

# Schaft Creek Project: Archaeological Baseline Study, 2007, Non-Technical Summary *Heritage Inspection Permit 2006-223*



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# EXECUTIVE SUMMARY

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# Executive Summary

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This report presents a non-technical summary the 2007 archaeology baseline studies for Copper Fox Metal Inc.'s (Copper Fox's) proposed Schaft Creek Mining Project (Project). Archaeological baseline studies for the Project were conducted by Rescan Tahltan Environmental Consultants Ltd.'s (RTEC) were carried out under *Heritage Conservation Act* Permit 2006-223, issued by the Archaeology Branch, Ministry of Sports, Tourism and the Arts. Data obtained from the Archaeological Impact Assessment (AIA) will contribute to the Archaeological Baseline study required for Copper Fox's B.C. Environmental Assessment (EA) application.

The proposed Project is located near Mount LaCasse in northwest B.C., primarily within the Schaft and Mess Creek valleys. The Project is within the asserted traditional territory of the Tahltan Nation. The mine will require several development components including: an open pit mine, tailings pond, airstrip, waste rock dump site, mining facilities and ancillary buildings, and an access road and power line running to the mine site.

Although the Project area itself was unknown archaeologically prior to initiation of the EA baseline studies in 2006; its proximity to a number of important archaeological sites within Mount Edziza Provincial Park strongly suggested that the project area contains areas of high archaeological potential. Field assessments undertaken by RTEC in 2006 resulted in the discovery of nine previously unrecorded archaeological sites, confirming that the project area has moderate to high potential for additional archaeological finds.

The primary objectives of the 2007 field season were to: (1) to identify and evaluate any archaeological sites located within and adjacent to the impact zone of the proposed developments, (2) to identify and assess possible impacts of the proposed developments on any identified archaeological sites, (3) to provide recommendations regarding the need and appropriate scope of further archaeological studies prior to the initiation of any proposed developments, and (4) to recommend viable alternatives for managing adverse impacts.

This 2007 field season focussed on the proposed locations of drill holes, tailings ponds and the access road. Twenty-two prehistoric archaeological sites, all consisting of flakes and tools made from obsidian, were identified during the 2007 field season. Site avoidance is the preferred management option for these sites. Additional archaeological fieldwork for the Schaft Creek project is scheduled for 2008.

# ACKNOWLEDGEMENTS

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# Acknowledgements

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Rescan Tahltan Environmental Consultants Ltd. would like to thank CopperFox Metals Inc. for the opportunity to conduct this study. We would also like to thank the Tahltan First Nation for the opportunity to work within their asserted traditional territory. Thanks also to Al Mackie of the Archaeological Branch for his assistance with the project.

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# 1. INTRODUCTION

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# 1. Introduction

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This report is a non-technical summary describing the results of archaeological baseline studies undertaken by Rescan Tahltan Environmental Consultants Ltd. (RTEC) during 2007 field season. The field work was part of a multi year Archaeological Impact Assessment (AIA) of Copper Fox Metals Inc.'s (Copper Fox) proposed Schaft Creek project in northwestern British Columbia. The project area is located in the Schaft Creek, Hickman Creek and Mess Creek drainage systems, immediately southwest of Mount Edziza Provincial Park and approximately 70 km south of Telegraph Creek. The field assessment was conducted in accordance Heritage Inspection Permit 2006-223, issued by the Archaeology Branch, B.C. Ministry of Tourism, Sports and the Arts (Archaeology Branch).

The primary objectives of the AIA are to: (1) identify and evaluate any archaeological sites within the project area and adjacent regions, (2) identify and assess possible impacts that the proposed developments may have on any identified archaeological sites, (3) provide recommendations regarding the need and scope of any further archaeological work in the project area that should be undertaken prior to project developments commencing, and (4) recommend alternatives that could be taken for managing any adverse impacts the proposed development may have to any archaeological sites.

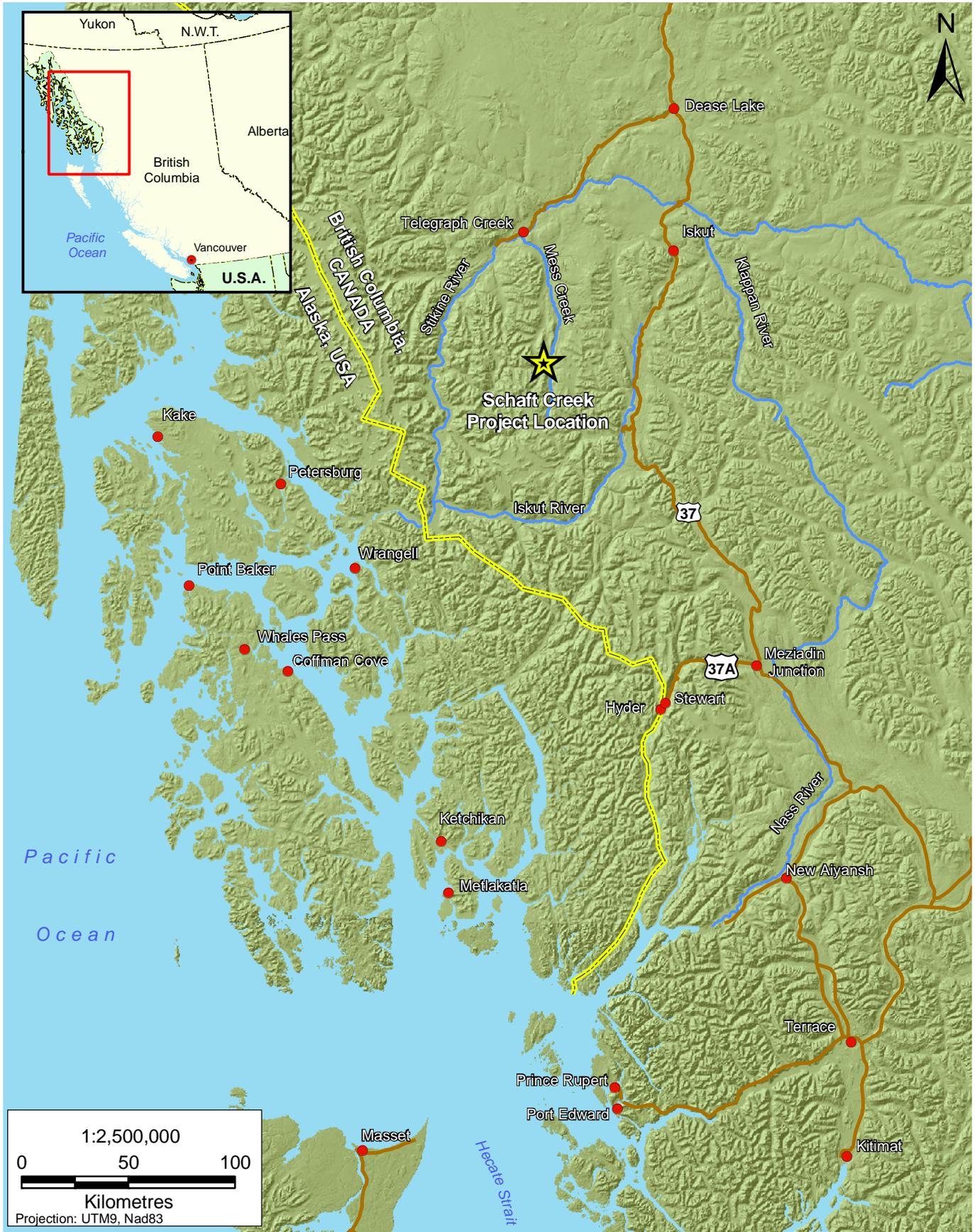
In an effort to minimize potential impacts to unrecorded archaeological sites in the Project area Copper Fox has archaeological assessments conducted prior to drilling and has implemented an 'Archaeological Chance Find Recovery Procedure' to provide protocols to follow in the case of a chance archaeological find by staff or contractors working at the site.

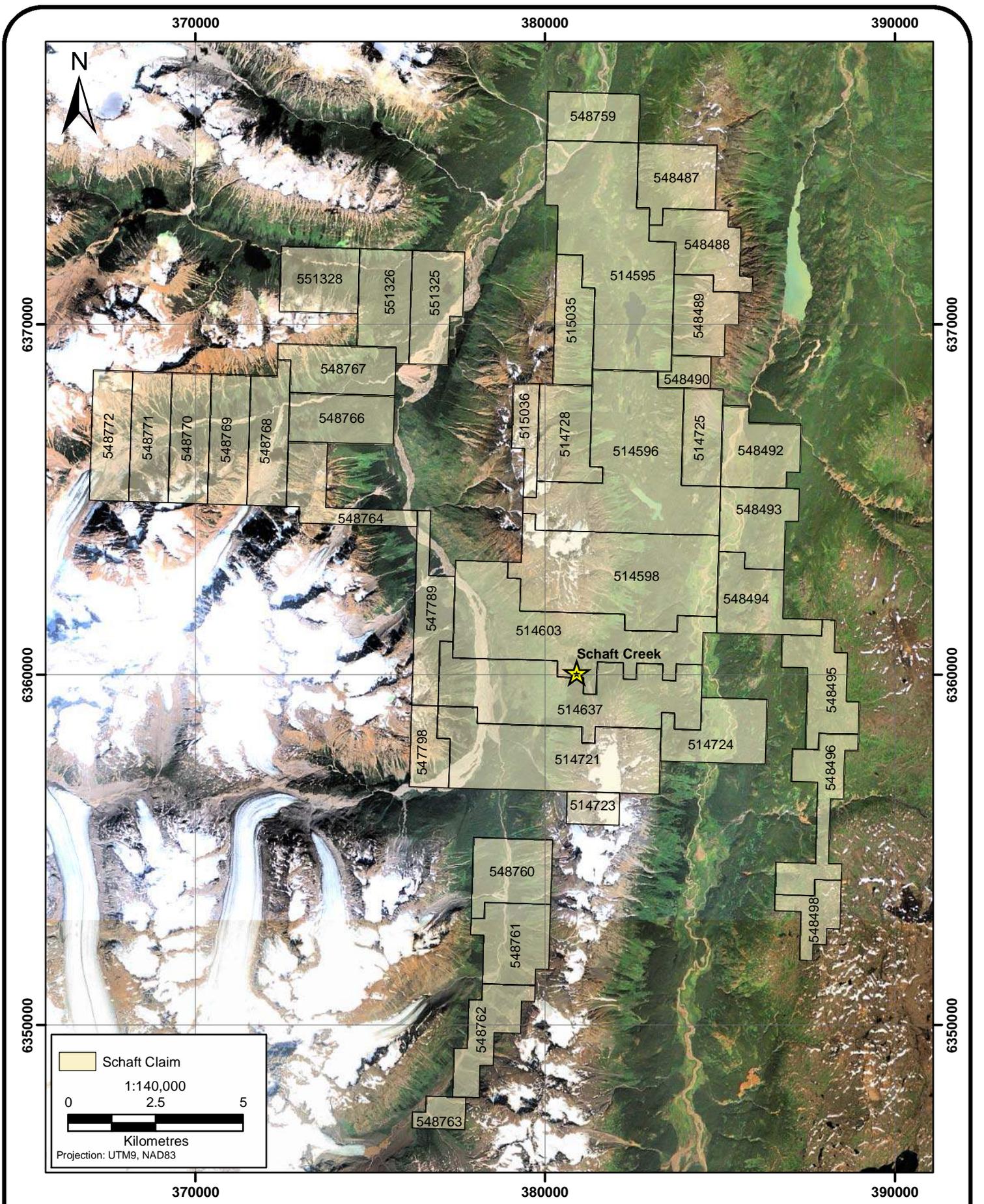
This report presents a summary of most recent field work only, and does not constitute an interim or final report for HCA permit 2007-223. Field work conducted during 2006 is discussed briefly in Section 4. A permit report detailing the complete results of the AIA and providing management recommendations for the Schaft Creek project will be prepared once all field work and analyses have been completed.

## 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° 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





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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.

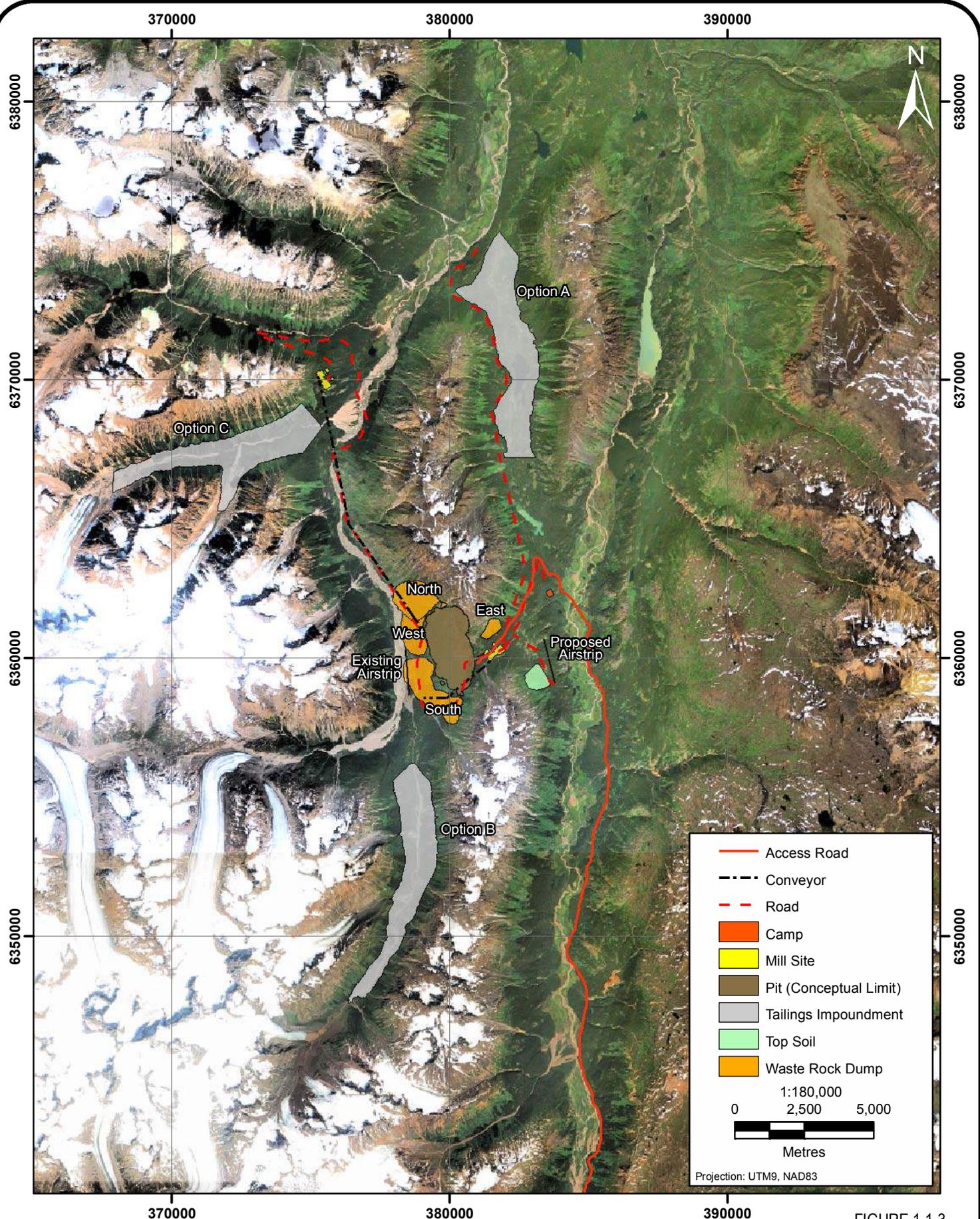
The Schaft Creek deposit was discovered in 1957 and has since been investigated by prospecting, geological mapping, geophysical surveys as well as diamond and percussion drilling. Over 65,000 meters of drilling has been completed on the property as of end of 2007. Additional drilling is planned for 2008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

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.

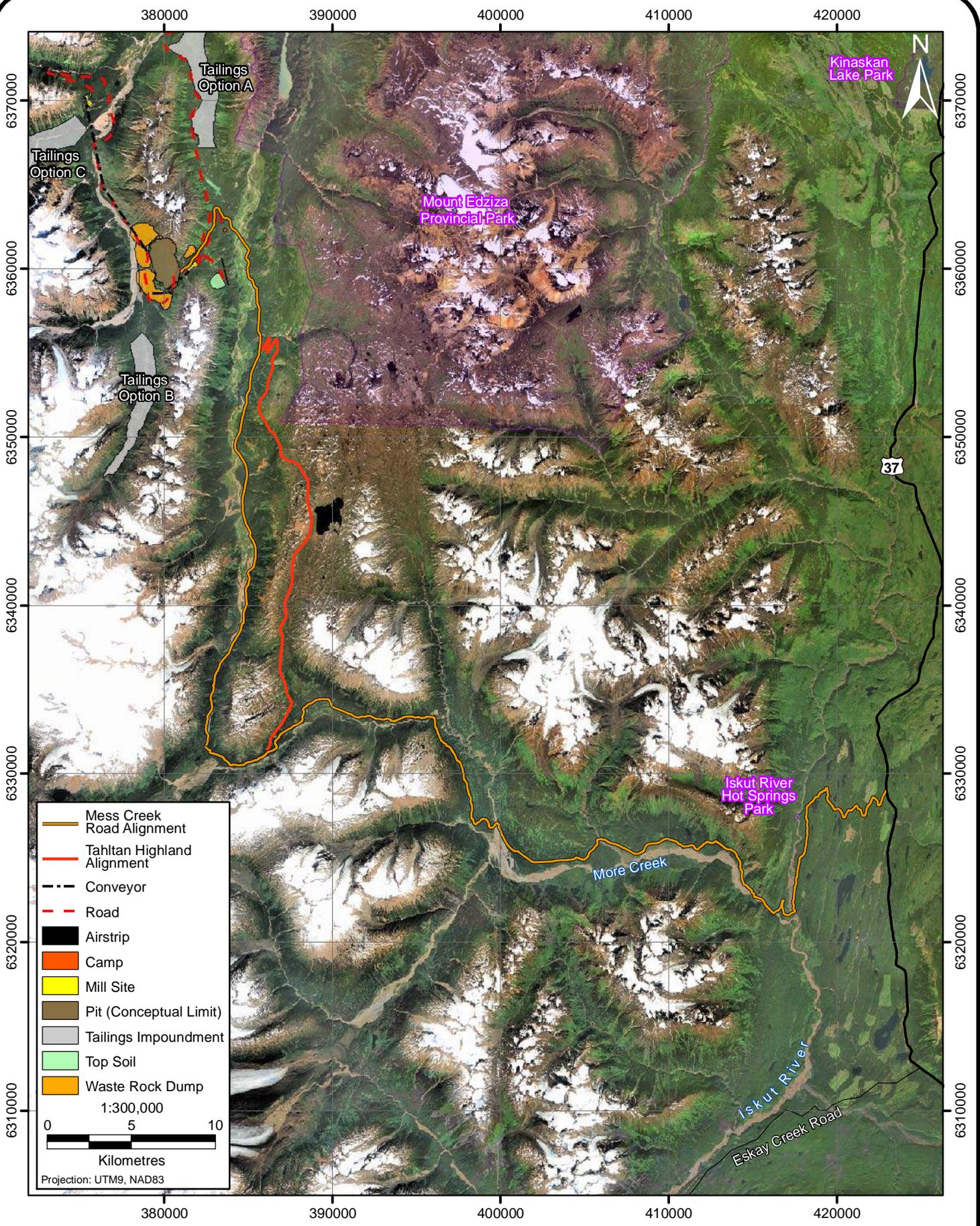
The Project will generate over a billion tonnes of waste rock. Waste rock dumps are proposed around the perimeter of the pit (Figure 1.1-3). This includes the flat area between the proposed pit and Schaft Creek.

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.



	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

## 2. PROJECT AREA BACKGROUND

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## **2. Project Area Background**

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### **2.1 Paleoenvironment**

The project area is characterized by rugged mountains, plateaus and valleys and falls within the Canadian Cordillera physiographic region (Clague, 1989). During the Wisconsinian glacial stage, between 80,000 and 10,000 years ago glacial actions significantly affected the region (Mathews, 1989). By the end of the Wisconsinian, large scale deglaciation was under way in northern B.C., and it is possible that areas in the region may have been suitable for human habitation as early as 10,300 to 9,500 years ago (Ryder and Clague, 1989). The Hypsithermal Interval, approximately 10,000 to 7,000 years ago, saw an increase in temperatures. The climate cooled and glacial growth occurred again between 3,300 to 1,900 years ago, a period known as the Little Ice Age (Clague and MacDonald, 1989).

### **2.2 Biogeoclimatic Zones**

The majority of the Schaft Creek project area is located in the Englemann Spruce-Subalpine Fir zone, at elevations between 900 to 1,700 m. This zone is characterized by continuous forest cover at the lower and mid-elevations and subalpine parkland at the higher elevations. Common trees found in the zone include Englemann spruce and subalpine fir, and occasionally mountain hemlock and amabilis fir. Vegetation found in heaths and meadows include a number of mountain heathers, hellebore, alpine lupine and paintbrush. Avalanche tracks are common in this zone, the vegetation in such locations often consisting of tall, dense shrubs, such as alder, cow parsnip, bunchberry, ferns and stinging nettles. Devil's club, brambles, moss and a number of berry species are found in wetter areas of this zone. Wildlife commonly found throughout the year include moose, caribou, mule deer and mountain goat. Additionally, seasonal distributions of elk, bighorn sheep, white-tailed deer, grizzly bear and black bear are common. Other wildlife and bird species include marten, fisher, wolverine, squirrels, spruce and blue grouse, owls, woodpeckers, finches, nutcraches and wrens (Meidinger and Pojar, 1991)<sup>1</sup>.

### **2.3 Ethnographic Background**

The Schaft Creek project is located within the asserted traditional territory of the Tahltan people. The Tahltan are an Athabaskan speaking group whose dialect is of the Tahltan-Kaska-Tagish language. The Tahltan language is intelligible to the Kaska groups who occupy the Dease Lake and Liard drainages, the Tagish around the Bennett and Tagish Lake, and the Tlingitized Athabaskan groups of the Upper Taku River, Atlin and Teslin Lake (YDLI, 2006).

In prehistoric times the Tahltan led a semi-sedentary way of life, travelling in small mobile hunting camps for part of the year and spending time in larger multifamily villages for the remainder of the year. During the summer season, the Tahltan would come together for the

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<sup>1</sup> This is general information for the Englemann Spruce-Subalpine Fir Zone, for specific information on the vegetation and wildlife in the Schaft Creek Project area please refer to the Vegetation and Wildlife Baseline studies.

annual salmon fishery along the Stikine River and its tributaries. The fur trade saw significant changes in the traditional way of life, with an emphasis being placed on fur-bearing animals which were hunted in the summer and winter months. With the advent of the fur trade and gold mining activities along the Stikine, the Tahltan played a middle-man role trading inland furs for European trade goods from the coast (Emmons, 1911). More extensive ethnographic information on the Tahltan can be found in studies conducted by Albright (1980, 1982, 1984), Emmons (1911), Hodge (1912), Jenness (1927), MacLachlan (1981), Morice (1893), Teit (1906, 1912, 1956), Thorman (n.d.) and White (1913).

### 2.4 Historic Background

Samuel Black's journal of his journey into the Stikine Valley in 1824 represents the earliest documentation of contact between Europeans and First Nations in this region (Black, 1955). He noted that, upon his arrival in the region, there was already evidence of early fur trading activities. It is widely accepted that George Vancouver was in the Stikine Plateau area in 1793 to 1799 and made the first contact in the area, however it is possible that Russian fur traders actually arrived in the area as early as 1729 (Sadouski, 1975). Fur trading activities continued in the region throughout the 1800s (Campbell, 1958:42).

Gold rush activities began in the Stikine Valley in 1861. Sporadic gold prospecting activities continued through the late 1860s and early 1870s. By 1874, the Cassiar mining rush saw a large influx of people into the area (Emmons, 1991; McLachlan, 1981). Following the discovery of gold in the Klondike in 1896, more people travelled to the Yukon through the Stikine River valley, making it a primary access route along which several settlements developed, namely Glenora and Telegraph Creek (Miller, 2004). As a result of the growing population in the Yukon a more efficient method of communication needed to be established which resulted in the construction of a telegraph line being built between 1866 and 1901 (Miller, 2004). Prospecting exploration, including geophysical, geochemical and drilling exploration, has been conducted in the project area since the early 1970s.

### 2.5 Previous Archaeological Research

While no previous archaeological studies have been conducted in the proposed the Schaft Creek project area, several important studies have been undertaken in the broader region. Of particular relevance to Schaft Creek project are the archaeological investigations undertaken within Mount Edziza Provincial Park by Knut Fladmark (1984 and 1985). Fladmark recorded 114 archaeological sites in alpine and subalpine regions of the park, approximately 20 km northeast of the Schaft Creek project. The majority of the sites were obsidian quarry-workshops or flaking stations. Ten obsidian sources have now been identified near Mount Edziza. Mount Edziza obsidian was widely traded and is found in archaeological sites throughout Western Canada and Alaska. The sources were most intensively used between 5,000 and 3,000 B.P. when the Ice Mountain Microblade Industry flourished in northwestern B.C. Additional information on Mount Edziza can be found in Godfrey-Smith (1985) and Smith (1971).

Additional archaeological investigations in the general area include French (1980), Friesen (1985), Ian Hayward and Associates Ltd. (1982), , Ham (1988), Arcas (1990), Points West Heritage Consulting (2005), Hall and Prager (2006), Magne (1982), Seip (2007), Simonsen (2002) Simonsen and Diaz (2004), Warner and Magne (1983) and Wilson *et al.*(1981).

### 3. METHODOLOGY

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### 3. Methodology

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This AIA was conducted in accordance with the *British Columbia Archaeological Impact Assessment Guidelines* (Apland and Kenny, 1998) and HCA permit 2006-223 issued by the Archaeology Branch. The AIA consists of several phases, including background research, field survey, data analysis and reporting.

Field methods were consistent with those outlined in HCA permit 2006-223. The field survey component of the study began in 2006 and continued during the summer and fall of 2007. Ground level assessments included extensive pedestrian surveys and subsurface (shovel) testing in areas assessed to have moderate to high archaeological potential. Testing was also conducted in no less than 15% of those areas identified as having low potential. Material from subsurface tests was screened through 6 mm mesh. Subsequent to the completion of the final report, all artifacts along with a copy of the report will be sent to the Royal British Columbia Museum, Victoria, B.C.

Archaeological potential of the area being examined was assessed based on the following factors: proximity to water sources, slope, aspect, food resource values (*i.e.*, ungulate ranges, fish), forest cover, local knowledge, proximity to previously recorded sites, proximity to relict water courses, the possible use of the area being assessed as a travel corridor, and the presence of micro-environmental features that tend to be associated with archaeological sites (*i.e.* terraces, hillocks, knolls), elevated areas adjacent to water sources and breaks in slopes. Factors thought to constrain archaeological potential include unbroken slope, steep or rough terrain, poorly-drained ground, and massive disturbance areas such as avalanche chutes.

## 4. RESULTS – 2006

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## 4. Results – 2006

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During the 2006 field season, assessment of the Schaft Creek project focused on the proposed open pit mine site on the south face of Mount LaCasse and the southern end of Tailings Impoundment Option “A” within Skeeter Lake valley. Although only eight days of field assessment was conducted in 2006, nine archaeological sites were identified. These sites are described in Table 4-1. In addition, three historic sites related to 20<sup>th</sup> century mining activity (*e.g.*, an exploration camp, mineral claim stakes) were identified, but are too recent to qualify for protection under the HCA.

**Table 4-1**  
**2006 Archaeological Sites**

<b>Site #</b>	<b>Type</b>	<b>Development Component / Site Location</b>
HiTr-1	Subsurface Lithics	Tailings Impoundment Option “A” South of Skeeter Lake
HiTr-2	Surface Lithics	Waste Rock Dump West side of Snipe Lake
HiTr-3	Surface Lithics	Open Pit Mine South face of Mt. LaCasse
HiTr-4	Surface Lithic	Open Pit Mine South face of Mt. LaCasse
HiTr-5	Subsurface Lithics	Open Pit Mine Southwest face of Mt. LaCasse
HiTr-6	Surface Lithics	Open Pit Mine South face of Mt. LaCasse
HiTr-7	Surface Lithics	Open Pit Mine South face of Mt. LaCasse
HiTr-8	Surface Lithics	Tailings Impoundment Option “A” South of Skeeter Lake
HiTr-9	Subsurface Lithics	Tailings Impoundment Option “A” Southwest of Skeeter Lake

## 5. RESULTS – 2007

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## 5. Results – 2007

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Fieldwork during the 2007 field season focused on the proposed mine access road, tailings impoundments and drill hole locations. Additional field work is scheduled for 2008 to complete the archaeological assessment of all remaining components for the Schaft Creek project. The following sections provide a general summary of areas assessed in 2007 and the archaeological sites identified.

### 5.1 Mount LaCasse and Saddle

Mount LaCasse and its saddle feature to the south are the center of the overall Schaft Creek project area and divides the Schaft and Mess Creek Valleys, located to the west and east respectively (Plate 5.1-1). This area will be the focus of mining activity, as Mount LaCasse is the proposed location of the open pit mine, with a mill site, waste rock dump and airstrip to be located immediately south. The area between the Schaft Camp and the saddle has seen extensive previous disturbance from drill pad, road and trail construction. Additionally, there is evidence a forest fire burned through the area during the 20<sup>th</sup> century.



**Plate 5.1-1. View of Snipe Lake, in the saddle south of Mount LaCasse, looking east.**

During the 2007 field season, the proposed access road and several drill hole locations were assessed in the Mount LaCasse saddle. The saddle is a level bench that occurs between the LaCasse peak and another unnamed peak to the south. Snipe Lake and a large marsh are located

in its centre. The area is densely forested with subalpine fir. Because of topographic constraints the saddle is a natural corridor between the Schaft and Mess Creek Valleys and is assessed to have moderate to high archaeological potential. The six sites found in the saddle area in 2006 were on the south face of Mount LaCasse and upslope, above the treeline. In 2007, the areas assessed were in the saddle itself where the terrain is generally uneven and often marshy. Due to the lower potential of the areas assessed in 2007, no archaeological sites were identified.

## **5.2 Schaft Creek Valley**

Proposed waste rock dumps, conveyor lines, access roads, a portion of the open pit mine and other mining facilities are located in the U-shaped Schaft Creek valley, north of Schaft Creek's confluence with Hickman Creek (Plate 5.2-1). The area has been previously disturbed by road and drill pad construction related to mineral exploration. A recent forest fire has resulted in a dense regrowth of pine and subalpine fir.



**Plate 5.2-1. Current camp site within Schaft Creek valley, looking northeast.**

The valley floor is composed of exposed gravel floodplain and other alluvial deposits that were assessed as having low archaeological potential. However, some raised landforms (likely kames or eskers) located between the east side of the creek and the toe of Mount LaCasse, are rated as having higher potential. In 2007, two such features were surveyed within the proposed waste rock dump. One archaeological site was identified from one of the features (Table 5.7-1). In addition, 18 drill pad locations were surveyed along the valley floor adjacent to proposed roadway and mine. No archaeological sites were identified in these areas.

### 5.3 Mess Creek Valley – Mine Access Road

Mess Creek is located within a long north-south trending U-shaped valley that runs from the Stikine River in the north to More Creek in the south (Plate 5.3-1). The valley bottom is composed of meandering braided creek channels surrounded by level, lush marshlands. The valley walls are generally steep with the occasional bedrock terrace jutting out.



**Plate 5.3-1. View south-west over Mess Creek valley from HiTr-16.**

Two road alignments are currently being proposed; one would run along Mess Creek, while an alternative route being considered utilizes the plateau to the east of Mess Creek. As the alternative route had not been proposed prior to 2007 field season, no field work has been conducted.

The road alignment along Mess Creek follows the east side of the valley for most of its length. Given the importance of the Mess Creek valley as a travel corridor to and from Mount Edziza, this area is been assessed as having moderate to high archaeological potential. Areas of high potential are generally found on microtopographic features such as terraces or knolls providing a vantage point over the valley.

An aerial survey has been conducted the entire proposed access road, however, only the northern portion of the road was assessed on foot in 2007. Late in the 2007 field season, an attempt was made to begin assessing the southernmost portions of the proposed road on foot, but the onset of winter limited work to half a day. In 2007, a total of 237 shovel tests were conducted and 10 tree throws were examined along the proposed road yielding eight archaeological sites (Table 5.7-1).

## 5.4 Skeeter Lake Valley – Tailings Impoundment “Option A”

The proposed Tailings Impoundment “Option A” is located in the Skeeter Lake valley to the east of Mount LaCasse (Plate 5.4-1). The valley is short, approximately 10 km long, and connects Schaft Creek to Mess Creek (Figure 1.1-3). The valley bottom is generally low and swampy, but is interrupted by several prominent landforms, such as high terraces and hills. The value of these landforms as lookouts and camp sites and the presence of Skeeter Lake make the valley a likely focal point for resource procurement, thus, the valley is assessed as having moderate to high archaeological potential.



**Plate 5.4-1. View north of Tailings Impoundment “Option A” from its southern boundary.**

During the 2007 field season, systematic aerial and ground surveys were completed in Option “A,” focusing on these higher potential landforms. A total of 276 shovel tests were conducted and 21 tree throws were examined. Two archaeological sites were identified during 2007 (Table 5.7-1). In addition, the south, north and northwest proposed dam walls were also assessed, primarily by helicopter, as they were generally located within swampy areas lacking suitable areas for ground examination. Further field work will be required in order to complete the assessment of Option “A”.

## 5.5 Hickman Creek Valley – Tailings Impoundment “Option B”

Hickman Creek is a north flowing glacial drainage feeding into Schaft Creek, situated in a long and narrow valley located to the south of the main project area. Like Option “C”, the valley is essentially a “dead end” and would not have served as a travel corridor of any importance.

The terrain within the valley is predominantly sloped and uneven along the subalpine fir-forested valley walls, with the valley floor consisting of a buckbrush willow over gravels along the creek bed (Plate 5.5-1). This area was assessed to have low to moderate archaeological potential, with the areas of higher potential occurring on landforms such as terraces, benches or rock outcrops that may provide strategic positions for hunting along the valley bottom. A systematic pedestrian survey was conducted along the valley bottom and included 183 shovel tests on areas of potential. This resulted in the identification of one archaeological site HhTs-1 (Table 5.7-1).



Plate 5.5-1. View north from southern end of Hickman Creek valley looking north.

## 5.6 Tailings Impoundment “Option C”

Tailings Impoundment “Option C” is located in a narrow and shallow valley associated with a deeply incised creek fed by Scud Glacier to the west of the Schaft Creek valley. From the high rock bluffs overlooking the creek bed, the terrain climbs steadily up the valley walls through willow, subalpine fir and pine forest.

An aerial survey was conducted of the proposed Tailings Impoundment “Option C” and the proposed eastern dam wall was systematically surveyed on foot. This included 86 shovel tests in

areas assessed as having higher archaeological potential, generally on open pine forested terraces on the north side of the valley. All tests along the east dam wall were negative for cultural material. One archaeological site (HiTs-1) was identified on a high bluff overlooking the creek, near its confluence with Schaft Creek (Table 5.7-1).

## **5.7 Archaeological Sites Identified -- 2007**

A total of 22 archaeological sites were recorded during the course of the 2007 field assessments of the Schaft Creek project. Nine sites had been previously recorded during the 2006 field assessments. All of the archaeological sites contained black or grey obsidian flakes and/or tools (Plates 5.7-1 and 5.7-2) with several artifacts from the 2006 sites chemically sourced to known quarries in Mount Edziza Provincial Park. The sites were discovered primarily through the inspection of surface exposures and, to a lesser extent, through shovel testing. These sites are described below in Table 5.7-1.

**Table 5.7-1  
2007 Archaeological Sites**

<b>Site #</b>	<b>Type</b>	<b>Location</b>
HiTr-10	Surface and Subsurface Lithics	Mine Access Road East face of Mt. LaCasse
HiTr-11	Subsurface Lithics	Mine Access Road East face of Mt. LaCasse
HiTr-12	Surface Lithics	Tailings Impoundment Option "A" North of Skeeter Lake
HiTr-13	Surface Lithics	Mine Access Road Island in the Mess Creek valley
HiTr-14	Surface Lithics	Mine Access Road East side of Mess Creek valley
HiTr-15	Surface and Subsurface Lithics	Mine Access Road East side of Mess Creek valley
HiTr-16	Surface Lithics	Mine Access Road East side of Mess Creek valley
HiTr-17	Surface Lithics	Tailings Impoundment Option "A" North of Skeeter Lake
HiTs-1	Surface and Subsurface Lithics	Tailings Impoundment Option "C" West of Schaft Creek
HiTs-2	Surface Lithics	Waste Rock Dump Knoll east of Schaft Creek
HhTs-1	Surface Lithics	Tailings Impoundment Option "B" West side of Hickman Creek.
HhTr-1	Surface Lithic	Mine Access Road East side of Mess Creek valley
HgTr-2	Subsurface Lithic	Mine Access Road South of Little Mess Lake

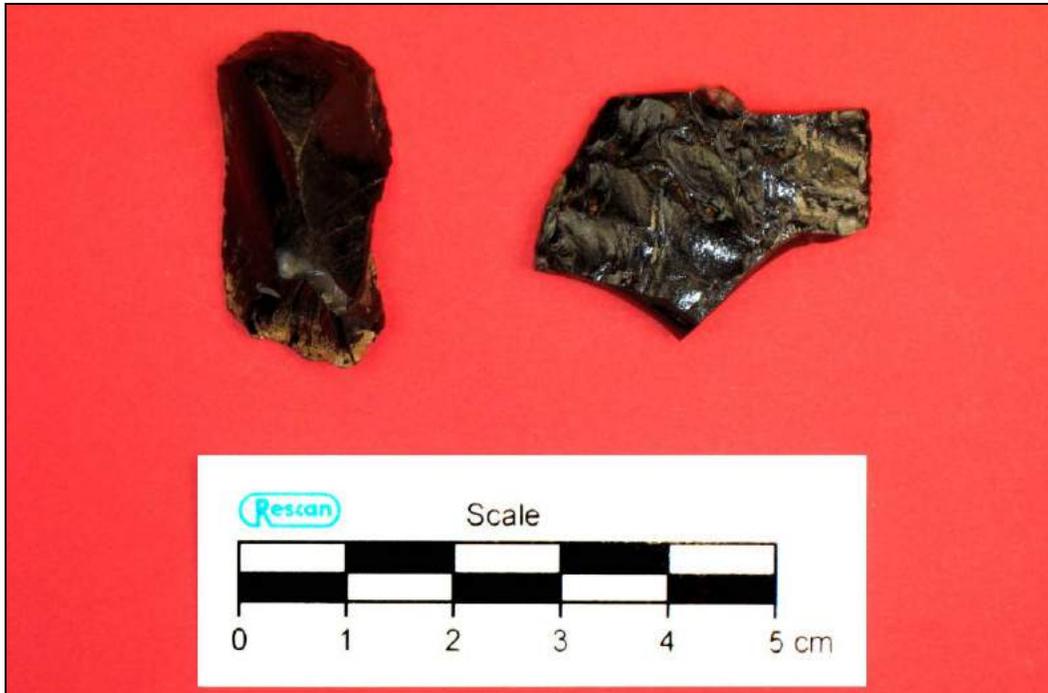


Plate 5.7-1. Artifacts recovered from HiTs-1: an end scraper (left) and a biface fragment (right).



Plate 5.7-2. Artifacts recovered from HiTr-17: three flakes (left) and a microblade (right).

## 6. RECOMMENDATIONS FOR FURTHER WORK

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## 6. Recommendations for Further Work

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As a result of the 2007 field season, the assessment of the proposed drill hole locations for 2007 and the northern portion of the Mess Creek road alignment is complete. No further work is recommended for these assessed areas, however, if the drill hole locations or road alignment are modified, further assessment may be necessary. Further field assessment is recommended for all the remaining development components. This work is scheduled for the summer of 2008.

For the 22 archaeological sites identified in 2007, site avoidance is the preferred management option. Where avoidance is not feasible, some form of impact mitigation is recommended. Final management recommendations for the Schaft Creek project will be presented in the AIA final report.

Copper Fox is advised that The *Heritage Conservation Act* (HCA) protects all archaeological sites which predate 1846. This includes as-yet unrecorded sites and archaeological materials from disturbed contexts. Burial sites and rock arts sites are protected regardless of age. Any archaeological site that may be directly or indirectly impacted by construction activities requires the issuance of a Site Alteration Permit under Section 12 of the HCA. Section 12 Permits are issued at the discretion of the Archaeology Branch.

## 7. CLOSING

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## 7. Closing

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This report was prepared by Rescan Tahltan Environmental Consultants Ltd. on behalf of Copper Fox Metals Inc. This study was not designed to address issues of traditional Aboriginal use and does not constitute a traditional use study. This report was written without prejudice to issues of Aboriginal rights and/or title.

We trust that the information contained in this report is sufficient for your present needs.

Sincerely,

**Rescan Environmental Services Ltd.**



Sean McKnight, B.A.  
Archaeologist



Lisa Seip, M.A., RPCA, CAHP  
Senior Archaeologist

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