

Schaft Creek Project

Draft Preliminary Groundwater

Baseline Report



Prepared by:

Rescan Tahltan Environmental Consultants
Vancouver, British Columbia

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EXECUTIVE SUMMARY



Executive Summary

The 10,371 ha Schaft Creek property (Schaft Creek) is situated in northwestern British Columbia. It is located approximately 60 kilometres south of the village of Telegraph Creek and approximately 45 kilometres due west of Highway 37 (M^cCandlish, 2007). Climate at the Schaft Creek property is alpine and characterized by the transition between coast and interior (Ewanchuk *et al.*, 2007 and Rescan, 2007b). In 2006, average monthly air temperatures ranged from -14.4°C in November to 12.5°C in July, and precipitation ranged from 41 mm in July to 182 mm in September (Rescan, 2007b).

The Schaft Creek property is located within the Stuhini Group of the Stikine Terrane. Located two kilometres east of the Schaft Creek Camp is the porphyry Cu-Mo-Au-Ag deposit. The Mess Creek Facies hosts the deposit, and contains the most westerly volcanics of the Stuhini Group. The Mess Creek Facies is composed of basaltic andesitic to andesitic volcanic flows, and subaerial tuffs (Ewanchuk *et al.*, 2007).

The Rescan preliminary baseline study was initiated to characterize the groundwater environment in the Schaft Creek area. Data from existing boreholes located across the property was evaluated and two standpipe piezometers were installed. An investigation of the main water-bearing units, the quality of groundwater, and the recharge and discharge sources was completed.

In October 2007, the installation of piezometers in eight locations was attempted. Only one borehole was found suitable for the installation of two standpipe piezometers. Borehole geology and piezometer construction information are presented in a log diagram (Appendix A), created using *gINT version 8* software.

In October 2007, four groundwater samples and one duplicate were collected from four boreholes on the property. Samples were analyzed for general chemistry, total metals, dissolved metals, nutrients and total organic carbon by ALS Laboratories in Vancouver, BC. Comparison to the CCME and BC water quality guidelines for aquatic life showed that ten constituents exceeded the guidelines. These were chloride, fluoride, sulphate, total arsenic, total boron, total chromium, total copper, total iron, total silver, and total zinc. The source of elevated levels of certain constituents is expected to be natural and likely derived from highly mineralized bedrock and mineralized fragments in the overburden.

The major water-bearing units underlying the Schaft Creek property were divided into overburden and highly fractured bedrock. The overburden is composed mainly of glacial till, and the bedrock is composed mainly of highly fractured intrusive volcanics. An examination of Rock Quality Designation (RQD) values provided insight into the degree of fracturing and faulting at varying depths. Hydraulic conductivity of the overburden may range from 10^{-12} to 10^{-6} m/s, and given the geology at the site the hydraulic conductivity of the bedrock may range from 10^{-8} to 10^{-4} m/s (Freeze and Cherry, 1979).

Executive Summary

Groundwater in the area of the proposed open pit is expected to flow from areas of high elevation into the Schaft Creek valley. Observed artesian boreholes in the valley bottom and the abundance of Muskeg indicate that groundwater likely flows in an upward gradient in the valley bottom. Major groundwater discharge areas are likely the Hickman Creek, Schaft Creek, and Mess Creek.

TABLE OF CONTENTS



Schaft Creek Project Draft Preliminary Groundwater Baseline Report

TABLE OF CONTENTS

Executive Summary	i
Table of Contents.....	iii
List of Appendices	iv
List of Figures.....	iv
List of Tables	v
List of Plates	v
1. Introduction	1-1
1.1 Schaft Creek Project Summary.....	1-1
1.2 Objectives	1-7
1.3 Methods	1-7
2. General Setting	2-1
2.1 Regional Geology	2-1
2.2 Property Geology.....	2-1
2.3 Rock Quality Designation (RQD) Analysis.....	2-2
3. Physical Hydrogeology.....	3-1
3.1 Standpipe Piezometer Installation.....	3-1
3.2 Hydrostratigraphy	3-3
3.2.1 Overburden Groundwater.....	3-3
3.2.2 Bedrock Groundwater.....	3-4
4. Groundwater Quality	4-1
4.1 Groundwater Sampling.....	4-1
4.2 Methodology	4-1
4.3 Water Quality Analysis.....	4-1
4.3.1 Results	4-4
4.3.1.1 General Chemistry.....	4-4
4.3.1.2 Anions/Nutrients	4-6
4.3.1.3 Total Metals	4-10
4.3.1.4 Dissolved Metals and Organic Parameters.....	4-15
4.3.2 Summary.....	4-16

Table of Contents

5. Recommendations	5-1
6. Conclusion	6-1
7. Closure	7-1
References.....	R-1

LIST OF APPENDICES

Appendix A – Geology Logs and Piezometer Construction

Appendix B – Chemical Analysis Results

LIST OF FIGURES

Figure	Page
1.1-1 Location Map for Schaft Creek Project	1-2
1.1-2 Schaft Creek Project Mineral Claims	1-3
1.1-3 Schaft Creek Project Mine and Associated Infrastructure.....	1-4
1.1-4 Proposed Access Road Alignment for the Schaft Creek Project.....	1-6
3.1-1 October 2007 Piezometer Installation Sites, Attempted and Successful	3-2
4.1-1 Groundwater Sampling Sites, October 2007	4-2
4.3-1 Hardness, pH, TDS, TSS, and Turbidity Profiles in Groundwater.....	4-5
4.3-2 Chloride and Fluoride Profiles in Groundwater	4-7
4.3-3 Sulphate and Total Arsenic Profiles in Groundwater	4-9
4.3-4 Total Boron and Total Chromium Profiles in Groundwater.....	4-11
4.3-5 Total Copper and Total Iron Profiles in Groundwater.....	4-12
4.3-6 Total Silver and Total Zinc Profiles in Groundwater	4-13

LIST OF TABLES

Table	Page
2.3-1 Rock Quality Designation (RQD)	2-2
3.1-1 Piezometer Construction Details of CFBH304	3-1
3.1-2 Attempted Piezometer Installation Details	3-1
4.3-1 Measurement Units and Minimum Detection Limits	4-3
4.3-2 Physical Parameter Concentrations in Schaft Creek Groundwater	4-6
4.3-3 Anion and Nutrient Concentrations in Schaft Creek Groundwater	4-8
4.3-4 Total Metal Concentrations in Schaft Creek Groundwater	4-14
4.3-5 Dissolved Metals and Organic Parameters in Schaft Creek Groundwater	4-15

LIST OF PLATES

Plate	Page
3.2-1. An example of overburden from a 2005 Diamond Drill core.	3-4

1. INTRODUCTION

1. Introduction

1.1 Schaft Creek Project Summary

Copper Fox Metals Inc. (Copper Fox) is a Canadian mineral exploration and development company focused on developing the Schaft Creek deposit located in north-western British Columbia, approximately 60 km south of the village of Telegraph Creek Creek (Figure 1.1-1). The Schaft Creek deposit is a polymetallic (copper-gold-silver-molybdenum) deposit located in the Liard District of north-western British Columbia (Latitude 57° 22' 4.2"; Longitude 130°, 58' 48.9"). The property is comprised of 40 mineral claims covering an area totalling approximately 20,932 ha within the Cassiar Iskut-Stikine Land and Resource Management Plan (Figure 1.1-2).

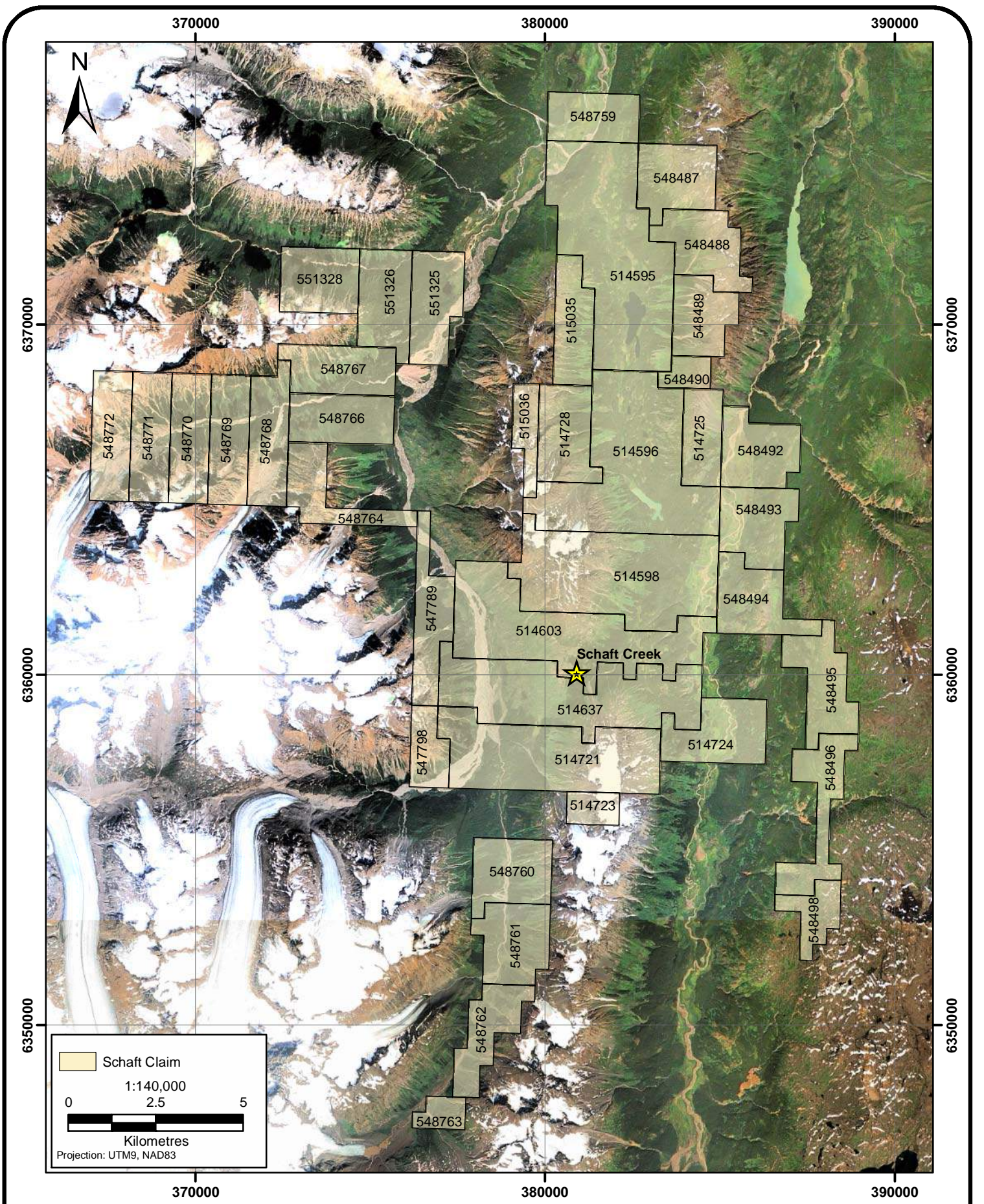
The Schaft Creek Project is located within the traditional territory of the Tahltan Nation. Copper Fox has been in discussions with the Tahltan Central Council (TCC) and the Tahltan Heritage Resources Environmental Assessment Team (THREAT) since initiating exploration activities in 2005. Copper Fox has engaged in numerous agreements with the TCC including a Communications Agreement, Traditional Knowledge Agreement, Letter of Understanding with the Tahltan Nation Development Corporation (TNDC) and a THREAT Agreement. Copper Fox will continue to work together with the Tahltan Nation as work on the Schaft Creek Project continues.

The Schaft Creek deposit was discovered in 1957 and has since been investigated by prospecting, geological mapping, geophysical surveys as piezometer as diamond and percussion drilling. Over 65,000 meters of drilling has been completed on the property as of end of 2007. Additional drilling is planned for 2008 to support future economic assessments of the property and an environmental assessment application.

The Schaft Creek Project entered the British Columbia environmental assessment process in August 2006. Although a formal federal decision has not yet been made, the Project will likely require federal approval as per the Canadian Environmental Assessment Act. Copper Fox has targeted the end of 2008 for submission of their Schaft Creek Environmental Assessment Application.

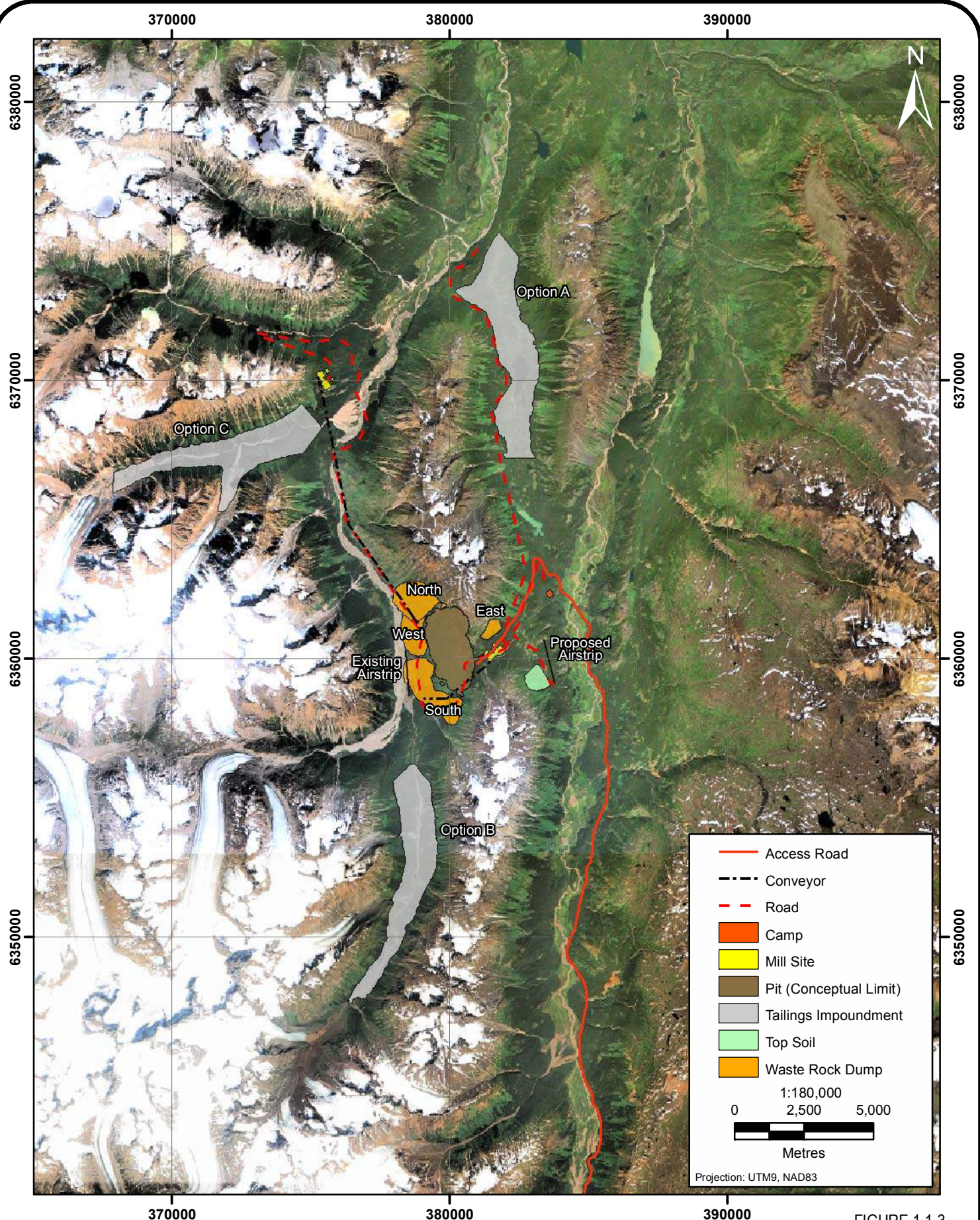
Copper Fox has recently released a scoping level engineering and economic report for Schaft Creek. The mine and associated infrastructure are presented in Figure 1.1-3. The current mine plan has ore milled from an open pit at a rate of 65,000 tonnes/day. The Schaft deposit will be mined with large truck/shovel operations and typical drill and blast techniques. An explosives manufacturing facility will be constructed on-site to support blasting activities. The mine plan includes 719 million tonnes of minable ore over a 31 year mine life. The Project is estimated to generate up to 1,200 jobs during the construction phase of the project and approximately 500 permanent jobs during the life of the mine.





Schaft Creek Project Mineral Claims





Ore will be crushed, milled and filtered on-site to produce copper and molybdenum concentrates. The mill will include a typical comminution circuit (Semi-Autogenous Mill, Ball Mill and Pebble Crusher) followed by a flotation circuit and a copper circuit with thickener, filtration and concentrate loadout and shipping. The mill includes a designated molybdenum circuit with thickener, filtration circuit, drying and bagging. The filter plant will be located at the plant site. A tailings thickener and water reclaim system will be used to recycle process water. The circuit will have a design capacity of 70,652 tonnes per day and a nominal capacity of 65,000 tonnes per day (23,400,000 tonnes per year). The copper and molybdenum concentrates will be shipped via truck from the mill to the port of Stewart, BC.

Copper Fox will construct an access road from Highway 37 to the Schaft Creek property. Access to the property from Highway 37 will require approximately 105 km of new road. The first 65 km of the access road to the Schaft Creek property corresponds to the Galore Creek access road. NovaGold and Teck Cominco have currently put a hold on future construction efforts along their access road and the overall Galore Creek Project. Copper Fox will seek approval from the provincial government and NovaGold/Teck Cominco to construct the first 65 km of the Galore Creek access road should the status of the project not change.

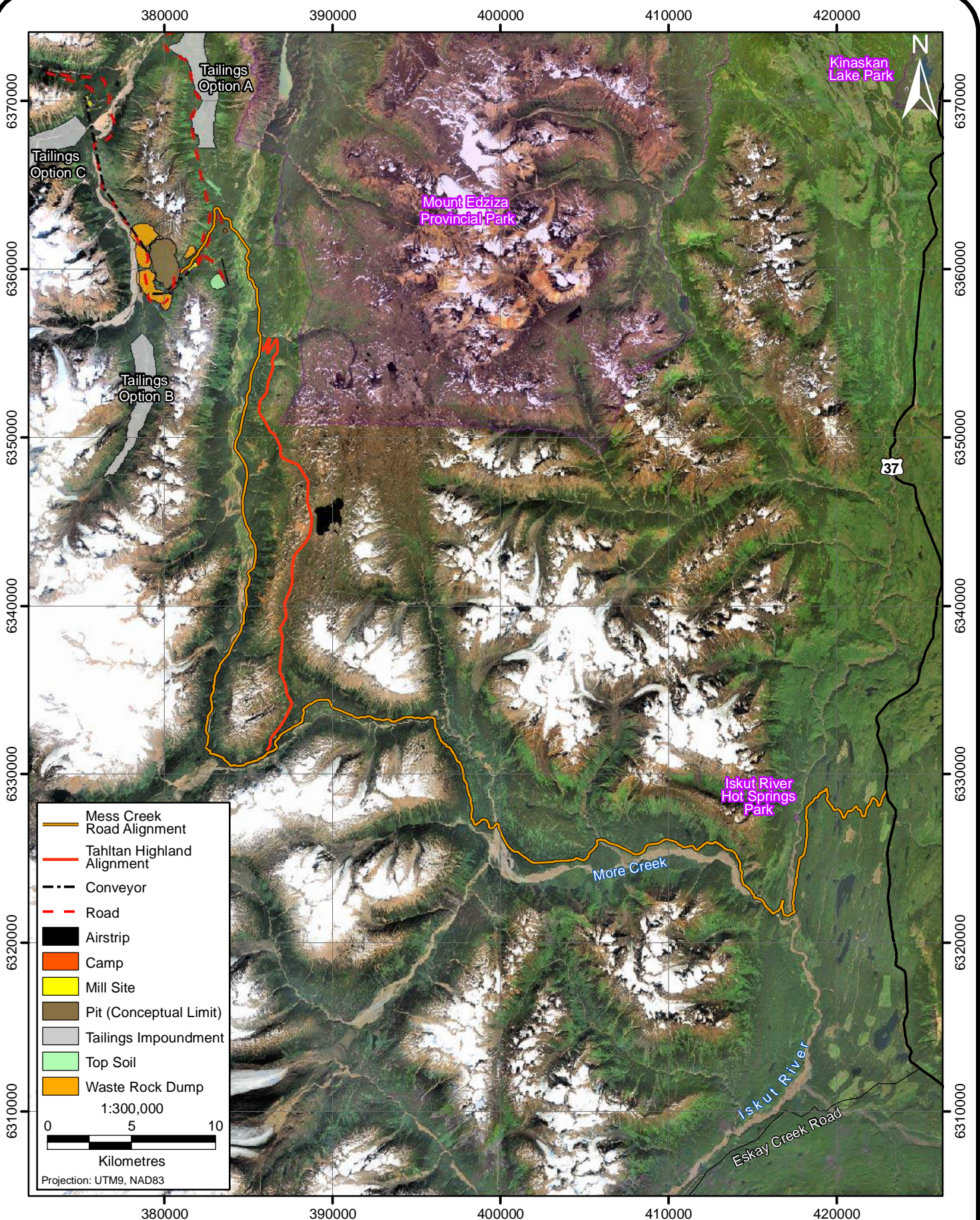
The route of the final 40 km of access road has not been finalized. Copper Fox has completed initial investigations of a route along Mess Creek. An alternative route is also being considered that utilizes the plateau to the east of Mess Creek. Copper Fox is currently investigating the feasibility, as it relates to geohazards, of the two alignments. Both alignments include a 30 m bridge on Mess Creek. Mess Creek is considered navigable as per Transportation Canada criteria. Figure 1.1-4 presents the access road alignment that follows the Galore Creek road (65 km from Highway 37) and the Mess Creek alignment (40 km) to the Schaft Creek property.

Over the life of the mine, the Schaft Creek Project will generate over 700 million tonnes of tailings. There are three tailings facilities being considered (Figure 1.1-3). The three options will undergo an alternatives assessment that will include engineering, construction and operating costs, geotechnical, geohazards, environmental and social considerations.

The Project will generate over a billion tonnes of waste rock. Waste rock dumps are proposed around the perimeter of the pit (Figure 1.1-3). This includes the flat area between the proposed pit and Schaft Creek.

A detailed water management plan has yet to be developed for the Project. A water management plan will be included in the next level of economic assessment (pre-feasibility) and the next project description update. A waste water discharge is expected from the tailings facility, waste rock dumps and domestic waste water treatment plant. The management plan will detail the plans to minimize natural drainage into the tailings facility, the pit and the waste rock dumps. Pit water will be pumped to the tailings facility.

A new airfield will be constructed to the east of the pit (Figure 1.1-3). The Project will be a fly-in, fly-out operation. The new landing strip will be capable of handling a Boeing 737. Other facilities include a terminal building, fuelling, maintenance and control facilities.



	Mess Creek Road Alignment
	Tahltan Highland Alignment
	Conveyor
	Road
	Airstrip
	Camp
	Mill Site
	Pit (Conceptual Limit)
	Tailings Impoundment
	Top Soil
	Waste Rock Dump

1:300,000

0 5 10

Kilometres

Projection: UTM9, NAD83



Proposed Access Road Alignment for the Schaft Creek Project



FIGURE 1.1-4

A permanent camp will be constructed to support a staff of approximately 500 employees. Other facilities include truck shop, warehouse, administration, maintenance laboratory, explosives storage, water treatment facilities and potable water storage.

Copper Fox has targeted the end of 2008 for submission of their Environmental Assessment Application and full Feasibility Report. Screening of the EA Application plus the 180 day review period will result in project approval as early as July 2009. Copper Fox will likely seek concurrent permitting for strategic permits to facilitate the timely construction of key project components. Construction is estimated to take two and half years. Thus, production could begin by early 2012.

1.2 Objectives

This study is intended to provide a preliminary assessment of baseline conditions. The information collected will be incorporated into future reports. A preliminary investigation of the groundwater environment in the Schaft Creek area was performed based on currently available site specific data. This report will make general comments on the different aquifers encountered in the overburden and bedrock, the quality of groundwater, and the recharge and discharge sources for the proposed mine site.

1.3 Methods

During October 2007, installation of standpipe piezometers in existing boreholes was attempted. Installation was unsuccessful in seven boreholes, mainly due to the open holes caving during installation. One deep and one shallow piezometer were successfully installed in borehole CFBH304. In addition, water samples were collected from four sites on the property.

The Rescan baseline groundwater study involved the following:

- Installation of one shallow and one deep piezometer in borehole CFBH304. Two nominal 1" schedule 40 PVC pipes were installed in borehole CFBH304. Sand filter pack was installed around the screened portion of both PVC pipes. Bentonite and grout were used to seal the units. Piezometer construction details are presented in Table 3.1-1. The locations of the seven other attempted piezometer installations and piezometers CFBH304A and B are presented in Figure 3.1-1. The software *gINT version 8*, designed specifically for geotechnical and geo-environmental data presentation, was used to present the log data and completion details for CFBH304 (Appendix A).
- Collection of groundwater samples from four artesian boreholes. Four groundwater samples and one duplicate sample were collected and shipped to ALS Laboratories in Vancouver for chemical analysis in October 2007. Samples were analyzed for general chemistry, total and dissolved metals, nutrients, and total organic carbon. The laboratory results are presented in Appendix B and a map of the four sample site locations is presented in Figure 4.1-1.

- Analysis of previous borehole logs and RQD values. Photographs from exploration boreholes drilled in 2005 and 2006 provided visual evidence of the degree of fracturing and faulting. Also, RQD values from 2005 and 2006 boreholes presented in previous reports were examined.

2. GENERAL SETTING

2. General Setting

2.1 Regional Geology

For a more detailed description of regional geology refer to, '2006 Diamond Drill Report Schaft Creek' (Ewanchuk et al., 2007).

The Canadian Cordillera consists of five superterrane. The Schaft Creek property lies within the Intermontane Belt superterrane, which is the most important superterrane with respect to porphyry copper formation. The deposit is a porphyry copper-molybdenum-gold-silver mineralization deposit (Ewanchuk *et al.*, 2007).

The Schaft Creek deposit is located in the Stikina terrane of the Intermontane Belt superterrane. The Stikina terrane is composed of Devonian to Jurassic arc-related volcanic and sedimentary rocks with coeval plutons. A large number of porphyry copper deposits occur within the terrane. Two main assemblages comprise the Stikina terrane; the Stikine Group of Devonian to Permian age, and the Stuhini Group of Upper Triassic age (Ewanchuk *et al.*, 2007).

The Schaft Creek deposit is contained within a belt of the Stuhini Group comprised of intermediate volcanic and sedimentary rocks. The Mess Creek Facies hosts the deposit, and contains the most westerly volcanics of the Stuhini Group. The Mess Creek Facies is composed of basaltic andesitic to andesitic volcanic flows, and subaerial tuffs (Ewanchuk *et al.*, 2007).

2.2 Property Geology

For a more detailed description of property geology, refer to the document, '2006 Diamond Drill Report Schaft Creek' (Ewanchuk et al., 2007).

The Schaft Creek deposit is located in part along the western slope of Mount Lacasse and in part in the valley of Schaft Creek and is elongated in a general north-south direction. It is bounded to the east by volcanic rocks of the Mess Lake facies and to the west by the Hickman batholith. The valley floor exposes the Stuhini Group volcanics and is covered by glacio-fluvial gravels. Bedrock is rarely exposed in the lower elevations of the valley floor. The deposit is hosted by north-striking, steep, easterly dipping volcanic rocks (Ewanchuk *et al.*, 2007).

The Schaft Creek deposit is a large, multi-phase, complex, porphyry system genetically linked to the Hickman batholith. It is divided into three geologically distinct, structurally modified zones representing distinct porphyry environments, which are:

- The Main Liard Zone is 1,000 × 700 × 300 m in depth, and is characterized by fracture, vein, sheeted vein and stockwork-controlled mineralization that are hosted mainly by andesite flows. This zone presently hosts the largest volume of mineralized material. Chalcopyrite is the dominant sulphide, followed by bornite, pyrite and molybdenite (M^cCandlish, 2007).

- The Paramount zone is 700 × 200 × 500 m in depth, and is the second largest and most northerly zone. The mineralization is contained in an intrusive breccia within altered andesite and granodiorite. Chalcopyrite is the dominant sulphide, followed by molybdenite, pyrite and bornite (M^cCandlish, 2007).
- The West Breccia Zone is 500 x 100 x >300 m in depth. It is the smallest zone and is situated immediately west of the Main Liard Zone. Mineralization is contained within fault controlled tourmaline and sulphide rich hydrothermal breccia and feldspar porphyry. Chalcopyrite is the dominant sulphide, followed by pyrite, bornite, and molybdenite (M^cCandlish, 2007).

There are 17 observed and recorded rock types on the property; the most common being andesitic volcanics. The majority (67%) are characteristic of a volcano-sedimentary basin. The second most common rock types are felsic intrusive rocks that are genetically linked to the Hickman batholith, comprising 13% of the remaining rocks (M^cCandlish, 2007).

2.3 Rock Quality Designation (RQD) Analysis

Rock quality designations (RQD) are routinely determined for each 3.05-meter core run of each borehole drilled. The methodology applied by Schaft Creek geologists involved cumulatively adding the number of pieces of intact core greater than 16-centimeters in length for PQ-core and greater than 12-centimeters in length for HQ-core. This number was then expressed as a percentage of each run (the RQD value) (Ewanchuk *et al.*, 2007).

RQD values provide an indication of the intensity of fracturing and faulting. Table 2.3-1 presents the RQD ranges and associated quality designations. In general, the higher the intensity of fracturing and faulting, represented by a lower RQD value, the greater the hydraulic conductivity of the material.

**Table 2.3-1
Rock Quality Designation (RQD)**

RQD Value	Quality Designation
0-25%	Very Poor
25-50%	Poor
50-75%	Fair
75-90%	Good
90-100%	Excellent

RQD values from the boreholes drilled on the Schaft Creek property in 2005 and 2006 were examined. The average RQD from the 2005 borehole analysis is poor (46%) (Fischer and Hanych, 2006). Boreholes from 2006 were examined with regards to the zone in which they were drilled. The average RQD from boreholes drilled in the Main Liard zone and West Breccia zone were poor, 28.2% and 35.1% respectively. The average RQD from boreholes drilled in the Paramount zone was very poor (12.2%) (Ewanchuk *et al.*, 2007).

3. PHYSICAL HYDROGEOLOGY

3. Physical Hydrogeology

3.1 Standpipe Piezometer Installation

In October 2007, the installation of standpipe piezometers into eight previously drilled boreholes was attempted. One shallow and one deep standpipe piezometers were installed in borehole CFBH304. At all other sites, piezometers were not installed as hole integrity was compromised (*i.e.*, borehole wall caving). Specific problems encountered are detailed in Table 3.1-2. A map of the location of each site is presented in Figure 3.1-1. UTM Locations for all sites are presented in Appendix B-2.

Two nominal 1” schedule 40 PVC piezometers were installed in borehole CFBH304 (drilled as HQ). Each PVC piezometer was screened at a different interval along the length of the borehole. A sand filter pack was installed around each screened interval. Bentonite was used to seal the screened unit. Grout was installed in the interval between the sealed units. Piezometer construction details are presented in Table 3.1-1.

**Table 3.1-1
Piezometer Construction Details of CFBH304**

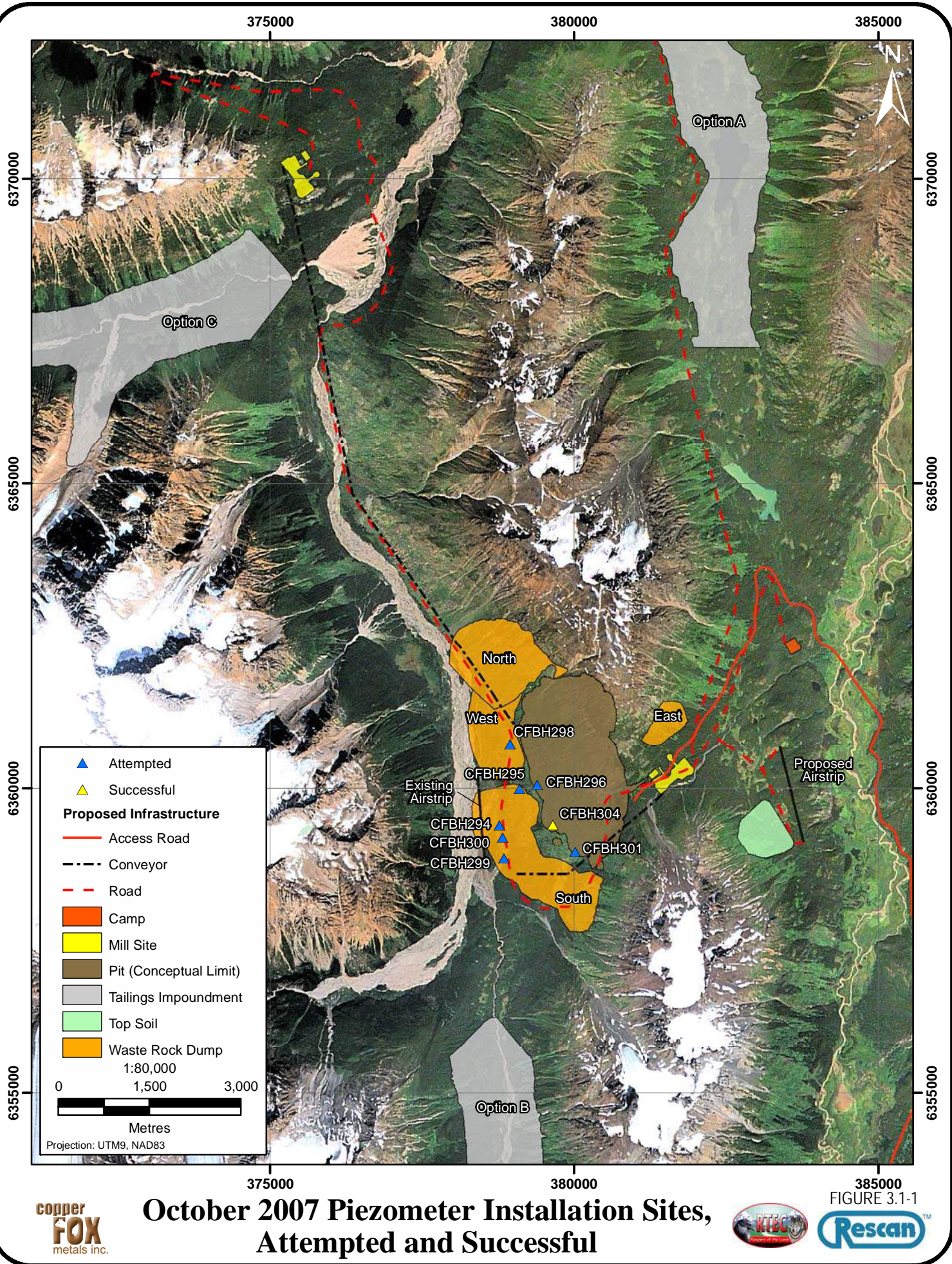
Hole ID: CFBH304									
I.D. ¹	Hole Dia. (m)	Stick-up (m)	Depth (m)	Screened Interval (m)		Length of Screened Interval (m)	Piezo meter Dia. ² (m)	Screened Lithology	Date Completed
				From	To				
A	0.096	0.9	139.76	139.8	131.9	7.91	0.033	Intrusive Breccia	24-10-07
B	0.096	0.89	139.76	26.4	18.7	7.7	0.033	Intrusive Tourmaline Breccia	27-10-07

¹. I.D. = Piezometer Identification

². Dia. = Diameter

**Table 3.1-2
Attempted Piezometer Installation Details**

Hole ID	Comments
CFBH294	Hole is not cased. Unable to install standpipe piezometer.
CFBH295	Hole previously sounded as open and reported as cased. At time of site visit hole not cased and caved at 9 m below ground surface.
CFBH296	Hole is cased but caved at 23 m below top of casing stick up.
CFBH298	Hole cased and open to bottom. Installation of piezometer not attempted as camp was closing.
CFBH299	PVC blocked by hole cave at approximately 26.5 m below top of casing stick-up.
CFBH300	Hole caved at 16 m below top of casing stick-up.
CFBH301	PVC blocked by hole cave at approximately 14 m below top of casing stick-up.



**October 2007 Piezometer Installation Sites,
Attempted and Successful**

385000
FIGURE 3.1-1



Although Rescan did not drill the borehole CFBH304, a copy of the core log created at the time of drilling in 2007, was examined. The piezometer log data for CFBH304 is presented in Appendix A.

3.2 Hydrostratigraphy

Rescan has not performed any drilling on the Schaft Creek property. However, the hydrostratigraphic environment underlying the Schaft Creek Property was inferred from available geological descriptions of drill holes and observations made during fieldwork in October 2007. Also, a geotechnical report produced in 2006 provided valuable insight into the nature of the overburden and the bedrock (Mann, 2006). Based on these sources the hydrostratigraphy of the area can be described in terms of two major units: overburden and highly fractured bedrock.

3.2.1 Overburden Groundwater

Overburden on the Schaft Creek property is variable in type and thickness. Photographic documentation of cores from exploration drilling reveals that in the centre and west of the Main Liard Zone, till reaches thicknesses of up to 18 metres. Also, holes in these areas were cased as deep as 50 meters, providing an indication of the depth of highly fractured material (Mann, 2006).

There is a general trend of decreasing overburden thickness as property elevation increases (Ewanchuk and Hanych, 2006). Overburden on the property is composed of glacial till, fluvio-glacial material, locally derived purple clay and local bedrock talus (Plate 3.2-1) (M^cCandlish, 2007). Scree and Talus cover the western-facing slopes of Schaft Creek. Material is derived from the bedrock below, and as a result is mineralized when derived from mineralized bedrock (Mann, 2006). Freeze and Cherry (1979), state that glacial tills range in hydraulic conductivities from 10^{-12} m/s to 10^{-6} m/s. Glacial till high in silt with some clay predominately comprises the overburden on the property. As a result, it is expected hydraulic conductivities of the overburden material lie within the mid to low estimates of this range ($\approx 10^{-8}$ m/s).

The primary recharge source to groundwater in the overburden is rainfall and snowmelt waters. Environment Canada Meteorological Stations near the Schaft Creek Project (maximum distance from project is approx. 130 km at Dease Lake Meteorology Station) recorded annual precipitation ranging from 369 mm to 2074 mm. The total precipitation at the project site observed in 2006 was 1039 mm (Rescan, 2007b).

Secondary sources of groundwater recharge in the overburden may include upgradient subsurface flows from areas of higher elevation surrounding the valley, exemplified by artesian conditions observed in drill holes in the valley bottom. Also, significant coverage of the valley floor by Muskeg indicates either poorly drained conditions or a potentiometric surface close to ground surface.

Inferred areas of groundwater flow direction and areas of discharge are west towards Hickman Creek and Schaft Creek, and east towards Mess Creek.

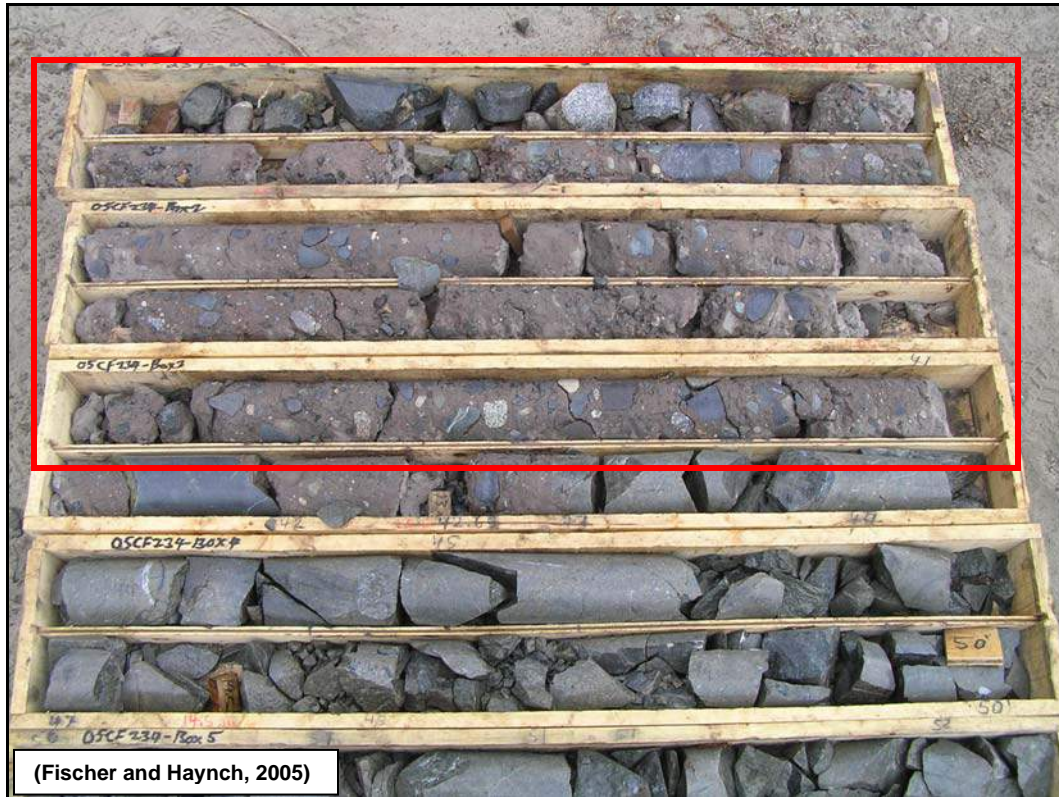


Plate 3.2-1. An example of overburden from a 2005 Diamond Drill core.

3.2.2 Bedrock Groundwater

It is expected that bedrock underlying the property yields groundwater mainly through fractures. Yield through pore space is less significant. Fracturing is ubiquitous throughout the Schaft Creek Property and ranges from moderate to high intensity, as demonstrated by the variation of RQD values in the 2005 /2006 Diamond Drill Cores. Other features that may act as conduits for groundwater flow are faults, microfractures, and crushed rock zones. Fractured volcanic (igneous) rocks have hydraulic conductivities which generally range from 10^{-8} m/s to 10^{-4} m/s (Freeze and Cherry, 1979).

It is expected that the majority of groundwater recharge in the bedrock unit is derived from infiltration through the overlying sediments. Hydraulic conductivities in the highly fractured zone underlying the overburden are likely highest. This zone is located within several meters of the ground surface; as observed in the 2005 borehole core photographs and supported by low RQD values (Fischer and Hanych, 2006). Underlying the highly fractured zone is generally more intact bedrock. Depth to the more intact zone can be upwards of 100 metres at the Schaft Creek property. It is anticipated that the hydraulic conductivity decreases as the amount of fracturing and faulting decreases below this zone.

Igneous rocks generally exhibit the majority of fracturing near the ground surface due to the presence of near-surface stresses (Freeze and Cherry, 1979). Till, with low permeability (high clay and silt content), overlying the highly fractured bedrock may act as an aquitard and create

conditions typical of a confined aquifer. This likely contributes to the artesian conditions observed in the valley bottom.

A secondary source of bedrock groundwater recharge is through outcrops (bedrock exposed at surface). Due to the layer of overburden, outcropping is rare and occurs intermittently on scree slopes surrounding the property (Mann, 2006). Outcrop infiltration would occur mainly through exposed fractures and faults.

4. GROUNDWATER QUALITY

4. Groundwater Quality

4.1 Groundwater Sampling

The data set described in this section is derived from groundwater sampling that was carried out in October 2007. Four groundwater samples and one duplicate were collected from four holes as a part of the preliminary groundwater quality characterization of the Schaft Creek Project. All holes were previously noted as artesian and located within the areas of two of the proposed tailings impoundment facility sites. A map of the sample sites is presented in Figure 4.1-1. The results of the laboratory chemical analyses are presented in Appendix B-1. The UTM location of each hole is presented in Appendix B-2.

4.2 Methodology

The samples from drill holes 07ASD01, 07AND02, 07ANWD01 and 07BD01 were collected in an unconventional manner given that there were no piezometers installed in the drill holes. A sampling methodology specific to these conditions was designed to obtain samples representative of the water quality in the bedrock.

The methodology involved passing a 1" Schedule 40 PVC down the hole to a depth where the bottom of the PVC was below casing and the overburden/bedrock interface. A sample obtained at this depth would likely avoid any metal contamination from the casing and prevent suspending solids from the overburden being sampled.

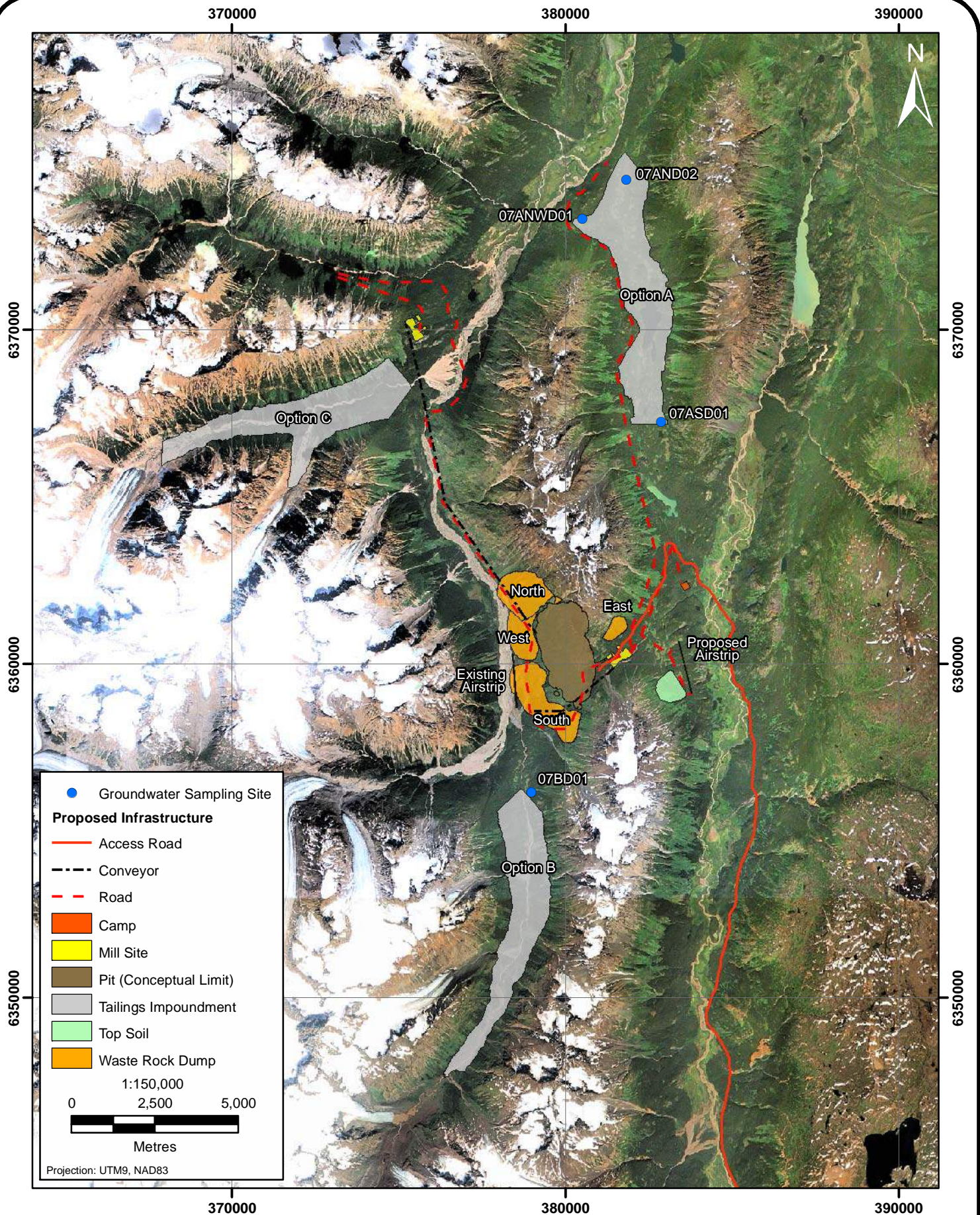
Tubing with a one-way valve on the end (Wattera Tube) was placed inside the PVC. Water was purged to remove any water not representative of groundwater derived from the bedrock. Samples were gathered from boreholes 07ASD01, 07AND02, and 07BD01 in this manner.

Conditions encountered at drill hole 07ANWD01 were such that the methodology described above needed to be modified. It was found that this hole had caved at a depth of 13.35 m below ground surface at the interface between bedrock and overburden. Although conditions were not ideal, samples were gathered from this hole ensuring that the sampling level was below casing depth in the hole.

4.3 Water Quality Analysis

Groundwater samples were analyzed for general chemistry, total metals, dissolved metals, nutrients and total organic carbon by ALS Laboratories in Vancouver, BC. The raw data, including duplicates, travel blanks and field blanks, is presented in Appendix B-1. Sample quality was determined by referring to maximum allowable concentrations (MACs) listed in the Canadian Environment Quality Guidelines, published by the Canadian Council of Ministers of the Environment (CCME) (CCME, 2006) and the British Columbia Approved Water Quality Guidelines for Aquatic Life (BC guidelines for aquatic life) (BC Aquatic Life, 2006).

Comparison to the CCME and BC guidelines for aquatic life showed that three anions (dissolved) and seven total metal concentrations exceeded a MAC in one or both of the guidelines.



Physical parameters and concentrations exceeding MACs are presented in Figures 4.3-1 to 4.3-6. It should be noted that concentrations below detection limits were substituted with one-half of the detection limit for analytical purposes. Detection limits are presented in Table 4.3-1. Also, the BC guidelines for aquatic life list MACs based on 30-day mean values. These MACs are not applicable since 30-day mean values are not available within the dataset.

**Table 4.3-1
Measurement Units and Minimum Detection Limits**

Parameter	Unit	Detection Limit (minimum)
Physical Tests		
Hardness (as CaCO ₃)	mg/L	0.5
Colour, True	CU	5
Conductivity	uS/cm	2
pH	pH	0.01
Total Dissolved Solids	mg/L	10
Total Suspended Solids	mg/L	3
Turbidity	NTU	0.1
Anions and Nutrients		
Ammonia as N	mg/L	0.005
Acidity (as CaCO ₃)	mg/L	1
Alkalinity, Bicarbonate (as CaCO ₃)	mg/L	2
Alkalinity, Carbonate (as CaCO ₃)	mg/L	2
Alkalinity, Hydroxide (as CaCO ₃)	mg/L	2
Alkalinity, Total (as CaCO ₃)	mg/L	2
Bromide (Br)	mg/L	0.05
Chloride (Cl)	mg/L	0.5
Fluoride (F)	mg/L	0.02
Sulfate (SO ₄)	mg/L	0.5
Nitrate (as N)	mg/L	0.005
Nitrite (as N)	mg/L	0.001
Total Kjeldahl Nitrogen	mg/L	0.05
Total Nitrogen	mg/L	0.05
Total Phosphate as P	mg/L	0.002
Total Metals		
Aluminum (Al)-Total and Dissolved	mg/L	0.001
Antimony (Sb)-Total and Dissolved	mg/L	0.0001
Arsenic (As)-Total and Dissolved	mg/L	0.0001
Barium (Ba)-Total and Dissolved	mg/L	0.00005
Beryllium (Be)-Total and Dissolved	mg/L	0.0005
Bismuth (Bi)-Total and Dissolved	mg/L	0.0005
Boron (B)-Total and Dissolved	mg/L	0.01
Cadmium (Cd)-Total and Dissolved	mg/L	0.00002

(continued)

**Table 4.3-1
Measurement Units and Minimum Detection Limits (completed)**

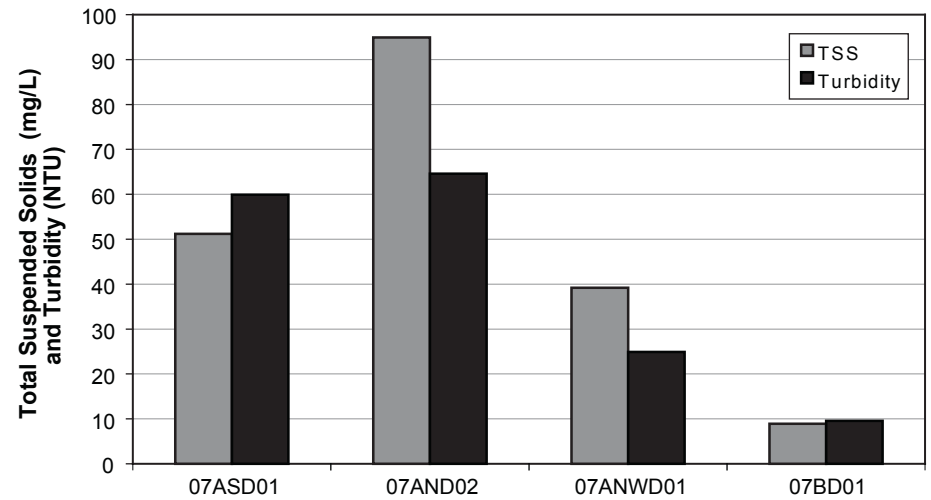
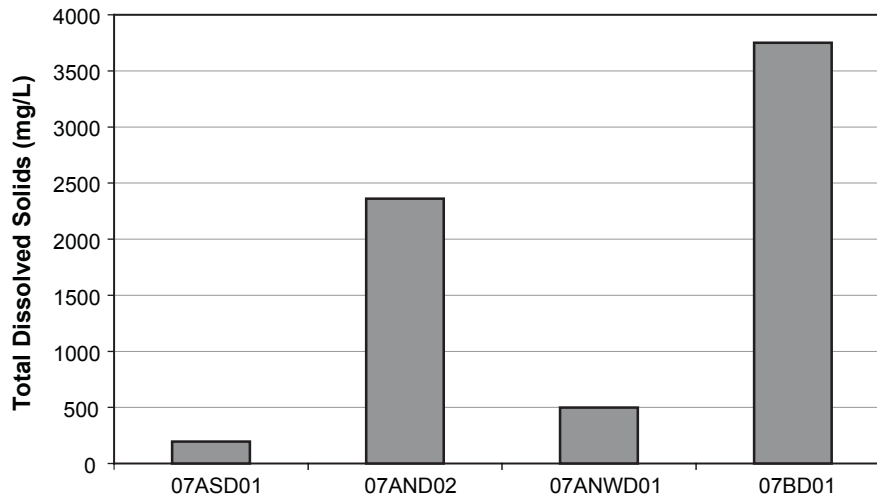
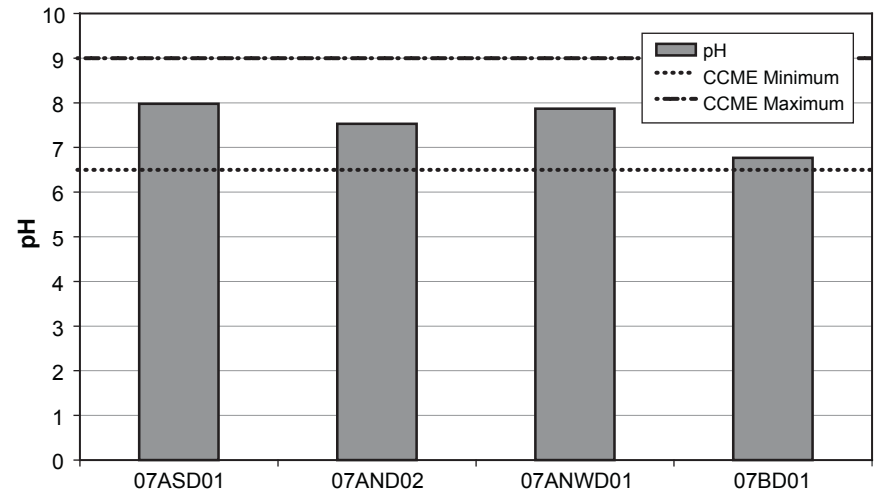
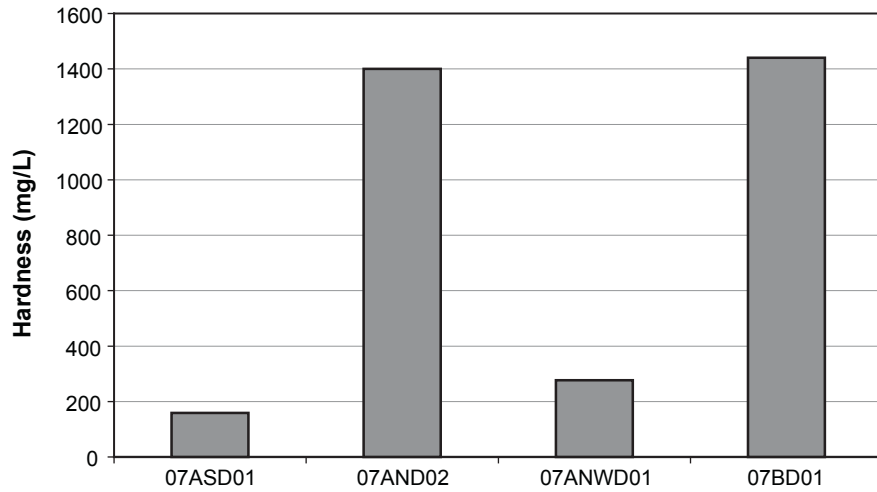
Parameter	Unit	Detection Limit (minimum)
Calcium (Ca)-Total and Dissolved	mg/L	0.02
Chromium (Cr)-Total and Dissolved	mg/L	0.0005
Cobalt (Co)-Total and Dissolved	mg/L	0.0001
Copper (Cu)-Total and Dissolved	mg/L	0.0001
Iron (Fe)-Total and Dissolved	mg/L	0.03
Lead (Pb)-Total and Dissolved	mg/L	0.00005
Lithium (Li)-Total and Dissolved	mg/L	0.005
Magnesium (Mg)-Total and Dissolved	mg/L	0.005
Manganese (Mn)-Total and Dissolved	mg/L	0.00005
Mercury (Hg)-Total and Dissolved	mg/L	0.00001
Molybdenum (Mo)-Total and Dissolved	mg/L	0.00005
Nickel (Ni)-Total and Dissolved	mg/L	0.0005
Phosphorus (P)-Total and Dissolved	mg/L	0.3
Potassium (K)-Total and Dissolved	mg/L	0.05
Selenium (Se)-Total and Dissolved	mg/L	0.0005
Silicon (Si)-Total and Dissolved	mg/L	0.05
Silver (Ag)-Total and Dissolved	mg/L	0.00001
Sodium (Na)-Total and Dissolved	mg/L	2
Strontium (Sr)-Total and Dissolved	mg/L	0.0001
Thallium (Tl)-Total and Dissolved	mg/L	0.0001
Tin (Sn)-Total and Dissolved	mg/L	0.0001
Titanium (Ti)-Total and Dissolved	mg/L	0.01
Uranium (U)-Total and Dissolved	mg/L	0.00001
Vanadium (V)-Total and Dissolved	mg/L	0.001
Zinc (Zn)-Total and Dissolved	mg/L	0.001
Organic Parameters		
COD	mg/L	20
Total Organic Carbon	mg/L	0.5

4.3.1 Results

4.3.1.1 General Chemistry

Hardness (concentration of divalent ions represented as calcium carbonate [CaCO₃] in the sample) ranged significantly from 159 mg/L in borehole 07ASD01 to 1440 mg/L in borehole 07BDO1 (Figure 4.3-1). There was no MAC listed for hardness in either the CCME or BC guidelines.

Groundwater pH ranged from slightly acidic (6.77) in borehole 07BD01 to slightly basic (7.98) in borehole 07ASD01. No samples fell outside the acceptable pH range (6.5 – 9.0) listed in the CCME guidelines (Figure 4.3-1).



Total dissolved solids (TDS) ranged from 195 mg/L in borehole 07AD01 to 3750 in borehole 07BD01 (Figure 4.3-1). Total suspended solids (TSS) ranged from 8.9 mg/L in borehole 07BD01 to 94.9 mg/L in borehole 07AND02. The concentration of total suspended solids corresponded with turbidity measurements which ranged from 9.54 mg/L in borehole 07BD01 to 64.6 mg/L in borehole 07AND02 (Figure 4.3-1). Concentrations in comparison to the CCME and BC guidelines for aquatic life are listed in Table 4.3-2.

**Table 4.3-2
Physical Parameter Concentrations in Schaft Creek Groundwater**

Parameter	07ASD01	07AND02	07ANWD01	07BD01	CCME MAC¹	BC Aquatic Life MAC¹
Hardness (as CaCO₃)	159	1400	277	1440	ng	ng
Colour, True	<5.0	<5.0	<5.0	<5.0	narrative	30 average transmission of white light >80% of background
Conductivity	341	2820	714	5100	ng	ng
pH	7.98	7.53	7.87	6.77	6.5 - 9.0	ng
Total Dissolved Solids	195	2360	498	3750	ng	ng
Total Suspended Solids	51.2	94.9	39.2	8.9	25 mg/L above background levels	depends on background
Turbidity	59.9	64.6	24.9	9.54	ng	depends on background

Note:
1. MAC = maximum allowable concentration
ng = no guideline
Bolded values exceed the MAC listed in the BC guidelines for Aquatic Life
Underlined values exceed the MAC listed in the CCME guidelines

4.3.1.2 Anions/Nutrients

The maximum concentration of chloride (Cl) stated in the BC water quality guidelines for aquatic life is 600 mg/L. This guideline was exceeded in borehole 07BD01, by over twice the maximum limit (1230 mg/L). The chloride concentration ranged from 0.5 mg/L in borehole 07ASD01 to 1230 mg/L in borehole 07BD01 (Figure 4.3-2). The CCME lists no guideline for the concentration of chloride (Cl).

According to the BC water quality guidelines, the concentration of fluoride (F) is dependent on the hardness of the groundwater sample (presented in Figure 4.3-2). Hardness exceeded 50 mg/L in all boreholes and the according MAC for fluoride is 0.3 mg/L. This MAC was exceeded in three boreholes, and in the remaining borehole, 07BD01, fluoride was below the detection limit. Fluoride concentrations ranged from <0.4 mg/L in borehole 07BD01 to 2.75 mg/L in borehole 07ANWD01 (Figure 4.3-2). There is no MAC listed for fluoride in the CCME guidelines.

The MAC for sulphate (SO₄) listed in the BC water quality guidelines for aquatic life is 100 mg/L. This limit was exceeded in three of the boreholes (07AND02, 07ANWD01 and 07BD01).

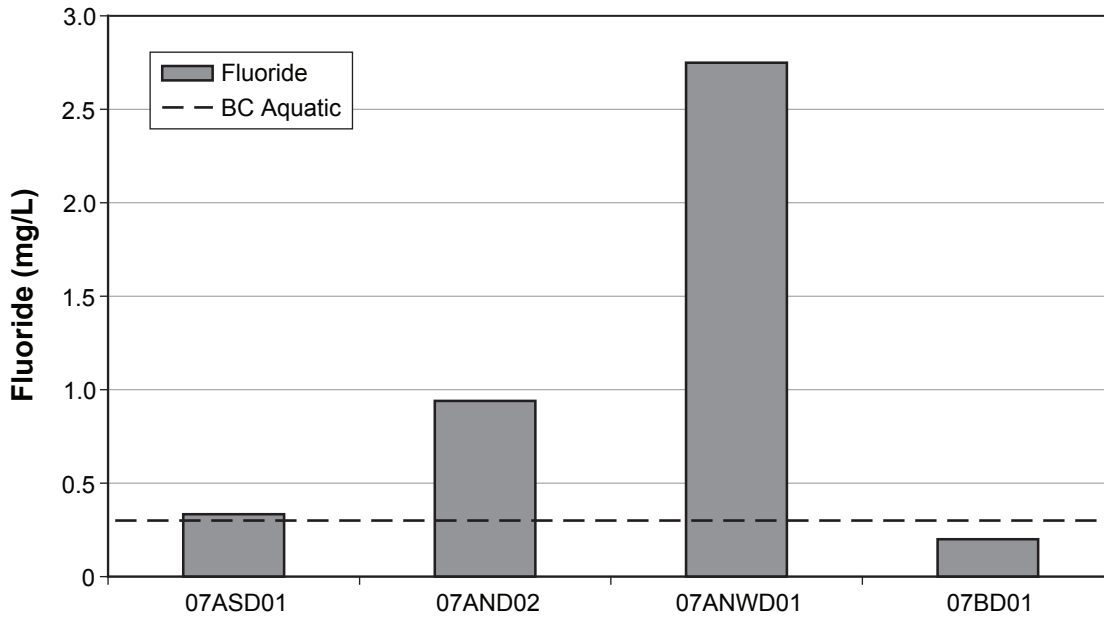
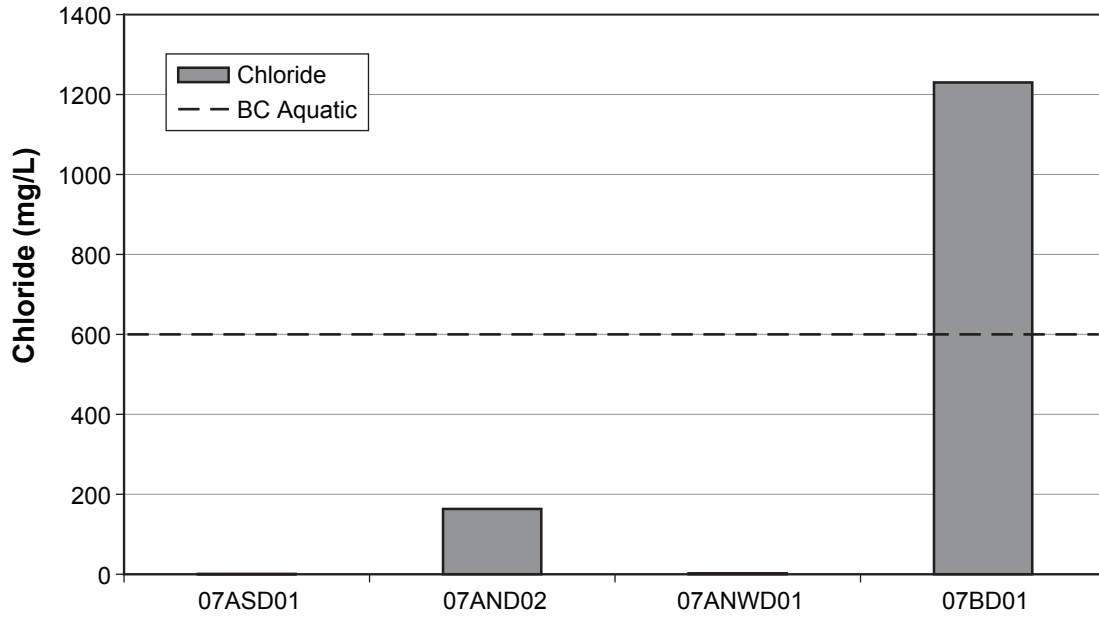


FIGURE 4.3-2



Sulphate concentrations ranged from 61.9 mg/L in borehole 07ASD01 to 1440 mg/L in borehole 07AND02 (Figure 4.3-3). The maximum concentration of sulphate measured in 07ASD02 is over fourteen times that of the MAC. The CCME lists no guideline for the concentration of sulphate. Table 4.3-3 presents the concentrations of nutrients and anions in Schaft Creek groundwater as piezometer as the MACs listed in the CCME and BC guidelines for aquatic life.

**Table 4.3-3
Anion and Nutrient Concentrations in Schaft Creek Groundwater**

Parameter	07ASD01	07AND02	07ANWD01	07BD01	CCME MAC	BC Aquatic Life MAC
Ammonia as N	0.0065	<0.0050	0.0099	0.256	depends on field Temp and pH	depends on field Temp and pH
Acidity (as CaCO3)	3.2	4.5	4.3	7.2	ng	ng
Alkalinity, Bicarbonate (as CaCO3)	128	29.5	112	26.5	ng	ng
Alkalinity, Carbonate (as CaCO3)	<2.0	<2.0	<2.0	<2.0	ng	ng
Alkalinity, Hydroxide (as CaCO3)	<2.0	<2.0	<2.0	<2.0	ng	ng
Alkalinity, Total (as CaCO3)	128	29.5	112	26.5	ng	ng
Bromide (Br)	<0.050	<1.0	<0.050	<1.0	ng	ng
Chloride (Cl)	0.5	163	2.04	1230	ng	600
Fluoride (F)	0.334	0.94	2.75	<0.4	ng	Fluoride BC Max 0.2 mg/L when at <50 mg/L [CaCO3], 0.3 mg/L at >50 mg/L [CaCO3]
Sulfate (SO4)	61.9	1440	251	1250	ng	100 (Sulphate BC Max alert to monitor aquatic moss at 50 mg/L)
Nitrate (as N)	0.0158	0.05	0.0025	0.05	13	200 (≤ 40 30 day mean)
Nitrite (as N)	0.0005	0.01	0.0005	0.037	0.06	0.06mg/L for Cl<2mg/L and 0.12 mg/L for Cl 2-4 mg/L
Total Kjeldahl Nitrogen	<0.050	<0.10	<0.050	0.28	ng	Ng
Total Nitrogen	<0.05	<0.05	<0.05	0.32	ng	Ng
Total Phosphate as P	0.0714	0.12	0.0177	0.0157	ng	n/a

1. MAC = maximum allowable concentration
ng = no guideline
n/a = not applicable
Bolded values exceed the MAC listed in the BC guidelines for Aquatic Life
Underlined values exceed the MAC listed in the CCME guidelines

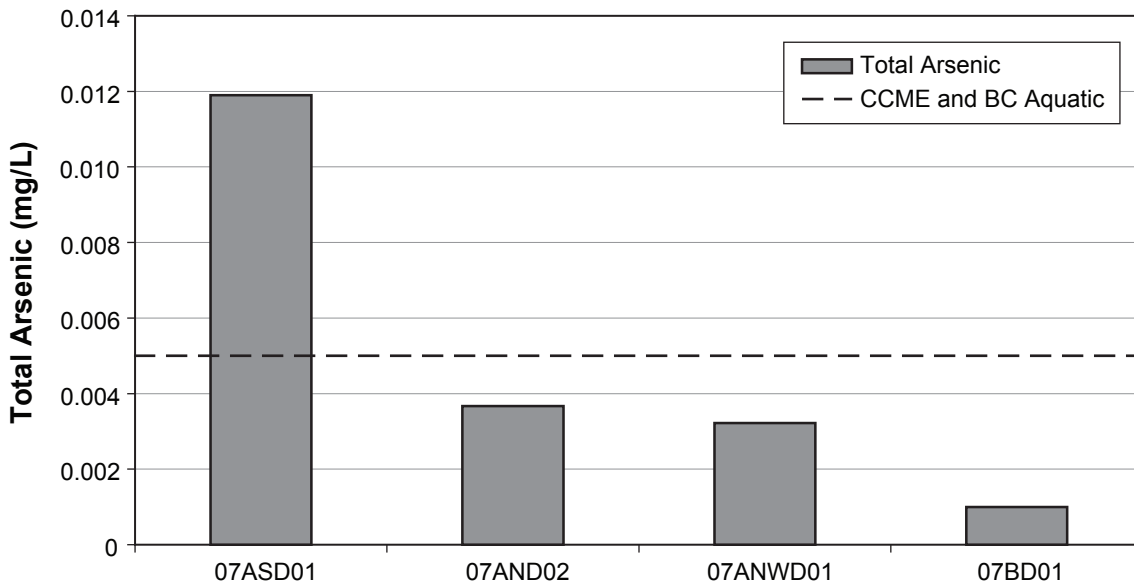
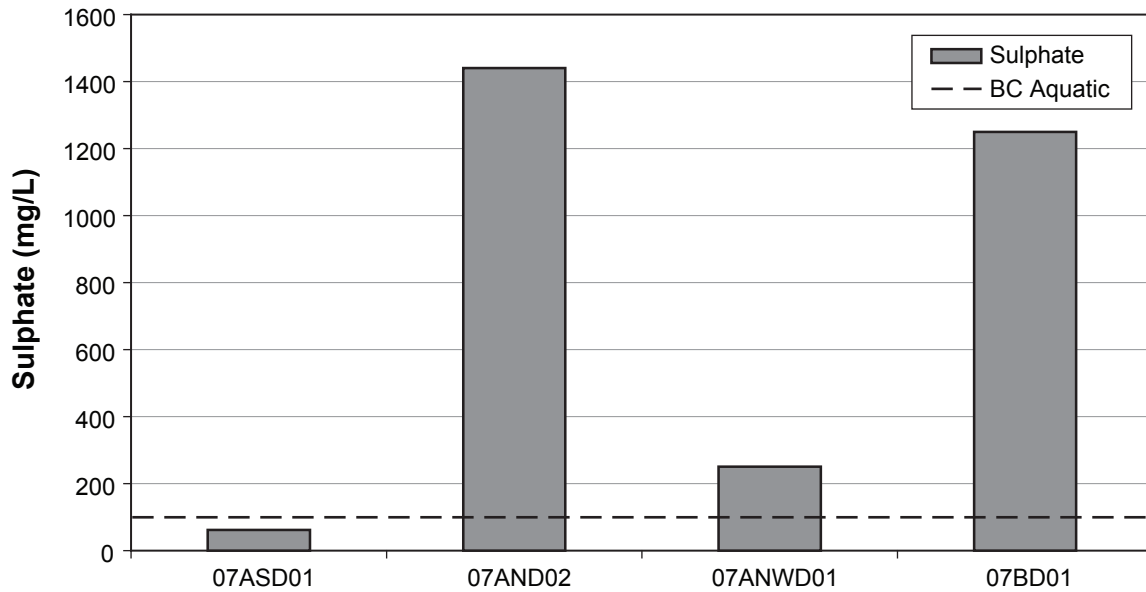


FIGURE 4.3-3



4.3.1.3 Total Metals

The maximum concentration of total arsenic (As) stated in both the CCME and the BC water quality guidelines for aquatic life is 0.005 mg/L. This limit was exceeded in borehole 07ASD01, where the arsenic concentration was 0.0119 mg/L; over double the maximum limit (Figure 4.3-3). The lowest concentration of arsenic was below the detection limit (<0.002 mg/L) in borehole 07BD01.

The maximum concentration of total boron (B) in the BC water quality guideline for aquatic life is 1.2 mg/L. This concentration was exceeded in borehole 07BD01 (Figure 4.3-4). Total boron concentrations ranged from 0.022 mg/L in borehole 07ASD01 to 1.96 mg/L in borehole 07BD01. The CCME lists no guideline for the concentration of total boron.

The MAC of total chromium (Cr) listed in the BC water quality guidelines for aquatic life was 0.001 mg/L. This was exceeded in two of the four boreholes; 07AND02 and 07ANWD01. In Figure 4.3-4 the chromium concentration from 07BD01 exceeds the MAC listed in the BC water quality guideline. This may not be true since the value shown is the detection limit, and the actual concentration in 07BD01 may be lower than this value. Chromium concentrations ranged from 0.00055 mg/L in borehole 07ASD01 to 0.0172 mg/L in borehole 07AND02 (Figure 4.3-4). The MAC listed in the CCME guidelines is specific to the species of chromium, Cr (VI) or Cr (III), and as measurements are for the total concentration of chromium, this MAC is not applicable to this part of the dataset.

Both the CCME and the BC water quality guidelines for aquatic life state that the maximum concentration of total copper (Cu) is dependent on hardness. Borehole 07AND02 exceeded its CCME MAC of 0.004 mg/L, as it contained 0.00958 mg/L of copper (Figure 4.3-5). Total copper concentrations ranged from 0.00118 mg/L in borehole 07ASD01 to 0.00958 mg/L in borehole 07AND02. None of the samples exceeded the BC water quality guidelines for copper.

The maximum total iron (Fe) concentration stipulated by both the CCME and the BC water quality guideline for aquatic life is 0.3 mg/L. This concentration was exceeded in all four piezometers. Total iron concentration ranged from 0.822 mg/L in borehole 07BD01 to 18.3 mg/L in borehole 07ASD01, a value significantly higher than the maximum limit (Figure 4.3-5).

The CCME guideline states that the MAC of silver is 0.0001 mg/L. Samples from boreholes 07AND02 and 07ANDW01 exceeded this limit. Silver concentrations ranged from below the detection limit of <0.00010 mg/L in borehole 07BD01 to 0.0019 mg/L in borehole 07AND02 (Figure 4.3-6). None of the total silver concentrations exceed the BC guidelines for aquatic life.

The MAC for total zinc (Zn) listed in the BC water quality guideline for aquatic life depends on the hardness of the sample. Borehole 07ASD01 and 07AND02 exceeded their limits of 0.084 mg/L and 1.02 mg/L respectively. The CCME guideline MAC for total zinc is 0.03 mg/L, and was exceeded in three boreholes; 07ASD01, 07AND02 and 07BD01.

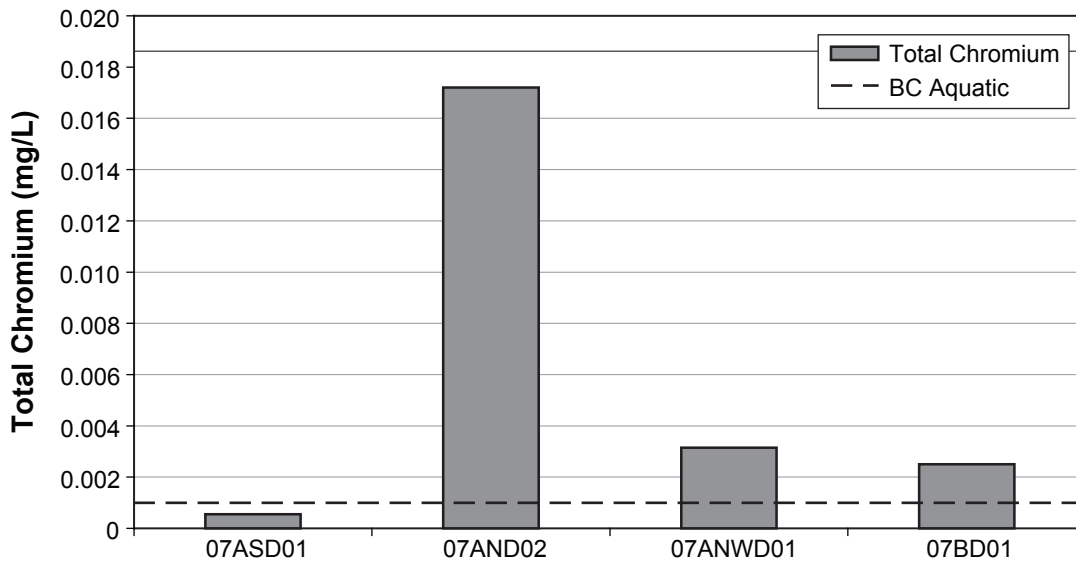
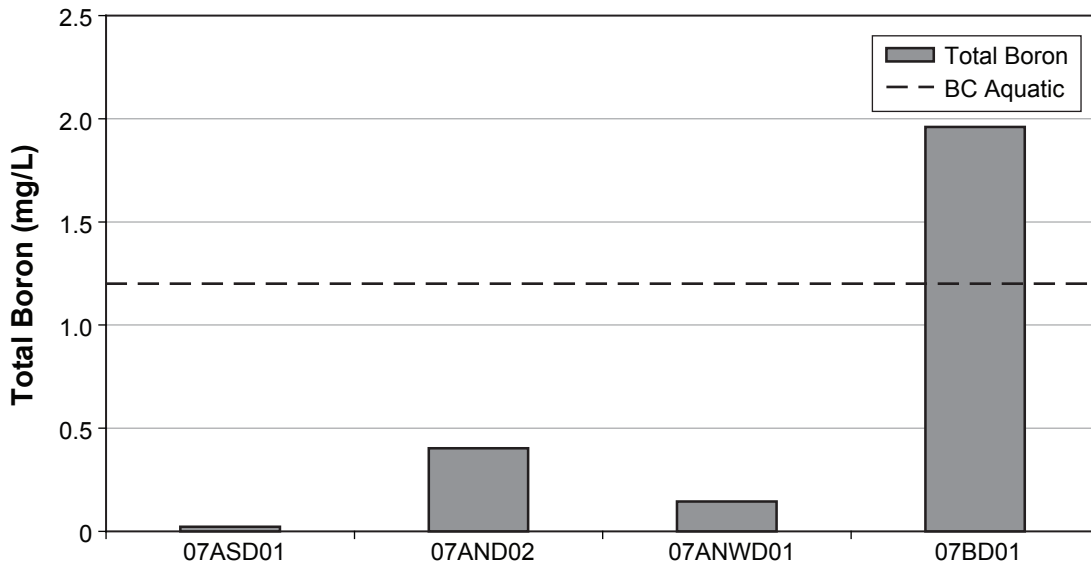


FIGURE 4.3-4



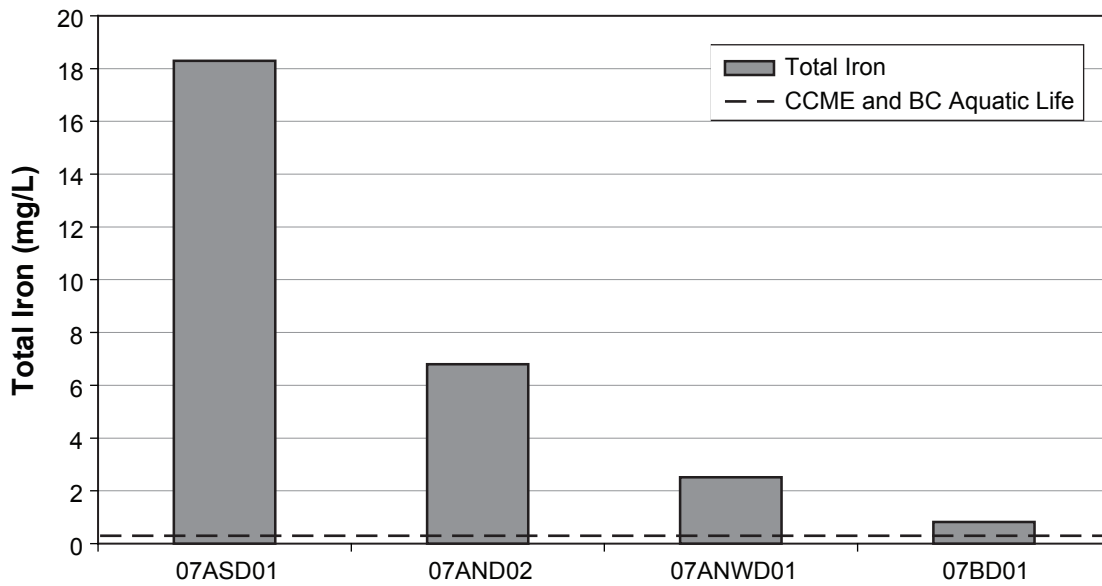
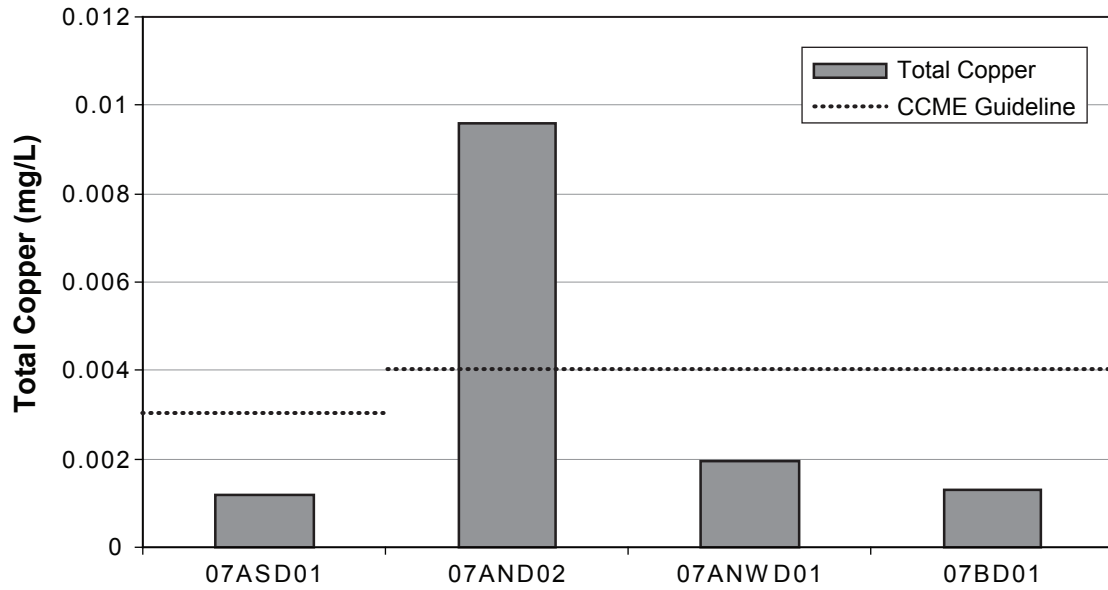


FIGURE 4.3-5



Total Copper and Total Iron Profiles in Groundwater

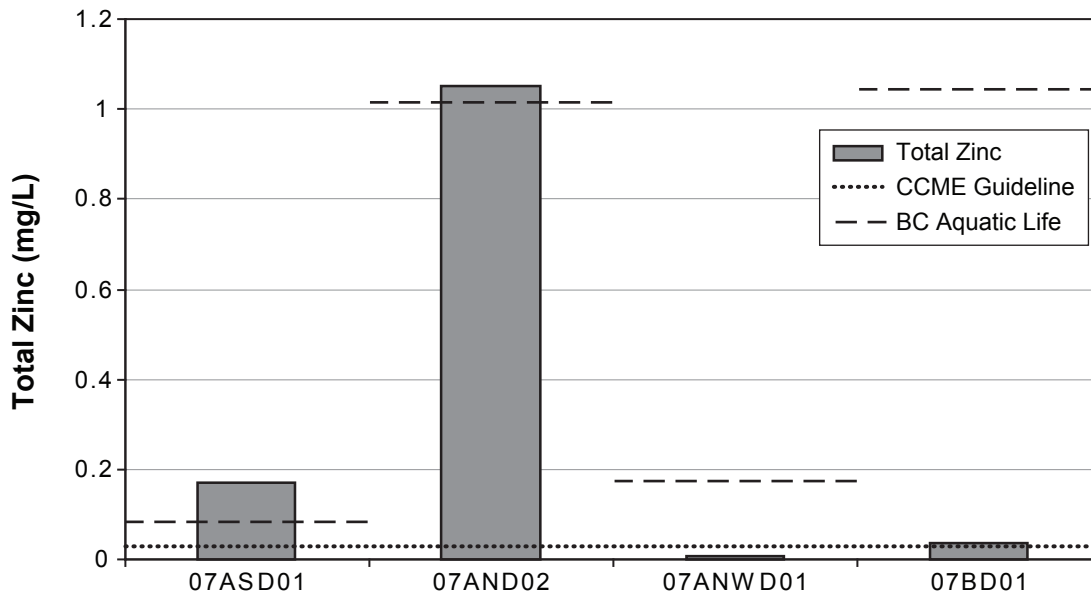
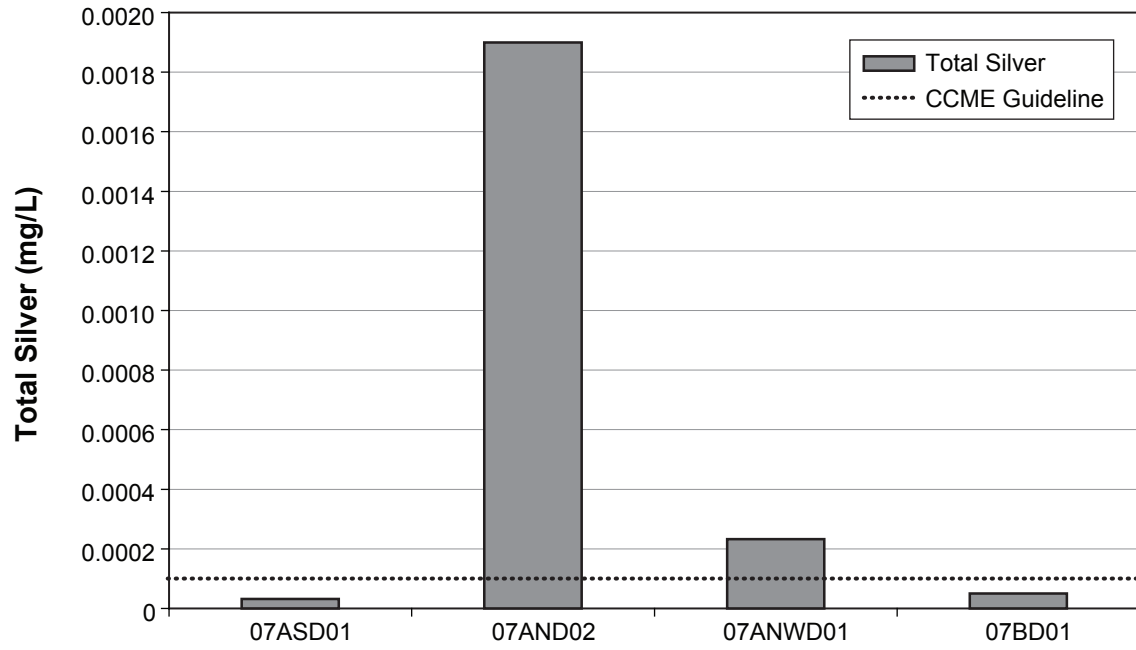


FIGURE 4.3-6



The total zinc concentrations ranged from 0.0065 mg/L in borehole 07ANWD01 to 1.05 mg/L in borehole 07AND02 (4.3-6). Table 4.3-4 presents the total metal concentrations as piezometer as the MACs listed in the CCME and BC guidelines for aquatic life.

**Table 4.3-4
Total Metal Concentrations in Schaft Creek Groundwater**

Parameter	07ASD01	07AND02	07ANWD01	07BD01	CCME MAC	BC Aquatic Life MAC
Aluminum	0.028	1.14	0.244	0.084	n/a	ng
Antimony	0.00076	<0.00050	<0.00010	<0.0010	ng	0.02
Arsenic	0.0119	0.00367	0.00322	<0.002	0.005	0.005
Barium	0.0546	0.0245	0.0139	0.0118	ng	5
Beryllium	<0.00050	<0.0025	<0.00050	<0.0050	ng	0.0053
Bismuth	<0.00050	<0.0025	<0.00050	<0.0050		
Boron	0.022	0.403	0.145	1.96	ng	1.2
Cadmium	0.000025	<0.00010	0.000032	<0.00020	0.0073	K = Cadmium BC max guideline = 0.001 * $10^{(0.86[\log(\text{hardness})] - 3.2)}$ mg/L
Calcium	49.4	473	94.4	507	ng	ng
Chromium	0.00055	0.0172	0.00315	<0.005	n/a	0.001
Cobalt	0.00012	0.00065	0.00023	<0.0010	ng	0.11
Copper	0.00118	<u>0.00958</u>	0.00195	0.0013	0.002 mg/L at 0-120 mg/L [CaCO ₃], 0.003mg/L at 120-80 mg/L [CaCO ₃], 0.004 mg/L at > 180 mg/L [CaCO ₃]	=(0.094(hardness)+2) µg/L.
Iron	18.3	6.8	2.51	0.822	0.3	0.3
Lead	0.000181	0.00042	0.000554	0.00058	0.001 mg/L for [CaCO ₃]=0-60 mg/L, 0.002 mg/L for [CaCO ₃]= 60-120 mg/L, 0.004 mg/L for [CaCO ₃]= 120-180 mg/L, 0.007 mg/L for [CaCO ₃] >180 mg/L	=e ^{(1.273 ln (hardness) - 1.460)} µg/L if hardness > 8mg/L; 0.003 mg/L if hardness ≤ 8 mg/L
Lithium	<0.0050	<0.025	0.0199	<0.050	ng	5 (depends on hardness)
Magnesium	16.4	15.8	9.81	66.3		
Manganese	0.0423	0.253	0.0745	0.107	ng	=0.01102(hardness)+0.54 mg/L'
Mercury	<0.000010	<0.000010	<0.000010	<0.000010	0.000026 mg/L inorganic Hg, 0.000004 mg/L MeHg	0.00002
Molybdenum	0.00301	0.0177	0.0191	0.00194	0.073	2
Nickel	<0.00050	<0.0025	<0.00050	<0.0050	0.025 mg/L at 0-60 mg/L [CaCO ₃], 0.065 mg/L at 60-120 mg/L [CaCO ₃], 0.110 mg/L at 120 - 180 mg/L [CaCO ₃], 0.150 mg/L at > 180 mg/L [CaCO ₃]	0.025 mg/L at 0-60 mg/L [CaCO ₃], 0.065 mg/L at 60-120 mg/L [CaCO ₃], 0.110 mg/L at 120 - 180 mg/L [CaCO ₃], 0.150 mg/L at > 180 mg/L [CaCO ₃]
Phosphorus	<0.30	<0.30	<0.30	<0.30	ng	ng

(continued)

**Table 4.3-4
Total Metal Concentrations in Schaft Creek Groundwater (completed)**

Parameter	07ASD01	07AND02	07ANWD01	07BD01	CCME MAC	BC Aquatic Life MAC
Potassium	0.721	1.63	0.883	8.38	ng	ng
Selenium	0.00071	<0.00050	<0.00050	0.00097	0.001	0.002
Silicon	5.09	5.66	7.1	8.2	ng	ng
Silver	0.000032	<u>0.0019</u>	<u>0.000233</u>	<0.0001	0.0001	0.003 mg/L if hardness > 100 mg/L, max of 0.0001 mg/L if hardness ≤ 100 mg/L
Sodium	7.2	177	50	566	ng	ng
Strontium	0.357	11.1	7.13	12.1	ng	ng
Thallium	<0.00010	<0.00050	<0.00010	<0.0010	0.0008	0.0003
Tin	<0.00010	<0.00050	<0.00010	<0.0010	ng	ng
Titanium	<0.010	0.041	0.016	<0.010	ng	0.1
Uranium	0.000255	0.000377	0.0488	0.00027	ng	0.3
Vanadium	<0.0010	<0.0050	0.0035	<0.010	ng	ng
Zinc	<u>0.171</u>	1.05	0.0065	<u>0.038</u>	0.030	=[33 + 0.75*(hardness - 90)] ug/L, minimum of 33 ug/L

Note:

1. MAC = maximum allowable concentration

ng = no guideline

n/a = not applicable

Bolded values exceed the MAC listed in the BC guidelines for Aquatic Life

Underlined values exceed the MAC listed in the CCME guidelines

4.3.1.4 Dissolved Metals and Organic Parameters

None of the concentrations of dissolved metals and organic parameters in the Schaft Creek groundwater exceeded a MAC. Table 4.3-5 presents the dissolved metal and organic parameter concentrations, as piezometer as the MACs listed in the CCME and BC guidelines for aquatic life.

**Table 4.3-5
Dissolved Metals and Organic Parameters in Schaft Creek
Groundwater**

Parameter	07ASD01	07AND02	07ANWD01	07BD01	CCME	BC Aquatic
Dissolved Metals						
Aluminum	0.0012	0.0094	0.0031	0.018	ng	0.1 for pH ≥ 6.5
Antimony	0.00044	<0.00050	<0.00010	<0.0010	ng	ng
Arsenic	0.00277	0.00329	0.00279	<0.0020	ng	ng
Barium	0.0275	0.0191	0.0113	0.0126	ng	ng
Beryllium	<0.00050	<0.0025	<0.00050	<0.0050	ng	ng
Bismuth	<0.00050	<0.0025	<0.00050	<0.0050	ng	ng
Boron	0.021	0.459	0.145	1.79	ng	ng
Cadmium	<0.000020	<0.00010	0.00003	<0.00020	ng	ng
Calcium	37	532	94.7	473	ng	ng

(continued)

**Table 4.3-5
Dissolved Metals and Organic Parameters in Schaft Creek
Groundwater (completed)**

Parameter	07ASD01	07AND02	07ANWD01	07BD01	CCME	BC Aquatic
Chromium	<0.00050	<0.0025	<0.00050	<0.0050	ng	ng
Cobalt	<0.00010	<0.00050	<0.00010	<0.0010	ng	ng
Copper	0.00011	<0.00050	0.00012	<0.0010	ng	ng
Iron	0.095	1.94	0.759	0.195	ng	ng
Lead	<0.000050	<0.00025	<0.000050	<0.00050	ng	ng
Lithium	<0.0050	<0.025	0.0196	<0.050	ng	ng
Magnesium	16.1	17.1	9.78	62.1	ng	ng
Manganese	0.00447	0.226	0.0627	0.0965	ng	ng
Mercury	<0.000010	<0.000010	<0.000010	<0.000010	ng	ng
Molybdenum	0.00301	0.0152	0.018	0.0015	ng	ng
Nickel	<0.00050	<0.0025	<0.00050	<0.0050	ng	ng
Phosphorus	<0.30	<0.30	<0.30	<0.30	ng	ng
Potassium	0.71	1.66	0.868	8.03	ng	ng
Selenium	0.00113	<0.00050	<0.00050	<0.00050	ng	ng
Silicon	3.64	3.79	6.17	8.01	ng	ng
Silver	<0.000010	<0.000050	<0.000010	<0.00010	ng	ng
Sodium	6.9	201	49.6	561	ng	ng
Strontium	0.338	12.7	7.12	11.2	ng	ng
Thallium	<0.00010	<0.00050	<0.00010	<0.0010	ng	ng
Tin	<0.00010	<0.00050	<0.00010	<0.0010	ng	ng
Titanium	<0.010	<0.010	<0.010	<0.010	ng	ng
Uranium	0.000229	0.000108	0.0458	<0.00010	ng	ng
Vanadium	<0.0010	<0.0050	<0.0010	<0.010	ng	ng
Zinc	0.0041	0.315	0.0039	<0.010	ng	ng
Organic Parameters						
COD	<20	<20	<20	60	ng	ng
Total Organic Carbon	<0.50	<0.50	<0.50	0.89	ng	ng

1. MAC = maximum allowable concentration

ng = no guideline

Bolded values exceed the MAC listed in the BC guidelines for Aquatic Life

Underlined values exceed the MAC listed in the CCME guidelines

4.3.2 Summary

Groundwater samples derived from boreholes within two of the proposed tailings impoundment facility sites provide a preliminary indication of groundwater quality on the Schaft Creek property. The presence of high concentrations of total metals may indicate that metals are originating from mineralized rocks in the bedrock. Groundwater high in metals may also be derived from overburden containing mineralized rock fragments derived from local bedrock.

Various elevated concentrations of metals and anions in the groundwater at Schaft Creek exceed maximum allowable concentrations listed in the CCME and BC Water Quality Guidelines for

Aquatic life. Potential poor water quality should be taken into consideration when managing and displacing groundwater on the property, especially in the area of freshwater creeks. A thorough investigation of groundwater quality from more locations over a longer period of time will provide a more accurate indication of overall groundwater quality.

5. RECOMMENDATIONS

5. Recommendations

To gain a detailed understanding of baseline hydrogeological conditions on the Schaft Creek property, various recommendations can be made for the 2008 field season:

- Install multiple standpipe piezometers across the property to characterize the diverse subsurface hydrogeological conditions. The number and location of installations are dependent on budget and location of mine infrastructure.
- Perform packer tests to determine the water quality and hydraulic conductivity at vertical distribution intervals in the aquifer.
- Perform Slug Tests (Falling/Rising Head Tests) to determine the hydraulic conductivity of aquifers.
- Commence a groundwater sampling program involving a chemical analysis of groundwater samples every three months (or as often as deemed necessary) in order to account for seasonal fluctuations in groundwater chemistry. Samples will be derived from proposed standpipe piezometers mentioned above.
- Measure static water elevations to determine hydraulic gradients across the site (*i.e.*, flow directions).

6. CONCLUSION

6. Conclusion

Preliminary baseline conditions of groundwater quantity and quality within the Schaft Creek Project area have been generalized. Groundwater flow directions, recharge/discharge areas and aquifer permeability have been discussed. Groundwater chemistry has been characterized and presented in this report. The baseline investigation conducted on the hydrogeological features of the Schaft Creek area resulted in the following findings:

- The main source of groundwater recharge is precipitation in the forms of rain and snow. Also, due to the physiographic setting surrounding the Schaft Creek property, it is likely that infiltrated groundwater flowing from high elevations to low elevations encounters confining layers causing upgradient subsurface flows. Major groundwater discharge areas are likely the Hickman Creek, the Schaft Creek and the Mess Creek.
- The major water-bearing units underlying the Schaft Creek property are the overburden and highly fractured bedrock. The hydraulic conductivity of the overburden is likely similar to that of glacial till, which ranges from 10^{-12} m/s to 10^{-6} m/s (Freeze and Cherry, 1979). Bedrock likely yields groundwater through highly fractured volcanics with hydraulic conductivities ranging from 10^{-8} m/s to 10^{-4} m/s (Freeze and Cherry, 1979). A highly fractured zone between the overburden and less fractured bedrock is expected to yield the most water.
- Groundwater sampled from four boreholes was found to contain 10 constituents exceeding a maximum allowable concentration listed in the CCME and BC water quality guidelines for aquatic life. The source of naturally occurring elevated concentrations is expected to be highly mineralized bedrock and mineralized fragments in the overburden.

7. CLOSURE

7. Closure

Best practices and standard methods were applied during collection of all data presented in this report. All efforts have been made to provide accurate data. It should be noted that all observations and conclusions within this report are based on information available at the time of report completion and may be subject to change as more information is obtained.

The information contained herein is correct to the best of our knowledge at this time. Any comments herein reflect the opinions of Rescan staff based on available information.

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APPENDIX A
GEOLOGY LOGS AND WELL CONSTRUCTIONS



Rescan Environmental Services Ltd.
 Sixth Floor - 1111 West Hastings Street
 Vancouver, BC, V6E 2J3
 Telephone: (604) 689 9460
 Fax: (604) 687 4277

BORING NUMBER CFBH304

CLIENT Copper Fox Metals Inc.

PROJECT NAME Schaft Creek Project

PROJECT NUMBER 830-4

PROJECT LOCATION Northwest British Columbia

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION	WELL DIAGRAM
12		<p>TOURMALINE BRECCIA: green-gray, angular to subangular fragments < 1cm - 7cm, fine grained augite phyric andesite, closely packed. Matrix, small fragments, tourmaline ground mass. Strong epidote and carbonate alteration as well as sericite alteration of smaller fragments. Pyrite and chalcocopyrite with trace molybdenum. Weak late carbonate veinlets. <i>(continued)</i></p>	890.10	
14		<p>INTRUSIVE TOURMALINE BRECCIA (ITB): Pink, dark green, grey. Fine grained tourmaline matrix with Quartz Monzonite clasts. Moderate chlorite/silica weak hematite/potassic/sericite/carbonate alteration. Quartz carbonate veins, chlorite filled, epidote altered, hematite halos. Moderately fractured, 1-3cm spacing. Disseminated pyrite, chalcocopyrite in veins and fractures.</p>	886.20	
16		<p>INTRUSIVE BRECCIA: Moderate to high fractures with 2-3cm rubble, chlorite coating and fracture gouge at 17.70m.</p>	884.00	
18		<p>INTRUSIVE TOURMALINE BRECCIA (ITB): Pink, dark green, grey. Fine grained tourmaline matrix with Quartz Monzonite clasts. Moderate chlorite/silica weak hematite/potassic/sericite/carbonate alteration. Quartz carbonate veins, chlorite filled, epidote altered, hematite halos. Moderately fractured, 1-3cm spacing. Disseminated pyrite, chalcocopyrite in veins and fractures.</p>	884.00	

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 Sixth Floor - 1111 West Hastings Street
 Vancouver, BC, V6E 2J3
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PROJECT NAME Schaft Creek Project
 PROJECT LOCATION Northwest British Columbia

DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION	WELL DIAGRAM
22	22.00		880.00	
		INTRUSIVE BRECCIA: Strong broken rock, angular 1-5cm pieces		
	22.50		879.50	
		INTRUSIVE TOURMALINE BRECCIA (ITB): Pink, dark green, grey. Fine grained tourmaline matrix with Quartz Monzonite clasts. Moderate chlorite/silica weak hematite/potassic/sericite/carbonate alteration. Quartz carbonate veins, chlorite filled, epidote altered, hematite halos. Moderately fractured, 1-3cm spacing. Disseminated pyrite, chalcopyrite in veins and fractures.		← Sandpack ← Slotted PVC
24				
	25.50		878.50	
		INTRUSIVE BRECCIA: Strong broken rock, 2-5cm pieces.		
26				
	26.40		875.60	
		INTRUSIVE BRECCIA: Strong broken rock, incompetent, angular 1-5cm pieces, brown clay present.		
28				
	28.50		873.50	
		INTRUSIVE BRECCIA: Moderate angle fractures with incompetent core, fault gouge.		
	29.00		873.00	
		INTRUSIVE TOURMALINE BRECCIA (ITB): Pink, dark green, grey. Fine grained tourmaline matrix with Quartz Monzonite clasts. Moderate chlorite/silica weak hematite/potassic/sericite/carbonate alteration. Quartz carbonate veins, chlorite filled, epidote altered, hematite halos. Moderately fractured, 1-3cm spacing. Disseminated pyrite, chalcopyrite in veins and fractures.		
30				
	32			
	32.80		869.20	

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DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION	WELL DIAGRAM
	△ △	TOURMALINE BRECCIA: green-gray fragments, fine grained augite phyric andesite. Matrix: tourmaline ground mass, strong epidote/carbonate alteration as well as assericite alteration. Trace quartz and K-feldspar. Sulphate content disseminated, and in fracture surfaces. Pyrite and chalcopyrite, trace molybdenum. Weak late carbonate veinlets. (continued)		
45.30	△ △		856.70	
45.80	△ △	INTRUSIVE TOURMALINE BRECCIA (ITB): Pink, dark green, grey. Tourmaline matrix with Quartz Monzonite clasts. Chlorite/silica weak hematite/ potassic/sericite/carbonate alteration. Quartz carbonate veins, chlorite filled, epidote altered, hematite halos. Moderately fractured, low to moderate angles, 1-3cm spacing. Disseminated pyrite, chalcopyrite. End of section has moderate angle contact with dyke. Low angle contact at 45.8 m. Molybdenum present.	856.20	
46	△ △			
48	△ △	INTRUSIVE TOURMALINE BRECCIA (ITB): Pink, dark green, grey. Tourmaline matrix with Quartz Monzonite clasts. Chlorite/silica weak hematite/potassic/sericite/ carbonate alteration. Quartz carbonate veins, chlorite filled, epidote altered, hematite halos. Moderately fractured, low to moderate angles, 1-3cm spacing. Disseminated pyrite, chalcopyrite.		
50	△ △			
52	△ △			
53.51	△ △	INTRUSIVE TOURMALINE BRECCIA: Highly fractured moderate to high angle, strongly broken rock, 1mm-3cm pieces, incompetent, fault gouge. Moderate chlorite/carbonate alteration, molybdenum in fractures, hairline quartz carbonate veins with chalcopyrite lining.	848.49	
54	△ △			

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DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION	WELL DIAGRAM
90		INTRUSIVE TOURMALINE BRECCIA (ITB): Subsection: Hematite and Potassic alteration increase from 89.1 to 102.6 m). Pink/red. (continued)		
92				
93.30 93.35		INTRUSIVE TOURMALINE BRECCIA (ITB): High concentration of disseminated pyrite.	808.70 808.65	
94		INTRUSIVE TOURMALINE BRECCIA (ITB): Pink, dark green, grey. Tourmaline matrix with Quartz Monzonite clasts. Chlorite/silica weak hematite/potassic/sericite/carbonate alteration. Quartz carbonate veins, chlorite filled, epidote altered, hematite halos. Moderately fractured, low to moderate angles, 1-3cm spacing. Disseminated pyrite, chalcopyrite.		
95.60 96		INTRUSIVE TOURMALINE BRECCIA (ITB): Moderate to highly fractured, medium to high angle, 1-7 cm subangular pieces, with fault gouge.	806.40	
96.40 98		INTRUSIVE TOURMALINE BRECCIA (ITB): Strong potassic alteration, increase of smaller size 1-3cm clasts, crowded.	805.60	
98.40 100		INTRUSIVE TOURMALINE BRECCIA (ITB): Pink, dark green, grey. Tourmaline matrix with Quartz Monzonite clasts. Chlorite/silica weak hematite/potassic/sericite/carbonate alteration. Quartz carbonate veins, chlorite filled, epidote altered, hematite halos. Moderately fractured, low to moderate angles, 1-3cm spacing. Disseminated pyrite, chalcopyrite.	803.60	

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DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION	WELL DIAGRAM
	△ △	ALTERED IGNEOUS BRECCIA: Highly fractured, with moderate to high angle fractures. Large silica altered halos around veins. Chlorite, sericite, and potassic alteration. (continued)		
113.40	△ △		788.90	
113.60	△ △	ALTERED IGNEOUS BRECCIA: Pink, dark green, grey. Tourmaline matrix with Quartz Monzonite clasts. Pyrite and chlorite/sericite alteration. Quartz carbonate veins, chlorite filled, epidote altered, hematite halos. Moderately fractured, low to moderate angles, 1-3cm spacing. Disseminated pyrite, chalcopryrite and in veins and fractures.	788.40	
113.80	△ △		788.20	
114.00	△ △		788.00	
114.40	△ △	ALTERED IGNEOUS BRECCIA: Highly fractured, zone of 1mm-4mm pyrohedrons in chlorite sericite veins.	787.60	
114.90	△ △	ALTERED IGNEOUS BRECCIA: Pink, dark green, grey. Tourmaline matrix with Quartz Monzonite clasts. Pyrite and chlorite/sericite alteration. Quartz carbonate veins, chlorite filled, epidote altered, hematite halos. Moderately fractured, low to moderate angles, 1-3cm spacing. Disseminated pyrite, chalcopryrite and in veins and fractures.	787.10	
115.80	△ △	ALTERED IGNEOUS BRECCIA: Moderately fractured zone. 1mm-6mm cubic anhedral pyrite in chlorite/sericite altered vein.	786.20	
	△ △	ALTERED IGNEOUS BRECCIA: Pink, dark green, grey. Tourmaline matrix with Quartz Monzonite clasts. Pyrite and chlorite/sericite alteration. Quartz carbonate veins, chlorite filled, epidote altered, hematite halos. Moderately fractured, low to moderate angles, 1-3cm spacing. Disseminated pyrite, chalcopryrite and in veins and fractures.		
	△ △	ALTERED IGNEOUS BRECCIA: Igneous fragments floating in matrix, little or no tourmaline.		
	△ △	INTRUSIVE BRECCIA: Dark green grey. Andesite matrix. Quartz monzonite and andesite clasts. Moderate chlorite/hematite/potassic alteration, weak siliceous/sericitic/carbonate alteration. Moderately fractured at moderate to high angles, slickensides. Disseminated chalcopryrite, pyrite and molybdenum in fractures, veins and veinlets.		
118	△ △			
119.00	△ △	INTRUSIVE BRECCIA: Moderate to strongly fractured, low to high angle fractures, 1-10cm angular pieces, with hematite coating fracture surfaces.	783.00	
119.50	△ △		782.50	
119.70	△ △	INTRUSIVE BRECCIA: Dark green grey. Andesite matrix. Quartz monzonite and andesite clasts. Moderate chlorite/hematite/potassic alteration, weak siliceous/sericitic/carbonate alteration. Moderately fractured at moderate to high angles, slickensides. Disseminated chalcopryrite, pyrite and molybdenum in fractures, veins and veinlets.	782.30	
120	△ △			
	△ △	INTRUSIVE BRECCIA: Moderately fractured, low to high angle fractures, slickensides with parallel spacing 3-30cm. Molybdenum on fracture surfaces and slickensides.		
122	△ △			
123.30	△ △	INTRUSIVE BRECCIA: Felsic, 3mm-2cm clasts, preferentially aligned. Potassic/siliceous/chlorite altered.	778.70	
123.80	△ △		778.20	
124	△ △			

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DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION	ELEVATION	WELL DIAGRAM
136		<p>INTRUSIVE BRECCIA: Moderate to high chloritization, moderate high angle fractures, 5-10cm angular pieces. Finely disseminated chalcopyrite. Minor mafic catenulate mineral grains within volcanic clasts. <i>(continued)</i></p>		<p>← Slotted PVC</p>
138		<p>INTRUSIVE BRECCIA: Moderate angle fractures coated with Molybdenum. 1mm-2cm Quartz vein with Molybdenum.</p> <p>INTRUSIVE BRECCIA: Quartz Monzonite clasts 10-20cm, moderate chlorite/hematite alteration. Potassic alteration halos around silica veins. Multiple slickensides at low to moderate angles.</p>	<p>765.10 765.00</p>	
138.30		<p>INTRUSIVE BRECCIA: Moderate to highly fractured, moderate angle, 1-5cm angular pieces. Finely disseminated chalcopyrite. Minor mafic catenulate mineral grains within volcanic clasts.</p>	763.70	
138.60		<p>INTRUSIVE BRECCIA: Dark green grey. Andesite matrix. Quartz Monzonite and andesite clasts. Moderate chlorite/hematite/potassic alteration, weak siliceous/sericitic/carbonate alteration. Moderately fractured at moderate to high angles, slickensides. Disseminated chalcopyrite, pyrite and molybdenum in fractures, veins and veinlets.</p>	763.40	
139.00		<p>INTRUSIVE BRECCIA: Strong hematite/chlorite alteration, specular hematite</p>	763.00	
139.20		<p>INTRUSIVE BRECCIA: Dark green grey. Andesite matrix. Quartz Monzonite and andesite clasts. Moderate chlorite/hematite/potassic alteration, weak siliceous/sericitic/carbonate alteration. Moderately fractured at moderate to high angles, slickensides. Disseminated chalcopyrite, pyrite and molybdenum in fractures, veins and veinlets.</p>	762.80	
139.40		<p>INTRUSIVE BRECCIA: Moderate to high angle quartz carbonate veins with 7-10cm spacing with Molybdenum present in veins, no slickensides. Large 50cm quartz monzonite clasts.</p>	762.90	<p>← Sandpack</p>
139.90		<p>INTRUSIVE BRECCIA: Strong hematite/chlorite alteration, specular hematite</p>	762.10	
<p>Bottom of hole at 139.90 m.</p>				

**APPENDIX B
CHEMICAL ANALYSIS RESULTS**

Appendix B

Appendix B-1 Chemical Analysis Results

Sample ID	Oct-07						
	07ASD01	07AND02	07ANWD01	07BD01	DUPLICATE	TRAVEL BLANK	FIELD BLANK
Date Sampled	26/10/07	26/10/07	26/10/07	26/10/07	26/10/07		
Physical Tests							
Hardness (mg/L CaCO ₃)	159	1400	277	1440	270	<0.50	<0.50
Colour, True (CU)	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Conductivity (uS/cm)	341	2820	714	5100	710	<2.0	<2.0
pH	7.98	7.53	7.87	6.77	7.84	5.59	5.57
Total Dissolved Solids	195	2360	498	3750	492	<10	<10
Total Suspended Solids	51.2	94.9	39.2	8.9	34.7	<3.0	<3.0
Turbidity (NTU)	59.9	64.6	24.9	9.54	25.3	<0.10	<0.10
Anions and Nutrients							
Ammonia (as N)	0.0065	<0.0050	0.0099	0.256	0.0131	<0.0050	<0.0050
Acidity (as CaCO ₃)	3.2	4.5	4.3	7.2	4.3	1.9	2.1
Alkalinity, Bicarbonate (as CaCO ₃)	128	29.5	112	26.5	114	<2.0	<2.0
Alkalinity, Carbonate (as CaCO ₃)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Alkalinity, Hydroxide (as CaCO ₃)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Alkalinity, Total (as CaCO ₃)	128	29.5	112	26.5	114	<2.0	<2.0
Bromide (Br)	<0.050	<1.0	<0.050	<1.0	<0.050	<0.050	<0.050
Chloride (Cl)	<0.50	163	2.04	1230	2.02	<0.50	<0.50
Fluoride (F)	0.334	0.94	2.75	<0.40	2.74	<0.020	<0.020
Sulphate (SO ₄)	61.9	1440	251	1250	249	<0.50	<0.50
Nitrate (as N)	0.0158	<0.10	<0.0050	<0.10	<0.0050	<0.0050	<0.0050
Nitrite (as N)	<0.0010	<0.020	<0.0010	0.037	<0.0010	<0.0010	<0.0010
Total Kjeldahl Nitrogen	<0.050	<0.10	<0.050	0.28	<0.050	<0.050	<0.050
Total Nitrogen	<0.05	<0.05	<0.05	0.32	<0.05	<0.05	<0.05
Total Phosphate (as P)	0.0714	0.12	0.0177	0.0157	0.0159	<0.0020	<0.0020
Total Metals							
Aluminum (Al)-Total	0.028	1.14	0.244	0.084	0.252	<0.0010	<0.0010
Antimony (Sb)-Total	0.00076	<0.00050	<0.00010	<0.0010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	0.0119	0.00367	0.00322	<0.0020	0.00341	<0.00010	<0.00010
Barium (Ba)-Total	0.0546	0.0245	0.0139	0.0118	0.0145	<0.000050	<0.000050
Beryllium (Be)-Total	<0.00050	<0.0025	<0.00050	<0.0050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total	<0.00050	<0.0025	<0.00050	<0.0050	<0.00050	<0.00050	<0.00050
Boron (B)-Total	0.022	0.403	0.145	1.96	0.145	<0.010	<0.010
Cadmium (Cd)-Total	0.000025	<0.00010	0.000032	<0.00020	0.000036	<0.000020	<0.000020
Calcium (Ca)-Total	49.4	473	94.4	507	95.3	<0.020	<0.020
Chromium (Cr)-Total	0.00055	0.0172	0.00315	<0.0050	0.00246	<0.00050	<0.00050
Cobalt (Co)-Total	0.00012	0.00065	0.00023	<0.0010	0.00038	<0.00010	<0.00010
Copper (Cu)-Total	0.00118	0.00958	0.00195	0.0013	0.00235	<0.00010	<0.00010
Iron (Fe)-Total	18.3	6.8	2.51	0.822	2.23	<0.030	<0.030
Lead (Pb)-Total	0.000181	0.00042	0.000554	0.00058	0.000755	<0.000050	<0.000050

(continued)

Appendix B-1 Chemical Analysis Results (continued)

Sample ID	Oct-07						
	07ASD01	07AND02	07ANWD01	07BD01	DUPLICATE	TRAVEL BLANK	FIELD BLANK
Date Sampled	26/10/07	26/10/07	26/10/07	26/10/07	26/10/07		
Lithium (Li)-Total	<0.0050	<0.025	0.0199	<0.050	0.0188	<0.0050	<0.0050
Magnesium (Mg)-Total	16.4	15.8	9.81	66.3	9.97	<0.0050	<0.0050
Manganese (Mn)-Total	0.0423	0.253	0.0745	0.107	0.0741	<0.000050	<0.000050
Mercury (Hg)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Total	0.00301	0.0177	0.0191	0.00194	0.0192	<0.000050	<0.000050
Nickel (Ni)-Total	<0.00050	<0.0025	<0.00050	<0.0050	0.00068	<0.00050	<0.00050
Phosphorus (P)-Total	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Potassium (K)-Total	0.721	1.63	0.883	8.38	0.892	<0.050	<0.050
Selenium (Se)-Total	0.00071	<0.00050	<0.00050	0.00097	<0.00050	<0.00050	<0.00050
Silicon (Si)-Total	5.09	5.66	7.1	8.2	6.73	<0.050	<0.050
Silver (Ag)-Total	0.000032	0.0019	0.000233	<0.00010	0.000213	<0.000010	<0.000010
Sodium (Na)-Total	7.2	177	50	566	48.4	<2.0	<2.0
Strontium (Sr)-Total	0.357	11.1	7.13	12.1	7.14	<0.00010	<0.00010
Thallium (Tl)-Total	<0.00010	<0.00050	<0.00010	<0.0010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	<0.00010	<0.00050	<0.00010	<0.0010	0.0001	<0.00010	<0.00010
Titanium (Ti)-Total	<0.010	0.041	0.016	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	0.000255	0.000377	0.0488	0.00027	0.049	<0.000010	<0.000010
Vanadium (V)-Total	<0.0010	<0.0050	0.0035	<0.010	0.0024	<0.0010	<0.0010
Zinc (Zn)-Total	0.171	1.05	0.0065	0.038	0.0089	<0.0010	<0.0010
Dissolved Metals							
Aluminum (Al)-Dissolved	0.0012	0.0094	0.0031	0.018	0.008	-	-
Antimony (Sb)-Dissolved	0.00044	<0.00050	<0.00010	<0.0010	<0.00010	-	-
Arsenic (As)-Dissolved	0.00277	0.00329	0.00279	<0.0020	0.00281	-	-
Barium (Ba)-Dissolved	0.0275	0.0191	0.0113	0.0126	0.0111	-	-
Beryllium (Be)-Dissolved	<0.00050	<0.0025	<0.00050	<0.0050	<0.00050	-	-
Bismuth (Bi)-Dissolved	<0.00050	<0.0025	<0.00050	<0.0050	<0.00050	-	-
Boron (B)-Dissolved	0.021	0.459	0.145	1.79	0.143	-	-
Cadmium (Cd)-Dissolved	<0.000020	<0.00010	0.00003	<0.00020	0.000025	-	-
Calcium (Ca)-Dissolved	37	532	94.7	473	92.2	-	-
Chromium (Cr)-Dissolved	<0.00050	<0.0025	<0.00050	<0.0050	<0.00050	-	-
Cobalt (Co)-Dissolved	<0.00010	<0.00050	<0.00010	<0.0010	<0.00010	-	-
Copper (Cu)-Dissolved	0.00011	<0.00050	0.00012	<0.0010	0.0001	-	-
Iron (Fe)-Dissolved	0.095	1.94	0.759	0.195	0.79	-	-
Lead (Pb)-Dissolved	<0.000050	<0.00025	<0.000050	<0.00050	<0.000050	-	-
Lithium (Li)-Dissolved	<0.0050	<0.025	0.0196	<0.050	0.0189	-	-
Magnesium (Mg)- Dissolved	16.1	17.1	9.78	62.1	9.59	-	-
Manganese (Mn)- Dissolved	0.00447	0.226	0.0627	0.0965	0.0624	-	-
Mercury (Hg)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	-	-
Molybdenum (Mo)- Dissolved	0.00301	0.0152	0.018	0.0015	0.0178	-	-
Nickel (Ni)-Dissolved	<0.00050	<0.0025	<0.00050	<0.0050	<0.00050	-	-
Phosphorus (P)-Dissolved	<0.30	<0.30	<0.30	<0.30	<0.30	-	-
Potassium (K)-Dissolved	0.71	1.66	0.868	8.03	0.84	-	-
Selenium (Se)-Dissolved	0.00113	<0.00050	<0.00050	<0.00050	<0.00050	-	-
Silicon (Si)-Dissolved	3.64	3.79	6.17	8.01	6.14	-	-

(continued)

Appendix B-1 Chemical Analysis Results (completed)

Sample ID	Oct-07					TRAVEL BLANK	FIELD BLANK
	07ASD01	07AND02	07ANWD01	07BD01	DUPLICATE		
Date Sampled	26/10/07	26/10/07	26/10/07	26/10/07	26/10/07		
Silver (Ag)-Dissolved	<0.000010	<0.000050	<0.000010	<0.00010	<0.000010	-	-
Sodium (Na)-Dissolved	6.9	201	49.6	561	49	-	-
Strontium (Sr)-Dissolved	0.338	12.7	7.12	11.2	6.99	-	-
Thallium (Tl)-Dissolved	<0.00010	<0.00050	<0.00010	<0.0010	<0.00010	-	-
Tin (Sn)-Dissolved	<0.00010	<0.00050	<0.00010	<0.0010	0.00019	-	-
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	-	-
Uranium (U)-Dissolved	0.000229	0.000108	0.0458	<0.00010	0.0459	-	-
Vanadium (V)-Dissolved	<0.0010	<0.0050	<0.0010	<0.010	<0.0010	-	-
Zinc (Zn)-Dissolved	0.0041	0.315	0.0039	<0.010	0.0034	-	-
Organic Parameters							
COD	<20	<20	<20	60	<20	<20	<20
Total Organic Carbon	<0.50	<0.50	<0.50	0.89	0.74	<0.50	<0.50

Results are expressed as milligrams per liter except where noted.
< = less than the detection limit indicated.

Appendix B-2 UTM Coordinates of Baseline Features

Feature I.D.	UTM Zone (Zone 9, NAD 83)	Coordinates	
		Easting	Northing
CFBH294	9	378 763	6 359 388
CFBH295	9	379 103	6 359 991
CFBH296	9	379 390	6 360 057
CFBH298	9	378 939	6 360 726
CFBH299	9	378 839	6 358 857
CFBH300	9	378 814	6 359 195
CFBH301	9	380 019	6 358 955
CFBH304	9	379 650	6 359 400
07ASD01	9	382 879	6 367 246
07AND02	9	381 836	6 374 497
07ANWD01	9	380 516	6 373 335
07BD01	9	378 970	6 356 156