Knight Piésold

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

2009 BASELINE HYDROGEOLOGY STUDY

PREPARED FOR

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EXECUTIVE SUMMARY

The Schaft Creek project is a large porphyry copper-gold-molybdenum-silver deposit located within the Stikine-Iskut region of northwestern British Columbia, approximately 60 km southwest of Telegraph Creek and 1,050 km north of Vancouver. The area is characterized by steep sided mountains and broad U-shaped valleys trending north-south. The study area is bounded to the east by the northerly flowing Mess Creek and to the west by Schaft and Hickman Creeks, which also flow to the north and merge with Mess Creek downstream of the study site.

The deposit is located in the southern portion of the study area, on the southwest slopes of Mount LaCasse, and the proposed waste dumps are located along the south and eastern slopes and into the floodplain of Schaft Creek. The proposed plant site is located within a saddle to the east of the deposit, and the proposed tailings storage facility is located in the Skeeter Creek Valley.

Knight Piésold Ltd. (KP) was requested to complete a baseline hydrogeology and groundwater quality study for the project. The work consisted of reviewing information from previous studies and incorporating physical hydrogeological and groundwater quality testing completed by KP and Rescan Environmental Services (Rescan) in 2008 and 2009 to produce an updated study of the baseline hydrogeologic and groundwater quality conditions.

Groundwater Hydrology

Information regarding the groundwater hydrology of the study area was obtained from a number of sources including:

- Geotechnical and geological information, including rock and overburden logs, from the 2007 and 2008 geotechnical site investigation programs.
- A cross hole seismic tomography study completed by Associated Geosciences to further investigate karst susceptible terrain within Skeeter Creek Valley.
- Groundwater levels obtained from vibrating wire piezometers installed in the deposit area, water level measurements taken following drilling of geotechnical drill holes, and water level measurements taken prior to well development and subsequent groundwater sampling.
- Hydrogeologic testing, including falling and rising head tests and packer tests.

Information from the geotechnical site investigation programs allowed for characterization of the bedrock and surficial geology that provides a context for the hydrogeology of the site. The surficial geology of the site is of particular importance, as remnants of the Quaternary glaciation appear to dominate the hydrogeologic regime. The major aquifers on site are located in a number of alluvial deposits, including the alluvial deposits within Schaft Creek, a former channel east of Schaft Creek, and within Skeeter Creek Valley. These aquifers are also the primary areas of groundwater discharge, with recharge occurring from the upslope areas. Information from previous hydrogeologic and geotechnical site investigations

facilitated the identification of groundwater divides and the general direction of groundwater flow in the study area.

The bedrock geology of the site is characterized by sedimentary and volcanic rocks that have been intruded by granitic plutons. The geology in the deposit area includes volcanics (tuffs, flow breccias and andesite) and intrusives (granodiorite). The geology of the Skeeter Creek Valley includes dolomitic limestone, undifferentiated carbonate, and basalt and breccias flows. Carbonate (limestone) bedrock can often include solution features, and in some cases, karstic features. Efforts have been made to either confirm or disprove the presence of potential karst formations. Site investigations included surface and cross hole seismic tomography, and targeted geotechnical drilling. No evidence of voids or karstic features was detected during the course of the investigations; however, monitoring of this area should continue so that any voids or elevated bedrock permeability resulting from solution features are identified. Granodiorite and gabbro intrusives have been mapped at the north end of Skeeter Creek Valley.

Groundwater measurements from a multi-level vibrating wire piezometer system installed in an east-west trending fault/shear zone in the deposit area indicate a shallow water table with strong downward gradients. The strong downward gradients are likely related to a nearby shear zone.

Groundwater level measurements taken throughout the deposit area indicated that the groundwater levels vary from artesian conditions to approximately 5 m below ground surface. However, most of these measurements were taken soon after drilling was completed and are not considered an accurate representation of the groundwater level.

Groundwater Quality

Sixteen groundwater quality monitoring wells were installed at eight locations throughout the project site. Two monitoring wells were installed at each location: a shallow well and a deep well. Each of the groundwater quality monitoring wells were sampled by Rescan in the fall of 2008. KP continued the groundwater quality monitoring program in the fall of 2009.

The groundwater samples from the project area are generally slightly alkaline to alkaline; a number of wells located in the deposit area and Schaft Creek had pH exceedances in the range of 11 and above. The wells with pH exceedances also indicated ammonia exceedances. Increased ammonia concentrations could be a result of the elevated pH, as the solubility of ammonia in water increases with alkalinity. The elevated pH is probably the result of cement contamination during installation. The groundwater throughout the site has a high buffering capacity with alkalinity values greater than 20 mg/L.

Sulphate and fluoride exceedances were noted in a number of wells, as were dissolved and total metal exceedances. Dissolved metal exceedances were noted for aluminium, arsenic, beryllium, cadmium, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc, with the most common met exceedances being aluminium, and copper. Total metal exceedances were noted for aluminium, arsenic, cadmium, cobalt, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc, with the most common exceedances being aluminium, copper, iron, silver, and vanadium.

The groundwater facies in the deposit, Schaft Creek and saddle areas are calcium-magnesium to calcium-sodium and bicarbonate to bicarbonate-sulphate. The groundwater facies for Skeeter Creek Valley vary from sodium-calcium near the north TSF embankment, bicarbonate-sulphate to sulphate-bicarbonate near the northwest TSF embankment and magnesium-calcium and bicarbonate-sulphate near the south TSF embankment.

Conclusions and Recommendations

This baseline study provides a description of the groundwater regime within the study area that addresses: the location of aquifers and aquitards; the rate and direction of groundwater flow; the expected interaction with surface water; and the water quality characteristics of groundwater. The information presented in this report is adequate to support a feasibility level design of the project, although further study is required to complete the hydrogeologic characterization of the site to a level necessary for final design.

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SECTION 1.0 - INTRODUCTION

1.1 STUDY AREA

The Schaft Creek project is a large porphyry copper-gold-molybdenum-silver deposit located in the Stikine-Iskut region of northwestern British Columbia, approximately 60 km southwest of Telegraph Creek and 1,050 km north of Vancouver, as shown on Figure 1.1. The study area and a general arrangement of the proposed mine development are shown on Figure 1.2. The study area includes:

- The deposit area (open pit)
- Areas surrounding the deposit area that may be developed for the plant site (saddle area) and waste dumps (deposit area and Schaft Creek)
- The proposed tailings storage facility (TSF) area (Skeeter Creek Valley)
- The corridor between the deposit area and the proposed TSF
- Areas immediately upslope of the areas defined above that may influence the groundwater conditions in these areas, and
- Areas immediately down gradient of the areas defined above where groundwater may be impacted by mining operations.

This study is focused on the areas near the deposit, waste dumps, and the proposed TSF.

1.2 PROJECT BACKGROUND

The deposit was initially indentified in the late 1950's and was staked by the BIK Syndicate in 1957. The deposit changed hands numerous times during the 1960's and 70's with Teck Corporation (now Teck Cominco and referred to herein as Teck) acquiring the property around 1979. Teck continued exploratory drilling and completed a Prefeasibility Study in the early 1980's. Mr. G. Salazar optioned an interest in the Project in 2002 and incorporated the property into Copper Fox Metals Incorporated (Copper Fox) in 2005. Copper Fox has since undertaken exploratory drilling programs in 2005, 2006, 2007 and 2008 and have commissioned numerous investigations and reports to support mine permitting and development.

A preliminary economic assessment of the project prepared by Samuel Engineering Incorporated (December, 2007) reported a measured and indicated resource of 1.4 billion tons of ore at 0.25% copper, 0.18% gold, 0.019% molybdenum and 1.55% silver.

1.3 SCOPE OF WORK

Knight Piésold Ltd. (KP) was requested to complete a baseline hydrogeology and groundwater quality study for the Schaft Creek project. This baseline study provides a description of the groundwater regime

within the study area that addresses: the location of aquifers and aquitards; the rate and direction of groundwater flow; the expected interaction with surface water; and the water quality characteristics of groundwater. The intent of this study is to characterize the existing groundwater regime and to provide a basis for defining impacts, mitigation measures, monitoring, and contingency planning as mine planning proceeds. The work consisted of reviewing information from previous studies and incorporating physical hydrogeological and groundwater quality testing completed by KP and Rescan Environmental Services (Rescan) in 2008 and 2009 to produce a baseline hydrogeologic and groundwater quality report.

Physical hydrogeologic information was obtained from studies and work completed by other consultants in 2006, 2007 and 2008 (Fisher and Hanych, March 2006; Ruthrie, July 2006; Ewanchuk, Fisher and Hanych, March 2007; DST, January 2008; DST, March 2008; RTEC, 2008; Rescan, 2009) and incorporated with information obtained during the 2008 geotechnical site investigation program (KP, January 2010). The physical hydrogeologic information considered in this report includes rock and overburden logs, groundwater level measurements, falling and rising head tests, and packer tests.

Groundwater quality information was obtained from studies and work completed by Rescan Tahltan Environmental Consultants (RTEC, 2008) and Rescan (2009), and incorporated with groundwater quality sampling data collected in the fall of 2009.

SECTION 2.0 - SITE CONDITIONS

2.1 PHYSIOGRAPHY

The Schaft Creek deposit is located within the Stikine-Iskut region of northwestern British Columbia, near the eastern edge of the Boundary Range of the Coast Mountains (BC Environment, 1992). The area is characterized by steep sided mountains and broad U-shaped valleys trending north-south. Ground elevations in the area typically range from around 700 to 900 m in the valley floors rising steeply to mountain peaks in excess of 2,500 m.

The topography of the region was predominantly influenced by events that occurred during the mid and late Tertiary and the Pleistocene. Weathering and erosion during the mid-Tertiary created an undulating surface across all rock types. Subsequent uplift combined with faulting and continued erosion during the late Tertiary created a gradient from the mountainous topography in the southwest (the area of greatest uplift and highest stream gradients) to dissected plateaus in the northeast. The entire region was then glaciated during the Pleistocene, the most extensive icefields and valley glaciers occurring within the more mountainous southwest region. Active glaciers can still be found in the region (Ryder, 1984).

The deposit is located in the southern portion of the study site, on the southwest slopes of Mount LaCasse, that rises to an elevation of more than 2,000 m. The proposed waste dumps are located along the south and eastern slopes and into the floodplain of Schaft Creek. The proposed plant site is located within a saddle to the east of the deposit, and the proposed tailings storage facility is located in the Skeeter Creek Valley.

2.2 CLIMATE AND HYDROMETEROLOGY

The Schaft Creek project site is located near the eastern edge of the Boundary Range of the Coast Mountains, just west of the Tahltan Highlands of the Stikine Plateau. The climate of the area is characterized by the transition zone between the marine climate of the Boundary Range and the continental climate of the Tahltan Highlands (BC Environment, 1992). Glaciers dominate the upper reaches of most of the local streams.

There are no long term site specific climate data for the project area; however, climate data have been collected in the immediate study area over two intervals: by BC Hydro from 1969 to 1974 and by Copper Fox from 2005 to present.

Rescan Tahltan Environmental Consultants (RTEC) indicated that 1,039 mm per year is a conservative estimate of mean annual precipitation at the study site using information from the four on-site stations and several meteorological stations within 130 km of the project area. RTEC has also reported that the monthly average air temperatures in 2006 ranged from -14.4°C in November to 12.5°C in July (2007).

Both temperature and precipitation are expected to vary with location and elevation in the study area, with colder temperatures and higher precipitation expected at higher elevations. Precipitation may also increase to the west, where the maritime influence will be stronger.

2.3 DRAINAGE

The study area is bounded to the east by the northerly flowing Mess Creek and to the west by Schaft and Hickman Creeks, which also flow to the north and merge with Mess Creek downstream of the study area.

The deposit is located in a saddle between the Schaft Creek and Mess Creek drainages. The proposed TSF is located within Skeeter Creek Valley, a hanging valley resulting from downcutting of Mess Creek.

2.4 GEOLOGY

2.4.1 Bedrock

The bedrock geology is characterized as sedimentary and volcanic rocks that have been intruded by granitic plutons. The geology in the deposit area includes volcanics (tuffs, flow breccias, and andesite), and intrusives (granodiorite). The geology of Skeeter Creek Valley includes dolomitic limestone, undifferentiated carbonate, and basalt and breccias flows. Granodiorite and gabbro intrusives have been mapped at the north end of Skeeter Creek Valley.

Regional structures generally trend north/south including inferred faults underlying Mess Creek Valley and Skeeter Creek Valley. Similar structures could be inferred underlying Schaft Creek Valley. Minor faults and shear zones have been mapped throughout the study area.

The geology of the project site is presented on Figure 2.1. The geology map used to create this figure, Geology of the Forrest Kerr-Mess Creek Area (Logan, Drobe, Koyanagi and Elsby, 1997), can be found in Appendix A.

2.4.2 Overburden

The surficial geologic features of the study area are dominated by late glacial and alluvial deposits infilling valley floors bordered by steep active slopes. The glacial history of the region provides a setting that allows for thick sand and gravel deposits as well as glacial lacustrine and moraine deposits. Glacial contact features such as lateral and terminal moraines and abandoned outwash channels may also be present. Active glaciers and steep alluvial fans continue to provide coarse alluvium to the stream channels.

SECTION 3.0 - SITE INVESTIGATIONS AND MONITORING

3.1 SITE INVESTIGATIONS

Geotechnical, geological and hydrogeological information was collected during the 2007 and 2008 geotechnical site investigations (DST, January 2008; DST, March 2008; KP, January 2010) and the 2007 (Rescan, March 2008), 2008 (Rescan, December 2009), and 2009 groundwater sampling programs. The geotechnical and geologic information collected, including rock and overburden logs, allowed for characterization of the bedrock and surficial geology that provides a context for the hydrogeology of the site. The hydrogeologic information collected includes groundwater level measurements, response tests, and water quality data. Water quality data from the 2007 groundwater sampling program was not considered in this summary, as the samples were collected directly from open drill holes, not from groundwater monitoring wells. The geotechnical site investigations and groundwater sampling programs are summarized below.

2007 - Geotechnical site investigation of the TSF area (DST, January 2008)

- 7 vertical drill holes were completed in the current TSF area
  - 3 drill holes near the proposed south TSF embankment alignment
  - 3 drill holes near the proposed north TSF embankment alignment, and
  - 1 drill hole near the proposed northwest TSF embankment alignment.
- The overburden was logged
- Standard penetration tests (SPTs) were completed
- Rock core information was collected including lithology, total core recovery (TCR), solid core recovery (SCR), rock quality designation (RQD), fractures per meter, and rock mass rating (RMR)
- Select core samples were sent off-site for point load testing
- Groundwater levels were measured in all drill holes
- The following response tests were completed:
  - 16 falling head tests (FHTs) and 9 rising head tests (RHTs) along the proposed south TSF alignment
  - 2 FHTs and 27 RHTs along the proposed north TSF alignment, and
  - 6 RHTs along the proposed northwest TSF alignment.

2007 - Geotechnical site investigation of the deposit area (DST, March 2008)

- 8 drill holes, 7 oriented and one vertical, were completed
- The overburden was briefly described
- Rock core information was collected including lithology, TCR, SCR, RQD, fractures per meter, and RMR
- Groundwater levels were measured in 6 drill holes, and
- A multi-level vibrating wire piezometer system with 5 piezometers was installed in one drill hole.

2007 – Groundwater quality – piezometer installation and sampling (Rescan, March 2008)

- Two piezometers were installed in a drill hole in the deposit area (Copper Fox Drill Hole ID 07CF304)
- 4 drill holes were sampled for water quality.
  - 1 drill hole near the proposed south TSF embankment alignment
  - 1 drill hole near the proposed north TSF embankment alignment

  - 1 drill hole near the proposed northwest TSF embankment alignment, and
  - 1 drill hole approximately 5 km south of the deposit area.
- Water samples were collected directly from the drill holes; no piezometers were installed.

2008 - Geotechnical site investigation of the deposit, waste dump, plant site, and TSF areas (KP, January 2010)

- 46 drill holes, 13 oriented and 33 vertical, were completed
  - 10 oriented and 4 vertical drill holes in the deposit area
  - 1 oriented and 9 vertical drill holes in the waste dump area
  - 4 vertical drill holes in the plant site area
  - 2 oriented and 7 vertical drill holes near the proposed south TSF embankment alignment
  - 5 vertical drill holes near the proposed north TSF embankment alignment, and
  - 4 vertical drill holes near the proposed northwest TSF embankment alignment.
- The overburden was logged
- SPTs were performed
- Overburden samples in the drill holes were collected using Shelby tubes (STs)
- Rock core information was collected including lithology, recovery, RQD and RMR
- 104 test pits (TPs) and 15 Dutch auger holes were completed
- Select soil and rock samples were sent off-site for additional testing
  - 140 soil samples from SPTs, STs and TPs were tested for natural moisture content (140 samples), particle size distribution (140 samples), specific gravity (2 samples), and Atterberg limits (107 samples)
  - 45 rock samples were tested for unconfined compressive strength with unconfined compressive strength testing (21 samples) and point load testing (24 samples), and
  - 6 rock samples were tested for shear strength with direct shear testing.
- Groundwater levels were measured in 41 drill holes
- The following response tests were completed:
  - 74 packer tests
    - 52 packer tests in the deposit area
    - 14 packer tests in the waste dump area
    - 2 packer tests along the proposed south TSF embankment alignment
    - 3 packer tests along the proposed north TSF embankment alignment, and
    - 3 packer tests along the proposed northwest TSF embankment alignment.
  - 42 FHT and 69 RHT in drill rods
    - 17 FHT and 28 RHT in drill rods in the deposit area
    - 1 FHT and 7 RHT in drill rods in the waste dump area
    - 7 FHT and 2 RHT in drill rods in the plant site area
    - 9 FHT and 16 RHT in drill rods near the proposed south TSF embankment alignment
    - 3 FHT and 6 RHT in drill rods near the proposed north TSF embankment alignment, and
    - 5 FHT and 10 RHT in drill rods near the proposed northwest TSF embankment alignment.
  - 27 FHT and 16 RHT in piezometers
    - 6 FHT and 2 RHT in piezometers in the deposit area
    - 7 FHT and 6 RHT in piezometers in the waste dump area
    - 2 FHT and 1 RHT in piezometers in the plant site area
    - 8 FHT in piezometers near the proposed south TSF embankment alignment

- 1 FHT and 4 RHT in piezometers near the proposed north TSF embankment alignment, and
- 3 FHT and 3 RHT in drill holes near the proposed northwest TSF embankment alignment.

2008 – Groundwater quality - well development and sampling (Rescan, December 2009)

- 16 wells in 8 locations were identified as groundwater quality wells
- 12 wells were developed in 6 locations
  - 2 wells in the deposit area
  - 6 wells in the waste dump area
  - 2 wells near the proposed north TSF embankment alignment, and
  - 2 wells near the proposed northwest TSF embankment alignment.
- Groundwater levels were measured in 16 wells
- RHTs were completed in the 12 developed wells, and
- All 16 wells were sampled for water quality.

2009 – Groundwater quality sampling (KP, October/November 2009)

- Groundwater levels were measured in 14 wells, and
- 14 wells were sampled for water quality.

3.2 HYDROGEOLOGIC INFORMATION

A summary of the hydrogeologic information, including piezometric head, hydrogeologic equipment installed, completion zones, and hydrogeologic tests performed, is presented in Table 3.1. The 2007 and 2008 geotechnical site investigation drill hole location plan, including the measured values of piezometric head, can be seen on Figure 3.1.

3.2.1 Groundwater Levels

Groundwater level measurements were obtained from three sources: vibrating wire piezometers installed in the open pit area (DST, January 2008); water level measurements taken following drilling of geotechnical drill holes (DST, January 2008; DST, March 2008; KP, January 2010); and water level measurements taken prior to well development (Rescan, December 2008) and during subsequent groundwater sampling.

Vibrating Wire Piezometers

A multi-level vibrating wire piezometer system was installed in drill hole PO-05-07 during the 2007 site investigation program (DST, January 2008). Five vibrating wire piezometers were installed at approximately 20 m intervals within the drill hole; this corresponds to vertical intervals of approximately 17.5 m as the drill hole is inclined 62°. Each vibrating wire piezometer was installed within a sand pack and isolated from the other piezometers by bentonite seals. The vibrating wire piezometers were installed at the following vertical depths:

- VW Piezometer 1 – 16.1 m
- VW Piezometer 2 – 32.7 m
- VW Piezometer 3 – 52.3 m
- VW Piezometer 4 – 69.8 m, and
- VW Piezometer 5 – 87.4 m.

The vibrating wire piezometers were connected to a solar powered data logger programmed to take frequency (pressure) and temperature readings every hour. The most recent download from the data logger provided readings from October 15, 2007, the installation date, to September 25, 2008. It appears that the data logger was not in operation for several hours during July 13 and 14, 2008 and from July 15 to August 5, 2008. Plots of piezometric head versus time, and groundwater temperature versus time, are presented on Figures 3.2 and 3.3, respectively.

Measured Groundwater Levels

Groundwater levels were measured for most drill holes completed in 2007 and 2008 (see Table 3.1 and Figure 3.1). The groundwater levels measured by DST and KP were taken soon after drilling was completed (this was assumed to be the case for the holes drilled by DST as no dates were provided with the groundwater level measurements) and should only be used as an indication of the groundwater level. These measurements cannot be considered an accurate representation of long-term conditions, as the groundwater level may not have had time to stabilize following drilling.

A number of piezometers were developed by Rescan for hydrogeological testing and groundwater quality monitoring. Water level measurements in these drill holes were taken at three different times: soon after drilling was completed, prior to well development in late September 2008 (Rescan, December 2009), and prior to water quality sampling in late September/early October 2009. Water level measurements in these drill holes are considered representative of actual site conditions as the groundwater level had time to stabilize.

3.2.2 Hydrogeologic Testing

Hydrologic testing in many of the drill holes included packer tests, FHTs, and RHTs, in both the drill rods and in the piezometers at select depths. A summary of the hydrogeologic test results is presented in Table 3.2. Summaries of the overburden and rock mass hydraulic conductivities by overburden and rock type, and by location, can be found in Tables 3.3 and 3.4, respectively. Box and whisker plots of the hydraulic conductivities by overburden and rock type, and by location, can be found on Figures 3.4 and 3.5, respectively. Figure 3.6 shows the variation in hydraulic conductivity with depth for all drill holes. A brief description of the test conditions, procedures and results is presented in the sections below.

Falling and Rising Head Tests – Drill Rods

FHTs and RHTs in the drill rods were completed at select depths in many of the drill holes. The tests were generally completed in saturated conditions in both overburden and bedrock. Only two tests were completed in unsaturated conditions: FHT12-01 in drill hole KP08-12, and FHT37A-01 in drill hole KP08-37A.

The tests were performed by either pulling the drill casing up to a selected depth, exposing the walls and the bottom of the drill hole, or by leaving the casing at the bottom of the drill hole, exposing only the bottom of the drill hole. Water was then added or removed (water was added

for the FHT and removed for the RHT) and the subsequent water recovery was measured over a period of time.

FHTs and RHTs performed by KP in the drill rods were analysed using the Hvorsley method; it is not know what analytical method was used for the FHTs and RHTs performed by DST. Hydraulic conductivity values from FHTs and RHTs in the drill rods are considered as qualitative indications only as the test section may not have been isolated from the remainder of the drill hole (i.e. infiltration beneath the casing). For example, a high hydraulic conductivity zone in a hole may influence many lower test sections, and there is a possibility that measured responses are to the well bore annulus rather than to the formation.

Packer Testing

Packer tests were completed at select depths in approximately half the 2008 drill holes. The tests consist of seating inflatable bladders (packers) in competent bedrock to seal off a zone within the drill hole, pumping water at several constant pressure stages into the zone, and measuring the pumped flow rate for each pressure stage. Three ascending and two descending pressure stages were applied for each Packer test.

Falling and Rising Head Tests – Piezometer

Piezometers were installed by KP in most geotechnical drill holes completed in 2008 and by Rescan in an exploration drill hole completed in 2007. FHTs and RHTs in the piezometers were carried out to estimate the hydraulic conductivity of the completion zone. Testing was completed by KP following installation of the piezometers. Additional RHTs were carried out by Rescan in the piezometers used for groundwater quality monitoring following well development. Hydraulic conductivities obtained from RHTs following well development are considered to the more representative than those completed prior to well development.

3.3 CROSS HOLE SEISMIC TOMOGRAPHY

Cross hole seismic tomography was performed along the north and south TSF embankment alignments during the summer of 2008 by Associated Geosciences (AG) to further investigate the karst susceptible terrain identified by I. Spooner (no date) and BGC (November 2009). Cross hole seismic tomography involves installing a source array of seismic detonators and a receiver array in drill holes some distance apart, and generating a series of wavepaths. The receiver data was processed to develop a seismic velocity model. Areas of low velocity could be interpreted as karst terrain or collapsed zones (AG, November 2009).

Cross hole seismic tomography was completed in drill holes A-SD07-01, A-SD07-02 and A-SD07-03 along the south embankment alignment and in drill holes A-ND07-01, A-ND07-02 and A-ND07-03 along the north embankment alignment. No voids or karstic formations were identified. The cross hole seismic tomography indicates a correlation with lithology, other geophysical logging, and RQD along both embankments (AG, November 2009). An anomaly was identified along the south embankment alignment, between drill holes A-SD07-01 and A-SD07-02 (the eastern portion) that may be a fracture zone, although AG have indicated that the fracture zone is likely cemented or quite narrow (November 2009).

SECTION 4.0 - GROUNDWATER HYDROLOGY

4.1 INTRODUCTION

Groundwater will generally move from recharge areas, on high ground, towards discharge areas on low ground. The groundwater surface is therefore expected to be a muted replication of the ground surface. This general condition is modified by the presence of aquifers and aquitards, or zones of higher and lower hydraulic conductivity. A conceptual understanding of the groundwater flow system requires recognition of topographic and drainage controls, as well as identification of aquifers and aquitards in the study area.

The following sections present a brief discussion of the conceptual setting present within the study area, including identification of the primary groundwater pathways that may be of interest during design construction, operation, and closure of a mine.

4.2 SCHAFT CREEK VALLEY

4.2.1 Description

The Schaft Creek Valley is infilled with an assemblage of permeable deposits, including glacial outwash, alluvium, alluvial fans from valley walls, and reworked colluvium. The alluvium is fairly loose and extends to depths of up to 75 m. The valley infill is over 700 m wide and extends a considerable distance both upstream and downstream. The valley fill materials are underlain by intrusive bedrock. The bedrock is expected to be relatively impermeable.

This Schaft Creek Valley aquifer bifurcates upstream of the deposit area, with extensive permeable deposits expected in the Schaft Creek headwaters and in Hickman Creek. Both of these upstream valleys have glaciers in their headwaters. The aquifer is continuous downstream of the deposit to a location where the creek passes through a bedrock channel on the east side of the valley floor. The aquifer likely also continues downstream under the valley floor to the west of the bedrock controlled stream channel.

4.2.2 Hydrogeologic Properties

Response tests were carried out in piezometers installed in the permeable deposits of the Schaft Creek Valley in drill holes KP08-20 and RES08-03B. It was not possible to calculate the hydraulic conductivity in either test because the water level returned to static too quickly for measurement. This indicates that the hydraulic conductivity of the Schaft Creek Valley aquifer is greater than $1x10^{-3}$ cm/s.

4.2.3 Groundwater Levels

Groundwater levels measured in KP08-20 (1.5 mbgs) and RES08-03B (1.3 and 1.5 mbgs) are consistent with a permeable aquifer interacting with the stream. On average, the aquifer water table is expected to be slightly higher than the stream stage at most locations. Examples of exceptions include:

- The water table may be lower than the stream stage at times when the stream stage increases faster the groundwater table. Creek water will enter the aquifer during these periods (often termed bank storage).
- The stream gradient may flatten at some locations along the valley resulting in the stream stage rising above the groundwater table. This could occur upstream of a confluence where the additional sediment load can result in local flattening of the stream gradient and may result in reduction of stream base flows in the stream reach. The base flow often returns downstream as the groundwater emerges to rejoin the surface water.

Such groundwater/surface water interactions are common and expected along valley floors. On average, the groundwater gradient in a downstream direction will be similar to the stream gradient. The gradient of Schaft Creek near the deposit is approximately 1%.

4.2.4 Groundwater Flow Rates and Directions

The source of water for the Schaft Creek Valley aquifer includes direct precipitation (rainfall and snowmelt), runon from adjacent valley slopes, discharge of groundwater and, as noted above, periodic interaction with the stream.

The primary groundwater flow direction is downstream (north) with a component of flow towards the stream where groundwater is contributing to the stream base flow.

The estimated average flow rate within the Schaft Creek Valley aquifer is:

$$Q = KiA$$

where the hydraulic conductivity, K, is 5×10^{-2} cm/s,
the gradient, i, is 0.01, and
the area, A, is 35,000 m^2 (700 m wide and 50 m thick).

The estimated average flow rate, Q, is therefore 0.18 m^3/s

The flow rate will vary seasonally, probably near a maximum value through most of the non-freezing months (except in very dry summers) and reducing over the winter as the aquifer continues to contribute to the base flow of Schaft Creek. Groundwater quantities in excess of the above estimate will discharge, contributing to stream flow.

4.3 DEPOSIT AREA

4.3.1 Hydrogeologic Units

The deposit area is located on the southwest slopes of Mount LaCasse, on the east side of Schaft Creek Valley. The area extends into a saddle between Schaft and Mess Creeks, and part way up the high slopes to the north and south of the saddle.

Overburden on the upper slopes is expected to be up to 30 m thick, and consists of predominantly clayey till with pebbles and boulders. As drill holes in these areas were drilled to support mine design, there is little detail regarding the overburden material properties. These materials are generally of moderate to low permeability and, combined with the underlying rock, form a low flow rate groundwater pathway from recharge sites on the hillside to overburden aquifers in the valleys below. Drill holes in the northern portion of the deposit area encountered highly fractured bedrock; enhanced permeability in the bedrock is expected in these locations.

Drill holes PO-05-07 and KP08-04 also encountered highly fractured bedrock. The vibrating wire piezometer system in PO-05-07 indicates a downward vertical gradient of approximately one, implying that the measured sequence is underdrained by a permeable unit. Packer test, FHTs, and RHTs in KP08-04 provided hydraulic conductivity values of approximately $1x10^{-3}$ cm/s at 75 mbgs, decreasing to approximately $5x10^{-5}$ cm/s at 500 mbgs. These drill holes are located in an east-west trending fault/shear zone and are thought to provide a downward flow path towards Schaft Creek.

Alluvium was logged within an abandoned channel east of Schaft Creek (south of the deposit within a trough on the lower slope). This infilled channel (tributary aquifer) may intercept seepage migrating downslope towards the Schaft Creek Valley aquifer, concentrating the discharge into a tributary of Schaft Creek.

4.3.2 Hydrogeologic Properties

The median hydraulic conductivity value from hydraulic testing in bedrock within the deposit area is $4x10^{-5}$ cm/s. Local areas, primarily near the top of the rock and within fractured zones, are expected to have higher hydraulic conductivity.

- Packer tests from KP08-04 and KP08-05 in the deposit area provide most of the available data for depths greater than 250 m. The approximate bulk hydraulic conductivity measured at these depths is approximately $5x10^{-5}$ cm/s in KP08-04 and $5x10^{-7}$ cm/s in KP08-05. The bulk hydraulic conductivity measured at KP08-04 is probable not indicative of the hydraulic conductivity of the deposit area as this drill hole is located in a fault/shear zone.
- The median hydraulic conductivity value from hydraulic testing in bedrock surrounding the deposit area, where waste rock may be stored, is $4x10^{-5}$ cm/s.

Although no testing was completed in the abandoned channel, the material descriptions and the documented recovery of water levels after drilling indicate that the permeability of this aquifer material is in the range of $1x10^{-4}$ to $1x10^{-3}$ cm/s.

4.3.3 Groundwater Levels

Artesian conditions were encountered in drill holes located in the alluvial deposits within the deposit area while deeper groundwater levels were encountered in the upslope portion. The water table was generally less than 5 m below ground surface.

Piezometric head values recorded for the five vibrating water piezometers installed in drill hole PO-05-07, in the middle of the deposit area, can be seen on Figure 3.2. All five piezometers were installed in bedrock (andesite and a dyke). The response of the units to spring freshet indicates that the units are well connected; all units responded to freshet with little lag time between the response of the upper piezometer and the lower piezometer.

4.3.4 Groundwater Flow Rates and Directions

Groundwater is generally recharged on the slopes and migrates downslope to Schaft Creek. Most of the available data indicate that the water table is at or near the ground surface. With steep mid slope surface gradients (assumed to be 0.5), bulk hydraulic conductivities of $1x10^{-5}$ cm/s, and an effective thickness of 200 m, the downslope flux is approximately 10 L/s per kilometre of slope.

An additional flux is likely flowing through east-west trending fault/shear zone near PO-05-07 and KP08-04. Flow along such a fault/shear zone could contribute an additional 10 L/s.

4.4 SADDLE AREA

4.4.1 Hydrogeologic Units

Alluvium in the saddle near the deposit is fairly loose near surface and extends to depths of up to 60 m. The saddle aquifer provides a conduit for groundwater recharging locally and into adjacent slopes. The aquifer underlying the valley floor is estimated to be an average of 30 m thick and 300 m wide.

The saddle is underlain by extrusive bedrock. There is potential for faulting aligned parallel to the saddle valley.

4.4.2 Hydrogeologic Properties

The median of three hydraulic conductivity values from hydraulic testing in bedrock is $9x10^{-5}$ cm/s. These values were measured in drill holes near the proposed plant site location.

4.4.3 Groundwater Levels

Artesian conditions were observed in bedrock at RES08-05A, while groundwater observations during drilling of other holes indicated depths to water of up to 10 m. The groundwater gradient is expected to be downslope above the saddle and to the east in the saddle overburden aquifer.

4.4.4 Groundwater Flow Rates and Directions

As with slopes in the deposit area, groundwater flow is expected to be downslope towards the saddle. The flow direction beneath the saddle in bedrock, and within the saddle aquifer, will be towards the east northeast and west southwest.

The rate of flow through the saddle aquifer will be limited by groundwater recharge, and likely in the order of 20 L/s.

4.5 SKEETER CREEK VALLEY

4.5.1 Hydrogeologic Units

Skeeter Creek is an underfit creek within the north end of a north-south trending abandoned valley, Skeeter Creek Valley. An infilled bedrock low has been identified under the west side of the valley where the bedrock low has been infilled with interbedded silts, sands and gravels. These materials form a moderate to low permeability aquifer.

The bedrock along the east slope of Skeeter Creek Valley includes carbonates (limestone). Carbonate bedrock often includes solution features, and in some cases, karstic features. Efforts have been made to either confirm or disprove the presence of potential karst formations includeing cross hole seismic tomography and targeted geotechnical drilling. No evidence of voids or karstic features were detected during the course of the investigations; however, monitoring of this area should continue so that any voids or elevated bedrock permeability resulting from solution features are identified.

Faults and fracture zones are expected to underlie the valley. No groundwater features have been observed to date that relate to permeable fault or fracture zones.

4.5.2 Hydrogeologic Properties

The median hydraulic conductivity value from hydraulic testing in bedrock within Skeeter Creek Valley (the proposed TSF area) is $5x10^{-5}$ cm/s. The distribution includes:

- The median hydraulic conductivity value from hydraulic testing in bedrock near the proposed north embankment is $3x10^{-5}$ cm/s
- The median hydraulic conductivity value from hydraulic testing in bedrock near the proposed south embankment is $8x10^{-5}$ cm/s, and
- The median hydraulic conductivity value from hydraulic testing in bedrock near the proposed northwest embankment is $4x10^{-5}$ cm/s.

4.5.3 Groundwater Levels

Drill holes located in the lacustrine units along the proposed TSF embankments exhibited both artesian conditions and deeper groundwater levels, although the artesian conditions were generally located in the eastern portion of the south TSF embankment, the western portion of the north TSF embankment, and along the entire northwest TSF embankment.

4.5.4 Groundwater Flow Rates and Directions

Groundwater recharges on valley slopes and migrates towards the valley floor. Groundwater is expected to discharge to the streambed and aquifer materials underlying the valley floor. Groundwater is expected to flow towards the north within the valley. The groundwater divide is

expected to be near the surface water divide at the proposed south TSF embankment. Groundwater flow rates to the north are expected to be less than 10 L/s.

SECTION 5.0 - GROUNDWATER QUALITY

5.1 GENERAL

Sixteen groundwater quality monitoring wells were installed by KP, under the direction of Rescan, at eight locations throughout the project site during the 2008 geotechnical site investigation program (KP, January 2010). Two monitoring wells were installed at each location: a shallow well and a deep well. The wells are located within areas of the proposed mine development, including the Schaft Creek Valley, the deposit area, the saddle area and Skeeter Creek Valley. Groundwater monitoring well location are shown on Figure 4.1, and descriptions can be found in Table 4.1.

Each of the groundwater quality monitoring wells was sampled by Rescan in the fall of 2008. KP continued the groundwater quality monitoring program in the fall of 2009, sampling fourteen of the wells at seven locations. The wells installed at one location, RES08-05A and RES08-05B at the plant site, were not found.

5.2 METHODOLOGY

5.2.1 Monitoring Well Preparation

The monitoring wells were prepared for sampling by purging the well until either three well volumes were removed or measurements of the *in situ* parameters stabilized, whichever came first. A pumping method was selected based on the depth of the completion zone, turbidity of the sample and hydraulic conductivity of the formation. A Waters Hydro lift® with 5/8" high density polyethylene tubing and a D25 foot value was used to pump the shallow or turbid wells and a Grundfos Redi-flo® submersible pump was used to pump the deep wells with high recharge and limited turbidity.

5.2.2 In Situ Measurements

A Yellow Springs Instrument 556 multiprobe system (YSI 556MPS) with a flow through cell was used to determine *in situ* parameters including temperature, pH, conductivity, specific conductance, dissolved oxygen, and redox potential. A flow through cell was used to limit groundwater interaction with the atmosphere.

Well volumes were analyzed every 15 L for chemical stabilization. Chemical stabilization was considered to be reached when the parameters had less than 5% difference in three consecutive readings. If stabilization did not occur the well was purged to three well volumes. At some locations (RES08-01A, RES08-01B, RES08-02A and RES08-02B) the wells were purged dry and sampled the following day due to time constraints (slow responding monitoring wells).

5.2.3 Sampling and Preservation

Groundwater samples were collected and preserved according to standard protocols adapted from the BC Integrated Land Management Bureau - Resources Information Standards Committee (RISC) document entitled "Ambient Fresh Water and Effluent Sampling Manual" (RISC, 1997).

Groundwater samples were collected in laboratory supplied pre-washed bottles and the field scientist used nitrile gloves while collecting the samples to limit contamination. The samples were preserved immediately after collection; dissolved samples were field filtered with an inline 45 micron polyethersulfone filter. Samples were then placed in coolers with ice packs and sent to the laboratory as soon as courier services were available.

5.2.4 Laboratory Analysis

The laboratory analysis of the groundwater samples consisted of testing the physical and chemical parameters, above detectable limits, and comparing the results with the BC Water Quality Guidelines (BCWQG) and Canadian Council of the Ministers of Environment (CCME) aquatic habitat standards. The samples collected were analyzed for the following parameters:

- Physical parameters:
  - pH
  - Specific conductance
  - Total suspended solids
  - Total dissolved solids
  - Hardness, and
  - Alkalinity.
- Chemical parameters:
  - Anions - chloride, bromide, fluoride and sulphate
  - Nutrients - ammonia, nitrate, nitrite, total and dissolved phosphate, dissolved orthophosphate and Total Kjeldahl Nitrogen (TKN)
  - Dissolved metals - full suite of metals specific to the BCWQG and CCME aquatic habitat standards, and
  - Total organic carbon.

A summary of the BCWQG and CCME aquatic habitat standards exceedances can be found in Table 4.2. The summarized analytical data for each monitoring well can be found in Appendix B1.

Piper plots were created for the groundwater samples in which the cation and anion balance was less than 10% (see Section 5.3.3). Piper plots are used to determine the hydrochemical facies of the groundwater sample by plotting the major cations and anions present in the water. The major cations present in water are calcium, magnesium, potassium and sodium, and the major anions are bicarbonate, sulphate and chloride. The Piper plots can be found on Figures B1.1 and B1.2 in Appendix B1.

5.3 QUALITY ASSURANCE/QUALITY CONTROL

The objective of the quality assurance/quality control (QA/QC) program is to verify that the data is obtained in a scientifically defensible, repeatable and well documented manner. The QA/QC program uses standard methods and protocols in compliance with ISO 9001 and ISO 14001 for the collection of groundwater quality samples. The following methods and protocols were carried out as per the QA/QC program:

- Regular calibration and maintenance and of all field equipment
- Collection and preparation of field blanks, travel blanks and duplicate samples for approximately 10% of overall samples
- Employment of a fully accredited analytical laboratory for the analysis of all the groundwater quality samples, and
- Determination of analytical precision and accuracy through the interpretation of the analysis reports for the blank samples and blind duplicates.

5.3.1 Field and Travel Blanks

Field blank samples are laboratory certified deionized water samples collected using the same sampling procedure and equipment as the water quality samples. They are used to identify sample contamination from the sampling equipment and procedures. Travel blanks are provided by the laboratory to determine if the samples were contaminated during shipment.

The field and travel blanks used during the 2008 groundwater sampling program were in exceedance of the method of detection limit (MDL) for bicarbonate alkalinity (as $CaCO_3$) and total alkalinity (as $CaCO_3$) with values of 1.2 mg/L and 1.6 mg/L, respectively. Alkalinity results for the samples collected had a minimum detectable value of 73 mg/L for both bicarbonate alkalinity (as $CaCO_3$) and total alkalinity (as $CaCO_3$). The exceedances have been noted and determined to have no effect on the sample set.

Neither the field blank nor the travel blank used during the 2009 groundwater sampling were in exceedance of the MDL.

A summary of the laboratory results from the field and travel blanks can be found in Table B2.1 in Appendix B2.

5.3.2 Blind Duplicates

A blind duplicate is a replicate sample collected in the field at a known location and submitted to the laboratory for analysis under an alias. The blind duplicate is used to verify the laboratory is providing reproducible results. A relative percent difference (RPD) calculation is applied to the laboratory results to determine the precision of the test results; the results are considered adequate if the RPD between the duplicate and alias is 25% or greater for concentrations that are 5 times greater than the MDL.

The blind duplicate analysis was completed on samples from RES08-06A for the 2008 groundwater sampling program. The samples did not meet the above criteria for the following parameters:

- Dissolved Barium – RPD of 32%, and
- Dissolved Molybdenum – RPD of 46%

These parameters were excluded from the 2008 data set.

The blind duplicate analysis was completed on samples from RES08-03B for the 2009 groundwater sampling program. The samples met the duplicate criteria for all parameters.

A summary of the laboratory results from samples collected from RES08-06A in 2008 and RES08-03B in 2009 can be found in Table B2.2 in Appendix B2.

5.3.3 Cation and Anion Balance

A cation and anion balance is used to detect error associated with the analysis of the major ionic species present in the groundwater samples. The major cations present in water are calcium, magnesium, potassium and sodium, and the major anions are bicarbonate, sulphate and chloride. The error between the sum of the cation species and the sum of the anion species should be less that 10%. An error greater than 10% could indicate either an analytical error or that a major ionic species was not accounted for.

The cation and anion balance error was greater than 10% for samples from RES08-04B in 2008, RES08-01B and RES08-02B in 2009, and RES08-01A, RES08-02A and RES08-04A in both 2008 and 2009. Eight of the nine samples with a cation and anion balance error greater than 10% also had pH exceedances.

The laboratory was contacted to confirm the analysis completed in 2009 and a repeat analysis verified the measured ion concentrations. Unfortunately, the data from 2008 could not be verified as it was over one year old.

A summary of the cation and anion balances can be found in Table B2.3 in Appendix B2.

5.4 SUMMARY OF WATER QUALITY RESULTS

A summary the groundwater quality results within each of the areas proposed for mine development, including Schaft Creek Valley, the deposit area, the saddle area and Skeeter Creek Valley, is presented in the sections below. The laboratory results were compared to the BCWQG and CCME aquatic habitat standards, and exceedances of these guidelines were noted (see Appendix B1). Details of which guideline was exceeded is not specified in the summary below; “exceedance” indicates only that the parameter was in exceedance of one or both of the guidelines.

5.4.1 Schaft Creek Valley

Groundwater quality monitoring wells RES08-03A, RES08-03B, RES08-04A and RES08-04B are located in the Schaft Creek Valley. RES08-03B is installed in overburden and the other three wells are installed in bedrock.

Monitoring well RES08-03B (overburden) had no exceedances other than in total metals, which had concentration exceedances with aluminium, arsenic, cadmium, copper, iron, lead, silver,

vanadium and zinc, These are associated with collection of turbid samples and are not representative of groundwater migration.

The bedrock monitoring well, RES08-04A had high pH values in both 2008 (12) and 2009 (11.9). The elevated pH is consistent with grout contamination of the monitoring zone. These samples are not representative of groundwater conditions and results from these samples have been excluded from the discussion below. The bedrock monitoring well RES08-04B had high pH values in both 2008 (11.9) and 2009 (9.05). The sample collected in 2009 with the lower pH and the lower TDS (141 mg/L) appears to be more representative of groundwater conditions than the 2008 sample, and is included in the discussion below.

***In situ* Parameters**
RES08-04B, was slightly alkaline to alkaline with a pH of 9.05.

Physical Parameters
The groundwater is classified as fresh with TDS values generally less than 1000 mg/L (107 to 351 mg/L).

Dissolved Anions
Sulphate was in exceedance for RES08-03A in 2009.

Nutrients
No exceedances.

Dissolved Metals
Dissolved copper was exceeded in the RES08-04B sample in 2009.

Total Metals
Many exceedances were noted for total metals concentrations in 2008 including: aluminium, arsenic, cadmium, copper, iron, lead, nickel, selenium, silver, vanadium and zinc. These high concentrations are the result of turbid samples.

Hydrochemical Facies
The cation and anion balance error was greater than 10% in RES08-04B in 2008. Piper plots were therefore not created and the dominant cation and anion facies were not determined for this sample. The dominant cation and anion facies for the remaining samples, those with less than 10% error for the cation and anion balance, are summarized below.

- RES08-03A in 2008 – calcium-magnesium and bicarbonate
- RES08-03A in 2009 – calcium-magnesium and sulphate-bicarbonate, and
- RES08-04B in 2009 – calcium and bicarbonate-carbonate.

5.4.2 Deposit Area

Groundwater quality monitoring wells RES08-01A and RES08-01B are located in the deposit area and RES08-02A and RES08-02B are on the slope to the south of the deposit. RES08-02B was installed in overburden and the other three wells were installed in bedrock. Samples from these wells, except RES08-02B, were alkaline with median pH values exceeding 11.5. The high pH is the result of accidental placement of grout within the monitoring zone during well construction. Groundwater samples from these three wells are not representative of groundwater conditions in the deposit area and results from these samples have been excluded from the discussion below.

The sample collected from RES08-02B had a pH of 8.4 and 8.6. In 2008, the sample had several exceedances of dissolved metals which were much higher than concentrations measured in 2009. Metal concentrations measured in 2008 are expected to be more representative of overburden groundwater conditions at RES08-02B.

***In situ* Parameters**
The shallow monitoring well RES08-02B was slightly alkaline to alkaline.

Physical Parameters
The groundwater is classified as fresh, with TDS values less of than 1000 mg/L (137 and 117 mg/L). The TSS and turbidity values were high for RES08-02B in 2008 (1040 mg/L) and 2009 (2030 mg/L).

Dissolved Anions
Sulphate was the dominant anion, but not in exceedance at 31 and 28 mg/L.

Nutrients
No exceedances of nutrients were detected in samples from RES08-02B.

Dissolved Metals
RES08-02B had exceedances for aluminium, arsenic, copper and iron in 2008, and arsenic in 2009.

Total Metals
Many exceedances were noted for total metals concentrations in 2008 including: aluminium, arsenic, cadmium, copper, iron, lead, nickel, selenium, silver, vanadium and zinc. These exceedances are almost certainly the result of a turbid sample collected from the well. Total metals were not measured in 2009.

Hydrochemical Facies
The cation and anion balance error was greater than 10% in RES08-02B in 2009. Piper plots were therefore not created for that year. For 2008, the sample was characterized as sodium-calcium and sulphate dominant.

5.4.3 Saddle Area

Groundwater quality monitoring wells RES08-05A and RES08-05B are located in the saddle area. RES08-05A is installed in bedrock and RES08-05B is installed in overburden. These wells were not found, and therefore not sampled during the 2009 groundwater quality monitoring program. All data presented below were obtained from the samples collected in 2008.

Monitoring well RES08-05A (bedrock) was artesian during groundwater sampling.

***In situ* Parameters**

In situ parameters were not measured in RES08-05A and RES08-05B.

Physical Parameters
The groundwater is classified as fresh with TDS values of less than 1000 mg/L (113, 168 mg/L).

Both wells were slightly alkaline with pH values of 8.2. RES08-05B had elevated TSS (1030 mg/L) and a turbidity value greater than 4000 NTU.

Dissolved Anions and Nutrients
There were no noted exceedances for dissolved anions or nutrients.

Dissolved Metals
Dissolved metals were in exceedance for aluminium, cadmium, copper and iron in RES08-05A (bedrock) and for aluminium, cadmium and copper in RES08-05B (overburden).

Total Metals
Aluminium and cadmium were in exceedance for RES08-05A (bedrock). The concentrations of several total metals in the sample from RES08-05A are lower than dissolved metals, which suggests a lack of quality control in the sampling or analysis.

Exceedances for RES08-05B include: aluminium, arsenic, cadmium, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium, silver, vanadium and zinc.

The exceedances may be a result of elevated TSS and turbidity.

Total metals were not analyzed in 2009 at the request of the client.

Hydrochemical Facies
The dominant cation and anion facies are calcium and bicarbonate-sulphate for RES08-05A and calcium and bicarbonate for RES08-05B.

5.4.4 Skeeter Creek Valley

Locations of monitoring wells within Skeeter Creek valley are summarized below:

- RES08-06A (bedrock) and RES08-06B (overburden) are located near the proposed north TSF embankment alignment.
- RES08-07A (bedrock) and RES08-07B (overburden) are located near the proposed south TSF embankment alignment.
- RES08-08A (bedrock) and RES08-08B (overburden) are located near the proposed northwest TSF embankment alignment.

Monitoring wells RES08-07A (bedrock) and RES08-07B (overburden) were artesian during groundwater sampling in 2008 and 2009. The flow rate was greater for the deep well, RES08-07A.

***In situ* Parameters**

The bedrock wells were slightly alkaline. The overburden wells, except for RES08-06B, were also slightly alkaline but less so than the bedrock wells.

The sample collected from RES08-6B in 2009 was acidic (6.44) in 2009 and in exceedance of the guidelines. The laboratory value for the same well (7.87), was neutral to slightly alkaline. The acidic measurement may be an anomaly and further sampling is required to support or reject this measurement.

Physical Parameters

The groundwater is generally considered to be fresh with TDS values of less than 1000 mg/L (268 to 500 mg/L for bedrock and 165 to 377 mg/L for overburden).

The sample collected from RES08-06B in 2008 was very turbid, greater than 4000 NTU, with a TSS value of 2890 mg/L. The TSS and turbidity values were high for RES09-07B in 2009. The TSS and turbidity values were high for RES08-08A and RES08-08B in 2009 and elevated for RES08-08A in 2009.

Dissolved Anions

Fluoride was in exceedance for all bedrock wells in 2008 and 2009. Sulphate was in exceedance in RES08-06A in 2009 and both sampling rounds in the other two bedrock wells.

Fluoride was in exceedance for overburden wells RES08-7B and RES08-8B in 2008 and 2009. Sulphate was in exceedance in RES08-07B for both years and in RES08-08B for 2008.

Nutrients

There were no noted exceedances for nutrients.

Dissolved Metals

Dissolved metals were in exceedance in 2008 only for bedrock wells RES08-06A (copper) and RES08-08A (aluminium, copper, iron and silver). These samples were turbid.

Dissolved metals were in exceedance in 2008 for overburden wells RES08-06B (aluminium, copper, iron, silver) and RES08-08B (aluminium, cadmium and iron), and in 2009 for well RES08-08B (iron). These samples were turbid.

Total Metals

Total metals were in exceedance for two bedrock wells (RES08-06A and RES08-08A). RES08-06A was in exceedance for aluminium, arsenic, cadmium, copper, iron, lead, mercury, molybdenum, nickel, silver, vanadium, and zinc. RES08-08A was in exceedance for aluminium, arsenic, beryllium, cadmium, copper, iron, lead, mercury, molybdenum, selenium, silver, vanadium, and zinc.

Total metals were in exceedance for two overburden wells (RES08-06B and RES08-08B). RES08-06B was in exceedance for aluminium, arsenic, cadmium, cobalt, copper, iron, lead, manganese, nickel, selenium, silver, thallium, vanadium, and zinc, and RES08-08B was in exceedance for aluminium, arsenic, cadmium, copper, iron, lead, molybdenum, selenium, silver, vanadium, and zinc.

The exceedances may be a result of elevated TSS and turbidity.

Total metals were not analyzed in 2009 at the request of the client.

Hydrochemical Facies

The dominant cation and anion facies for the bedrock wells are:

- Sodium-calcium-magnesium and sulphate-bicarbonate for RES08-06A
- RES08-07A in 2008 – magnesium-calcium and bicarbonate-sulphate
- RES08-07A in 2009 – magnesium-calcium-sodium and bicarbonate-sulphate, and
- RES08-08A in 2008 and 2009 – sodium and sulphate-bicarbonate

The dominant cation and anion facies for the overburden wells are:

- Calcium-sodium-magnesium and bicarbonate-sulphate for RES08-06B
- RES08-07B in 2008 – magnesium-calcium and bicarbonate-sulphate
- RES08-07B in 2009 – magnesium-calcium-sodium and carbonate
- RES08-08B in 2008 – calcium-sodium-magnesium and bicarbonate-sulphate, and
- RES08-08B in 2009 – sodium-calcium and sulphate-bicarbonate.

SECTION 6.0 - ANALYSIS AND RECOMMENDATIONS

6.1 GROUNDWATER HYDROLOGY SUMMARY

A conceptual understanding of the groundwater hydrology of the study area has been developed with consideration of the site geology, specifically the surficial geology, groundwater level measurements and the results of hydrogeologic testing. This includes identification of the major aquifers and their hydrogeologic properties, the location of groundwater recharge and discharge areas, and the rate and direction of groundwater flow.

The major aquifers on site are located within the alluvial deposits, including the alluvial deposits within Schaft Creek, an abandoned channel east of Schaft Creek, within the saddle area to the east of the deposit, and the within Skeeter Creek Valley. These aquifers are also the location of groundwater discharge, with recharge occurring from the upslope areas.

There are three groundwater divides to note within the project area including:

- Near the eastern boundary of the deposit, in the saddle area
  - Groundwater over most of the deposit and the saddle flows towards Schaft Creek, while groundwater in the eastern portion of the saddle flows towards Mess Creek
- At the southern extent of Skeeter Creek (the south TSF embankment alignment)
  - Groundwater south of the proposed south TSF embankment flows towards Mess Creek while groundwater north of that location flows towards the north.
- Along the proposed northwest TSF embankment alignment
  - Groundwater west of the northwest TSF embankment flows west towards Schaft Creek and groundwater east of the northwest TSF embankment flows to the east towards Skeeter Creek.

6.2 GROUNDWATER QUALITY SUMMARY

The groundwater in the project area is generally slightly alkaline to alkaline. For high *in situ* pH values, in the range of 11 and above, ammonia concentrations were noted to exceed the guidelines. The increased ammonia concentration could be a result of pH, as the solubility of ammonia in water increases with alkalinity. The wells with the highest pH were: RES08-01A, RES08-01B, RES08-02A, RES08-04A and RES08-4B. These wells are located in the deposit area and Schaft Creek Valley. The water quality of these samples does not represent groundwater conditions. The high pH is likely the result of grout contamination during well installation.

The groundwater also has a high buffering capacity throughout the site with alkalinity values greater than 20 mg/L.

Sulphate exceedances were noted in the deep wells with the exception of RES08-04A and RES08-05A. Fluoride exceedances were noted in all wells within Skeeter Creek Valley with the exception of RES08-6B.

Dissolved metals exceedances in wells not contaminated by grout were noted for: aluminium, arsenic, cadmium, copper, iron, and silver. Samples with several exceedances were turbid.

There were also many exceedances for total metals including aluminium, arsenic, cadmium, cobalt, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium and zinc. The most common exceedances were in aluminium, copper, iron, silver and vanadium. The total metals exceedances could be the result of high TSS and turbidity in samples collected in 2008. There was no testing for total metals in 2009 and, therefore, no data to compare total metals results.

The groundwater facies in the deposit, waste dump and plant site areas are calcium-magnesium to calcium-sodium and bicarbonate to bicarbonate-sulphate. The groundwater facies for the north and west TSF embankment areas are sodium-calcium and bicarbonate-sulphate to sulphate-bicarbonate, and the groundwater facies for the south embankment areas are magnesium-calcium and bicarbonate-sulphate.

The quality assurance/quality control resulted in rejection of two parameters in the 2008 data sample set: dissolved barium and dissolved molybdenum. Cation and anion balances completed on both data sets exceeded the 10% error for nine samples. The 2009 data were verified by the laboratory; however, the 2008 data was too old to reanalyze. New data controls have been put in place using the KP integrated management system FULCRUM to calculate cation-anion balances immediately upon receipt of the sample set to ensure that data analysis is correct.

6.3 CONCLUSIONS

This baseline study provides an understanding of the groundwater regime within the study area and addresses the:

- Location of aquifers and aquitards
- Rate and direction of groundwater flow
- Expected interaction of groundwater with surface water, and
- Water quality characteristics of groundwater.

The information presented in this report is adequate to support a feasibility level design of the project, although further study is required to complete the hydrogeologic characterization of the site to a level necessary for final design.

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SECTION 8.0 - CERTIFICATION

This report was prepared, reviewed and approved by the undersigned.

Prepared:

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Reviewed:

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Approved:

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
K. J. BROUWER
APRIL 1, 2010

Ken Brouwer, P.Eng.
Managing Director

Knight Piésold CONSULTING

TABLE 3.1

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF HYDROGEOLOGICAL INFORMATION

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Consultant	Year	Drillhole ID	Copper Fox Drillhole ID	Location of Drillhole	Coordinates			Drill Type	Total Length[1]	Depth to Bedrock[2][3]	Depth to Groundwater[2]	Piezometic Head	Completion Zone		Hydrogeological Testing Performed
					Northing (m)	Easting (m)	Elevation (m)		(m)	(m)	(m)	(m)	From (m)	To (m)	
?	2007	?	07CF304	Open Pit Area	6,359,400	379,650		?	139.9	4.6	-	-	131.9 18.7	139.9 26.4	Two piezometers installed - no testing performed
DST	2007	A-ND-07-01	?	North TSF Dam Area	6,374,500	382,127	820[4]	HQ/NQ	137.5	39.8	3.0	817.0	-		1 FHT, 9 RHT
DST	2007	A-ND-07-02	?	North TSF Dam Area	6,374,497	381,836	800[4]	HQ/NQ	125.0	22.9	artesian (>2.6 m.a.g.s.)	>802.6	-	-	9 RHT
DST	2007	A-ND-07-03	?	North TSF Dam Area	6,374,497	381,513	815[4]	HQ/NQ	101.8	2.4	0.2	814.8	-	-	1 FHT, 8 RHT
DST	2007	A-NWD-07-01	?	Northwest TSF Dam Area	6,373,335	380,516	900[4]	HQ/NQ	113.4	12.8/13.3[8]	artesian (>0.5 m.a.g.s.)	>900.5	-	-	6 RHT
DST	2007	A-SD-07-01	?	South TSF Dam Area	6,367,246	382,879	900[4]	HQ/NQ	120.5	21.2/22.0[8]	artesian (>0.8 m.a.g.s.)	>900.8	-	-	7 FHT, 3 RHT
DST	2007	A-SD-07-02	?	South TSF Dam Area	6,367,257	382,604	900[4]	HQ/NQ	101.3	4.0	5.0	895.0	-	-	6 FHT
DST	2007	A-SD-07-03	?	South TSF Dam Area	6,367,245[5]	382,328[5]	900[5]	HQ/NQ	92.7	4.1	artesian (1.5 m.a.g.s.)	901.5	-	-	3 FHT, 6 RHT
DST	2007	PO-01-07	07CF308	Open Pit Area	6,358,834[5]	379,626[5]	929	HQ/NQ	62.0	9.4	artesian (0.5 m.a.g.s.)	929.5	-	-	-
DST	2007	PO-02-07	07CF306	Open Pit Area	6,358,936[5]	379,094[5]	880	HQ/NQ	65.7	24.0	2.0	878.1	-	-	-
DST	2007	PO-03-07	07CF309	Open Pit Area	6,358,959[5]	380,021[5]	955	HQ/NQ	57.3	10.5	1.0	954.0	-	-	-
DST	2007	PO-04-07	07CF312	Open Pit Area	6,359,781[5]	380,614[5]	1170	HQ/NQ	89.0	3.0	6.2	1163.8	-	-	-
DST	2007	PO-05-07	07CF313	Open Pit Area	6,360,183[5]	380,278[5]	1157	HQ/NQ	201.3	2.0	18.3	1138.7	-	-	5 VWP
DST	2007	PO-06-07	07CF314	Open Pit Area	6,360,608[5]	379,977[5]	1092[5]	HQ/NQ	131.1	29.0	-	-	-	-	-
DST	2007	PO-07-07	07CF315	Open Pit Area	6,361,023[5]	379,702[5]	1084	HQ/NQ	82.7	94.5	52.5	1031.6	-	-	-
DST	2007	PO-08-07	07CF316	Open Pit Area	6,360,563[5]	380,437[5]	1353[5]	HQ/NQ	636.1	8.5	-	-	-	-	-
KP	2008	KP08-01	08CF344	Open Pit Area	6,361,268	379,773	1196	HQ3	250.2	32.0	-	-	-	-	4 FHT
KP	2008	KP08-02	08CF345	Open Pit Area	6,361,020	379,854	1157	HQ3	101.2	28.0	-	-	-	-	1 FHT
KP	2008	KP08-03	08CF328	Open Pit Area	6,360,467	379,823	992	HQ3	285.9	23.5	4.3	987.7	25.9	30.8	1 FHT in piezometer
KP	2008	KP08-04	08CF341	Open Pit Area	6,360,244	380,282	1178	HQ3	542.4	9.5	-	-	-	-	23 PT, 6 FHT
KP	2008	KP08-05	08CF347	Open Pit Area	6,359,807[6]	380,000[6]	980[6]	HQ3	463.6	8.5	artesian	>980.0	-	-	24 PT, 3 RHT
KP	2008	KP08-06	08CF346	Open Pit Area	6,359,641	380,352	1078	HQ3	299.2	19.8	artesian	>1078.0	34.0	37.2	1 PT, 2 FHT, 10 RHT
KP	2008	KP08-07	08CF329	Open Pit Area	6,359,248	380,336	1047	HQ3	271.7	14.5	artesian	>1047.0	27.5	30.9	3 RHT
KP	2008	KP08-08	08CF339	Open Pit Area	6,359,940	379,900	938	HQ3	199.3	10.4	20.0	918.0	-	-	2 FHT, 4 RHT
KP	2008	KP08-09	08CF338	Open Pit Area	6,360,367	379,574	920	HQ3	805.0	25.0	19.7	900.3	47.4	51.0	1 RHT, 1 FHT in piezometer
KP	2008	KP08-10	08CF342	Open Pit Area	6,360,998	379,480	994	HQ3	223.7	27.1	-	-	-	-	1 FHT
KP	2008	KP08-12	08CF389	Plant Site Area	6,359,933	381,776	1150	ODEX/HQ3	61.9	N/A	10.0	1140.1	44.8	48.8	5 FHT, 1 FHT in piezometer
KP	2008	KP08-13	08CF387	Plant Site Area	6,360,071	381,404	1142	HQ3/NQ3	25.9	20.7	6.6	1135.8	21.8	25.8	1 RHT, 1 RHT in piezometer
KP	2008	KP08-16	08CF363	Open Pit Area	6,359,903	379,445	876	ODEX/HQ2	62.5	13.7	2.8	873.4	58.5	62.2	1 PT, 3 RHT, 1 FHT in piezometer
KP	2008	KP08-17	08CF364	Open Pit Area	6,360,803	379,041	865	ODEX/HQ3	55.8	12.2	3.5	861.9	52.6	55.8	2 PT, 2 RHT, 1 FHT in piezometer
KP	2008	KP08-20	08CF336	Waste Dump Area	6,360,889	378,413	835	HQ3	76.2	N/A	1.5	833.7	12.2	16.8	1 FHT in piezometer

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TABLE 3.1

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF HYDROGEOLOGICAL INFORMATION

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Consultant	Year	Drillhole ID	Copper Fox Drillhole ID	Location of Drillhole	Coordinates			Drill Type	Total Length[1]	Depth to Bedrock[2][3]	Depth to Groundwater[2]	Piezometic Head	Completion Zone		Hydrogeological Testing Performed
					Northing (m)	Easting (m)	Elevation (m)		(m)	(m)	(m)	(m)	From (m)	To (m)	
KP	2008	KP08-21	08CF331	Waste Dump Area	6,359,157	378,441	855	ODEX	50.9	N/A	10.6	844.3	43.9	46.9	-
KP	2008	KP08-22	08CF335	Waste Dump Area	6,357,930	379,936	995[4]	HQ3	72.2	33.2	-	-	-	-	-
KP	2008	KP08-23	08CF333	Waste Dump Area	6,358,189	379,460	947	HQ3	150.6	3.7	1.2	945.6	-	-	2 PT, 6 RH
KP	2008	KP08-25	08CF380	North TSF Dam Area	6,374,073	382,129	824	ODEX/HQ3	59.7	22.3	9.8	814.6	56.1	59.7	1 PT, 1 FHT, 2 RHT, 1 FHT in piezometer
KP	2008	KP08-27	08CF381	North TSF Dam Area	6,374,151	381,687	794[7]	ODEX/HQ3	44.2	12.5	artesian (0.3 m.a.g.s.)	794.3	36.9	40.5	1 PT, 2 RHT, 1 RHT in piezometer
KP	2008	KP08-28	08CF382	North TSF Dam Area	6,374,164	381,387	825	ODEX/HQ3	47.0	13.7	artesian	>825	42.8	46.7	2 RHT, 1 RHT in piezometer
KP	2008	KP08-31	08CF384	Northwest TSF Dam Area	6,373,183	380,396	858	ODEX/HQ3	49.7	9.1	artesian	>858	45.1	49.4	1 PT, 2 FHT, 2 RHT, 1 RHT in piezometer
KP	2008	KP08-32	08CF385	Northwest TSF Dam Area	6,372,976	380,347	877	ODEX/HQ3	67.1	29.9	artesian	>877	63.4	67.1	1 PT, 2 FHT, 1 RHT, 1 RHT in piezometer
KP	2008	KP08-37A	08CF374A	South TSF Dam Area	6,367,157	382,039	892	ODEX/HQ3	54.6	35.4	13.8	878.6	31.1	35.1	4 FHT, 2 RHT, 1 FHT in piezometer
KP	2008	KP08-37B	08CF374B	South TSF Dam Area	6,367,154	382,039	893	ODEX/HQ3	67.4	35.4	13.7	879.0	62.5	66.7	1 RHT, 1 FHT in piezometer
KP	2008	KP08-38	08CF375	South TSF Dam Area	6,367,184	382,204	908	ODEX/HQ3	92.7	2.7	10.5	897.5	26.5	30.2	1 FHT, 7 RHT, 1 FHT in piezometer
KP	2008	KP08-40	08CF376	South TSF Dam Area	6,367,191	382,670	891	ODEX/HQ3	30.5	0.9	3.7	887.5	26.5	30.3	2 RHT, 1 FHT in piezometer
KP	2008	KP08-41	08CF378	South TSF Dam Area	6,367,178	382,867	885	ODEX/HQ3	29.0	21.6	1.6	883.1	17.1	20.7	1 PT, 2 FHT, 1 RHT, 1 FHT in piezometer
KP	2008	KP08-42	08CF373	South TSF Dam Area	6,366,806	382,167	882	ODEX/HQ3	59.7	27.7	3.3	878.3	56.1	59.7	1FHT, 2 RHT, 1 FHT in piezometer
KP	2008	KP08-45	08CF379	South TSF Dam Area	6,367,822	382,266	898	ODEX/HQ3	70.4	1.2	14.7	883.6	66.1	70.1	4 RHT, 1 FHT in piezometer
KP	2008	RES08-01A	08CF340A	Open Pit Area	6,359,940	379,718	908	ODEX/HQ3	50.3	4.7	1.8/1.8/2.6[9]	906.2/906.2/905.4	43.9	50.0	1 PT, 1 FHT, 2 RHT, 1 FHTand 1 RHT in piezometer
KP	2008	RES08-01B	08CF340B	Open Pit Area	6,359,939	379,718	908	ODEX/HQ3	15.2	4.7	0.6/2.2/3.5[9]	907.4/905.8/904.5	9.1	15.2	1 FHT and 1 RHT in piezometer
KP	2008	RES08-02A	08CF337A	Waste Dump Area	6,358,424	380,200	1028	HQ3	60.0	29.3	6.5/4.0/4.6[9]	1021.5/1024.0/1023.4	51.8	60.0	2 PT, 1 FHT, 1 RHT, 1 FHT and 1 RHT in piezometer
KP	2008	RES08-02B	08CF337B	Waste Dump Area	6,358,423	380,200	1028	ODEX/HQ3	28.0	N/A	4.0/7.1/8.0[9]	1024.0/1020.9/1020.0	23.8	28.0	1 FHT and 1 RHT in piezometer
KP	2008	RES08-03A	08CF330A	Waste Dump Area	6,360,095	378,645	843	HQ3	117.3	51.5	3.1/3.0/3.0[9]	839.9/840.0/840.0	106.4	117.3	3 PT, 1 FHT and 1 RHT in piezometer
KP	2008	RES08-03B	08CF330B	Waste Dump Area	6,360,096	378,646	843	ODEX	10.7	N/A	1.3/1.5/1.5[9]	841.7/841.5/841.5	7.3	10.7	1 FHT and 1 RHT in piezometer
KP	2008	RES08-04A	08CF332A	Waste Dump Area	6,358,509	378,682	865	HQ3	99.4	6.7	6.5/9.9/8.6[9]	858.5/855.1/856.4	86.3	99.4	7 PT, 1 FHT and 1 RHT in piezometer
KP	2008	RES08-04B	08CF332B	Waste Dump Area	6,358,508	378,687	864	HQ3	53.3	4.6	3.8/9.1/8.3[9]	860.2/854.9/855.7	48.2	53.3	1 FHT and 1 RHT in piezometer
KP	2008	RES08-05A	08CF388A	Plant Site Area	6,360,632	381,532	1136	ODEX/HQ3	27.4	13.7	artesian/artesian/no measurement[9]	>1136.0/>1136.0/?	21.4	27.4	1 FHT, 1 RHT
KP	2008	RES08-05B	08CF388B	Plant Site Area	6,360,632	381,532	1136	ODEX	10.7	N/A	0.1/0.3/no measurement[9]	1135.9/1135.7/?	6.4	10.4	1 FHT, 1 FHT in piezometer
KP	2008	RES08-06A	08CF383A	North TSF Dam Area	6,374,743	381,815	794	ODEX/HQ3	63.1	29.3	artesian (0.2 m.a.g.s.)/0.1/0[9]	794.2/793.9/794.0	59.4	63.1	1 PT, 2 FHT, 2 RHT in piezometer
KP	2008	RES08-06B	08CF383B	North TSF Dam Area	6,374,744	381,815	794	ODEX	15.2	N/A	0.1/0.2/1.2[9]	793.9/793.8/792.8	11.6	15.2	1 FHT and 1 RHT in piezometer
KP	2008	RES08-07A	08CF377A	South TSF Dam Area	6,366,778	382,819	886	ODEX/HQ3	39.9	10.7	artesian/artesian/artesian[9]	>886/>886/>886	36.3	39.9	1 PT, 1 FHT, 1 RHT, 1 FHT in piezometer
KP	2008	RES08-07B	08CF377B	South TSF Dam Area	6,366,778	382,819	886	ODEX	9.1	N/A	2.4/artesian/artesian[9]	883.6/>886/>886	4.5	9.1	1 FHT in piezometer
KP	2008	RES08-08A	08CF386A	Northwest TSF Dam Area	6,373,318	379,992	829	ODEX/HQ3	59.9	2.7	1.1/1.0/1.7[9]	827.9/828.0/827.3	56.8	59.9	1 PT, 1 FHT, 2 RHT, 1 FHT and 1 RHT in piezometer
KP	2008	RES08-08B	08CF386B	Northwest TSF Dam Area	6,373,318	379,992	829	ODEX/HQ3	11.0	2.7	0.6/0.5/1.5[9]	828.4/828.5/827.5	4.5	9.1	1 FHT and 1 RHT in piezometer

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NOTES:

1. ALL HOLES ARE VERTICAL EXCEPT FOR PO-01-07 TO PO-07-07 AND KP08-01 TO KP08-10, KP08-22, KP08-38 AND KP08-45.
2. ALL DEPTH MEASUREMENTS ARE TAKEN WITH RESPECT TO GROUND SURFACE AND INDICATE ACTUAL DEPTH.
3. SEVERAL DRILLHOLES DID NOT CONTACT BEDROCK ARE INDICATED BY "N/A".
4. ELEVATION ESTIMATED FROM DRILLHOLE LOCATION AND TOPOGRAPHIC MAPS.
5. COORDINATE ESTIMATED FROM THE 2007 SITE INVESTIGATION DRILLHOLE PLAN.
6. KP08-05 (08CF347) WAS NOT SURVEYED. THE COORDINATES PROVIDED ARE THE PLANNED COORDINATES AND THE ELEVATION WAS ESTIMATED FROM TOPOGRAPHY .
7. KP08-27 (08CF381) WAS NOT SURVEYED, HOWEVER THE DRILL PAD WAS LOCATED AT THE SAME ELEVATION AS RES08-06 A/B.
8. INCONSISTENCY IN REPORTING - BOTH VALUES GIVEN.
9. WATER LEVELS MEASURED AT DIFFERENT TIMES; FIRST MEASUREMENT INDICATES THE WATER LEVEL AFTER PIEZOMETER INSTALLATION, SECOND MEASUREMENT INDICATES THE WATER LEVEL PRIOIR TO WELL DEVELOPMENT BY RESCAN (2008), THIRD MEASUREMENT INDICATES THE WATER LEVEL PRIOR TO WATER QUALITY SAMPLING BY KP (2009).

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	23NOV'09	ISSUED FOR REPORT VA101-329/8-1	AM	HRS	KJB

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TABLE 3.2

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF HYDROGEOLOGICAL TESTING

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Consultant	Year	Drillhole ID	Copper Fox Drillhole ID	Location of Drillhole	Packer Test (Lugeon)					Falling/Rising Head Test					Piezometer Information						Notes
					Test Number	Packer Zone		Hydraulic Conductivity	Geology	Test Number	Test Zone		Hydraulic Conductivity[1]	Geology	Test Number	Completion Zone		Depth to Water[2]	Hydraulic Conductivity (Rising/ Falling Head)[1]	Geology	
						From (m)	To (m)	(cm/s)			From (m)	To (m)	(cm/s)			From (m)	To (m)	(m)	(cm/s)		
?	2007	?	07CF304	Open Pit Area	-	-	-	-	-	-	-	-	-	-	-	131.9	139.9	-	-	Granodiorite	Two piezometers installed by Rescan - no testing performed.
																18.7	26.4	-	-	Breccia	
DST	2007	A-ND-07-1	?	North TSF Dam Area	-	-	-	-	-	1	3.5	3.5	6.9E-05	Overburden	-	-	-	3.0	-	-	
										2	9.5	9.5	2.6E-04	Overburden							
										3	12.5	12.5	2.5E-04	Overburden							
										5	18.6	18.6	3.6E-02	Overburden							
										7	25.0	25.0	1.4E-02	Overburden							
										9	31.1	31.1	1.2E-02	Overburden							
										12	37.2	37.2	N/A	N/A							
										13	40.9	40.9	2.6E-03	Bedrock							
										14	59.2	59.2	1.9E-03	Bedrock							
										15	71.3	71.3	1.9E-03	Bedrock							
										16	92.7	92.7	1.2E-03	Bedrock							
DST	2007	A-ND-07-2	?	North TSF Dam Area	-	-	-	-	-	1	3.7	3.7	1.9E-04	Overburden	-	-	-	Artesian	-	-	
										2	6.4	6.4	7.5E-05	Overburden							
										3	9.75	9.75	3.0E-05	Overburden							
										4	18.6	18.6	N/A	N/A							
										5	25	25	1.0E-04	Bedrock (fractured)							
										6	37.8	37.8	3.0E-07	Bedrock							
										8	65.25	65.25	4.7E-05	Bedrock							
										9	98.75	98.75	N/A	N/A							
DST	2007	A-ND-07-3	?	North TSF Dam Area	-	-	-	-	-	1	0	0	N/A	N/A	-	-	-	0.2	-	-	
										2	3.9	3.9	2.9E-05	Bedrock							
										3	7.3	7.3	2.3E-05	Bedrock							
										4	19.5	19.5	1.3E-05	Bedrock							
										5	31.7	31.7	1.5E-05	Bedrock							
										6	40.85	40.85	2.8E-05	Bedrock							
										7	56.1	56.1	6.8E-06	Bedrock							
										8	65.25	65.25	4.5E-04	Bedrock							
										9	86.6	86.6	1.1E-03	Bedrock							Very high hydraulic conductivity measurement - difficult to obtain accurate test results of this magnitude.
DST	2007	A-NWD-07-1	?	West TSF Dam Area	-	-	-	-	-	2	3.05	3.05	5.0E-02	Overburden	-	-	-	Artesian	-	-	
										3	6.1	6.1	3.2E-02	Overburden							
										5	12.8	12.8	4.7E-05	Bedrock							
										6	25	25	3.7E-05	Bedrock							
										7	43.3	43.3	7.6E-05	Bedrock							
										8	58.55	58.55	3.0E-05	Bedrock							
DST	2007	A-SD-07-1	?	South TSF Dam Area	-	-	-	-	-	1	4.19	4.19	2.7E-03	Overburden	-	-	-	Artesian	-	-	
										2	10.26	10.26	9.5E-02	Overburden							
										3	14.34	14.34	7.9E-02	Overburden							
										4	19.81	19.81	1.9E+03	Overburden							Very high hydraulic conductivity measurement - difficult to obtain accurate test results of this magnitude.
										5	25.9	25.9	1.5E-03	Bedrock							
										6A	38.1	38.1	1.4E-03	Bedrock							
										6B	38.1	38.1	2.8E-05	Bedrock							
										7	59.45	59.45	4.0E-05	Bedrock							
										8	77.75	77.75	1.8E-03	Bedrock							
										9	105.2	105.2	1.8E-03	Bedrock							
DST	2007	A-SD-07-2	?	South TSF Dam Area	-	-	-	-	-	1	3.08	3.08	N/A	N/A	-	-	-	5.0	-	-	
										2	6.4	6.4	5.0E-03	Bedrock							
										3	12.55	12.55	3.8E-03	Bedrock							
										4	21.6	21.6	4.4E-04	Bedrock							
										5	33.8	33.8	3.9E-03	Bedrock							
										6	55.15	55.15	5.7E-04	Bedrock							
DST	2007	A-SD-07-3	?	South TSF Dam Area	-	-	-	-	-	1	2.55	2.55	6.1E-02	Overburden	-	-	-	Artesian	-	-	
										2	5.2	5.2	N/A	N/A							
										3A	14.35	14.35	2.9E-05	Bedrock							
										3B	14.35	14.35	2.1E-04	Bedrock							
										4	24.35	24.35	2.3E-04	Bedrock							
										5	35.65	35.65	4.4E-04	Bedrock							
										6	44.8	44.8	2.4E-03	Bedrock							
										7	57	57	2.6E-03	Bedrock							
										8	69.2	69.2	2.7E-03	Bedrock							
KP	2008	KP08-01	08CF-344	Open Pit Area	-	-	-	-	-	FHT01-02	135.9	137.5	8.2E-04	Andesite	-	-	-	-	-	-	No standpipe piezometer installed as rods were stuck in the hole.
										FHT01-03	169.5	171.0	8.6E-05	Andesite							Water level during falling head test dropped too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
										FHT01-04	186.2	187.8	9.5E-05	Andesite							Water level during falling head test dropped too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
										FHT01-05	87.3	195.4	2.6E-06	Andesite							Packer tests were not possible due to the highly fractured/gouged nature of the rock.
KP	2008	KP08-02	08CF-345	Open Pit Area	-	-	-	-	-	FHT02-01	83.3	89.9	1.3E-04	Sedimentary and Volcaniclastic	-	-	-	-	-	-	No standpipe piezometer installed. Static water level estimated.
KP	2008	KP08-03	08CF-328	Open Pit Area	-	-	-	-	-	-	-	-	-	-	FHT03-01	25.9	30.8	4.3	4.0E-05	Augite Porphyry	
KP	2008	KP08-04	08CF-341	Open Pit Area	PT04-01	85.2	100.5	6.6E-05	Andesite	FHT04-01	30.3	33.4	6.1E-04	Andesite	-	-	-	-	-	-	Standpipe piezometer damaged during casing removal and unrecoverable. Static water level estimated.
					PT04-02	100.5	115.7	4.8E-05	Augite Porphyry	FHT04-02	62.3	65.4	1.3E-03	Andesite							
					PT04-03	115.7	131.0	1.2E-04	Andesite	FHT04-03	65.4	68.4	$>10^{-3}$	Andesite							Water level fell during falling head test too quickly to take readings and it was not possible to fill the rods for a rising head test, indicating high hydraulic conductivity[5].
					PT04-04	131.0	146.2	2.2E-05	Andesite	FHT04-04	80.6	83.7	$>10^{-3}$	Andesite							Water level fell during falling head test too quickly to take readings and it was not possible to fill the rods for a rising head test, indicating high hydraulic conductivity[5]
					PT04-05	146.2	161.4	3.9E-05	Andesite	FHT04-05	83.7	86.7	3.8E-03	Andesite							
					PT04-06	222.4	237.7	5.6E-05	Andesite	FHT04-06	417.4	420.5	5.3E-04	Andesite							Static water level estimated.
					PT04-07	237.7	252.9	3.4E-05	Andesite	-	-	-	-	-							
					PT04-08	252.9	268.1	6.7E-05	Andesite	-	-	-	-	-							
					PT04-09	268.1	283.4	3.4E-07	Andesite	-	-	-	-	-							
					PT04-10	283.4	298.6	3.7E-05	Andesite	-	-	-	-	-							
					PT04-11	298.6	313.9	5.6E-05	Andesite	-	-	-	-	-							
					PT04-12	313.9	329.1	2.6E-07	Andesite	-	-	-	-	-							
					PT04-13	329.1	344.4	4.2E-07	Andesite	-	-	-	-	-							
					PT04-14	359.6	374.9	4.3E-05	Andesite	-	-	-	-	-							
					PT04-15	374.9	390.1	4.3E-07	Andesite	-	-	-	-	-							
					PT04-16	420.6	435.8	2.5E-06	Andesite	-	-	-	-	-							
					PT04-17	435.8	451.1	2.0E-06	Andesite	-	-	-	-	-							
					PT04-18	454.1	469.4	6.8E-07	Andesite	-	-	-	-	-							
					PT04-19	466.3	481.6	4.9E-06	Andesite	-	-	-	-	-							
					PT04-20	481.6	496.8	4.1E-05	Andesite	-	-	-	-	-							
					PT04-21	496.8	512.0	4.4E-05	Andesite	-	-	-	-	-							
					PT04-22	512.0	527.3	$<10^{-7}$	Andesite	-	-	-	-	-							No flow into test inverval for the Packer test.
					PT04-23	527.3	542.5	5.1E-05	Andesite	-	-	-	-	-							
KP	2008	KP08-05	08CF-347	Open Pit Area	PT05-01	23.9	39.2	$<10^{-7}$	Andesite	RHT05-01	100.1	103.2	9.8E-05	Andesite	-	-	-	Artesian	-	-	Hole is artesian (~3.4 L/min) so casing was left in hole and no well was installed. No flow into test interval for the Packer test.
					PT05-02	42.2	57.5	4.9E-06	Sedimentary and Volcaniclastic	RHT05-02	115.4	118.4	6.7E-05	Andesite							Water level during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
					PT05-03	57.5	72.7	2.2E-06	Sedimentary and Volcaniclastic	RHT05-03	255.6	270.8	3.5E-05	Sedimentary and Volcaniclastic							
					PT05-04	72.7	88.0	5.6E-07	Sedimentary and Volcaniclastic	-	-	-	-	-							
					PT05-05	118.5	133.7	3.0E-07	Andesite	-	-	-	-	-							
					PT05-06	133.7	148.9	3.2E-07	Andesite	-	-	-	-	-							
					PT05-07	148.9	164.2	N/A	Andesite	-	-	-	-	-							Poor Packer test results.
					PT05-08	164.2	179.4	7.5E-07	Andesite	-	-	-	-	-							
					PT05-09	179.4	194.7	N/A	Andesite	-	-	-	-	-							Poor Packer test results.
					PT05-10	194.7	209.9	3.6E-07	Andesite	-	-	-	-	-							
					PT05-11	209.9	225.2	N/A	Andesite	-	-	-	-	-							Poor Packer test results.
					PT05-12	225.2	240.4	1.7E-07	Andesite	-	-	-	-	-							
					PT05-13	240.4	255.6	N/A	Andesite	-	-	-	-	-							Poor Packer test results.
					PT05-14	255.6	270.9	$<10^{-7}$	Sedimentary and Volcaniclastic	-	-	-	-	-							No flow into test inverval for the Packer test.
					PT05-15	270.9	286.1	5.4E-07	Sedimentary and Volcaniclastic	-	-	-	-	-							
					PT05-16	286.1	301.4	3.9E-07	Sedimentary and Volcaniclastic	-	-	-	-	-							
					PT05-17	301.4	316.6	$<10^{-7}$	Sedimentary and Volcaniclastic	-	-	-	-	-							No flow into test inverval for the Packer test.
					PT05-18	316.6	331.9	4.0E-07	Sedimentary and Volcaniclastic	-	-	-	-	-							
					PT05-19	331.9	347.1	6.2E-07	Andesite	-	-	-	-	-							
					PT05-20	347.1	362.4	1.5E-06	Andesite	-	-	-	-	-							
					PT05-21	362.4	377.6	3.3E-07	Andesite	-	-	-	-	-							
					PT05-22	377.6	408.1	6.2E-07	Andesite	-	-	-	-	-							
					PT05-23	408.1	438.6	3.1E-07	Andesite	-	-	-	-	-							
					PT05-24	438.6	463.7	8.1E-07	Andesite	-	-	-	-	-							
KP	2008	KP08-06	08CF-346	Open Pit Area	PT06-01	27.3	42.5	N/A	Andesite	FHT06-01	54.7	57.8	1.7E-03	Andesite	-	34.0	37.2	Artesian	-	-	Poor Packer test results. Flow rate is ~0.05 L/min (casing is set above standpipe, so flow rate estimated).
										RHT06-01	70.0	73.0	1.8E-04	Andesite							
										FHT06-02	88.2	91.3	8.4E-05	Andesite							
										RHT06-03	103.5	106.5	4.0E-04	Andesite							
										RHT06-04	118.7	121.8	1.1E-03	Andesite							
										RHT06-05	137.0	140.1	1.2E-03	Andesite							
										RHT06-06	152.3	155.3	3.1E-04	Andesite							
										RHT06-07	169.0	172.1	3.1E-04	Granodiorite							
										RHT06-08	182.7	185.8	7.6E-04	Dyke							
										RHT06-09	198.0	201.0	3.4E-04	Andesite							
										RHT06-10	213.2	216.3	4.8E-04	Andesite							
										RHT06-11	228.5	231.5	7.2E-04	Andesite							
KP	2008	KP08-07	08CF-329	Open Pit Area	-	-	-	-	-	RHT07-01	236.4	239.4	5.4E-05	Augite Porphyry	-	27.5	30.9	Artesian	-	-	Flow rate <0.005 L/min. Water level during rising head test rose too slowly to complete the test hydraulic conductivity results were extrapolated from existing data.
										RHT07-02	251.6	254.7	1.1E-04	Augite Porphyry							Static water level estimated.
										RHT07-03	266.9	269.9	2.2E-04	Augite Porphyry							Static water level estimated.
KP	2008	KP08-08	08CF-339	Open Pit Area	-	-	-	-	-	RHT08-01	39.3	42.4	8.2E-06	Dyke	-	-	-	20.0	-	-	No well was installed because Van Ruth Plugs required for the installation were not available and it was considered impractical to have the drill sit and wait for them to arrive. Water level during rising head test rose too slowly to complete the test, h
										RHT08-02	61.7	64.8	1.1E-05	Andesite							Water level during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
										RHT08-03	77.0	80.0	5.2E-05	Augite Porphyry							Water level during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
										RHT08-04	92.2	95.3	1.6E-04	Augite Porphyry							Water level during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
										FHT08-01	171.9	175.0	1.8E-05	Sedimentary and Volcaniclastic							Water level during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
										FHT08-02	193.2	196.3	1.3E-05	Sedimentary and Volcaniclastic							Water level during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
KP	2008	KP08-09	08CF-338	Open Pit Area	-	-	-	-	-	RHT09-01	61.0	64.0	$<10^{-7}$	Granodiorite	FHT09-01	47.4	51.0	19.7	9.3E-05	Granodiorite	Water level did not rise for RHT09-01, indicating low hydraulic conductivity[5]
KP	2008	KP08-10	08CF-342	Open Pit Area	-	-	-	-	-	FHT10-01	126.2	129.2	7.9E-04	Granodiorite	-	-	-	-	-	-	No packer tests were conducted as rock was too fractured. No standpipe piezometer was installed because the rods became stuck in the hole and could not be removed. Static water level estimated.
KP	2008	KP08-12	08CF-389	Plant Site Area	-	-	-	-	-	FHT12-01	9.0	9.1	7.0E-04	Overburden	FHT12-06	44.8	48.8	10.0	2.7E-04	Overburden	Bedrock was not reached and hole was ended in overburden.
										FHT12-02	24.3	24.4	2.8E-04	Overburden							
										FHT12-03	35.1	36.6	9.6E-05	Overburden							
										FHT12-04	54.1	54.2	3.2E-03	Overburden							
										FHT12-05	60.9	61.0	3.7E-03	Overburden							
KP	2008	KP08-13	08CF-387	Plant Site Area	-	-	-	-	-	RHT13-01	22.9	24.4	2.7E-03	Dyke	RHT13-02	21.8	25.5	6.6	2.9E-05	Dyke	
KP	2008	KP08-16	08CF-363	Open Pit Area	PT16-01	19.8	35.1	FAILED	Andesite	RHT16-01	25.9	29.0	2.0E-05	Andesite	FHT16-01	58.5	62.2	2.8	1.0E-07	Andesite	Water leaking from Packer test. Water level during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data. Static water level estimated.
										RHT16-02	35.1	38.1	7.6E-05	Andesite							Water level during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data. Static water level estimated.
										RHT16-03	50.3	53.3	1.1E-07	Andesite							Water level during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data. Static water level estimated.
KP	2008	KP08-17	08CF-364	Open Pit Area	PT17-01	18.3	33.5	$<10^{-7}$	Granodiorite	RHT17-01	27.4	30.5	2.2E-04	Granodiorite	FHT17-01	52.6	55.8	3.5	8.6E-07	Granodiorite	No flow into test inverval for the Packer test.
					PT17-02	45.7	54.9	FAILED	Granodiorite	RHT17-02	35.1	36.6	1.4E-05	Granodiorite							Water leaking from Packer test. Water level during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.

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TABLE 3.2

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF HYDROGEOLOGICAL TESTING

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Consultant	Year	Drillhole ID	Copper Fox Drillhole ID	Location of Drillhole	Packer Test (Lugeon)					Falling/Rising Head Test					Piezometer Information						Notes
					Test Number	Packer Zone		Hydraulic Conductivity	Geology	Test Number	Test Zone		Hydraulic Conductivity[1]	Geology	Test Number	Completion Zone		Depth to Water[2]	Hydraulic Conductivity (Rising/ Falling Head)[1]	Geology	
						From (m)	To (m)	(cm/s)			From (m)	To (m)	(cm/s)			From (m)	To (m)	(m)	(cm/s)		
KP	2008	KP08-20	08CF-336	Waste Dump Area	-	-	-	-	-	-	-	-	-	-	FHT20-01	12.2	16.8	1.5	$>10^{-3}$	No Recovery	Water drained out of the standpipe too quickly to fill, could not complete falling head test[3].
KP	2008	KP08-21	08CF-331	Waste Dump Area	-	-	-	-	-	-	-	-	-	-	FHT21-01	43.9	46.9	10.6	$>10^{-3}$	No Recovery	No packer tests were conducted as all drilling was in overburden. Could not fill well for falling head test, water level dropped too quickly[5].
KP	2008	KP08-22	08CF-335	Waste Dump Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No piezometer installled as the hole was dry.
KP	2008	KP08-23	08CF-333	Waste Dump Area	PT23-01	11.9	18.0	2.6E-04	Andesite	RHT23-01	64.0	64.0	2.0E-02	Andesite	-	-	-	1.2	-	-	No piezometer required due to artesian conditions. Water level re-measured in September at 1.2 m.b.g.s. Casing was left in hole.
					PT23-02	30.2	34.7	FAILED	Andesite	RHT23-02	75.9	75.9	3.1E-03	Andesite							Water leaking from Packer test.
					PT23-03	40.4	46.5	FAILED	Granodiorite	RHT23-03	82.0	85.0	1.5E-05	Andesite							Water level during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data. Static water level estimated. Packer system was leaking during test, results not valid.
					-	-	-	-	-	RHT23-04	106.0	106.1	2.2E-02	Granodiorite							
					-	-	-	-	-	RHT23-05	118.8	121.6	4.5E-04	Andesite							
					-	-	-	-	-	RHT23-06	133.8	136.9	6.5E-04	Andesite							
KP	2008	KP08-25	08CF-380	North TSF Dam Area	PT25-01	29.3	44.5	$<10^{-7}$	Peridotite	FHT25-01	17.5	17.5	N/A	No Recovery	FHT25-02	56.1	59.7	9.8	5.8E-08	Peridotite	No flow into test inverval for the Packer test. Falling head test did not produce valid results, drill rods could not be raised to expose a sufficient test zone due to the hole sloughing in.
										RHT25-02	32.3	36.9	1.9E-05	Peridotite							Water level during falling head test fell too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
										RHT25-01	56.7	59.7	1.1E-06	Peridotite							Water level during falling head test fell too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
KP	2008	KP08-27	08CF381	North TSF Dam Area	PT27-01	22.9	38.1	$<10^{-7}$	Granodiorite	RHT27-01	22.9	25.9	9.9E-05	Granodiorite	RHT27-03	36.9	40.5	-0.3	5.0E-07	Granodiorite	No flow into test inverval for the Packer test. Water level in piezometer during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
										RHT27-02	22.9	38.1	3.8E-05	Granodiorite							
KP	2008	KP08-28	08CF-382	North TSF Dam Area	-	-	-	-	-	RHT28-01	19.8	24.4	7.5E-05	Granodiorite	RHT28-03	42.8	46.7	Artesian	3.3E-05	Granodiorite	Water level in piezometer during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data. Flow rate is 0.0135 L/min.
										RHT28-02	29.0	44.2	7.1E-04	Granodiorite							
KP	2008	KP08-31	08CF-384	Northwest TSF Dam Area	PT31-01	22.3	37.5	FAILED	Granodiorite	FHT31-01	9.1	9.1	6.3E-05	Overburden	RHT31-03	45.1	49.4	Artesian	8.6E-05	Granodiorite	Flow rate is 0.05 L/min. Water level in piezometer during falling head test fell too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.Packer test failed due to water leaking out of the packer system.
										FHT31-02	17.7	20.7	N/A	Granodiorite							Falling head test did not produce valid results.
										RHT31-01	34.4	39.0	1.4E-04	Granodiorite							
										RHT31-02	42.1	48.2	6.9E-05	Granodiorite							
KP	2008	KP08-32	08CF-385	Northwest TSF Dam Area	PT32-01	44.1	59.4	1.8E-05	Granodiorite	FHT32-01	12.6	12.7	N/A	Overburden	RHT32-02	63.4	67.1	Artesian	8.1E-05	Granodiorite	Flow rate is 0.033 L/min. Falling head test did not produce valid results.
										FHT32-02	23.3	23.3	N/A	Overburden							Falling head test did not produce valid results.
										RHT32-01	45.7	48.8	3.6E-04	Granodiorite							
KP	2008	KP08-37A	08CF-374A	South TSF Dam Area	-	-	-	-	-	FHT37A-01	11.4	11.4	1.3E-02	Overburden	FHT37A-05	31.1	35.1	13.8	3.1E-06	Overburden	
										FHT37A-02	17.5	17.5	6.4E-03	Overburden							
										FHT37A-03	26.6	26.7	6.3E-03	Overburden							
										FHT37A-04	36.0	54.6	7.7E-05	Sedimentary and Volcaniclastic							
										RHT37A-01	42.0	42.1	1.9E-03	Sedimentary and Volcaniclastic							
										RHT37A-02	51.5	54.6	2.1E-05	Sedimentary and Volcaniclastic							Water level during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
KP	2008	KP08-37B	08CF-374B	South TSF Dam Area	-	-	-	-	-	RHT37B-01	44.5	47.6	8.4E-05	Sedimentary and Volcaniclastic	FHT37B-01	62.5	66.7	13.7	3.5E-06	Sedimentary and Volcaniclastic	Water level during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
KP	2008	KP08-38	08CF-375	South TSF Dam Area	PT38-01	13.1	25.3	FAILED	Limestone	RHT38-01	13.4	14.6	6.7E-06	Limestone	FHT38-02	26.5	30.2	10.5	9.9E-07	Limestone	Water level during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data. Packer system was leaking during test, results not valid.
										RHT38-02	13.1	25.3	5.2E-05	Limestone							
										RHT38-03	40.5	43.6	N/A	Limestone							Rising head test did not produce valid results.
										RHT38-04	46.6	51.2	N/A	Sedimentary and Volcaniclastic							Rising head test did not produce valid results.
										FHT38-01	46.6	51.2	8.0E-05	Sedimentary and Volcaniclastic							
										RHT38-05	2.7	52.7	1.6E-06	Limestone/ Sedimentary and Volcaniclastic							Water level during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
										RHT38-06	64.9	68.3	1.1E-04	Sedimentary and Volcaniclastic							
										RHT38-07	77.4	82.0	9.8E-05	Sedimentary and Volcaniclastic							
KP	2008	KP08-40	08CF-376	South TSF Dam Area	-	-	-	-	-	RHT40-01	13.7	15.2	2.2E-05	Limestone	FHT40-01	26.5	30.3	3.7	1.1E-06	Limestone	Water level during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
										RHT40-02	19.8	24.4	8.4E-05	Limestone							
KP	2008	KP08-41	08CF-378	South TSF Dam Area	PT41-01	22.9	30.0	FAILED	Limestone	FHT41-01	7.9	7.9	2.3E-04	Overburden	FHT41-03	17.1	20.7	1.6	4.8E-06	Overburden	Water level during falling head test fell too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data. Packer system was leaking during the test, results not valid.
										FHT41-02	14.0	14.0	1.5E-04	Overburden							Water level during falling head test fell too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
										RHT41-01	22.9	29.0	4.8E-06	Limestone							Water level during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
KP	2008	KP08-42	08CF-373	South TSF Dam Area	-	-	-	-	-	FHT42-01	12.9	12.9	1.5E-03	Overburden	FHT42-02	56.1	59.7	3.3	8.4E-07	Sedimentary and Volcaniclastic	Water level during falling head test fell too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
										RHT42-01	41.5	44.5	3.1E-05	Sedimentary and Volcaniclastic							Water level during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
										RHT42-02	44.5	49.1	4.4E-05	Sedimentary and Volcaniclastic							
KP	2008	KP08-45	08CF-379	Northwest TSF Dam Area	-	-	-	-	-	RHT45-01	14.0	17.1	1.0E-05	Limestone	FHT45-01	66.1	70.1	14.7	1.9E-05	Limestone	Packer tests were attempted but failed due to equipment malfunction. Water level during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data. Static water level estimated.
										RHT45-02	29.3	32.3	2.5E-03	Andesite							Water level during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data. Static water level estimated.
										RHT45-03	44.5	47.6	2.4E-03	Andesite							Water level during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data. Static water level estimated.
										RHT45-04	59.7	62.8	N/A	Limestone							Rising head test did not produce valid results.
KP	2008	RES08-01A	08CF-340A	Open Pit Area	PT-01A-01	21.3	36.6	5.2E-07	Veins	RHT-R01A-01	16.7	16.7	N/A	Veins	FHT-R01A-02	43.9	50.0	1.8	4.6E-07	Andesite	Rising head test did not produce valid results. Packer test failed due to loss of water flow through packer system.
										FHT-R01A-01	32.0	38.1	$<10^{-7}$	Veins	RHT[3]	43.9	50.0	3.1	3.2E-07	Andesite	Water level remained constant during falling head test, indicating low hydraulic conductivity[5].
										RHT-R01A-02	32.0	38.1	$\leq 10^{-6}$	Veins							Water level during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
KP	2008	RES08-01B	08CF-340B	Open Pit Area	-	-	-	-	-	-	-	-	-	-	FHT-R01B-01	9.1	15.2	0.6	3.4E-07	Veins	Static water leve estimated.
															RHT[3]	8.5[4]	15.2	2.2	-	Veins	
KP	2008	RES08-02A	08CF-337A	Waste Dump Area	PT-R02A-01	32.6	41.8	1.2E-05	Feldspar-Quartz Porphyry	FHT-R02A-01	32.6	41.8	5.8E-06	Feldspar-Quartz Porphyry	FHT-R02A-02	51.8	60.0	6.5	2.5E-05	Feldspar-Quartz Porphyry	Water level during falling head test dropped too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
					PT-R02A-02	44.8	52.4	3.0E-06	Feldspar-Quartz Porphyry	RHT-R02A-01	32.6	41.7	9.9E-05	Feldspar-Quartz Porphyry	RHT[3]	51.8	60.0	13.8	1.7E-07	Feldspar-Quartz Porphyry	
KP	2008	RES08-02B	08CF-337B	Waste Dump Area	-	-	-	-	-	-	-	-	-	-	FHT-R02B-01	23.8	28.0	4.0	4.3E-07	No Recovery	Water level during falling head test dropped too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
															RHT[3]	22.6[4]	28.7[4]	6.6	6.9E-07[4]	No Recovery	
KP	2008	RES08-03A	08CF-330A	Waste Dump Area	PT-R03A-01	68.6	71.7	FAILED	Granodiorite	-	-	-	-	-	FHT-R03A-01	106.4	117.3	3.1	3.7E-05	Granodiorite	Packer system was leaking during test, results not valid.
					PT-R03A-02	70.1	73.2	FAILED	Granodiorite						RHT[3]	106.4	117.3	3.1	3.9E-05	Granodiorite	Packer system was leaking during test, results not valid.
					PT-R03A-03	94.5	99.1	1.8E-04	Granodiorite												
KP	2008	RES08-03B	08CF-330B	Waste Dump Area	-	-	-	-	-	-	-	-	-	-	FHT-R03B-01	7.3	10.7	1.3	$>10^{-3}$	No Recovery	Could not fill well for falling head test, water level dropped too quickly, indicating high hydraulic conductivity.[5]
															RHT[3]	7.3	10.7	1.5	-	No Recovery	
KP	2008	RES08-04A	08CF-332A	Waste Dump Area	PT-R04A-01	24.7	32.3	3.0E-04	Granodiorite	-	-	-	-	-	FHT-R04A-01	86.3	99.4	6.5	3.3E-06	Granodiorite	
					PT-R04A-02	36.9	45.6	2.0E-04	Granodiorite												
					PT-R04A-03	46.0	50.6	3.5E-04	Granodiorite												
					PT-R04A-04	55.2	61.3	2.3E-04	Granodiorite						RHT[3]	86.3	99.4	9.8	3.5E-06	Granodiorite	
					PT-R04A-05	70.4	75.0	6.9E-04	Granodiorite												
					PT-R04A-06	88.7	99.4	FAILED	Granodiorite												Packer system was leaking during test, results not valid.
					PT-R04A-07	88.7	99.4	7.9E-06	Granodiorite												
KP	2008	RES08-04B	08CF-332B	Waste Dump Area	-	-	-	-	-	-	-	-	-	-	FHT-R04B-01	48.2	53.5	3.8	9.1E-06	Granodiorite	
															RHT[3]	48.2	55.2[4]	9.5	3.2E-06[4]	Granodiorite	
KP	2008	RES08-05A	08CF-388A	Plant Site Area	-	-	-	-	-	FHT14A-01	10.4	10.4	5.6E-07	Overburden	-	21.4	27.4	Artesian	-	Andesite	Calculated flow rate was ~0.2 L/min. Water level during falling head test dropped too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
										RHT14A-01	16.8	18.3	9.4E-05	Andesite							
KP	2008	RES08-05B	08CF-388B	Plant Site Area	-	-	-	-	-	FHT14B-01	7.0	10.1	8.8E-03	Overburden	FHT14B-02	6.4	10.4	0.1	2.3E-03	Overburden	
KP	2008	RES08-06A	08CF-383A	North TSF Dam Area	PT-R06A-01	35.7	50.9	7.2E-07	Granodiorite	FHT-R06A-01	0.8	9.9	9.3E-04	Overburden	RHT-R06A-01	59.4	63.1	-0.2	3.1E-05	Granodiorite	
										FHT-R06A-02	17.9	18.0	5.6E-07	Overburden	RHT[3]	59.4	63.1	0.1	6.5E-06	Granodiorite	Water level during falling head test dropped too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
KP	2008	RES08-06B	08CF-383B	North TSF Dam Area	-	-	-	-	-	-	-	-	-	-	FHT-R06B-01	11.6	15.2	0.1	1.9E-03	Overburden	
															RHT[3]	11.6	15.2	0.3	1.9E-03	Overburden	
KP	2008	RES08-07A	08CF-377A	South TSF Dam Area	PT43A-01	24.7	39.9	FAILED	Limestone	FHT43A-01	10.0	10.1	3.4E-04	Overburden	FHT43A-02	36.3	39.9	Artesian	1.6E-03	Limestone	Water level during falling head test dropped too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data. Flow rate is ~0.82 L/min. Water flow was observed leaking from the casing during the packer test, results
										RHT43A-01	24.7	39.9	3.5E-05	Limestone							
KP	2008	RES08-07B	08CF-377B	South TSF Dam Area		-	-	-	-	-	-	-	-	-	FHT43B-01	4.5	9.1	Artesian	3.4E-04	Overburden	Flow rate is ~0.2 L/min.
KP	2008	RES08-08A	08CF-386A	Northwest TSF Dam Area	PT44A-01	15.2	30.5	$<10^{-7}$	Limestone	FHT44A-01	17.1	17.2	5.7E-05	Granodiorite	FHT44A-02	56.4	59.9	1.1	9.9E-06	Granodiorite	No flow into test inverval for the Packer test. Water level during falling head test dropped too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
										RHT44A-01	38.3	43.1	1.3E-05	Granodiorite							Water level during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
										RHT44A-02	50.4	50.8	1.7E-04	Granodiorite	RHT[3]	56.4	60.2[4]	1.0	1.3E-05[4]	Granodiorite	Water level during rising head test rose too slowly to complete the test, hydraulic conductivity results were extrapolated from existing data.
KP	2008	RES08-08B	08CF-386B	Northwest TSF Dam Area	-	-	-	-	-	-	-	-	-	-	FHT44B-01	7.2	10.7	0.6	2.6E-05	Granodiorite	
															RHT[3]	7.2	10.7	0.5	1.4E-05	Granodiorite	

M:\1\01\00329\08\A\Report\Rev 01- Hydrogeology\Tables\[Table 3.2.xls]Hydrogeological Summary

NOTES:

1. HYRAULIC CONDUCTIVITIES ESTIMATED USING THE HVORSLEV EQUATION.
2. VERTICAL DEPTH TO WATER BELOW GROUND SURFACE.
3. TESTS PERFORMED BY RESCAN FOLLOWING WELL DEVELOPMENT.
4. INCORRECT COMPLETION ZONE AND, THEREFORE, HYDRAULIC CONDUCTIVITY RESULT.
5. ASSUMED VALUES OF HYDRAULIC CONDUCTIVITY BASED ON MAXIMUM AND MINIMUM CONDUCTIVITY OBSERVED ON SITE.

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	07DEC'09	ISSUED WITH REPORT VA101-329/8-1	AWM	HRS	KJB

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TABLE 3.3

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF OVERBURDEN AND ROCKMASS HYDRAULIC CONDUCTIVITY

Print Apr/08/10 13:08:33

Material		Hydraulic Conductivity (cm/s)						Standard Deviation	No. of Values
		Minimum	Maximum	Mean	Median	25th percentile	75th percetile		
Overburden[1]		4.3E-07	1.9E+03	4.4E+01	9.7E-04	1.4E-04	7.0E-03	2.9E+02	44
Tertiary and Older	Dyke	8.2E-06	2.7E-03	8.6E-04	3.9E-04	2.4E-05	1.2E-03	1.2E-03	4
Late Triassic	Vein Systems	1.0E-07	1.0E-06	4.9E-07	4.3E-07	2.8E-07	6.4E-07	3.8E-07	4
	Peridotite	5.8E-08	1.9E-05	5.0E-06	6.2E-07	9.0E-08	5.6E-06	9.2E-06	4
Stuhini Group	Sedimentary and Volcaniclastic Rocks	1.0E-07	1.9E-03	1.2E-04	1.9E-05	1.2E-06	8.0E-05	4.0E-04	22
	Andesite	1.0E-07	2.0E-02	6.4E-04	5.1E-05	6.2E-07	4.0E-04	2.4E-03	73
	Augite Porphyry	4.0E-05	2.2E-04	9.7E-05	5.4E-05	5.0E-05	1.3E-04	6.8E-05	7
Hickman Batholith	Feldspar-Quartz Porphyry	1.7E-07	2.5E-04	4.6E-05	5.8E-06	3.7E-06	1.1E-05	9.9E-05	6
	Granodiorite	1.0E-07	2.2E-02	6.0E-04	3.8E-05	9.1E-06	1.8E-04	3.2E-03	45
Upper Carboniferous	Limestone	1.0E-07	1.6E-03	1.4E-04	1.0E-05	1.6E-06	3.5E-05	4.4E-04	13
All Rocks[1]		5.8E-08	2.2E-02	5.7E-04	4.1E-05	4.9E-06	2.5E-04	2.2E-03	211

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NOTES:

1. INCLUDES HYDRAULIC CONDUCTIVITY VALUES FROM DST REPORT (DST, JANUARY 2008).

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	10FEB'10	ISSUED WITH - REPORT VA101-329/8-1	AM	HRS	KJB

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TABLE 3.4

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF ROCKMASS HYDRAULIC CONDUCTIVITY BY LOCATION

Print Apr/01/10 12:16:50

Location	Hydraulic Conductivity (cm/s)						Standard Deviation	No. of Values
	Minimum	Maximum	Mean	Median	25th percentile	75th percetile		
Open Pit	1.0E-07	3.8E-03	2.1E-04	3.6E-05	5.8E-07	1.2E-04	5.0E-04	94
Waste Dumps	1.7E-07	2.2E-02	1.7E-03	3.9E-05	3.5E-06	3.0E-04	5.4E-03	29
Plant Site	2.9E-05	2.7E-03	9.2E-04	9.4E-05	6.2E-05	1.4E-03	1.5E-03	3
TSF - North Embankment	5.8E-08	2.6E-03	3.6E-04	3.0E-05	6.8E-06	1.0E-04	7.0E-04	29
TSF - Northwest Embankment	1.0E-07	2.5E-03	2.8E-04	4.2E-05	1.3E-05	8.5E-05	7.0E-04	22
TSF - South Embankment	8.4E-07	5.0E-03	8.5E-04	8.4E-05	2.8E-05	1.6E-03	1.3E-03	39
TSF	5.8E-08	5.0E-03	5.5E-04	4.7E-05	1.4E-05	4.4E-04	1.0E-03	90

M:\1\01\00329\08\A\Report\1- Hydrogeology\Tables\[Table 3.4.xls]Table 3.4

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	10FEB'10	ISSUED WITH - REPORT VA101-329/8-1	AM	HRS	KJB

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TABLE 4.1

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

GROUNDWATER SAMPLE LOCATION DESCRIPTIONS

4/1/2010 12:17

Site Location	Easting	Northing	Site Description
RES08-1A	380587	6360572	Groundwater monitoring location in the open pit area.
RES08-1B	380587	6360572	
RES08-2A	380685	6358778	Groundwater monitoring location in the waste dump area.
RES08-2B	380685	6358778	
RES08-3A	378573	6360083	Groundwater monitoring location in the waste dump area.
RES08-3B	378573	6360083	
RES08-4A	378705	6358496	Groundwater monitoring location in the waste dump area.
RES08-4B	378705	6358496	
RES08-5A	381532	6360631	Groundwater monitoring location in the plant site area.
RES08-5B	381532	6360631	
RES08-6A	382226	6375784	Groundwater monitoring location in the North TSF Dam area.
RES08-6B	382226	6375784	
RES08-7A	382819	6366778	Groundwater monitoring location in the South TSF Dam area.
RES08-7B	382819	6366778	
RES08-8A	379992	6373318	Groundwater monitoring location in the Northwest TSF Dam area.
RES08-8B	379992	6373318	

M:\1\01\00329\08\A\Report\1- Hydrogeology\Tables\[Table 4.1.xls]Table 4.1

NOTES:

1. GPS COORDINATES ARE PROVIDED UTM NAD83 ZONE 9V.

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	30NOV'09	ISSUED WITH REPORT - VA101-329/8-1	AL	HRS	KJB

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TABLE 4.2

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF GROUNDWATER QUALITY
GUIDELINE EXCEEDANCES

Print Mar/23/10 10:05:51

Parameter	BCWQG [2] Limits	CCME [3] Limits	Site	Total Number of Samples	BCWQG Exceedances	CCME Exceedances
Physical Parameters						
***In-situ* pH**	6.5 - 9	6.5 - 9	RES08-1A	2	2	2
			RES08-1B	2	2	2
			RES08-2A	2	2	2
			RES08-4A	2	2	2
			RES08-4B	2	1	1
			RES08-6B	2	1	1
Lab pH	6.5 - 9	6.5 - 9	RES08-1A	2	2	2
			RES08-1B	2	2	2
			RES08-2A	2	2	2
			RES08-4A	2	2	2
			RES08-4B	2	2	2
Fluoride	0.2 to 0.3 [4]		RES08-4A	2	2	
			RES08-6A	2	2	
			RES08-7A	2	2	
			RES08-7B	2	2	
			RES08-8A	2	2	
			RES08-8B	2	2	
Sulphate	100		RES08-1A	2	2	
			RES08-1B	2	2	
			RES08-2A	2	1	
			RES08-3A	2	1	
			RES08-6A	2	1	
			RES08-7A	2	2	
			RES08-7B	2	2	
			RES08-8A	2	2	
			RES08-8B	2	1	
Ammonia	0.681 to 28.3 [5,6]	0.0168 to 185 [5,6]	RES08-1A	2		2
			RES08-1B	2		2
			RES08-2A	2		2
			RES08-4A	2		2
Dissolved Metals						
Aluminum	0.1 to $e^{(1.209-2.426*[pH]+0.286*[pH](2))}$ (8)	0.005 to 0.1 [8]	RES08-2A	2	2	2
			RES08-2B	2	1	1
			RES08-4A	2	2	2
			RES08-4B	2	1	1
			RES08-5A	1	1	1
			RES08-5B	1	1	1
			RES08-6B	2	1	1
			RES08-8A	2	1	1
			RES08-8B	2	1	1
Arsenic	0.005	0.005	RES08-2B	2	2	2
Cadmium	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)/1000}$ (4)	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)/1000}$ (4)	RES08-5A	1	1	1
			RES08-5B	1	1	1
			RES08-8B	2	1	1
Copper	(0.094*([Hardness (Dissolved)])+2)/1000 [4]	0.002 to 0.004 [4]	RES08-1A	2		2
			RES08-1B	2		1
			RES08-2A	2		2
			RES08-2B	2		1
			RES08-4A	2		2
			RES08-4B	2		1
			RES08-5A	1		1
			RES08-5B	1		1
			RES08-6A	2		1
			RES08-6B	2		1
			RES08-8A	2		1
Iron	0.35	0.3	RES08-2B	2	1	1
			RES08-5A	1	1	1
			RES08-6B	2	1	1
			RES08-8A	2	1	1
			RES08-8B	2	1	2
Molybdenum	2	0.073	RES08-1A	2		2
			RES08-1B	2		2
			RES08-2A	2		2
			RES08-4A	2		2
			RES08-8A	2		1
			RES08-8B	2		1
Selenium	0.002	0.001	RES08-1B	2	1	2
			RES08-2A	2	1	2
			RES08-4B	2		1
			RES08-6B	2	1	1
Silver	0.0001 to 0.003 [4]	0.0001	RES08-8A	2	1	1
Vanadium	0.006		RES08-6B	2	1	

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TABLE 4.2

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF GROUNDWATER QUALITY
GUIDELINE EXCEEDANCES

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Parameter	BCWQG [2] Limits	CCME [3] Limits	Site	Total Number of Samples	BCWQG Exceedances	CCME Exceedances
Total Metals						
Aluminum		0.005 to 0.1 [8]	RES08-1A	1		1
			RES08-1B	1		1
			RES08-2A	1		1
			RES08-2B	1		1
			RES08-3A	1		1
			RES08-3B	1		1
			RES08-4A	1		1
			RES08-4B	1		1
			RES08-5A	1		1
			RES08-5B	1		1
			RES08-6A	1		1
			RES08-6B	1		1
			RES08-8A	1		1
			RES08-8B	1		1
Arsenic	0.005	0.005	RES08-1B	1	1	1
			RES08-2B	1	1	1
			RES08-3B	1	1	1
			RES08-5B	1	1	1
			RES08-6A	1	1	1
			RES08-6B	1	1	1
			RES08-8A	1	1	1
			RES08-8B	1	1	1
Beryllium	0.0053		RES08-8A	1	1	
Cadmium	$10^{(0.86*(\log(\text{Hardness}))-3.2)}/1000$ [4]	$10^{(0.86*(\log(\text{Hardness}))-3.2)}/1000$ [4]	RES08-2B	1	1	1
			RES08-3A	1	1	1
			RES08-3B	1	1	1
			RES08-4B	1	1	1
			RES08-5A	1	1	1
			RES08-5B	1	1	1
			RES08-6A	1	1	1
			RES08-6B	1	1	1
			RES08-8A	1	1	1
			RES08-8B	1	1	1
Cobalt	0.11		RES08-6B	1	1	
Copper	(0.094*([Hardness (Dissolved)])+2)/1000 [4]	0.002 to 0.004 [4]	RES08-1A	1		1
			RES08-1B	1	1	1
			RES08-2A	1		1
			RES08-2B	1	1	1
			RES08-3A	1		1
			RES08-3B	1	1	1
			RES08-4A	1		1
			RES08-4B	1		1
			RES08-5B	1	1	1
			RES08-6A	1	1	1
			RES08-6B	1	1	1
			RES08-8A	1	1	1
			RES08-8B	1	1	1
Iron	1	0.3	RES08-1B	1	1	1
			RES08-2A	1	1	1
			RES08-2B	1	1	1
			RES08-3A	1		1
			RES08-3B	1	1	1
			RES08-4A	1		1
			RES08-4B	1		1
			RES08-5B	1	1	1
			RES08-6A	1	1	1
			RES08-6B	1	1	1
			RES08-8A	1	1	1
			RES08-8B	1	1	1
Lead	0.003 to $e^{(1.273*\ln([\text{Hardness (Dissolved)}])-1.460)}/1000$ [4]	0.001 to 0.007 [4]	RES08-1B	1		1
			RES08-2A	1		1
			RES08-2B	1		1
			RES08-3B	1		1
			RES08-5B	1		1
			RES08-6A	1		1
			RES08-6B	1		1
			RES08-8A	1	1	1
			RES08-8B	1		1
Manganese	(0.01102*[Hardness(Dissolved)])+2)/1000 [4]		RES08-5B	1	1	
			RES08-6B	1	1	
Mercury	0.0001	0.000026	RES08-1B	1		1
			RES08-5B	1		1
			RES08-6A	1		1
			RES08-8A	1		1
Molybdenum	2	0.073	RES08-1A	1		1
			RES08-1B	1		1
			RES08-2A	1		1
			RES08-4A	1		1
			RES08-5B	1		1
			RES08-6A	1		1
			RES08-8A	1		1
			RES08-8B	1		1

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TABLE 4.2

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF GROUNDWATER QUALITY
GUIDELINE EXCEEDANCES

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Parameter	BCWQG [2] Limits	CCME [3] Limits	Site	Total Number of Samples	BCWQG Exceedances	CCME Exceedances
Nickel	0.025 to 0.150 [4]	0.025 to 0.15 [4]	RES08-2B	1	1	1
			RES08-5B	1	1	1
			RES08-6A	1	1	1
			RES08-6B	1	1	1
Selenium	0.002	0.001	RES08-1B	1	1	1
			RES08-2A	1	1	1
			RES08-2B	1		1
			RES08-4A	1		1
			RES08-4B	1		1
			RES08-5B	1	1	1
			RES08-6B	1	1	1
			RES08-8A	1	1	1
			RES08-8B	1		1
Silver	0.0001 to 0.003 [4]	0.0001	RES08-1A	1		1
			RES08-1B	1		1
			RES08-2A	1		1
			RES08-2B	1	1	1
			RES08-3A	1		1
			RES08-3B	1	1	1
			RES08-4A	1		1
			RES08-4B	1		1
			RES08-5B	1	1	1
			RES08-6A	1	1	1
			RES08-6B	1	1	1
			RES08-8A	1	1	1
			RES08-8B	1		1
Thallium	0.0003	0.0008	RES08-6B	1	1	1
Vanadium	0.006		RES08-1B	1	1	
			RES08-2A	1	1	
			RES08-2B	1	1	
			RES08-3B	1	1	
			RES08-4B	1	1	
			RES08-5B	1	1	
			RES08-6A	1	1	
			RES08-6B	1	1	
			RES08-8A	1	1	
			RES08-8B	1	1	
Zinc	(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [4]	0.03	RES08-1B	1		1
			RES08-2A	1		1
			RES08-2B	1	1	1
			RES08-3B	1	1	1
			RES08-5B	1	1	1
			RES08-6A	1	1	1
			RES08-6B	1	1	1
			RES08-8A	1	1	1
			RES08-8B	1	1	1
M:\1\01\00329\08\A\Report\1- Hydrogeology\Tables\[Table 4.2.xls]Table 2				263	145	195

NOTES:

1. UNITS ARE mg/L, UNLESS OTHERWISE STATED.
2. BCWQG - BRITISH COLUMBIA WATER QUALITY GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (AUGUST 2006).
3. CCME - CANADAIN COUNCIL OF MINISTERS OF THE ENVIRONMENT, CANADIAN ENVIRONMENTAL QUALITY GUIDELINES - FRESHWATER GUIDELINES FOR THE PROTECTION OF AQUATIC LIFE, UPDATED DECEMBER 2006.
4. HARDNESS (CaCO3) DEPENDENT.
5. pH (*IN SITU*) DEPENDENT.
6. TEMPERATURE (*IN SITU*) DEPENDENT.
7. CHLORIDE (DISSOLVED) DEPENDENT.
8. pH DEPENDENT.

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
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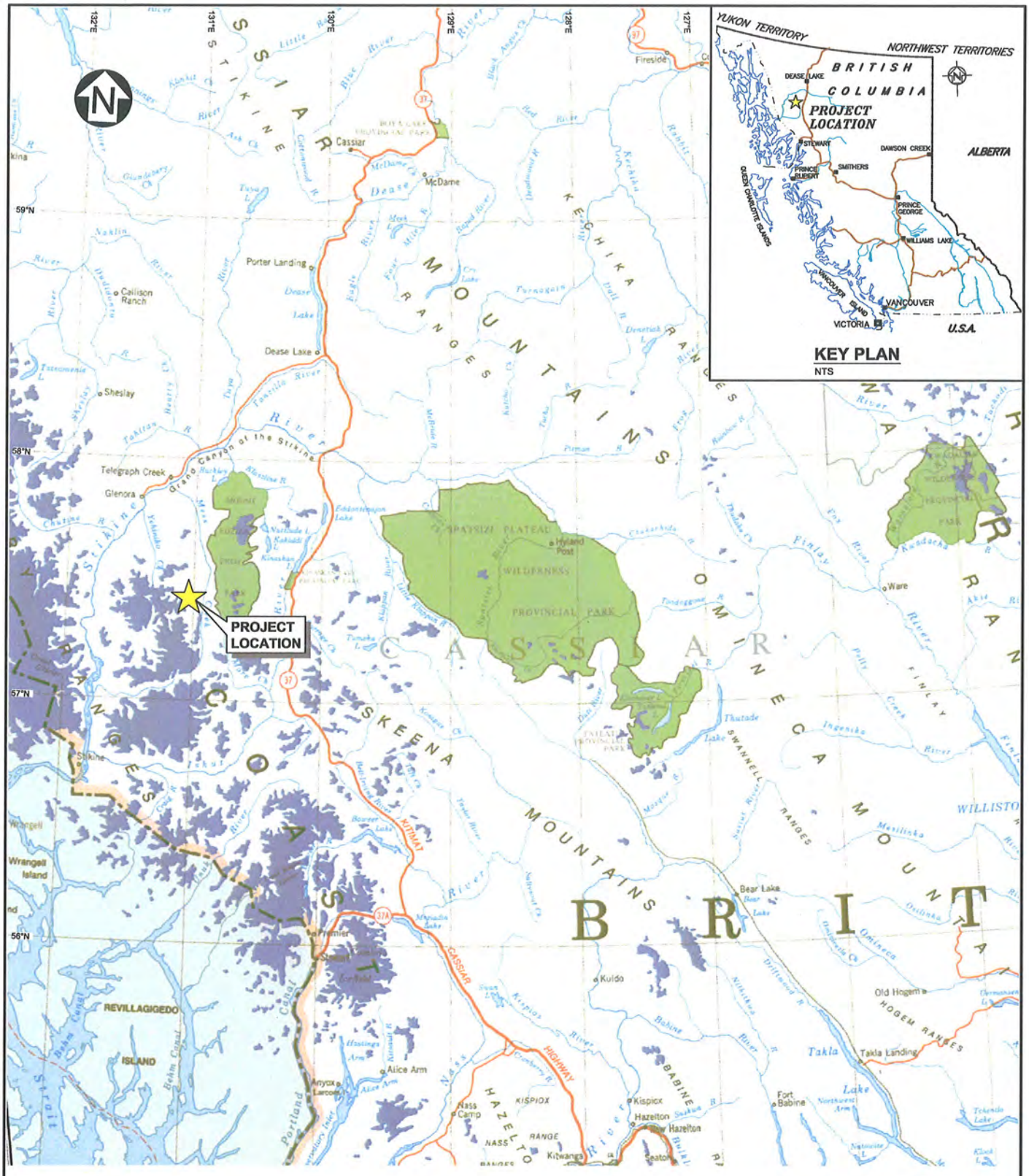

COPPER FOX METALS INC.

SCHAFT CREEK PROJECT

PROJECT LOCATION MAP

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P/A NO. VA101-329/8 | REF NO. 1

FIGURE 1.1 | REV 0

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
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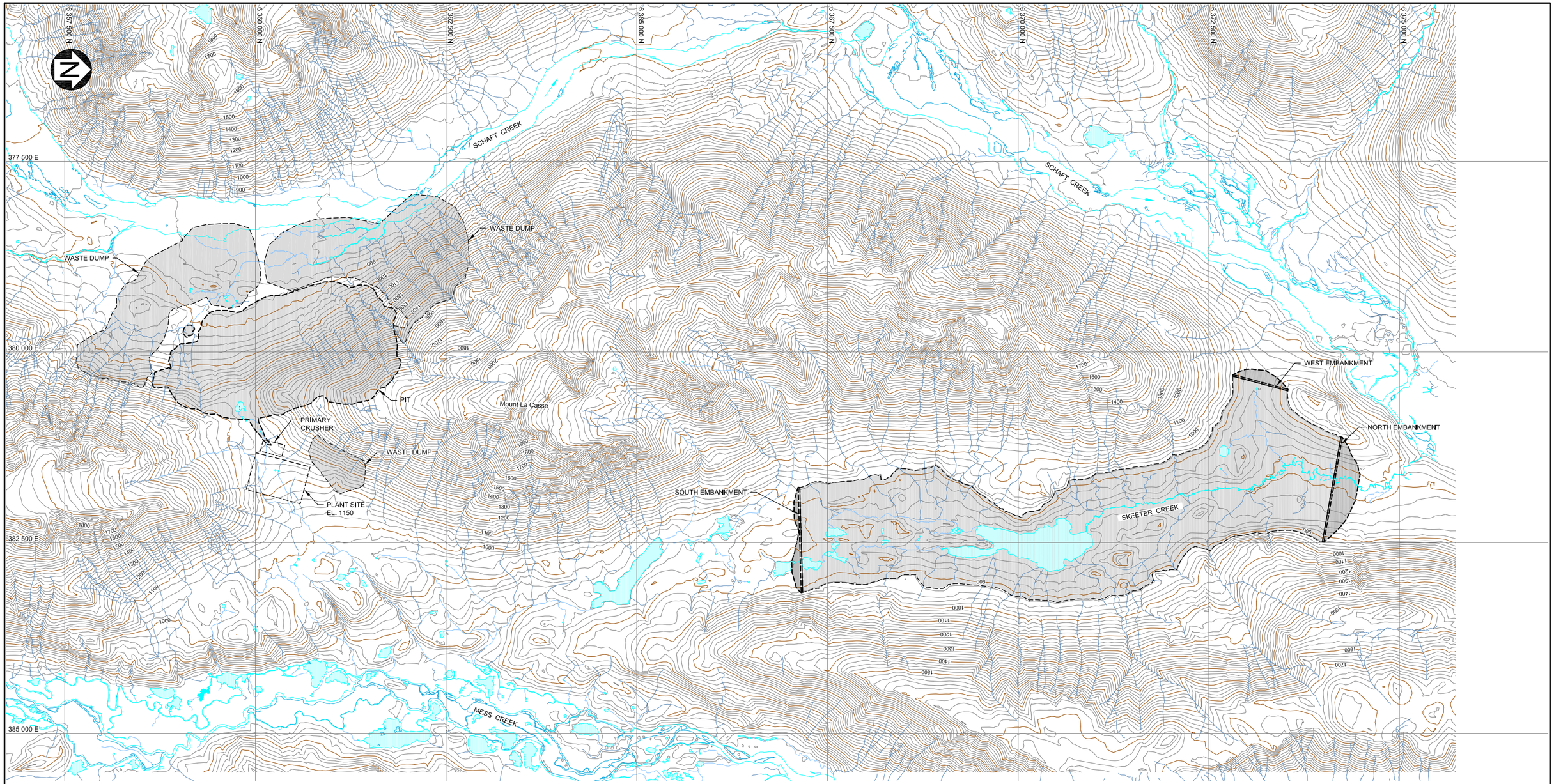

NOTES:

1. COORDINATE GRID IS UTM (NAD83) ZONE 9V.
2. 20 m INTERNAL TRIM MAP PROVIDED BY COPPER FOX (JANUARY 2008).
3. PROPOSED MINE FACILITIES IN ACCORDANCE WITH MOOSE MOUNTAIN PRELIMINARY MINE PLAN (MAY 2008).

SCALE A 500 250 0 500 1000 1500 2000 2500 m

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
0	09FEB'10	ISSUED WITH REPORT	AMM	JY	DF	KJB

COPPER FOX METALS INC.

SCHAFT CREEK PROJECT

GENERAL ARRANGEMENT

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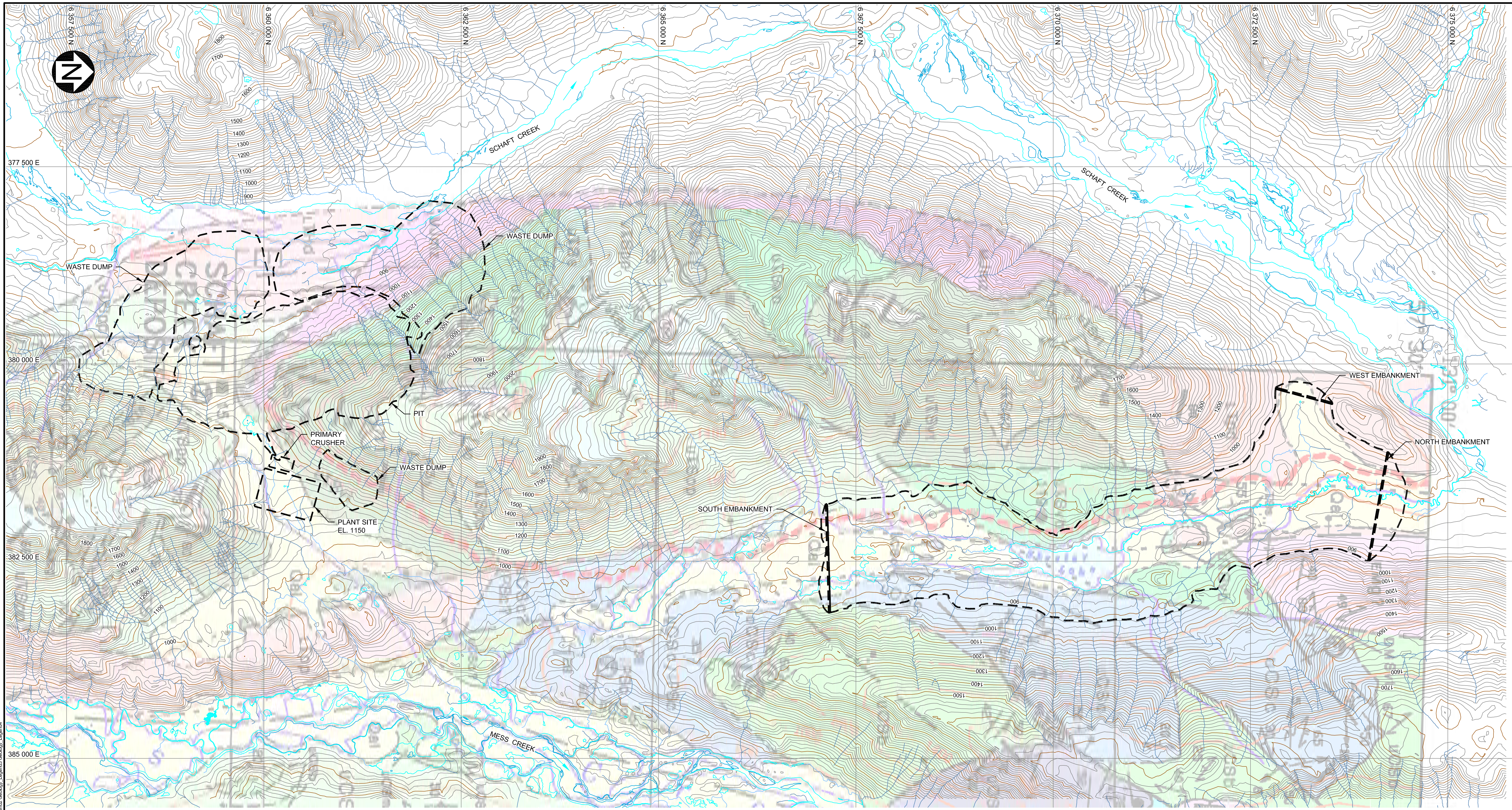
P/A NO. VA101-329/8

REF NO. 1

FIGURE 1.2

REV 0



NOTES:

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2. 20 m INTERNAL TRIM MAP PROVIDED BY COPPER FOX (JANUARY 2008).
3. PROPOSED MINE FACILITIES IN ACCORDANCE WITH MOOSE MOUNTAIN PRELIMINARY MINE PLAN (MAY 2008).

LEGEND:

SYMBOLS

- Geological boundary (defined, approximate, assumed)
- Unconformity (defined, assumed)
- Bedding; tops unknown (inclined, vertical)
- Bedding; tops observed (inclined, overturned)
- Igneous flow layering (inclined, vertical)
- Dominant foliation (inclined, vertical)
- Foliation; generation indicated by number of ticks
- Lineation; bedding-cleavage intersection, m=mineral, s=stretching, ss=slickensides
- Crenulation lineation; ages indicated by number of ticks (plunge indicated)
- Joint (inclined, vertical)
- Dike (inclined, vertical)
- Vein (inclined, vertical)
- Axial trace of overturned antiform, synform (arrow indicates plunge)
- Axial trace of upright antiform, synform (arrow indicates plunge)
- Fold axis of minor fold (arrow indicates plunge) m, s and z asymmetry
- Brittle fault zone (inclined, vertical)
- Extension fault; downthrown side indicated (defined, approximate, assumed)
- Contraction fault; teeth indicate upthrust side (defined, approximate, assumed)
- Cross-section line
- Limit of mapped area
- Fossil locality (macrofossil, conodont, foraminifera, radiolarian)
- Isotopic age locality (U/Pb, Ar/Ar, K/Ar, Rb/Sr)
- MINFILE occurrence; developed prospect, prospect, showing, number — 104G378
- Surface work; adit, trench
- Topographic contour (200 metre interval)
- Cart track

LAYERED ROCKS

QUATERNARY

- Qal — Unconsolidated glacial till and poorly sorted alluvium

LOWER JURASSIC

- Ucg — Maroon-weathering, polylithic cobble to boulder conglomerate and coarse sandstone, well bedded, poorly-graded and quartz-rich, contains granitoid, volcanic and sedimentary clasts of Stikine assemblage and Stuhini Group strata

UPPER JURASSIC

MESS LAKE VOLCANIC FACIES

- uTrSvp — Maroon and dark green pyroxene porphyritic, plagioclase porphyritic and aphyric basalt flows and fragmental rocks
- uTrSvt — Massive to weakly stratified, grey and mauve lapilli and crystal tuff
- uTrSvb — Dark grey, massive plagioclase porphyritic basalt flows and coarse-bladed plagioclase and pyroxene porphyry dikes

MORE CREEK SEDIMENTARY FACIES

- uTrSv — Medium bedded, pale green tuff and epiclastic rocks, orange-weathering augite phyric and aphyric basalt flows and sills
- uTrSa — Thick bedded augite-bearing volcaniclastic sandstone, interbeds of sharpstone conglomerate

LOWER PERMIAN

- lPSc — Medium bedded to massive fossiliferous carbonate; deformed, thin layered carbonate of probable Permian age (lPSdc)

UPPER CARBONIFEROUS

- uCSc — Grey, thin bedded, fetid and dolomitic limestone, minor interbeds of maroon and green tuff and cherty siltstone
- uCSr — Pink flow-layered and spherulitic rhyolite, sparsely feldspar porphyritic lava and quartz feldspar-phyric flow breccia
- uCSmv — Maroon andesitic feldspar-phyric lapilli and crystal tuff, includes unwelded to weakly welded ash-flow tuff beds
- uCSb — Massive amygdaloidal, aphyric to plagioclase and pyroxene-phyric basalt and breccia flows
- uCScg — Thick bedded, maroon volcanic conglomerate, clasts are augite and plagioclase-phyric mafic and intermediate volcanic and subvolcanic rocks and limestone, poorly sorted with tuff interbeds
- uCSsa — Thin bedded, siltstone, poorly bedded tuff, tuffaceous wacke and sandstone, lesser chert

UPPER DEVONIAN AND LOWER CARBONIFEROUS (MISSISSIPPIAN)

- DMSv — Undifferentiated basalt and andesite, hyaloclastite, pillowed and flow breccia rocks
- DMSvl — Pale to dark green, well bedded siliceous dust and ash tuff, scoriaceous mafic tuff and minor pyritic felsic welded tuff

INTRUSIVE ROCKS

MIDDLE JURASSIC
THREE SISTERS PLUTONIC SUITE (179 - 176 Ma)

- MJmz — Yehiniko Pluton: Pink, medium to coarse-grained, equigranular hornblende-biotite monzonite to granite

MIDDLE TO LATE TRIASSIC
STIKINE PLUTONIC SUITE (228 - 221 Ma)

- LTrHd — Hickman Pluton: Medium to fine-grained, equigranular hornblende diorite, hornblende monzonite
- LTrpd — Medium-grained equigranular augite diorite and gabbro
- LTrpp — Pale green, stubby-plagioclase porphyritic hornblende-pyroxene diorite

EARLY MISSISSIPPIAN
MORE CREEK PLUTONIC SUITE (~ 355 Ma)

- EMg — Equigranular to quartz-porphyritic biotite granite

SCALE A: 500 250 0 500 1000 1500 2000 2500 m

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SCHAFT CREEK PROJECT

SITE GEOLOGY

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P/A NO.	REF NO.
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FIGURE 2.1 REV 0

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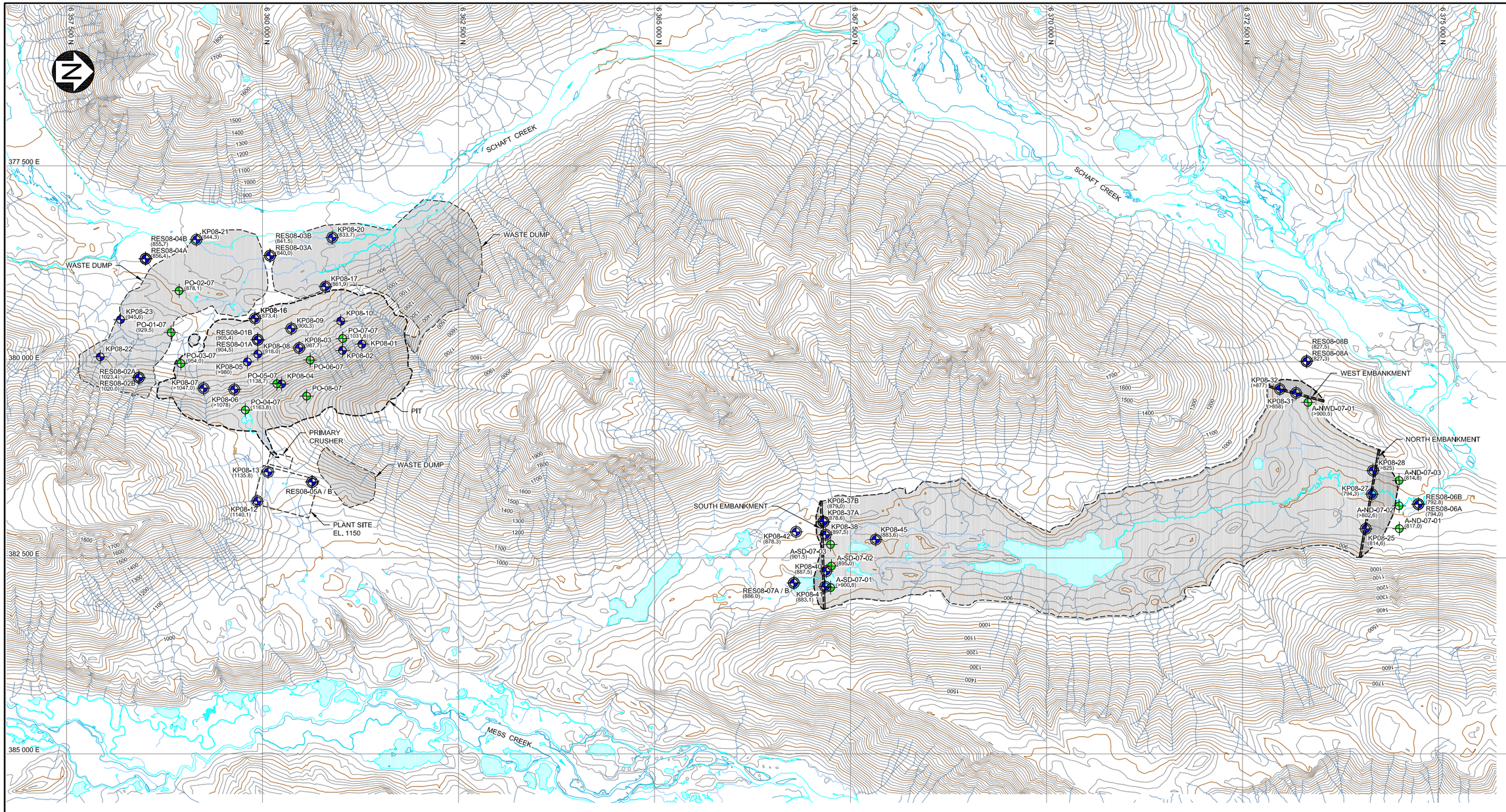

NOTES:

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2. 20 m INTERNAL TRIM MAP PROVIDED BY COPPER FOX (JANUARY 2008).
3. PROPOSED MINE FACILITIES IN ACCORDANCE WITH MOOSE MOUNTAIN PRELIMINARY MINE PLAN (MAY 2008).
4. 2007 GEOTECHNICAL DRILL HOLES COMPLETED BY DST.
5. 2008 GEOTECHNICAL DRILL HOLES COMPLETED BY KP.

LEGEND:

PO-02-07 (878,1) — 2007 SI (by DST)

KP08-23 (945,6) — 2008 SI (by KP)

KP08-09 (900,3) — 2008 DRILL HOLES WITH PIEZOMETERS INSTALLED

GROUNDWATER LEVEL (PIEZOMETRIC HEAD), TYP.

SCALE A: 500 250 0 500 1000 1500 2000 2500 m

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
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COPPER FOX METALS INC.

SCHAFT CREEK PROJECT

2007 AND 2008 GEOTECHNICAL DRILLHOLE PLAN AND GROUNDWATER LEVELS

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P/A NO. VA101-329/8 | REF NO. 1

FIGURE 3.1 | REV 0

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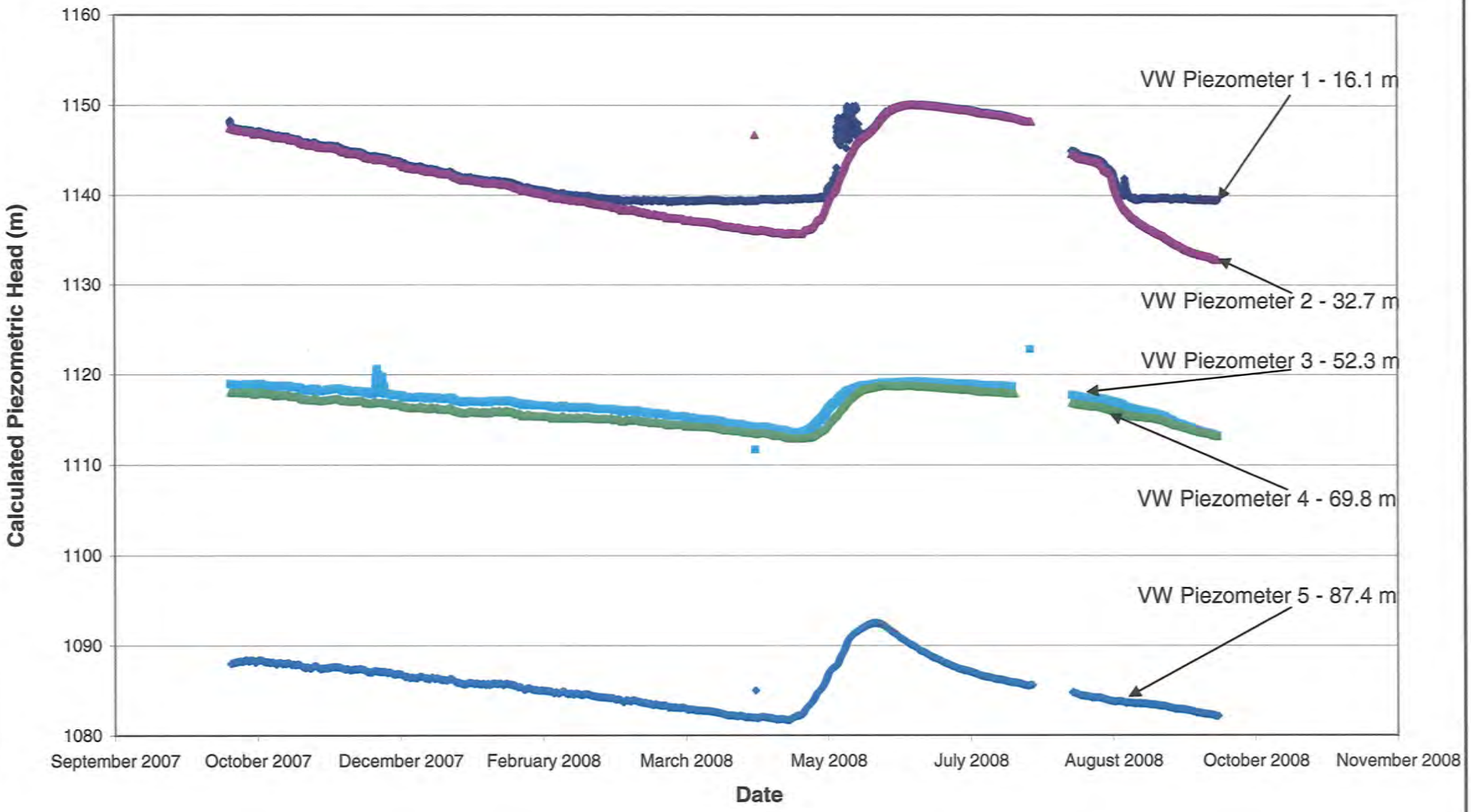
Rev'd Dec/24/09



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SCHAFT CREEK PROJECT

DRILL HOLE PO-05-07 VIBRATING WIRE PIEZOMETERS CALCULATED PIEZOMETRIC HEAD

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P/A NO. VA101/329-08

REF. NO. 1

FIGURE 3.2

REV 0

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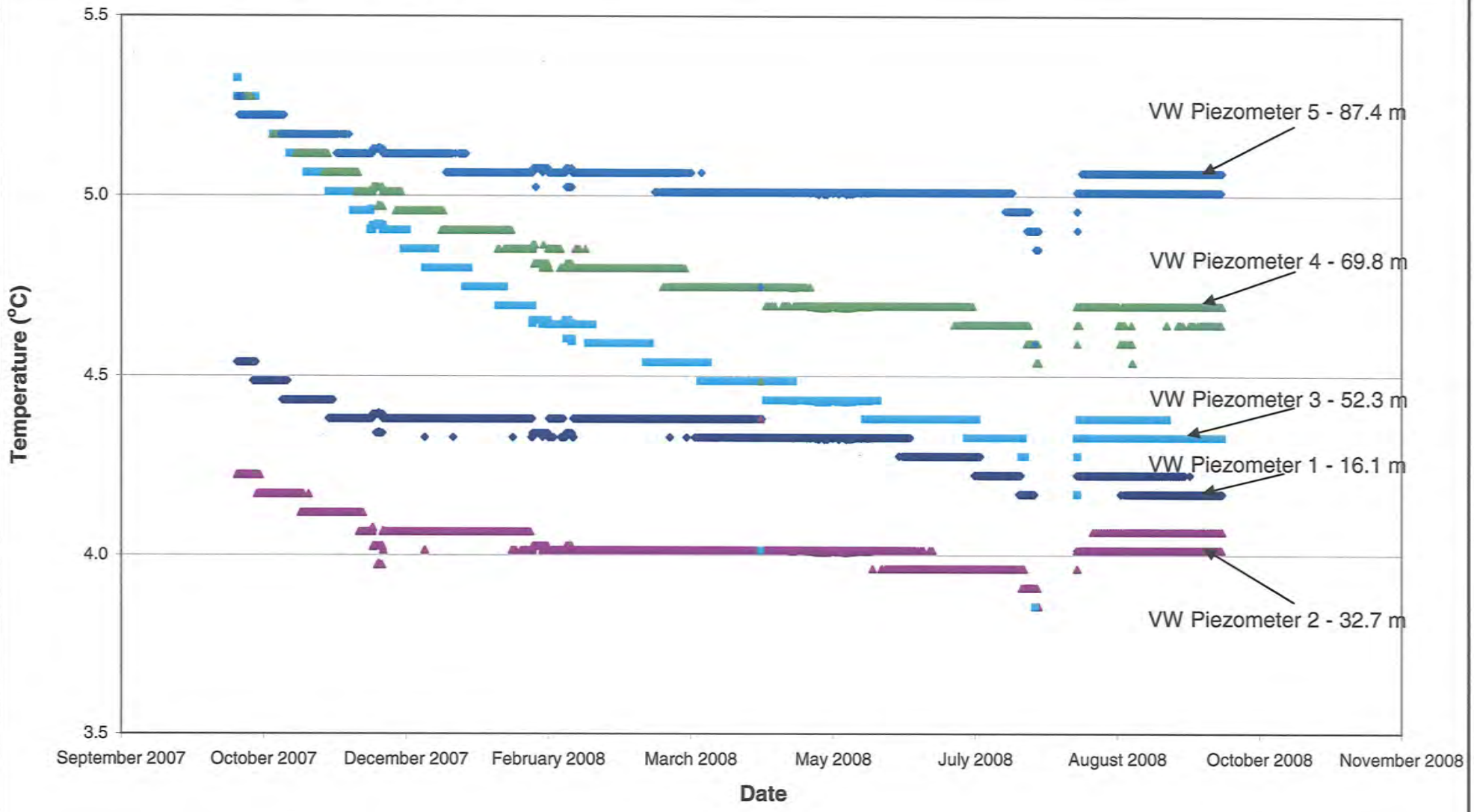

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	03DEC'08	ISSUED WITH REPORT	AM	HRS	KJB

COPPER FOX METALS INC.

SCHAFT CREEK PROJECT

DRILL HOLE PO-05-07 VIBRATING WIRE PIEZOMETERS GROUNDWATER TEMPERATURE

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P/A NO. VA101/329-08

REF. NO. 1

FIGURE 3.3

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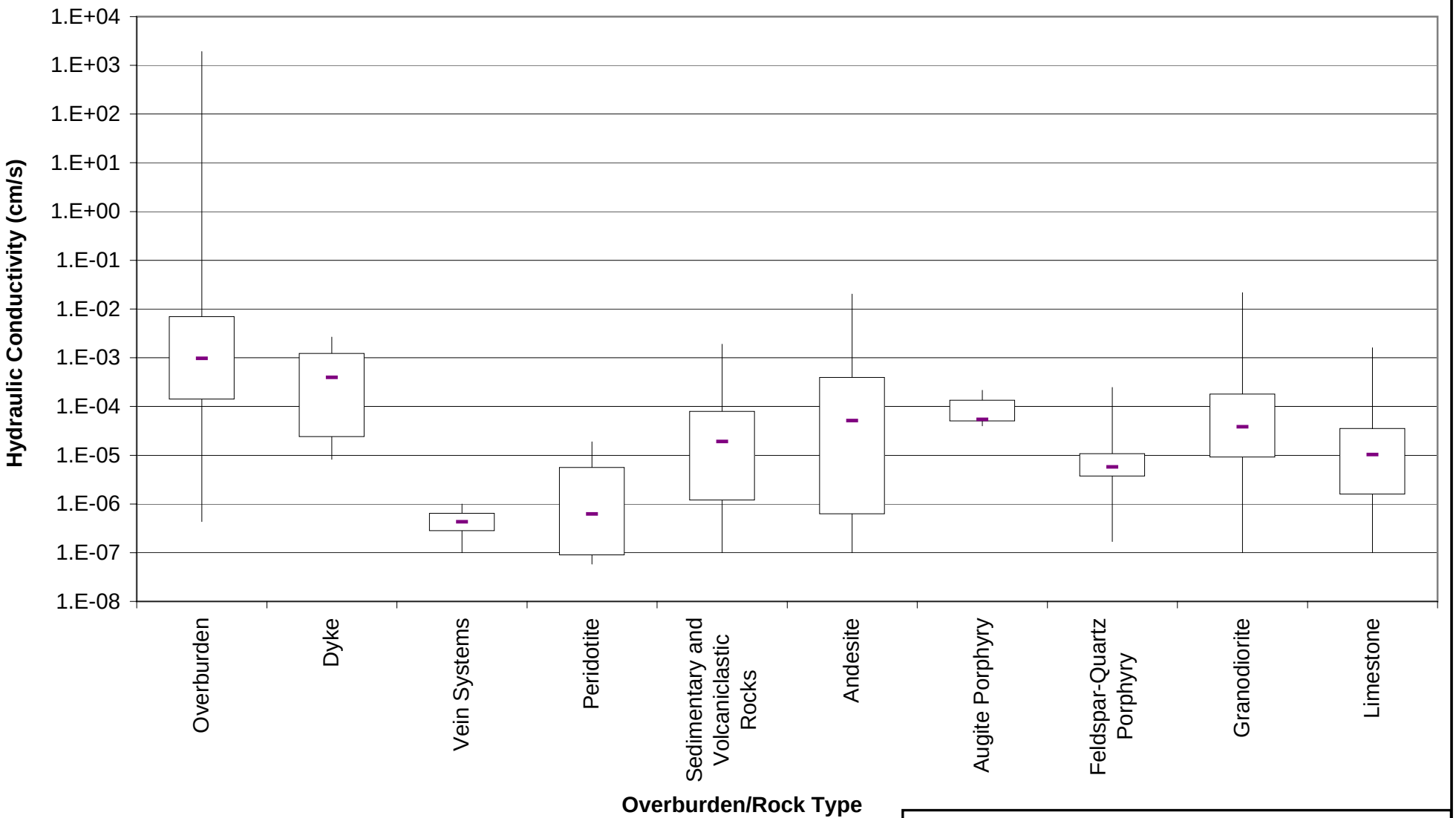

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0	03DEC'08	ISSUED WITH REPORT	AM	HRS	KJB

COPPER FOX METALS INC.

SCHAFT CREEK PROJECT

SUMMARY OF OVERBURDEN AND ROCKMASS HYDRAULIC CONDUCTIVITY

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P/A NO. VA101/329-08

REF. NO. 1

FIGURE 3.4

REV 0

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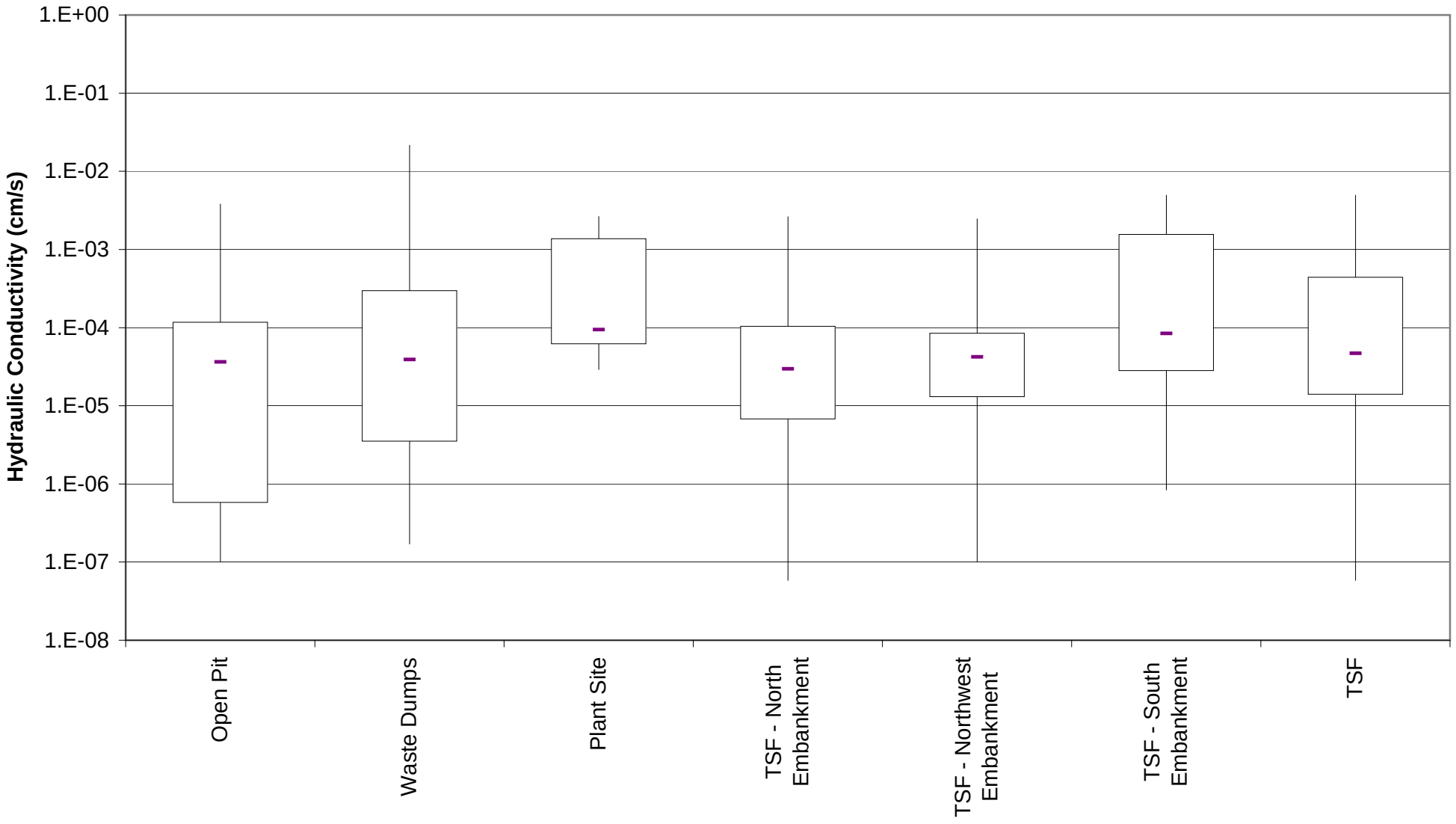

COPPER FOX METALS INC.

SCHAFT CREEK PROJECT

SUMMARY OF ROCKMASS HYDRAULIC CONDUCTIVITY BY LOCATION

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P/A NO. VA101/329-08

REF. NO. 1

FIGURE 3.5

REV 0

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
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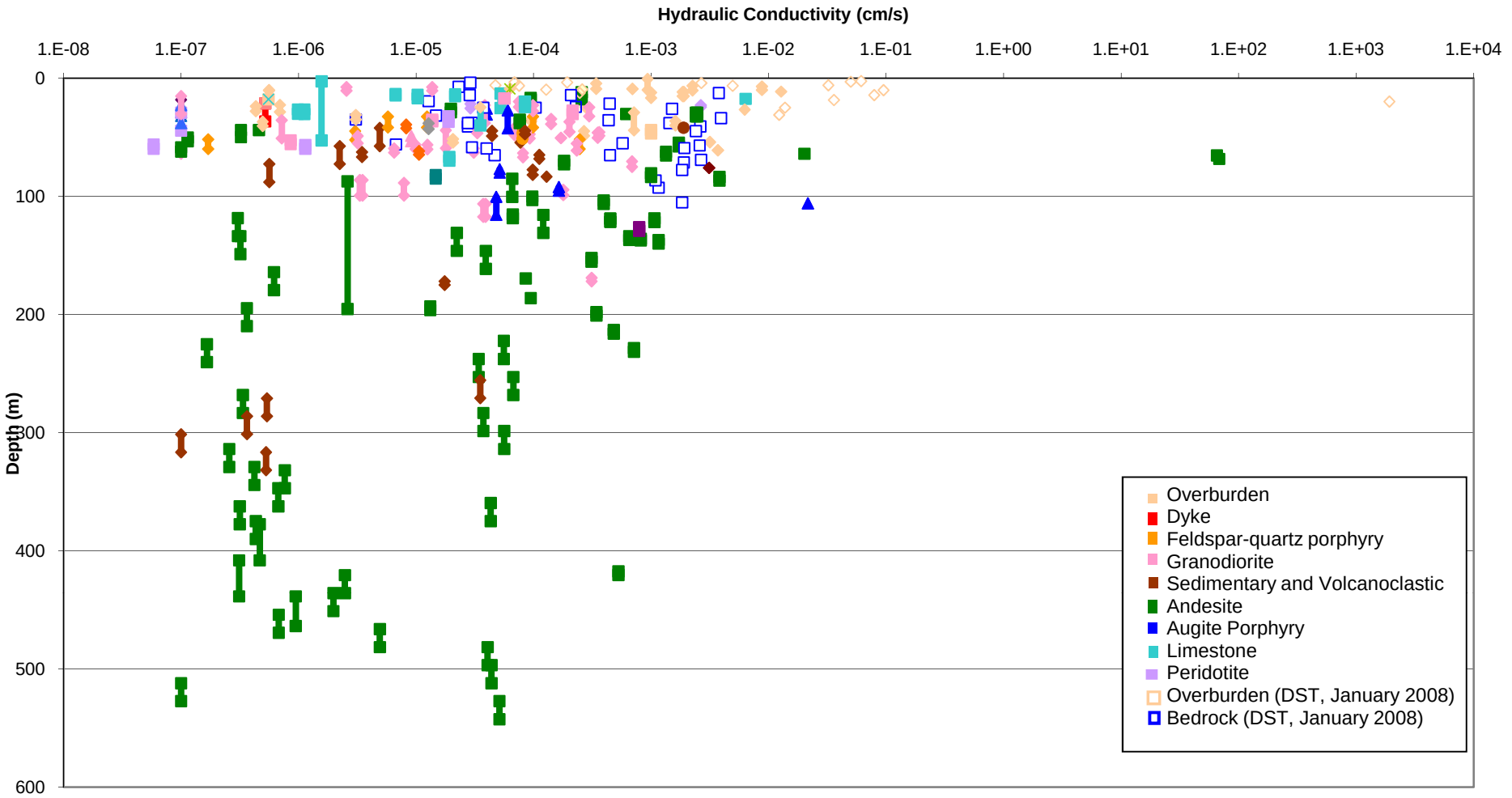

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0	03DEC'08	ISSUED WITH REPORT	AM	HRS	KJB

COPPER FOX METALS INC.

SCHAFT CREEK PROJECT

SUMMARY OF HYDRAULIC CONDUCTIVITY BY DEPTH

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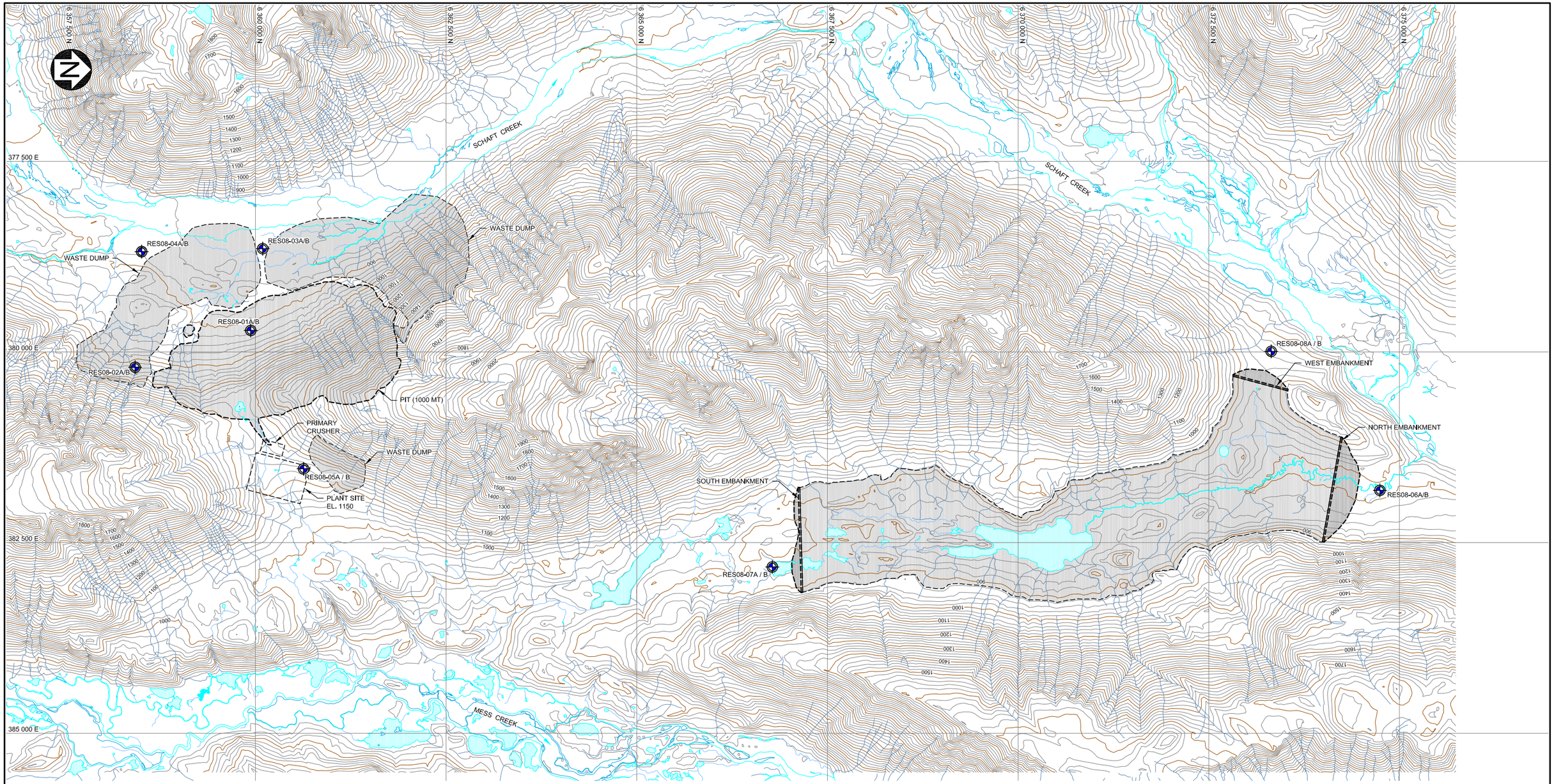
P/A NO. VA101/329-08

REF. NO. 1

FIGURE 3.6

REV 0



NOTES:

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4. 2007 GEOTECHNICAL DRILL HOLES COMPLETED BY DST.
5. 2008 GEOTECHNICAL DRILL HOLES COMPLETED BY KP.

LEGEND:

2008 DRILL HOLES WITH PIEZOMETERS INSTALLED

SCALE A: 500 250 0 500 1000 1500 2000 2500 m

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
0	09FEB'10	ISSUED WITH REPORT	AMM	JY	DF	KJB

COPPER FOX METALS INC.

SCHAFT CREEK PROJECT

GROUNDWATER MONITORING LOCATIONS

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P/A NO. VA101-329/8

REF NO. 1

FIGURE 4.1

REV 0

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APPENDIX A

GEOLOGY OF THE FORREST KERR-MESS CREEK AREA, NORTHWESTERN BRITISH COLUMBIA

BRITISH COLUMBIA
Ministry of Energy and Mines
Minerals Division
Geological Survey Branch

Geological Survey Branch

FIGURE GM97-3
To Accompany Bulletin 104
(Updated from Geoscience Map 1997-3)

GEOLOGY OF THE FORREST KERR-MESS CREEK AREA, NORTHWESTERN BRITISH COLUMBIA

NTS (104B/10, 15 & 104G/2 & 7W)

Compiled by: J.M. Logan

Geology by: J.M. Logan, J.R. Drobe, V.M. Koyanagi and D.C. Elsby

SCALE 1:100 000

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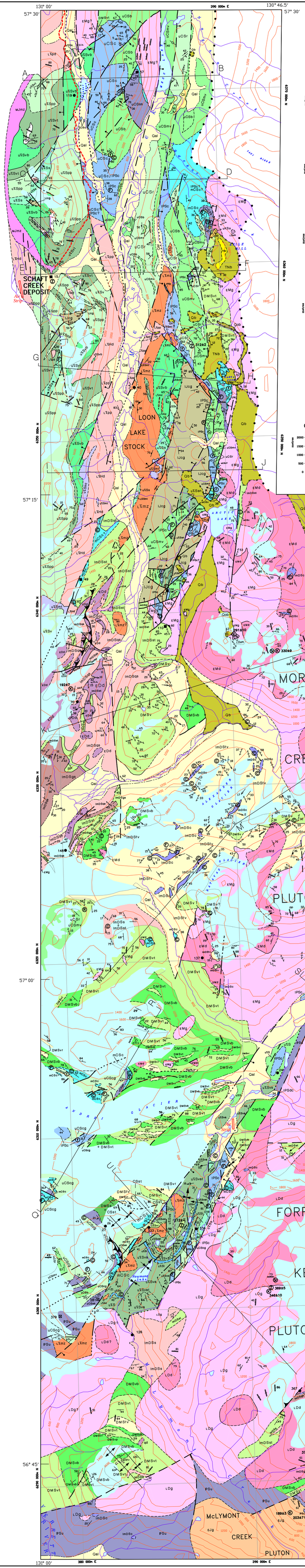
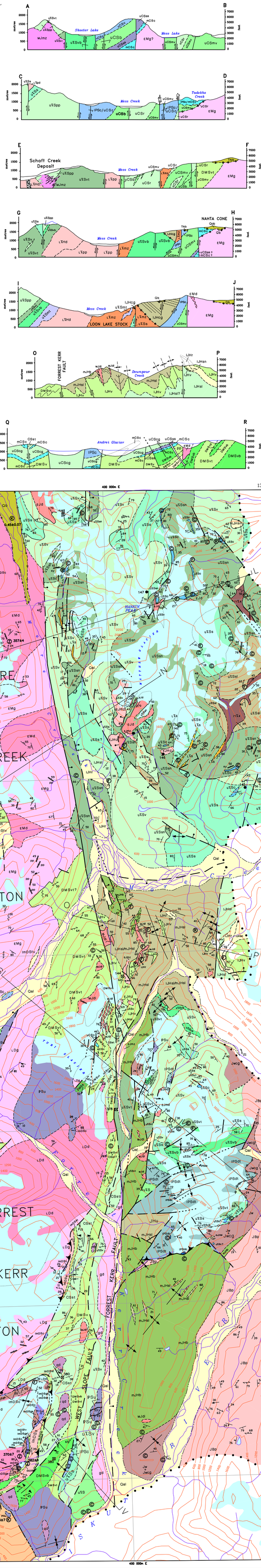
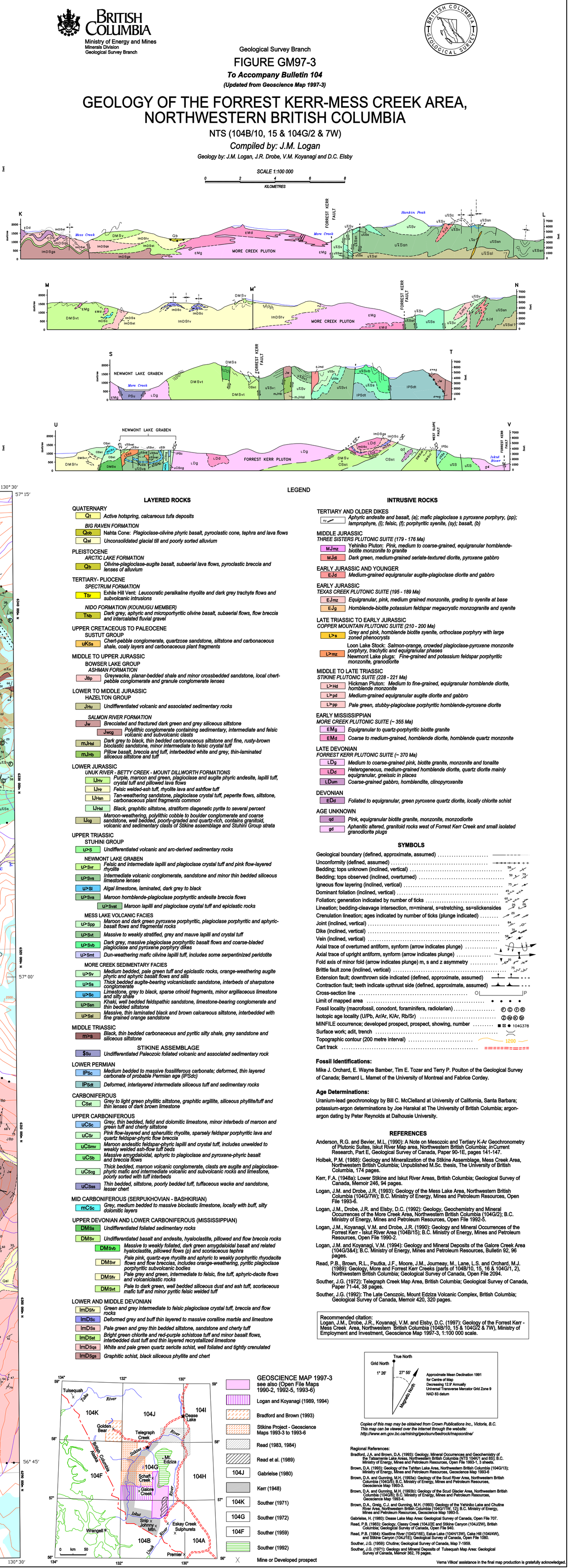
KILOMETRES







LEGEND

LAYERED ROCKS

QUATERNARY

Qt — *Active hotspring, calcareous tufa deposits*

BIG RAVEN FORMATION

Qob — Nahta Cone: *Plagioclase-olivine phyric basalt, pyroclastic cone, tephra and lava flows*

Qal — *Unconsolidated glacial till and poorly sorted alluvium*

PLEISTOCENE

ARCTIC LAKE FORMATION

Qb — *Olivine-plagioclase-augite basalt, subaerial lava flows, pyroclastic breccia and lenses of alluvium*

TERTIARY- PLIOCENE

SPECTRUM FORMATION

TSr — Exhile Hill Vent: *Leucocratic peralkaline rhyolite and dark grey trachyte flows and subvolcanic intrusions*

NIDO FORMATION (KOUNUGU MEMBER)

TNb — *Dark grey, aphyric and microporhyritic olivine basalt, subaerial flows, flow breccia and intercalated fluvial gravel*

UPPER CRETACEOUS TO PALEOCENE

SUSTUT GROUP

uKSs — *Chert-pebble conglomerate, quartzose sandstone, siltstone and carbonaceous shale, coaly layers and carbonaceous plant fragments*

MIDDLE TO UPPER JURASSIC

BOWSER LAKE GROUP

ASHMAN FORMATION

JBp — *Greywacke, planar-bedded shale and minor crossbedded sandstone, local chert-pebble conglomerate and granule conglomerate lenses*

LOWER TO MIDDLE JURASSIC

HAZELTON GROUP

Jhu — *Undifferentiated volcanic and associated sedimentary rocks*

SALMON RIVER FORMATION

Jw — *Brecciated and fractured dark green and grey siliceous siltstone*

Jwcg — *Polylithic conglomerate containing sedimentary, intermediate and felsic volcanic and subvolcanic clasts*

mJHsl — *Dark grey to black, thin bedded carbonaceous siltstone and fine, rusty-brown bioclastic sandstone, minor intermediate to felsic crystal tuff*

mJHb — *Pillow basalt, breccia and tuff, interbedded white and grey, thin-laminated siliceous siltstone and tuff*

LOWER JURASSIC

UNUK RIVER - BETTY CREEK - MOUNT DILLWORTH FORMATIONS

lJHv — *Purple, maroon and green, plagioclase and augite phyric andesite, lapilli tuff, crystal tuff and pillowed lava flows*

lJHr — *Felsic welded-ash tuff, rhyolite lava and ashflow tuff*

lJHsn — *Tan-weathering sandstone, plagioclase crystal tuff, peperite flows, siltstone, carbonaceous plant fragments common*

lJHsl — *Black, graphitic siltstone, stratiform diagenetic pyrite to several percent*

lJcg — *Maroon-weathering, polylithic cobble to boulder conglomerate and coarse sandstone, well bedded, poorly-graded and quartz-rich, contains granitoid, volcanic and sedimentary clasts of Stikine assemblage and Stuhini Group strata*

UPPER TRIASSIC

STUHINI GROUP

u>S — *Undifferentiated volcanic and arc-derived sedimentary rocks*

NEWMONT LAKE GRABEN

u>Svr — *Felsic and intermediate lapilli and plagioclase crystal tuff and pink flow-layered rhyolite*

u>Svs — *Intermediate volcanic conglomerate, sandstone and minor thin bedded siliceous limestone lenses*

u>Sl — *Algal limestone, laminated, dark grey to black*

u>Sva — *Maroon hornblende-plagioclase porphyritic andesite breccia flows*

u>Svat — *Maroon lapilli and plagioclase crystal tuff and epiclastic rocks*

MESS LAKE VOLCANIC FACIES

u>Spp — *Maroon and dark green pyroxene porphyritic, plagioclase porphyritic and aphyric-basalt flows and fragmental rocks*

u>Svt — *Massive to weakly stratified, grey and mauve lapilli and crystal tuff*

u>Svb — *Dark grey, massive plagioclase porphyritic basalt flows and coarse-bladed plagioclase and pyroxene porphyry dikes*

u>Smt — *Dun-weathering mafic olivine lapilli tuff, includes some serpentinized peridotite*

MORE CREEK SEDIMENTARY FACIES

u>Sv — *Medium bedded, pale green tuff and epiclastic rocks, orange-weathering augite phyric and aphyric basalt flows and sills*

u>Ss — *Thick bedded augite-bearing volcaniclastic sandstone, interbeds of sharpstone conglomerate*

u>Sc — *Limestone, grey to black, sparse crinoid fragments, minor argillaceous limestone and silty shale*

u>Ssn — *Khaki, well bedded feldspathic sandstone, limestone-bearing conglomerate and thin bedded siltstone*

u>Ssl — *Massive, thin laminated black and brown calcareous siltstone, interbedded with fine grained orange sandstone*

MIDDLE TRIASSIC

m>s — *Black, thin bedded carbonaceous and pyritic silty shale, grey sandstone and siliceous siltstone*

STIKINE ASSEMBLAGE

$Su — *Undifferentiated Paleozoic foliated volcanic and associated sedimentary rock*

LOWER PERMIAN

lPSc — *Medium bedded to massive fossiliferous carbonate; deformed, thin layered carbonate of probable Permian age (lPSdc)*

lPSdt — *Deformed, interlayered intermediate siliceous tuff and sedimentary rocks*

CARBONIFEROUS

CSst — *Grey to light green phyllitic siltstone, graphitic argillite, siliceous phyllite/tuff and thin lenses of dark brown limestone*

UPPER CARBONIFEROUS

uCSc — *Grey, thin bedded, fetid and dolomitic limestone, minor interbeds of maroon and green tuff and cherty siltstone*

uCSr — *Pink flow-layered and spherulitic rhyolite, sparsely feldspar porphyritic lava and quartz feldspar-phyric flow breccia*

uCSmv — *Maroon andesitic feldspar-phyric lapilli and crystal tuff, includes unwelded to weakly welded ash-flow tuff beds*

uCSb — *Massive amygdaloidal, aphyric to plagioclase and pyroxene-phyric basalt and breccia flows*

uCScg — *Thick bedded, maroon volcanic conglomerate, clasts are augite and plagioclase-phyric mafic and intermediate volcanic and subvolcanic rocks and limestone, poorly sorted with tuff interbeds*

uCSss — *Thin bedded, siltstone, poorly bedded tuff, tuffaceous wacke and sandstone, lesser chert*

MID CARBONIFEROUS (SERPUKHOVIAN - BASHKIRIAN)

mCSc — *Grey, medium bedded to massive bioclastic limestone, locally with buff, silty dolomitic layers*

UPPER DEVONIAN AND LOWER CARBONIFEROUS (MISSISSIPPIAN)

DMSs — *Undifferentiated foliated sedimentary rocks*

DMSv — *Undifferentiated basalt and andesite, hyaloclastite, pillowed and flow breccia rocks*

DMSvb — *Massive to weakly foliated, dark green amygdaloidal basalt and related hyaloclastite, pillowed flows (p) and scoriaceous tephra*

DMSvr — *Pale pink, quartz-eye rhyolite and aphyric to weakly porphyritic rhyodacite flows and flow breccias, includes orange-weathering, pyritic plagioclase porphyritic subvolcanic bodies*

DMSiv — *Pale grey and green, intermediate to felsic, fine tuff, aphyric-dacite flows and volcaniclastic rocks*

DMSvt — *Pale to dark green, well bedded siliceous dust and ash tuff, scoriaceous mafic tuff and minor pyritic felsic welded tuff*

LOWER AND MIDDLE DEVONIAN

lmDSiv — *Green and grey intermediate to felsic plagioclase crystal tuff, breccia and flow rocks*

lmDSc — *Deformed grey and buff thin layered to massive coralline marble and limestone*

lmDSs — *Pale green and grey thin bedded siltstone, sandstone and cherty tuff*

lmDSst — *Bright green chlorite and red-purple schistose tuff and minor basalt flows, interbedded dust tuff and thin layered recrystallized limestone*

lmDSqs — *White and pale green quartz sericite schist, well foliated and tightly crenulated*

lmDSgs — *Graphitic schist, black siliceous phyllite and chert*

INTRUSIVE ROCKS

TERTIARY AND OLDER DIKES

sy — *Aphyric andesite and basalt, (a); mafic plagioclase ± pyroxene porphyry, (pp); lamprophyre, (l); felsic, (f); porphyritic syenite, (sy); basalt, (b)*

MIDDLE JURASSIC

THREE SISTERS PLUTONIC SUITE (179 - 176 Ma)

MJmz — Yehiniko Pluton: *Pink, medium to coarse-grained, equigranular hornblende-biotite monzonite to granite*

MJdi — *Dark green, medium-grained seriate-textured diorite, pyroxene gabbro*

EARLY JURASSIC AND YOUNGER

EJd — *Medium-grained equigranular augite-plagioclase diorite and gabbro*

EARLY JURASSIC

TEXAS CREEK PLUTONIC SUITE (195 - 189 Ma)

EJmz — *Equigranular, pink, medium grained monzonite, grading to syenite at base*

EJg — *Hornblende-biotite potassium feldspar megacrystic monzogranite and syenite*

LATE TRIASSIC TO EARLY JURASSIC

COPPER MOUNTAIN PLUTONIC SUITE (210 - 200 Ma)

L>s — *Grey and pink, hornblende biotite syenite, orthoclase porphyry with large zoned phenocrysts*

L>mz — Loon Lake Stock: *Salmon-orange, crowded plagioclase-pyroxene monzonite porphyry, trachytic and equigranular phases*
Newmont Lake plugs: *Fine-grained and potassium feldspar porphyritic monzonite, granodiorite*

MIDDLE TO LATE TRIASSIC

STIKINE PLUTONIC SUITE (228 - 221 Ma)

L>Hd — Hickman Pluton: *Medium to fine-grained, equigranular hornblende diorite, hornblende monzonite*

L>pd — *Medium-grained equigranular augite diorite and gabbro*

L>pp — *Pale green, stubby-plagioclase porphyritic hornblende-pyroxene diorite*

EARLY MISSISSIPPIAN

MORE CREEK PLUTONIC SUITE (~ 355 Ma)

EMg — *Equigranular to quartz-porphyritic biotite granite*

EMd — *Coarse to medium-grained, hornblende diorite, hornblende quartz monzonite*

LATE DEVONIAN

FORREST KERR PLUTONIC SUITE (~ 370 Ma)

LDg — *Medium to coarse-grained pink, biotite granite, monzonite and tonalite*

LDd — *Heterogeneous, medium-grained hornblende diorite, quartz diorite mainly equigranular, gneissic in places*

LDum — *Coarse-grained gabbro, hornblendite, clinopyroxenite*

DEVONIAN

EDd — *Foliated to equigranular, green pyroxene quartz diorite, locally chlorite schist*

AGE UNKNOWN

qd — *Pink, equigranular biotite granite, monzonite, monzodiorite*

gd — *Aphanitic altered, granitoid rocks west of Forrest Kerr Creek and small isolated granodiorite plugs*

SYMBOLS

Geological boundary (defined, approximate, assumed)
Unconformity (defined, assumed)
Bedding; tops unknown (inclined, vertical)
Bedding; tops observed (inclined, overturned)
Igneous flow layering (inclined, vertical)
Dominant foliation (inclined, vertical)
Foliation; generation indicated by number of ticks
Lineation; bedding-cleavage intersection, m=mineral, s=stretching, ss=slickensides
Crenulation lineation; ages indicated by number of ticks (plunge indicated)
Joint (inclined, vertical)
Dike (inclined, vertical)
Vein (inclined, vertical)
Axial trace of overturned antiform, synform (arrow indicates plunge)
Axial trace of upright antiform, synform (arrow indicates plunge)
Fold axis of minor fold (arrow indicates plunge) m, s and z asymmetry
Brittle fault zone (inclined, vertical)
Extension fault; downthrown side indicated (defined, approximate, assumed)
Contraction fault; teeth indicate upthrust side (defined, approximate, assumed)
Cross-section line O P
Limit of mapped area
Fossil locality (macrofossil, conodont, foraminifera, radiolarian) Ⓕ Ⓒ Ⓘ Ⓡ
Isotopic age locality (U/Pb, Ar/Ar, K/Ar, Rb/Sr) ② Ⓐ Ⓚ Ⓢ
MINFILE occurrence; developed prospect, prospect, showing, number ■ ⊠ ● 104G378
Surface work; adit, trench
Topographic contour (200 metre interval) 1200
Cart track

Fossil Identifications:

Mike J. Orchard, E. Wayne Bamber, Tim E. Tozer and Terry P. Poulton of the Geological Survey of Canada; Bernard L. Mamet of the University of Montreal and Fabrice Cordey.

Age Determinations:

Uranium-lead geochronology by Bill C. McClelland at University of California, Santa Barbara; potassium-argon determinations by Joe Harakal at The University of British Columbia; argon-argon dating by Peter Reynolds at Dalhousie University.

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see also (Open File Maps 1990-2, 1992-5, 1993-6)

- Logan and Koyanagi (1989, 1994)
- Bradford and Brown (1993)
- Stikine Project - Geoscience Maps 1993-3 to 1993-6
- Read (1983, 1984)
- Read et al. (1989)
- 104J Gabrielse (1980)
- Kerr (1948)
- 104K Souther (1971)
- 104G Souther (1972)
- 104F Souther (1959)
- Souther (1992)
- Mine or Developed prospect

Copies of this map may be obtained from Crown Publications Inc., Victoria, B.C.
This map can be viewed over the internet through the website:
http://www.em.gov.bc.ca/mining/geolsurv/bedrock/mapsonline/

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APPENDIX B

SUMMARY OF GROUNDWATER QUALITY DATA

Appendix B1 Summary of Groundwater Quality and Guideline Exceedances

Appendix B2 Summary of Quality Assurance and Quality Control Data

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APPENDIX B1

SUMMARY OF GROUNDWATER QUALITY AND GUIDELINE EXCEEDANCES

(Pages B1-1 to B1-18)

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TABLE B1.1

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF GROUNDWATER DATA AND GUIDELINES EXCEEDANCES
SAMPLE LOCATION RES08-1A

Print Mar/23/10 10:53:32

Date Sampled	30-Sep-08	4-Oct-09	BCWQG [2]	CCME [3]
Time Sampled		9:45 AM		
In Situ Parameters				
Conductivity (uS/cm)	16600	10319		
Oxygen Dissolved		4.88		
Oxygen Dissolved %	62.7			
pH	**13.3**	**13.5**	6.5 to 9	6.5 to 9
Redox Potential (mV)	-107			
Specific Conductivity (uS/cm)				
Temperature (°C)	4.7	7.39		
Physical Tests				
Acidity to pH 8.3 (as CaCO3)	<1	<1		
Bicarbonate Alkalinity (as CaCO3)	<17	<1		
Carbonate Alkalinity (as CaCO3)	106	25.9		
Hydroxide Alkalinity (as CaCO3)	3380	679		
Total Alkalinity (as CaCO3)	3480	705		
Conductivity (uS/cm)	14500	15700		
Hardness (as CaCO3)	1680	1460		
pH	**12.5**	**12.5**	6.5 to 9	6.5 to 9
Total Dissolved Solids	3960	3700		
Total Suspended Solids	25.5	75.8		
Turbidity (NTU)	17.2	73.7		
Dissolved Anions				
Bromide	<0.5	<2.5		
Chloride	<5	<25	600	
Fluoride	<0.2	0.116	0.2 to 0.3 [7]	
Sulphate	**217**	**162**	100	
Nutrients				
Ammonia (as N)	**0.0962**	**0.0884**	0.681 to 28.3 [8,9]	0.0168 to 185 [8,9]
Nitrate (as N)	<0.05	<0.25	200	13
Nitrite (as N)	<0.01	<0.05	0.06 to 0.6 [10]	0.06
Nitrogen (Total)	<5	2.32		
Nitrogen (Total Kjeldahl)	0.726	1.08		
Phosphate (Total; as P)	0.0128	0.062		
Phosphorus (Dissolved)	<0.3	<0.3		
Phosphorus (Total)	<0.3			
Dissolved Metals				
Aluminum	0.023	0.013	0.1 to $e^{(1.209-2.426*[pH]+0.286*[pH](2))}$ (11)	0.005 to 0.1 [11]
Antimony	<0.001	<0.001		
Arsenic	<0.001	<0.001	0.005	0.005
Barium	QA/QC	0.652	5	
Beryllium	<0.005	<0.005	0.0053	
Bismuth	<0.005	<0.005		
Boron	<0.1	<0.1	1.2	
Cadmium	0.00025	<0.0001	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]
Calcium	675	586		
Chromium	0.164	0.14		
Cobalt	<0.001	<0.001	0.11	
Copper	**0.007**	**0.0179**	(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	<0.03	<0.03	0.35	0.3
Lead	0.0042	0.00338	0.003 to $e^{(1.273*\ln([\text{Hardness (Dissolved)}]))-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	0.51	0.475		
Magnesium	<0.05	<0.05		
Manganese	<0.0005	0.00344	(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	<0.00001	<0.00001	0.0001	0.000026
Molybdenum	**QA/QC (0.126)**	**0.106**	2	0.073
Nickel	<0.005	<0.005	0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	203	191		
Selenium	<0.001	<0.001	0.002	0.001
Silicon	0.283	0.34		
Silver	<0.0001	<0.0001	0.0001 to 0.003 [7]	0.0001
Sodium	915	992		
Strontium	33.4	37.1		
Thallium	<0.001	<0.001	0.0003	0.0008
Tin	<0.001	<0.001		
Titanium	<0.01	<0.01		
Uranium	<0.0001	<0.0001		
Vanadium	<0.01	<0.01	0.006	
Zinc	0.014	<0.01	(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Total Metals				
Aluminum	**0.184**			0.005 to 0.1 [11]
Antimony	<0.001			
Arsenic	<0.001		0.005	0.005
Barium	1.56		5	
Beryllium	<0.005		0.0053	
Bismuth	<0.005			
Boron	<0.1		1.2	
Cadmium	<0.00017		$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]
Calcium	685			
Chromium	0.17			
Cobalt	<0.001		0.11	
Copper	**0.0128**		(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	0.17		1	0.3
Lead	0.00506		0.003 to $e^{(1.273*\ln([\text{Hardness (Dissolved)}]))-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	0.536			
Magnesium	0.238			
Manganese	0.00973		(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	<0.00001		0.0001	0.000026
Molybdenum	**0.125**		2	0.073
Nickel	<0.005		0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	215			
Selenium	<0.001		0.002	0.001
Silicon	0.55			
Silver	**0.00028**		0.0001 to 0.003 [7]	0.0001
Sodium	945			
Strontium	34.4			
Thallium	<0.001		0.0003	0.0008
Tin	<0.001			
Titanium	0.018			
Uranium	<0.0001			
Vanadium	<0.01		0.006	
Zinc	0.016		(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Organics				
Carbon Organic (Total)	21.9	30		

M:\1\01\00329\08\A\Report\1- Hydrogeology\Appendices\Appendix B\B1\[Table B1.1 to B1.16.xls]RES08-1A

NOTES:

1. UNITS ARE mg/L, UNLESS OTHERWISE STATED.
2. BCWQG - BCWQG: AQUATIC LIFE: FRESH - BRITISH COLUMBIA WATER QUALITY GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (AUGUST 2006).
3. CCME - CCME: AQUATIC LIFE: FRESH - CANADIAN ENVIRONMENTAL GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (DECEMBER 2006).
4. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH LIMITS.
5. **BOLD** INDICATES THE VALUE EXCEEDS THE CCME: AQUATIC LIFE: FRESH LIMITS.
6. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC LIFE: FRESH LIMITS.
7. HARDNESS (as CaCO3) DEPENDENT
8. pH (IN SITU) DEPENDENT
9. TEMPERATURE (IN SITU) DEPENDENT
10. CHLORIDE (DISSOLVED) DEPENDENT
11. pH DEPENDENT

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	07DEC'09	ISSUED WITH REPORT - VA101-329/8-1	AL	HRS	KJB

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TABLE B1.2

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF GROUNDWATER DATA AND GUIDELINES EXCEEDANCES
SAMPLE LOCATION RES08-1B

Print Mar/23/10 10:53:32

Date Sampled Time Sampled	30-Sep-08	4-Oct-09 10:10 AM	BCWQG [2]	CCME [3]
In Situ Parameters				
Conductivity (uS/cm)	4034	10104		
Oxygen Dissolved		4.64		
Oxygen Dissolved %		38.1		
pH	**12.7**	**13.5**	6.5 to 9	6.5 to 9
Redox Potential (mV)	-73.3			
Specific Conductivity (uS/cm)		16674		
Temperature (°C)	5.64	4.37		
Physical Tests				
Acidity to pH 8.3 (as CaCO3)	<1	<1		
Bicarbonate Alkalinity (as CaCO3)	<1	<1		
Carbonate Alkalinity (as CaCO3)	73.9	64.1		
Hydroxide Alkalinity (as CaCO3)	247	670		
Total Alkalinity (as CaCO3)	321	734		
Color (TCU)	13.7	<5		
Conductivity (uS/cm)	3550	4570		
Hardness (as CaCO3)	960	688		
pH	**11.7**	**12**	6.5 to 9	6.5 to 9
Total Dissolved Solids	2210	1840		
Total Suspended Solids	384	1050		
Turbidity (NTU)	218	585		
Dissolved Anions				
Bromide	<0.5	<2.5		
Chloride	9.5	<25	600	
Fluoride	<0.2	0.184	0.2 to 0.3 [7]	
Sulphate	**1160**	**566**	100	
Nutrients				
Ammonia (as N)	**0.0832**	**0.0977**	0.681 to 28.3 [8,9]	0.0168 to 185 [8,9]
Nitrate (as N)	<0.05	<0.25	200	13
Nitrite (as N)	<0.01	<0.05	0.06 to 0.6 [10]	0.06
Nitrogen (Total)	<5	1.03		
Nitrogen (Total Kjeldahl)	0.416	0.734		
Phosphate (Total; as P)	0.233	0.395		
Phosphorus (Dissolved)	<0.3	<0.3		
Phosphorus (Total)	0.86			
Dissolved Metals				
Aluminum	0.0649	0.0145	0.1 to $e^{(1.209-2.426*[pH]+0.286*[pH](2))}$ (11)	0.005 to 0.1 [11]
Antimony	0.00059	<0.0005		
Arsenic	0.00055	<0.0005	0.005	0.005
Barium	QA/QC	0.133	5	
Beryllium	<0.0025	<0.0025	0.0053	
Bismuth	<0.0025	<0.0025		
Boron	0.055	<0.05	1.2	
Cadmium	<0.001	<0.0011	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]
Calcium	384	275		
Chromium	0.0533	0.042		
Cobalt	<0.0005	<0.0005	0.11	
Copper	**0.260**	**0.0161**	(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	0.042	<0.03	0.35	0.3
Lead	<0.00025	<0.00025	0.003 to $e^{(1.273*\ln([\text{Hardness (Dissolved)}])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	0.051	<0.025		
Magnesium	0.157	0.045		
Manganese	0.00079	<0.00025	(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	<0.00001	<0.00001	0.0001	0.000026
Molybdenum	QA/QC (0.00311)	**0.489**	2	0.073
Nickel	<0.0025	0.0025	0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	31.1	22.9		
Selenium	**0.00275**	**0.00141**	0.002	0.001
Silicon	1.35	0.843		
Silver	<0.00005	<0.00005	0.0001 to 0.003 [7]	0.0001
Sodium	351	346		
Strontium	11.2	10.3		
Thallium	<0.0005	<0.0005	0.0003	0.0008
Tin	<0.0005	<0.0005		
Titanium	0.012	<0.01		
Uranium	<0.00005	<0.00005		
Vanadium	<0.005	<0.005	0.006	
Zinc	<0.005	<0.005	(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Total Metals				
Aluminum	**24.9**			0.005 to 0.1 [11]
Antimony	0.0132			
Arsenic	**0.0247**		0.005	0.005
Barium	0.589		5	
Beryllium	<0.0025		0.0053	
Bismuth	<0.0025			
Boron	0.149		1.2	
Cadmium	<0.0015		$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]
Calcium	507			
Chromium	0.0918			
Cobalt	0.0174		0.11	
Copper	**0.28**		(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	**24.4**		1	0.3
Lead	**0.0233**		0.003 to $e^{(1.273*\ln([\text{Hardness (Dissolved)}])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	0.065			
Magnesium	51.2			
Manganese	0.761		(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	**0.00003**		0.0001	0.000026
Molybdenum	**0.346**		2	0.073
Nickel	0.031		0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	33.1			
Selenium	**0.00629**		0.002	0.001
Silicon	48.9			
Silver	**0.00165**		0.0001 to 0.003 [7]	0.0001
Sodium	330			
Strontium	11.4			
Thallium	<0.0005		0.0003	0.0008
Tin	0.00833			
Titanium	0.519			
Uranium	0.00298			
Vanadium	**0.0546**		0.006	
Zinc	**0.238**		(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Organics				
Carbon Organic (Total)	41.5	62.5		

M:\1\01\00329\08\A\Report\1- Hydrogeology\Appendices\Appendix B\B1\[Table B1.1 to B1.16.xls]RES08-1B

NOTES:

1. UNITS ARE mg/L, UNLESS OTHERWISE STATED.
2. BCWQG - BCWQG: AQUATIC LIFE: FRESH - BRITISH COLUMBIA WATER QUALITY GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (AUGUST 2006).
3. CCME - CCME: AQUATIC LIFE: FRESH - CANADIAN ENVIRONMENTAL GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (DECEMBER 2006).
4. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH LIMITS.
5. **BOLD** INDICATES THE VALUE EXCEEDS THE CCME: AQUATIC LIFE: FRESH LIMITS.
6. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC LIFE: FRESH LIMITS.
7. HARDNESS (as CaCO3) DEPENDENT
8. pH (IN SITU) DEPENDENT
9. TEMPERATURE (IN SITU) DEPENDENT
10. CHLORIDE (DISSOLVED) DEPENDENT
11. pH DEPENDENT

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	07DEC'09	ISSUED WITH REPORT - VA101-329/8-1	AL	HRS	KJB

Knight Piésold CONSULTING

TABLE B1.3

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF GROUNDWATER DATA AND GUIDELINES EXCEEDANCES
SAMPLE LOCATION RES08-2A

Print Mar/23/10 10:53:32

Date Sampled	29-Sep-08	4-Oct-09	BCWQG [2]	CCME [3]
Time Sampled		9:12 AM		
In Situ Parameters				
Conductivity (uS/cm)		4500		
Oxygen Dissolved		8.39		
Oxygen Dissolved %	55	64		
pH	**13.3**	**12.7**	6.5 to 9	6.5 to 9
Redox Potential (mV)	-82.9			
Specific Conductivity (uS/cm)		8198		
Temperature (°C)	5.46	3.42		
Physical Tests				
Acidity to pH 8.3 (as CaCO3)	<1	<1		
Bicarbonate Alkalinity (as CaCO3)	<13	<1		
Carbonate Alkalinity (as CaCO3)	132	168		
Hydroxide Alkalinity (as CaCO3)	3310	361		
Total Alkalinity (as CaCO3)	3440	529		
Color (TCU)	36.2	<5		
Conductivity (uS/cm)	13200	2660		
Hardness (as CaCO3)	1900	379		
pH	**12.3**	**11.9**	6.5 to 9	6.5 to 9
Total Dissolved Solids	3990	708		
Total Suspended Solids	260	27.8		
Turbidity (NTU)	140	41.3		
Dissolved Anions				
Bromide	<0.5	<0.5		
Chloride	5.7	<5	600	
Fluoride	0.24	<0.2	0.2 to 0.3 [7]	
Sulphate	**477**	36.2	100	
Nutrients				
Ammonia (as N)	**0.117**	**0.0911**	0.681 to 28.3 [8,9]	0.0168 to 185 [8,9]
Nitrate (as N)	0.151	<0.05	200	13
Nitrite (as N)	<0.01	<0.01	0.06 to 0.6 [10]	0.06
Nitrogen (Total)	<5	0.42		
Nitrogen (Total Kjeldahl)	1.24	0.408		
Phosphate (Total; as P)	0.169	0.101		
Phosphorus (Dissolved)	<0.3	<0.3		
Phosphorus (Total)	<0.3			
Dissolved Metals				
Aluminum	**0.494**	**0.174**	0.1 to $e^{(1.209-2.426*[pH]+0.286*[pH](2))}$ [11]	0.005 to 0.1 [11]
Antimony	<0.001	0.00127		
Arsenic	<0.001	0.00047	0.005	0.005
Barium	QA/QC	0.337	5	
Beryllium	<0.005	<0.001	0.0053	
Bismuth	<0.005	<0.001		
Boron	<0.1	<0.02	1.2	
Cadmium	<0.001	<0.00025	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]
Calcium	761	152		
Chromium	0.701	0.0512		
Cobalt	<0.001	<0.0002	0.11	
Copper	**0.0042**	**0.00632**	(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	<0.03	<0.03	0.35	0.3
Lead	0.00367	0.00014	0.003 to $e^{(1.273*\ln([\text{Hardness (Dissolved)}])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	0.25	0.048		
Magnesium	0.123	0.05		
Manganese	0.00261	0.00015	(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	<0.00001	<0.00001	0.0001	0.000026
Molybdenum	QA/QC	**0.103**	2	0.073
Nickel	<0.005	<0.001	0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	302	48.7		
Selenium	**0.0191**	**0.00144**	0.002	0.001
Silicon	0.48	1.23		
Silver	<0.0001	<0.00002	0.0001 to 0.003 [7]	0.0001
Sodium	728	123		
Strontium	19.1	4.49		
Thallium	<0.001	<0.0002	0.0003	0.0008
Tin	0.001	0.00203		
Titanium	0.01	<0.01		
Uranium	0.00011	<0.00002		
Vanadium	<0.01	<0.002	0.006	
Zinc	0.02	0.0175	(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Total Metals				
Aluminum	**2.93**			0.005 to 0.1 [11]
Antimony	0.0028			
Arsenic	0.0031		0.005	0.005
Barium	1.7		5	
Beryllium	<0.005		0.0053	
Bismuth	<0.005			
Boron	<0.1		1.2	
Cadmium	<0.001		$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]
Calcium	815			
Chromium	0.738			
Cobalt	0.0025		0.11	
Copper	**0.0367**		(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	**3.18**		1	0.3
Lead	**0.00747**		0.003 to $e^{(1.273*\ln([\text{Hardness (Dissolved)}])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	0.26			
Magnesium	2.18			
Manganese	0.104		(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	<0.00001		0.0001	0.000026
Molybdenum	**0.319**		2	0.073
Nickel	0.0082		0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	308			
Selenium	**0.0185**		0.002	0.001
Silicon	7.68			
Silver	**0.00054**		0.0001 to 0.003 [7]	0.0001
Sodium	727			
Strontium	19.7			
Thallium	<0.001		0.0003	0.0008
Tin	0.0041			
Titanium	0.186			
Uranium	0.0002			
Vanadium	**0.011**		0.006	
Zinc	**0.082**		(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Organics				
Carbon Organic (Total)	22.9	8.44		

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NOTES:

1. UNITS ARE mg/L, UNLESS OTHERWISE STATED.
2. BCWQG - BCWQG: AQUATIC LIFE: FRESH - BRITISH COLUMBIA WATER QUALITY GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (AUGUST 2006).
3. CCME - CCME: AQUATIC LIFE: FRESH - CANADIAN ENVIRONMENTAL GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (DECEMBER 2006).
4. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH LIMITS.
5. **BOLD** INDICATES THE VALUE EXCEEDS THE CCME: AQUATIC LIFE: FRESH LIMITS.
6. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC LIFE: FRESH LIMITS.
7. HARDNESS (as CaCO3) DEPENDENT
8. pH (IN SITU) DEPENDENT
9. TEMPERATURE (IN SITU) DEPENDENT
10. CHLORIDE (DISSOLVED) DEPENDENT
11. pH DEPENDENT

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	07DEC'09	ISSUED WITH REPORT - VA101-329/8-1	AL	HRS	KJB

Knight Piésold CONSULTING

TABLE B1.4

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF GROUNDWATER DATA AND GUIDELINES EXCEEDANCES
SAMPLE LOCATION RES08-2B

Print Mar/23/10 10:53:32

Date Sampled Time Sampled	29-Sep-08	4-Oct-09 8:50 AM	BCWQG [2]	CCME [3]
In Situ Parameters				
Conductivity (uS/cm)	152	110		
Oxygen Dissolved		5.78		
Oxygen Dissolved %	19.4	43		
pH	8.44	8.63	6.5 to 9	6.5 to 9
Redox Potential (mV)	-76.7			
Specific Conductivity (uS/cm)		189		
Temperature (°C)	5.51	3.22		
Physical Tests				
Acidity to pH 8.3 (as CaCO3)	<1	<1		
Bicarbonate Alkalinity (as CaCO3)	88.9	43.6		
Carbonate Alkalinity (as CaCO3)	6.7	62		
Hydroxide Alkalinity (as CaCO3)	<1	<1		
Total Alkalinity (as CaCO3)	95.5	106		
Color (TCU)	9.3	<5		
Conductivity (uS/cm)	218	194		
Hardness (as CaCO3)	61.4	79.9		
pH	8.36	8.62	6.5 to 9	6.5 to 9
Total Dissolved Solids	137	117		
Total Suspended Solids	1040	2030		
Turbidity (NTU)	1080	543		
Dissolved Anions				
Bromide	<0.05	<0.05		
Chloride	0.51	<0.5	600	
Fluoride	0.098	0.08	0.2 to 0.3 [7]	
Sulphate	31.6	28.2	100	
Nutrients				
Ammonia (as N)	0.0145	<0.02	0.681 to 28.3 [8,9]	0.0168 to 185 [8,9]
Nitrate (as N)	0.0088	<0.005	200	13
Nitrite (as N)	<0.001	<0.001	0.06 to 0.6 [10]	0.06
Nitrogen (Total)	0.57	0.056		
Nitrogen (Total Kjeldahl)	0.563	0.082		
Phosphate (Total; as P)	0.088	1.41		
Phosphorus (Dissolved)	<0.3	<0.3		
Phosphorus (Total)	1.03			
Dissolved Metals				
Aluminum	**0.422**	0.0023	0.1 to $e^{(1.209-2.426*[pH]+0.286*[pH](2))}$ (11)	0.005 to 0.1 [11]
Antimony	0.00057	0.00047		
Arsenic	**0.00658**	**0.0162**	0.005	0.005
Barium	QA/QC	0.0508	5	
Beryllium	<0.0025	<0.0005	0.0053	
Bismuth	<0.0025	<0.0005		
Boron	<0.05	0.049	1.2	
Cadmium	<0.000085	<0.00001	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]
Calcium	15.1	17.4		
Chromium	0.0034	<0.0005		
Cobalt	<0.0005	<0.0001	0.11	
Copper	**0.00398**	0.00017	(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	**0.524**	<0.03	0.35	0.3
Lead	0.00033	<0.00005	0.003 to $e^{(1.273*\ln([\text{Hardness (Dissolved)}])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	<0.025	<0.005		
Magnesium	5.73	8.85		
Manganese	0.0287	0.00445	(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	<0.00001	<0.00001	0.0001	0.000026
Molybdenum	QA/QC	0.0155	2	0.073
Nickel	<0.0025	0.0012	0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	1.99	1.22		
Selenium	<0.0005	<0.0001	0.002	0.001
Silicon	6.01	4.34		
Silver	<0.00005	<0.00001	0.0001 to 0.003 [7]	0.0001
Sodium	17.9	6.9		
Strontium	0.206	0.237		
Thallium	<0.0005	<0.0001	0.0003	0.0008
Tin	<0.0005	<0.0001		
Titanium	0.022	<0.01		
Uranium	0.000809	0.000727		
Vanadium	<0.005	0.0012	0.006	
Zinc	0.0078	0.002	(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Total Metals				
Aluminum	**22.8**			0.005 to 0.1 [11]
Antimony	0.00102			
Arsenic	**0.0249**		0.005	0.005
Barium	0.248		5	
Beryllium	<0.0025		0.0053	
Bismuth	<0.0025			
Boron	0.06		1.2	
Cadmium	**0.000417**		$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]
Calcium	47.9			
Chromium	0.154			
Cobalt	0.0226		0.11	
Copper	**0.285**		(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	**30.9**		1	0.3
Lead	**0.0132**		0.003 to $e^{(1.273*\ln([\text{Hardness (Dissolved)}])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	<0.025			
Magnesium	24.5			
Manganese	0.671		(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	0.000012		0.0001	0.000026
Molybdenum	0.0369		2	0.073
Nickel	**0.117**		0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	4.55			
Selenium	**0.0011**		0.002	0.001
Silicon	45.7			
Silver	**0.00243**		0.0001 to 0.003 [7]	0.0001
Sodium	18.1			
Strontium	0.352			
Thallium	<0.0005		0.0003	0.0008
Tin	0.00125			
Titanium	1.03			
Uranium	0.00441			
Vanadium	**0.0945**		0.006	
Zinc	**0.1**		(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Organics				
Carbon Organic (Total)	8.51	1.44		

M:\1\01\00329\08\A\Report\1- Hydrogeology\Appendices\Appendix B\B1\[Table B1.1 to B1.16.xls]RES08-2B

NOTES:

1. UNITS ARE mg/L, UNLESS OTHERWISE STATED.
2. BCWQG - BCWQG: AQUATIC LIFE: FRESH - BRITISH COLUMBIA WATER QUALITY GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (AUGUST 2006).
3. CCME - CCME: AQUATIC LIFE: FRESH - CANADIAN ENVIRONMENTAL GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (DECEMBER 2006).
4. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH LIMITS.
5. **BOLD** INDICATES THE VALUE EXCEEDS THE CCME: AQUATIC LIFE: FRESH LIMITS.
6. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC LIFE: FRESH LIMITS.
7. HARDNESS (as CaCO3) DEPENDENT
8. pH (IN SITU) DEPENDENT
9. TEMPERATURE (IN SITU) DEPENDENT
10. CHLORIDE (DISSOLVED) DEPENDENT
11. pH DEPENDENT

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	07DEC'09	ISSUED WITH REPORT - VA101-329/8-1	AL	HRS	KJB

Knight Piésold CONSULTING

TABLE B1.5

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF GROUNDWATER DATA AND GUIDELINES EXCEEDANCES
SAMPLE LOCATION RES08-3A

Print Mar/23/10 10:53:32

Date Sampled	30-Sep-08	2-Oct-09	BCWQG [2]	CCME [3]
Time Sampled		1:18 PM		
In Situ Parameters				
Conductivity (uS/cm)	239	321		
Oxygen Dissolved		4.01		
Oxygen Dissolved (%)	45.8	1.32		
pH	7.61	7.74	6.5 to 9	6.5 to 9
Redox Potential (mV)	65.2			
Specific Conductivity (uS/cm)		513		
Temperature (°C)	5.21	5.88		
Physical Tests				
Acidity to pH 8.3 (as CaCO3)	<1	5.5		
Bicarbonate Alkalinity (as CaCO3)	115	111		
Carbonate Alkalinity (as CaCO3)	<1	<2		
Hydroxide Alkalinity (as CaCO3)	<1	<2		
Total Alkalinity (as CaCO3)	115	111		
Color (TCU)	<5	<5		
Conductivity (uS/cm)	243	534		
Hardness (as CaCO3)	109	236		
pH	8.25	7.9	6.5 to 9	6.5 to 9
Total Dissolved Solids	146	351		
Total Suspended Solids	21	3.7		
Turbidity (NTU)	13.5	4.03		
Dissolved Anions				
Bromide	<0.05	<0.05		
Chloride	<0.5	4.32	600	
Fluoride	0.031	0.125	0.2 to 0.3 [7]	
Sulphate	16.6	**159**	100	
Nutrients				
Ammonia (as N)	<0.005	<0.005	0.681 to 28.3 [8,9]	0.0168 to 185 [8,9]
Nitrate (as N)	0.121	0.0843	200	13
Nitrite (as N)	<0.001	<0.001	0.06 to 0.6 [10]	0.06
Nitrogen (Total)	0.17	0.1		
Nitrogen (Total Kjeldahl)	<0.050	<0.05		
Phosphate (Total; as P)	0.0184	0.006		
Phosphorus (Dissolved)	<0.3	<0.3		
Phosphorus (Total)	<0.3			
Dissolved Metals				
Aluminum	0.0284	0.0054	$0.1 \text{ to } e^{(1.209-2.426*[pH]+0.286*[pH](2))}$ [11]	0.005 to 0.1 [11]
Antimony	0.00101	0.00061		
Arsenic	0.00138	0.00114	0.005	0.005
Barium	QA/QC	0.155	5	
Beryllium	<0.0005	<0.0005	0.0053	
Bismuth	<0.0005	<0.0005		
Boron	0.018	0.064	1.2	
Cadmium	0.000034	<0.00001	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]
Calcium	33.8	72.4		
Chromium	0.00151	0.00104		
Cobalt	0.00015	<0.0001	0.11	
Copper	0.00520	0.0005	(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	0.033	<0.03	0.35	0.3
Lead	<0.00005	<0.00005	$0.003 \text{ to } e^{(1.273*\ln([\text{Hardness (Dissolved)}])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	<0.005	<0.005		
Magnesium	6.03	13.4		
Manganese	0.0183	0.00623	(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	0.000014	<0.00001	0.0001	0.000026
Molybdenum	QA/QC	0.0623	2	0.073
Nickel	0.00144	<0.0005	0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	0.737	1.1		
Selenium	0.00021	0.00019	0.002	0.001
Silicon	3.55	3.57		
Silver	<0.00001	<0.00001	0.0001 to 0.003 [7]	0.0001
Sodium	4.5	19.5		
Strontium	0.384	2.11		
Thallium	<0.0001	<0.0001	0.0003	0.0008
Tin	0.00018	<0.0001		
Titanium	<0.01	<0.01		
Uranium	0.00398	0.0108		
Vanadium	<0.001	<0.001	0.006	
Zinc	0.0031	0.0021	(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Total Metals				
Aluminum	**0.747**			0.005 to 0.1 [11]
Antimony	0.00031			
Arsenic	0.00058		0.005	0.005
Barium	0.0772		5	
Beryllium	<0.0005		0.0053	
Bismuth	<0.0005			
Boron	0.014		1.2	
Cadmium	**0.000366**		$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]
Calcium	38.2			
Chromium	0.0105			
Cobalt	0.00128		0.11	
Copper	**0.0052**		(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	**0.676**		1	0.3
Lead	0.000686		$0.003 \text{ to } e^{(1.273*\ln([\text{Hardness (Dissolved)}])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	<0.005			
Magnesium	8.07			
Manganese	0.0261		(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	<0.00001		0.0001	0.000026
Molybdenum	0.00874		2	0.073
Nickel	0.0105		0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	0.898			
Selenium	0.00032		0.002	0.001
Silicon	4.8			
Silver	**0.000521**		0.0001 to 0.003 [7]	0.0001
Sodium	2.3			
Strontium	0.154			
Thallium	<0.0001		0.0003	0.0008
Tin	0.0004			
Titanium	0.033			
Uranium	0.000627			
Vanadium	0.002		0.006	
Zinc	0.0081		(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Organics				
Carbon Organic (Total)	1	0.91		

M:\1\01\00329\08\A\Report\1- Hydrogeology\Appendices\Appendix B\B1\[Table B1.1 to B1.16.xls]RES08-3A

NOTES:

1. UNITS ARE mg/L, UNLESS OTHERWISE STATED.
2. BCWQG - BCWQG: AQUATIC LIFE: FRESH - BRITISH COLUMBIA WATER QUALITY GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (AUGUST 2006).
3. CCME - CCME: AQUATIC LIFE: FRESH - CANADIAN ENVIRONMENTAL GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (DECEMBER 2006).
4. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH LIMITS.
5. **BOLD** INDICATES THE VALUE EXCEEDS THE CCME: AQUATIC LIFE: FRESH LIMITS.
6. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC LIFE: FRESH LIMITS.
7. HARDNESS (as CaCO3) DEPENDENT
8. pH (IN SITU) DEPENDENT.
9. TEMPERATURE (IN SITU) DEPENDENT.
10. CHLORIDE (DISSOLVED) DEPENDENT.
11. pH DEPENDENT.

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	07DEC'09	ISSUED WITH REPORT - VA101-329/8-1	AL	HRS	KJB

Knight Piésold CONSULTING

TABLE B1.6

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF GROUNDWATER DATA AND GUIDELINES EXCEEDANCES
SAMPLE LOCATION RES08-3B

Print Mar/23/10 10:53:32

Date Sampled Time Sampled	30-Sep-08	2-Oct-09 10:12 AM	BCWQG [2]	CCME [3]
In Situ Parameters				
Conductivity (uS/cm)	186	132		
Oxygen Dissolved		6.02		
Oxygen Dissolved %	70.4	47.6		
pH	7.87	7.88	6.5 to 9	6.5 to 9
Redox Potential (mV)	83.2	257		
Specific Conductivity (uS/cm)		212		
Temperature (°C)	9.7	5.29		
Physical Tests				
Acidity to pH 8.3 (as CaCO3)	<1	3		
Bicarbonate Alkalinity (as CaCO3)	92.6	100		
Carbonate Alkalinity (as CaCO3)	<1	<2		
Hydroxide Alkalinity (as CaCO3)	<1	<2		
Total Alkalinity (as CaCO3)	92.6	100		
Color (TCU)	<5	<5		
Conductivity (uS/cm)	184	211		
Hardness (as CaCO3)	86.6	103		
pH	8.23	8.15	6.5 to 9	6.5 to 9
Total Dissolved Solids	107	117		
Total Suspended Solids	357	6.2		
Turbidity (NTU)	365	5.44		
Dissolved Anions				
Bromide	<0.05	<0.05		
Chloride	<0.5	<0.5	600	
Fluoride	<0.02	<0.02	0.2 to 0.3 [7]	
Sulphate	9.71	8.97	100	
Nutrients				
Ammonia (as N)	<0.005	<0.005	0.681 to 28.3 [8,9]	0.0168 to 185 [8,9]
Nitrate (as N)	0.0568	0.0339	200	13
Nitrite (as N)	<0.001	<0.001	0.06 to 0.6 [10]	0.06
Nitrogen (Total)	0.17			
Nitrogen (Total Kjeldahl)	0.113	<0.05		
Phosphate (Total; as P)	0.446	0.011		
Phosphorus (Dissolved)	<0.3	<0.3		
Phosphorus (Total)	0.45			
Dissolved Metals				
Aluminum	0.0584	0.0026	0.1 to $e^{(1.209-2.426*[pH]+0.286*[pH](2))}$ [11]	0.005 to 0.1 [11]
Antimony	0.00013	<0.0001		
Arsenic	0.00055	0.00047	0.005	0.005
Barium	QA/QC	0.0621	5	
Beryllium	<0.0005	<0.0005	0.0053	
Bismuth	<0.0005	<0.0005		
Boron	<0.01	0.01	1.2	
Cadmium	<0.000017	<0.00001	$10^{(0.86*(log([Hardness (Dissolved)]))-3.2)}/1000$ [7]	$10^{(0.86*(log([Hardness (Dissolved)]))-3.2)}/1000$ [7]
Calcium	27.3	32.5		
Chromium	0.00101	0.00087		
Cobalt	<0.0001	<0.0001	0.11	
Copper	0.103	0.00023	(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	0.074	<0.03	0.35	0.3
Lead	0.00007	<0.00005	0.003 to $e^{(1.273*ln([Hardness (Dissolved)])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	<0.005	<0.005		
Magnesium	4.47	5.26		
Manganese	0.00772	0.000209	(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	<0.00001	<0.00001	0.0001	0.000026
Molybdenum	QA/QC	0.00142	2	0.073
Nickel	<0.0005	<0.0005	0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	0.852	0.65		
Selenium	0.00021	<0.0001	0.002	0.001
Silicon	2.41	2.29		
Silver	<0.00001	<0.00001	0.0001 to 0.003 [7]	0.0001
Sodium	2.6	<2		
Strontium	0.119	0.12		
Thallium	<0.0001	<0.0001	0.0003	0.0008
Tin	<0.0001	<0.0001		
Titanium	<0.01	<0.01		
Uranium	0.000169	0.000163		
Vanadium	<0.001	<0.001	0.006	
Zinc	0.0013	<0.001	(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Total Metals				
Aluminum	**16.6**			0.005 to 0.1 [11]
Antimony	0.0004			
Arsenic	**0.0102**		0.005	0.005
Barium	0.206		5	
Beryllium	<0.0005		0.0053	
Bismuth	<0.0005			
Boron	0.017		1.2	
Cadmium	**0.000289**		$10^{(0.86*(log([Hardness (Dissolved)]))-3.2)}/1000$ [7]	$10^{(0.86*(log([Hardness (Dissolved)]))-3.2)}/1000$ [7]
Calcium	33.9			
Chromium	0.047			
Cobalt	0.0168		0.11	
Copper	**0.103**		(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	**16.9**		1	0.3
Lead	**0.00493**		0.003 to $e^{(1.273*ln([Hardness (Dissolved)])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	0.0074			
Magnesium	21.2			
Manganese	1.13		(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	0.000015		0.0001	0.000026
Molybdenum	0.00213		2	0.073
Nickel	0.0558		0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	3.04			
Selenium	0.00047		0.002	0.001
Silicon	31.9			
Silver	**0.00012**		0.0001 to 0.003 [7]	0.0001
Sodium	2.7			
Strontium	0.13			
Thallium	<0.0001		0.0003	0.0008
Tin	0.00029			
Titanium	0.624			
Uranium	0.000385			
Vanadium	**0.0466**		0.006	
Zinc	**0.0563**		(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Organics				
Carbon Organic (Total)	2.32	<0.5		

M:\1\01\00329\08\A\Report\1- Hydrogeology\Appendices\Appendix B\B1\[Table B1.1 to B1.16.xls]RES08-3B

NOTES:

1. UNITS ARE mg/L, UNLESS OTHERWISE STATED.
2. BCWQG - BCWQG: AQUATIC LIFE: FRESH - BRITISH COLUMBIA WATER QUALITY GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (AUGUST 2006).
3. CCME - CCME: AQUATIC LIFE: FRESH - CANADIAN ENVIRONMENTAL GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (DECEMBER 2006).
4. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH LIMITS.
5. **BOLD** INDICATES THE VALUE EXCEEDS THE CCME: AQUATIC LIFE: FRESH LIMITS.
6. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC LIFE: FRESH LIMITS.
7. HARDNESS (as CaCO3) DEPENDENT
8. pH (IN SITU) DEPENDENT
9. TEMPERATURE (IN SITU) DEPENDENT
10. CHLORIDE (DISSOLVED) DEPENDENT
11. pH DEPENDENT
12. QA/QC INDICATES THE VALUE EXCEEDED QUALITY ASSURANCE AND QUALITY CONTROL OBJECTIVES.

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	07DEC'09	ISSUED WITH REPORT - VA101-329/8-1	AL	HRS	KJB

Knight Piésold CONSULTING

TABLE B1.7

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF GROUNDWATER DATA AND GUIDELINES EXCEEDANCES
SAMPLE LOCATION RES08-4A

Print Mar/23/10 10:53:32

Date Sampled	1-Oct-08	4-Oct-09	BCWQG [2]	CCME [3]
Time Sampled		2:22 PM		
In Situ Parameters				
Conductivity (uS/cm)	4268	2032		
Oxygen Dissolved		0.97		
Oxygen Dissolved %	28.5			
pH	**12.8**	**12.8**	6.5 to 9	6.5 to 9
Redox Potential (mV)	-146			
Temperature (°C)	5.97	8.81		
Physical Tests				
Acidity to pH 8.3 (as CaCO3)	<1	<1		
Bicarbonate Alkalinity (as CaCO3)	<1	<1		
Carbonate Alkalinity (as CaCO3)	124	124		
Hydroxide Alkalinity (as CaCO3)	630	326		
Total Alkalinity (as CaCO3)	754	451		
Color (TCU)	13.4	<5		
Conductivity (uS/cm)	3090	2500		
Hardness (as CaCO3)	484	336		
pH	**12**	**11.9**	6.5 to 9	6.5 to 9
Total Dissolved Solids	989	841		
Total Suspended Solids	63.1	46.2		
Turbidity (NTU)	20.9	61.5		
Dissolved Anions				
Bromide	<0.5	<0.5		
Chloride	11.1	5.87	600	
Fluoride	**1.44**	**1.06**	0.2 to 0.3 [7]	
Sulphate	83.8	42.2	100	
Nutrients				
Ammonia (as N)	**0.0654**	**0.0733**	0.681 to 28.3 [8,9]	0.0168 to 185 [8,9]
Nitrate (as N)	0.106	0.184	200	13
Nitrite (as N)	<0.01	<0.01	0.06 to 0.6 [10]	0.06
Nitrogen (Total)	0.67	0.37		
Nitrogen (Total Kjeldahl)	0.564	0.328		
Phosphate (Total; as P)	0.0553	0.017		
Phosphorus (Dissolved)	<0.3	<0.3		
Phosphorus (Total)	<0.3			
Dissolved Metals				
Aluminum	**0.24**	**0.245**	0.1 to $e^{(1.209-2.426*[pH]+0.286*[pH](2))}$ [11]	0.005 to 0.1 [11]
Antimony	0.00169	0.00094		
Arsenic	0.00173	0.00255	0.005	0.005
Barium	QA/QC	0.35	5	
Beryllium	<0.0025	<0.001	0.0053	
Bismuth	<0.0025	<0.001		
Boron	0.107	0.075	1.2	
Cadmium	<0.001	<0.0004	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]
Calcium	194	135		
Chromium	0.0238	0.0066		
Cobalt	<0.0005	<0.0002	0.11	
Copper	**0.0117**	**0.0044**	(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	0.054	<0.03	0.35	0.3
Lead	0.00112	0.00023	0.003 to $e^{(1.273*\ln([\text{Hardness (Dissolved)}])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	0.058	0.025		
Magnesium	0.06	0.084		
Manganese	0.00206	0.00013	(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	0.000011	0.000016	0.0001	0.000026
Molybdenum	QA/QC	**0.19**	2	0.073
Nickel	<0.0025	<0.001	0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	27.9	13.3		
Selenium	0.00099	0.00034	0.002	0.001
Silicon	2.46	2.71		
Silver	<0.00005	<0.00002	0.0001 to 0.003 [7]	0.0001
Sodium	207	156		
Strontium	5.02	4.01		
Thallium	<0.0005	<0.0002	0.0003	0.0008
Tin	0.00318	0.00029		
Titanium	0.01	<0.01		
Uranium	<0.00005	0.000769		
Vanadium	<0.005	0.0037	0.006	
Zinc	0.0091	0.0024	(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Total Metals				
Aluminum	**0.714**			0.005 to 0.1 [11]
Antimony	0.00206			
Arsenic	0.00204		0.005	0.005
Barium	0.475		5	
Beryllium	<0.0025		0.0053	
Bismuth	<0.0025			
Boron	0.1		1.2	
Cadmium	<0.001		$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]
Calcium	190			
Chromium	0.0529			
Cobalt	0.00184		0.11	
Copper	**0.0171**		(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	**0.782**		1	0.3
Lead	0.00215		0.003 to $e^{(1.273*\ln([\text{Hardness (Dissolved)}])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	0.057			
Magnesium	0.598			
Manganese	0.0233		(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	<0.00001		0.0001	0.000026
Molybdenum	**0.323**		2	0.073
Nickel	0.0238		0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	26.4			
Selenium	**0.00128**		0.002	0.001
Silicon	3.48			
Silver	**0.000405**		0.0001 to 0.003 [7]	0.0001
Sodium	202			
Strontium	4.79			
Thallium	<0.0005		0.0003	0.0008
Tin	0.00349			
Titanium	0.038			
Uranium	0.000142			
Vanadium	0.0054		0.006	
Zinc	0.0183		(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Organics				
Carbon Organic (Total)	101	99.9		

M:\1\01\00329\08\A\Report\1- Hydrogeology\Appendices\Appendix B\B1\[Table B1.1 to B1.16.xls]RES08-4A

NOTES:

1. UNITS ARE mg/L, UNLESS OTHERWISE STATED.
2. BCWQG - BCWQG: AQUATIC LIFE: FRESH - BRITISH COLUMBIA WATER QUALITY GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (AUGUST 2006).
3. CCME - CCME: AQUATIF LIFE: FRESH - CANADIAN ENVIRONMENTAL GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (DECEMBER 2006).
3. **BOLD** CCME: AQUATIC LIFE: FRESH - CANADIAN ENVIRONMENTAL GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (DECEMBER 2006).
5. **BOLD** INDICATES THE VALUE EXCEEDS THE CCME: AQUATIC LIFE: FRESH LIMITS.
6. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC LIFE: FRESH LIMITS.
7. HARDNESS (as CaCO3) DEPENDENT
8. pH (IN SITU) DEPENDENT
9. TEMPERATURE (IN SITU) DEPENDENT
10. CHLORIDE (DISSOLVED) DEPENDENT
11. pH DEPENDENT

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	07DEC'09	ISSUED WITH REPORT - VA101-329/8-1	AL	HRS	KJB

Knight Piésold CONSULTING

TABLE B1.8

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF GROUNDWATER DATA AND GUIDELINES EXCEEDANCES
SAMPLE LOCATION RES08-4B

Print Mar/29/10 11:02:35

Date Sampled Time Sampled	1-Oct-08	4-Oct-09 11:36 AM	BCWQG [2]	CCME [3]
In Situ Parameters				
Conductivity (uS/cm)	3193	124		
Oxygen Dissolved		2.8		
Oxygen Dissolved %	27	21.3		
pH	7.66	**9.39**	6.5 to 9	6.5 to 9
Redox Potential (mV)	13.3			
Specific Conductivity (uS/cm)		212		
Temperature (°C)	5.24	3.1		
Physical Tests				
Acidity to pH 8.3 (as CaCO3)	<1	<1		
Bicarbonate Alkalinity (as CaCO3)	<1	92.5		
Carbonate Alkalinity (as CaCO3)	66.3	36.2		
Hydroxide Alkalinity (as CaCO3)	463	<1		
Total Alkalinity (as CaCO3)	530	129		
Color (TCU)	9.1	<5		
Conductivity (uS/cm)	2620	219		
Hardness (as CaCO3)	589	106		
pH	**11.9**	**9.05**	6.5 to 9	6.5 to 9
Total Dissolved Solids	702	141		
Total Suspended Solids	134	24.7		
Turbidity (NTU)	36.2	17		
Dissolved Anions				
Bromide	<0.5	<0.05		
Chloride	<5	<0.5	600	
Fluoride	<0.2	0.045	0.2 to 0.3 [7]	
Sulphate	8.7	6.89	100	
Nutrients				
Ammonia (as N)	0.0166	0.0181	0.681 to 28.3 [8,9]	0.0168 to 185 [8,9]
Nitrate (as N)	<0.05	0.0236	200	13
Nitrite (as N)	<0.01	<0.001	0.06 to 0.6 [10]	0.06
Nitrogen (Total)	0.28	0.17		
Nitrogen (Total Kjeldahl)	0.280	0.15		
Phosphate (Total; as P)	0.036	0.0249		
Phosphorus (Dissolved)	<0.3	<0.3		
Phosphorus (Total)	<0.3			
Dissolved Metals				
Aluminum	**0.308**	0.0265	0.1 to $e^{(1.209-2.426*[pH]+0.286*[pH](2))}$ [11]	0.005 to 0.1 [11]
Antimony	0.00275	0.00173		
Arsenic	0.00084	0.00147	0.005	0.005
Barium	QA/QC	0.0942	5	
Beryllium	<0.0025	<0.0005	0.0053	
Bismuth	<0.0025	<0.0005		
Boron	<0.05	0.018	1.2	
Cadmium	0.00012	0.000028	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]
Calcium	236	32.5		
Chromium	0.0361	0.00329		
Cobalt	<0.0005	<0.0001	0.11	
Copper	0.0146	**0.00924**	(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	<0.03	<0.03	0.35	0.3
Lead	0.00032	0.000054	0.003 to $e^{(1.273*\ln([\text{Hardness (Dissolved)}])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	<0.025	<0.005		
Magnesium	0.039	6.03		
Manganese	0.00079	0.00273	(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	<0.00001	<0.00001	0.0001	0.000026
Molybdenum	QA/QC	0.00885	2	0.073
Nickel	<0.0025	0.0009	0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	5.91	1.49		
Selenium	**0.00144**	0.00038	0.002	0.001
Silicon	2.59	6.76		
Silver	<0.00005	<0.00001	0.0001 to 0.003 [7]	0.0001
Sodium	19.7	6.2		
Strontium	4	0.731		
Thallium	<0.0005	<0.0001	0.0003	0.0008
Tin	0.00267	0.00046		
Titanium	0.011	<0.01		
Uranium	<0.00005	0.0102		
Vanadium	<0.005	0.002	0.006	
Zinc	<0.005	0.0025	(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Total Metals				
Aluminum	**1.01**			0.005 to 0.1 [11]
Antimony	0.00283			
Arsenic	0.00189		0.005	0.005
Barium	0.805		5	
Beryllium	<0.0025		0.0053	
Bismuth	<0.0025			
Boron	<0.05		1.2	
Cadmium	**0.0002**		$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]
Calcium	303			
Chromium	0.0554			
Cobalt	0.00136		0.11	
Copper	**0.0146**		(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	**0.885**		1	0.3
Lead	0.00201		0.003 to $e^{(1.273*\ln([\text{Hardness (Dissolved)}])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	<0.025			
Magnesium	1.5			
Manganese	0.0308		(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	<0.00001		0.0001	0.000026
Molybdenum	0.0368		2	0.073
Nickel	0.0172		0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	6.24			
Selenium	**0.00143**		0.002	0.001
Silicon	6.37			
Silver	**0.000531**		0.0001 to 0.003 [7]	0.0001
Sodium	18.2			
Strontium	4.32			
Thallium	<0.0005		0.0003	0.0008
Tin	0.00191			
Titanium	0.038			
Uranium	0.000147			
Vanadium	**0.0078**		0.006	
Zinc	0.0201		(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Organics				
Carbon Organic (Total)	6.62	9.85		

M:\1\01\00329\08\A\Report\1- Hydrogeology\Appendices\Appendix B\B1\[Table B1.1 to B1.16.xls]RES08-4B

NOTES:

1. UNITS ARE mg/L, UNLESS OTHERWISE STATED.
2. BCWQG - BCWQG: AQUATIC LIFE: FRESH - BRITISH COLUMBIA WATER QUALITY GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (AUGUST 2006).
3. CCME - CCME: AQUATIC LIFE: FRESH - CANADIAN ENVIRONMENTAL GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (DECEMBER 2006).
4. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH LIMITS.
5. **BOLD** INDICATES THE VALUE EXCEEDS THE CCME: AQUATIC LIFE: FRESH LIMITS.
6. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC LIFE: FRESH LIMITS.
7. HARDNESS (as CaCO3) DEPENDENT
8. pH (IN SITU) DEPENDENT
9. TEMPERATURE (IN SITU) DEPENDENT
10. CHLORIDE (DISSOLVED) DEPENDENT
11. pH DEPENDENT

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	07DEC'09	ISSUED WITH REPORT - VA101-329/8-1	AL	HRS	KJB

Knight Piésold CONSULTING

TABLE B1.9

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF GROUNDWATER DATA AND GUIDELINES EXCEEDANCES
SAMPLE LOCATION RES08-5A

Print Mar/23/10 10:53:32

Date Sampled / Time Sampled	1-Oct-08	BCWQG [2]	CCME [3]
Physical Tests			
Acidity to pH 8.3 (as CaCO3)	<1		
Bicarbonate Alkalinity (as CaCO3)	73		
Carbonate Alkalinity (as CaCO3)	<1		
Hydroxide Alkalinity (as CaCO3)	<1		
Total Alkalinity (as CaCO3)	73		
Color (TCU)	<5		
Conductivity (uS/cm)	189		
Hardness (as CaCO3)	70		
pH	8.2	6.5 to 9	6.5 to 9
Total Dissolved Solids	113		
Total Suspended Solids	<3		
Turbidity (NTU)	1.03		
Dissolved Anions			
Bromide	<0.05		
Chloride	<0.5	600	
Fluoride	0.069	0.2 to 0.3 [7]	
Sulphate	25.2	100	
Nutrients			
Ammonia (as N)	<0.005	0.681 to 28.3 [8,9]	0.0168 to 185 [8,9]
Nitrate (as N)	<0.005	200	13
Nitrite (as N)	<0.001	0.06 to 0.6 [10]	0.06
Nitrogen (Total)	<0.05		
Nitrogen (Total Kjeldahl)	<0.050		
Phosphate (Total; as P)	0.007		
Phosphorus (Dissolved)	<0.3		
Phosphorus (Total)	<0.3		
Dissolved Metals			
Aluminum	**0.346**	0.1 to $e^{(1.209-2.426*[pH]+0.286*[pH](2))}$ [11]	0.005 to 0.1 [11]
Antimony	<0.0001		
Arsenic	0.00067	0.005	0.005
Barium	QA/QC	5	
Beryllium	<0.0005	0.0053	
Bismuth	<0.0005		
Boron	0.017	1.2	
Cadmium	**0.000035**	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]
Calcium	21.5		
Chromium	0.00054		
Cobalt	0.00031	0.11	
Copper	**0.00697**	(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	**0.477**	0.35	0.3
Lead	0.000092	0.003 to $e^{(1.273*\ln([\text{Hardness (Dissolved)}])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	<0.005		
Magnesium	3.99		
Manganese	0.0214	(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	<0.00001	0.0001	0.000026
Molybdenum	QA/QC	2	0.073
Nickel	0.00084	0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	0.406		
Selenium	0.00018	0.002	0.001
Silicon	5.51		
Silver	0.000042	0.0001 to 0.003 [7]	0.0001
Sodium	9.9		
Strontium	0.1		
Thallium	<0.0001	0.0003	0.0008
Tin	<0.0001		
Titanium	0.02		
Uranium	0.000347		
Vanadium	0.0034	0.006	
Zinc	0.0026	(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Total Metals			
Aluminum	**0.131**		0.005 to 0.1 [11]
Antimony	<0.0001		
Arsenic	0.00071	0.005	0.005
Barium	QA/QC	5	
Beryllium	<0.0005	0.0053	
Bismuth	<0.0005		
Boron	0.019	1.2	
Cadmium	**0.00003**	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]
Calcium	22.7		
Chromium	<0.0005		
Cobalt	<0.0001	0.11	
Copper	0.00028	(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	0.05	1	0.3
Lead	<0.00005	0.003 to $e^{(1.273*\ln([\text{Hardness (Dissolved)}])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	<0.005		
Magnesium	4.35		
Manganese	0.00595	(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	<0.00001	0.0001	0.000026
Molybdenum	QA/QC	2	0.073
Nickel	<0.0005	0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	0.399		
Selenium	0.00027	0.002	0.001
Silicon	4.98		
Silver	<0.00001	0.0001 to 0.003 [7]	0.0001
Sodium	10.4		
Strontium	0.103		
Thallium	<0.0001	0.0003	0.0008
Tin	<0.0001		
Titanium	<0.01		
Uranium	0.000371		
Vanadium	0.0027	0.006	
Zinc	<0.001	(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Organics			
Carbon Organic (Total)	<0.5		

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NOTES:

1. UNITS ARE mg/L, UNLESS OTHERWISE STATED.
2. BCWQG - BCWQG: AQUATIC LIFE: FRESH - BRITISH COLUMBIA WATER QUALITY GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (AUGUST 2006).
3. CCME - CCME: AQUATIF LIFE: FRESH - CANADIAN ENVIRONMENTAL GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (DECEMBER 2006).
4. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH LIMITS.
5. **BOLD** INDICATES THE VALUE EXCEEDS THE CCME: AQUATIC LIFE: FRESH LIMITS.
6. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC LIFE: FRESH LIMITS.
7. HARDNESS (as CaCO3) DEPENDENT
8. pH (IN SITU) DEPENDENT
9. TEMPERATURE (IN SITU) DEPENDENT
10. CHLORIDE (DISSOLVED) DEPENDENT
3. CCME - CCME: AQUATIC LIFE: FRESH - CANADIAN ENVIRONMENTAL GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (DECEMBER 2006).

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	07DEC'09	ISSUED WITH REPORT - VA101-329/8-1	AL	HRS	KJB

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TABLE B1.10

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF GROUNDWATER DATA AND GUIDELINES EXCEEDANCES
SAMPLE LOCATION RES08-5B

Print Mar/23/10 10:53:32

Date Sampled / Time Sampled	1-Oct-08	BCWQG [2]	CCME [3]
In Situ Parameters			
Conductivity (uS/cm)	252		
Oxygen Dissolved (%)	7.8		
pH	7.41		
Redox Potential (mV)	-286		
Physical Tests			
Acidity to pH 8.3 (as CaCO3)	<1		
Bicarbonate Alkalinity (as CaCO3)	113		
Carbonate Alkalinity (as CaCO3)	<1		
Hydroxide Alkalinity (as CaCO3)	<1		
Total Alkalinity (as CaCO3)	113		
Color (TCU)	10.5		
Conductivity (uS/cm)	243		
Hardness (as CaCO3)	106		
pH	8.18	6.5 to 9	6.5 to 9
Total Dissolved Solids	168		
Total Suspended Solids	1030		
Turbidity (NTU)	>4000		
Dissolved Anions			
Bromide	<0.05		
Chloride	1.37	600	
Fluoride	0.055	0.2 to 0.3 [7]	
Sulphate	21.2	100	
Nutrients			
Ammonia (as N)	<0.005	0.681 to 28.3 [8,9]	0.0168 to 185 [8,9]
Nitrate (as N)	<0.005	200	13
Nitrite (as N)	<0.001	0.06 to 0.6 [10]	0.06
Nitrogen (Total)	<0.3		
Nitrogen (Total Kjeldahl)	<0.25		
Phosphate (Total; as P)	2.36		
Phosphorus (Dissolved)	<0.3		
Phosphorus (Total)	2.77		
Dissolved Metals			
Aluminum	**0.164**	$0.1 \text{ to } e^{(1.209-2.426*[pH]+0.286*[pH](2))}$ [11]	0.005 to 0.1 [11]
Antimony	<0.001		
Arsenic	<0.001	0.005	0.005
Barium	QA/QC	5	
Beryllium	<0.005	0.0053	
Bismuth	<0.005		
Boron	<0.1	1.2	
Cadmium	**0.00025**	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]
Calcium	32.8		
Chromium	<0.005		
Cobalt	<0.001	0.11	
Copper	**0.0076**	(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	0.224	0.35	0.3
Lead	<0.0005	$0.003 \text{ to } e^{(1.273*\ln([\text{Hardness (Dissolved)}])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	<0.05		
Magnesium	5.85		
Manganese	0.221	(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	<0.00001	0.0001	0.000026
Molybdenum	QA/QC	2	0.073
Nickel	<0.005	0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	1.08		
Selenium	<0.001	0.002	0.001
Silicon	4.92		
Silver	<0.0001	0.0001 to 0.003 [7]	0.0001
Sodium	8.3		
Strontium	0.145		
Thallium	<0.001	0.0003	0.0008
Tin	<0.001		
Titanium	0.01		
Uranium	0.00016		
Vanadium	<0.01	0.006	
Zinc	<0.01	(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Total Metals			
Aluminum	**70.7**		0.005 to 0.1 [11]
Antimony	<0.001		
Arsenic	**0.0242**	0.005	0.005
Barium	0.489	5	
Beryllium	<0.005	0.0053	
Bismuth	<0.005		
Boron	<0.1	1.2	
Cadmium	**0.00085**	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]
Calcium	92.7		
Chromium	0.119		
Cobalt	0.0603	0.11	
Copper	**1.21**	(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	**91.2**	1	0.3
Lead	**0.014**	$0.003 \text{ to } e^{(1.273*\ln([\text{Hardness (Dissolved)}])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	<0.05		
Magnesium	59		
Manganese	**2.5**	(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	**0.000031**	0.0001	0.000026
Molybdenum	**0.0753**	2	0.073
Nickel	**0.143**	0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	5.95		
Selenium	**0.0024**	0.002	0.001
Silicon	89.6		
Silver	**0.00827**	0.0001 to 0.003 [7]	0.0001
Sodium	12.3		
Strontium	0.327		
Thallium	<0.001	0.0003	0.0008
Tin	0.0011		
Titanium	3.83		
Uranium	0.00107		
Vanadium	**0.223**	0.006	
Zinc	**0.267**	(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Organics			
Carbon Organic (Total)	3.38		

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NOTES:

1. UNITS ARE mg/L, UNLESS OTHERWISE STATED.
2. BCWQG - BCWQG: AQUATIC LIFE: FRESH - BRITISH COLUMBIA WATER QUALITY GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (AUGUST 2006).
3. CCME - CCME: AQUATIF LIFE: FRESH - CANADIAN ENVIRONMENTAL GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (DECEMBER 2006).
4. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH LIMITS.
5. **BOLD** INDICATES THE VALUE EXCEEDS THE CCME: AQUATIC LIFE: FRESH LIMITS.
3. **BOLD** CCME: AQUATIC LIFE: FRESH - CANADIAN ENVIRONMENTAL GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (DECEMBER 2006).
7. HARDNESS (as CaCO3) DEPENDENT
8. pH (IN SITU) DEPENDENT
9. TEMPERATURE (IN SITU) DEPENDENT
10. CHLORIDE (DISSOLVED) DEPENDENT
11. pH DEPENDENT

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	07DEC'09	ISSUED WITH REPORT - VA101-329/8-1	AL	HRS	KJB

Knight Piésold CONSULTING

TABLE B1.11

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF GROUNDWATER DATA AND GUIDELINES EXCEEDANCES
SAMPLE LOCATION RES08-6A

Print Mar/23/10 10:53:32

Date Sampled	27-Sep-08	30-Sep-09	BCWQG [2]	CCME [3]
Time Sampled		4:00 PM		
In Situ Parameters				
Conductivity (uS/cm)	390	454		
Oxygen Dissolved		0.93		
Oxygen Dissolved %	37.2	1.2		
pH	8.37	7.55	6.5 to 9	6.5 to 9
Redox Potential (mV)	-82.2	20.7		
Specific Conductivity (uS/cm)		278		
Temperature (°C)	7.79	4.64		
Physical Tests				
Acidity to pH 8.3 (as CaCO3)	<1	<1		
Bicarbonate Alkalinity (as CaCO3)	107	99.3		
Carbonate Alkalinity (as CaCO3)	4.6	<2		
Hydroxide Alkalinity (as CaCO3)	<1	<2		
Total Alkalinity (as CaCO3)	112	99.3		
Color (TCU)	<5	<5		
Conductivity (uS/cm)	427	437		
Hardness (as CaCO3)	97	102		
pH	8.3	8.25	6.5 to 9	6.5 to 9
Total Dissolved Solids	277	268		
Total Suspended Solids	452	3.2		
Turbidity (NTU)	430	3.32		
Dissolved Anions				
Bromide	<0.05	<0.05		
Chloride	9.87	11.1	600	
Fluoride	**0.566**	**0.368**	0.2 to 0.3 [7]	
Sulphate	94.1	**102**	100	
Nutrients				
Ammonia (as N)	0.0159	0.0093	0.681 to 28.3 [8,9]	0.0168 to 185 [8,9]
Nitrate (as N)	0.0063	<0.005	200	13
Nitrite (as N)	0.0018	<0.001	0.06 to 0.6 [10]	0.06
Nitrogen (Total)	0.23	<0.05		
Nitrogen (Total Kjeldahl)	0.223	<0.05		
Phosphate (Total; as P)	0.355	0.0072		
Phosphorus (Dissolved)	<0.3	<0.3		
Phosphorus (Total)	0.4			
Dissolved Metals				
Aluminum	0.083	0.0038	0.1 to $e^{(1.209-2.426*[pH]+0.286*[pH](2))}$ (11)	0.005 to 0.1 [11]
Antimony	<0.001	<0.0001		
Arsenic	0.0022	0.00193	0.005	0.005
Barium	QA/QC	0.0238	5	
Beryllium	<0.005	<0.0005	0.0053	
Bismuth	<0.005	<0.0005		
Boron	0.11	0.132	1.2	
Cadmium	<0.00017	<0.00004	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]
Calcium	20.1	21		
Chromium	<0.005	<0.0005		
Cobalt	<0.001	<0.0001	0.11	
Copper	**0.0024**	0.0001	(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	0.083	<0.03	0.35	0.3
Lead	<0.0005	<0.00005	0.003 to $e^{(1.273*\ln([\text{Hardness (Dissolved)}])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	<0.05	0.0108		
Magnesium	11.4	12		
Manganese	0.0182	0.0196	(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	<0.00001	<0.00001	0.0001	0.000026
Molybdenum	QA/QC	0.0103	2	0.073
Nickel	0.005	<0.0005	0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	5.72	5.84		
Selenium	<0.001	0.00037	0.002	0.001
Silicon	4.47	4.51		
Silver	<0.0001	<0.00001	0.0001 to 0.003 [7]	0.0001
Sodium	39.8	48.1		
Strontium	0.5	0.661		
Thallium	<0.001	<0.0001	0.0003	0.0008
Tin	<0.001	<0.0001		
Titanium	<0.01	<0.01		
Uranium	0.00311	0.00224		
Vanadium	<0.01	<0.001	0.006	
Zinc	<0.01	0.0027	(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Total Metals				
Aluminum	**14.5**			0.005 to 0.1 [11]
Antimony	0.00104			
Arsenic	**0.00552**		0.005	0.005
Barium	0.137		5	
Beryllium	<0.001		0.0053	
Bismuth	<0.001			
Boron	0.124		1.2	
Cadmium	**0.000291**		$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]	$10^{(0.86*(\log([\text{Hardness (Dissolved)}]))-3.2)}/1000$ [7]
Calcium	32.7			
Chromium	0.129			
Cobalt	0.0166		0.11	
Copper	**0.0682**		(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	**21.1**		1	0.3
Lead	**0.00439**		0.003 to $e^{(1.273*\ln([\text{Hardness (Dissolved)}])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	0.021			
Magnesium	35.4			
Manganese	0.415		(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	**0.00003**		0.0001	0.000026
Molybdenum	**0.113**		2	0.073
Nickel	**0.182**		0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	5.81			
Selenium	0.00067		0.002	0.001
Silicon	36.4			
Silver	**0.00758**		0.0001 to 0.003 [7]	0.0001
Sodium	49.4			
Strontium	0.602			
Thallium	<0.0002		0.0003	0.0008
Tin	0.00226			
Titanium	0.683			
Uranium	0.00434			
Vanadium	**0.0514**		0.006	
Zinc	**0.0843**		(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Organics				
Carbon Organic (Total)	4.34	<0.5		

M:\1\01\00329\08\A\Report\1- Hydrogeology\Appendices\Appendix B\B1\[Table B1.1 to B1.16.xls]RES08-6A

NOTES:

1. UNITS ARE mg/L, UNLESS OTHERWISE STATED.
2. BCWQG - BCWQG: AQUATIC LIFE: FRESH - BRITISH COLUMBIA WATER QUALITY GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (AUGUST 2006).
3. CCME - CCME: AQUATIC LIFE: FRESH - CANADIAN ENVIRONMENTAL GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (DECEMBER 2006).
4. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH LIMITS.
5. **BOLD** INDICATES THE VALUE EXCEEDS THE CCME: AQUATIC LIFE: FRESH LIMITS.
6. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC LIFE: FRESH LIMITS.
7. HARDNESS (as CaCO3) DEPENDENT
8. pH (IN SITU) DEPENDENT
9. TEMPERATURE (IN SITU) DEPENDENT
10. CHLORIDE (DISSOLVED) DEPENDENT
11. pH DEPENDENT

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	07DEC'09	ISSUED WITH REPORT - VA101-329/8-1	AL	HRS	KJB

Knight Piésold CONSULTING

TABLE B1.12

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF GROUNDWATER DATA AND GUIDELINES EXCEEDANCES
SAMPLE LOCATION RES08-6B

Print Mar/23/10 10:53:32

Date Sampled Time Sampled	27-Sep-08	30-Sep-09 11:15 AM	BCWQG [2]	CCME [3]
In Situ Parameters				
Conductivity (uS/cm)	244	269		
Oxygen Dissolved		0.16		
Oxygen Dissolved %	24.9	1.2		
pH	8.29	**6.44**	6.5 to 9	6.5 to 9
Redox Potential (mV)	-114	82		
Specific Conductivity (uS/cm)		165		
Temperature (°C)	5	4.68		
Physical Tests				
Acidity to pH 8.3 (as CaCO3)	<1	2.5		
Bicarbonate Alkalinity (as CaCO3)	90.1	107		
Carbonate Alkalinity (as CaCO3)	4.5	<1		
Hydroxide Alkalinity (as CaCO3)	<1	<1		
Total Alkalinity (as CaCO3)	94.7	107		
Color (TCU)	<5	<5		
Conductivity (uS/cm)	247	264		
Hardness (as CaCO3)	79.5	84.4		
pH	8.38	7.87	6.5 to 9	6.5 to 9
Total Dissolved Solids	200	165		
Total Suspended Solids	2890	53.7		
Turbidity (NTU)	>4000	97		
Dissolved Anions				
Bromide	<0.05	<0.05		
Chloride	1.64	2.18	600	
Fluoride	0.162	0.108	0.2 to 0.3 [7]	
Sulphate	37.1	35.5	100	
Nutrients				
Ammonia (as N)	0.0217	0.0178	0.681 to 28.3 [8,9]	0.0168 to 185 [8,9]
Nitrate (as N)	<0.005	<0.005	200	13
Nitrite (as N)	<0.001	<0.001	0.06 to 0.6 [10]	0.06
Nitrogen (Total)	<0.3	<0.05		
Nitrogen (Total Kjeldahl)	<0.25	<0.05		
Phosphate (Total; as P)	2.64	0.081		
Phosphorus (Dissolved)	<0.3	<0.3		
Phosphorus (Total)	2.27			
Dissolved Metals				
Aluminum	**0.206**	0.0031	0.1 to $e^{(1.209-2.426*[pH]+0.286*[pH](2))}$ [11]	0.005 to 0.1 [11]
Antimony	0.00123	<0.0001		
Arsenic	0.00334	0.00225	0.005	0.005
Barium	QA/QC	0.0353	5	
Beryllium	<0.001	<0.0005	0.0053	
Bismuth	<0.001	<0.0005		
Boron	0.063	0.082	1.2	
Cadmium	<0.000034	0.000019	$10^{(0.86*(log([Hardness (Dissolved)]))-3.2)}/1000$ [7]	$10^{(0.86*(log([Hardness (Dissolved)]))-3.2)}/1000$ [7]
Calcium	20.5	19.5		
Chromium	0.0015	<0.0005		
Cobalt	0.00039	<0.0001	0.11	
Copper	**0.00257**	<0.0001	(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	**0.351**	<0.03	0.35	0.3
Lead	<0.0001	<0.00005	0.003 to $e^{(1.273*ln([Hardness (Dissolved)])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	<0.01	<0.005		
Magnesium	6.87	8.69		
Manganese	0.0241	0.0201	(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	<0.00001	<0.00001	0.0001	0.000026
Molybdenum	QA/QC	0.00596	2	0.073
Nickel	0.0067	<0.0005	0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	4.73	5.97		
Selenium	**0.00425**	<0.0001	0.002	0.001
Silicon	5.41	5.08		
Silver	0.000048	<0.00001	0.0001 to 0.003 [7]	0.0001
Sodium	17.4	17.9		
Strontium	0.211	0.322		
Thallium	<0.0002	<0.0001	0.0003	0.0008
Tin	<0.0002	<0.0001		
Titanium	<0.01	<0.01		
Uranium	0.000347	0.000379		
Vanadium	**0.0227**	0.0025	0.006	
Zinc	0.0025	<0.001	(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Total Metals				
Aluminum	**84.9**			0.005 to 0.1 [11]
Antimony	<0.001			
Arsenic	**0.0198**		0.005	0.005
Barium	0.321		5	
Beryllium	<0.005		0.0053	
Bismuth	<0.005			
Boron	0.12		1.2	
Cadmium	**0.00058**		$10^{(0.86*(log([Hardness (Dissolved)]))-3.2)}/1000$ [7]	$10^{(0.86*(log([Hardness (Dissolved)]))-3.2)}/1000$ [7]
Calcium	104			
Chromium	0.512			
Cobalt	**0.117**		0.11	
Copper	**0.444**		(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	**112**		1	0.3
Lead	**0.0142**		0.003 to $e^{(1.273*ln([Hardness (Dissolved)])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	<0.05			
Magnesium	184			
Manganese	**2.59**		(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	0.000025		0.0001	0.000026
Molybdenum	0.0371		2	0.073
Nickel	**1.24**		0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	11.8			
Selenium	**0.0041**		0.002	0.001
Silicon	101			
Silver	**0.00684**		0.0001 to 0.003 [7]	0.0001
Sodium	23.3			
Strontium	0.471			
Thallium	**<0.001**		0.0003	0.0008
Tin	<0.001			
Titanium	5.23			
Uranium	0.00161			
Vanadium	**0.332**		0.006	
Zinc	**0.254**		(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Organics				
Carbon Organic (Total)	1.39	<0.5		

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NOTES:

1. UNITS ARE mg/L, UNLESS OTHERWISE STATED.
2. BCWQG - BCWQG: AQUATIC LIFE: FRESH - BRITISH COLUMBIA WATER QUALITY GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (AUGUST 2006).
3. CCME - CCME: AQUATIC LIFE: FRESH - CANADIAN ENVIRONMENTAL GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (DECEMBER 2006).
4. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH LIMITS.
5. **BOLD** INDICATES THE VALUE EXCEEDS THE CCME: AQUATIC LIFE: FRESH LIMITS.
6. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC LIFE: FRESH LIMITS.
7. HARDNESS (as CaCO3) DEPENDENT
8. pH (IN SITU) DEPENDENT
9. TEMPERATURE (IN SITU) DEPENDENT
10. CHLORIDE (DISSOLVED) DEPENDENT
11. pH DEPENDENT

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	07DEC'09	ISSUED WITH REPORT - VA101-329/8-1	AL	HRS	KJB

Knight Piésold CONSULTING

TABLE B1.13

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF GROUNDWATER DATA AND GUIDELINES EXCEEDANCES
SAMPLE LOCATION RES08-7A

Print Mar/23/10 10:53:32

Date Sampled Time Sampled	29-Sep-08	1-Oct-09 5:12 PM	BCWQG [2]	CCME [3]
In Situ Parameters				
Conductivity (uS/cm)		398		
Oxygen Dissolved		0.14		
Oxygen Dissolved %		1.1		
pH		7.79	6.5 to 9	6.5 to 9
Redox Potential (mV)		-55		
Specific Conductivity (uS/cm)		649		
Temperature (°C)		4.77		
Physical Tests				
Acidity to pH 8.3 (as CaCO3)	<1	4.4		
Bicarbonate Alkalinity (as CaCO3)	183	183		
Carbonate Alkalinity (as CaCO3)	9.7	<2		
Hydroxide Alkalinity (as CaCO3)	<1	<2		
Total Alkalinity (as CaCO3)	193	183		
Color (TCU)	<5	<5		
Conductivity (uS/cm)	601	637		
Hardness (as CaCO3)	256	262		
pH	8.36	8.07	6.5 to 9	6.5 to 9
Total Dissolved Solids	351	409		
Total Suspended Solids	<3	8.2		
Turbidity (NTU)	0.73	10.6		
Dissolved Anions				
Bromide	<0.05	<0.05		
Chloride	14.6	16.4	600	
Fluoride	**0.348**	**0.524**	0.2 to 0.3 [7]	
Sulphate	**113**	**137**	100	
Nutrients				
Ammonia (as N)	0.0357	0.0241	0.681 to 28.3 [8,9]	0.0168 to 185 [8,9]
Nitrate (as N)	0.0086	<0.005	200	13
Nitrite (as N)	0.0022	<0.001	0.06 to 0.6 [10]	0.06
Nitrogen (Total)	<0.05	<0.05		
Nitrogen (Total Kjeldahl)	<0.050	<0.05		
Phosphate (Total; as P)	0.0049	0.0065		
Phosphorus (Dissolved)	<0.3	<0.3		
Phosphorus (Total)	<0.3			
Dissolved Metals				
Aluminum	0.0464	<0.001	0.1 to $e^{(1.209-2.426*[pH]+0.286*[pH](2))}$ [11]	0.005 to 0.1 [11]
Antimony	<0.0001	<0.0001		
Arsenic	0.00153	0.00309	0.005	0.005
Barium	QA/QC	0.0185	5	
Beryllium	<0.0005	<0.0005	0.0053	
Bismuth	<0.0005	<0.0005		
Boron	0.073	0.064	1.2	
Cadmium	<0.000017	<0.00001	$10^{(0.86*(log([Hardness (Dissolved)]))-3.2)}/1000$ [7]	$10^{(0.86*(log([Hardness (Dissolved)]))-3.2)}/1000$ [7]
Calcium	35.8	49.9		
Chromium	<0.0005	<0.001		
Cobalt	0.00013	0.00056	0.11	
Copper	<0.00010	<0.0001	(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	0.08	0.088	0.35	0.3
Lead	0.000068	<0.00005	0.003 to $e^{(1.273*ln([Hardness (Dissolved)])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	0.0122	0.0215		
Magnesium	40.5	33.3		
Manganese	0.0459	0.0615	(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	<0.00001	<0.00001	0.0001	0.000026
Molybdenum	QA/QC	0.00226	2	0.073
Nickel	0.00092	0.00068	0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	4.79	1.8		
Selenium	0.00011	0.00038	0.002	0.001
Silicon	4.25	4.25		
Silver	<0.00001	<0.00001	0.0001 to 0.003 [7]	0.0001
Sodium	27.4	30.3		
Strontium	0.476	0.725		
Thallium	<0.0001	<0.0001	0.0003	0.0008
Tin	<0.0001	<0.0001		
Titanium	<0.01	<0.01		
Uranium	0.00121	0.00239		
Vanadium	0.0012	<0.001	0.006	
Zinc	0.011	0.0012	(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Total Metals				
Aluminum	0.0235			0.005 to 0.1 [11]
Antimony	<0.0001			
Arsenic	0.00149		0.005	0.005
Barium	0.052		5	
Beryllium	<0.0005		0.0053	
Bismuth	<0.0005			
Boron	0.07		1.2	
Cadmium	<0.000017		$10^{(0.86*(log([Hardness (Dissolved)]))-3.2)}/1000$ [7]	$10^{(0.86*(log([Hardness (Dissolved)]))-3.2)}/1000$ [7]
Calcium	35.6			
Chromium	<0.0005			
Cobalt	0.0001		0.11	
Copper	<0.0001		(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	<0.03		1	0.3
Lead	0.000071		0.003 to $e^{(1.273*ln([Hardness (Dissolved)])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	0.0114			
Magnesium	38.8			
Manganese	0.0425		(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	<0.00001		0.0001	0.000026
Molybdenum	0.00327		2	0.073
Nickel	0.00071		0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	4.74			
Selenium	<0.0001		0.002	0.001
Silicon	4.17			
Silver	<0.00001		0.0001 to 0.003 [7]	0.0001
Sodium	26.7			
Strontium	0.477			
Thallium	<0.0001		0.0003	0.0008
Tin	<0.0001			
Titanium	<0.01			
Uranium	0.00122			
Vanadium	0.0011		0.006	
Zinc	0.0036		(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Organics				
Carbon Organic (Total)	<0.5	<0.5		

M:\1\01\00329\08\A\Report\1- Hydrogeology\Appendices\Appendix B\B1\[Table B1.1 to B1.16.xls]RES08-7A

NOTES:

1. UNITS ARE mg/L, UNLESS OTHERWISE STATED.
2. BCWQG - BCWQG: AQUATIC LIFE: FRESH - BRITISH COLUMBIA WATER QUALITY GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (AUGUST 2006).
3. CCME - CCME: AQUATIC LIFE: FRESH - CANADIAN ENVIRONMENTAL GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (DECEMBER 2006).
4. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH LIMITS.
5. **BOLD** INDICATES THE VALUE EXCEEDS THE CCME: AQUATIC LIFE: FRESH LIMITS.
6. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC LIFE: FRESH LIMITS.
7. HARDNESS (as CaCO3) DEPENDENT
8. pH (IN SITU) DEPENDENT
9. TEMPERATURE (IN SITU) DEPENDENT
10. CHLORIDE (DISSOLVED) DEPENDENT
11. pH DEPENDENT
12. QA/QC INDICATES THE VALUE EXCEEDED QUALITY ASSURANCE AND QUALITY CONTROL OBJECTIVES.

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	07DEC'09	ISSUED WITH REPORT - VA101-329/8-1	AL	HRS	KJB

Knight Piésold CONSULTING

TABLE B1.14

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF GROUNDWATER DATA AND GUIDELINES EXCEEDANCES
SAMPLE LOCATION RES08-7B

Print Mar/23/10 10:53:32

Date Sampled Time Sampled	29-Sep-08	1-Oct-09 5:17 PM	BCWQG [2]	CCME [3]
In Situ Parameters				
Conductivity (uS/cm)		380		
Oxygen Dissolved		0.68		
Oxygen Dissolved %		5.1		
pH		7.88	6.5 to 9	6.5 to 9
Redox Potential (mV)		-18.3		
Specific Conductivity (uS/cm)		628		
Temperature (°C)		4.31		
Physical Tests				
Acidity to pH 8.3 (as CaCO3)	<1	3.8		
Bicarbonate Alkalinity (as CaCO3)	191	189		
Carbonate Alkalinity (as CaCO3)	<1	<2		
Hydroxide Alkalinity (as CaCO3)	<1	<2		
Total Alkalinity (as CaCO3)	191	189		
Color (TCU)	<5	<5		
Conductivity (uS/cm)	612	610		
Hardness (as CaCO3)	266	253		
pH	8.23	8.13	6.5 to 9	6.5 to 9
Total Dissolved Solids	374	377		
Total Suspended Solids	<3	2070		
Turbidity (NTU)	0.37	3620		
Dissolved Anions				
Bromide	<0.05	<0.05		
Chloride	15.6	14.7	600	
Fluoride	**0.513**	**0.451**	0.2 to 0.3 [7]	
Sulphate	**120**	**120**	100	
Nutrients				
Ammonia (as N)	0.0269	0.0206	0.681 to 28.3 [8,9]	0.0168 to 185 [8,9]
Nitrate (as N)	<0.005	<0.005	200	13
Nitrite (as N)	<0.001	<0.001	0.06 to 0.6 [10]	0.06
Nitrogen (Total)	<0.05	0.073		
Nitrogen (Total Kjeldahl)	<0.050	0.053		
Phosphate (Total; as P)	0.0058	1.82		
Phosphorus (Dissolved)	<0.3	<0.3		
Phosphorus (Total)	<0.3			
Dissolved Metals				
Aluminum	0.0267	0.0013	0.1 to $e^{(1.209-2.426*[pH]+0.286*[pH](2))}$ [11]	0.005 to 0.1 [11]
Antimony	0.00014	<0.0001		
Arsenic	0.00137	0.00135	0.005	0.005
Barium	QA/QC	0.0457	5	
Beryllium	<0.0005	<0.0005	0.0053	
Bismuth	<0.0005	<0.0005		
Boron	0.064	0.07	1.2	
Cadmium	<0.000017	<0.00001	$10^{(0.86*(log([Hardness (Dissolved)]))-3.2)}/1000$ [7]	$10^{(0.86*(log([Hardness (Dissolved)]))-3.2)}/1000$ [7]
Calcium	44.9	43.9		
Chromium	<0.0005	<0.001		
Cobalt	0.00041	<0.0001	0.11	
Copper	<0.00010	0.00014	(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	0.101	<0.03	0.35	0.3
Lead	<0.00005	<0.00005	0.003 to $e^{(1.273*ln([Hardness (Dissolved)])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	0.0225	0.0173		
Magnesium	37.3	34.7		
Manganese	0.0577	0.0514	(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	<0.00001	<0.00001	0.0001	0.000026
Molybdenum	QA/QC	0.00226	2	0.073
Nickel	0.00075	0.00107	0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	1.95	3.03		
Selenium	<0.0001	0.00043	0.002	0.001
Silicon	4.23	4.37		
Silver	<0.00001	<0.00001	0.0001 to 0.003 [7]	0.0001
Sodium	28.7	29		
Strontium	0.545	0.664		
Thallium	<0.0001	<0.0001	0.0003	0.0008
Tin	<0.0001	<0.0001		
Titanium	<0.01	<0.01		
Uranium	0.00295	0.00179		
Vanadium	<0.001	<0.001	0.006	
Zinc	0.0027	0.0023	(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Total Metals				
Aluminum	0.006			0.005 to 0.1 [11]
Antimony	0.00013			
Arsenic	0.00125		0.005	0.005
Barium	0.019		5	
Beryllium	<0.0005		0.0053	
Bismuth	<0.0005			
Boron	0.064		1.2	
Cadmium	<0.000017		$10^{(0.86*(log([Hardness (Dissolved)]))-3.2)}/1000$ [7]	$10^{(0.86*(log([Hardness (Dissolved)]))-3.2)}/1000$ [7]
Calcium	44.3			
Chromium	<0.0005			
Cobalt	0.00039		0.11	
Copper	<0.0001		(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	0.033		1	0.3
Lead	<0.00005		0.003 to $e^{(1.273*ln([Hardness (Dissolved)])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	0.0227			
Magnesium	37.2			
Manganese	0.0565		(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	<0.00001		0.0001	0.000026
Molybdenum	0.00207		2	0.073
Nickel	0.00059		0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	1.94			
Selenium	<0.0001		0.002	0.001
Silicon	4.15			
Silver	<0.00001		0.0001 to 0.003 [7]	0.0001
Sodium	28.4			
Strontium	0.542			
Thallium	<0.0001		0.0003	0.0008
Tin	<0.0001			
Titanium	<0.01			
Uranium	0.00304			
Vanadium	<0.001		0.006	
Zinc	0.0024		(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Organics				
Carbon Organic (Total)	0.51	1.09		

M:\1\01\00329\08\A\Report\1- Hydrogeology\Appendices\Appendix B\B1\[Table B1.1 to B1.16.xls]RES08-7B

NOTES:

1. UNITS ARE mg/L, UNLESS OTHERWISE STATED.
2. BCWQG - BCWQG: AQUATIC LIFE: FRESH - BRITISH COLUMBIA WATER QUALITY GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (AUGUST 2006).
3. CCME - CCME: AQUATIC LIFE: FRESH - CANADIAN ENVIRONMENTAL GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (DECEMBER 2006).
4. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH LIMITS.
5. **BOLD** INDICATES THE VALUE EXCEEDS THE CCME: AQUATIC LIFE: FRESH LIMITS.
6. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC LIFE: FRESH LIMITS.
7. HARDNESS (as CaCO3) DEPENDENT
8. pH (IN SITU) DEPENDENT
9. TEMPERATURE (IN SITU) DEPENDENT
10. CHLORIDE (DISSOLVED) DEPENDENT
11. pH DEPENDENT
12. QA/QC INDICATES THE VALUE EXCEEDED QUALITY ASSURANCE AND QUALITY CONTROL OBJECTIVES.

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	07DEC'09	ISSUED WITH REPORT - VA101-329/8-1	AL	HRS	KJB

Knight Piésold CONSULTING

TABLE B1.15

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF GROUNDWATER DATA AND GUIDELINES EXCEEDANCES
SAMPLE LOCATION RES08-8A

Print Mar/23/10 10:53:32

Date Sampled Time Sampled	28-Sep-08	1-Oct-09 12:47 PM	BCWQG [2]	CCME [3]
In Situ Parameters				
Conductivity (uS/cm)	731	327		
Oxygen Dissolved		0.14		
Oxygen Dissolved %	40.9	1.1		
pH	8.95	8.15	6.5 to 9	6.5 to 9
Redox Potential (mV)	124	-59.4		
Specific Conductivity (uS/cm)		513		
Temperature (°C)	4.22	6		
Physical Tests				
Acidity to pH 8.3 (as CaCO3)	<1	3.1		
Bicarbonate Alkalinity (as CaCO3)	119	111		
Carbonate Alkalinity (as CaCO3)	7.1	<2		
Hydroxide Alkalinity (as CaCO3)	<1	<2		
Total Alkalinity (as CaCO3)	126	111		
Color (TCU)	14.6	<5		
Conductivity (uS/cm)	749	494		
Hardness (as CaCO3)	79.7	143		
pH	8.44	8.12	6.5 to 9	6.5 to 9
Total Dissolved Solids	500	324		
Total Suspended Solids	9880	557		
Turbidity (NTU)	>4000	235		
Dissolved Anions				
Bromide	<0.05	<0.05		
Chloride	4.22	1.29	600	
Fluoride	**1.24**	**1.01**	0.2 to 0.3 [7]	
Sulphate	**232**	**138**	100	
Nutrients				
Ammonia (as N)	0.0336	0.0075	0.681 to 28.3 [8,9]	0.0168 to 185 [8,9]
Nitrate (as N)	0.436	<0.005	200	13
Nitrite (as N)	0.008	<0.001	0.06 to 0.6 [10]	0.06
Nitrogen (Total)	0.84	0.073		
Nitrogen (Total Kjeldahl)	0.4	0.051		
Phosphate (Total; as P)	1.41	0.11		
Phosphorus (Dissolved)	<0.3	<0.3		
Phosphorus (Total)	1.1			
Dissolved Metals				
Aluminum	**1.5**	<0.001	0.1 to $e^{(1.209-2.426*[pH]+0.286*[pH](2))}$ [11]	0.005 to 0.1 [11]
Antimony	<0.001	<0.0001		
Arsenic	0.0049	0.00142	0.005	0.005
Barium	QA/QC	0.0146	5	
Beryllium	<0.005	<0.0005	0.0053	
Bismuth	<0.005	<0.0005		
Boron	0.12	0.101	1.2	
Cadmium	<0.00017	<0.00015	$10^{(0.86*(log([Hardness (Dissolved)]))-3.2)}/1000$ [7]	$10^{(0.86*(log([Hardness (Dissolved)]))-3.2)}/1000$ [7]
Calcium	21.7	41.3		
Chromium	<0.005	<0.0005		
Cobalt	<0.001	<0.0001	0.11	
Copper	**0.0523**	0.00013	(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	**0.745**	<0.03	0.35	0.3
Lead	0.00113	<0.00005	0.003 to $e^{(1.273*ln([Hardness (Dissolved)])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	<0.05	0.0089		
Magnesium	6.18	9.73		
Manganese	0.0288	0.0393	(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	<0.00001	<0.00001	0.0001	0.000026
Molybdenum	QA/QC	0.0359	2	0.073
Nickel	<0.005	0.00156	0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	1.76	0.958		
Selenium	<0.001	0.0001	0.002	0.001
Silicon	9.61	4.4		
Silver	**0.0004**	<0.00001	0.0001 to 0.003 [7]	0.0001
Sodium	129	47.1		
Strontium	1.1	3.01		
Thallium	<0.001	<0.0001	0.0003	0.0008
Tin	<0.001	0.00078		
Titanium	0.024	<0.01		
Uranium	0.0215	0.0225		
Vanadium	<0.01	<0.001	0.006	
Zinc	0.012	<0.001	(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Total Metals				
Aluminum	**68.5**			0.005 to 0.1 [11]
Antimony	<0.001			
Arsenic	**0.015**		0.005	0.005
Barium	0.44		5	
Beryllium	**0.01**		0.0053	
Bismuth	<0.005			
Boron	0.2		1.2	
Cadmium	**0.00112**		$10^{(0.86*(log([Hardness (Dissolved)]))-3.2)}/1000$ [7]	$10^{(0.86*(log([Hardness (Dissolved)]))-3.2)}/1000$ [7]
Calcium	80.7			
Chromium	0.0218			
Cobalt	0.0116		0.11	
Copper	**0.0523**		(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	**38**		1	0.3
Lead	**0.112**		0.003 to $e^{(1.273*ln([Hardness (Dissolved)])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	0.12			
Magnesium	36.2			
Manganese	1.02		(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	**0.000048**		0.0001	0.000026
Molybdenum	**0.125**		2	0.073
Nickel	0.037		0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	7.97			
Selenium	**0.0058**		0.002	0.001
Silicon	159			
Silver	**0.0194**		0.0001 to 0.003 [7]	0.0001
Sodium	128			
Strontium	4.22			
Thallium	<0.001		0.0003	0.0008
Tin	0.0013			
Titanium	0.341			
Uranium	0.0618			
Vanadium	**0.03**		0.006	
Zinc	**0.189**		(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Organics				
Carbon Organic (Total)	2.94	1.55		

M:\1\01\00329\08\A\Report\1- Hydrogeology\Appendices\Appendix B\B1\[Table B1.1 to B1.16.xls]RES08-8A

NOTES:

1. UNITS ARE mg/L, UNLESS OTHERWISE STATED.
2. BCWQG - BCWQG: AQUATIC LIFE: FRESH - BRITISH COLUMBIA WATER QUALITY GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (AUGUST 2006).
3. CCME - CCME: AQUATIC LIFE: FRESH - CANADIAN ENVIRONMENTAL GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (DECEMBER 2006).
4. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH LIMITS.
5. **BOLD** INDICATES THE VALUE EXCEEDS THE CCME: AQUATIC LIFE: FRESH LIMITS.
6. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC LIFE: FRESH LIMITS.
7. HARDNESS (as CaCO3) DEPENDENT
8. pH (IN SITU) DEPENDENT
9. TEMPERATURE (IN SITU) DEPENDENT
10. CHLORIDE (DISSOLVED) DEPENDENT
11. pH DEPENDENT

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	07DEC'09	ISSUED WITH REPORT - VA101-329/8-1	AL	HRS	KJB

Knight Piésold CONSULTING

TABLE B1.16

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF GROUNDWATER DATA AND GUIDELINES EXCEEDANCES
SAMPLE LOCATION RES08-8B

Print Mar/23/10 10:53:32

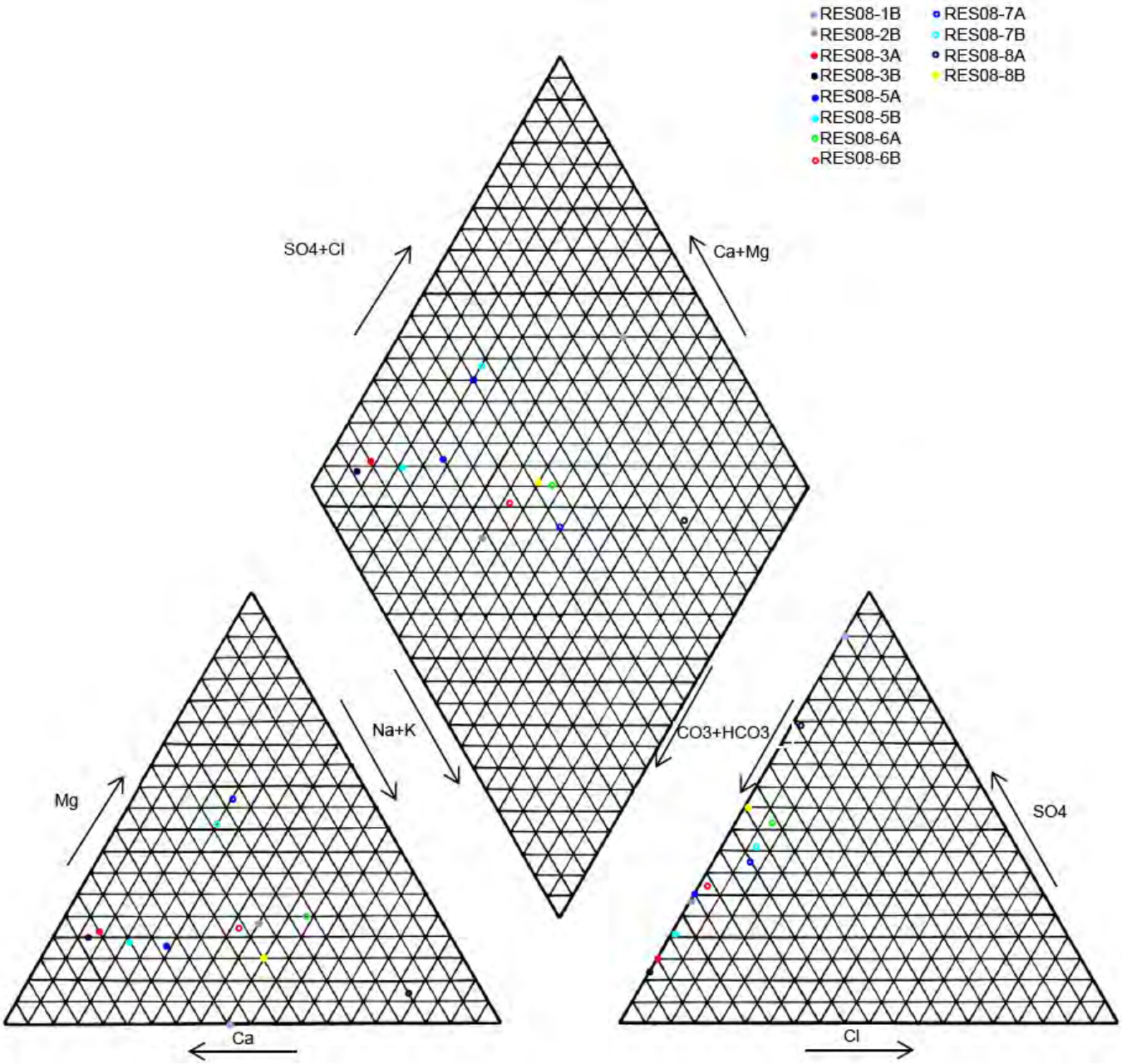
Date Sampled Time Sampled	28-Sep-08	1-Oct-09 10:55 AM	BCWQG [2]	CCME [3]
In Situ Parameters				
Conductivity (uS/cm)	548	286		
Oxygen Dissolved		1.42		
Oxygen Dissolved %	29.6	11		
pH	7.12	7.18	6.5 to 9	6.5 to 9
Redox Potential (mV)	52.6	-100		
Specific Conductivity (uS/cm)		465		
Temperature (°C)	4.49	4.76		
Physical Tests				
Acidity to pH 8.3 (as CaCO3)	1.4	7.1		
Bicarbonate Alkalinity (as CaCO3)	154	165		
Carbonate Alkalinity (as CaCO3)	<1	<2		
Hydroxide Alkalinity (as CaCO3)	<1	<2		
Total Alkalinity (as CaCO3)	154	165		
Color (TCU)	15.5	<5		
Conductivity (uS/cm)	535	445		
Hardness (as CaCO3)	151	151		
pH	8.1	7.81	6.5 to 9	6.5 to 9
Total Dissolved Solids	363	284		
Total Suspended Solids	1180	3.7		
Turbidity (NTU)	1080	5.32		
Dissolved Anions				
Bromide	<0.05	<0.05		
Chloride	1.64	0.65	600	
Fluoride	**0.635**	**0.68**	0.2 to 0.3 [7]	
Sulphate	**123**	72	100	
Nutrients				
Ammonia (as N)	<0.005	<0.005	0.681 to 28.3 [8,9]	0.0168 to 185 [8,9]
Nitrate (as N)	<0.005	<0.005	200	13
Nitrite (as N)	<0.001	<0.001	0.06 to 0.6 [10]	0.06
Nitrogen (Total)	1.3	0.05		
Nitrogen (Total Kjeldahl)	1.27	0.083		
Phosphate (Total; as P)	0.69	0.0503		
Phosphorus (Dissolved)	<0.3	<0.3		
Phosphorus (Total)	1.12			
Dissolved Metals				
Aluminum	**0.28**	0.0125	0.1 to $e^{(1.209-2.426*[pH]+0.286*[pH](2))}$ [11]	0.005 to 0.1 [11]
Antimony	<0.0005	<0.0001		
Arsenic	0.00091	0.00315	0.005	0.005
Barium	QA/QC	0.0584	5	
Beryllium	<0.0025	<0.0005	0.0053	
Bismuth	<0.0025	<0.0005		
Boron	0.078	0.097	1.2	
Cadmium	**0.000092**	<0.00005	$10^{(0.86*(log([Hardness (Dissolved)]))-3.2)}/1000$ [7]	$10^{(0.86*(log([Hardness (Dissolved)]))-3.2)}/1000$ [7]
Calcium	44	42.3		
Chromium	<0.0025	<0.001		
Cobalt	0.00071	0.00057	0.11	
Copper	0.12	0.00011	(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	**0.316**	**0.79**	0.35	0.3
Lead	<0.00025	<0.00005	0.003 to $e^{(1.273*ln([Hardness (Dissolved)])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	<0.025	<0.005		
Magnesium	10.1	11.1		
Manganese	0.203	0.448	(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	<0.00001	<0.00001	0.0001	0.000026
Molybdenum	QA/QC	0.0144	2	0.073
Nickel	0.0054	<0.0005	0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	2.8	1.74		
Selenium	<0.0005	0.00036	0.002	0.001
Silicon	4.64	5.64		
Silver	<0.00005	<0.00001	0.0001 to 0.003 [7]	0.0001
Sodium	56.2	35.9		
Strontium	1.01	1.73		
Thallium	<0.0005	<0.0001	0.0003	0.0008
Tin	<0.0005	<0.0001		
Titanium	0.012	<0.01		
Uranium	0.0309	0.0114		
Vanadium	<0.005	0.0012	0.006	
Zinc	0.0055	<0.001	(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Total Metals				
Aluminum	**33.7**			0.005 to 0.1 [11]
Antimony	0.00057			
Arsenic	**0.00962**		0.005	0.005
Barium	0.967		5	
Beryllium	<0.0025		0.0053	
Bismuth	<0.0025			
Boron	0.081		1.2	
Cadmium	**0.000569**		$10^{(0.86*(log([Hardness (Dissolved)]))-3.2)}/1000$ [7]	$10^{(0.86*(log([Hardness (Dissolved)]))-3.2)}/1000$ [7]
Calcium	59			
Chromium	0.0598			
Cobalt	0.018		0.11	
Copper	**0.12**		(0.094*([Hardness (Dissolved)])+2)/1000 [7]	0.002 to 0.004 [7]
Iron	**33.6**		1	0.3
Lead	**0.0172**		0.003 to $e^{(1.273*ln([Hardness (Dissolved)])-1.460)}/1000$ [7]	0.001 to 0.007 [7]
Lithium	0.028			
Magnesium	25.6			
Manganese	0.998		(0.01102*[Hardness (Dissolved)])+0.54 [7]	
Mercury	0.00002		0.0001	0.000026
Molybdenum	**0.152**		2	0.073
Nickel	0.0645		0.025 to 0.150 [7]	0.025 to 0.15 [7]
Potassium	7.84			
Selenium	**0.00167**		0.002	0.001
Silicon	52			
Silver	**0.00299**		0.0001 to 0.003 [7]	0.0001
Sodium	56.6			
Strontium	1.14			
Thallium	<0.0005		0.0003	0.0008
Tin	0.00114			
Titanium	0.727			
Uranium	0.0383			
Vanadium	**0.0895**		0.006	
Zinc	**0.127**		(33+0.75*([Hardness (Dissolved)]-90))/1000 to 0.033 [7]	0.03
Organics				
Carbon Organic (Total)	21	2.74		

M:\1\01\00329\08\A\Report\1- Hydrogeology\Appendices\Appendix B\B1\[Table B1.1 to B1.16.xls]RES08-8B

NOTES:

1. UNITS ARE mg/L, UNLESS OTHERWISE STATED.
2. BCWQG - BCWQG: AQUATIC LIFE: FRESH - BRITISH COLUMBIA WATER QUALITY GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (AUGUST 2006).
3. CCME - CCME: AQUATIC LIFE: FRESH - CANADIAN ENVIRONMENTAL GUIDELINES FOR AQUATIC LIFE IN FRESH WATER (DECEMBER 2006).
4. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH LIMITS.
5. **BOLD** INDICATES THE VALUE EXCEEDS THE CCME: AQUATIC LIFE: FRESH LIMITS.
6. **BOLD** INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC INDICATES THE VALUE EXCEEDS THE BCWQG: AQUATIC LIFE: FRESH AND CCME: AQUATIC LIFE: FRESH LIMITS.
7. HARDNESS (as CaCO3) DEPENDENT
8. pH (IN SITU) DEPENDENT
9. TEMPERATURE (IN SITU) DEPENDENT
10. CHLORIDE (DISSOLVED) DEPENDENT
11. pH DEPENDENT
12. QA/QC INDICATES THE VALUE EXCEEDED QUALITY ASSURANCE AND QUALITY CONTROL OBJECTIVES.

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	07DEC'09	ISSUED WITH REPORT - VA101-329/8-1	AL	HRS	KJB



COPPER FOX METALS INC

SCHAFT CREEK PROJECT

2008 PIPER PLOT FOR GROUNDWATER CHARACTERIZATION

Knight Piésold CONSULTING

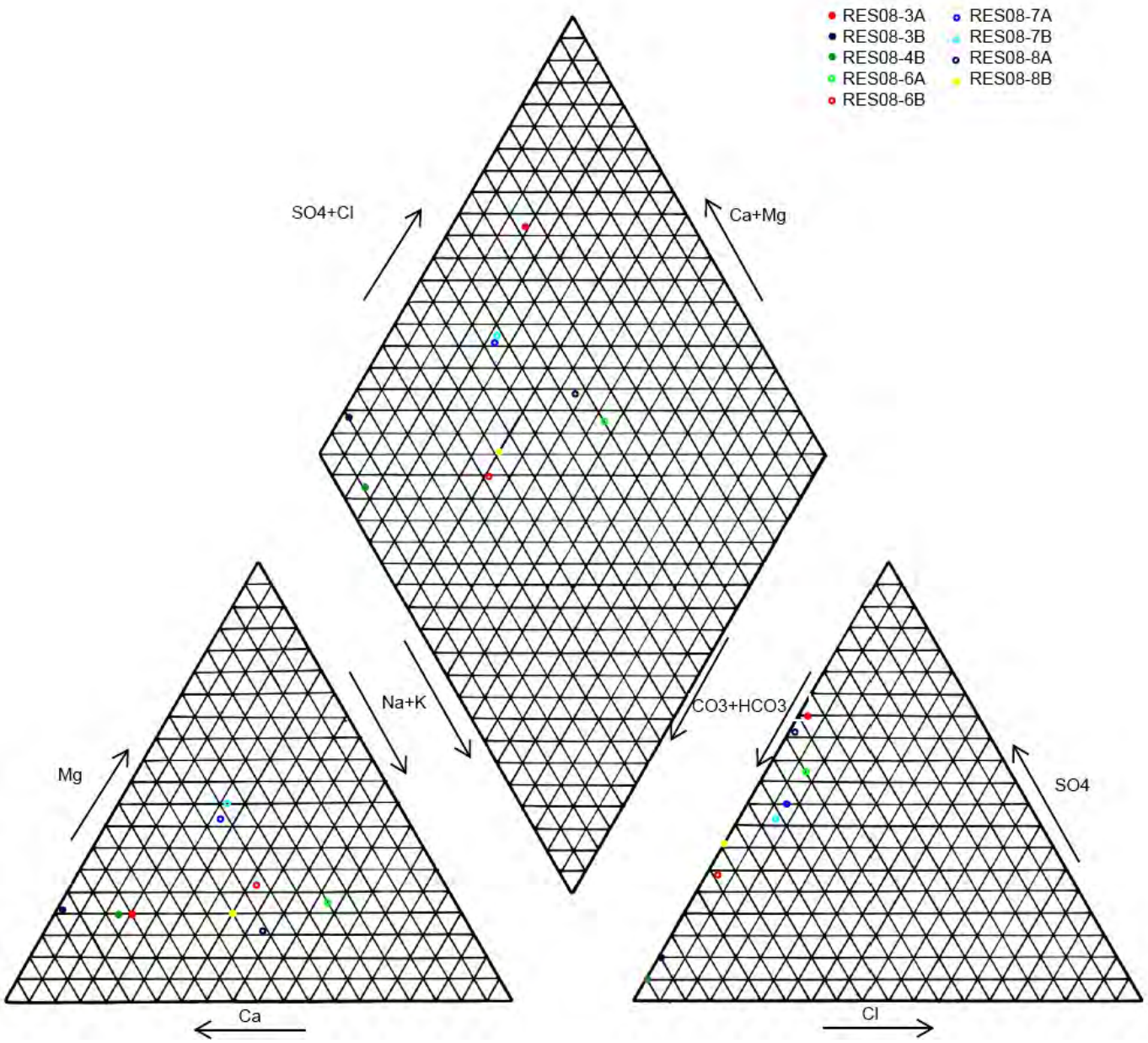
P/A NO. VA101-329/8

REF. NO. 1

FIGURE B1.1

REV 0

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	18JAN'10	ISSUED WITH REPORT	AMM	HRS	KJB



REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	18JAN'10	ISSUED WITH REPORT	AMM	HRS	KJB

COPPER FOX METALS INC

SCHAFT CREEK PROJECT

2009 PIPER PLOT FOR GROUNDWATER CHARACTERIZATION

Knight Piésold CONSULTING

P/A NO. VA101-329/8

REF. NO. 1

FIGURE B1.2

REV 0

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CONSULTING

APPENDIX B2

SUMMARY OF QUALITY ASSURANCE AND QUALITY CONTROL DATA

(Pages B2-1 to B2-3)

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TABLE B2.1

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF QA/QC BLANK SAMPLE ANALYSIS FOR GROUNDWATER QUALITY

Print Mar/23/10 11:14:48

Sample ID	FIELD BLANK	TRAVEL BLANK	FIELD BLANK	TRAVEL BLANK
Date Sampled	**27-Sep-08**	**27-Sep-08**	**30-Sep-09**	**30-Sep-09**
Physical Tests				
Acidity to pH 8.3 (as CaCO3)	<1	<1	<1	<1
Hydroxide Alkalinity (as CaCO3)	<1	<1	<2	<2
Bicarbonate Alkalinity (as CaCO3)	**1.6**	**1.2**	<2	<2
Carbonate Alkalinity (as CaCO3)	<1	<1	<2	<2
Total Alkalinity (as CaCO3)	**1.6**	**1.2**	<2	<2
Conductivity (uS/cm)	<2	<2	<2	<2
Hardness (as CaCO3)	<0.5	<0.5	<0.5	<0.5
pH	5.41	5.55	5.56	5.58
Total Dissolved Solids	<10	<10	<10	<10
Total Suspended Solids	<3	<3	<3	<3
Turbidity (NTU)	<0.1	<0.1	<0.1	<0.1
Dissolved Anions				
Bromide (Dissolved)	<0.05	<0.05	<0.05	<0.05
Chloride (Dissolved)	<0.5	<0.5	<0.5	<0.5
Fluoride (Dissolved)	<0.02	<0.02	<0.02	<0.02
Sulphate (Dissolved)	<0.5	<0.5	<0.5	<0.5
Nutrients				
Ammonia (as N)	<0.005	<0.005	<0.005	<0.005
Nitrate (as N)	<0.005	<0.005	<0.005	<0.005
Nitrite (as N)	<0.001	<0.001	<0.001	<0.001
Nitrogen (Total)	<0.05	<0.05	<0.05	<0.05
Nitrogen (Total Kjeldahl)	<0.05	<0.05	<0.05	<0.05
Phosphate (Total; as P)	<0.002	<0.002	<0.002	<0.002
Phosphorus (Dissolved)			<0.3	
Phosphorus (Total)	<0.3	<0.3		<0.3
Dissolved Metals				
Aluminum (Dissolved)	-	-	<0.001	-
Antimony (Dissolved)	-	-	<0.0001	-
Arsenic (Dissolved)	-	-	<0.0001	-
Barium (Dissolved)	-	-	<0.00005	-
Beryllium (Dissolved)	-	-	<0.0005	-
Bismuth (Dissolved)	-	-	<0.0005	-
Boron (Dissolved)	-	-	<0.01	-
Cadmium (Dissolved)	-	-	<0.00001	-
Calcium (Dissolved)	-	-	<0.02	-
Chromium (Dissolved)	-	-	<0.0005	-
Cobalt (Dissolved)	-	-	<0.0001	-
Copper (Dissolved)	-	-	<0.0001	-
Iron (Dissolved)	-	-	<0.03	-
Lead (Dissolved)	-	-	<0.00005	-
Lithium (Dissolved)	-	-	<0.005	-
Magnesium (Dissolved)	-	-	<0.005	-
Manganese (Dissolved)	-	-	<0.00005	-
Mercury (Dissolved)	-	-	<0.00001	-
Molybdenum (Dissolved)	-	-	<0.00005	-
Nickel (Dissolved)	-	-	<0.0005	-
Potassium (Dissolved)	-	-	<0.05	-
Selenium (Dissolved)	-	-	<0.0001	-
Silicon (Dissolved)	-	-	<0.05	-
Silver (Dissolved)	-	-	<0.00001	-
Sodium (Dissolved)	-	-	<2	-
Strontium (Dissolved)	-	-	<0.0001	-
Thallium (Dissolved)	-	-	<0.0001	-
Tin (Dissolved)	-	-	<0.0001	-
Titanium (Dissolved)	-	-	<0.01	-
Uranium (Dissolved)	-	-	<0.00001	-
Vanadium (Dissolved)	-	-	<0.001	-
Zinc (Dissolved)	-	-	<0.001	-
Total Metals				
Aluminum (Total)	<0.001	<0.001	-	<0.001
Antimony (Total)	<0.0001	<0.0001	-	<0.0001
Arsenic (Total)	<0.0001	<0.0001	-	<0.0001
Barium (Total)	<0.00005	<0.00005	-	<0.00005
Beryllium (Total)	<0.0005	<0.0005	-	<0.0005
Bismuth (Total)	<0.0005	<0.0005	-	<0.0005
Boron (Total)	<0.01	<0.01	-	<0.01
Cadmium (Total)	<0.000017	<0.000017	-	<0.00001
Calcium (Total)	<0.02	<0.02	-	<0.02
Chromium (Total)	<0.0005	<0.0005	-	<0.0005
Cobalt (Total)	<0.0001	<0.0001	-	<0.0001
Copper (Total)	<0.0001	<0.0001	-	<0.0001
Iron (Total)	<0.03	<0.03	-	<0.03
Lead (Total)	<0.00005	<0.00005	-	<0.00005
Lithium (Total)	<0.005	<0.005	-	<0.005
Magnesium (Total)	<0.005	<0.005	-	<0.005
Manganese (Total)	<0.00005	<0.00005	-	<0.00005
Mercury (Total)	<0.00001	<0.00001	-	<0.00001
Molybdenum (Total)	<0.00005	<0.00005	-	<0.00005
Nickel (Total)	<0.0005	<0.0005	-	<0.0005
Potassium (Total)	<0.05	<0.05	-	<0.05
Selenium (Total)	<0.0001	<0.0001	-	<0.0001
Silicon (Total)	<0.05	<0.05	-	<0.05
Silver (Total)	<0.00001	<0.00001	-	<0.00001
Sodium (Total)	<2	<2	-	<2
Strontium (Total)	<0.0001	<0.0001	-	<0.0001
Thallium (Total)	<0.0001	<0.0001	-	<0.0001
Tin (Total)	<0.0001	<0.0001	-	<0.0001
Titanium (Total)	<0.01	<0.01	-	<0.01
Uranium (Total)	<0.00001	<0.00001	-	<0.00001
Vanadium (Total)	<0.001	<0.001	-	<0.001
Zinc (Total)	<0.001	<0.001	-	<0.001
Organics				
Carbon Organic (Total)	<0.5	<0.5	<0.5	<0.5
Percent of sample > MDL	**3.64%**	**3.64%**	**0.00%**	**0.00%**

M:\1\01\00329\08\A\Report\1- Hydrogeology\Appendices\Appendix B\B2\[Table B2.1.xls]Blank Analysis

NOTES:

1. UNITS ARE mg/L, UNLESS OTHERWISE STATED.
2. **BOLD** INDICATES THE RESULT EXCEEDS THE MDL FOR THAT ANALYTE.
3. MDL EXCEEDANCE CALCULATION DOES NOT INCLUDE pH, pH VALUES WILL ALWAYS BE ABOVE THE MDL.
4. "-" SAMPLE NOT ANALYZED FOR.

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	12DEC'09	ISSUED WITH REPORT - VA101-329/8-1	AL	HRS	KJB

Knight Piésold CONSULTING

TABLE B2.2

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF QA/QC DUPLICATE SAMPLE ANALYSIS
FOR GROUNDWATER QUALITY

Print Mar/23/10 11:15:26

Site	MDL	RES08-6A	Duplicate	RPD (%)	MDL	RES08-3B	Duplicate	RPD (%)
Date Sampled	**27-Sep-08**	**27-Sep-08**	**27-Sep-08**		**2-Oct-09**	**2-Oct-09**	**2-Oct-09**	
Physical Tests								
Acidity to pH 8.3 (as CaCO3)	1	<1	<1		1	3	2.6	
Total Alkalinity (as CaCO3)	1	112	108	4%	2	100	103	3%
Bicarbonate Alkalinity (as CaCO3)	1	107	103	4%	2	100	103	3%
Carbonate Alkalinity (as CaCO3)	1	4.6	5.3	14%	2	<2	<2	
Hydroxide Alkalinity (as CaCO3)	1	<1	<1		2	<2	<2	
Color (TCU)	5	<5	<5		5	<5	<5	
Conductivity (uS/cm)	2	427	421	1%	2	211	208	1%
Hardness (as CaCO3)	0.5	97	92	5%	0.5	103	104	1%
pH	0.01	8.3	8.23	1%	0.1	8.15	8.16	0%
Total Dissolved Solids	10	277	266	4%	10	117	113	3%
Total Suspended Solids	3	452	418	8%	3	6.2	6.2	
Turbidity (NTU)	0.1	430	448	4%	0.1	5.44	4.62	16%
Dissolved Anions								
Bromide (Dissolved)	0.05	<0.05	<0.05		0.05	<0.05	<0.05	
Chloride (Dissolved)	0.5	9.87	9.69	2%	0.5	<0.5	<0.5	
Fluoride (Dissolved)	0.02	0.566	0.515	9%	0.02	<0.02	<0.02	
Sulphate (Dissolved)	0.5	94.1	93.3	1%	0.5	8.97	8.87	1%
Nutrients								
Ammonia (as N)	0.005	0.0159	0.0173		0.005	<0.005	<0.005	
Nitrate (as N)	0.005	0.0063	0.0054		0.005	0.0339	0.031	9%
Nitrite (as N)	0.001	0.0018	0.0013		0.001	<0.001	<0.001	
Nitrogen (Total)	0.05	0.23	0.14		0.05	<0.05	<0.05	
Nitrogen (Total Kjeldahl)	0.05	0.223	0.129		0.05	<0.05	<0.05	
Phosphate (Total; as P)	0.02	0.355	0.339	5%	0.002	0.011	0.0091	19%
Phosphorus (Dissolved)	0.3	<0.3	<0.3		0.3	<0.3	<0.3	
Phosphorus (Total)	0.3	0.4	0.4		-	-	-	
Dissolved Metals								
Aluminum (Dissolved)	0.002	0.083	0.0808	3%	0.001	0.0026	0.0026	
Antimony (Dissolved)	0.0002	<0.001	0.00062		0.0001	<0.0001	<0.0001	
Arsenic (Dissolved)	0.0002	0.0022	0.00199		0.0001	0.00047	0.00048	
Barium (Dissolved)	0.0001	0.0413	0.0572	**32%**	0.00005	0.0621	0.0629	1%
Beryllium (Dissolved)	0.001	<0.005	<0.001		0.0005	<0.0005	<0.0005	
Bismuth (Dissolved)	0.001	<0.005	<0.001		0.0005	<0.0005	<0.0005	
Boron (Dissolved)	0.02	0.11	0.116	5%	0.01	0.01	0.011	
Cadmium (Dissolved)	0.000034	<0.00017	<0.000034		0.00001	<0.00001	<0.00001	
Calcium (Dissolved)	0.04	20.1	18.2	10%	0.02	32.5	32.9	1%
Chromium (Dissolved)	0.001	<0.005	<0.001		0.0005	0.00087	0.00087	
Cobalt (Dissolved)	0.0002	<0.001	<0.0002		0.0001	<0.0001	<0.0001	
Copper (Dissolved)	0.001/0.0002[4]	0.0024	0.00147		0.0001	0.00023	0.0002	
Iron (Dissolved)	0.03	0.083	0.099		0.03	<0.03	<0.03	
Lead (Dissolved)	0.0001	<0.0005	<0.0001		0.00005	<0.00005	<0.00005	
Lithium (Dissolved)	0.01	<0.05	0.01		0.005	<0.005	<0.005	
Magnesium (Dissolved)	0.01	11.4	11.3	1%	0.005	5.26	5.37	2%
Manganese (Dissolved)	0.0001	0.0182	0.0177	3%	0.00005	0.000209	0.000214	2%
Mercury (Dissolved)	0.00001	<0.00001	<0.00001		0.00001	<0.00001	<0.00001	
Molybdenum (Dissolved)	0.0001	0.0562	0.0899	**46%**	0.00005	0.00142	0.00146	3%
Nickel (Dissolved)	0.001	0.005	0.0044	13%	0.0005	<0.0005	<0.0005	
Potassium (Dissolved)	0.1	5.72	4.64	21%	0.05	0.65	0.645	1%
Selenium (Dissolved)	0.0002	<0.001	0.0003		0.0001	<0.0001	<0.0001	
Silicon (Dissolved)	0.05	4.47	4.49	0%	0.05	2.29	2.29	0%
Silver (Dissolved)	0.00002	<0.0001	<0.00002		0.00001	<0.00001	<0.00001	
Sodium (Dissolved)	2	39.8	45.7	14%	2	<2	<2	
Strontium (Dissolved)	0.0002	0.5	0.519	4%	0.0001	0.12	0.122	2%
Thallium (Dissolved)	0.0002	<0.001	<0.0002		0.0001	<0.0001	<0.0001	
Tin (Dissolved)	0.0002	<0.001	0.00061		0.0001	<0.0001	<0.0001	
Titanium (Dissolved)	0.01	<0.01	<0.01		0.01	<0.01	<0.01	
Uranium (Dissolved)	0.00002	0.00311	0.00333	7%	0.00001	0.000163	0.00016	2%
Vanadium (Dissolved)	0.002	<0.01	<0.002		0.001	<0.001	<0.001	
Zinc (Dissolved)	0.002	<0.01	0.0034		0.001	<0.001	<0.001	
Total Metals								
Aluminum (Total)	0.002	14.5	12.9	12%	-	-	-	-
Antimony (Total)	0.0002	0.00104	0.00096	8%	-	-	-	-
Arsenic (Total)	0.0002	0.00552	0.00531	4%	-	-	-	-
Barium (Total)	0.0001	0.137	0.131	4%	-	-	-	-
Beryllium (Total)	0.001	<0.001	<0.001		-	-	-	-
Bismuth (Total)	0.001	<0.001	<0.001		-	-	-	-
Boron (Total)	0.02	0.124	0.123	1%	-	-	-	-
Cadmium (Total)	0.000034	0.000291	0.000323	10%	-	-	-	-
Calcium (Total)	0.04	32.7	32.5	1%	-	-	-	-
Chromium (Total)	0.001	0.129	0.116	11%	-	-	-	-
Cobalt (Total)	0.0002	0.0166	0.0151	9%	-	-	-	-
Copper (Total)	0.0002	0.0682	0.0644	6%	-	-	-	-
Iron (Total)	0.03	21.1	18.3	14%	-	-	-	-
Lead (Total)	0.0001	0.00439	0.00442	1%	-	-	-	-
Lithium (Total)	0.01	0.021	0.02		-	-	-	-
Magnesium (Total)	0.01	35.4	34.1	4%	-	-	-	-
Manganese (Total)	0.0001	0.415	0.389	6%	-	-	-	-
Mercury (Total)	0.00001	0.00003	0.000016		-	-	-	-
Molybdenum (Total)	0.0001	0.113	0.108	5%	-	-	-	-
Nickel (Total)	0.001	0.182	0.168	8%	-	-	-	-
Potassium (Total)	0.1	5.81	5.51	5%	-	-	-	-
Selenium (Total)	0.0002	0.00067	0.00078		-	-	-	-
Silicon (Total)	0.05	36.4	31.7	14%	-	-	-	-
Silver (Total)	0.00002	0.00758	0.00668	13%	-	-	-	-
Sodium (Total)	2	49.4	49.5	0%	-	-	-	-
Strontium (Total)	0.0002	0.602	0.617	2%	-	-	-	-
Thallium (Total)	0.0002	<0.0002	<0.0002		-	-	-	-
Tin (Total)	0.0002	0.00226	0.00197	14%	-	-	-	-
Titanium (Total)	0.01	0.683	0.554	21%	-	-	-	-
Uranium (Total)	0.00002	0.00434	0.00435	0%	-	-	-	-
Vanadium (Total)	0.002	0.0514	0.046	11%	-	-	-	-
Zinc (Total)	0.002	0.0843	0.0773	9%	-	-	-	-
Organics								
Carbon Organic (Total)	0.5	4.34	4.86	11%	0.5	<0.5	<0.5	

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NOTES:

1. UNITS ARE mg/L, UNLESS OTHERWISE STATED.
2. **BOLD** INDICATES THE RPD (RELATIVE PERCENT DIFFERENCE) EXCEEDS THE 25% DATA QUALITY OBJECTIVE FOR ANALYTICAL VALUES GREATER THAN 5 TIMES THE MDL.
3. "-" SAMPLE NOT ANALYZED FOR.
4. DIFFERENT MDL FOR RES08-06A AND DUPLICATE.

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	07DEC'09	ISSUED WITH REPORT - VA101-329/8-1	AL	HRS	KJB

Knight Piésold CONSULTING

TABLE B2.3

COPPER FOX METALS INC.
SCHAFT CREEK PROJECT

SUMMARY OF CATION-ANION BALANCE

Print Mar/23/10 11:15:44

Location	Year	Ca^{2+} meq/L	Mg^{2+} meq/L	K^{+} meq/L	Na^{+} meq/L	Sum of Cations	$HCO3^{-}$ meq/L	CO_3^{2-} meq/L	SO_4^{2-} meq/L	Cl^{-} meq/L	OH^{-} meq/L	Sum of Anions	% Error
RES08-1A	2008	33.68	0.00	5.19	39.80	78.67	0.00	3.53	4.52	0.00	198.71	206.76	**-45%**
	2009	29.24	0.00	4.88	43.15	77.28	0.00	0.86	3.37	0.00	39.92	44.15	**27%**
RES08-1B	2008	19.16	0.01	0.80	15.27	35.24	0.02	2.46	24.15	0.27	14.52	41.42	-8%
	2009	13.72	0.00	0.59	15.05	29.36	0.02	2.14	11.78	0.71	39.39	54.03	**-30%**
RES08-2A	2008	37.97	0.01	7.72	31.67	77.37	0.00	4.40	9.93	0.16	194.59	209.08	**-46%**
	2009	7.58	0.00	1.25	5.35	14.18	0.00	5.60	0.75	0.00	21.22	27.57	**-32%**
RES08-2B	2008	0.75	0.47	0.05	0.78	2.05	1.46	0.22	0.66	0.01	0.00	2.35	-7%
	2009	0.87	0.73	0.03	0.30	1.93	0.71	2.07	0.59	0.00	0.00	3.37	**-27%**
RES08-3A	2008	1.69	0.50	0.02	0.20	2.40	1.88	0.00	0.35	0.00	0.00	2.23	4%
	2009	3.61	1.10	0.03	0.85	5.59	1.82	0.00	3.31	0.12	0.00	5.25	3%
RES08-3B	2008	1.36	0.37	0.02	0.11	1.86	1.52	0.00	0.20	0.00	0.00	1.72	4%
	2009	1.62	0.43	0.02	0.00	2.07	1.64	0.00	0.19	0.00	0.00	1.83	6%
RES08-4A	2008	9.68	0.00	0.71	9.00	19.40	0.00	4.13	1.74	0.31	37.04	43.23	**-38%**
	2009	6.74	0.01	0.34	6.79	13.87	0.00	4.13	0.88	0.17	19.17	24.34	**-27%**
RES08-4B	2008	11.78	0.00	0.15	0.86	12.79	0.00	2.21	0.18	0.00	27.22	29.61	**-40%**
	2009	1.62	0.50	0.04	0.27	2.43	1.52	1.21	0.14	0.00	0.00	2.87	-8%
RES08-5A	2008	1.07	0.33	0.01	0.43	1.84	1.20	0.00	0.52	0.00	0.00	1.72	3%
RES08-5B	2008	1.64	0.48	0.03	0.36	2.51	1.85	0.00	0.44	0.04	0.00	2.33	4%
RES08-6A	2008	1.00	0.94	0.15	1.73	3.82	1.75	0.15	1.96	0.28	0.00	4.14	-4%
	2009	1.05	0.99	0.15	2.09	4.28	1.63	0.00	2.12	0.31	0.00	4.06	3%
RES08-6B	2008	1.02	0.56	0.12	0.76	2.47	1.48	0.15	0.77	0.05	0.00	2.45	0%
	2009	0.97	0.71	0.15	0.78	2.62	1.75	0.00	0.74	0.06	0.00	2.55	1%
RES08-7A	2008	1.79	3.33	0.12	1.19	6.43	3.00	0.32	2.35	0.41	0.00	6.09	3%
	2009	2.49	2.74	0.05	1.32	6.59	3.00	0.00	2.85	0.46	0.00	6.31	2%
RES08-7B	2008	2.24	3.07	0.05	1.25	6.61	3.13	0.00	2.50	0.44	0.00	6.07	4%
	2009	2.19	2.85	0.08	1.26	6.38	3.10	0.00	2.50	0.41	0.00	6.01	3%
RES08-8A	2008	1.08	0.51	0.05	5.61	7.25	1.95	0.24	4.83	0.12	0.00	7.14	1%
	2009	2.06	0.80	0.02	2.05	4.93	1.82	0.00	2.87	0.04	0.00	4.73	2%
RES08-8B	2008	2.20	0.83	0.07	2.44	5.54	2.52	0.00	2.56	0.05	0.00	5.13	4%
	2009	2.11	0.91	0.04	1.56	4.63	2.70	0.00	1.50	0.02	0.00	4.22	5%

M:\1\01\00329\08\A\Report\1- Hydrogeology\Appendices\Appendix B\B2\[Table B2.3.xls]Table B2.3

NOTES:

1. **BOLD** INDICATE GREATER THAN 10% ERROR.
2. OH^{-} ION USED IN CALCUATION TO CONSIDER pH VALUES.

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	21DEC'09	ISSUED WITH REPORT - VA101-00329/8-1	AL	HRS	KJB