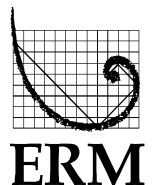


BRUCEJACK GOLD MINE PROJECT
Application for an Environmental Assessment Certificate /
Environmental Impact Statement

Appendix 24-B

**Brucejack Gold Mine Project: 2012 Visual Quality
Baseline Report**



Pretium Resources Inc.

BRUCEJACK GOLD MINE PROJECT 2012 Visual Quality Baseline Report



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

April 2013

BRUCEJACK GOLD MINE PROJECT 2012 VISUAL QUALITY BASELINE REPORT

April 2013
Project #1042-009-16

Citation:

Rescan. 2013. *Brucejack Project: 2012 Visual Quality Baseline Report*. Prepared for Pretium Resources Inc. by Rescan Environmental Services Ltd.: Vancouver, British Columbia.

Prepared for:



Pretium Resources Inc.

Prepared by:



Engineers and Scientists

Rescan™ Environmental Services Ltd.
Vancouver, British Columbia

Executive Summary

Executive Summary

The Brucejack Property is situated within the Sulphurets District in the Iskut River region, approximately 20 kilometres northwest of Bowser Lake or 65 kilometres north-northwest of the town of Stewart, British Columbia. The present report documents baseline studies completed for the project area.

The scope of this study was to characterize the current visual condition of the Brucejack Project area. Procedures developed by the British Columbia Ministry of Forests and Range (BC MOFR) are adapted here to guide the collection of visual quality baseline information for the Project. The BC MOFR procedures were developed to take “visual values into account in resource management planning.”

In preparation for field work a number of documents and data sources were reviewed. Two land use plans encompass parts of the Project study area. The Cassiar Iskut-Stikine Land and Resource Management Plan (LRMP) includes visual quality as a resource value and identifies and describes areas that are visually sensitive. The Nass South Sustainable Resource Management Plan (SRMP) addresses visual quality in its General Management Direction. The land use data collected from the project was reviewed to identify specific groups that use the area. Provincial Recreational Features Inventory (RFI; DataBC 2011) spatial data was used to identify and locate features classified for their recreational value, to provide information about the recreation features. The RFI data is sorted in terms of their local significance for providing or supporting recreation opportunities and their sensitivity to alteration (BC ILMB 2004b).

A viewshed analysis using Esri ArcView 10 Spatial Analyst was performed to identify the areas from where the proposed Project would be potentially visible. The result was compared to areas identified in the document and data review and four key areas were selected for visual quality field data collection. These areas included Knipple Glacier, Bowser Lake, Salmon Glacier, and Highway 37. Visual Quality sample sites were chosen to represent where a person would visit in each area and where there would be a higher likelihood of seeing Project infrastructure, based on the viewshed analysis.

During field studies, conducted between May 8 and August 15 2012, photographs were taken from viewpoints within each of the four areas. Views from the selected viewpoints were predominately of an unmodified natural state. Current development that is visible from the viewpoints included Highway 37, a secondary paved road leading to the Salmon Glacier lookout point and structures to support the current exploration phase for the Project (i.e., access road, camp, and drill pads).

Acknowledgements

Acknowledgements

This report was produced for Pretium Resources Inc. by Rescan Environmental Services Ltd. It was written by Stephen Jollymore (B.A.) and reviewed by Pieter van Leuzen (M.Sc.). Greg Norton (M.Sc.) was the project manager and Nicole Bishop (B.Sc.) the project coordinator. Graphics production was coordinated by Francine Alford (B.F.A.), GIS production was coordinated by Pieter van Leuzen (M.Sc.) and report production was coordinated by Robert Tarbuck (BTECH). Field work was led by Stephen Jollymore with assistance from Brian Tait, a member of the Skii km Lax Ha.

Table of Contents

BRUCEJACK GOLD MINE PROJECT

2012 VISUAL QUALITY BASELINE REPORT

Table of Contents

Executive Summary	i
Acknowledgements.....	iii
Table of Contents	v
List of Figures	vi
List of Tables	vi
List of Plates	vi
Acronyms and Abbreviations	ix
1. Introduction	1-1
2. Project Description.....	2-1
3. Background Information.....	3-1
3.1 Applicable Legislation (Federal and Provincial) and Guidelines	3-1
3.2 Literature Review	3-1
3.2.1 Visual Quality Methods	3-1
3.2.2 Recreational Feature Inventory.....	3-1
3.2.3 Commercial Tenures and Land Use.....	3-2
3.2.4 Parks and Protected Areas.....	3-2
3.2.5 Transportation	3-2
4. Objectives	4-1
5. Study Area	5-1
6. Methodology.....	6-1
6.1 Introduction	6-1
6.2 Planning and Pre-field Trip Preparation.....	6-1
6.3 Conducting Fieldwork.....	6-1
7. Results.....	7-1
7.1 Planning and Pre-field Trip Preparation.....	7-1
7.1.1 Provincial Visual Quality Objectives	7-1
7.1.2 Tenures.....	7-1
7.1.2.1 Commercial Recreation Tenures	7-1
7.1.2.2 Guide Outfitting Tenures	7-1

7.1.2.3	Angling Licenses and Tenures.....	7-3
7.1.3	Recreational Use	7-3
7.1.4	Viewshed Analysis	7-5
7.2	Fieldwork	7-5
8.	Conclusions	8-1
	References.....	R-1

List of Figures

FIGURE		PAGE
Figure 2-1.	Brucejack Gold Mine Project Overview	2-2
Figure 5-1.	Brucejack Gold Mine Project Visual Quality Study Area.....	5-2
Figure 7.1-1.	Commercial Tenures in Relation to the Visual Quality Study Area	7-2
Figure 7.1-2.	Brucejack Gold Mine Project: Viewpoint Locations in Relation to Viewshed Analysis and RFI Recreational Feature Polygons.....	7-4

List of Tables

TABLE		PAGE
Table 5-1.	Viewing Distance Rating	5-1
Table 7.1-1.	Summary of Commercial Recreation Tenure Table.....	7-1
Table 7.1-2.	Summary of Guide Outfitting Tenures	7-3
Table 7.1-3.	RFI Ratings in VQSA	7-3
Table 7.2-1.	Viewpoint Locations.....	7-5

List of Plates

PLATE		PAGE
Plate 7.2-1a.	Viewpoint 1 - View 1 - Looking west from Highway 37 from a point near the Bell-Irving River, May 8, 2012.....	7-6
Plate 7.2-1b.	Viewpoint 1 - Location and bearings from a point near the confluence of Wildfire Creek and the Bell-Irving River, May 8, 2012.....	7-6
Plate 7.2-2a.	Viewpoint 2 - View 1 - Looking west from Highway 37 a point near the confluence of Wildfire Creek and the Bell-Irving River, July 1, 2012.	7-7
Plate 7.2-2b.	Viewpoint 2 - View 2 - Looking south-east along Highway 37 from a point near the confluence of Wildfire Creek and the Bell-Irving River, July 1, 2012.....	7-7

Plate 7.2-2c. Viewpoint 2 - Location and bearings from a point near the confluence of Wildfire Creek and the Bell-Irving River, July 1, 2012.7-7

Plate 7.2-3a. Viewpoint 3 - View 1 - Looking east at Graveyard point from a point over Bowser Lake, June 29, 2012.....7-8

Plate 7.2-3b. Viewpoint 3 - Location and bearings from a point on Bowser Lake, June 29, 2012 and July 1, 2012.7-8

Plate 7.2-4a. Viewpoint 4 - View 1 - Looking east from a point on Mount Anderson on the north shore of Bowser Lake, June 29, 2012.7-8

Plate 7.2-4b. Viewpoint 4 - Location and bearings from a point on Mount Anderson, June 29, 2012.7-8

Plate 7.2-5a. Viewpoint 5 - View 1 - Looking west from a point on a slope overlooking Bowser River, June 29, 2012.7-9

Plate 7.2-5b. Viewpoint 5 - Location and bearings from a point on a slope overlooking Bowser River, June 29, 2012.7-9

Plate 7.2-6a. Viewpoint 6 - View 1 - Looking east from a point on a slope overlooking Scott Pass, June 29, 2012. 7-10

Plate 7.2-6b. Viewpoint 6 - Location and bearings from a point on a slope overlooking Scott Pass, June 29, 2012. 7-10

Plate 7.2-7a. Viewpoint 7 - View 1 - Looking east from a point on a slope overlooking Scott Pass, June 29, 2012. 7-11

Plate 7.2-7b. Viewpoint 7 - Location and bearings from a point on a slope overlooking Scott Pass, June 29, 2012. 7-11

Plate 7.2-8a. Viewpoint 8 - View 1 - Looking north-west towards Knipple Lake from a point on a slope overlooking Bowser River, August 15, 2012. 7-11

Plate 7.2-8b. Viewpoint 8 - View 2 - Looking north-east towards Bowser Lake from a point on a slope overlooking Bowser River, August 15, 2012. 7-11

Plate 7.2-8c. Viewpoint 8 - Location and bearings from a point on a slope overlooking Scott Pass, August 15, 2012..... 7-12

Plate 7.2-9a. Viewpoint 9 - View 1 - Looking north towards Knipple Glacier from a point on a ridge overlooking the Knipple Glacier, August 15, 2012. 7-12

Plate 7.2-9b. Viewpoint 9 - View 2 - Looking south-east towards Bowser Lake from a point on a ridge overlooking the Knipple Glacier, August 15, 2012. 7-12

Plate 7.2-9c. Viewpoint 9 - Location and bearings from a point on a ridge overlooking the Knipple Glacier, August 15, 2012..... 7-13

Plate 7.2-10a. Viewpoint 10 - View 1 - Looking north towards Knipple Glacier from a point on a ridge overlooking the Knipple Glacier, August 15, 2012. 7-13

Plate 7.2-10b. Viewpoint 10 - Location and bearings from a point on a ridge overlooking the Knipple Glacier, August 15, 2012..... 7-13

Plate 7.2-11a. Viewpoint 11 - View 1 - Looking north-east towards Sulpurets Glacier from a point on a slope overlooking the Sulpurets Glacier, August 15, 2012. 7-14

Plate 7.2-11b. Viewpoint 11 - View 2 - Looking north-east towards Bowser Lake from a point on a slope overlooking the Sulpurets Glacier, August 15, 2012. 7-14

Plate 7.2-11c. Viewpoint 11 - Location and bearings from a point on a ridge overlooking the Knipple Glacier, August 15, 2012. 7-14

Plate 7.2-12a. Viewpoint 12 - View 1 - Looking north-west towards Sulpurets Glacier from a point on a slope between the Sulpurets Glacier and Brucejack Lake, June 30, 2012. 7-15

Plate 7.2-12b. Viewpoint 12 - View 2 - Looking north towards Brucejack Lake from a point on a slope between the Sulpurets Glacier and Brucejack Lake, June 30, 2012. 7-15

Plate 7.2-12c. Viewpoint 12 - Location and bearings from a point between the Sulpurets Glacier and Bowser Lake, June 30, 2012. 7-15

Plate 7.2-13a. Viewpoint 13 - View 1 - Looking west towards Brucejack Lake from a point on the Knipple Glacier east of Brucejack Lake, August 15, 2012..... 7-16

Plate 7.2-13b. Viewpoint 13 - View 2 - Looking east along Knipple Glacier Lake from a point on the Knipple Glacier east of Brucejack Lake, August 15, 2012..... 7-16

Plate 7.2-13c. Viewpoint 13 - Location and bearings from a point on the Knipple Glacier east of Brucejack Lake, August 15, 2012. 7-16

Plate 7.2-14a. Viewpoint 14 - View 1 - Looking north-east towards the Sulpurets Glacier from a ridge above the Knipple Glacier west of Brucejack Lake, August 15, 2012..... 7-17

Plate 7.2-14b. Viewpoint 14 - Location and bearings from a point on the Knipple Glacier west of Brucejack Lake, June 30, 2012. 7-17

Plate 7.2-15a. Viewpoint 15 - View 1 - Looking west towards the Salmon Glacier from a viewpoint to the east of the Salmon Glacier, September 23, 2012. 7-17

Plate 7.2-15b. Viewpoint 15 - View 2 - Looking west towards the Salmon Glacier and lookout from a viewpoint to the east of the Salmon Glacier lookout, September 23, 2012. 7-17

Plate 7.2-15c. Viewpoint 15 - Location and bearings viewpoint to the east of the Salmon Glacier, September 21 and 23, 2012. 7-18

Plate 7.2-16a. Viewpoint 16 - View 1 - Looking north from a viewpoint on the road to the east of the Salmon Glacier, September 21, 2012. 7-18

Plate 7.2-16b. Viewpoint 16 - Location and bearings viewpoint on the road to the east of the Salmon Glacier, September 21, 2012. 7-18

Acronyms and Abbreviations

Acronyms and Abbreviations

Terminology used in this document is defined where it is first used. The following list will assist readers who may choose to review only portions of the document.

BC	British Columbia
CIS	Cassiar Iskut-Stikine
DEM	Digital elevation model
GIS	Geographic Information System
GMD	General Management Direction
GPS	Global positioning system
LRMP	Land and Resource Management Plan
MOF	Ministry of Forests
MOFR	Ministry of Forests and Range
MOFLNRO	Ministry of Forests, Lands and Natural Resource Operations
Pretium	Pretium Resources Inc.
Rescan	Rescan Environmental Services Ltd.
RFI	Recreational Features Inventory
RFP	Recreational Feature Polygons
RMZ	Resource Management Zone
SRMP	Sustainable Resource Management Plan
the Project	Brucejack Project
tpd	Tonne per day
VQSA	Visual Quality Study Area
WMO	World Meteorological Organization's

1. Introduction

1. Introduction

This report presents the results of a visual quality baseline study conducted for Pretium Resources Inc's (Pretium's) proposed Brucejack Gold Mine Project (the Project) undertaken in 2012. The purpose of the study was to assess the existing visual landscape and compile an inventory of currently used viewpoints. Visual quality is a resource value addressed in the Cassiar Iskut-Stikine (CIS) Land and Resource Management Plan (LRMP). Visual quality objectives were designed for forestry activities, however; according to the LRMP, companies working on non-forestry activities should be carried out in respect of the scenic values of specified areas and cognizant of the visual quality objectives (BC ILMB 2000). This document will follow the BC MOFR's visual impact procedures described in the *Visual Impact Assessment Guidebook* (BC MOF 2001).

2. Project Description

2. Project Description

Pretium proposes to develop the Project as a 2,700 tonne per day (tpd) underground gold and silver mine. The Brucejack property is located at 56°28'20" N latitude by 130°11'31" W longitude, which is approximately 950 km northwest of Vancouver, 65 km north-northwest of Stewart, and 21 km south-southeast of the closed Eskay Creek Mine (Figure 2-1). The Project is located within the Kitimat-Stikine Regional District. Several First Nation and Treaty Nations have traditional territory within the general region of the Project including the Skii km Lax Ha, the Nisga'a Nation, the Tahltan Nation, the Gitxan First Nation, and the Gitanyow First Nation.

The mine site area will be located near Brucejack Lake. Vehicle access to the mine site will be via an existing exploration access road from Highway 37 that may require upgrades to facilitate traffic during mine operations. A transmission line will connect the mine site to the provincial power grid near Stewart or along Highway 37; two options are currently under consideration.

The Project is located within the boundary range of the Coast Mountain Physiographic Belt, along the western margin of the Intermontane Tectonic Belt. The local terrain ranges from generally steep in the western portion of the Project area in the high alpine with substantial glacier cover to relatively subdued topography in the eastern portion of the Project area towards the Bell-Irving River. The Brucejack mine site will be located above the tree line in a mountainous area at an elevation of approximately 1,400 masl; surrounding peaks measure 2,200 m in elevation. The access and transmission corridors will span a range of elevations and ecosystems reaching a minimum elevation near the Bell Irving River of 500 masl. Sparse fir, spruce, and alder grow along the valley bottoms, with only scrub alpine spruce, juniper, alpine grass, moss, and heather covering the steep valley walls.

The general area of the Brucejack Property has been the target of mineral exploration since the 1960s. In the 1980s Newhawk Gold Mines Ltd. conducted advanced exploration activities at the current site of the proposed Brucejack mine site that included 5 km of underground development, construction of an access road along the Bowser River and Knipple Glacier, and resulted in the deposition of 60,000 m³ of waste rock within Brucejack Lake.

Environmental baseline data was collected from Brucejack Lake and the surround vicinity in the 1980s to support a Stage I Impact Assessment for the Sulphurets Project proposed by Newhawk Gold Mines Ltd. Silver Standard Resources Inc. commenced recent environmental baseline studies specific to the currently proposed Project in 2009 which have been continued by Pretium, following its acquisition of the Project in 2010. The scope and scale of the recent environmental baseline programs have varied over the period from 2009 to the present as the development plan for the Project has evolved.

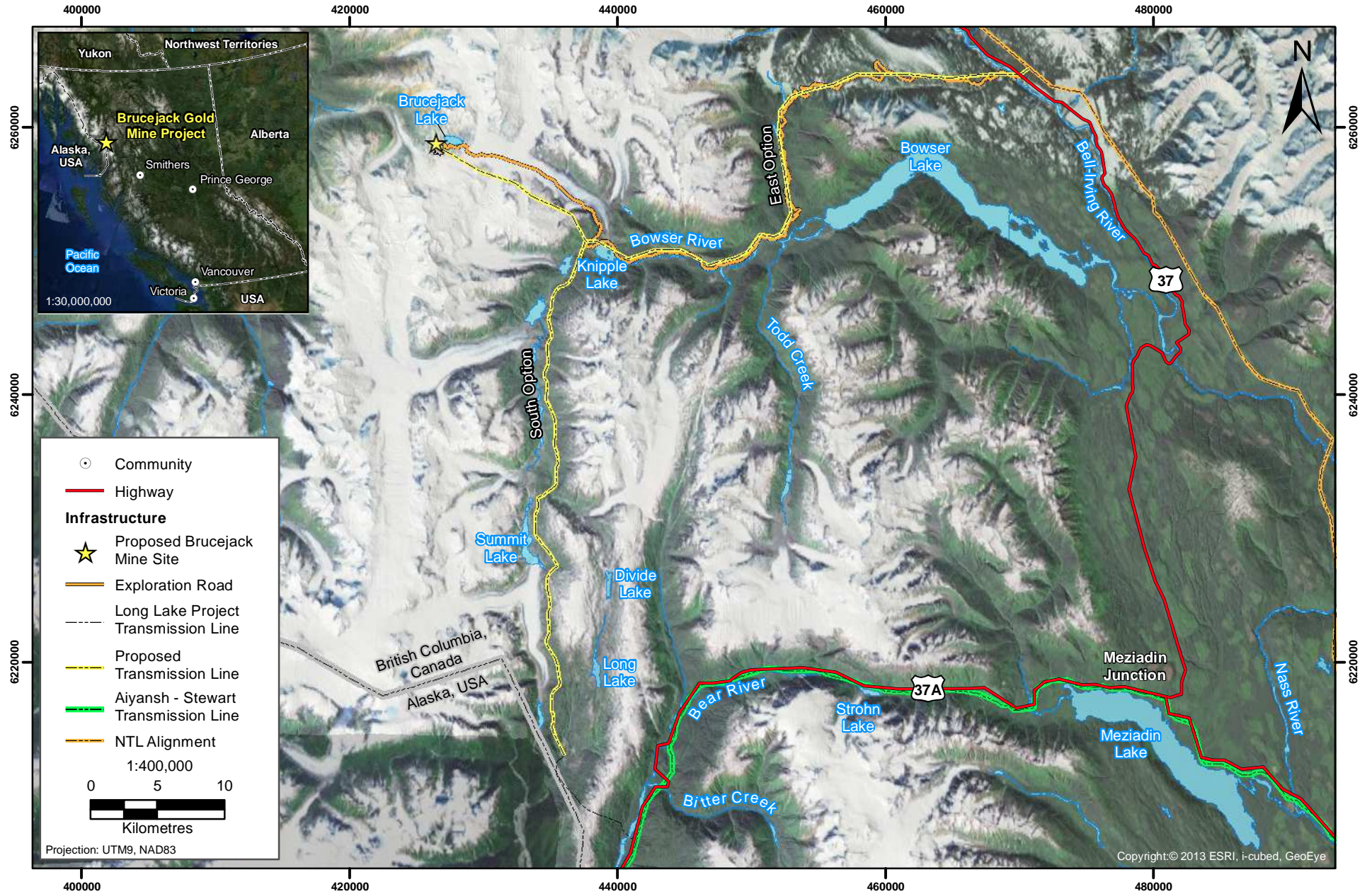


Figure 2-1

Figure 2-1

3. Background Information

3. Background Information

3.1 APPLICABLE LEGISLATION (FEDERAL AND PROVINCIAL) AND GUIDELINES

Within the general region of the Project the CIS LRMP and Nass South Sustainable Resource Management Plan (SRMP) include objectives for maintaining visual quality in the areas covered by the Project.

3.2 LITERATURE REVIEW

The CIS LRMP is a sub-regional land use plan that defines specific land and resources management objectives for this area. Visual Quality is listed as a General Management Direction (GMD) in the LRMP. The GMD objectives ‘provide a baseline for management of all resource activities on Crown Land in the LRMP area, except in Protected Areas (LRMP)’. Nature based tourism is supported in extensive areas throughout the LRMP area. Travel corridors are noted as being highly valued for scenery and visual quality in the LRMP. The term ‘corridors,’ applies to trails, roads and rivers. A goal of the CIS LRMP visual quality objective is ‘A scenic landscape that supports world class tourism and recreation potential.’ The visual quality objectives established for resource management by the BC MOFR are described in the CIS LRMP and are considered as a reference for activities related to the Project.

The Nass South SRMP is a landscape level plan developed to address sustainable management of land, water and resources in the southern portion of the Nass Timber Supply Area” (BC ILMB 2009). In regards to visual quality, the Nass South SRMP has an objective to ‘increase certainty for long term access and sustainable development’ for several user groups in the area. The document’s purpose is to help promote sustainable economic development while maintaining cultural, environmental and economic values in the area (MFLNRO 2012). Outside of the areas to be protected, the SRMP affirms resource use and development activity for a number of activities. Protected areas include Parks and ecological reserves, as well as lands set aside to protect natural and cultural heritage. Mineral exploration and development is included in the SRMP as well as a number of commercial and recreational uses. These include the recognition and the development of activities such as Commercial recreation and tourism, Guide-outfitting, hunting and fishing, trapping and cultural heritage resources. The Nass South SRMP includes Visual Quality Objectives as one of many variables in its timber supply analysis. The VQO reflects ‘desired level of visual quality based on the physical characteristics and social concern for the area (MFLNRO 2012)’. The analysis was completed to help inform the SRMP planning for management of timber harvesting. Visual Quality is not referred to otherwise in the SRMP.

3.2.1 Visual Quality Methods

The methods used for this study are based on procedures set out by the BC MOFR *Visual Impact Assessment Guidebook* (BC MOFR 2001) and by the World Meteorological Organization’s (WMO) *Guide to Meteorological Instruments and Methods of Observation*. The *Visual Impact Assessment Guidebook* lays out recommendations to help forest resource managers comply with the Forest Practices code. World Meteorological Organization’s (WMO) *Guide to Meteorological Instruments and Methods of Observation* lays out methods for determining visibility.

3.2.2 Recreational Feature Inventory

The provincial RFI (BC FLNRO 2004) data set was reviewed to find potentially significant and sensitive areas around the Project area. The Ministry of Forests Forest Practice Branch developed the RFI as mandated in the Forest Act from the former Forest Practices Code of BC Act. The RFI was created to identify and classify features for their recreational value and to provide information about those recreation features. The RFI polygons, called recreation feature polygons (RFP) are based on recreation features of local significance and the activities they support and the sensitivity to alteration.

RFI GIS data was utilized to define potentially visually sensitive areas. The data set contains significance and sensitivity codes. The significance and sensitivities codes are both subjective ratings. Significance is used to indicate the relative importance of the polygon to recreation (BC MOF 1998) and uses the following rating codes (BC MOF 1998): Very high, High, Moderate and Low. Sensitivity indicates the relative vulnerability of the recreation features to potential alterations caused by resource development (BC MOF 1998). The sensitivity codes are: High, Moderate, Low.

3.2.3 Commercial Tenures and Land Use

Additional locations where land use is in part tied to the visual aesthetics of the area were sought through review of land use and cultural heritage information collected as part of the Brucejack Project baseline programs. Documents reviewed to determine the possible uses of the Project area included: *The Brucejack Gold Mine Project Draft 2012 Non-Traditional Land Use Baseline Report* and the *Draft Brucejack Gold Mine Project 2012 Archaeology Baseline Report*.

3.2.4 Parks and Protected Areas

A Provincial dataset for Parks and Protected areas from the Crown Land Registry System (Tantalis) was reviewed. The dataset contained all provincial park boundaries and protected areas designated by Order in Council or legislation (BCGOV ENV 2004a). The protected areas closest to the Project include the Bear Glacier Park, 13 km to the east of the proposed mine site, between Stewart and Highway 37. Ningunsaw Park, 19 km from the minesite north of the Project mine site. Both are outside of the study area established for the visual quality study (see Chapter 5).

3.2.5 Transportation

The Stewart-Cassiar Highway (Highway 37) passes to the east of the Project. Highway 37 is a major road access to Northern BC. It is one of only two overland routes to Alaska. It is used by personal, recreational and industrial traffic.

4. Objectives

4. Objectives

The visual quality baseline study objective is to identify areas that are potentially sensitive to change in their visual appearance by Project activities and to describe the current visual landscape for each sensitive area identified. The baseline study followed BC MOFR visual impact procedures described in the *Visual Impact Assessment Guidebook* (BC MOFR 2001).

5. Study Area

5. Study Area

A visual quality study area (VQSA) has defined around the proposed Project infrastructure (Figure 5-1). The VQSA boundary was defined by determining a distance at which the proposed project infrastructure could be viewed by land users within the general area of the Project. The VQSA includes an eight kilometre buffer around the proposed infrastructure based on when several shapes and pattern of objects emerge from the general background based on the description of moderate and low viewing distance ratings defined by MOF 1997 (Table 5-1). Viewing distance is listed as an important measure of viewing condition (MOF 1997). As distance increases from an object ‘the details and thus, sensitivity decreases (MOF 1997).’

Table 5-1. Viewing Distance Rating

Viewing Distance Rating	Distance from Viewer	Explanation
High (Foreground)	0 to 1.0 km	Maximum discernment of detail, texture and contrast
Moderate (Midground)	1.0 to 8.0 km	Emergence of overall shapes and patterns, with some texture and color still evident
Low (Background)	> 8.0 km	Outlines of general shape and patterns, with little discernible texture and color, and strong sense of overall perspective

Source: MOF 1997

According to the World Meteorological Organization’s (WMO) Guide to Meteorological Instruments and Methods of Observation (WMO 2006), an object must occupy at least 0.5 degrees of the total view relative to a viewer to be seen, and stand out from its surroundings (WMO 2006). Following the WMO methodology to determine viewing distance: from a distance of eight kilometres an object must be at least 70 m high to be visible. For the purposes of calculating the viewshed for the Project infrastructure a height of 50 m was used. Corresponding to the tallest infrastructure components, which would be the transmission line towers and power-line. Eight kilometres should therefore encompass all potential areas that would have views of the Project infrastructure.

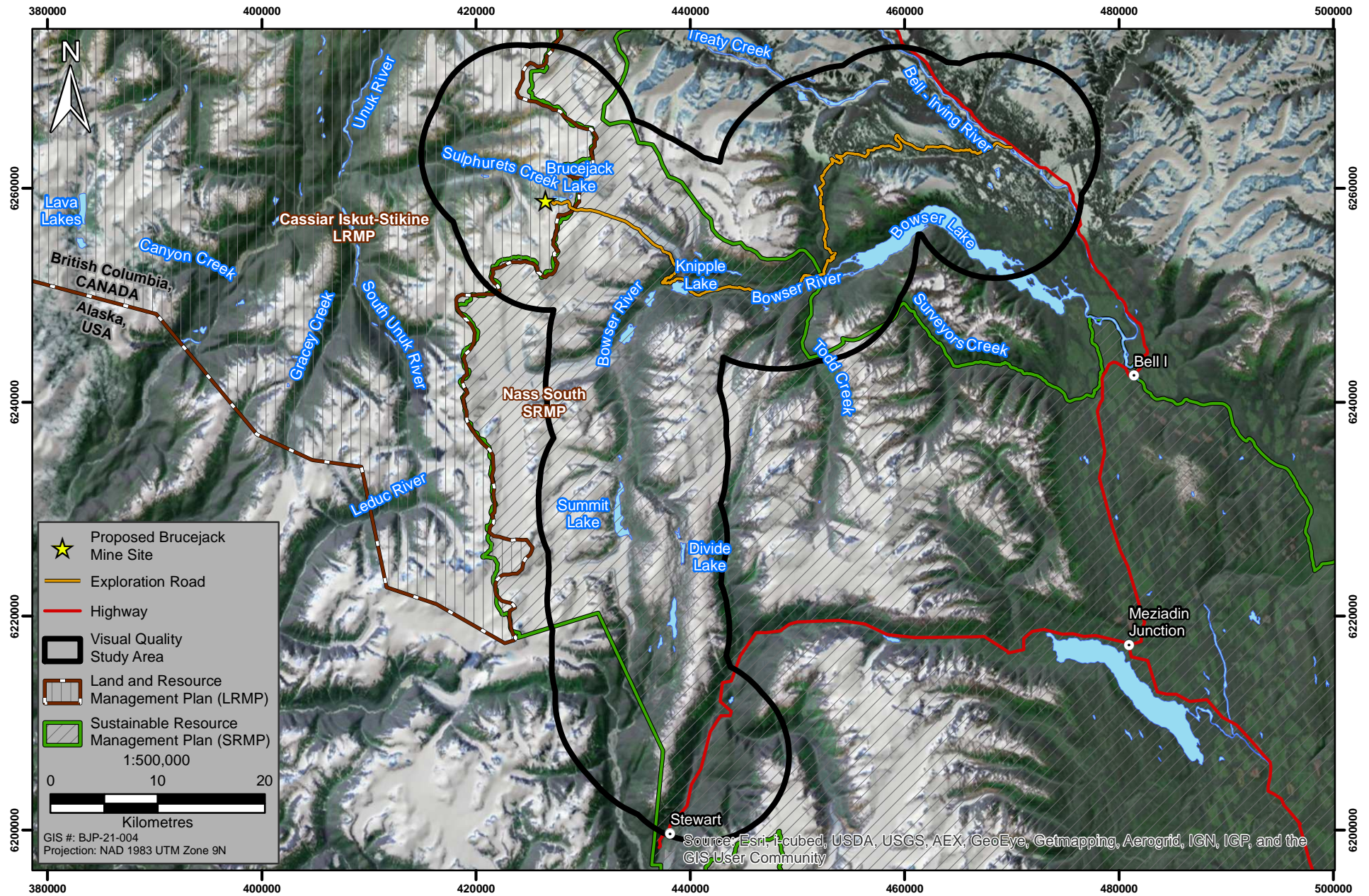


Figure 5-1

Figure 5-1

6. Methodology

6. Methodology

6.1 INTRODUCTION

The methods used for this study are based on procedures set out by the BC MOFR *Visual Impact Assessment Guidebook* (BC MOFR 2001). The guidebook lays out recommendations to help forest resource managers comply with the Forest Practices code. The baseline report will address the first two steps from the guidebook:

1. Planning and pre-field trip preparation.
2. Conducting fieldwork.
3. Developing design options and preparing visual simulations.
4. Assessing visual simulations.
5. Preparing a visual impact assessment report.

The remaining three steps will be addressed during the environmental assessment for the Project.

6.2 PLANNING AND PRE-FIELD TRIP PREPARATION

Planning and pre-field preparation was performed to gather information to identify potentially sensitive areas and prepare the data to be used for performing fieldwork. A review was conducted of relevant literature and current land use tenures. Any spatial data was overlaid in GIS based maps to compare the various types of data. Spatial information was studied and recorded using ArcGIS Geographic Information Systems (GIS) software.

Locations for field investigation were chosen based on the result of a viewshed analysis. The viewshed analysis was performed using ESRI ArcGIS 10.1 3D Analyst Viewshed tool to identify the areas within the VQSA that could potentially be viewed from proposed infrastructure location. An assumption in the analysis is that a person seen from the Project infrastructure can also view the Project infrastructure.

For analysis the location and assumed height of proposed infrastructure are inserted into a digital elevation model (DEM), with an approximate resolution of 20 metres, created by the Centre for Topographic Information. Vegetation was not taken into account for the baseline study. Vegetation will be taken into account during the environmental assessment for the Project.

Based on the literature review and identified land users in the general project area, significant and sensitive areas for visual quality were identified. A selection of these areas located within the Project viewshed were selected for field investigation.

6.3 CONDUCTING FIELDWORK

Site visits allow for a review and update of the potential viewpoints identified in the planning and field preparation step. Locations chosen during field-trip preparation were selected so the locations most often used or travelled through by typical users were visited. The means of travel used by potential area users, such as driving or walking, were used whenever possible by field personnel. The location of some sites were adjusted to be as close as possible to human activity and to locations where the typical view by potential users would be towards the potential infrastructure.

Viewpoints were visited and information was gathered in site visits undertaken on May 08, 2012, June 29, 2012, July 1, 2012 and August 15, 2012. At each viewpoint current conditions were recorded. Samples were taken from the ground whenever possible, using a 14.2 megapixel digital camera with a focal length of 5 mm to 25 mm, which is equivalent to 28 mm to 140 mm on a 35 mm lens. When a ground location was not accessible, photographs were taken from a helicopter as close to the ground as possible. The information gathered at each viewpoint included:

- GPS coordinates for the viewpoint (using a Garmin 60CX - Accuracy 3 - 5 metres 95% typical - Wide Area Augmentation System (WAAS) accuracy in North America or < 10 metres 95% typical where WAAS not available);
- current weather conditions;
- photographs from each viewpoint in the direction of proposed Project development; and
- the compass bearing in which the photograph was taken.

The information collected during all site visits is summarized in the Results section of this report.

7. Results

7. Results

7.1 PLANNING AND PRE-FIELD TRIP PREPARATION

7.1.1 Provincial Visual Quality Objectives

There are no specific locations within the VQSA that have specific visual quality objectives assigned in the CIS LRMP or SRMP. Within the CIS LRMP, the Unuk River Management Zone is the closest area with specific visual quality objectives to proposed infrastructure. None of the proposed Project infrastructure would be visible from this area.

7.1.2 Tenures

7.1.2.1 Commercial Recreation Tenures

Active commercial tenures were reviewed to obtain information to identify potentially visually sensitive areas. During the Brucejack Gold Mine Project land use baseline studies (Rescan 2012) four commercial recreation tenures were identified that are adjacent to or intersect with the VQSA. Active commercial tenures adjacent to the VQSA include commercial recreation licenses for heli-skiing, Guided Water Recreation, Guided Angling, and Guided Mountaineering (Figure 7.1-1).

There is one heli-skiing tenure, held by Last Frontier Heliskiing, which covers a substantial portion of the entire VQSA. The tenure encompasses approximately 9500 square kilometres. The heli-skiing is based out of Bell II Lodge and Stewart. The season runs between December through April. Multiple trips throughout the day are made between the lodge and the mountain tops. Last Frontier Heliskiing also offers angling and heli-fishing services from mid-September to the end of October on the Bell-Irving River.

Bear Enterprises and 11434 Yukon Ltd have Guided Backcountry Expeditions commercial tenures that intersect the VQSA (Table 7.1-1). Bear Enterprises conducts guided backcountry expeditions between Bell II and Hyder Alaska, along routes that include parts of the Knipple Glacier, as well as Teigen Creek and Hodkin Lake to the north of the Project. The tenure is typically used for expeditions once every five years. The 11434 Yukon Ltd tenure covers the same area as the Misty Mountain Outfitters guide outfitting licence. The two tenures are used in conjunction by the same owner to allow for added tours.

Table 7.1-1. Summary of Commercial Recreation Tenure Table

Company	Type of Commercial Licence
Last Frontier Heliskiing	Heli-ski
11434 Yukon Ltd.	Multiple Use Commercial Recreation Licence
Bear Enterprises	Guided Mountaineering/Rock Climbing
Bell II Lodge	Eco-Tourist Lodge/Resort

(Rescan Land Use)

7.1.2.2 Guide Outfitting Tenures

Guided outfitting requires licensed guides to accompany non-residents to participate in recreational hunting. Each guide has a specified territory (Figure 7.1-1). There are two guides outfitting tenures in the VQSA (Table 7.1-2).

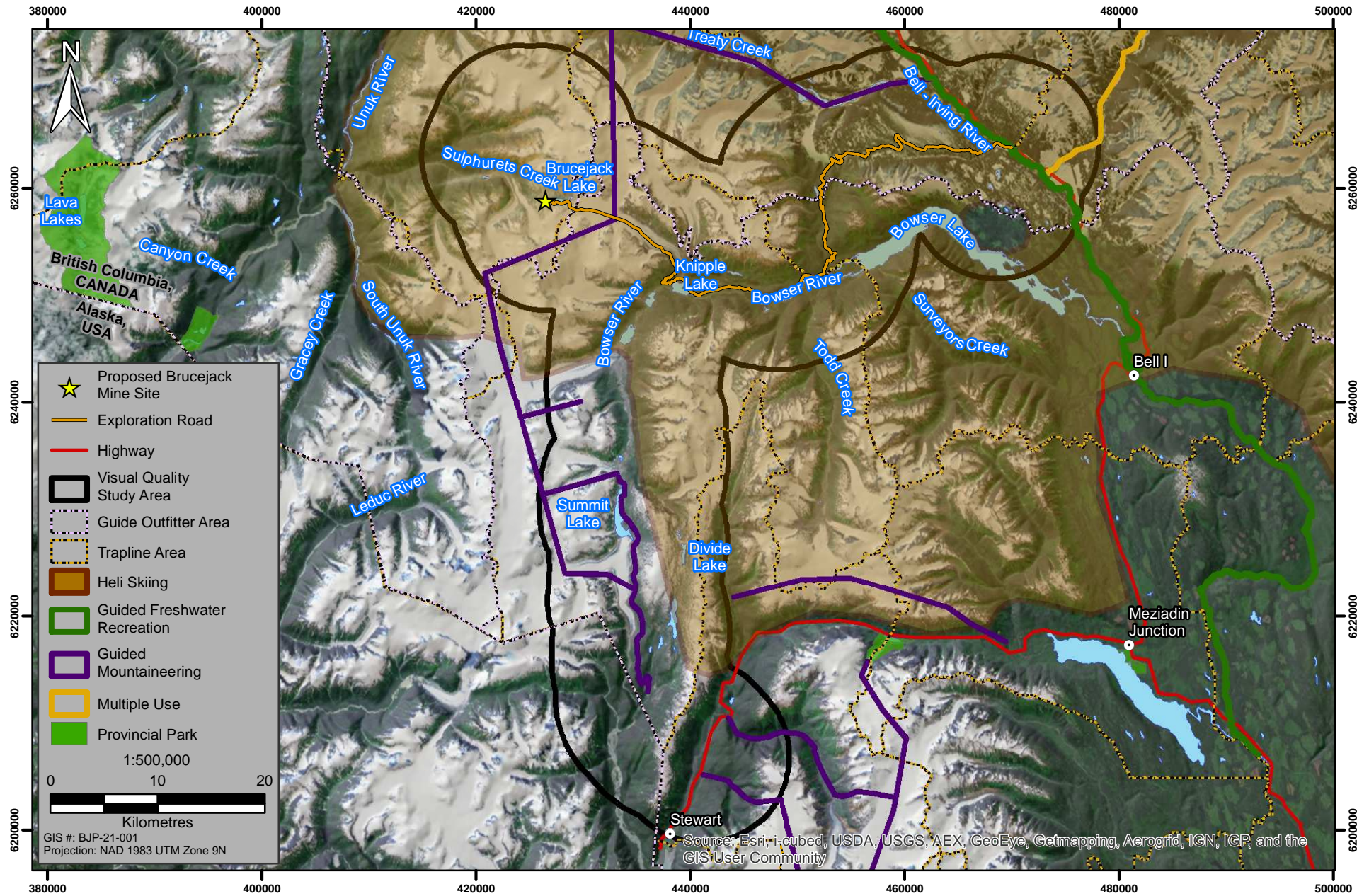


Figure 7.1-1

Figure 7.1-1

Table 7.1-2. Summary of Guide Outfitting Tenures

Company	Name
Misty Mountain Outfitters	Drinnan, Derek
Milligan Outfitting	Milligan, Robert

(Rescan Land Use)

A portion of the Misty Mountain Outfitters area intersects with the VQSA. There are typically one or two guided trips taken per year. ‘Hunting occurs across all of’ the tenure, however, it is sometimes concentrated in specific pockets ‘characterized by prime wildlife habitat.’ Guests are also offered angling service and guided hiking. The area is accessed by airplane or from Highway 37 from Bell II or Treaty crossings across the Bell Irving River.

Milligan Outfitting’s tenure overlaps the VQSA in the south. The tenure holder hosts an average of two trips per year in May and October, taking one or two clients per trip. ‘The tenure is primarily accessed by foot from a cabin on Bowser Lake.’ Milligan Outfitting offers angling services as well along the Bell-Irving River. They utilize a ‘cabin at Bowser Lake and one abandoned cabin along Bowser River at the mouth of Todd Creek.’

7.1.2.3 Angling Licenses and Tenures

The Nisga’a Nation holds angling guide licenses along the Bell-Irving River, a portion of which is located within the VQSA.

There are two angling guides operating within the VQSA. Geoff Straight operates out of Bell II Lodge. Overnight trips are based from a tent camp approximately 15 km south of Bell II, along the Bell-Irving River. Angling trips are lead over eight weeks in the fall. The trips are mainly along the Bell-Irving River, upstream of its confluence with the Bowser River, and its tributaries, such as Teigen Creek.

7.1.3 Recreational Use

Recreational Features Polygons near the Project are presented in Figure 7.1-2 and Table 7.1-3. Graveyard Point on Bowser Lake was listed in the RFI with a sensitivity of high and significance rating of very high. The ratings indicated that there would be higher potential that development would result in adverse effects to recreation resources. No other areas within the VQSA had more than a moderate sensitivity rating.

Table 7.1-3. RFI Ratings in VQSA

Scenic Area	RFI Sensitivity Rating	RFI Significance Rating
Graveyard Point Site	High	Very High
Knipple Glacier near Brucejack Lake	Moderate	High
Areas surrounding Bowser River and Bowser Lake	Moderate	Moderate
Salmon Glacier	Moderate	Very High

Source: Data BC 2011

The area around Salmon Glacier had a significance rating of very high, while the surrounding valley had a significance rating of high. Sections of the Knipple Glacier near Brucejack Lake had a significance rating of high (Figure 7.1-2). The remaining VQSA had a significance rating of no higher that moderate (Table 7.1-3).

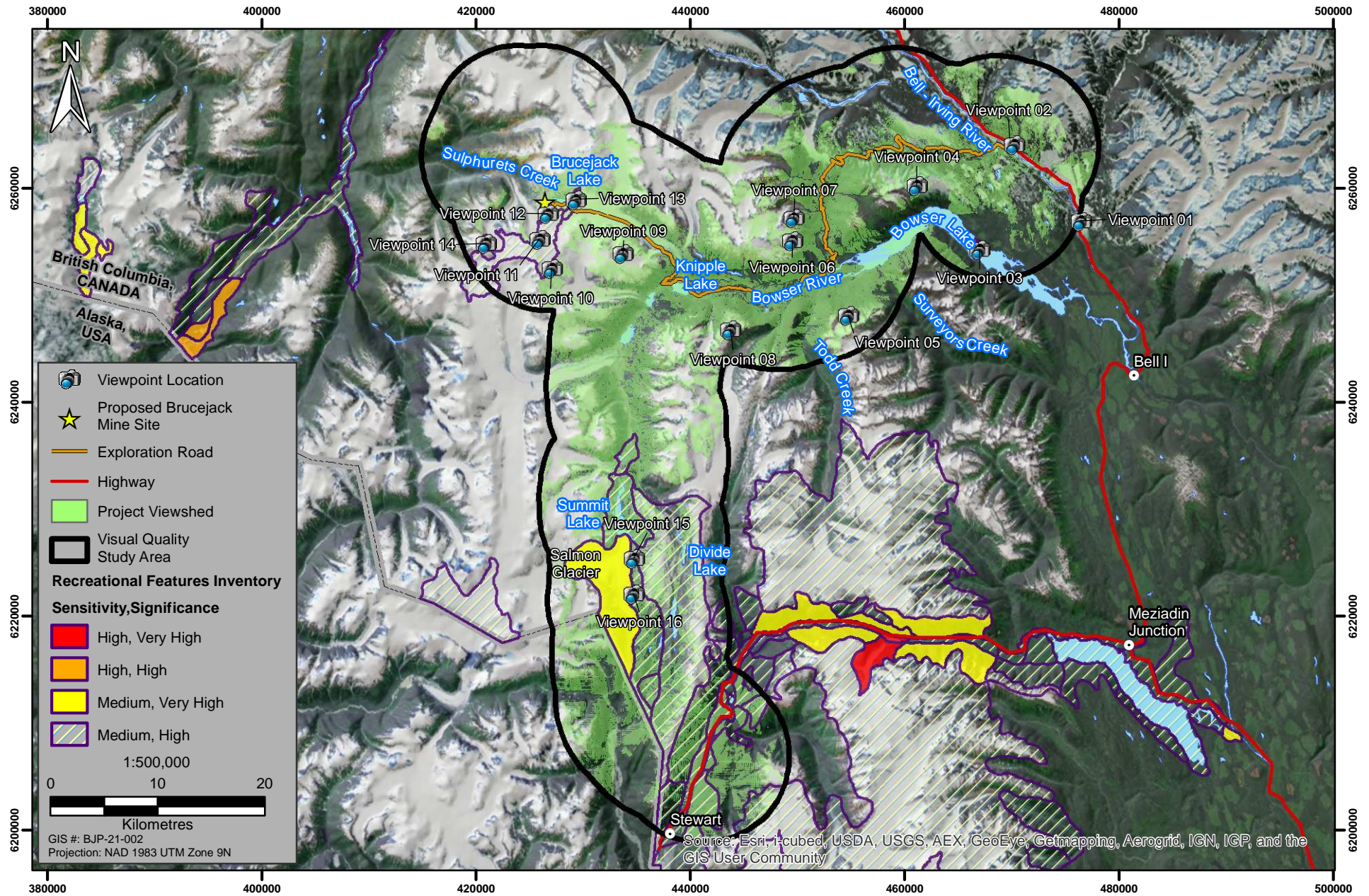


Figure 7.1-2



Brucejack Gold Mine Project: Viewpoint Locations in relation to Viewshed Analysis and RFI Recreational Feature Polygons

Figure 7.1-2



7.1.4 Viewshed Analysis

The viewshed results were combined with the user information to help inform the field work. The project viewshed within the VQSA is presented in Figure 7.1-2. The viewshed area indicates locations where the Project infrastructure may be visible. The following areas were identified as primary locations where there was a relatively higher likelihood that the Project infrastructure could be seen (Figure 7.1-2):

- The Knipple Glacier area;
- Bowser Lake area;
- Highway 37 area; and
- Salmon Glacier area.

7.2 FIELDWORK

Within the VQSA the lower elevation areas are heavily forested. Steep slopes rise to mountains standing several hundred metres above the valley floor. The higher elevations are characterized by alpine vegetation with late season snow and glaciers.

Photographs were taken at several locations around the VQSA on May 8, June 29, June 30, July 1 and August 15, 2012. Weather conditions when photographs were taken are summarized in Table 7.2-1.

Table 7.2-1. Viewpoint Locations

Viewpoint	View	Bearing	Weather	Easting	Northing
1	1	W	Scattered Clouds	475864	6259046
2	1	W	High Clouds	469795	6264656
	2	SE			
3	1	E	Scattered Clouds	466974	6254297
4	1	NE	Scattered Clouds	461115	6260306
5	1	W-NW	Scattered Clouds	454717	6248114
6	1	E-NE	Scattered Clouds	449515	6255089
7	1	NE-SE	Scattered Clouds	449640	6257244
8	1	NW	Clear/Sun	439298	6245990
	2	NE			
9	1	NW	Clear/Sun	433704	6253897
	2	NE			
10	1	N-NE	Clear/Sun	427055	6252511
11	1	NE	Clear/Sun	425926	6255269
	2	E			
12	1	NW	Low Cloud	426700	6257627
	2	N			
13	1	W	Clear/Sun	429309	6258995
	2	E			
14	1	NE	Clear/Sun	420905	6254829
15	1	W	Low Overcast	434714	6225410
	2	W		434857	6225425
16	1	E	Clear/Sun	434685	6222023

Viewpoint 1

Viewpoint 1 photographs were taken on May 8, 2012, from Highway 37, near the Bell-Irving River. There was snow on the ground at lower elevations. The photographed location was within an area rated as Moderate sensitivity and Moderate significance. The visibility from this location is restricted by vegetation (Plate 7.2-1a to Plate 7.2-1b).



Plate 7.2-1a. Viewpoint 1 - View 1 - Looking west from Highway 37 from a point near the Bell-Irving River, May 8, 2012.



Plate 7.2-1b. Viewpoint 1 - Location and bearings from a point near the confluence of Wildfire Creek and the Bell-Irving River, May 8, 2012.

Viewpoint 2

Viewpoint 2 photographs were taken on June 29, 2012 and July 1, 2012, on Highway 37, near the confluence of Wildfire Creek and the Bell-Irving River. The photographed location was within an area rated as Moderate sensitivity and Moderate significance. The access road gate could be seen from the location. The visibility from this location is restricted by vegetation (Plate 7.2-2a to Plate 7.2-2c).



Plate 7.2-2a. Viewpoint 2 - View 1 - Looking west from Highway 37 a point near the confluence of Wildfire Creek and the Bell-Irving River, July 1, 2012.



Plate 7.2-2b. Viewpoint 2 - View 2 - Looking south-east along Highway 37 from a point near the confluence of Wildfire Creek and the Bell-Irving River, July 1, 2012.

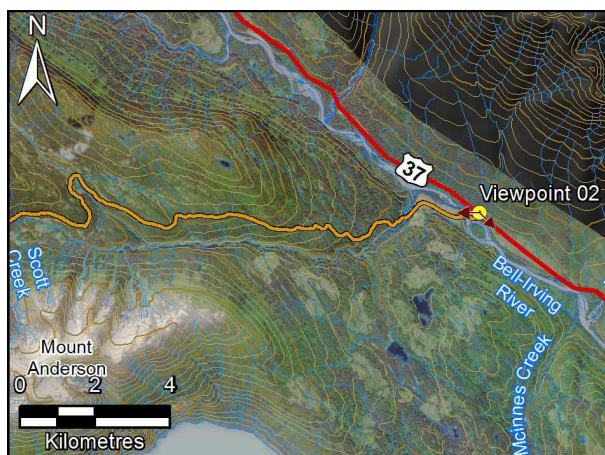


Plate 7.2-2c. Viewpoint 2 - Location and bearings from a point near the confluence of Wildfire Creek and the Bell-Irving River, July 1, 2012.

Viewpoint 3

Viewpoint 3 photographs were taken on June 29, 2012 off the eastern shore of Bowser Lake, near Graveyard Point. The photographed location was within an area rated as High sensitivity and Very High significance. No existing development could be seen from the location. The lake is surrounded by forest and steep slopes. The visibility from this location is restricted by vegetation and terrain (Plate 7.2-3a to Plate 7.2-3b).

Viewpoint 4

Viewpoint 4 photographs were taken on June 29, 2012, on an eastern slope of Mount Anderson. The photographed location was within an area rated as Low sensitivity and Moderate significance. No existing development could be seen from the location. The view from the slope is restricted by terrain, but the view is not restricted by vegetation (Plate 7.2-4a to Plate 7.2-4b).



Plate 7.2-3a. Viewpoint 3 - View 1 - Looking east at Graveyard point from a point over Bowser Lake, June 29, 2012.



Plate 7.2-3b. Viewpoint 3 - Location and bearings from a point on Bowser Lake, June 29, 2012 and July 1, 2012.



Plate 7.2-4a. Viewpoint 4 - View 1 - Looking east from a point on Mount Anderson on the north shore of Bowser Lake, June 29, 2012.

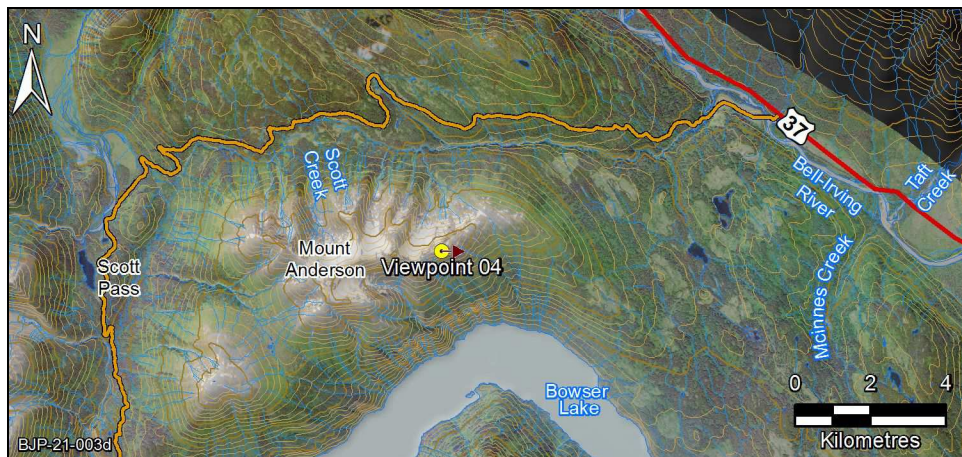


Plate 7.2-4b. Viewpoint 4 - Location and bearings from a point on Mount Anderson, June 29, 2012.

Viewpoint 5

Viewpoint 5 photographs were taken on June 29, 2012, on a slope overlooking Bowser River. The photographed location was within an area rated as Low sensitivity and Moderate significance. No existing development could be seen from the location. The visibility from the slope is restricted by vegetation and terrain (Plate 7.2-5a to Plate 7.2-5b).

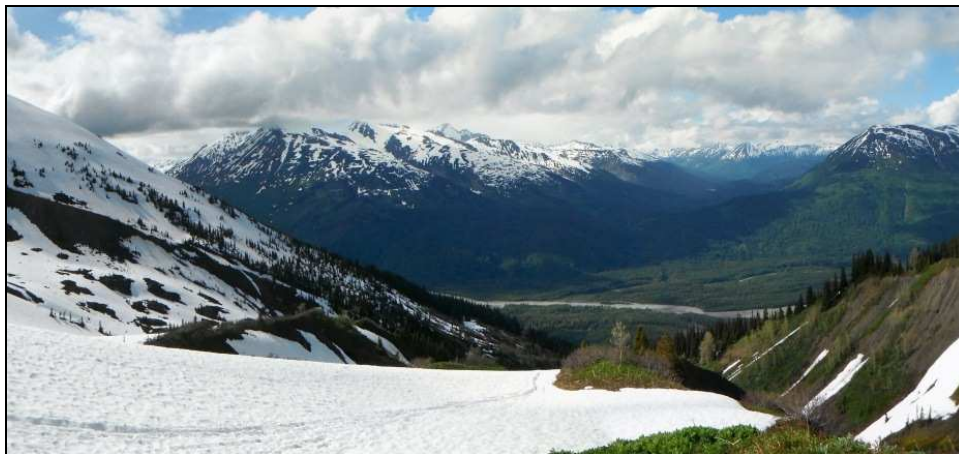


Plate 7.2-5a. Viewpoint 5 - View 1 - Looking west from a point on a slope overlooking Bowser River, June 29, 2012.

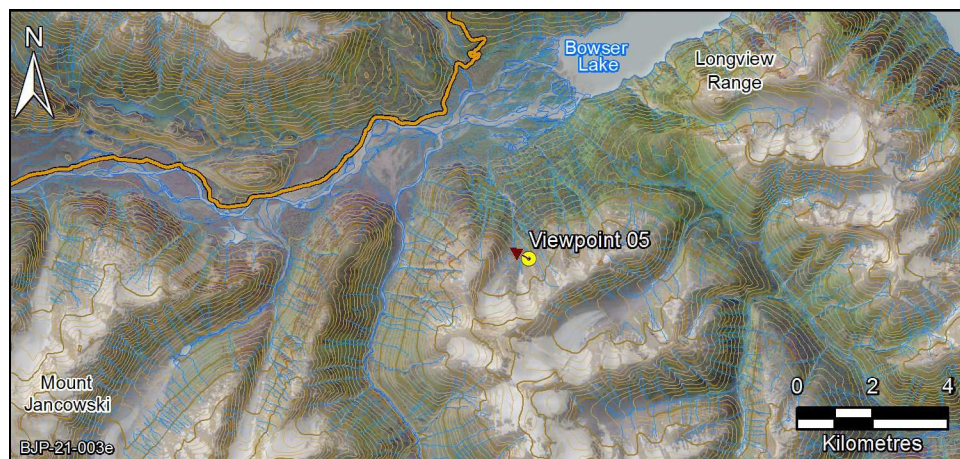


Plate 7.2-5b. Viewpoint 5 - Location and bearings from a point on a slope overlooking Bowser River, June 29, 2012.

Viewpoint 6

Viewpoint 6 photographs were taken on June 29, 2012, on a slope overlooking Scott Pass. The photographed location was within an area rated as Low sensitivity and Moderate significance. No existing development could be seen from the location. The visibility from the slope is restricted by terrain, but not by vegetation (Plate 7.2-6a to Plate 7.2-6b).



Plate 7.2-6a. Viewpoint 6 - View 1 - Looking east from a point on a slope overlooking Scott Pass, June 29, 2012.

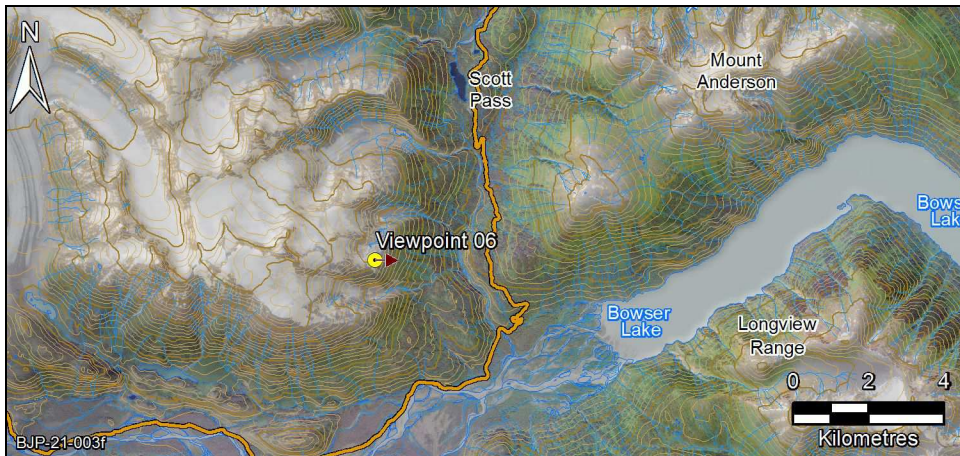


Plate 7.2-6b. Viewpoint 6 - Location and bearings from a point on a slope overlooking Scott Pass, June 29, 2012.

Viewpoint 7

Viewpoint 7 photographs were taken on June 29, 2012, on a slope overlooking Scott Pass. The photographed location was within an area rated as Low sensitivity and Moderate significance. No existing development could be seen from the location. The visibility from the slope is restricted by terrain, but not by vegetation (Plate 7.2-7a to Plate 7.2-7b).

Viewpoint 8

Viewpoint 8 photographs were taken on August 15, 2012, on a slope of Mount Jancowski, overlooking Bowser River. The photographed location was within an area rated as Moderate sensitivity and Moderate significance. An exploration road could be seen in the valley bottom. No other existing development could be seen from the location. The visibility from the slope is restricted by terrain, but not by vegetation (Plate 7.2-8a to Plate 7.2-8c).

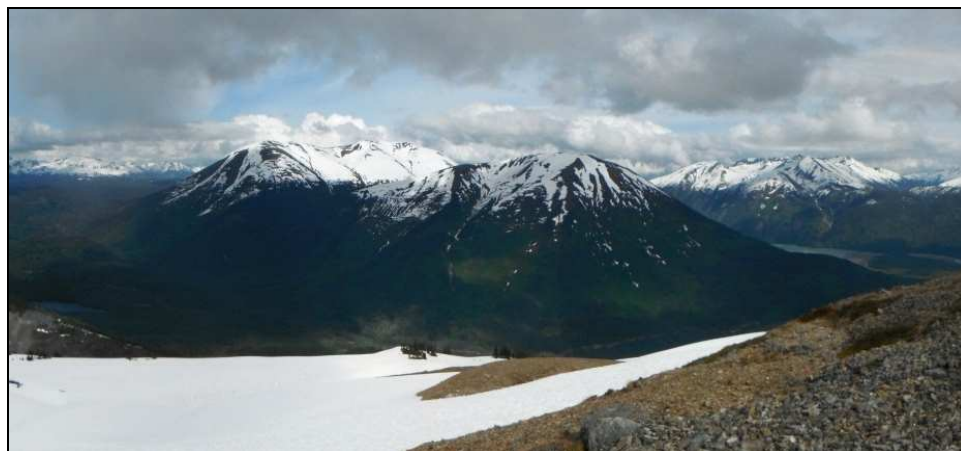


Plate 7.2-7a. Viewpoint 7 - View 1 - Looking east from a point on a slope overlooking Scott Pass, June 29, 2012.

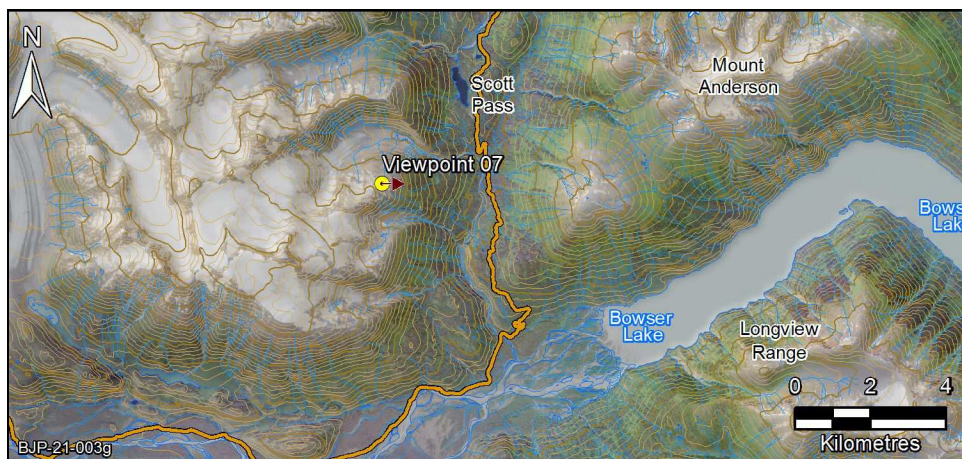


Plate 7.2-7b. Viewpoint 7 - Location and bearings from a point on a slope overlooking Scott Pass, June 29, 2012.



Plate 7.2-8a. Viewpoint 8 - View 1 - Looking north-west towards Knipple Lake from a point on a slope overlooking Bowser River, August 15, 2012.



Plate 7.2-8b. Viewpoint 8 - View 2 - Looking north-east towards Bowser Lake from a point on a slope overlooking Bowser River, August 15, 2012.

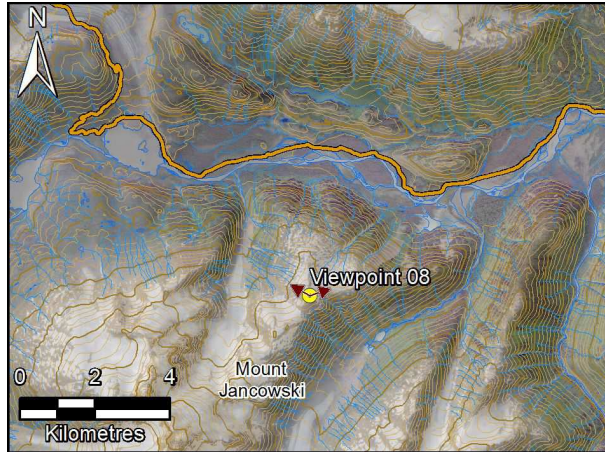


Plate 7.2-8c. Viewpoint 8 - Location and bearings from a point on a slope overlooking Scott Pass, August 15, 2012.

Viewpoint 9

Viewpoint 9 photographs were taken on August 15, 2012, on a slope above the Knipple Glacier. The photographed location was within an area rated as Moderate sensitivity and Moderate significance. No existing development could be seen from the location. The visibility from the slope is restricted by terrain, but not by vegetation (Plate 7.2-9a to Plate 7.2-9c).

Viewpoint 10

Viewpoint 10 photographs were taken on August 15, 2012, on a peak above the Knipple Glacier. The photographed location was within an area rated as Moderate sensitivity and High significance. No existing development could be seen from the location. The visibility from the slope is restricted by terrain, but not by vegetation (Plate 7.2-10a to Plate 7.2-10b).



Plate 7.2-9a. Viewpoint 9 - View 1 - Looking north towards Knipple Glacier from a point on a ridge overlooking the Knipple Glacier, August 15, 2012.



Plate 7.2-9b. Viewpoint 9 - View 2 - Looking south-east towards Bowser Lake from a point on a ridge overlooking the Knipple Glacier, August 15, 2012.

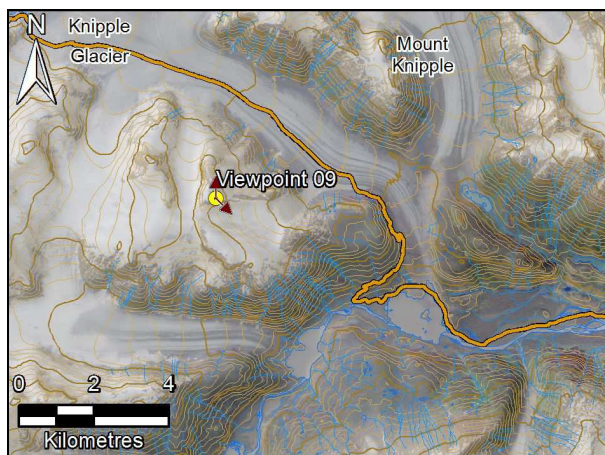


Plate 7.2-9c. Viewpoint 9 - Location and bearings from a point on a ridge overlooking the Knipple Glacier, August 15, 2012.



Plate 7.2-10a. Viewpoint 10 - View 1 - Looking north towards Knipple Glacier from a point on a ridge overlooking the Knipple Glacier, August 15, 2012.

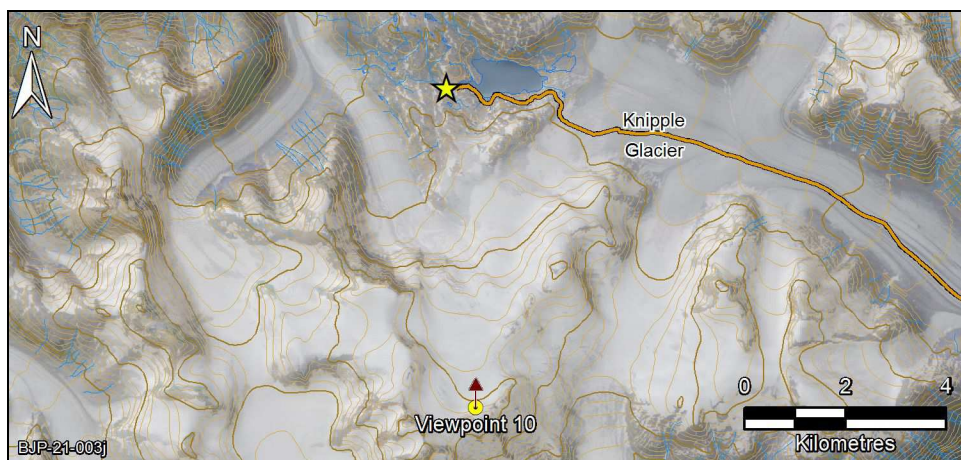


Plate 7.2-10b. Viewpoint 10 - Location and bearings from a point on a ridge overlooking the Knipple Glacier, August 15, 2012.

Viewpoint 11

Viewpoint 11 photographs were taken on August 15, 2012, on a slope above the Sulphurets Glacier. The photographed location was within an area rated as Moderate sensitivity and High significance. A drill pad, supporting exploration work for the Project, could be seen from this location. No other existing development could be seen from the location. The visibility from the slope is restricted by terrain, but not by vegetation (Plate 7.2-11a to Plate 7.2-11c).



Plate 7.2-11a. Viewpoint 11 - View 1 - Looking north-east towards Sulpurets Glacier from a point on a slope overlooking the Sulpurets Glacier, August 15, 2012.



Plate 7.2-11b. Viewpoint 11 - View 2 - Looking north-east towards Bowser Lake from a point on a slope overlooking the Sulpurets Glacier, August 15, 2012.



Plate 7.2-11c. Viewpoint 11 - Location and bearings from a point on a ridge overlooking the Knipple Glacier, August 15, 2012.

Viewpoint 12

Viewpoint 12 photographs were taken on June 30, 2012, on a slope between the Sulphurets Glacier and Brucejack Lake. The photographed location was within an area rated as Moderate sensitivity and High significance. The exploration camp and a drill pad could be seen from this location. The visibility from the slope is restricted by terrain, but not by vegetation (Plate 7.2-12a to Plate 7.2-12c).



Plate 7.2-12a. Viewpoint 12 - View 1 - Looking north-west towards Sulpurets Glacier from a point on a slope between the Sulpurets Glacier and Brucejack Lake, June 30, 2012.



Plate 7.2-12b. Viewpoint 12 - View 2 - Looking north towards Brucejack Lake from a point on a slope between the Sulpurets Glacier and Brucejack Lake, June 30, 2012.

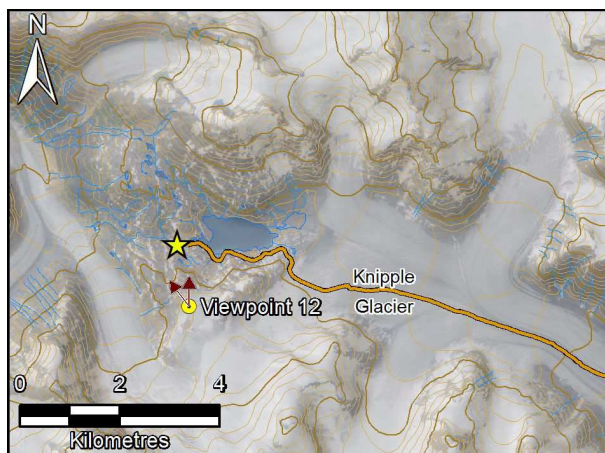


Plate 7.2-12c. Viewpoint 12 - Location and bearings from a point between the Sulpurets Glacier and Bowser Lake, June 30, 2012.

Viewpoint 13

Viewpoint 13 photographs were taken on August 15, 2012, on the Knipple Glacier east of Brucejack Lake. The photographed location was within an area rated as Moderate sensitivity and High significance. No existing development could be seen from this location. The visibility from the slope is restricted by terrain, but not by vegetation (Plate 7.2-13a to Plate 7.2-13c).

Viewpoint 14

Viewpoint 14 photographs were taken on August 15, 2012, on a ridge above the Knipple Glacier west of Brucejack Lake. The photographed location was within an area rated as Moderate sensitivity and High significance. No existing development could be seen from this location. The visibility from the slope is restricted by terrain, but not by vegetation (Plate 7.2-14a to Plate 7.2-14b).



Plate 7.2-13a. Viewpoint 13 - View 1 - Looking west towards Brucejack Lake from a point on the Knipple Glacier east of Brucejack Lake, August 15, 2012.



Plate 7.2-13b. Viewpoint 13 - View 2 - Looking east along Knipple Glacier Lake from a point on the Knipple Glacier east of Brucejack Lake, August 15, 2012.

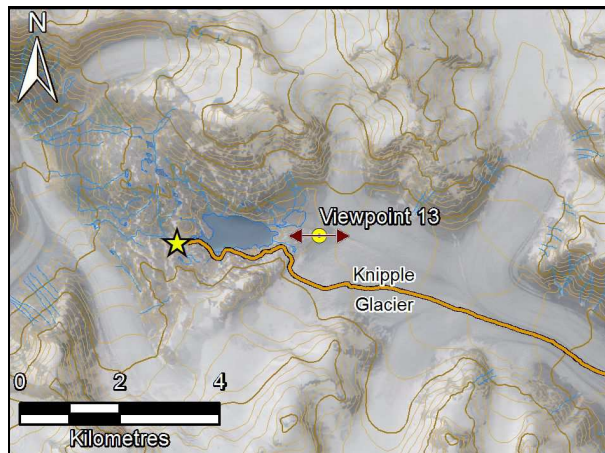


Plate 7.2-13c. Viewpoint 13 - Location and bearings from a point on the Knipple Glacier east of Brucejack Lake, August 15, 2012.

Viewpoint 15

Viewpoint 15 photographs were taken on September 23, 2012, from a scenic viewing area below the Salmon Glacier. The photographed location was within an area rated as Moderate sensitivity and Very High significance. The visibility from the slope is restricted by terrain (Plate 7.2-15a to Plate 7.2-15c).

Viewpoint 16

Viewpoint 16 photographs were taken on September 21, 2012, from a road east of the Salmon Glacier. The photographed location was within an area rated as Moderate sensitivity and High significance. The visibility from the slope is restricted by terrain (Plate 7.2-16a to Plate 7.2-16b).



Plate 7.2-14a. Viewpoint 14 - View 1 - Looking north-east towards the Sulphurets Glacier from a ridge above the Knipple Glacier west of Brucejack Lake, August 15, 2012.

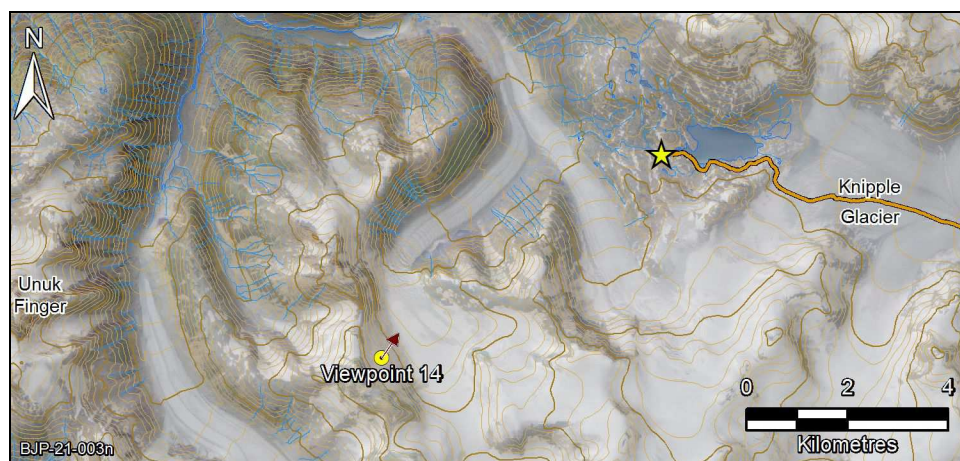


Plate 7.2-14b. Viewpoint 14 - Location and bearings from a point on the Knipple Glacier west of Brucejack Lake, June 30, 2012.



Plate 7.2-15a. Viewpoint 15 - View 1 - Looking west towards the Salmon Glacier from a viewpoint to the east of the Salmon Glacier, September 23, 2012.



Plate 7.2-15b. Viewpoint 15 - View 2 - Looking west towards the Salmon Glacier and lookout from a viewpoint to the east of the Salmon Glacier lookout, September 23, 2012.

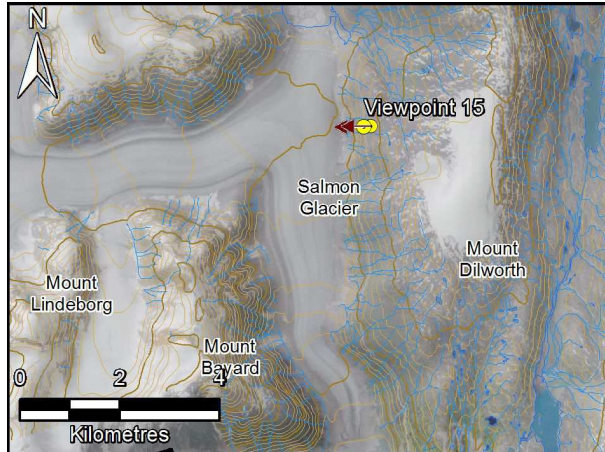


Plate 7.2-15c. Viewpoint 15 - Location and bearings viewpoint to the east of the Salmon Glacier, September 21 and 23, 2012.



Plate 7.2-16a. Viewpoint 16 - View 1 - Looking north from a viewpoint on the road to the east of the Salmon Glacier, September 21, 2012.

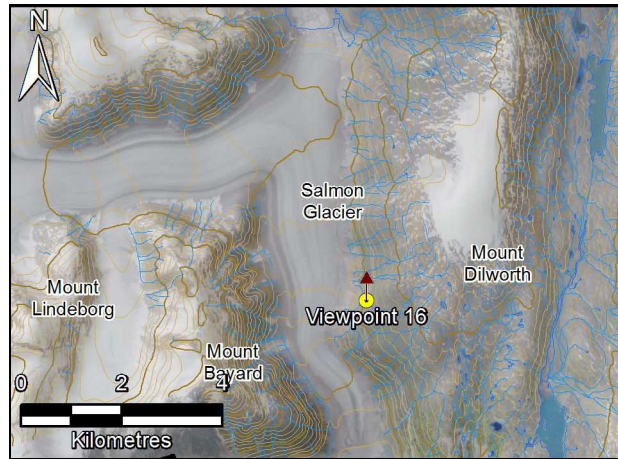


Plate 7.2-16b. Viewpoint 16 - Location and bearings viewpoint on the road to the east of the Salmon Glacier, September 21, 2012.

8. Conclusions

8. Conclusions

The several areas of the Brucejack Project area are mountainous and relatively remote. It can be accessed via Highway 37, but is usually entered by boat or helicopter. Provincial resource objectives set out in the CIS LRMP have objectives to support mine development in the area while protecting recreational use in the area. The Project area is used by several recreational groups because it is a natural environment with high aesthetic value. The VSQA is used throughout the year. In winter a heli-skiing company use several mountains throughout the VSQA as part of a much larger range. Backcountry expeditions, angling and hunting trips run infrequently at various times throughout the rest of the year. The Salmon Glacier is a popular spot for tourists to travel to, though it is remote. Due to the remoteness of the area and the lack of access through it, there is expected to be little unregistered recreational activity. The area overlaps traplines licences and has value to the Skii km Lax Ha and Nisga'a fishing in the eastern section of the VQSA. An important cultural heritage site is within the Project Area near to the north-eastern shore of Bowser Lake.

A viewshed analysis was performed, to determine what areas around the project area could potentially be seen from proposed project infrastructure. The analysis identified four key areas within the study area: Knipple Glacier, Bowser Lake, Highway 37 and the Salmon Glacier. Viewpoints were selected within the key areas and were visited for field data collection. The resulting description of the potentially sensitive areas account for other features that may act as visual obstructions, such as terrain or other natural features.

Views from the selected viewpoints were predominately of an unmodified natural state. Current development that is visible from the viewpoints included Highway 37, a secondary paved road leading to the Salmon Glacier lookout point and structures to support the current exploration phase for the Project (i.e., access road, camp, and drill pads).

References

References

- Holman, G and E. Terry. 2000. *Cassiar Iskut-Stikine Land and Resource Management Plan “Consensus Recommendations Package”, Socio-Economic & Environmental Assessment: Final Report*. Government of British Columbia
http://archive.ilmb.gov.bc.ca/slrp/lrmp/smithers/cassiar/plan/files/cassiar_I-S_LRMP_SEEA_pt1_SEA_aug2000.pdf (accessed November 2012)
- BC GOV ENV. 2011. Parks and Protected Areas Regional Boundaries
<https://apps.gov.bc.ca/pub/geometadata/metadataDetail.do?from=search&edit=true&showall=showall&recordSet=ISO19115&recordUID=61319> (accessed 2012).
- BC ILMB. 2000. *Cassiar Iskut-Stikine land and resource management plan*.
<http://ilmbwww.gov.bc.ca/slrp/lrmp/smithers/cassiar/index.html>. (accessed November 2012).
- BC MoF. 1998. *Recreation Features Inventory Procedures and Standards Manual*. Government of British Columbia.
- BC MoF. 2001. *Visual Impact Assessment Guidebook*. 2nd ed. Forest Practices Branch, Ministry of Forests, Victoria, B.C.
- DataBC, 2011. *Recreational Features Inventory*.
<http://www.data.gov.bc.ca/dbc/catalogue/detail.page?config=dbc&P110=recorduid:173774&recorduid=173774&title=Recreational Features Inventory> (accessed in November 2012).
- BC MoFLNRO. 2012. *Nass South - Sustainable Resource Management Plan*. Ministry of Forests, Lands and Natural Resource Operations: Smithers, BC.
http://www.ilmb.gov.bc.ca/slrp/srmp/south/nass/docs/Nass_South_SRMP_final.docx (accessed October 2012).
- BC MoFLNRO. 2012. *Nass South - Sustainable Resource Management Plan*. Government of British Columbia.
<http://archive.ilmb.gov.bc.ca> (accessed 2012)
- BC MSRM. 2000. *Cassiar Iskut - Stikine Land and Resource Management Plan*. Government of British Columbia. <http://archive.ilmb.gov.bc.ca/slrp/lrmp/smithers/cassiar/plan/files/CIS-LRMP-November-2006.pdf> (accessed 2012)
- BC MSRM. 2002. *Gridded DEM Product Specification Release 2.0* Government of British Columbia
<http://archive.ilmb.gov.bc.ca/crgb/pba/trim/specs/BC-DEM-specifications-2002-12.pdf> (accessed November 2012)
- Rescan. 2013 *Draft Brucejack Gold Mine Project: 2012 Archaeology Baseline Report - In Progress..* Prepared for Pretium Resources Inc. by Rescan Environmental Services Ltd.: Vancouver, British Columbia.
- Rescan. 2013 *Draft Brucejack Gold Mine Project: 2012 Non-Traditional Land Use Baseline Report - In Progress*. Prepared for Pretium Resources Inc. by Rescan Environmental Services Ltd.: Vancouver, British Columbia.
- WMO. 2006. *Guide to Meteorological Instruments and Methods of Observation - Measurement of Meteorological Variables - Part I*. Secretariat of the World Meteorological Organization. Geneva, Switzerland. <http://www.scribd.com/doc/37427718/Part-I> (accessed November 2012)