2 Spring	7/1/1998							
BG-2 Spring	8/1/1998							
BG-2 Spring	9/1/1998							
BG Spring	4/1/1993	-0.005	-0.01	0.02		1.2	-0.002	-0.02
BG Spring	7/1/1998							
BG Spring	8/1/1998							
BG Spring	9/1/1998							
Casa Moya Wier	6/1/1998							
Casa Moya Wier	7/1/1998							
Casa Moya Wier	8/1/1998							
Casa Moya Wier	9/1/1998							
Danfelser Spring	1/1/1998							
Danfelser Spring	2/1/1998							
Danfelser Spring	3/1/1998							
Danfelser Spring	4/15/1998							
Danfelser Spring	5/1/1998							
Danfelser Spring	6/1/1998							
Danfelser Spring	7/22/1998							
Danfelser Spring	8/1/1998							
Danfelser Spring	9/1/1998							
Due South of Pit	8/1/1997							
Erwin Wier	5/1/1998							
Erwin Wier	6/1/1998							
Erwin Wier	7/1/1998							
Erwin Wier	8/1/1998							
Erwin Wier	9/1/1998							
Greyback Station A	1/77		0.01					
Greyback Station A	1/77		0.01					
Greyback Station B	1/77		0.01					
Greyback Station B	1/77		0.01					
Greyback Station C	1/77		0.01					
Greyback Station C	1/77		0.01					
Greyback Station A	3/77		0.01					
Greyback Station B	3/77		-0.01					
Greyback Station C	3/77		-0.01					

Well Name	Date	Arsenic(As)	Silver(Ag)	Boron(B)	Berrylium(Be)	Barium(Ba)	Cadmium(Cd)	Chromium(Cr)
Greyback Station B	7/77		-0.005					
Greyback	5/17/1982						-0.005	
Greyback	2/11/1991		0.04			0.04	*0.043*	*0.1*
Greyback	2/11/1991		-0.02			0.03	*0.015*	-0.02
Greyback	2/11/1991		-0.02			0.03	*0.015*	-0.02
Greyback Outfall	8/1/1995		-0.025			-0.05	-0.0025	-0.025
Greyback Outfall	9/21/1995		-0.025	-0.1	-0.002	-0.05	-0.0025	-0.025
Greyback Wash	3/1/1997							-0.025
Humphries Wier	6/1/1998							
Humphries Wier	7/1/1998							
Humphries Wier	8/1/1998							
Humphries Wier	9/1/1998							
Las Animas Creek	10/1/1997							-0.005
Las Animas Creek	4/15/1998							-0.005
Las Animas Creek	10/22/1998							-0.005
Las Animas/Seco Creek	7/31/1974							
Las Animas/Seco Creek	7/12/1974							
Las Animas/Seco Creek	5/7/1974			0.12				
Las Animas/Seco Creek	7/11/1974							
Las Animas/Seco Creek	7/11/1974							
Las Animas/Seco Creek	5/7/1974							
Las Animas/Seco Creek	7/9/1974							
Las Animas/Seco Creek	1/1/2001		-0.03	-0.10		-0.1	-0.001	-0.03
Las Animas/Seco Creek	11/16/1994		-0.03	-0.10		-0.1	-0.005	-0.03
Las Animas/Seco Creek	11/16/1994		-0.03	-0.10		-0.1	-0.005	-0.03
Las Animas/Seco Creek	11/16/1994		-0.03	-0.10		-0.1	-0.005	-0.03
Left Side of Haul Road	8/1/1997							
Pit Lake	4/3/1989		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Pit Lake	4/3/1989							
Pit Lake	11/14/1990							
Pit Lake	2/11/1991		0.03			-0.01	0.035	0.06
Pit Lake	2/11/1991		-0.02			-0.01	0.015	-0.02
Pit Lake	7/19/1991		-0.02			-0.01	-0.005	-0.02
Pit Lake	8/29/1991							
Pit Lake	11/26/1991							
Pit Lake	3/15/1992							

Well Name	Date	Arsenic(As)	Silver(Ag)	Boron(B)	Berrylium(Be)	Barium(Ba)	Cadmium(Cd)	Chromium(Cr)
Pit Lake	3/15/1992							
Pit Lake	5/25/1992							
Pit Lake	7/16/1992							
Pit Lake	10/8/1992							
Pit Lake	11/27/1992							
Pit Lake	12/15/1992							
Pit Lake	2/12/1993		-0.1	-0.1		-0.1	-0.1	-0.1
Pit Lake	2/25/1993							
Pit Lake	9/28/1993							
Pit Lake	3/17/1994							
Pit Lake	5/24/1994		-0.025	-0.1		-0.01	0.021	-0.025
Pit Lake	5/24/1994		-0.025	-0.1		-0.01	0.021	-0.025
Pit Lake	5/24/1994		-0.025	-0.1		-0.01	0.021	-0.025
Pit Lake	5/24/1994		-0.025	-0.1		-0.01	0.017	-0.025
Pit Lake	9/22/1994							
Pit Lake	11/16/1994		-0.025	-0.1	-0.002	-0.01	0.017	*0.2*
Pit Lake	11/16/1994		-0.025	-0.1	-0.002	-0.01	0.017	-0.025
Pit Lake	12/12/1994		-0.025	-0.1	-0.002	-0.01	0.017	-0.025
Pit Lake	12/19/1994		-0.025	-0.1	-0.002	-0.01	0.017	-0.025
Pit Lake	1/29/1995							
Pit Lake	3/29/1995							
Pit Lake	6/27/1995							
Pit Lake	8/1/1995		-0.05	-0.05		-0.05	0.0014	
Pit Lake	8/1/1995							
Pit Lake	9/21/1995		-0.025	-0.1	-0.002	-0.05	0.014	-0.025
Pit Lake	9/21/1995							
Pit Lake	1/10/1996							
Pit Lake	4/3/1996							
Pit Lake	6/1/1996							
Pit Lake	9/25/1996							
Pit Lake	11/15/1996						-0.01	
Pit Lake	11/15/1996						-0.01	
Pit Lake	11/15/1996						-0.01	
Pit Lake	11/15/1996						-0.01	
Pit Lake	1/15/1997							
Pit Lake	1/18/1997						-0.01	

Well Name	Date	Arsenic(As)	Silver(Ag)	Boron(B)	Berrylium(Be)	Barium(Ba)	Cadmium(Cd)	Chromium(Cr)
Pit Lake	1/18/1997						-0.01	
Pit Lake	1/18/1997						-0.01	
Pit Lake	1/18/1997						-0.01	
Pit Lake	7/1/1997							
Pit Lake	7/16/1997							
Pit Lake	7/16/1997							
Pit Lake	7/16/1997							
Pit Lake	7/16/1997							
Pit Lake	8/1/1997		-0.025	0.12	-0.002	-0.005	-0.002	-0.015
Pit Lake	10/1/1997							
Pit Lake	10/8/1997							
Pit Lake	10/8/1997							
Pit Lake	10/8/1997							
Pit Lake	10/8/1997							
Pit Lake	1/15/1998							
Pit Lake	1/24/1998							
Pit Lake	2/1/1998							
Pit Lake	3/1/1998							
Pit Lake	4/9/1998							
Pit Lake	5/1/1998							
Pit Lake	6/1/1998							
Pit Lake	7/13/1998							
Pit Lake	7/21/1998							
Pit Lake	8/1/1998							
Pit Lake	9/1/1998							
Pit Lake	10/15/1998							
Pit Lake	10/1/1997							
PP	8/9/1997		-0.025	0.064	-0.002	-0.05	-0.002	-0.025
PW-1	8/8/1997		-0.025	*1*	0.22	-0.05	**0.18**	*0.11*
PW-1	8/9/1997		-0.025	*1.6*	0.48	-0.05	**0.19**	*0.15*
PW-2	8/9/1997		-0.025	0.12	-0.002	-0.05	-0.002	-0.025
Seep	5/17/1982						-0.005	
Seep	9/2/1982							
Seep	12/23/1982						-0.005	
Seep	2/21/1983						-0.005	
Acid Rock Drianage	5/7/1993							

Well Name	Date	Copper(Cu)	Cobalt(Co)	Lead(Pb)	Iron(Fe)	Magnesium(Mg)	Molybdenum(Mo)	Manganese(Mn)
BG-2Spring	4/1/1993	-0.01	-0.05	-0.02	-0.05	56	-0.02	0.1
BG-2 Spring	7/1/1998							
BG-2 Spring	8/1/1998							
BG-2 Spring	9/1/1998							
BG Spring	4/1/1993	-0.01	-0.05	-0.02	-0.05	66	-0.02	0.2
BG Spring	7/1/1998							
BG Spring	8/1/1998							
BG Spring	9/1/1998							
Casa Moya Wier	6/1/1998							
Casa Moya Wier	7/1/1998							
Casa Moya Wier	8/1/1998							
Casa Moya Wier	9/1/1998							
Danfelser Spring	1/1/1998							
Danfelser Spring	2/1/1998							
Danfelser Spring	3/1/1998							
Danfelser Spring	4/15/1998	-0.005			-0.05	3.9	-0.5	-0.02
Danfelser Spring	5/1/1998							
Danfelser Spring	6/1/1998							
Danfelser Spring	7/22/1998	-0.005			-0.05	3.6	-0.05	-0.02
Danfelser Spring	8/1/1998							
Danfelser Spring	9/1/1998							
Due South of Pit	8/1/1997							
Erwin Wier	5/1/1998							
Erwin Wier	6/1/1998							
Erwin Wier	7/1/1998							
Erwin Wier	8/1/1998							
Erwin Wier	9/1/1998							
Greyback Station A	1/77	*0.04*			0.23		0.01	0.01
Greyback Station A	1/77	*0.03*			0.3		0.01	0.01
Greyback Station B	1/77	*0.04*			0.19		0.03	0.01
Greyback Station B	1/77	*0.05*			0.29		0.03	0.01
Greyback Station C	1/77	*0.03*			0.23		0.03	0.01
Greyback Station C	1/77	*0.05*			0.37		0.02	0.01
Greyback Station A	3/77	-0.005			0.1		0.01	-0.01
Greyback Station B	3/77	-0.005			0.15		0.08	-0.01
Greyback Station C	3/77	-0.005			0.1		0.08	-0.01

Well Name	Date	Copper(Cu)	Cobalt(Co)	Lead(Pb)	Iron(Fe)	Magnesium(Mg)	Molybdenum(Mo)	Manganese(Mn)
Greyback Station B	7/77	-0.005			0.14	29	0.05	0.07
Greyback	5/17/1982	-0.05			-0.01		0.08	-0.05
Greyback	2/11/1991			0.008	0.36	41.9		0.18
Greyback	2/11/1991			0.009	0.1	103		0.04
Greyback	2/11/1991			0.006	-0.05	98.1		-0.02
Greyback Outfall	8/1/1995	-0.025	-0.05	-0.005	0.057		-0.05	0.17
Greyback Outfall	9/21/1995	-0.025	-0.05	-0.005	0.057	140	-0.05	0.17
Greyback Wash	3/1/1997	-0.025			-0.05			-0.025
Humphries Wier	6/1/1998							
Humphries Wier	7/1/1998							
Humphries Wier	8/1/1998							
Humphries Wier	9/1/1998							
Las Animas Creek	10/1/1997				-0.05			
Las Animas Creek	4/15/1998				0.08	5.1	-0.05	-0.02
Las Animas Creek	10/22/1998				-0.05			
Las Animas/Seco Creek	7/31/1974					12		
Las Animas/Seco Creek	7/12/1974					3		
Las Animas/Seco Creek	5/7/1974				0	13		
Las Animas/Seco Creek	7/11/1974					8		
Las Animas/Seco Creek	7/11/1974				0.05	5		
Las Animas/Seco Creek	5/7/1974				0	6		
Las Animas/Seco Creek	7/9/1974				0.01	11		0.01
Las Animas/Seco Creek	1/1/2001	-0.03	-0.05	-0.01	-0.05	9	-0.05	-0.03
Las Animas/Seco Creek	11/16/1994	-0.03	-0.05	-0.01	-0.05	1	-0.05	-0.03
Las Animas/Seco Creek	11/16/1994	-0.03	-0.05	-0.01	-0.05	9	-0.05	-0.03
Las Animas/Seco Creek	11/16/1994	-0.03	-0.05	-0.01	-0.05	10	-0.05	-0.03
Left Side of Haul Road	8/1/1997							
Pit Lake	4/3/1989	-0.1	-0.05	-0.1	-0.1	130	-0.1	1.1
Pit Lake	4/3/1989					129		
Pit Lake	11/14/1990							
Pit Lake	2/11/1991			0.006	0.16	155.6		1.82
Pit Lake	2/11/1991			0.006	0.18	157.3		1.84
Pit Lake	7/19/1991			-0.005	0.27	209.1		2.03
Pit Lake	8/29/1991	**0.64**						
Pit Lake	11/26/1991	0.084						
Pit Lake	3/15/1992							

Well Name	Date	Copper(Cu)	Cobalt(Co)	Lead(Pb)	Iron(Fe)	Magnesium(Mg)	Molybdenum(Mo)	Manganese(Mn)
Pit Lake	3/15/1992							
Pit Lake	5/25/1992							
Pit Lake	7/16/1992							
Pit Lake	10/8/1992							
Pit Lake	11/27/1992							
Pit Lake	12/15/1992	**3.208**						
Pit Lake	2/12/1993	**2.6**	*0.1*	-0.1	0.1	181	-0.1	4.9
Pit Lake	2/25/1993							
Pit Lake	9/28/1993	0.001						
Pit Lake	3/17/1994	0.089						
Pit Lake	5/24/1994	0.051	-0.05	-0.005	0.19	200	-0.05	3.3
Pit Lake	5/24/1994	0.06	-0.05	-0.005	0.25	210	-0.05	3.9
Pit Lake	5/24/1994	0.06	-0.05	-0.005	0.22	200	-0.05	3.7
Pit Lake	5/24/1994	0.041	-0.05	-0.005	0.26	230	-0.05	0.46
Pit Lake	9/22/1994							
Pit Lake	11/16/1994	0.032	-0.025	-0.005	-0.05	250	-0.05	3.4
Pit Lake	11/16/1994	*0.3*	-0.025	-0.05	-0.05	250	-0.05	3.6
Pit Lake	12/12/1994	0.03	-0.05	0.005	-0.05	250	-0.05	3.6
Pit Lake	12/19/1994	0.032	-0.05	0.005	-0.05	250	-0.05	3.4
Pit Lake	1/29/1995							
Pit Lake	3/29/1995							
Pit Lake	6/27/1995							
Pit Lake	8/1/1995	0.064	-0.05	-0.005	0.23		-0.05	
Pit Lake	8/1/1995							
Pit Lake	9/21/1995	-0.025	-0.05	-0.005	-0.05	300	-0.05	3
Pit Lake	9/21/1995							
Pit Lake	1/10/1996							
Pit Lake	4/3/1996							
Pit Lake	6/1/1996							
Pit Lake	9/25/1996							
Pit Lake	11/15/1996	-0.1		-0.05				
Pit Lake	11/15/1996	-0.1		-0.05				
Pit Lake	11/15/1996	-0.1		-0.05				
Pit Lake	11/15/1996	-0.1		-0.05				
Pit Lake	1/15/1997							
Pit Lake	1/18/1997	-0.1		-0.05				

Well Name	Date	Copper(Cu)	Cobalt(Co)	Lead(Pb)	Iron(Fe)	Magnesium(Mg)	Molybdenum(Mo)	Manganese(Mn)
Pit Lake	1/18/1997	-0.1		-0.05				
Pit Lake	1/18/1997	-0.1		-0.05				
Pit Lake	1/18/1997	-0.1		-0.05				
Pit Lake	7/1/1997							
Pit Lake	7/16/1997							
Pit Lake	7/16/1997							
Pit Lake	7/16/1997							
Pit Lake	7/16/1997							
Pit Lake	8/1/1997	0.05	-0.05	-0.005	-0.5	290	0.058	0.83
Pit Lake	10/1/1997							
Pit Lake	10/8/1997							
Pit Lake	10/8/1997							
Pit Lake	10/8/1997							
Pit Lake	10/8/1997							
Pit Lake	1/15/1998	-0.005			-0.05	331.9	0.05	
Pit Lake	1/24/1998	-0.005				364.8	-0.05	1.76
Pit Lake	2/1/1998							
Pit Lake	3/1/1998							
Pit Lake	4/9/1998	0.055			-0.05		1.5	0.15
Pit Lake	5/1/1998							
Pit Lake	6/1/1998							
Pit Lake	7/13/1998	-0.05			-0.5		-0.5	1.3
Pit Lake	7/21/1998	-0.05			-0.5	386.5	-0.5	0.72
Pit Lake	8/1/1998							
Pit Lake	9/1/1998							
Pit Lake	10/15/1998	0.064			0.23			
Pit Lake	10/1/1997	0.064			0.23			
PP	8/9/1997	-0.025	-0.05	-0.005	-0.05	7.4	-0.05	-0.025
PW-1	8/8/1997	**97**	**1.5**	-0.005	1400	170	0.075	25
PW-1	8/9/1997	**110**	**2.1**	-0.005	1700	200	0.087	30
PW-2	8/9/1997	0.05	-0.05	-0.005	-0.05	290	0.058	0.83
Seep	5/17/1982	-0.05			0.1		1.1	0.15
Seep	9/2/1982					28.2		
Seep	12/23/1982	-0.05			-0.01		1.1	-0.05
Seep	2/21/1983	-0.05			-0.01		1.1	-0.05
Acid Rock Drianage	5/7/1993	**684**			375	236		142

Mercury(Hg)	Well Name	Date	Nickel(Ni)	Antimony(Sb)	Selenium(Se)	Zinc(Zn)
-0.001	BG-2Spring	4/1/1993	-0.01		-0.005	-0.01
	BG-2 Spring	7/1/1998				
	BG-2 Spring	8/1/1998				
	BG-2 Spring	9/1/1998				
-0.001	BG Spring	4/1/1993	-0.01		-0.005	-0.01
	BG Spring	7/1/1998				
	BG Spring	8/1/1998				
	BG Spring	9/1/1998				
	Casa Moya Wier	6/1/1998				
	Casa Moya Wier	7/1/1998				
	Casa Moya Wier	8/1/1998				
	Casa Moya Wier	9/1/1998				
	Danfelser Spring	1/1/1998				
	Danfelser Spring	2/1/1998				
	Danfelser Spring	3/1/1998				
-0.002	Danfelser Spring	4/15/1998				
	Danfelser Spring	5/1/1998				
	Danfelser Spring	6/1/1998				
-0.002	Danfelser Spring	7/22/1998				
	Danfelser Spring	8/1/1998				
	Danfelser Spring	9/1/1998				
	Due South of Pit	8/1/1997				
	Erwin Wier	5/1/1998				
	Erwin Wier	6/1/1998				
	Erwin Wier	7/1/1998				
	Erwin Wier	8/1/1998				
	Erwin Wier	9/1/1998				
	Greyback Station A	1/77				0.05
	Greyback Station A	1/77				0.04
	Greyback Station B	1/77				0.04
	Greyback Station B	1/77				0.04
	Greyback Station C	1/77				0.04
	Greyback Station C	1/77				0.04
	Greyback Station A	3/77				-0.01
	Greyback Station B	3/77				0.02
	Greyback Station C	3/77				0.02

Mercury(Hg)	Well Name	Date	Nickel(Ni)	Antimony(Sb)	Selenium(Se)	Zinc(Zn)
	Greyback Station B	7/77				0.01
-0.001	Greyback	5/17/1982			-0.005	
-0.0002	Greyback	2/11/1991			-0.001	
0.0007	Greyback	2/11/1991			-0.001	
0.0002	Greyback	2/11/1991			-0.001	
-0.001	Greyback Outfall	8/1/1995	-0.05		-0.025	-0.05
-0.001	Greyback Outfall	9/21/1995	-0.05	-0.005	-0.25	-0.05
	Greyback Wash	3/1/1997				-0.05
	Humphries Wier	6/1/1998				
	Humphries Wier	7/1/1998				
	Humphries Wier	8/1/1998				
	Humphries Wier	9/1/1998				
	Las Animas Creek	10/1/1997				
0.002	Las Animas Creek	4/15/1998			-0.05	
	Las Animas Creek	10/22/1998				
	Las Animas/Seco Creek	7/31/1974				
	Las Animas/Seco Creek	7/12/1974				
	Las Animas/Seco Creek	5/7/1974				
	Las Animas/Seco Creek	7/11/1974				
	Las Animas/Seco Creek	7/11/1974				
	Las Animas/Seco Creek	5/7/1974				
	Las Animas/Seco Creek	7/9/1974				
-0.001	Las Animas/Seco Creek	1/1/2001	-0.05			-0.05
-0.001	Las Animas/Seco Creek	11/16/1994	-0.05		-0.005	-0.05
-0.001	Las Animas/Seco Creek	11/16/1994	-0.05		-0.005	-0.05
-0.001	Las Animas/Seco Creek	11/16/1994	-0.05		-0.005	-0.05
	Left Side of Haul Road	8/1/1997				
	Pit Lake	4/3/1989	-0.1			0.4
	Pit Lake	4/3/1989				
	Pit Lake	11/14/1990				
0.0004	Pit Lake	2/11/1991			-0.001	
-0.0002	Pit Lake	2/11/1991			-0.001	
-0.0002	Pit Lake	7/19/1991			-0.001	
	Pit Lake	8/29/1991				
	Pit Lake	11/26/1991				
	Pit Lake	3/15/1992				

Mercury(Hg)	Well Name	Date	Nickel(Ni)	Antimony(Sb)	Selenium(Se)	Zinc(Zn)
	Pit Lake	3/15/1992				
	Pit Lake	5/25/1992				
	Pit Lake	7/16/1992				
	Pit Lake	10/8/1992				
	Pit Lake	11/27/1992				
	Pit Lake	12/15/1992				
-0.0005	Pit Lake	2/12/1993	-0.1		-0.005	1.8
	Pit Lake	2/25/1993				
	Pit Lake	9/28/1993				0.01
	Pit Lake	3/17/1994				1.01
-0.001	Pit Lake	5/24/1994	-0.05	-0.005	-0.005	0.6
-0.001	Pit Lake	5/24/1994	-0.05	-0.005	-0.005	0.56
-0.001	Pit Lake	5/24/1994	-0.05	-0.005	-0.005	0.57
-0.001	Pit Lake	5/24/1994	-0.05	-0.005	-0.005	0.54
	Pit Lake	9/22/1994				
-0.001	Pit Lake	11/16/1994	0.05	-0.005	-0.005	0.092
-0.001	Pit Lake	11/16/1994	-0.05	-0.005	-0.005	0.095
-0.001	Pit Lake	12/12/1994	-0.05	-0.005	-0.005	0.095
-0.001	Pit Lake	12/19/1994	-0.05	-0.005	-0.005	0.092
	Pit Lake	1/29/1995				
	Pit Lake	3/29/1995				
	Pit Lake	6/27/1995				
-0.001	Pit Lake	8/1/1995	-0.05		-0.025	
	Pit Lake	8/1/1995				
-0.001	Pit Lake	9/21/1995	-0.05	-0.005	-0.25	0.071
	Pit Lake	9/21/1995				
	Pit Lake	1/10/1996				
	Pit Lake	4/3/1996				
	Pit Lake	6/1/1996				
	Pit Lake	9/25/1996				
-0.001	Pit Lake	11/15/1996				0.28
-0.001	Pit Lake	11/15/1996				0.17
-0.001	Pit Lake	11/15/1996				0.2
-0.001	Pit Lake	11/15/1996				0.29
	Pit Lake	1/15/1997				
-0.001	Pit Lake	1/18/1997				0.23

Mercury(Hg)	Well Name	Date	Nickel(Ni)	Antimony(Sb)	Selenium(Se)	Zinc(Zn)
-0.001	Pit Lake	1/18/1997				0.23
-0.001	Pit Lake	1/18/1997				0.23
-0.001	Pit Lake	1/18/1997				0.19
	Pit Lake	7/1/1997				
	Pit Lake	7/16/1997				
	Pit Lake	7/16/1997				
	Pit Lake	7/16/1997				
	Pit Lake	7/16/1997				
	Pit Lake	8/1/1997	-0.05	-0.005	-0.005	0.11
	Pit Lake	10/1/1997				
	Pit Lake	10/8/1997				
	Pit Lake	10/8/1997				
	Pit Lake	10/8/1997				
	Pit Lake	10/8/1997				
-0.002	Pit Lake	1/15/1998			-0.05	
	Pit Lake	1/24/1998			-0.05	
	Pit Lake	2/1/1998				
	Pit Lake	3/1/1998				
-0.002	Pit Lake	4/9/1998			-0.05	
	Pit Lake	5/1/1998				
	Pit Lake	6/1/1998				
-0.002	Pit Lake	7/13/1998			-0.05	
-0.002	Pit Lake	7/21/1998			-0.05	
	Pit Lake	8/1/1998				
	Pit Lake	9/1/1998				
	Pit Lake	10/15/1998				
	Pit Lake	10/1/1997				
	PP	8/9/1997	-0.05		-0.005	-0.05
	PW-1	8/8/1997	0.37		**0.043**	16
	PW-1	8/9/1997	0.36		-0.05	19
	PW-2	8/9/1997	-0.05		-0.005	0.11
-0.001	Seep	5/17/1982			-0.005	
	Seep	9/2/1982				
-0.001	Seep	12/23/1982			-0.005	
-0.001	Seep	2/21/1983			-0.005	
	Acid Rock Drianage	5/7/1993				**51**

Well Name	Flow Rate	Date	Sampler	Notes	Lat	Long
Seep		5/13/1983	QMC			
Seep		11/1/1983	QMC			
Seep		3/16/1984	QMC			
Seep		8/9/1993	QMC			
Spring		11/14/1990	GE	Greyback, rock house below cu flat		
Spring		11/14/1990	GE	Wet weather spring		
Spring		2/12/1991	GE	Wet weather spring, SHB #7		
SWQ1		12/28/1982	QMC		32.96645	107.54562
SWQ1		2/21/1983	QMC		32.96645	107.54562
SWQ1		7/16/1992	BI/GE	Mislabeled as GQW1	32.96645	107.54562
SWQ1		11/27/1992	GE	Greyback wash 1/2 mi. w of pit	32.96645	107.54562
SWQ1		2/25/1993	BI/GE	Greyback wash 1/2 mi. w of pit	32.96645	107.54562
SWQ1		4/1/1993	Shomaker		32.96645	107.54562
SWQ2		10/27/1981		BG Arroyo	32.96404	107.52329
SWQ2		2/25/1982	QMC		32.96404	107.52329
SWQ2		5/12/1982	QMC		32.96404	107.52329
SWQ2		2/21/1983	QMC		32.96404	107.52329
SWQ2		5/13/1983	QMC		32.96404	107.52329
SWQ2		8/9/1983	QMC		32.96404	107.52329
SWQ2		11/1/1983	QMC		32.96404	107.52329
SWQ2		12/23/1983	QMC		32.96404	107.52329
SWQ2		3/16/1984	QMC		32.96404	107.52329
SWQ2		5/30/1984	QMC		32.96404	107.52329
SWQ2		9/12/1984	CFP		32.96404	107.52329
SWQ2		11/27/1984	CFP		32.96404	107.52329
SWQ2		5/17/1985	CFP		32.96404	107.52329
SWQ2		11/13/1985	CFP		32.96404	107.52329
SWQ2		6/5/1986	CFP	No flow	32.96404	107.52329
SWQ2		10/13/1986	CFP		32.96404	107.52329
SWQ2		7/19/1991	GE	Greyback wash s of plant	32.96404	107.52329
SWQ2		7/16/1992	BI/GE	Mislabeled as GQW2, greyback wash of plant	32.96404	107.52329
SWQ2		10/8/1992	BI/GE		32.96404	107.52329
SWQ2		12/15/1992	BI/GE	Greyback wash s of plant	32.96404	107.52329
SWQ2		2/25/1993	BI/GE	Greyback wash s of plant	32.96404	107.52329
SWQ2		3/31/1993	Shomaker		32.96404	107.52329
SWQ2		6/23/1994	BI/AG	S on grayback of mill site	32.96404	107.52329

Well Name	Flow Rate	Date	Sampler	Notes	Lat	Long
SWQ2		1/29/1995	BI/AG	Mislabeled as gwq2, grayback s of mill	32.96404	107.52329
SWQ2		3/29/1995	BI/AG	Mislabeled as qwq1, south of mill site	32.96404	107.52329
SWQ2		6/27/1995	BI/AG	Mislabeled as qwq1, south of mill site	32.96404	107.52329
SWQ2		9/21/1995	BI/AG	Mislabeled as qwq1, south of mill site	32.96404	107.52329
SWQ2		1/10/1996	BI/AG	Mislabeled as qwq1, south of mill site	32.96404	107.52329
SWQ2		4/3/1996	BI/AG	Mislabeled as qwq1, south of mill site	32.96404	107.52329
SWQ2		9/25/1996	BI/AG	Mislabeled as qwq2 rock house of grayback	32.96404	107.52329
SWQ2		1/15/1997	BI/AG	Mislabeled as qwq1, south of mill site	32.96404	107.52329
SWQ2		7/1/1997	BI	exact date not known	32.96404	107.52329
SWQ2		8/10/1997	SRK		32.96404	107.52329
SWQ2		10/1/1997	BI	exact date not known	32.96404	107.52329
SWQ2		1/15/1998	BI	Labled GWQ-1 South [of] Mill Site	32.96404	107.52329
SWQ2		4/9/1998	BI	Labled GWQ-1 South [of] Mill Site	32.96404	107.52329
SWQ2A		10/27/1981	QMC	BG Arroyo		
SWQ2A		2/25/1982	QMC			
SWQ3		7/19/1991	GE	Greyback wash E of Rock house	32.96654	107.51597
SWQ3		8/29/1991	BI/GE	Greyback wash Opp. Rock House	32.96654	107.51597
SWQ3		11/26/1991	MH/GE	Greyback wash Opp. Rock House	32.96654	107.51597
SWQ3		3/15/1992	BI/GE		32.96654	107.51597
SWQ3		3/15/1992	BI/GE	Greyback wash Opp. Rock House	32.96654	107.51597
SWQ3		2/25/1992	BI/GE		32.96654	107.51597
SWQ3		7/16/1992	BI/GE	Greyback wash E of plant	32.96654	107.51597
SWQ3		10/8/1992	BI/GE		32.96654	107.51597
SWQ3		11/27/1992	MH/GE	Greyback wash Opp. Rock House	32.96654	107.51597
SWQ3		12/15/1992	BI/GE	Greyback wash e of plant	32.96654	107.51597
SWQ3		2/25/1993	BI/GE	Greyback wash E of plant	32.96654	107.51597
SWQ-3		3/31/1993	Shomaker		32.96654	107.51597
SWQ3		9/28/1993	BI/GE		32.96654	107.51597
SWQ3		6/23/1994	BI/AG	Mislabeled as GWQ3, grayback at rock house	32.96654	107.51597
SWQ3		1/29/1995	BI/AG	Mislabeled as gwq1, grayback at rock house	32.96654	107.51597
SWQ3		3/29/1995	BI/AG	Mislabeled as gwq2, rock house on greyback	32.96654	107.51597
SWQ3		6/27/1995	BI/AG	Mislabeled as gwq2, at rock house on greyback	32.96654	107.51597
SWQ3		9/21/1995	BI/AG	Mislabeled as gwq2 rock house of greyback	32.96654	107.51597
SWQ3		1/10/1996	BI/AG	Mislabeled as gwq2 rock house of greyback	32.96654	107.51597
SWQ3		4/3/1996	BI/AG	Mislabeled as gwq2 rock house of greyback	32.96654	107.51597
SWQ3		9/25/1996	BI/AG	Mislabeled as gwq2 rock house of greyback	32.96654	107.51597

Well Name	Flow Rate	Date	Sampler	Notes	Lat	Long
SWQ3		1/15/1997	BI/AG	Mislabeled as gwq2 rock house of greyback	32.96654	107.51597
SWQ3		7/1/1997	BI	exact date not known		
SWQ3		8/10/1997	SRK			
SWQ3		10/1/1997	BI	exact date not known		
SWQ3		1/15/1998	BI	Labeled GWQ-2 Greyback Rock House		
SWQ3		4/9/1998	BI	Labeled GWQ-2 Greyback Rock House		
US Greyback		2/11/1991	FTS/GE	SHB6		
Warm Springs South	18	4/1/1998		16.7.5.2.2.3	32.94974	107.57747
Warm Springs South	5	7/21/1998	Brownfield	16.7.5.2.2.3	32.94974	107.57747
W.Waste	0.01	8/10/1997	SRK	Seep at E. toe of W. waste rock dump		
Caballo Reservoir		11/16/1994		CF-Caballo		
Rio Grande @ El Paso		1/1/1958				
Rio Grande @ El Paso		1/1/1964				
Rio Grande @ El Paso		1/1/1975				
Rio Grande @ El Paso		12/30/1975				
Warm Springs Canyon		4/2/1993				

Well Name	Date	North	East	Filtered?	pH	Sp. Cond.	TDS	SO4	Bicarbonate
Seep	5/13/1983				8.2		1120	600	
Seep	11/1/1983				8		1160	529	
Seep	3/16/1984				8.3		1300	620	
Seep	8/9/1993				8.0		1210	505	
Spring	11/14/1990						2618	1559.1	
Spring	11/14/1990						541	200.8	
Spring	2/12/1991					1095	679	245.0	
SWQ1	12/28/1982	262071	3650254		8.0		250	68	
SWQ1	2/21/1983	262071	3650254		8.0		470	161	
SWQ1	7/16/1992	262071	3650254	TRUE	7.37		965	298.3	
SWQ1	11/27/1992	262071	3650254		8.31		545	180.8	
SWQ1	2/25/1993	262071	3650254	TRUE	8.34		844	323.1	
SWQ1	4/1/1993	262071	3650254		8.30	1150	782	276	430
SWQ2	10/27/1981	264152	3649937	TRUE	8.7		1060	460	
SWQ2	2/25/1982	264152	3649937	TRUE	8.1		1360	658	
SWQ2	5/12/1982	264152	3649937	TRUE	7.9		1380	700	
SWQ2	2/21/1983	264152	3649937		8.4		990	445	
SWQ2	5/13/1983	264152	3649937		8.4		1120	517	
SWQ2	8/9/1983	264152	3649937		8.0		1620	675	
SWQ2	11/1/1983	264152	3649937		8.2		1170	553	
SWQ2	12/23/1983	264152	3649937	TRUE	8.0		1180	550	
SWQ2	3/16/1984	264152	3649937		8.3		1140	515	
SWQ2	5/30/1984	264152	3649937		8.1		1420	720	
SWQ2	9/12/1984	264152	3649937		8.1		1190	577	
SWQ2	11/27/1984	264152	3649937		8.2		1360	675	
SWQ2	5/17/1985	264152	3649937		8.0		1640	770	
SWQ2	11/13/1985	264152	3649937		7.9		1590	770	
SWQ2	6/5/1986	264152	3649937						
SWQ2	10/13/1986	264152	3649937		7.9		1840	830	
SWQ2	7/19/1991	264152	3649937		7.57	4310	3019	1585.5	
SWQ2	7/16/1992	264152	3649937	TRUE	7.57		2305	1154.9	
SWQ2	10/8/1992	264152	3649937	TRUE	7.53		2685	1470.5	
SWQ2	12/15/1992	264152	3649937	TRUE	7.61		3108	1613.0	
SWQ2	2/25/1993	264152	3649937	TRUE	7.58		2713	1459.3	
SWQ2	3/31/1993	264152	3649937		7.7	3150	2720	1460	376
SWQ2	6/23/1994	264152	3649937	TRUE	8.87		3958	2369	

Well Name	Date	North	East	Filtered?	pH	Sp. Cond.	TDS	SO4	Bicarbonate
SWQ2	1/29/1995	264152	3649937	TRUE	7.64		2653	1286.2	
SWQ2	3/29/1995	264152	3649937	TRUE	7.83		2866	1388.2	
SWQ2	6/27/1995	264152	3649937	TRUE	7.74		3235	1877.0	
SWQ2	9/21/1995	264152	3649937	TRUE	7.58		500	271.2	
SWQ2	1/10/1996	264152	3649937	TRUE	7.37		3991	2336.9	
SWQ2	4/3/1996	264152	3649937	TRUE	8.06		4464	2566.3	
SWQ2	9/25/1996	264152	3649937	TRUE	7.66		3997	1987	
SWQ2	1/15/1997	264152	3649937	TRUE	7.43		3436	1356	
SWQ2	7/1/1997	264152	3649937	TRUE	7.34		3507	2033	
SWQ2	8/10/1997	264152	3649937	TRUE	7.89	3267	2890	1410	
SWQ2	10/1/1997	264152	3649937	TRUE	7.75		2015	960	
SWQ2	1/15/1998	264152	3649937	TRUE	7.67	3380	2643	1500	
SWQ2	4/9/1998	264152	3649937	TRUE		3360	2365	2029	
SWQ2A	10/27/1981			TRUE	8.2		830	360	
SWQ2A	2/25/1982			TRUE	8.4		800	320	
SWQ3	7/19/1991	264842	3650197		7.52	3120	2191	1108.2	
SWQ3	8/29/1991	264842	3650197	TRUE	7.82		3596	1884.2	
SWQ3	11/26/1991	264842	3650197		7.71		2857	1419	
SWQ3	3/15/1992	264842	3650197	TRUE	8.08		2393	1247.6	
SWQ3	3/15/1992	264842	3650197	TRUE	8.08		2393	1247.6	
SWQ3	2/25/1992	264842	3650197	TRUE	8.07		2380	1185.2	
SWQ3	7/16/1992	264842	3650197	TRUE	7.66		3364	1654.0	
SWQ3	10/8/1992	264842	3650197	TRUE	7.49		3611	1667.4	
SWQ3	11/27/1992	264842	3650197		8.35		1866	952.2	
SWQ3	12/15/1992	264842	3650197	TRUE	8.15		3436	1549.4	
SWQ3	2/25/1993	264842	3650197	TRUE	8.01		2974	1573.7	
SWQ-3	3/31/1993	264842	3650197		8.1	3330	2950	1580	409
SWQ3	9/28/1993	264842	3650197	TRUE	8.13		4432	1254	
SWQ3	6/23/1994	264842	3650197	TRUE	8.37		2934	1712	
SWQ3	1/29/1995	264842	3650197	TRUE	7.93		3185	1671.7	
SWQ3	3/29/1995	264842	3650197	TRUE	8.23		3216	1709.7	
SWQ3	6/27/1995	264842	3650197	TRUE	7.51		3393	1792.4	
SWQ3	9/21/1995	264842	3650197	TRUE	8.73		3741	2382.0	
SWQ3	1/10/1996	264842	3650197	TRUE	7.78		3666	1936.6	
SWQ3	4/3/1996	264842	3650197	TRUE	7.38		3635	2236.3	
SWQ3	9/25/1996	264842	3650197	TRUE	7.64		2568	1153	

Well Name	Date	North	East	Filtered?	pH	Sp. Cond.	TDS	SO4	Bicarbonate
SWQ3	1/15/1997	264842	3650197	TRUE	8.13		3436	1356	
SWQ3	7/1/1997			TRUE	7.79		3854	2185	
SWQ3	8/10/1997			TRUE	7.92	3590	3310	1670	
SWQ3	10/1/1997			TRUE	7.91		2964	1489	
SWQ3	1/15/1998			TRUE	7.7	3800	3115	1738	
SWQ3	4/9/1998			TRUE		3570	3361	2050	
US Greyback	2/11/1991				7.78	1418	908	348.6	
Warm Springs South	4/1/1998	259047	3648474						
Warm Springs South	7/21/1998	259047	3648474	TRUE			543	96	
W.Waste	8/10/1997			TRUE	3.03	12280	25440	22100	
Caballo Reservoir	11/16/1994				7.97		440	110	
Rio Grande @ El Paso	1/1/1958						721	260	
Rio Grande @ El Paso	1/1/1964						1058	340	
Rio Grande @ El Paso	1/1/1975						846	275	
Rio Grande @ El Paso	12/30/1975						809	129	
Warm Springs Canyon	4/2/1993				8.5		1370	351	

Well Name	Date	Calcium(Ca)	Cl	Flouride(F)	Nitrate (NO$_3$)	Sodium(Na)	Potassium(K)	Aluminum(Al)
Seep	5/13/1983		52	1.9	0.9			
Seep	11/1/1983		56	1.5	1.1			
Seep	3/16/1984		52	1.7	5.6			
Seep	8/9/1993		52	1.5	1.2			
Spring	11/14/1990		141.2					
Spring	11/14/1990		26.1					
Spring	2/12/1991		43.3	0.3	0.08	78.6	1.6	
SWQ1	12/28/1982		10	0.3	0.9			
SWQ1	2/21/1983		20	0.3	4.4			
SWQ1	7/16/1992		47.2					
SWQ1	11/27/1992		16.7					
SWQ1	2/25/1993		28.9					
SWQ1	4/1/1993	109	27	0.53	0	107	1.8	-0.1
SWQ2	10/27/1981		46	0.8	6.6			-0.01
SWQ2	2/25/1982		80	0.7	4.2			
SWQ2	5/12/1982		108	0.7	3			
SWQ2	2/21/1983		68	0.7	0.8			
SWQ2	5/13/1983		84	0.8	0.3			
SWQ2	8/9/1983		142	0.7	-0.2			
SWQ2	11/1/1983		72	0.8	0.3			
SWQ2	12/23/1983		82	0.5	11.2			
SWQ2	3/16/1984		68	0.8	5.3			
SWQ2	5/30/1984		94	0.8	0.4			
SWQ2	9/12/1984		80	0.9	0.4			
SWQ2	11/27/1984		88	0.8	-0.2			
SWQ2	5/17/1985		102					
SWQ2	11/13/1985		94					
SWQ2	6/5/1986							
SWQ2	10/13/1986		136					
SWQ2	7/19/1991		216.7	0.57	12.74	264.3	10.9	
SWQ2	7/16/1992		93.4					
SWQ2	10/8/1992		130.7					
SWQ2	12/15/1992		192.5					
SWQ2	2/25/1993		135.9					
SWQ2	3/31/1993	436	123	0.63	14.5	279	2.1	-0.1
SWQ2	6/23/1994		197.3					

Well Name	Date	Calcium(Ca)	Cl	Flouride(F)	Nitrate (NO$_3$)	Sodium(Na)	Potassium(K)	Aluminum(Al)
SWQ2	1/29/1995		89.2					
SWQ2	3/29/1995		83.9					
SWQ2	6/27/1995		127.3					
SWQ2	9/21/1995		31.1					
SWQ2	1/10/1996		167.2					
SWQ2	4/3/1996		222.6					
SWQ2	9/25/1996		143.7					
SWQ2	1/15/1997		148					
SWQ2	7/1/1997		168					
SWQ2	8/10/1997		97	0.86	2.1	290	9.6	0.12
SWQ2	10/1/1997		64.1					
SWQ2	1/15/1998		67.2	0.87	11.3			
SWQ2	4/9/1998		88	0.95	6			
SWQ2A	10/27/1981		46	0.6	0.3			-0.01
SWQ2A	2/25/1982		50	0.7	-0.2			
SWQ3	7/19/1991		143.9	0.73	1.39	189.5	7.4	
SWQ3	8/29/1991		231.3					
SWQ3	11/26/1991		141.1					
SWQ3	3/15/1992		99.2					
SWQ3	3/15/1992		99.2					
SWQ3	2/25/1992		102.9					
SWQ3	7/16/1992		128.7					
SWQ3	10/8/1992		174.4					
SWQ3	11/27/1992		160.5					
SWQ3	12/15/1992		221.6					
SWQ3	2/25/1993		150.7					
SWQ-3	3/31/1993	445	135	0.97	6.9	271	2.2	-0.1
SWQ3	9/28/1993		226.9					
SWQ3	6/23/1994		157.4					
SWQ3	1/29/1995		237.6					
SWQ3	3/29/1995		100.6					
SWQ3	6/27/1995		200.3					
SWQ3	9/21/1995		178.5					
SWQ3	1/10/1996		112.0					
SWQ3	4/3/1996		157.0					
SWQ3	9/25/1996		96.7					

Well Name	Date	Calcium(Ca)	Cl	Flouride(F)	Nitrate (NO_3)	Sodium(Na)	Potassium(K)	Aluminum(Al)
SWQ3	1/15/1997		148					
SWQ3	7/1/1997		176					
SWQ3	8/10/1997		130	0.85	-1	300	9	0.032
SWQ3	10/1/1997		118					
SWQ3	1/15/1998		114	0.99	1.6			
SWQ3	4/9/1998		116	1.07	0.12			
US Greyback	2/11/1991		49.9	0.37	0.07	118.5	1.2	
Warm Springs South	4/1/1998							
Warm Springs South	7/21/1998		17	16.15	-0.05	148.3	9.3	
W.Waste	8/10/1997		16	0.31	4.7	20	-1	**2100**
Caballo Reservoir	11/16/1994		71	0.57		79	5.8	-0.05
Rio Grande @ El Paso	1/1/1958		87			116		
Rio Grande @ El Paso	1/1/1964		199			224		
Rio Grande @ El Paso	1/1/1975		124			159		
Rio Grande @ El Paso	12/30/1975					151		
Warm Springs Canyon	4/2/1993		52	22.2	0	457	22	-0.01

Well Name	Date	Arsenic(As)	Silver(Ag)	Boron(B)	Berrylium(Be)	Barium(Ba)	Cadmium(Cd)	Chromium(Cr)
Seep	5/13/1983						-0.005	
Seep	11/1/1983						-0.005	
Seep	3/16/1984						-0.005	
Seep	8/9/1993						-0.005	
Spring	11/14/1990					0.1	*0.027*	
Spring	11/14/1990							
Spring	2/12/1991	-0.001	-0.001			0.1	*0.027*	0.05
SWQ1	12/28/1982						-0.005	
SWQ1	2/21/1983						-0.005	
SWQ1	7/16/1992							
SWQ1	11/27/1992							
SWQ1	2/25/1993							
SWQ1	4/1/1993	-0.005	-0.01	0.02		-0.05	-0.002	-0.02
SWQ2	10/27/1981	-0.01	-0.02	-0.01		-0.02	-0.005	-0.01
SWQ2	2/25/1982						-0.005	
SWQ2	5/12/1982						-0.005	
SWQ2	2/21/1983						-0.005	
SWQ2	5/13/1983						-0.005	
SWQ2	8/9/1983						-0.005	
SWQ2	11/1/1983						-0.005	
SWQ2	12/23/1983						-0.005	
SWQ2	3/16/1984						-0.005	
SWQ2	5/30/1984						-0.005	
SWQ2	9/12/1984						-0.005	
SWQ2	11/27/1984						-0.005	
SWQ2	5/17/1985							
SWQ2	11/13/1985							
SWQ2	6/5/1986							
SWQ2	10/13/1986							
SWQ2	7/19/1991	-0.002	-0.02			-0.01	-0.005	-0.02
SWQ2	7/16/1992							
SWQ2	10/8/1992							
SWQ2	12/15/1992							
SWQ2	2/25/1993							
SWQ2	3/31/1993	-0.005	-0.01	0.08		-0.5	-0.002	-0.02
SWQ2	6/23/1994							

Well Name	Date	Arsenic(As)	Silver(Ag)	Boron(B)	Berrylium(Be)	Barium(Ba)	Cadmium(Cd)	Chromium(Cr)
SWQ2	1/29/1995							
SWQ2	3/29/1995							
SWQ2	6/27/1995							
SWQ2	9/21/1995							
SWQ2	1/10/1996							
SWQ2	4/3/1996							
SWQ2	9/25/1996							
SWQ2	1/15/1997							
SWQ2	7/1/1997							
SWQ2	8/10/1997	-0.005	-0.025	0.11	-0.002	0.12	-0.002	-0.025
SWQ2	10/1/1997							
SWQ2	1/15/1998							
SWQ2	4/9/1998							
SWQ2A	10/27/1981	-0.01	-0.02	-0.01		-0.02	-0.005	-0.01
SWQ2A	2/25/1982						-0.005	
SWQ3	7/19/1991	-0.002	-0.02			0.03	-0.005	-0.02
SWQ3	8/29/1991							
SWQ3	11/26/1991							
SWQ3	3/15/1992							
SWQ3	3/15/1992							
SWQ3	2/25/1992							
SWQ3	7/16/1992							
SWQ3	10/8/1992							
SWQ3	11/27/1992							
SWQ3	12/15/1992							
SWQ3	2/25/1993							
SWQ-3	3/31/1993	-0.005	-0.01	0.06		-0.05	-0.002	-0.02
SWQ3	9/28/1993							
SWQ3	6/23/1994							
SWQ3	1/29/1995							
SWQ3	3/29/1995							
SWQ3	6/27/1995							
SWQ3	9/21/1995							
SWQ3	1/10/1996							
SWQ3	4/3/1996							
SWQ3	9/25/1996							

Well Name	Date	Arsenic(As)	Silver(Ag)	Boron(B)	Berrylium(Be)	Barium(Ba)	Cadmium(Cd)	Chromium(Cr)
SWQ3	1/15/1997							
SWQ3	7/1/1997							
SWQ3	8/10/1997	-0.005	-0.025	0.11	-0.002	0.1	-0.002	-0.025
SWQ3	10/1/1997							
SWQ3	1/15/1998							
SWQ3	4/9/1998							
US Greyback	2/11/1991	-0.001	0.08			0.06	**0.38**	0.07
Warm Springs South	4/1/1998							
Warm Springs South	7/21/1998							
W.Waste	8/10/1997	*0.14*	-0.025	0.21	0.49	-0.05	**0.82**	0.068
Caballo Reservoir	11/16/1994	-0.005	-0.03	0.14		-0.1	-0.005	-0.03
Rio Grande @ El Paso	1/1/1958							
Rio Grande @ El Paso	1/1/1964							
Rio Grande @ El Paso	1/1/1975							
Rio Grande @ El Paso	12/30/1975							
Warm Springs Canyon	4/2/1993	-0.005	-0.01	0.15		-0.5	-0.002	-0.02

Well Name	Date	Copper(Cu)	Cobalt(Co)	Lead(Pb)	Iron(Fe)	Magnesium(Mg)	Molybdenum(Mo)	Manganese(Mn)	Mercury(Hg)
Seep	5/13/1983	0.089			-0.01		1.8	-0.05	-0.001
Seep	11/1/1983	-0.05			-0.01		1.1	-0.05	-0.001
Seep	3/16/1984	-0.05			-0.01		0.88	-0.05	-0.001
Seep	8/9/1993	-0.05			-0.01		0.87	-0.05	0.001
Spring	11/14/1990								
Spring	11/14/1990								
Spring	2/12/1991			-0.005	0.24	24.7		0.07	-0.0002
SWQ1	12/28/1982	-0.05			-0.01		-0.05	-0.05	-0.001
SWQ1	2/21/1983	-0.05			-0.01		-0.05	-0.05	-0.001
SWQ1	7/16/1992								
SWQ1	11/27/1992								
SWQ1	2/25/1993								
SWQ1	4/1/1993	-0.01	-0.05	-0.02	-0.05	36	-0.02	-0.02	-0.001
SWQ2	10/27/1981	-0.05	-0.02	-0.02	-0.05		-0.05	-0.05	0.004
SWQ2	2/25/1982	-0.05			0.13		-0.05	-0.05	-0.001
SWQ2	5/12/1982	-0.05			-0.01		-0.05	-0.05	-0.001
SWQ2	2/21/1983	-0.05			-0.01		-0.05	-0.05	-0.001
SWQ2	5/13/1983	-0.05			-0.01		-0.05	-0.05	-0.001
SWQ2	8/9/1983	-0.05			-0.01		-0.05	-0.05	-0.001
SWQ2	11/1/1983	-0.05			-0.01		-0.05	-0.05	-0.001
SWQ2	12/23/1983	-0.05			-0.01		-0.05	-0.05	-0.001
SWQ2	3/16/1984	-0.05			-0.01		-0.05	-0.05	-0.001
SWQ2	5/30/1984	-0.05			-0.01		-0.05	-0.05	-0.001
SWQ2	9/12/1984	-0.05			-0.01		-0.05	-0.05	-0.001
SWQ2	11/27/1984	-0.05			-0.01		-0.05	-0.05	-0.001
SWQ2	5/17/1985								
SWQ2	11/13/1985								
SWQ2	6/5/1986								
SWQ2	10/13/1986								
SWQ2	7/19/1991			-0.005	-0.05	129.1		-0.02	-0.0002
SWQ2	7/16/1992								
SWQ2	10/8/1992								
SWQ2	12/15/1992								
SWQ2	2/25/1993								
SWQ2	3/31/1993	0.01	-0.05	-0.02	-0.05	83	-0.02	0.03	-0.001
SWQ2	6/23/1994								

Well Name	Date	Copper(Cu)	Cobalt(Co)	Lead(Pb)	Iron(Fe)	Magnesium(Mg)	Molybdenum(Mo)	Manganese(Mn)	Mercury(Hg)
SWQ2	1/29/1995								
SWQ2	3/29/1995								
SWQ2	6/27/1995								
SWQ2	9/21/1995								
SWQ2	1/10/1996								
SWQ2	4/3/1996								
SWQ2	9/25/1996								
SWQ2	1/15/1997								
SWQ2	7/1/1997								
SWQ2	8/10/1997	0.098	-0.05	-0.005	0.068	110	-0.05	1.6	
SWQ2	10/1/1997								
SWQ2	1/15/1998	-0.005			0.15	93.4	-0.05		-0.002
SWQ2	4/9/1998	0.02			-0.2		-0.05	0.03	-0.002
SWQ2A	10/27/1981	-0.05	-0.02	-0.02	-0.05		-0.05	-0.05	-0.001
SWQ2A	2/25/1982	-0.05			0.1		-0.05	-0.05	-0.001
SWQ3	7/19/1991			-0.005	0.14	84.6		-0.02	-0.0002
SWQ3	8/29/1991	0.015							
SWQ3	11/26/1991	0.001							
SWQ3	3/15/1992								
SWQ3	3/15/1992								
SWQ3	2/25/1992								
SWQ3	7/16/1992								
SWQ3	10/8/1992								
SWQ3	11/27/1992								
SWQ3	12/15/1992								
SWQ3	2/25/1993								
SWQ-3	3/31/1993	0.01	-0.05	-0.02	-0.05	109	-0.02	-0.02	-0.001
SWQ3	9/28/1993								
SWQ3	6/23/1994								
SWQ3	1/29/1995								
SWQ3	3/29/1995								
SWQ3	6/27/1995								
SWQ3	9/21/1995								
SWQ3	1/10/1996								
SWQ3	4/3/1996								
SWQ3	9/25/1996								

Well Name	Date	Copper(Cu)	Cobalt(Co)	Lead(Pb)	Iron(Fe)	Magnesium(Mg)	Molybdenum(Mo)	Manganese(Mn)	Mercury(Hg)
SWQ3	1/15/1997								
SWQ3	7/1/1997								
SWQ3	8/10/1997	0.047	-0.05	-0.005	-0.05	140	-0.05	0.17	
SWQ3	10/1/1997								
SWQ3	1/15/1998	-0.005			-0.05	120.9	-0.05		-0.002
SWQ3	4/9/1998	0.011			-0.05		-0.05	0.02	-0.002
US Greyback	2/11/1991			-0.005	-0.05	42.1		0.07	-0.0002
Warm Springs South	4/1/1998								
Warm Springs South	7/21/1998	-0.005			-0.05	7.8	-0.05	0.03	0.0023
W.Waste	8/10/1997	**1800**	**9.9**	-0.005	310	580	0.28	170	
Caballo Reservoir	11/16/1994	-0.03	-0.05	-0.01	-0.05	14	-0.05	-0.03	-0.001
Rio Grande @ El Paso	1/1/1958								
Rio Grande @ El Paso	1/1/1964								
Rio Grande @ El Paso	1/1/1975								
Rio Grande @ El Paso	12/30/1975								
Warm Springs Canyon	4/2/1993	-0.01	-0.05	-0.02	0.09	3	-0.02	-0.02	-0.001

Well Name	Date	Nickel(Ni)	Antimony(Sb)	Selenium(Se)	Zinc(Zn)
Seep	5/13/1983			-0.005	
Seep	11/1/1983			-0.005	
Seep	3/16/1984			-0.005	
Seep	8/9/1993			-0.005	
Spring	11/14/1990				
Spring	11/14/1990				
Spring	2/12/1991			**0.05**	
SWQ1	12/28/1982			-0.005	
SWQ1	2/21/1983			-0.005	
SWQ1	7/16/1992				
SWQ1	11/27/1992				
SWQ1	2/25/1993				
SWQ1	4/1/1993	-0.01		-0.005	-0.01
SWQ2	10/27/1981	-0.05		-0.005	
SWQ2	2/25/1982			-0.005	
SWQ2	5/12/1982			-0.005	
SWQ2	2/21/1983			-0.005	
SWQ2	5/13/1983			-0.005	
SWQ2	8/9/1983			-0.005	
SWQ2	11/1/1983			-0.005	
SWQ2	12/23/1983			-0.005	
SWQ2	3/16/1984			-0.005	
SWQ2	5/30/1984			-0.005	
SWQ2	9/12/1984			-0.005	
SWQ2	11/27/1984			-0.005	
SWQ2	5/17/1985				
SWQ2	11/13/1985				
SWQ2	6/5/1986				
SWQ2	10/13/1986				
SWQ2	7/19/1991			-0.001	
SWQ2	7/16/1992				
SWQ2	10/8/1992				
SWQ2	12/15/1992				
SWQ2	2/25/1993				
SWQ2	3/31/1993	-0.01		0.008	0.01
SWQ2	6/23/1994				

Well Name	Date	Nickel(Ni)	Antimony(Sb)	Selenium(Se)	Zinc(Zn)
SWQ2	1/29/1995				
SWQ2	3/29/1995				
SWQ2	6/27/1995				
SWQ2	9/21/1995				
SWQ2	1/10/1996				
SWQ2	4/3/1996				
SWQ2	9/25/1996				
SWQ2	1/15/1997				
SWQ2	7/1/1997				
SWQ2	8/10/1997	-0.05		-0.005	-0.05
SWQ2	10/1/1997				
SWQ2	1/15/1998			-0.05	
SWQ2	4/9/1998			-0.05	
SWQ2A	10/27/1981	-0.05		-0.005	
SWQ2A	2/25/1982			-0.005	
SWQ3	7/19/1991			-0.001	
SWQ3	8/29/1991				
SWQ3	11/26/1991				
SWQ3	3/15/1992				
SWQ3	3/15/1992				
SWQ3	2/25/1992				
SWQ3	7/16/1992				
SWQ3	10/8/1992				
SWQ3	11/27/1992				
SWQ3	12/15/1992				
SWQ3	2/25/1993				
SWQ-3	3/31/1993	-0.01		-0.005	-0.01
SWQ3	9/28/1993				
SWQ3	6/23/1994				
SWQ3	1/29/1995				
SWQ3	3/29/1995				
SWQ3	6/27/1995				
SWQ3	9/21/1995				
SWQ3	1/10/1996				
SWQ3	4/3/1996				
SWQ3	9/25/1996				

Well Name	Date	Nickel(Ni)	Antimony(Sb)	Selenium(Se)	Zinc(Zn)
SWQ3	1/15/1997				
SWQ3	7/1/1997				
SWQ3	8/10/1997	-0.05		-0.005	-0.05
SWQ3	10/1/1997				
SWQ3	1/15/1998			-0.05	
SWQ3	4/9/1998			-0.05	
US Greyback	2/11/1991			-0.001	
Warm Springs South	4/1/1998				
Warm Springs South	7/21/1998			-0.05	
W.Waste	8/10/1997	1.3		**0.11**	**38**
Caballo Reservoir	11/16/1994	-0.05		-0.005	-0.05
Rio Grande @ El Paso	1/1/1958				
Rio Grande @ El Paso	1/1/1964				
Rio Grande @ El Paso	1/1/1975				
Rio Grande @ El Paso	12/30/1975				
Warm Springs Canyon	4/2/1993	-0.01		-0.005	-0.01

Appendix B

B-1 Comprehensive Groundwater Chemistry Data
B-2 Pre 1980 SHB Groundwater Sample Results

Appendix B-1

Comprehensive Groundwater Chemistry Data

Well Name	Water Depth	USGS Quad	Well Depth		Sample ID	Date	Sampler	Notes
EPA DWS								
NM GWQ-1							Domestic Use	
NM SWQ-1							Domestic Use	
NM GWQ-2							Livestock	
NM SWQ-2							Livestock	
15.6.30.432	190			-1	15.6.30.432-1	6/6/1981	SHB	
15.6.31.343	98.11	Skute Stone Arroyo		-1	15.6.31.343-1	6/6/1981	SHB	
15.6.31.431		Skute Stone Arroyo		-1	15.6.31.431-1	6/4/1976	SHB	
15.6.31.431		Skute Stone Arroyo		-2	15.6.31.431-2	4/9/1981	SHB	
15.6.31.431	76.39	Skute Stone Arroyo		-3	15.6.31.431-3	6/9/1981	SHB	
15.7.26.324	28.4	Hillsboro		-1	15.7.26.324-1	6/11/1981	SHB	
15.7.26.344	56.5	Hillsboro		-1	15.7.26.344-1	1/11/1981	SHB	
15.7.26.431	34.5	Hillsboro		-1	15.7.26.431-1	6/1/1981	SHB	
Adams	4.15			-1	Adams-1	1/1/1998		
Adams	4			-2	Adams-2	2/1/1998		
Adams	3.4			-3	Adams-3	3/1/1998		
Adams	3.25			-4	Adams-4	4/15/1998	Goff	15.5.28.3.1
Adams	3.1			-5	Adams-5	5/1/1998		
Adams	3.4			-6	Adams-6	6/1/1998		
Adams	3.25			-7	Adams-7	7/22/1998	Brownfield	15.5.28.3.1
Adams	2.75			-8	Adams-8	8/1/1998		
Adams	2.75			-9	Adams-9	9/1/1998		
Branno				-1	Branno-1	7/31/1947		
Bussman	12.65			-1	Bussman-1	1/1/1998		
Bussman	12.5			-2	Bussman-2	2/1/1998		
Bussman	12.3			-3	Bussman-3	3/1/1998		
Bussman	12.26			-4	Bussman-4	4/15/1998	Goff	
Bussman	12.73			-5	Bussman-5	5/1/1998		
Bussman	12.86			-6	Bussman-6	6/1/1998		
Bussman	13.35			-7	Bussman-7	7/22/1998	Brownfield	
Bussman	12.45			-8	Bussman-8	8/1/1998		
Bussman	13.16			-9	Bussman-9	9/1/1998		
Casa-Moya	2.9			-1	Casa-Moya-1	1/1/1998		
Casa-Moya	13.1			-2	Casa-Moya-2	2/1/1998		
Casa-Moya	13.3			-3	Casa-Moya-3	3/1/1998		
Casa-Moya	1			-4	Casa-Moya-4	5/1/1998		

Well Name	Water Depth	USGS Quad	Well Depth		Sample ID	Date	Sampler	Notes
Casa-Moya	2.75			-5	Casa-Moya-5	6/1/1998		
Casa-Moya	2.2			-6	Casa-Moya-6	7/22/1998	Brownfield	
Casa-Moya	2.25			-7	Casa-Moya-7	8/1/1998		
Casa-Moya	2.6			-8	Casa-Moya-8	9/1/1998		
Dawson 1				-1	Dawson 1-1	6/14/1946		
Dawson 1				-2	Dawson 1-2	6/7/1947		
Dawson 2				-1	Dawson 2-1	7/31/1947		
Delores	31.58	Hillsboro		-1	Delores-1	7/1/1998		15.7.25.1.2.1
Delores	30.64	Hillsboro		-2	Delores-2	8/1/1998		15.7.25.1.2.1
Delores	30.85	Hillsboro		-3	Delores-3	9/1/1998		15.7.25.1.2.1
Eaton				-1	Eaton-1	7/31/1947		
ElW	39.855			-1	ElW-1	2/5/1997	SRK	
El Oro	64.2			-1	El Oro-1	6/11/1981	SHB	
Folcher				-1	Folcher-1	6/20/1946		
Guest House	5.94	Hillsboro		-1	Guest House-1	6/9/1981	SHB	
GWQ-1		Skute Stone Arroyo		-1	GWQ-1-1	5/1/1975		exact data unknown
GWQ-1		Skute Stone Arroyo		-2	GWQ-1-2	1/20/1981	SHB	QMC-3, Cl,Na icon
GWQ-1		Skute Stone Arroyo		-3	GWQ-1-3	2/2/1981	SHB	QMC-3, in SHB (198
GWQ-1		Skute Stone Arroyo		-4	GWQ-1-4	3/27/1981	SHB	QMC-3 in SHB (198
GWQ-1	70.6	Skute Stone Arroyo		-5	GWQ-1-5	6/11/1981	SHB	
GWQ-1		Skute Stone Arroyo		-6	GWQ-1-6	6/15/1981	SHB	
GWQ-1		Skute Stone Arroyo		-7	GWQ-1-7	6/15/1981	SHB	
GWQ-1		Skute Stone Arroyo		-8	GWQ-1-8	2/25/1982	QMC	
GWQ-1		Skute Stone Arroyo		-9	GWQ-1-9	3/30/1989	EID	
GWQ-1	0	Skute Stone Arroyo		-10	GWQ-1-10	7/19/1991	GE	lab pH
GWQ-1		Skute Stone Arroyo		-11	GWQ-1-11	3/31/1993	JWS	
GWQ-1	0	Skute Stone Arroyo		-12	GWQ-1-12	5/25/1994	SRK	Artesian
GWQ-1	0	Skute Stone Arroyo		-13	GWQ-1-13	7/21/1994	SRK	Artesian
GWQ-1		Skute Stone Arroyo		-14	GWQ-1-14	9/1/1995		
GWQ-1	-0.38	Skute Stone Arroyo		-15	GWQ-1-15	1/24/1998	GOFF	Artesian
GWQ-1	-0.4	Skute Stone Arroyo		-16	GWQ-1-16	2/1/1998		
GWQ-1	-0.43	Skute Stone Arroyo		-17	GWQ-1-17	3/1/1998		
GWQ-1	-0.71	Skute Stone Arroyo		-18	GWQ-1-18	4/14/1998	Goff	Artesian
GWQ-1	-0.38	Skute Stone Arroyo		-19	GWQ-1-19	5/1/1998		
GWQ-1	-0.38	Skute Stone Arroyo		-20	GWQ-1-20	6/1/1998		
GWQ-1	-0.23	Skute Stone Arroyo		-21	GWQ-1-21	7/21/1998	Brownfield	

Well Name	Water Depth	USGS Quad	Well Depth	Sample ID	Date	Sampler	Notes
GWQ-1	-0.1	Skute Stone Arroyo	-22	GWQ-1-22	8/1/1998		
GWQ-1	-0.04	Skute Stone Arroyo	-23	GWQ-1-23	9/1/1998		
GWQ-10		Skute Stone Arroyo	-1	GWQ-10-1	4/6/1981	QMC	
GWQ-10	90.62	Skute Stone Arroyo	-2	GWQ-10-2	8/10/1981	QMC	
GWQ-10		Skute Stone Arroyo	-3	GWQ-10-3	10/27/1981	QMC	
GWQ-10		Skute Stone Arroyo	-4	GWQ-10-4	10/30/1981	QMC	
GWQ-10		Skute Stone Arroyo	-5	GWQ-10-5	11/6/1981	QMC	
GWQ-10	84.81	Skute Stone Arroyo	-6	GWQ-10-6	11/12/1981	QMC	
GWQ-10	84.09	Skute Stone Arroyo	-7	GWQ-10-7	11/13/1981	EID	
GWQ-10	83.25	Skute Stone Arroyo	-8	GWQ-10-8	11/17/1981	QMC	
GWQ-10	82.69	Skute Stone Arroyo	-9	GWQ-10-9	11/23/1981	QMC	
GWQ-10	80.04	Skute Stone Arroyo	-10	GWQ-10-10	12/7/1981	QMC	
GWQ-10	81.46	Skute Stone Arroyo	-11	GWQ-10-11	12/15/1981	QMC	
GWQ-10	80.04	Skute Stone Arroyo	-12	GWQ-10-12	12/22/1981	QMC	
GWQ-10		Skute Stone Arroyo	-13	GWQ-10-13	1/5/1982	QMC	
GWQ-10	78.46	Skute Stone Arroyo	-14	GWQ-10-14	1/18/1982	QMC	
GWQ-10	78.4	Skute Stone Arroyo	-15	GWQ-10-15	1/26/1982	QMC	
GWQ-10	77.92	Skute Stone Arroyo	-16	GWQ-10-16	2/16/1982	QMC	
GWQ-10	77.9	Skute Stone Arroyo	-17	GWQ-10-17	2/22/1982	QMC	
GWQ-10	75.5	Skute Stone Arroyo	-18	GWQ-10-18	3/12/1982	QMC	
GWQ-10	70.17	Skute Stone Arroyo	-19	GWQ-10-19	4/16/1982	QMC	
GWQ-10	70.2	Skute Stone Arroyo	-20	GWQ-10-20	4/26/1982	QMC	
GWQ-10	20.58	Skute Stone Arroyo	-21	GWQ-10-21	5/17/1982	QMC	
GWQ-10	6.2	Skute Stone Arroyo	-22	GWQ-10-22	6/8/1982	QMC	
GWQ-10	6.17	Skute Stone Arroyo	-23	GWQ-10-23	6/14/1982	QMC	
GWQ-10	4.5	Skute Stone Arroyo	-24	GWQ-10-24	6/30/1982	QMC	
GWQ-10	4.5	Skute Stone Arroyo	-25	GWQ-10-25	7/26/1982	QMC	
GWQ-10	6.6	Skute Stone Arroyo	-26	GWQ-10-26	7/18/1982	QMC	
GWQ-10	7.7	Skute Stone Arroyo	-27	GWQ-10-27	9/2/1982	EID	
GWQ-10	8.6	Skute Stone Arroyo	-28	GWQ-10-28	9/14/1982	QMC	
GWQ-10	11.8	Skute Stone Arroyo	-29	GWQ-10-29	10/18/1982	QMC	
GWQ-10	14.7	Skute Stone Arroyo	-30	GWQ-10-30	11/11/1982	QMC	
GWQ-10	18.5	Skute Stone Arroyo	-31	GWQ-10-31	12/23/1982	QMC	
GWQ-10	18.5	Skute Stone Arroyo	-32	GWQ-10-32	12/28/1982	QMC	
GWQ-10	21.2	Skute Stone Arroyo	-33	GWQ-10-33	2/21/1983	QMC	
GWQ-10	25.1	Skute Stone Arroyo	-34	GWQ-10-34	5/6/1983	QMC	

Well Name	Water Depth	USGS Quad	Well Depth	Sample ID	Date	Sampler	Notes
GWQ-10	25.1	Skute Stone Arroyo	-35	GWQ-10-35	5/13/1983	QMC	
GWQ-10	26.2	Skute Stone Arroyo	-36	GWQ-10-36	6/2/1983	QMC	
GWQ-10	28	Skute Stone Arroyo	-37	GWQ-10-37	7/5/1983	QMC	
GWQ-10	30.2	Skute Stone Arroyo	-38	GWQ-10-38	8/9/1983	QMC	
GWQ-10	30.2	Skute Stone Arroyo	-39	GWQ-10-39	8/25/83	QMC	
GWQ-10	32.6	Skute Stone Arroyo	-40	GWQ-10-40	10/20/1983	QMC	
GWQ-10	32.6	Skute Stone Arroyo	-41	GWQ-10-41	11/1/1983	QMC	
GWQ-10	33.9	Skute Stone Arroyo	-42	GWQ-10-42	12/7/1983	QMC	
GWQ-10	34.7	Skute Stone Arroyo	-43	GWQ-10-43	1/28/1984	QMC	
GWQ-10	35	Skute Stone Arroyo	-44	GWQ-10-44	2/13/1984	QMC	
GWQ-10	33.1	Skute Stone Arroyo	-45	GWQ-10-45	3/1/1984	QMC	
GWQ-10	33.1	Skute Stone Arroyo	-46	GWQ-10-46	3/16/1984	CFP	
GWQ-10	33.2	Skute Stone Arroyo	-47	GWQ-10-47	4/18/1984	CFP	
GWQ-10	32.4	Skute Stone Arroyo	-48	GWQ-10-48	5/22/1984	CFP	
GWQ-10	32.4	Skute Stone Arroyo	-49	GWQ-10-49	5/30/1984	CFP	
GWQ-10	32.3	Skute Stone Arroyo	-50	GWQ-10-50	6/26/1984	CFP	
GWQ-10	32.2	Skute Stone Arroyo	-51	GWQ-10-51	7/25/1984	CFP	
GWQ-10	32	Skute Stone Arroyo	-52	GWQ-10-52	8/27/1984	CFP	
GWQ-10	31.5	Skute Stone Arroyo	-53	GWQ-10-53	9/12/1984	CFP	
GWQ-10	31.8	Skute Stone Arroyo	-54	GWQ-10-54	9/21/1984	CFP	
GWQ-10	32.1	Skute Stone Arroyo	-55	GWQ-10-55	11/19/1984	CFP	
GWQ-10	32.1	Skute Stone Arroyo	-56	GWQ-10-56	11/27/1984	CFP	
GWQ-10	31.7	Skute Stone Arroyo	-57	GWQ-10-57	12/17/1984	CFP	
GWQ-10	31.5	Skute Stone Arroyo	-58	GWQ-10-58	5/17/1985	CFP	

Well Name	Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride
EPA DWS								FALSE	
NM GWQ-1								FALSE	
NM SWQ-1								FALSE	
NM GWQ-2								FALSE	
NM SWQ-2								FALSE	
15.6.30.432	6/6/1981							TRUE	
15.6.31.343	6/6/1981							TRUE	
15.6.31.431	6/4/1976						5171	TRUE	14.3
15.6.31.431	4/9/1981						5171	TRUE	22
15.6.31.431	6/9/1981						5171	FALSE	
15.7.26.324	6/11/1981						5531	TRUE	
15.7.26.344	1/11/1981						5480	TRUE	
15.7.26.431	6/1/1981						5335	TRUE	
Adams	1/1/1998								
Adams	2/1/1998								
Adams	3/1/1998								
Adams	4/15/1998							TRUE	24.5
Adams	5/1/1998								
Adams	6/1/1998								
Adams	7/22/1998							TRUE	24.4
Adams	8/1/1998								
Adams	9/1/1998								
Branno	7/31/1947							FALSE	15
Bussman	1/1/1998								
Bussman	2/1/1998								
Bussman	3/1/1998								
Bussman	4/15/1998							TRUE	15.3
Bussman	5/1/1998								
Bussman	6/1/1998								
Bussman	7/22/1998							TRUE	14.3
Bussman	8/1/1998								
Bussman	9/1/1998								
Casa-Moya	1/1/1998								
Casa-Moya	2/1/1998								
Casa-Moya	3/1/1998								
Casa-Moya	5/1/1998								

Well Name	Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride
Casa-Moya	6/1/1998								
Casa-Moya	7/22/1998							TRUE	81.6
Casa-Moya	8/1/1998								
Casa-Moya	9/1/1998								
Dawson 1	6/14/1946							FALSE	18
Dawson 1	6/7/1947							FALSE	11
Dawson 2	7/31/1947							FALSE	13
Delores	7/1/1998								
Delores	8/1/1998								
Delores	9/1/1998								
Eaton	7/31/1947							FALSE	17
ElW	2/5/1997							TRUE	
El Oro	6/11/1981							TRUE	
Folcher	6/20/1946							FALSE	6
Guest House	6/9/1981	32.96821	107.50922	265478	3650367	13	5283	TRUE	
GWQ-1	5/1/1975	32.96712	107.49556	266753	3650216	13	5183		20
GWQ-1	1/20/1981	32.96712	107.49556	266753	3650216	13	5183	TRUE	200
GWQ-1	2/2/1981	32.96712	107.49556	266753	3650216	13	5183	TRUE	20
GWQ-1	3/27/1981	32.96712	107.49556	266753	3650216	13	5183	TRUE	
GWQ-1	6/11/1981	32.96712	107.49556	266753	3650216	13	5183	TRUE	
GWQ-1	6/15/1981	32.96712	107.49556	266753	3650216	13	5183	TRUE	16
GWQ-1	6/15/1981	32.96712	107.49556	266753	3650216	13	5183	TRUE	22
GWQ-1	2/25/1982	32.96712	107.49556	266753	3650216	13	5183	TRUE	22
GWQ-1	3/30/1989	32.96712	107.49556	266753	3650216	13	5183	TRUE	20
GWQ-1	7/19/1991	32.96712	107.49556	266753	3650216	13	5183	TRUE	21.1
GWQ-1	3/31/1993	32.96712	107.49556	266753	3650216	13	5183	TRUE	22
GWQ-1	5/25/1994	32.96712	107.49556	266753	3650216	13	5183	FALSE	22
GWQ-1	7/21/1994	32.96712	107.49556	266753	3650216	13	5183	TRUE	25
GWQ-1	9/1/1995	32.96712	107.49556	266753	3650216	13	5183		31.1
GWQ-1	1/24/1998	32.96712	107.49556	266753	3650216	13	5183	TRUE	24.5
GWQ-1	2/1/1998	32.96712	107.49556	266753	3650216	13	5183		
GWQ-1	3/1/1998	32.96712	107.49556	266753	3650216	13	5183		
GWQ-1	4/14/1998	32.96712	107.49556	266753	3650216	13	5183	TRUE	24.9
GWQ-1	5/1/1998	32.96712	107.49556	266753	3650216	13	5183		
GWQ-1	6/1/1998	32.96712	107.49556	266753	3650216	13	5183		
GWQ-1	7/21/1998	32.96712	107.49556	266753	3650216	13	5183	TRUE	25.7

Well Name	Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride
GWQ-1	8/1/1998	32.96712	107.49556	266753	3650216	13	5183		
GWQ-1	9/1/1998	32.96712	107.49556	266753	3650216	13	5183		
GWQ-10	4/6/1981	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	8/10/1981	32.96325	107.49677	266630	3649790	13	5200	TRUE	23.5
GWQ-10	10/27/1981	32.96325	107.49677	266630	3649790	13	5200	TRUE	22
GWQ-10	10/30/1981	32.96325	107.49677	266630	3649790	13	5200	FALSE	22.8
GWQ-10	11/6/1981	32.96325	107.49677	266630	3649790	13	5200	TRUE	22
GWQ-10	11/12/1981	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	11/13/1981	32.96325	107.49677	266630	3649790	13	5200	TRUE	22.85
GWQ-10	11/17/1981	32.96325	107.49677	266630	3649790	13	5200	TRUE	26
GWQ-10	11/23/1981	32.96325	107.49677	266630	3649790	13	5200	TRUE	26
GWQ-10	12/7/1981	32.96325	107.49677	266630	3649790	13	5200	TRUE	24
GWQ-10	12/15/1981	32.96325	107.49677	266630	3649790	13	5200	TRUE	24
GWQ-10	12/22/1981	32.96325	107.49677	266630	3649790	13	5200	TRUE	24
GWQ-10	1/5/1982	32.96325	107.49677	266630	3649790	13	5200	TRUE	22
GWQ-10	1/18/1982	32.96325	107.49677	266630	3649790	13	5200	TRUE	
GWQ-10	1/26/1982	32.96325	107.49677	266630	3649790	13	5200	TRUE	24
GWQ-10	2/16/1982	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	2/22/1982	32.96325	107.49677	266630	3649790	13	5200	TRUE	24
GWQ-10	3/12/1982	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	4/16/1982	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	4/26/1982	32.96325	107.49677	266630	3649790	13	5200	TRUE	20
GWQ-10	5/17/1982	32.96325	107.49677	266630	3649790	13	5200	TRUE	28
GWQ-10	6/8/1982	32.96325	107.49677	266630	3649790	13	5200	TRUE	22
GWQ-10	6/14/1982	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	6/30/1982	32.96325	107.49677	266630	3649790	13	5200	TRUE	20
GWQ-10	7/26/1982	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	7/18/1982	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	9/2/1982	32.96325	107.49677	266630	3649790	13	5200	TRUE	22.3
GWQ-10	9/14/1982	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	10/18/1982	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	11/11/1982	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	12/23/1982	32.96325	107.49677	266630	3649790	13	5200	TRUE	26
GWQ-10	12/28/1982	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	2/21/1983	32.96325	107.49677	266630	3649790	13	5200	TRUE	24
GWQ-10	5/6/1983	32.96325	107.49677	266630	3649790	13	5200	FALSE	

Well Name	Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride
GWQ-10	5/13/1983	32.96325	107.49677	266630	3649790	13	5200	TRUE	32
GWQ-10	6/2/1983	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	7/5/1983	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	8/9/1983	32.96325	107.49677	266630	3649790	13	5200	TRUE	36
GWQ-10	8/25/83	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	10/20/1983	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	11/1/1983	32.96325	107.49677	266630	3649790	13	5200	TRUE	34
GWQ-10	12/7/1983	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	1/28/1984	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	2/13/1984	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	3/1/1984	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	3/16/1984	32.96325	107.49677	266630	3649790	13	5200	TRUE	42
GWQ-10	4/18/1984	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	5/22/1984	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	5/30/1984	32.96325	107.49677	266630	3649790	13	5200	TRUE	56
GWQ-10	6/26/1984	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	7/25/1984	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	8/27/1984	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	9/12/1984	32.96325	107.49677	266630	3649790	13	5200	TRUE	68
GWQ-10	9/21/1984	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	11/19/1984	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	11/27/1984	32.96325	107.49677	266630	3649790	13	5200	TRUE	64
GWQ-10	12/17/1984	32.96325	107.49677	266630	3649790	13	5200	FALSE	
GWQ-10	5/17/1985	32.96325	107.49677	266630	3649790	13	5200	FALSE	52

Sulfate	Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony
500	EPA DWS								-1	-0.025	-0.005
600	NM GWQ-1		6-9						-1	-0.025	-0.005
600	NM SWQ-1								-1	-0.025	-0.005
600	NM GWQ-2								-1	-0.025	-0.005
	NM SWQ-2								-1	-0.025	-0.005
	15.6.30.432	6/6/1981									
	15.6.31.343	6/6/1981									
137	15.6.31.431	6/4/1976	7.78	520		228	720	0.52	1.39		
144.5	15.6.31.431	4/9/1981				285.7		0.58	1.14	-0.1	
	15.6.31.431	6/9/1981									
	15.7.26.324	6/11/1981									
	15.7.26.344	1/11/1981									
	15.7.26.431	6/1/1981									
	Adams	1/1/1998									
	Adams	2/1/1998									
	Adams	3/1/1998									
16	Adams	4/15/1998	7.87	212			413	0.53	0.5		
	Adams	5/1/1998									
	Adams	6/1/1998									
16	Adams	7/22/1998		194				0.47	0.47		
	Adams	8/1/1998									
	Adams	9/1/1998									
13	Branno	7/31/1947		270		232	404	0.8	0.4		
	Bussman	1/1/1998									
	Bussman	2/1/1998									
	Bussman	3/1/1998									
18	Bussman	4/15/1998	7.45	238			428	0.5	-0.05		
	Bussman	5/1/1998									
	Bussman	6/1/1998									
13	Bussman	7/22/1998		234				0.46	-0.05		
	Bussman	8/1/1998									
	Bussman	9/1/1998									
	Casa-Moya	1/1/1998									
	Casa-Moya	2/1/1998									
	Casa-Moya	3/1/1998									
	Casa-Moya	5/1/1998									

Sulfate	Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony
	Casa-Moya	6/1/1998									
29.3	Casa-Moya	7/22/1998		722				0.68	0.61		
	Casa-Moya	8/1/1998									
	Casa-Moya	9/1/1998									
36	Dawson 1	6/14/1946		219		169	369	1.3	0.8		
58	Dawson 1	6/7/1947		283		180	385	1	1.1		
52	Dawson 2	7/31/1947		283		158	360	1.2	1.3		
	Delores	7/1/1998									
	Delores	8/1/1998									
	Delores	9/1/1998									
21	Eaton	7/31/1947		356		329	546	0.2	0.2		
	ElW	2/5/1997									
	El Oro	6/11/1981									
19	Folcher	6/20/1946		147		126	216	0.4	2.4		
	Guest House	6/9/1981									
130	GWQ-1	5/1/1975				273		0.5	2.8		
250	GWQ-1	1/20/1981	7.3	450		280.6					
156	GWQ-1	2/2/1981	7.9	520		276					
	GWQ-1	3/27/1981						0.6	5.5		
	GWQ-1	6/11/1981								-0.05	-0.005
148	GWQ-1	6/15/1981	7.4	500	220	251	700	0.5	5.1	-0.01	
117	GWQ-1	6/15/1981		500				0.51	3.75	-0.25	
84	GWQ-1	2/25/1982	7.9	410				0.3	0.2		
133	GWQ-1	3/30/1989		512		280				-0.1	
136.4	GWQ-1	7/19/1991	7.34	543	215	262.4	799	0.58	5.19		
160	GWQ-1	3/31/1993	7.7	536		297	822	0.54	4.9	-0.01	
150	GWQ-1	5/25/1994	7.9	614		270	760	0.52	4.3	0.025	-0.005
162	GWQ-1	7/21/1994	7.97	558		278	861	0.52	4.2	-0.05	0.0052
271.2	GWQ-1	9/1/1995	7.58	500							
148	GWQ-1	1/24/1998	7.7	508			901	0.52			
	GWQ-1	2/1/1998									
	GWQ-1	3/1/1998									
155	GWQ-1	4/14/1998	7.68	521			879	0.55	3.8		
	GWQ-1	5/1/1998									
	GWQ-1	6/1/1998									
132	GWQ-1	7/21/1998		460				0.55	1.19		

Sulfate	Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony
	GWQ-1	8/1/1998									
	GWQ-1	9/1/1998									
	GWQ-10	4/6/1981						0.53	4.6		
143	GWQ-10	8/10/1981	7.48	528	179	219		1.14	0.22	10.2	
168	GWQ-10	10/27/1981	8.2	520				0.6	1.1	-0.01	
122	GWQ-10	10/30/1981	8.1	588				0.98	0.66	-0.25	
162	GWQ-10	11/6/1981	7.9	500				0.7	2	-0.01	
	GWQ-10	11/12/1981									
140.9	GWQ-10	11/13/1981	7.75	509		275.6	700	0.62	1.8	0.37	
156	GWQ-10	11/17/1981	7.9	500				0.6	1.8	-0.01	
161	GWQ-10	11/23/1981	7.7	650				0.6	1.8	-0.01	
168	GWQ-10	12/7/1981	8.2	490				0.5	1.8	-0.01	
181	GWQ-10	12/15/1981	7.9	550				0.7	2.6	-0.01	
168	GWQ-10	12/22/1981	8.1	480				0.5	2.5	-0.01	
174	GWQ-10	1/5/1982	7.5	430				0.6	2.9	-0.01	
	GWQ-10	1/18/1982									
162	GWQ-10	1/26/1982	7.8	490				0.6	2.3		
	GWQ-10	2/16/1982									
161	GWQ-10	2/22/1982	7.6	510				0.6	2.1		
	GWQ-10	3/12/1982									
	GWQ-10	4/16/1982									
168	GWQ-10	4/26/1982	7.4	840				0.6	2		
175	GWQ-10	5/17/1982	7.7	490				0.6	2.3		
162	GWQ-10	6/8/1982	8	500				0.5	2.2		
	GWQ-10	6/14/1982									
160	GWQ-10	6/30/1982	8	510				0.6	3.3		
	GWQ-10	7/26/1982									
	GWQ-10	7/18/1982									
143.4	GWQ-10	9/2/1982	7.3	506		278	690	0.54	2.25		
	GWQ-10	9/14/1982									
	GWQ-10	10/18/1982									
	GWQ-10	11/11/1982									
138	GWQ-10	12/23/1982	8.5	500				0.6	1.7		
	GWQ-10	12/28/1982									
161	GWQ-10	2/21/1983	7.9	470				0.6	2.4		
	GWQ-10	5/6/1983									

Sulfate	Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony
161	GWQ-10	5/13/1983	8	480				0.6	2.4		
	GWQ-10	6/2/1983									
	GWQ-10	7/5/1983									
142	GWQ-10	8/9/1983	7.9	510				0.6	2.4		
	GWQ-10	8/25/83									
	GWQ-10	10/20/1983									
125	GWQ-10	11/1/1983	8.1	500				0.6	4.8		
	GWQ-10	12/7/1983									
	GWQ-10	1/28/1984									
	GWQ-10	2/13/1984									
	GWQ-10	3/1/1984									
128	GWQ-10	3/16/1984	8.2	500				0.5	3.5		
	GWQ-10	4/18/1984									
	GWQ-10	5/22/1984									
161	GWQ-10	5/30/1984	7.5	530				0.5	3.3		
	GWQ-10	6/26/1984									
	GWQ-10	7/25/1984									
	GWQ-10	8/27/1984									
158	GWQ-10	9/12/1984	7.8	580				0.5	4.2		
	GWQ-10	9/21/1984									
	GWQ-10	11/19/1984									
163	GWQ-10	11/27/1984	7.7	580				0.6	4.9		
	GWQ-10	12/17/1984									
163	GWQ-10	5/17/1985	7.8	570							

Arsenic	Well Name	Date	Boron	Barium	Berrylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron
-0.005	EPA DWS			-0.1		-0.0005		-0.025		-0.025	-0.05
-0.005	NM GWQ-1			-0.1		-0.0005		-0.025		-0.025	-0.05
-0.005	NM SWQ-1			-0.1		-0.0005		-0.025		-0.025	-0.05
-0.005	NM GWQ-2			-0.1		-0.0005		-0.025		-0.025	-0.05
-0.005	NM SWQ-2			-0.1		-0.0005		-0.025		-0.025	-0.05
	15.6.30.432	6/6/1981									
	15.6.31.343	6/6/1981									
	15.6.31.431	6/4/1976	-0.1				117				
-0.005	15.6.31.431	4/9/1981	0.025	-0.1		-0.001		-0.005			0.002
	15.6.31.431	6/9/1981								0.7	-0.25
	15.7.26.324	6/11/1981									
	15.7.26.344	1/11/1981									
	15.7.26.431	6/1/1981									
	Adams	1/1/1998									
	Adams	2/1/1998									
	Adams	3/1/1998									
	Adams	4/15/1998					34.2			-0.005	-0.05
	Adams	5/1/1998									
	Adams	6/1/1998									
	Adams	7/22/1998					32.7			-0.005	-0.05
	Adams	8/1/1998									
	Adams	9/1/1998									
	Branno	7/31/1947					28				
	Bussman	1/1/1998									
	Bussman	2/1/1998									
	Bussman	3/1/1998									
	Bussman	4/15/1998					57			0.013	4.09
	Bussman	5/1/1998									
	Bussman	6/1/1998									
	Bussman	7/22/1998					55.5			-0.005	1.33
	Bussman	8/1/1998									
	Bussman	9/1/1998									
	Casa-Moya	1/1/1998									
	Casa-Moya	2/1/1998									
	Casa-Moya	3/1/1998									
	Casa-Moya	5/1/1998									

Arsenic	Well Name	Date	Boron	Barium	Berrylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron
	Casa-Moya	6/1/1998									
	Casa-Moya	7/22/1998					84.1			-0.005	-0.05
	Casa-Moya	8/1/1998									
	Casa-Moya	9/1/1998									
	Dawson 1	6/14/1946					21				
	Dawson 1	6/7/1947					22				
	Dawson 2	7/31/1947					24				
	Delores	7/1/1998									
	Delores	8/1/1998									
	Delores	9/1/1998									
	Eaton	7/31/1947					71				
	ElW	2/5/1997									
	El Oro	6/11/1981									
	Folcher	6/20/1946					18				
	Guest House	6/9/1981									
	GWQ-1	5/1/1975					81				
	GWQ-1	1/20/1981					84				0.05
	GWQ-1	2/2/1981					74				1.7
-0.01	GWQ-1	3/27/1981								-0.05	
-0.005	GWQ-1	6/11/1981	-0.1	-0.1	-0.002	-0.0005		-0.025	-0.05	-0.025	-0.05
-0.01	GWQ-1	6/15/1981	-0.1	-0.2		-0.005	82	-0.01	-0.05	-0.05	-0.1
-0.002	GWQ-1	6/15/1981	0.076	-1		-0.01	81	-0.05	-0.05	-0.02	-0.05
	GWQ-1	2/25/1982				-0.005				-0.05	0.14
	GWQ-1	3/30/1989	-0.1	-0.1	-0.1	-0.1	84	-0.1	-0.05	-0.1	-0.1
0.003	GWQ-1	7/19/1991		0.01		-0.005	88	-0.02		-0.02	-0.05
-0.005	GWQ-1	3/31/1993	0.03	-0.5		-0.002	82	-0.02	-0.05	-0.01	-0.05
-0.005	GWQ-1	5/25/1994		-0.1		-0.0005	80	-0.025		-0.025	-0.05
-0.005	GWQ-1	7/21/1994	-0.1	-0.1	-0.002	-0.0005	95	-0.025	-0.05	-0.025	-0.05
	GWQ-1	9/1/1995									
	GWQ-1	1/24/1998					76.5			-0.005	
	GWQ-1	2/1/1998									
	GWQ-1	3/1/1998									
	GWQ-1	4/14/1998					90.4			-0.005	0.13
	GWQ-1	5/1/1998									
	GWQ-1	6/1/1998									
	GWQ-1	7/21/1998					71.2			-0.005	0.11

Arsenic	Well Name	Date	Boron	Barium	Berrylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron
	GWQ-1	8/1/1998									
	GWQ-1	9/1/1998									
0.002	GWQ-10	4/6/1981				-0.01				-0.05	
-0.004	GWQ-10	8/10/1981	0.016	-1		-0.01	74	-0.05	-0.05	-0.05	2.31
-0.01	GWQ-10	10/27/1981	-0.1	-0.2		-0.005	68	-0.01	-0.02	-0.05	-0.01
-0.005	GWQ-10	10/30/1981	0.77	-1		-0.01		-0.05	-0.05	-0.05	-1
-0.01	GWQ-10	11/6/1981	-0.1	-0.2		-0.005	72	-0.01	-0.02	-0.05	-0.1
	GWQ-10	11/12/1981									
-0.005	GWQ-10	11/13/1981	0.037	0.25		0.001	84.2	-0.005			
-0.01	GWQ-10	11/17/1981	-0.1	-0.2		-0.005	70	-0.01	-0.02	-0.05	-0.1
-0.01	GWQ-10	11/23/1981	-0.1	-0.2		-0.005	70	-0.01	-0.02	-0.05	-0.1
-0.01	GWQ-10	12/7/1981	-0.1	-0.2		-0.005	67	-0.01	-0.02	-0.05	-0.1
-0.01	GWQ-10	12/15/1981	-0.1	-0.2		-0.005	89	-0.01	-0.02	-0.05	-0.1
-0.01	GWQ-10	12/22/1981	-0.1	-0.2		-0.005	85	-0.01	-0.02	-0.05	-0.1
-0.01	GWQ-10	1/5/1982	-0.1	-0.2		-0.005	80	-0.01	-0.02	-0.05	0.13
	GWQ-10	1/18/1982									
	GWQ-10	1/26/1982				-0.005				-0.05	-0.1
	GWQ-10	2/16/1982									
	GWQ-10	2/22/1982				-0.005				-0.05	0.12
	GWQ-10	3/12/1982									
	GWQ-10	4/16/1982									
	GWQ-10	4/26/1982				-0.005				-0.05	0.41
	GWQ-10	5/17/1982				-0.005				-0.05	0.1
	GWQ-10	6/8/1982				-0.005				-0.05	-0.1
	GWQ-10	6/14/1982									
	GWQ-10	6/30/1982				-0.005				-0.05	0.62
	GWQ-10	7/26/1982									
	GWQ-10	7/18/1982									
	GWQ-10	9/2/1982				-0.001	82.6				
	GWQ-10	9/14/1982									
	GWQ-10	10/18/1982									
	GWQ-10	11/11/1982									
	GWQ-10	12/23/1982				-0.005				-0.05	-0.1
	GWQ-10	12/28/1982									
	GWQ-10	2/21/1983				-0.005				-0.05	-0.1
	GWQ-10	5/6/1983									

Arsenic	Well Name	Date	Boron	Barium	Berrylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron
	GWQ-10	5/13/1983				-0.005				-0.05	-0.1
	GWQ-10	6/2/1983									
	GWQ-10	7/5/1983									
	GWQ-10	8/9/1983				-0.005				-0.05	-0.01
	GWQ-10	8/25/83									
	GWQ-10	10/20/1983									
	GWQ-10	11/1/1983				-0.005				-0.05	0.17
	GWQ-10	12/7/1983									
	GWQ-10	1/28/1984									
	GWQ-10	2/13/1984									
	GWQ-10	3/1/1984									
	GWQ-10	3/16/1984				-0.005				-0.05	0.11
	GWQ-10	4/18/1984									
	GWQ-10	5/22/1984									
	GWQ-10	5/30/1984				-0.005				-0.05	-0.1
	GWQ-10	6/26/1984									
	GWQ-10	7/25/1984									
	GWQ-10	8/27/1984									
	GWQ-10	9/12/1984				-0.005				-0.05	-0.1
	GWQ-10	9/21/1984									
	GWQ-10	11/19/1984									
	GWQ-10	11/27/1984				-0.005				-0.05	-0.1
	GWQ-10	12/17/1984									
	GWQ-10	5/17/1985									

Lead	Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium
-0.005	EPA DWS			-0.03	-0.001		-0.05		-0.005	-0.025	
-0.005	NM GWQ-1			-0.03	-0.001		-0.05		-0.005	-0.025	
-0.005	NM SWQ-1			-0.03	-0.001		-0.05		-0.005	-0.025	
-0.005	NM GWQ-2			-0.03	-0.001		-0.05		-0.005	-0.025	
-0.005	NM SWQ-2			-0.03	-0.001		-0.05		-0.005	-0.025	
	15.6.30.432	6/6/1981									
	15.6.31.343	6/6/1981									
	15.6.31.431	6/4/1976						1.78			50.4
	15.6.31.431	4/9/1981	25.6	0.003		0.005	-0.01		-0.005		
-0.005	15.6.31.431	6/9/1981		-0.05							
	15.7.26.324	6/11/1981									
	15.7.26.344	1/11/1981									
	15.7.26.431	6/1/1981									
	Adams	1/1/1998									
	Adams	2/1/1998									
	Adams	3/1/1998									
	Adams	4/15/1998	4.7	-0.02	-0.0002	-0.05		4.3	-0.05		38.9
	Adams	5/1/1998									
	Adams	6/1/1998									
	Adams	7/22/1998	4.2	-0.02	-0.0002	-0.05		3.6	-0.05		33.7
	Adams	8/1/1998									
	Adams	9/1/1998									
	Branno	7/31/1947	3.6								
	Bussman	1/1/1998									
	Bussman	2/1/1998									
	Bussman	3/1/1998									
	Bussman	4/15/1998	7.1	-0.02	-0.0002	-0.05		0.9	-0.05		19.9
	Bussman	5/1/1998									
	Bussman	6/1/1998									
	Bussman	7/22/1998	6.7	0.09	0.0002	-0.05		0.5	-0.05		18.3
	Bussman	8/1/1998									
	Bussman	9/1/1998									
	Casa-Moya	1/1/1998									
	Casa-Moya	2/1/1998									
	Casa-Moya	3/1/1998									
	Casa-Moya	5/1/1998									

Lead	Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium
	Casa-Moya	6/1/1998									
	Casa-Moya	7/22/1998	8.5	-0.02	0.0004	-0.05		84	-0.05		122.5
	Casa-Moya	8/1/1998									
	Casa-Moya	9/1/1998									
	Dawson 1	6/14/1946	4.4								
	Dawson 1	6/7/1947	2.5								
	Dawson 2	7/31/1947	1.6								
	Delores	7/1/1998									
	Delores	8/1/1998									
	Delores	9/1/1998									
	Eaton	7/31/1947	12								
	ElW	2/5/1997									
	El Oro	6/11/1981									
	Folcher	6/20/1946	3.9								
	Guest House	6/9/1981									
	GWQ-1	5/1/1975	14	0.17				2.1			57
	GWQ-1	1/20/1981	14.6								632
	GWQ-1	2/2/1981	20								60
-0.02	GWQ-1	3/27/1981									
-0.005	GWQ-1	6/11/1981		-0.03	-0.001	-0.05	-0.05		-0.005	-0.025	
-0.02	GWQ-1	6/15/1981	19	-0.05	-0.001	-0.05	-0.05	2	-0.005	-0.02	57
-0.05	GWQ-1	6/15/1981	12	-0.02	-0.001	-0.1	-0.05	3.06	-0.0022	-0.02	49.1
	GWQ-1	2/25/1982		-0.063	-0.001	-0.05			-0.005		
-0.1	GWQ-1	3/30/1989	16	-0.05		-0.1	-0.1	3		-0.1	61
-0.005	GWQ-1	7/19/1991	18	-0.02	-0.0002			2.7	-0.002	-0.2	39.6
-0.02	GWQ-1	3/31/1993	21	-0.02	-0.001	-0.02	-0.01	2.1	-0.005	-0.01	67
-0.005	GWQ-1	5/25/1994	18	-0.03	-0.001		-0.05	2.7	-0.005	-0.025	55
-0.005	GWQ-1	7/21/1994	19	-0.03	-0.001	-0.05	-0.05	2.7	-0.005	-0.025	66
	GWQ-1	9/1/1995									
	GWQ-1	1/24/1998	17.8	-0.02							61.5
	GWQ-1	2/1/1998									
	GWQ-1	3/1/1998									
	GWQ-1	4/14/1998	17.9	-0.02	-0.0002	-0.05		1.7	-0.05		62
	GWQ-1	5/1/1998									
	GWQ-1	6/1/1998									
	GWQ-1	7/21/1998	15.1	0.02	0.0004	-0.05		2.7	-0.05		57.5

Lead	Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium
	GWQ-1	8/1/1998									
	GWQ-1	9/1/1998									
-0.01	GWQ-10	4/6/1981			-1			8.25			
-0.05	GWQ-10	8/10/1981	11.3	1.18	-1	-0.1	-0.05	8.32	-0.002	-0.02	58.7
-0.02	GWQ-10	10/27/1981		-0.05	-0.001	-0.05	-0.05		-0.005	-0.02	
-0.05	GWQ-10	10/30/1981		-0.02	-0.001	-0.1	-0.02		-0.002	-0.02	
-0.02	GWQ-10	11/6/1981		-0.05	-0.001	-0.05	-0.05		-0.005	-0.02	
	GWQ-10	11/12/1981									
-0.005	GWQ-10	11/13/1981	17.5	0.5	-0.0005	-0.01	-0.05	2.34	0.01	-0.001	39.1
-0.02	GWQ-10	11/17/1981		-0.05	-0.001	-0.05	-0.05		-0.005	-0.02	
-0.02	GWQ-10	11/23/1981		-0.05	-0.001	-0.05	-0.05		-0.005	-0.02	
-0.02	GWQ-10	12/7/1981		-0.05	-0.001	-0.05	-0.05		-0.005	-0.02	
-0.02	GWQ-10	12/15/1981		-0.05	-0.001	-0.05	-0.05		-0.005	-0.02	
-0.02	GWQ-10	12/22/1981		-0.05	-0.001	-0.05	-0.05		-0.005	-0.02	
-0.02	GWQ-10	1/5/1982		-0.05	-0.001	-0.05	-0.05		-0.005	-0.02	
	GWQ-10	1/18/1982									
	GWQ-10	1/26/1982		-0.05	-0.001	-0.1			-0.005		
	GWQ-10	2/16/1982									
	GWQ-10	2/22/1982		-0.05	-0.001	-0.05			-0.005		
	GWQ-10	3/12/1982									
	GWQ-10	4/16/1982									
	GWQ-10	4/26/1982		-0.05	-0.001	-0.05			-0.005		
	GWQ-10	5/17/1982		-0.05	-0.001	-0.05			-0.005		
	GWQ-10	6/8/1982		-0.05	-0.001	-0.05			-0.005		
	GWQ-10	6/14/1982									
	GWQ-10	6/30/1982		-0.05	-0.001	-0.05			-0.005		
	GWQ-10	7/26/1982									
	GWQ-10	7/18/1982									
	GWQ-10	9/2/1982	17	-0.05		-0.01		2.73	-0.005		57.5
	GWQ-10	9/14/1982									
	GWQ-10	10/18/1982									
	GWQ-10	11/11/1982									
	GWQ-10	12/23/1982		-0.05	-0.001	-0.05			-0.005		
	GWQ-10	12/28/1982									
	GWQ-10	2/21/1983		-0.05	-0.001	-0.05			-0.005		
	GWQ-10	5/6/1983									

Lead	Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium
	GWQ-10	5/13/1983		-0.05	-0.001	-0.05			-0.005		
	GWQ-10	6/2/1983									
	GWQ-10	7/5/1983									
	GWQ-10	8/9/1983		-0.05	-0.001	-0.05			-0.005		
	GWQ-10	8/25/83									
	GWQ-10	10/20/1983									
	GWQ-10	11/1/1983		-0.05	-0.001	-0.05			-0.005		
	GWQ-10	12/7/1983									
	GWQ-10	1/28/1984									
	GWQ-10	2/13/1984									
	GWQ-10	3/1/1984									
	GWQ-10	3/16/1984		-0.05	-0.001	-0.05			-0.005		
	GWQ-10	4/18/1984									
	GWQ-10	5/22/1984									
	GWQ-10	5/30/1984		-0.05	-0.001	-0.05			-0.005		
	GWQ-10	6/26/1984									
	GWQ-10	7/25/1984									
	GWQ-10	8/27/1984									
	GWQ-10	9/12/1984		-0.05	-0.001	-0.05			-0.005		
	GWQ-10	9/21/1984									
	GWQ-10	11/19/1984									
	GWQ-10	11/27/1984		-0.05	-0.001	-0.05			-0.005		
	GWQ-10	12/17/1984									
	GWQ-10	5/17/1985									

Thallium	Well Name	Date	Zinc	Temp (C)	Tin	Vanadium
	EPA DWS		-0.05			
	NM GWQ-1		-0.05			
	NM SWQ-1		-0.05			
	NM GWQ-2		-0.05			
	NM SWQ-2		-0.05			
	15.6.30.432	6/6/1981				
	15.6.31.343	6/6/1981				
	15.6.31.431	6/4/1976				
	15.6.31.431	4/9/1981	0.14			
	15.6.31.431	6/9/1981				
	15.7.26.324	6/11/1981				
	15.7.26.344	1/11/1981				
	15.7.26.431	6/1/1981				
	Adams	1/1/1998				
	Adams	2/1/1998				
	Adams	3/1/1998				
	Adams	4/15/1998				
	Adams	5/1/1998				
	Adams	6/1/1998				
	Adams	7/22/1998				
	Adams	8/1/1998				
	Adams	9/1/1998				
	Branno	7/31/1947				
	Bussman	1/1/1998				
	Bussman	2/1/1998				
	Bussman	3/1/1998				
	Bussman	4/15/1998				
	Bussman	5/1/1998				
	Bussman	6/1/1998				
	Bussman	7/22/1998				
	Bussman	8/1/1998				
	Bussman	9/1/1998				
	Casa-Moya	1/1/1998				
	Casa-Moya	2/1/1998				
	Casa-Moya	3/1/1998				
	Casa-Moya	5/1/1998				

Thallium	Well Name	Date	Zinc	Temp (C)	Tin	Vanadium
	Casa-Moya	6/1/1998				
	Casa-Moya	7/22/1998				
	Casa-Moya	8/1/1998				
	Casa-Moya	9/1/1998				
	Dawson 1	6/14/1946		23.7999992		
	Dawson 1	6/7/1947				
	Dawson 2	7/31/1947				
	Delores	7/1/1998				
	Delores	8/1/1998				
	Delores	9/1/1998				
	Eaton	7/31/1947				
	ElW	2/5/1997				
	El Oro	6/11/1981				
	Folcher	6/20/1946				
	Guest House	6/9/1981				
	GWQ-1	5/1/1975				
	GWQ-1	1/20/1981				
	GWQ-1	2/2/1981				
	GWQ-1	3/27/1981	0.16			
-0.005	GWQ-1	6/11/1981	-0.05			
	GWQ-1	6/15/1981	0.12	22		
-0.005	GWQ-1	6/15/1981	0.078			
	GWQ-1	2/25/1982				
	GWQ-1	3/30/1989	-0.1		-0.1	-0.1
	GWQ-1	7/19/1991				
	GWQ-1	3/31/1993	-0.01			
	GWQ-1	5/25/1994	-0.05			
-0.005	GWQ-1	7/21/1994	-0.05			
	GWQ-1	9/1/1995				
	GWQ-1	1/24/1998				
	GWQ-1	2/1/1998				
	GWQ-1	3/1/1998				
	GWQ-1	4/14/1998				
	GWQ-1	5/1/1998				
	GWQ-1	6/1/1998				
	GWQ-1	7/21/1998				

Thallium	Well Name	Date	Zinc	Temp (C)	Tin	Vanadium
	GWQ-1	8/1/1998				
	GWQ-1	9/1/1998				
	GWQ-10	4/6/1981	0.12			
	GWQ-10	8/10/1981	0.23			
	GWQ-10	10/27/1981	0.25			
	GWQ-10	10/30/1981	0.24			
	GWQ-10	11/6/1981	0.28			
	GWQ-10	11/12/1981				
-0.005	GWQ-10	11/13/1981	0.9	19.5		
	GWQ-10	11/17/1981	0.28			
	GWQ-10	11/23/1981	0.37			
	GWQ-10	12/7/1981	0.87			
	GWQ-10	12/15/1981	0.44			
	GWQ-10	12/22/1981	0.35			
	GWQ-10	1/5/1982	0.31			
	GWQ-10	1/18/1982				
	GWQ-10	1/26/1982				
	GWQ-10	2/16/1982				
	GWQ-10	2/22/1982				
	GWQ-10	3/12/1982				
	GWQ-10	4/16/1982				
	GWQ-10	4/26/1982				
	GWQ-10	5/17/1982				
	GWQ-10	6/8/1982				
	GWQ-10	6/14/1982				
	GWQ-10	6/30/1982				
	GWQ-10	7/26/1982				
	GWQ-10	7/18/1982				
	GWQ-10	9/2/1982				
	GWQ-10	9/14/1982				
	GWQ-10	10/18/1982				
	GWQ-10	11/11/1982				
	GWQ-10	12/23/1982				
	GWQ-10	12/28/1982				
	GWQ-10	2/21/1983				
	GWQ-10	5/6/1983				

Thallium	Well Name	Date	Zinc	Temp (C)	Tin	Vanadium
	GWQ-10	5/13/1983				
	GWQ-10	6/2/1983				
	GWQ-10	7/5/1983				
	GWQ-10	8/9/1983				
	GWQ-10	8/25/83				
	GWQ-10	10/20/1983				
	GWQ-10	11/1/1983				
	GWQ-10	12/7/1983				
	GWQ-10	1/28/1984				
	GWQ-10	2/13/1984				
	GWQ-10	3/1/1984				
	GWQ-10	3/16/1984				
	GWQ-10	4/18/1984				
	GWQ-10	5/22/1984				
	GWQ-10	5/30/1984				
	GWQ-10	6/26/1984				
	GWQ-10	7/25/1984				
	GWQ-10	8/27/1984				
	GWQ-10	9/12/1984				
	GWQ-10	9/21/1984				
	GWQ-10	11/19/1984				
	GWQ-10	11/27/1984				
	GWQ-10	12/17/1984				
	GWQ-10	5/17/1985				

Well Name	Water Depth	USGS Quad	Well Depth		Sample ID	Date	Sampler	Notes
GWQ-10	23.4	Skute Stone Arroyo		-59	GWQ-10-59	11/13/1985	CFP	
GWQ-10	21.2	Skute Stone Arroyo		-60	GWQ-10-60	5/23/1986	CFP	
GWQ-10	20.7	Skute Stone Arroyo		-61	GWQ-10-61	10/8/1986	CFP	
GWQ-10	16	Skute Stone Arroyo		-62	GWQ-10-62	3/4/1987	EID	
GWQ-10		Skute Stone Arroyo		-63	GWQ-10-63	5/25/1987		
GWQ-10	15.5	Skute Stone Arroyo		-64	GWQ-10-64	1/12/1988	EID	
GWQ-10		Skute Stone Arroyo		-65	GWQ-10-65	4/4/1988	Irwin	lab pH
GWQ-10	20.75	Skute Stone Arroyo		-66	GWQ-10-66	8/23/1988	Irwin	lab pH
GWQ-10	17.58	Skute Stone Arroyo		-67	GWQ-10-67	2/9/1989	Irwin	lab pH
GWQ-10	17.2	Skute Stone Arroyo		-68	GWQ-10-68	6/1/1989	Irwin	lab pH
GWQ-10	17.5	Skute Stone Arroyo		-69	GWQ-10-69	11/30/1989	Irwin	lab pH
GWQ-10	17.5	Skute Stone Arroyo		-70	GWQ-10-70	11/14/1990	GE	
GWQ-10	21.2	Skute Stone Arroyo		-71	GWQ-10-71	2/11/1991	SHB	
GWQ-10	15.31	Skute Stone Arroyo		-72	GWQ-10-72	7/19/1991	GE	lab pH
GWQ-10	16.58	Skute Stone Arroyo		-73	GWQ-10-73	8/29/1991	Irwin	lab pH
GWQ-10	14.6	Skute Stone Arroyo		-74	GWQ-10-74	11/26/1991	Hood	lab pH
GWQ-10	15	Skute Stone Arroyo		-75	GWQ-10-75	3/15/1992	Irwin	lab pH
GWQ-10		Skute Stone Arroyo		-76	GWQ-10-76	5/25/1992	Irwin	lab pH
GWQ-10		Skute Stone Arroyo		-77	GWQ-10-77	7/16/1992	Irwin	lab pH
GWQ-10	14.5	Skute Stone Arroyo		-78	GWQ-10-78	10/8/1992	Irwin	lab pH
GWQ-10	15.58	Skute Stone Arroyo		-79	GWQ-10-79	11/27/1992	Hood	lab pH
GWQ-10		Skute Stone Arroyo		-80	GWQ-10-80	12/15/1992	Irwin	lab pH
GWQ-10	15.42	Skute Stone Arroyo		-81	GWQ-10-81	2/25/1993	Irwin	lab pH
GWQ-10		Skute Stone Arroyo		-82	GWQ-10-82	3/30/1993	JWS	
GWQ-10		Skute Stone Arroyo		-83	GWQ-10-83	9/28/1993	Irwin	lab pH
GWQ-10	16.7	Skute Stone Arroyo		-84	GWQ-10-84	5/26/1994	SRK	
GWQ-10		Skute Stone Arroyo		-85	GWQ-10-85	6/23/1994	Irwin	lab pH
GWQ-10		Skute Stone Arroyo		-86	GWQ-10-86	7/23/1994	SRK	
GWQ-10		Skute Stone Arroyo		-87	GWQ-10-87	9/22/1994	Irwin	lab pH
GWQ-10		Skute Stone Arroyo		-88	GWQ-10-88	1/29/1995	Irwin	lab pH
GWQ-10		Skute Stone Arroyo		-89	GWQ-10-89	3/29/1995	Irwin	lab pH
GWQ-10		Skute Stone Arroyo		-90	GWQ-10-90	3/29/1995	Irwin	lab pH
GWQ-10	19.58	Skute Stone Arroyo		-91	GWQ-10-91	6/27/1995	Irwin	lab pH
GWQ-10		Skute Stone Arroyo		-92	GWQ-10-92	9/21/1995	Irwin	lab pH
GWQ-10		Skute Stone Arroyo		-93	GWQ-10-93	1/10/1996	Irwin	lab pH
GWQ-10		Skute Stone Arroyo		-94	GWQ-10-94	4/3/1996	Irwin	lab pH

Well Name	Water Depth	USGS Quad	Well Depth		Sample ID	Date	Sampler	Notes
GWQ-10		Skute Stone Arroyo		-95	GWQ-10-95	6/1/1996		
GWQ-10		Skute Stone Arroyo		-96	GWQ-10-96	9/25/1996	Irwin	lab pH
GWQ-10		Skute Stone Arroyo		-97	GWQ-10-97	1/15/1997	Irwin	lab pH
GWQ-10		Skute Stone Arroyo		-98	GWQ-10-98	4/1/1997		
GWQ-10		Skute Stone Arroyo		-99	GWQ-10-99	7/1/1997		
GWQ-10		Skute Stone Arroyo		-100	GWQ-10-100	8/1/1997		
GWQ-10		Skute Stone Arroyo		-101	GWQ-10-101	10/1/1997		
GWQ-10		Skute Stone Arroyo		-102	GWQ-10-102	10/1/1997		
GWQ-10	22.1	Skute Stone Arroyo		-103	GWQ-10-103	1/15/1998	Irwin	
GWQ-10	22.25	Skute Stone Arroyo		-104	GWQ-10-104	4/9/1998	Irwin	
GWQ-10	22.42	Skute Stone Arroyo		-105	GWQ-10-105	7/13/1998	Irwin	
GWQ-10		Skute Stone Arroyo		-106	GWQ-10-106	10/15/1998	Goff	
GWQ-11	34.83	Skute Stone Arroyo		-1	GWQ-11-1	8/10/1981	QMC	
GWQ-11		Skute Stone Arroyo		-2	GWQ-11-2	10/27/1981	QMC	
GWQ-11		Skute Stone Arroyo		-3	GWQ-11-3	10/30/1981		
GWQ-11	34.85	Skute Stone Arroyo		-4	GWQ-11-4	11/6/1981	QMC	
GWQ-11	34.82	Skute Stone Arroyo		-5	GWQ-11-5	11/13/1981	EID	
GWQ-11	34.17	Skute Stone Arroyo		-6	GWQ-11-6	11/17/1981	QMC	
GWQ-11	36.02	Skute Stone Arroyo		-7	GWQ-11-7	11/23/1981	QMC	
GWQ-11	34.75	Skute Stone Arroyo		-8	GWQ-11-8	12/7/1981	QMC	
GWQ-11	35.02	Skute Stone Arroyo		-9	GWQ-11-9	12/15/1981	QMC	
GWQ-11	35.02	Skute Stone Arroyo		-10	GWQ-11-10	12/22/1981	QMC	
GWQ-11	34.74	Skute Stone Arroyo		-11	GWQ-11-11	1/5/1982	QMC	
GWQ-11	36.67	Skute Stone Arroyo		-12	GWQ-11-12	1/18/1982	QMC	
GWQ-11	36.66	Skute Stone Arroyo		-13	GWQ-11-13	1/26/1982	QMC	
GWQ-11	34.92	Skute Stone Arroyo		-14	GWQ-11-14	2/16/1982	QMC	
GWQ-11	34.91	Skute Stone Arroyo		-15	GWQ-11-15	2/22/1982	QMC	
GWQ-11	35.17	Skute Stone Arroyo		-16	GWQ-11-16	3/12/1982	QMC	
GWQ-11	28.67	Skute Stone Arroyo		-17	GWQ-11-17	4/16/1982	QMC	
GWQ-11	28.16	Skute Stone Arroyo		-18	GWQ-11-18	4/26/1982	QMC	
GWQ-11	23.8	Skute Stone Arroyo		-19	GWQ-11-19	5/17/1982	QMC	
GWQ-11	19.7	Skute Stone Arroyo		-20	GWQ-11-20	6/8/1982	QMC	
GWQ-11	19.67	Skute Stone Arroyo		-21	GWQ-11-21	6/14/1982	QMC	
GWQ-11	15.1	Skute Stone Arroyo		-22	GWQ-11-22	6/30/1982	QMC	
GWQ-11	15.08	Skute Stone Arroyo		-23	GWQ-11-23	7/26/1982	QMC	
GWQ-11	13.2	Skute Stone Arroyo		-24	GWQ-11-24	8/18/1982	QMC	

Well Name	Water Depth	USGS Quad	Well Depth	Sample ID	Date	Sampler	Notes
GWQ-11	12.3	Skute Stone Arroyo	-25	GWQ-11-25	9/2/1982	EID	
GWQ-11	11.8	Skute Stone Arroyo	-26	GWQ-11-26	9/14/1982	QMC	
GWQ-11	11.1	Skute Stone Arroyo	-27	GWQ-11-27	10/18/1982	QMC	
GWQ-11	11.2	Skute Stone Arroyo	-28	GWQ-11-28	11/11/1982	QMC	
GWQ-11	11.2	Skute Stone Arroyo	-29	GWQ-11-29	12/23/1982	QMC	
GWQ-11	11.2	Skute Stone Arroyo	-30	GWQ-11-30	12/28/1982	QMC	
GWQ-11	11.4	Skute Stone Arroyo	-31	GWQ-11-31	2/21/1983	QMC	
GWQ-11	12.5	Skute Stone Arroyo	-32	GWQ-11-32	5/6/1983	QMC	
GWQ-11	12.5	Skute Stone Arroyo	-33	GWQ-11-33	5/13/1983	QMC	
GWQ-11	12.9	Skute Stone Arroyo	-34	GWQ-11-34	6/2/1983	QMC	
GWQ-11	13.6	Skute Stone Arroyo	-35	GWQ-11-35	7/5/1983	QMC	
GWQ-11	14.1	Skute Stone Arroyo	-36	GWQ-11-36	8/9/1983	QMC	
GWQ-11	14.1	Skute Stone Arroyo	-37	GWQ-11-37	8/25/1983	QMC	
GWQ-11	14.6	Skute Stone Arroyo	-38	GWQ-11-38	10/20/1983	QMC	
GWQ-11	14.6	Skute Stone Arroyo	-39	GWQ-11-39	11/1/1983	QMC	
GWQ-11	14.3	Skute Stone Arroyo	-40	GWQ-11-40	12/7/1984	QMC	
GWQ-11	14.8	Skute Stone Arroyo	-41	GWQ-11-41	1/28/1984	QMC	
GWQ-11	14.9	Skute Stone Arroyo	-42	GWQ-11-42	2/13/1984	QMC	
GWQ-11	14.9	Skute Stone Arroyo	-43	GWQ-11-43	3/1/1984	CFP	
GWQ-11	14.9	Skute Stone Arroyo	-44	GWQ-11-44	3/16/1984	CFP	
GWQ-11	15.2	Skute Stone Arroyo	-45	GWQ-11-45	4/18/1984	CFP	
GWQ-11	15.5	Skute Stone Arroyo	-46	GWQ-11-46	5/22/1984	CFP	
GWQ-11	15.5	Skute Stone Arroyo	-47	GWQ-11-47	5/30/1984	CFP	
GWQ-11	15.8	Skute Stone Arroyo	-48	GWQ-11-48	6/26/1984	CFP	
GWQ-11	15.9	Skute Stone Arroyo	-49	GWQ-11-49	7/25/1984	CFP	
GWQ-11	16	Skute Stone Arroyo	-50	GWQ-11-50	8/27/1984	CFP	
GWQ-11	16	Skute Stone Arroyo	-51	GWQ-11-51	9/12/1984	CFP	
GWQ-11	16	Skute Stone Arroyo	-52	GWQ-11-52	9/21/1984	CFP	
GWQ-11	16.3	Skute Stone Arroyo	-53	GWQ-11-53	11/19/1984	CFP	
GWQ-11	16.3	Skute Stone Arroyo	-54	GWQ-11-54	11/27/1984	CFP	
GWQ-11	16.4	Skute Stone Arroyo	-55	GWQ-11-55	12/17/1984	CFP	
GWQ-11	16.4	Skute Stone Arroyo	-56	GWQ-11-56	5/17/1985	CFP	
GWQ-11	16.2	Skute Stone Arroyo	-57	GWQ-11-57	11/13/1985	CFP	
GWQ-11	16.1	Skute Stone Arroyo	-58	GWQ-11-58	5/23/1986	CFP	
GWQ-11	16.1	Skute Stone Arroyo	-59	GWQ-11-59	10/8/1986	CFP	
GWQ-11	14.54	Skute Stone Arroyo	-60	GWQ-11-60	3/4/1987	EID	

Well Name	Water Depth	USGS Quad	Well Depth		Sample ID	Date	Sampler	Notes
GWQ-11		Skute Stone Arroyo		-61	GWQ-11-61	5/25/1987		
GWQ-11	15	Skute Stone Arroyo		-62	GWQ-11-62	1/12/1988	EID	
GWQ-11		Skute Stone Arroyo		-63	GWQ-11-63	4/4/1988	Irwin	
GWQ-11	18.2	Skute Stone Arroyo		-64	GWQ-11-64	8/23/1988	Irwin	
GWQ-11	15.66	Skute Stone Arroyo		-65	GWQ-11-65	2/9/1989	Irwin	
GWQ-11	16.25	Skute Stone Arroyo		-66	GWQ-11-66	6/1/1989	Irwin	
GWQ-11	16.25	Skute Stone Arroyo		-67	GWQ-11-67	11/30/1989	Irwin	
GWQ-11	15.75	Skute Stone Arroyo		-68	GWQ-11-68	11/14/1990	GE	
GWQ-11		Skute Stone Arroyo		-69	GWQ-11-69	2/11/1991	SHB	
GWQ-11	17.9	Skute Stone Arroyo		-70	GWQ-11-70	7/19/1991	GE	
GWQ-11	17.42	Skute Stone Arroyo		-71	GWQ-11-71	8/29/1991	Irwin	lab pH
GWQ-11	16	Skute Stone Arroyo		-72	GWQ-11-72	11/26/1991	Hood	lab pH
GWQ-11	16	Skute Stone Arroyo		-73	GWQ-11-73	3/15/1992	Irwin	lab pH
GWQ-11		Skute Stone Arroyo		-74	GWQ-11-74	5/25/1992	Irwin	lab pH
GWQ-11	15.75	Skute Stone Arroyo		-75	GWQ-11-75	10/8/1992	Irwin	lab pH
GWQ-11	15.25	Skute Stone Arroyo		-76	GWQ-11-76	11/27/1992	Hood	lab pH
GWQ-11		Skute Stone Arroyo		-77	GWQ-11-77	12/15/1992	Irwin	lab pH
GWQ-11	16.17	Skute Stone Arroyo		-78	GWQ-11-78	2/25/1993	Irwin	lab pH
GWQ-11		Skute Stone Arroyo		-79	GWQ-11-79	3/30/1993	JWS	
GWQ-11		Skute Stone Arroyo		-80	GWQ-11-80	9/28/1993	Irwin	lab pH
GWQ-11	15.95	Skute Stone Arroyo		-81	GWQ-11-81	5/25/1994	SRK	
GWQ-11		Skute Stone Arroyo		-82	GWQ-11-82	6/23/1994	Irwin	lab pH
GWQ-11		Skute Stone Arroyo		-83	GWQ-11-83	7/22/1994	SRK	
GWQ-11		Skute Stone Arroyo		-84	GWQ-11-84	9/22/1994	Irwin	lab pH

Well Name	Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride	Sulfate
GWQ-10	11/13/1985	32.96325	107.49677	266630	3649790	13	5200	FALSE	42	149
GWQ-10	5/23/1986	32.96325	107.49677	266630	3649790	13	5200	FALSE	58	151
GWQ-10	10/8/1986	32.96325	107.49677	266630	3649790	13	5200	FALSE	54	137
GWQ-10	3/4/1987	32.96325	107.49677	266630	3649790	13	5200	TRUE	59	150
GWQ-10	5/25/1987	32.96325	107.49677	266630	3649790	13	5200	FALSE		154.2
GWQ-10	1/12/1988	32.96325	107.49677	266630	3649790	13	5200	TRUE	78.8	173
GWQ-10	4/4/1988	32.96325	107.49677	266630	3649790	13	5200	FALSE	65	170.6
GWQ-10	8/23/1988	32.96325	107.49677	266630	3649790	13	5200	FALSE	63	179.2
GWQ-10	2/9/1989	32.96325	107.49677	266630	3649790	13	5200	FALSE	76.3	180.5
GWQ-10	6/1/1989	32.96325	107.49677	266630	3649790	13	5200	FALSE	67.9	162.7
GWQ-10	11/30/1989	32.96325	107.49677	266630	3649790	13	5200	FALSE	72.1	161.7
GWQ-10	11/14/1990	32.96325	107.49677	266630	3649790	13	5200	FALSE	92.7	178
GWQ-10	2/11/1991	32.96325	107.49677	266630	3649790	13	5200	FALSE	78.1	213.5
GWQ-10	7/19/1991	32.96325	107.49677	266630	3649790	13	5200	TRUE	83.3	166.6
GWQ-10	8/29/1991	32.96325	107.49677	266630	3649790	13	5200	FALSE	84.7	191.7
GWQ-10	11/26/1991	32.96325	107.49677	266630	3649790	13	5200	FALSE	58.2	171.2
GWQ-10	3/15/1992	32.96325	107.49677	266630	3649790	13	5200	FALSE	82.5	191.6
GWQ-10	5/25/1992	32.96325	107.49677	266630	3649790	13	5200	FALSE	83.8	169.2
GWQ-10	7/16/1992	32.96325	107.49677	266630	3649790	13	5200	FALSE	76.3	166.6
GWQ-10	10/8/1992	32.96325	107.49677	266630	3649790	13	5200	FALSE	83.4	161.4
GWQ-10	11/27/1992	32.96325	107.49677	266630	3649790	13	5200	FALSE	80.3	174.4
GWQ-10	12/15/1992	32.96325	107.49677	266630	3649790	13	5200	FALSE	90.9	168.7
GWQ-10	2/25/1993	32.96325	107.49677	266630	3649790	13	5200	FALSE	95.5	175.8
GWQ-10	3/30/1993	32.96325	107.49677	266630	3649790	13	5200	FALSE	94	183
GWQ-10	9/28/1993	32.96325	107.49677	266630	3649790	13	5200	FALSE	96	142.6
GWQ-10	5/26/1994	32.96325	107.49677	266630	3649790	13	5200	FALSE	92	175
GWQ-10	6/23/1994	32.96325	107.49677	266630	3649790	13	5200	FALSE	103.6	191.6
GWQ-10	7/23/1994	32.96325	107.49677	266630	3649790	13	5200	TRUE	98	184
GWQ-10	9/22/1994	32.96325	107.49677	266630	3649790	13	5200	FALSE	89.2	155.8
GWQ-10	1/29/1995	32.96325	107.49677	266630	3649790	13	5200	FALSE	87.5	65.7
GWQ-10	3/29/1995	32.96325	107.49677	266630	3649790	13	5200	FALSE	84.9	176
GWQ-10	3/29/1995	32.96325	107.49677	266630	3649790	13	5200	FALSE	84.9	176
GWQ-10	6/27/1995	32.96325	107.49677	266630	3649790	13	5200	FALSE	84.8	168.7
GWQ-10	9/21/1995	32.96325	107.49677	266630	3649790	13	5200	FALSE	91.3	187.4
GWQ-10	1/10/1996	32.96325	107.49677	266630	3649790	13	5200	FALSE	97.7	197.5
GWQ-10	4/3/1996	32.96325	107.49677	266630	3649790	13	5200	FALSE	97.4	218.2

Well Name	Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride	Sulfate
GWQ-10	6/1/1996	32.96325	107.49677	266630	3649790	13	5200		94.2	190
GWQ-10	9/25/1996	32.96325	107.49677	266630	3649790	13	5200	TRUE	86.2	190.8
GWQ-10	1/15/1997	32.96325	107.49677	266630	3649790	13	5200	TRUE	91	203.67
GWQ-10	4/1/1997	32.96325	107.49677	266630	3649790	13	5200	TRUE	94.9	205
GWQ-10	7/1/1997	32.96325	107.49677	266630	3649790	13	5200	TRUE	91	197
GWQ-10	8/1/1997	32.96325	107.49677	266630	3649790	13	5200	TRUE	94.5	
GWQ-10	10/1/1997	32.96325	107.49677	266630	3649790	13	5200	TRUE	95	193
GWQ-10	10/1/1997	32.96325	107.49677	266630	3649790	13	5200	TRUE	17.9	19
GWQ-10	1/15/1998	32.96325	107.49677	266630	3649790	13	5200	TRUE	86	201
GWQ-10	4/9/1998	32.96325	107.49677	266630	3649790	13	5200	TRUE	92.2	206
GWQ-10	7/13/1998	32.96325	107.49677	266630	3649790	13	5200	TRUE	85	209
GWQ-10	10/15/1998	32.96325	107.49677	266630	3649790	13	5200	TRUE	17.9	19
GWQ-11	8/10/1981	32.96027	107.49667	266632	3649459	13	5183	TRUE	37	123
GWQ-11	10/27/1981	32.96027	107.49667	266632	3649459	13	5183	TRUE	36	183
GWQ-11	10/30/1981	32.96027	107.49667	266632	3649459	13	5183	FALSE	39.1	101
GWQ-11	11/6/1981	32.96027	107.49667	266632	3649459	13	5183	TRUE	36	168
GWQ-11	11/13/1981	32.96027	107.49667	266632	3649459	13	5183	TRUE	37.64	155.6
GWQ-11	11/17/1981	32.96027	107.49667	266632	3649459	13	5183	TRUE	36	165
GWQ-11	11/23/1981	32.96027	107.49667	266632	3649459	13	5183	TRUE	36	181
GWQ-11	12/7/1981	32.96027	107.49667	266632	3649459	13	5183	TRUE	56	184
GWQ-11	12/15/1981	32.96027	107.49667	266632	3649459	13	5183	TRUE	38	191
GWQ-11	12/22/1981	32.96027	107.49667	266632	3649459	13	5183	TRUE	40	185
GWQ-11	1/5/1982	32.96027	107.49667	266632	3649459	13	5183	TRUE	40	174
GWQ-11	1/18/1982	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	1/26/1982	32.96027	107.49667	266632	3649459	13	5183	TRUE	40	168
GWQ-11	2/16/1982	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	2/22/1982	32.96027	107.49667	266632	3649459	13	5183	TRUE	38	168
GWQ-11	3/12/1982	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	4/16/1982	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	4/26/1982	32.96027	107.49667	266632	3649459	13	5183	TRUE	40	165
GWQ-11	5/17/1982	32.96027	107.49667	266632	3649459	13	5183	TRUE	44	185
GWQ-11	6/8/1982	32.96027	107.49667	266632	3649459	13	5183	TRUE	44	185
GWQ-11	6/14/1982	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	6/30/1982	32.96027	107.49667	266632	3649459	13	5183	TRUE	44	198
GWQ-11	7/26/1982	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	8/18/1982	32.96027	107.49667	266632	3649459	13	5183	FALSE		

Well Name	Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride	Sulfate
GWQ-11	9/2/1982	32.96027	107.49667	266632	3649459	13	5183	TRUE	52.22	247.6
GWQ-11	9/14/1982	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	10/18/1982	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	11/11/1982	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	12/23/1982	32.96027	107.49667	266632	3649459	13	5183	TRUE	52	235
GWQ-11	12/28/1982	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	2/21/1983	32.96027	107.49667	266632	3649459	13	5183	TRUE	44	218
GWQ-11	5/6/1983	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	5/13/1983	32.96027	107.49667	266632	3649459	13	5183	TRUE	44	206
GWQ-11	6/2/1983	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	7/5/1983	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	8/9/1983	32.96027	107.49667	266632	3649459	13	5183	TRUE	46	168
GWQ-11	8/25/1983	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	10/20/1983	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	11/1/1983	32.96027	107.49667	266632	3649459	13	5183	TRUE	46	174
GWQ-11	12/7/1984	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	1/28/1984	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	2/13/1984	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	3/1/1984	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	3/16/1984	32.96027	107.49667	266632	3649459	13	5183	TRUE	52	184
GWQ-11	4/18/1984	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	5/22/1984	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	5/30/1984	32.96027	107.49667	266632	3649459	13	5183	TRUE	58	195
GWQ-11	6/26/1984	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	7/25/1984	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	8/27/1984	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	9/12/1984	32.96027	107.49667	266632	3649459	13	5183	TRUE	60	181
GWQ-11	9/21/1984	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	11/19/1984	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	11/27/1984	32.96027	107.49667	266632	3649459	13	5183	TRUE	60	165
GWQ-11	12/17/1984	32.96027	107.49667	266632	3649459	13	5183	FALSE		
GWQ-11	5/17/1985	32.96027	107.49667	266632	3649459	13	5183	FALSE	64	197
GWQ-11	11/13/1985	32.96027	107.49667	266632	3649459	13	5183	FALSE	62	183
GWQ-11	5/23/1986	32.96027	107.49667	266632	3649459	13	5183	FALSE	66	210
GWQ-11	10/8/1986	32.96027	107.49667	266632	3649459	13	5183	FALSE	70	200
GWQ-11	3/4/1987	32.96027	107.49667	266632	3649459	13	5183	TRUE	69	200

Well Name	Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride	Sulfate
GWQ-11	5/25/1987	32.96027	107.49667	266632	3649459	13	5183	FALSE		230
GWQ-11	1/12/1988	32.96027	107.49667	266632	3649459	13	5183	TRUE	77.1	253
GWQ-11	4/4/1988	32.96027	107.49667	266632	3649459	13	5183	FALSE	74.6	277.7
GWQ-11	8/23/1988	32.96027	107.49667	266632	3649459	13	5183	FALSE	73	293.8
GWQ-11	2/9/1989	32.96027	107.49667	266632	3649459	13	5183	FALSE	77	258.4
GWQ-11	6/1/1989	32.96027	107.49667	266632	3649459	13	5183	FALSE	69.7	238.2
GWQ-11	11/30/1989	32.96027	107.49667	266632	3649459	13	5183	FALSE	79.8	254.3
GWQ-11	11/14/1990	32.96027	107.49667	266632	3649459	13	5183	FALSE	104.4	257.4
GWQ-11	2/11/1991	32.96027	107.49667	266632	3649459	13	5183	FALSE	88.9	233.4
GWQ-11	7/19/1991	32.96027	107.49667	266632	3649459	13	5183	TRUE	89.7	210.2
GWQ-11	8/29/1991	32.96027	107.49667	266632	3649459	13	5183	FALSE	92.6	278.6
GWQ-11	11/26/1991	32.96027	107.49667	266632	3649459	13	5183	FALSE	89.3	240.7
GWQ-11	3/15/1992	32.96027	107.49667	266632	3649459	13	5183	FALSE	65.1	260.2
GWQ-11	5/25/1992	32.96027	107.49667	266632	3649459	13	5183	FALSE	96.2	258.1
GWQ-11	10/8/1992	32.96027	107.49667	266632	3649459	13	5183	FALSE	96	226.9
GWQ-11	11/27/1992	32.96027	107.49667	266632	3649459	13	5183	FALSE	96	248.4
GWQ-11	12/15/1992	32.96027	107.49667	266632	3649459	13	5183	FALSE	98.1	220
GWQ-11	2/25/1993	32.96027	107.49667	266632	3649459	13	5183	FALSE	104	273.3
GWQ-11	3/30/1993	32.96027	107.49667	266632	3649459	13	5183	FALSE	104	271
GWQ-11	9/28/1993	32.96027	107.49667	266632	3649459	13	5183	FALSE	105.6	207.7
GWQ-11	5/25/1994	32.96027	107.49667	266632	3649459	13	5183	FALSE	110	260
GWQ-11	6/23/1994	32.96027	107.49667	266632	3649459	13	5183	FALSE	117.2	274.6
GWQ-11	7/22/1994	32.96027	107.49667	266632	3649459	13	5183	TRUE	116	272
GWQ-11	9/22/1994	32.96027	107.49667	266632	3649459	13	5183	FALSE	112.3	234.5

Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
GWQ-10	11/13/1985	7.7	500								
GWQ-10	5/23/1986	7.9	560								
GWQ-10	10/8/1986	7.5	550								
GWQ-10	3/4/1987		568		256	740			-0.1	0.9	
GWQ-10	5/25/1987										
GWQ-10	1/12/1988		648		243				-0.1		
GWQ-10	4/4/1988		552								
GWQ-10	8/23/1988		692								
GWQ-10	2/9/1989		618								
GWQ-10	6/1/1989		604								
GWQ-10	11/30/1989		620								
GWQ-10	11/14/1990		635								
GWQ-10	2/11/1991		696								-0.001
GWQ-10	7/19/1991	8.05	645	198	241.6	975	0.51	3.88			0.002
GWQ-10	8/29/1991	7.44	665								
GWQ-10	11/26/1991	7.46	648								
GWQ-10	3/15/1992	7.85	641								
GWQ-10	5/25/1992	7.41	621								
GWQ-10	7/16/1992	7.51	626								
GWQ-10	10/8/1992	7.43	659								
GWQ-10	11/27/1992	7.89	654								
GWQ-10	12/15/1992	7.48	582								
GWQ-10	2/25/1993	7.39	620								
GWQ-10	3/30/1993	7.8	642		254	1020	0.52	3.9	-0.1		-0.005
GWQ-10	9/28/1993	7.7	693								
GWQ-10	5/26/1994	7.82	1000		232	1050	0.51	3.5	0.85	-0.005	-0.005
GWQ-10	6/23/1994	7.97	671								
GWQ-10	7/23/1994	7.97	696		238	1050	0.49	3.5	-0.05	-0.005	-0.005
GWQ-10	9/22/1994	7.45	668								
GWQ-10	1/29/1995	7.52	672								
GWQ-10	3/29/1995	7.67	62								
GWQ-10	3/29/1995	7.67	622								
GWQ-10	6/27/1995	7.29	677								
GWQ-10	9/21/1995	7.42	693								
GWQ-10	1/10/1996	7.29	654								
GWQ-10	4/3/1996	6.95	628								

Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
GWQ-10	6/1/1996	7.29	637								
GWQ-10	9/25/1996	7.56	679								
GWQ-10	1/15/1997	7.59	746								
GWQ-10	4/1/1997		659				0.4				
GWQ-10	7/1/1997	7.34	689								
GWQ-10	8/1/1997	7.23	683				0.6				
GWQ-10	10/1/1997	7.52	662								
GWQ-10	10/1/1997	7.57	304					-0.05			
GWQ-10	1/15/1998	7.45	637			1090	0.56	3.3			
GWQ-10	4/9/1998		674			1200	0.56	3.8			
GWQ-10	7/13/1998		661			973	0.58	3.5			
GWQ-10	10/15/1998	7.57	304			551		-0.05			
GWQ-11	8/10/1981	7.38	612		237		0.9	1.02	-0.25		-0.004
GWQ-11	10/27/1981	8.1	550				1	0.7	-0.01		-0.01
GWQ-11	10/30/1981	8.4	536				0.96	0.61	-0.25		-0.005
GWQ-11	11/6/1981	8.1	520				1	1.5	-0.01		-0.01
GWQ-11	11/13/1981	7.7	544		241.1	700	0.99	1.33	-0.25		-0.005
GWQ-11	11/17/1981	8	520				1	1.3	-0.01		-0.01
GWQ-11	11/23/1981	7.8	570				0.9	1.7	-0.01		-0.01
GWQ-11	12/7/1981	7.9	560				0.9	1.6	-0.01		-0.01
GWQ-11	12/15/1981	7.9	570				1	1.5	-0.01		-0.01
GWQ-11	12/22/1981	8	530				0.5	1.9	-0.01		-0.01
GWQ-11	1/5/1982	7.5	480				1	2.5	-0.01		-0.01
GWQ-11	1/18/1982										
GWQ-11	1/26/1982	7.9	500				1	1.7			
GWQ-11	2/16/1982										
GWQ-11	2/22/1982	7.7	510				0.9	1.4			
GWQ-11	3/12/1982										
GWQ-11	4/16/1982										
GWQ-11	4/26/1982	7.6	510				0.8	1.3			
GWQ-11	5/17/1982	7.8	510				0.8	1.9			
GWQ-11	6/8/1982	7.9	530				0.8	1.7			
GWQ-11	6/14/1982										
GWQ-11	6/30/1982	7.9	590								
GWQ-11	7/26/1982										
GWQ-11	8/18/1982										

Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
GWQ-11	9/2/1982	7.3	700		226	940	0.78	1.94			
GWQ-11	9/14/1982										
GWQ-11	10/18/1982										
GWQ-11	11/11/1982										
GWQ-11	12/23/1982	8.5	650				0.8	1.6			
GWQ-11	12/28/1982										
GWQ-11	2/21/1983	8	600				0.8	1.7			
GWQ-11	5/6/1983										
GWQ-11	5/13/1983	8.1	570				0.8	1.9			
GWQ-11	6/2/1983										
GWQ-11	7/5/1983										
GWQ-11	8/9/1983	7.9	580				0.8	2			
GWQ-11	8/25/1983										
GWQ-11	10/20/1983										
GWQ-11	11/1/1983	8	580				0.8	4.8			
GWQ-11	12/7/1984										
GWQ-11	1/28/1984										
GWQ-11	2/13/1984										
GWQ-11	3/1/1984										
GWQ-11	3/16/1984	8.3	540				0.6	3.8			
GWQ-11	4/18/1984										
GWQ-11	5/22/1984										
GWQ-11	5/30/1984	7.5	550				0.8	1.9			
GWQ-11	6/26/1984										
GWQ-11	7/25/1984										
GWQ-11	8/27/1984										
GWQ-11	9/12/1984	7.9	590				0.8	2.3			
GWQ-11	9/21/1984										
GWQ-11	11/19/1984										
GWQ-11	11/27/1984	7.7	570				0.8	2.3			
GWQ-11	12/17/1984										
GWQ-11	5/17/1985	7.8	640								
GWQ-11	11/13/1985	7.7	600								
GWQ-11	5/23/1986	7.8	650								
GWQ-11	10/8/1986	7.6	560								
GWQ-11	3/4/1987	6.7	696		220	820			-0.1	1.1	

Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
GWQ-11	5/25/1987										
GWQ-11	1/12/1988		718		214				-0.1		
GWQ-11	4/4/1988		694								
GWQ-11	8/23/1988		772								
GWQ-11	2/9/1989		730								
GWQ-11	6/1/1989		708								
GWQ-11	11/30/1989		732								
GWQ-11	11/14/1990		746								
GWQ-11	2/11/1991		790								-0.001
GWQ-11	7/19/1991	7.36	785	181	220.9	1100	0.74	3.93			0.004
GWQ-11	8/29/1991	7.46	771								
GWQ-11	11/26/1991	7.29	770								
GWQ-11	3/15/1992	7.91	765								
GWQ-11	5/25/1992	7.45	761								
GWQ-11	10/8/1992	7.42	755								
GWQ-11	11/27/1992	7.85	763								
GWQ-11	12/15/1992	7.59	741								
GWQ-11	2/25/1993	7.64	762								
GWQ-11	3/30/1993	7.7	776		227	1170	0.52	4.1	0.2		-0.005
GWQ-11	9/28/1993	7.57	800								
GWQ-11	5/25/1994	7.88	820		199	1130	0.72	3.8	0.14	-0.005	-0.005
GWQ-11	6/23/1994	7.42	802								
GWQ-11	7/22/1994	7.7	808		207	1210	0.7	3.8	-0.054	0.0055	-0.005
GWQ-11	9/22/1994	7.37	816								

Well Name	Date	Boron	Barium	Berrylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
GWQ-10	11/13/1985										
GWQ-10	5/23/1986										
GWQ-10	10/8/1986										
GWQ-10	3/4/1987	-0.1	-0.1	-0.1	-0.1	90	-0.1	-0.05	-0.1	-0.1	-0.1
GWQ-10	5/25/1987	-0.1	-0.1	-0.1	-0.1						
GWQ-10	1/12/1988	-0.1	-0.1	-0.1	-0.1	116	-0.1	-0.05	-0.1	-0.1	-0.1
GWQ-10	4/4/1988										
GWQ-10	8/23/1988										
GWQ-10	2/9/1989										
GWQ-10	6/1/1989										
GWQ-10	11/30/1989										
GWQ-10	11/14/1990										
GWQ-10	2/11/1991										
GWQ-10	7/19/1991		0.02		-0.005	106.3	-0.02			0.07	-0.005
GWQ-10	8/29/1991										
GWQ-10	11/26/1991										
GWQ-10	3/15/1992										
GWQ-10	5/25/1992										
GWQ-10	7/16/1992										
GWQ-10	10/8/1992										
GWQ-10	11/27/1992										
GWQ-10	12/15/1992										
GWQ-10	2/25/1993										
GWQ-10	3/30/1993	0.04	-0.5		-0.002	104	-0.02	-0.05	-0.01	-0.05	-0.02
GWQ-10	9/28/1993										
GWQ-10	5/26/1994		-0.1		-0.0005	100	-0.025		0.026	1.1	-0.005
GWQ-10	6/23/1994										
GWQ-10	7/23/1994	-0.1	-0.1	-0.002	-0.0005	110	-0.025	-0.05	-0.025	-0.05	-0.005
GWQ-10	9/22/1994										
GWQ-10	1/29/1995										
GWQ-10	3/29/1995										
GWQ-10	3/29/1995										
GWQ-10	6/27/1995										
GWQ-10	9/21/1995										
GWQ-10	1/10/1996										
GWQ-10	4/3/1996										

Well Name	Date	Boron	Barium	Berrylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
GWQ-10	6/1/1996										
GWQ-10	9/25/1996										
GWQ-10	1/15/1997										
GWQ-10	4/1/1997								-0.005	0.15	
GWQ-10	7/1/1997										
GWQ-10	8/1/1997										
GWQ-10	10/1/1997										
GWQ-10	10/1/1997								-0.005	-0.05	
GWQ-10	1/15/1998								-0.005	0.05	
GWQ-10	4/9/1998								-0.005	-0.05	
GWQ-10	7/13/1998								-0.005	0.09	
GWQ-10	10/15/1998								-0.005	-0.05	
GWQ-11	8/10/1981	0.092	-1		-0.01	68.3	-0.05	-0.05	-0.05	1.14	-0.05
GWQ-11	10/27/1981	-0.01	-0.2		-0.005	72	-0.01	-0.02	-0.05	-0.1	-0.02
GWQ-11	10/30/1981	0.55	-1		-0.01		-0.05	-0.05	-0.05	-0.1	-0.05
GWQ-11	11/6/1981	-0.1	-0.2		-0.005	67	-0.01	-0.02	-0.05	-0.1	-0.02
GWQ-11	11/13/1981	0.041	-0.2		0.001	82.6	-0.05				-0.005
GWQ-11	11/17/1981	-0.1	-0.2		-0.005	71	-0.01	-0.02	-0.05	-0.1	-0.02
GWQ-11	11/23/1981	-0.1	-0.2		-0.005	67	-0.01	-0.02	-0.05	-0.1	-0.02
GWQ-11	12/7/1981	-0.1	-0.2		-0.005	57	-0.01	-0.02	-0.05	-0.1	-0.02
GWQ-11	12/15/1981	-0.1	-0.2		-0.005	85	-0.01	-0.02	-0.05	-0.1	-0.02
GWQ-11	12/22/1981	-0.1	-0.2		-0.005	82	-0.01	-0.02	-0.05	0.27	-0.02
GWQ-11	1/5/1982	-0.1	-0.2		-0.005	79	-0.01	-0.02	-0.05	0.14	-0.02
GWQ-11	1/18/1982										
GWQ-11	1/26/1982				-0.005				-0.05	-0.1	
GWQ-11	2/16/1982								-0.05		
GWQ-11	2/22/1982				-0.005				-0.05	0.11	
GWQ-11	3/12/1982										
GWQ-11	4/16/1982										
GWQ-11	4/26/1982				-0.005				-0.05	0.36	
GWQ-11	5/17/1982				-0.005				-0.05	0.11	
GWQ-11	6/8/1982				-0.005				-0.05	-0.1	
GWQ-11	6/14/1982										
GWQ-11	6/30/1982								-0.05	0.39	
GWQ-11	7/26/1982										
GWQ-11	8/18/1982										

Well Name	Date	Boron	Barium	Berrylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
GWQ-11	9/2/1982				-0.001	111.2					
GWQ-11	9/14/1982										
GWQ-11	10/18/1982										
GWQ-11	11/11/1982										
GWQ-11	12/23/1982					-0.005			-0.05	-0.1	
GWQ-11	12/28/1982										
GWQ-11	2/21/1983				-0.005				-0.05	0.38	
GWQ-11	5/6/1983										
GWQ-11	5/13/1983				-0.005				-0.05	-0.1	
GWQ-11	6/2/1983										
GWQ-11	7/5/1983										
GWQ-11	8/9/1983				-0.005				-0.05	-0.1	
GWQ-11	8/25/1983										
GWQ-11	10/20/1983										
GWQ-11	11/1/1983				-0.005				-0.05	-0.1	
GWQ-11	12/7/1984										
GWQ-11	1/28/1984										
GWQ-11	2/13/1984										
GWQ-11	3/1/1984										
GWQ-11	3/16/1984				-0.005				-0.05	-0.1	
GWQ-11	4/18/1984										
GWQ-11	5/22/1984										
GWQ-11	5/30/1984				-0.005				-0.05	-0.1	
GWQ-11	6/26/1984										
GWQ-11	7/25/1984										
GWQ-11	8/27/1984										
GWQ-11	9/12/1984				-0.005				-0.05	-0.1	
GWQ-11	9/21/1984										
GWQ-11	11/19/1984										
GWQ-11	11/27/1984				-0.005				-0.05	-0.1	
GWQ-11	12/17/1984										
GWQ-11	5/17/1985										
GWQ-11	11/13/1985										
GWQ-11	5/23/1986										
GWQ-11	10/8/1986										
GWQ-11	3/4/1987	-0.1	-0.1	-0.1	-0.1	108	-0.1	-0.05	-0.1	-0.1	-0.1

Well Name	Date	Boron	Barium	Berrylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
GWQ-11	5/25/1987										
GWQ-11	1/12/1988	-0.1	-0.1	-0.1	-0.1	128	-0.1	-0.05	-0.1	-0.1	-0.1
GWQ-11	4/4/1988										
GWQ-11	8/23/1988										
GWQ-11	2/9/1989										
GWQ-11	6/1/1989										
GWQ-11	11/30/1989										
GWQ-11	11/14/1990										
GWQ-11	2/11/1991										
GWQ-11	7/19/1991		0.1		-0.005	122.5	-0.02			-0.05	-0.002
GWQ-11	8/29/1991										
GWQ-11	11/26/1991										
GWQ-11	3/15/1992										
GWQ-11	5/25/1992										
GWQ-11	10/8/1992										
GWQ-11	11/27/1992										
GWQ-11	12/15/1992								0.017		
GWQ-11	2/25/1993										
GWQ-11	3/30/1993	0.04	-0.5		-0.002	126	-0.02	-0.05	-0.01	0.33	-0.02
GWQ-11	9/28/1993										
GWQ-11	5/25/1994		-0.1		-0.0005	120	-0.025		-0.025	0.16	-0.005
GWQ-11	6/23/1994										
GWQ-11	7/22/1994	-0.1	-0.1	-0.002	-0.0005	140	-0.025	-0.05	-0.25	-0.05	-0.005
GWQ-11	9/22/1994										

Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium
GWQ-10	11/13/1985										
GWQ-10	5/23/1986										
GWQ-10	10/8/1986										
GWQ-10	3/4/1987	20.7	-0.05		-0.1	-0.1	2.34		-0.1	73.6	
GWQ-10	5/25/1987										
GWQ-10	1/12/1988	24	-0.05		-0.1	-0.01	3		-0.1	64	
GWQ-10	4/4/1988										
GWQ-10	8/23/1988										
GWQ-10	2/9/1989										
GWQ-10	6/1/1989										
GWQ-10	11/30/1989										
GWQ-10	11/14/1990										
GWQ-10	2/11/1991										
GWQ-10	7/19/1991	24.1	-0.02	-0.0002			3.9	0.002	-0.02	46.9	
GWQ-10	8/29/1991										
GWQ-10	11/26/1991										
GWQ-10	3/15/1992										
GWQ-10	5/25/1992										
GWQ-10	7/16/1992										
GWQ-10	10/8/1992										
GWQ-10	11/27/1992										
GWQ-10	12/15/1992										
GWQ-10	2/25/1993										
GWQ-10	3/30/1993	27	-0.02	-0.001	-0.02	-0.01	2.3	-0.005	-0.01	71	
GWQ-10	9/28/1993										
GWQ-10	5/26/1994	25	0.059	-0.001		-0.05	3.1	-0.005	-0.025	56	
GWQ-10	6/23/1994										
GWQ-10	7/23/1994	26	-0.03	-0.001	-0.05	-0.05	2.8	-0.005	-0.025	66	-0.005
GWQ-10	9/22/1994										
GWQ-10	1/29/1995										
GWQ-10	3/29/1995										
GWQ-10	3/29/1995										
GWQ-10	6/27/1995										
GWQ-10	9/21/1995										
GWQ-10	1/10/1996										
GWQ-10	4/3/1996										

Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium
GWQ-10	6/1/1996										
GWQ-10	9/25/1996										
GWQ-10	1/15/1997										
GWQ-10	4/1/1997		-0.02								
GWQ-10	7/1/1997										
GWQ-10	8/1/1997										
GWQ-10	10/1/1997										
GWQ-10	10/1/1997										
GWQ-10	1/15/1998	25.3		-0.0002	-0.05			-0.05			
GWQ-10	4/9/1998		-0.02	-0.0002	-0.05			-0.05			
GWQ-10	7/13/1998		0.06	-0.0002	-0.05			-0.05			
GWQ-10	10/15/1998										
GWQ-11	8/10/1981	13.5	0.45	0.1	-0.1	-0.05	7.88	0.006	-0.02	48.1	
GWQ-11	10/27/1981		-0.05	-0.001	-0.05	-0.05		-0.005	-0.02		
GWQ-11	10/30/1981		-0.02	-0.001	-0.1	-0.02		-0.011	-0.02		
GWQ-11	11/6/1981		-0.05	-0.001	-0.05	-0.05		-0.005	-0.02		
GWQ-11	11/13/1981	17.2	-0.05	-0.0005	0.12	-0.05	3.9	0.023	-0.001	43.7	
GWQ-11	11/17/1981		-0.05	-0.001	-0.05	-0.05		-0.005	-0.02		
GWQ-11	11/23/1981		-0.05	-0.001	-0.05	-0.05		-0.005	-0.02		
GWQ-11	12/7/1981		-0.05	0.0064	-0.05	-0.05		-0.005	-0.02		
GWQ-11	12/15/1981		-0.05	-0.001	-0.05	-0.05		-0.005	-0.02		
GWQ-11	12/22/1981		0.093	-0.001	-0.05	-0.05		-0.005	-0.02		
GWQ-11	1/5/1982		-0.05	-0.001	-0.05	-0.05		-0.005	-0.02		
GWQ-11	1/18/1982										
GWQ-11	1/26/1982		-0.05	-0.001	-0.1			-0.005			
GWQ-11	2/16/1982										
GWQ-11	2/22/1982		-0.05	-0.001	-0.05			-0.005			
GWQ-11	3/12/1982										
GWQ-11	4/16/1982										
GWQ-11	4/26/1982		-0.05	-0.001	0.05			-0.005			
GWQ-11	5/17/1982		-0.05	-0.001	-0.05			-0.005			
GWQ-11	6/8/1982		-0.05	-0.001	-0.05			-0.005			
GWQ-11	6/14/1982										
GWQ-11	6/30/1982		-0.05	-0.001	-0.05			-0.005			
GWQ-11	7/26/1982										
GWQ-11	8/18/1982										

Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium
GWQ-11	9/2/1982	27.6	-0.05		-0.01		3.51	-0.005		57.5	
GWQ-11	9/14/1982										
GWQ-11	10/18/1982										
GWQ-11	11/11/1982										
GWQ-11	12/23/1982		-0.05	-0.001	-0.05			-0.005			
GWQ-11	12/28/1982										
GWQ-11	2/21/1983		-0.05	-0.001	-0.05			-0.005			
GWQ-11	5/6/1983										
GWQ-11	5/13/1983		-0.05	-0.001	-0.05			-0.005			
GWQ-11	6/2/1983										
GWQ-11	7/5/1983										
GWQ-11	8/9/1983		-0.05	-0.001	-0.05			-0.005			
GWQ-11	8/25/1983										
GWQ-11	10/20/1983										
GWQ-11	11/1/1983		-0.05	-0.001	-0.05			-0.005			
GWQ-11	12/7/1984										
GWQ-11	1/28/1984										
GWQ-11	2/13/1984										
GWQ-11	3/1/1984										
GWQ-11	3/16/1984		-0.05	-0.001	-0.05			-0.005			
GWQ-11	4/18/1984										
GWQ-11	5/22/1984										
GWQ-11	5/30/1984		-0.05	-0.001	-0.05			-0.005			
GWQ-11	6/26/1984										
GWQ-11	7/25/1984										
GWQ-11	8/27/1984										
GWQ-11	9/12/1984		-0.05	-0.001	-0.05						
GWQ-11	9/21/1984										
GWQ-11	11/19/1984										
GWQ-11	11/27/1984		-0.05	-0.001	-0.05			-0.005			
GWQ-11	12/17/1984										
GWQ-11	5/17/1985										
GWQ-11	11/13/1985										
GWQ-11	5/23/1986										
GWQ-11	10/8/1986										
GWQ-11	3/4/1987	26.1	-0.05		-0.1	-0.1	3.51		-0.1	62.1	

Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium
GWQ-11	5/25/1987										
GWQ-11	1/12/1988	31	-0.005		-0.1	-0.1	4		-0.1	63	
GWQ-11	4/4/1988										
GWQ-11	8/23/1988										
GWQ-11	2/9/1989										
GWQ-11	6/1/1989										
GWQ-11	11/30/1989										
GWQ-11	11/14/1990										
GWQ-11	2/11/1991										
GWQ-11	7/19/1991	33.6	-0.02	-0.0002			3.9	0.002	-0.02	40.1	
GWQ-11	8/29/1991										
GWQ-11	11/26/1991										
GWQ-11	3/15/1992										
GWQ-11	5/25/1992										
GWQ-11	10/8/1992										
GWQ-11	11/27/1992										
GWQ-11	12/15/1992										
GWQ-11	2/25/1993										
GWQ-11	3/30/1993	34	0.03	-0.001	-0.02	-0.01	2.9	-0.005	-0.01	68	
GWQ-11	9/28/1993										
GWQ-11	5/25/1994	34	-0.03	-0.001		-0.05	3.5	-0.005	-0.025	55	
GWQ-11	6/23/1994										
GWQ-11	7/22/1994	37	-0.03	-0.001	-0.05	-0.05	3.4	-0.005	-0.025	66	-0.005
GWQ-11	9/22/1994										

Well Name	Date	Zinc	Temp (C)	Tin	Vanadium
GWQ-10	11/13/1985				
GWQ-10	5/23/1986				
GWQ-10	10/8/1986				
GWQ-10	3/4/1987	-0.1	21.5	-0.1	-0.1
GWQ-10	5/25/1987				
GWQ-10	1/12/1988	-0.1		0.2	-0.1
GWQ-10	4/4/1988				
GWQ-10	8/23/1988				
GWQ-10	2/9/1989				
GWQ-10	6/1/1989				
GWQ-10	11/30/1989				
GWQ-10	11/14/1990				
GWQ-10	2/11/1991				
GWQ-10	7/19/1991				
GWQ-10	8/29/1991				
GWQ-10	11/26/1991				
GWQ-10	3/15/1992				
GWQ-10	5/25/1992				
GWQ-10	7/16/1992				
GWQ-10	10/8/1992				
GWQ-10	11/27/1992				
GWQ-10	12/15/1992				
GWQ-10	2/25/1993				
GWQ-10	3/30/1993	0.11			
GWQ-10	9/28/1993				
GWQ-10	5/26/1994	0.55			
GWQ-10	6/23/1994				
GWQ-10	7/23/1994	-0.05			
GWQ-10	9/22/1994				
GWQ-10	1/29/1995				
GWQ-10	3/29/1995				
GWQ-10	3/29/1995				
GWQ-10	6/27/1995				
GWQ-10	9/21/1995				
GWQ-10	1/10/1996				
GWQ-10	4/3/1996				

Well Name	Date	Zinc	Temp (C)	Tin	Vanadium
GWQ-10	6/1/1996				
GWQ-10	9/25/1996				
GWQ-10	1/15/1997				
GWQ-10	4/1/1997				
GWQ-10	7/1/1997				
GWQ-10	8/1/1997				
GWQ-10	10/1/1997				
GWQ-10	10/1/1997				
GWQ-10	1/15/1998				
GWQ-10	4/9/1998				
GWQ-10	7/13/1998				
GWQ-10	10/15/1998				
GWQ-11	8/10/1981	-0.05			
GWQ-11	10/27/1981	0.17			
GWQ-11	10/30/1981	0.23			
GWQ-11	11/6/1981	0.29			
GWQ-11	11/13/1981	0.79	21		
GWQ-11	11/17/1981	0.64			
GWQ-11	11/23/1981	0.53			
GWQ-11	12/7/1981	1.6			
GWQ-11	12/15/1981	1.1			
GWQ-11	12/22/1981	0.42			
GWQ-11	1/5/1982	0.44			
GWQ-11	1/18/1982				
GWQ-11	1/26/1982				
GWQ-11	2/16/1982				
GWQ-11	2/22/1982				
GWQ-11	3/12/1982				
GWQ-11	4/16/1982				
GWQ-11	4/26/1982				
GWQ-11	5/17/1982				
GWQ-11	6/8/1982				
GWQ-11	6/14/1982				
GWQ-11	6/30/1982				
GWQ-11	7/26/1982				
GWQ-11	8/18/1982				

Well Name	Date	Zinc	Temp (C)	Tin	Vanadium
GWQ-11	9/2/1982		23		
GWQ-11	9/14/1982				
GWQ-11	10/18/1982				
GWQ-11	11/11/1982				
GWQ-11	12/23/1982				
GWQ-11	12/28/1982				
GWQ-11	2/21/1983				
GWQ-11	5/6/1983				
GWQ-11	5/13/1983				
GWQ-11	6/2/1983				
GWQ-11	7/5/1983				
GWQ-11	8/9/1983				
GWQ-11	8/25/1983				
GWQ-11	10/20/1983				
GWQ-11	11/1/1983				
GWQ-11	12/7/1984				
GWQ-11	1/28/1984				
GWQ-11	2/13/1984				
GWQ-11	3/1/1984				
GWQ-11	3/16/1984				
GWQ-11	4/18/1984				
GWQ-11	5/22/1984				
GWQ-11	5/30/1984				
GWQ-11	6/26/1984				
GWQ-11	7/25/1984				
GWQ-11	8/27/1984				
GWQ-11	9/12/1984				
GWQ-11	9/21/1984				
GWQ-11	11/19/1984				
GWQ-11	11/27/1984				
GWQ-11	12/17/1984				
GWQ-11	5/17/1985				
GWQ-11	11/13/1985				
GWQ-11	5/23/1986				
GWQ-11	10/8/1986				
GWQ-11	3/4/1987	-0.1	15	-0.1	-0.1

Well Name	Date	Zinc	Temp (C)	Tin	Vanadium
GWQ-11	5/25/1987				
GWQ-11	1/12/1988	-0.1		0.2	-0.1
GWQ-11	4/4/1988				
GWQ-11	8/23/1988				
GWQ-11	2/9/1989				
GWQ-11	6/1/1989				
GWQ-11	11/30/1989				
GWQ-11	11/14/1990				
GWQ-11	2/11/1991				
GWQ-11	7/19/1991				
GWQ-11	8/29/1991				
GWQ-11	11/26/1991				
GWQ-11	3/15/1992				
GWQ-11	5/25/1992				
GWQ-11	10/8/1992				
GWQ-11	11/27/1992				
GWQ-11	12/15/1992				
GWQ-11	2/25/1993				
GWQ-11	3/30/1993	0.03			
GWQ-11	9/28/1993				
GWQ-11	5/25/1994	-0.05			
GWQ-11	6/23/1994				
GWQ-11	7/22/1994	-0.05			
GWQ-11	9/22/1994				

Well Name	Water Depth	USGS Quad	Well Depth		Sample ID	Date	Sampler	Notes
GWQ-11		Skute Stone Arroyo		-85	GWQ-11-85	01/29/95	Irwin	lab pH
GWQ-11		Skute Stone Arroyo		-86	GWQ-11-86	03/29/95	Irwin	lab pH
GWQ-11	17.42	Skute Stone Arroyo		-87	GWQ-11-87	06/27/95	Irwin	lab pH
GWQ-11		Skute Stone Arroyo		-88	GWQ-11-88	09/21/95	Irwin	lab pH
GWQ-11		Skute Stone Arroyo		-89	GWQ-11-89	01/10/96	Irwin	lab pH
GWQ-11		Skute Stone Arroyo		-90	GWQ-11-90	04/03/96	Irwin	lab pH
GWQ-11		Skute Stone Arroyo		-91	GWQ-11-91	06/01/96		
GWQ-11		Skute Stone Arroyo		-92	GWQ-11-92	09/25/96	Irwin	lab pH
GWQ-11		Skute Stone Arroyo		-93	GWQ-11-93	01/15/97	Irwin	lab pH
GWQ-11		Skute Stone Arroyo		-94	GWQ-11-94	04/01/97		
GWQ-11		Skute Stone Arroyo		-95	GWQ-11-95	04/01/97		
GWQ-11		Skute Stone Arroyo		-96	GWQ-11-96	07/01/97		
GWQ-11		Skute Stone Arroyo		-97	GWQ-11-97	08/01/97		
GWQ-11		Skute Stone Arroyo		-98	GWQ-11-98	10/01/97		
GWQ-11	18.5	Skute Stone Arroyo		-99	GWQ-11-99	01/15/98	Irwin	
GWQ-11	18.5	Skute Stone Arroyo		-100	GWQ-11-100	04/09/98	Irwin	
GWQ-11	18.75	Skute Stone Arroyo		-101	GWQ-11-101	07/13/98	Irwin	
GWQ-12	100.33	Skute Stone Arroyo		-1	GWQ-12-1	05/17/82	QMC	
GWQ-12	100.33	Skute Stone Arroyo		-2	GWQ-12-2	06/14/82	QMC	
GWQ-12	100.25	Skute Stone Arroyo		-3	GWQ-12-3	07/26/82	QMC	
GWQ-12	100.5	Skute Stone Arroyo		-4	GWQ-12-4	08/18/82	QMC	
GWQ-12	100.5	Skute Stone Arroyo		-5	GWQ-12-5	09/14/82	QMC	
GWQ-12	100.6	Skute Stone Arroyo		-6	GWQ-12-6	10/18/82	QMC	
GWQ-12	100.6	Skute Stone Arroyo		-7	GWQ-12-7	11/11/82	QMC	
GWQ-12	100.9	Skute Stone Arroyo		-8	GWQ-12-8	12/28/82	QMC	
GWQ-12		Skute Stone Arroyo		-9	GWQ-12-9	02/21/83	QMC	
GWQ-12	101.2	Skute Stone Arroyo		-10	GWQ-12-10	05/06/83	QMC	
GWQ-12		Skute Stone Arroyo		-11	GWQ-12-11	05/13/83	QMC	
GWQ-12	101.4	Skute Stone Arroyo		-12	GWQ-12-12	06/02/83	QMC	
GWQ-12	101.5	Skute Stone Arroyo		-13	GWQ-12-13	07/05/83	QMC	
GWQ-12		Skute Stone Arroyo		-14	GWQ-12-14	08/09/83	QMC	
GWQ-12	101.6	Skute Stone Arroyo		-15	GWQ-12-15	08/25/83	QMC	
GWQ-12	101.7	Skute Stone Arroyo		-16	GWQ-12-16	10/20/83	QMC	
GWQ-12		Skute Stone Arroyo		-17	GWQ-12-17	11/01/83	QMC	
GWQ-12	101.7	Skute Stone Arroyo		-18	GWQ-12-18	12/07/83	QMC	
GWQ-12	101.7	Skute Stone Arroyo		-19	GWQ-12-19	01/28/84	QMC	

Well Name	Water Depth	USGS Quad	Well Depth		Sample ID	Date	Sampler	Notes
GWQ-12	101.9	Skute Stone Arroyo		-20	GWQ-12-20	02/13/84	QMC	
GWQ-12	101.7	Skute Stone Arroyo		-21	GWQ-12-21	03/01/84	QMC	
GWQ-12		Skute Stone Arroyo		-22	GWQ-12-22	03/16/84	CFP	
GWQ-12	101.7	Skute Stone Arroyo		-23	GWQ-12-23	04/18/84	CFP	
GWQ-12	101.8	Skute Stone Arroyo		-24	GWQ-12-24	05/22/84	CFP	
GWQ-12		Skute Stone Arroyo		-25	GWQ-12-25	05/30/84	CFP	
GWQ-12	101.9	Skute Stone Arroyo		-26	GWQ-12-26	06/26/84	CFP	
GWQ-12	101.9	Skute Stone Arroyo		-27	GWQ-12-27	07/25/84	CFP	
GWQ-12	101.8	Skute Stone Arroyo		-28	GWQ-12-28	08/27/84	CFP	
GWQ-12		Skute Stone Arroyo		-29	GWQ-12-29	09/12/84	CFP	
GWQ-12	101.7	Skute Stone Arroyo		-30	GWQ-12-30	09/21/84	CFP	
GWQ-12	101.7	Skute Stone Arroyo		-31	GWQ-12-31	11/19/84	CFP	
GWQ-12		Skute Stone Arroyo		-32	GWQ-12-32	11/27/84	CFP	
GWQ-12	101.6	Skute Stone Arroyo		-33	GWQ-12-33	12/17/84	CFP	
GWQ-12	101.7	Skute Stone Arroyo		-34	GWQ-12-34	05/27/85	CFP	
GWQ-12	100.8	Skute Stone Arroyo		-35	GWQ-12-35	11/13/85	CFP	
GWQ-12	99.3	Skute Stone Arroyo		-36	GWQ-12-36	05/23/86	CFP	
GWQ-12	99	Skute Stone Arroyo		-37	GWQ-12-37	10/08/86	CFP	
GWQ-12		Skute Stone Arroyo		-38	GWQ-12-38	07/21/94	SRK	
GWQ-12		Skute Stone Arroyo		-39	GWQ-12-39	04/01/97		
GWQ-2		Skute Stone Arroyo		-1	GWQ-2-1	06/15/81	SHB	
GWQ-2		Skute Stone Arroyo		-2	GWQ-2-2	06/25/81	SHB	
GWQ-3		Hillsboro		-1	GWQ-3-1	03/27/81		
GWQ-3	8.6	Hillsboro		-2	GWQ-3-2	06/06/81	SHB	
GWQ-3		Hillsboro		-3	GWQ-3-3	06/15/81	SHB	
GWQ-3		Hillsboro		-4	GWQ-3-4	06/15/81	SHB	
GWQ-3		Hillsboro		-5	GWQ-3-5	02/25/82	QMC	
GWQ-3		Hillsboro		-6	GWQ-3-6	05/12/82	QMC	
GWQ-3		Hillsboro		-7	GWQ-3-7	06/30/82	QMC	
GWQ-3		Hillsboro		-8	GWQ-3-8	12/23/82	QMC	
GWQ-3	10.25	Hillsboro		-9	GWQ-3-9	02/21/83	QMC	
GWQ-3		Hillsboro		-10	GWQ-3-10	05/13/83	QMC	
GWQ-3		Hillsboro		-11	GWQ-3-11	08/09/83	QMC	
GWQ-3		Hillsboro		-12	GWQ-3-12	11/01/83	QMC	
GWQ-3		Hillsboro		-13	GWQ-3-13	03/16/84	QMC	
GWQ-3	35	Hillsboro		-14	GWQ-3-14	06/10/81	SHB	

Well Name	Water Depth	USGS Quad	Well Depth		Sample ID	Date	Sampler	Notes
GWQ-4		Hillsboro		-1	GWQ-4-1	06/15/81	SHB	Windmill
GWQ-4		Hillsboro		-2	GWQ-4-2	06/15/81	SHB	Windmill
GWQ-4	86.39	Hillsboro		-3	GWQ-4-3	11/06/81		
GWQ-4		Hillsboro		-4	GWQ-4-4	04/01/93	JWS	Windmill
GWQ-4		Hillsboro		-5	GWQ-4-5	05/26/94	SRK	Windmill
GWQ-4	10.45	Hillsboro		-6	GWQ-4-6	06/10/81	SHB	
GWQ-5		Hillsboro		-1	GWQ-5-1	06/15/81	SHB	
GWQ-5		Hillsboro		-2	GWQ-5-2	06/15/81	SHB	
GWQ-5	25.45	Hillsboro		-3	GWQ-5-3	06/09/81	SHB	
GWQ-6		Hillsboro		-4	GWQ-6-4	06/15/81	SHB	
GWQ-6		Hillsboro		-5	GWQ-6-5	06/15/81	SHB	
GWQ-6		Hillsboro		-6	GWQ-6-6	02/25/82	QMC	
GWQ-6		Hillsboro		-7	GWQ-6-7	04/01/93	JWS	
GWQ-6	23.26	Hillsboro		-8	GWQ-6-8		SHB	
GWQ-6		Hillsboro		-9	GWQ-6-9	01/20/81	SHB	QMC-1,CI,N
GWQ-7				-1	GWQ-7-1	02/02/81		
GWQ-7				-2	GWQ-7-2	02/02/81	SHB	QMC-1,SHE
GWQ-7				-3	GWQ-7-3	03/27/81		
GWQ-7				-4	GWQ-7-4	03/27/81	SHB	QMC-1 in S
GWQ-7				-5	GWQ-7-5	04/06/81		
GWQ-7	77			-6	GWQ-7-6	06/09/81	SHB	
GWQ-7				-7	GWQ-7-7	06/15/81	SHB	
GWQ-7				-8	GWQ-7-8	06/15/81	SHB	
GWQ-7				-9	GWQ-7-9	08/07/81		
GWQ-7				-10	GWQ-7-10	08/10/81		
GWQ-7				-11	GWQ-7-11	10/23/81	QMC	
GWQ-7				-12	GWQ-7-12	10/23/81	QMC	
GWQ-7				-13	GWQ-7-13	11/06/81	QMC	
GWQ-7				-14	GWQ-7-14	02/25/82	QMC	
GWQ-7				-15	GWQ-7-15	12/28/82	QMC	
GWQ-7				-16	GWQ-7-16	02/21/83	QMC	
GWQ-7				-17	GWQ-7-17	03/16/83	QMC	
GWQ-7				-18	GWQ-7-18	05/13/83	QMC	
GWQ-7				-19	GWQ-7-19	08/09/83	QMC	
GWQ-7				-20	GWQ-7-20	11/01/83	QMC	
GWQ-7				-21	GWQ-7-21	03/16/84	CFP	

Well Name	Water Depth	USGS Quad	Well Depth		Sample ID	Date	Sampler	Notes
GWQ-7				-22	GWQ-7-22	05/30/84	CFP	
GWQ-7				-23	GWQ-7-23	09/12/84	CFP	
GWQ-7				-24	GWQ-7-24	11/27/84	CFP	
GWQ-7				-25	GWQ-7-25	05/17/85	CFP	
GWQ-7				-26	GWQ-7-26	11/13/85	CFP	
GWQ-7				-27	GWQ-7-27	05/23/86	CFP	
GWQ-7				-28	GWQ-7-28	10/08/86	CFP	
GWQ-7				-29	GWQ-7-29	03/30/89	EID	
GWQ-7				-30	GWQ-7-30	03/30/93	JWS	Electric Pu
GWQ-7	33.9			-31	GWQ-7-31	05/25/94	SRK	
GWQ-7				-32	GWQ-7-32	07/21/94	SRK	Electric Pu
GWQ-8		Skute Stone Arroyo		-1	GWQ-8-1	06/04/76	SHB	
GWQ-8		Skute Stone Arroyo		-2	GWQ-8-2	02/02/81		Windmill
GWQ-8	83.55	Skute Stone Arroyo		-3	GWQ-8-3	06/09/81	SHB	
GWQ-8		Skute Stone Arroyo		-4	GWQ-8-4	08/19/81	QMC	Windmill
GWQ-8		Skute Stone Arroyo		-5	GWQ-8-5	10/01/81		
GWQ-8		Skute Stone Arroyo		-6	GWQ-8-6	02/25/82	QMC	Windmill
GWQ-8		Skute Stone Arroyo		-7	GWQ-8-7	03/01/93		
GWQ-8		Skute Stone Arroyo		-8	GWQ-8-8	03/31/93	JWS	Windmill
GWQ-8		Skute Stone Arroyo		-9	GWQ-8-9	03/31/93	JWS	
GWQ-8		Skute Stone Arroyo		-10	GWQ-8-10	05/25/94	SRK	Windmill
GWQ-8		Skute Stone Arroyo		-11	GWQ-8-11	04/01/97	Goff	
GWQ-8		Skute Stone Arroyo		-12	GWQ-8-12	04/14/98	Goff	
GWQ-8		Skute Stone Arroyo		-13	GWQ-8-13	07/21/98	Brownfield	lab pH

Well Name	Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride	Sulfate
GWQ-11	01/29/95	32.96027	107.49667	266632	3649459	13	5183	FALSE	199.5	158.7
GWQ-11	03/29/95	32.96027	107.49667	266632	3649459	13	5183	FALSE	99.4	136.9
GWQ-11	06/27/95	32.96027	107.49667	266632	3649459	13	5183	FALSE	101.7	278.8
GWQ-11	09/21/95	32.96027	107.49667	266632	3649459	13	5183	FALSE	112.1	289.5
GWQ-11	01/10/96	32.96027	107.49667	266632	3649459	13	5183	FALSE	120.8	287.5
GWQ-11	04/03/96	32.96027	107.49667	266632	3649459	13	5183	FALSE	119.2	276.5
GWQ-11	06/01/96	32.96027	107.49667	266632	3649459	13	5183		122.3	281.4
GWQ-11	09/25/96	32.96027	107.49667	266632	3649459	13	5183	TRUE	116	229.9
GWQ-11	01/15/97	32.96027	107.49667	266632	3649459	13	5183	TRUE	127	303.9
GWQ-11	04/01/97	32.96027	107.49667	266632	3649459	13	5183	TRUE	120	690
GWQ-11	04/01/97	32.96027	107.49667	266632	3649459	13	5183	TRUE	128.1	305
GWQ-11	07/01/97	32.96027	107.49667	266632	3649459	13	5183	TRUE	129	269
GWQ-11	08/01/97	32.96027	107.49667	266632	3649459	13	5183	TRUE	4.1	
GWQ-11	10/01/97	32.96027	107.49667	266632	3649459	13	5183	TRUE	123	284
GWQ-11	01/15/98	32.96027	107.49667	266632	3649459	13	5183	TRUE	130	276
GWQ-11	04/09/98	32.96027	107.49667	266632	3649459	13	5183	TRUE	127.2	294
GWQ-11	07/13/98	32.96027	107.49667	266632	3649459	13	5183	TRUE	127.5	300
GWQ-12	05/17/82	32.95278	107.47190	268928	3648574	13	5223	FALSE		
GWQ-12	06/14/82	32.95278	107.47190	268928	3648574	13	5223	FALSE		
GWQ-12	07/26/82	32.95278	107.47190	268928	3648574	13	5223	FALSE		
GWQ-12	08/18/82	32.95278	107.47190	268928	3648574	13	5223	FALSE		
GWQ-12	09/14/82	32.95278	107.47190	268928	3648574	13	5223	FALSE		
GWQ-12	10/18/82	32.95278	107.47190	268928	3648574	13	5223	FALSE		
GWQ-12	11/11/82	32.95278	107.47190	268928	3648574	13	5223	FALSE		
GWQ-12	12/28/82	32.95278	107.47190	268928	3648574	13	5223	FALSE		
GWQ-12	02/21/83	32.95278	107.47190	268928	3648574	13	5223	TRUE	18	53
GWQ-12	05/06/83	32.95278	107.47190	268928	3648574	13	5223	FALSE		
GWQ-12	05/13/83	32.95278	107.47190	268928	3648574	13	5223	TRUE	16	37
GWQ-12	06/02/83	32.95278	107.47190	268928	3648574	13	5223	FALSE		
GWQ-12	07/05/83	32.95278	107.47190	268928	3648574	13	5223	FALSE		
GWQ-12	08/09/83	32.95278	107.47190	268928	3648574	13	5223	TRUE	22	130
GWQ-12	08/25/83	32.95278	107.47190	268928	3648574	13	5223	FALSE		
GWQ-12	10/20/83	32.95278	107.47190	268928	3648574	13	5223	FALSE		
GWQ-12	11/01/83	32.95278	107.47190	268928	3648574	13	5223	TRUE	14	38
GWQ-12	12/07/83	32.95278	107.47190	268928	3648574	13	5223	FALSE		
GWQ-12	01/28/84	32.95278	107.47190	268928	3648574	13	5223	FALSE		

Well Name	Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride	Sulfate
GWQ-12	02/13/84	32.95278	107.47190	268928	3648574	13	5223	FALSE		
GWQ-12	03/01/84	32.95278	107.47190	268928	3648574	13	5223	FALSE		
GWQ-12	03/16/84	32.95278	107.47190	268928	3648574	13	5223	TRUE	14	44
GWQ-12	04/18/84	32.95278	107.47190	268928	3648574	13	5223	FALSE		
GWQ-12	05/22/84	32.95278	107.47190	268928	3648574	13	5223	FALSE		
GWQ-12	05/30/84	32.95278	107.47190	268928	3648574	13	5223	TRUE	16	47
GWQ-12	06/26/84	32.95278	107.47190	268928	3648574	13	5223	FALSE		
GWQ-12	07/25/84	32.95278	107.47190	268928	3648574	13	5223	FALSE		
GWQ-12	08/27/84	32.95278	107.47190	268928	3648574	13	5223	FALSE		
GWQ-12	09/12/84	32.95278	107.47190	268928	3648574	13	5223	TRUE	16	38
GWQ-12	09/21/84	32.95278	107.47190	268928	3648574	13	5223	FALSE		
GWQ-12	11/19/84	32.95278	107.47190	268928	3648574	13	5223	FALSE		
GWQ-12	11/27/84	32.95278	107.47190	268928	3648574	13	5223	TRUE	14	37
GWQ-12	12/17/84	32.95278	107.47190	268928	3648574	13	5223	FALSE		
GWQ-12	05/27/85	32.95278	107.47190	268928	3648574	13	5223	FALSE	14	36
GWQ-12	11/13/85	32.95278	107.47190	268928	3648574	13	5223	FALSE	14	35
GWQ-12	05/23/86	32.95278	107.47190	268928	3648574	13	5223	FALSE	16	31
GWQ-12	10/08/86	32.95278	107.47190	268928	3648574	13	5223	FALSE	16	35
GWQ-12	07/21/94	32.95278	107.47190	268928	3648574	13	5223	TRUE	16	38
GWQ-12	04/01/97	32.95278	107.47190	268928	3648574	13	5223	TRUE	36	43
GWQ-2	06/15/81	32.97342	107.49899	266450	3650923	13	5216	TRUE	20	140
GWQ-2	06/25/81	32.97342	107.49899	266450	3650923	13	5216	TRUE	24.8	111
GWQ-3	03/27/81	32.97084	107.50472	265907	3650649	13	5250	FALSE		
GWQ-3	06/06/81	32.97084	107.50472	265907	3650649	13	5250	TRUE		
GWQ-3	06/15/81	32.97084	107.50472	265907	3650649	13	5250	TRUE	32	383
GWQ-3	06/15/81	32.97084	107.50472	265907	3650649	13	5250	TRUE	40.1	335
GWQ-3	02/25/82	32.97084	107.50472	265907	3650649	13	5250	TRUE	56	490
GWQ-3	05/12/82	32.97084	107.50472	265907	3650649	13	5250	TRUE	56	410
GWQ-3	06/30/82	32.97084	107.50472	265907	3650649	13	5250	TRUE	48	365
GWQ-3	12/23/82	32.97084	107.50472	265907	3650649	13	5250	TRUE	64	340
GWQ-3	02/21/83	32.97084	107.50472	265907	3650649	13	5250	TRUE	68	428
GWQ-3	05/13/83	32.97084	107.50472	265907	3650649	13	5250	TRUE	82	437
GWQ-3	08/09/83	32.97084	107.50472	265907	3650649	13	5250	TRUE	78	385
GWQ-3	11/01/83	32.97084	107.50472	265907	3650649	13	5250	TRUE	90	529
GWQ-3	03/16/84	32.97084	107.50472	265907	3650649	13	5250	TRUE	74	530
GWQ-3	06/10/81	32.97084	107.50472	265907	3650649	13	5250	TRUE		

Well Name	Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride	Sulfate
GWQ-4	06/15/81	32.96641	107.54305	262311	3650244	13	5539	FALSE	30	270
GWQ-4	06/15/81	32.96641	107.54305	262311	3650244	13	5539	TRUE	35.1	255
GWQ-4	11/06/81	32.96641	107.54305	262311	3650244	13	5539	FALSE	22	162
GWQ-4	04/01/93	32.96641	107.54305	262311	3650244	13	5539	FALSE	27	235
GWQ-4	05/26/94	32.96641	107.54305	262311	3650244	13	5539	FALSE	30	220
GWQ-4	06/10/81	32.96641	107.54305	262311	3650244	13	5539	TRUE		
GWQ-5	06/15/81							TRUE	42	575
GWQ-5	06/15/81							TRUE	45	477
GWQ-5	06/09/81							TRUE		
GWQ-6	06/15/81							TRUE	32.6	40.5
GWQ-6	06/15/81							TRUE	28	37
GWQ-6	02/25/82							TRUE	102	220
GWQ-6	04/01/93							FALSE	22	10
GWQ-6								TRUE		
GWQ-6	01/20/81							TRUE	200	350
GWQ-7	02/02/81	32.95646	107.49585	266698	3649035	13	5172	FALSE	20	156
GWQ-7	02/02/81	32.95646	107.49585	266698	3649035	13	5172	TRUE	20	156
GWQ-7	03/27/81	32.95646	107.49585	266698	3649035	13	5172	FALSE		
GWQ-7	03/27/81	32.95646	107.49585	266698	3649035	13	5172	TRUE		
GWQ-7	04/06/81	32.95646	107.49585	266698	3649035	13	5172	FALSE		
GWQ-7	06/09/81	32.95646	107.49585	266698	3649035	13	5172	TRUE		
GWQ-7	06/15/81	32.95646	107.49585	266698	3649035	13	5172	TRUE	20	165
GWQ-7	06/15/81	32.95646	107.49585	266698	3649035	13	5172	TRUE	24.5	110
GWQ-7	08/07/81	32.95646	107.49585	266698	3649035	13	5172	FALSE	100	150
GWQ-7	08/10/81	32.95646	107.49585	266698	3649035	13	5172	FALSE	24	162
GWQ-7	10/23/81	32.95646	107.49585	266698	3649035	13	5172	TRUE	26	160
GWQ-7	10/23/81	32.95646	107.49585	266698	3649035	13	5172	TRUE	26	162
GWQ-7	11/06/81	32.95646	107.49585	266698	3649035	13	5172	TRUE	24	158
GWQ-7	02/25/82	32.95646	107.49585	266698	3649035	13	5172	TRUE	26	162
GWQ-7	12/28/82	32.95646	107.49585	266698	3649035	13	5172	TRUE	20	40
GWQ-7	02/21/83	32.95646	107.49585	266698	3649035	13	5172	TRUE	22	47
GWQ-7	03/16/83	32.95646	107.49585	266698	3649035	13	5172	TRUE		
GWQ-7	05/13/83	32.95646	107.49585	266698	3649035	13	5172	TRUE	20	158
GWQ-7	08/09/83	32.95646	107.49585	266698	3649035	13	5172	TRUE	22	130
GWQ-7	11/01/83	32.95646	107.49585	266698	3649035	13	5172	TRUE	22	137
GWQ-7	03/16/84	32.95646	107.49585	266698	3649035	13	5172	TRUE	20	140

Well Name	Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride	Sulfate
GWQ-7	05/30/84	32.95646	107.49585	266698	3649035	13	5172	TRUE	20	154
GWQ-7	09/12/84	32.95646	107.49585	266698	3649035	13	5172	TRUE	20	128
GWQ-7	11/27/84	32.95646	107.49585	266698	3649035	13	5172	TRUE	18	144
GWQ-7	05/17/85	32.95646	107.49585	266698	3649035	13	5172	TRUE	20	144
GWQ-7	11/13/85	32.95646	107.49585	266698	3649035	13	5172	FALSE	18	137
GWQ-7	05/23/86	32.95646	107.49585	266698	3649035	13	5172	FALSE	22	142
GWQ-7	10/08/86	32.95646	107.49585	266698	3649035	13	5172	FALSE	22	116
GWQ-7	03/30/89	32.95646	107.49585	266698	3649035	13	5172	TRUE	15.9	131
GWQ-7	03/30/93	32.95646	107.49585	266698	3649035	13	5172	FALSE	21	138
GWQ-7	05/25/94	32.95646	107.49585	266698	3649035	13	5172	FALSE	20	1300
GWQ-7	07/21/94	32.95646	107.49585	266698	3649035	13	5172	TRUE	22	5
GWQ-8	06/04/76	32.96722	107.49801	266524	3650233	13	5203	TRUE	16.7	114
GWQ-8	02/02/81	32.96722	107.49801	266524	3650233	13	5203	FALSE	20	156
GWQ-8	06/09/81	32.96722	107.49801	266524	3650233	13	5203	TRUE		
GWQ-8	08/19/81	32.96722	107.49801	266524	3650233	13	5203	TRUE	24	134
GWQ-8	10/01/81	32.96722	107.49801	266524	3650233	13	5203		24	134
GWQ-8	02/25/82	32.96722	107.49801	266524	3650233	13	5203	TRUE	38	220
GWQ-8	03/01/93	32.96722	107.49801	266524	3650233	13	5203		38	283
GWQ-8	03/31/93	32.96722	107.49801	266524	3650233	13	5203	FALSE	38	283
GWQ-8	03/31/93	32.96722	107.49801	266524	3650233	13	5203	TRUE	22	260
GWQ-8	05/25/94	32.96722	107.49801	266524	3650233	13	5203	FALSE	41	290
GWQ-8	04/01/97	32.96722	107.49801	266524	3650233	13	5203	TRUE	46.3	318
GWQ-8	04/14/98	32.96722	107.49801	266524	3650233	13	5203	TRUE	55.3	376
GWQ-8	07/21/98	32.96722	107.49801	266524	3650233	13	5203	TRUE	55.2	362

Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
GWQ-11	01/29/95	7.6	861								
GWQ-11	03/29/95	7.96	793								
GWQ-11	06/27/95	7.67	835								
GWQ-11	09/21/95	7.58	865								
GWQ-11	01/10/96	7.36	777								
GWQ-11	04/03/96	7.38	767								
GWQ-11	06/01/96	7.49	848								
GWQ-11	09/25/96	7.78	835								
GWQ-11	01/15/97	7.68	860								
GWQ-11	04/01/97		810				0.65				
GWQ-11	04/01/97		797				0.9				
GWQ-11	07/01/97	7.53	838								
GWQ-11	08/01/97	7.91	217				0.96				
GWQ-11	10/01/97	7.41	820								
GWQ-11	01/15/98	7.54	812			1310	0.84	3.73			
GWQ-11	04/09/98		817			1230	0.79	4			
GWQ-11	07/13/98		796			971	0.85	3.8			
GWQ-12	05/17/82										
GWQ-12	06/14/82										
GWQ-12	07/26/82										
GWQ-12	08/18/82										
GWQ-12	09/14/82										
GWQ-12	10/18/82										
GWQ-12	11/11/82										
GWQ-12	12/28/82										
GWQ-12	02/21/83	7.7	360				1	2.2			
GWQ-12	05/06/83										
GWQ-12	05/13/83	8.1	330				1	2.1			
GWQ-12	06/02/83										
GWQ-12	07/05/83										
GWQ-12	08/09/83	7.8	480				0.6	1.1			
GWQ-12	08/25/83										
GWQ-12	10/20/83										
GWQ-12	11/01/83	8.2	340				1.1	2.8			
GWQ-12	12/07/83										
GWQ-12	01/28/84										

Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
GWQ-12	02/13/84										
GWQ-12	03/01/84										
GWQ-12	03/16/84	8.2	320				1.1	3.8			
GWQ-12	04/18/84										
GWQ-12	05/22/84										
GWQ-12	05/30/84	8	320				1	2.5			
GWQ-12	06/26/84										
GWQ-12	07/25/84										
GWQ-12	08/27/84										
GWQ-12	09/12/84	8	330				1	2.2			
GWQ-12	09/21/84										
GWQ-12	11/19/84										
GWQ-12	11/27/84	7.8	340				1	2.3			
GWQ-12	12/17/84										
GWQ-12	05/27/85	8	370								
GWQ-12	11/13/85	7.8	310								
GWQ-12	05/23/86	7.8	330								
GWQ-12	10/08/86	7.6	310								
GWQ-12	07/21/94	7.75	358		262	537	0.99	2.1	-0.05	0.0064	-0.005
GWQ-12	04/01/97		353				1.3				
GWQ-2	06/15/81	7.3	530		242	700	0.5	5.6	-0.01		-0.01
GWQ-2	06/25/81		448		261		0.48	4.3	-0.025		-0.002
GWQ-3	03/27/81						0.6	5.5			-0.01
GWQ-3	06/06/81										
GWQ-3	06/15/81	7	890	275	327	1100	0.7	0.1	-0.01		-0.01
GWQ-3	06/15/81		868		354		0.72	0.25	-0.25		0.004
GWQ-3	02/25/82	7.9	1040				0.6	0.4			
GWQ-3	05/12/82	7.9	930				0.7	0.2			
GWQ-3	06/30/82	7.6	860				0.7	0.4			
GWQ-3	12/23/82	8.5	990				0.7	0.2			
GWQ-3	02/21/83	7.7	970				0.7	0.2			
GWQ-3	05/13/83	8	980				0.6	0.3			
GWQ-3	08/09/83	7.8	1060				0.7	-0.2			
GWQ-3	11/01/83	8	1240				0.7	0.3			
GWQ-3	03/16/84	8.2	1190				0.3	3.4			
GWQ-3	06/10/81										

Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
GWQ-4	06/15/81	7.2	770		376	1000	0.6	1.1	-0.01		-0.01
GWQ-4	06/15/81		776		370		0.68	0.53	-0.25		-0.002
GWQ-4	11/06/81	7.9	500				0.7	2	-0.01		-0.01
GWQ-4	04/01/93	7.6	702		404	1060	0.73	0.1	-0.1		-0.005
GWQ-4	05/26/94	8.08	926		316	1010	0.63	-1	-0.025	-0.005	-0.005
GWQ-4	06/10/81										
GWQ-5	06/15/81	7.3	1260	330	398	1500	1	0.6	-0.01		-0.01
GWQ-5	06/15/81		1070		431		1.03	0.37	-0.25		-0.002
GWQ-5	06/09/81										
GWQ-6	06/15/81		400		309		1.09	3.3	-0.25		-0.002
GWQ-6	06/15/81	7.3	420	245	317	600	1.2	3.8	-0.01		-0.01
GWQ-6	02/25/82	8.3	810				1.1	0.5			
GWQ-6	04/01/93	7.7	304		322	597	0.84	1.1	-0.1		-0.005
GWQ-6											
GWQ-6	01/20/81	7.2	500		341.6						
GWQ-7	02/02/81	7.9	530		278						
GWQ-7	02/02/81	7.9	530		278						
GWQ-7	03/27/81						0.6	1.4			-0.01
GWQ-7	03/27/81						0.6	1.4			-0.01
GWQ-7	04/06/81						0.59	0.9			0.003
GWQ-7	06/09/81										
GWQ-7	06/15/81	7.2	510	210	266	700	0.5	1.1	-0.01		-0.01
GWQ-7	06/15/81		496		285		0.53	0.54	-0.25		-0.002
GWQ-7	08/07/81	7.4	475		268.4						
GWQ-7	08/10/81	7.7	490		229		0.6	1.2			-0.01
GWQ-7	10/23/81		490				0.5	1.1	-0.01		-0.01
GWQ-7	10/23/81		500				0.5	1.3	-0.01		-0.01
GWQ-7	11/06/81	8.1	480				0.8	1.2	-0.01		-0.01
GWQ-7	02/25/82	8	510				0.5	0.8			
GWQ-7	12/28/82	8.1	250				0.3	-0.2			
GWQ-7	02/21/83	8.3	250				0.4	2.8			
GWQ-7	03/16/83										
GWQ-7	05/13/83	8.1	470				0.6	1.2			
GWQ-7	08/09/83	8	490				0.6	1			
GWQ-7	11/01/83	8.1	500				0.6	1.8			
GWQ-7	03/16/84	8.3	450				0.8	1			

Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
GWQ-7	05/30/84	7.7	470				0.6	0.9			
GWQ-7	09/12/84	8	500				0.6	1.4			
GWQ-7	11/27/84	7.7	490				0.6	1.4			
GWQ-7	05/17/85	7.9	500								
GWQ-7	11/13/85	7.8	450								
GWQ-7	05/23/86	7.9	490								
GWQ-7	10/08/86	7.4	460								
GWQ-7	03/30/89		492		278				-0.1		
GWQ-7	03/30/93	7.8	482		298	752	0.56	138	-0.1		-0.005
GWQ-7	05/25/94	7.26	2420		480	2630	2.1	-1	0.25	-0.005	-0.005
GWQ-7	07/21/94	7.72	224		349	660	16	-1	-0.05	-0.005	-0.005
GWQ-8	06/04/76	7.48	560		241	780	0.51	16.8			
GWQ-8	02/02/81	7.9	520		276			60			
GWQ-8	06/09/81										
GWQ-8	08/19/81	7.42	608		283		0.59	2.8	-0.25		-0.004
GWQ-8	10/01/81	7.4	608		283		0.59	2.8			
GWQ-8	02/25/82	7.6	380				1	0.3			
GWQ-8	03/01/93	7.6	764		298		0.53	5.7			
GWQ-8	03/31/93	7.6	764		298	1110	0.51	6.3	-0.1		-0.005
GWQ-8	03/31/93	7.7	290		262		0.53	5.7	-0.05		-0.005
GWQ-8	05/25/94	7.97	792		272	1060	0.5	5.3	-0.025	-0.005	-0.005
GWQ-8	04/01/97		854				0.4				
GWQ-8	04/14/98	7.36	871			1290	0.6	4.2			
GWQ-8	07/21/98		887				0.6	4.7			

Well Name	Date	Boron	Barium	Berrylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
GWQ-11	01/29/95										
GWQ-11	03/29/95										
GWQ-11	06/27/95										
GWQ-11	09/21/95										
GWQ-11	01/10/96										
GWQ-11	04/03/96										
GWQ-11	06/01/96										
GWQ-11	09/25/96										
GWQ-11	01/15/97										
GWQ-11	04/01/97								-0.025	-0.05	
GWQ-11	04/01/97								-0.005	-0.05	
GWQ-11	07/01/97										
GWQ-11	08/01/97										
GWQ-11	10/01/97										
GWQ-11	01/15/98								-0.005	-0.05	
GWQ-11	04/09/98								-0.005	-0.05	
GWQ-11	07/13/98								-0.005	0.13	
GWQ-12	05/17/82										
GWQ-12	06/14/82										
GWQ-12	07/26/82										
GWQ-12	08/18/82										
GWQ-12	09/14/82										
GWQ-12	10/18/82										
GWQ-12	11/11/82										
GWQ-12	12/28/82										
GWQ-12	02/21/83				-0.005				-0.05	-0.1	
GWQ-12	05/06/83										
GWQ-12	05/13/83				-0.005				-0.05	-0.1	
GWQ-12	06/02/83										
GWQ-12	07/05/83										
GWQ-12	08/09/83				-0.005				-0.05	-0.1	
GWQ-12	08/25/83										
GWQ-12	10/20/83										
GWQ-12	11/01/83				-0.005				-0.05	0.32	
GWQ-12	12/07/83										
GWQ-12	01/28/84										

Well Name	Date	Boron	Barium	Berrylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
GWQ-12	02/13/84										
GWQ-12	03/01/84										
GWQ-12	03/16/84				-0.005				-0.05	-0.1	
GWQ-12	04/18/84										
GWQ-12	05/22/84										
GWQ-12	05/30/84				-0.005				-0.05	-0.1	
GWQ-12	06/26/84										
GWQ-12	07/25/84										
GWQ-12	08/27/84										
GWQ-12	09/12/84				-0.005				-0.05	-0.1	
GWQ-12	09/21/84										
GWQ-12	11/19/84										
GWQ-12	11/27/84				-0.005				-0.05	-0.1	
GWQ-12	12/17/84										
GWQ-12	05/27/85										
GWQ-12	11/13/85										
GWQ-12	05/23/86										
GWQ-12	10/08/86										
GWQ-12	07/21/94	-0.1	-0.1	-0.002	-0.0005	59	-0.025	-0.05	-0.025	-0.05	-0.005
GWQ-12	04/01/97								-0.005	2.2	
GWQ-2	06/15/81	-0.1	-0.2		-0.005	102	-0.01	-0.1	-0.05	-0.1	-0.02
GWQ-2	06/25/81	0.162	-1		-0.01	98	-0.05	-0.05	-0.02	0.1	-0.05
GWQ-3	03/27/81								-0.05		-0.02
GWQ-3	06/06/81										
GWQ-3	06/15/81	-0.1	-0.2		-0.005	146	-0.01	-0.05	-0.05	-0.1	0.073
GWQ-3	06/15/81	0.108	-1		-0.01	138	-0.05	-0.05	-0.02	-0.05	-0.05
GWQ-3	02/25/82				-0.005				-0.05	-0.1	
GWQ-3	05/12/82				-0.005				-0.05	-0.1	
GWQ-3	06/30/82				-0.005				-0.05	-0.1	
GWQ-3	12/23/82				-0.005				-0.05	-0.1	
GWQ-3	02/21/83				-0.005				-0.05	-0.1	
GWQ-3	05/13/83				-0.005				-0.05	-0.1	
GWQ-3	08/09/83				-0.005				-0.05	0.11	
GWQ-3	11/01/83				-0.005				-0.05	-0.1	
GWQ-3	03/16/84				-0.005				-0.05	-0.1	
GWQ-3	06/10/81										

Well Name	Date	Boron	Barium	Berrylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
GWQ-4	06/15/81	-0.1	-0.2		-0.005	137	-0.01	-0.05	-0.05	-0.1	-0.02
GWQ-4	06/15/81	0.065	-1		-0.01	132	-0.05	-0.05	-0.02	-0.05	-0.05
GWQ-4	11/06/81	-0.1	-0.2		-0.005	72	-0.01	-0.02	-0.05	-0.1	-0.02
GWQ-4	04/01/93	0.02	1		-0.002	125	-0.02	-0.05	-0.01	0.2	-0.02
GWQ-4	05/26/94	-0.1	-0.1		-0.0005	93	-0.025	-0.05	-0.025	0.13	-0.005
GWQ-4	06/10/81										
GWQ-5	06/15/81	-0.1	-0.2		-0.005	200	-0.01	-0.05	-0.05	-0.1	-0.02
GWQ-5	06/15/81	0.054	-1		-0.01	175	-0.05	-0.05	0.02	0.07	-0.05
GWQ-5	06/09/81										
GWQ-6	06/15/81	0.135	-1		-0.01	68	-0.05	-0.05	-0.02	-0.05	-0.05
GWQ-6	06/15/81	-0.1	-0.2		-0.005	73	-0.01	-0.05	-0.05	-0.1	-0.02
GWQ-6	02/25/82				-0.005				-0.05	-0.1	
GWQ-6	04/01/93	0.09	0.6		-0.002	49	-0.02	-0.05	0.03	5.05	-0.02
GWQ-6											
GWQ-6	01/20/81					96				0.03	
GWQ-7	02/02/81					74				3.8	
GWQ-7	02/02/81					74				3.8	
GWQ-7	03/27/81								-0.05		-0.02
GWQ-7	03/27/81								-0.05		-0.02
GWQ-7	04/06/81								-0.05		-0.01
GWQ-7	06/09/81										
GWQ-7	06/15/81	-0.1	-0.2		-0.005	86	-0.01	-0.05	-0.05	-0.1	-0.02
GWQ-7	06/15/81	0.065	-1		-0.01	88	-0.05	-0.05	-0.02	-0.05	-0.05
GWQ-7	08/07/81					80				0.02	
GWQ-7	08/10/81					68			-0.05	1.7	-0.02
GWQ-7	10/23/81	-0.1	-0.02		-0.005	71	-0.01	-0.02	-0.05	0.14	-0.02
GWQ-7	10/23/81	-0.1	-0.2		-0.005	70	-0.01	-0.02	-0.05	-0.1	-0.02
GWQ-7	11/06/81	-0.1	-0.2		-0.005	71	-0.01	-0.02	-0.05	-0.1	-0.02
GWQ-7	02/25/82				-0.005				-0.05	0.17	
GWQ-7	12/28/82				-0.005				-0.05	0.26	
GWQ-7	02/21/83				-0.005				-0.05	-0.1	
GWQ-7	03/16/83										
GWQ-7	05/13/83				-0.005				-0.05	-0.1	
GWQ-7	08/09/83				-0.005				-0.05	-0.1	
GWQ-7	11/01/83				-0.005				-0.05	-0.1	
GWQ-7	03/16/84				-0.005				-0.05	-0.1	

Well Name	Date	Boron	Barium	Berrylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
GWQ-7	05/30/84				-0.005				-0.05	-0.1	
GWQ-7	09/12/84				-0.005				-0.05	-0.1	
GWQ-7	11/27/84				-0.005				-0.05	-0.1	
GWQ-7	05/17/85										
GWQ-7	11/13/85										
GWQ-7	05/23/86										
GWQ-7	10/08/86										
GWQ-7	03/30/89	-0.1	-0.1	-0.1	-0.1	80	-0.1	-0.05	-0.1	-0.1	-0.1
GWQ-7	03/30/93	0.04	-0.5		-0.002	68	-0.02	-0.05	-0.01	-0.05	-0.02
GWQ-7	05/25/94		-0.1		0.00058	490	-0.025		0.11	0.72	-0.005
GWQ-7	07/21/94	-0.1	-0.1	-0.002	-0.0005	14	-0.025	-0.05	-0.025	1.2	-0.005
GWQ-8	06/04/76	-0.1				122				0.002	
GWQ-8	02/02/81					74				1.7	
GWQ-8	06/09/81										
GWQ-8	08/19/81	0.076	-1		-0.01	72.9	-0.05	-0.05	-0.05	-0.1	-0.05
GWQ-8	10/01/81					73					
GWQ-8	02/25/82				-0.005				-0.05	-0.1	
GWQ-8	03/01/93					132					
GWQ-8	03/31/93	0.03	-0.05		-0.002	132	-0.02	-0.05	0.01	-0.05	-0.02
GWQ-8	03/31/93	-0.1	0.042		-0.0005	149	-0.01	-0.01	-0.01	0.038	-0.002
GWQ-8	05/25/94	-0.1	-0.1		-0.0005	120	-0.025	-0.05	-0.025	0.24	-0.005
GWQ-8	04/01/97								-0.005	0.2	
GWQ-8	04/14/98					168.5			-0.005	-0.05	
GWQ-8	07/21/98					162			-0.005	0.23	

Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium
GWQ-11	01/29/95										
GWQ-11	03/29/95										
GWQ-11	06/27/95										
GWQ-11	09/21/95										
GWQ-11	01/10/96										
GWQ-11	04/03/96										
GWQ-11	06/01/96										
GWQ-11	09/25/96										
GWQ-11	01/15/97										
GWQ-11	04/01/97		-0.025								
GWQ-11	04/01/97		-0.02								
GWQ-11	07/01/97										
GWQ-11	08/01/97										
GWQ-11	10/01/97										
GWQ-11	01/15/98	37.3		0.0004	-0.05			-0.05			
GWQ-11	04/09/98		-0.02	-0.0002	-0.05			-0.05			
GWQ-11	07/13/98		0.05	0.0004	-0.05			-0.05			
GWQ-12	05/17/82										
GWQ-12	06/14/82										
GWQ-12	07/26/82										
GWQ-12	08/18/82										
GWQ-12	09/14/82										
GWQ-12	10/18/82										
GWQ-12	11/11/82										
GWQ-12	12/28/82										
GWQ-12	02/21/83		-0.05		-0.05			-0.005			
GWQ-12	05/06/83										
GWQ-12	05/13/83		-0.05	-0.001	-0.05			-0.005			
GWQ-12	06/02/83										
GWQ-12	07/05/83										
GWQ-12	08/09/83		-0.05	-0.001	-0.05			-0.005			
GWQ-12	08/25/83										
GWQ-12	10/20/83										
GWQ-12	11/01/83		-0.05	-0.001	-0.05			-0.005			
GWQ-12	12/07/83										
GWQ-12	01/28/84										

Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium
GWQ-12	02/13/84										
GWQ-12	03/01/84										
GWQ-12	03/16/84		-0.05	-0.001	-0.05			-0.005			
GWQ-12	04/18/84										
GWQ-12	05/22/84										
GWQ-12	05/30/84		-0.05	-0.001	-0.05			-0.005			
GWQ-12	06/26/84										
GWQ-12	07/25/84										
GWQ-12	08/27/84										
GWQ-12	09/12/84		-0.05	-0.001	-0.05			-0.005			
GWQ-12	09/21/84										
GWQ-12	11/19/84										
GWQ-12	11/27/84		-0.05	-0.001	-0.05			-0.005			
GWQ-12	12/17/84										
GWQ-12	05/27/85										
GWQ-12	11/13/85										
GWQ-12	05/23/86										
GWQ-12	10/08/86										
GWQ-12	07/21/94	19	-0.03	-0.001	-0.05	-0.05	3.2	-0.005	-0.025	29	-0.005
GWQ-12	04/01/97		0.14	-0.002							
GWQ-2	06/15/81	16	-0.05	0.0013	-0.05	-0.05	2.3	-0.005	-0.02	42	
GWQ-2	06/25/81	11.4	-0.02	-0.001	-0.1	-0.05	2.96	0.0022	-0.02	41.2	
GWQ-3	03/27/81										
GWQ-3	06/06/81										
GWQ-3	06/15/81	33	-0.05	-0.001	-0.05	-0.05	1.7	-0.005	-0.02	95	
GWQ-3	06/15/81	25.8	0.02	-0.001	-0.1	-0.05	2.66	0.0037	-0.02	86	
GWQ-3	02/25/82		-0.05	-0.001	-0.05			-0.005			
GWQ-3	05/12/82		-0.05	-0.001	-0.05			-0.005			
GWQ-3	06/30/82		-0.05	-0.001	-0.05			-0.005			
GWQ-3	12/23/82		-0.05	-0.001	-0.05			-0.005			
GWQ-3	02/21/83		-0.05	-0.001	-0.05			-0.005			
GWQ-3	05/13/83		-0.05	-0.001	0.11			-0.005			
GWQ-3	08/09/83		-0.05	-0.001	-0.05			-0.005			
GWQ-3	11/01/83		-0.05	-0.001	-0.05			-0.005			
GWQ-3	03/16/84		-0.05	-0.001	-0.05			-0.005			
GWQ-3	06/10/81										

Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium
GWQ-4	06/15/81	27	-0.05	-0.001	-0.05	-0.05	1.2	-0.005	-0.02	91	
GWQ-4	06/15/81	18.6	-0.02	-0.001	-0.1	-0.05	2.03	0.0025	-0.02	73.8	
GWQ-4	11/06/81		-0.05	-0.001	-0.05	-0.05		-0.005	-0.02		
GWQ-4	04/01/93	23	-0.02	-0.001	-0.02	-0.01	1	-0.005	-0.01	86	
GWQ-4	05/26/94	22	-0.03	-0.001	-0.05	-0.05	1.8	-0.005	-0.025	74	
GWQ-4	06/10/81										
GWQ-5	06/15/81	49	-0.05	-0.001	-0.05	-0.05	1.1	-0.005	-0.02	173	
GWQ-5	06/15/81	35.8	-0.02	-0.001	-0.1	-0.05	2.26	0.0062	-0.02	126	
GWQ-5	06/09/81										
GWQ-6	06/15/81	11.1	0.076	0.00235	-0.1	-0.05	2.4	0.0046	-0.02	57	
GWQ-6	06/15/81	16	0.11	-0.001	-0.05	-0.05	1.6	-0.005	-0.02	61	
GWQ-6	02/25/82		-0.05	-0.001	-0.05			-0.005			
GWQ-6	04/01/93	14	0.36	-0.001	-0.02	-0.01	3.1	-0.005	-0.01	53	
GWQ-6											
GWQ-6	01/20/81	14.6								781	
GWQ-7	02/02/81	27								51	
GWQ-7	02/02/81	27								51	
GWQ-7	03/27/81										
GWQ-7	03/27/81										
GWQ-7	04/06/81										
GWQ-7	06/09/81										
GWQ-7	06/15/81	24	-0.05	-0.001	-0.05	-0.05	1.6	-0.005	-0.02	61	
GWQ-7	06/15/81	15.7	-0.02	-0.001	-0.1	-0.05	2.33	-0.0005	-0.02	47.9	
GWQ-7	08/07/81	19.4								138.9	
GWQ-7	08/10/81	21								48	
GWQ-7	10/23/81		-0.05	-0.001	-0.05	-0.05		-0.005	-0.02		
GWQ-7	10/23/81		-0.05	-0.001	-0.05	-0.05		-0.005	-0.02		
GWQ-7	11/06/81		-0.05	-0.001	-0.05	-0.05		-0.005	-0.02		
GWQ-7	02/25/82		-0.05	-0.001	-0.05			-0.005			
GWQ-7	12/28/82		0.16	-0.001	-0.05			-0.005			
GWQ-7	02/21/83		0.27	-0.001	-0.05			-0.005			
GWQ-7	03/16/83		-0.05								
GWQ-7	05/13/83		-0.05	-0.001	-0.05			-0.005			
GWQ-7	08/09/83		-0.05	-0.001	-0.05			-0.005			
GWQ-7	11/01/83		-0.05	-0.001	-0.05			-0.005			
GWQ-7	03/16/84		-0.05	-0.001	0.08			-0.005			

Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium
GWQ-7	05/30/84		-0.05	-0.001	-0.05			-0.005			
GWQ-7	09/12/84		-0.05	-0.001	-0.05			-0.005			
GWQ-7	11/27/84		-0.05	-0.001	-0.05			-0.005			
GWQ-7	05/17/85										
GWQ-7	11/13/85										
GWQ-7	05/23/86										
GWQ-7	10/08/86										
GWQ-7	03/30/89	22	-0.05		-0.1	-0.1	2		-0.1	47	
GWQ-7	03/30/93	31	-0.02	-0.001	-0.02	-0.01	1.6	-0.005	-0.01	52	
GWQ-7	05/25/94	51	1.1	-0.001		-0.05	14	-0.005	-0.025	80	
GWQ-7	07/21/94	8.2	0.21	-0.001	-0.05	-0.05	13	-0.005	-0.025	47	-0.005
GWQ-8	06/04/76	15.5	0.003				1.72			76.1	
GWQ-8	02/02/81	20									
GWQ-8	06/09/81										
GWQ-8	08/19/81	12.1	0.047	-1	-0.1	-0.05	4.2	0.004	-0.02	84.1	
GWQ-8	10/01/81	12					4.2			84	
GWQ-8	02/25/82		0.17	-0.001	-0.05			-0.005			
GWQ-8	03/01/93	18					3.5			94	
GWQ-8	03/31/93	18	-0.02	-0.001	-0.02	-0.01	1.8	-0.005	-0.01	94	
GWQ-8	03/31/93	21	-0.01	-0.0002	-0.02	-0.02	3.5	-0.005	-0.01	94	
GWQ-8	05/25/94	20	-0.03	-0.001	-0.05	-0.05	2.4	-0.005	-0.025	76	
GWQ-8	04/01/97		-0.02	-0.002				0.056			
GWQ-8	04/14/98	25.2	-0.02	-0.0002	-0.05		1.7	-0.05		91.2	
GWQ-8	07/21/98	23.9	-0.02	0.0003	-0.05		2.3	-0.05		85.3	

Well Name	Date	Zinc	Temp (C)	Tin	Vanadium
GWQ-11	01/29/95				
GWQ-11	03/29/95				
GWQ-11	06/27/95				
GWQ-11	09/21/95				
GWQ-11	01/10/96				
GWQ-11	04/03/96				
GWQ-11	06/01/96				
GWQ-11	09/25/96				
GWQ-11	01/15/97				
GWQ-11	04/01/97				
GWQ-11	04/01/97				
GWQ-11	07/01/97				
GWQ-11	08/01/97				
GWQ-11	10/01/97				
GWQ-11	01/15/98				
GWQ-11	04/09/98				
GWQ-11	07/13/98				
GWQ-12	05/17/82				
GWQ-12	06/14/82				
GWQ-12	07/26/82				
GWQ-12	08/18/82				
GWQ-12	09/14/82				
GWQ-12	10/18/82				
GWQ-12	11/11/82				
GWQ-12	12/28/82				
GWQ-12	02/21/83				
GWQ-12	05/06/83				
GWQ-12	05/13/83				
GWQ-12	06/02/83				
GWQ-12	07/05/83				
GWQ-12	08/09/83				
GWQ-12	08/25/83				
GWQ-12	10/20/83				
GWQ-12	11/01/83				
GWQ-12	12/07/83				
GWQ-12	01/28/84				

Well Name	Date	Zinc	Temp (C)	Tin	Vanadium
GWQ-12	02/13/84				
GWQ-12	03/01/84				
GWQ-12	03/16/84				
GWQ-12	04/18/84				
GWQ-12	05/22/84				
GWQ-12	05/30/84				
GWQ-12	06/26/84				
GWQ-12	07/25/84				
GWQ-12	08/27/84				
GWQ-12	09/12/84				
GWQ-12	09/21/84				
GWQ-12	11/19/84				
GWQ-12	11/27/84				
GWQ-12	12/17/84				
GWQ-12	05/27/85				
GWQ-12	11/13/85				
GWQ-12	05/23/86				
GWQ-12	10/08/86				
GWQ-12	07/21/94	-0.05			
GWQ-12	04/01/97				
GWQ-2	06/15/81	0.16	21		
GWQ-2	06/25/81	0.11			
GWQ-3	03/27/81	0.016			
GWQ-3	06/06/81				
GWQ-3	06/15/81	0.32	19		
GWQ-3	06/15/81	0.061			
GWQ-3	02/25/82				
GWQ-3	05/12/82				
GWQ-3	06/30/82				
GWQ-3	12/23/82				
GWQ-3	02/21/83				
GWQ-3	05/13/83				
GWQ-3	08/09/83				
GWQ-3	11/01/83				
GWQ-3	03/16/84				
GWQ-3	06/10/81				

Well Name	Date	Zinc	Temp (C)	Tin	Vanadium
GWQ-4	06/15/81	0.056	20		
GWQ-4	06/15/81	-0.025			
GWQ-4	11/06/81	0.28			
GWQ-4	04/01/93	0.38			
GWQ-4	05/26/94	0.56			
GWQ-4	06/10/81				
GWQ-5	06/15/81	0.064	20		
GWQ-5	06/15/81	-0.025			
GWQ-5	06/09/81				
GWQ-6	06/15/81	-0.025			
GWQ-6	06/15/81	-0.05	20.5		
GWQ-6	02/25/82				
GWQ-6	04/01/93	0.03			
GWQ-6					
GWQ-6	01/20/81				
GWQ-7	02/02/81				
GWQ-7	02/02/81				
GWQ-7	03/27/81	0.28			
GWQ-7	03/27/81	0.28			
GWQ-7	04/06/81	0.24			
GWQ-7	06/09/81				
GWQ-7	06/15/81	0.38	22		
GWQ-7	06/15/81	0.278			
GWQ-7	08/07/81				
GWQ-7	08/10/81	0.63			
GWQ-7	10/23/81	0.41			
GWQ-7	10/23/81	0.16			
GWQ-7	11/06/81	0.19			
GWQ-7	02/25/82				
GWQ-7	12/28/82				
GWQ-7	02/21/83				
GWQ-7	03/16/83				
GWQ-7	05/13/83				
GWQ-7	08/09/83				
GWQ-7	11/01/83				
GWQ-7	03/16/84				

Well Name	Date	Zinc	Temp (C)	Tin	Vanadium
GWQ-7	05/30/84				
GWQ-7	09/12/84				
GWQ-7	11/27/84				
GWQ-7	05/17/85				
GWQ-7	11/13/85				
GWQ-7	05/23/86				
GWQ-7	10/08/86				
GWQ-7	03/30/89	0.1		0.2	-0.1
GWQ-7	03/30/93	0.1			
GWQ-7	05/25/94	-0.05			
GWQ-7	07/21/94	-0.05			
GWQ-8	06/04/76				
GWQ-8	02/02/81				
GWQ-8	06/09/81				
GWQ-8	08/19/81	0.69			
GWQ-8	10/01/81				
GWQ-8	02/25/82				
GWQ-8	03/01/93				
GWQ-8	03/31/93	0.09			
GWQ-8	03/31/93	0.075			
GWQ-8	05/25/94	-0.05			
GWQ-8	04/01/97				
GWQ-8	04/14/98				
GWQ-8	07/21/98				

Well Name	Water Depth	USGS Quad	Well Depth		Sample ID	Sample Date	Sampler	Notes
GWQ-9				-1	GWQ-9-1	6/4/1976	SHB	
GWQ-9				-2	GWQ-9-2	1/20/1981	SHB	QMC-2,Cl,Na incon
GWQ-9				-3	GWQ-9-3	2/2/1981		
GWQ-9				-4	GWQ-9-4	2/2/1981	SHB	Qmc-2 in SHB (198
GWQ-9				-5	GWQ-9-5	3/27/1981		
GWQ-9				-6	GWQ-9-6	3/27/1981	SHB	Qmc-2 in SHB (198
GWQ-9				-7	GWQ-9-7	4/6/1981		
GWQ-9	197			-8	GWQ-9-8	6/10/1981	SHB	
GWQ-9				-9	GWQ-9-9	8/7/1981		
GWQ-9				-10	GWQ-9-10	8/10/1981		
GWQ-9				-11	GWQ-9-11	10/8/1981	QMC	
GWQ-9				-12	GWQ-9-12	2/25/1982	QMC	
GWQ-9				-13	GWQ-9-13	12/28/1982	QMC	
GWQ-9				-14	GWQ-9-14	2/21/1983	QMC	
GWQ-9				-15	GWQ-9-15	5/13/1983	QMC	
GWQ-9				-16	GWQ-9-16	8/9/1983	QMC	
GWQ-9				-17	GWQ-9-17	11/1/1983	QMC	
GWQ-9				-18	GWQ-9-18	3/16/1984	CFP	
GWQ-9				-19	GWQ-9-19	5/30/1984	CFP	
GWQ-9				-20	GWQ-9-20	9/12/1984	CFP	labeled "GWQ-9a"
GWQ-9				-21	GWQ-9-21	11/27/1984	CFP	
GWQ-9				-22	GWQ-9-22	5/17/1985	CFP	
GWQ-9	20.9			-23	GWQ-9-23	6/27/1985	QMC	
GWQ-9	20			-24	GWQ-9-24	11/13/1985	CFP	
GWQ-9	17.2			-25	GWQ-9-25	5/23/1985	CFP	
GWQ-9	17.4			-26	GWQ-9-26	10/8/1986	CFP	
GWQ-9				-27	GWQ-9-27	8/1/1997		
GWQ-94-13				-1	GWQ-94-13-1	11/15/1994	SRK	
GWQ-94-13				-2	GWQ-94-13-2	7/1/1996	ABC	
GWQ-94-13				-3	GWQ-94-13-3	8/1/1997		
GWQ-94-14				-1	GWQ-94-14-1	11/14/1994	SRK	
GWQ-94-14				-2	GWQ-94-14-2	6/30/1996	ABC	
GWQ-94-14				-3	GWQ-94-14-3	8/1/1997		
GWQ-94-15				-1	GWQ-94-15-1	11/14/1994	SRK	
GWQ-94-15				-2	GWQ-94-15-2	7/1/1996	ABC	
GWQ-94-15				-3	GWQ-94-15-3	8/1/1997		

Well Name	Water Depth	USGS Quad	Well Depth		Sample ID	Sample Date	Sampler	Notes
GWQ-94-15				-4	GWQ-94-15-4	10/1/1997		
GWQ-94-15	0.54			-5	GWQ-94-15-5	1/24/1998	Goff	
GWQ-94-15	0.49			-6	GWQ-94-15-6	2/1/1998		
GWQ-94-15	0.43			-7	GWQ-94-15-7	3/1/1998		
GWQ-94-15	0.6			-8	GWQ-94-15-8	4/14/1998	Goff	
GWQ-94-15	0.61			-9	GWQ-94-15-9	5/1/1998		
GWQ-94-15	0.83			-10	GWQ-94-15-1	6/1/1998		
GWQ-94-15	1.03			-11	GWQ-94-15-1	7/21/1998	Brownfield	
GWQ-94-15	1.03			-12	GWQ-94-15-1	8/1/1998		
GWQ-94-15	1.1			-13	GWQ-94-15-1	9/1/1998		
GWQ-94-15		Skute Stone Arroyo		-14	GWQ-94-15-1	10/15/1998	Goff	
GWQ-94-16		Skute Stone Arroyo		-1	GWQ-94-16-1	11/13/1994	SRK	
GWQ-94-16		Skute Stone Arroyo		-2	GWQ-94-16-2	7/1/1996	ABC	
GWQ-94-17		Skute Stone Arroyo		-1	GWQ-94-17-1	11/15/1994	SRK	
GWQ-94-17		Skute Stone Arroyo		-2	GWQ-94-17-2	6/30/1996	ABC	
GWQ-94-17		Skute Stone Arroyo		-3	GWQ-94-17-3	5/1/1997		
GWQ-94-17	6.11	Skute Stone Arroyo		-4	GWQ-94-17-4	1/24/1998	Goff	
GWQ-94-17	6.1	Skute Stone Arroyo		-5	GWQ-94-17-5	2/1/1998		
GWQ-94-17	6.8	Skute Stone Arroyo		-6	GWQ-94-17-6	3/1/1998		
GWQ-94-17	6.13	Skute Stone Arroyo		-7	GWQ-94-17-7	4/14/1998	Goff	
GWQ-94-17	6.22	Skute Stone Arroyo		-8	GWQ-94-17-8	5/1/1998		
GWQ-94-17	6.34	Skute Stone Arroyo		-9	GWQ-94-17-9	5/1/1998		
GWQ-94-17	6.55	Skute Stone Arroyo		-10	GWQ-94-17-1	7/21/1998	Brownfield	
GWQ-94-17	6.55	Skute Stone Arroyo		-11	GWQ-94-17-1	8/1/1998		
GWQ-94-17	6.59	Skute Stone Arroyo		-12	GWQ-94-17-1	9/1/1998		
GWQ-94-20		Skute Stone Arroyo		-1	GWQ-94-20-1	11/15/1994	SRK	
GWQ-94-20		Skute Stone Arroyo		-2	GWQ-94-20-2	6/30/1996	ABC	
GWQ-94-20		Skute Stone Arroyo		-3	GWQ-94-20-3	8/1/1997		
GWQ-94-21A		Skute Stone Arroyo		-1	GWQ-94-21A-	11/13/1994	SRK	
GWQ-94-21A		Skute Stone Arroyo		-2	GWQ-94-21A-	6/30/1996	ABC	
GWQ-94-21A	2.41	Skute Stone Arroyo		-3	GWQ-94-21A-	1/24/1998	Goff	
GWQ-94-21A	2.1	Skute Stone Arroyo		-4	GWQ-94-21A-	2/1/1998		
GWQ-94-21A	2.01	Skute Stone Arroyo		-5	GWQ-94-21A-	3/1/1998		
GWQ-94-21A	2.11	Skute Stone Arroyo		-6	GWQ-94-21A-	4/14/1998	Goff	
GWQ-94-21A	2.53	Skute Stone Arroyo		-7	GWQ-94-21A-	5/1/1998		
GWQ-94-21A	2.64	Skute Stone Arroyo		-8	GWQ-94-21A-	6/1/1998		

Well Name	Water Depth	USGS Quad	Well Depth		Sample ID	Sample Date	Sampler	Notes
GWQ-94-21A	3.44	Skute Stone Arroyo		-9	GWQ-94-21A-	7/21/1998	Brownfield	
GWQ-94-21A	2.8	Skute Stone Arroyo		-10	GWQ-94-21A-	8/1/1998		
GWQ-94-21A	2.86	Skute Stone Arroyo		-11	GWQ-94-21A-	9/1/1998		
GWQ-94-21B		Skute Stone Arroyo		-1	GWQ-94-21B-	11/13/1994	SRK	
GWQ-94-21B		Skute Stone Arroyo		-2	GWQ-94-21B-	6/30/1996	ABC	
GWQ-96-22A				-1	GWQ-96-22A-	7/13/1996	ABC	
GWQ-96-22A	44.93			-2	GWQ-96-22A-	2/5/1997	SRK	
GWQ-96-22A				-3	GWQ-96-22A-	4/1/1997		
GWQ-96-22A				-4	GWQ-96-22A-	8/1/1997		
GWQ-96-22A				-5	GWQ-96-22A-	8/8/1997	SRK	
GWQ-96-22A				-6	GWQ-96-22A-	10/1/1997		
GWQ-96-22A	45.92			-7	GWQ-96-22A-	1/24/1998	Goff	
GWQ-96-22A	46.09			-8	GWQ-96-22A-	2/1/1998		
GWQ-96-22A	46.74			-9	GWQ-96-22A-	3/1/1998		
GWQ-96-22A	47.27			-10	GWQ-96-22A-	4/14/1998	Goff	
GWQ-96-22A	47.89			-11	GWQ-96-22A-	5/1/1998		
GWQ-96-22A	48.24			-12	GWQ-96-22A-	6/1/1998		
GWQ-96-22A	46			-13	GWQ-96-22A-	7/21/1998	Brownfield	
GWQ-96-22A	45.1			-14	GWQ-96-22A-	8/1/1998		
GWQ-96-22A	46.5			-15	GWQ-96-22A-	9/1/1998		
GWQ-96-22A				-16	GWQ-96-22A-	10/15/1998	Goff	
GWQ-96-22B				-1	GWQ-96-22B-	7/13/1996	ABC	
GWQ-96-22B	45.22			-2	GWQ-96-22B-	2/5/1997	SRK	
GWQ-96-23A				-1	GWQ-96-23A-	7/14/1996	ABC	
GWQ-96-23A	35.18			-2	GWQ-96-23A-	2/5/1997	SRK	
GWQ-96-23A				-3	GWQ-96-23A-	4/1/1997		
GWQ-96-23A				-4	GWQ-96-23A-	4/1/1997		
GWQ-96-23A				-5	GWQ-96-23A-	8/1/1997		
GWQ-96-23A				-6	GWQ-96-23A-	8/8/1997	SRK	
GWQ-96-23A	35.89			-7	GWQ-96-23A-	1/24/1998	Goff	Dup sample had v. h
GWQ-96-23A	35.82			-8	GWQ-96-23A-	2/1/1998		
GWQ-96-23A	35.6			-9	GWQ-96-23A-	3/1/1998		
GWQ-96-23A	35.71			-10	GWQ-96-23A-	4/14/1998	Goff	
GWQ-96-23A	34.91			-11	GWQ-96-23A-	5/1/1998		
GWQ-96-23A	34.97			-12	GWQ-96-23A-	6/1/1998		
GWQ-96-23A	36.68			-13	GWQ-96-23A-	7/21/1998	Brownfield	

Well Name	Water Depth	USGS Quad	Well Depth		Sample ID	Sample Date	Sampler	Notes
GWQ-96-23A	36.32			-14	GWQ-96-23A-	8/1/1998		
GWQ-96-23A	36.35			-15	GWQ-96-23A-	9/1/1998		
GWQ-96-23A				-16	GWQ-96-23A-	10/15/1998	Goff	
GWQ-96-23B				-1	GWQ-96-23B-	7/14/1996	ABC	
GWQ-96-23B	36.745			-2	GWQ-96-23B-	2/5/1997	SRK	
GWQ-96-23B				-3	GWQ-96-23B-	4/1/1997		
GWQ-96-23B				-4	GWQ-96-23B-	4/1/1997		
Hansen	12.6			-1	Hansen-1	1/1/1998		
Hansen	12.5			-2	Hansen-2	2/1/1998		
Hansen	12.2			-3	Hansen-3	3/1/1998		
Hansen	11.3			-4	Hansen-4	4/1/1998		
Hansen	11			-5	Hansen-5	5/1/1998		
Hansen	11.25			-6	Hansen-6	6/1/1998		
Hansen	11.25			-7	Hansen-7	7/22/1998	Brownfield	
Hansen	12			-8	Hansen-8	8/1/1998		
Hansen	11			-9	Hansen-9	9/1/1998		
Highway		Skute Stone Arroyo		-1	Highway-1	5/27/1994	SRK	
Highway		Skute Stone Arroyo		-2	Highway-2	4/14/1998	Goff	Labeled "Birdy Wind"
Hill				-1	Hill-1	7/13/1947		
Humphries-Deep				-1	Humphries-De	10/1/1997		
Humphries-Deep	36.75			-2	Humphries-De	1/23/1998	Goff	
Humphries-Deep	36.5			-3	Humphries-De	2/1/1998		
Humphries-Deep	36.05			-4	Humphries-De	3/1/1998		
Humphries-Deep	36.29			-5	Humphries-De	4/15/1998	Goff	

Well Name	Sample Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride	Sulfate
GWQ-9	6/4/1976	32.96438	107.49539	266762	3649912	13	5195	TRUE	19.9	34
GWQ-9	1/20/1981	32.96438	107.49539	266762	3649912	13	5195	TRUE	200	300
GWQ-9	2/2/1981	32.96438	107.49539	266762	3649912	13	5195	FALSE	20	156
GWQ-9	2/2/1981	32.96438	107.49539	266762	3649912	13	5195	TRUE	20	156
GWQ-9	3/27/1981	32.96438	107.49539	266762	3649912	13	5195	FALSE		
GWQ-9	3/27/1981	32.96438	107.49539	266762	3649912	13	5195	TRUE		
GWQ-9	4/6/1981	32.96438	107.49539	266762	3649912	13	5195	FALSE		
GWQ-9	6/10/1981	32.96438	107.49539	266762	3649912	13	5195	TRUE		
GWQ-9	8/7/1981	32.96438	107.49539	266762	3649912	13	5195	FALSE	100	140
GWQ-9	8/10/1981	32.96438	107.49539	266762	3649912	13	5195	FALSE	22	148
GWQ-9	10/8/1981	32.96438	107.49539	266762	3649912	13	5195	TRUE	22.4	133
GWQ-9	2/25/1982	32.96438	107.49539	266762	3649912	13	5195	TRUE	26	160
GWQ-9	12/28/1982	32.96438	107.49539	266762	3649912	13	5195	TRUE	20	150
GWQ-9	2/21/1983	32.96438	107.49539	266762	3649912	13	5195	TRUE	20	161
GWQ-9	5/13/1983	32.96438	107.49539	266762	3649912	13	5195	TRUE	20	158
GWQ-9	8/9/1983	32.96438	107.49539	266762	3649912	13	5195	TRUE	20	135
GWQ-9	11/1/1983	32.96438	107.49539	266762	3649912	13	5195	TRUE	18	132
GWQ-9	3/16/1984	32.96438	107.49539	266762	3649912	13	5195	TRUE	18	132
GWQ-9	5/30/1984	32.96438	107.49539	266762	3649912	13	5195	TRUE	18	154
GWQ-9	9/12/1984	32.96438	107.49539	266762	3649912	13	5195	TRUE	20	132
GWQ-9	11/27/1984	32.96438	107.49539	266762	3649912	13	5195	TRUE	16	132
GWQ-9	5/17/1985	32.96438	107.49539	266762	3649912	13	5195	TRUE	20	149
GWQ-9	6/27/1985	32.96438	107.49539	266762	3649912	13	5195	FALSE		
GWQ-9	11/13/1985	32.96438	107.49539	266762	3649912	13	5195	FALSE	20	142
GWQ-9	5/23/1985	32.96438	107.49539	266762	3649912	13	5195	FALSE	36	137
GWQ-9	10/8/1986	32.96438	107.49539	266762	3649912	13	5195	FALSE	20	125
GWQ-9	8/1/1997	32.96438	107.49539	266762	3649912	13	5195	TRUE	55.1	
GWQ-94-13	11/15/1994	32.96113	107.49664	266637	3649555	13	5186	TRUE	190	720
GWQ-94-13	7/1/1996	32.96113	107.49664	266637	3649555	13	5186	TRUE	200	620
GWQ-94-13	8/1/1997	32.96113	107.49664	266637	3649555	13	5186	TRUE	196.1	
GWQ-94-14	11/14/1994	32.96082	107.49482	266806	3649515	13	5178	TRUE	22	140
GWQ-94-14	6/30/1996	32.96082	107.49482	266806	3649515	13	5178	TRUE	26	140
GWQ-94-14	8/1/1997	32.96082	107.49482	266806	3649515	13	5178	TRUE	32	
GWQ-94-15	11/14/1994	32.95942	107.49490	266794	3649361	13	5168	TRUE	110	180
GWQ-94-15	7/1/1996	32.95942	107.49490	266794	3649361	13	5168	TRUE	130	240
GWQ-94-15	8/1/1997	32.95942	107.49490	266794	3649361	13	5168	TRUE	51.7	

Well Name	Sample Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride	Sulfate
GWQ-94-15	10/1/1997	32.95942	107.49490	266794	3649361	13	5168	TRUE	53	150.5
GWQ-94-15	1/24/1998	32.95942	107.49490	266794	3649361	13	5168	TRUE	55.2	148
GWQ-94-15	2/1/1998	32.95942	107.49490	266794	3649361	13	5168			
GWQ-94-15	3/1/1998	32.95942	107.49490	266794	3649361	13	5168			
GWQ-94-15	4/14/1998	32.95942	107.49490	266794	3649361	13	5168	TRUE	73.6	158
GWQ-94-15	5/1/1998	32.95942	107.49490	266794	3649361	13	5168			
GWQ-94-15	6/1/1998	32.95942	107.49490	266794	3649361	13	5168			
GWQ-94-15	7/21/1998	32.95942	107.49490	266794	3649361	13	5168	TRUE	57.3	154
GWQ-94-15	8/1/1998	32.95942	107.49490	266794	3649361	13	5168			
GWQ-94-15	9/1/1998	32.95942	107.49490	266794	3649361	13	5168			
GWQ-94-15	10/15/1998	32.95942	107.49490	266794	3649361	13	5168	TRUE	53	150.5
GWQ-94-16	11/13/1994	32.96016	107.49671	266627	3649447	13	5183	TRUE	190	410
GWQ-94-16	7/1/1996	32.96016	107.49671	266627	3649447	13	5183	TRUE	200	500
GWQ-94-17	11/15/1994	32.96115	107.49601	266696	3649555	13	5183	TRUE	110	240
GWQ-94-17	6/30/1996	32.96115	107.49601	266696	3649555	13	5183	TRUE	81	190
GWQ-94-17	5/1/1997	32.96115	107.49601	266696	3649555	13	5183	TRUE	61.2	
GWQ-94-17	1/24/1998	32.96115	107.49601	266696	3649555	13	5183	TRUE	46.5	141
GWQ-94-17	2/1/1998	32.96115	107.49601	266696	3649555	13	5183			
GWQ-94-17	3/1/1998	32.96115	107.49601	266696	3649555	13	5183			
GWQ-94-17	4/14/1998	32.96115	107.49601	266696	3649555	13	5183	TRUE	47.5	136
GWQ-94-17	5/1/1998	32.96115	107.49601	266696	3649555	13	5183			
GWQ-94-17	5/1/1998	32.96115	107.49601	266696	3649555	13	5183			
GWQ-94-17	7/21/1998	32.96115	107.49601	266696	3649555	13	5183	TRUE	48.1	140
GWQ-94-17	8/1/1998	32.96115	107.49601	266696	3649555	13	5183			
GWQ-94-17	9/1/1998	32.96115	107.49601	266696	3649555	13	5183			
GWQ-94-20	11/15/1994	32.96148	107.49676	266626	3649593	13	5189	TRUE	19	40
GWQ-94-20	6/30/1996	32.96148	107.49676	266626	3649593	13	5189	TRUE	21	56
GWQ-94-20	8/1/1997	32.96148	107.49676	266626	3649593	13	5189	TRUE	22	
GWQ-94-21A	11/13/1994	32.96099	107.49399	266884	3649533	13	5177	TRUE	18	130
GWQ-94-21A	6/30/1996	32.96099	107.49399	266884	3649533	13	5177	TRUE	16	120
GWQ-94-21A	1/24/1998	32.96099	107.49399	266884	3649533	13	5177	TRUE	19.1	130
GWQ-94-21A	2/1/1998	32.96099	107.49399	266884	3649533	13	5177			
GWQ-94-21A	3/1/1998	32.96099	107.49399	266884	3649533	13	5177			
GWQ-94-21A	4/14/1998	32.96099	107.49399	266884	3649533	13	5177	TRUE	19.6	142
GWQ-94-21A	5/1/1998	32.96099	107.49399	266884	3649533	13	5177			
GWQ-94-21A	6/1/1998	32.96099	107.49399	266884	3649533	13	5177			

Well Name	Sample Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride	Sulfate
GWQ-94-21A	7/21/1998	32.96099	107.49399	266884	3649533	13	5177	TRUE	19.9	119
GWQ-94-21A	8/1/1998	32.96099	107.49399	266884	3649533	13	5177			
GWQ-94-21A	9/1/1998	32.96099	107.49399	266884	3649533	13	5177			
GWQ-94-21B	11/13/1994	32.96099	107.49399	266884	3649533	13	5177	TRUE	19	130
GWQ-94-21B	6/30/1996	32.96099	107.49399	266884	3649533	13	5177	TRUE	17	120
GWQ-96-22A	7/13/1996							TRUE	89	250
GWQ-96-22A	2/5/1997							TRUE		
GWQ-96-22A	4/1/1997							TRUE	96.5	267
GWQ-96-22A	8/1/1997							TRUE	93.2	
GWQ-96-22A	8/8/1997							TRUE	89	230
GWQ-96-22A	10/1/1997							TRUE	80	260
GWQ-96-22A	1/24/1998							TRUE	80.4	254
GWQ-96-22A	2/1/1998									
GWQ-96-22A	3/1/1998									
GWQ-96-22A	4/14/1998							TRUE	83.8	254
GWQ-96-22A	5/1/1998									
GWQ-96-22A	6/1/1998									
GWQ-96-22A	7/21/1998							TRUE	81.4	303.4
GWQ-96-22A	8/1/1998									
GWQ-96-22A	9/1/1998									
GWQ-96-22A	10/15/1998							TRUE	80	260
GWQ-96-22B	7/13/1996							TRUE	210	79
GWQ-96-22B	2/5/1997							TRUE		
GWQ-96-23A	7/14/1996							TRUE	22	140
GWQ-96-23A	2/5/1997							TRUE		
GWQ-96-23A	4/1/1997							TRUE	20	150
GWQ-96-23A	4/1/1997							TRUE	25	174
GWQ-96-23A	8/1/1997							TRUE	18.2	
GWQ-96-23A	8/8/1997							TRUE	18	410
GWQ-96-23A	1/24/1998							TRUE	19.6	85
GWQ-96-23A	2/1/1998									
GWQ-96-23A	3/1/1998									
GWQ-96-23A	4/14/1998							TRUE	18.9	323
GWQ-96-23A	5/1/1998									
GWQ-96-23A	6/1/1998									
GWQ-96-23A	7/21/1998							TRUE	18.6	330

Well Name	Sample Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride	Sulfate
GWQ-96-23A	8/1/1998									
GWQ-96-23A	9/1/1998									
GWQ-96-23A	10/15/1998							TRUE	18.3	450.7
GWQ-96-23B	7/14/1996							TRUE	20	170
GWQ-96-23B	2/5/1997							TRUE		
GWQ-96-23B	4/1/1997							TRUE	16	170
GWQ-96-23B	4/1/1997							TRUE	22.1	238
Hansen	1/1/1998									
Hansen	2/1/1998									
Hansen	3/1/1998									
Hansen	4/1/1998									
Hansen	5/1/1998									
Hansen	6/1/1998									
Hansen	7/22/1998							TRUE	26.5	21
Hansen	8/1/1998									
Hansen	9/1/1998									
Highway	5/27/1994							FALSE	23	42
Highway	4/14/1998							TRUE	22.6	50
Hill	7/13/1947							FALSE	10	76
Humphries-De	10/1/1997							TRUE	19.4	19
Humphries-De	1/23/1998							TRUE	18.6	18
Humphries-De	2/1/1998									
Humphries-De	3/1/1998									
Humphries-De	4/15/1998							TRUE	18.1	19

Well Name	Sample Date	pH	TDS	Alkalinity	Bicarb	Spec.Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
GWQ-9	6/4/1976	8.6	350		188	480	0.44	4			
GWQ-9	1/20/1981	7.4	450		305						
GWQ-9	2/2/1981	7.9	510		273						
GWQ-9	2/2/1981	7.9	510		273						
GWQ-9	3/27/1981						0.6	1.4			-0.01
GWQ-9	3/27/1981						0.6	1.4			-0.01
GWQ-9	4/6/1981						0.56	1.2			0.002
GWQ-9	6/10/1981										
GWQ-9	8/7/1981	7.4	450		268.4						
GWQ-9	8/10/1981	8	470		268		0.5	1.4			-0.01
GWQ-9	10/8/1981	7.22	476		302		0.6	0.96	-0.25		-0.004
GWQ-9	2/25/1982	8.3	430				0.5	0.9			
GWQ-9	12/28/1982	7.8	480				0.5	1			
GWQ-9	2/21/1983	8	480				0.5	1.4			
GWQ-9	5/13/1983	8.2	460				0.5	1.1			
GWQ-9	8/9/1983	8	480				0.5	0.9			
GWQ-9	11/1/1983	8.2	460				0.5	0.8			
GWQ-9	3/16/1984	8.1	460				0.7	1.7			
GWQ-9	5/30/1984	7.6	450				0.5	0.9			
GWQ-9	9/12/1984	8	470				0.5	1.3			
GWQ-9	11/27/1984	7.9	470				0.5	1.5			
GWQ-9	5/17/1985	8	490								
GWQ-9	6/27/1985										
GWQ-9	11/13/1985	7.8	450								
GWQ-9	5/23/1985	7.9	490								
GWQ-9	10/8/1986	7.6	460								
GWQ-9	8/1/1997	7.3	867				0.58				
GWQ-94-13	11/15/1994	7.74	1570		159	2026	0.36	4.6	-0.05	-0.005	-0.005
GWQ-94-13	7/1/1996	7.76	1520	128	156	2000	0.34	5.2	-0.025	-0.002	-0.005
GWQ-94-13	8/1/1997	7.2	1330				0.55				
GWQ-94-14	11/14/1994	7.95	560		279	745	0.52	1.3	-0.05	-0.005	-0.005
GWQ-94-14	6/30/1996	8.44	520	222	261	641	0.48	1.5	-0.025	-0.002	-0.005
GWQ-94-14	8/1/1997	7.32	475				0.55				
GWQ-94-15	11/14/1994	7.74	790		265	1058	0.46	2.1	-0.05	-0.005	-0.005
GWQ-94-15	7/1/1996	7.31	780	186	227	1190	0.42	2.5	-0.025	-0.002	-0.005
GWQ-94-15	8/1/1997	8.08	441				0.55				

Well Name	Sample Date	pH	TDS	Alkalinity	Bicarb	Spec.Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
GWQ-94-15	10/1/1997	7.56	530					1.45			
GWQ-94-15	1/24/1998	7.61	567		257.4	900	0.57				
GWQ-94-15	2/1/1998										
GWQ-94-15	3/1/1998										
GWQ-94-15	4/14/1998	7.5	563			872	0.58	1.6			
GWQ-94-15	5/1/1998										
GWQ-94-15	6/1/1998										
GWQ-94-15	7/21/1998		505				0.58	1.7			
GWQ-94-15	8/1/1998										
GWQ-94-15	9/1/1998										
GWQ-94-15	10/15/1998	7.56	530			915		1.45			
GWQ-94-16	11/13/1994	7.55	1140		199	1600	0.66	3.8	-0.05	-0.005	-0.005
GWQ-94-16	7/1/1996	7.95	1160	158	193	1620	0.57	3.7	-0.025	-0.002	-0.005
GWQ-94-17	11/15/1994	7.71	820		232	1147	0.46	2.4	-0.05	-0.005	-0.005
GWQ-94-17	6/30/1996	8.56	690	198	227	925	0.46	2	-0.025	-0.002	-0.005
GWQ-94-17	5/1/1997	7.18	558				0.57				
GWQ-94-17	1/24/1998	7.64	519		262.3	837	0.6				
GWQ-94-17	2/1/1998										
GWQ-94-17	3/1/1998										
GWQ-94-17	4/14/1998	7.51	502			855	0.6	1.4			
GWQ-94-17	5/1/1998										
GWQ-94-17	5/1/1998										
GWQ-94-17	7/21/1998		553				0.67	1.59			
GWQ-94-17	8/1/1998										
GWQ-94-17	9/1/1998										
GWQ-94-20	11/15/1994	7.66	370		296	588	0.36	1	-0.05	-0.005	-0.005
GWQ-94-20	6/30/1996	8.79	390	256	273	597	0.29	-1	-0.025	-0.002	-0.005
GWQ-94-20	8/1/1997	7.31	361				0.37				
GWQ-94-21A	11/13/1994	7.25	480		267	672	0.57	1	-0.05	-0.005	-0.005
GWQ-94-21A	6/30/1996	8.22	470	220	268	649	0.51	1.1	-0.025	-0.002	-0.005
GWQ-94-21A	1/24/1998	7.72	472		258	791	0.61				
GWQ-94-21A	2/1/1998										
GWQ-94-21A	3/1/1998										
GWQ-94-21A	4/14/1998	7.96	474			760	0.71	1.16			
GWQ-94-21A	5/1/1998										
GWQ-94-21A	6/1/1998										

Well Name	Sample Date	pH	TDS	Alkalinity	Bicarb	Spec.Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
GWQ-94-21A	7/21/1998		464				0.7	1.34			
GWQ-94-21A	8/1/1998										
GWQ-94-21A	9/1/1998										
GWQ-94-21B	11/13/1994	7.57	440		255	669	0.39	-1	-0.05	-0.005	-0.005
GWQ-94-21B	6/30/1996	8.6	470	226	256	648	0.52	1.1	-0.025	-0.002	-0.005
GWQ-96-22A	7/13/1996	7.5	700	102	124	1040	3.3	-1	-0.025	-0.003	-0.005
GWQ-96-22A	2/5/1997										
GWQ-96-22A	4/1/1997		707				1.7				
GWQ-96-22A	8/1/1997	7.32	687				2.5				
GWQ-96-22A	8/8/1997	7.65	700	145	177	1140	2.2	-1	0.028		-0.005
GWQ-96-22A	10/1/1997	7.69	689				0.8	-0.05			
GWQ-96-22A	1/24/1998	7.59	665		154.3	1190	2.53				
GWQ-96-22A	2/1/1998										
GWQ-96-22A	3/1/1998										
GWQ-96-22A	4/14/1998	7.65	655		148	1130	3	0.1			
GWQ-96-22A	5/1/1998										
GWQ-96-22A	6/1/1998										
GWQ-96-22A	7/21/1998		669				2.86	0.07			
GWQ-96-22A	8/1/1998										
GWQ-96-22A	9/1/1998										
GWQ-96-22A	10/15/1998	7.69	689			1120		-0.05			
GWQ-96-22B	7/13/1996	7.75	650	116	141	1070	1.8	-1	-0.025	-0.003	-0.005
GWQ-96-22B	2/5/1997										
GWQ-96-23A	7/14/1996	7.95	520	230	280	760	0.84	-1	0.28	-0.003	-0.005
GWQ-96-23A	2/5/1997										
GWQ-96-23A	4/1/1997		770								
GWQ-96-23A	4/1/1997		737				0.5				
GWQ-96-23A	8/1/1997	7.03	939				1.3				
GWQ-96-23A	8/8/1997	7.68	920	269	328	1130	1.2	-1	0.036		-0.005
GWQ-96-23A	1/24/1998	7.8	519		503.25	933	1.76				
GWQ-96-23A	2/1/1998										
GWQ-96-23A	3/1/1998										
GWQ-96-23A	4/14/1998	7.57	918			1390	1.54	-0.05			
GWQ-96-23A	5/1/1998										
GWQ-96-23A	6/1/1998										
GWQ-96-23A	7/21/1998		916				1.69	-0.05			

Well Name	Sample Date	pH	TDS	Alkalinity	Bicarb	Spec.Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
GWQ-96-23A	8/1/1998										
GWQ-96-23A	9/1/1998										
GWQ-96-23A	10/15/1998	7.67	986			1320		-0.05			
GWQ-96-23B	7/14/1996	8.15	550	200	234	780	1.1	-1	7.4	-0.003	-0.005
GWQ-96-23B	2/5/1997										
GWQ-96-23B	4/1/1997		580				1.4				
GWQ-96-23B	4/1/1997		375				0.8				
Hansen	1/1/1998										
Hansen	2/1/1998										
Hansen	3/1/1998										
Hansen	4/1/1998										
Hansen	5/1/1998										
Hansen	6/1/1998										
Hansen	7/22/1998		232				0.59	0.7			
Hansen	8/1/1998										
Hansen	9/1/1998										
Highway	5/27/1994	8.19	342		227	513	0.89	2.4	-0.05	0.0076	-0.005
Highway	4/14/1998	8.38	304			545	1.1	2.2			
Hill	7/13/1947		320		190	426	0.6	0.7			
Humphries-Deep	10/1/1997	8.05	259					-0.05			
Humphries-Deep	1/23/1998	7.33	267		253.8	539	0.2				
Humphries-Deep	2/1/1998										
Humphries-Deep	3/1/1998										
Humphries-Deep	4/15/1998	7.6	290			501	0.22	0.15			

Well Name	Sample Date	Boron	Barium	Berylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
GWQ-9	6/4/1976	-0.1				69.2				0.004	
GWQ-9	1/20/1981					92				0.05	
GWQ-9	2/2/1981					73				1.8	
GWQ-9	2/2/1981					73				1.8	
GWQ-9	3/27/1981								-0.05		-0.02
GWQ-9	3/27/1981								-0.05		-0.02
GWQ-9	4/6/1981								-0.05		-0.01
GWQ-9	6/10/1981										
GWQ-9	8/7/1981					80				0.06	
GWQ-9	8/10/1981					76			-0.05	0.49	0.033
GWQ-9	10/8/1981	0.044	-1		-0.01	51.8	-0.05	-0.05	-0.05	-0.1	-0.05
GWQ-9	2/25/1982				-0.005				-0.05	-0.1	
GWQ-9	12/28/1982				-0.005				-0.05	-0.1	
GWQ-9	2/21/1983				-0.005				-0.05	-0.1	
GWQ-9	5/13/1983				-0.005				-0.05	-0.1	
GWQ-9	8/9/1983				-0.005				-0.05	-0.1	
GWQ-9	11/1/1983				-0.005				-0.05	-0.1	
GWQ-9	3/16/1984				-0.005				-0.05	-0.1	
GWQ-9	5/30/1984				-0.005				-0.05	-0.1	
GWQ-9	9/12/1984				-0.005				-0.05	-0.1	
GWQ-9	11/27/1984				-0.005				-0.05	-0.1	
GWQ-9	5/17/1985										
GWQ-9	6/27/1985										
GWQ-9	11/13/1985										
GWQ-9	5/23/1985										
GWQ-9	10/8/1986										
GWQ-9	8/1/1997										
GWQ-94-13	11/15/1994	-0.1	-0.1	-0.002	-0.0005	270	-0.025	-0.05	-0.025	0.11	-0.005
GWQ-94-13	7/1/1996	-0.05	-0.05	-0.002	-0.0005	290	-0.025	-0.05	-0.025	-0.05	-0.005
GWQ-94-13	8/1/1997										
GWQ-94-14	11/14/1994	-0.1	-0.1	-0.002	-0.0005	81	-0.025	-0.05	-0.025	-0.05	-0.005
GWQ-94-14	6/30/1996	-0.05	-0.05	-0.002	-0.0005	87	-0.025	-0.05	-0.025	-0.05	-0.005
GWQ-94-14	8/1/1997										
GWQ-94-15	11/14/1994	-0.1	-0.1	-0.002	-0.0005	110	-0.025	-0.05	-0.025	-0.05	-0.005
GWQ-94-15	7/1/1996	-0.05	-0.05	-0.002	-0.0005	140	-0.025	-0.05	-0.025	0.41	-0.005
GWQ-94-15	8/1/1997										

Well Name	Sample Date	Boron	Barium	Berylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
GWQ-94-15	10/1/1997								-0.005	-0.05	
GWQ-94-15	1/24/1998					84			-0.005		
GWQ-94-15	2/1/1998										
GWQ-94-15	3/1/1998										
GWQ-94-15	4/14/1998					99.9			-0.005	-0.05	
GWQ-94-15	5/1/1998										
GWQ-94-15	6/1/1998										
GWQ-94-15	7/21/1998					66.9			-0.005	-0.05	
GWQ-94-15	8/1/1998										
GWQ-94-15	9/1/1998										
GWQ-94-15	10/15/1998								-0.005	-0.05	
GWQ-94-16	11/13/1994	-0.1	-0.1	-0.002	-0.0005	190	-0.025	-0.05	-0.025	-0.05	-0.005
GWQ-94-16	7/1/1996	-0.05	-0.05	-0.002	-0.0005	200	-0.025	-0.05	-0.025	0.22	-0.005
GWQ-94-17	11/15/1994	-0.1	-0.1	-0.002	-0.0005	120	-0.025	-0.05	-0.025	-0.05	-0.005
GWQ-94-17	6/30/1996	-0.05	-0.05	-0.002	-0.0005	120	-0.025	-0.05	-0.025	0.062	-0.005
GWQ-94-17	5/1/1997										
GWQ-94-17	1/24/1998					84.9			-0.005		
GWQ-94-17	2/1/1998										
GWQ-94-17	3/1/1998										
GWQ-94-17	4/14/1998					97.6			-0.005	-0.05	
GWQ-94-17	5/1/1998										
GWQ-94-17	5/1/1998										
GWQ-94-17	7/21/1998					91.2			-0.005	0.23	
GWQ-94-17	8/1/1998										
GWQ-94-17	9/1/1998										
GWQ-94-20	11/15/1994	0.11	-0.1	-0.002	-0.0005	48	-0.025	-0.05	-0.025	-0.05	-0.005
GWQ-94-20	6/30/1996	0.086	0.12	-0.002	-0.0005	58	-0.025	-0.05	-0.025	-0.05	-0.005
GWQ-94-20	8/1/1997										
GWQ-94-21A	11/13/1994	-0.1	-0.1	-0.002	-0.0005	82	-0.025	-0.05	-0.025	-0.05	-0.005
GWQ-94-21A	6/30/1996	-0.05	-0.05	-0.002	-0.0005	86	-0.025	-0.05	-0.025	-0.05	-0.005
GWQ-94-21A	1/24/1998					73.3			-0.005		
GWQ-94-21A	2/1/1998										
GWQ-94-21A	3/1/1998										
GWQ-94-21A	4/14/1998					88.4			-0.005	-0.05	
GWQ-94-21A	5/1/1998										
GWQ-94-21A	6/1/1998										

Well Name	Sample Date	Boron	Barium	Berylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
GWQ-94-21A	7/21/1998					83.9			0.017	-0.05	
GWQ-94-21A	8/1/1998										
GWQ-94-21A	9/1/1998										
GWQ-94-21B	11/13/1994	-0.1	-0.1	-0.002	-0.0005	71	-0.025	-0.05	-0.025	-0.05	-0.005
GWQ-94-21B	6/30/1996	-0.05	-0.05	-0.002	-0.0005	87	-0.025	-0.05	-0.025	-0.05	-0.005
GWQ-96-22A	7/13/1996	-0.05	-0.05	-0.002	-0.0005	71	-0.025	-0.05	-0.025	-0.05	-0.005
GWQ-96-22A	2/5/1997										
GWQ-96-22A	4/1/1997								-0.005	1.2	
GWQ-96-22A	8/1/1997										
GWQ-96-22A	8/8/1997	0.23	0.057	-0.002	-0.002	73	-0.025	-0.05	-0.025	0.13	-0.005
GWQ-96-22A	10/1/1997								-0.005	0.61	
GWQ-96-22A	1/24/1998					60			-0.005		
GWQ-96-22A	2/1/1998										
GWQ-96-22A	3/1/1998										
GWQ-96-22A	4/14/1998					67.3			0.007	0.07	
GWQ-96-22A	5/1/1998										
GWQ-96-22A	6/1/1998										
GWQ-96-22A	7/21/1998					69.3			-0.005	-0.05	
GWQ-96-22A	8/1/1998										
GWQ-96-22A	9/1/1998										
GWQ-96-22A	10/15/1998								-0.005	0.61	
GWQ-96-22B	7/13/1996	0.12	0.096	-0.002	-0.0005	66	-0.025	-0.05	-0.025	-0.05	-0.005
GWQ-96-22B	2/5/1997										
GWQ-96-23A	7/14/1996	-0.05	0.064	-0.002	-0.0005	59	-0.025	-0.05	-0.025	0.26	-0.005
GWQ-96-23A	2/5/1997										
GWQ-96-23A	4/1/1997										
GWQ-96-23A	4/1/1997								-0.005		
GWQ-96-23A	8/1/1997										
GWQ-96-23A	8/8/1997	0.0687	0.13	-0.002	-0.002	130	0.025	-0.05	-0.025	0.82	-0.005
GWQ-96-23A	1/24/1998					80.3			-0.005		
GWQ-96-23A	2/1/1998										
GWQ-96-23A	3/1/1998										
GWQ-96-23A	4/14/1998					169.4			0.019	0.41	
GWQ-96-23A	5/1/1998										
GWQ-96-23A	6/1/1998										
GWQ-96-23A	7/21/1998					168.1			-0.005	2.59	

Well Name	Sample Date	Boron	Barium	Berylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
GWQ-96-23A	8/1/1998										
GWQ-96-23A	9/1/1998										
GWQ-96-23A	10/15/1998								-0.005	0.65	
GWQ-96-23B	7/14/1996	0.058	0.093	-0.002	-0.0005	67	-0.025	-0.05	-0.025	3.7	-0.005
GWQ-96-23B	2/5/1997										
GWQ-96-23B	4/1/1997								-0.025	0.1	
GWQ-96-23B	4/1/1997								-0.005	0.25	
Hansen	1/1/1998										
Hansen	2/1/1998										
Hansen	3/1/1998										
Hansen	4/1/1998										
Hansen	5/1/1998										
Hansen	6/1/1998										
Hansen	7/22/1998					19.7			-0.005	-0.05	
Hansen	8/1/1998										
Hansen	9/1/1998										
Highway	5/27/1994	-0.01	-0.1	-0.002	-0.0005	63	-0.025	-0.05	-0.025	-0.05	-0.005
Highway	4/14/1998					63.6			0.014	0.22	
Hill	7/13/1947					37					
Humphries-Deep	10/1/1997								-0.005	0.17	
Humphries-Deep	1/23/1998					61.3			-0.005		
Humphries-Deep	2/1/1998										
Humphries-Deep	3/1/1998										
Humphries-Deep	4/15/1998					66.2			-0.005	-0.05	

Well Name	Sample Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium
GWQ-9	6/4/1976	15.2	0.001				1.56			30
GWQ-9	1/20/1981	9.7								703
GWQ-9	2/2/1981	24								49
GWQ-9	2/2/1981	24								49
GWQ-9	3/27/1981									
GWQ-9	3/27/1981									
GWQ-9	4/6/1981									
GWQ-9	6/10/1981									
GWQ-9	8/7/1981	19.4								128.9
GWQ-9	8/10/1981	20								47
GWQ-9	10/8/1981	17.1	-0.02	-1	-0.1	-0.05	3.3	-0.002	-0.02	71
GWQ-9	2/25/1982		-0.05	-0.001	-0.05			-0.005		
GWQ-9	12/28/1982		-0.05	-0.001	-0.05			-0.005		
GWQ-9	2/21/1983		-0.05	-0.001	-0.05			-0.005		
GWQ-9	5/13/1983		-0.05	-0.001	-0.05			-0.005		
GWQ-9	8/9/1983		-0.05	-0.001	-0.05			-0.005		
GWQ-9	11/1/1983		-0.05	-0.001	-0.05			-0.005		
GWQ-9	3/16/1984		-0.05	-0.001	-0.05			-0.005		
GWQ-9	5/30/1984		-0.05	-0.001	-0.05			-0.005		
GWQ-9	9/12/1984		-0.05	-0.001	-0.05			-0.005		
GWQ-9	11/27/1984		-0.05	-0.001	-0.05			-0.005		
GWQ-9	5/17/1985									
GWQ-9	6/27/1985									
GWQ-9	11/13/1985									
GWQ-9	5/23/1985									
GWQ-9	10/8/1986									
GWQ-9	8/1/1997									
GWQ-94-13	11/15/1994	56	-0.03	-0.001	-0.05	-0.05	3.9	-0.005	-0.025	110
GWQ-94-13	7/1/1996	62	-0.03	-0.001	-0.05	-0.05	3.6	0.0068	-0.05	120
GWQ-94-13	8/1/1997									
GWQ-94-14	11/14/1994	23	-0.03	-0.001	-0.05	-0.05	1.9	-0.005	-0.025	46
GWQ-94-14	6/30/1996	23	-0.03	-0.001	-0.05	-0.05	1.9	-0.005	-0.05	51
GWQ-94-14	8/1/1997									
GWQ-94-15	11/14/1994	29	-0.03	-0.001	-0.05	-0.05	2.5	-0.005	-0.025	68
GWQ-94-15	7/1/1996	38	-0.03	-0.001	-0.05	-0.05	2.4	-0.005	-0.05	77
GWQ-94-15	8/1/1997									

Well Name	Sample Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium
GWQ-94-15	10/1/1997									
GWQ-94-15	1/24/1998	25.4	-0.02				5.5			54.2
GWQ-94-15	2/1/1998									
GWQ-94-15	3/1/1998									
GWQ-94-15	4/14/1998	25.9	-0.02	-0.0002	-0.05		1.3	-0.05		52.8
GWQ-94-15	5/1/1998									
GWQ-94-15	6/1/1998									
GWQ-94-15	7/21/1998	24	-0.02	0.0003	-0.05		2	-0.05		49.5
GWQ-94-15	8/1/1998									
GWQ-94-15	9/1/1998									
GWQ-94-15	10/15/1998									
GWQ-94-16	11/13/1994	51	0.038	-0.001	-0.05	-0.05	3.7	-0.005	-0.025	78
GWQ-94-16	7/1/1996	54	-0.03	-0.001	-0.05	-0.05	3.4	-0.005	-0.05	80
GWQ-94-17	11/15/1994	33	-0.03	-0.001	-0.05	-0.05	2.4	-0.005	-0.025	62
GWQ-94-17	6/30/1996	28	-0.03	-0.001	-0.05	-0.05	2	-0.005	-0.05	61
GWQ-94-17	5/1/1997									
GWQ-94-17	1/24/1998	23.3	-0.02				5.2			45.7
GWQ-94-17	2/1/1998									
GWQ-94-17	3/1/1998									
GWQ-94-17	4/14/1998	23.5	-0.02	-0.0002	-0.05		1.2	-0.05		44.7
GWQ-94-17	5/1/1998									
GWQ-94-17	5/1/1998									
GWQ-94-17	7/21/1998	22.3	-0.02	0.0004	-0.05		2.1	-0.05		41.8
GWQ-94-17	8/1/1998									
GWQ-94-17	9/1/1998									
GWQ-94-20	11/15/1994	9.8	0.42	-0.001	-0.05	-0.05	3.2	-0.005	-0.025	67
GWQ-94-20	6/30/1996	10	-0.03	-0.001	-0.05	-0.05	3.1	-0.005	-0.05	75
GWQ-94-20	8/1/1997									
GWQ-94-21A	11/13/1994	23	0.2	-0.001	-0.05	-0.05	2.1	-0.005	-0.025	39
GWQ-94-21A	6/30/1996	22	-0.03	-0.001	-0.05	-0.05	1.5	-0.005	-0.05	37
GWQ-94-21A	1/24/1998	22.1	-0.02				4.3			35.3
GWQ-94-21A	2/1/1998									
GWQ-94-21A	3/1/1998									
GWQ-94-21A	4/14/1998	23.2	-0.02	-0.0002	-0.05		1.4	-0.05		35.7
GWQ-94-21A	5/1/1998									
GWQ-94-21A	6/1/1998									

Well Name	Sample Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium
GWQ-94-21A	7/21/1998	22	-0.02	0.0002	-0.05		2	-0.05		
GWQ-94-21A	8/1/1998									
GWQ-94-21A	9/1/1998									
GWQ-94-21B	11/13/1994	18	0.37	-0.001	-0.05	-0.05	2.6	-0.005	-0.025	56
GWQ-94-21B	6/30/1996	22	-0.03	-0.001	-0.05	-0.05	1.7	-0.005	-0.05	40
GWQ-96-22A	7/13/1996	6.7	0.075	-0.001	-0.05	-0.05	2.5	-0.005	-0.05	150
GWQ-96-22A	2/5/1997									
GWQ-96-22A	4/1/1997		0.44	-0.002				-0.001		
GWQ-96-22A	8/1/1997									
GWQ-96-22A	8/8/1997	8.2	0.53		-0.05	-0.05	6.2	-0.005	-0.025	170
GWQ-96-22A	10/1/1997									
GWQ-96-22A	1/24/1998	5.5	0.163				7.6			146.3
GWQ-96-22A	2/1/1998									
GWQ-96-22A	3/1/1998									
GWQ-96-22A	4/14/1998	4.8	0.12	-0.0002	-0.05		3.6	-0.05		
GWQ-96-22A	5/1/1998									
GWQ-96-22A	6/1/1998									
GWQ-96-22A	7/21/1998	5.7	0.04	-0.0002	-0.05		3.7	-0.05		143.9
GWQ-96-22A	8/1/1998									
GWQ-96-22A	9/1/1998									
GWQ-96-22A	10/15/1998									
GWQ-96-22B	7/13/1996	10	0.41	-0.001	-0.05	-0.05	10	-0.005	-0.05	130
GWQ-96-22B	2/5/1997									
GWQ-96-23A	7/14/1996	18	0.05	-0.001	-0.05	-0.05	4.2	-0.005	-0.05	98
GWQ-96-23A	2/5/1997									
GWQ-96-23A	4/1/1997									
GWQ-96-23A	4/1/1997		2.56	-0.002				0.043		
GWQ-96-23A	8/1/1997									
GWQ-96-23A	8/8/1997	36	1.6		-0.05	-0.05	2.5	-0.005	-0.025	72
GWQ-96-23A	1/24/1998	22.4	0.36				5.6			83.6
GWQ-96-23A	2/1/1998									
GWQ-96-23A	3/1/1998									
GWQ-96-23A	4/14/1998	43.4	1.4	-0.0002	-0.05		2.5	-0.05		86.6
GWQ-96-23A	5/1/1998									
GWQ-96-23A	6/1/1998									
GWQ-96-23A	7/21/1998	41.8	1.67	-0.0002	-0.05		3.2	-0.05		80

Well Name	Sample Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium
GWQ-96-23A	8/1/1998									
GWQ-96-23A	9/1/1998									
GWQ-96-23A	10/15/1998									
GWQ-96-23B	7/14/1996	20	0.13	-0.001	-0.05	-0.05	4	-0.005	-0.05	79
GWQ-96-23B	2/5/1997									
GWQ-96-23B	4/1/1997		0.75							
GWQ-96-23B	4/1/1997		0.72	0.002				0.027		
Hansen	1/1/1998									
Hansen	2/1/1998									
Hansen	3/1/1998									
Hansen	4/1/1998									
Hansen	5/1/1998									
Hansen	6/1/1998									
Hansen	7/22/1998	2.1	-0.02	-0.0002	-0.05		3.9	-0.05		46
Hansen	8/1/1998									
Hansen	9/1/1998									
Highway	5/27/1994	14	-0.03	-0.001	-0.05	-0.05	3	-0.005	-0.025	28
Highway	4/14/1998	13.9	-0.02	-0.0002	-0.05		0.9	-0.05		27.2
Hill	7/13/1947	1.9								
Humphries-Deep	10/1/1997									
Humphries-Deep	1/23/1998	11	-0.02				4.8			22
Humphries-Deep	2/1/1998									
Humphries-Deep	3/1/1998									
Humphries-Deep	4/15/1998	11	-0.02	-0.0002	-0.05		1.8	-0.05		21.8

Thallium	Well Name	Sample Dat	Zinc	Temp (C)	Tin	Vanadium
	GWQ-9	6/4/1976				
	GWQ-9	1/20/1981				
	GWQ-9	2/2/1981				
	GWQ-9	2/2/1981				
	GWQ-9	3/27/1981	0.16			
	GWQ-9	3/27/1981	0.16			
	GWQ-9	4/6/1981	0.13			
	GWQ-9	6/10/1981				
	GWQ-9	8/7/1981				
	GWQ-9	8/10/1981	0.96			
	GWQ-9	10/8/1981	0.35			
	GWQ-9	2/25/1982				
	GWQ-9	12/28/1982				
	GWQ-9	2/21/1983				
	GWQ-9	5/13/1983				
	GWQ-9	8/9/1983				
	GWQ-9	11/1/1983				
	GWQ-9	3/16/1984				
	GWQ-9	5/30/1984				
	GWQ-9	9/12/1984				
	GWQ-9	11/27/1984				
	GWQ-9	5/17/1985				
	GWQ-9	6/27/1985				
	GWQ-9	11/13/1985				
	GWQ-9	5/23/1985				
	GWQ-9	10/8/1986				
	GWQ-9	8/1/1997				
-0.005	GWQ-94-13	11/15/1994	-0.05			
-0.001	GWQ-94-13	7/1/1996	-0.05			
	GWQ-94-13	8/1/1997				
-0.005	GWQ-94-14	11/14/1994	-0.05			
-0.001	GWQ-94-14	6/30/1996	-0.05			
	GWQ-94-14	8/1/1997				
-0.005	GWQ-94-15	11/14/1994	-0.05			
-0.001	GWQ-94-15	7/1/1996	-0.05			
	GWQ-94-15	8/1/1997				

Thallium	Well Name	Sample Dat	Zinc	Temp (C)	Tin	Vanadium
	GWQ-94-15	10/1/1997				
	GWQ-94-15	1/24/1998				
	GWQ-94-15	2/1/1998				
	GWQ-94-15	3/1/1998				
	GWQ-94-15	4/14/1998				
	GWQ-94-15	5/1/1998				
	GWQ-94-15	6/1/1998				
	GWQ-94-15	7/21/1998				
	GWQ-94-15	8/1/1998				
	GWQ-94-15	9/1/1998				
	GWQ-94-15	10/15/1998				
-0.005	GWQ-94-16	11/13/1994	-0.05			
-0.001	GWQ-94-16	7/1/1996	-0.05			
-0.005	GWQ-94-17	11/15/1994	-0.05			
-0.001	GWQ-94-17	6/30/1996	-0.05			
	GWQ-94-17	5/1/1997				
	GWQ-94-17	1/24/1998				
	GWQ-94-17	2/1/1998				
	GWQ-94-17	3/1/1998				
	GWQ-94-17	4/14/1998				
	GWQ-94-17	5/1/1998				
	GWQ-94-17	5/1/1998				
	GWQ-94-17	7/21/1998				
	GWQ-94-17	8/1/1998				
	GWQ-94-17	9/1/1998				
-0.005	GWQ-94-20	11/15/1994	-0.05			
-0.001	GWQ-94-20	6/30/1996	-0.05			
	GWQ-94-20	8/1/1997				
-0.005	GWQ-94-21A	11/13/1994	-0.05			
-0.001	GWQ-94-21A	6/30/1996	-0.05			
	GWQ-94-21A	1/24/1998				
	GWQ-94-21A	2/1/1998				
	GWQ-94-21A	3/1/1998				
	GWQ-94-21A	4/14/1998				
	GWQ-94-21A	5/1/1998				
	GWQ-94-21A	6/1/1998				

Thallium	Well Name	Sample Dat	Zinc	Temp (C)	Tin	Vanadium
33.2	GWQ-94-21A	7/21/1998				
	GWQ-94-21A	8/1/1998				
	GWQ-94-21A	9/1/1998				
-0.005	GWQ-94-21B	11/13/1994	-0.05			
-0.001	GWQ-94-21B	6/30/1996	-0.05			
-0.001	GWQ-96-22A	7/13/1996	-0.05			
	GWQ-96-22A	2/5/1997				
	GWQ-96-22A	4/1/1997				
	GWQ-96-22A	8/1/1997				
-0.001	GWQ-96-22A	8/8/1997	-0.05			
	GWQ-96-22A	10/1/1997				
	GWQ-96-22A	1/24/1998				
	GWQ-96-22A	2/1/1998				
	GWQ-96-22A	3/1/1998				
	GWQ-96-22A	4/14/1998				
	GWQ-96-22A	5/1/1998				
	GWQ-96-22A	6/1/1998				
	GWQ-96-22A	7/21/1998				
	GWQ-96-22A	8/1/1998				
	GWQ-96-22A	9/1/1998				
	GWQ-96-22A	10/15/1998				
-0.001	GWQ-96-22B	7/13/1996	-0.05			
	GWQ-96-22B	2/5/1997				
-0.001	GWQ-96-23A	7/14/1996	-0.05			
	GWQ-96-23A	2/5/1997				
	GWQ-96-23A	4/1/1997				
	GWQ-96-23A	4/1/1997				
	GWQ-96-23A	8/1/1997				
-0.001	GWQ-96-23A	8/8/1997	-0.05			
	GWQ-96-23A	1/24/1998				
	GWQ-96-23A	2/1/1998				
	GWQ-96-23A	3/1/1998				
	GWQ-96-23A	4/14/1998				
	GWQ-96-23A	5/1/1998				
	GWQ-96-23A	6/1/1998				
	GWQ-96-23A	7/21/1998				

Thallium	Well Name	Sample Dat	Zinc	Temp (C)	Tin	Vanadium
	GWQ-96-23A	8/1/1998				
	GWQ-96-23A	9/1/1998				
	GWQ-96-23A	10/15/1998				
-0.001	GWQ-96-23B	7/14/1996	-0.05			
	GWQ-96-23B	2/5/1997				
	GWQ-96-23B	4/1/1997				
	GWQ-96-23B	4/1/1997				
	Hansen	1/1/1998				
	Hansen	2/1/1998				
	Hansen	3/1/1998				
	Hansen	4/1/1998				
	Hansen	5/1/1998				
	Hansen	6/1/1998				
	Hansen	7/22/1998				
	Hansen	8/1/1998				
	Hansen	9/1/1998				
-0.005	Highway	5/27/1994	-0.05			
	Highway	4/14/1998				
	Hill	7/13/1947				
	Humphries-Deep	10/1/1997				
	Humphries-Deep	1/23/1998				
	Humphries-Deep	2/1/1998				
	Humphries-Deep	3/1/1998				
	Humphries-Deep	4/15/1998				

Well Name	Water Depth	USGS Quad	Well Depth		Sample ID	Date	Sampler	Notes
Humphries.Deep				-6	Humphries.Deep-6	5/1/1998		
Humphries-Deep				-7	Humphries-Deep-7	6/1/1998		
Humphries-Deep				-8	Humphries-Deep-8	7/22/1998	Brownfield	
Humphries-Deep				-9	Humphries-Deep-9	8/1/1998		
Humphries-Deep				-10	Humphries-Deep-10	9/1/1998		
Humphries-Deep				-11	Humphries-Deep-11	10/15/1998	Goff	
Humphries-Shallow				-1	Humphries-Shallow-1	1/23/1998	Goff	
Humphries-Shallow				-2	Humphries-Shallow-2	2/1/1998		
Humphries-Shallow				-3	Humphries-Shallow-3	3/1/1998		
Humphries-Shallow				-4	Humphries-Shallow-4	4/15/1998	Goff	
Humphries-Shallow				-5	Humphries-Shallow-5	5/1/1998		
Humphries-Shallow				-6	Humphries-Shallow-6	6/1/1998		
Humphries-Shallow				-7	Humphries-Shallow-7	7/22/1998	Brownfield	
Humphries-Shallow				-8	Humphries-Shallow-8	8/1/1998		
Humphries-Shallow				-9	Humphries-Shallow-9	9/1/1998		
IW-1		Skute Stone Arroyo		-1	IW-1-1	3/4/1987	EID	
IW-1		Skute Stone Arroyo		-2	IW-1-2	7/19/1997	GE	lab pH
IW-1		Skute Stone Arroyo		-3	IW-1-3	8/29/1991	Irwin	lab pH
IW-1		Skute Stone Arroyo		-4	IW-1-4	11/26/1991	Hood	lab pH
IW-1		Skute Stone Arroyo		-5	IW-1-5	3/15/1992	Irwin	lab pH
IW-1		Skute Stone Arroyo		-6	IW-1-6	5/25/1992	Irwin	lab pH
IW-1		Skute Stone Arroyo		-7	IW-1-7	7/16/1992	Irwin	lab pH
IW-1		Skute Stone Arroyo		-8	IW-1-8	10/18/1992	Irwin	lab pH
IW-1		Skute Stone Arroyo		-9	IW-1-9	11/27/1992	Hood	lab pH
IW-1		Skute Stone Arroyo		-10	IW-1-10	12/15/1992	Irwin	lab pH
IW-1		Skute Stone Arroyo		-11	IW-1-11	9/28/1993	Irwin	lab pH
IW-1		Skute Stone Arroyo		-12	IW-1-12	3/17/1994	Irwin	lab pH
IW-1		Skute Stone Arroyo		-13	IW-1-13	5/24/1994	SRK	Mislabeled NP-3A
IW-1		Skute Stone Arroyo		-14	IW-1-14	6/23/1994	Irwin	lab pH
IW-1		Skute Stone Arroyo		-15	IW-1-15	7/22/1994	SRK	
IW-1		Skute Stone Arroyo		-16	IW-1-16	9/22/1994	Irwin	lab pH
IW-1		Skute Stone Arroyo		-17	IW-1-17	1/29/1995	Irwin	lab pH
IW-1		Skute Stone Arroyo		-18	IW-1-18	3/29/1995	Irwin	lab pH
IW-1		Skute Stone Arroyo		-19	IW-1-19	6/27/1995	Irwin	lab pH
IW-1		Skute Stone Arroyo		-20	IW-1-20	9/21/1995	Irwin	lab pH
IW-1		Skute Stone Arroyo		-21	IW-1-21	1/10/1996	Irwin	lab pH

Well Name	Water Depth	USGS Quad	Well Depth	Sample ID	Date	Sampler	Notes
IW-1		Skute Stone Arroyo	-22	IW-1-22	4/1/1996		
IW-1		Skute Stone Arroyo	-23	IW-1-23	6/1/1996		
IW-1		Skute Stone Arroyo	-24	IW-1-24	9/25/1996	Irwin	lab pH
IW-1		Skute Stone Arroyo	-25	IW-1-25	1/15/1997	Irwin	lab pH
IW-1		Skute Stone Arroyo	-26	IW-1-26	7/1/1997		
IW-1		Skute Stone Arroyo	-27	IW-1-27	10/1/1997		
IW-1		Skute Stone Arroyo	-28	IW-1-28	1/15/1998	Irwin	
IW-1		Skute Stone Arroyo	-29	IW-1-29	4/9/1998	Irwin	
IW-1		Skute Stone Arroyo	-30	IW-1-30	7/13/1998	Irwin	
IW-2		Skute Stone Arroyo	-1	IW-2-1	9/2/1982	EID	
IW-2		Skute Stone Arroyo	-2	IW-2-2	5/25/1994	SRK	Mislabeled NP-3B
IW-2		Skute Stone Arroyo	-3	IW-2-3	7/22/1994	SRK	
IW-3		Skute Stone Arroyo	-1	IW-3-1	9/2/1982	EID	
IW-3		Skute Stone Arroyo	-2	IW-3-2	2/25/1993	Irwin	lab pH
IW-3		Skute Stone Arroyo	-3	IW-3-3	5/26/1994	SRK	Significant sediment
IW-3		Skute Stone Arroyo	-4	IW-3-4	7/23/1994	SRK	
IW-3		Skute Stone Arroyo	-5	IW-3-5	4/3/1996	Irwin	lab pH
Ladder-Higgins			-1	Ladder-Higgins-1	8/2/1994	SRK	
McGarvey-Greyback		Skute Stone Arroyo	-1	McGarvey-Greyback-1	3/31/1993	JWS	
McGarvey-Greyback		Skute Stone Arroyo	-2	McGarvey-Greyback-2	10/1/1997		
McGarvey-Greyback		Skute Stone Arroyo	-3	McGarvey-Greyback-3	1/24/1998	Goff	
McGarvey-Greyback		Skute Stone Arroyo	-4	McGarvey-Greyback-4	2/1/1998		
McGarvey-Greyback		Skute Stone Arroyo	-5	McGarvey-Greyback-5	3/1/1998		
McGarvey-Greyback		Skute Stone Arroyo	-6	McGarvey-Greyback-6	4/15/1998	Goff	
McGarvey-Greyback		Skute Stone Arroyo	-7	McGarvey-Greyback-7	5/1/1998		
McGarvey-Greyback		Skute Stone Arroyo	-8	McGarvey-Greyback-8	6/1/1998		
McGarvey-Greyback		Skute Stone Arroyo	-9	McGarvey-Greyback-9	7/21/1998	Brownfield	
McGarvey-Greyback		Skute Stone Arroyo	-10	McGarvey-Greyback-1	8/1/1998		
McGarvey-Greyback		Skute Stone Arroyo	-11	McGarvey-Greyback-1	9/1/1998		
McGarvey-Greyback		Skute Stone Arroyo	-12	McGarvey-Greyback-1	10/15/1998	Goff	
Miranda			-1	Miranda-1	7/31/1947		
MW-1		Skute Stone Arroyo	-1	MW-1-1	1/1/1975		
MW-10			-1	MW-10-1	11/16/1994	SRK	
MW-10	67.08		-2	MW-10-2	1/23/1998	Goff	
MW-10	66.91		-3	MW-10-3	2/1/1998		
MW-10	66.82		-4	MW-10-4	3/1/1998		

Well Name	Water Depth	USGS Quad	Well Depth		Sample ID	Date	Sampler	Notes
MW-10	66.94			-5	MW-10-5	4/15/1998	Goff	
MW-10	66.19			-6	MW-10-6	5/1/1998		
MW-10	66.54			-7	MW-10-7	6/1/1998		
MW-10	66.98			-8	MW-10-8	7/22/1998	Brownfield	
MW-10	67.02			-9	MW-10-9	8/1/1998		
MW-10	66.92			-10	MW-10-10	9/1/1998		
MW-11				-1	MW-11-1	11/16/1994	SRK	
MW-11				-2	MW-11-2	4/1/1997		
MW-11				-3	MW-11-3	4/1/1997		
MW-11				-4	MW-11-4	8/1/1997		
MW-11				-5	MW-11-5	10/1/1997		
MW-11	5.9			-6	MW-11-6	1/24/1998	Goff	
MW-11	5.61			-7	MW-11-7	2/1/1998		
MW-11	5.52			-8	MW-11-8	3/1/1998		
MW-11	5.43			-9	MW-11-9	4/15/1998	Goff	
MW-11	6.32			-10	MW-11-10	5/1/1998		
MW-11	6.76			-11	MW-11-11	6/1/1998		
MW-11	7.61			-12	MW-11-12	7/22/1998	Brownfield	
MW-11	6.21			-13	MW-11-13	8/1/1998		
MW-11	6.84			-14	MW-11-14	9/1/1998	Goff	
MW-11				-15	MW-11-15	10/15/1998		
MW-2		Skute Stone Arroyo		-1	MW-2-1	5/7/1975		
MW-2		Skute Stone Arroyo		-2	MW-2-2	7/20/1994	SRK	
MW-3				-1	MW-3-1	10/15/1998	Goff	
MW-4		Skute Stone Arroyo		-1	MW-4-1	6/13/1975		
MW-4	122.87	Skute Stone Arroyo		-2	MW-4-2	6/9/1981	SHB	
MW-4		Skute Stone Arroyo		-3	MW-4-3	7/20/1994	SRK	
MW-4		Skute Stone Arroyo		-4	MW-4-4	4/1/1997		
MW-4		Skute Stone Arroyo		-5	MW-4-5	4/1/1997		
MW-4		Skute Stone Arroyo		-6	MW-4-6	8/1/1997		
MW-4	79.92	Skute Stone Arroyo		-7	MW-4-7	1/24/1998	Goff	
MW-4	80	Skute Stone Arroyo		-8	MW-4-8	2/1/1998		
MW-4	80.1	Skute Stone Arroyo		-9	MW-4-9	3/1/1998		
MW-4	80.43	Skute Stone Arroyo		-10	MW-4-10	4/14/1998	Goff	
MW-4	80.5	Skute Stone Arroyo		-11	MW-4-11	5/1/1998		
MW-4	80.68	Skute Stone Arroyo		-12	MW-4-12	6/1/1998		

Well Name	Water Depth	USGS Quad	Well Depth	Sample ID	Date	Sampler	Notes
MW-4	80.86	Skute Stone Arroyo	-13	MW-4-13	7/21/1998	Brownfield	
MW-4	81.19	Skute Stone Arroyo	-14	MW-4-14	8/1/1998		
MW-4	81.21	Skute Stone Arroyo	-15	MW-4-15	9/1/1998		
MW-5		Skute Stone Arroyo	-1	MW-5-1	9/19/1975		
MW-5		Skute Stone Arroyo	-2	MW-5-2	7/20/1994	SRK	
MW-5	325.04	Skute Stone Arroyo	-3	MW-5-3	1/1/1998		
MW-5	324.74	Skute Stone Arroyo	-4	MW-5-4	2/1/1998		
MW-5	324.11	Skute Stone Arroyo	-5	MW-5-5	3/1/1998		
MW-5	324.27	Skute Stone Arroyo	-6	MW-5-6	4/1/1998		
MW-5	325.08	Skute Stone Arroyo	-7	MW-5-7	5/1/1998		
MW-5	325.2	Skute Stone Arroyo	-8	MW-5-8	6/1/1998		
MW-5	327.88	Skute Stone Arroyo	-9	MW-5-9	7/1/1998		
MW-5	325.42	Skute Stone Arroyo	-10	MW-5-10	8/1/1998		
MW-5	327.87	Skute Stone Arroyo	-11	MW-5-11	9/1/1998		
MW-6		Skute Stone Arroyo	-1	MW-6-1	1/1/1975		
MW-6		Skute Stone Arroyo	-2	MW-6-2	8/2/1994	SRK	
MW-6		Skute Stone Arroyo	-3	MW-6-3	4/1/1997		
MW-6		Skute Stone Arroyo	-4	MW-6-4	8/1/1997		
MW-6		Skute Stone Arroyo	-5	MW-6-5	4/14/1998	Goff	
MW-6		Skute Stone Arroyo	-6	MW-6-6	7/21/1998	Brownfield	
MW-8		Skute Stone Arroyo	-1	MW-8-1	1/1/1975		
MW-8		Skute Stone Arroyo	-2	MW-8-2	7/21/1994	SRK	
MW-8	353.87	Skute Stone Arroyo	-3	MW-8-3	1/1/1998		
MW-8	353.77	Skute Stone Arroyo	-4	MW-8-4	2/1/1998		

Well Name	Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride	Sulfate
Humphries.Deep	5/1/1998									
Humphries-Deep	6/1/1998									
Humphries-Deep	7/22/1998							TRUE	18.2	19
Humphries-Deep	8/1/1998									
Humphries-Deep	9/1/1998									
Humphries-Deep	10/15/1998							TRUE	19.4	19
Humphries-Shallow	1/23/1998							TRUE	18	18
Humphries-Shallow	2/1/1998									
Humphries-Shallow	3/1/1998									
Humphries-Shallow	4/15/1998							TRUE	12.4	17
Humphries-Shallow	5/1/1998									
Humphries-Shallow	6/1/1998									
Humphries-Shallow	7/22/1998							TRUE	13.8	19
Humphries-Shallow	8/1/1998									
Humphries-Shallow	9/1/1998									
IW-1	3/4/1987	32.96120	107.49678	266624	3649563	13	5186	TRUE	575	1901
IW-1	7/19/1997	32.96120	107.49678	266624	3649563	13	5186	TRUE	632.6	1985
IW-1	8/29/1991	32.96120	107.49678	266624	3649563	13	5186	FALSE	642.4	1917.9
IW-1	11/26/1991	32.96120	107.49678	266624	3649563	13	5186	FALSE	615.1	1634
IW-1	3/15/1992	32.96120	107.49678	266624	3649563	13	5186	FALSE	598.2	2203
IW-1	5/25/1992	32.96120	107.49678	266624	3649563	13	5186	FALSE	598.2	2203
IW-1	7/16/1992	32.96120	107.49678	266624	3649563	13	5186	FALSE	584.6	1775
IW-1	10/18/1992	32.96120	107.49678	266624	3649563	13	5186	FALSE	616.9	1726.8
IW-1	11/27/1992	32.96120	107.49678	266624	3649563	13	5186	FALSE	604.8	1716.6
IW-1	12/15/1992	32.96120	107.49678	266624	3649563	13	5186	FALSE	608.9	1414.6
IW-1	9/28/1993	32.96120	107.49678	266624	3649563	13	5186	FALSE	521.1	1150
IW-1	3/17/1994	32.96120	107.49678	266624	3649563	13	5186	FALSE	404.8	1569
IW-1	5/24/1994	32.96120	107.49678	266624	3649563	13	5186	FALSE	470	1500
IW-1	6/23/1994	32.96120	107.49678	266624	3649563	13	5186	FALSE	473.8	1444
IW-1	7/22/1994	32.96120	107.49678	266624	3649563	13	5186	TRUE	431	1480
IW-1	9/22/1994	32.96120	107.49678	266624	3649563	13	5186	FALSE	195.5	707.1
IW-1	1/29/1995	32.96120	107.49678	266624	3649563	13	5186	FALSE	663	1478.5
IW-1	3/29/1995	32.96120	107.49678	266624	3649563	13	5186	FALSE	419.4	1350.7
IW-1	6/27/1995	32.96120	107.49678	266624	3649563	13	5186	FALSE	446.1	1680.1
IW-1	9/21/1995	32.96120	107.49678	266624	3649563	13	5186	FALSE	458.7	1710.8
IW-1	1/10/1996	32.96120	107.49678	266624	3649563	13	5186	FALSE	442.2	1595.5

Well Name	Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride	Sulfate
IW-1	4/1/1996	32.96120	107.49678	266624	3649563	13	5186		432.6	1566
IW-1	6/1/1996	32.96120	107.49678	266624	3649563	13	5186		426.8	1369.6
IW-1	9/25/1996	32.96120	107.49678	266624	3649563	13	5186	TRUE	568	1493
IW-1	1/15/1997	32.96120	107.49678	266624	3649563	13	5186	TRUE	410	1694.5
IW-1	7/1/1997	32.96120	107.49678	266624	3649563	13	5186	TRUE	375	2185
IW-1	10/1/1997	32.96120	107.49678	266624	3649563	13	5186	TRUE	400	1709
IW-1	1/15/1998	32.96120	107.49678	266624	3649563	13	5186	TRUE	385	1791
IW-1	4/9/1998	32.96120	107.49678	266624	3649563	13	5186	TRUE	373	1865
IW-1	7/13/1998	32.96120	107.49678	266624	3649563	13	5186	TRUE	383	1954
IW-2	9/2/1982	32.96214	107.49682	266622	3649667	13	5195	TRUE	409.07	2252
IW-2	5/25/1994	32.96214	107.49682	266622	3649667	13	5195	FALSE	340	1000
IW-2	7/22/1994	32.96214	107.49682	266622	3649667	13	5195	TRUE	380	1040
IW-3	9/2/1982	32.96313	107.49684	266623	3649776	13	5200	TRUE	159.12	707.3
IW-3	2/25/1993	32.96313	107.49684	266623	3649776	13	5200	FALSE	589.5	1738.9
IW-3	5/26/1994	32.96313	107.49684	266623	3649776	13	5200	FALSE	209	415
IW-3	7/23/1994	32.96313	107.49684	266623	3649776	13	5200	TRUE	206	437
IW-3	4/3/1996	32.96313	107.49684	266623	3649776	13	5200	FALSE	432.6	1566.3
Ladder-Higgins	8/2/1994							TRUE	48	22
McGarvey-Greyback	3/31/1993	32.96882	107.49714	266610	3650408	13	5195	TRUE	30	207
McGarvey-Greyback	10/1/1997	32.96882	107.49714	266610	3650408	13	5195	TRUE	47.2	14.3
McGarvey-Greyback	1/24/1998	32.96882	107.49714	266610	3650408	13	5195	TRUE	51.9	3
McGarvey-Greyback	2/1/1998	32.96882	107.49714	266610	3650408	13	5195			
McGarvey-Greyback	3/1/1998	32.96882	107.49714	266610	3650408	13	5195			
McGarvey-Greyback	4/15/1998	32.96882	107.49714	266610	3650408	13	5195	TRUE	50.5	2
McGarvey-Greyback	5/1/1998	32.96882	107.49714	266610	3650408	13	5195			
McGarvey-Greyback	6/1/1998	32.96882	107.49714	266610	3650408	13	5195			
McGarvey-Greyback	7/21/1998	32.96882	107.49714	266610	3650408	13	5195	TRUE	51	3
McGarvey-Greyback	8/1/1998	32.96882	107.49714	266610	3650408	13	5195			
McGarvey-Greyback	9/1/1998	32.96882	107.49714	266610	3650408	13	5195			
McGarvey-Greyback	10/15/1998	32.96882	107.49714	266610	3650408	13	5195	TRUE	47.2	14.3
Miranda	7/31/1947							FALSE	380	64
MW-1	1/1/1975	32.93787	107.46704	269344	3646910	13	4995	FALSE	10	73
MW-10	11/16/1994	32.97845	107.38743	276891	3651238	13	4443	TRUE	14	25
MW-10	1/23/1998	32.97845	107.38743	276891	3651238	13	4443	TRUE	18	19
MW-10	2/1/1998	32.97845	107.38743	276891	3651238	13	4443			
MW-10	3/1/1998	32.97845	107.38743	276891	3651238	13	4443			

Well Name	Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride	Sulfate
MW-10	4/15/1998	32.97845	107.38743	276891	3651238	13	4443	TRUE	18.1	19
MW-10	5/1/1998	32.97845	107.38743	276891	3651238	13	4443			
MW-10	6/1/1998	32.97845	107.38743	276891	3651238	13	4443			
MW-10	7/22/1998	32.97845	107.38743	276891	3651238	13	4443	TRUE	14.83	12
MW-10	8/1/1998	32.97845	107.38743	276891	3651238	13	4443			
MW-10	9/1/1998	32.97845	107.38743	276891	3651238	13	4443			
MW-11	11/16/1994	32.97832	107.38747	276886	3651224	13	4443	TRUE	15	21
MW-11	4/1/1997	32.97832	107.38747	276886	3651224	13	4443	TRUE	18	16
MW-11	4/1/1997	32.97832	107.38747	276886	3651224	13	4443	TRUE	20.2	24
MW-11	8/1/1997	32.97832	107.38747	276886	3651224	13	4443	TRUE	19.9	
MW-11	10/1/1997	32.97832	107.38747	276886	3651224	13	4443	TRUE	17.8	21.6
MW-11	1/24/1998	32.97832	107.38747	276886	3651224	13	4443	TRUE	18.5	19
MW-11	2/1/1998	32.97832	107.38747	276886	3651224	13	4443			
MW-11	3/1/1998	32.97832	107.38747	276886	3651224	13	4443			
MW-11	4/15/1998	32.97832	107.38747	276886	3651224	13	4443	TRUE	17.9	19
MW-11	5/1/1998	32.97832	107.38747	276886	3651224	13	4443			
MW-11	6/1/1998	32.97832	107.38747	276886	3651224	13	4443			
MW-11	7/22/1998	32.97832	107.38747	276886	3651224	13	4443	TRUE	14.5	17
MW-11	8/1/1998	32.97832	107.38747	276886	3651224	13	4443			
MW-11	9/1/1998	32.97832	107.38747	276886	3651224	13	4443			
MW-11	10/15/1998	32.97832	107.38747	276886	3651224	13	4443	TRUE	17.8	21.6
MW-2	5/7/1975	32.92415	107.46436	269558	3645382	13	4980	FALSE	8	40
MW-2	7/20/1994	32.92415	107.46436	269558	3645382	13	4980	TRUE	5.5	18
MW-3	10/15/1998	32.92415	107.46436	269558	3645382	13	4980	TRUE	17	50.2
MW-4	6/13/1975	32.95405	107.48797	267429	3648750	13	5135	FALSE	15	110
MW-4	6/9/1981	32.95405	107.48797	267429	3648750	13	5135	TRUE		
MW-4	7/20/1994	32.95405	107.48797	267429	3648750	13	5135	TRUE	17	66
MW-4	4/1/1997	32.95405	107.48797	267429	3648750	13	5135	TRUE	20	62
MW-4	4/1/1997	32.95405	107.48797	267429	3648750	13	5135	TRUE	17	47
MW-4	8/1/1997	32.95405	107.48797	267429	3648750	13	5135	TRUE	20	
MW-4	1/24/1998	32.95405	107.48797	267429	3648750	13	5135	TRUE	20.1	48
MW-4	2/1/1998	32.95405	107.48797	267429	3648750	13	5135			
MW-4	3/1/1998	32.95405	107.48797	267429	3648750	13	5135			
MW-4	4/14/1998	32.95405	107.48797	267429	3648750	13	5135	TRUE	20.3	48
MW-4	5/1/1998	32.95405	107.48797	267429	3648750	13	5135			
MW-4	6/1/1998	32.95405	107.48797	267429	3648750	13	5135			

Well Name	Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride	Sulfate
MW-4	7/21/1998	32.95405	107.48797	267429	3648750	13	5135	TRUE	20.3	46
MW-4	8/1/1998	32.95405	107.48797	267429	3648750	13	5135			
MW-4	9/1/1998	32.95405	107.48797	267429	3648750	13	5135			
MW-5	9/19/1975	32.97023	107.38902	276722	3650330	13	4700	FALSE	30	26
MW-5	7/20/1994	32.97023	107.38902	276722	3650330	13	4700	TRUE	17	24
MW-5	1/1/1998	32.97023	107.38902	276722	3650330	13	4700			
MW-5	2/1/1998	32.97023	107.38902	276722	3650330	13	4700			
MW-5	3/1/1998	32.97023	107.38902	276722	3650330	13	4700			
MW-5	4/1/1998	32.97023	107.38902	276722	3650330	13	4700			
MW-5	5/1/1998	32.97023	107.38902	276722	3650330	13	4700			
MW-5	6/1/1998	32.97023	107.38902	276722	3650330	13	4700			
MW-5	7/1/1998	32.97023	107.38902	276722	3650330	13	4700			
MW-5	8/1/1998	32.97023	107.38902	276722	3650330	13	4700			
MW-5	9/1/1998	32.97023	107.38902	276722	3650330	13	4700			
MW-6	1/1/1975	32.97312	107.40611	275132	3650687	13	4756	FALSE	66	38
MW-6	8/2/1994	32.97312	107.40611	275132	3650687	13	4756	TRUE	75	45
MW-6	4/1/1997	32.97312	107.40611	275132	3650687	13	4756	TRUE	71.4	62
MW-6	8/1/1997	32.97312	107.40611	275132	3650687	13	4756	TRUE	75.7	
MW-6	4/14/1998	32.97312	107.40611	275132	3650687	13	4756	TRUE	75.6	47
MW-6	7/21/1998	32.97312	107.40611	275132	3650687	13	4756	TRUE	78	49
MW-8	1/1/1975	32.96885	107.46111	269979	3650332	13	5012	FALSE	10	21
MW-8	7/21/1994	32.96885	107.46111	269979	3650332	13	5012	TRUE	6.6	18
MW-8	1/1/1998	32.96885	107.46111	269979	3650332	13	5012			
MW-8	2/1/1998	32.96885	107.46111	269979	3650332	13	5012			

Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
Humphries.Deep	5/1/1998										
Humphries-Deep	6/1/1998										
Humphries-Deep	7/22/1998		278				0.2	0.12			
Humphries-Deep	8/1/1998										
Humphries-Deep	9/1/1998										
Humphries-Deep	10/15/1998	8.05	259			544	0	-0.05			
Humphries-Shallow	1/23/1998	7.11	269		238.5	493	0.48				
Humphries-Shallow	2/1/1998										
Humphries-Shallow	3/1/1998										
Humphries-Shallow	4/15/1998	7.54	231			395	0.55	-0.05			
Humphries-Shallow	5/1/1998										
Humphries-Shallow	6/1/1998										
Humphries-Shallow	7/22/1998		262				0.56	-0.05			
Humphries-Shallow	8/1/1998										
Humphries-Shallow	9/1/1998										
IW-1	3/4/1987	6.6	3802		193	3950					
IW-1	7/19/1997	7.87	4235	182	222.1	6460	0.69	9.06			-0.002
IW-1	8/29/1991	7.13	4120								
IW-1	11/26/1991	7.53	3979								
IW-1	3/15/1992	7.09	4155								
IW-1	5/25/1992	7.09	4155								
IW-1	7/16/1992	7.12	4297								
IW-1	10/18/1992	6.96	3996								
IW-1	11/27/1992	7.71	4004								
IW-1	12/15/1992	7.4	3969								
IW-1	9/28/1993	7.12	3661								
IW-1	3/17/1994	7	3684								
IW-1	5/24/1994	7.84	3500		248	3920	0.7	5.8	0.94	-0.005	-0.005
IW-1	6/23/1994	7.69	3555								
IW-1	7/22/1994	7.51	3450		256	4100	0.72	5.9	-0.05	-0.005	-0.005
IW-1	9/22/1994	7.65	1691								
IW-1	1/29/1995	7.18	3395								
IW-1	3/29/1995	7.49	3465								
IW-1	6/27/1995	6.99	3599								
IW-1	9/21/1995	6.82	34.87								
IW-1	1/10/1996	7.32	3437								

Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
IW-1	4/1/1996	7.04	3364								
IW-1	6/1/1996	7.17	3570								
IW-1	9/25/1996	7.17	3551								
IW-1	1/15/1997	7.44	35.97								
IW-1	7/1/1997	6.92	3604								
IW-1	10/1/1997	6.95	3576								
IW-1	1/15/1998	7.38	3529			5000	0.72	5.1			
IW-1	4/9/1998		3554			3760	0.74	5.1			
IW-1	7/13/1998		3558			3800	0.77	4.1			
IW-2	9/2/1982	7.3	4010		185	4250	1.22	1.38			
IW-2	5/25/1994	7.75	2400		534	2890	0.66	1.5	22	-0.005	-0.005
IW-2	7/22/1994	7.78	2390		300	3400	0.69	-0.1	-0.05	-0.005	-0.005
IW-3	9/2/1982	7.2	1562		179	1700	0.42	4.12			
IW-3	2/25/1993	7.27	3892								
IW-3	5/26/1994	7.83	1870		341	1790	0.47	5.7	32	-0.005	-0.005
IW-3	7/23/1994	7.76	1300		255	1860	0.48	5	-0.05	0.0055	-0.005
IW-3	4/3/1996	7.04	3364								
Ladder-Higgins	8/2/1994	8.01	286		137	450	1.9	-0.1	-0.05	-0.0082	-0.005
McGarvey-Greyback	3/31/1993	7.8	632		302	927	0.51	3	-0.1		-0.005
McGarvey-Greyback	10/1/1997	7.98	156					0.08			
McGarvey-Greyback	1/24/1998	9.22	166		101.3	385	1.23				
McGarvey-Greyback	2/1/1998										
McGarvey-Greyback	3/1/1998										
McGarvey-Greyback	4/15/1998	9.22	144			414	1.29	-0.05			
McGarvey-Greyback	5/1/1998										
McGarvey-Greyback	6/1/1998										
McGarvey-Greyback	7/21/1998		158				1.19	-0.05			
McGarvey-Greyback	8/1/1998										
McGarvey-Greyback	9/1/1998										
McGarvey-Greyback	10/15/1998	7.89	156			434		0.08			
Miranda	7/31/1947		823		117	1490	0.2	4.2			
MW-1	1/1/1975	8.1	433		215	480	0.7	6.1			
MW-10	11/16/1994	7.84	310		262	473	0.43	-1	-0.05	-0.005	-0.005
MW-10	1/23/1998	7.08	294		248.3	540	0.51				
MW-10	2/1/1998										
MW-10	3/1/1998										

Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
MW-10	4/15/1998	7.26	287			482	0.53	-0.05			
MW-10	5/1/1998										
MW-10	6/1/1998										
MW-10	7/22/1998		235				0.5	-0.05			
MW-10	8/1/1998										
MW-10	9/1/1998										
MW-11	11/16/1994	7.79	314		263	480	0.45	-1	-0.05	-0.005	-0.005
MW-11	4/1/1997		290				0.41				
MW-11	4/1/1997		275				0.6				
MW-11	8/1/1997	7.03	305				0.51				
MW-11	10/1/1997	7.94	286					-0.05			
MW-11	1/24/1998	6.94	288		245.8	520	0.56				
MW-11	2/1/1998										
MW-11	3/1/1998										
MW-11	4/15/1998	7.21	281			482	0.54	-0.05			
MW-11	5/1/1998										
MW-11	6/1/1998										
MW-11	7/22/1998		240				0.49	-0.05			
MW-11	8/1/1998										
MW-11	9/1/1998										
MW-11	10/15/1998	7.94	286			529		-0.05			
MW-2	5/7/1975	7.9	327		209	400	2.3				
MW-2	7/20/1994	9	254		149	347	3.1	-0.1	-0.05	-0.005	0.019
MW-3	10/15/1998	8.73	212			487		-0.05			
MW-4	6/13/1975	7.9			226	620	0.63				
MW-4	6/9/1981										
MW-4	7/20/1994	8.34	256		139	408	0.28	-1	-0.05	-0.005	-0.005
MW-4	4/1/1997		171				0.5				
MW-4	4/1/1997		200				0.29				
MW-4	8/1/1997	8.78	202				0.38				
MW-4	1/24/1998	8.76	208		141.5	431	0.37				
MW-4	2/1/1998										
MW-4	3/1/1998										
MW-4	4/14/1998	8.83	213			442	0.39	-0.05			
MW-4	5/1/1998										
MW-4	6/1/1998										

Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
MW-4	7/21/1998		220				0.43	-0.05			
MW-4	8/1/1998										
MW-4	9/1/1998										
MW-5	9/19/1975	7.7	260		157	390	0.61	-0.5			
MW-5	7/20/1994	7.97	440		274	507	0.18	-1	-0.05	-0.005	-0.005
MW-5	1/1/1998										
MW-5	2/1/1998										
MW-5	3/1/1998										
MW-5	4/1/1998										
MW-5	5/1/1998										
MW-5	6/1/1998										
MW-5	7/1/1998										
MW-5	8/1/1998										
MW-5	9/1/1998										
MW-6	1/1/1975	7.6	260		146	520	3.4	4.3			
MW-6	8/2/1994	8.09	436		154	626	1.6	-1	-0.05	0.01	0.013
MW-6	4/1/1997		417				6.9				
MW-6	8/1/1997	8.27	416				8				
MW-6	4/14/1998	8.4	431			667	9.2	0.97			
MW-6	7/21/1998		423				8.4	0.97			
MW-8	1/1/1975	7.7	293		222	440	0.86	15.4			
MW-8	7/21/1994	8.88	290		196	438	1	-1	-0.05	-0.005	0.012
MW-8	1/1/1998										
MW-8	2/1/1998										

Well Name	Date	Boron	Barium	Berrylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
Humphries.Deep	5/1/1998										
Humphries-Deep	6/1/1998										
Humphries-Deep	7/22/1998					64.1			-0.005	-0.05	
Humphries-Deep	8/1/1998										
Humphries-Deep	9/1/1998										
Humphries-Deep	10/15/1998								-0.005	0.17	
Humphries-Shallow	1/23/1998					59.9			-0.005		
Humphries-Shallow	2/1/1998										
Humphries-Shallow	3/1/1998										
Humphries-Shallow	4/15/1998					52.1			-0.005	-0.05	
Humphries-Shallow	5/1/1998										
Humphries-Shallow	6/1/1998										
Humphries-Shallow	7/22/1998					58.3			-0.005	-0.05	
Humphries-Shallow	8/1/1998										
Humphries-Shallow	9/1/1998										
IW-1	3/4/1987					564					
IW-1	7/19/1997		-0.01		-0.005	635.5	-0.02		-0.02	-0.05	-0.005
IW-1	8/29/1991										
IW-1	11/26/1991										
IW-1	3/15/1992										
IW-1	5/25/1992										
IW-1	7/16/1992										
IW-1	10/18/1992										
IW-1	11/27/1992										
IW-1	12/15/1992										
IW-1	9/28/1993										
IW-1	3/17/1994										
IW-1	5/24/1994		-0.1		-0.0005	550	-0.025		-0.025	1	-0.005
IW-1	6/23/1994										
IW-1	7/22/1994	0.1	-0.1	-0.002	-0.0005	570	-0.025	-0.05	-0.025	-0.05	-0.005
IW-1	9/22/1994										
IW-1	1/29/1995										
IW-1	3/29/1995										
IW-1	6/27/1995										
IW-1	9/21/1995										
IW-1	1/10/1996										

Well Name	Date	Boron	Barium	Berrylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
IW-1	4/1/1996										
IW-1	6/1/1996										
IW-1	9/25/1996										
IW-1	1/15/1997										
IW-1	7/1/1997										
IW-1	10/1/1997										
IW-1	1/15/1998								-0.005	-0.05	
IW-1	4/9/1998								-0.005	-0.2	
IW-1	7/13/1998								-0.005	-0.05	
IW-2	9/2/1982				-0.001	320					
IW-2	5/25/1994		0.12		-0.0005	430	0.046		-0.025	16	0.0073
IW-2	7/22/1994	0.15	-0.1	-0.002	-0.0005	390	-0.025	-0.05	-0.025	-0.05	-0.005
IW-3	9/2/1982			0	-0.001	233.6					
IW-3	2/25/1993										
IW-3	5/26/1994		0.2		-0.0005	240	0.059		6	22	0.077
IW-3	7/23/1994	-0.1	-0.1	-0.002	-0.0005	200	-0.025	-0.05	0.058	-0.05	-0.005
IW-3	4/3/1996	0	0	0							
Ladder-Higgins	8/2/1994	0.11	-0.1	-0.002	-0.0005	51	-0.025	-0.05	-0.025	-0.05	-0.005
McGarvey-Greyback	3/31/1993	-0.04	-0.5	0	-0.0002	97	-0.02	-0.05	-0.01	0.05	-0.02
McGarvey-Greyback	10/1/1997	-0.005	0.43						-0.005	0.43	
McGarvey-Greyback	1/24/1998					4.5			-0.005		
McGarvey-Greyback	2/1/1998										
McGarvey-Greyback	3/1/1998										
McGarvey-Greyback	4/15/1998					2.8			-0.005	0.24	
McGarvey-Greyback	5/1/1998										
McGarvey-Greyback	6/1/1998										
McGarvey-Greyback	7/21/1998					5			-0.005	0.35	
McGarvey-Greyback	8/1/1998										
McGarvey-Greyback	9/1/1998										
McGarvey-Greyback	10/15/1998								-0.005	0.43	
Miranda	7/31/1947					126					
MW-1	1/1/1975					28					
MW-10	11/16/1994	-0.1	-0.1	-0.002	-0.0005	59	-0.025	-0.05	-0.025	-0.05	-0.005
MW-10	1/23/1998					54.3			-0.005		
MW-10	2/1/1998										
MW-10	3/1/1998										

Well Name	Date	Boron	Barium	Berrylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
MW-10	4/15/1998					67.4			-0.005	-0.05	
MW-10	5/1/1998										
MW-10	6/1/1998										
MW-10	7/22/1998					57.7			-0.005	-0.05	
MW-10	8/1/1998										
MW-10	9/1/1998										
MW-11	11/16/1994	-0.1	-0.1	-0.002	-0.0005	63	-0.025	-0.05	-0.025	-0.05	-0.005
MW-11	4/1/1997								-0.025	-0.05	
MW-11	4/1/1997								-0.005	-0.05	
MW-11	8/1/1997										
MW-11	10/1/1997								0.09	-0.05	
MW-11	1/24/1998					64.1			-0.005		
MW-11	2/1/1998										
MW-11	3/1/1998										
MW-11	4/15/1998					65.8			-0.005	-0.05	
MW-11	5/1/1998										
MW-11	6/1/1998										
MW-11	7/22/1998					56			-0.005	-0.05	
MW-11	8/1/1998										
MW-11	9/1/1998										
MW-11	10/15/1998								0.09	-0.05	
MW-2	5/7/1975					9					
MW-2	7/20/1994	0.16	-0.1	-0.002	-0.0005	2.5	-0.025	-0.05	-0.025	0.069	-0.005
MW-3	10/15/1998								-0.005	1.68	
MW-4	6/13/1975					46					
MW-4	6/9/1981										
MW-4	7/20/1994	-0.1	-0.1	-0.002	-0.0005	15	-0.025	-0.05	-0.025	-0.05	-0.005
MW-4	4/1/1997								-0.005	9.9	
MW-4	4/1/1997								-0.025	-0.05	
MW-4	8/1/1997										
MW-4	1/24/1998					11.7			-0.005		
MW-4	2/1/1998										
MW-4	3/1/1998										
MW-4	4/14/1998					11.5			-0.005	0.88	
MW-4	5/1/1998										
MW-4	6/1/1998										

Well Name	Date	Boron	Barium	Berrylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
MW-4	7/21/1998					11.6			-0.005	3.43	
MW-4	8/1/1998										
MW-4	9/1/1998										
MW-5	9/19/1975					26					
MW-5	7/20/1994	-0.1	-0.1	-0.002	-0.0005	71	-0.025	-0.05	-0.025	-0.05	-0.005
MW-5	1/1/1998										
MW-5	2/1/1998										
MW-5	3/1/1998										
MW-5	4/1/1998										
MW-5	5/1/1998										
MW-5	6/1/1998										
MW-5	7/1/1998										
MW-5	8/1/1998										
MW-5	9/1/1998										
MW-6	1/1/1975					19					
MW-6	8/2/1994	0.16	-0.1	-0.002	-0.0005	14	-0.025	-0.025	-0.025	0.41	-0.005
MW-6	4/1/1997								-0.005	0.45	
MW-6	8/1/1997										
MW-6	4/14/1998					13.5			-0.005	0.24	
MW-6	7/21/1998					14.3			-0.005	0.36	
MW-8	1/1/1975					34					
MW-8	7/21/1994	-0.1	-0.1	-0.002	-0.0005	4.8	-0.025	-0.05	-0.025	0.14	-0.005
MW-8	1/1/1998										
MW-8	2/1/1998										

Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium
Humphries.Deep	5/1/1998										
Humphries-Deep	6/1/1998										
Humphries-Deep	7/22/1998	10.2	-0.02	-0.0002	-0.05		1.5	-0.05		19.3	
Humphries-Deep	8/1/1998										
Humphries-Deep	9/1/1998										
Humphries-Deep	10/15/1998										
Humphries-Shallow	1/23/1998	8.5	-0.02				3.7			22.4	
Humphries-Shallow	2/1/1998										
Humphries-Shallow	3/1/1998										
Humphries-Shallow	4/15/1998	6.7	-0.02	-0.0002	-0.05		1.1	-0.05		19.5	
Humphries-Shallow	5/1/1998										
Humphries-Shallow	6/1/1998										
Humphries-Shallow	7/22/1998	7.1	-0.02	0.0005	-0.05		1	-0.05		19.6	
Humphries-Shallow	8/1/1998										
Humphries-Shallow	9/1/1998										
IW-1	3/4/1987						3.12			273.7	
IW-1	7/19/1997	181.6	-0.02	0.0005			7	0.015	-0.02	375	
IW-1	8/29/1991										
IW-1	11/26/1991										
IW-1	3/15/1992										
IW-1	5/25/1992										
IW-1	7/16/1992										
IW-1	10/18/1992										
IW-1	11/27/1992										
IW-1	12/15/1992										
IW-1	9/28/1993										
IW-1	3/17/1994										
IW-1	5/24/1994	170	-0.03	-0.001		-0.05	2.9	-0.005	-0.025	250	
IW-1	6/23/1994										
IW-1	7/22/1994	200	-0.03	-0.001	-0.05	-0.05	2.5	0.018	-0.025	280	0.0063
IW-1	9/22/1994										
IW-1	1/29/1995										
IW-1	3/29/1995										
IW-1	6/27/1995										
IW-1	9/21/1995										
IW-1	1/10/1996										

Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium
IW-1	4/1/1996										
IW-1	6/1/1996										
IW-1	9/25/1996										
IW-1	1/15/1997										
IW-1	7/1/1997										
IW-1	10/1/1997										
IW-1	1/15/1998	160.9		0.0004	-0.05						
IW-1	4/9/1998		-0.02	0.0003	-0.05			-0.05			
IW-1	7/13/1998		0.2	0.0008	-0.05			-0.05			
IW-2	9/2/1982	173.7	-0.05		-0.01		234	-0.005		720	
IW-2	5/25/1994	94	0.77	-0.001		0.097	3.2	-0.005	-0.025	290	
IW-2	7/22/1994	110	0.036	-0.001	-0.05	-0.05	1.3	0.014	-0.025	360	0.0073
IW-3	9/2/1982	42.1	-0.05		-0.01		3.51	-0.005		168	
IW-3	2/25/1993										
IW-3	5/26/1994	51	0.35	-0.001		0.19	4	-0.005	-0.025	69	
IW-3	7/23/1994	66	0.13	-0.001	0.062	-0.05	3.5	0.011	-0.025	89	-0.005
IW-3	4/3/1996										
Ladder-Higgins	8/2/1994	9	-0.03	-0.001	-0.05	-0.05	3	-0.005	-0.025	24	-0.005
McGarvey-Greyback	3/31/1993	24	-0.02	-0.001	-0.02	-0.01	2	-0.005	-0.01	78	
McGarvey-Greyback	10/1/1997										
McGarvey-Greyback	1/24/1998	1.6	-0.02				6			64.9	
McGarvey-Greyback	2/1/1998										
McGarvey-Greyback	3/1/1998										
McGarvey-Greyback	4/15/1998	0.7	-0.02	-0.0002	-0.05		2.3	-0.05		64.3	
McGarvey-Greyback	5/1/1998										
McGarvey-Greyback	6/1/1998										
McGarvey-Greyback	7/21/1998	1.1	-0.02	-0.0002	-0.05		4.4	-0.05		58	
McGarvey-Greyback	8/1/1998										
McGarvey-Greyback	9/1/1998										
McGarvey-Greyback	10/15/1998										
Miranda	7/31/1947	17									
MW-1	1/1/1975	1					10.6			85	
MW-10	11/16/1994	9.4	-0.03	-0.001	-0.05	-0.05	1.9	-0.005	-0.025	29	-0.005
MW-10	1/23/1998	11.1	-0.02				8.6			23.9	
MW-10	2/1/1998										
MW-10	3/1/1998										

Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium
MW-10	4/15/1998	8.3	-0.02	0.0002	-0.05		1.1	-0.05		22	
MW-10	5/1/1998										
MW-10	6/1/1998										
MW-10	7/22/1998	6.7	-0.02	-0.0002	-0.05		0.9	-0.05		18.3	
MW-10	8/1/1998										
MW-10	9/1/1998										
MW-11	11/16/1994	9.7	-0.03	-0.001	-0.05	-0.05	1.5	-0.005	-0.025	23	-0.005
MW-11	4/1/1997		-0.025								
MW-11	4/1/1997		-0.02	-0.002				-0.001			
MW-11	8/1/1997										
MW-11	10/1/1997										
MW-11	1/24/1998	9.2	-0.02				3.3			23.2	
MW-11	2/1/1998										
MW-11	3/1/1998										
MW-11	4/15/1998	8.1	-0.02	-0.0002	-0.05		0.9	-0.05		2.1	
MW-11	5/1/1998										
MW-11	6/1/1998										
MW-11	7/22/1998	6.6	-0.02	0.0006	-0.05		0.5	-0.05		18.1	
MW-11	8/1/1998										
MW-11	9/1/1998										
MW-11	10/15/1998										
MW-2	5/7/1975	0					5.3			89	
MW-2	7/20/1994	0.16	-0.03	-0.001	-0.05	-0.05	-1	-0.005	-0.025	79	-0.005
MW-3	10/15/1998										
MW-4	6/13/1975	10					4.4			73	
MW-4	6/9/1981										
MW-4	7/20/1994	13	-0.03	-0.001	-0.05	-0.05	3.4	-0.005	-0.025	56	-0.005
MW-4	4/1/1997		-0.02	-0.002				0.019			
MW-4	4/1/1997		-0.025								
MW-4	8/1/1997										
MW-4	1/24/1998	10.9	0.06				5.9			56.2	
MW-4	2/1/1998										
MW-4	3/1/1998										
MW-4	4/14/1998	10.5	-0.02	0.0003	-0.05		2.2	-0.05		54.8	
MW-4	5/1/1998										
MW-4	6/1/1998										

Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium
MW-4	7/21/1998	9.5	-0.02	-0.0002	-0.05		2.7	-0.05		51.3	
MW-4	8/1/1998										
MW-4	9/1/1998										
MW-5	9/19/1975	3					4.1			54	
MW-5	7/20/1994	11	-0.03	-0.001	-0.05	-0.05	3.6	-0.005	-0.025	33	-0.005
MW-5	1/1/1998										
MW-5	2/1/1998										
MW-5	3/1/1998										
MW-5	4/1/1998										
MW-5	5/1/1998										
MW-5	6/1/1998										
MW-5	7/1/1998										
MW-5	8/1/1998										
MW-5	9/1/1998										
MW-6	1/1/1975	1					7.3			90	
MW-6	8/2/1994	0.95	-0.03	-0.001	-0.05	-0.05	6.2	-0.005	-0.025	120	-0.005
MW-6	4/1/1997		-0.02								
MW-6	8/1/1997										
MW-6	4/14/1998	0.6	-0.02	0.0003	-0.05		5.4	-0.05		116.6	
MW-6	7/21/1998	0.5	-0.02	0.0008	-0.05		5.8	-0.05		105.9	
MW-8	1/1/1975	10					6.2			45	
MW-8	7/21/1994	1	-0.03	-0.001	-0.05	-0.05	3.4	-0.005	-0.025	89	-0.005
MW-8	1/1/1998										
MW-8	2/1/1998										

Well Name	Date	Zinc	Temp (C)	Tin	Vanadium
Humphries.Deep	5/1/1998				
Humphries-Deep	6/1/1998				
Humphries-Deep	7/22/1998				
Humphries-Deep	8/1/1998				
Humphries-Deep	9/1/1998				
Humphries-Deep	10/15/1998				
Humphries-Shallow	1/23/1998				
Humphries-Shallow	2/1/1998				
Humphries-Shallow	3/1/1998				
Humphries-Shallow	4/15/1998				
Humphries-Shallow	5/1/1998				
Humphries-Shallow	6/1/1998				
Humphries-Shallow	7/22/1998				
Humphries-Shallow	8/1/1998				
Humphries-Shallow	9/1/1998				
IW-1	3/4/1987		22.5		
IW-1	7/19/1997				
IW-1	8/29/1991				
IW-1	11/26/1991				
IW-1	3/15/1992				
IW-1	5/25/1992				
IW-1	7/16/1992				
IW-1	10/18/1992				
IW-1	11/27/1992				
IW-1	12/15/1992				
IW-1	9/28/1993				
IW-1	3/17/1994				
IW-1	5/24/1994	0.053			
IW-1	6/23/1994				
IW-1	7/22/1994	-0.05			
IW-1	9/22/1994				
IW-1	1/29/1995				
IW-1	3/29/1995				
IW-1	6/27/1995				
IW-1	9/21/1995				
IW-1	1/10/1996				

Well Name	Date	Zinc	Temp (C)	Tin	Vanadium
IW-1	4/1/1996				
IW-1	6/1/1996				
IW-1	9/25/1996				
IW-1	1/15/1997				
IW-1	7/1/1997				
IW-1	10/1/1997				
IW-1	1/15/1998				
IW-1	4/9/1998				
IW-1	7/13/1998				
IW-2	9/2/1982				
IW-2	5/25/1994	0.084			
IW-2	7/22/1994	-0.05			
IW-3	9/2/1982				
IW-3	2/25/1993				
IW-3	5/26/1994	0.15			
IW-3	7/23/1994	-0.05			
IW-3	4/3/1996				
Ladder-Higgins	8/2/1994	-0.05			
McGarvey-Greyback	3/31/1993	0.01			
McGarvey-Greyback	10/1/1997				
McGarvey-Greyback	1/24/1998				
McGarvey-Greyback	2/1/1998				
McGarvey-Greyback	3/1/1998				
McGarvey-Greyback	4/15/1998				
McGarvey-Greyback	5/1/1998				
McGarvey-Greyback	6/1/1998				
McGarvey-Greyback	7/21/1998				
McGarvey-Greyback	8/1/1998				
McGarvey-Greyback	9/1/1998				
McGarvey-Greyback	10/15/1998				
Miranda	7/31/1947				
MW-1	1/1/1975				
MW-10	11/16/1994	-0.05			
MW-10	1/23/1998				
MW-10	2/1/1998				
MW-10	3/1/1998				

Well Name	Date	Zinc	Temp (C)	Tin	Vanadium
MW-10	4/15/1998				
MW-10	5/1/1998				
MW-10	6/1/1998				
MW-10	7/22/1998				
MW-10	8/1/1998				
MW-10	9/1/1998				
MW-11	11/16/1994	-0.05			
MW-11	4/1/1997				
MW-11	4/1/1997				
MW-11	8/1/1997				
MW-11	10/1/1997				
MW-11	1/24/1998				
MW-11	2/1/1998				
MW-11	3/1/1998				
MW-11	4/15/1998				
MW-11	5/1/1998				
MW-11	6/1/1998				
MW-11	7/22/1998				
MW-11	8/1/1998				
MW-11	9/1/1998				
MW-11	10/15/1998				
MW-2	5/7/1975				
MW-2	7/20/1994	-0.05			
MW-3	10/15/1998				
MW-4	6/13/1975				
MW-4	6/9/1981				
MW-4	7/20/1994	-0.05			
MW-4	4/1/1997				
MW-4	4/1/1997				
MW-4	8/1/1997				
MW-4	1/24/1998				
MW-4	2/1/1998				
MW-4	3/1/1998				
MW-4	4/14/1998				
MW-4	5/1/1998				
MW-4	6/1/1998				

Well Name	Date	Zinc	Temp (C)	Tin	Vanadium
MW-4	7/21/1998				
MW-4	8/1/1998				
MW-4	9/1/1998				
MW-5	9/19/1975				
MW-5	7/20/1994	-0.05			
MW-5	1/1/1998				
MW-5	2/1/1998				
MW-5	3/1/1998				
MW-5	4/1/1998				
MW-5	5/1/1998				
MW-5	6/1/1998				
MW-5	7/1/1998				
MW-5	8/1/1998				
MW-5	9/1/1998				
MW-6	1/1/1975				
MW-6	8/2/1994	-0.05			
MW-6	4/1/1997				
MW-6	8/1/1997				
MW-6	4/14/1998				
MW-6	7/21/1998				
MW-8	1/1/1975				
MW-8	7/21/1994	-0.05			
MW-8	1/1/1998				
MW-8	2/1/1998				

Well Name	Water Depth	USGS Quad	Well Depth		Sample Date	Sampler	Notes
MW-8	353.7	Skute Stone Arroyo	-5	MW-8-5	3/1/1998		
MW-8	353.7	Skute Stone Arroyo	-6	MW-8-6	4/1/1998		
MW-8	352.19	Skute Stone Arroyo	-7	MW-8-7	5/1/1998		
MW-8	353.43	Skute Stone Arroyo	-8	MW-8-8	6/1/1998		
MW-8	355.06	Skute Stone Arroyo	-9	MW-8-9	7/1/1998		
MW-8	354.55	Skute Stone Arroyo	-10	MW-8-10	8/1/1998		
MW-8	356.11	Skute Stone Arroyo	-11	MW-8-11	9/1/1998		
MW-9			-1	MW-9-1	11/16/1994	SRK	Animas Ck.
MW-9			-2	MW-9-2	8/1/1997		
MW-9	67.74		-3	MW-9-3	1/23/1998	Goff	
MW-9	67.72		-4	MW-9-4	2/1/1998		
MW-9	67.71		-5	MW-9-5	3/1/1998		
MW-9	67.75		-6	MW-9-6	4/15/1998	Goff	
MW-9	67.94		-7	MW-9-7	5/1/1998		
MW-9	68.7		-8	MW-9-8	6/1/1998		
MW-9	68375		-9	MW-9-9	7/22/1998	Brownfield	
MW-9	68.72		-10	MW-9-10	8/1/1998		
MW-9	68.65		-11	MW-9-11	9/1/1998		
MW-9			-12	MW-9-12	10/15/1998	Goff	
NP-1	83.7	Skute Stone Arroyo	-1	NP-1-1	10/8/1981	QMC	
NP-1	85.6	Skute Stone Arroyo	-2	NP-1-2	11/4/1981	QMC	
NP-1	85.67	Skute Stone Arroyo	-3	NP-1-3	11/13/1981	EID	
NP-1	84.5	Skute Stone Arroyo	-4	NP-1-4	11/17/1981	QMC	
NP-1	84.1	Skute Stone Arroyo	-5	NP-1-5	11/23/1981	QMC	
NP-1	88.2	Skute Stone Arroyo	-6	NP-1-6	12/7/1981	QMC	
NP-1	84	Skute Stone Arroyo	-7	NP-1-7	12/15/1981	QMC	
NP-1	84	Skute Stone Arroyo	-8	NP-1-8	12/22/1981	QMC	
NP-1	85.5	Skute Stone Arroyo	-9	NP-1-9	1/5/1982	QMC	
NP-1	84.42	Skute Stone Arroyo	-10	NP-1-10	1/18/1982	QMC	
NP-1	84.4	Skute Stone Arroyo	-11	NP-1-11	1/26/1982	QMC	
NP-1	85.17	Skute Stone Arroyo	-12	NP-1-12	2/16/1982	QMC	
NP-1	85.2	Skute Stone Arroyo	-13	NP-1-13	2/22/1982	QMC	
NP-1	84.83	Skute Stone Arroyo	-14	NP-1-14	3/12/1982	QMC	
NP-1	84.5	Skute Stone Arroyo	-15	NP-1-15	4/16/1982	QMC	
NP-1	84.5	Skute Stone Arroyo	-16	NP-1-16	4/26/1982	QMC	
NP-1	84.08	Skute Stone Arroyo	-17	NP-1-17	5/17/1982	QMC	

Well Name	Water Depth	USGS Quad	Well Depth		Sample Date	Sampler	Notes
NP-1		Skute Stone Arroyo	-18	NP-1-18	5/24/1982	QMC	
NP-1		Skute Stone Arroyo	-19	NP-1-19	5/28/1982	QMC	
NP-1	83.3	Skute Stone Arroyo	-20	NP-1-20	6/8/1982	QMC	
NP-1	83.33	Skute Stone Arroyo	-21	NP-1-21	6/14/1982	QMC	
NP-1	82.1	Skute Stone Arroyo	-22	NP-1-22	6/30/1982	QMC	
NP-1	82.08	Skute Stone Arroyo	-23	NP-1-23	7/26/1982	QMC	
NP-1	81.5	Skute Stone Arroyo	-24	NP-1-24	8/18/1982	QMC	
NP-1	80.6	Skute Stone Arroyo	-25	NP-1-25	9/14/1982	QMC	
NP-1	79.1	Skute Stone Arroyo	-26	NP-1-26	10/18/1982	QMC	
NP-1	79.1	Skute Stone Arroyo	-27	NP-1-27	10/27/1982	QMC	
NP-1	78	Skute Stone Arroyo	-28	NP-1-28	11/11/1982	QMC	
NP-1	76.1	Skute Stone Arroyo	-29	NP-1-29	12/28/1982	QMC	
NP-1	74.4	Skute Stone Arroyo	-30	NP-1-30	2/21/1983	QMC	
NP-1	72.1	Skute Stone Arroyo	-31	NP-1-31	5/6/1983	QMC	
NP-1	72.1	Skute Stone Arroyo	-32	NP-1-32	5/13/1983	QMC	
NP-1	71.5	Skute Stone Arroyo	-33	NP-1-33	6/2/1983	QMC	
NP-1	71.2	Skute Stone Arroyo	-34	NP-1-34	7/5/1983	QMC	
NP-1	70.7	Skute Stone Arroyo	-35	NP-1-35	8/9/1983	QMC	
NP-1	70.7	Skute Stone Arroyo	-36	NP-1-36	8/25/1983	QMC	
NP-1	69.6	Skute Stone Arroyo	-37	NP-1-37	10/20/1983	QMC	
NP-1	69.6	Skute Stone Arroyo	-38	NP-1-38	11/1/1983	QMC	
NP-1	68.3	Skute Stone Arroyo	-39	NP-1-39	12/7/1983	QMC	
NP-1	67.3	Skute Stone Arroyo	-40	NP-1-40	1/28/1984	QMC	
NP-1	67.1	Skute Stone Arroyo	-41	NP-1-41	2/13/1984	QMC	
NP-1	66.6	Skute Stone Arroyo	-42	NP-1-42	3/1/1984	QMC	
NP-1	66.6	Skute Stone Arroyo	-43	NP-1-43	3/16/1984	CFP	
NP-1		Skute Stone Arroyo	-44	NP-1-44	4/9/1984	CFP	
NP-1	66.1	Skute Stone Arroyo	-45	NP-1-45	4/18/1984	CFP	
NP-1	65.7	Skute Stone Arroyo	-46	NP-1-46	5/22/1984	CFP	
NP-1	65.7	Skute Stone Arroyo	-47	NP-1-47	5/30/1984	CFP	
NP-1	65.6	Skute Stone Arroyo	-48	NP-1-48	6/26/1984	CFP	
NP-1	65.4	Skute Stone Arroyo	-49	NP-1-49	7/25/1984	CFP	
NP-1	65.2	Skute Stone Arroyo	-50	NP-1-50	8/27/1984	CFP	
NP-1	64.4	Skute Stone Arroyo	-51	NP-1-51	9/12/1984	CFP	
NP-1	64.4	Skute Stone Arroyo	-52	NP-1-52	9/21/1984	CFP	
NP-1	64.1	Skute Stone Arroyo	-53	NP-1-53	11/19/1984	CFP	

Well Name	Water Depth	USGS Quad	Well Depth		Sample Date	Sampler	Notes
NP-1	64.1	Skute Stone Arroyo	-54	NP-1-54	11/27/1984	CFP	
NP-1	63.6	Skute Stone Arroyo	-55	NP-1-55	12/17/1984	CFP	
NP-1	62.3	Skute Stone Arroyo	-56	NP-1-56	5/17/1985	CFP	
NP-1	54.9	Skute Stone Arroyo	-57	NP-1-57	11/13/1985	CFP	
NP-1	52.9	Skute Stone Arroyo	-58	NP-1-58	5/23/1986	CFP	
NP-1	52.9	Skute Stone Arroyo	-59	NP-1-59	10/8/1986	CFP	
NP-1		Skute Stone Arroyo	-60	NP-1-60	3/30/1989	EID	
NP-1	29	Skute Stone Arroyo	-61	NP-1-61	7/19/1991	GE	lab pH
NP-1	29.17	Skute Stone Arroyo	-62	NP-1-62	8/29/1991	Irwin	lab pH
NP-1	28	Skute Stone Arroyo	-63	NP-1-63	11/26/1991	Hood	lab pH
NP-1	16.17	Skute Stone Arroyo	-64	NP-1-64	3/15/1992	Irwin	lab pH
NP-1		Skute Stone Arroyo	-65	NP-1-65	5/25/1992	Irwin	lab pH
NP-1		Skute Stone Arroyo	-66	NP-1-66	7/16/1992	Irwin	lab pH
NP-1	26.17	Skute Stone Arroyo	-67	NP-1-67	10/8/1992	Irwin	lab pH
NP-1	25.25	Skute Stone Arroyo	-68	NP-1-68	11/27/1992	Hood	lab pH
NP-1		Skute Stone Arroyo	-69	NP-1-69	12/15/1992	Irwin	lab pH
NP-1	26.17	Skute Stone Arroyo	-70	NP-1-70	2/25/1993	Irwin	lab pH
NP-1		Skute Stone Arroyo	-71	NP-1-71	3/30/1993	JWS	
NP-1		Skute Stone Arroyo	-72	NP-1-72	9/28/1993	Irwin	lab pH
NP-1	27	Skute Stone Arroyo	-73	NP-1-73	3/17/1994	Irwin	lab pH
NP-1	26.45	Skute Stone Arroyo	-74	NP-1-74	5/24/1994	SRK	
NP-1		Skute Stone Arroyo	-75	NP-1-75	6/23/1994	Irwin	lab pH
NP-1		Skute Stone Arroyo	-76	NP-1-76	7/21/1994	SRK	
NP-1		Skute Stone Arroyo	-77	NP-1-77	9/22/1994	Irwin	lab pH
NP-1		Skute Stone Arroyo	-78	NP-1-78	1/29/1995	Irwin	lab pH
NP-1		Skute Stone Arroyo	-79	NP-1-79	3/29/1995	Irwin	lab pH
NP-1	28.33	Skute Stone Arroyo	-80	NP-1-80	6/27/1995	Irwin	lab pH
NP-1		Skute Stone Arroyo	-81	NP-1-81	9/21/1995	Irwin	lab pH
NP-1		Skute Stone Arroyo	-82	NP-1-82	1/10/1996	Irwin	lab pH
NP-1		Skute Stone Arroyo	-83	NP-1-83	4/3/1996	Irwin	lab pH
NP-1		Skute Stone Arroyo	-84	NP-1-84	6/1/1996		
NP-1		Skute Stone Arroyo	-85	NP-1-85	9/25/1996	Irwin	lab pH
NP-1		Skute Stone Arroyo	-86	NP-1-86	1/15/1997	Irwin	lab pH
NP-1		Skute Stone Arroyo	-87	NP-1-87	4/1/1997		
NP-1		Skute Stone Arroyo	-88	NP-1-88	7/1/1997		
NP-1		Skute Stone Arroyo	-89	NP-1-89	10/1/1997		

Well Name	Water Depth	USGS Quad	Well Depth		Sample Date	Sampler	Notes
NP-1	30.42	Skute Stone Arroyo	-90	NP-1-90	1/15/1998	Irwin	
NP-1	30.33	Skute Stone Arroyo	-91	NP-1-91	4/9/1998	Irwin	
NP-1	30.92	Skute Stone Arroyo	-92	NP-1-92	7/13/1998	Irwin	
NP-2	87.29	Skute Stone Arroyo	-1	NP-2-1	10/8/1981	QMC	
NP-2	87	Skute Stone Arroyo	-2	NP-2-2	11/6/1981	QMC	
NP-2	87.5	Skute Stone Arroyo	-3	NP-2-3	11/13/1981	EID	
NP-2	90.1	Skute Stone Arroyo	-4	NP-2-4	11/23/1981	QMC	
NP-2	87.83	Skute Stone Arroyo	-5	NP-2-5	12/7/1981	QMC	
NP-2	87.39	Skute Stone Arroyo	-6	NP-2-6	12/15/1981	QMC	
NP-2	87.12	Skute Stone Arroyo	-7	NP-2-7	12/22/1981	QMC	
NP-2	87.125	Skute Stone Arroyo	-8	NP-2-8	1/5/1982	QMC	
NP-2	86.67	Skute Stone Arroyo	-9	NP-2-9	1/18/1982	QMC	
NP-2	86.66	Skute Stone Arroyo	-10	NP-2-10	1/25/1982	QMC	
NP-2	86.5	Skute Stone Arroyo	-11	NP-2-11	2/16/1982	QMC	
NP-2	86.45	Skute Stone Arroyo	-12	NP-2-12	2/22/1982	QMC	
NP-2	86	Skute Stone Arroyo	-13	NP-2-13	3/12/1982	QMC	
NP-2	85.75	Skute Stone Arroyo	-14	NP-2-14	4/16/1982	QMC	
NP-2	85.45	Skute Stone Arroyo	-15	NP-2-15	4/26/1982	QMC	
NP-2	84	Skute Stone Arroyo	-16	NP-2-16	5/15/1982	QMC	
NP-2		Skute Stone Arroyo	-17	NP-2-17	5/24/1982	QMC	
NP-2		Skute Stone Arroyo	-18	NP-2-18	5/28/1982	QMC	
NP-2	81.91	Skute Stone Arroyo	-19	NP-2-19	6/8/1982	QMC	
NP-2	80.5	Skute Stone Arroyo	-20	NP-2-20	6/14/1982	QMC	
NP-2	77.8	Skute Stone Arroyo	-21	NP-2-21	6/30/1982		

Well Name	Sample Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride	Sulfate
MW-8	3/1/1998	32.96885	107.46111	269979	3650332	13	5012			
MW-8	4/1/1998	32.96885	107.46111	269979	3650332	13	5012			
MW-8	5/1/1998	32.96885	107.46111	269979	3650332	13	5012			
MW-8	6/1/1998	32.96885	107.46111	269979	3650332	13	5012			
MW-8	7/1/1998	32.96885	107.46111	269979	3650332	13	5012			
MW-8	8/1/1998	32.96885	107.46111	269979	3650332	13	5012			
MW-8	9/1/1998	32.96885	107.46111	269979	3650332	13	5012			
MW-9	11/16/1994	32.97841	107.38760	276875	3651234	13	4444	TRUE	12	12
MW-9	8/1/1997	32.97841	107.38760	276875	3651234	13	4444	TRUE	13.7	
MW-9	1/23/1998	32.97841	107.38760	276875	3651234	13	4444	TRUE	13.7	14
MW-9	2/1/1998	32.97841	107.38760	276875	3651234	13	4444			
MW-9	3/1/1998	32.97841	107.38760	276875	3651234	13	4444			
MW-9	4/15/1998	32.97841	107.38760	276875	3651234	13	4444	TRUE	13.1	13
MW-9	5/1/1998	32.97841	107.38760	276875	3651234	13	4444			
MW-9	6/1/1998	32.97841	107.38760	276875	3651234	13	4444			
MW-9	7/22/1998	32.97841	107.38760	276875	3651234	13	4444	TRUE	13.9	13
MW-9	8/1/1998	32.97841	107.38760	276875	3651234	13	4444			
MW-9	9/1/1998	32.97841	107.38760	276875	3651234	13	4444			
MW-9	10/15/1998	32.97841	107.38760	276875	3651234	13	4444	TRUE	10.2	14.5
NP-1	10/8/1981	32.95503	107.49676	266610	3648878	13	5176	TRUE	24.9	108
NP-1	11/4/1981	32.95503	107.49676	266610	3648878	13	5176	TRUE	28	148
NP-1	11/13/1981	32.95503	107.49676	266610	3648878	13	5176	TRUE	24.08	130.7
NP-1	11/17/1981	32.95503	107.49676	266610	3648878	13	5176	TRUE	24	154
NP-1	11/23/1981	32.95503	107.49676	266610	3648878	13	5176	TRUE	26	146
NP-1	12/7/1981	32.95503	107.49676	266610	3648878	13	5176	TRUE	24	158
NP-1	12/15/1981	32.95503	107.49676	266610	3648878	13	5176	TRUE	24	151
NP-1	12/22/1981	32.95503	107.49676	266610	3648878	13	5176	TRUE	22	149
NP-1	1/5/1982	32.95503	107.49676	266610	3648878	13	5176	TRUE	22	163
NP-1	1/18/1982	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	1/26/1982	32.95503	107.49676	266610	3648878	13	5176	TRUE	22	154
NP-1	2/16/1982	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	2/22/1982	32.95503	107.49676	266610	3648878	13	5176	TRUE	24	158
NP-1	3/12/1982	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	4/16/1982	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	4/26/1982	32.95503	107.49676	266610	3648878	13	5176	TRUE	26	154
NP-1	5/17/1982	32.95503	107.49676	266610	3648878	13	5176	FALSE		

Well Name	Sample Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride	Sulfate
NP-1	5/24/1982	32.95503	107.49676	266610	3648878	13	5176	TRUE		
NP-1	5/28/1982	32.95503	107.49676	266610	3648878	13	5176	TRUE		
NP-1	6/8/1982	32.95503	107.49676	266610	3648878	13	5176	TRUE	20	162
NP-1	6/14/1982	32.95503	107.49676	266610	3648878	13	5176	TRUE		
NP-1	6/30/1982	32.95503	107.49676	266610	3648878	13	5176	TRUE	18	143
NP-1	7/26/1982	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	8/18/1982	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	9/14/1982	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	10/18/1982	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	10/27/1982	32.95503	107.49676	266610	3648878	13	5176	TRUE	20	151
NP-1	11/11/1982	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	12/28/1982	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	2/21/1983	32.95503	107.49676	266610	3648878	13	5176	TRUE	18	156
NP-1	5/6/1983	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	5/13/1983	32.95503	107.49676	266610	3648878	13	5176	TRUE	24	149
NP-1	6/2/1983	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	7/5/1983	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	8/9/1983	32.95503	107.49676	266610	3648878	13	5176	TRUE	22	130
NP-1	8/25/1983	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	10/20/1983	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	11/1/1983	32.95503	107.49676	266610	3648878	13	5176	TRUE	18	125
NP-1	12/7/1983	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	1/28/1984	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	2/13/1984	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	3/1/1984	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	3/16/1984	32.95503	107.49676	266610	3648878	13	5176	TRUE	22	124
NP-1	4/9/1984	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	4/18/1984	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	5/22/1984	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	5/30/1984	32.95503	107.49676	266610	3648878	13	5176	TRUE	22	154
NP-1	6/26/1984	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	7/25/1984	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	8/27/1984	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	9/12/1984	32.95503	107.49676	266610	3648878	13	5176	FALSE	22	137
NP-1	9/21/1984	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	11/19/1984	32.95503	107.49676	266610	3648878	13	5176	FALSE		

Well Name	Sample Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride	Sulfate
NP-1	11/27/1984	32.95503	107.49676	266610	3648878	13	5176	FALSE	16	144
NP-1	12/17/1984	32.95503	107.49676	266610	3648878	13	5176	FALSE		
NP-1	5/17/1985	32.95503	107.49676	266610	3648878	13	5176	FALSE	20	144
NP-1	11/13/1985	32.95503	107.49676	266610	3648878	13	5176	FALSE	16	149
NP-1	5/23/1986	32.95503	107.49676	266610	3648878	13	5176	FALSE	18	142
NP-1	10/8/1986	32.95503	107.49676	266610	3648878	13	5176	FALSE	22	107
NP-1	3/30/1989	32.95503	107.49676	266610	3648878	13	5176	TRUE	14.9	137
NP-1	7/19/1991	32.95503	107.49676	266610	3648878	13	5176	TRUE	21.6	133.4
NP-1	8/29/1991	32.95503	107.49676	266610	3648878	13	5176	FALSE	21.1	140.7
NP-1	11/26/1991	32.95503	107.49676	266610	3648878	13	5176	FALSE	22.7	136.8
NP-1	3/15/1992	32.95503	107.49676	266610	3648878	13	5176	FALSE	22.1	146.2
NP-1	5/25/1992	32.95503	107.49676	266610	3648878	13	5176	FALSE	28.6	128.2
NP-1	7/16/1992	32.95503	107.49676	266610	3648878	13	5176	FALSE	21.7	142.2
NP-1	10/8/1992	32.95503	107.49676	266610	3648878	13	5176	FALSE	21.7	128.8
NP-1	11/27/1992	32.95503	107.49676	266610	3648878	13	5176	FALSE	21.3	142.4
NP-1	12/15/1992	32.95503	107.49676	266610	3648878	13	5176	FALSE	23.7	125
NP-1	2/25/1993	32.95503	107.49676	266610	3648878	13	5176	FALSE	22.6	138.3
NP-1	3/30/1993	32.95503	107.49676	266610	3648878	13	5176	FALSE	22	145
NP-1	9/28/1993	32.95503	107.49676	266610	3648878	13	5176	FALSE	36.2	110.1
NP-1	3/17/1994	32.95503	107.49676	266610	3648878	13	5176	FALSE	24	134.2
NP-1	5/24/1994	32.95503	107.49676	266610	3648878	13	5176	FALSE	22	130
NP-1	6/23/1994	32.95503	107.49676	266610	3648878	13	5176	FALSE	40.3	142.3
NP-1	7/21/1994	32.95503	107.49676	266610	3648878	13	5176	TRUE	23	133
NP-1	9/22/1994	32.95503	107.49676	266610	3648878	13	5176	FALSE	24.3	118.8
NP-1	1/29/1995	32.95503	107.49676	266610	3648878	13	5176	FALSE	26.2	125.4
NP-1	3/29/1995	32.95503	107.49676	266610	3648878	13	5176	FALSE	23.3	86.2
NP-1	6/27/1995	32.95503	107.49676	266610	3648878	13	5176	FALSE	24.1	113.7
NP-1	9/21/1995	32.95503	107.49676	266610	3648878	13	5176	FALSE	27.2	145
NP-1	1/10/1996	32.95503	107.49676	266610	3648878	13	5176	FALSE	26.1	109.4
NP-1	4/3/1996	32.95503	107.49676	266610	3648878	13	5176	FALSE	25.7	123.3
NP-1	6/1/1996	32.95503	107.49676	266610	3648878	13	5176		26.6	126.3
NP-1	9/25/1996	32.95503	107.49676	266610	3648878	13	5176	TRUE	23.6	94.4
NP-1	1/15/1997	32.95503	107.49676	266610	3648878	13	5176	TRUE	25.6	109.13
NP-1	4/1/1997	32.95503	107.49676	266610	3648878	13	5176	TRUE	26	114
NP-1	7/1/1997	32.95503	107.49676	266610	3648878	13	5176	TRUE	25.9	112
NP-1	10/1/1997	32.95503	107.49676	266610	3648878	13	5176	TRUE	26.2	119

Well Name	Sample Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride	Sulfate
NP-1	1/15/1998	32.95503	107.49676	266610	3648878	13	5176	TRUE	25.2	111
NP-1	4/9/1998	32.95503	107.49676	266610	3648878	13	5176	TRUE	26.8	120
NP-1	7/13/1998	32.95503	107.49676	266610	3648878	13	5176	TRUE	25	110
NP-2	10/8/1981	32.95807	107.49674	266619	3649215	13	5179	TRUE	45.1	198
NP-2	11/6/1981	32.95807	107.49674	266619	3649215	13	5179	TRUE	35	164
NP-2	11/13/1981	32.95807	107.49674	266619	3649215	13	5179	TRUE	30.79	162.4
NP-2	11/23/1981	32.95807	107.49674	266619	3649215	13	5179	TRUE	30	156
NP-2	12/7/1981	32.95807	107.49674	266619	3649215	13	5179	TRUE	30	160
NP-2	12/15/1981	32.95807	107.49674	266619	3649215	13	5179	TRUE	32	161
NP-2	12/22/1981	32.95807	107.49674	266619	3649215	13	5179	TRUE	32	161
NP-2	1/5/1982	32.95807	107.49674	266619	3649215	13	5179	TRUE	28	158
NP-2	1/18/1982	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	1/25/1982	32.95807	107.49674	266619	3649215	13	5179	TRUE	24	160
NP-2	2/16/1982	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	2/22/1982	32.95807	107.49674	266619	3649215	13	5179	TRUE	30	151
NP-2	3/12/1982	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	4/16/1982	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	4/26/1982	32.95807	107.49674	266619	3649215	13	5179	TRUE	42	149
NP-2	5/15/1982	32.95807	107.49674	266619	3649215	13	5179	TRUE	34	128
NP-2	5/24/1982	32.95807	107.49674	266619	3649215	13	5179	TRUE		
NP-2	5/28/1982	32.95807	107.49674	266619	3649215	13	5179	TRUE		
NP-2	6/8/1982	32.95807	107.49674	266619	3649215	13	5179	TRUE	26	158
NP-2	6/14/1982	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	6/30/1982	32.95807	107.49674	266619	3649215	13	5179	TRUE	26	133

Well Name	Sample Date	pH	TDS	Alkalinity	Bicarb	Spec.Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
MW-8	3/1/1998										
MW-8	4/1/1998										
MW-8	5/1/1998										
MW-8	6/1/1998										
MW-8	7/1/1998										
MW-8	8/1/1998										
MW-8	9/1/1998										
MW-9	11/16/1994	8.05	230		149	293	1.4	-1	-0.05	-0.005	-0.005
MW-9	8/1/1997	8.13	174				1.33				
MW-9	1/23/1998	7.96	189		146.4	350	1.43				
MW-9	2/1/1998										
MW-9	3/1/1998										
MW-9	4/15/1998	8.07	189			336	1.53	0.91			
MW-9	5/1/1998										
MW-9	6/1/1998										
MW-9	7/22/1998		172				1.96	0.95			
MW-9	8/1/1998										
MW-9	9/1/1998										
MW-9	10/15/1998	7.79	175			382		0.83			
NP-1	10/8/1981	7.6	496		266		0.84	0.47	-0.25		-0.004
NP-1	11/4/1981	8.1	470				1	0.3	-0.01		-0.01
NP-1	11/13/1981	7.65	470		274.4	625	0.83	0.09	-0.25		-0.005
NP-1	11/17/1981	8	460				0.8	0.2	-0.01		-0.005
NP-1	11/23/1981	7.7	530				0.8	0.2	-0.01		-0.01
NP-1	12/7/1981	7.3	490				0.8	0.2	-0.01		-0.01
NP-1	12/15/1981	7.8	480				0.8	-0.2	-0.01		-0.01
NP-1	12/22/1981	7.8	450				0.8	0.3	-0.01		-0.01
NP-1	1/5/1982	7.6	400				0.8	0.7	-0.01		-0.01
NP-1	1/18/1982										
NP-1	1/26/1982	7.9	440				0.7	0.5			
NP-1	2/16/1982										
NP-1	2/22/1982	7.9	460				0.7	0.6			
NP-1	3/12/1982										
NP-1	4/16/1982										
NP-1	4/26/1982	7.9	440				0.6	0.7			
NP-1	5/17/1982										

Well Name	Sample Date	pH	TDS	Alkalinity	Bicarb	Spec.Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
NP-1	5/24/1982										
NP-1	5/28/1982										
NP-1	6/8/1982	7.5	500				0.6	1.1			
NP-1	6/14/1982										
NP-1	6/30/1982	7.7	500				0.6	1.1			
NP-1	7/26/1982										
NP-1	8/18/1982										
NP-1	9/14/1982										
NP-1	10/18/1982										
NP-1	10/27/1982	7.7	470				0.7	1.3			
NP-1	11/11/1982										
NP-1	12/28/1982										
NP-1	2/21/1983	7.7	490				0.7	1.3			
NP-1	5/6/1983										
NP-1	5/13/1983	7.9	470				0.6	1.1			
NP-1	6/2/1983										
NP-1	7/5/1983										
NP-1	8/9/1983	7.8	480				0.6	1.1			
NP-1	8/25/1983										
NP-1	10/20/1983										
NP-1	11/1/1983	7.8	500				0.6	2.1			
NP-1	12/7/1983										
NP-1	1/28/1984										
NP-1	2/13/1984										
NP-1	3/1/1984										
NP-1	3/16/1984	8.2	480				0.6	1.8			
NP-1	4/9/1984										
NP-1	4/18/1984										
NP-1	5/22/1984										
NP-1	5/30/1984	7.5	510				0.6	0.7			
NP-1	6/26/1984										
NP-1	7/25/1984										
NP-1	8/27/1984										
NP-1	9/12/1984	7.7	480				0.6	1.1			
NP-1	9/21/1984										
NP-1	11/19/1984										

Well Name	Sample Date	pH	TDS	Alkalinity	Bicarb	Spec.Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
NP-1	11/27/1984	7.8	480				0.6	1.1			
NP-1	12/17/1984										
NP-1	5/17/1985	7.6	510								
NP-1	11/13/1985	7.3	480								
NP-1	5/23/1986	7.6	500								
NP-1	10/8/1986	7.4	470								
NP-1	3/30/1989		492		279				0.1		
NP-1	7/19/1991	8.04	530	210	256.3	761	0.58	0.99			0.003
NP-1	8/29/1991	7.69	501								
NP-1	11/26/1991	7.12	1484								
NP-1	3/15/1992	7.8	510								
NP-1	5/25/1992	7.49	608								
NP-1	7/16/1992	7.5	487								
NP-1	10/8/1992	7.35	517								
NP-1	11/27/1992	7.85	498								
NP-1	12/15/1992	7.58	502								
NP-1	2/25/1993	7.42	510								
NP-1	3/30/1993	7.7	496		306	767	0.59	1.1	-0.1		-0.005
NP-1	9/28/1993	7.48	508								
NP-1	3/17/1994	7.3	516								
NP-1	5/24/1994	7.53	510		263	680	0.56	1.1	0.83	-0.005	0.005
NP-1	6/23/1994	7.5	453								
NP-1	7/21/1994	7.87	464		249	698	0.65	-1	-0.05	-0.005	-0.005
NP-1	9/22/1994	7.49	488								
NP-1	1/29/1995	7.94	407								
NP-1	3/29/1995	7.98	392								
NP-1	6/27/1995	8.02	385								
NP-1	9/21/1995	7.96	373								
NP-1	1/10/1996	7.73	277								
NP-1	4/3/1996	7.89	300								
NP-1	6/1/1996	7.73	312								
NP-1	9/25/1996	8.22	320								
NP-1	1/15/1997	8.42	318								
NP-1	4/1/1997		280				0.8				
NP-1	7/1/1997	8.06	288								
NP-1	10/1/1997	8.31	296								

Well Name	Sample Date	pH	TDS	Alkalinity	Bicarb	Spec.Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
NP-1	1/15/1998	7.87	276			582	0.63	-0.05			
NP-1	4/9/1998		319			564	0.58	0.11			
NP-1	7/13/1998		301			531	0.61	-0.05			
NP-2	10/8/1981	7.39	476		159		1.75	0.23	-0.25		0.024
NP-2	11/6/1981	7.6	450				1.4	0.4	-0.01		-0.1
NP-2	11/13/1981	7.65	466		221.3	675	1.14	0.25	-0.25		-0.005
NP-2	11/23/1981	7.7	520				0.9	0.7	-0.01		-0.01
NP-2	12/7/1981	7.5	490				0.8	0.6	-0.01		-0.01
NP-2	12/15/1981	8	480				0.09	0.5	-0.01		-0.01
NP-2	12/22/1981	8	440				0.6	0.8	-0.01		-0.01
NP-2	1/5/1982	7.6	400				0.9	0.9	-0.01		-0.01
NP-2	1/18/1982										
NP-2	1/25/1982	8	450				0.7	1.1			
NP-2	2/16/1982										
NP-2	2/22/1982	8	440				0.7	0.8			
NP-2	3/12/1982										
NP-2	4/16/1982										
NP-2	4/26/1982	8	450				1	2.4			
NP-2	5/15/1982	7.9	480				0.6	1.8			
NP-2	5/24/1982										
NP-2	5/28/1982										
NP-2	6/8/1982	7.8	490				0.5	0.9			
NP-2	6/14/1982										
NP-2	6/30/1982	7.8	490				0.6	1.4			

Well Name	Sample Date	Boron	Barium	Berylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
MW-8	3/1/1998										
MW-8	4/1/1998										
MW-8	5/1/1998										
MW-8	6/1/1998										
MW-8	7/1/1998										
MW-8	8/1/1998										
MW-8	9/1/1998										
MW-9	11/16/1994	-0.1	-0.1	-0.002	-0.0005	12	-0.025	-0.05	-0.025	-0.05	-0.005
MW-9	8/1/1997										
MW-9	1/23/1998					12.1			-0.005		
MW-9	2/1/1998										
MW-9	3/1/1998										
MW-9	4/15/1998					13.5			-0.005		
MW-9	5/1/1998										
MW-9	6/1/1998										
MW-9	7/22/1998					13			-0.005	-0.05	
MW-9	8/1/1998										
MW-9	9/1/1998										
MW-9	10/15/1998								-0.005	0.07	
NP-1	10/8/1981	-0.004	-1		-0.01	55.7	-0.05	-0.05	-0.05	0.27	-0.05
NP-1	11/4/1981	-0.1	-0.2		-0.005	54	-0.01	-0.02	-0.05	-0.1	-0.02
NP-1	11/13/1981	0.044	0.2		0.006	71.6	-0.005				-0.005
NP-1	11/17/1981	-0.1	0.24		-0.005	59	-0.01	-0.02	0.069	-0.1	-0.02
NP-1	11/23/1981	-0.1	0.02		-0.005	58	-0.02	-0.02	-0.05	-0.1	-0.02
NP-1	12/7/1981	-0.1	-0.2		-0.005	58	-0.01	-0.02	-0.05	-0.1	-0.02
NP-1	12/15/1981	-0.1	-0.2		-0.005	68	-0.01	-0.02	-0.05	-0.1	-0.02
NP-1	12/22/1981	-0.1	-0.2		-0.005	66	-0.01	-0.02	-0.05	-0.1	-0.02
NP-1	1/5/1982	-0.1	-0.2		-0.005	67	-0.01	-0.02	-0.05	0.14	-0.02
NP-1	1/18/1982										
NP-1	1/26/1982				-0.005				-0.05	-0.1	
NP-1	2/16/1982										
NP-1	2/22/1982				-0.005				0.48	0.83	
NP-1	3/12/1982										
NP-1	4/16/1982										
NP-1	4/26/1982				-0.005				-0.05	1.2	
NP-1	5/17/1982										

Well Name	Sample Date	Boron	Barium	Berylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
NP-1	5/24/1982									-0.1	
NP-1	5/28/1982									-0.1	
NP-1	6/8/1982				-0.005				-0.05	-0.1	
NP-1	6/14/1982										
NP-1	6/30/1982				-0.005				-0.05	-0.1	
NP-1	7/26/1982										
NP-1	8/18/1982										
NP-1	9/14/1982										
NP-1	10/18/1982										
NP-1	10/27/1982				-0.005				-0.05	0.45	
NP-1	11/11/1982										
NP-1	12/28/1982										
NP-1	2/21/1983				-0.005				-0.05	-0.1	
NP-1	5/6/1983										
NP-1	5/13/1983				-0.005				-0.05	-0.1	
NP-1	6/2/1983										
NP-1	7/5/1983										
NP-1	8/9/1983				-0.005				-0.05	0.22	
NP-1	8/25/1983										
NP-1	10/20/1983										
NP-1	11/1/1983				-0.005				-0.05	0.14	
NP-1	12/7/1983										
NP-1	1/28/1984										
NP-1	2/13/1984										
NP-1	3/1/1984										
NP-1	3/16/1984				-0.005				-0.05	-0.1	
NP-1	4/9/1984										
NP-1	4/18/1984										
NP-1	5/22/1984										
NP-1	5/30/1984				-0.005				-0.05	-0.1	
NP-1	6/26/1984										
NP-1	7/25/1984										
NP-1	8/27/1984										
NP-1	9/12/1984				-0.005				-0.05	-0.1	
NP-1	9/21/1984										
NP-1	11/19/1984										

Well Name	Sample Date	Boron	Barium	Berylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
NP-1	11/27/1984				-0.005				-0.05	-0.1	
NP-1	12/17/1984										
NP-1	5/17/1985										
NP-1	11/13/1985										
NP-1	5/23/1986										
NP-1	10/8/1986										
NP-1	3/30/1989	-0.1	-0.1	-0.01	-0.1	88	-0.1	-0.05	-0.1	-0.1	-0.1
NP-1	7/19/1991			0.02	-0.005	81.1	-0.02			-0.59	0.007
NP-1	8/29/1991										
NP-1	11/26/1991										
NP-1	3/15/1992										
NP-1	5/25/1992										
NP-1	7/16/1992										
NP-1	10/8/1992										
NP-1	11/27/1992										
NP-1	12/15/1992										
NP-1	2/25/1993										
NP-1	3/30/1993	0.03	-0.5		-0.002	79	-0.02	-0.05	-0.01	0.17	-0.02
NP-1	9/28/1993										
NP-1	3/17/1994										
NP-1	5/24/1994		-0.1		0.0096	79	-0.025		-0.025	9.5	0.016
NP-1	6/23/1994										
NP-1	7/21/1994	-0.1	-0.1	-0.002	-0.0005	71	-0.025	-0.05	-0.025	0.052	-0.005
NP-1	9/22/1994			-0.002							
NP-1	1/29/1995										
NP-1	3/29/1995										
NP-1	6/27/1995										
NP-1	9/21/1995										
NP-1	1/10/1996										
NP-1	4/3/1996										
NP-1	6/1/1996										
NP-1	9/25/1996										
NP-1	1/15/1997										
NP-1	4/1/1997								-0.005	1.2	
NP-1	7/1/1997										
NP-1	10/1/1997										

Well Name	Sample Date	Boron	Barium	Berylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
NP-1	1/15/1998								-0.005	1.3	
NP-1	4/9/1998								0.01	2.11	
NP-1	7/13/1998								-0.005	0.32	
NP-2	10/8/1981	0.08	-1		-0.01	46	-0.05	-0.05	-0.05	-0.1	-0.05
NP-2	11/6/1981	-0.1	-0.2		-0.005	53	-0.01	-0.02	-0.05	-0.1	-0.02
NP-2	11/13/1981	0.04	-0.1		-0.001	65.1	-0.005				-0.005
NP-2	11/23/1981	-0.1	0.02		-0.005	57	-0.02	-0.02	-0.05	-0.1	-0.02
NP-2	12/7/1981	-0.1	-0.2		-0.005	53	-0.01	-0.02	-0.05	-0.1	-0.02
NP-2	12/15/1981	-0.1	-0.2		-0.005	62	-0.01	-0.02	-0.05	-0.1	-0.02
NP-2	12/22/1981	-0.1	0.21		-0.005	73	-0.01	-0.02	-0.05	0.12	-0.02
NP-2	1/5/1982	-0.1	-0.2		-0.005	65	-0.01	-0.02	-0.05	0.14	-0.02
NP-2	1/18/1982										
NP-2	1/25/1982				-0.005				-0.05	-0.1	
NP-2	2/16/1982										
NP-2	2/22/1982				-0.005				0.069	0.37	
NP-2	3/12/1982										
NP-2	4/16/1982										
NP-2	4/26/1982				-0.005				-0.05	1.2	
NP-2	5/15/1982				0.015				-0.05	0.68	
NP-2	5/24/1982									-0.1	
NP-2	5/28/1982									-0.1	
NP-2	6/8/1982				-0.005				-0.05	-0.1	
NP-2	6/14/1982										
NP-2	6/30/1982				-0.005				-0.05	-0.1	

Well Name	Sample Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium
MW-8	3/1/1998										
MW-8	4/1/1998										
MW-8	5/1/1998										
MW-8	6/1/1998										
MW-8	7/1/1998										
MW-8	8/1/1998										
MW-8	9/1/1998										
MW-9	11/16/1994	1	-0.03	-0.001	-0.05	-0.05	2.3	-0.005	-0.025	52	-0.005
MW-9	8/1/1997										
MW-9	1/23/1998	1.6	-0.02				4.6			50.1	
MW-9	2/1/1998										
MW-9	3/1/1998										
MW-9	4/15/1998	0.8	-0.02	-0.0002	-0.05		1.5	-0.05		51.2	
MW-9	5/1/1998										
MW-9	6/1/1998										
MW-9	7/22/1998	0.6	-0.02	0.0004	-0.05		1.6	-0.05		45.8	
MW-9	8/1/1998										
MW-9	9/1/1998										
MW-9	10/15/1998										
NP-1	10/8/1981	13.7	0.92	-1	-0.1	-0.05	8.25	0.003	-0.02	61.7	
NP-1	11/4/1981		0.6	-0.001	-0.05	-0.05		-0.005	-0.02		
NP-1	11/13/1981	19.28	1.34	-0.0005	0.011	-0.05	5.85	0.029	-0.001	39.1	
NP-1	11/17/1981		1.4	-0.001	0.06	-0.05		-0.005	-0.02		
NP-1	11/23/1981		1.2	-0.001	-0.05	-0.05		-0.005	-0.02		
NP-1	12/7/1981		1.2	-0.001	-0.05	-0.05		-0.005	-0.02		
NP-1	12/15/1981		1.2	-0.001	-0.05	-0.05		-0.005	-0.02		
NP-1	12/22/1981		1	-0.001	-0.05	-0.05		-0.005	-0.02		
NP-1	1/5/1982		0.71	0.0012	-0.05	-0.05		-0.02	-0.02		
NP-1	1/18/1982										
NP-1	1/26/1982		0.45	-0.001	-0.1			-0.005			
NP-1	2/16/1982										
NP-1	2/22/1982		0.26	-0.001	-0.05			-0.005			
NP-1	3/12/1982										
NP-1	4/16/1982										
NP-1	4/26/1982		0.16	-0.001	-0.05			-0.005			
NP-1	5/17/1982										

Well Name	Sample Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium
NP-1	5/24/1982		0.28								
NP-1	5/28/1982		0.022								
NP-1	6/8/1982		0.025	-0.001	-0.05			-0.005			
NP-1	6/14/1982										
NP-1	6/30/1982		0.18	-0.001	-0.05			-0.005			
NP-1	7/26/1982										
NP-1	8/18/1982							-0.005			
NP-1	9/14/1982										
NP-1	10/18/1982										
NP-1	10/27/1982		0.058	-0.001	-0.05			-0.005			
NP-1	11/11/1982										
NP-1	12/28/1982										
NP-1	2/21/1983		-0.05	-0.001	-0.05			-0.005			
NP-1	5/6/1983										
NP-1	5/13/1983		-0.05	-0.001	-0.05			-0.005			
NP-1	6/2/1983										
NP-1	7/5/1983										
NP-1	8/9/1983		-0.05	-0.001	-0.05			-0.005			
NP-1	8/25/1983										
NP-1	10/20/1983										
NP-1	11/1/1983		-0.05	-0.001	-0.05			-0.005			
NP-1	12/7/1983										
NP-1	1/28/1984										
NP-1	2/13/1984										
NP-1	3/1/1984										
NP-1	3/16/1984		-0.05	0.0083	-0.05			-0.005			
NP-1	4/9/1984			-0.001							
NP-1	4/18/1984										
NP-1	5/22/1984										
NP-1	5/30/1984		-0.05	-0.001	-0.05			-0.005			
NP-1	6/26/1984										
NP-1	7/25/1984										
NP-1	8/27/1984										
NP-1	9/12/1984		-0.05	-0.001	-0.05			-0.005			
NP-1	9/21/1984										
NP-1	11/19/1984										

Well Name	Sample Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium
NP-1	11/27/1984		-0.05	-0.001	-0.05			-0.005			
NP-1	12/17/1984										
NP-1	5/17/1985										
NP-1	11/13/1985										
NP-1	5/23/1986										
NP-1	10/8/1986										
NP-1	3/30/1989	23	-0.05		-0.1	-0.1	3		-0.1	46	
NP-1	7/19/1991	23.9	-0.02	-0.0002			2	-0.002	-0.02	31.2	
NP-1	8/29/1991										
NP-1	11/26/1991										
NP-1	3/15/1992										
NP-1	5/25/1992										
NP-1	7/16/1992										
NP-1	10/8/1992										
NP-1	11/27/1992										
NP-1	12/15/1992										
NP-1	2/25/1993										
NP-1	3/30/1993	27	-0.02	-0.001	-0.02	-0.01	1.8	-0.005	-0.01	52	
NP-1	9/28/1993										
NP-1	3/17/1994										
NP-1	5/24/1994	23	0.1	-0.001		-0.05	2.5	-0.005	-0.025	48	
NP-1	6/23/1994										
NP-1	7/21/1994	23	0.27	-0.001	-0.05	-0.05	2.2	-0.005	-0.025	47	-0.005
NP-1	9/22/1994										
NP-1	1/29/1995										
NP-1	3/29/1995										
NP-1	6/27/1995										
NP-1	9/21/1995										
NP-1	1/10/1996										
NP-1	4/3/1996										
NP-1	6/1/1996										
NP-1	9/25/1996										
NP-1	1/15/1997										
NP-1	4/1/1997		-0.02	-0.002				0.0026			
NP-1	7/1/1997										
NP-1	10/1/1997										

Well Name	Sample Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium
NP-1	1/15/1998	19.7		-0.0002	-0.05			-0.05			
NP-1	4/9/1998		0.02	-0.0002	-0.05			-0.05			
NP-1	7/13/1998		0.05	0.0007	-0.05			-0.05			
NP-2	10/8/1981	14.6	0.62	-1	-0.1	-0.05	9.57	-0.002	-0.02	93.5	
NP-2	11/6/1981		0.39	-0.001	0.21	-0.05		-0.005	-0.02		
NP-2	11/13/1981	18.67	0.79	-0.0005	0.04	-0.01	3.9	0.017	-0.001	59.8	
NP-2	11/23/1981		0.54	-0.001	0.06	-0.05		-0.005	-0.02		
NP-2	12/7/1981		0.54	-0.001	0.06	-0.05		-0.005	-0.02		
NP-2	12/15/1981		0.52	-0.001	0.072	-0.05		-0.005	-0.02		
NP-2	12/22/1981		0.51	-0.001	0.053	-0.05		-0.005	-0.02		
NP-2	1/5/1982		0.49	-0.001	0.07	-0.05		-0.02	-0.02		
NP-2	1/18/1982										
NP-2	1/25/1982		0.34	-0.001	-0.1			-0.005			
NP-2	2/16/1982										
NP-2	2/22/1982		0.3	-0.001	-0.05			-0.005			
NP-2	3/12/1982										
NP-2	4/16/1982										
NP-2	4/26/1982		0.29	-0.001	-0.05			-0.005			
NP-2	5/15/1982		0.078	-0.001	-0.05			-0.005			
NP-2	5/24/1982		-0.05								
NP-2	5/28/1982		-0.05								
NP-2	6/8/1982		-0.05	-0.001	-0.05			-0.005			
NP-2	6/14/1982										
NP-2	6/30/1982		-0.05	-0.001	-0.05			-0.005			

Well Name	Sample Date	Zinc	Temp (C)	Tin	Vanadium
MW-8	3/1/1998				
MW-8	4/1/1998				
MW-8	5/1/1998				
MW-8	6/1/1998				
MW-8	7/1/1998				
MW-8	8/1/1998				
MW-8	9/1/1998				
MW-9	11/16/1994	-0.05			
MW-9	8/1/1997				
MW-9	1/23/1998				
MW-9	2/1/1998				
MW-9	3/1/1998				
MW-9	4/15/1998				
MW-9	5/1/1998				
MW-9	6/1/1998				
MW-9	7/22/1998				
MW-9	8/1/1998				
MW-9	9/1/1998				
MW-9	10/15/1998				
NP-1	10/8/1981	0.4			
NP-1	11/4/1981	0.14			
NP-1	11/13/1981	0.44	20		
NP-1	11/17/1981	3.9			
NP-1	11/23/1981	4.1			
NP-1	12/7/1981	5.1			
NP-1	12/15/1981	5.3			
NP-1	12/22/1981	4.1			
NP-1	1/5/1982	4.1			
NP-1	1/18/1982				
NP-1	1/26/1982				
NP-1	2/16/1982				
NP-1	2/22/1982				
NP-1	3/12/1982				
NP-1	4/16/1982				
NP-1	4/26/1982				
NP-1	5/17/1982				

Well Name	Sample Date	Zinc	Temp (C)	Tin	Vanadium
NP-1	5/24/1982				
NP-1	5/28/1982				
NP-1	6/8/1982				
NP-1	6/14/1982				
NP-1	6/30/1982				
NP-1	7/26/1982				
NP-1	8/18/1982				
NP-1	9/14/1982				
NP-1	10/18/1982				
NP-1	10/27/1982				
NP-1	11/11/1982				
NP-1	12/28/1982				
NP-1	2/21/1983				
NP-1	5/6/1983				
NP-1	5/13/1983				
NP-1	6/2/1983				
NP-1	7/5/1983				
NP-1	8/9/1983				
NP-1	8/25/1983				
NP-1	10/20/1983				
NP-1	11/1/1983				
NP-1	12/7/1983				
NP-1	1/28/1984				
NP-1	2/13/1984				
NP-1	3/1/1984				
NP-1	3/16/1984				
NP-1	4/9/1984				
NP-1	4/18/1984				
NP-1	5/22/1984				
NP-1	5/30/1984				
NP-1	6/26/1984				
NP-1	7/25/1984				
NP-1	8/27/1984				
NP-1	9/12/1984				
NP-1	9/21/1984				
NP-1	11/19/1984				

Well Name	Sample Date	Zinc	Temp (C)	Tin	Vanadium
NP-1	11/27/1984				
NP-1	12/17/1984				
NP-1	5/17/1985				
NP-1	11/13/1985				
NP-1	5/23/1986				
NP-1	10/8/1986				
NP-1	3/30/1989	2.6		0.2	-0.1
NP-1	7/19/1991				
NP-1	8/29/1991				
NP-1	11/26/1991				
NP-1	3/15/1992				
NP-1	5/25/1992				
NP-1	7/16/1992				
NP-1	10/8/1992				
NP-1	11/27/1992				
NP-1	12/15/1992				
NP-1	2/25/1993				
NP-1	3/30/1993	1.13			
NP-1	9/28/1993				
NP-1	3/17/1994				
NP-1	5/24/1994	5.7			
NP-1	6/23/1994				
NP-1	7/21/1994	4.9			
NP-1	9/22/1994				
NP-1	1/29/1995				
NP-1	3/29/1995				
NP-1	6/27/1995				
NP-1	9/21/1995				
NP-1	1/10/1996				
NP-1	4/3/1996				
NP-1	6/1/1996				
NP-1	9/25/1996				
NP-1	1/15/1997				
NP-1	4/1/1997				
NP-1	7/1/1997				
NP-1	10/1/1997				

Well Name	Sample Date	Zinc	Temp (C)	Tin	Vanadium
NP-1	1/15/1998				
NP-1	4/9/1998				
NP-1	7/13/1998				
NP-2	10/8/1981	0.31			
NP-2	11/6/1981	1.7			
NP-2	11/13/1981	3.18	21		
NP-2	11/23/1981	3.5			
NP-2	12/7/1981	4.4			
NP-2	12/15/1981	2.9			
NP-2	12/22/1981	2.8			
NP-2	1/5/1982	3.2			
NP-2	1/18/1982				
NP-2	1/25/1982				
NP-2	2/16/1982				
NP-2	2/22/1982				
NP-2	3/12/1982				
NP-2	4/16/1982				
NP-2	4/26/1982				
NP-2	5/15/1982				
NP-2	5/24/1982				
NP-2	5/28/1982				
NP-2	6/8/1982				
NP-2	6/14/1982				
NP-2	6/30/1982				

Well Name	Water Depth	USGS Quad	Well Depth	Sample ID	Sample Date	Sampler	Notes
NP-2	77.83	Skute Stone Arroyo	-22	NP-2-22	7/26/1982	QMC	
NP-2	76.6	Skute Stone Arroyo	-23	NP-2-23	8/18/1982	QMC	
NP-2	75.6	Skute Stone Arroyo	-24	NP-2-24	9/2/1982	EID	
NP-2	75.1	Skute Stone Arroyo	-25	NP-2-25	9/14/1982	QMC	
NP-2	72.9	Skute Stone Arroyo	-26	NP-2-26	10/18/1982	QMC	
NP-2	72.9	Skute Stone Arroyo	-27	NP-2-27	10/27/1982	QMC	
NP-2	71.6	Skute Stone Arroyo	-28	NP-2-28	11/11/1982	QMC	
NP-2	69.7	Skute Stone Arroyo	-29	NP-2-29	12/28/1982	QMC	
NP-2	67.8	Skute Stone Arroyo	-30	NP-2-30	2/21/1983	QMC	
NP-2	67	Skute Stone Arroyo	-31	NP-2-31	5/6/1983	QMC	
NP-2	67	Skute Stone Arroyo	-32	NP-2-32	5/13/1983	QMC	
NP-2	66.8	Skute Stone Arroyo	-33	NP-2-33	6/2/1983	QMC	
NP-2	66.8	Skute Stone Arroyo	-34	NP-2-34	7/5/1983	QMC	
NP-2	66.9	Skute Stone Arroyo	-35	NP-2-35	8/9/1983	QMC	
NP-2	66.9	Skute Stone Arroyo	-36	NP-2-36	8/25/1983	QMC	
NP-2	66.2	Skute Stone Arroyo	-37	NP-2-37	10/20/1983	QMC	
NP-2	66.2	Skute Stone Arroyo	-38	NP-2-38	11/1/1983	QMC	
NP-2	65	Skute Stone Arroyo	-39	NP-2-39	12/7/1983	QMC	
NP-2	64.4	Skute Stone Arroyo	-40	NP-2-40	1/28/1984	QMC	
NP-2	64.2	Skute Stone Arroyo	-41	NP-2-41	2/13/1984	QMC	
NP-2	63.8	Skute Stone Arroyo	-42	NP-2-42	3/84	QMC	
NP-2	63.8	Skute Stone Arroyo	-43	NP-2-43	3/16/1984	CFP	
NP-2	63.8	Skute Stone Arroyo	-44	NP-2-44	4/18/1984	CFP	
NP-2	63.7	Skute Stone Arroyo	-45	NP-2-45	5/22/1984	CFP	
NP-2	63.7	Skute Stone Arroyo	-46	NP-2-46	5/30/1984	CFP	
NP-2	63.4	Skute Stone Arroyo	-47	NP-2-47	6/26/1984	CFP	
NP-2	63.4	Skute Stone Arroyo	-48	NP-2-48	7/25/1984	CFP	
NP-2	63.3	Skute Stone Arroyo	-49	NP-2-49	8/27/1984	CFP	
NP-2	62.5	Skute Stone Arroyo	-50	NP-2-50	9/12/1984	CFP	
NP-2	62.5	Skute Stone Arroyo	-51	NP-2-51	9/21/1984	CFP	
NP-2	62.6	Skute Stone Arroyo	-52	NP-2-52	11/19/1984	CFP	
NP-2	62.6	Skute Stone Arroyo	-53	NP-2-53	12/27/1984	CFP	
NP-2	61.9	Skute Stone Arroyo	-54	NP-2-54	12/17/1984	CFP	
NP-2	61.4	Skute Stone Arroyo	-55	NP-2-55	5/17/1985	CFP	
NP-2	53.1	Skute Stone Arroyo	-56	NP-2-56	11/13/1985	CFP	
NP-2	51	Skute Stone Arroyo	-57	NP-2-57	5/23/1986	CFP	

Well Name	Water Depth	USGS Quad	Well Depth	Sample ID	Sample Date	Sampler	Notes
NP-2	51.6	Skute Stone Arroyo	-58	NP-2-58	10/8/1986	CFP	
NP-2		Skute Stone Arroyo	-59	NP-2-59	3/30/1989	EID	
NP-2	3.9	Skute Stone Arroyo	-60	NP-2-60	7/19/1991	GE	Lab NP-3- mixed w/
NP-2	30	Skute Stone Arroyo	-61	NP-2-61	8/29/1991	Irwin	lab pH
NP-2		Skute Stone Arroyo	-62	NP-2-62	10/26/1991	Hood	lab pH
NP-2	28.33	Skute Stone Arroyo	-63	NP-2-63	3/15/1992	Irwin	lab pH
NP-2		Skute Stone Arroyo	-64	NP-2-64	5/25/1992	Irwin	lab pH
NP-2		Skute Stone Arroyo	-65	NP-2-65	7/16/1992	Irwin	lab pH
NP-2	27.33	Skute Stone Arroyo	-66	NP-2-66	10/8/1992	Irwin	lab pH
NP-2	25.58	Skute Stone Arroyo	-67	NP-2-67	11/27/1992	Hood	lab pH
NP-2		Skute Stone Arroyo	-68	NP-2-68	12/15/1992	Irwin	lab pH
NP-2	27.5	Skute Stone Arroyo	-69	NP-2-69	2/25/1993	Irwin	lab pH
NP-2		Skute Stone Arroyo	-70	NP-2-70	3/30/1993	JWS	
NP-2		Skute Stone Arroyo	-71	NP-2-71	9/28/1993	Irwin	lab pH
NP-2	18.67	Skute Stone Arroyo	-72	NP-2-72	3/17/1994	Irwin	lab pH
NP-2	26.7	Skute Stone Arroyo	-73	NP-2-73	5/24/1994	SRK	
NP-2		Skute Stone Arroyo	-74	NP-2-74	6/23/1994	Irwin	lab pH
NP-2		Skute Stone Arroyo	-75	NP-2-75	7/22/1994	SRK	
NP-2		Skute Stone Arroyo	-76	NP-2-76	9/22/1994	Irwin	lab pH
NP-2		Skute Stone Arroyo	-77	NP-2-77	1/29/1995	Irwin	lab pH
NP-2		Skute Stone Arroyo	-78	NP-2-78	3/29/1995	Irwin	lab pH
NP-2	30.25	Skute Stone Arroyo	-79	NP-2-79	6/27/1995	Irwin	lab pH
NP-2		Skute Stone Arroyo	-80	NP-2-80	9/21/1995	Irwin	lab pH
NP-2		Skute Stone Arroyo	-81	NP-2-81	1/10/1996	Irwin	lab pH
NP-2		Skute Stone Arroyo	-82	NP-2-82	4/3/1996	Irwin	lab pH
NP-2		Skute Stone Arroyo	-83	NP-2-83	6/1/1996		
NP-2		Skute Stone Arroyo	-84	NP-2-84	9/25/1996	Irwin	lab pH
NP-2		Skute Stone Arroyo	-85	NP-2-85	1/15/1997	Irwin	lab pH
NP-2		Skute Stone Arroyo	-86	NP-2-86	7/1/1997		
NP-2		Skute Stone Arroyo	-87	NP-2-87	10/1/1997		
NP-2	33.25	Skute Stone Arroyo	-88	NP-2-88	1/15/1998	Irwin	
NP-2	32.75	Skute Stone Arroyo	-89	NP-2-89	4/9/1998	Irwin	
NP-2	33	Skute Stone Arroyo	-90	NP-2-90	7/13/1998	Irwin	

Well Name	Sample Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride	Sulfate
NP-2	7/26/1982	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	8/18/1982	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	9/2/1982	32.95807	107.49674	266619	3649215	13	5179	TRUE	26.49	127
NP-2	9/14/1982	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	10/18/1982	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	10/27/1982	32.95807	107.49674	266619	3649215	13	5179	TRUE	26	120
NP-2	11/11/1982	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	12/28/1982	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	2/21/1983	32.95807	107.49674	266619	3649215	13	5179	TRUE	24	127
NP-2	5/6/1983	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	5/13/1983	32.95807	107.49674	266619	3649215	13	5179	TRUE	24	139
NP-2	6/2/1983	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	7/5/1983	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	8/9/1983	32.95807	107.49674	266619	3649215	13	5179	TRUE	36	148
NP-2	8/25/1983	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	10/20/1983	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	11/1/1983	32.95807	107.49674	266619	3649215	13	5179	TRUE	24	111
NP-2	12/7/1983	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	1/28/1984	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	2/13/1984	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	3/84	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	3/16/1984	32.95807	107.49674	266619	3649215	13	5179	TRUE	30	146
NP-2	4/18/1984	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	5/22/1984	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	5/30/1984	32.95807	107.49674	266619	3649215	13	5179	TRUE	32	175
NP-2	6/26/1984	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	7/25/1984	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	8/27/1984	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	9/12/1984	32.95807	107.49674	266619	3649215	13	5179	TRUE	22	134
NP-2	9/21/1984	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	11/19/1984	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	12/27/1984	32.95807	107.49674	266619	3649215	13	5179	TRUE	20	125
NP-2	12/17/1984	32.95807	107.49674	266619	3649215	13	5179	FALSE		
NP-2	5/17/1985	32.95807	107.49674	266619	3649215	13	5179	FALSE	22	120
NP-2	11/13/1985	32.95807	107.49674	266619	3649215	13	5179	FALSE	22	115
NP-2	5/23/1986	32.95807	107.49674	266619	3649215	13	5179	FALSE	28	113

Well Name	Sample Date	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Elevation	Filtered?	Chloride	Sulfate
NP-2	10/8/1986	32.95807	107.49674	266619	3649215	13	5179	FALSE	24	100
NP-2	3/30/1989	32.95807	107.49674	266619	3649215	13	5179	TRUE	29.2	124
NP-2	7/19/1991	32.95807	107.49674	266619	3649215	13	5179	TRUE	60.9	180.8
NP-2	8/29/1991	32.95807	107.49674	266619	3649215	13	5179	FALSE	62.8	197.6
NP-2	10/26/1991	32.95807	107.49674	266619	3649215	13	5179	FALSE	63	170
NP-2	3/15/1992	32.95807	107.49674	266619	3649215	13	5179	FALSE	67.6	194.2
NP-2	5/25/1992	32.95807	107.49674	266619	3649215	13	5179	FALSE	66.6	161.7
NP-2	7/16/1992	32.95807	107.49674	266619	3649215	13	5179	FALSE	65.3	183.7
NP-2	10/8/1992	32.95807	107.49674	266619	3649215	13	5179	FALSE	78.2	178.9
NP-2	11/27/1992	32.95807	107.49674	266619	3649215	13	5179	FALSE	63.7	179.4
NP-2	12/15/1992	32.95807	107.49674	266619	3649215	13	5179	FALSE	82.5	166.8
NP-2	2/25/1993	32.95807	107.49674	266619	3649215	13	5179	FALSE	77.8	197.2
NP-2	3/30/1993	32.95807	107.49674	266619	3649215	13	5179	FALSE	239	436
NP-2	9/28/1993	32.95807	107.49674	266619	3649215	13	5179	FALSE	207	299.9
NP-2	3/17/1994	32.95807	107.49674	266619	3649215	13	5179	FALSE	118.2	300.5
NP-2	5/24/1994	32.95807	107.49674	266619	3649215	13	5179	FALSE	130	300
NP-2	6/23/1994	32.95807	107.49674	266619	3649215	13	5179	FALSE	124.3	267.5
NP-2	7/22/1994	32.95807	107.49674	266619	3649215	13	5179	TRUE	128	299
NP-2	9/22/1994	32.95807	107.49674	266619	3649215	13	5179	FALSE	123.8	252.7
NP-2	1/29/1995	32.95807	107.49674	266619	3649215	13	5179	FALSE	94.1	120.9
NP-2	3/29/1995	32.95807	107.49674	266619	3649215	13	5179	FALSE	90.7	228.7
NP-2	6/27/1995	32.95807	107.49674	266619	3649215	13	5179	FALSE	95.9	247.1
NP-2	9/21/1995	32.95807	107.49674	266619	3649215	13	5179	FALSE	86.6	211.8
NP-2	1/10/1996	32.95807	107.49674	266619	3649215	13	5179	FALSE	78.6	173.1
NP-2	4/3/1996	32.95807	107.49674	266619	3649215	13	5179	FALSE	76.8	168.7
NP-2	6/1/1996	32.95807	107.49674	266619	3649215	13	5179		74.4	181
NP-2	9/25/1996	32.95807	107.49674	266619	3649215	13	5179	TRUE	57.2	118
NP-2	1/15/1997	32.95807	107.49674	266619	3649215	13	5179	TRUE	56	148.4
NP-2	7/1/1997	32.95807	107.49674	266619	3649215	13	5179	TRUE	55.8	121
NP-2	10/1/1997	32.95807	107.49674	266619	3649215	13	5179	TRUE	55	127
NP-2	1/15/1998	32.95807	107.49674	266619	3649215	13	5179	TRUE	59	121
NP-2	4/9/1998	32.95807	107.49674	266619	3649215	13	5179	TRUE	61.8	122
NP-2	7/13/1998	32.95807	107.49674	266619	3649215	13	5179	TRUE	64.6	120

Well Name	Sample Date	pH	TDS	Alkalinity	Bicarb	Spec.Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
NP-2	7/26/1982										
NP-2	8/18/1982										
NP-2	9/2/1982	7.4	468		316	650	0.54	1.66			
NP-2	9/14/1982										
NP-2	10/18/1982										
NP-2	10/27/1982	7.9	440				0.6	1.6			
NP-2	11/11/1982										
NP-2	12/28/1982										
NP-2	2/21/1983	7.8	440				0.6	1.6			
NP-2	5/6/1983										
NP-2	5/13/1983	8.1	460				0.6	1.5			
NP-2	6/2/1983										
NP-2	7/5/1983										
NP-2	8/9/1983	7.9	560				0.6	1.6			
NP-2	8/25/1983										
NP-2	10/20/1983										
NP-2	11/1/1983	8	470				0.6	2.3			
NP-2	12/7/1983										
NP-2	1/28/1984										
NP-2	2/13/1984										
NP-2	3/84										
NP-2	3/16/1984	8.2	500				0.8	1.6			
NP-2	4/18/1984										
NP-2	5/22/1984										
NP-2	5/30/1984	7.7	520				0.6	1.4			
NP-2	6/26/1984										
NP-2	7/25/1984										
NP-2	8/27/1984										
NP-2	9/12/1984	7.8	470				0.6	1.7			
NP-2	9/21/1984										
NP-2	11/19/1984										
NP-2	12/27/1984	7.9	470				0.6	1.7			
NP-2	12/17/1984										
NP-2	5/17/1985	7.8	480								
NP-2	11/13/1985	7.4	460								
NP-2	5/23/1986	7.6	480								

Well Name	Sample Date	pH	TDS	Alkalinity	Bicarb	Spec.Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
NP-2	10/8/1986	7.4	430								
NP-2	3/30/1989		376		183				-0.1		
NP-2	7/19/1991	7.55	453	46	56.1	726	0.64	0.02			-0.002
NP-2	8/29/1991	8.11	471								
NP-2	10/26/1991	7.45	460								
NP-2	3/15/1992	8.07	467								
NP-2	5/25/1992	8.34	456								
NP-2	7/16/1992	8.13	479								
NP-2	10/8/1992	8.26	494								
NP-2	11/27/1992	8.38	451								
NP-2	12/15/1992	8.43	612								
NP-2	2/25/1993	8.62	475								
NP-2	3/30/1993	7.7	1310		289	1910	1.33	3.3	0.5		-0.005
NP-2	9/28/1993	7.92	1170								
NP-2	3/17/1994	7.65	971								
NP-2	5/24/1994	8.03	878		261	1250	0.97	-0.1	4.6	-0.005	-0.005
NP-2	6/23/1994	7.69	848								
NP-2	7/22/1994	7.88	878		270	1360	0.94	1.5	-0.05	0.0059	-0.005
NP-2	9/22/1994	7.55	963								
NP-2	1/29/1995	7.57	791								
NP-2	3/29/1995	7.69	1164								
NP-2	6/27/1995	7.93	778								
NP-2	9/21/1995	7.36	772								
NP-2	1/10/1996	7.1	632								
NP-2	4/3/1996	7.23	603								
NP-2	6/1/1996	6.91	642								
NP-2	9/25/1996	7.68	598								
NP-2	1/15/1997	7.44	536								
NP-2	7/1/1997	7.41	496								
NP-2	10/1/1997	7.49	489								
NP-2	1/15/1998	7.54	486			853	0.61	1.8			
NP-2	4/9/1998		536			802	0.56	1.9			
NP-2	7/13/1998		500			795	0.62	1.5			

Well Name	Sample Date	Boron	Barium	Berylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
NP-2	7/26/1982										
NP-2	8/18/1982										
NP-2	9/2/1982				-0.001	73.8					
NP-2	9/14/1982										
NP-2	10/18/1982										
NP-2	10/27/1982				-0.005				-0.05	0.29	
NP-2	11/11/1982										
NP-2	12/28/1982										
NP-2	2/21/1983				-0.005				-0.05	0.12	
NP-2	5/6/1983										
NP-2	5/13/1983				-0.005				-0.05	-0.1	
NP-2	6/2/1983										
NP-2	7/5/1983										
NP-2	8/9/1983				-0.005				-0.05	-0.1	
NP-2	8/25/1983										
NP-2	10/20/1983										
NP-2	11/1/1983				-0.005				-0.05	0.17	
NP-2	12/7/1983										
NP-2	1/28/1984										
NP-2	2/13/1984										
NP-2	3/84										
NP-2	3/16/1984				-0.005				-0.05	-0.1	
NP-2	4/18/1984										
NP-2	5/22/1984										
NP-2	5/30/1984				-0.005				-0.05	-0.1	
NP-2	6/26/1984										
NP-2	7/25/1984										
NP-2	8/27/1984										
NP-2	9/12/1984				-0.005				-0.05	-0.1	
NP-2	9/21/1984										
NP-2	11/19/1984										
NP-2	12/27/1984				-0.005				-0.05	-0.1	
NP-2	12/17/1984										
NP-2	5/17/1985										
NP-2	11/13/1985										
NP-2	5/23/1986										

Well Name	Sample Date	Boron	Barium	Berylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
NP-2	10/8/1986										
NP-2	3/30/1989	-0.1	-0.1	-0.1	-0.1	52	-0.1	-0.05	-0.1	-0.1	-0.1
NP-2	7/19/1991		-0.01		-0.005	34.2	-0.02		-0.02	-0.05	-0.005
NP-2	8/29/1991										
NP-2	10/26/1991										
NP-2	3/15/1992									-0.05	
NP-2	5/25/1992									-0.05	
NP-2	7/16/1992									-0.05	
NP-2	10/8/1992										
NP-2	11/27/1992										
NP-2	12/15/1992									-0.05	
NP-2	2/25/1993										
NP-2	3/30/1993	0.1	0.6		-0.002	163	-0.02	-0.05	0.01	1.85	-0.02
NP-2	9/28/1993										
NP-2	3/17/1994										
NP-2	5/24/1994		-0.1		0.00097	120	-0.025		-0.025	4.5	0.0079
NP-2	6/23/1994										
NP-2	7/22/1994	-0.1	-0.1	-0.002	-0.0005	120	-0.025	-0.05	-0.025	-0.05	-0.005
NP-2	9/22/1994										
NP-2	1/29/1995										
NP-2	3/29/1995										
NP-2	6/27/1995										
NP-2	9/21/1995										
NP-2	1/10/1996										
NP-2	4/3/1996										
NP-2	6/1/1996										
NP-2	9/25/1996										
NP-2	1/15/1997										
NP-2	7/1/1997										
NP-2	10/1/1997										
NP-2	1/15/1998								-0.005	0.25	
NP-2	4/9/1998								0.005	0.24	
NP-2	7/13/1998								-0.005	0.11	

Well Name	Sample Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium
NP-2	7/26/1982										
NP-2	8/18/1982										
NP-2	9/2/1982	17.9	-0.05		-0.01		1.95	-0.005		57.5	
NP-2	9/14/1982										
NP-2	10/18/1982										
NP-2	10/27/1982		-0.05	-0.001	-0.05			-0.005			
NP-2	11/11/1982										
NP-2	12/28/1982										
NP-2	2/21/1983		-0.05	-0.001	-0.05			-0.005			
NP-2	5/6/1983										
NP-2	5/13/1983		-0.05	-0.001	-0.05			-0.005			
NP-2	6/2/1983										
NP-2	7/5/1983										
NP-2	8/9/1983		-0.05	-0.001	-0.05			-0.005			
NP-2	8/25/1983										
NP-2	10/20/1983										
NP-2	11/1/1983		-0.05	-0.001	-0.05			-0.005			
NP-2	12/7/1983										
NP-2	1/28/1984										
NP-2	2/13/1984										
NP-2	3/84										
NP-2	3/16/1984		-0.05	-0.001	-0.05			-0.005			
NP-2	4/18/1984										
NP-2	5/22/1984										
NP-2	5/30/1984		-0.05	-0.001	-0.05			-0.005			
NP-2	6/26/1984										
NP-2	7/25/1984										
NP-2	8/27/1984										
NP-2	9/12/1984		-0.05	-0.001	-0.05			-0.005			
NP-2	9/21/1984										
NP-2	11/19/1984										
NP-2	12/27/1984		-0.05	-0.001	-0.05			-0.005			
NP-2	12/17/1984										
NP-2	5/17/1985										
NP-2	11/13/1985										
NP-2	5/23/1986										

Well Name	Sample Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium
NP-2	10/8/1986										
NP-2	3/30/1989	18	0.06		-0.1	-0.1	3		-0.1	65	
NP-2	7/19/1991	24	-0.02	-0.0002			0.8	0.018	-0.02	47.8	
NP-2	8/29/1991										
NP-2	10/26/1991										
NP-2	3/15/1992										
NP-2	5/25/1992										
NP-2	7/16/1992										
NP-2	10/8/1992										
NP-2	11/27/1992										
NP-2	12/15/1992										
NP-2	2/25/1993										
NP-2	3/30/1993	61	0.07	-0.001	-0.02	-0.01	0.9	0.005	-0.01	163	
NP-2	9/28/1993										
NP-2	3/17/1994										
NP-2	5/24/1994	47	0.19	-0.001		-0.05	2.3	-0.005	-0.025	100	
NP-2	6/23/1994										
NP-2	7/22/1994	43	-0.03	-0.001	-0.05	-0.05	1.3	-0.005	-0.025	120	-0.005
NP-2	9/22/1994										
NP-2	1/29/1995										
NP-2	3/29/1995										
NP-2	6/27/1995										
NP-2	9/21/1995										
NP-2	1/10/1996										
NP-2	4/3/1996										
NP-2	6/1/1996										
NP-2	9/25/1996										
NP-2	1/15/1997										
NP-2	7/1/1997										
NP-2	10/1/1997										
NP-2	1/15/1998	20.4		-0.0002	-0.05			-0.05			
NP-2	4/9/1998		-0.02	-0.0002	-0.05			-0.05			
NP-2	7/13/1998		0.05	0.0005	-0.05			-0.05			

Well Name	Sample Date	Zinc	Temp (C)	Tin	Vanadium
NP-2	7/26/1982				
NP-2	8/18/1982				
NP-2	9/2/1982		22		
NP-2	9/14/1982				
NP-2	10/18/1982				
NP-2	10/27/1982				
NP-2	11/11/1982				
NP-2	12/28/1982				
NP-2	2/21/1983				
NP-2	5/6/1983				
NP-2	5/13/1983				
NP-2	6/2/1983				
NP-2	7/5/1983				
NP-2	8/9/1983				
NP-2	8/25/1983				
NP-2	10/20/1983				
NP-2	11/1/1983				
NP-2	12/7/1983				
NP-2	1/28/1984				
NP-2	2/13/1984				
NP-2	3/84				
NP-2	3/16/1984				
NP-2	4/18/1984				
NP-2	5/22/1984				
NP-2	5/30/1984				
NP-2	6/26/1984				
NP-2	7/25/1984				
NP-2	8/27/1984				
NP-2	9/12/1984				
NP-2	9/21/1984				
NP-2	11/19/1984				
NP-2	12/27/1984				
NP-2	12/17/1984				
NP-2	5/17/1985				
NP-2	11/13/1985				
NP-2	5/23/1986				

Well Name	Sample Date	Zinc	Temp (C)	Tin	Vanadium
NP-2	10/8/1986				
NP-2	3/30/1989	0.5		-0.1	-0.1
NP-2	7/19/1991				
NP-2	8/29/1991				
NP-2	10/26/1991				
NP-2	3/15/1992				
NP-2	5/25/1992				
NP-2	7/16/1992				
NP-2	10/8/1992				
NP-2	11/27/1992				
NP-2	12/15/1992				
NP-2	2/25/1993				
NP-2	3/30/1993	0.67			
NP-2	9/28/1993				
NP-2	3/17/1994				
NP-2	5/24/1994	4.1			
NP-2	6/23/1994				
NP-2	7/22/1994	1.2			
NP-2	9/22/1994				
NP-2	1/29/1995				
NP-2	3/29/1995				
NP-2	6/27/1995				
NP-2	9/21/1995				
NP-2	1/10/1996				
NP-2	4/3/1996				
NP-2	6/1/1996				
NP-2	9/25/1996				
NP-2	1/15/1997				
NP-2	7/1/1997				
NP-2	10/1/1997				
NP-2	1/15/1998				
NP-2	4/9/1998				
NP-2	7/13/1998				

Well Name	Water Depth	USGS Quad	Well Depth		sample ID	Date	Sampler	Notes
NP-3	73.45	Skute Stone Arroyo		-1	NP-3-1	10/8/1981	QMC	
NP-3		Skute Stone Arroyo		-2	NP-3-2	10/27/1981	QMC	
NP-3		Skute Stone Arroyo		-3	NP-3-3	10/30/1981		
NP-3	71.58	Skute Stone Arroyo		-4	NP-3-4	11/6/1981	QMC	
NP-3	71.58	Skute Stone Arroyo		-5	NP-3-5	11/12/1981	QMC	
NP-3	71.4	Skute Stone Arroyo		-6	NP-3-6	11/13/1981	EID	
NP-3	69	Skute Stone Arroyo		-7	NP-3-7	11/17/1981	QMC	
NP-3	69.85	Skute Stone Arroyo		-8	NP-3-8	11/23/1981	QMC	
NP-3	70.1	Skute Stone Arroyo		-9	NP-3-9	12/7/1981	QMC	
NP-3	68.67	Skute Stone Arroyo		-10	NP-3-10	12/15/1981	QMC	
NP-3	77.67	Skute Stone Arroyo		-11	NP-3-11	12/22/1981	QMC	
NP-3		Skute Stone Arroyo		-12	NP-3-12	1/5/1982	QMC	
NP-3	66.17	Skute Stone Arroyo		-13	NP-3-13	1/18/1982	QMC	
NP-3	66.16	Skute Stone Arroyo		-14	NP-3-14	1/26/1982	QMC	
NP-3	64.67	Skute Stone Arroyo		-15	NP-3-15	2/16/1982	QMC	
NP-3	64.62	Skute Stone Arroyo		-16	NP-3-16	2/22/1982	QMC	
NP-3	63.42	Skute Stone Arroyo		-17	NP-3-17	3/12/1982	QMC	
NP-3	57.67	Skute Stone Arroyo		-18	NP-3-18	4/16/1982	QMC	
NP-3	57.5	Skute Stone Arroyo		-19	NP-3-19	4/26/1982	QMC	
NP-3	5.75	Skute Stone Arroyo		-20	NP-3-20	5/17/1982	QMC	
NP-3		Skute Stone Arroyo		-21	NP-3-21	5/24/1982	QMC	
NP-3		Skute Stone Arroyo		-22	NP-3-22	5/28/1982	QMC	
NP-3	0	Skute Stone Arroyo		-23	NP-3-23	6/8/1982	QMC	
NP-3	0	Skute Stone Arroyo		-24	NP-3-24	6/14/1982	QMC	
NP-3	0	Skute Stone Arroyo		-25	NP-3-25	6/30/1982	QMC	
NP-3	0	Skute Stone Arroyo		-26	NP-3-26	7/26/1982	QMC	
NP-3	0	Skute Stone Arroyo		-27	NP-3-27	8/18/1982	QMC	
NP-3	0	Skute Stone Arroyo		-28	NP-3-28	9/2/1982	EID	
NP-3	0	Skute Stone Arroyo		-29	NP-3-29	9/14/1982	QMC	
NP-3	0.8	Skute Stone Arroyo		-30	NP-3-30	10/18/1982	QMC	
NP-3	0.8	Skute Stone Arroyo		-31	NP-3-31	10/27/1982	QMC	
NP-3	2.7	Skute Stone Arroyo		-32	NP-3-32	11/11/1982	QMC	
NP-3	6.6	Skute Stone Arroyo		-33	NP-3-33	12/28/1982	QMC	
NP-3	9.2	Skute Stone Arroyo		-34	NP-3-34	2/21/1983	QMC	
NP-3	14.4	Skute Stone Arroyo		-35	NP-3-35	5/6/1983	QMC	
NP-3	14.4	Skute Stone Arroyo		-36	NP-3-36	5/13/1983	QMC	

Well Name	Water Depth	USGS Quad	Well Depth		sample ID	Date	Sampler	Notes
NP-3	15.7	Skute Stone Arroyo		-37	NP-3-37	6/2/1983	QMC	
NP-3	17	Skute Stone Arroyo		-38	NP-3-38	7/5/1983	QMC	
NP-3	19.1	Skute Stone Arroyo		-39	NP-3-39	8/9/1983	QMC	
NP-3	19.1	Skute Stone Arroyo		-40	NP-3-40	8/25/1983	QMC	
NP-3	21.5	Skute Stone Arroyo		-41	NP-3-41	10/20/1983	QMC	
NP-3	21.5	Skute Stone Arroyo		-42	NP-3-42	11/1/1983	QMC	
NP-3	22.7	Skute Stone Arroyo		-43	NP-3-43	12/7/1983	QMC	
NP-3	22.5	Skute Stone Arroyo		-44	NP-3-44	1/28/1984	QMC	
NP-3	22.5	Skute Stone Arroyo		-45	NP-3-45	2/13/1984	QMC	
NP-3	22.4	Skute Stone Arroyo		-46	NP-3-46	3/1/1984	QMC	
NP-3	22.4	Skute Stone Arroyo		-47	NP-3-47	3/16/1984	CFP	
NP-3	22.4	Skute Stone Arroyo		-48	NP-3-48	4/18/1984	CFP	
NP-3	22.4	Skute Stone Arroyo		-49	NP-3-49	5/22/1984	CFP	
NP-3	22.4	Skute Stone Arroyo		-50	NP-3-50	5/30/1984	CFP	
NP-3	22.8	Skute Stone Arroyo		-51	NP-3-51	6/26/1984	CFP	
NP-3	22.9	Skute Stone Arroyo		-52	NP-3-52	7/25/1984	CFP	
NP-3	22.9	Skute Stone Arroyo		-53	NP-3-53	8/27/1984	CFP	
NP-3	22.4	Skute Stone Arroyo		-54	NP-3-54	9/12/1984	CFP	
NP-3	22.4	Skute Stone Arroyo		-55	NP-3-55	9/21/1984	CFP	
NP-3	22.6	Skute Stone Arroyo		-56	NP-3-56	11/19/1984	CFP	
NP-3	22.6	Skute Stone Arroyo		-57	NP-3-57	11/27/1984	CFP	
NP-3	22.5	Skute Stone Arroyo		-58	NP-3-58	12/17/1984	CFP	
NP-3	22.4	Skute Stone Arroyo		-59	NP-3-59	5/17/1985	CFP	
NP-3	12.5	Skute Stone Arroyo		-60	NP-3-60	11/13/1985	CFP	
NP-3	11.1	Skute Stone Arroyo		-61	NP-3-61	5/23/1986	CFP	
NP-3	10.9	Skute Stone Arroyo		-62	NP-3-62	10/8/1986	CFP	
NP-3	5.12	Skute Stone Arroyo		-63	NP-3-63	3/3/1987		
NP-3	5.12	Skute Stone Arroyo		-64	NP-3-64	3/4/1987	EID	
NP-3		Skute Stone Arroyo		-65	NP-3-65	5/25/1987		
NP-3	6.5	Skute Stone Arroyo		-66	NP-3-66	1/12/1988	EID	
NP-3		Skute Stone Arroyo		-67	NP-3-67	4/4/1988	Irwin	lab pH
NP-3	7.58	Skute Stone Arroyo		-68	NP-3-68	8/23/1988	Irwin	lab pH
NP-3	6.5	Skute Stone Arroyo		-69	NP-3-69	2/9/1989	Irwin	lab pH
NP-3	6.8	Skute Stone Arroyo		-70	NP-3-70	6/1/1989	Irwin	lab pH
NP-3	5.66	Skute Stone Arroyo		-71	NP-3-71	11/30/1989	Irwin	lab pH
NP-3	4.9	Skute Stone Arroyo		-72	NP-3-72	11/14/1990	GE	

Well Name	Water Depth	USGS Quad	Well Depth		sample ID	Date	Sampler	Notes
NP-3	10.9	Skute Stone Arroyo		-73	NP-3-73	2/11/1991	SHB	
NP-3	30.3	Skute Stone Arroyo		-74	NP-3-74	7/19/1991	GE	Lab NP-2-mixed w/
NP-3	3.92	Skute Stone Arroyo		-75	NP-3-75	8/29/1991	Irwin	lab pH
NP-3	3.67	Skute Stone Arroyo		-76	NP-3-76	11/26/1991	Hood	lab pH
NP-3	3.42	Skute Stone Arroyo		-77	NP-3-77	3/15/1992	Irwin	lab pH
NP-3		Skute Stone Arroyo		-78	NP-3-78	5/25/1992	Irwin	lab pH
NP-3		Skute Stone Arroyo		-79	NP-3-79	7/16/1992	Irwin	lab pH
NP-3	2.42	Skute Stone Arroyo		-80	NP-3-80	10/8/1992	Irwin	lab pH
NP-3	3.58	Skute Stone Arroyo		-81	NP-3-81	11/27/1992	Hood	lab pH
NP-3		Skute Stone Arroyo		-82	NP-3-82	12/15/1992	Irwin	lab pH
NP-3	3.58	Skute Stone Arroyo		-83	NP-3-83	2/25/1993	Irwin	lab pH
NP-3		Skute Stone Arroyo		-84	NP-3-84	3/30/1993	JWS	
NP-3		Skute Stone Arroyo		-85	NP-3-85	9/28/1993	Irwin	lab pH
NP-3	3.56	Skute Stone Arroyo		-86	NP-3-86	3/17/1994	Irwin	lab pH
NP-3		Skute Stone Arroyo		-87	NP-3-87	6/23/1994	Irwin	lab pH
NP-3		Skute Stone Arroyo		-88	NP-3-88	7/22/1994	SRK	25 ft of sediment I
NP-3		Skute Stone Arroyo		-89	NP-3-89	9/22/1994	Irwin	lab pH
NP-3		Skute Stone Arroyo		-90	NP-3-90	1/29/1995	Irwin	lab pH
NP-3		Skute Stone Arroyo		-91	NP-3-91	3/29/1995	Irwin	lab pH
NP-3	7.58	Skute Stone Arroyo		-92	NP-3-92	6/27/1995	Irwin	lab pH
NP-3		Skute Stone Arroyo		-93	NP-3-93	9/21/1995	Irwin	lab pH
NP-3		Skute Stone Arroyo		-94	NP-3-94	1/10/1996	Irwin	lab pH
NP-3		Skute Stone Arroyo		-95	NP-3-95	4/3/1996	Irwin	lab pH
NP-3		Skute Stone Arroyo		-96	NP-3-96	6/1/1996		
NP-3		Skute Stone Arroyo		-97	NP-3-97	9/25/1996	Irwin	lab pH
NP-3		Skute Stone Arroyo		-98	NP-3-98	1/15/1997	Irwin	lab pH
NP-3		Skute Stone Arroyo		-99	NP-3-99	7/1/1997		
NP-3		Skute Stone Arroyo		-100	NP-3-100	10/1/1997		
NP-3	10.5	Skute Stone Arroyo		-101	NP-3-101	1/15/1998	Irwin	
NP-3	10.35	Skute Stone Arroyo		-102	NP-3-102	4/9/1998	Irwin	
NP-3	10.5	Skute Stone Arroyo		-103	NP-3-103	7/13/1998	Irwin	
NP-4	82.25	Skute Stone Arroyo		-1	NP-4-1	4/16/1982	QMC	
NP-4	82.2	Skute Stone Arroyo		-2	NP-4-2	4/26/1982	QMC	
NP-4	68.5	Skute Stone Arroyo		-3	NP-4-3	5/17/1982	QMC	
NP-4		Skute Stone Arroyo		-4	NP-4-4	5/24/1982	QMC	
NP-4		Skute Stone Arroyo		-5	NP-4-5	5/28/1982	QMC	

Well Name	Water Depth	USGS Quad	Well Depth		sample ID	Date	Sampler	Notes
NP-4	42.5	Skute Stone Arroyo		-6	NP-4-6	6/8/1982	QMC	
NP-4	42.5	Skute Stone Arroyo		-7	NP-4-7	6/14/1982	QMC	
NP-4		Skute Stone Arroyo		-8	NP-4-8	6/30/1982	QMC	
NP-4	31.62	Skute Stone Arroyo		-9	NP-4-9	7/26/1982	QMC	
NP-4	31.3	Skute Stone Arroyo		-10	NP-4-10	8/18/1982	QMC	
NP-4	31.2	Skute Stone Arroyo		-11	NP-4-11	9/2/1982	EID	
NP-4	31.1	Skute Stone Arroyo		-12	NP-4-12	9/14/1982	QMC	
NP-4	31.6	Skute Stone Arroyo		-13	NP-4-13	10/18/1982	QMC	
NP-4	31.6	Skute Stone Arroyo		-14	NP-4-14	10/27/1982	QMC	
NP-4	33.1	Skute Stone Arroyo		-15	NP-4-15	11/11/1982	QMC	
NP-4	35.1	Skute Stone Arroyo		-16	NP-4-16	12/28/1982	QMC	
NP-4	38.9	Skute Stone Arroyo		-17	NP-4-17	2/21/1983	QMC	
NP-4	39.7	Skute Stone Arroyo		-18	NP-4-18	5/6/1983	QMC	
NP-4	39.7	Skute Stone Arroyo		-19	NP-4-19	5/13/1983	QMC	
NP-4	40.6	Skute Stone Arroyo		-20	NP-4-20	6/2/1983	QMC	
NP-4	41.8	Skute Stone Arroyo		-21	NP-4-21	7/5/1983	QMC	
NP-4	43.7	Skute Stone Arroyo		-22	NP-4-22	8/9/1983	QMC	
NP-4	43.7	Skute Stone Arroyo		-23	NP-4-23	8/25/1983	QMC	
NP-4	45.2	Skute Stone Arroyo		-24	NP-4-24	10/20/1983	QMC	
NP-4	45.2	Skute Stone Arroyo		-25	NP-4-25	11/1/1983	QMC	
NP-4	48.4	Skute Stone Arroyo		-26	NP-4-26	12/7/1983	QMC	
NP-4	47.1	Skute Stone Arroyo		-27	NP-4-27	1/28/1984	QMC	
NP-4	46.8	Skute Stone Arroyo		-28	NP-4-28	2/13/1984	QMC	
NP-4	46.6	Skute Stone Arroyo		-29	NP-4-29	3/1/1984	QMC	
NP-4	46.6	Skute Stone Arroyo		-30	NP-4-30	3/16/1984	CFP	
NP-4	46.7	Skute Stone Arroyo		-31	NP-4-31	4/18/1984	CFP	
NP-4	44.9	Skute Stone Arroyo		-32	NP-4-32	5/22/1984	CFP	
NP-4	44.9	Skute Stone Arroyo		-33	NP-4-33	5/30/1984	CFP	
NP-4	44.6	Skute Stone Arroyo		-34	NP-4-34	6/26/1984	CFP	
NP-4	44.3	Skute Stone Arroyo		-35	NP-4-35	7/25/1984	CFP	
NP-4	44.1	Skute Stone Arroyo		-36	NP-4-36	8/27/1984	CFP	
NP-4	43.8	Skute Stone Arroyo		-37	NP-4-37	9/12/1984	CFP	
NP-4	43.8	Skute Stone Arroyo		-38	NP-4-38	9/21/1984	CFP	
NP-4	43.1	Skute Stone Arroyo		-39	NP-4-39	11/19/1984	CFP	
NP-4	42.1	Skute Stone Arroyo		-40	NP-4-40	11/27/1984	CFP	
NP-4	42.9	Skute Stone Arroyo		-41	NP-4-41	12/17/1984	CFP	

Well Name	Water Depth	USGS Quad	Well Depth		sample ID	Date	Sampler	Notes
NP-4	42.7	Skute Stone Arroyo		-42	NP-4-42	5/17/1985	CFP	
NP-4	37.3	Skute Stone Arroyo		-43	NP-4-43	11/13/1985	CFP	
NP-4	34.4	Skute Stone Arroyo		-44	NP-4-44	5/23/1986	CFP	
NP-4	34.5	Skute Stone Arroyo		-45	NP-4-45	10/8/1986	CFP	
NP-4		Skute Stone Arroyo		-46	NP-4-46	5/25/1987		
NP-4	29.8	Skute Stone Arroyo		-47	NP-4-47	1/12/1988	EID	
NP-4		Skute Stone Arroyo		-48	NP-4-48	4/4/1988	Irwin	lab pH
NP-4	29.33	Skute Stone Arroyo		-49	NP-4-49	8/23/1988	Irwin	lab pH
NP-4	29.25	Skute Stone Arroyo		-50	NP-4-50	2/9/1989	Irwin	lab pH
NP-4	27.3	Skute Stone Arroyo		-51	NP-4-51	6/1/1989	Irwin	lab pH
NP-4	29.2	Skute Stone Arroyo		-52	NP-4-52	11/30/1989	Irwin	lab pH
NP-4	29.75	Skute Stone Arroyo		-53	NP-4-53	11/14/1990		
NP-4		Skute Stone Arroyo		-54	NP-4-54	2/11/1991		
NP-4		Skute Stone Arroyo		-55	NP-4-55	7/19/1991	GE	lab pH
NP-4	27.5	Skute Stone Arroyo		-56	NP-4-56	8/29/1991	Irwin	lab pH
NP-4	27	Skute Stone Arroyo		-57	NP-4-57	11/26/1991	Hood	lab pH
NP-4	26.42	Skute Stone Arroyo		-58	NP-4-58	3/15/1992	Irwin	lab pH
NP-4		Skute Stone Arroyo		-59	NP-4-59	5/25/1992	Irwin	lab pH
NP-4		Skute Stone Arroyo		-60	NP-4-60	7/16/1992	Irwin	lab pH
NP-4	26	Skute Stone Arroyo		-61	NP-4-61	10/8/1992	Irwin	lab pH
NP-4	26.92	Skute Stone Arroyo		-62	NP-4-62	11/27/1992	Hood	lab pH
NP-4		Skute Stone Arroyo		-63	NP-4-63	12/15/1992	Irwin	lab pH
NP-4	27.08	Skute Stone Arroyo		-64	NP-4-64	2/25/1993	Irwin	lab pH
NP-4		Skute Stone Arroyo		-65	NP-4-65	3/31/1993	JWS	
NP-4		Skute Stone Arroyo		-66	NP-4-66	9/28/1993	Irwin	lab pH
NP-4	27.85	Skute Stone Arroyo		-67	NP-4-67	5/26/1994	SRK	
NP-4		Skute Stone Arroyo		-68	NP-4-68	6/23/1994	Irwin	lab pH
NP-4		Skute Stone Arroyo		-69	NP-4-69	7/23/1994	SRK	
NP-4		Skute Stone Arroyo		-70	NP-4-70	9/22/1994	Irwin	lab pH
NP-4		Skute Stone Arroyo		-71	NP-4-71	1/29/1995	Irwin	lab pH
NP-4		Skute Stone Arroyo		-72	NP-4-72	3/29/1995	Irwin	lab pH
NP-4	30.75	Skute Stone Arroyo		-73	NP-4-73	6/27/1995	Irwin	lab pH
NP-4		Skute Stone Arroyo		-74	NP-4-74	9/21/1995	Irwin	lab pH
NP-4		Skute Stone Arroyo		-75	NP-4-75	1/10/1996	Irwin	lab pH
NP-4		Skute Stone Arroyo		-76	NP-4-76	4/3/1996	Irwin	lab pH
NP-4		Skute Stone Arroyo		-77	NP-4-77	6/1/1996		

Well Name	Water Depth	USGS Quad	Well Depth		sample ID	Date	Sampler	Notes
NP-4		Skute Stone Arroyo		-78	NP-4-78	9/25/1996	Irwin	lab pH
NP-4		Skute Stone Arroyo		-79	NP-4-79	1/15/1997	Irwin	lab pH
NP-4		Skute Stone Arroyo		-80	NP-4-80	7/1/1997		
NP-4		Skute Stone Arroyo		-81	NP-4-81	10/1/1997		
NP-4	33.3	Skute Stone Arroyo		-82	NP-4-82	1/15/1998	Irwin	
NP-4		Skute Stone Arroyo		-83	NP-4-83	1/24/1998	Goff	
NP-4	33.75	Skute Stone Arroyo		-84	NP-4-84	4/9/1998	Irwin	
NP-4	33.75	Skute Stone Arroyo		-85	NP-4-85	7/13/1998	Irwin	
NP-4		Skute Stone Arroyo		-86	NP-4-86	7/21/1998	Brownfield	
NP-5	37.56	Skute Stone Arroyo		-1	NP-5-1	11/4/1981	QMC	
NP-5	34.83	Skute Stone Arroyo		-2	NP-5-2	11/11/1981	QMC	
NP-5	37.49	Skute Stone Arroyo		-3	NP-5-3	11/13/1981	EID	
NP-5	34.83	Skute Stone Arroyo		-4	NP-5-4	11/17/1981	QMC	
NP-5	33	Skute Stone Arroyo		-5	NP-5-5	11/23/1981	QMC	
NP-5	37.56	Skute Stone Arroyo		-6	NP-5-6	12/7/1981	QMC	

Well Name	Date	Latitude	Longitude	UTM_easting	UTM_northing	UTM_zone	Elevation	Filtered?	Chloride	Sulfate
NP-3	10/8/1981	32.96126	107.49678	266624	3649569	13	5200	TRUE	28.6	94.5
NP-3	10/27/1981	32.96126	107.49678	266624	3649569	13	5200	TRUE	28	148
NP-3	10/30/1981	32.96126	107.49678	266624	3649569	13	5200	FALSE	31.2	102
NP-3	11/6/1981	32.96126	107.49678	266624	3649569	13	5200	TRUE	28	140
NP-3	11/12/1981	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	11/13/1981	32.96126	107.49678	266624	3649569	13	5200	TRUE	26.71	140.6
NP-3	11/17/1981	32.96126	107.49678	266624	3649569	13	5200	TRUE	26	144
NP-3	11/23/1981	32.96126	107.49678	266624	3649569	13	5200	TRUE	26	144
NP-3	12/7/1981	32.96126	107.49678	266624	3649569	13	5200	TRUE	28	153
NP-3	12/15/1981	32.96126	107.49678	266624	3649569	13	5200	TRUE	26	149
NP-3	12/22/1981	32.96126	107.49678	266624	3649569	13	5200	TRUE	26	149
NP-3	1/5/1982	32.96126	107.49678	266624	3649569	13	5200	TRUE	26	154
NP-3	1/18/1982	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	1/26/1982	32.96126	107.49678	266624	3649569	13	5200	TRUE	30	151
NP-3	2/16/1982	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	2/22/1982	32.96126	107.49678	266624	3649569	13	5200	TRUE	28	137
NP-3	3/12/1982	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	4/16/1982	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	4/26/1982	32.96126	107.49678	266624	3649569	13	5200	TRUE	28	146
NP-3	5/17/1982	32.96126	107.49678	266624	3649569	13	5200	TRUE	562	900
NP-3	5/24/1982	32.96126	107.49678	266624	3649569	13	5200	TRUE		
NP-3	5/28/1982	32.96126	107.49678	266624	3649569	13	5200	TRUE		
NP-3	6/8/1982	32.96126	107.49678	266624	3649569	13	5200	TRUE	30	150
NP-3	6/14/1982	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	6/30/1982	32.96126	107.49678	266624	3649569	13	5200	TRUE	26	128
NP-3	7/26/1982	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	8/18/1982	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	9/2/1982	32.96126	107.49678	266624	3649569	13	5200	TRUE	27.82	123.8
NP-3	9/14/1982	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	10/18/1982	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	10/27/1982	32.96126	107.49678	266624	3649569	13	5200	TRUE	26	132
NP-3	11/11/1982	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	12/28/1982	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	2/21/1983	32.96126	107.49678	266624	3649569	13	5200	TRUE	26	131
NP-3	5/6/1983	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	5/13/1983	32.96126	107.49678	266624	3649569	13	5200	TRUE	64	139

Well Name	Date	Latitude	Longitude	UTM_easting	UTM_northing	UTM_zone	Elevation	Filtered?	Chloride	Sulfate
NP-3	6/2/1983	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	7/5/1983	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	8/9/1983	32.96126	107.49678	266624	3649569	13	5200	TRUE	114	100
NP-3	8/25/1983	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	10/20/1983	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	11/1/1983	32.96126	107.49678	266624	3649569	13	5200	TRUE	162	163
NP-3	12/7/1983	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	1/28/1984	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	2/13/1984	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	3/1/1984	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	3/16/1984	32.96126	107.49678	266624	3649569	13	5200	TRUE	228	216
NP-3	4/18/1984	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	5/22/1984	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	5/30/1984	32.96126	107.49678	266624	3649569	13	5200	TRUE	248	292
NP-3	6/26/1984	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	7/25/1984	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	8/27/1984	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	9/12/1984	32.96126	107.49678	266624	3649569	13	5200	TRUE	270	292
NP-3	9/21/1984	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	11/19/1984	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	11/27/1984	32.96126	107.49678	266624	3649569	13	5200	TRUE	290	348
NP-3	12/17/1984	32.96126	107.49678	266624	3649569	13	5200	FALSE		
NP-3	5/17/1985	32.96126	107.49678	266624	3649569	13	5200	FALSE	310	453
NP-3	11/13/1985	32.96126	107.49678	266624	3649569	13	5200	FALSE	288	541
NP-3	5/23/1986	32.96126	107.49678	266624	3649569	13	5200	FALSE	282	624
NP-3	10/8/1986	32.96126	107.49678	266624	3649569	13	5200	FALSE	272	620
NP-3	3/3/1987	32.96126	107.49678	266624	3649569	13	5200	FALSE		695
NP-3	3/4/1987	32.96126	107.49678	266624	3649569	13	5200	TRUE	283	695
NP-3	5/25/1987	32.96126	107.49678	266624	3649569	13	5200	FALSE		735.5
NP-3	1/12/1988	32.96126	107.49678	266624	3649569	13	5200	TRUE	359	755
NP-3	4/4/1988	32.96126	107.49678	266624	3649569	13	5200	FALSE	254	587
NP-3	8/23/1988	32.96126	107.49678	266624	3649569	13	5200	FALSE	251.4	835.2
NP-3	2/9/1989	32.96126	107.49678	266624	3649569	13	5200	FALSE	254.3	763.4
NP-3	6/1/1989	32.96126	107.49678	266624	3649569	13	5200	FALSE	241.1	713.6
NP-3	11/30/1989	32.96126	107.49678	266624	3649569	13	5200	FALSE	158.9	742.9
NP-3	11/14/1990	32.96126	107.49678	266624	3649569	13	5200	FALSE	228.7	821.6

Well Name	Date	Latitude	Longitude	UTM_easting	UTM_northing	UTM_zone	Elevation	Filtered?	Chloride	Sulfate
NP-3	2/11/1991	32.96126	107.49678	266624	3649569	13	5200	FALSE	255.9	970.5
NP-3	7/19/1991	32.96126	107.49678	266624	3649569	13	5200	TRUE	239.2	820.3
NP-3	8/29/1991	32.96126	107.49678	266624	3649569	13	5200	FALSE	254.3	854.1
NP-3	11/26/1991	32.96126	107.49678	266624	3649569	13	5200	FALSE	248.1	745.2
NP-3	3/15/1992	32.96126	107.49678	266624	3649569	13	5200	FALSE	227.8	921.3
NP-3	5/25/1992	32.96126	107.49678	266624	3649569	13	5200	FALSE	216.4	752.9
NP-3	7/16/1992	32.96126	107.49678	266624	3649569	13	5200	FALSE	226.1	802.2
NP-3	10/8/1992	32.96126	107.49678	266624	3649569	13	5200	FALSE	211.6	799.1
NP-3	11/27/1992	32.96126	107.49678	266624	3649569	13	5200	FALSE	254.7	796.1
NP-3	12/15/1992	32.96126	107.49678	266624	3649569	13	5200	FALSE	223.2	545.3
NP-3	2/25/1993	32.96126	107.49678	266624	3649569	13	5200	FALSE	219.3	793.6
NP-3	3/30/1993	32.96126	107.49678	266624	3649569	13	5200	FALSE	205	825
NP-3	9/28/1993	32.96126	107.49678	266624	3649569	13	5200	FALSE	210.3	619.4
NP-3	3/17/1994	32.96126	107.49678	266624	3649569	13	5200	FALSE	169.5	746.9
NP-3	6/23/1994	32.96126	107.49678	266624	3649569	13	5200	FALSE	205.7	778.6
NP-3	7/22/1994	32.96126	107.49678	266624	3649569	13	5200	TRUE	194	796
NP-3	9/22/1994	32.96126	107.49678	266624	3649569	13	5200	FALSE	435.9	1348
NP-3	1/29/1995	32.96126	107.49678	266624	3649569	13	5200	FALSE	566.4	651.9
NP-3	3/29/1995	32.96126	107.49678	266624	3649569	13	5200	FALSE	185.5	558
NP-3	6/27/1995	32.96126	107.49678	266624	3649569	13	5200	FALSE	202.7	717
NP-3	9/21/1995	32.96126	107.49678	266624	3649569	13	5200	FALSE	208.4	822
NP-3	1/10/1996	32.96126	107.49678	266624	3649569	13	5200	FALSE	208.5	724.1
NP-3	4/3/1996	32.96126	107.49678	266624	3649569	13	5200	FALSE	208.3	722.6
NP-3	6/1/1996	32.96126	107.49678	266624	3649569	13	5200		210.6	556.5
NP-3	9/25/1996	32.96126	107.49678	266624	3649569	13	5200	TRUE	190.5	536.5
NP-3	1/15/1997	32.96126	107.49678	266624	3649569	13	5200	TRUE	207	657.4
NP-3	7/1/1997	32.96126	107.49678	266624	3649569	13	5200	TRUE	211	711
NP-3	10/1/1997	32.96126	107.49678	266624	3649569	13	5200	TRUE	226	719
NP-3	1/15/1998	32.96126	107.49678	266624	3649569	13	5200	TRUE	217	627
NP-3	4/9/1998	32.96126	107.49678	266624	3649569	13	5200	TRUE	219	683
NP-3	7/13/1998	32.96126	107.49678	266624	3649569	13	5200	TRUE	220	715
NP-4	4/16/1982	32.96513	107.49789	266530	3650000	13	5187	FALSE		
NP-4	4/26/1982	32.96513	107.49789	266530	3650000	13	5187	TRUE	46	132
NP-4	5/17/1982	32.96513	107.49789	266530	3650000	13	5187	FALSE	46	138
NP-4	5/24/1982	32.96513	107.49789	266530	3650000	13	5187	TRUE		
NP-4	5/28/1982	32.96513	107.49789	266530	3650000	13	5187	TRUE		

Well Name	Date	Latitude	Longitude	UTM_easting	UTM_northing	UTM_zone	Elevation	Filtered?	Chloride	Sulfate
NP-4	6/8/1982	32.96513	107.49789	266530	3650000	13	5187	TRUE	26	140
NP-4	6/14/1982	32.96513	107.49789	266530	3650000	13	5187	FALSE		
NP-4	6/30/1982	32.96513	107.49789	266530	3650000	13	5187	TRUE	28	115
NP-4	7/26/1982	32.96513	107.49789	266530	3650000	13	5187	FALSE		
NP-4	8/18/1982	32.96513	107.49789	266530	3650000	13	5187	FALSE		
NP-4	9/2/1982	32.96513	107.49789	266530	3650000	13	5187	TRUE	28.72	107.1
NP-4	9/14/1982	32.96513	107.49789	266530	3650000	13	5187	FALSE		
NP-4	10/18/1982	32.96513	107.49789	266530	3650000	13	5187	FALSE		
NP-4	10/27/1982	32.96513	107.49789	266530	3650000	13	5187	TRUE	36	108
NP-4	11/11/1982	32.96513	107.49789	266530	3650000	13	5187	FALSE		
NP-4	12/28/1982	32.96513	107.49789	266530	3650000	13	5187	FALSE		
NP-4	2/21/1983	32.96513	107.49789	266530	3650000	13	5187	TRUE	48	115
NP-4	5/6/1983	32.96513	107.49789	266530	3650000	13	5187	FALSE		
NP-4	5/13/1983	32.96513	107.49789	266530	3650000	13	5187	TRUE	76	134
NP-4	6/2/1983	32.96513	107.49789	266530	3650000	13	5187	FALSE		
NP-4	7/5/1983	32.96513	107.49789	266530	3650000	13	5187	FALSE		
NP-4	8/9/1983	32.96513	107.49789	266530	3650000	13	5187	TRUE	94	156
NP-4	8/25/1983	32.96513	107.49789	266530	3650000	13	5187	FALSE		
NP-4	10/20/1983	32.96513	107.49789	266530	3650000	13	5187	FALSE		
NP-4	11/1/1983	32.96513	107.49789	266530	3650000	13	5187	TRUE	114	206
NP-4	12/7/1983	32.96513	107.49789	266530	3650000	13	5187	FALSE		
NP-4	1/28/1984	32.96513	107.49789	266530	3650000	13	5187	FALSE		
NP-4	2/13/1984	32.96513	107.49789	266530	3650000	13	5187	FALSE		
NP-4	3/1/1984	32.96513	107.49789	266530	3650000	13	5187	FALSE		
NP-4	3/16/1984	32.96513	107.49789	266530	3650000	13	5187	TRUE	126	256
NP-4	4/18/1984	32.96513	107.49789	266530	3650000	13	5187	FALSE		
NP-4	5/22/1984	32.96513	107.49789	266530	3650000	13	5187	FALSE		
NP-4	5/30/1984	32.96513	107.49789	266530	3650000	13	5187	TRUE	134	320
NP-4	6/26/1984	32.96513	107.49789	266530	3650000	13	5187	FALSE		
NP-4	7/25/1984	32.96513	107.49789	266530	3650000	13	5187	FALSE		
NP-4	8/27/1984	32.96513	107.49789	266530	3650000	13	5187	FALSE		
NP-4	9/12/1984	32.96513	107.49789	266530	3650000	13	5187	TRUE	134	339
NP-4	9/21/1984	32.96513	107.49789	266530	3650000	13	5187	FALSE		
NP-4	11/19/1984	32.96513	107.49789	266530	3650000	13	5187	FALSE		
NP-4	11/27/1984	32.96513	107.49789	266530	3650000	13	5187	TRUE	140	354
NP-4	12/17/1984	32.96513	107.49789	266530	3650000	13	5187	FALSE		

Well Name	Date	Latitude	Longitude	UTM_easting	UTM_northing	UTM_zone	Elevation	Filtered?	Chloride	Sulfate
NP-4	5/17/1985	32.96513	107.49789	266530	3650000	13	5187	FALSE	146	348
NP-4	11/13/1985	32.96513	107.49789	266530	3650000	13	5187	FALSE	142	292
NP-4	5/23/1986	32.96513	107.49789	266530	3650000	13	5187	FALSE	136	300
NP-4	10/8/1986	32.96513	107.49789	266530	3650000	13	5187	FALSE	134	290
NP-4	5/25/1987	32.96513	107.49789	266530	3650000	13	5187	FALSE		278.5
NP-4	1/12/1988	32.96513	107.49789	266530	3650000	13	5187	TRUE	137	256
NP-4	4/4/1988	32.96513	107.49789	266530	3650000	13	5187	FALSE	130.4	328.8
NP-4	8/23/1988	32.96513	107.49789	266530	3650000	13	5187	FALSE	132.1	292.2
NP-4	2/9/1989	32.96513	107.49789	266530	3650000	13	5187	FALSE	130	266.8
NP-4	6/1/1989	32.96513	107.49789	266530	3650000	13	5187	FALSE	116.4	243.5
NP-4	11/30/1989	32.96513	107.49789	266530	3650000	13	5187	FALSE	96.9	237.4
NP-4	11/14/1990	32.96513	107.49789	266530	3650000	13	5187	FALSE	153.1	254.5
NP-4	2/11/1991	32.96513	107.49789	266530	3650000	13	5187	FALSE	126.1	288.9
NP-4	7/19/1991	32.96513	107.49789	266530	3650000	13	5187	TRUE	112.3	198.5
NP-4	8/29/1991	32.96513	107.49789	266530	3650000	13	5187	FALSE	110.7	232
NP-4	11/26/1991	32.96513	107.49789	266530	3650000	13	5187	FALSE	99	193.6
NP-4	3/15/1992	32.96513	107.49789	266530	3650000	13	5187	FALSE	102.9	216.5
NP-4	5/25/1992	32.96513	107.49789	266530	3650000	13	5187	FALSE	106.2	171.4
NP-4	7/16/1992	32.96513	107.49789	266530	3650000	13	5187	FALSE	94.4	176.8
NP-4	10/8/1992	32.96513	107.49789	266530	3650000	13	5187	FALSE	102.9	182.9
NP-4	11/27/1992	32.96513	107.49789	266530	3650000	13	5187	FALSE	97.5	201.7
NP-4	12/15/1992	32.96513	107.49789	266530	3650000	13	5187	FALSE	84.4	151.2
NP-4	2/25/1993	32.96513	107.49789	266530	3650000	13	5187	FALSE	76.6	150.8
NP-4	3/31/1993	32.96513	107.49789	266530	3650000	13	5187	FALSE	45	134
NP-4	9/28/1993	32.96513	107.49789	266530	3650000	13	5187	FALSE	56.9	108.5
NP-4	5/26/1994	32.96513	107.49789	266530	3650000	13	5187	FALSE	39	131
NP-4	6/23/1994	32.96513	107.49789	266530	3650000	13	5187	FALSE	48.5	133.5
NP-4	7/23/1994	32.96513	107.49789	266530	3650000	13	5187	TRUE	34	120
NP-4	9/22/1994	32.96513	107.49789	266530	3650000	13	5187	FALSE	36.9	111
NP-4	1/29/1995	32.96513	107.49789	266530	3650000	13	5187	FALSE	34.5	110.7
NP-4	3/29/1995	32.96513	107.49789	266530	3650000	13	5187	FALSE	33.8	121.7
NP-4	6/27/1995	32.96513	107.49789	266530	3650000	13	5187	FALSE	33.2	134.1
NP-4	9/21/1995	32.96513	107.49789	266530	3650000	13	5187	FALSE	35.3	132.1
NP-4	1/10/1996	32.96513	107.49789	266530	3650000	13	5187	FALSE	34.7	123.1
NP-4	4/3/1996	32.96513	107.49789	266530	3650000	13	5187	FALSE	26	123.3
NP-4	6/1/1996	32.96513	107.49789	266530	3650000	13	5187		34.4	123

Well Name	Date	Latitude	Longitude	UTM_easting	UTM_northing	UTM_zone	Elevation	Filtered?	Chloride	Sulfate
NP-4	9/25/1996	32.96513	107.49789	266530	3650000	13	5187	TRUE	31.7	125.6
NP-4	1/15/1997	32.96513	107.49789	266530	3650000	13	5187	TRUE	98	1113
NP-4	7/1/1997	32.96513	107.49789	266530	3650000	13	5187	TRUE	33.2	119
NP-4	10/1/1997	32.96513	107.49789	266530	3650000	13	5187	TRUE	34.3	123
NP-4	1/15/1998	32.96513	107.49789	266530	3650000	13	5187	TRUE	33.4	137
NP-4	1/24/1998	32.96513	107.49789	266530	3650000	13	5187	TRUE	35.8	130
NP-4	4/9/1998	32.96513	107.49789	266530	3650000	13	5187	TRUE	34.2	120
NP-4	7/13/1998	32.96513	107.49789	266530	3650000	13	5187	TRUE	32.9	131
NP-4	7/21/1998	32.96513	107.49789	266530	3650000	13	5187	TRUE	33.2	128
NP-5	11/4/1981	32.95888	107.49677	266618	3649305	13	5186	TRUE	50	196
NP-5	11/11/1981	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	11/13/1981	32.95888	107.49677	266618	3649305	13	5186	TRUE	37.89	162
NP-5	11/17/1981	32.95888	107.49677	266618	3649305	13	5186	TRUE	42	158
NP-5	11/23/1981	32.95888	107.49677	266618	3649305	13	5186	TRUE	36	161
NP-5	12/7/1981	32.95888	107.49677	266618	3649305	13	5186	TRUE	34	172

Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
NP-3	10/8/1981	6.98	460		211		1.58	-0.5	-0.25		0.005
NP-3	10/27/1981	8	390				1.9	0.4	-0.01		-0.01
NP-3	10/30/1981	7.89	428				1.6	-0.5	-0.25		-0.005
NP-3	11/6/1981	7.9	380				1.6	0.2	-0.01		-0.01
NP-3	11/12/1981										
NP-3	11/13/1981	7.6	446		190.3	600	1.39	0.16	-0.25		0.009
NP-3	11/17/1981	8.1	390				1.4	-0.2	-0.01		-0.01
NP-3	11/23/1981	7.8	460				1.2	0.2	-0.01		-0.01
NP-3	12/7/1981	7.9	450				1.1	-0.2	-0.01		-0.01
NP-3	12/15/1981	7.8	450				1.1	0.2	-0.01		-0.01
NP-3	12/22/1981	7.9	410				0.9	0.2	-0.01		-0.01
NP-3	1/5/1982	7.7	360				1.1	0.2	-0.01		-0.01
NP-3	1/18/1982										
NP-3	1/26/1982	8.1	400				1	0.2			
NP-3	2/16/1982										
NP-3	2/22/1982	8	420				0.9	-0.2			
NP-3	3/12/1982										
NP-3	4/16/1982										
NP-3	4/26/1982	7.9	410				0.8	-0.2			
NP-3	5/17/1982	7.6	2460				0.7	12			
NP-3	5/24/1982										
NP-3	5/28/1982										
NP-3	6/8/1982	7.9	500				0.5	1.9			
NP-3	6/14/1982										
NP-3	6/30/1982	7.9	510				0.5	1.8			
NP-3	7/26/1982										
NP-3	8/18/1982										
NP-3	9/2/1982	7.5	498		308	750	0.53	1.94			
NP-3	9/14/1982										
NP-3	10/18/1982										
NP-3	10/27/1982	8	450				0.6	1.6			
NP-3	11/11/1982										
NP-3	12/28/1982										
NP-3	2/21/1983	8.2	410				0.5	1.4			
NP-3	5/6/1983										
NP-3	5/13/1983	8	500				0.5	2.1			

Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
NP-3	6/2/1983										
NP-3	7/5/1983										
NP-3	8/9/1983	7.8	630				0.5	2.3			
NP-3	8/25/1983										
NP-3	10/20/1983										
NP-3	11/1/1983	7.9	760				0.5	3.8			
NP-3	12/7/1983										
NP-3	1/28/1984										
NP-3	2/13/1984										
NP-3	3/1/1984										
NP-3	3/16/1984	8.1	870				0.6	3.2			
NP-3	4/18/1984										
NP-3	5/22/1984										
NP-3	5/30/1984	7.8	1060				0.4	2.9			
NP-3	6/26/1984										
NP-3	7/25/1984										
NP-3	8/27/1984										
NP-3	9/12/1984	7.7	1140				0.4	3.1			
NP-3	9/21/1984										
NP-3	11/19/1984										
NP-3	11/27/1984	7.8	1150				0.4	3.5			
NP-3	12/17/1984										
NP-3	5/17/1985	7.7	1470								
NP-3	11/13/1985	7.2	1520								
NP-3	5/23/1986	7.5	1590								
NP-3	10/8/1986	7.4	1710								
NP-3	3/3/1987										
NP-3	3/4/1987	6.8	1882		188						
NP-3	5/25/1987										
NP-3	1/12/1988		1584		30				-0.1		
NP-3	4/4/1988		1772								
NP-3	8/23/1988		1744								
NP-3	2/9/1989		1583								
NP-3	6/1/1989		1596								
NP-3	11/30/1989		1600								
NP-3	11/14/1990		1675								

Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
NP-3	2/11/1991		1551								-0.001
NP-3	7/19/1991	8.29	1663	167	191.6	2520	0.66	0.23			-0.002
NP-3	8/29/1991	7.84	1616								
NP-3	11/26/1991	7.08	1613								
NP-3	3/15/1992	7.63	1644								
NP-3	5/25/1992	7.85	1607								
NP-3	7/16/1992	7.26	1578								
NP-3	10/8/1992	7.69	1445								
NP-3	11/27/1992	7.49	1640								
NP-3	12/15/1992	7.75	1558								
NP-3	2/25/1993	7.65	1580								
NP-3	3/30/1993	7.4	1560		29	2070	0.54		0.1		-0.005
NP-3	9/28/1993	7.88	1544								
NP-3	3/17/1994	7.46	1609								
NP-3	6/23/1994	7.77	1628								
NP-3	7/22/1994	7.83	1620		118	2160	0.34	-1	-0.05	-0.005	-0.005
NP-3	9/22/1994	7.05	3466								
NP-3	1/29/1995	7.45	1623								
NP-3	3/29/1995	7.48	1639								
NP-3	6/27/1995	7.38	1607								
NP-3	9/21/1995	7.5	1557								
NP-3	1/10/1996	7.32	1464								
NP-3	4/3/1996	7.29	1415								
NP-3	6/1/1996	7.64	1422								
NP-3	9/25/1996	7.72	1472								
NP-3	1/15/1997	7.51	1478								
NP-3	7/1/1997	7.28	1486								
NP-3	10/1/1997	7.79	1440								
NP-3	1/15/1998	7.39	1406			1980	0.29	-0.05			
NP-3	4/9/1998		1448			1810	0.028	-0.05			
NP-3	7/13/1998		1433			1830	0.031	0.06			
NP-4	4/16/1982										
NP-4	4/26/1982	8.6	410				1.5	0.6			
NP-4	5/17/1982	9.4	310				1	1.3			
NP-4	5/24/1982										
NP-4	5/28/1982										

Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
NP-4	6/8/1982	8.4	420				0.5	4.5			
NP-4	6/14/1982										
NP-4	6/30/1982	9.5	270				0.4	-0.2			
NP-4	7/26/1982										
NP-4	8/18/1982										
NP-4	9/2/1982	8.5	252		63.1	410	0.4	0.03			
NP-4	9/14/1982										
NP-4	10/18/1982										
NP-4	10/27/1982	8.9	230				0.4	-0.2			
NP-4	11/11/1982										
NP-4	12/28/1982										
NP-4	2/21/1983	9.3	250				0.4	0.2			
NP-4	5/6/1983										
NP-4	5/13/1983	7.9	340				0.4	-0.2			
NP-4	6/2/1983										
NP-4	7/5/1983										
NP-4	8/9/1983	8.8	430				0.3	-0.2			
NP-4	8/25/1983										
NP-4	10/20/1983										
NP-4	11/1/1983	8.2	530				0.3	0.6			
NP-4	12/7/1983										
NP-4	1/28/1984										
NP-4	2/13/1984										
NP-4	3/1/1984										
NP-4	3/16/1984	8	540				0.6	0.2			
NP-4	4/18/1984										
NP-4	5/22/1984										
NP-4	5/30/1984	8	630				0.3	-0.2			
NP-4	6/26/1984										
NP-4	7/25/1984										
NP-4	8/27/1984										
NP-4	9/12/1984	8	760				0.3	0.9			
NP-4	9/21/1984										
NP-4	11/19/1984										
NP-4	11/27/1984	8.5	740				0.3	0.2			
NP-4	12/17/1984										

Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
NP-4	5/17/1985	8.2	770								
NP-4	11/13/1985	8	690								
NP-4	5/23/1986	8	690								
NP-4	10/8/1986	7.8	690								
NP-4	5/25/1987										
NP-4	1/12/1988		612		24.4				-0.1		
NP-4	4/4/1988		610								
NP-4	8/23/1988		688								
NP-4	2/9/1989		604								
NP-4	6/1/1989		580								
NP-4	11/30/1989		572								
NP-4	11/14/1990		262								
NP-4	2/11/1991		676								-0.001
NP-4	7/19/1991	7.81	532	45	54.9	802	0.41	0.07			-0.002
NP-4	8/29/1991	8.37	532								
NP-4	11/26/1991	8.54	522								
NP-4	3/15/1992	8.85	565								
NP-4	5/25/1992	8.62	439								
NP-4	7/16/1992	7.64	458								
NP-4	10/8/1992	9.01	535								
NP-4	11/27/1992	8.12	495								
NP-4	12/15/1992	9.52	424								
NP-4	2/25/1993	9.85	349								
NP-4	3/31/1993	7.6	504		275	813	0.53	3.7	0.3		-0.005
NP-4	9/28/1993	8.2	437								
NP-4	5/26/1994	8.1	666		320	800	0.46	4.3	3.5	-0.005	-0.005
NP-4	6/23/1994	8.13	498								
NP-4	7/23/1994	7.9	536		279	828	0.48	4.6	-0.05	0.01	-0.005
NP-4	9/22/1994	7.73	547								
NP-4	1/29/1995	7.88	447								
NP-4	3/29/1995	7.86	494								
NP-4	6/27/1995	7.37	487								
NP-4	9/21/1995	7.51	509								
NP-4	1/10/1996	7.35	483								
NP-4	4/3/1996	7.19	475								
NP-4	6/1/1996	7.36	478								

Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
NP-4	9/25/1996	7.75	504								
NP-4	1/15/1997	7.43	2651								
NP-4	7/1/1997	7.53	500								
NP-4	10/1/1997	7.66	503								
NP-4	1/15/1998	7.73	489			847	0.56	5.97			
NP-4	1/24/1998	7.56	527		287.9	864	0.058				
NP-4	4/9/1998		534			850	0.54	6.3			
NP-4	7/13/1998		503			784	0.58	6			
NP-4	7/21/1998		543				0.61	6.2			
NP-5	11/4/1981	8	570				1.3	4.1	-0.01		-0.01
NP-5	11/11/1981										
NP-5	11/13/1981	7.7	488		186.7	650	1.28	3.56	0.239		-0.005
NP-5	11/17/1981	8	500				1.3	2.7	-0.01		-0.01
NP-5	11/23/1981	7.8	580				1.2	4	-0.01		-0.01
NP-5	12/7/1981	7.9	510				1.2	3.1	-0.01		-0.01

Well Name	Date	Boron	Barium	Berrylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
NP-3	10/8/1981	0.188	-1		-0.01	40.9	-0.05	-0.05	-0.05	-0.1	-0.05
NP-3	10/27/1981	-0.01	0.2		-0.005	41	-0.01	-0.02	-0.05	0.39	-0.02
NP-3	10/30/1981	0.29	-1		-0.01		-0.05	-0.05	-0.05	-0.1	-0.05
NP-3	11/6/1981	-0.01	-0.2		-0.005	39	-0.01	-0.02	-0.05	-0.1	-0.02
NP-3	11/12/1981										
NP-3	11/13/1981	0.034	-0.1		-0.001	55.2	-0.005				-0.005
NP-3	11/17/1981	-0.1	0.24		-0.005	44	-0.01	-0.02	-0.05	-0.1	-0.02
NP-3	11/23/1981	-0.1	0.02		-0.005	47	-0.02	-0.02	-0.05	-0.1	-0.02
NP-3	12/7/1981	-0.1	-0.2		-0.005	47	-0.01	-0.02	-0.05	-0.1	-0.02
NP-3	12/15/1981	-0.1	-0.2		-0.005	56	-0.01	-0.02	-0.05	-0.1	-0.02
NP-3	12/22/1981	-0.1	-0.2		-0.005	73	-0.01	-0.02	-0.05	-0.1	-0.02
NP-3	1/5/1982	-0.1	-0.2		-0.005	56	-0.01	-0.02	-0.05	0.31	-0.02
NP-3	1/18/1982										
NP-3	1/26/1982				-0.005				-0.05	-0.1	
NP-3	2/16/1982										
NP-3	2/22/1982				-0.005				-0.05	0.14	
NP-3	3/12/1982										
NP-3	4/16/1982										
NP-3	4/26/1982				-0.005				-0.05	0.24	
NP-3	5/17/1982				-0.005				-0.05	0.016	
NP-3	5/24/1982									-0.1	
NP-3	5/28/1982									-0.1	
NP-3	6/8/1982				-0.005				-0.05	-0.1	
NP-3	6/14/1982										
NP-3	6/30/1982				-0.005				-0.05	-0.1	
NP-3	7/26/1982										
NP-3	8/18/1982										
NP-3	9/2/1982				-0.001	77.4					
NP-3	9/14/1982										
NP-3	10/18/1982										
NP-3	10/27/1982				-0.005				-0.05	-0.1	
NP-3	11/11/1982										
NP-3	12/28/1982										
NP-3	2/21/1983				-0.005				-0.05	-0.1	
NP-3	5/6/1983										
NP-3	5/13/1983				-0.005				-0.05	-0.1	

Well Name	Date	Boron	Barium	Berrylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
NP-3	6/2/1983										
NP-3	7/5/1983										
NP-3	8/9/1983				-0.005				-0.05	-0.1	
NP-3	8/25/1983										
NP-3	10/20/1983										
NP-3	11/1/1983				-0.005				-0.05	0.14	
NP-3	12/7/1983										
NP-3	1/28/1984										
NP-3	2/13/1984										
NP-3	3/1/1984										
NP-3	3/16/1984				-0.005				-0.05	-0.1	
NP-3	4/18/1984										
NP-3	5/22/1984										
NP-3	5/30/1984				-0.005				-0.05	-0.1	
NP-3	6/26/1984										
NP-3	7/25/1984										
NP-3	8/27/1984										
NP-3	9/12/1984				-0.005				-0.05	-0.1	
NP-3	9/21/1984										
NP-3	11/19/1984										
NP-3	11/27/1984				-0.005				-0.05	-0.1	
NP-3	12/17/1984										
NP-3	5/17/1985										
NP-3	11/13/1985										
NP-3	5/23/1986										
NP-3	10/8/1986										
NP-3	3/3/1987										
NP-3	3/4/1987					320					
NP-3	5/25/1987										
NP-3	1/12/1988	-0.1	-0.1	-0.1	-0.1	268	-0.1	-0.05	-0.1	-0.1	-0.1
NP-3	4/4/1988										
NP-3	8/23/1988										
NP-3	2/9/1989										
NP-3	6/1/1989										
NP-3	11/30/1989										
NP-3	11/14/1990										

Well Name	Date	Boron	Barium	Berrylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
NP-3	2/11/1991										
NP-3	7/19/1991		-0.01		-0.005	287	-0.02		-0.02	0.28	-0.005
NP-3	8/29/1991										
NP-3	11/26/1991										
NP-3	3/15/1992										
NP-3	5/25/1992										
NP-3	7/16/1992										
NP-3	10/8/1992										
NP-3	11/27/1992										
NP-3	12/15/1992								0.01		
NP-3	2/25/1993										
NP-3	3/30/1993	0.02	-0.5		-0.002	296	-0.02	-0.05	0.01	4.99	-0.02
NP-3	9/28/1993								-0.001	-0.05	
NP-3	3/17/1994								0.012	0.24	
NP-3	6/23/1994										
NP-3	7/22/1994	-0.1	-0.1	-0.002	-0.0005	320	-0.025	-0.05	-0.025	-0.05	-0.005
NP-3	9/22/1994										
NP-3	1/29/1995										
NP-3	3/29/1995										
NP-3	6/27/1995										
NP-3	9/21/1995										
NP-3	1/10/1996										
NP-3	4/3/1996										
NP-3	6/1/1996										
NP-3	9/25/1996										
NP-3	1/15/1997										
NP-3	7/1/1997										
NP-3	10/1/1997										
NP-3	1/15/1998								-0.005	0.2	
NP-3	4/9/1998								-0.005	-0.2	
NP-3	7/13/1998								-0.005	-0.05	
NP-4	4/16/1982										
NP-4	4/26/1982				-0.005				0.051	3.8	
NP-4	5/17/1982				-0.005				-0.05	0.11	
NP-4	5/24/1982									-0.1	
NP-4	5/28/1982									-0.1	

Well Name	Date	Boron	Barium	Berylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
NP-4	6/8/1982				-0.005				-0.05	-0.1	
NP-4	6/14/1982										
NP-4	6/30/1982				-0.005				-0.05	-0.1	
NP-4	7/26/1982										
NP-4	8/18/1982										
NP-4	9/2/1982				-0.001	7.2					
NP-4	9/14/1982										
NP-4	10/18/1982										
NP-4	10/27/1982				0.0061				-0.05	0.34	
NP-4	11/11/1982										
NP-4	12/28/1982										
NP-4	2/21/1983				-0.005				-0.05	0.28	
NP-4	5/6/1983										
NP-4	5/13/1983				-0.005				-0.05	-0.1	
NP-4	6/2/1983										
NP-4	7/5/1983										
NP-4	8/9/1983				-0.005				-0.05	-0.1	
NP-4	8/25/1983										
NP-4	10/20/1983										
NP-4	11/1/1983				-0.005				-0.05	-0.1	
NP-4	12/7/1983										
NP-4	1/28/1984										
NP-4	2/13/1984										
NP-4	3/1/1984										
NP-4	3/16/1984				-0.005				-0.05	-0.1	
NP-4	4/18/1984										
NP-4	5/22/1984										
NP-4	5/30/1984				-0.005				-0.05	-0.1	
NP-4	6/26/1984										
NP-4	7/25/1984										
NP-4	8/27/1984										
NP-4	9/12/1984				-0.005				-0.05	-0.1	
NP-4	9/21/1984										
NP-4	11/19/1984										
NP-4	11/27/1984				-0.005				-0.05	-0.1	
NP-4	12/17/1984										

Well Name	Date	Boron	Barium	Berrylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
NP-4	5/17/1985										
NP-4	11/13/1985										
NP-4	5/23/1986										
NP-4	10/8/1986										
NP-4	5/25/1987										
NP-4	1/12/1988	-0.1	-0.1	-0.1	-0.1	76	-0.1	-0.05	-0.1	-0.1	-0.1
NP-4	4/4/1988										
NP-4	8/23/1988										
NP-4	2/9/1989										
NP-4	6/1/1989										
NP-4	11/30/1989										
NP-4	11/14/1990										
NP-4	2/11/1991										
NP-4	7/19/1991		0.28		-0.005	63.4	-0.02			5.14	-0.005
NP-4	8/29/1991										
NP-4	11/26/1991										
NP-4	3/15/1992										
NP-4	5/25/1992										
NP-4	7/16/1992										
NP-4	10/8/1992										
NP-4	11/27/1992										
NP-4	12/15/1992										
NP-4	2/25/1993										
NP-4	3/31/1993	0.04	-0.5		-0.002	76	-0.02	-0.05	0.01	0.62	-0.02
NP-4	9/28/1993										
NP-4	5/26/1994		-0.1		0.0034	73	-0.025		-0.025	15	0.018
NP-4	6/23/1994										
NP-4	7/23/1994	-0.1	-0.1	-0.002	-0.0005	88	-0.025	-0.05	-0.025	-0.05	-0.005
NP-4	9/22/1994										
NP-4	1/29/1995										
NP-4	3/29/1995										
NP-4	6/27/1995										
NP-4	9/21/1995										
NP-4	1/10/1996										
NP-4	4/3/1996										
NP-4	6/1/1996										

Well Name	Date	Boron	Barium	Berrylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
NP-4	9/25/1996										
NP-4	1/15/1997										
NP-4	7/1/1997										
NP-4	10/1/1997										
NP-4	1/15/1998								-0.005	1	
NP-4	1/24/1998					77			-0.005		
NP-4	4/9/1998								0.009	-0.2	
NP-4	7/13/1998								-0.005	0.76	
NP-4	7/21/1998					87			-0.005	0.42	
NP-5	11/4/1981	-0.01	-0.2		-0.005	86	-0.01	-0.02	-0.05	-0.1	-0.02
NP-5	11/11/1981										
NP-5	11/13/1981	0.07	0.218		-0.001	88.6	-0.005		-0.1		-0.005
NP-5	11/17/1981	-0.1	-0.2		-0.005	72	-0.01	-0.02	-0.05	-0.1	-0.02
NP-5	11/23/1981	-0.1	-0.2		-0.005	73	-0.02	-0.02	-0.05	-0.1	-0.02
NP-5	12/7/1981	-0.1	-0.2		-0.005	66	-0.01	-0.02	-0.05	-0.1	-0.02

Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium
NP-3	10/8/1981	9.55	0.81	-1	-0.1	-0.05	9.71	0.005	-0.02	79	
NP-3	10/27/1981		1	-0.001	0.16	-0.05		-0.005	-0.02		
NP-3	10/30/1981		1.03	-0.001	-0.1	-0.02		-0.002	-0.02		
NP-3	11/6/1981		0.47	-0.001	0.26	-0.05		-0.005	-0.02		
NP-3	11/12/1981										
NP-3	11/13/1981	13.05	1.01	-0.0005	0.65	-0.05	5.85	0.023	0.023	43.7	
NP-3	11/17/1981		1	-0.001	0.2	-0.05		-0.005	-0.02		
NP-3	11/23/1981		0.96	-0.001	0.15	-0.05		-0.005	-0.01		
NP-3	12/7/1981		0.78	-0.001	0.13	-0.05		-0.005	-0.02		
NP-3	12/15/1981		0.87	-0.001	0.094	-0.05		-0.005	-0.02		
NP-3	12/22/1981		0.76	-0.001	0.1	-0.05		-0.005	-0.02		
NP-3	1/5/1982		0.72	-0.001	0.01	-0.05		-0.02	-0.02		
NP-3	1/18/1982										
NP-3	1/26/1982		0.7	-0.001	-0.1			-0.005			
NP-3	2/16/1982										
NP-3	2/22/1982		0.66	-0.001	-0.05			-0.005			
NP-3	3/12/1982										
NP-3	4/16/1982										
NP-3	4/26/1982		0.4	-0.001	-0.05			-0.005			
NP-3	5/17/1982		0.23	-0.001	-0.05			-0.005			
NP-3	5/24/1982		0.053								
NP-3	5/28/1982		0.063								
NP-3	6/8/1982		0.1	-0.001	-0.05			-0.005			
NP-3	6/14/1982										
NP-3	6/30/1982		0.081	-0.001	-0.05			-0.005			
NP-3	7/26/1982										
NP-3	8/18/1982										
NP-3	9/2/1982	15.1	-0.05		-0.01		3.9	-0.005		64.4	
NP-3	9/14/1982										
NP-3	10/18/1982										
NP-3	10/27/1982		-0.05	-0.001	-0.05			-0.005			
NP-3	11/11/1982										
NP-3	12/28/1982										
NP-3	2/21/1983		-0.05	-0.001	-0.05			-0.005			
NP-3	5/6/1983										
NP-3	5/13/1983		-0.05	-0.001	-0.05			-0.005			

Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium
NP-3	6/2/1983										
NP-3	7/5/1983										
NP-3	8/9/1983		-0.05	-0.001	-0.05			-0.005			
NP-3	8/25/1983										
NP-3	10/20/1983										
NP-3	11/1/1983		-0.05	-0.001	-0.05			-0.005			
NP-3	12/7/1983										
NP-3	1/28/1984										
NP-3	2/13/1984										
NP-3	3/1/1984										
NP-3	3/16/1984		-0.05	-0.001	-0.05			-0.005			
NP-3	4/18/1984										
NP-3	5/22/1984										
NP-3	5/30/1984		-0.05	-0.001	-0.05			-0.005			
NP-3	6/26/1984										
NP-3	7/25/1984										
NP-3	8/27/1984										
NP-3	9/12/1984		-0.05	-0.001	-0.05			-0.005			
NP-3	9/21/1984										
NP-3	11/19/1984										
NP-3	11/27/1984		-0.05	-0.001	-0.05			-0.005			
NP-3	12/17/1984										
NP-3	5/17/1985										
NP-3	11/13/1985										
NP-3	5/23/1986										
NP-3	10/8/1986										
NP-3	3/3/1987										
NP-3	3/4/1987	67.1					4.29			117.3	
NP-3	5/25/1987										
NP-3	1/12/1988	57	0.57		-0.1	-0.1	38		-0.1	142	
NP-3	4/4/1988										
NP-3	8/23/1988										
NP-3	2/9/1989										
NP-3	6/1/1989										
NP-3	11/30/1989										
NP-3	11/14/1990										

Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium
NP-3	2/11/1991								255.9		
NP-3	7/19/1991	53.4	0.08	0.0002			7	0.011	-0.02	189.7	
NP-3	8/29/1991										
NP-3	11/26/1991										
NP-3	3/15/1992										
NP-3	5/25/1992										
NP-3	7/16/1992										
NP-3	10/8/1992										
NP-3	11/27/1992										
NP-3	12/15/1992										
NP-3	2/25/1993										
NP-3	3/30/1993	35	0.32	-0.001	-0.02	-0.01	4.1	-0.005	-0.01	129	
NP-3	9/28/1993		0.24								
NP-3	3/17/1994		0.33								
NP-3	6/23/1994										
NP-3	7/22/1994	73	0.61	-0.001	-0.05	-0.05	4.5	-0.005	-0.025	120	-0.005
NP-3	9/22/1994										
NP-3	1/29/1995										
NP-3	3/29/1995										
NP-3	6/27/1995										
NP-3	9/21/1995										
NP-3	1/10/1996										
NP-3	4/3/1996										
NP-3	6/1/1996										
NP-3	9/25/1996										
NP-3	1/15/1997										
NP-3	7/1/1997										
NP-3	10/1/1997										
NP-3	1/15/1998	54.8		-0.0002	-0.05			-0.05			
NP-3	4/9/1998		0.15	-0.0002	-0.05			-0.05			
NP-3	7/13/1998		0.33	-0.0002	-0.05			-0.05			
NP-4	4/16/1982										
NP-4	4/26/1982		0.6	-0.001	0.07			-0.005			
NP-4	5/17/1982		-0.05	-0.001	-0.05			-0.005			
NP-4	5/24/1982		-0.05								
NP-4	5/28/1982		-0.05								

Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium
NP-4	6/8/1982		-0.05	-0.001	-0.05			-0.005			
NP-4	6/14/1982										
NP-4	6/30/1982		-0.05	-0.001	-0.05			-0.005			
NP-4	7/26/1982										
NP-4	8/18/1982										
NP-4	9/2/1982	3.5	-0.05		-0.01		3.9	-0.005		71.3	
NP-4	9/14/1982										
NP-4	10/18/1982										
NP-4	10/27/1982		-0.05	-0.001	-0.05			-0.005			
NP-4	11/11/1982										
NP-4	12/28/1982										
NP-4	2/21/1983		-0.05	-0.001	-0.05			-0.005			
NP-4	5/6/1983										
NP-4	5/13/1983		-0.05	-0.001	-0.05			-0.005			
NP-4	6/2/1983										
NP-4	7/5/1983										
NP-4	8/9/1983		-0.05	-0.001	-0.05			-0.005			
NP-4	8/25/1983										
NP-4	10/20/1983										
NP-4	11/1/1983		-0.05	-0.001	-0.05			-0.005			
NP-4	12/7/1983										
NP-4	1/28/1984										
NP-4	2/13/1984										
NP-4	3/1/1984										
NP-4	3/16/1984		-0.05	0.001	-0.05			-0.005			
NP-4	4/18/1984										
NP-4	5/22/1984										
NP-4	5/30/1984		-0.05	-0.001	-0.05			-0.005			
NP-4	6/26/1984										
NP-4	7/25/1984										
NP-4	8/27/1984										
NP-4	9/12/1984		-0.05	-0.001	-0.05			-0.005			
NP-4	9/21/1984										
NP-4	11/19/1984										
NP-4	11/27/1984		-0.05	-0.001	-0.05			-0.005			
NP-4	12/17/1984										

Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium
NP-4	5/17/1985										
NP-4	11/13/1985										
NP-4	5/23/1986										
NP-4	10/8/1986										
NP-4	5/25/1987										
NP-4	1/12/1988	21	0.06		-0.1	-0.1	5		-0.1	86	
NP-4	4/4/1988										
NP-4	8/23/1988										
NP-4	2/9/1989										
NP-4	6/1/1989										
NP-4	11/30/1989										
NP-4	11/14/1990										
NP-4	2/11/1991										
NP-4	7/19/1991	20.8	-0.02	-0.0002			3.1	-0.002	-0.02	66.7	
NP-4	8/29/1991										
NP-4	11/26/1991										
NP-4	3/15/1992										
NP-4	5/25/1992										
NP-4	7/16/1992										
NP-4	10/8/1992										
NP-4	11/27/1992										
NP-4	12/15/1992										
NP-4	2/25/1993										
NP-4	3/31/1993	17	0.84	0.009	-0.02	-0.01	2.2	-0.005	-0.01	79	
NP-4	9/28/1993										
NP-4	5/26/1994	15	0.16	-0.001		-0.05	3	-0.005	-0.025	62	
NP-4	6/23/1994										
NP-4	7/23/1994	16	-0.03	-0.001	-0.05	-0.05	2.5	-0.005	-0.025	72	-0.005
NP-4	9/22/1994										
NP-4	1/29/1995										
NP-4	3/29/1995										
NP-4	6/27/1995										
NP-4	9/21/1995										
NP-4	1/10/1996										
NP-4	4/3/1996										
NP-4	6/1/1996										

Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium
NP-4	9/25/1996										
NP-4	1/15/1997										
NP-4	7/1/1997										
NP-4	10/1/1997										
NP-4	1/15/1998	13.8		-0.0002	-0.05			-0.05			
NP-4	1/24/1998	14.8	-0.02				5.3			70.1	
NP-4	4/9/1998		0.03	-0.0002	-0.05			-0.05			
NP-4	7/13/1998		0.08	-0.0002	-0.05			-0.05			
NP-4	7/21/1998	13.8	-0.02	0.0004	-0.05		2.2	-0.05		64.6	
NP-5	11/4/1981		0.1	-0.001	-0.05	-0.05		-0.005	-0.02		
NP-5	11/11/1981										
NP-5	11/13/1981	14.4	0.14	-0.0005	0.015	0.019	5.07	0.014	-0.001	43.7	
NP-5	11/17/1981		0.3	-0.001	0.07	-0.05		-0.005	-0.02		
NP-5	11/23/1981		0.091	-0.001	-0.05	-0.05		-0.005	-0.1		
NP-5	12/7/1981		-0.05	-0.001	-0.05	-0.05		-0.005	-0.02		

Well Name	Date	Zinc	Temp (C)	Tin	Vanadium
NP-3	10/8/1981	1.25			
NP-3	10/27/1981	0.98			
NP-3	10/30/1981	0.93			
NP-3	11/6/1981	1.1			
NP-3	11/12/1981				
NP-3	11/13/1981	1.59	20.5		
NP-3	11/17/1981	1.2			
NP-3	11/23/1981	1.9			
NP-3	12/7/1981	3.5			
NP-3	12/15/1981	2.5			
NP-3	12/22/1981	2.1			
NP-3	1/5/1982	1.7			
NP-3	1/18/1982				
NP-3	1/26/1982				
NP-3	2/16/1982				
NP-3	2/22/1982				
NP-3	3/12/1982				
NP-3	4/16/1982				
NP-3	4/26/1982				
NP-3	5/17/1982				
NP-3	5/24/1982				
NP-3	5/28/1982				
NP-3	6/8/1982				
NP-3	6/14/1982				
NP-3	6/30/1982				
NP-3	7/26/1982				
NP-3	8/18/1982				
NP-3	9/2/1982		26		
NP-3	9/14/1982				
NP-3	10/18/1982				
NP-3	10/27/1982				
NP-3	11/11/1982				
NP-3	12/28/1982				
NP-3	2/21/1983				
NP-3	5/6/1983				
NP-3	5/13/1983				

Well Name	Date	Zinc	Temp (C)	Tin	Vanadium
NP-3	6/2/1983				
NP-3	7/5/1983				
NP-3	8/9/1983				
NP-3	8/25/1983				
NP-3	10/20/1983				
NP-3	11/1/1983				
NP-3	12/7/1983				
NP-3	1/28/1984				
NP-3	2/13/1984				
NP-3	3/1/1984				
NP-3	3/16/1984				
NP-3	4/18/1984				
NP-3	5/22/1984				
NP-3	5/30/1984				
NP-3	6/26/1984				
NP-3	7/25/1984				
NP-3	8/27/1984				
NP-3	9/12/1984				
NP-3	9/21/1984				
NP-3	11/19/1984				
NP-3	11/27/1984				
NP-3	12/17/1984				
NP-3	5/17/1985				
NP-3	11/13/1985				
NP-3	5/23/1986				
NP-3	10/8/1986				
NP-3	3/3/1987				
NP-3	3/4/1987		17.5		
NP-3	5/25/1987				
NP-3	1/12/1988	1.1		0.2	-0.1
NP-3	4/4/1988				
NP-3	8/23/1988				
NP-3	2/9/1989				
NP-3	6/1/1989				
NP-3	11/30/1989				
NP-3	11/14/1990				

Well Name	Date	Zinc	Temp (C)	Tin	Vanadium
NP-3	2/11/1991				
NP-3	7/19/1991				
NP-3	8/29/1991				
NP-3	11/26/1991				
NP-3	3/15/1992				
NP-3	5/25/1992				
NP-3	7/16/1992				
NP-3	10/8/1992				
NP-3	11/27/1992				
NP-3	12/15/1992				
NP-3	2/25/1993				
NP-3	3/30/1993	6.98			
NP-3	9/28/1993	1.04			
NP-3	3/17/1994	2.58			
NP-3	6/23/1994				
NP-3	7/22/1994	1.8			
NP-3	9/22/1994				
NP-3	1/29/1995				
NP-3	3/29/1995				
NP-3	6/27/1995				
NP-3	9/21/1995				
NP-3	1/10/1996				
NP-3	4/3/1996				
NP-3	6/1/1996				
NP-3	9/25/1996				
NP-3	1/15/1997				
NP-3	7/1/1997				
NP-3	10/1/1997				
NP-3	1/15/1998				
NP-3	4/9/1998				
NP-3	7/13/1998				
NP-4	4/16/1982				
NP-4	4/26/1982				
NP-4	5/17/1982				
NP-4	5/24/1982				
NP-4	5/28/1982				

Well Name	Date	Zinc	Temp (C)	Tin	Vanadium
NP-4	6/8/1982				
NP-4	6/14/1982				
NP-4	6/30/1982				
NP-4	7/26/1982				
NP-4	8/18/1982				
NP-4	9/2/1982				
NP-4	9/14/1982				
NP-4	10/18/1982				
NP-4	10/27/1982				
NP-4	11/11/1982				
NP-4	12/28/1982				
NP-4	2/21/1983				
NP-4	5/6/1983				
NP-4	5/13/1983				
NP-4	6/2/1983				
NP-4	7/5/1983				
NP-4	8/9/1983				
NP-4	8/25/1983				
NP-4	10/20/1983				
NP-4	11/1/1983				
NP-4	12/7/1983				
NP-4	1/28/1984				
NP-4	2/13/1984				
NP-4	3/1/1984				
NP-4	3/16/1984				
NP-4	4/18/1984				
NP-4	5/22/1984				
NP-4	5/30/1984				
NP-4	6/26/1984				
NP-4	7/25/1984				
NP-4	8/27/1984				
NP-4	9/12/1984				
NP-4	9/21/1984				
NP-4	11/19/1984				
NP-4	11/27/1984				
NP-4	12/17/1984				

Well Name	Date	Zinc	Temp (C)	Tin	Vanadium
NP-4	5/17/1985				
NP-4	11/13/1985				
NP-4	5/23/1986				
NP-4	10/8/1986				
NP-4	5/25/1987				
NP-4	1/12/1988	0.1		0.5	-0.1
NP-4	4/4/1988				
NP-4	8/23/1988				
NP-4	2/9/1989				
NP-4	6/1/1989				
NP-4	11/30/1989				
NP-4	11/14/1990				
NP-4	2/11/1991				
NP-4	7/19/1991				
NP-4	8/29/1991				
NP-4	11/26/1991				
NP-4	3/15/1992				
NP-4	5/25/1992				
NP-4	7/16/1992				
NP-4	10/8/1992				
NP-4	11/27/1992				
NP-4	12/15/1992				
NP-4	2/25/1993				
NP-4	3/31/1993	241			
NP-4	9/28/1993				
NP-4	5/26/1994	12			
NP-4	6/23/1994				
NP-4	7/23/1994	0.51			
NP-4	9/22/1994				
NP-4	1/29/1995				
NP-4	3/29/1995				
NP-4	6/27/1995				
NP-4	9/21/1995				
NP-4	1/10/1996				
NP-4	4/3/1996				
NP-4	6/1/1996				

Well Name	Date	Zinc	Temp (C)	Tin	Vanadium
NP-4	9/25/1996				
NP-4	1/15/1997				
NP-4	7/1/1997				
NP-4	10/1/1997				
NP-4	1/15/1998				
NP-4	1/24/1998				
NP-4	4/9/1998				
NP-4	7/13/1998				
NP-4	7/21/1998				
NP-5	11/4/1981	0.14			
NP-5	11/11/1981				
NP-5	11/13/1981	-0.05	20		
NP-5	11/17/1981	0.19			
NP-5	11/23/1981	0.21			
NP-5	12/7/1981	0.24			

Well Name	Water Depth	USGS Quad	Well Depth	Sample ID	Date	Sampler	Notes
NP-5	37.95	Skute Stone Arroyo	-7	NP-5-7	12/15/1981	QMC	
NP-5	37.58	Skute Stone Arroyo	-8	NP-5-8	12/22/1981	QMC	
NP-5	37.66	Skute Stone Arroyo	-9	NP-5-9	1/5/1982	QMC	
NP-5	37.58	Skute Stone Arroyo	-10	NP-5-10	1/18/1982	QMC	
NP-5	37.58	Skute Stone Arroyo	-11	NP-5-11	1/26/1982	QMC	
NP-5	37.75	Skute Stone Arroyo	-12	NP-5-12	2/16/1982	QMC	
NP-5	37.7	Skute Stone Arroyo	-13	NP-5-13	2/22/1982	QMC	
NP-5	37.83	Skute Stone Arroyo	-14	NP-5-14	3/1/1982	QMC	
NP-5	34.08	Skute Stone Arroyo	-15	NP-5-15	4/16/1982	QMC	
NP-5	33.58	Skute Stone Arroyo	-16	NP-5-16	4/26/1982	QMC	
NP-5	27.16	Skute Stone Arroyo	-17	NP-5-17	5/17/1982	QMC	
NP-5	28.5	Skute Stone Arroyo	-18	NP-5-18	5/17/1982	QMC	
NP-5		Skute Stone Arroyo	-19	NP-5-19	5/24/1982	QMC	
NP-5		Skute Stone Arroyo	-20	NP-5-20	5/28/1982	QMC	
NP-5	23.7	Skute Stone Arroyo	-21	NP-5-21	6/8/1982	QMC	
NP-5	23.67	Skute Stone Arroyo	-22	NP-5-22	6/14/1982	QMC	
NP-5	18	Skute Stone Arroyo	-23	NP-5-23	6/30/1982	QMC	
NP-5	18	Skute Stone Arroyo	-24	NP-5-24	7/26/1982	QMC	
NP-5	15.9	Skute Stone Arroyo	-25	NP-5-25	8/18/1982	QMC	
NP-5	14.9	Skute Stone Arroyo	-26	NP-5-26	9/2/1982	EID	
NP-5	14.4	Skute Stone Arroyo	-27	NP-5-27	9/14/1982	QMC	
NP-5	13.6	Skute Stone Arroyo	-28	NP-5-28	10/18/1982	QMC	
NP-5	13.6	Skute Stone Arroyo	-29	NP-5-29	10/27/1982	QMC	
NP-5	13.4	Skute Stone Arroyo	-30	NP-5-30	11/11/1982	QMC	
NP-5	13.6	Skute Stone Arroyo	-31	NP-5-31	12/28/1982	QMC	
NP-5	13.9	Skute Stone Arroyo	-32	NP-5-32	2/21/1983	QMC	
NP-5	14.8	Skute Stone Arroyo	-33	NP-5-33	5/6/1983	QMC	
NP-5	14.8	Skute Stone Arroyo	-34	NP-5-34	5/13/1983	QMC	
NP-5	15.3	Skute Stone Arroyo	-35	NP-5-35	6/2/1983	QMC	
NP-5	15.9	Skute Stone Arroyo	-36	NP-5-36	7/5/1983	QMC	
NP-5	16.6	Skute Stone Arroyo	-37	NP-5-37	8/9/1983	QMC	
NP-5	16.6	Skute Stone Arroyo	-38	NP-5-38	8/25/1983	QMC	
NP-5	17	Skute Stone Arroyo	-39	NP-5-39	10/20/1983	QMC	
NP-5	17	Skute Stone Arroyo	-40	NP-5-40	11/1/1983	QMC	
NP-5	16.8	Skute Stone Arroyo	-41	NP-5-41	12/7/1983	QMC	
NP-5	17.3	Skute Stone Arroyo	-42	NP-5-42	1/28/1984	QMC	

Well Name	Water Depth	USGS Quad	Well Depth		Sample ID	Date	Sampler	Notes
NP-5	17.4	Skute Stone Arroyo		-43	NP-5-43	2/13/1984	QMC	
NP-5	17.5	Skute Stone Arroyo		-44	NP-5-44	3/1/1984	QMC	
NP-5	17.5	Skute Stone Arroyo		-45	NP-5-45	3/16/1984	CFP	
NP-5	17.8	Skute Stone Arroyo		-46	NP-5-46	4/18/1984	CFP	
NP-5	18.1	Skute Stone Arroyo		-47	NP-5-47	5/22/1984	CFP	
NP-5	18.1	Skute Stone Arroyo		-48	NP-5-48	5/30/1984	CFP	
NP-5	18.2	Skute Stone Arroyo		-49	NP-5-49	6/26/1984	CFP	
NP-5	18.3	Skute Stone Arroyo		-50	NP-5-50	7/25/1984	CFP	
NP-5	18.5	Skute Stone Arroyo		-51	NP-5-51	8/27/1984	CFP	
NP-5	18.6	Skute Stone Arroyo		-52	NP-5-52	9/12/1984	CFP	
NP-5	18.6	Skute Stone Arroyo		-53	NP-5-53	9/21/1984	CFP	
NP-5	19	Skute Stone Arroyo		-54	NP-5-54	11/19/1984	CFP	
NP-5	19	Skute Stone Arroyo		-55	NP-5-55	11/27/1984	CFP	
NP-5	19	Skute Stone Arroyo		-56	NP-5-56	12/17/1984	CFP	
NP-5	18.9	Skute Stone Arroyo		-57	NP-5-57	5/17/1985	CFP	
NP-5	18.9	Skute Stone Arroyo		-58	NP-5-58	11/13/1985	CFP	
NP-5	18	Skute Stone Arroyo		-59	NP-5-59	5/23/1986	CFP	
NP-5	18.3	Skute Stone Arroyo		-60	NP-5-60	10/8/1986	CFP	
NP-5		Skute Stone Arroyo		-61	NP-5-61	3/30/1989	EID	
NP-5	17.17	Skute Stone Arroyo		-62	NP-5-62	8/29/1991	Irwin	lab pH
NP-5	18.75	Skute Stone Arroyo		-63	NP-5-63	11/26/1991	Hood	lab pH
NP-5	18.33	Skute Stone Arroyo		-64	NP-5-64	3/15/1992	Irwin	lab pH
NP-5		Skute Stone Arroyo		-65	NP-5-65	5/25/1992	Irwin	lab pH
NP-5		Skute Stone Arroyo		-66	NP-5-66	7/16/1992	Irwin	lab pH
NP-5	18.58	Skute Stone Arroyo		-67	NP-5-67	10/8/1992	Irwin	lab pH
NP-5	18.5	Skute Stone Arroyo		-68	NP-5-68	11/27/1992	Hood	lab pH
NP-5		Skute Stone Arroyo		-69	NP-5-69	12/15/1992	Irwin	lab pH
NP-5	18.58	Skute Stone Arroyo		-70	NP-5-70	2/25/1993	Irwin	lab pH
NP-5		Skute Stone Arroyo		-71	NP-5-71	3/30/1993	JWS	
NP-5		Skute Stone Arroyo		-72	NP-5-72	9/28/1993	Irwin	lab pH
NP-5	18.74	Skute Stone Arroyo		-73	NP-5-73	5/24/1994	SRK	
NP-5		Skute Stone Arroyo		-74	NP-5-74	6/23/1994	Irwin	lab pH
NP-5		Skute Stone Arroyo		-75	NP-5-75	7/23/1994	SRK	
NP-5		Skute Stone Arroyo		-76	NP-5-76	9/22/1994	Irwin	lab pH
NP-5		Skute Stone Arroyo		-77	NP-5-77	1/29/1995	Irwin	lab pH
NP-5		Skute Stone Arroyo		-78	NP-5-78	3/29/1995	Irwin	lab pH

Well Name	Water Depth	USGS Quad	Well Depth		Sample ID	Date	Sampler	Notes
NP-5	20.08	Skute Stone Arroyo		-79	NP-5-79	6/27/1995	Irwin	lab pH
NP-5		Skute Stone Arroyo		-80	NP-5-80	9/21/1995	Irwin	lab pH
NP-5		Skute Stone Arroyo		-81	NP-5-81	1/10/1996	Irwin	lab pH
NP-5		Skute Stone Arroyo		-82	NP-5-82	4/3/1996	Irwin	lab pH
NP-5		Skute Stone Arroyo		-83	NP-5-83	6/1/1996		
NP-5		Skute Stone Arroyo		-84	NP-5-84	9/25/1996	Irwin	lab pH
NP-5		Skute Stone Arroyo		-85	NP-5-85	1/15/1997	Irwin	lab pH
NP-5		Skute Stone Arroyo		-86	NP-5-86	4/1/1997		
NP-5		Skute Stone Arroyo		-87	NP-5-87	7/1/1997		
NP-5		Skute Stone Arroyo		-88	NP-5-88	10/1/1997		
NP-5	21.58	Skute Stone Arroyo		-89	NP-5-89	1/15/1998	Irwin	
NP-5	21.25	Skute Stone Arroyo		-90	NP-5-90	4/9/1998	Irwin	
NP-5	21.5	Skute Stone Arroyo		-91	NP-5-91	7/13/1998	Irwin	
O. Williams				-1	O. Williams-1	12/19/1945		
O. Williams				-2	O. Williams-2	6/13/1946		
Pague		Hillsboro		-1	Pague-1	8/20/1946		
Paxton		Hillsboro		-1	Paxton-1	4/14/1998	Goff	
Paxton		Hillsboro		-2	Paxton-2	7/21/1998	Brownfield	
PW-1		Skute Stone Arroyo		-1	PW-1-1	12/23/1975		Production Well
PW-1		Skute Stone Arroyo		-2	PW-1-2	8/14/1981	SHB	Production Well
PW-1	325.02	Skute Stone Arroyo		-3	PW-1-3	8/2/1994	SRK	
PW-2		Skute Stone Arroyo		-1	PW-2-1	1/15/1976	SHB	Production Well
PW-2		Skute Stone Arroyo		-2	PW-2-2	11/27/1984	SHB	Production Well
PW-2	302.92	Skute Stone Arroyo		-3	PW-2-3	8/2/1994	SRK	Production Well
PW-3		Skute Stone Arroyo		-1	PW-3-1	1/27/1976	SHB	Production Well
PW-3		Skute Stone Arroyo		-2	PW-3-2	8/14/1981	SHB	Production Well
PW-3	347.1	Skute Stone Arroyo		-3	PW-3-3	8/2/1994	SRK	
PW-4	285.42	Skute Stone Arroyo		-1	PW-4-1	8/2/1994	SRK	Production Well
QMC-4				-1	QMC-4-1	3/27/1981	SHB	Unknown-SHB (19
Saladone Well		Saladone Tank		-1	Saladone Well-1	12/5/1992	Adkins	
SHB-27	38			-1	SHB-27-1	9/22/1976	SHB	geotech boring, water
SHB-28	29			-1	SHB-28-1	9/22/1976	SHB	geotech boring, water
SHB-29	67			-1	SHB-29-1	9/22/1976	SHB	geotech boring, water
SHB-30	73			-1	SHB-30 -1	9/22/1976	SHB	geotech boring, water
SHB-34	72			-1	SHB-34-1	9/22/1976	SHB	HCO3, cond, SO4, Cl
Shipping Pen		Saladone Tank		-1	Shipping Pen-1	12/18/1992	Adkins	

Well Name	Water Depth	USGS Quad	Well Depth		Sample ID	Date	Sampler	Notes
Stone				-1	Stone-1	7/31/1947		
Young 1				-1	Young 1-1	7/31/1947		
Young 2				-1	Young 2-1	7/31/1947		

Well Name	Date	Latitude	Longitude	UTM_easting	UTM_northing	UTM_zone	Elevation	Filtered?	Chloride	Sulfate
NP-5	12/15/1981	32.95888	107.49677	266618	3649305	13	5186	TRUE	36	168
NP-5	12/22/1981	32.95888	107.49677	266618	3649305	13	5186	TRUE	36	161
NP-5	1/5/1982	32.95888	107.49677	266618	3649305	13	5186	TRUE	34	163
NP-5	1/18/1982	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	1/26/1982	32.95888	107.49677	266618	3649305	13	5186	TRUE	32	158
NP-5	2/16/1982	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	2/22/1982	32.95888	107.49677	266618	3649305	13	5186	TRUE	32	150
NP-5	3/1/1982	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	4/16/1982	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	4/26/1982	32.95888	107.49677	266618	3649305	13	5186	TRUE	30	154
NP-5	5/17/1982	32.95888	107.49677	266618	3649305	13	5186	TRUE	36	165
NP-5	5/17/1982	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	5/24/1982	32.95888	107.49677	266618	3649305	13	5186	TRUE		
NP-5	5/28/1982	32.95888	107.49677	266618	3649305	13	5186	TRUE		
NP-5	6/8/1982	32.95888	107.49677	266618	3649305	13	5186	TRUE	30	150
NP-5	6/14/1982	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	6/30/1982	32.95888	107.49677	266618	3649305	13	5186	TRUE	28	133
NP-5	7/26/1982	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	8/18/1982	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	9/2/1982	32.95888	107.49677	266618	3649305	13	5186	TRUE	33.98	137.2
NP-5	9/14/1982	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	10/18/1982	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	10/27/1982	32.95888	107.49677	266618	3649305	13	5186	TRUE	34	139
NP-5	11/11/1982	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	12/28/1982	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	2/21/1983	32.95888	107.49677	266618	3649305	13	5186	TRUE	26	139
NP-5	5/6/1983	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	5/13/1983	32.95888	107.49677	266618	3649305	13	5186	TRUE	70	134
NP-5	6/2/1983	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	7/5/1983	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	8/9/1983	32.95888	107.49677	266618	3649305	13	5186	TRUE	26	108
NP-5	8/25/1983	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	10/20/1983	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	11/1/1983	32.95888	107.49677	266618	3649305	13	5186	TRUE	30	111
NP-5	12/7/1983	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	1/28/1984	32.95888	107.49677	266618	3649305	13	5186	FALSE		

Well Name	Date	Latitude	Longitude	UTM_easting	UTM_northing	UTM_zone	Elevation	Filtered?	Chloride	Sulfate
NP-5	2/13/1984	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	3/1/1984	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	3/16/1984	32.95888	107.49677	266618	3649305	13	5186	TRUE	26	130
NP-5	4/18/1984	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	5/22/1984	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	5/30/1984	32.95888	107.49677	266618	3649305	13	5186	TRUE	22	139
NP-5	6/26/1984	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	7/25/1984	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	8/27/1984	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	9/12/1984	32.95888	107.49677	266618	3649305	13	5186	TRUE	28	125
NP-5	9/21/1984	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	11/19/1984	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	11/27/1984	32.95888	107.49677	266618	3649305	13	5186	TRUE	28	120
NP-5	12/17/1984	32.95888	107.49677	266618	3649305	13	5186	FALSE		
NP-5	5/17/1985	32.95888	107.49677	266618	3649305	13	5186	FALSE	28	130
NP-5	11/13/1985	32.95888	107.49677	266618	3649305	13	5186	FALSE	24	134
NP-5	5/23/1986	32.95888	107.49677	266618	3649305	13	5186	FALSE	28	120
NP-5	10/8/1986	32.95888	107.49677	266618	3649305	13	5186	FALSE	28	113
NP-5	3/30/1989	32.95888	107.49677	266618	3649305	13	5186	TRUE	32	125
NP-5	8/29/1991	32.95888	107.49677	266618	3649305	13	5186	FALSE	38.7	152.1
NP-5	11/26/1991	32.95888	107.49677	266618	3649305	13	5186	FALSE	37.7	129.5
NP-5	3/15/1992	32.95888	107.49677	266618	3649305	13	5186	FALSE	46.7	140.7
NP-5	5/25/1992	32.95888	107.49677	266618	3649305	13	5186	FALSE	75.5	131.1
NP-5	7/16/1992	32.95888	107.49677	266618	3649305	13	5186	FALSE	37.8	132.4
NP-5	10/8/1992	32.95888	107.49677	266618	3649305	13	5186	FALSE	39.4	133.2
NP-5	11/27/1992	32.95888	107.49677	266618	3649305	13	5186	FALSE	117.2	133.9
NP-5	12/15/1992	32.95888	107.49677	266618	3649305	13	5186	FALSE	40.4	104
NP-5	2/25/1993	32.95888	107.49677	266618	3649305	13	5186	FALSE	41.4	140.8
NP-5	3/30/1993	32.95888	107.49677	266618	3649305	13	5186	FALSE	39	146
NP-5	9/28/1993	32.95888	107.49677	266618	3649305	13	5186	FALSE	48.1	109.2
NP-5	5/24/1994	32.95888	107.49677	266618	3649305	13	5186	FALSE	41	130
NP-5	6/23/1994	32.95888	107.49677	266618	3649305	13	5186	FALSE	54.1	142.3
NP-5	7/23/1994	32.95888	107.49677	266618	3649305	13	5186	TRUE	41	131
NP-5	9/22/1994	32.95888	107.49677	266618	3649305	13	5186	FALSE	42.8	117.7
NP-5	1/29/1995	32.95888	107.49677	266618	3649305	13	5186	FALSE	43.5	101.2
NP-5	3/29/1995	32.95888	107.49677	266618	3649305	13	5186	FALSE	42.4	130.8

Well Name	Date	Latitude	Longitude	UTM_easting	UTM_northing	UTM_zone	Elevation	Filtered?	Chloride	Sulfate
NP-5	6/27/1995	32.95888	107.49677	266618	3649305	13	5186	FALSE	43.4	119.4
NP-5	9/21/1995	32.95888	107.49677	266618	3649305	13	5186	FALSE	44.3	134.6
NP-5	1/10/1996	32.95888	107.49677	266618	3649305	13	5186	FALSE	41.6	136.6
NP-5	4/3/1996	32.95888	107.49677	266618	3649305	13	5186	FALSE	31.8	130
NP-5	6/1/1996	32.95888	107.49677	266618	3649305	13	5186		47.3	118.1
NP-5	9/25/1996	32.95888	107.49677	266618	3649305	13	5186	TRUE	42.5	129.4
NP-5	1/15/1997	32.95888	107.49677	266618	3649305	13	5186	TRUE	45.7	140.69
NP-5	4/1/1997	32.95888	107.49677	266618	3649305	13	5186	TRUE	47	151
NP-5	7/1/1997	32.95888	107.49677	266618	3649305	13	5186	TRUE	44.8	134
NP-5	10/1/1997	32.95888	107.49677	266618	3649305	13	5186	TRUE	45.3	132
NP-5	1/15/1998	32.95888	107.49677	266618	3649305	13	5186	TRUE	47.9	147
NP-5	4/9/1998	32.95888	107.49677	266618	3649305	13	5186	TRUE	47.8	135
NP-5	7/13/1998	32.95888	107.49677	266618	3649305	13	5186	TRUE	45.2	141
O. Williams	12/19/1945							FALSE	425	62
O. Williams	6/13/1946							FALSE	418	66
Pague	8/20/1946							FALSE	26	80
Paxton	4/14/1998	32.94392	107.53059	263416	3647722	13	5500	TRUE	25.5	163
Paxton	7/21/1998	32.94392	107.53059	263416	3647722	13	5500	TRUE	49.7	265
PW-1	12/23/1975	32.96935	107.38766	276846	3650229	13	4693	FALSE	16	10
PW-1	8/14/1981	32.96935	107.38766	276846	3650229	13	4693	FALSE	32	24
PW-1	8/2/1994	32.96935	107.38766	276846	3650229	13	4693	FALSE		
PW-2	1/15/1976	32.96311	107.38526	277055	3649533	13	4670	FALSE	17	-5
PW-2	11/27/1984	32.96311	107.38526	277055	3649533	13	4670	FALSE	20	125
PW-2	8/2/1994	32.96311	107.38526	277055	3649533	13	4670	TRUE	24	27
PW-3	1/27/1976	32.96851	107.39606	276059	3650155	13	4717	FALSE	24	-5
PW-3	8/14/1981	32.96851	107.39606	276059	3650155	13	4717	FALSE	66	31
PW-3	8/2/1994	32.96851	107.39606	276059	3650155	13	4717	FALSE		
PW-4	8/2/1994	32.96856	107.40469	275252	3650178	13	4645	TRUE	27	17
QMC-4	3/27/1981							TRUE		
Saladone Well	12/5/1992							FALSE		23
SHB-27	9/22/1976							TRUE	20.6	233
SHB-28	9/22/1976							TRUE	51.2	353
SHB-29	9/22/1976							TRUE		
SHB-30	9/22/1976							TRUE	21	145
SHB-34	9/22/1976							TRUE	-1	-1
Shipping Pen	12/18/1992							FALSE		19.2

Well Name	Date	Latitude	Longitude	UTM_easting	UTM_northing	UTM_zone	Elevation	Filtered?	Chloride	Sulfate
Stone	7/31/1947							FALSE	88	26
Young 1	7/31/1947							FALSE	238	43
Young 2	7/31/1947							FALSE	148	32

Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
NP-5	12/15/1981	7.8	500				1.2	3.3	-0.01		-0.01
NP-5	12/22/1981	7.9	460				1.1	3.8	-0.01		-0.01
NP-5	1/5/1982	7.7	420				1.1	4.1	-0.01		-0.01
NP-5	1/18/1982										
NP-5	1/26/1982	8	440				1.1	2.9			
NP-5	2/16/1982										
NP-5	2/22/1982	8	450				1	2			
NP-5	3/1/1982										
NP-5	4/16/1982										
NP-5	4/26/1982	7.9	450				1.1	1.1			
NP-5	5/17/1982	8	490				1.1	6.7			
NP-5	5/17/1982										
NP-5	5/24/1982										
NP-5	5/28/1982										
NP-5	6/8/1982	8.1	420				0.9	4.5			
NP-5	6/14/1982										
NP-5	6/30/1982	8.1	460				0.9	3.9			
NP-5	7/26/1982										
NP-5	8/18/1982										
NP-5	9/2/1982	7.6	472		206	650	0.82	4.2			
NP-5	9/14/1982										
NP-5	10/18/1982										
NP-5	10/27/1982	8	440				0.8	3.7			
NP-5	11/11/1982										
NP-5	12/28/1982										
NP-5	2/21/1983	8.3	420				0.5	1.3			
NP-5	5/6/1983										
NP-5	5/13/1983	8.9	290				0.4	0.2			
NP-5	6/2/1983										
NP-5	7/5/1983										
NP-5	8/9/1983	8.1	460				0.8	3.7			
NP-5	8/25/1983										
NP-5	10/20/1983										
NP-5	11/1/1983	8.2	440				0.8	5.2			
NP-5	12/7/1983										
NP-5	1/28/1984										

Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
NP-5	2/13/1984										
NP-5	3/1/1984										
NP-5	3/16/1984	8	380				0.4	3			
NP-5	4/18/1984										
NP-5	5/22/1984										
NP-5	5/30/1984	7.8	400				0.8	2.9			
NP-5	6/26/1984										
NP-5	7/25/1984										
NP-5	8/27/1984										
NP-5	9/12/1984	8	420				0.8	3.4			
NP-5	9/21/1984										
NP-5	11/19/1984										
NP-5	11/27/1984	8.2	420				0.8	3.2			
NP-5	12/17/1984										
NP-5	5/17/1985	7.9	450								
NP-5	11/13/1985	7.8	400								
NP-5	5/23/1986	7.9	430								
NP-5	10/8/1986	7.8	420								
NP-5	3/30/1989		458		211				-0.1		
NP-5	8/29/1991	7.68	499								
NP-5	11/26/1991	7	472								
NP-5	3/15/1992	7.89	456								
NP-5	5/25/1992	7.8	490								
NP-5	7/16/1992	7.63	476								
NP-5	10/8/1992	7.64	431								
NP-5	11/27/1992	8.01	475								
NP-5	12/15/1992	7.8	402								
NP-5	2/25/1993	7.65	487								
NP-5	3/30/1993	7.8	488		221	746	0.77	4	0.2		-0.005
NP-5	9/28/1993	7.79	518								
NP-5	5/24/1994	7.84	520		211	680	0.74	3.4	1.1	-0.005	-0.005
NP-5	6/23/1994	7.66	466								
NP-5	7/23/1994	7.89	494		206	749	0.71	3.3	-0.05	-0.005	-0.005
NP-5	9/22/1994	7.73	526								
NP-5	1/29/1995	7.99	490								
NP-5	3/29/1995	7.94	449								

Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
NP-5	6/27/1995	7.64	525								
NP-5	9/21/1995	7.71	483								
NP-5	1/10/1996	8.04	406								
NP-5	4/3/1996	7.67	405								
NP-5	6/1/1996	7.52	457								
NP-5	9/25/1996	8.09	504								
NP-5	1/15/1997	7.76	498								
NP-5	4/1/1997		526				0.7				
NP-5	7/1/1997	7.58	478								
NP-5	10/1/1997	7.79	473								
NP-5	1/15/1998	7.41	489			824	0.86	3.73			
NP-5	4/9/1998		493			770	0.8	3.7			
NP-5	7/13/1998		503			605	0.86	3.5			
O. Williams	12/19/1945		883		96	1609	0.6	1.9			
O. Williams	6/13/1946		847		98	1620	0.4	2.2			
Pague	8/20/1946		348		242	409	1.2	1.2			
Paxton	4/14/1998	7.77	773			936	0.83	1.9			
Paxton	7/21/1998		741				1.04	0.09			
PW-1	12/23/1975	7.8	217		145	340	0.46	3.5			
PW-1	8/14/1981	8.1	250		171		0.9	0.7			-0.01
PW-1	8/2/1994										
PW-2	1/15/1976	8.1	257		153	310	0.66	3.5			
PW-2	11/27/1984	7.9	470				0.6	1.7			
PW-2	8/2/1994	7.63	338		273	506	0.39	-1	-0.05	0.011	-0.005
PW-3	1/27/1976	8	243		158	330	0.64	2.6			
PW-3	8/14/1981	8.2	300		139		2.5	0.8			-0.01
PW-3	8/2/1994										
PW-4	8/2/1994	7.57	274		190	398	0.46	-1	-0.05	0.0062	0.0058
QMC-4	3/27/1981						2.5	-0.2			-0.01
Saladone Well	12/5/1992	7.91	354	174.8	213.2	429		0.19			
SHB-27	9/22/1976	7.61	434		205	720	0.77	0.8			-0.01
SHB-28	9/22/1976	7.58	840		264	1260	0.97	-0.1			
SHB-29	9/22/1976	7.98	384			640		-0.1			
SHB-30	9/22/1976	7.77	486		211	720	0.79	0.7			0.02
SHB-34	9/22/1976	7.36	50		12	41	0.14	-0.1			
Shipping Pen	12/18/1992	7.92	345	160	195	484		0.66			

Well Name	Date	pH	TDS	Alkalinity	Bicarb	Spec. Cond.	Flouride	Nitrate	Aluminum	Antimony	Arsenic
Stone	7/31/1947		369		188	607	0.6	3.3			
Young 1	7/31/1947		568		122	1030	0.6	0.8			
Young 2	7/31/1947		471		177	800	1	4.1			

Well Name	Date	Boron	Barium	Berrylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
NP-5	12/15/1981	-0.1	-0.2		-0.005	90	-0.01	-0.02	-0.05	-0.1	-0.02
NP-5	12/22/1981	-0.1	-0.2		-0.005	101	-0.01	-0.02	-0.05	-0.1	-0.02
NP-5	1/5/1982	-0.1	-0.2		-0.005	87	-0.01	-0.02	-0.05	0.18	-0.02
NP-5	1/18/1982										
NP-5	1/26/1982				-0.005				-0.05	-0.01	
NP-5	2/16/1982										
NP-5	2/22/1982				-0.005				-0.05	0.12	
NP-5	3/1/1982										
NP-5	4/16/1982										
NP-5	4/26/1982				-0.005				0.31	3.8	
NP-5	5/17/1982				-0.005				-0.05	0.14	
NP-5	5/17/1982										
NP-5	5/24/1982									-0.1	
NP-5	5/28/1982									-0.1	
NP-5	6/8/1982				-0.005				-0.05	0.44	
NP-5	6/14/1982										
NP-5	6/30/1982				-0.005				-0.05	0.36	
NP-5	7/26/1982										
NP-5	8/18/1982										
NP-5	9/2/1982				-0.001	72.6					
NP-5	9/14/1982										
NP-5	10/18/1982										
NP-5	10/27/1982				-0.005				-0.05	0.21	
NP-5	11/11/1982										
NP-5	12/28/1982										
NP-5	2/21/1983				-0.005				-0.05	-0.1	
NP-5	5/6/1983										
NP-5	5/13/1983				-0.005				-0.05	-0.1	
NP-5	6/2/1983										
NP-5	7/5/1983										
NP-5	8/9/1983				-0.005				-0.05	-0.1	
NP-5	8/25/1983										
NP-5	10/20/1983										
NP-5	11/1/1983				-0.005				-0.05	-0.1	
NP-5	12/7/1983										
NP-5	1/28/1984										

Well Name	Date	Boron	Barium	Berylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
NP-5	2/13/1984										
NP-5	3/1/1984										
NP-5	3/16/1984				-0.005				-0.05	-0.1	
NP-5	4/18/1984										
NP-5	5/22/1984										
NP-5	5/30/1984				-0.005				-0.05	-0.1	
NP-5	6/26/1984										
NP-5	7/25/1984										
NP-5	8/27/1984										
NP-5	9/12/1984				-0.005				-0.05	-0.1	
NP-5	9/21/1984										
NP-5	11/19/1984										
NP-5	11/27/1984				-0.005				-0.05	-0.1	
NP-5	12/17/1984										
NP-5	5/17/1985										
NP-5	11/13/1985										
NP-5	5/23/1986										
NP-5	10/8/1986										
NP-5	3/30/1989	-0.1	-0.1	-0.1	-0.1	82	-0.1	-0.05	-0.1	-0.1	-0.1
NP-5	8/29/1991										
NP-5	11/26/1991										
NP-5	3/15/1992										
NP-5	5/25/1992										
NP-5	7/16/1992										
NP-5	10/8/1992										
NP-5	11/27/1992										
NP-5	12/15/1992								0.025		
NP-5	2/25/1993										
NP-5	3/30/1993	0.04	-0.5		-0.002	76	-0.02	-0.05	-0.01	0.29	-0.02
NP-5	9/28/1993										
NP-5	5/24/1994		-0.1		-0.0005	86	-0.025		-0.025	1.2	0.0077
NP-5	6/23/1994										
NP-5	7/23/1994	-0.1	-0.1	-0.002	-0.0005	79	-0.025	-0.05	-0.025	-0.05	-0.005
NP-5	9/22/1994										
NP-5	1/29/1995										
NP-5	3/29/1995										

Well Name	Date	Boron	Barium	Berylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
NP-5	6/27/1995										
NP-5	9/21/1995										
NP-5	1/10/1996										
NP-5	4/3/1996										
NP-5	6/1/1996										
NP-5	9/25/1996										
NP-5	1/15/1997										
NP-5	4/1/1997								-0.005	0.25	
NP-5	7/1/1997										
NP-5	10/1/1997										
NP-5	1/15/1998								-0.005	0.15	
NP-5	4/9/1998								-0.005	-0.05	
NP-5	7/13/1998								-0.005	0.02	
O. Williams	12/19/1945					105					
O. Williams	6/13/1946					108					
Pague	8/20/1946					63					
Paxton	4/14/1998					140.5			0.038	0.85	
Paxton	7/21/1998					69			-0.005	0.17	
PW-1	12/23/1975					22					
PW-1	8/14/1981					28			-0.05	0.2	-0.02
PW-1	8/2/1994										
PW-2	1/15/1976					21					
PW-2	11/27/1984				-0.005				-0.05	-0.1	
PW-2	8/2/1994	-0.1	-0.1	-0.002	-0.0005	60	-0.025	-0.05	-0.025	0.062	-0.005
PW-3	1/27/1976					23					
PW-3	8/14/1981					16			-0.05	0.31	-0.02
PW-3	8/2/1994										
PW-4	8/2/1994	-0.1	-0.1	-0.002	-0.0005	21	-0.025	-0.05	-0.025	-0.05	-0.005
QMC-4	3/27/1981								-0.05		-0.02
Saladone Well	12/5/1992					54.8					
SHB-27	9/22/1976	-0.1			-0.001	5.86	0.002	-0.001	0.002	0.007	-0.001
SHB-28	9/22/1976	-0.1			-0.001	163	0.002	-0.001	0.005	0.015	-0.001
SHB-29	9/22/1976	-0.1			0.001	65.1	0.004	-0.001	0.002	0.52	0.002
SHB-30	9/22/1976	-0.1			-0.001	84.8	0.004	-0.001	0.002	0.009	-0.001
SHB-34	9/22/1976	-0.1			0.001	3.67	0.002	-0.001	0.002	0.009	-0.001
Shipping Pen	12/18/1992					54					

Well Name	Date	Boron	Barium	Berrylium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead
Stone	7/31/1947					39					
Young 1	7/31/1947					66					
Young 2	7/31/1947					44					

Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium
NP-5	12/15/1981		0.08	-0.001	-0.05	-0.05		-0.005	-0.02	
NP-5	12/22/1981		-0.05	-0.001	-0.05	-0.05		-0.005	-0.02	
NP-5	1/5/1982		-0.05	-0.001	-0.05	-0.05		-0.02	-0.02	
NP-5	1/18/1982									
NP-5	1/26/1982		-0.05	-0.001	-0.1			-0.005		
NP-5	2/16/1982									
NP-5	2/22/1982		-0.05	-0.001	-0.05	-0.05		-0.005		
NP-5	3/1/1982									
NP-5	4/16/1982									
NP-5	4/26/1982		6.9	-0.001	-0.05			-0.005		
NP-5	5/17/1982		-0.05	-0.001	-0.05			-0.005		
NP-5	5/17/1982									
NP-5	5/24/1982		-0.05							
NP-5	5/28/1982		-0.05							
NP-5	6/8/1982		-0.05	-0.001	-0.05			-0.005		
NP-5	6/14/1982									
NP-5	6/30/1982		-0.05	-0.001	-0.05			-0.005		
NP-5	7/26/1982									
NP-5	8/18/1982									
NP-5	9/2/1982	21.8	-0.05		-0.01		3.9	-0.005		46
NP-5	9/14/1982									
NP-5	10/18/1982									
NP-5	10/27/1982		-0.05	-0.001	-0.05			-0.005		
NP-5	11/11/1982									
NP-5	12/28/1982									
NP-5	2/21/1983		-0.05	-0.001	-0.05			-0.005		
NP-5	5/6/1983									
NP-5	5/13/1983		-0.05	-0.001	-0.05			-0.005		
NP-5	6/2/1983									
NP-5	7/5/1983									
NP-5	8/9/1983		-0.05	-0.001	-0.05			-0.005		
NP-5	8/25/1983									
NP-5	10/20/1983									
NP-5	11/1/1983		-0.05	-0.001	-0.05			-0.005		
NP-5	12/7/1983									
NP-5	1/28/1984									

Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium
NP-5	2/13/1984									
NP-5	3/1/1984									
NP-5	3/16/1984		-0.05	-0.001	-0.05			-0.005		
NP-5	4/18/1984									
NP-5	5/22/1984									
NP-5	5/30/1984		-0.05	-0.001	-0.05			-0.005		
NP-5	6/26/1984									
NP-5	7/25/1984									
NP-5	8/27/1984									
NP-5	9/12/1984		-0.05	-0.001	-0.05			-0.005		
NP-5	9/21/1984									
NP-5	11/19/1984									
NP-5	11/27/1984		-0.05	-0.001	-0.05			-0.005		
NP-5	12/17/1984									
NP-5	5/17/1985									
NP-5	11/13/1985									
NP-5	5/23/1986									
NP-5	10/8/1986									
NP-5	3/30/1989	22	-0.05		-0.1	-0.1	3		-0.1	39
NP-5	8/29/1991									
NP-5	11/26/1991									
NP-5	3/15/1992									
NP-5	5/25/1992									
NP-5	7/16/1992									
NP-5	10/8/1992									
NP-5	11/27/1992									
NP-5	12/15/1992									
NP-5	2/25/1993									
NP-5	3/30/1993	26	0.02	-0.001	-0.02	-0.01	2.5	-0.005	-0.01	43
NP-5	9/28/1993									
NP-5	5/24/1994	26	0.086	-0.001		-0.05	3.4	-0.005	-0.025	40
NP-5	6/23/1994									
NP-5	7/23/1994	24	-0.03	-0.001	-0.05	-0.05	3.1	-0.005	-0.025	45
NP-5	9/22/1994									
NP-5	1/29/1995									
NP-5	3/29/1995									

Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium
NP-5	6/27/1995									
NP-5	9/21/1995									
NP-5	1/10/1996									
NP-5	4/3/1996									
NP-5	6/1/1996									
NP-5	9/25/1996									
NP-5	1/15/1997									
NP-5	4/1/1997		-0.02	-0.002				0.0076		
NP-5	7/1/1997									
NP-5	10/1/1997									
NP-5	1/15/1998	24.2		-0.0002	-0.05			-0.05		
NP-5	4/9/1998		-0.02	-0.0002	-0.05			-0.05		
NP-5	7/13/1998		0.05	-0.0002	-0.05			-0.05		
O. Williams	12/19/1945	14								
O. Williams	6/13/1946	15								
Pague	8/20/1946	21								
Paxton	4/14/1998	17.4	-0.02	0.0003	-0.05		0.7	-0.05		66.9
Paxton	7/21/1998	23.5	-0.02	-0.0002	-0.05		4.09	-0.05		110.6
PW-1	12/23/1975	3					4.5			38
PW-1	8/14/1981	4								53
PW-1	8/2/1994									
PW-2	1/15/1976	3					4.3			39
PW-2	11/27/1984		-0.05	-0.001				-0.005		
PW-2	8/2/1994	8.4	0.032	-0.001	-0.05	-0.05	3.4	-0.005	-0.025	46
PW-3	1/27/1976	3					5.1			44
PW-3	8/14/1981	1								87
PW-3	8/2/1994									
PW-4	8/2/1994	1.7	-0.03	-0.001	-0.05	-0.05	3.5	-0.005	-0.025	73
QMC-4	3/27/1981									
Saladone Well	12/5/1992	23					2.16			22.4
SHB-27	9/22/1976	21.4	0.039	-0.0004	0.002		5.86	-0.01	-0.001	51.1
SHB-28	9/22/1976	32	0.42	-0.0004	0.003		11.5	-0.01	-0.001	81.7
SHB-29	9/22/1976	14.5	0.049	-0.0004	0.003		5.02	-0.01	-0.001	60.3
SHB-30	9/22/1976	21.3	0.036	-0.0004	0.002		4.88	-0.01	-0.001	50.6
SHB-34	9/22/1976	0.52	0.004	-0.0004	-0.001		0.63	-0.01	-0.001	2.55
Shipping Pen	12/18/1992	11.4					2.51			29.6

Well Name	Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium
Stone	7/31/1947	5.7								
Young 1	7/31/1947	7.9								
Young 2	7/31/1947	6.7								

Thallium	Well Name	Date	Zinc	Temp (C)	Tin	Vanadium
	NP-5	12/15/1981	0.37			
	NP-5	12/22/1981	0.32			
	NP-5	1/5/1982	0.4			
	NP-5	1/18/1982				
	NP-5	1/26/1982				
	NP-5	2/16/1982				
	NP-5	2/22/1982				
	NP-5	3/1/1982				
	NP-5	4/16/1982				
	NP-5	4/26/1982				
	NP-5	5/17/1982				
	NP-5	5/17/1982				
	NP-5	5/24/1982				
	NP-5	5/28/1982				
	NP-5	6/8/1982				
	NP-5	6/14/1982				
	NP-5	6/30/1982				
	NP-5	7/26/1982				
	NP-5	8/18/1982				
	NP-5	9/2/1982				
	NP-5	9/14/1982				
	NP-5	10/18/1982				
	NP-5	10/27/1982				
	NP-5	11/11/1982				
	NP-5	12/28/1982				
	NP-5	2/21/1983				
	NP-5	5/6/1983				
	NP-5	5/13/1983				
	NP-5	6/2/1983				
	NP-5	7/5/1983				
	NP-5	8/9/1983				
	NP-5	8/25/1983				
	NP-5	10/20/1983				
	NP-5	11/1/1983				
	NP-5	12/7/1983				
	NP-5	1/28/1984				

Thallium	Well Name	Date	Zinc	Temp (C)	Tin	Vanadium
	NP-5	2/13/1984				
	NP-5	3/1/1984				
	NP-5	3/16/1984				
	NP-5	4/18/1984				
	NP-5	5/22/1984				
	NP-5	5/30/1984				
	NP-5	6/26/1984				
	NP-5	7/25/1984				
	NP-5	8/27/1984				
	NP-5	9/12/1984				
	NP-5	9/21/1984				
	NP-5	11/19/1984				
	NP-5	11/27/1984				
	NP-5	12/17/1984				
	NP-5	5/17/1985				
	NP-5	11/13/1985				
	NP-5	5/23/1986				
	NP-5	10/8/1986				
	NP-5	3/30/1989	0.4		0.1	-0.1
	NP-5	8/29/1991				
	NP-5	11/26/1991				
	NP-5	3/15/1992				
	NP-5	5/25/1992				
	NP-5	7/16/1992				
	NP-5	10/8/1992				
	NP-5	11/27/1992				
	NP-5	12/15/1992				
	NP-5	2/25/1993				
	NP-5	3/30/1993	0.19			
	NP-5	9/28/1993				
	NP-5	5/24/1994	2.3			
	NP-5	6/23/1994				
-0.005	NP-5	7/23/1994	-0.05			
	NP-5	9/22/1994				
	NP-5	1/29/1995				
	NP-5	3/29/1995				

Thallium	Well Name	Date	Zinc	Temp (C)	Tin
	NP-5	6/27/1995			
	NP-5	9/21/1995			
	NP-5	1/10/1996			
	NP-5	4/3/1996			
	NP-5	6/1/1996			
	NP-5	9/25/1996			
	NP-5	1/15/1997			
	NP-5	4/1/1997			
	NP-5	7/1/1997			
	NP-5	10/1/1997			
	NP-5	1/15/1998			
	NP-5	4/9/1998			
	NP-5	7/13/1998			
	O. Williams	12/19/1945		22.2000008	
	O. Williams	6/13/1946			
	Pague	8/20/1946			
	Paxton	4/14/1998			
	Paxton	7/21/1998			
	PW-1	12/23/1975			
	PW-1	8/14/1981	-0.05		
	PW-1	8/2/1994			
	PW-2	1/15/1976			
	PW-2	11/27/1984			
-0.005	PW-2	8/2/1994	-0.05		
	PW-3	1/27/1976			
	PW-3	8/14/1981	0.19		
	PW-3	8/2/1994			
-0.005	PW-4	8/2/1994	-0.05		
	QMC-4	3/27/1981	-0.05		
	Saladone Well	12/5/1992			
	SHB-27	9/22/1976	0.004		
	SHB-28	9/22/1976	0.018		
	SHB-29	9/22/1976	0.16		
	SHB-30	9/22/1976	0.004		
	SHB-34	9/22/1976	0.014		
	Shipping Pen	12/18/1992			

Thallium	Well Name	Date	Zinc	Temp (C)	Tin	Vanadium
	Stone	7/31/1947				
	Young 1	7/31/1947				
	Young 2	7/31/1947				

Appendix B-2

Pre 1980 SHB Groundwater Sample Results

CUSTOMER Sergent, Hauskins & Beckwith
ATTENTION Mr. Booth
ADDRESS 2821 Girard N.E.
CITY Albuquerque, NM 87107
INVOICE NO. 606081

REPORT OF ANALYSIS

SAMPLES RECEIVED 6-4-76

CUSTOMER ORDER NUMBER

TYPE OF ANALYSIS Water Analysis

Analysis	Sample #1	Sample #2	Sample #4
Calcium	117	122	692
Magnesium	25.6	15.5	15.2
Sodium	50.4	76.1	30.0
Potassium	1.78	1.72	1.56
Bicarbonate	228	241	188
Sulfate	137	114	34
Chloride	14.3	16.7	19.9
Fluoride	0.52	0.51	0.44
Boron	<0.1	<0.1	<0.1
Nitrate	1.39	16.8	4.0
Silica	40.9	36.3	41.9
Iron	0.002	0.002	0.004
Manganese	0.003	0.003	0.001
Total Dissolved Solids	520	560	350
Specific Conductance umhos	720	780	480
pH Units	7.78	7.48	8.60
Hardness	301	269	211

APPROVED BY

James J. Mueller, President

6-16-76 PAGE 1 OF 1 PAGE

Controls for Environmental Pollution, Inc.

1925 Rosina • P. O. Box 5351 • Santa Fe, New Mexico 87501 • Telephone 505/982-9841

CUSTOMER Sergent, Hauskins & Beckwith
ATTENTION Mr. Booth
ADDRESS 2821 Girard N.E.
CITY Albuquerque, NM 87107
INVOICE NO. 606081

REPORT OF ANALYSIS

SAMPLES RECEIVED 6-4-76

CUSTOMER ORDER NUMBER

TYPE OF ANALYSIS Water Analysis

Analysis	Sample #3	Underflow	Underflow Percolate
Calcium	64.1	80.1	34.5
Magnesium	22.4	4.6	22.1
Sodium	47.2	69.7	106
Potassium	1.75	55.4	2.10
Bicarbonate	137	43.7	120
Sulfate	544	299	258
Chloride	18.9	36.1	41.8
Fluoride	0.77	2.94	1.97
Boron	< 0.1	< 0.1	0.3
Nitrate	1.1	17.7	< 0.1
Silica	42.4	4.2	24.4
Iron	0.017	0.75	0.007
Manganese	0.001	0.095	0.22
Total Dissolved Solids	409	654	672
Specific Conductance umhos	570	960	900
pH	8.16	8.35	7.61
Hardness	215	217	274
Arsenic	0.02	0.02	0.08
Cadmium	< 0.001	< 0.001	< 0.001
Chromium	0.002	0.003	0.002
Cobalt	< 0.001	< 0.001	< 0.001
Copper	< 0.001	0.004	0.002
Cyanide	< 0.01	0.30	9.03

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6-16-76 PAGE 1 OF 2 PAGE

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Controls for Environmental Pollution, Inc.

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REPORT OF ANALYSIS

CUSTOMER Sergent, Hauskins & Beckwith
ATTENTION Mr. Booth
ADDRESS 2821 Girard N.E.
CITY Albuquerque, NM 87107
INVOICE NO. 606081

SAMPLES RECEIVED 6-4-76

CUSTOMER ORDER NUMBER

TYPE OF ANALYSIS Water Analysis

Analysis	Sample #3	Underflow	Underflow Percolate
Lead	0.023	0.002	0.015
Mercury	< 0.0004	< 0.0004	0.0013
Molybdenum	0.001	0.020	0.073
Selenium	< 0.01	< 0.01	0.04
Silver	< 0.001	< 0.001	< 0.001
Zinc	< 0.01	0.01	0.54

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James J. Mueller, President
6-16-76 PAGE 2 OF 2 PAGE

CUSTOMER Sergent, Hauskins & Beckwith
ATTENTION Mr. Booth
ADDRESS 2821 Girard NE
CITY Albuquerque, NM 87107
INVOICE NO. 606112

REPORT OF ANALYSIS

SAMPLES RECEIVED 6/18/76
CUSTOMER ORDER NUMBER

TYPE OF ANALYSIS Water and Soils Analysis - Cyanide RUSH

Sample Identification	mg/l
Underflow Percolate Pit C 5½ - 9'	0.57
Job No. E76 - 1023 Boring 5 Depth 4½' Blows 25-25-33	ug/gm 0.15
Job N. E76-1023 Boring 5 Depth 14½' Blows 14-15-16	0.98
Job No. E76-1023 Boring 5 Depth 29½' Blows 15-22-29	1.06
Job No. E76-1023 Pit A-1 2' - 15½'	0.32
Job No. E76-1023 Pit C#2 5½ - 9'	0.15

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6/22/76
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Controls for Environmental Pollution, Inc.
1925 Rosina • P. O. Box 5351 • Santa Fe, New Mexico 87501 • Telephone 505/982-9841

CUSTOMER Sargent, Hauskins & Beckwith
ATTENTION Mr. Booth
ADDRESS 2501 Candelaria Road N.E.
CITY Albuquerque, NM 87107
INVOICE NO. 609066

REPORT OF ANALYSIS

SAMPLES RECEIVED 9/9/76

CUSTOMER ORDER NUMBER

TYPE OF ANALYSIS Soil Analysis -

Analysis	A-1 BH 2½ - 6' mg/l	A-2 BH 2½ - 6' mg/l
Calcium	11.6	8.89
Magnesium	1.8	1.6
Sodium	8.9	9.6
Potassium	1.3	1.2
Bicarbonate (as$CaCO_3$)	40.3	40.8
Sulfate	7	6
Chloride	1.06	< 0.05
Fluoride	0.64	1.08
Boron	0.3	0.1
Nitrate (as N)	3.11	1.14
Silica	6.8	6.8
Iron	0.27	0.33
Manganese	0.01	0.02
Total Dissolved Solids	127	142
Specific Conductance (umhos)	131	109
pH (Units)	8.18	8.20
Hardness (as $CaCO_3$)	51.4	42.5
Arsenic	< 0.01	< 0.01
Cadmium	< 0.001	< 0.001
Chromium	< 0.001	< 0.001
Cobalt	< 0.001	< 0.001
Copper	0.003	0.003
Cyanide	< 0.1	< 0.1
Lead	< 0.001	< 0.001
Mercury	< 0.0004	< 0.0004
Molybdenum	< 0.001	< 0.001
Selenium	< 0.01	< 0.01
Silver	< 0.001	< 0.001
Zinc	0.004	0.004

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James J. Mueller, President
9/14/76

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Controls for Environmental Pollution, Inc.

CUSTOMER Sargent Hauskins & Beckwith
ATTENTION Mr. Booth
ADDRESS 2501 Candelari Road NE
CITY Albuquerque, NM 87107
INVOICE NO. 610073

REPORT OF ANALYSIS

SAMPLES RECEIVED 9/1/76

CUSTOMER ORDER NUMBER

TYPE OF ANALYSIS Soil Analysis -

Analysis	BH F-1 mg/l	BH F-2 mg/l
Calcium	21.4	23.0
Magnesium	1.19	1.57
Sodium	23.7	28.5
Potassium	1.26	1.11
Bicarbonate (as $CaCO_3$)	42.8	42.2
Sulfate	19.4	2.3
Chloride	5.0	10.5
Fluoride	0.66	0.74
Boron	0.2	0.2
Nitrogen Nitrate	5.7	3.7
Silica	48.9	42.7
Iron	0.048	0.063
Manganese	0.002	0.002
Total Dissolved Solids	204	208
Specific Conductance umhos	230	268
pH	7.88	7.80
Hardness (as$CaCO_3$)	56.7	75.7
Arsenic	0.01	< 0.01
Cadmium	0.005	0.005
Chromium	0.004	0.003
Cobalt	< 0.001	< 0.001
Copper	0.008	0.006
Cyanide	< 0.1	< 0.1
Lead	< 0.001	< 0.001
Mercury	< 0.0004	< 0.0004
Molybdenum	0.001	< 0.001
Selenium	< 0.01	< 0.01
Silver	0.009	0.002
Zinc	0.018	0.014

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James J. Mueller, President
10/14/76

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CONSULTANTS ON
WATER QUALITY

BACTERIA AND
CHEMICAL ANALYSES

Environmental Biochemists

4115 SILVER AVE., S. E.
ALBUQUERQUE, NEW MEXICO 87108
Telephone (505) 266-9106 – Night 296-6164

E.B. No. 76911
Revised

Sept. 21, 1976

Sergent, Hauskins & Beckwith
Sep 1976

Sergent Hauskins & Beckwith
2821 Gerard N.E.
Albuquerque, N.M.

Att:Gary Allen

In our recent telephone conversation you asked that our previous report be revised to reflect milligrams per liter of the soluble components from soil samples that we analyzed for you. Aqueous suspensions of the soils were made as previously described and were 10;1 ml/g.

	Milligrams per liter	
	BH A-1	BH A-2
Moisture, %	4.22	4.35
pH	6.9	6.5
Hardness	26	26
Cyanide	<0.01	<0.01
Calcium	7.5	7.5
Magnesium	1.8	1.7
Sodium	7.3	9.2
Potassium	1.8	3.4
Iron	0.4	0.5
Manganese	<0.05	<0.05
Arsenic	<0.02	<0.02
Cadmium	<0.05	<0.05
Chromium	<0.05	<0.05
Cobalt	<0.025	<0.025
Copper	<0.01	<0.01
Lead	<0.025	<0.025
Mercury	<0.001	<0.001
Molybdemum	<0.05	<0.05
Selenium	<0.02	<0.02
Silver	<0.01	<0.01
Zinc	<0.025	<0.025
Bicarbonate	41	37.3
Sulfate	<0.05	<0.05
Chloride	7.0	6.0
Fluoride	1.28	1.75
Boron	<0.05	0.2
Nitrate	14.3	11.4
Silica	2.4	2.5
Tot. Diss. Solids	24	68
Conductance, umhos	110	135

Raymond G. Pfleger, Ph.D.

CONSULTANTS ON
WATER QUALITY

BACTERIA AND
CHEMICAL ANALYSES

Environmental Biochemists

4115 SILVER AVE., S. E.
ALBUQUERQUE, NEW MEXICO 87108
Telephone (505) 266-9106 — Night 296-6164

E.B. No. 76925A

Sept. 25, 1976

Sergent-Hauskins & Beckwith
2821 Gerard N.E.
Albuquerque, N.M.

Att:. Gary Allen

On Sept. 2, 1976, two soil samples were delivered to our laboratory for analysis. A 10:1 aqueous:soil suspension was made and the components analyzed in the aqueous phase after filtration through a 0.45 um membrane. The soil was screened through a 2mm sieve.

Sample	F 1	F 2
	ppm	ppm
Moisture, %	2.0	2.2
pH	7.56	6.67
Cyanide	0.02	0.03
Bicarbonate	4.91	4.33
Sulfate	31.2	29.2
Chloride	7.5	15.5
Fluoride	0.96	0.98
Nitrate	9.7	5.5
Calcium	11.4	15.0
Magnesium	1.1	0.75
Sodium	8.1	9.1
Potassium	3.2	2.4
Iron	0.3	0.3
Manganese	<0.05	<0.05
Arsenic	<0.02	<0.02
Cadmium	<0.004	<0.004
Chromium	<0.05	<0.05
Cobalt	<0.025	<0.025
Lead	<0.025	<0.025
Molybdemum	<0.05	<0.05
Selenium	<0.02	<0.02
Silver	<0.01	<0.01
Zinc	<0.025	<0.025
Mercury	<0.001	<0.001
Copper	0.02	0.02
Boron	<0.1	<0.1
Conductance	115 (umhos/cm)	125
Silica	11.75	11.0
Hardness	33	40
Total Dissolved Solids	106	96

Sergent, Hauskins & Beckwith
SEP 1976

ppm = parts per million in aqueous phase = milligrams per liter.

Thank you.

R. G. Pfleger
Raymond G. Pfleger, Ph D

CUSTOMER Sargent, Hauskins & Beckwith
ATTENTION Mr. Booth
ADDRESS 2501 Candelaria Road, N.E.
CITY Albuquerque, NM 87107
INVOICE NO. 610090

REPORT OF ANALYSIS

SAMPLES RECEIVED 9-22-76

CUSTOMER ORDER NUMBER

TYPE OF ANALYSIS Water Analysis

Analysis	E76-1100 #29 mg/l	E76-1100 #34 mg/l
Calcium	65.1	3.67
Magnesium	14.5	0.52
Sodium	60.3	2.55
Potassium	5.02	0.63
Bicarbonate (as $CaCO_3$)	QNS	12
Sulfate	QNS	<1
Chloride	QNS	<1.0
Fluoride	QNS	0.14
Boron	0.1	<0.1
Nitrate	<0.1	<0.1
Silica	54.0	51.2
Iron	0.052	0.009
Manganese	0.049	0.004
Total Dissolved Solids	384	50
Specific Conductance (umhos)	640	41
pH Units	7.98	7.36
Hardness (as $CaCO_3$)	QNS	517
Arsenic	QNS	QNS
Cadmium	0.001	0.001
Chromium	0.004	0.002
Cobalt	0.001	<0.001
Copper	0.002	0.002

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James J. Mueller, President
10-20-76 PAGE 1 OF 2 PAGE

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Controls for Environmental Pollution, Inc.

REPORT OF ANALYSIS

CUSTOMER Sargent, Hauskins & Beckwith
ATTENTION Mr. Booth
ADDRESS 2501 Candelaria Road, N.E.
CITY Albuquerque, NM 87107
INVOICE NO. 610090

SAMPLES RECEIVED 9-22-76

CUSTOMER ORDER NUMBER

TYPE OF ANALYSIS Water Analysis

Analysis	E76-1100 #29 mg/l	E76-1100 #34 mg/l
Cyanide	QNS	QNS
Lead	0.002	0.001
Mercury	< 0.0004	< 0.0004
Molybdenum	0.003	< 0.001
Selenium	< 0.01	< 0.01
Silver	< 0.001	< 0.001
Zinc	0.016	0.014

QNS = Quantity of Water not Sufficient for Analysis.

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10-20-76 PAGE 2 OF 2 PAGE

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CUSTOMER Sargent, Hauskins & Beckwith
ATTENTION Mr. Booth
ADDRESS 2501 Candelaria Road, N.E.
CITY Albuquerque, NM 87107
INVOICE NO. 610090

REPORT OF ANALYSIS

SAMPLES RECEIVED 9-22-76

CUSTOMER ORDER NUMBER

TYPE OF ANALYSIS Water Analysis

Analysis	E76-1100 #30 mg/l	E76-1100 #31 mg/l	E76-1100 #33 mg/l
Calcium	84.8	87.5	163
Magnesium	21.3	21.4	32.0
Sodium	50.6	51.1	81.7
Potassium	4.88	5.86	11.5
Bicarbonate (as $CaCO_3$)	211	205	264
Sulfate	145	233	353
Chloride	21.0	20.6	51.2
Fluoride	0.79	0.77	0.97
Boron	< 0.1	< 0.1	< 0.1
Nitrate	0.7	0.8	< 0.1
Silica	50.7	58.3	53.8
Iron	0.009	0.007	0.015
Manganese	0.036	0.039	0.42
Total Dissolved Solids	486	434	840
Specific Conductance (umhos)	720	720	1260
pH	7.77	7.61	7.58
Hardness (as $CaCO_3$)	318	279	530
Arsenic	0.02	< 0.01	QNS
Cadmium	< 0.001	< 0.001	< 0.001
Chromium	0.004	0.002	0.002
Cobalt	< 0.001	< 0.001	< 0.001
Copper	0.002	0.002	0.005

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CUSTOMER Sargent, Hauskins & Beckwith
ATTENTION Mr. Booth
ADDRESS 2501 Candelaria Road, N.E.
CITY Albuquerque, NM 87107
INVOICE NO. 610090

REPORT OF ANALYSIS

SAMPLES RECEIVED 9-22-76

CUSTOMER ORDER NUMBER

TYPE OF ANALYSIS Water Analysis

Analysis	E76-1100 #30 mg/l	E76-1100 #31 mg/l	E76-1100 #33 mg/l
Cyanide	< 0.01	< 0.01	QNS
Lead	< 0.001	< 0.001	< 0.001
Mercury	< 0.0004	< 0.0004	< 0.0004
Molybdenum	0.002	0.002	0.003
Selenium	< 0.01	< 0.01	< 0.01
Silver	< 0.001	< 0.001	< 0.001
Zinc	0.004	0.004	0.018

QNS = Quantity of Water not Sufficient for Analysis.

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James J. Mueller, President

10-20-76 PAGE 2 OF 2 PAGE

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Controls for Environmental Pollution, Inc.

REPORT OF ANALYSIS

CUSTOMER Sergent, Hauskins & Beckwith
ATTENTION Mr. Booth
ADDRESS 2821 Girard NE
CITY Albuquerque, NM 87107
INVOICE NO. 606081

SAMPLES RECEIVED 6/4/76
CUSTOMER ORDER NUMBER

TYPE OF ANALYSIS Water Analysis - Corrected Report

Analysis	Sample ~~#2~~ #1	Sample ~~#3~~ #2	Sample ~~#7~~ #4
Calcium	117	122	69.2
Magnesium	25.6	15.5	15.2
Sodium	50.4	76.1	30.0
Potassium	1.78	1.72	1.56
Bicarbonate	228	241	188
Sulfate	137	114	34
Chloride	14.3	16.7	19.9
Fluoride	0.52	0.51	0.44
Boron	< 0.1	< 0.1	< 0.1
Nitrate	1.39	16.8	4.0
Silica	40.9	36.3	41.9
Iron	0.002	0.002	0.004
Manganese	0.003	0.003	0.001
Total Dissolved Solids	520	560	350
Specific Conductance umhos	720	780	480
pH Units	7.78	7.48	8.60
Hardness	301	269	211

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6/16/76

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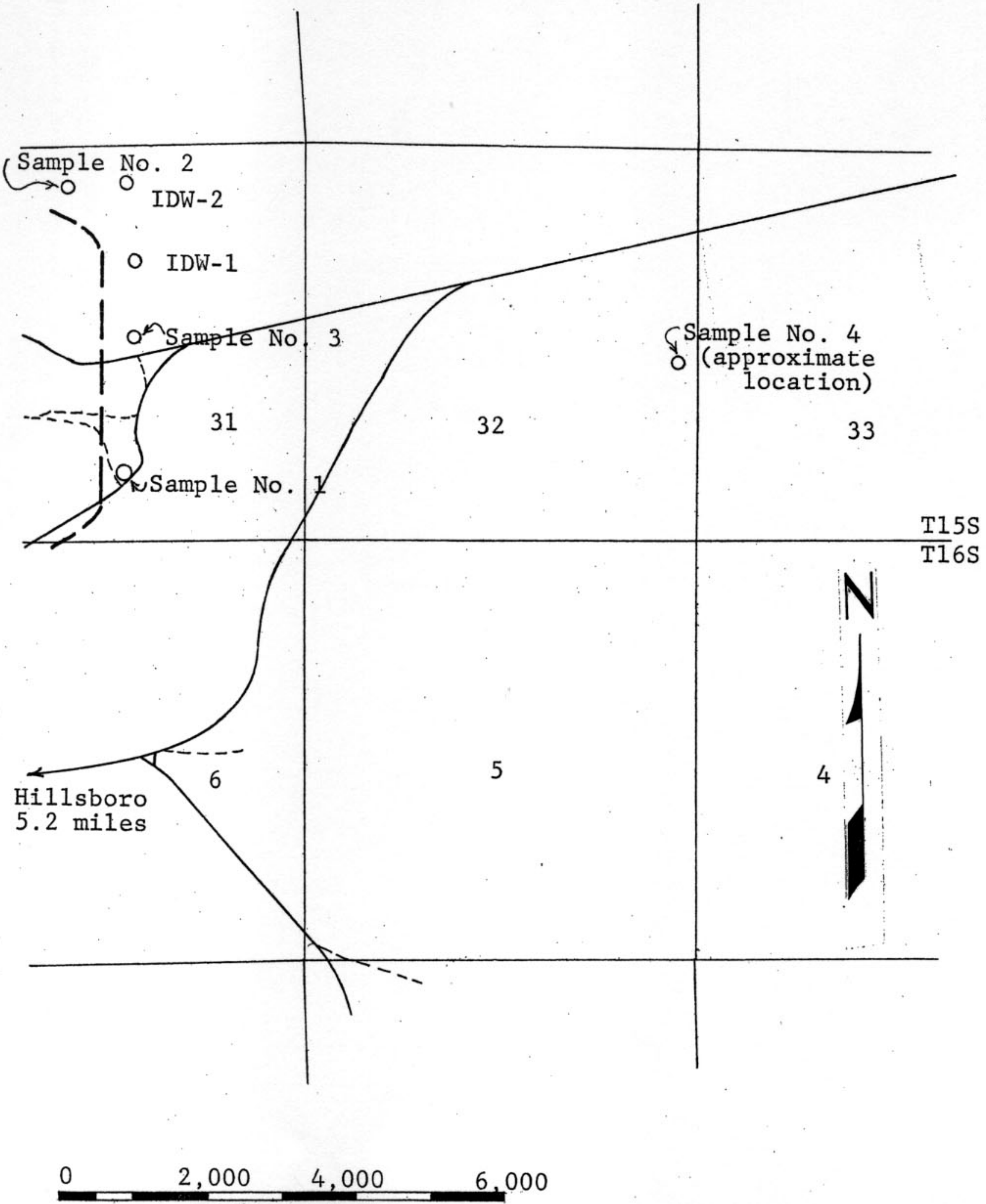
Figure 4

LOCATION OF WATER WELLS



Tailings Dam and Pond
Copper Flat Project
Hillsboro, New Mexico
SHB Job No. E80-1030

SERGENT, HAUSKINS & BECKWITH

Appendix C

Whole Rock Chemical Analyses for PW-3, WD-1, and November 20, 1996 Pond Rock Samples

ACZ LABORATORIES INC DATA MANAGEMENT SYSTEM |
07/25/94 ANALYTICAL REPORT 12:36 |
Page 1

Client : Steffen Robertson and Kirsten
Address : 3232 S. Vance St., Ste. 210
Lakewood, CO 80227
Attn. : Gene Muller
Project : 68605, Copper Flat

Sample Matrix: Waste Rock
Sample ID: 68605, PW-3 Lab No. : 94-RT/00595
Sample Date Time: Unknown Date Received: 06/10/94

Parameters			
Moisture %	0.3	%	
Phosphorus, total	0.04	%	
Aluminum, total	2950.	mg/kg	4
Antimony, total	-0.10	mg/kg	4
Arsenic, total	1.9	mg/kg	4
Barium, total	24.	mg/kg	4
Boron, total	-2.	mg/kg	4
Cadmium, total	-0.5	mg/kg	4
Calcium, total	700.	mg/kg	4
Chromium, total	-1.	mg/kg	4
Cobalt, total	9.	mg/kg	4
Copper, total	226.	mg/kg	4
Iron, total	40800.	mg/kg	4
Lead, total	4.	mg/kg	4
Magnesium, total	800.	mg/kg	4
Manganese, total	39.	mg/kg	4
Mercury, total	-0.02	mg/kg	4
Molybdenum, total	57.	mg/kg	4
Nickel, total	3.	mg/kg	4
Potassium, total	1300.	mg/kg	4
Selenium, total	9.0	mg/kg	4
Silver, total	-1.	mg/kg	4
Sodium, total	200.	mg/kg	4
Vanadium, total	5.	mg/kg	4
Zinc, total	14.	mg/kg	4

4 EPA SW846, Method 3051 Digestion.

Remarks:

Note: Negative sign "-" denotes that the value is less than "<"

Scott Habermehl, Project Manager/SH.

Frank E. Polniak, Inorganic Laboratory Supervisor/

! ACZ LABORATORIES INC DATA MANAGEMENT SYSTEM !
! 06/30/94 ANALYTICAL REPORT 15:12 !
Page 1

Client : Steffen Robertson and Kirsten
Address : 3232 S. Vance St., Ste. 210
Lakewood, CO 80227
Attn. : Gene Muller
Project : 68605, Copper Flat

Sample Matrix: Waste Rock
Sample ID: 68605, PW-3
Sample Date Time: Unknown

Lab No. : 94-SI/00595
Date Received: 06/10/94

Parameters		
Acid-Base Potent.(CaCO3)	-69.	Tons/1000T
Conductivity, sat. paste	5.94	mmhos/cm 1
pH, saturated paste	2.6	units 1
Neutralization Potential	-0.1	% as CaCO3
Sulfur, total	2.20	%
Sulfur, sulfate	-0.01	%
Sulfur, pyritic	0.84	%

1 Saturated Paste Extraction

Remarks: Negative (-) sign on ABP denotes a negative value
Note: Negative sign "-" denotes that the value is less than "<"

Scott Habermehl, Project Manager

Frank E. Polniak, Inorganic Laboratory Supervisor /SH.

ACZ LABORATORIES INC　　　　DATA MANAGEMENT SYSTEM |
07/25/94　　　　ANALYTICAL REPORT　　　　12:36 |
Page 1

lient : Steffen Robertson and Kirsten
ddress : 3232 S. Vance St., Ste. 210
Lakewood, CO 80227
ttn. : Gene Muller
roject : 68605, Copper Flat

JUL 28 1994

ample Matrix: Waste Rock
ample ID: 68605, WD 1
ample Date Time: Unknown

Lab No. : 94 RT/00594
Date Received: 06/10/94

Parameters			
Moisture %	0.2	%	
Phosphorus, total	0.01	%	
Aluminum, total	1890.	mg/kg	4
Antimony, total	-0.10	mg/kg	4
Arsenic, total	0.4	mg/kg	4
Barium, total	10.	mg/kg	4
Boron, total	-2.	mg/kg	4
Cadmium, total	-0.5	mg/kg	4
Calcium, total	700.	mg/kg	4
Chromium, total	-1.	mg/kg	4
Cobalt, total	11.	mg/kg	4
Copper, total	186.	mg/kg	4
Iron, total	41600.	mg/kg	4
Lead, total	2.	mg/kg	4
Magnesium, total	200.	mg/kg	4
Manganese, total	8.	mg/kg	4
Mercury, total	-0.02	mg/kg	4
Molybdenum, total	7.	mg/kg	4
Nickel, total	-2.	mg/kg	4
Potassium, total	1200.	mg/kg	4
Selenium, total	3.9	mg/kg	4
Silver, total	-1.	mg/kg	4
Sodium, total	200.	mg/kg	4
Vanadium, total	1.	mg/kg	4
Zinc, total	7.	mg/kg	4

4 EPA SW846, Method 3051 Digestion.

Remarks:

Note: Negative sign "-" denotes that the value is less than "<"

Scott Habermehl, Project Manager

Frank E. Polniak, Inorganic Laboratory Supervisor

ACZ LABORATORIES INC — DATA MANAGEMENT SYSTEM

06/30/94 — ANALYTICAL REPORT — 15:16

Client : Steffen Robertson and Kirsten
Address : 3232 S. Vance St., Ste. 210
Lakewood, CO 80227
Attn. : Gene Muller
Project : 68605, Copper Flat

Sample Matrix: Waste Rock
Sample ID: 68605, PW-1
Sample Date Time: Unknown

Lab No. : 94-SI/00612
Date Received: 06/10/94

Parameters		
Acid-Base Potent.(CaCO3)	-81.	Tons/1000T
Neutralization Potential	3.2	% as CaCO3
Sulfur, total	3.61	%
Sulfur, sulfate	0.14	%
Sulfur, pyritic	2.00	%

Remarks: Negative (-) sign on ABP denotes a negative Value
Note: Negative sign "-" denotes that the value is less than "<"

Scott Habermehl, Project Manager

Frank E. Polniak, Inorganic Laboratory Supervisor /S.H.

Appendix D

D-1
Paste pH and Conductivity Data
Acid-Base Accounting Data
Net Acid Generation Data

D-2
Humidity Cell Data

Appendix D-1

Paste pH and Conductivity Data
Acid-Base Accounting Data
Net Acid Generation Data

1997 Surface Sample Analyses

Sample	Type	Lithology	Visible sulfide %	EC	Paste pH	NAG kg/T H_2SO_4	NAG pH	Sulfate %	Sulfide %	Sulfur Total %	SO_4/S %	AGP m/g $CaCO_3$	NP m/g $CaCO_3$	NNP	NP:AP
WRC 5480 019	HS	QM	2	3020	2.66										
WRC 5480 020	HS	QM	2	878	3.96										
WRC 5480 021	HS	QM	2	1009	4.38										
WRC 5480 022	HS	QM	2	1850	2.97										
WRC 5480 023	HS	QM	2	1880	2.64										
WRC 5480 024	HS	QM	1.5	1190	2.71										
WRC 5480 025	LS	QM	1	637	8.6										
WRC 5480 026	LS	QM	1	129	9.65										
WRC 5480 027	HS	QM	2	1580	2.12										
WRC 5480 028	HS	QM	2	964	4.89										
WRC 5480 029	HS	QM	2	580	3.59										
WRC 5480 030	HS	QM	2	258	5.85										
WRC 5580 005	T	QV(Sternberg)pw2	2	19000	3.79										
WRD 4480 010	LS	QM	1	50	6.06										
WRD 5560 020	LS	QM	1	64	6.72										
WRD 5560 027	HS	QM	2	3990	2.56										
WRD 5560 028	HS	QM	2	730	2.95										
WRD 5560 029	HS	QM	2	1552	2.53										
WRD 5560 030	HS	QM	2	321	4.64										
WRD 5560 031	HS	QM	2	282	4.4										
WRD 5560 032	HS	QM	2	620	2.99										
WRD 5560 034	HS	QM	2	201	3.95										
WRD 5560 035	HS	QM	2	833	4.35										
WRD 5560 036	HS	QM	2	171	3.79										
WRD 5560 037	HS	QM	2	164	7.8										
WRD 5560 038	HS	QM	5	54	6.59	18.33	7.92	0.3	1.2	1.5	20.00	47	30.2	-16.8	0.64
WRD 5560 039	HS	QB	6	1848	2.81	72.13	3.92	0.1	2.1	2.2	4.55	70	0.1	-69.9	0.00
WRD 5560 040	HS	QB	3	456	3.97	36.46	2.98								
WRD 5560 041	HS	QB	4	2190	3.31	50.57	4.18	0.3	1.4	1.7	17.65	53	7.6	-45.4	0.14
WRD 5580 001	LS	QM	1	133	4	21.56	2.27	0.3	0.8	1.1	27.27	33	17.8	-15.2	0.54
WRD 5580 002	HS	QM	3	1422	2.77	34.01	6.00								
WRD 5580 004	O	QB			4.82			0.33	0.1	0.34	97.06	11	0.1	-10.9	0.01
WRD 5580 005	LS	QM	2	93	6.72	29.40	5.01								
WRD 5580 006	T	QM	0.5	212	3.2	30.77	5.06								
WRD 5580 007	HS	QB	2	345	3.02	31.07	4.87								
WRD 5580 008	HS	QB	2	230	5.55	29.01	5.15								
WRD 5580 009	HS	QM	2	325	3.14	28.62	5.01								
WRD 5580 011	HS	QM	2	8	5.6	28.03	5.29								
WRD 5580 012	HS	QM	2	305	5.4	29.11	5.1								
WRD 5580 013	HS	BB	7	2860	2.45	47.14	2.09								
WRD 5580 014	HS	BB	4	21	5	31.85	5.27	0.2	1.96	2.16	9.26	73.8	43.7	-30.1	0.59
WRD 5580 015	HS	QB	4	156	4.45	31.16	3.05								
WRD 5580 016	HS	QM	2	45.6	5.72	22.74	4.06								
WRD 5580 017	HS	QM	2	41	5.54	30.48	5.04								

1997 Surface Sample Analyses

Sample	Type	Lithology	Visible sulfide		Paste	NAG kg/T	NAG pH	Sulfate	Sulfide	Sulfur	SO_4/S	AGP	NP	NNP	NP:AP
			%	EC	pH	H_2SO_4		%	%	Total %	%	m/g $CaCO_3$			
NRD 5650 017	LS	QM	1	41.4	6.09	23.72	4.11	0.13	0.22	0.35	37.14	11	0.1	-10.9	0.01
NRD 5650 018	HS	QM	2	89	4.82										
NRD 5650 019	HS	QM	2	3620	2.79	46.35	4.40	0.1	1.3	1.4	7.14	45	0.1	-44.9	0.00
SRD 5470 006	HS	QM	2	63	5.94										
SRD 5470 010	LS	QM	1	196	7.05	8.72	2.51								
SRD 5470 011	HS	QV	5	2200	2.54	43.51	3.10	0.21	1.3	1.5	14.00	47	6.7	-40.3	0.14
SRD 5470 012	HS	QB	6	182	7.63			0.46	1.4	1.9	24.21	59	38.9	-20.1	0.66
SRD 5470 013	HS	QM	3	821	4.4										
SRD 5470 014	HS	QB	4	62.9	5.26	5.88	2.29								
SRD 5470 015	HS	QM	3	118.5	5.55										
SRD 5470 016	HS	QM	4	89.6	7.06										
SRD 5470 016	HS	QV	5	6570	2.66										
SRD 5470 017	HS	QB	4	27	5.02	21.56	2.27								
SRD 5470 018	HS	QB	5	1703	3.08										
SRD 5470 019	HS	QV	5	229	4.55										
SRD 5470 020	HS	QM	3	162	7.83	12.74	2.47	0.31	1.1	1.4	22.14	44	36.4	-7.6	0.83
SRD 5470 021	HS	QB	4	321	4.32										
SRD 5470 022	HS	QM	2	386	6.03										
SRD 5470 023	HS	QM	4	27	5.51										
SRD 5470 024	HS	QM	5	3970	2.52										
SRD 5470 025	HS	QM	3	172.2	5.21										
SRD 5470 027	HS	QM	2	3520	2.72	15.78	2.52								
SRD 5490 007	O	QM		42	8.76	19.70	3.32								
SRD 5500 001	HS	QM	2	831	5.31	8.23	4.10	0.37	0.7	1.1	33.64	33	34.2	1.2	1.04
SRD 5500 002	HS	BB	4	33	7.38	22.05	4.63								
SRD 5500 003	O	BB		58.7	4.75										
SRD 5500 004	HS	QB	4	231	5.5										
SRD 5500 005	HS	QV	5	292	6.05	19.01	3.96								
WRC 5440 30	HS	QM	2	227	4.1	15.88									
WRC 5440 31A	LS	QM	0.5		7.91			0.23	0.32	0.55	41.82	33	34.2	1.2	1.04
WRC 5440 31B	T	QM	0.5		8.35			0.21	0.11	0.32	65.63	10	10.1	0.1	1.01
WRC 5440 32	O	QM		347	6.55			0.19	0.05	0.24	79.17	7.5	9.6	2.1	1.28
WRC 5480 006	HS	QB	5	3680	3.7	31.46									
WRC 5480 007	HS	QB	5	1643	3.18	33.52									
WRC 5480 007	HS	QV	5	550	3.41	32.73									
WRC 5480 008	HS	QM	2	785	3.67	15.09									
WRC 5480 009	HS	BB	3	764	3.73	32.54									
WRC 5480 010	HS	BB	4	1338	3.76	28.71									
WRC 5480 012	LS	QB	1	589	4.01	33.81									
WRC 5480 013	LS	QM	1	297	6.95	15.19									
WRC 5480 014	T	QB	0.5	801	4.12	20.19		1.25	0.89	2.08	60.10	65	47.6	-17.4	0.73
WRC 5480 015	HS	QM	2	826	3.42										
WRC 5480 016	LS	QM	1	470	6.26										
WRC 5480 018	HS	QM	2	4840	3.02										

1997 Surface Sample Analyses

Sample	Type	Lithology	Visible sulfide	EC	Paste	NAG kg/T	NAG pH	Sulfate	Sulfide	Sulfur	SO_4/S	AGP	NP	NNP	NP:AP
			%		pH	H_2SO_4		%	%	Total %	%	m/g $CaCO_3$			
ERD 5500 001	T	QM	1	3140	3.63	29.60	5.11	0.71	0.74	1.45	48.97	45.3	18.9	-26.4	0.42
ERD 5500 002	HS	QB	4	19	7.94	15.48	2.48	0.44	2.46	2.9	15.17	53.1	62.5	9.4	1.18
ERD 5500 004	LS	QM	1	430	5.31										
ERD 5500 005	LS	QM	1	595	3.31										
ERD 5500 006	LS	QM	1.5	891	5.72										
ERD 5500 009	HS	BB	10	4000	2.71	80.75	6.30	0.6	2.3	2.9	20.69	91	9.1	-81.9	0.10
ERD 5500 010	LS	QM	1.5	471	4.55	19.99	3.92								
ERD 5500 012	HS	QM	2	1928	2.71										
ERD 5500 014	HS	QM	2	4370	2.73										
ERD 5510 002	LS	QM	1.5	257	4.71										
ERD 5560 001	O	AN			9.14			0.01	0.005	0.01	100.00	0.3	23.2	22.9	77.33
ERD 5560 002	HS	QM	8	467	6.76			0.3	2.6	2.9	10.34	90	23.7	-66.3	0.26
ERD 5560 006	HS	QB	2	1305	3.38										
ERD 5560 008	HS	QV	5	330	4.08			0.47	1.7	2.2	21.36	68	2	-66	0.03
ERD 5560 010	LS	QM	1.5	708	4.55	23.62	3.87								
ERD 5560 011	HS	QB	3	1565	4.54	22.05	4.07								
ERD 5600 001	LS	QM	1	450	4.44			0.1	0.43	0.53	18.87	17	0.1	-16.9	0.01
ERD 5600 003	HS	QB	3	4230	2.9	33.81	3.19	0.96	1.3	2.2	43.64	69	0.1	-68.9	0.00
ERD 5600 005	T	QB	0.5	2700	3.23	27.05	4.34								
ERD 5600 007	T	QM	0.5	174	6.88	14.31	2.68								
ERD 5600 009	T	QM	0.5	657	4.73										
ERD 5600 011	T	QM	0.5	847	5.43										
ERD 5600 012	T	QM	0.5	254	6.82										
ERD 5600 013	HS	QM	2	321	5.17										
ERD 5600 014	HS	BB	2	2080	3.55										
ERD 5600 070	HS	BB	4	227	4.92	11.27	2.45								
NRD 5620 001	HS	BB	4	41	5.05	10.68	3.41								
NRD 5620 001	HS	QB	5	1193	2.91	19.80	2.45								
NRD 5620 002	HS	QB	6	1717	2.68	77.62	2.98	0.3	2.6	2.9	10.34	90	23.7	-66.3	0.26
NRD 5620 003	HS	QM	4	1111	3.56	57.33	4.12	0.2	1.6	1.8	11.11	55	0.1	-54.9	0.00
NRD 5620 004	O	QM			4.75			0.17	0.1	0.18	94.44	5.6	0.1	-5.5	0.02
NRD 5620 005	T	QV	1	2170	2.81	9.60	4.81								
NRD 5620 006	HS	QM	2	260	3.68										
NRD 5620 007	HS	QM	2	1009	2.98										
NRD 5620 008	HS	QM	3	235	4.13	42.63	5.90	0.15	1.1	1.3	11.54	40	0.8	-39.2	0.02
NRD 5620 009	HS	QM	2	663	3.28										
NRD 5620 010	HS	QM	2	128	3.86										
NRD 5620 011	HS	QM	2	1219	2.68	39.69	3.51	0.28	0.92	1.2	23.33	36	0.1	-35.9	0.00
NRD 5620 012	HS	QB	4	997	2.75	58.80	4.08	0.2	1.6	1.8	11.11	57	0.1	-56.9	0.00
NRD 5620 013	HS	QM	2	2240	2.62										
NRD 5620 014	HS	QB	20	4860	2.5	223.44	3.65	0.9	6.2	7.1	12.68	220	0.1	-219.9	0.00
NRD 5620 015	HS	QB	2	1075	3.71										
NRD 5620 016	HS	QM	2	3390	2.51										

1997 Surface Sample Analyses

Sample	Type	Lithology	Visible sulfide	EC	Paste	NAG kg/T	NAG pH	Sulfate	Sulfide	Sulfur	SO_4/S	AGP	NP	NNP	NP:AP
			%		pH	H_2SO_4		%	%	Total %	%	m/g $CaCO_3$			
WRD 5580 018	HS	QM	2	112	6.4	32.93	5.55								
WRD 5580 019	HS	QM	2	42	6.14	19.60	3.91								
WRD 5580 021	HS	QM	2	65	5.87	19.89	3.98								
WRD 5580 022	HS	QM	2	170	5.61	39.79	3.00								
WRD 5580 023	HS	QM	2	103	7.67	21.17	4.63								
WRD 5580 024	HS	QM	1.5	183	5.39	21.56	4.07								
WRD 5580 025	HS	QM	1.5	42	5.74	15.78	2.52								
WRD 5580 026	HS	QM	2	84	6.1	34.79	6.42								
WRD 5580 033	HS	QM	1.5	237	3.82	38.71	7.74								
WRD 5580 042	HS	QB	5	1080	2.35	76.93	2.10	0.15	2.2	2.4	6.25	74	0.1	-73.9	0.00

KEY

Lithology QM= Quartz Monzonite QB= Quartz Breccia BB= Biotite Breccia QV = Quartz Vein AN = Andesite

Visible sulfide (%) = Observed pyrite/sulfide content in hand specimen

Type HS=High Sulfide (>2% visible sulfide) LS= Low Sulfide (<2% visible sulfide) T=Transitional (trace sulfide & acidic paste pH) O=Oxide (no observed sulfide)

$$\text{NAG (eqkg H2SO4/T)} = \frac{\text{49xVolume of NaOH titrated x molality of NaOH (0.1M)}}{\text{weight of sample (5g)}}$$

APPENDIX A.2

PASTE pH AND CONDUCTIVITY DATA

ACID BASE ACCOUNTING DATA

and

NET ACID GENERATION DATA

Copper Flat Project
Static Test on Wall Rock and Drill Core from the Pit Area
1994 Sampling

Sample	Paste PH	Total	Sulfide	Sulfate	NP	AP	NNP	NP/AP
PW-1 SW pitwall transition	6.1	3.61	3.47	0.14	32	108.44	-76.44	0.3
PW-2 Oxidized pitwall	–	0.37	0.365	0.005	11	11.41	-0.41	0.96
PW-3 NW pitwall	2.6	2.2	2.195	0.005	0.1	68.59	-68.49	–
PW-4 NE pitwall	3.9	1.89	1.885	0.005	16	58.91	-42.91	0.27
IDC24-222-241, QM – core	–	1.74	1.735	0.005	31	54.22	-23.22	0.57
CF10-177-190, andesite – core	–	2.86	2.8	0.06	52	87.5	-35.5	0.59
CF10-190-199 QM—core	–	3.59	3.52	0.07	44	110	-66	0.4
CF10-214-220, QM – core	–	3.92	3.915	0.005	65	122.34	-57.34	0.53
H75-53-42, QM - reverse circ.	8.2	1.77	1.765	0.005	36	55.16	-19.16	0.65
H75-64-44, QM - reverse circ.	7.2	1.69	1.685	0.005	39	52.66	-13.66	0.74
H75-51-34, QM - reverse circ.	8.6	2.02	2.015	0.005	49	62.97	-13.97	0.78
H75-48-58, QM - reverse circ.	7.2	1.18	1.175	0.005	16	36.72	-20.72	0.44
H75-48-44, QM - reverse circ.	7.4	1.06	1.055	0.005	9	32.97	-23.97	0.27

SOURCE: *Copper Flat Mine - Compliation of Pit Lake Studies (SRK 1997)*

Appendix D-2

Humidity Cell Data

DRAFT

APPENDIX A.3

HUMIDITY COLUMN TEST DATA

IDC-24-222-241 - Kinetic Test Data

Parameter	Cycle 1	Cycle 2	Cycle 3	Cycle 4	Cycle 5	Cycle 6	Cycle 7	Cycle 8	Cycle 9	Cycle 10	Cycle 11	Cycle 12	Cycle 13	Cycle 14	Cycle 15
Ag ug/l	1.	4.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
Al mg/l	0.03	0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
As ug/l	30.	30.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.
B ug/l	50.	50.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.
Ba ug/l	75.	60.	30.	15.	35.	45.	35.	40.	40.	45.	40.	45.	35.	35.	15.
Be ug/l	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
Bi ug/l	6.	26.	2.	2.	2.	2.	2.	2.	2.	2.	2.	6.	2.	2.	2.
Ca mg/l	30.48	23.76	18.11	12.95	18.44	15.01	13.24	13.16	13.42	15.01	13.19	15.92	13.85	11.87	5.47
Cd ug/l	1.	2.	1.	1.	3.	1.	1.	3.	1.	1.	1.	1.	1.	1.	1.
Co ug/l	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.
Cr ug/l	5.	20.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.
Cu ug/l	14.	16.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.
Fe mg/l	0.04	0.06	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
K mg/l	1.56	1.47	0.65	0.13	0.47	0.61	0.12	0.79	0.9	0.22	0.68	0.94	0.34	0.75	0.18
Li ug/l	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.
Mg mg/l	1.26	1.04	0.59	0.36	0.58	0.42	0.39	0.39	0.37	0.34	0.52	0.65	0.48	0.48	0.18
Mn mg/l	0.07	0.03	0.02	0.02	0.035	0.03	0.025	0.025	0.025	0.02	0.015	0.02	0.015	0.01	0.005
Mo ug/l	6.	4.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	4.
Na mg/l	5.24	4.63	2.19	1.26	2.38	1.79	1.65	1.82	1.27	1.57	2.34	2.98	2.05	2.12	0.52
Ni ug/l	10.	15.	10.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	10.
P ug/l	40.	110.	10.	10.	10.	10.	30.	10.	10.	10.	10.	10.	10.	30.	10.
Pb ug/l	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	8.	10.	2.	2.	2.
Sb ug/l	10.	34.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	4.	2.
Se ug/l	85.	150.	5.	5.	5.	5.	50.	25.	15.	15.	30.	40.	5.	30.	15.
Si mg/l	0.87	0.6	0.53	0.3	0.6	0.39	0.51	0.52	0.5	0.53	0.56	0.73	0.48	0.57	0.28
Sn ug/l	100.	174.	2.	2.	2.	2.	2.	2.	6.	22.	46.	2.	2.	80.	2.
Sr ug/l	124.	104.	50.	28.	44.	32.	32.	34.	34.	32.	34.	46.	36.	34.	18.
Tl ug/l	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.
V ug/l	2.	5.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
Zn ug/l	28.	25.	12.	3.	9.	20.	11.	16.	1.	1.	2.	6.	8.	5.	9.
pH	7.73	7.8	7.55	7.4	7.85	7.64	7.52	7.53	7.54	7.59	7.61	7.63	7.72	7.51	7.16
Redox (mV)	300.	289.	307.	321.	295.	311.	318.	321.	341.	287.	272.	264.	265.	265.	296.
Conductivity (uS/cm)	132.	104.	70.	45.	69.	53.	45.	42.	41.	46.	50.	63.	49.	44.	19.
Alkalinity (mg $CaCO_3$/l)	43.	31.	24.	17.	26.	18.	16.	17.	17.	20.	19.	26.	19.	16.	10.
Acidity (pH 4.5)	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
Acidity (pH 8.3)	1.	2.	2.	2.	1.	1.	2.	1.	1.	2.	1.	2.9	2.	2.	3.
Cum Acidity (pH 8.3)	0.1	0.1	0.2	0.3	0.3	0.4	0.5	0.5	0.6	0.7	0.7	0.9	1.	1.1	1.2
Sulphate (mg/l)	9.	9.	5.	6.	8.	6.	5.	4.	4.	4.	5.	4.	3.	4.	2.
Cum Sulphate (mg/kg)	0.5	0.8	1.	1.2	1.6	1.9	2.2	2.4	2.6	2.8	3.	3.2	3.4	3.6	3.7
Water added (L)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
pH of water added	5.45	6.26	5.98	5.59	6.15	6.03	5.83	5.98	6.15	6.05	5.96	6.04	6.06	6.56	6.23
Leachate collected (L)	0.214	0.144	0.184	0.148	0.188	0.218	0.169	0.23	0.188	0.231	0.189	0.191	0.212	0.21	0.194
Cumulative Iron	0.04	0.1	0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.2	0.21	0.22	0.23
Cumulative Copper	14.	30.	32.	34.	36.	38.	40.	42.	44.	46.	48.	50.	52.	54.	56.

Parameter	Cycle 16	Cycle 17	Cycle 18	Cycle 19	Cycle 20	Cycle 21	Cycle 22	Cycle 23	Cycle 24	Cycle 25	Cycle 26	Cycle 27	Cycle 28	Cycle 29
Ag ug/l	<0.015	<0.015	<0.015	<0.015	<0.015								<0.015	<0.015
Al mg/l	<0.20	<0.20	<0.20	<0.20	<0.20								<0.20	<0.20
As ug/l	<0.20	<0.20	<0.20	<0.20	<0.20								<0.20	<0.20
B ug/l	<0.10	<0.10	<0.10	<0.10	<0.10								<0.10	<0.10
Ba ug/l	0.014	0.022	0.018	0.046	0.033								0.061	0.057
Be ug/l	<0.005	<0.005	<0.005	<0.005	<0.005								<0.005	<0.005
Bi ug/l	<0.10	<0.1	<0.1	<0.1	<0.1								<0.1	<0.1
Ca mg/l	1.5	2.75	2.2	4.49	2.7								6.21	8.
Cd ug/l	<0.010	<0.010	<0.010	<0.010	<0.010								<0.010	<0.010
Co ug/l	<0.015	<0.015	<0.015	<0.015	<0.015								<0.015	<0.015
Cr ug/l	<0.015	<0.015	<0.015	<0.015	<0.015								<0.015	<0.015
Cu ug/l	<0.010	<0.010	<0.010	<0.010	<0.010								<0.010	<0.010
Fe mg/l	<0.030	<0.030	<0.030	<0.030	<0.030								<0.030	<0.030
K mg/l	<2.0	<2.0	<2.0	<2.0	<2.0								<2.0	<2.0
Li ug/l	<0.015	<0.015	<0.015	<0.015	<0.015								<0.015	<0.015
Mg mg/l	0.091	0.12	0.12	0.323	0.16								0.453	0.621
Mn mg/l	0.008	0.005	0.005	0.007	<0.005								0.016	0.012
Mo ug/l	<0.030	<0.030	<0.030	<0.030	<0.030								<0.030	<0.030
Na mg/l	<2.0	<2.0	<2.0	<2.0	<2.0								<2.0	<2.0
Ni ug/l	<0.020	<0.020	<0.020	<0.020	<0.020								<0.020	<0.020
P ug/l	<0.30	<0.30	<0.30	<0.30	<0.30								<0.30	<0.30
Pb ug/l	<0.050	<0.050	<0.050	<0.050	<0.050								<0.050	<0.050
Sb ug/l	<0.20	<0.20	<0.20	<0.20	<0.20								<0.20	<0.20
Se ug/l	<0.20	<0.20	<0.20	<0.20	<0.20								<0.20	<0.20
Si mg/l	0.143	0.207	0.171	0.377	0.231								0.432	0.596
Sn ug/l	<0.30	<0.30	<0.30	<0.30	<0.30								<0.30	<0.30
Sr ug/l	0.011	0.016	0.015	0.03	0.022								0.04	0.053
Ti ug/l	<0.010	<0.010	<0.010	<0.010	<0.010								<0.010	<0.010
V ug/l	<0.030	<0.030	<0.030	<0.030	<0.030								<0.030	<0.030
Zn ug/l	0.01	0.006	0.009	0.012	0.015								0.022	0.024
pH	7.08	7.29	7.23	7.4	6.64								7.59	7.69
Redox (mV)	304.	284.	295.	288.	281.								291.	293.
Conductivity (uS/cm)	10.	16.	15.	32.	19.								45.	58.
Alkalinity (mg $CaCO_3$/l)	6.	10.	7.	12.	8.								16.	20.
Acidity (pH 4.5)	0.	0.	0.	0.	0.								0.	0.
Acidity (pH 8.3)	5.	5.	6.	3.	6.								5.9	6.9
Cum Acidity (pH 8.3)	1.4	1.6	1.9	2.1	2.4								2.6	3.
Sulphate (mg/l)	2.	2.	2.	4.	3.								4.	4.
Cum Sulphate (mg/kg)	3.8	3.9	3.9	4.1	4.3								4.5	4.7
Water added (L)	0.2	0.2	0.2	0.2	0.2								0.2	0.2
pH of water added	5.92	5.57	5.66	6.09	5.23								5.93	5.7
Leachate collected (L)	0.151	0.175	0.198	0.181	0.205								0.185	0.216
Cumulative Iron	0.23	0.23	0.23	0.23	0.23								0.23	0.23
Cumulative Copper	56.	56.	56.	56.	56.								56.	56.

Laboratory Equipment Failure
Weeks 21-27
No Samples Collected

LGSSP-2 - Kinetic Test Data

Parameter	Cycle 1	Cycle 2	Cycle 3	Cycle 4	Cycle 5	Cycle 6	Cycle 7	Cycle 8	Cycle 9	Cycle 10	Cycle 11	Cycle 12	Cycle 13	Cycle 14	Cycle 15
Ag ug/l	7.	6.	1.	1.	1.	1.	1.	1.	1.	1.	2.	1.	1.	1.	1.
Al mg/l	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
As ug/l	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.
B ug/l	60.	70.	40.	30.	10.	10.	30.	10.	10.	10.	10.	10.	10.	10.	10.
Ba ug/l	200.	105.	60.	55.	60.	40.	70.	75.	50.	90.	80.	60.	60.	75.	45.
Be ug/l	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
Bi ug/l	6.	26.	2.	2.	2.	2.	2.	2.	2.	2.	8.	2.	2.	2.	2.
Ca mg/l	155.59	115.41	85.41	76.19	55.92	41.91	51.46	44.1	38.78	54.5	52.94	37.69	45.46	51.56	32.69
Cd ug/l	18.	13.	5.	1.	5.	1.	3.	5.	1.	1.	6.	1.	7.	1.	1.
Co ug/l	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.
Cr ug/l	20.	25.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.
Cu ug/l	82.	54.	28.	26.	16.	18.	34.	16.	14.	12.	10.	6.	10.	10.	6.
Fe mg/l	0.41	0.28	0.04	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.08	0.01	0.01	0.01	0.01
K mg/l	7.07	7.1	7.65	7.2	4.99	4.56	5.84	4.95	4.58	4.64	5.79	4.85	5.52	6.79	4.62
Li ug/l	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.
Mg mg/l	16.36	11.17	8.56	7.12	4.48	2.92	4.14	3.22	2.68	4.25	4.34	2.58	3.58	4.32	2.2
Mn mg/l	0.04	0.035	0.02	0.01	0.03	0.015	0.01	0.015	0.005	0.01	0.015	0.01	0.005	0.005	0.005
Mo ug/l	242.	308.	288.	282.	176.	122.	140.	96.	74.	126.	126.	60.	90.	98.	66.
Na mg/l	7.5	7.94	7.2	6.55	3.88	2.91	3.15	2.04	1.79	2.48	2.69	1.54	2.31	2.5	1.63
Ni ug/l	5.	15.	10.	5.	5.	5.	5.	5.	5.	5.	10.	5.	5.	5.	5.
P ug/l	230.	270.	300.	340.	220.	200.	240.	190.	120.	200.	220.	180.	200.	270.	150.
Pb ug/l	32.	20.	2.	2.	2.	2.	2.	2.	2.	2.	2.	6.	12.	2.	2.
Sb ug/l	18.	22.	2.	2.	2.	2.	2.	2.	2.	2.	10.	2.	2.	2.	2.
Se ug/l	530.	405.	285.	245.	125.	30.	210.	145.	160.	225.	170.	110.	125.	115.	70.
Si mg/l	5.53	6.71	7.61	8.57	6.18	7.08	7.17	5.79	6.24	5.6	5.38	4.81	5.66	5.39	5.
Sn ug/l	574.	508.	2.	2.	2.	2.	26.	92.	60.	64.	90.	44.	44.	52.	2.
Sr ug/l	1,018.	680.	492.	418.	270.	178.	252.	204.	168.	262.	234.	142.	216.	224.	126.
Tl ug/l	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.
V ug/l	11.	10.	5.	4.	2.	1.	4.	1.	1.	1.	6.	3.	2.	2.	2.
Zn ug/l	28.	14.	12.	13.	6.	17.	13.	14.	1.	1.	1.	1.	9.	1.	3.
pH	8.07	8.1	8.09	8.16	8.11	8.13	8.13	8.05	8.21	8.03	8.04	8.01	8.07	7.96	8.02
Redox (mV)	325.	306.	318.	330.	310.	322.	335.	337.	344.	294.	281.	271.	268.	269.	296.
Conductivity (uS/cm)	979.	690.	533.	448.	308.	196.	261.	204.	170.	264.	279.	170.	226.	267.	151.
Alkalinity (mg CaCO$_3$/l)	53.	54.	58.	64.	54.	53.	58.	49.	54.	50.	51.	41.	54.	48.	49.
Acidity (pH 4.5)	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
Acidity (pH 8.3)	1.	1.	1.	1.	1.	1.	1.	1.	0.5	1.	1.	1.	1.	1.	1.
Cum Acidity (pH 8.3)	0.	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.5
Sulphate (mg/l)	432.	243.	155.	141.	82.	29.	64.	49.	21.	69.	69.	30.	48.	72.	16.
Cum Sulphate (mg/kg)	10.4	17.5	22.6	25.9	28.7	29.6	32.	33.6	34.2	36.8	39.5	40.5	42.3	45.7	46.2
Water added (L)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
pH of water added	5.45	6.26	5.98	5.59	6.15	6.03	5.83	5.98	6.15	6.05	5.96	6.04	6.06	6.56	6.23
Leachate collected (L)	0.102	0.122	0.139	0.101	0.144	0.119	0.162	0.138	0.112	0.158	0.165	0.153	0.158	0.198	0.127
Cumulative Iron	0.41	0.69	0.73	0.74	0.75	0.76	0.77	0.78	0.79	0.8	0.88	0.89	0.9	0.91	0.92
Cumulative Copper	82.	136.	164.	190.	206.	224.	258.	274.	288.	300.	310.	316.	326.	336.	342.

LGSSP-2 - Kinetic Test Data

Parameter	Cycle 16	Cycle 17	Cycle 18	Cycle 19	Cycle 20	Cycle 21	Cycle 22	Cycle 23	Cycle 24	Cycle 25	Cycle 26	Cycle 27	Cycle 28	Cycle 29
Ag ug/l	<0.015	<0.015	<0.015	<0.015	<0.015								<0.015	<0.015
Al mg/l	<0.20	<0.20	<0.20	<0.20	<0.20								<0.20	<0.20
As ug/l	<0.20	<0.20	<0.20	<0.20	<0.20								<0.20	<0.20
B ug/l	<0.10	<0.10	<0.10	<0.10	<0.10								<0.10	<0.10
Ba ug/l	0.058	0.048	0.037	0.038	0.044								0.101	0.084
Be ug/l	<0.005	<0.005	<0.005	<0.005	<0.005								<0.005	<0.005
Bi ug/l	<0.10	<0.10	<0.10	<0.10	<0.10								<0.10	<0.10
Ca mg/l	27.3	22.4	16.4	17.	14.6								66.2	65.3
Cd ug/l	<0.010	<0.010	<0.010	<0.010	<0.010								<0.010	<0.010
Co ug/l	<0.015	<0.015	<0.015	<0.015	<0.015								<0.015	<0.015
Cr ug/l	<0.015	<0.015	<0.015	<0.015	<0.015								<0.015	<0.015
Cu ug/l	0.019	0.016	0.011	0.011	<0.010								0.014	0.018
Fe mg/l	<0.030	<0.030	<0.030	<0.030	<0.030								<0.030	<0.030
K mg/l	4.	3.4	2.2	2.8	<2.0								4.4	4.2
Li ug/l	<0.015	<0.015	<0.015	<0.015	<0.015								<0.015	<0.015
Mg mg/l	2.7	2.11	1.49	1.55	1.29								6.2	6.19
Mn mg/l	<0.005	<0.005	<0.005	<0.005	<0.005								<0.005	<0.005
Mo ug/l	0.066	0.041	<0.030	0.03	<0.030								0.065	0.093
Na mg/l	<2.0	<2.0	<2.0	<2.0	<2.0								<2.0	<2.0
Ni ug/l	<0.020	<0.020	<0.020	<0.020	<0.020								<0.020	<0.020
P ug/l	<0.30	<0.30	<0.30	<0.30	<0.30								<0.30	<0.30
Pb ug/l	<0.050	<0.050	<0.050	<0.050	<0.050								<0.050	<0.050
Sb ug/l	<0.20	<0.20	<0.20	<0.20	<0.20								<0.20	<0.20
Se ug/l	<0.20	<0.20	<0.20	<0.20	<0.20								<0.20	<0.20
Si mg/l	5.55	4.58	3.18	3.22	2.26								4.12	5.03
Sn ug/l	<0.30	<0.30	<0.30	<0.30	<0.30								<0.30	<0.30
Sr ug/l	0.179	0.14	0.104	0.108	0.093								0.409	0.393
Ti ug/l	<0.010	<0.010	<0.010	<0.010	<0.010								<0.010	<0.010
V ug/l	<0.030	<0.030	<0.030	<0.030	<0.030								<0.030	<0.030
Zn ug/l	0.005	0.009	<0.005	<0.005	<0.005								0.008	0.005
pH	8.12	8.09	8.01	7.92	7.22								7.9	7.96
Redox (mV)	288.	298.	294.	290.	280.								313.	296.
Conductivity (uS/cm)	177.	138.	104.	109.	93.								402.	384.
Alkalinity (mg $CaCO_3$/l)	57.	48.	34.	38.	30.								36.	49.
Acidity (pH 4.5)	0.	0.	0.	0.	0.								0.	0.
Acidity (pH 8.3)	1.	1.	2.	2.	3.								3.	2.
Cum Acidity (pH 8.3)	0.5	0.5	0.6	0.7	0.8								1.	1.
Sulphate (mg/l)	20.	10.	11.	11.	8.								139.	124.
Cum Sulphate (mg/kg)	46.8	47.1	47.5	47.9	48.3								54.4	59.3
Water added (L)	0.2	0.2	0.2	0.2	0.2								0.2	0.2
pH of water added	5.92	5.57	5.66	6.09	5.23								5.93	5.7
Leachate collected (L)	0.127	0.131	0.16	0.158	0.203								0.183	0.67
Cumulative Iron	0.92	0.92	0.92	0.92	0.92								0.92	0.92
Cumulative Copper	342.	342.	342.	342.	342.								342.	342.

Laboratory Equipment Failure
Weeks 21-27
No Samples Collected

C10-190-199-2 - Kinetic Test Data

Parameter	Cycle 1	Cycle 2	Cycle 3	Cycle 4	Cycle 5	Cycle 6	Cycle 7	Cycle 8	Cycle 9	Cycle 10	Cycle 11	Cycle 12	Cycle 13	Cycle 14	Cycle 15
Ag ug/l	5.	5.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
Al mg/l	0.01	0.04	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
As ug/l	10.	30.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.
B ug/l	50.	30.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.
Ba ug/l	50.	30.	45.	35.	15.	25.	15.	15.	15.	25.	20.	35.	35.	15.	30.
Be ug/l	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
Bi ug/l	6.	16.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	8.
Ca mg/l	48.27	40.54	43.47	34.16	32.33	30.47	23.86	25.61	19.7	22.26	20.91	23.92	22.28	18.03	22.24
Cd ug/l	3.	8.	2.	1.	1.	3.	3.	3.	1.	1.	1.	1.	4.	4.	3.
Co ug/l	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.
Cr ug/l	10.	15.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.
Cu ug/l	52.	34.	24.	20.	14.	10.	8.	8.	6.	4.	2.	2.	4.	4.	2.
Fe mg/l	0.05	0.11	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
K mg/l	3.95	3.56	4.39	2.98	2.07	1.51	2.13	2.16	1.36	0.77	1.5	1.78	1.35	1.31	2.1
Li ug/l	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.
Mg mg/l	4.25	3.86	4.68	3.49	3.06	2.59	2.22	2.35	1.47	1.79	1.83	2.5	2.3	2.04	2.4
Mn mg/l	0.11	0.065	0.05	0.035	0.045	0.04	0.035	0.035	0.025	0.025	0.025	0.025	0.025	0.02	0.03
Mo ug/l	10.	12.	6.	4.	6.	2.	2.	2.	2.	2.	2.	4.	2.	4.	4.
Na mg/l	3.83	4.18	4.35	3.16	2.22	2.01	1.98	1.78	1.24	1.01	1.09	1.82	1.61	1.66	1.87
Ni ug/l	5.	10.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.
P ug/l	60.	100.	10.	30.	10.	10.	10.	30.	10.	10.	10.	10.	10.	10.	20.
Pb ug/l	6.	22.	2.	2.	2.	2.	2.	2.	2.	2.	6.	2.	2.	2.	4.
Sb ug/l	14.	22.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.
Se ug/l	205.	200.	80.	75.	40.	5.	50.	95.	95.	75.	15.	70.	10.	35.	60.
Si mg/l	0.85	0.7	1.02	0.82	0.71	0.78	0.9	0.81	0.57	0.53	0.5	0.66	0.3	0.41	0.74
Sn ug/l	66.	316.	2.	2.	148.	2.	18.	66.	24.	50.	2.	2.	8.	58.	2.
Sr ug/l	372.	320.	324.	244.	194.	184.	136.	150.	100.	110.	94.	132.	120.	80.	140.
Ti ug/l	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.
V ug/l	5.	6.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.
Zn ug/l	31.	29.	21.	16.	13.	13.	14.	8.	1.	1.	10.	30.	19.	17.	36.
pH	8.07	7.91	7.9	7.37	7.75	7.8	7.66	7.4	7.78	7.57	7.55	7.45	7.03	7.04	7.45
Redox (mV)	306.	297.	315.	327.	303.	320.	326.	329.	346.	292.	279.	276.	277.	281.	304.
Conductivity (uS/cm)	259.	225.	253.	181.	165.	142.	112.	114.	77.	89.	90.	114.	103.	86.	107.
Alkalinity (mg $CaCO_3$/l)	43.	30.	32.	22.	19.	25.	20.	21.	19.	17.	15.	15.	11.	10.	16.
Acidity (pH 4.5)	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
Acidity (pH 8.3)	1.	1.	1.	2.	1.	1.	2.	2.	0.5	2.	1.	2.	2.	2.	2.
Cum Acidity (pH 8.3)	0.	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.6	0.7	0.8	0.9	0.9
Sulphate (mg/l)	65.	58.	70.	57.	51.	33.	25.	26.	12.	17.	20.	30.	27.	20.	22.
Cum Sulphate (mg/kg)	3.2	5.5	7.8	9.5	12.	13.4	14.2	15.4	15.9	16.7	17.6	19.	20.3	21.2	22.1
Water added (L)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
pH of water added	5.45	6.26	5.98	5.59	6.15	6.03	5.83	5.98	6.15	6.05	5.96	6.04	6.06	6.56	6.23
Leachate collected (L)	0.228	0.175	0.149	0.139	0.224	0.19	0.158	0.198	0.195	0.219	0.215	0.208	0.219	0.206	0.194
Cumulative Iron	0.05	0.16	0.17	0.18	0.19	0.2	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29
Cumulative Copper	52.	86.	110.	130.	144.	154.	162.	170.	176.	180.	182.	184.	188.	192.	194.

Parameter	Cycle 16	Cycle 17	Cycle 18	Cycle 19	Cycle 20	Cycle 21	Cycle 22	Cycle 23	Cycle 24	Cycle 25	Cycle 26	Cycle 27	Cycle 28	Cycle 29
Ag ug/l	<0.015	<0.015	<0.015	<0.015	<0.015								<0.015	<0.015
Al mg/l	<0.20	<0.20	<0.20	<0.20	<0.20								<0.20	<0.20
As ug/l	<0.20	<0.20	<0.20	<0.20	<0.20								<0.20	<0.20
B ug/l	<0.10	<0.10	<0.10	<0.10	<0.10								<0.10	<0.10
Ba ug/l	0.026	0.022	0.013	0.011	0.023								0.096	0.066
Be ug/l	<0.005	<0.005	<0.005	<0.005	<0.005								<0.005	<0.005
Bi ug/l	<0.10	<0.10	<0.10	<0.10	<0.10								<0.10	<0.10
Ca mg/l	11.8	10.8	4.76	3.15	14.3								45.3	50.7
Cd ug/l	<0.010	<0.010	<0.010	<0.010	<0.010								<0.010	<0.010
Co ug/l	<0.015	<0.015	<0.015	<0.015	<0.015								<0.015	<0.015
Cr ug/l	<0.015	<0.015	<0.015	<0.015	<0.015								<0.015	<0.015
Cu ug/l	0.017	0.015	0.012	0.015	0.016								0.036	0.034
Fe mg/l	<0.030	<0.030	<0.030	<0.030	<0.030								<0.030	<0.030
K mg/l	<2.0	<2.0	<2.0	<2.0	<2.0								<2.0	<2.0
Li ug/l	<0.015	<0.015	<0.015	<0.015	<0.015								<0.015	<0.015
Mg mg/l	2.05	1.75	0.749	0.456	1.48								6.05	7.52
Mn mg/l	0.032	0.029	0.013	0.012	0.035								0.083	0.089
Mo ug/l	<0.030	<0.030	<0.030	<0.030	<0.030								<0.030	<0.030
Na mg/l	<2.0	<2.0	<2.0	<2.0	<2.0								<2.0	<2.0
Ni ug/l	<0.020	<0.020	<0.020	<0.020	<0.020								<0.020	<0.020
P ug/l	<0.30	<0.30	<0.30	<0.30	<0.30								<0.30	<0.30
Pb ug/l	<0.050	<0.050	<0.050	<0.050	<0.050								<0.050	<0.050
Sb ug/l	<0.20	<0.20	<0.20	<0.20	<0.20								<0.20	<0.20
Se ug/l	<0.20	<0.20	<0.20	<0.20	<0.20								<0.20	<0.20
Si mg/l	0.541	0.547	0.275	0.169	0.346								0.614	0.679
Sn ug/l	<0.30	<0.30	<0.30	<0.30	<0.30								<0.30	<0.30
Sr ug/l	0.131	0.108	0.047	0.03	0.112								0.393	0.427
Ti ug/l	<0.010	<0.010	<0.010	<0.010	<0.010								<0.010	<0.010
V ug/l	<0.030	<0.030	<0.030	<0.030	<0.030								<0.030	<0.030
Zn ug/l	0.02	0.02	0.016	0.015	0.041								0.078	0.058
pH	7.52	7.64	7.27	6.87	6.66								7.49	7.41
Redox (mV)	309.	290.	301.	297.	290.								320.	307.
Conductivity (uS/cm)	95.	80.	37.	26.	104.								309.	335.
Alkalinity (mg $CaCO_3$/l)	15.	15.	8.	5.	8.								14.	15.
Acidity (pH 4.5)	0.	0.	0.	0.	0.								0.	0.
Acidity (pH 8.3)	3.	6.	2.	4.	4.								6.9	8.9
Cum Acidity (pH 8.3)	1.1	1.3	1.4	1.6	1.8								2.1	2.5
Sulphate (mg/l)	19.	14.	7.	6.	28.								118.	124.
Cum Sulphate (mg/kg)	22.9	23.5	23.8	24.1	25.3								30.2	35.5
Water added (L)	0.2	0.2	0.2	0.2	0.2								0.2	0.2
pH of water added	5.92	5.57	5.66	6.09	5.23								5.93	5.7
Leachate collected (L)	0.177	0.205	0.194	0.219	0.197								0.188	0.198
Cumulative Iron	0.29	0.29	0.29	0.29	0.29								0.29	0.29
Cumulative Copper	194.	194.	194.	194.	194.								194.	194.

Laboratory Equipment Failure
Weeks 21-27
No Samples Collected

Sample SW-1 - Kinetic Test Data

Parameter	Cycle 1	Cycle 2	Cycle 3	Cycle 4	Cycle 5	Cycle 6	Cycle 7	Cycle 8	Cycle 9	Cycle 10	Cycle 11	Cycle 12	Cycle 13	Cycle 14	Cycle 15
Ag ug/l	2.	4.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
Al mg/l	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
As ug/l	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.
B ug/l	20.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.
Ba ug/l	50.	30.	20.	20.	10.	10.	20.	25.	25.	15.	20.	25.	15.	20.	15.
Be ug/l	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
Bi ug/l	6.	6.	2.	2.	2.	2.	2.	2.	2.	2.	8.	2.	2.	2.	2.
Ca mg/l	53.15	45.51	34.83	36.28	31.01	23.67	23.36	24.87	30.06	23.22	23.31	30.56	20.57	22.22	17.45
Cd ug/l	2.	2.	1.	1.	1.	1.	7.	1.	1.	1.	4.	5.	1.	1.	5.
Co ug/l	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.
Cr ug/l	15.	15.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.
Cu ug/l	26.	16.	10.	12.	6.	2.	2.	2.	6.	2.	2.	2.	2.	2.	2.
Fe mg/l	0.08	0.08	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
K mg/l	2.98	2.71	2.19	2.94	2.35	1.69	1.41	1.07	2.17	0.15	1.7	2.14	1.98	1.47	1.28
Li ug/l	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.
Mg mg/l	4.46	3.72	2.5	2.78	2.19	1.24	1.38	1.49	2.02	1.32	1.42	2.38	1.26	1.37	1.02
Mn mg/l	0.04	0.015	0.01	0.015	0.01	0.005	0.005	0.005	0.015	0.005	0.005	0.005	0.005	0.005	0.005
Mo ug/l	102.	84.	50.	62.	44.	26.	22.	32.	32.	14.	32.	32.	10.	26.	20.
Na mg/l	1.57	1.17	0.82	1.01	0.79	0.28	0.47	0.43	0.66	0.36	0.43	0.7	0.41	0.52	0.34
Ni ug/l	10.	10.	5.	10.	5.	5.	5.	5.	5.	5.	5.	15.	5.	5.	5.
P ug/l	120.	140.	40.	150.	100.	90.	180.	140.	130.	100.	140.	180.	50.	140.	80.
Pb ug/l	4.	8.	2.	2.	2.	2.	2.	2.	2.	2.	6.	2.	4.	2.	12.
Sb ug/l	14.	20.	2.	2.	2.	2.	2.	2.	2.	2.	6.	2.	2.	60.	2.
Se ug/l	210.	155.	65.	110.	25.	5.	80.	45.	80.	40.	70.	85.	20.	2.06	35.
Si mg/l	3.69	3.95	3.56	4.88	4.05	1.99	2.6	1.99	3.74	2.51	2.31	2.82	1.93	2.	1.98
Sn ug/l	300.	376.	2.	2.	2.	2.	80.	2.	44.	12.	2.	8.	50.	60.	2.
Sr ug/l	194.	166.	104.	110.	82.	56.	62.	68.	88.	56.	60.	78.	48.	2.	38.
Ti ug/l	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.
V ug/l	5.	6.	1.	1.	1.	1.	1.	1.	1.	1.	2.	1.	1.	1.	1.
Zn ug/l	27.	9.	7.	7.	4.	8.	4.	9.	1.	1.	7.	3.	11.	1.	4.
pH	7.65	7.73	7.87	7.91	8.04	7.65	7.69	7.66	8.	7.78	7.85	7.75	7.62	7.74	7.54
Redox (mV)	287.	265.	280.	305.	296.	302.	320.	317.	309.	260.	251.	241.	233.	233.	278.
Conductivity (uS/cm)	268.	231.	167.	174.	144.	95.	92.	105.	125.	84.	94.	138.	78.	84.	65.
Alkalinity (mg $CaCO_3$/l)	34.	29.	27.	37.	35.	21.	23.	18.	34.	26.	26.	26.	20.	22.	14.
Acidity (pH 4.5)	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
Acidity (pH 8.3)	0.5	2.	1.	2.	1.	0.5	2.	1.	1.	1.	1.	2.	2.	2.	4.
Cum Acidity (pH 8.3)	0.	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.6	0.6	0.7	0.9
Sulphate (mg/l)	77.	60.	32.	30.	24.	12.	11.	20.	14.	8.	11.	25.	8.	9.	6.
Cum Sulphate (mg/kg)	3.9	6.7	8.2	8.2	8.2	8.8	9.3	10.3	10.7	11.1	11.6	12.9	13.2	13.6	13.9
Water added (L)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
pH of water added	5.45	6.26	5.98	5.59	6.15	6.03	5.83	5.98	6.15	6.05	5.96	6.04	6.06	6.56	6.23
Leachate collected (L)	0.166	0.207	0.157	0.128	0.181	0.168	0.188	0.194	0.162	0.209	0.198	0.206	0.179	0.186	0.206
Cumulative Iron	0.08	0.16	0.17	0.18	0.19	0.2	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29
Cumulative Copper	26.	42.	52.	64.	70.	72.	74.	76.	82.	84.	86.	88.	90.	92.	94.

Sample SW-1 - Kinetic Test Data

Parameter	Cycle 16	Cycle 17	Cycle 18	Cycle 19	Cycle 20	Cycle 21	Cycle 22	Cycle 23	Cycle 24	Cycle 25	Cycle 26	Cycle 27	Cycle 28	Cycle 29
Ag ug/l	<0.015	<0.015	<0.015	<0.015	<0.015								<0.015	<0.015
Al mg/l	<0.20	<0.20	<0.20	<0.20	<0.20								<0.20	<0.20
As ug/l	<0.20	<0.20	<0.20	<0.20	<0.20								<0.20	<0.20
B ug/l	<0.10	<0.10	<0.10	<0.10	<0.10								<0.10	<0.10
Ba ug/l	0.018	0.014	<0.010	0.012	0.013								0.021	0.021
Be ug/l	<0.005	<0.005	<0.005	<0.005	<0.005								<0.005	<0.005
Bi ug/l	<0.10	<0.10	<0.10	<0.10	<0.10								<0.10	<0.10
Ca mg/l	10.9	8.36	6.44	7.72	4.2								7.65	7.26
Cd ug/l	<0.010	<0.010	<0.010	<0.010	<0.010								<0.010	<0.010
Co ug/l	<0.015	<0.015	<0.015	<0.015	<0.015								<0.015	<0.015
Cr ug/l	<0.015	<0.015	<0.015	<0.015	<0.015								<0.015	<0.015
Cu ug/l	0.011	<0.010	<0.010	0.01	<0.010								0.011	0.012
Fe mg/l	<0.030	<0.031	<0.032	<0.033	<0.034								<0.035	<0.036
K mg/l	<2.0	<2.1	<2.2	<2.3	<2.4								<2.5	<2.6
Li ug/l	<0.015	<0.016	<0.017	<0.018	<0.019								<0.020	<0.021
Mg mg/l	1.14	0.766	0.636	0.782	0.414								0.851	0.775
Mn mg/l	<0.005	<0.005	0.005	0.006	0.007								0.022	0.013
Mo ug/l	<0.030	<0.031	<0.032	<0.033	<0.034								<0.035	<0.036
Na mg/l	<2.0	<2.1	<2.2	<2.3	<2.4								<2.5	<2.6
Ni ug/l	<0.020	<0.020	<0.020	<0.020	<0.020								<0.020	<0.020
P ug/l	<0.30	<0.30	<0.30	<0.30	<0.30								<0.30	<0.30
Pb ug/l	<0.050	<0.050	<0.050	<0.050	<0.050								<0.050	<0.050
Sb ug/l	<0.20	<0.20	<0.20	<0.20	<0.20								<0.20	<0.20
Se ug/l	<0.20	<0.20	<0.20	<0.20	<0.20								<0.20	<0.20
Si mg/l	1.99	1.33	1.25	1.38	0.705								0.581	0.928
Sn ug/l	<0.30	<0.31	<0.32	<0.33	<0.34								<0.35	<0.36
Sr ug/l	0.055	0.044	0.034	0.039	0.026								0.037	0.035
Ti ug/l	<0.010	<0.010	<0.010	<0.010	<0.010								<0.010	<0.010
V ug/l	<0.030	<0.030	<0.030	<0.030	<0.030								<0.030	<0.030
Zn ug/l	0.006	0.005	0.007	0.008	0.011								0.026	0.014
pH	7.79	7.64	7.55	7.44	6.54								7.2	7.32
Redox (mV)	261.	280.	283.	274.	260.								298.	277.
Conductivity (uS/cm)	73.	53.	40.	51.	27.								55.	49.
Alkalinity (mg $CaCO_3$/l)	13.	13.	16.	15.	9.								4.	4.
Acidity (pH 4.5)	0.													
Acidity (pH 8.3)	3.	3.	5.	5.	5.								10.9	11.9
Cum Acidity (pH 8.3)	1.	1.2	1.4	1.6	1.9								2.3	3.
Sulphate (mg/l)	5.	4.	4.	6.	4.								11.	6.
Cum Sulphate (mg/kg)	14.1	14.3	14.5	14.7	14.9								15.4	15.7
Water added (L)	0.2	0.2	0.2	0.2	0.2								0.2	0.2
pH of water added	5.92	5.57	5.66	6.09	5.23								5.93	5.7
Leachate collected (L)	0.171	0.178	0.188	0.177	0.211								0.175	0.22
Cumulative Iron	0.29	0.29	0.29	0.29	0.29								0.29	0.29
Cumulative Copper	94.	94.	94.	94.	94.								94.	94.

Laboratory Equipment Failure
Weeks 21-27
No Samples Collected

Sample PW-2 - Kinetic Test Data

Parameter	Cycle 1	Cycle 2	Cycle 3	Cycle 4	Cycle 5	Cycle 6	Cycle 7	Cycle 8	Cycle 9	Cycle 10	Cycle 11	Cycle 12	Cycle 13	Cycle 14	Cycle 15
Ag ug/l	36.	3.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
Al mg/l	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
As ug/l	30.	20.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.
B ug/l	10.	20.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.
Ba ug/l	110.	75.	25.	45.	15.	60.	25.	25.	25.	30.	35.	60.	30.	35.	35.
Be ug/l	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
Bi ug/l	26.	42.	2.	2.	2.	2.	2.	2.	2.	2.	8.	8.	2.	2.	16.
Ca mg/l	30.55	33.63	9.45	11.3	3.49	12.99	4.86	4.17	3.87	4.01	5.17	5.19	4.91	4.48	7.33
Cd ug/l	26.	25.	12.	1.	1.	8.	7.	7.	1.	1.	4.	1.	4.	1.	1.
Co ug/l	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.
Cr ug/l	5.	10.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.
Cu ug/l	302.2	280.	67.4	63.4	23.6	83.8	31.4	28.	42.4	43.6	62.6	81.8	59.8	69.	102.2
Fe mg/l	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
K mg/l	5.11	5.88	1.53	2.22	0.3	2.22	0.58	0.62	0.01	0.4	1.42	1.26	1.61	1.46	1.51
Li ug/l	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.	10.
Mg mg/l	1.6	2.03	0.44	0.52	0.11	0.58	0.18	0.15	0.13	0.13	0.27	0.26	0.19	0.22	0.37
Mn mg/l	0.1	0.145	0.045	0.055	0.02	0.07	0.03	0.02	0.025	0.03	0.035	0.04	0.035	0.035	0.065
Mo ug/l	24.	14.	8.	10.	2.	6.	2.	2.	2.	2.	6.	4.	2.	4.	6.
Na mg/l	1.29	1.64	0.38	0.55	0.06	0.56	0.18	0.16	0.12	0.13	0.23	0.2	0.2	0.39	0.33
Ni ug/l	5.	10.	5.	5.	5.	5.	5.	5.	5.	5.	5.	10.	5.	5.	5.
P ug/l	70.	80.	10.	10.	30.	30.	20.	30.	10.	10.	40.	10.	10.	10.	70.
Pb ug/l	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	28.	8.	2.	2.	2.
Sb ug/l	2.	16.	2.	2.	2.	2.	2.	2.	2.	2.	8.	2.	2.	2.	2.
Se ug/l	120.	125.	5.	5.	5.	5.	5.	5.	25.	10.	45.	5.	5.	10.	5.
Si mg/l	7.32	9.68	2.54	4.08	1.	4.73	1.54	1.42	1.4	1.46	1.76	1.79	1.28	1.41	1.71
Sn ug/l	2.	328.	88.	2.	2.	2.	2.	2.	58.	50.	2.	2.	34.	12.	2.
Sr ug/l	98.	114.	18.	20.	2.	30.	8.	10.	8.	6.	14.	12.	8.	10.	14.
Tl ug/l	2.	2.	2.	2.	2.	2.	2.	2:	2.	2.	2.	2.	2.	2.	2.
V ug/l	1.	3.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
Zn ug/l	473.	492.	114.	126.	43.	176.	58.	51.	3.	1.	66.	96.	68.	64.	145.
pH	6.52	5.87	5.99	5.9	6.42	6.1	6.03	6.26	6.43	6.31	6.14	6.1	6.14	6.13	5.95
Redox (mV)	367.	332.	306.	321.	281.	335.	310.	316.	362.	297.	315.	307.	312.	315.	352.
Conductivity (uS/cm)	169.	193.	51.	57.	19.	63.	23.	17.	20.	21.	28.	29.	25.	27.	39.
Alkalinity (mg $CaCO_3$/l)	7.	3.	2.	3.	3.	2.	3.	2.	3.	3.	2.	2.	2.	2.	3.
Acidity (pH 4.5)	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
Acidity (pH 8.3)	8.	9.	4.	4.	3.	3.	2.	2.	2.	2.9	2.9	2.9	3.	3.	4.
Cum Acidity (pH 8.3)	0.4	0.9	1.	1.2	1.3	1.5	1.6	1.7	1.7	1.9	2.1	2.2	2.4	2.5	2.7
Sulphate (mg/l)	59.	66.	13.	15.	7.	15.	6.	5.	5.	5.	7.	7.	4.	6.	10.
Cum Sulphate (mg/kg)	2.6	6.3	6.9	7.4	7.7	8.4	8.7	9.	9.2	9.5	9.9	10.3	10.4	10.7	11.3
Water added (L)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
pH of water added	5.45	6.26	5.98	5.59	6.15	6.03	5.83	5.98	6.15	6.05	5.96	6.04	6.06	6.56	6.23
Leachate collected (L)	0.166	0.207	0.157	0.128	0.181	0.168	0.188	0.194	0.162	0.209	0.198	0.206	0.179	0.186	0.206
Cumulative Iron	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.11	0.12	0.13	0.14	0.15
Cumulative Copper	302.2	582.2	649.6	713.	736.6	820.4	851.8	879.8	922.2	965.8	1,028.4	1,110.2	1,170.	1,239.	1,341.2

Sample PW-2 - Kinetic Test Data

Parameter	Cycle 16	Cycle 17	Cycle 18	Cycle 19	Cycle 20	Cycle 21	Cycle 22	Cycle 23	Cycle 24	Cycle 25	Cycle 26	Cycle 27	Cycle 28	Cycle 29
Ag ug/l	<0.015	<0.015	<0.015	<0.015	<0.015								<0.015	<0.015
Al mg/l	<0.20	<0.20	<0.20	<0.20	<0.20								<0.20	<0.20
As ug/l	<0.20	<0.20	<0.20	<0.20	<0.20								<0.20	<0.20
B ug/l	<0.10	<0.10	<0.10	<0.10	<0.10								<0.10	<0.10
Ba ug/l	0.014	0.015	0.011	0.012	0.015								0.025	0.035
Be ug/l	<0.005	<0.005	<0.005	<0.005	<0.005								<0.005	<0.005
Bi ug/l	<0.10	<0.10	<0.10	<0.10	<0.10								<0.10	<0.10
Ca mg/l	1.06	1.09	0.51	0.548	0.761								1.02	2.02
Cd ug/l	<0.010	<0.010	<0.010	<0.010	<0.010								<0.010	<0.010
Co ug/l	<0.015	<0.015	<0.015	<0.015	<0.015								<0.015	<0.015
Cr ug/l	<0.015	<0.015	<0.015	<0.015	<0.015								<0.015	<0.015
Cu ug/l	28.1	24.4	16.5	16.4	17.								22.	32.
Fe mg/l	<0.030	<0.030	<0.030	<0.030	<0.030								<0.030	<0.030
K mg/l	<2.0	<2.0	<2.0	<2.0	<2.0								<2.0	<2.0
Li ug/l	<0.015	<0.015	<0.015	<0.015	<0.015								<0.015	<0.015
Mg mg/l	0.097	0.101	0.054	<0.050	0.093								0.086	0.188
Mn mg/l	0.02	0.021	0.013	0.017	0.019								0.03	0.044
Mo ug/l	<0.030	<0.030	<0.030	<0.030	<0.030								<0.030	<0.030
Na mg/l	<2.0	<2.0	<2.0	<2.0	<2.0								<2.0	<2.0
Ni ug/l	<0.020	<0.020	<0.020	<0.020	<0.020								<0.020	<0.020
P ug/l	<0.30	<0.30	<0.30	<0.30	<0.30								<0.30	<0.30
Pb ug/l	<0.050	<0.050	<0.050	<0.050	<0.050								<0.050	<0.050
Sb ug/l	<0.20	<0.20	<0.20	<0.20	<0.20								<0.20	<0.20
Se ug/l	<0.20	<0.20	<0.20	<0.20	<0.20								<0.20	<0.20
Si mg/l	0.685	0.991	0.377	0.458	0.567								0.364	0.686
Sn ug/l	<0.30	<0.30	<0.30	<0.30	<0.30								<0.30	<0.30
Sr ug/l	0.008	0.009	0.006	<0.001	0.011								0.007	0.013
Tl ug/l	<0.010	<0.010	<0.010	<0.010	<0.010								<0.010	<0.010
V ug/l	<0.030	<0.030	<0.030	<0.030	<0.030								<0.030	<0.030
Zn ug/l	0.038	0.04	0.023	0.027	0.04								0.058	0.077
pH	6.23	6.4	6.17	6.19	5.35								6.31	6.03
Redox (mV)	327.	326.	316.	308.	294.								340.	332.
Conductivity (uS/cm)	32.	12.	6.	6.	8.								11.	19.
Alkalinity (mg $CaCO_3$/l)	3.	3.	3.	2.	1.								2.	2.
Acidity (pH 4.5)	0.	0.	0.	0.	0.								0.	0.
Acidity (pH 8.3)	2.	2.	3.	4.	6.								11.9	11.9
Cum Acidity (pH 8.3)	2.9	3.	3.1	3.3	3.7								4.3	5.
Sulphate (mg/l)	3.	3.	3.	4.	4.								3.	4.
Cum Sulphate (mg/kg)	11.5	11.6	11.8	12.	12.2								12.4	12.6
Water added (L)	0.2	0.2	0.2	0.2	0.2								0.2	0.2
pH of water added	5.92	5.57	5.66	6.09	5.23								5.93	5.7
Leachate collected (L)	0.171	0.178	0.188	0.177	0.211								0.175	0.22
Cumulative Iron	0.15	0.15	0.15	0.15	0.15								0.15	0.15
Cumulative Copper	1,369.3	1,393.7	1,410.2	1,426.6	1,443.6								1,465.6	1,497.6

Laboratory Equipment Failure
Weeks 21-27
No Samples Collected

Appendix E

Appendix E-1
SHB Permeability Data

Appendix E-2
Tailings Impoundment Liner Material Hydrometer Analysis and Gradation Plot

Appendix E-3
Geotechnical Boring Logs andGeotechnical Analytical Data Sheets

Appendix E-1

SHB Permeability Data

Tailings Dam & Pond
Quintana Minerals Corporation
Copper Flat Project
Hillsboro, New Mexico
SHB Job No. E76-1100

TABLE 1A - RESULTS OF IN-PLACE PERMEABILITY TESTS

Well Permeameter Tests,
U. S. Bureau of Reclamation Designation E-19

Boring No.	Soil Description	Interval Tested	Permeability (ft/yr)
17A	clayey sand	5'-15'	12.0
20A	clayey sand	10'-25'	3.0
22A	sandy clay	1'-9'	7.5
24A	silty clay	15'-25'	18.0
26A	silty clay, basalt	5'-15'	11.0
27A	silty sand, gravel	15'-30'	2.2
28A	clayey sand & gravel, basalt	5'-12½'	46.0
29A	sandy clay, silty sand, clayey sand & gravel	5'-13'	18.0
101A	clayey sand & gravel	1'-12'	32.0
106A	clayey sand & gravel	1'-15'	2.0
111A	sand, gravel, cobbles with clay	2'-15'	2.3
114A	sand, gravel & cobbles	5'-12½'	17.0
119A	sand & gravel with clay	5'-15'	6.6
122A	basalt	5'-11'	38.0
134A	sand, gravel, cobbles with clay	5'-15'	7.0

Tailings Dam & Pond
Quintana Minerals Corporation
Copper Flat Project
Hillsboro, New Mexico
SHB Job No. E76-1100

TABLE 1A - FIELD PERMEABILITY TESTS IN BORINGS

U. S. Bureau of Reclamation Designation E-18

Boring No.	Soil Description	Interval Tested	Equivalent Head	Permeability (ft/yr)
18	silty clay	10'-20'	38.0'	0
21	silty clay	15'-25'	43.0'	0
		15'-25'	55.0'	0
		15'-25'	66.0'	0
24	silty clay	15'-25'	43.0'	72.0*
		15'-25'	55.0'	114.0*
		15'-25'	66.0'	135.0*
26	basalt	10'-20'	61.0'	46.0
	brecciated basalt	22½'-32½'	50.0'	169.0
		22½'-32½'	62.0'	192.0
		22½'-32½'	74.0'	372.0
28	basalt	41'-51'	69.0'	410.0
	basalt	45'-55'	73.0'	212.0

*Packer leakage noted

TABLE 1A - LONG-TERM FALLING HEAD TESTS

(Piezometer Method)

Navy Design Manual - NAVFAL DM-7

Boring No.	Soil Description	Interval Tested	Permeability (ft/yr)
17	clayey sand	20'-30'	61.0**
27B	clayey sand & gravel	31'-41'	6.0
29B	clayey sand	70'-80'	5.0

**Calculated by modified U. S. Bureau of Reclamation Designation E-18

Appendix E-2

Tailings Impoundment Liner Material Hydrometer Analysis and Gradation Plot

HYDROMETER ANALYSIS DATA SHEET

Name RAUGUST/KEDANIC **Group No.** 1

Project COPPER FLAT

Visual Description RED SILTY CLAY

Dispersing Agent: 0.4 N Calgon - 15 ml

Soil Specific Gravity________

Date 5/3/03

Specimen________

Hydrometer No. B

Calibration line________

Weight of dry soil 50.2 **g**

Corrections to readings: **Dispersing Agent:** - 1.0

Meniscus: - 1.0 (read top of meniscus)

Elapsed Time (min)	Temp. EC	Hydrometer Reading R'	Temperature Correction m	Corrected Reading R	Reading Height From Neck H_R	Particle Diameter (mm)	Percent Finer	
							Partial PPF %	Total TPF %
0.5	20°C	40 43 43	0	42	10.44	0.058	83.4	80.6
1.0	20°C	42 42 41	0	41.67	10.50	0.044	82.8	80.0
2.0	20°C	38 38 38	0	38	11.16	0.031	75.5	72.9
4.0	20°C	35	0	35	11.70	0.022	69.5	67.1
8.0 81/2	20°C	32	0	32	12.24	0.016	63.5	61.3
15.0 15.35	20°C	29	0	29	12.78	0.013	57.6	55.6
30.15	20°C	27	0	27	13.14	0.009	53.6	51.8
60.0	19.5	22	-0.1	21.9	14.06	0.0065	43.2	42.2
120.0	19	6	-0.2	5.8	16.96	0.0052	11.0	10.6
240.0	19	2	-0.2	1.8	17.68	0.0037	3.0	2.9
543.0	18.5	2	-0.3	1.7	17.69	0.0024	2.6	2.5
1217	18.5	1	-0.3	0.7	17.87	0.0016	0.6	0.6

Weight of dry soil used in hydrometer test **W_s** 50.2 **g**

Weight of dry soil used for sieving and hydrometer tests (combined analysis) **W** ____ **g**

Total weight of dry soil retained on the no. 200 sieve (combined anlaysis) **W_r** ____ **g**

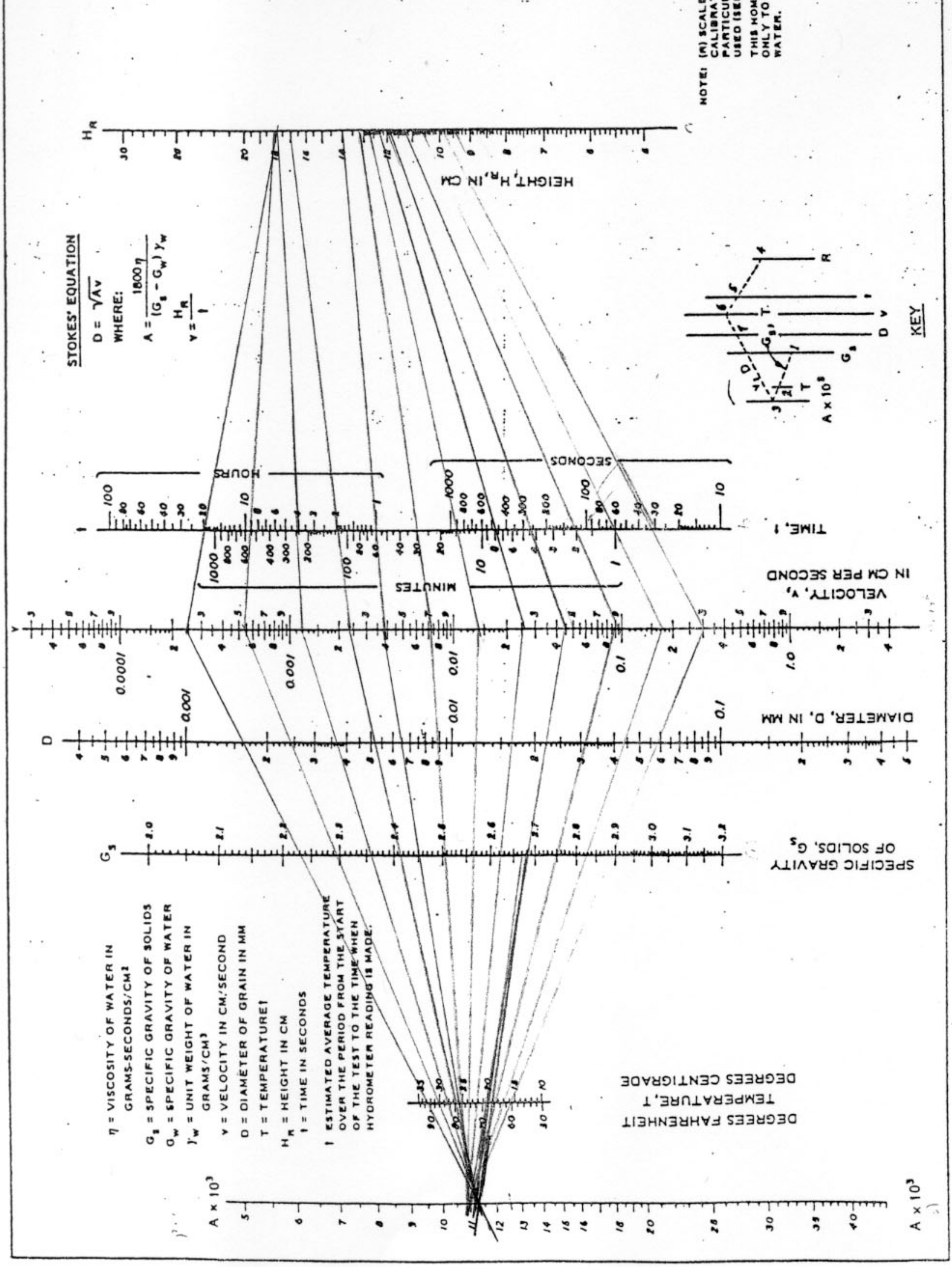
NOTE: PPF is used when only the hydrometer test is performed on the sample
TPF is computed only for combined analysis

Partial Percent Finer $PPF = R(100)/W_s$ **Total Percent Finer** $TPF = PPF(W - W_r)/W$

Remarks:

Checked by________ **Date**________

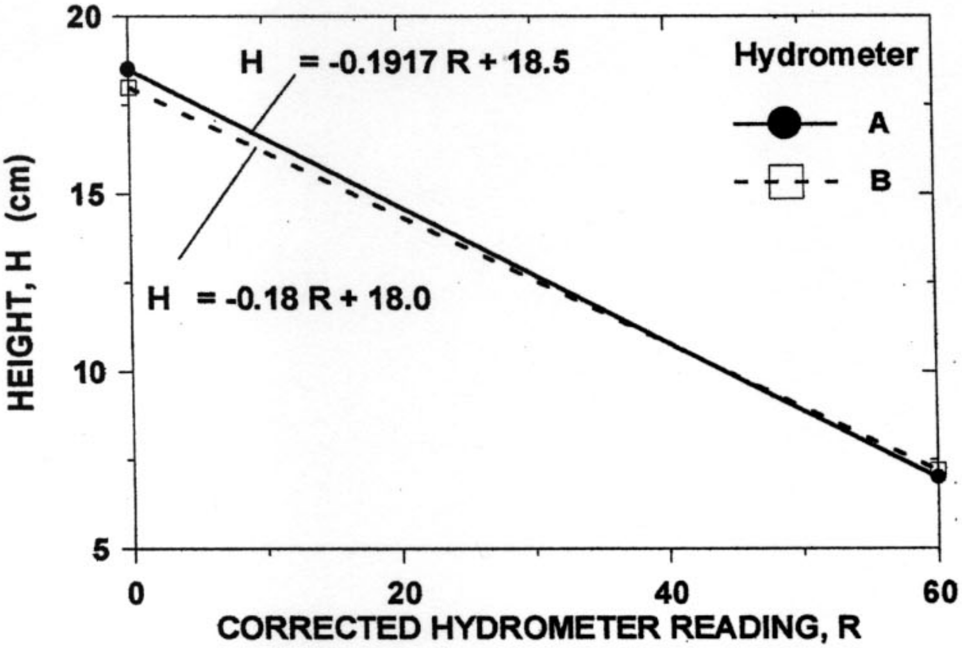
NOMOGRAPH FOR HYDROMETER DATA REDUCTION



NOTE: (R) SCALE DETERMINED FROM CALIBRATION CURVE FOR PARTICULAR HYDROMETER USED (SEE FIG. 6).
THIS NOMOGRAPH APPLIES ONLY TO SUSPENSIONS IN WATER.

AFTER A. CASAGRANDE

HYROMETER CALIBRATION EQUATIONS



TEMPERATURE CURRECTION FACTORS, m
FOR HYDROMETER DATA REDUCTION

Degrees	Degrees	Correction	Degrees	Degrees	Correction	Degrees	Degrees	Correction
C	F	m	C	F		C	F	m
14	57.2	-0.9	21	69.8	0.2	28	82.4	1.8
14.5	58.1	-0.8	21.5	70.7	0.3	29	84.2	2.1
15	59	-0.8	22	71.6	0.4	29.5	85.1	2.2
15.5	59.9	-0.7	22.5	72.5	0.5	30	86	2.3
16	60.8	-0.6	23	73.4	0.6	30.5	86.9	2.5
16.5	61.7	-0.6	23.5	74.3	0.7	31	87.8	2.6
17	62.6	-0.5	24	75.2	0.8	31.5	88.7	2.8
17.5	63.5	-0.4	24.5	76.1	0.9	32	89.6	2.9
18	64.4	-0.4	25	77	1	32.5	90.5	3
18.5	65.3	-0.3	25.5	77.9	1.1	33	91.4	3.2
19	66.2	-0.2	26	78.8	1.3	33.5	92.3	3.3
19.5	67.1	-0.1	26.5	79.7	1.4	34	93.2	3.5
20	68	0	27	80.6	1.5			
20.5	68.9	0.1	27.5	81.5	1.6			

SIEVE ANALYSIS DATA SHEET

Name Tailings Impoundment Liner Material **Date** 5/5/03

Project Copper Flat **Specimen No.** SR-1

Visual Description Red clayey silt

Total Sample Mass (g) 94.30 **Group No.** NA

Sieve Opening		U.S. Standard	Weight	Percent Retained		Percent Finer
(in)	(mm)	Seive No.	Retained	Partial	Cumulative	by weight
0.187	4.76	4	0	0.00	0.00	100.00
0.0029	0.074	200	3.2	3.39	3.39	96.61
0.058						80.60
0.044						80.00
0.031						72.90
0.022						67.10
0.016						61.30
0.013						55.60
0.009						51.80
0.0065						42.20
0.0052						10.60
0.0037						2.90
0.0024						2.50
0.0016						0.60
Pan			91.1			
Total mass (g)			94.3			

Partial percent retained= weight retained on a sieve/total weigh

Cumulative percent retained=cumulative partial percent retain

Percent finer by weight=100-cumulative percent retained

D_{60} NA

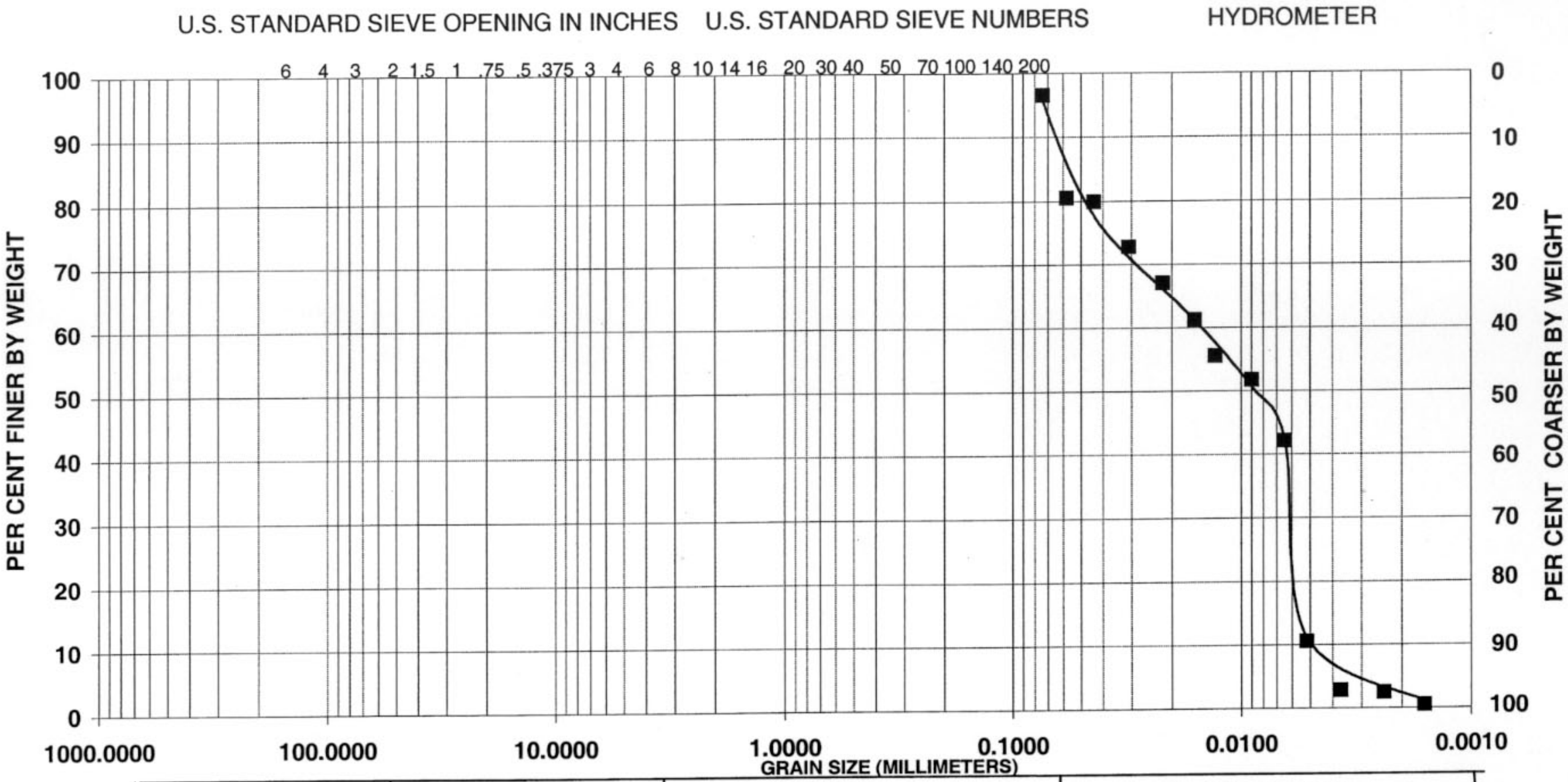
D_{30} NA

D_{10} NA

C_u NA

C_c NA

Checked By ____________________ **Date** ________________



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SAMPLE	DEPTH	W %	LL	PL	PI	VISUAL DISCRIPTION	USCS	NEW MEXICO TECH
						Red clayey silt		PROJECT: Copper Flat Liner Material LOCATION: NM Tech BORING NO.: DATE: 5/5/03 TECHNICIAN: Raugust

Percent Sand and Fines
And Swell Test

Total soil (Dry) = 94.3 g

>#200 = 3.2 g

< #200 = 91.1 g

percent retained #200 = 3.2/94.3 X 100 = 3.4 percent

Percent passing #200 = 91.1/94.3 x 100 = 96.6 percent.

Swell Test

original dry material = 10 ml

after 24 hours submerged by water = 16 ml

Percent difference = (16-10)/10 x 100 = 60 percent.

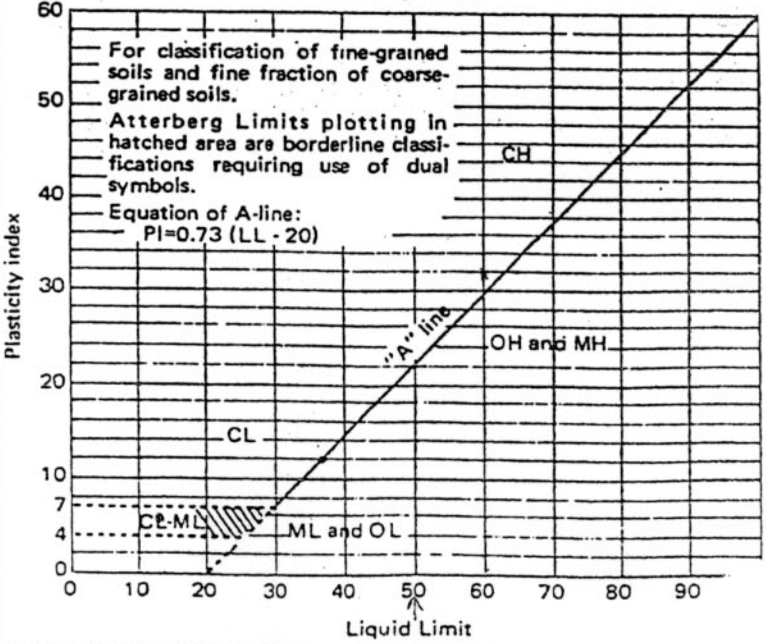
Appendix E-3

Geotechnical Boring Logs andGeotechnical Analytical Data Sheets

UNIFIED SOIL CLASSIFICATION SYSTEM

Major divisions			Group symbols		Typical names	Laboratory classification criteria		
Coarse-grained soils (More than half of material is *larger* than No. 200 sieve size)	Gravels (More than half of coarse fraction larger than No. 4 sieve size)	Clean gravels (Little or no fines)	GW		Well-graded gravels, gravel-sand mixtures, little or no fines	Determine percentages of sand and gravel from grain-size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows: Less than 5 per cent . . . . GW, GP, SW, SP More than 12 per cent . . . . GM, GC, SM, SC 5 to 12 per cent . . . . *Borderline* cases requiring dual symbols	$C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between 1 and	
			GP		Poorly graded gravels, gravel-sand mixtures, little or no fines		Not meeting all gradation requirements for GW	
		Gravels with fines (Appreciable amount of fines)	GM	d	Silty gravels, gravel-sand-silt mixtures		Atterberg limits below "A" line or P.I. less than 4	Above "A" line with between 4 and 7 are *derline* cases requiring of dual symbols
				u				
			GC		Clayey gravels, gravel-sand-clay mixtures		Atterberg limits above "A" line with P.I. greater than 7	
	Sands (More than half of coarse fraction is smaller than No. 4 sieve size)	Clean sands (Little or no fines)	SW		Well-graded sands, gravelly sands, little or no fines		$C_u = \frac{D_{60}}{D_{10}}$ greater than 6; $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between 1 and	
			SP		Poorly graded sands, gravelly sands, little or no fines		Not meeting all gradation requirements for SW	
		Sands with fines (Appreciable amount of fines)	SM	d	Silty sands, sand-silt mixtures		Atterberg limits below "A" line or P.I. less than 4	Limits plotting in hatch zone with P.I. between and 7 are *borderline* ca requiring use of dual sy bols.
				u				
			SC		Clayey sands, sand-clay mixtures		Atterberg limits above "A" line with P.I. greater than 7	
Fine-grained soils (More than half of material is *smaller* than No. 200 sieve)	Silts and clays (Liquid limit less than 50)		ML		Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity			
			CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays			
			OL		Organic silts and organic silty clays of low plasticity			
	Silts and clays (Liquid limit greater than 50)		MH		Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts			
			CH		Inorganic clays of high plasticity, fat clays			
			OH		Organic clays of medium to high plasticity, organic silts			
Highly organic soils			Pt		Peat and other highly organic soils	SOIL TESTING SERVICES, INC. NORTHBROOK ILLINOIS 60062		

Plasticity Chart



For classification of fine-grained soils and fine fraction of coarse-grained soils.

Atterberg Limits plotting in hatched area are borderline classifications requiring use of dual symbols.

Equation of A-line:
PI=0.73 (LL - 20)

PROJECT Tailings Dam Investigation
Copper Flat Project

JOB NO. E76-1023 DATE 4-2-76

LOG OF TEST PIT NO. A

RIG TYPE Ford
BORING TYPE Backhoe test pit
SURFACE ELEV.
DATUM

Depth in Ft	Continuous Penetration Resistance	Graphical Log	Sample	Sample Type	Blows per foot 140 lb. 30" free fall drop hammer	Dry Density Lbs. per cu. ft.	Moisture Content Percent of Dry Wt.	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0		○						SM		SILTY SAND, predominantly fine, low plasticity, brown
5		▨	☒	A				CL		SILTY CLAY, medium to high plasticity, reddish brown
10		▨	☒	A				GC		CLAYEY SAND & GRAVEL, predominantly medium, interbedded with caliche, medium plasticity, reddish brown mottled with white
15										Stopped backhoe at 14'6"
0										

GROUND WATER

DEPTH	HOUR	DATE
	none	

SAMPLE TYPE

A – Auger cuttings. B – Block sample
S – 2" O.D. 1.38" I.D. tube sample.

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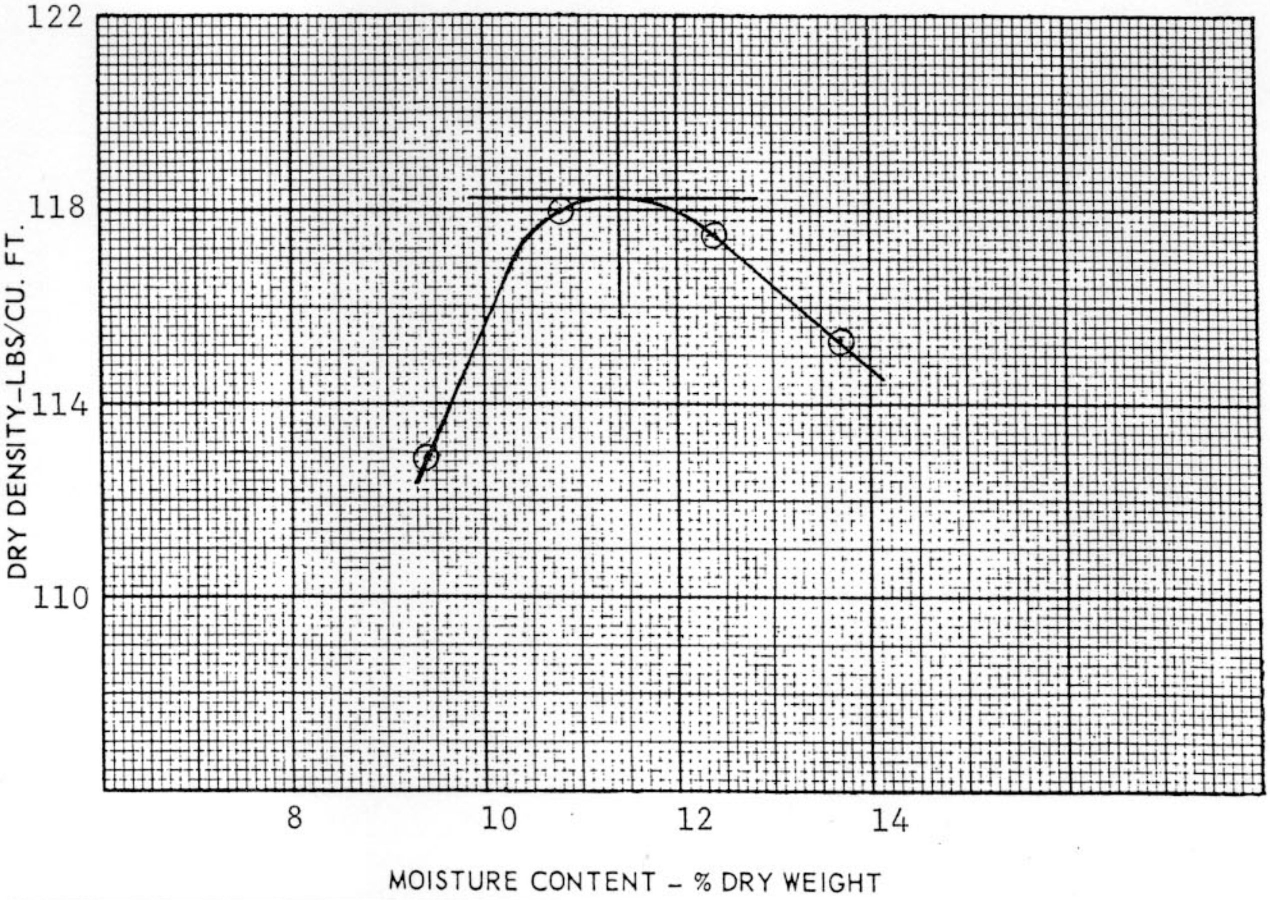
SUMMARY OF MOISTURE DENSITY RELATIONSHIP TESTS

PROJECT Tailings Dam Investigation
Copper Flat Project
JOB NO. E76-1023

CLIENT
LAB NO. 1023-1



CURVE	SOURCE	OPTIMUM MOISTURE CONTENT % DRY WT.	MAXIMUM DRY DENSITY LBS./CU. FT.	TEST DESIGNATION	TEST METHOD	LAB NO.
	Pit A @ 2½'-6'	11.4	118.2	ASTM D1557	D	1023-1

MOISTURE-DENSITY RELATIONSHIP TEST METHOD DATA

AASHTO T 99-74 and ASTM D 698-70 (Standard Proctor)

METHOD	MATERIAL	MOLD		NO. OF LAYERS	BLOWS PER LAYER	HAMMER WEIGHT	HEIGHT OF FALL	COMPACTIVE EFFORT FT. LBS/CU. FT.
		DIAMETER	HEIGHT					
A	-#4	4''	4.58''	3	25	5.5 LBS.	12''	12,375
B	-#4	6''	4.58''	3	56	5.5 LBS.	12''	12,317
C	-3/4	4''	4.58''	3	25	5.5 LBS.	12''	12,375
D	-3/4	6''	4.58''	3	56	5.5 LBS.	12''	12,317

AASHTO T 180-74 and ASTM D 1557-70 (Modified Proctor)

METHOD	MATERIAL	MOLD		NO. OF LAYERS	BLOWS PER LAYER	HAMMER WEIGHT	HEIGHT OF FALL	COMPACTIVE EFFORT FT. LBS/CU. FT.
		DIAMETER	HEIGHT					
A	-#4	4''	4.58''	5	25	10.0 LBS.	18''	56,250
B	-#4	6''	4.58''	5	56	10.0 LBS.	18''	55,986
C	-3/4	4''	4.58''	5	25	10.0 LBS.	18''	56,250
D	-3/4	6''	4.58''	5	56	10.0 LBS.	18''	55,986

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REPORT OF LABORATORY TESTS

DATE

PROJECT Tailings Dam Investigation Copper Flat Project JOB NO. E76-1023

LOCATION Hillsboro, New Mexico LAB NO. 1023-1

SAMPLE Test Pit A @ 2½'-6'

REMOLDED PERMEABILITY

INITIAL DATA

Maximum Dry Density	118.2	PCF
Optimum Moisture	11.4	%
Initial Dry Density	112.0	PCF
Initial Moisture Content	11.4	%
Degree of Maximum Density	94.8	%
Specific Gravity	2.675	
Volume of Specimen	1016	cc
Head	319.2	inches

AFTER TEST DATA

Moisture Content	26.1	%
Dry Density	108.2	PCF
Percent Saturation	100.0+	%
Coefficient of Permeability	1.77×10^{-6}	cm/sec
	1.83	ft/yr

Note: Thickener underflow from the breccia bulk flotation pilot plant studies used in test.

Tailings Dam Investigation
ROJECT Copper Flat Project
OB NO. E76-1023 DATE 4-2-76

LOG OF TEST PIT NO. E

RIG TYPE Ford
BORING TYPE Backhoe test pit
SURFACE ELEV.
DATUM

Depth , eet	Continuous Penetration Resistance	Graphical Log	Sample	Sample Type	Blows per foot 140 lb. 30" free fall drop hammer	Dry Density Lbs. per cu. ft.	Moisture Content Percent of Dry Wt.	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0		▨						CH -		CLAY, high plasticity, reddish brown
		▨	☒	A				CL		SANDY CLAY, low to medium plasticity, reddish brown
5										Stopped backhoe at 5'
10										

GROUND WATER

DEPTH	HOUR	DATE
	none	

SAMPLE TYPE

A – Auger cuttings. B – Block sample
S – 2'' O.D. 1.38'' I.D. tube sample.
U – 3'' O.D. 2.42'' I.D. tube sample.
T – 2'' O.D. thin-walled Shelby tube.

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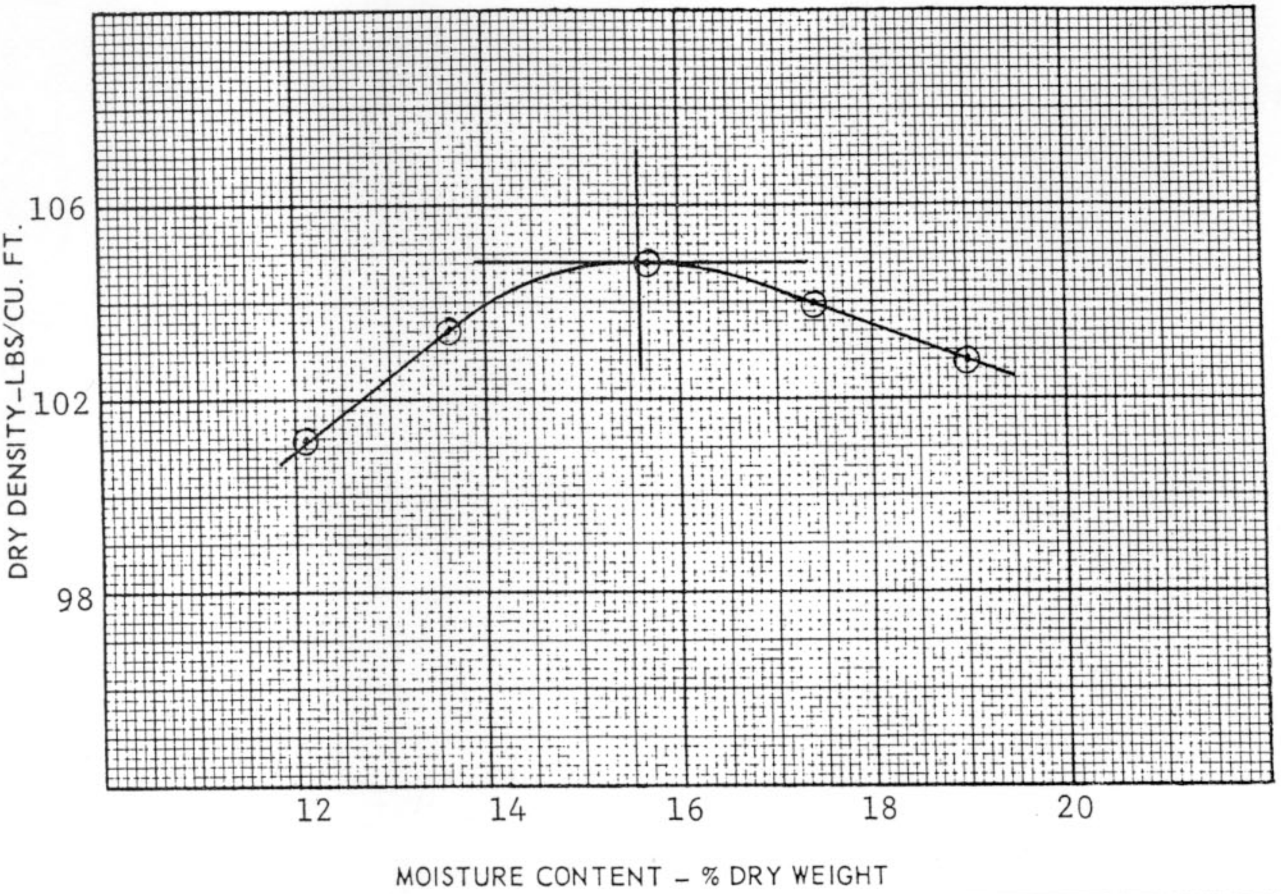
SUMMARY OF MOISTURE DENSITY RELATIONSHIP TESTS

PROJECT Tailings Dam Investigation
Copper Flat Project
JOB NO. E76-1023

CLIENT
LAB NO. 1023-6



CURVE	SOURCE	OPTIMUM MOISTURE CONTENT % DRY WT.	MAXIMUM DRY DENSITY LBS./CU. FT.	TEST DESIGNATION	TEST METHOD	LAB NO.
	Pit E @ 2'-5'	15.6	104.8	ASTM D1557	D	1023-6

MOISTURE-DENSITY RELATIONSHIP TEST METHOD DATA

AASHTO T 99-74 and ASTM D 698-70 (Standard Proctor)

METHOD	MATERIAL	MOLD		NO. OF LAYERS	BLOWS PER LAYER	HAMMER WEIGHT	HEIGHT OF FALL	COMPACTIVE EFFORT FT. LBS/CU. FT.
		DIAMETER	HEIGHT					
A	-#4	4''	4.58''	3	25	5.5 LBS.	12''	12,375
B	-#4	6''	4.58''	3	56	5.5 LBS.	12''	12,317
C	-3/4	4''	4.58''	3	25	5.5 LBS.	12''	12,375
D	-3/4	6''	4.58''	3	56	5.5 LBS.	12''	12,317

AASHTO T 180-74 and ASTM D 1557-70 (Modified Proctor)

METHOD	MATERIAL	MOLD		NO. OF LAYERS	BLOWS PER LAYER	HAMMER WEIGHT	HEIGHT OF FALL	COMPACTIVE EFFORT FT. LBS/CU. FT.
		DIAMETER	HEIGHT					
A	-#4	4''	4.58''	5	25	10.0 LBS.	18''	56,250
B	-#4	6''	4.58''	5	56	10.0 LBS.	18''	55,986
C	-3/4	4''	4.58''	5	25	10.0 LBS.	18''	56,250
D	-3/4	6''	4.58''	5	56	10.0 LBS.	18''	55,986

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REPORT OF LABORATORY TESTS

DATE

PROJECT Tailings Dam Investigation Copper Flat Project

JOB NO. E76-1023

LOCATION Hillsboro, New Mexico

LAB NO. 1023-1

SAMPLE Test Pit E @ 2'-5'

REMOLDED PERMEABILITY

INITIAL DATA

Maximum Dry Density	104.8	PCF
Optimum Moisture	15.6	%
Initial Dry Density	99.6	PCF
Initial Moisture Content	15.6	%
Degree of Maximum Density	95.0	%
Specific Gravity	2.675	
Volume of Specimen	2085	cc
Head	316.1	inches

AFTER TEST DATA

Moisture Content	28.9	%
Dry Density	96.9	PCF
Percent Saturation	100.0+	%
Coefficient of Permeability	2.86×10^{-7}	cm/sec
	0.29	ft/yr
Time Duration of Testing	198	hours

Note: Thickener underflow from the breccia bulk flotation pilot plant studies used in test.

ROJECT Tailings Dam Investigation
Copper Flat Project

OB NO. E76-1023 DATE 4-2-76

LOG OF TEST PIT NO. F

RIG TYPE Ford
BORING TYPE Backhoe test pit
SURFACE ELEV.
DATUM

Depth in Feet	Continuous Penetration Resistance	Graphical Log	Sample	Sample Type	Blows per foot 140 lb. 30" free fall drop hammer	Dry Density Lbs. per cu. ft.	Moisture Content Percent of Dry Wt.	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0		‖‖						ML		SILT, very fine, low plasticity, light brown
5		▨	☒	A				CH		alternating layers of CLAY & SILT, high plasticity, dark reddish brown
		●						GM$^-$		SILTY SAND & GRAVEL, predominantly fine, occasional basaltic boulders, subangular, nonplastic, brown
10										Stopped backhoe at 10'
15										

GROUND WATER

DEPTH	HOUR	DATE

SAMPLE TYPE
A – Auger cuttings. B – Block sample

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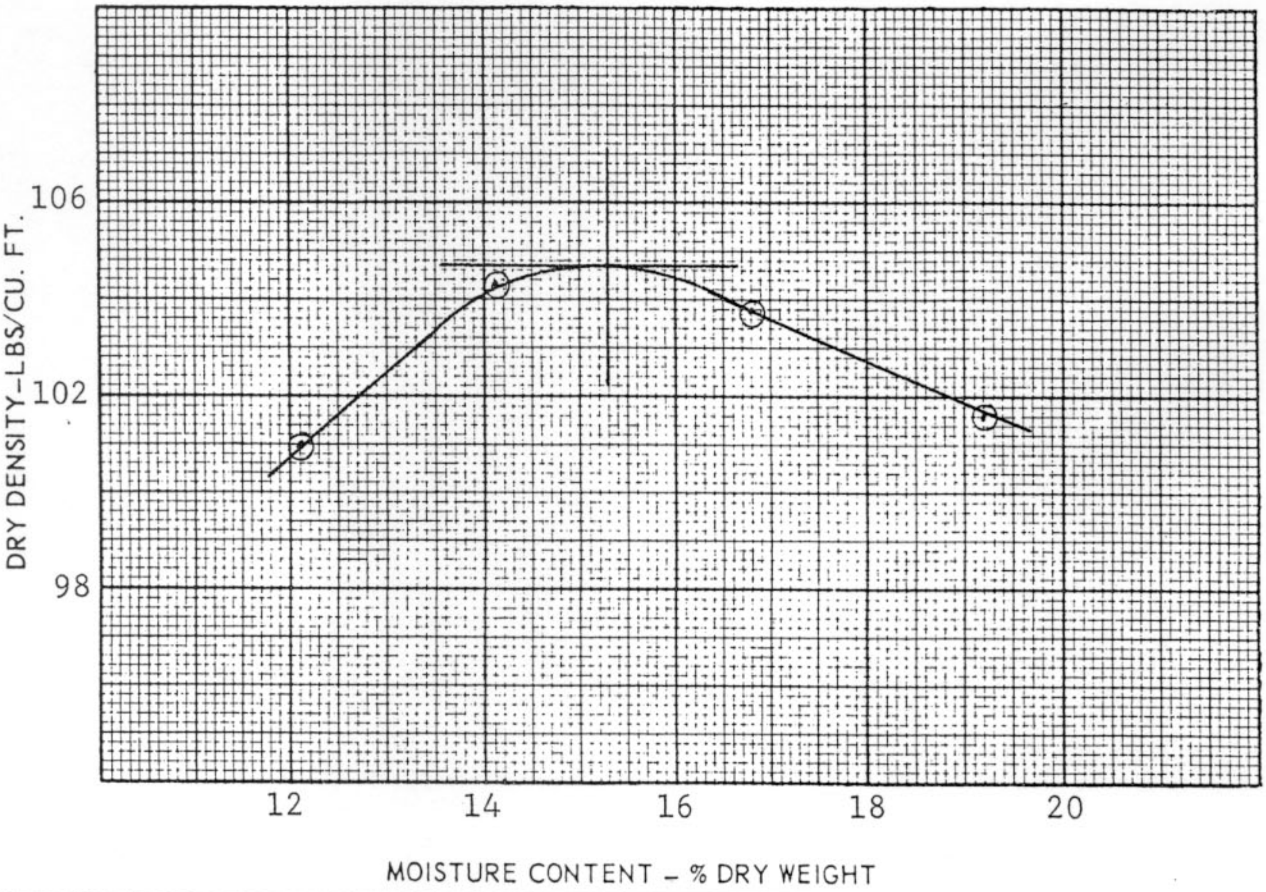
SUMMARY OF MOISTURE DENSITY RELATIONSHIP TESTS

PROJECT Tailings Dam Investigation Copper Flat Project **JOB NO.** E76-1023

CLIENT **LAB NO.** 1023-7



CURVE	SOURCE	OPTIMUM MOISTURE CONTENT % DRY WT.	MAXIMUM DRY DENSITY LBS./CU. FT.	TEST DESIGNATION	TEST METHOD	LAB NO.
	Pit F @ 2'-5'	15.3	104.7	ASTM D1557	D	1023-7

MOISTURE-DENSITY RELATIONSHIP TEST METHOD DATA

AASHTO T 99-74 and ASTM D 698-70 (Standard Proctor)

METHOD	MATERIAL	MOLD		NO. OF LAYERS	BLOWS PER LAYER	HAMMER WEIGHT	HEIGHT OF FALL	COMPACTIVE EFFORT FT. LBS/CU. FT.
		DIAMETER	HEIGHT					
A	-#4	4''	4.58''	3	25	5.5 LBS.	12''	12,375
B	-#4	6''	4.58''	3	56	5.5 LBS.	12''	12,317
C	-3/4	4''	4.58''	3	25	5.5 LBS.	12''	12,375
D	-3/4	6''	4.58''	3	56	5.5 LBS.	12''	12,317

AASHTO T 180-74 and ASTM D 1557-70 (Modified Proctor)

METHOD	MATERIAL	MOLD		NO. OF LAYERS	BLOWS PER LAYER	HAMMER WEIGHT	HEIGHT OF FALL	COMPACTIVE EFFORT FT. LBS/CU. FT.
		DIAMETER	HEIGHT					
A	-#4	4''	4.58''	5	25	10.0 LBS.	18''	56,250
B	-#4	6''	4.58''	5	56	10.0 LBS.	18''	55,986
C	-3/4	4''	4.58''	5	25	10.0 LBS.	18''	56,250
D	-3/4	6''	4.58''	5	56	10.0 LBS.	18''	55,986

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REPORT OF LABORATORY TESTS

DATE

PROJECT Tailings Dam Investigation
Copper Flat Project

JOB NO. E76-1023

LOCATION Hillsboro, New Mexico

LAB NO. 1023-2

SAMPLE Test Pit F @ 2'-5'

REMOLDED PERMEABILITY

INITIAL DATA

Maximum Dry Density	104.7	PCF
Optimum Moisture	15.3	%
Initial Dry Density	99.5	PCF
Initial Moisture Content	15.3	%
Degree of Maximum Density	95.0	%
Specific Gravity	2.675	
Volume of Specimen	2085	cc
Head	881.8	inches

AFTER TEST DATA

Moisture Content	32.1	%
Dry Density	98.02	PCF
Percent Saturation	100.0+	%
Coefficient of Permeability	2.11×10^{-8}	cm/sec
	0.022	ft/yr
Time Duration of Testing	198	hours

Note: Thickener underflow from the breccia bulk flotation pilot plant studies used in test.

PROJECT Tailings Dam Investigation

LOG OF TEST BORING NO. 1

JOB NO. E76-1023 DATE 3-24-76

RIG TYPE CME-55
BORING TYPE 6½" Hollow Stem Auger
SURFACE ELEV.
DATUM

Depth in ft	Continuous Penetration Resistance	Graphical Log	Sample	Sample Type	Blows per foot 140 lb. 30" free fall drop hammer	Dry Density Lbs. per cu. ft.	Moisture Content Percent of Dry Wt.	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0			☒	S	30		16	CH	firm	CLAY, high plasticity, reddish brown
5			☒	S	73		16	CL	hard	SILTY CLAY, medium plasticity, reddish brown
10			☒	U	67		13			
15			☒	S	92		17	ML	hard	CLAYEY SILT, medium plasticity, brown
20			☒	S	50/5"		11			
25			☒	S	50/3"		9			
30			☒	S	50/4"		11			Stopped auger at 29'6" Sampler refused at 29'10"
35										

GROUND WATER

DEPTH	HOUR	DATE
	none	

SAMPLE TYPE

A – Auger cuttings. B – Block sample
S – 2" O.D. 1.38" I.D. tube sample.
U – 3" O.D. 2.42" I.D. tube sample.

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TABULATION OF TEST RESULTS

Job No. E76-1023

Project Tailings Dam Investigation, Copper Flat Project
Hillsboro, New Mexico

Material

Source

HOLE NO.	LOCATION	DEPTH	UNIFIED CLASS.	LL	PI	SIEVE ANALYSIS – ACCUM. % PASSING												LAB. NO.
						200	100	40	16	10	4	¼	⅜	¾	1	1½	2	
1	See Site Plan	5'	CL	42	18	72	89	100										23-8
1	See Site Plan	15'	ML	49	20	74	89	98		100								23-9
2	See Site Plan	1'	GC	55	28	23	30	38		51	61		74	84	100			23-10
2	See Site Plan	20'	SC	33	13	34	47	61		76	84		92	100				23-11
2	See Site Plan	35'	SC	32	13	36	51	67		84	94		100					23-12
4	See Site Plan	1'	CL	41	22	72	78	86		98	100							23-13
5	See Site Plan	1'	SC	32	16	46	53	63		78	86		93	100				23-14
5	See Site Plan	10'	ML	39	14	93	96	98		99	100							23-15
5	See Site Plan	20'	CH	79	47	82	92	98		100								23-16
5	See Site Plan	35'	ML	40	14	74	89	99		100								23-17
5	See Site Plan	60'	CH	55	29	96	99	100										23-18
6	See Site Plan	1'	CL	41	19	83	93	99		100								23-19
6	See Site Plan	5'	CL	35	16	56	64	75		90	96		98	100				23-20
7	See Site Plan	42'	CH	54	27	91	96	99		100								23-21
9	See Site Plan	1'	SC	33	13	44	52	62		78	88		96	100				23-23

PROJECT Copper Flat Tailings Dam & Pond

JOB NO. E76-1100 DATE 9-1-76

LOG OF TEST BORING NO. 18

RIG TYPE CME-75

BORING TYPE 6½" Hollow Stem Auger

SURFACE ELEV.

DATUM

Depth in Feet	Continuous Penetration Resistance	Sample	Sample Type	Blows per foot 140 lb. 30" free fall drop hammer	Dry Density Lbs. per cu. ft.	Moisture Content Percent of Dry Wt.	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0		☒	S	20		17		firm to hard	GRAVEL littered surface SILTY CLAY, some sand, medium to high plasticity, reddish-brown note: occasional seam of clayey silt, medium plasticity, reddish-tan
5		☒	S	33		18			
10		☒	S	38			CH		
15		☒	S	50/5½"		22			
20		☒	S	50/5½"		16			
25		☒	S	85		23	ML	hard	CLAYEY SILT, some fine sand, medium plasticity, light brown
30		☒	S	50/4"		20	ML	hard	SANDY SILT, considerable lime, low plasticity, light tan
35		☒	S	50/4"				hard	SILTY CLAY, some fine sand, medium plasticity, light brown
40		☒	S	50/5½"		13	CL	hard	SANDY SILT, low plasticity, light brown
									CLAYEY SAND & GRAVEL, occasional cobble, decomposed, low plasticity, brown
45		☒	S	50/2"		11	ML		
50		☒	S	50/2"		19	SC		Stopped auger at 49'6" Sampler refused at 49'8"

GROUND WATER

DEPTH	HOUR	DATE
	none	

SAMPLE TYPE

A – Auger cuttings. B – Block sample

S – 2" O.D. 1.38" I.D. tube sample.

U – 3" O.D. 2.42" I.D. tube sample.

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Job No. E76-1100

Date

Client:

Project Copper Flat Tailings Dam & Pond
Hillsboro, New Mexico

Material

Source

HOLE NO.	LOCATION	DEPTH	UNIFIED CLASS.	L L	P I	SIEVE ANALYSIS – ACCUM. % PASSING											moist.	LAB. NO.
						200	100	40	16	10	4	¼	⅜	¾	1	1½		
17	See Site Plan	½'	SC	35	18	43	50	64	78	84	92	94	97	100			5.2	1100-6
17	See Site Plan	9½'	SC	39	19	35	42	51	61	66	78	81	86	100			5.3	1100-8
17	See Site Plan	24½'	SC	39	20	20	24	32	45	53	66	70	78	100			4.5	1100-11
18	See Site Plan	9½'	CH	60	34	87	94	99	99	99	100						13.4	1100-20
18	See Site Plan	34½'	CL	40	20	68	82	91	95	96	98	99	100				8.2	1100-25
19	See Site Plan	14½-16'	SC	39	16	28	41	56		74	84		91	100				1100-3-1
19	See Site Plan	34½'-36'	SM-SC	35	10	21	35	84		99	100							1100-3-2
19	See Site Plan	49½-51'	MH	66	29	70	87	99		100								1100-3-3
20	See Site Plan	9½'	SC	36	14	23	30	41	52	59	74	80	88	97	100		4.3	1100-31
20	See Site Plan	39½'	CH	67	41	93	95	98	99	100							20.3	1100-37
20	See Site Plan	64½'	CH	57	31	79	95	99	100								21.3	1100-42
21	See Site Plan	29½'	CH-MH	51	23	67	83	98	99	100							14.5	1100-51
21	See Site Plan	54½'	CH-MH	60	30	92	98	99	100								16.9	1100-56
21	See Site Plan	74½'	CH	56	30	95	99	99	100								16.7	1100-60
21	See Site Plan	104½'	GC	40	20	22	25	32	42	48	61	64	72	100			9.5	1100-66

TABULATION OF TEST RESULTS

Job No. E76-1023

Project Tailings Dam Investigation, Copper Flat Project
Hillsboro, New Mexico

Material

Source Backhoe Test Pits

HOLE NO.	LOCATION	DEPTH	UNIFIED CLASS.	L L	P I	SIEVE ANALYSIS – ACCUM. % PASSING												LAB. NO.
						200	100	40	16	10	4	¼	⅜	¾	1	2	3	
A	See Site Plan	2'-6½'	CL	45	25	61	67	76		91	97		99		100			23-1
A	See Site Plan	7'-9'	GC	45	24	17	20	26		39	48		57	69	72	76	100	23-2
B	See Site Plan	2'-5'	SC	34	16	47	54	86		98	99		100					23-3
C	See Site Plan	1'-5'	CL	43	22	67	77	90		98	99		100					23-4
C	See Site Plan	5½'-9'	SC	31	10	26	30	39		61	75		85		86	100		23-5
E	See Site Plan	2'-5'	CL	38	14	76	90	99		100								23-6
F	See Site Plan	2'-5'	CH	58	34	99	100											23-7

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Appendix F

Bulk XRD and Clay Mineralogy Distribution Data Scans and Calculations

Clay Mineralogy Calcualtions

General Calculation

T = total counts
S1g = smectite/mixed (glycolated)
I1g = Illite (glycolated)
K1 = Kaolinite (glycolated)
I1h = Illite (heated)

T = I1h + K1

Illite = I1g/T x 10

Smectite = (S1g/4)/T x 10

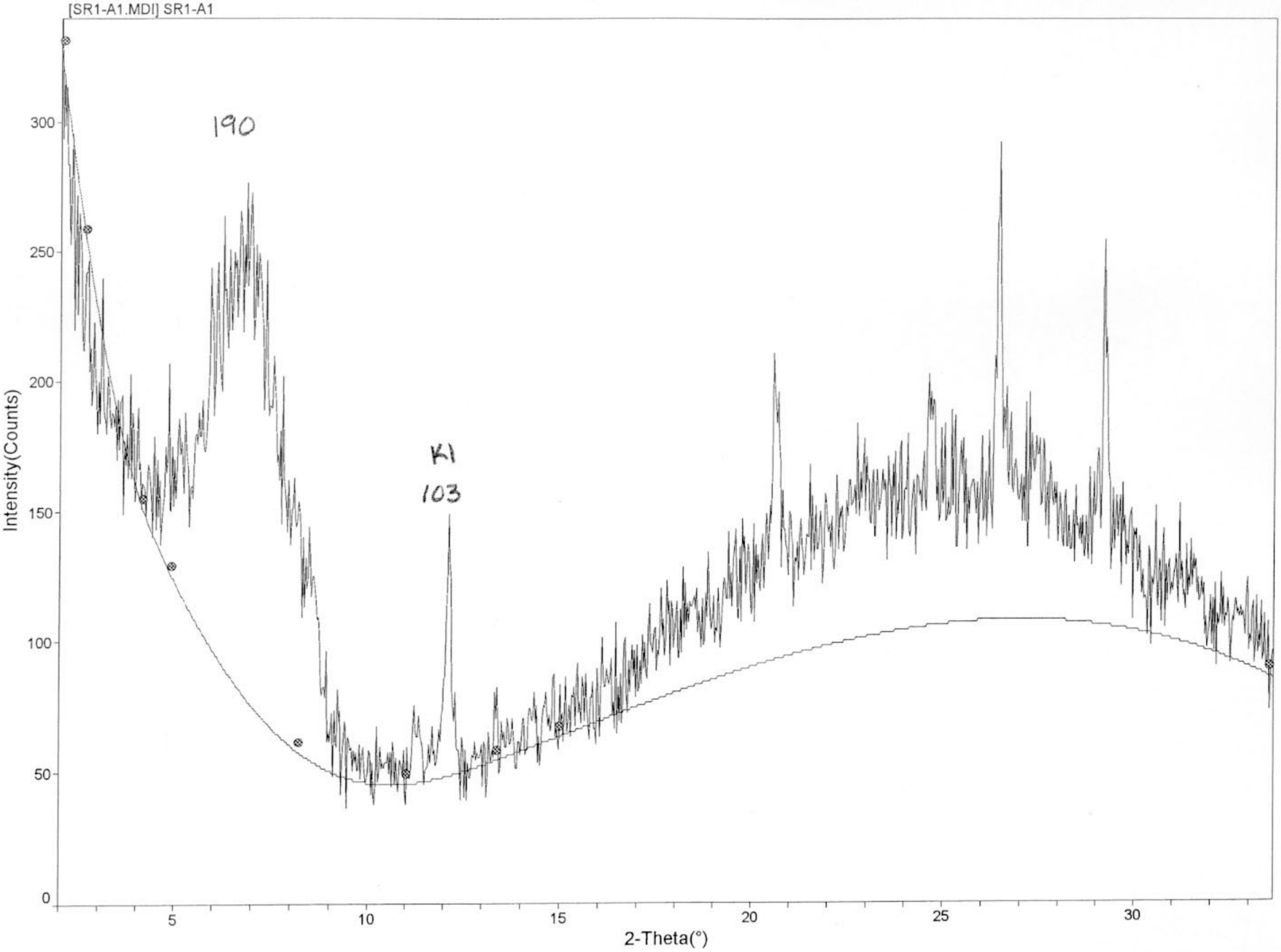
Mixed Layer (I/S) = (I1h - I1g - (S1g/4))/T x 10

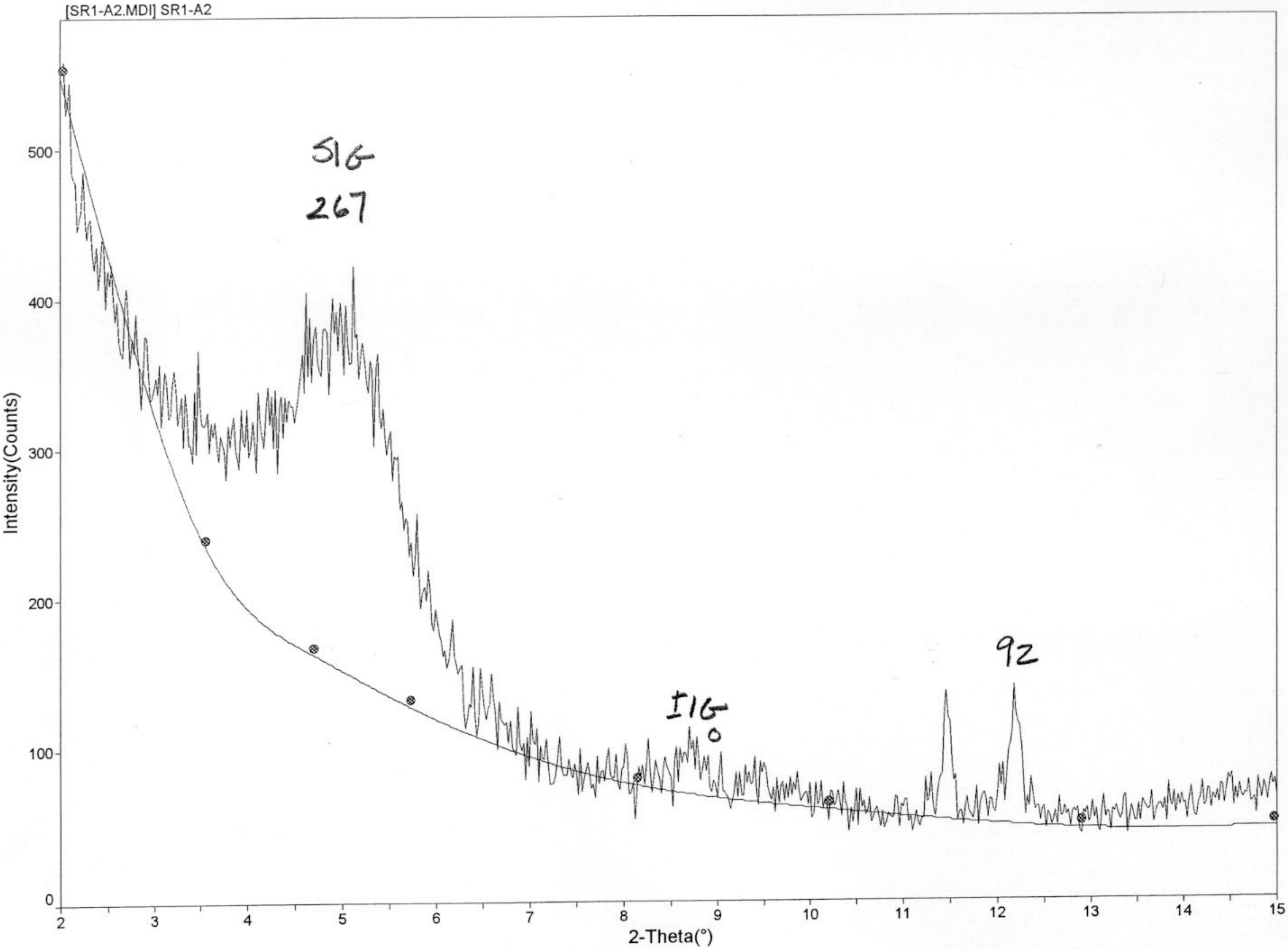
Kaolinite = K1/T x10

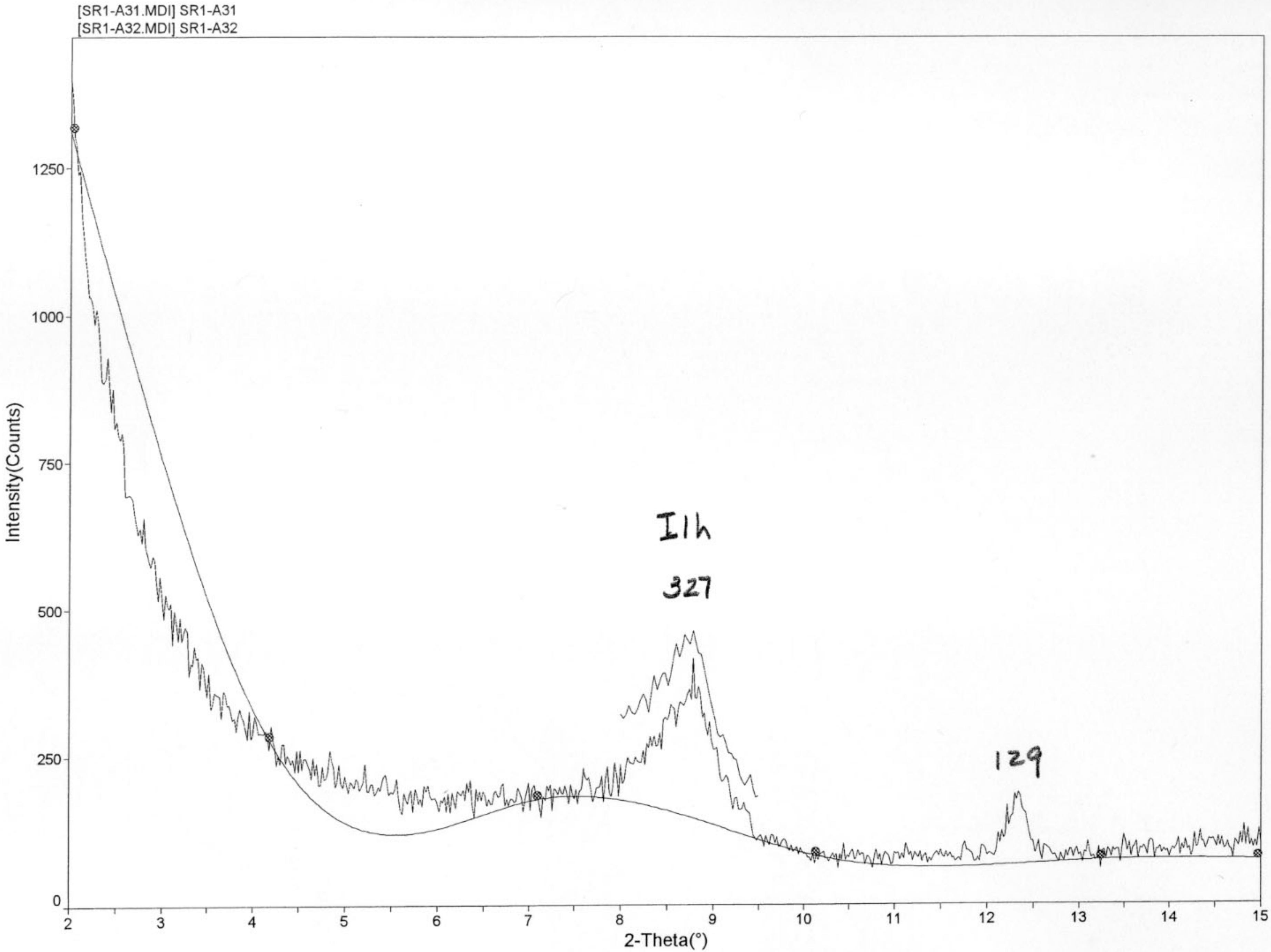
Results are in parts in 10.

Calculations

Sample ID	I1h	K1	I1g	S1g	T	Illite	Smectite	Mixed layer (I/S)	Kaolinite	Total
SR-1, Calc1	327	103	0	267	430	0.0	1.6	6.1	2.4	10
SR-1, Calc2	318	100	0	245	418	0.0	1.5	6.1	2.4	10
SR-1, Calc3	363	100	0	253	463	0.0	1.4	6.5	2.2	10
SR3	156	35	42	0	191	2.2	0.0	6.0	1.8	10


[SR1-A1.MDI] SR1-A1
190
Kl
103
Intensity(Counts)
0
50
100
150
200
250
300
2-Theta(°)
5
10
15
20
25
30


[SR1-A2.MDI] SR1-A2
516
267
116
0
92
Intensity(Counts)
500
400
300
200
100
0
2-Theta(°)
2
3
4
5
6
7
8
9
10
11
12
13
14
15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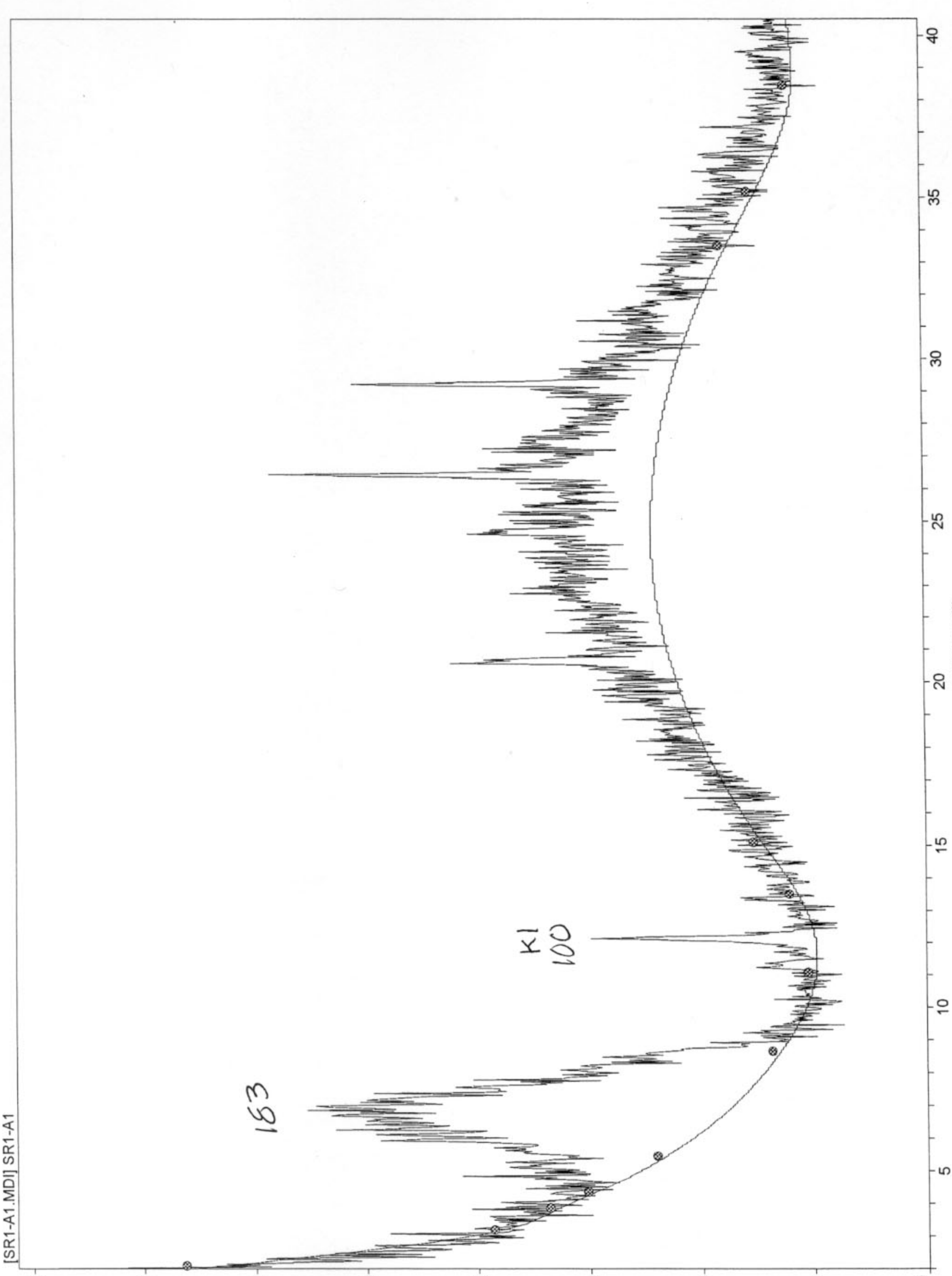
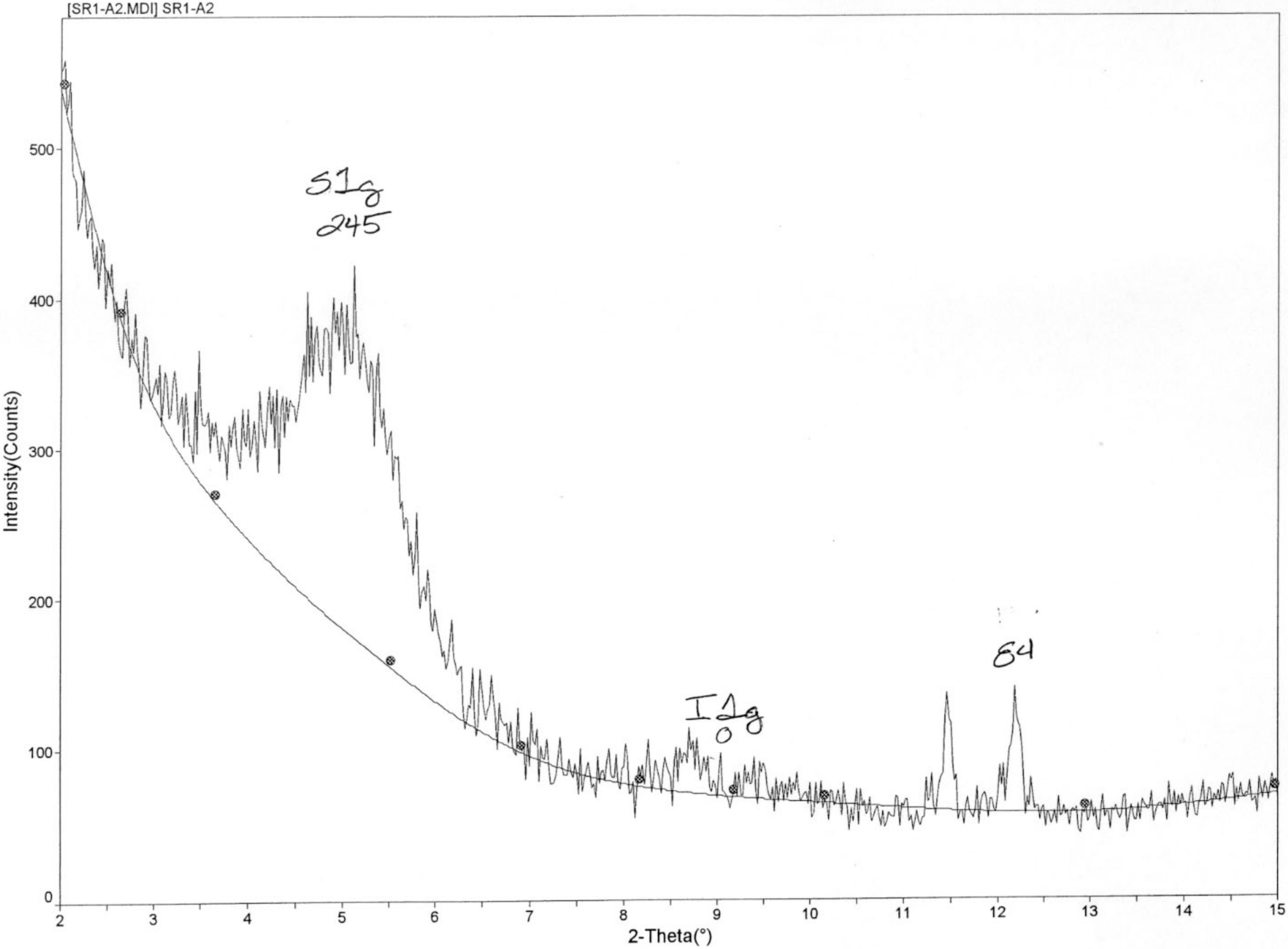
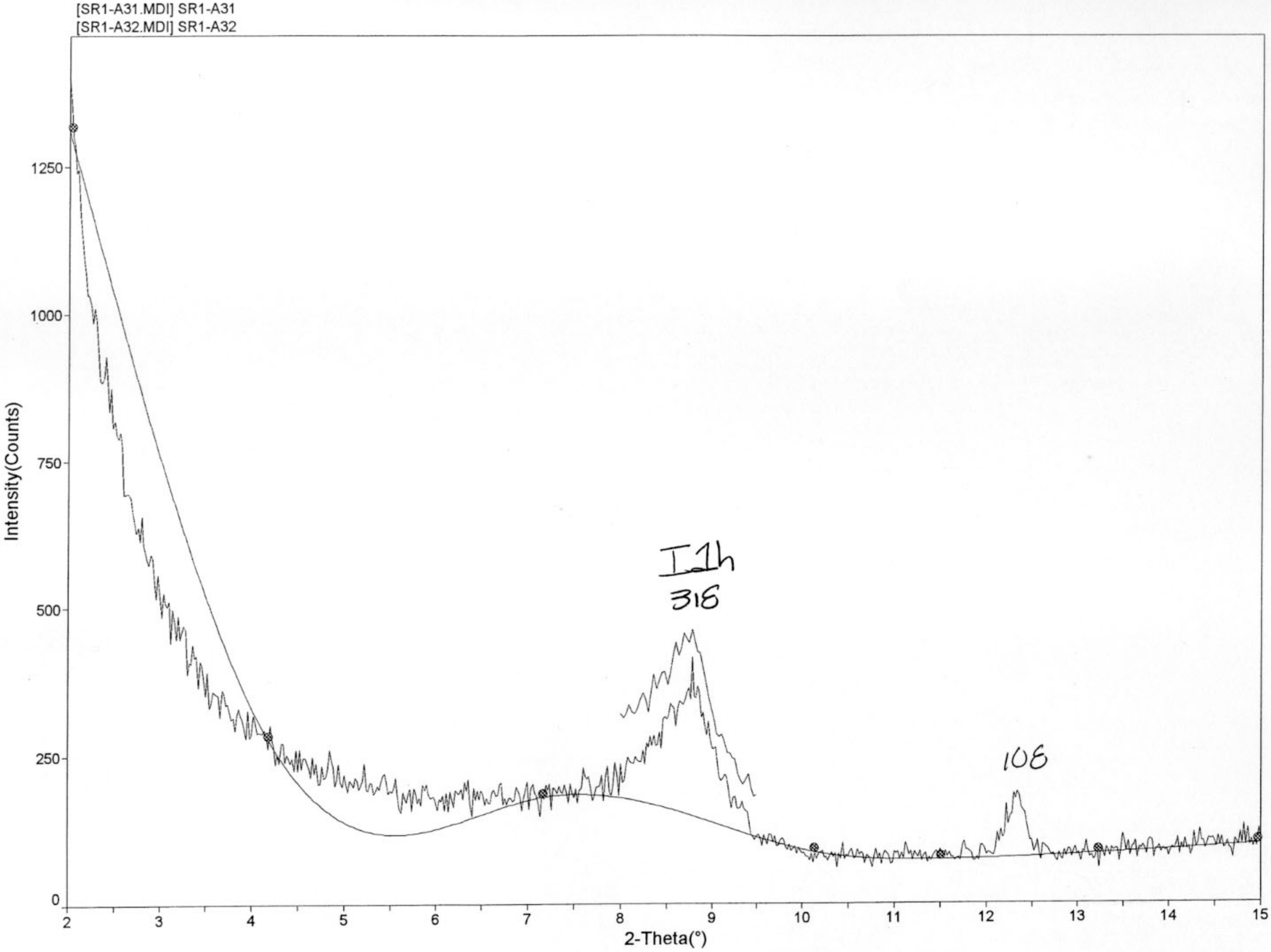
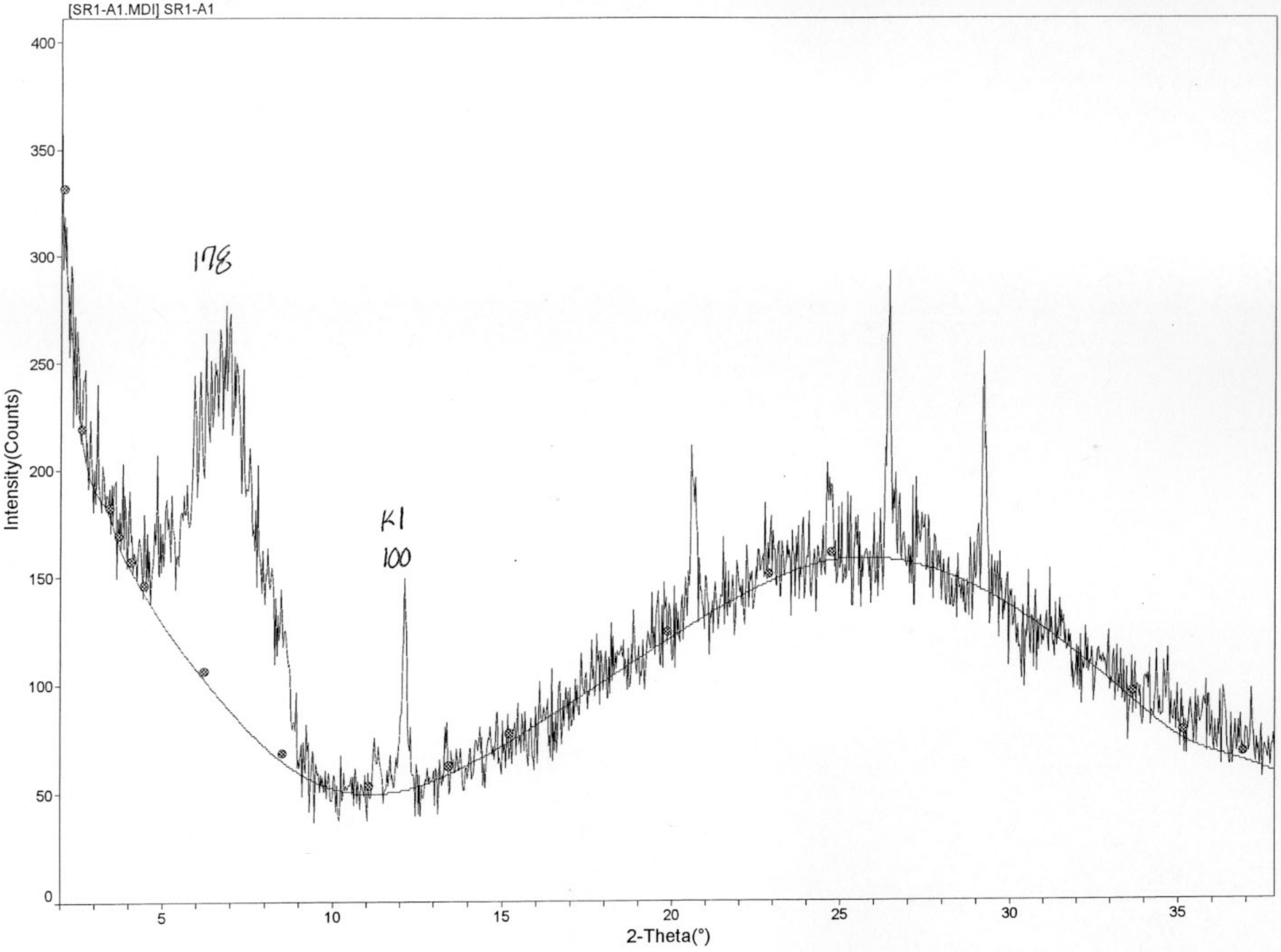
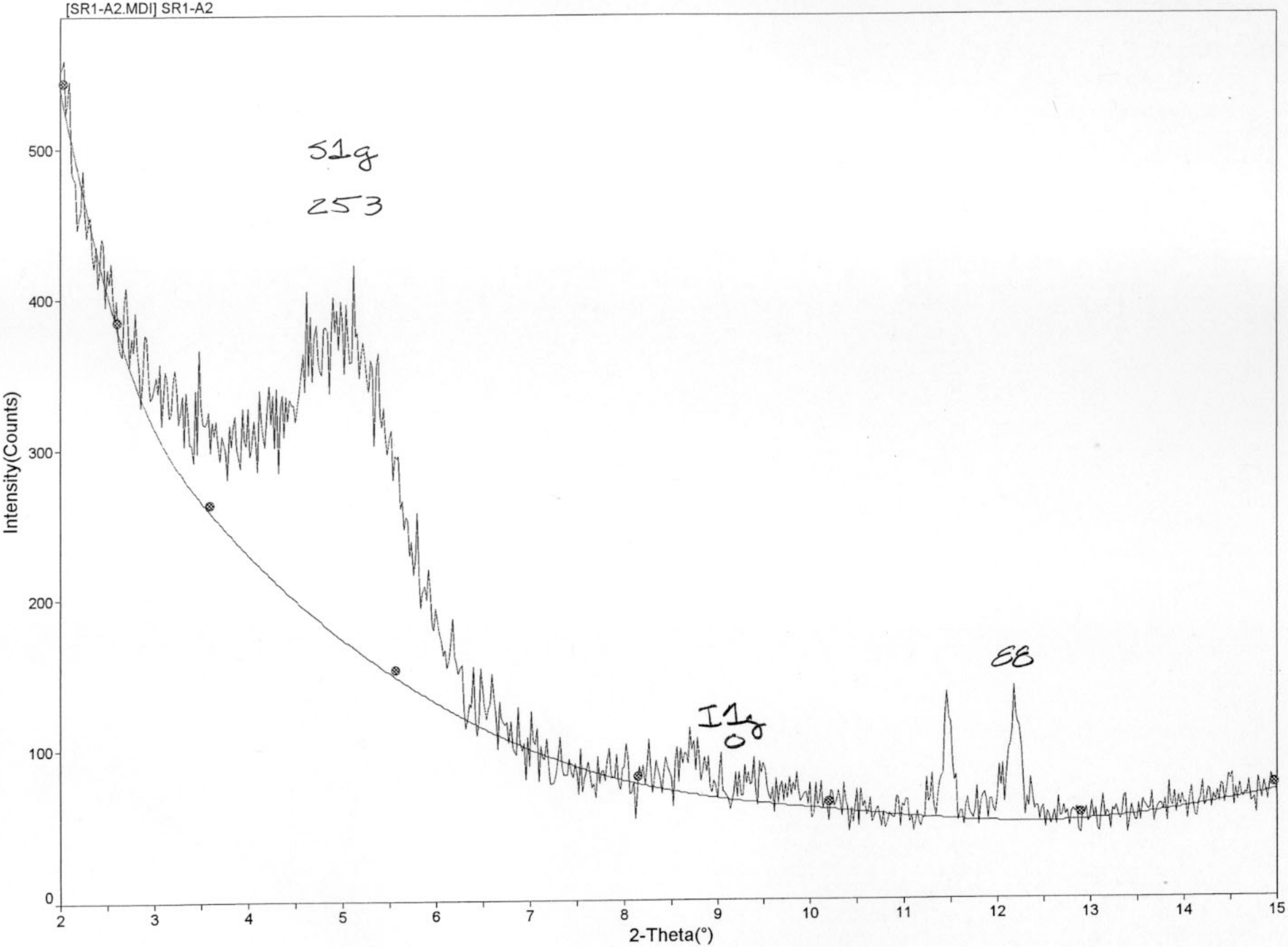
[SR1-A32.MDI] SR1-A32
Intensity(Counts)
0
250
500
750
1000
1250
2-Theta(°)
2
3
4
5
6
7
8
9
10
11
12
13
14
15
I1h
327
129

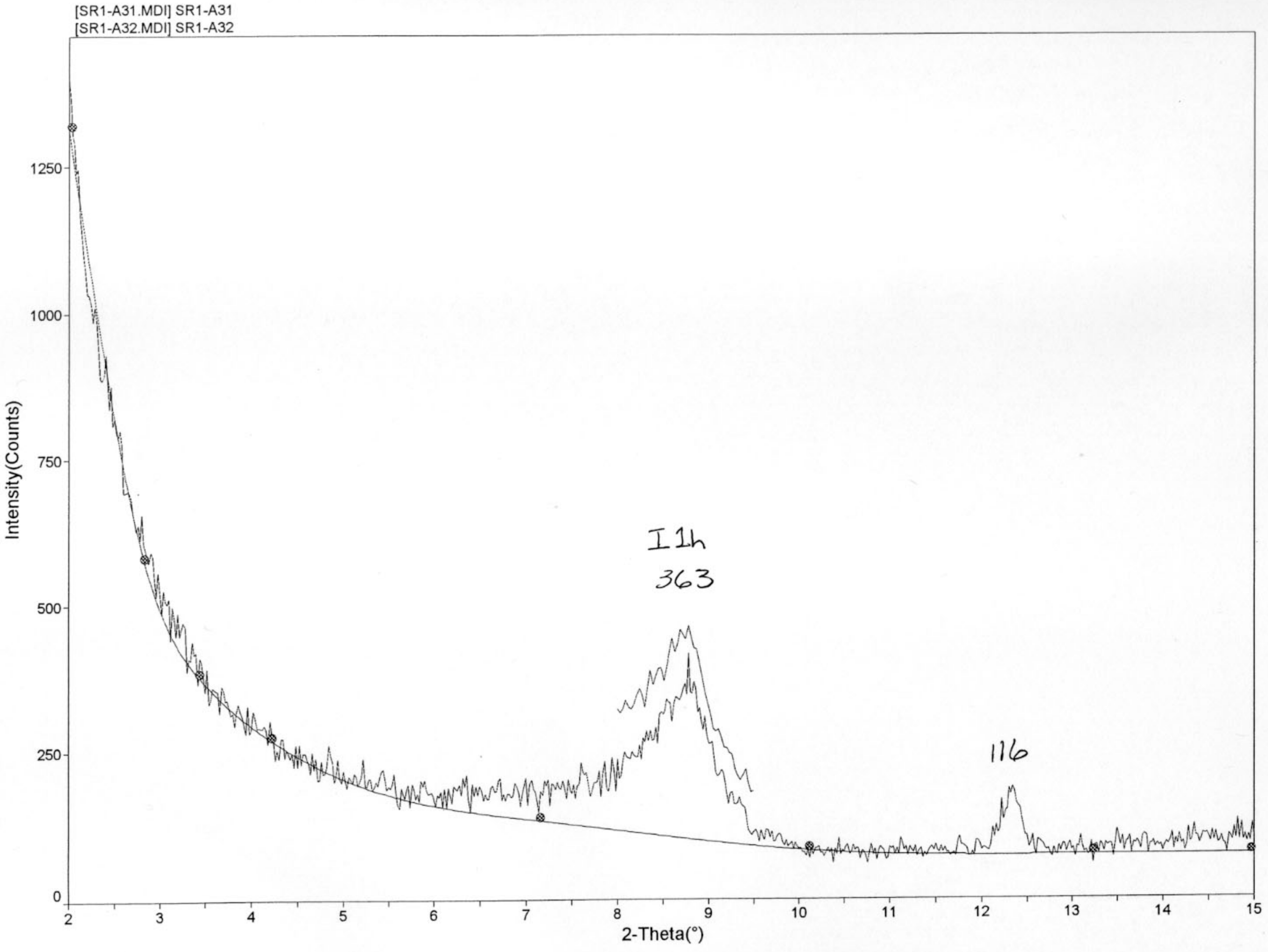

[SR1-A1.MDI] SR1-A1
Intensity(Counts)
0
50
100
150
200
250
300
350
400
2-Theta(°)
5
10
15
20
25
30
35
40
183
K1
100

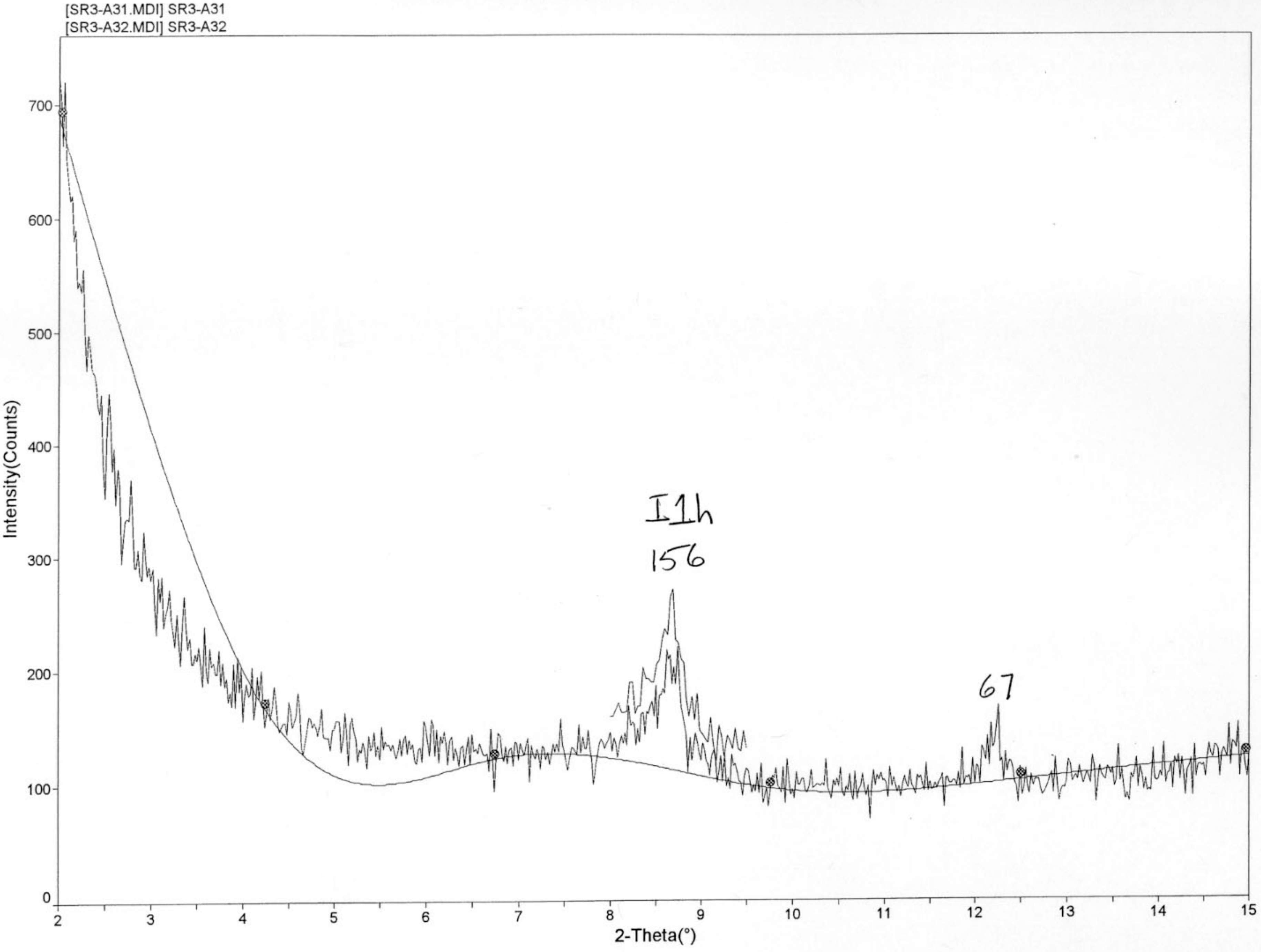

[SR1-A2.MDI] SR1-A2
Intensity(Counts)
0
100
200
300
400
500
2-Theta(°)
2
3
4
5
6
7
8
9
10
11
12
13
14
15
S1g
245
I1g
0
64

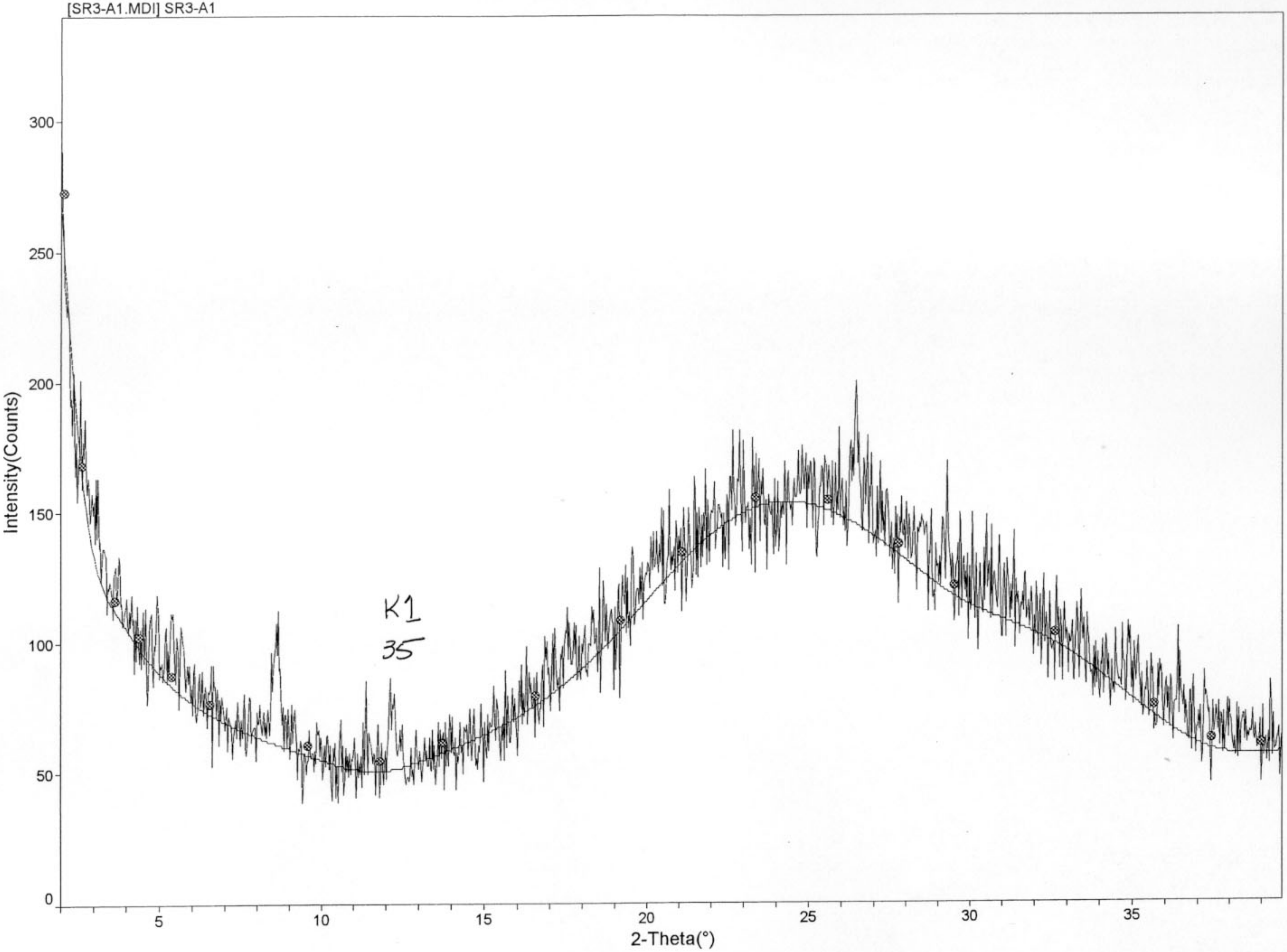
[SR1-A31.MDI] SR1-A31
[SR1-A32.MDI] SR1-A32
Intensity(Counts)
0
250
500
750
1000
1250
2-Theta(°)
2
3
4
5
6
7
8
9
10
11
12
13
14
15
I1h
318
108


[SR1-A1.MDI] SR1-A1
Intensity(Counts)
400
350
300
250
200
150
100
50
0
2-Theta(°)
5
10
15
20
25
30
35
178
K1
100

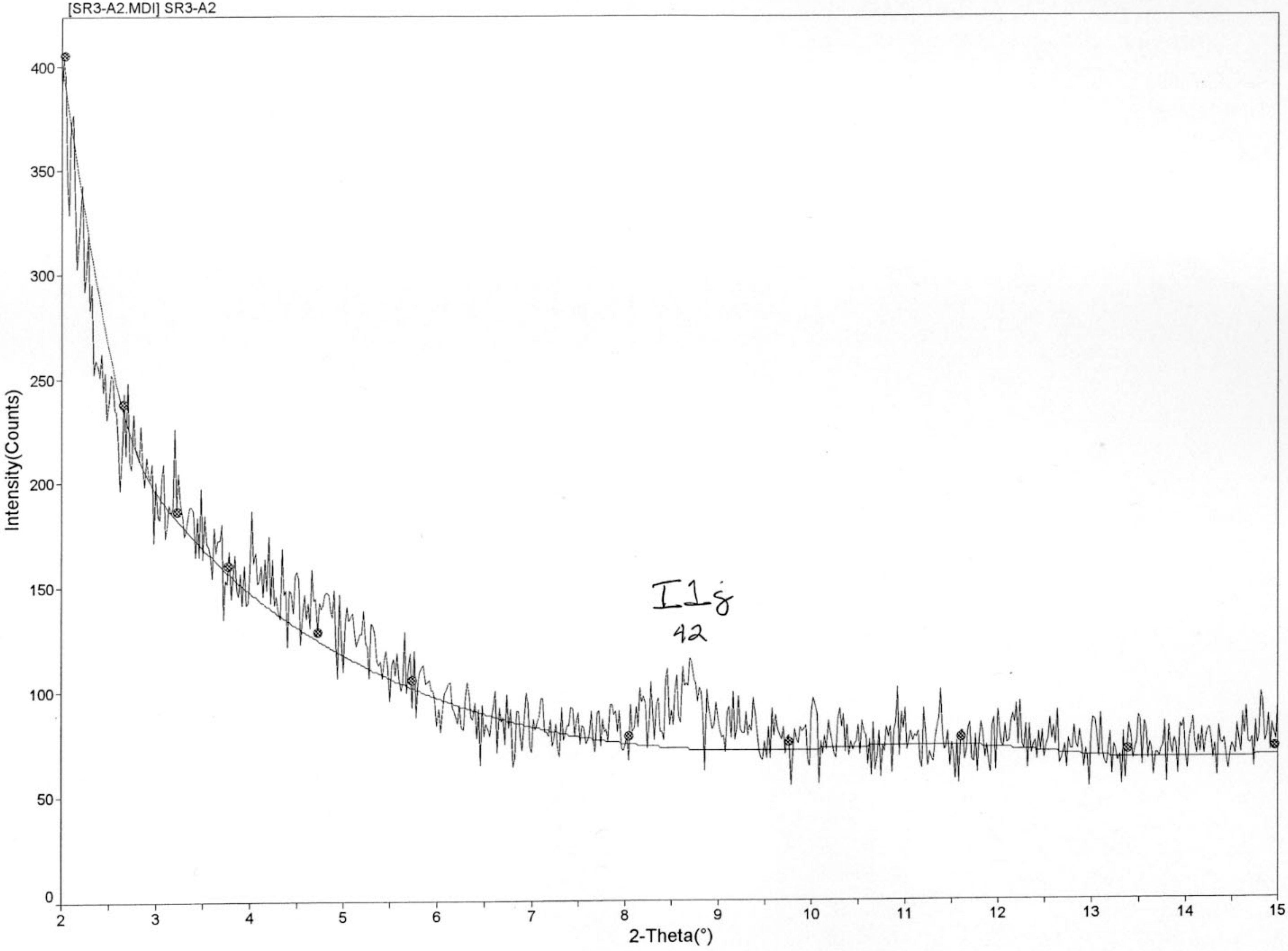

[SR1-A2.MDI] SR1-A2
Intensity(Counts)
0
100
200
300
400
500
2-Theta(°)
2
3
4
5
6
7
8
9
10
11
12
13
14
15
51g
253
I1g
0
E8

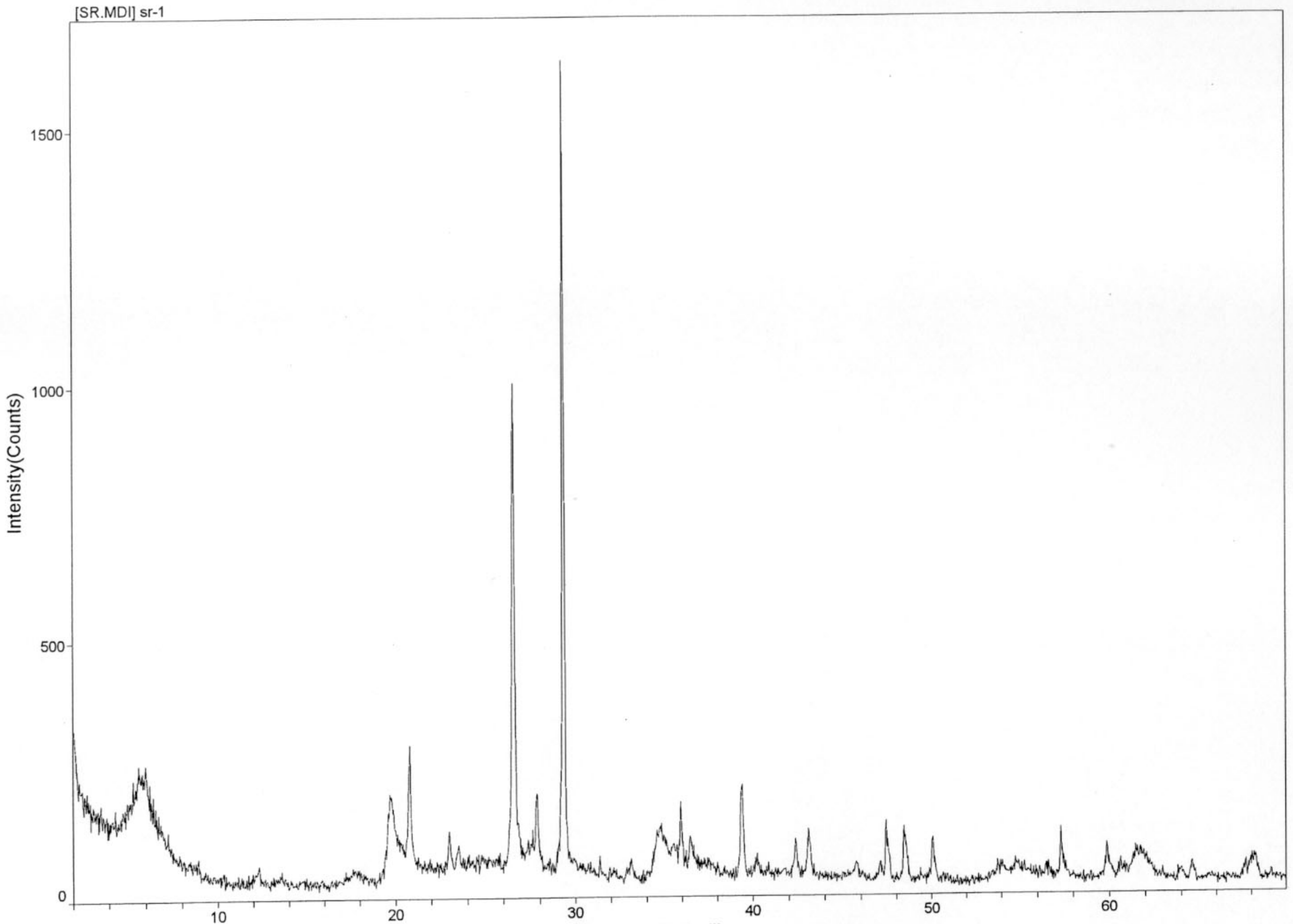

[SR1-A31.MDI] SR1-A31
[SR1-A32.MDI] SR1-A32
Intensity(Counts)
1250
1000
750
500
250
0
2-Theta(°)
2
3
4
5
6
7
8
9
10
11
12
13
14
15
I1h
363
116


[SR3-A31.MDI] SR3-A31
[SR3-A32.MDI] SR3-A32
Intensity(Counts)
0
100
200
300
400
500
600
700
2-Theta(°)
2
3
4
5
6
7
8
9
10
11
12
13
14
15
I1h
156
67


[SR3-A1.MDI] SR3-A1
Intensity(Counts)
0
50
100
150
200
250
300
2-Theta(°)
5
10
15
20
25
30
35

K1
35


[SR3-A2.MDI] SR3-A2
Intensity(Counts)
0
50
100
150
200
250
300
350
400
2
3
4
5
6
7
8
9
10
11
12
13
14
15
2-Theta(°)
I1g
42


[SR.MDI] sr-1
Intensity(Counts)
1500
1000
500
0
10
20
30
40
50
60
2-Theta(°)

[SR.MDI] sr-1 **Peak ID Report**

SCAN: 2.0/69.98/0.03/0.5(sec), Cu, I(max)=1465, 04/11/03 11:42

PEAK: 17-pts/Parabolic Filter, Threshold=1.0, Cutoff=0.5%, BG=2/1.0, Peak-Top=Centroid Fit

NOTE: Intensity = Counts, 2T(0)=0.0(°), Wavelength to Compute d-Spacing = 1.54056Å (Cu/K-alpha1)

#	2-Theta	d(Å)	Height%	Quartz, syn	Calcite, syn					
1	5.649	15.6313	5.1							
2	6.002	14.7133	4.9							
3	12.313	7.1824	1.3							
4	19.704	4.5019	8.2							
5	20.779	4.2712	11.3	-0.010 (22.0%)						
6	23.485	3.7850	1.8							
7	26.551	3.3544	48.3	0.020 (100.0%)						
8	27.837	3.2023	7.0							
9	29.333	3.0423	100.0		0.072 (100.0%)					
10	33.089	2.7050	1.9							
11	34.754	2.5792	3.8							
12	35.916	2.4983	6.1		0.050 (14.0%)					
13	36.460	2.4623	2.5	0.001 (8.0%)						
14	39.354	2.2876	9.4	0.020 (8.0%)	0.046 (18.0%)					
15	40.208	2.2410	1.9	-0.005 (4.0%)						
16	42.357	2.1321	3.6	0.027 (6.0%)						
17	43.091	2.0975	5.0		0.053 (18.0%)					
18	45.757	1.9813	1.9	-0.030 (4.0%)						
19	47.062	1.9293	2.1		0.060 (5.0%)					
20	47.443	1.9147	7.9		0.045 (17.0%)					
21	48.443	1.8775	6.6		0.069 (17.0%)					
22	50.041	1.8212	5.5	0.018 (14.0%)						
23	54.801	1.6738	1.8	-0.013 (4.0%)						
24	56.541	1.6263	1.5		0.012 (4.0%)					
25	57.337	1.6056	6.0	-0.181 (1.0%)	0.063 (8.0%)					
26	59.864	1.5437	4.2	0.003 (9.0%)						
27	60.609	1.5265	2.1		0.068 (5.0%)					
28	61.475	1.5071	2.7		-0.131 (3.0%)					
29	63.971	1.4542	1.0	-0.052 (1.0%)						
30	67.692	1.3830	2.3	-0.024 (6.0%)						

[SR.MDI] sr-1 **Peak ID Report**

SCAN: 2.0/69.98/0.03/0.5(sec), Cu, I(max)=1465, 04/11/03 11:42

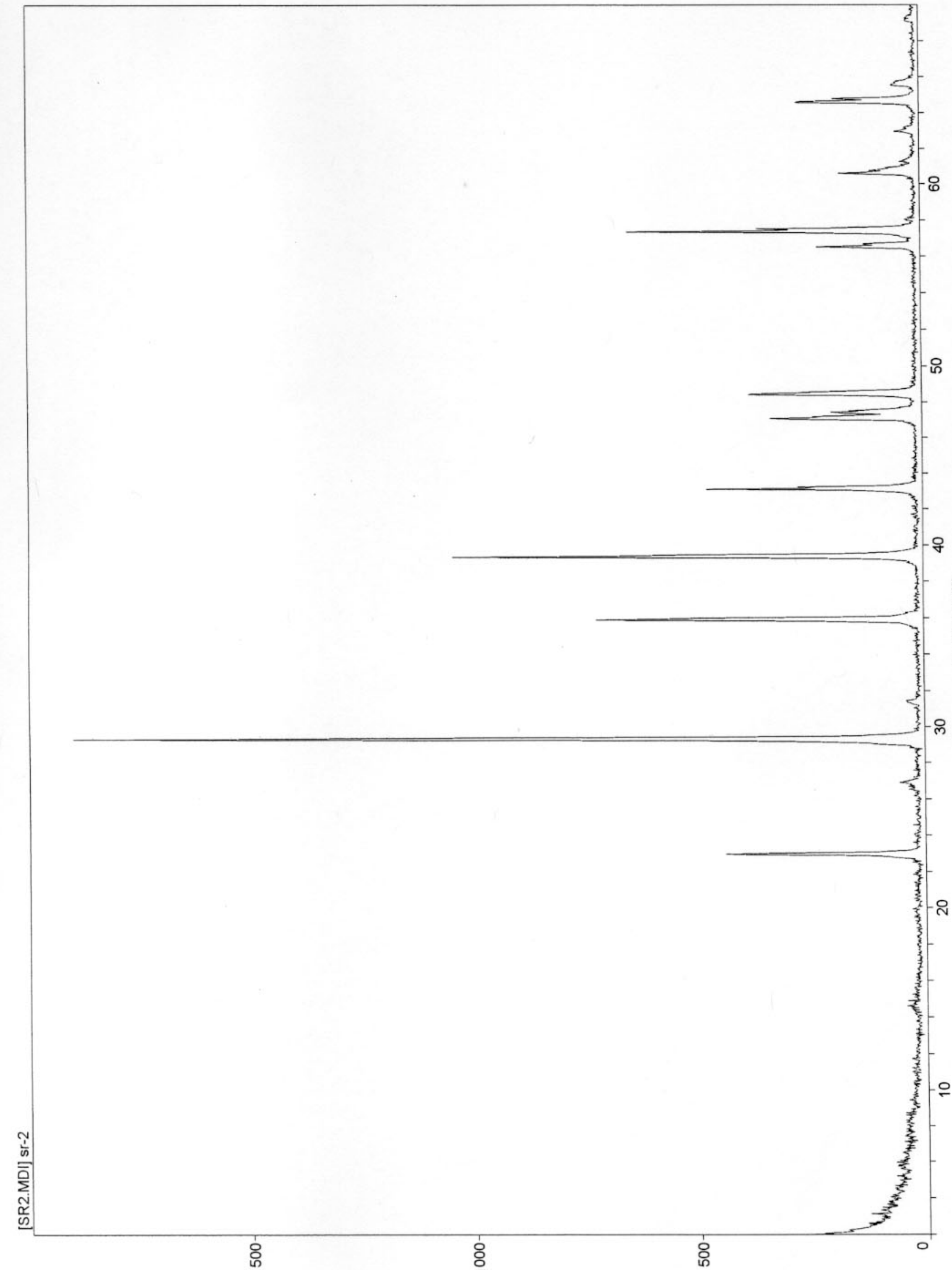
PEAK: 17-pts/Parabolic Filter, Threshold=1.0, Cutoff=0.5%, BG=2/1.0, Peak-Top=Centroid Fit

NOTE: Intensity = Counts, 2T(0)=0.0(°), Wavelength to Compute d-Spacing = 1.54056Å (Cu/K-alpha1)

#	2-Theta	d(Å)	Height%	Quartz, syn	Calcite, syn
31	68.090	1.3759	2.9	-0.042 (7.0%)	
32	69.134	1.3576	1.3		0.095 (1.0%)
?	Unmatched Line			55.247 (2.0%)	23.022 (12.0%)
?	Unmatched Line			68.241 (8.0%)	31.418 (3.0%)
?	Unmatched Line				58.073 (2.0%)
?	Unmatched Line				60.986 (4.0%)
?	Unmatched Line				63.058 (2.0%)
?	Unmatched Line				64.677 (5.0%)
?	Unmatched Line				65.597 (3.0%)

PDF#33-1161 - Quartz, syn <2T(0) = -0.08, d/d(0) = 1.0>

PDF#05-0586 - Calcite, syn <2T(0) = 0.0, d/d(0) = 1.0>


[SR2.MDI] sr-2
Intensity(Counts)
0
500
1000
1500
2-Theta(°)
10
20
30
40
50
60

[SR2.MDI] sr-2										Peak ID Report

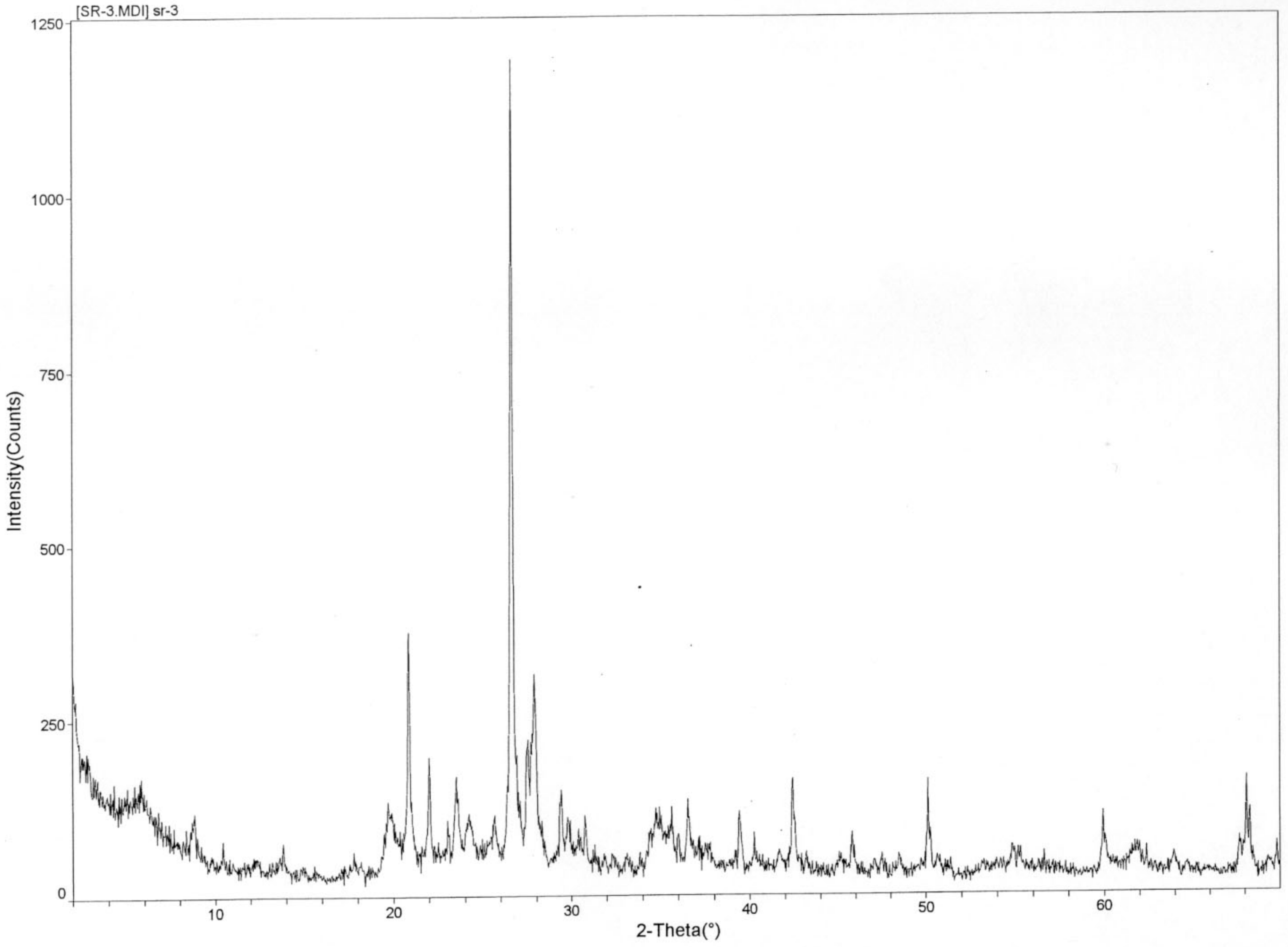
SCAN: 2.0/69.98/0.03/0.5(sec), Cu, I(max)=1557, 04/11/03 12:11

PEAK: 17-pts/Parabolic Filter, Threshold=1.0, Cutoff=0.5%, BG=2/1.0, Peak-Top=Centroid Fit

NOTE: Intensity = Counts, 2T(0)=0.0(°), Wavelength to Compute d-Spacing = 1.54056Å (Cu/K-alpha1)

#	2-Theta	d(Å)	Height%	Calcite, syn						
1	22.951	3.8717	21.5	0.011 (12.0%)						
2	26.869	3.3155	2.1							
3	29.313	3.0443	100.0	0.032 (100.0%)						
4	31.376	2.8487	1.1	-0.018 (3.0%)						
5	35.893	2.4998	39.8	0.012 (14.0%)						
6	39.353	2.2877	61.5	-0.012 (18.0%)						
7	43.098	2.0972	27.1	-0.013 (18.0%)						
8	47.099	1.9279	19.0	-0.037 (5.0%)						
9	47.427	1.9153	10.3	0.001 (17.0%)						
10	48.451	1.8772	22.1	0.001 (17.0%)						
11	56.518	1.6269	13.1	-0.025 (4.0%)						
12	57.354	1.6052	39.6	-0.014 (8.0%)						
13	60.625	1.5262	10.2	-0.009 (5.0%)						
14	60.898	1.5200	3.5							
15	61.304	1.5109	1.9	-0.020 (3.0%)						
16	62.973	1.4748	2.8	0.025 (2.0%)						
17	64.616	1.4412	16.6	0.000 (5.0%)						
18	65.596	1.4220	2.7	-0.058 (3.0%)						
19	69.174	1.3570	1.2	-0.004 (1.0%)						
?	Unmatched Line			58.013 (2.0%)						
?	Unmatched Line			60.926 (4.0%)						

PDF#05-0586 - Calcite, syn <2T(0) = -0.06, d/d(0) = 1.0>



[SR-3.MDI] sr-3
Intensity(Counts)
1250
1000
750
500
250
0
10
20
30
40
50
60
2-Theta(°)

[SR-3.MDI] sr-3 **Peak ID Report**

SCAN: 2.0/69.98/0.03/0.5(sec), Cu, I(max)=873, 04/11/03 12:50

PEAK: 17-pts/Parabolic Filter, Threshold=1.0, Cutoff=0.5%, BG=2/1.0, Peak-Top=Centroid Fit

NOTE: Intensity = Counts, 2T(0)=0.0(°), Wavelength to Compute d-Spacing = 1.54056Å (Cu/K-alpha1)

#	2-Theta	d(Å)	Height%	Quartz, syn	Muscovite-1M, ..					
1	8.799	10.0416	4.6		0.009 (100.0%)					
2	13.827	6.3991	3.1							
3	19.682	4.5067	7.6		0.134 (90.0%)					
4	20.840	4.2589	26.8	-0.011 (22.0%)						
5	21.993	4.0383	10.6							
6	23.520	3.7794	7.7							
7	24.207	3.6737	3.9		0.152 (60.0%)					
8	26.617	3.3462	100.0	0.014 (100.0%)	-0.051 (100.0%)					
9	27.505	3.2401	11.4							
10	27.856	3.2002	22.0							
11	29.350	3.0406	8.2		-0.227 (50.0%)					
12	29.780	2.9976	5.8							
13	30.742	2.9060	6.7		-0.188 (6.0%)					
14	34.432	2.6025	4.6							
15	34.907	2.5682	7.3		0.104 (90.0%)					
16	35.609	2.5191	6.6							
17	35.979	2.4941	4.4							
18	36.507	2.4592	7.7	0.014 (8.0%)	0.202 (12.0%)					
19	37.131	2.4193	3.7		0.289 (4.0%)					
20	39.421	2.2839	8.1	0.014 (8.0%)						
21	42.424	2.1289	12.7	0.020 (6.0%)						
22	45.783	1.9802	5.7	0.005 (4.0%)						
23	50.104	1.8191	13.8	0.016 (14.0%)						
24	50.656	1.8006	2.2	-0.066 (1.0%)						
25	54.827	1.6730	3.3	0.021 (4.0%)						
26	55.208	1.6624	3.1	0.099 (2.0%)	-0.141 (18.0%)					
27	59.928	1.5422	8.9	-0.001 (9.0%)						
28	61.819	1.4995	3.0		0.084 (35.0%)					
29	63.912	1.4554	3.0	0.067 (1.0%)						
30	67.687	1.3831	5.2	0.041 (6.0%)						

[SR-3,MDI] sr-3 **Peak ID Report**

SCAN: 2.0/69.98/0.03/0.5(sec), Cu, I(max)=873, 04/11/03 12:50

PEAK: 17-pts/Parabolic Filter, Threshold=1.0, Cutoff=0.5%, BG=2/1.0, Peak-Top=Centroid Fit

NOTE: Intensity = Counts, 2T(0)=0.0(°), Wavelength to Compute d-Spacing = 1.54056Å (Cu/K-alpha1)

#	2-Theta	d(Å)	Height%	Quartz, syn	Muscovite-1M, ..					
31	68.113	1.3755	14.2	-0.004 (7.0%)						
?	Unmatched Line			40.263 (4.0%)	17.642 (35.0%)					
?	Unmatched Line			68.301 (8.0%)	20.459 (25.0%)					
?	Unmatched Line				21.664 (16.0%)					
?	Unmatched Line				33.352 (16.0%)					
?	Unmatched Line				34.774 (50.0%)					
?	Unmatched Line				35.224 (20.0%)					
?	Unmatched Line				37.827 (12.0%)					
?	Unmatched Line				40.174 (8.0%)					
?	Unmatched Line				40.684 (8.0%)					
?	Unmatched Line				41.226 (4.0%)					
?	Unmatched Line				41.926 (20.0%)					
?	Unmatched Line				42.904 (6.0%)					
?	Unmatched Line				45.056 (30.0%)					
?	Unmatched Line				46.418 (8.0%)					
?	Unmatched Line				47.894 (4.0%)					
?	Unmatched Line				55.609 (12.0%)					
?	Unmatched Line				56.274 (12.0%)					
?	Unmatched Line				61.224 (4.0%)					

PDF#33-1161 - Quartz, syn <2T(0) = -0.02, d/d(0) = 1.0>

PDF#07-0025 - Muscovite-1M, syn <2T(0) = 0.06, d/d(0) = 1.0>