CopperFox Metals Inc.

Schaft Creek Project

British Columbia, Canada

Schaft Creek Project
Noise Baseline Report

February 2008

Prepared by:

Rescan Tahltan Environmental Consultants
Vancouver, British Columbia

EXECUTIVE SUMMARY

Executive Summary

The Schaft Creek Project is located on the eastern edge of the Coastal Mountains in north central British Columbia, 80 kilometers southwest of Telegraph Creek and 76 kilometers west of Highway 37. The property is within the Tahltan Nation's traditional territory, and is comprised of 40 mineral claims, covering 21,016 hectares.

The construction and operation of the Schaft Creek copper deposit proposed by Copper Fox Metals Inc. (Copper Fox) will create noise. Noise is defined as unwanted sound. During the construction phase, the primary sources of noise will be excavation equipment, vehicles, blasting and air traffic. Throughout operation of the mine, noise will be generated by rock blasting and ore crushing, along with vehicles and air traffic.

The objective of this study is to describe the baseline noise levels measured in the Schaft Creek Project area. In 2007, baseline noise was measured at four locations within or near the Project area. Two locations in the Mess Creek valley (FD-7 and FD-8) were monitored between 3:00 pm on June 26th, 2007 and 3:00 pm on June 30th, 2007. Two additional locations 9.7 km and 12.8 km north of the Schaft Creek Camp area (FD-4 and FD-5, respectively) in the Schaft Creek valley were monitored between 11:00 am on July 14th, 2007 and 11:00 am on July 18th, 2007. The meters recorded average and peak sound levels in "A" weighted decibels (dBA) every minute. The observed 4 day equivalent noise level (L_{eq}) values were 48.2 dBA and 45.2 dBA at stations FD-7 and FD-8, respectively and 45.6 dBA and 40.0 dBA at stations FD-4 and FD-5.

Elevated noise levels at all four study locations correlated with elevated wind speeds at the Saddle meteorological station at Schaft Creek. Noise effects of precipitation were at most noticeable but generally negligible. Thus, baseline noise fluctuations can generally be attributed to wind effects the area.

Schaft Creek Project:
Noise Baseline Report

TABLE OF CONTENTS

LIST OF FIGURES

Figure **Page**

LIST OF TABLES

Table **Page**

LIST OF PLATES

Plate **Page**

1. INTRODUCTION

1. Introduction

The construction and operation of the proposed Schaft Creek Project will create noise. Noise is defined as unwanted sound. During the construction and operation phase of the mine, drilling, blasting, excavating and haul equipment as well as ore crushing and air traffic will be the primary sources of noise. An assessment of potential effects of noise associated with the construction and operation of the Schaft Creek Project will be completed as part of the Environmental Assessment (EA) process, which will be completed in early 2009.

The objective of this study is to describe the baseline noise levels at the Schaft Creek property.

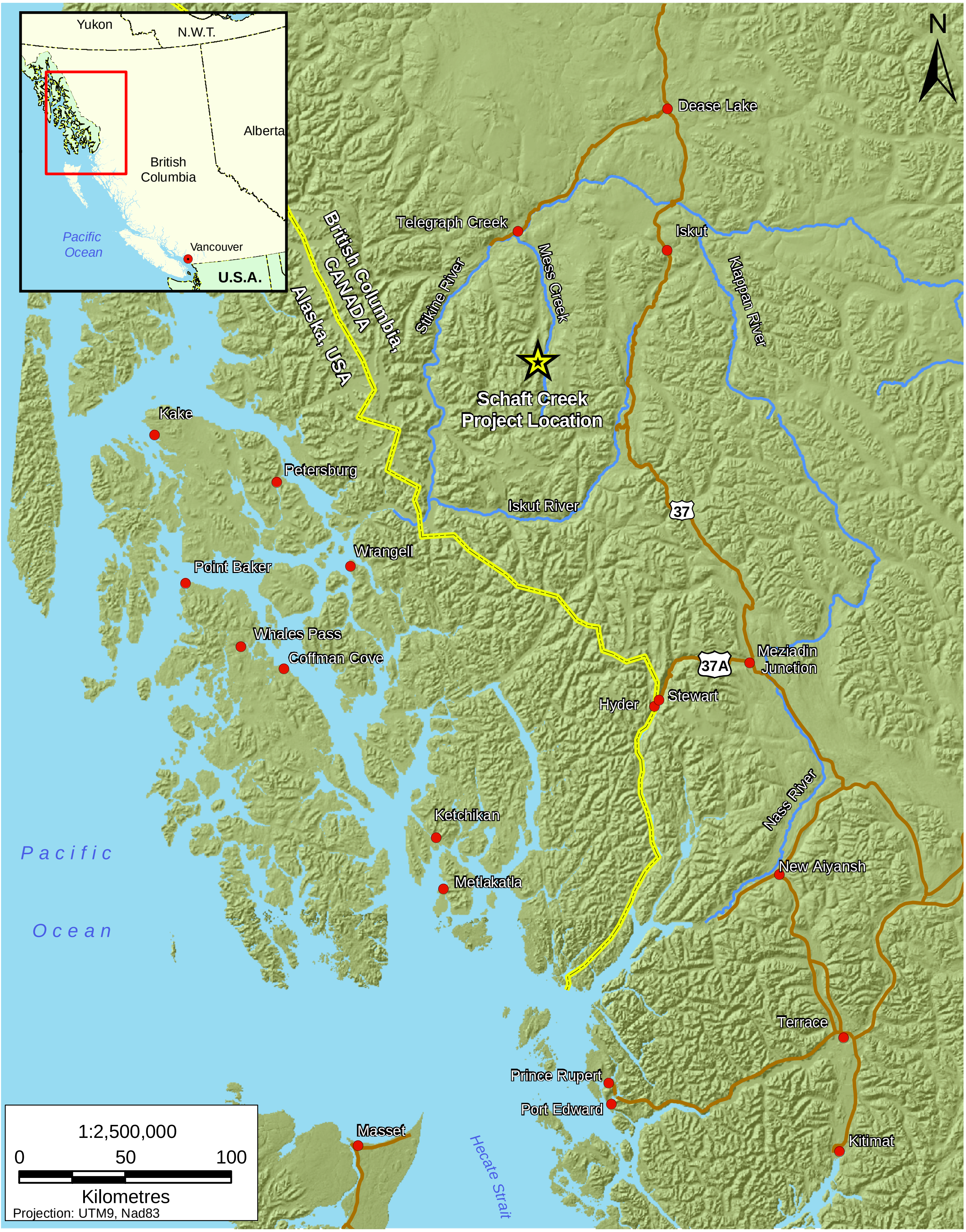
1.1 Schaft Creek Project Summary

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 (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^{o} 22’ 4.2’’; Longitude 130^{o}, 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.

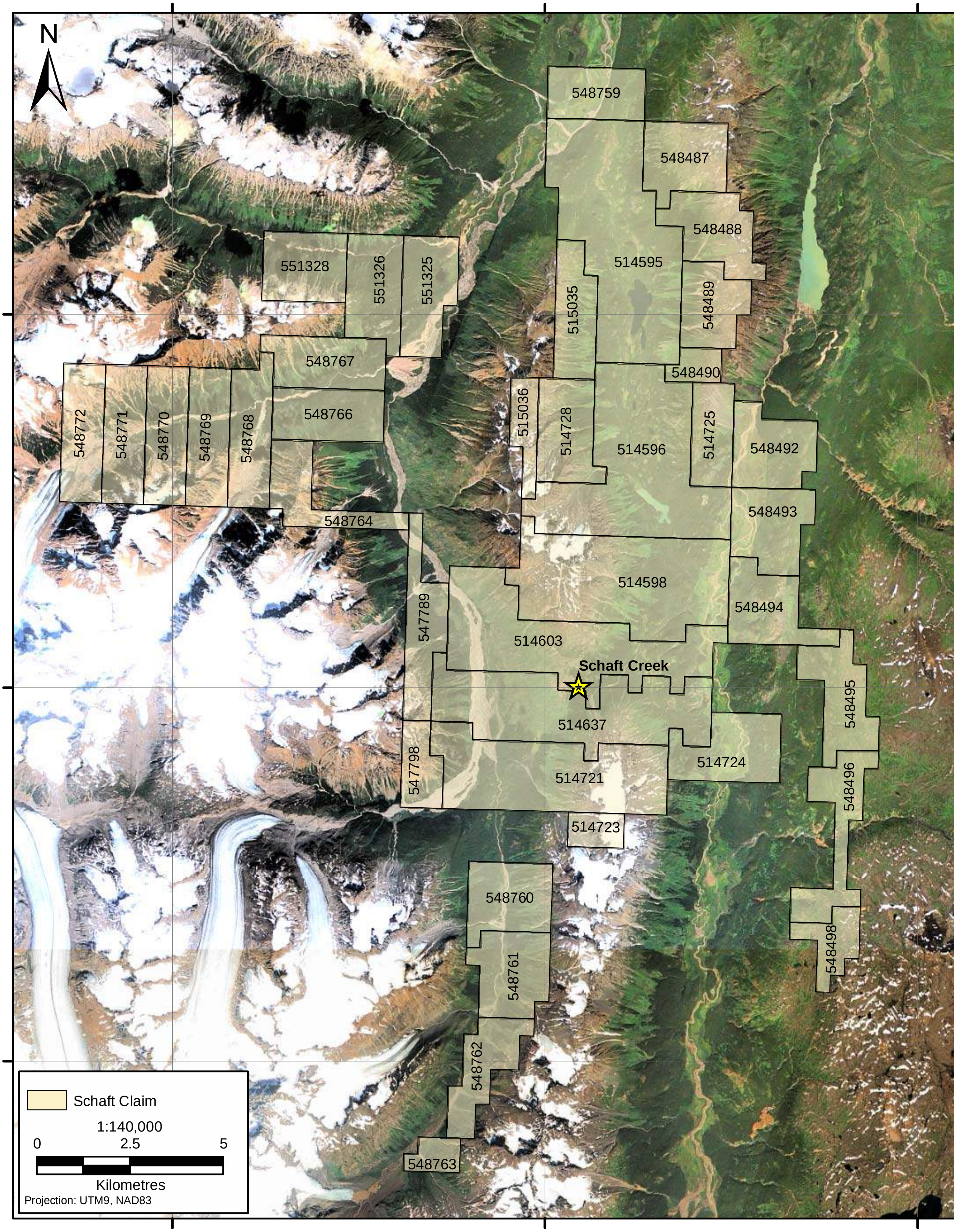
The Schaft Creek deposit was discovered in 1957 and has since been investigated by prospecting, geological mapping, geophysical surveys as well as diamond and percussion drilling. Over 65,000 meters of drilling has been completed on the property as of end of 2007. Additional drilling is planned for 2008 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.



Location Map for Schaft Creek Project

FIGURE 1.1-1



Schaft Creek Project Mineral Claims

FIGURE 1.1-2

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.

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.

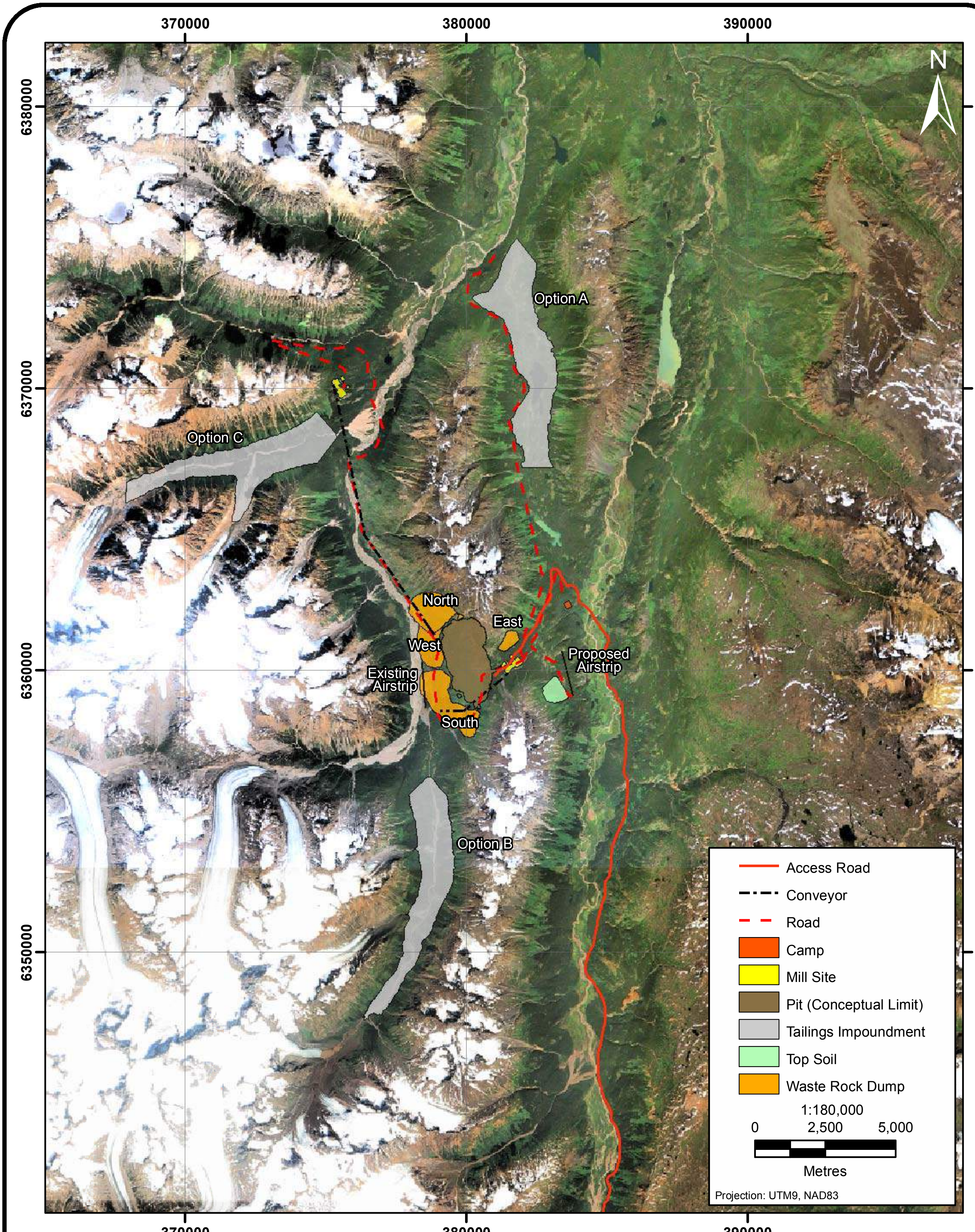


FIGURE 1.1-3

Schaft Creek Project Mine and Associated Infrastructure

copper FOX metals inc.

RTEC Rescan

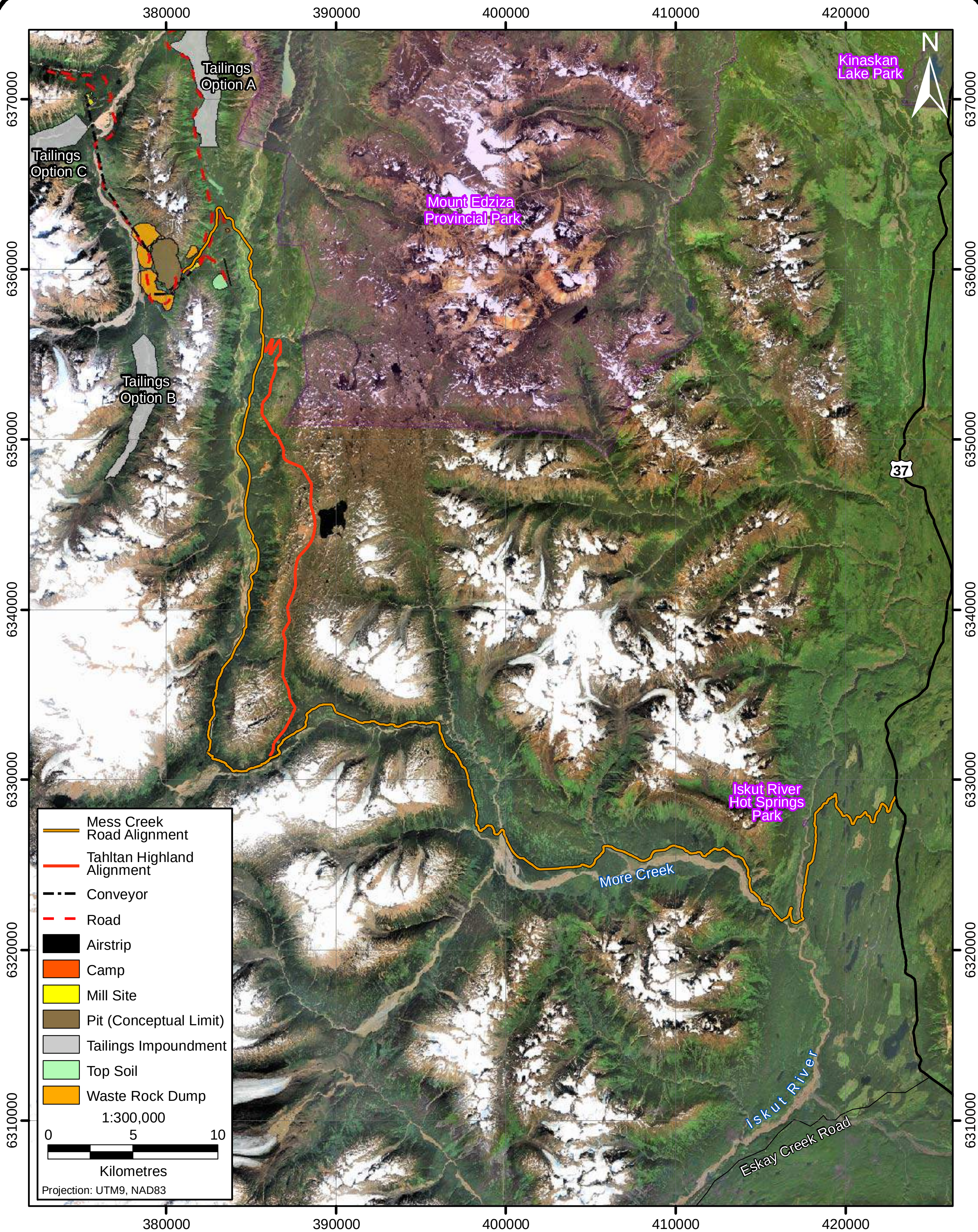


FIGURE 1.1-4

Proposed Access Road Alignment for the Schaft Creek Project

copper FOX metals inc.

RTEC Rescan

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.

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 Overview of Noise Measurement

Noise is defined as unwanted sound, and is characterized by the pressure of sound waves. Because the sound perception of humans is non-linear, a ten-fold increase in sound pressure is perceived as a doubling of the sound level. The decibel (dB) is a logarithmic measure of noise level which takes this non-linearity into consideration. It is defined as the logarithm of the ratio of the root mean square (rms) sound pressure with respect to the standard rms sound pressure. The standard rms sound pressure is the hearing threshold below which the human ear cannot detect sound, and is usually 20 µPa. For humans, a change in sound level is only perceived if the change is greater than 3 dB.

The detection of sound by humans is frequency dependent, and therefore the sound pressure is weighted by its frequency. Most common is the "A" weighting, which represents human hearing, given units of "dBA." Described below are some typical noise levels in terms of dBA.

- **0 dBA:** human hearing threshold (flying mosquito, 3 m away)
- **10 dBA:** the rustling of leaves
- **20 - 40 dBA:** quiet room
- **40 – 60 dBA**: typical conversation
- **60 – 80 dBA**: passenger car, 10 m away

- **80 – 90 dBA**: busy road, 10 m away
- **100 dBA**: jackhammer, 1 m away
- **110 – 130 dBA**: takeoff of a jet, 100 m away
- **130 dBA**: human pain threshold

Due to the non-linear nature of the decibel scale, sounds are not easily added together. Alternatively, the logarithm must be inverted before addition (Alberta EUB, 2007),

$$L_{total} = 10\log_{10}(10^{\frac{L_1}{10}} + 10^{\frac{L_2}{10}})$$

where L_1 and L_2 are the noise levels to be added (in dB). As an example, a typical conversation (50 dBA) in a quiet room (35 dBA) does not result in a total noise of 85 dBA, comparable to a busy road, 10 m away. Instead, the background noise of the quiet room will not be audible over the conversation. Following the formula for the addition of dB, the noise levels will only increase to 50.1 dBA. Figure 1.2-1 displays the change to overall noise upon addition to a background noise of 35 dBA. In order for the additional noise to be audible, it must be of equal or greater magnitude to the background noise.

Noise levels are dynamic, and are characterized by the equivalent continuous sound level (L_{eq}). This is the dBA level of a constant rms sound pressure containing the same energy as the varying noise. The L_{eq} is usually given for a specific time interval, such as 1 day.

This baseline study uses the L_{eq} and additional measurements to evaluate the noise levels of the study area. The maximum and minimum sound levels observed over the study time period are reported (L_{min} and L_{max}). In addition, the sound level exceeded x % of the time is presented in this report (L_x). The L_x is given for 5, 10, 50 and 90% exceedance.

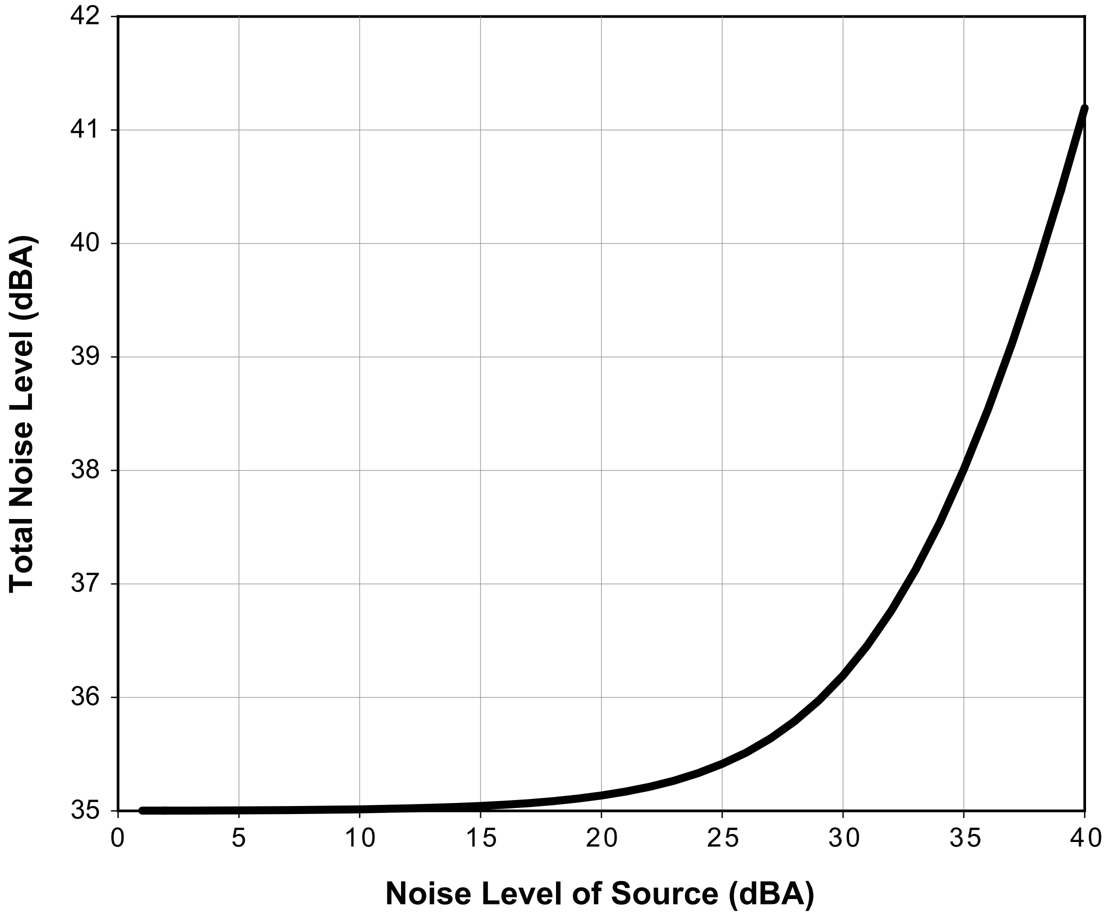


FIGURE 1.2-1

copper FOX metals inc.

Adding Background Noise (35 dBA) and Source Noise

2. METHODS

2. Methods

Two Quest Model 2900 sound level meters were used for measuring baseline noise. The sound level meter recorded the average sound level and peak sound levels in dBA. Calibration of the sound level was performed using a Quest QC10 Calibrator beforehand. The noise measurements were recorded every minute and the sound meter was located approximately 1.5 m above ground level. The Quest Model 2900 sound level meter has an accuracy of ±2 dB, a noise floor of 30 dBA and a maximum noise range of 90 dBA (Plate 2-1).

Plate 2-1. Photograph of a Quest Model 2900 sound level meter (centre) at Schaft Creek station FD-7 surrounded by two dustfall collectors

Sound level meters were placed at two sampling locations in the Mess Creek Valley alongside two dust collector stands (FD-7 and FD-8) between 3:00 pm on June 26th, 2007 and 3:00 pm on June 30th, 2007 (Table 2-1). The meters were moved to locations FD-4 and FD-5 where noise data was collected starting at 11:00 am on July 14th, 2007, and ending at 11:00 am on July 18th, 2007 (Figure 2-1).

Table 2-1
Location of Noise Baseline Measurements

Location	Easting	Northing	Elevation (masl)	Duration of Noise Measurement
FD-4	376,249	6,368,709	765	14 July 11:00 to 18 July 11:00
FD-5	379,757	6,374,512	719	14 July 11:00 to 18 July 11:00
FD-7	384,926	6,355,244	732	26 June 15:00 to 30 June 15:00
FD-8	383,850	6,345,472	795	26 June 15:00 to 30 June 15:00

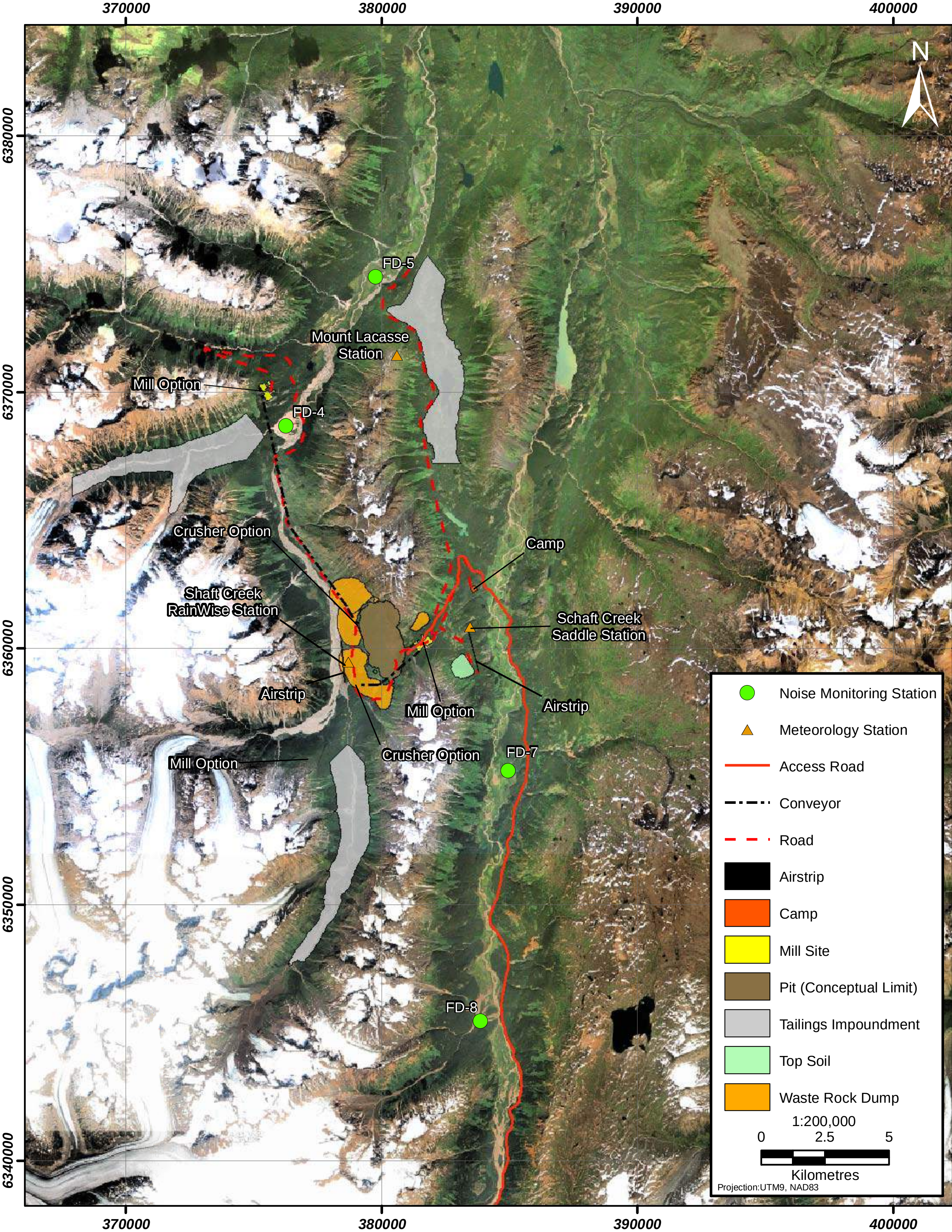


FIGURE 2-1

copper FOX metals inc.

Schaft Creek Project
Noise Station Locations

RTEC Rescan

3. RESULTS

3. Results

The 4-day L_{eq} values measured at stations FD-7 and FD-8 were 48.2 dBA and 45.2 dBA, respectively. For stations FD-4 and FD-5, the 4-day L_{eq} values were 45.6 dBA and 40.0 dBA, respectively (Table 3-1). These L_{eq} values coincide with noise baseline conditions reported for the Environmental Assessment application for the Galore Creek Project in 2005 by NovaGold Canada Inc. (Rescan, 2005). At Galore Creek, the L_{eq} values reported ranged from 38.5 dBA to 50.5 dBA, conducted in study periods of 7 to 20 hours during July. However, helicopter activity was reported at the majority of the noise sample stations during these study periods.

Table 3-1
Sound Levels (dBA) of the Study Locations

Location	4-day L_{eq}	L_{max}	L_5	L_{10}	L_{50}	L_{90}	L_{min}
FD-4	45.6	75.0	50.2	48.9	43.5	36.1	32.0
FD-5	40.0	78.4	42.1	40.6	36.5	30.6	26.5
FD-7	48.2	89.5	48.8	48.2	42.8	38.6	35.2
FD-8	45.2	61.5	48.7	48.1	44.4	38.4	34.6

Figure 3-1 shows the one minute L_{eq} values recorded at stations FD-7 and FD-8 over the 4 day study period (June 26th to June 30th), along with hourly wind speeds recorded at the Saddle Meteorological Station, located approximately 5.8 km to the north of FD-7 and 15.4 km to the north of FD-8. The Saddle Station wind speeds were assumed to be representative of wind speeds in the Mess Creek valley during the study period.

Figure 3-2 shows the one minute L_{eq} values recorded at stations FD-4 and FD-5 over the 4 day study period (July 14th to July 18th), together with the hourly wind speeds recorded at the Saddle Station. The FD-4 and FD-5 stations were located approximately 9.7 km and 12.8 km north of the Schaft Creek Camp, respectively. Comparison to changes in wind speeds recorded at the Mount LaCasse Station was not possible due to a power surge at the station during the study period caused by a lightning strike. The noise levels were compared to wind speed variations recorded at the Saddle Station, located 10.8 km southeast of FD-4 and 14.2 km southeast of FD-5. Wind speed patterns at the two meteorological stations are generally well correlated.

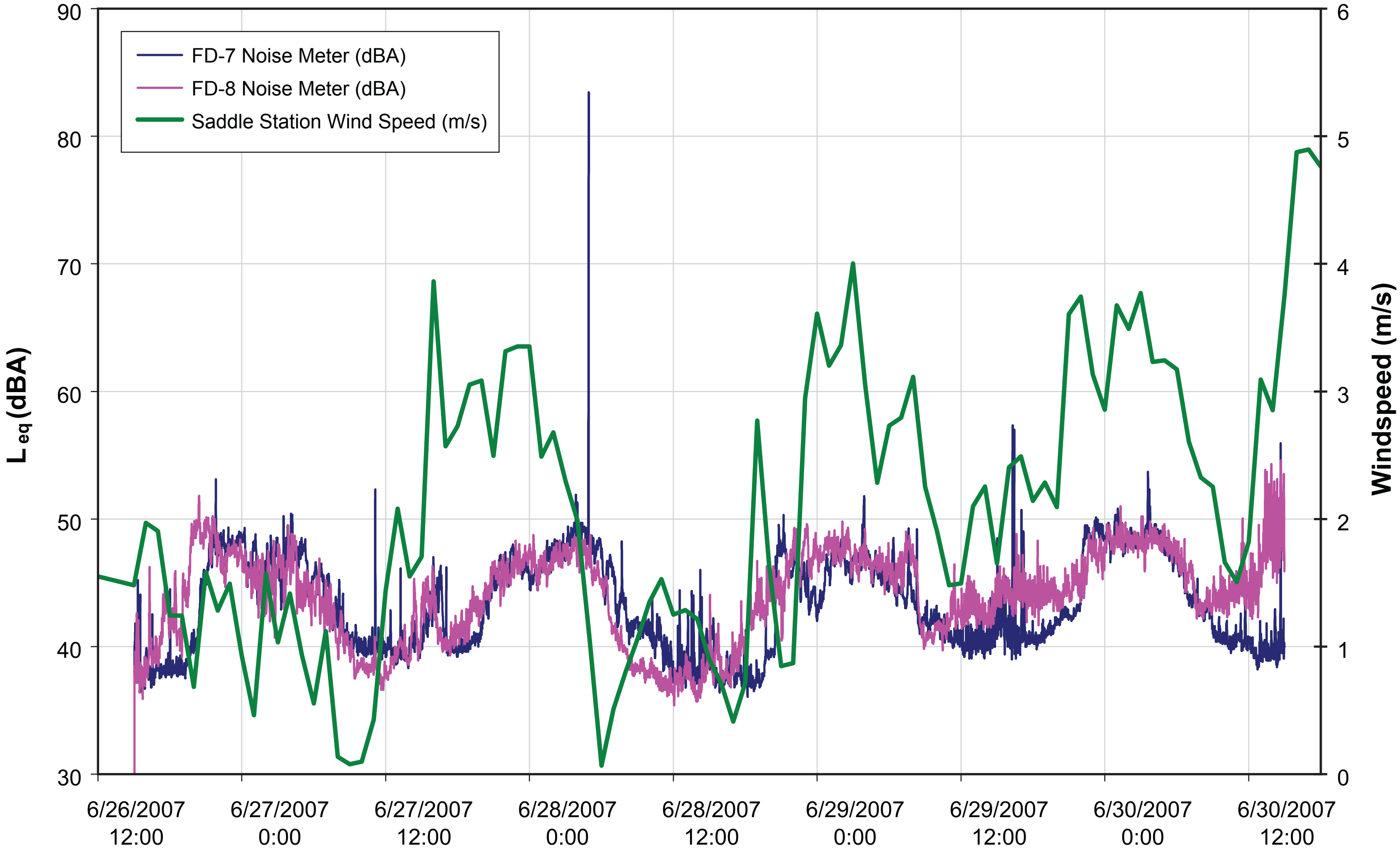
The wind speeds observed at the Saddle Station increased during the nights throughout the study periods, which is consistent with the trend of increasing night-time noise. Noise fluctuations, with lows throughout the day and elevated noise levels at night, can therefore be attributed to effects associated with increased wind speeds in the area. The average hourly observed wind speeds of the Saddle Station during these study periods were 2.0 m/s and 2.3 m/s (June 26th to June 30th and July 14th to July 18th, respectively) and are representative of the average annual wind speed of 2.4 m/s observed at the Saddle Station in 2007.

Figure 3-2 shows that the noise level at station FD-4 was consistently higher than noise levels at FD-5. Station FD-4 was located approximately 3 km closer to the camp than station FD-5 (9.7

km vs. 12.8 km). However, given the distance and the presence of topographical sound barriers between the noise monitoring stations (mountain ridges and hills) it is very unlikely that noise from the exploration camp (drilling and other activities) would have influenced the noise measurements at either of the stations. The differences in noise levels were more likely associated with differences in wind exposure. FD-4 is situated on a rocky, relatively barren fluvial fan while FD-5 is situated in a heavily vegetated wetland area. These ground cover difference would likely affect the local noise levels.

Although it is likely that helicopters were audible at the sample stations during the monitoring period the duration of helicopter noise would have been short and restricted to day-light hours. Figures 3-1 and 3-2 show that night-time noise levels were generally higher than day-time noise levels. Therefore, helicopter noise is unlikely to have significantly influenced the baseline noise measurements.

Effects of precipitation on the noise levels during the study periods were examined. During a rain event on June 29, 2007 the noise levels at FD-7 and FD-8 were elevated slightly. However, a general correlation between noise levels and precipitation was not noted during the study periods.

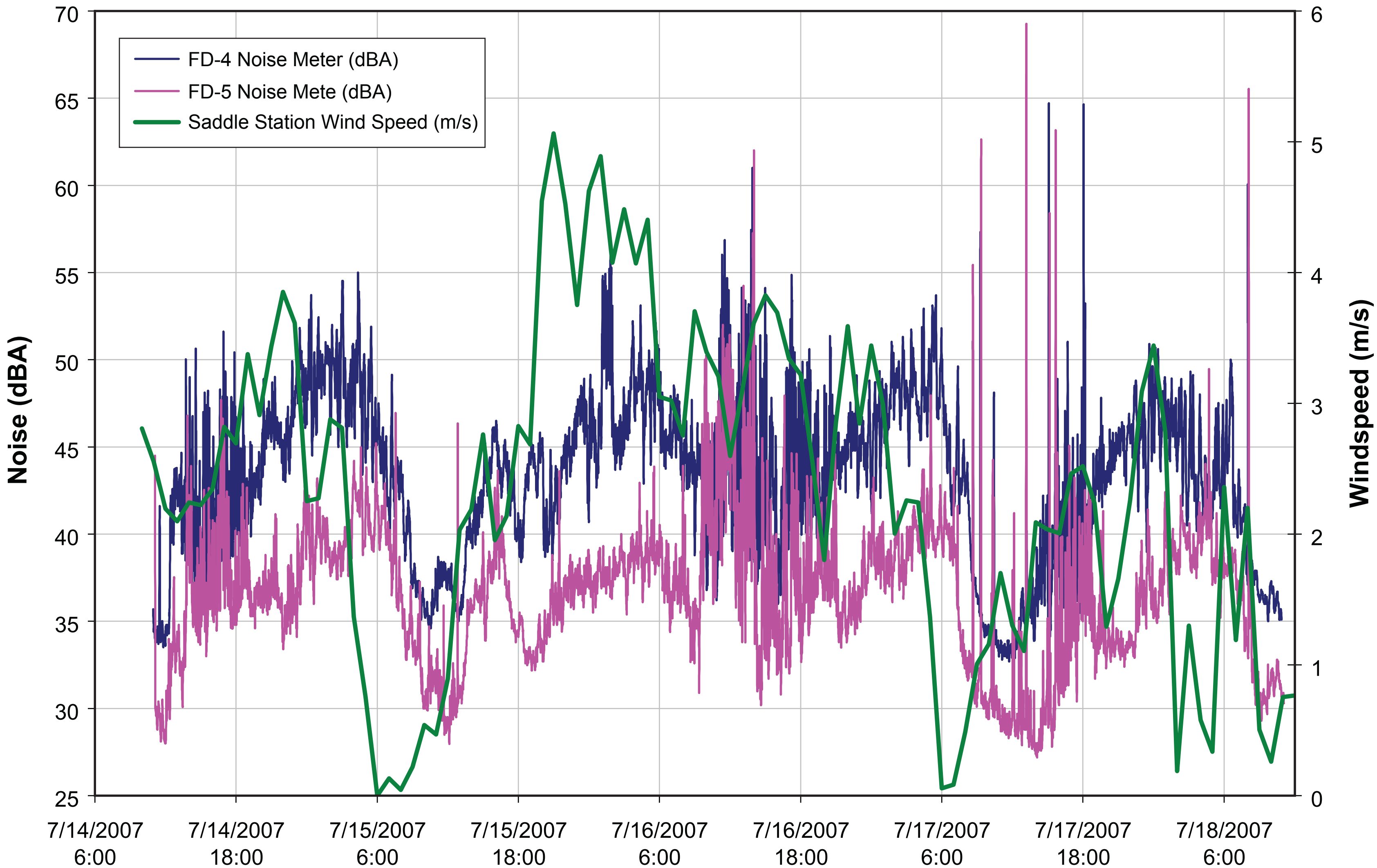


copper FOX metals inc.

Noise Levels Of Stations FD-7 And FD-8

FIGURE 3-1

RTEC Rescan



copper FOX metals inc.

FIGURE 3-2

Noise Levels Of Stations FD-4 And FD-5

RTEC Rescan

4. SUMMARY

4. Summary

Noise baseline measurements were completed at 4 sampling locations in June and July of 2007, using two Quest Technologies 2900 Type 2 sound level meters. Sampling was carried out during two study periods from June 26th to June 30th at two locations in the Mess Creek Valley (FD-7 and FD-8), and from July 14th to July 18th at two locations north of the Schaft Creek Camp in the Schaft Creek Valley (FD-4 and FD-5). The observed 4 day L_{eq} values were 48.2 and 45.2 dBA at stations FD-7 and FD-8, respectively. The 4 day L_{eq} values at stations FD-4 and FD-5 were 45.6 and 40.0 dBA, respectively.

Wind speed was deemed to have the greatest effect on baseline noise levels at the noise monitoring stations during the study periods. Helicopter noise and exploration camp activities did not likely influence the baseline noise measurements.

References

Alberta EUB. 2007. *Directive 038 – Noise Control.* Calgary, AB: Revised edition. February 16, 2007.

Copper Fox Metals Inc. (Copper Fox). 2008. *Schaft Creek Project Description.* Prepared by Copper Fox Metals Inc. January 2008. www.copperfoxmetals.com

Rescan. 2006. *Appendix 6-A Galore Creek Meteorology, Air Quality and Noise Baseline Studies Report.* Prepared for NovaGold Canada Inc. by Rescan Environmental Services Ltd.