

Appendix 7.1-A

Tenas Project Archaeology Baseline Report



Tenas Project

Archaeology Baseline Report

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Submitted by:

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EXECUTIVE SUMMARY

This archaeology baseline report summarizes the results of the archaeological studies conducted by Crossroads Cultural Resource Management Ltd. (Crossroads CRM) under Permit # 2018-0338 for the proposed development of a metallurgical coal mine (the Tenas Project; ‘the Project’) near Telkwa, BC, on behalf of Allegiance Coal Limited, operating as Telkwa Coal Limited (‘the Proponent’). This report describes the Project, Proponent, Study Area, and the Project’s regulatory and policy context. Furthermore, it outlines the methodologies of the baseline archaeological studies conducted by Crossroads CRM: an Archaeological Overview Assessment (AOA) in 2018, Preliminary Field Reconnaissance (PFR) in 2017 and 2018, and an Archaeological Impact Assessment (AIA) in 2018 and 2019. It concludes with a discussion of the significance of archaeological and heritage resources, followed by appropriate mitigation measures that should be implemented during the Tenas Project to avoid impacting archaeological and heritage resources.

Six registered archaeological sites were identified during the 2018 AOA: GdSs-1, GdSs-2, GdSs-3, and GdSs-4 (historic mining and camping sites, all of which are no longer in existence), GdSs-5 (precontact lithics), and GdSr-8 (a series of cultural depressions). AOA and PFR results were used to indicate areas of high archaeological potential, which were evaluated during the AIA. Two post-1846 CMTs site consisting of three Culturally Modified Trees (CMTs) in total were found during the AIA, and are not afforded protection status under the *Heritage Conservation Act*; however, the Wet’suwet’en will attribute ethnic significance to this heritage site. Any potential mitigation of these CMTs should be discussed with the Office of the Wet’suwet’en.

Four permissible archaeologists, with a high level of experience in northern interior BC, worked on this project, along with several archaeological technicians. House representatives from relevant Wet’suwet’en House Groups participated in the field archaeological assessments, and all field work was completed in accordance with Wet’suwet’en cultural protocols and provincial archaeology branch parameters.

Tenas Project

Archaeology Baseline Report

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GLOSSARY AND ABBREVIATIONS

Abbreviation Long form of abbreviation

AIA	Archaeological Impact Assessment
AIR	Application Information Requirements
AOA	Archaeological Overview Assessment
BC	British Columbia
BC EAA	<i>BC Environmental Assessment Act</i>
CEAA	<i>Canadian Environmental Assessment Act</i>
CMT	Culturally Modified Tree
Crossroads CRM	Crossroads Cultural Resource Management
CUS	Cultural Use Study
EA	Environmental Assessment
HCA	<i>Heritage Conservation Act</i>
PFR	Preliminary Field Reconnaissance
RAAD	Remote Access to Archaeological Data
TK / TEK	Traditional Knowledge / Traditional Ecological Knowledge
UNDRIP	<i>United Nations Declaration on the Rights of Indigenous Peoples</i>

1. INTRODUCTION

1.1 Project Proponent

The Project developer, Telkwa Coal Limited ('the Proponent'), is a subsidiary of Allegiance Coal Limited (ACL). Based out of Sydney, New South Wales, Australia, ACL focuses on the production of metallurgical (steelmaking) coal (Telkwa Coal Project 2018:1-1). Altius Minerals, owner of 14% outstanding shares in Allegiance Coal, originally acquired the Project in 2014 from Sherritt as part of a Prairies royalties acquisition and Carbon Development Partnership. In 2017, Altius entered into an agreement to sell 100% ownership of the Project for shares in ACL, in addition to retaining royalty in gross sales ranging from 1.5%-3%, depending on benchmark coal prices (Altius Minerals 2019).

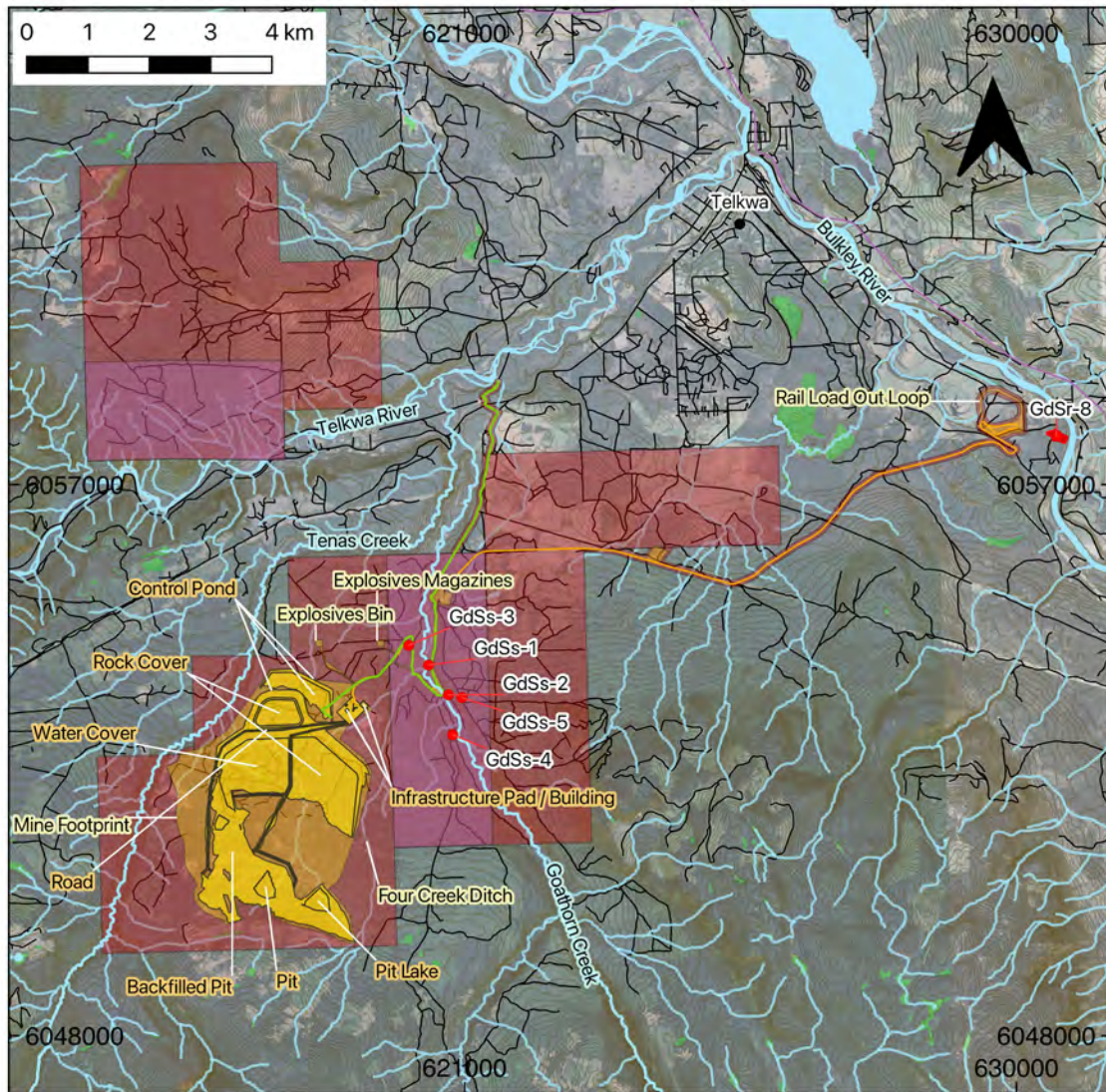
1.2 Project Description

The Tenas Project ('the Project') is a proposed surface mine anticipated to produce 750,000 tonnes per annum of saleable coal. The Project is situated in the Bulkley-Nechako region of Northern British Columbia, approximately 15km south of Smithers and 7km west/southwest of Telkwa, BC. The average strip ratio is predicted to be 3.6:1BCM/ROMt, with a total operation duration of 22 years, in which 15% of the Telkwa coal resource will be extracted (Allegiance Coal 2019). The surface mining will be conducted as a conventional truck/shovel operation comparable to conventional quarry operations in the region. Overall, an estimated 15 million tonnes of washed metallurgical coal will be produced for steel-manufacturing (Telkwa Coal Limited 2018:1). The mine's expected footprint is 1000ha, including buffers. Of significant note is the Project's ease of access to rail and port. A 2.5km rail loop (7km northeast of the Project) will be constructed and subsequently connected to the existing CN rail line. This allows for efficient transport to the Port of Prince Rupert (Altius Minerals 2019; Telkwa Coal Limited 2018:3-9).

The commissioning, construction, and pre-mine development of the Project are cumulatively expected to take up to a year. The reclamation phases will require between two and three years, after which monitoring will continue to ensure reclamation efforts have been effective (Telkwa Coal Limited 2018).

Locations of infrastructure for metallurgical coal operation and associated transportation elements and operational facilities are depicted in Figures 1 through 4. The project includes two surface pits, a waste rock disposal area, coal processing infrastructure, and ancillary infrastructure, such as storage, maintenance facilities, and access roads. A proposed rail siding and stockpile facilities will connect with the main rail lines adjacent to the Bulkley River, just south of Telkwa ('rail loop and loadout').

The Project mine site, rail loop, and loadout fall within Wet'suwet'en traditional territories. The mine site is located in Cas'Yex House territory; the rail loop and loadout are located in Kwen Bea Yex House territory. The need for an assessment is the result of regulatory requirements, First Nations interests, and/or, but not exclusively limited to, provisions of the *Heritage Conservation Act (HCA)*.



General Development Map - Tenas Project

Legend

- | | |
|--|---|
| Tenas Project Infrastructure | Archaeological Sites |
| Ancilliary Project Infrastructure | Highway 16 |
| Telkwa Coal Tenure (Permit Area) | Roads |
| Telkwa Coal Private Lands | Waterbodies |
| Tenas Road Option | Wetlands |
| Tenas Pipeline | Elevation (10 m intervals) |

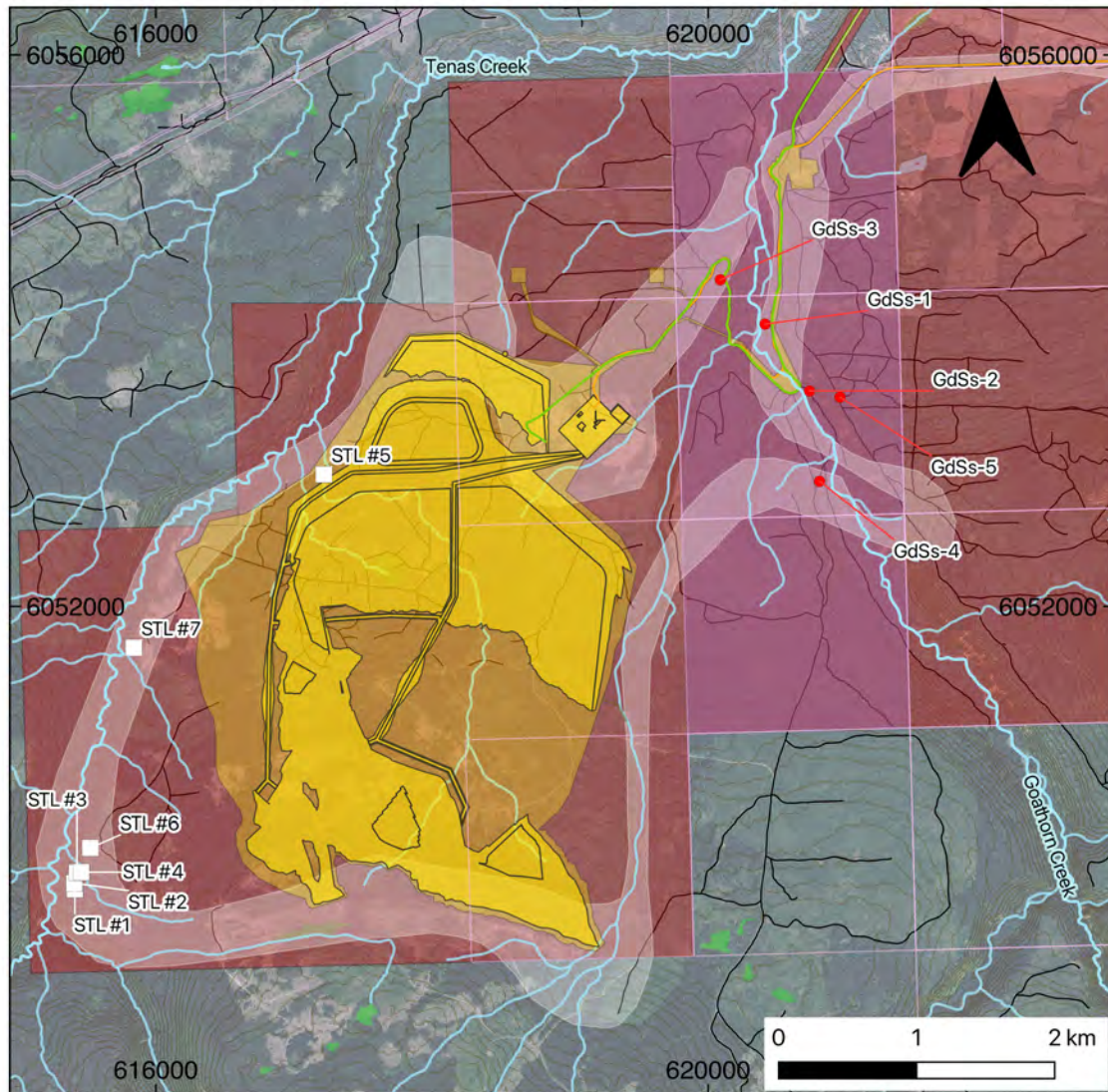
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Data from B.C. Data Catalogue, Google Earth

Date: 08/12/2020
Permit # 2018-0338

Project Location in BC



Figure 1: General Development Map



Midrange Map 1 / 3 – Tenas Pit

Legend

- | | |
|--|---|
| Tenas Project Infrastructure | Survey Area |
| Ancilliary Project Infrastructure | Negative Shovel Tests
(35 cm X 35 cm) |
| Telkwa Coal Tenure (Permit Area) | Waterbodies |
| Telkwa Coal Private Lands | Wetlands |
| Tenas Road Option | Roads |
| Tenas Pipeline | Land Parcels |
| Archaeological Sites | |



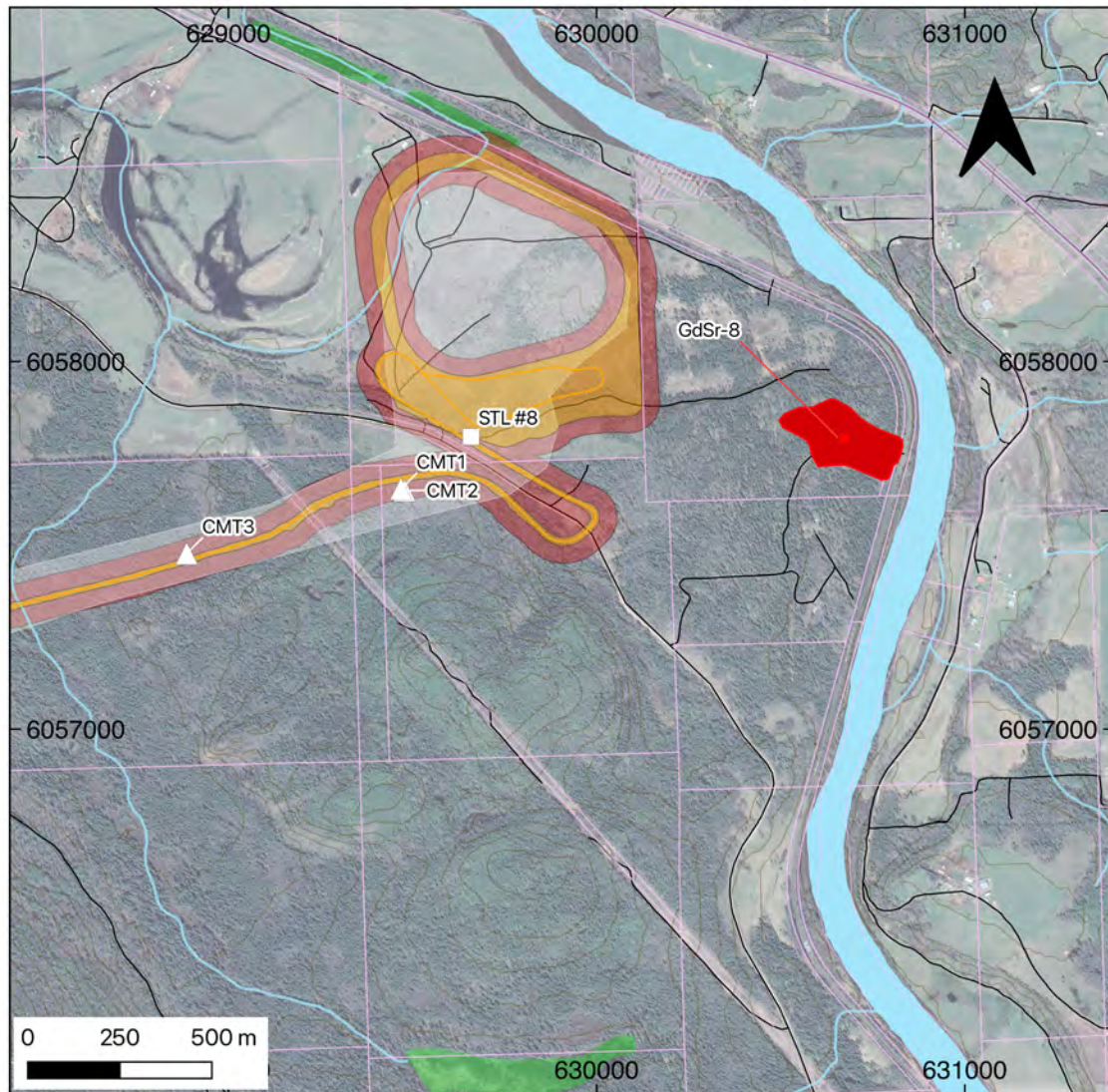
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BC Data Catalogue, Google Earth

Date: 08/12/2020
Permit # 2018-0338

Project Location in BC



Figure 2: Midrange Map 1/3 – Tenas Pit



Midrange Map 2/3 – Load Out Loop

Legend

- | | |
|---|---|
| Tenas Project Infrastructure | CMTs (post-1846) |
| Ancilliary Project Infrastructure | Waterbodies |
| Telkwa Coal Tenure (Permit Area) | Wetlands |
| Tenas Road Option | Highway 16 |
| Archaeological Sites | Roads |
| Survey Area | Land Parcels |
| Negative Shovel Tests
(35 cm X 35 cm) | |



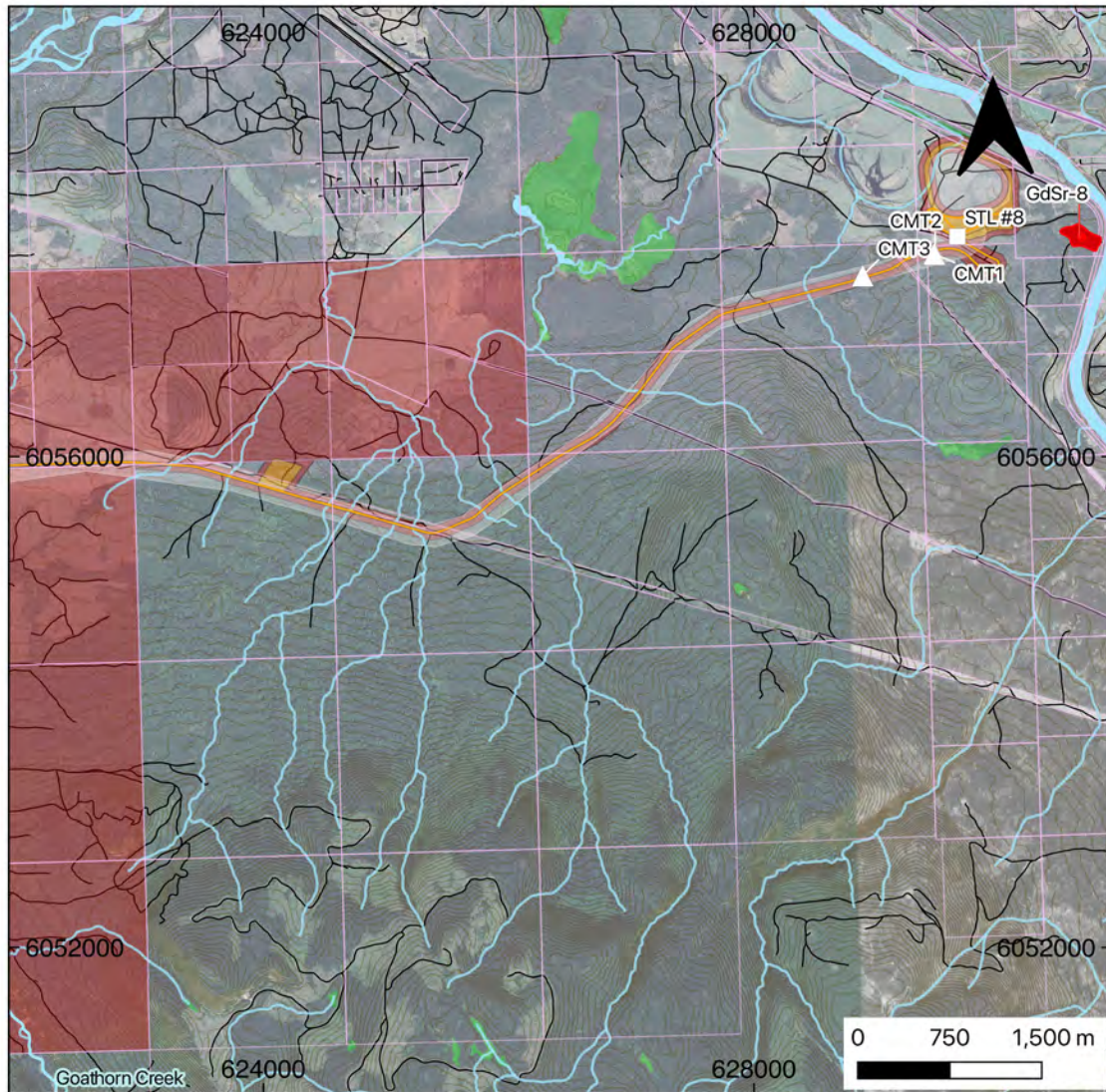
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Project Location in BC



Scale 1:15000
NAD83 UTM zone 9
BC Data Catalogue, Google Earth

Figure 3: Midrange Map 2/3 – Rail Load Out Loop



Midrange Map 3/3 – Road Option

Legend

- | | |
|---|---|
| Tenas Project Infrastructure | CMTs (post-1846) |
| Ancilliary Project Infrastructure | Waterbodies |
| Telkwa Coal Tenure (Permit Area) | Wetlands |
| Tenas Road Option | Highway 16 |
| Archaeological Sites | Roads |
| Survey Area | Land Parcels |
| Negative Shovel Tests
(35 cm X 35 cm) | |



Date: 08/12/2020
Permit # 2018-0338

Project Location in BC



Scale 1:45000
NAD83 UTM zone 9
BC Data Catalogue, Google Earth

Figure 4: Midrange Map 3/3 – Road Option

1.3 Baseline Report Scope

Archaeological baseline studies (Archaeological Overview Assessment [AOA], included in Appendix A, Preliminary Field Reconnaissance [PFR], and Archaeological Impact Assessment [AIA]) for the Project were conducted by Crossroads Cultural Resource Management under *HCA* Heritage Inspection Permit # 2018-0338. These studies' objectives, which were consistent with those outlined in the permit application, were to:

- identify and assess any archaeological sites within or near the proposed Project footprint;
- identify and evaluate possible effects from the proposed developments on identified archaeological sites;
- supply recommendations regarding the need for and appropriate scope of further archaeological studies before initiating any proposed developments; and
- recommend alternatives for managing adverse effects, if any are identified.

The objectives of this baseline report are to:

- review previous archaeological work to describe a regional context;
- summarize the work conducted during the baseline studies undertaken for the Project; and
- identify any archaeological sites within or near the Project footprint.

1.4 Crossroads Cultural Resource Management

The present archaeological baseline report has been completed by Crossroads Cultural Resource Management Ltd. (Crossroads CRM) on behalf of Telkwa Coal. Crossroads CRM is a locally established Cultural Resource Management (CRM) firm based in Smithers, British Columbia. Our members have been servicing British Columbia and abroad for over 20 years. We have extensive experience working with provincial First Nations, particularly the Wet'suwet'en, in natural and cultural resource management. Further, over the years we have established a trusted and respected relationship with the Wet'suwet'en Hereditary Chiefs. Every member of the Crossroads CRM team uniquely combines education, experience, and cultural sensitivity and respect for First Nations—which allows us to effectively liaise and work between industry, government, and First Nations contexts, as well as integrate cross-cultural ideas and management.

1.5 Statement on Traditional Knowledge in Cultural Resource Management

Prior to describing the Tenas Project's baseline archaeological studies and their results, it is prudent to emphasize the importance of Traditional Knowledge in Cultural Resource Management. Traditional Knowledge (TK) is important to any archaeological or cultural assessment. TK has been ascribed many different labels, including Aboriginal Traditional Knowledge (ATK), Indigenous Knowledge (IK), Indigenous Ecological Knowledge (IEK), Traditional Ecological Knowledge (TEK), and Traditional Ecological Knowledge and Wisdom (TEKW). Berkes (1993:3) established a frequently referenced definition of Traditional Ecological Knowledge:

TEK is a cumulative body of knowledge and beliefs, handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment. Further, TEK is an attribute of societies with historical

continuity in resource use practices; by and large, these are non-industrial ... societies, many of them Indigenous.

In the present report, this field of knowledge will be referred to as Traditional Knowledge (TK). For example, the Government of Northwest Territories (GNWT) (2005:1) defines TK as the “knowledge and values, which have been acquired through experience, observation, from the land, or from spiritual teachings, and handed down from one generation to another.”

When Indigenous peoples employ TK—a knowledge system inseparable from a community’s values, practices, beliefs, and social relations—to guide land and resource management, such management decisions are made in the context of, and with consideration to, their broader cultural context. This broader context includes connections between the human world, spiritual world, and environment that are often not acknowledged in Western scientific perspectives and practices (Nadasdy 1999:4). Within the culture of the Indigenous Nation whose traditional territory encompasses the Project, the Wet’suwet’en, the connection between human, spiritual, and ecological worlds is found in the concept of *Yintah*. *Yintah* incorporates the physical with the social; if the physical territory is harmed, so too is the social world. Moreover, it includes the land, air, water, flora, and fauna—akin to the notion of ‘mother earth.’ As such, the Wet’suwet’en deem stewardship over territorial lands and resources as vital facets of sustaining community health.

The term ‘traditional’ that describes this TK does not imply that it is non-technical or old, but rather is ‘tradition-based.’ It is ‘traditional’ in the sense that it is created in a fashion that reflects the traditions of the communities from which it arises; therefore, ‘traditional’ does not relate to the nature of the knowledge itself, but to the way in which it is created, preserved, and disseminated. TK is collective in nature and is often considered the property of a whole community, as opposed to belonging to a single individual. TK is transmitted through specific cultural and traditional information exchange mechanisms.

Given the variety of references for TK, how it is researched, documented, and collected can significantly vary. TK emerges in archived transcripts and recordings, written ethnographies, interviews, land-use inventories, media, oral histories, public hearings, and scientific meetings, as well as in the 1980s and 1990s court cases of the Gitksan and Wet’suwet’en Nations. In the *Delgamuukw-Gisdaywa* court cases, TK was well documented in the BC Supreme Court and the Supreme Court of Canada.

Over the past few decades, TK has been gathered in greater frequency in order to assist land use and resource management decision-making, as well as to document and record invaluable information from Indigenous Elders who continue to practice traditional life-ways, such as language, oral histories, and seasonal rounds. In the last 15 to 20 years, TK has become an important component of many resource management processes—even more so in recent years, as landmark court cases (i.e., *Delgamuukw-Gisdaywa*, *Haida Nation v. Weyerhaeuser*, *Taku Tlingit v. Tulsequah Chief Mine*) have reinforced the importance of appropriate and meaningful consultation and accommodation with Indigenous peoples in resource activities that significantly impact their traditional territories. Gathering, incorporating, and respecting TK is a vital component of that process—as is integrating that TK with the Western-scientific perspective that dominates resource management processes, including archaeological research.

In a Wet’suwet’en context, TK is often passed down through *kungax* (laws and oral history). One story, for example, describes *Dizkle*, the first settlement established by the Wet’suwet’en, Gitksan, Carrier, Sekani, and Talhtan peoples (Jenness 1943:476-477). Though its precise location has yet to be determined, the village was

situated in an area that is now known as Mosquito Flats on the Bulkley River, south of the Bulkley-Suskwa confluence. Houses populated both banks of the river, with one side named *Hahwilamax* and the other *Kwatso*. A large weir with fish traps connected the two banks together both physically and economically, as the two groups would work together during salmon fishing season. *Dizkle* was eventually abandoned when two squirrels were seen crossing the weir and deemed a bad omen. As a result, the Wet'suwet'en, Gitksan, Carrier, Sekani, and Talhtan peoples dispersed to settle separate summer villages and seasonal territories. The Wet'suwet'en moved to *Siy'gehtiy* (Trout Creek) and eventually *Kyah Wiget* (Witset) (Rabnett 2000:20-21). For the Wet'suwet'en, *kungax*, such as the story of *Dizkle*, not only tell the origin of their nation, but pass important TK onto younger generations. Transmission of such knowledge is often accompanied by 'hands on' instruction of traditional Wet'suwet'en resource activities (Morris et al. 2006:6). Though generations of colonial assimilationist policies have impacted the transmission of Wet'suwet'en TK and *kungax* (Morin and Lewis 2017), many Wet'suwet'en TK holders remain.

Crossroads CRM endeavours to incorporate TK into all of our work. In order to provide an overview of regional cultural and archaeological resources that is as holistic as possible, Wet'suwet'en TK is referenced throughout the present report, wherever appropriate and possible.

2. ARCHAEOLOGY BASELINE ASSESSMENTS

This chapter of the Application for an Environmental Assessment (EA) Certificate (‘the Application’) assesses potential heritage effects of the proposed Tenas Project. The assessment is based on baseline data related to archaeological resources discussed below and presented in Appendix A.

2.1 Study Area

The Study Area is situated in the Bulkley-Nechako region, near the confluence of the Telkwa and Bulkley rivers. Goathorn Creek, a major tributary to the Telkwa River, lies within the Study Area. The Project is located adjacent to Canadian National Rail’s (CNR) mainline.

The local area is located at the northwestern edge of the Nechako Plateau section of the Interior Plateau, bordering the Skeena Mountains to the north and the Bulkley Ranges of the Hazelton Mountains to the west. The Nechako Plateau is generally flat to rolling terrain with distinctive glacial features, for example, eskers, and numerous lakes of all sizes (Holland 1964). The Bulkley River is an important drainage basin, dissecting the edge of the Plateau and flowing north into the Skeena, as part of the Pacific watershed.

The Study Area falls within the Sub-Boreal Spruce (SBS) biogeoclimatic zone, which dominates the central interior of British Columbia and is characteristic of the Bulkley Valley. Land typical of this region is depicted below in Plate 1. Much of the arable lowlands along the Bulkley Valley have been logged in the past and converted to farmland. Where forested areas remain, they are composed largely of white and hybrid (Engelmann) spruce and sub-alpine fir, with lodgepole pine, aspen, and birch stands. This area supports a variety of large mammals, including moose, mule deer, white tail deer, black bear, grizzly bear, grey wolf, cougar, and, at higher elevations, bighorn sheep, mountain goat, and caribou. Smaller mammals, such as coyote, porcupine, beaver and fox, as well as fur bearing species, such as snowshoe hare, mink, marten, and fisher, are common here. Salmon can be found in many of the streams and rivers throughout the project area in general (Hewer 1998; Meidinger et al. 1991). Ground cover and forest typical of the Project area are depicted in Plates 2 and 3, respectively.

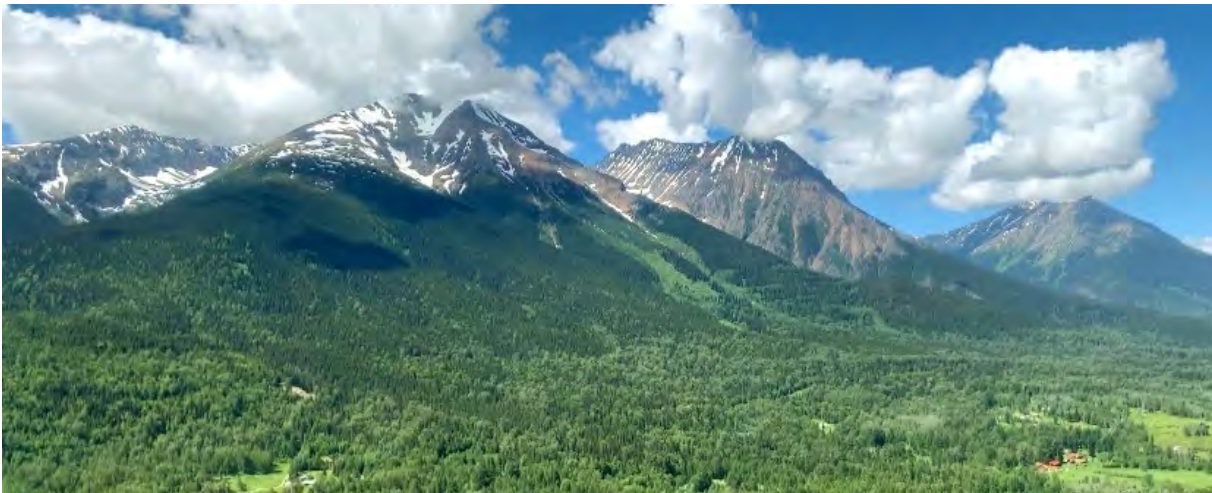


Plate 1: *Bulkley Valley Landscape*



Plate 2: *Ground Cover Typical of the Study Area*



Plate 3: *Forest Typical of the Study Area*

Two major events drastically altered the landscape of the area. In 1914, a forest fire swept through the valley, destroying many buildings and forested areas. In more recent years, the Mountain Pine Beetle epidemic killed off the regrown forests. This combined with the increased settlement of the area caused the extirpation of the woodland caribou (Ministry of Environment 2000:4). Today, the Telkwa herd consists of less than 100 caribou that range south of Highway 16 between Smithers and Houston, BC (Cichowski 2014; Hatter and Post nd:124). Caribou calve in alpine areas and normally winter in low elevation pine forests. They are reliant on old growth forests for their survival (Ministry of Environment, Lands, and Parks 2000:3). The Project lies within the northeastern portion of the Telkwa Mountains Caribou Wildlife Habitat Area.

The study area is encompassed by the traditional territory of the Cas'Yex (Grizzly House) of the Gitdumden Clan, and the Kwen Bea Yex (House Beside the Fire) of the Laksilyu Clan, of the Wet'suwet'en Nation (Figures 5 and 6). Traditional Wet'suwet'en life-ways revolved around the summer salmon food fishery; during the rest of the year, family groups dispersed to their Houses' resource areas (Rabnett 2000:i). Fish bone artifacts found during an excavation in Witset (Moricetown) indicate that the Wet'suwet'en have continuously inhabited the region for at least 6000 years before present (Allbright 1987). Early explorers of the Bulkley Valley reported that the landscape was primarily comprised of open pastures with deciduous forest stands and berry patches (Rabnett 2000:12). Prior to the ban of controlled burning, the Wet'suwet'en traditionally maintained their resource harvest areas using fire to manage wildlife and plants (Gottesfeld 1994).

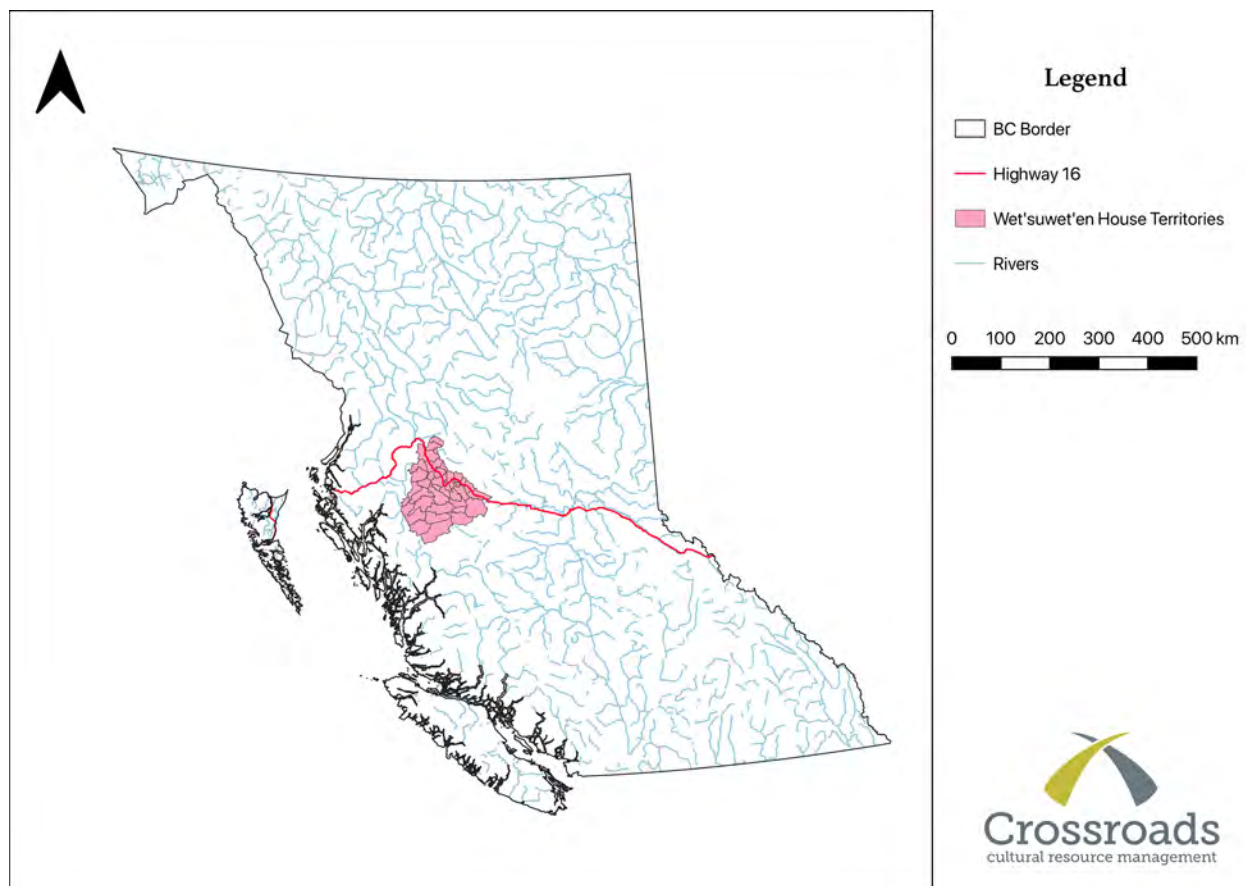


Figure 5: Wet'suwet'en Traditional Territory within BC

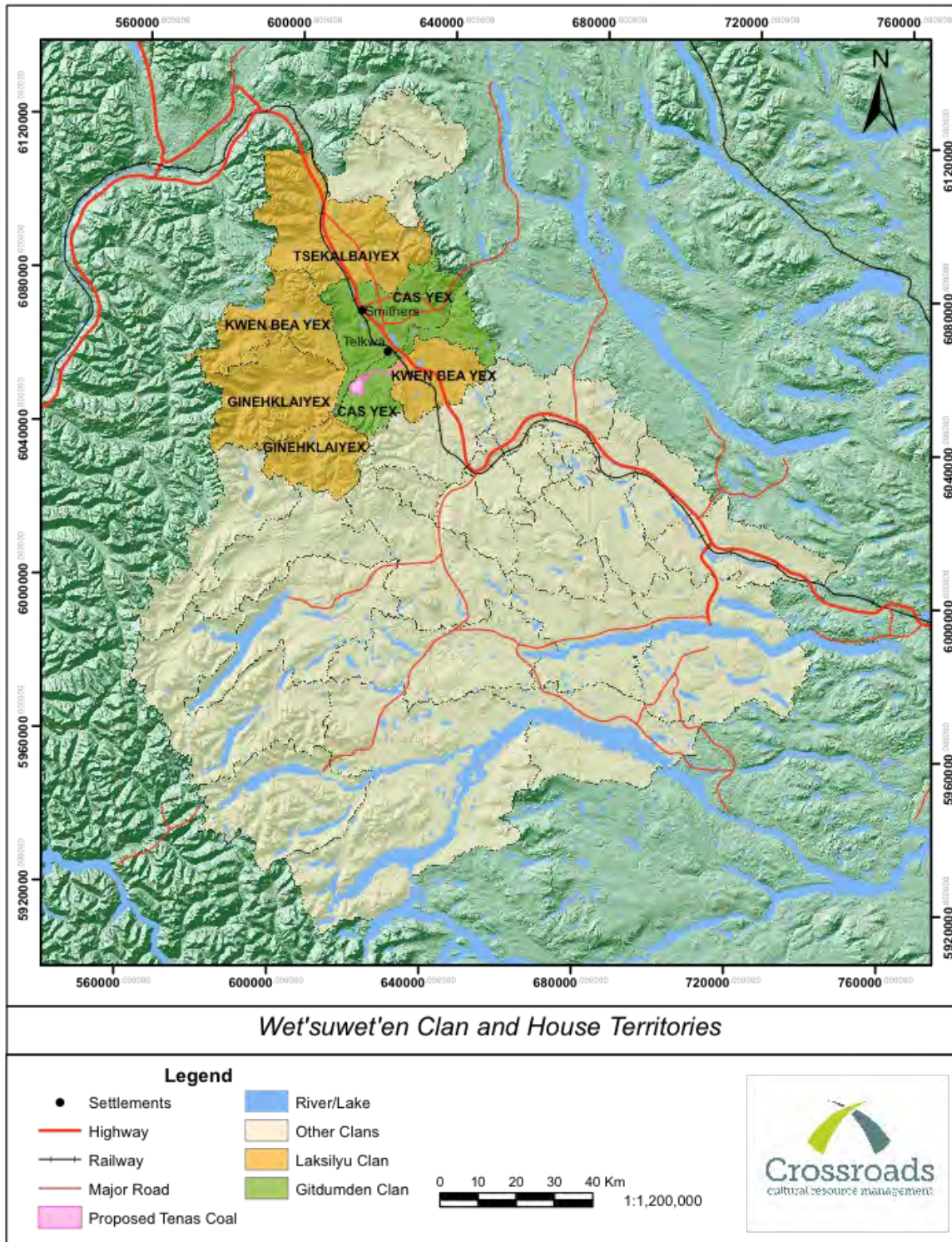


Figure 6: Cas'Yex and Kwen Bea Yex territories within the Wet'suwet'en Traditional Territory

Fishing, hunting, trapping, and gathering occurred (and continue to occur) on the territories. Elk, caribou, deer, bear, rabbits, and marten were the most commonly hunted animals. In the early 1900s, sheep and caribou populations began to decrease, and moose and mule deer became more common (Rabnett 2000:11). Berries, including blueberries, huckleberries, and soapberries, were harvested and dried, and trees were used for medicines, tools, building, or firewood (Mills 2004:141, 145-146).

Contact with Europeans commenced in this region with the Gitksan trading in European goods from the coast. During the 1820s, the Hudson's Bay Company built forts in the Babine area to directly trade with these western Carrier groups (Tobey 1981). In the Telkwa area, more direct and lasting contact with Europeans commenced as prospectors began traveling through the area looking for gold and mineral deposits to claim. These prospectors' stories of the region's terrain led to the development of a pack trail and telegraph line from the south, first up to Quesnel, then west along Fraser Lake, and up along the high bluffs over the Bulkley River, to head north to Telegraph Creek (Cassidy 1987). This line, known as The Telegraph Trail, passed along the east and south sides of Tyhee Lake. The area's earliest settlement, Aldermere, was established near the southeast side of Tyhee Lake in the early 1900s. Aldermere became a stopping point and rest station along the trail. By 1907, though, the focus of European settlement in this part of the Valley was moving to the current site of Telkwa, near the confluence of the Bulkley and Telkwa Rivers, where the Grand Trunk Pacific Railway was being constructed (Bulkley Valley Heritage Club 1973). The small town of Hubert was constructed during this time period along the Grand Trunk Rail line, roughly 4.5km east of Telkwa, in the vicinity of the Project's load out loop (Gent 2016). Hubert was originally intended to be the halfway point along the rail line between Prince George and Prince Rupert. However, after the surrounding lands were bought by property speculators, the town was dismantled, and Smithers was made the new dividing point. A BC Land and Titles Search of relevant property parcels—PID # 013-581-180, # 015-077-802, # 012-469-301, # 015-103-765, and # 015-842-819—indeed indicates that the lands around the former settlement of Hubert have since been reverted to Crown land.

Since European contact, the Bulkley Valley has been an active prospecting and mining area (L'Orsa 2013). In the late 1800s and early 1900s, mineral prospectors were drawn to the Bulkley Valley, particularly after it was decided the Grand Trunk Railway was to run through it. These prospectors were interested in coal and other minerals, such as copper, and many copper deposits were discovered in the Telkwa Mountain Range. By 1906, W. W. Leach drafted a detailed contour map of the general geology of the Telkwa River area that included information on these newly identified deposits. Although early prospectors in the Bulkley Valley discovered numerous small veins of copper, lead, zinc, silver, and gold, they failed to locate larger deposits until the 1960s, when a substantial mineral deposit (the 'Davidson deposit') was found within Hudson Mountain, approximately 8km northwest of the Smithers rail station. Prospecting activity decreased in the 1930s during the Great Depression, but picked up following World War II, reaching a peak in the 1960s, during the Great Copper Rush. Notable mines in the Telkwa Mountains and the Hudson Bay Mountain areas included Duthie, Conin, and Dome Mountain mines, as well as the coal mine in Telkwa. Although some mines in the Bulkley Valley, such as the Bell and Granisle copper mines, have since closed down.

2.2 Regulatory and Policy Framework

This sub-section provides an overview of the regulatory and policy framework-related to heritage resources, as summarized in Table 1. The assessment of heritage effects has been prepared to fulfill the requirements of the Application Information Requirements (AIR; BC EAO 2016).

The Project is subject to the *BC Environmental Assessment Act (BC EAA 2002)* and the *Canadian Environmental Assessment Act (CEAA 2012)*, both of which identify requirements related to potential heritage effects:

- The *BC EAA* requires an assessment of heritage effects.
- Section 5(1)(c) of the *CEAA 2012* requires an assessment of how environmental effects caused by a project could affect physical and cultural heritage of Aboriginal peoples. These effects are addressed in Chapter 20 (Effects of Changes to the Environment on Aboriginal Peoples).

Table 1: Summary of Applicable Regulatory and Policy Framework for Heritage Resources

Name	Jurisdiction	Description
<i>Canadian Environmental Assessment Act (2012)</i>	Federal	Contains provisions related to the assessment of effects of changes to the environment on physical and cultural heritage or on any structure, site, or thing that is of historical, archaeological, paleontological, or architectural significance.
<i>Environmental Assessment Act (2002)</i>	Provincial	The Act sets out the requirements for reviewing major projects in BC. The environmental assessment process addresses a broad range of environmental, economic, social, health, and heritage issues through a single, integrated process. It ensures that the issues and concerns of all interested parties and First Nations are considered together, and that a project, if it is to proceed, will do so in a sustainable manner.
<i>Freedom of Information and Protection of Privacy Act (1996)</i>	Provincial	Prevents the locations of archaeological sites to be included in public documents.
<i>Heritage Conservation Act (1996)</i>	Provincial	Sections 12 and 14 provide the BC Archaeology Branch with the authority to issue permits authorizing archaeological studies and archaeological site alterations. Section 13 prohibits disturbance of archaeological sites and heritage sites. Section 36 describes penalties for contraventions of the Act.
<i>BC Archaeological Impact Assessment Guidelines (2000)</i>	Provincial	Provides guidance on conducting Archaeological Impact Assessments in British Columbia.
<i>Fossil Management Framework</i>	Provincial	Provides guidance related to fossil management in BC. Mineral tenure holders who discover fossils during exploration are encouraged to report the discovery to a local museum, university, or paleontology organization.

Heritage resources are non-renewable, can be susceptible to disturbance, and are finite in number. They are protected for their historical, cultural, scientific, and educational value to the public, local communities, and Aboriginal groups. In BC, both recorded and as-yet unrecorded archaeological sites are protected by the *Heritage Conservation Act (HCA 1996)*, regardless of whether they are situated on crown, provincial,

municipal, or private land. Archaeological sites refer to the physical remains of past human activity. Some archaeological sites, including burials, Indigenous rock art sites, shipwrecks, plane wrecks, and sites designated by the Provincial Government, are protected regardless of age (BCAPA 2019). The *Freedom of Information and Protection of Privacy Act* (1996) prevents the locations of archaeological sites from being included in public documents.

The *HCA* gives the Province of BC the ability to inspect an archaeological site, stop nearby work to avoid site alteration, and impose penalties. It is illegal to remove or collect any archaeological objects, or disturb any archaeological features, at an archaeological site unless one is authorized to do so under the *HCA*'s Section 12.2 (heritage inspection and heritage inspection by permit) or 12.4 (power to issue or amend permits), or a ministerial order issued under Section 12.3 (BC Laws 2019). The *BC Archaeological Impact Assessment Guidelines* (2000) outline the requirements for archaeological assessments. Section 12.2 and 12.4 Permits are issued by the Archaeology Branch, Ministry of Forests, Lands and Natural Resource Operations. Unlawful destruction or disturbance of an archaeological site incurs severe penalties under the *HCA*, including fines up to \$1,000,000 for corporations, and fines of up to \$50,000 and imprisonment up to two years for employees or agents of a corporation (Archaeology Branch 2019).

Since May 2016, the Government of Canada has stated that they fully support the *United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)*, and that they are working with Indigenous communities on its implementation. *UNDRIP* (2008:1) affirms that the rights of Indigenous peoples are equivalent to all peoples, while recognizing and respecting that these rights can differ. In addition to addressing issues of identity, culture, language, religion, health, community, and education, *UNDRIP* (2008:4) outlines the importance of Indigenous peoples' fundamental rights to self-determination, including their free, prior, and informed consent for developments within their territories. With the recent passing of *BC Bill 41*, the Province of British Columbia adopted *UNDRIP* into its legislation and formally committed to its implementation (Larsen 2019). Despite this, for the foreseeable future, "the Ministry of Energy, Mines and Petroleum Resources ... does not anticipate any significant changes to the regulatory framework for mining and oil and gas" (O'Callaghan and Grist 2019).

2.3 Existing Information

This sub-section first describes the Project's timeline, followed by a timeline for its baseline heritage studies. Baseline environmental and cultural studies for the Project began in late 2016. Prefeasibility studies were conducted in 2017, and feasibility studies in 2018. In 2019, Telkwa Coal submitted applications for the Project to regulators. A decision about whether the Project will go forward will be made in 2020. If this decision is affirmative, construction will begin in the same year, and mine operations and environmental monitoring will commence in 2021.

Crossroads CRM applied for a Heritage Investigation Permit in 2018 (Permit # 2018-0338, expiry: December 31, 2019), which was amended in October 2019 to add the Project's road option section. Crossroads CRM completed the Archaeological Overview Assessment (AOA) in Fall 2018 and, subsequently, conducted Preliminary Field Reconnaissance (PFR) and an Archaeological Impact Assessment (AIA) to further evaluate the Project area's archaeological potential and the Project's potential to affect archaeological resources. All fieldwork was finished in 2019, and archaeological studies are being completed in 2021.

In summary, heritage resources baseline studies undertaken for the Project include: the Telkwa Coal Limited – Tenas Project Archaeological Overview Assessment (Crossroads CRM 2018; Appendix A), the Telkwa Coal and the Telkwa Coal Limited – Tenas Project Heritage Inspection Permit Final Report : Permit # 2018-0338 (in progress).

2.4 Methodology

Four permittable archaeologists with a high level of experience in northern interior BC worked on this project. House representatives from relevant Wet'suwet'en House Groups participated in the field archaeological assessments, and all field work was completed in accordance with Wet'suwet'en cultural protocols.

In terms of baseline archaeological studies, Crossroads CRM conducted an Archaeological Overview Assessment (AOA), Preliminary Field Reconnaissance (PFR), and an Archaeological Impact Assessment (AIA) for the Tenas Project. This sub-section outlines these studies' methodologies. Crossroads CRM also completed a Cultural Use Study (CUS) of the Project area, briefly described in the coming AOA sub-section.

2.4.1 Archaeological Overview Assessment

Prior to fieldwork, the project footprint was assessed in the office to determine the need for an AIA. The Project footprint and surrounding area were reviewed to determine areas of archaeological potential within each portion of the development area. An Archaeological Overview Assessment (AOA) was conducted for the entire proposed development and areas of concern to the First Nations involved in the Project area. As outlined in the *BC Archaeological Impact Assessment Guidelines* (2000), research conducted for the AOA included:

- a check of extant records, including the BC Archaeological Site Inventory, Remote Access to Archaeological Data (RAAD), legal land survey records, and other relevant records and inventory files;
- a review of all previous archaeological and ethnographic investigations in the Study Area and adjacent areas;
- examination of orthophotos, topographic information, forest cover information, and geological information; and
- a review of relevant information from published and unpublished sources, such as local and regional history, prehistory, and ethnography.

This overview of background information included a synthesis of biogeophysical, ethnographic, and archaeological information, that was essential to:

- identifying the limits of available data and gaps in existing knowledge;
- evaluating the physical and cultural potential of the Study Area;
- assessing temporal changes to the landscape and the resulting impacts on settlement and subsistence patterns;
- formulating cultural land-use patterns;
- evaluating previous archaeological studies;
- assessing the integrity of the Study Area; and
- framing research and resource management objectives through an appropriate survey and sampling

strategy.

The portions of the Project footprint that were determined to require an AIA were described in the AOA report in terms of their archaeological potential (see sub-section 2.5.1). The information gathered via the AOA was used to plan our field efforts (sub-sections 2.4.2 and 2.4.3). During the AOA, a location was determined to have archaeological potential if it displayed one or more of the following attributes:

- a defined topographical rise on level terrain and/or surrounded by a wetland (e.g., knolls, eskers, whalebacks);
- adjacent to a significant change in slope (e.g., terrace edges, valley tops, ridges).
- well-drained and relatively level;
- a source of water in close proximity (e.g., lake, stream, mineral seep, seasonal water run, wetland complex, tidal saltwater);
- on a preferred path of travel between or adjacent to landscape features (e.g., edges of wetlands and terraces, ridge-tops, shorelines);
- offers a view of wetlands and/or natural corridors (e.g., gullies, valleys, ridges, estuaries);
- any of the above conditions that existed in the past (e.g., abandoned terraces, palaeo-drainages), but are not present today;
- areas of old growth timber for CMT sites; and,
- Within 250m of a known archaeological or traditional-use site or within 500m of a known pack trail, provided environmental conditions of adjacent terrain would have been suitable for use and/or occupancy in the past, but no substantial variation in terrain is evident around known sites or within trail corridors.

Areas of low archaeological potential fell outside these parameters.

As noted, Crossroads CRM also completed a desk-based Cultural Use Study (CUS) of the Project area. The goal of this CUS was to compile a baseline inventory of cultural heritage resources pertaining to Wet'suwet'en communities, including an examination of pre-existing cultural, social, historic, and economic data, Traditional Knowledge, and community health and wellbeing. The concerns of landowners and non-Indigenous stakeholders with longstanding histories in the area were also briefly explored; however, at the request of the Proponent, this CUS primarily focused on Wet'suwet'en persons and communities. The CUS permitted a more holistic interpretation of the Wet'suwet'en cultural landscape and archeological resources therein. Data it yielded are referenced throughout the present document, where appropriate.

2.4.2 Preliminary Field Reconnaissance

Preliminary Field Reconnaissance (PFR) was conducted during June, 2018. The PFR included the involvement of local Wet'suwet'en community members from relevant House Groups. It was conducted as follows:

- Pedestrian transects were conducted by three individuals spaced 5 to 15m apart throughout the proposed impact zone.
- Potential archaeological and traditional use sites were marked with GPS and flagged to be further recorded during the AIA.
- Areas with high archaeological potential were identified, photographed, and recorded with GPS.

In addition to the PFR described above, a helicopter fly-over of the Project area to identify areas of high archaeological potential was conducted during September, 2017.

2.4.3 Archaeological Impact Assessment

Based on the results of the 2018 PFR, an Archaeological Impact Assessment (AIA) was conducted over the week of June 12, 2019, with further field work taking place during the week of October 17, 2019. The AIA focused on areas identified during the AOA and PFR as having archaeological potential, the 1. Tenas Pit area, 2. the proposed road option, and 3. the rail load out loop area, which were assessed through a combination of visual and sub-surface inspections. All fieldwork was completed without snow cover. The following methodology was used:

- **Visual Inspections**
 - Pedestrian transects, spaced 5m to 15m apart, were walked by a two to four-person crew.
 - In areas of high archaeological potential, survey transects were spaced 5m to 10m apart and areas of surface exposure were closely examined.
- **Sub-surface Inspections.**
 - In areas of archaeological potential, subsurface shovel tests, with a minimum area of 30cm by 30cm, were excavated until sterile soil was reached.
 - Shovel testing was undertaken to define the horizontal and vertical extent of the archaeological site deposits.
 - If present, archaeological materials were documented with photographs and in field notes, the location was recorded with GPS, the area and the associated subsurface tests were sketched on a map, and the finds were collected and labelled.

CMTs. Recording procedures for CMTs followed those described in the *Culturally Modified Trees of British Columbia* handbook and *Archaeology Branch Bulletin 16* (Archaeology Branch 2001). The three post 1846 CMTs encountered during this AIA, described in sub-section 2.5.3) were recorded according to “Level 1” standards established in the *Culturally Modified Trees of British Columbia* handbook (Archaeology Branch 2001). This post-AD 1846 determination was based primarily on tree stand data collected by the Ministry of Forests (where available), and visual clues suggested by small diameter trees with thin scar lobes. Increment cores were obtained from these trees to verify ages. It is recognized that tree stand data is not 100% accurate, and this information was only be used as a guide. All three CMTs had their location, type, and metric attributes (i.e., scar length, width, location of cut marks) recorded. All CMTs were mapped, demarcated in the field with flagging tape, and labeled with an identifying number.

2.5 Data Summary

This section outlines the results of the AOA, PFR, and AIA that Crossroads CRM conducted for the Tenas Project.

2.5.1 Archaeological Overview Results

The AOA indicated that the proposed Tenas Project development area has experienced a high degree of surface level disturbances in the past. The area is frequented by recreationalists who use the area for hiking, skiing, hunting, horseback riding, snowmobiling, and ATVing. These activities can contribute to additional surface level disturbances within the Study Area. This area has also been heavily impacted by previous mining and logging activities as well as associated road construction.

With reference to the knowledge and oral traditions of the Wet'suwet'en, the Project is situated within the House territories of the Cas Yex and Kwen Bea Yex Houses (see Figure 6), and this area would have been frequented for resource harvesting. To be specific, the Project site, situated between Tenas and Goathorn Creeks, falls within the southwest boundary of the C'inilh Kit territory of the Gitdumden Clan's Cas Yex House (Morris et al. 2006). The Wet'suwet'en called this house territory C'inulh K'it after the presently-named Tyee Lake. The Cosl'et Bin territory of the Kwen Bea Yex House (of the Laksilyu Clan) encompasses the Project's rail loadout site, located 7 km from the Project mine-site. Cosl'et Bin's northern border follows north of Round Lake, and then turns southwest, crossing the Bulkley River and encompassing the Project's rail loadout site. Cosl'et Bin shares borders with the C'inilh K'it territory to the north, west, and east. The southern border is shared with the C'idi To Stan territory of the Laksamshu Clan. The Wet'suwet'en oral and documented history indicates that these territories were used heavily until they were evicted in 1912.

The RAAD review resulted in five registered archaeology sites within the Project footprint, as well as an additional site near the load out loop (summarized in Table 2 and depicted in Figures 1-4). These sites were identified in previous archaeological studies, described below. The majority of these sites are associated geographically with the Bulkley and Telkwa Rivers and their tributaries.

In 1984, archaeologists from I. R. Wilson Consultants completed a Heritage Resource Inventory and Impact Assessment for Manalta Coal Ltd.'s Telkwa Project—Permit #1984-035 (Warner 1984)—registering sites GdSs-1-4 (historic mining and camping sites). A Heritage Resource Inventory and Impact Assessment (Permit # 1990-011) for the same project was completed by I. R. Wilson Consultants in 1990 (Smart 1990). This resulted in the registration of GdSs-5, a group of three pre-contact lithic bifaces that were exposed by road construction in 1989. In 1997, I. R. Wilson Consultants conducted an Archaeological Inventory and Impact Assessment (Permit #1997-285) for the project (Hewer 1997). They were unable to relocate the sites registered in 1984, nor the site registered in 1990, noting they had been removed and/or disturbed by road construction. The final site in the area, Gdsr-8 (habitation site with two house depressions and two cache pits), was registered during Archaeological Reconnaissance in the Nechako Area in Summer 1975—Permit #1975-004 (Rafferty 1975). This site was relocated by I. R. Wilson Consultants in 1997. All of these sites are described below.

GdSs-1-4 all correspond with early mining and logging activity in the area. The Archaeological Inventory and Impact Assessment in 1997 determined that most of what was initially recorded in 1984 is no longer identifiable (Hewer 1997, 1998). In the general vicinity of GdSs-1, three historic CMTs were identified and recorded, all being lodgepole pine trees.

GdSs-5 is located east of Goathorn Creek. Road construction exposed a cache of three obsidian bifaces on a high terrace above Goathorn Creek. All subsequent shovel tests were negative. A chert cobble and some basalt shatter were identified nearby. The site may have been a hunting blind or an isolated artifact cache. A recent spruce CMT (1997 investigation) was recorded near GdSs-5, but attempts to relocate the archaeological site came back

negative (Hewer 1997, 1998).

GdSr-8 is located within the Tenas Project's proposed load out loop area. The site was originally recorded in 1975 as four cultural depressions (Rafferty 1975). Archaeological surveys in 1997 resulted in six additional cultural depressions, as well as a CMT being identified and recorded (Hewer 1997). The larger of the depressions is likely a subterranean pithouse structure, with the smaller depressions likely acting as a cache or possibly cooking or roasting pits (Hewer 1998). Previous Tenas Project plans were changed due to the presence of this site, and no further archaeological investigations occurred in the vicinity.

Table 2: Summary of Archaeological Sites within Study Area

Site #/ Permit #	Environmental Setting	Type	Recorded Visits
GdSs-1 (1984-035, 1997-285)	SW of Telkwa in the Goathorn Creek Valley in Lot 391 on the east side of the creek, 300m NW of the bridge	CMTs, Historic (Bulkley Valley Collieries #3 Mine)	1984, 1997
GdSs-2 (1984-035, 1997-285)	SW of Telkwa, in the Goathorn Creek Valley, in Lot 39, 90m SE of the bridge crossing on east side of the creek	Historic (Cassiar Camp, Bulkley Valley Collieries #1 Mine)	1984, 1997
GdSs-3 (1984-035, 1997-285)	Western slope of the Goathorn Creek Valley, 1km NW of the confluence of Goathorn and Four Creeks	Historic (Bulkley Valley Collieries #2 Mine)	1984, 1997
GdSs-4 (1984-035, 1997-285)	In the Goathorn Creek Valley SW of Telkwa on a broad terrace on the west side of the creek below Coal Mine Road	Historic	1984, 1997
GdSs-5 (1990-011, 1997-285)	South of Telkwa River on the eastern terrace overlooking Goathorn Creek 225m west of the eastern boundary of Lot 391 and 1350m south of the lot's northern boundary	CMT, Lithics	1990, 1997
GdSr-8 (1975-004, 1997-285)	Terrace on south bank of Bulkley River	Cultural depressions, CMT	1975, 1997

The AOA's results indicate that there are archeological sites within the Tenas Project area. Most notable is the presence of GdSr-8, a series of cultural depressions. Due to its proximity to the Bulkley River and the presence of possible pithouse structure remains, it is likely that GdSr-8 was a seasonal hunting or fishing camp. Although based on the results of this AOA the Proponent amended Project design plans to avoid registered archaeological sites at the load out loop, there is still the potential for further sites to be identified during Project development.

The Traditional Knowledge of the area (explored in-depth in the aforementioned Cultural Use Study) and the close proximity of two significant water sources and numerous archaeological sites further indicates the whole

area has archaeological potential. To be specific, the AOA suggested that the likelihood of CMTS, seasonal campsites, lithic scatters, and trail networks, as well as historic sites associated with mining, existing within the Project area is high.

2.5.2 Preliminary Field Reconnaissance Results

The PFR identified two areas as having archaeological potential, the Tenas Pit (specifically the area near the west boundary of the Project adjacent to Tenas Creek) and the proposed road option.

2.5.3 Archaeological Impact Assessment Results

In this sub-section, we provide details on AIA results, partitioned by date. The sole cultural materials identified during the AIA were three post-1846 spruce CMTs, encountered in the road option area. Sixty-seven shovel tests were undertaken in the Tenas Pit area, as well as ten shovel tests in the rail load out area (See Table 3), all of which were negative (total of 77 shovel tests).

June 2019, Tenas Pit. As previously described, during the week of June 12, 2019, archaeologists from Crossroads CRM conducted a series of pedestrian surveys and shovel tests in the Tenas Pit area. Shovel test locations in the Tenas Pit are depicted in Figure 2.

In the Tenas Pit's southwestern corner, 22 shovel tests were conducted on a well-defined terrace southeast of Tenas Creek (Shovel Test Location #1); seven shovel tests were completed 15m to the north along a flat portion of the same terrace (Shovel Test Location #2); six shovel tests were undertaken immediately to the north along another flat section of the terrace (Shovel Test Location #3); and 11 shovel tests were conducted to the east, where the terrace turns into a ridge (Shovel Test Location #4). In the Tenas Pit's northwestern corner, eight shovel tests were completed along an esker on an uneven terrace (Shovel Test Location #5). Five shovel tests were undertaken in the Tenas Pit's southwestern corner on a high terrace above Tenas Creek (Shovel Test Location #6), as well as eight shovel tests near a gully on the same terrace on the Tenas Pit's western side (Shovel Test Location #7).

October 2019, Load Out Loop. During the week of October 14, 2019 two Crossroads CRM archaeologists and a Wet'suwet'en community member conducted ten shovel tests on a raised terrace with an extinct stream channel above the Project's load out loop area (Shovel Test Location #8). The shovel test location in the load out loop is depicted in Figure 3.

Table 3: Shovel Test Locations (STL) within Study Area

STL #	Date	Location	# of Shovel Tests	Results
1	12/06/2019	Tenas Pit, SW corner	22	Negative
2	12/06/2019	Tenas Pit, SW corner	7	Negative
3	12/06/2019	Tenas Pit, SW corner	6	Negative
4	12/06/2019	Tenas Pit, SW corner	11	Negative

5	12/06/2019	Tenas Pit, NW corner	8	Negative
6	13/06/2019	Tenas Pit, SW corner	5	Negative
7	13/06/2019	Tenas Pit, W side	8	Negative
8	17/10/2019	Rail Load Out Loop	10	Negative

October 2019, Road Option. Two post-1846 pine CMT sites consisting of three CMTs in total were identified while completing pedestrian transects in the road option area during the week of October 14, 2019. The locations of these CMTs, relative to Project infrastructure, are indicated in Figure 4. The CMTs are pictured in Plate 4. Given that the terrain around the CMTs was sloped and undulating, and the CMTs were not on any favourable terrain feature, shovel testing was not conducted.. No areas of archaeological potential were noted during transects in this area, and no shovel tests were undertaken.



Plate 4: *Three CMTs found near the Project's Road Option*

3. DISCUSSION

In this section, we describe the significance of archaeological resources, both in general and specific to the Project's baseline studies, and outline mitigation measures.

3.1 Significance of Archaeological Resources

In this sub-section, we evaluate the significance of the archaeological resources encountered during the Project's baseline studies. Archaeological sites are traditional use sites (and, therefore, the pursuit of archaeological evidence is the pursuit of traditional use)—but a traditional use site is not necessarily an archaeological site. Among First Nations, there is generally no difference in 'importance' between an archaeological site and a traditional use site or area (Budhwa 2005; Nicholas 2006; Rabnett 2000:5-7). For example, sacred grizzly habitat may be as important to First Nations as a village site. Moreover, while there are traditional use 'sites' and 'areas,' traditional use can only be understood in a larger context. The study of traditional use involves the study of geographic space and place, as well as how cultures interact with such places and with the environment (Nicholas 2006).

The importance of obtaining traditional use and oral information cannot be over-emphasized within baseline archaeological assessment processes. An archaeological site is the physical remains of an event of human activity and may only represent certain aspects of cultural activity, such as food gathering, processing, and/or preservation (Rabnett 2000:5-7). Traditional use sites and areas are places of cultural importance where people generally performed all manner of activity (Budhwa 2005).

First Nations cultural heritage requires sensitive and thoughtful management. The Wet'suwet'en believe that 'everything is connected to the land,' a concept referred to as *Yintah*. The Wet'suwet'en have validated their oral history in the *Delgamuukw* court cases (1997) and think that this should facilitate blanket designation of their trail network and associated camps and villages as pre-1846 cultural infrastructure (the date of protection, under the *Heritage Conservation Act*). Until Wet'suwet'en TK is included in relevant archaeological predictive models, the Office of the Wet'suwet'en is of the opinion that the management of their cultural heritage should be done on a contextual basis. Therefore, they do not recognize 1846, nor any date for that matter, as a critical date for protection.

The Office of the Wet'suwet'en considers all cultural heritage resources of high value, regardless of their protection status under the *Heritage Conservation Act (HCA)*. Not all sites, however, have high significance. Due to the density and type of CMTs encountered during baseline archaeological studies, and the Project's location within the traditional territory of the Wet'suwet'en, ethnic significance (defined below) of this area is estimated to be high.

BC's Archaeology Branch (1998) provides criteria to evaluate site significance in the *British Columbia Archaeological Impact Assessment Guidelines, Appendix D*. Each site is assessed and rated as having a high, moderate, or low significance. The definitions of each significance type are as follows:

- **Scientific Significance.** A site's potential to supply information that could improve scientific understanding of BC's heritage resources (i.e., capacities to contribute to various scientific disciplines and understanding of local and regional prehistory). Disturbed sites are typically considered to have low

scientific significance.

- **Ethnic Significance.** The significance or value of a site as perceived by an ethnically distinct community or group (e.g., in this case, the Wet'suwet'en);
- **Public Significance.** A site's potential to improve public appreciation, awareness, interest, and/or understanding, BC's historic or prehistoric past (e.g., its interpretive, educational, and recreational potential).
- **Economic Significance.** A site's potential to contribute or generate monetary benefits or employment through its development and use as a public recreational or educational facility.
- **Historic Significance.** The extent to which a site relates to or represents important historical events or individuals.

All three post-1846 CMTs encountered during the AIA are considered to be of low significance in all of these areas, with the exception of ethnic significance, which the Wet'suwet'en will determine.

In terms of sites registered during prior archaeological field work that were noted in the AOA, GdSs-1-4 (historic mining and camping sites) and GdSs-5 (precontact lithics) are no longer in existence (Hewer 1997, 1998). Their significance, thus, cannot be assessed. Although it has been disturbed, given it is likely a former habitation site (Hewer 1997, 1998), GdSr-8 (a cluster of cultural depressions indicative of dwellings and cache pits near the Project's load out loop area) is of moderate to high scientific significance, medium public significance, and low economic and historic significance. Project infrastructure in the load out loop area has been redesigned to avoid affecting GdSr-8.

3.2 Mitigation Measures

This sub-section describes mitigation measures to prevent developments from impacting archaeological resources, first in general, and then specific to this project.

Impacts to archaeological sites are assessed following Archaeology Branch guidelines. Although occasionally beneficial impacts to sites may result as a consequence of development (e.g., preventing or lessening erosion, or enhancing a site through implementation of a non-destructive public use or educational/recreational facility), adverse impacts are the most common type of impacts to archaeological sites as a result of development. Adverse impacts result in a loss of information and/or a decrease in the socio-cultural, public, and/or monetary value of a site. They include such things as destruction or alteration of all or part of an archaeological site, isolation of a site from its natural setting, or introduction of physical, chemical, or visual elements out of character with the site and its setting. Moreover, adverse impacts may be direct, resulting as an immediate and direct consequence of a development, or indirect, resulting through actions or means other than development activities, but nevertheless not occurring without the development occurring (e.g., vandalism and erosion as a result of increased access to a site).

The primary criterion used to assess the degree of potential impacts to archaeological resources is proximity to proposed development areas. In general, if a site is located within a development boundary or road right-of-way, it is assumed that the site will be destroyed, if the development proceeds. If a site is outside but near a proposed development, indirect impacts could occur through several factors (e.g., disturbance of features or deposits). Such factors could include ground disturbance by wind-blown tree-falls along the edge of the construction area, erosion through changing drainage patterns, erosion by human pedestrian and/or vehicular traffic through

increased access to a site area, and looting/vandalism through increased access and/or knowledge about the location of sites.

The primary and generally preferred recommendation that would be made if a site is found to be in direct conflict with proposed development operations is avoidance. If avoidance is not a feasible option, however, recommendations outlining appropriate measures for mitigating potential adverse impacts through some level of further data collection also would be formulated. For each site, an appropriate scope of work for further research and data collection that would effectively mitigate destruction of the site would be outlined. Such further work could include one or all of the following general tasks: documentary/cultural background research, detailed mapping, systematic surface collection of cultural material, test excavations, and/or intensive research excavations. Recommendations for monitoring of development activities could be made along with any of these strategies.

For sites that are in indirect conflict with a development (i.e., outside but close to construction zone boundaries), several recommendations could be made. These recommendations may include one or all of the following tasks: some level of further data collection, keeping a suitably wide buffer zone between the site boundary and the construction area, monitoring of development activities, maintenance of a relatively high level of confidentiality about the location and nature of a site (e.g., limited access to reports, etc.), and/or deactivation of access into the proposed development area, if applicable.

To develop appropriate mitigation measures for archaeological resources that may be affected by Project development, the Proponent, Telkwa Coal, will work in collaboration with the Office of the Wet'suwet'en. They have already redesigned a portion of the Project, the rail load out loop, to avoid affecting GdSr-8. Further mitigations may be required.

The development of mitigation measures to prevent harm to intangible cultural resources is a separate process and not addressed in the present document (this is addressed in the Cultural Use Study). Final decision-making authority concerning management option(s) will occur through consultation between the Proponent and the Archaeology Branch, Ministry of Forests, Lands, Natural Resource Operations and Rural Development, Victoria.

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Appendix A

Telkwa Coal Limited – Tenas Project Archaeological Overview Assessment (Crossroads CRM 2018)



ARCHAEOLOGICAL OVERVIEW ASSESSMENT

TENAS PROJECT

Submitted by:

Crossroads Cultural Resource
Management Ltd.
Smithers, BC, V0J 2N0
250-877-7858

Submitted to:

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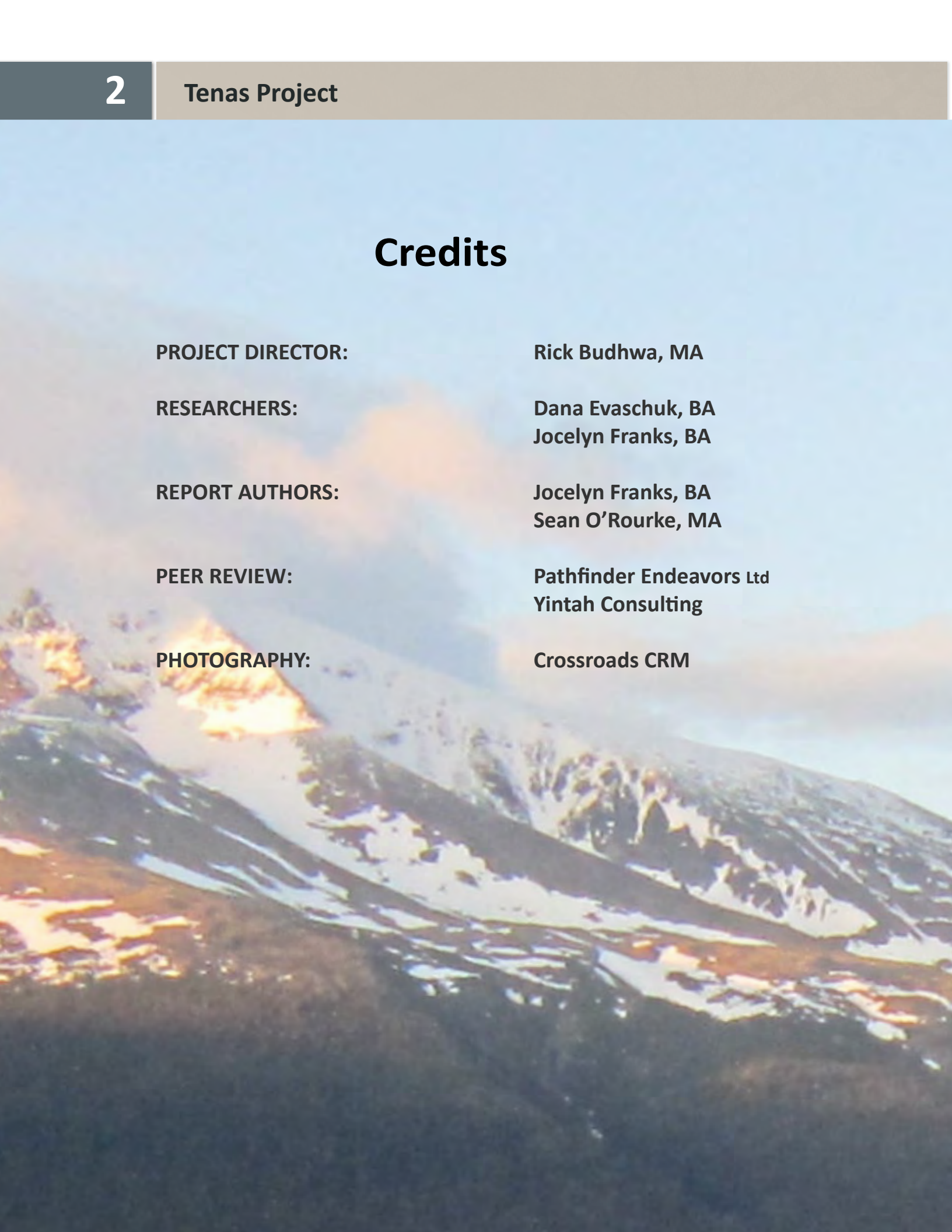
**Jocelyn Franks, BA
Sean O'Rourke, MA**

PEER REVIEW:

**Pathfinder Endeavors Ltd
Yintah Consulting**

PHOTOGRAPHY:

Crossroads CRM



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Management Summary

This Archaeological Overview Assessment (AOA) was conducted on behalf of Telkwa Coal Limited. The proposed development is the construction of a metallurgical coal mine. The AOA was conducted to assess the archaeological potential of the lands proposed for this development. Traditional Knowledge, resource mapping, and the existence of previously registered archaeological sites within the Study Area (GdSs 1-5, and GdSr 8) all indicate the Study Area has archaeological potential. An archaeological impact assessment (AIA) is recommended prior to any ground disturbances related to this development.



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1. Introduction

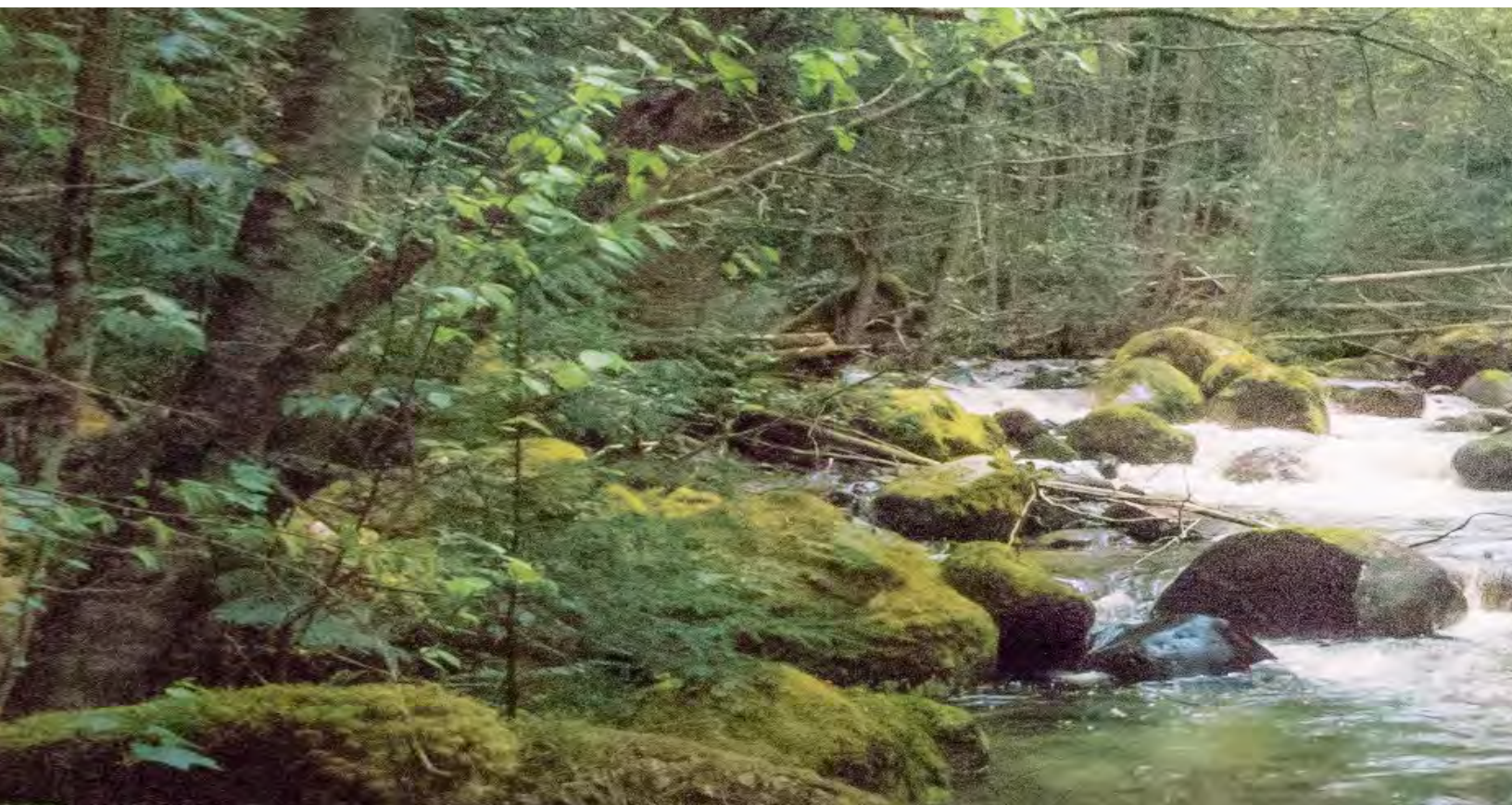
Proponent and Project Information

Allegiance Coal Limited is a company based out of Sydney, New South Wales, Australia, that focuses on the production of steel-making, or metallurgical, coal. Telkwa Coal Limited is owned by Allegiance Coal and is proposing to develop and mine coal in the Bulkley Nechako region, this project is referred to as Tenas Project (the Project). The coalfield is located approximately 15 km south of Smithers and 7 km west/southwest of Telkwa, BC.

Telkwa Coal Limited anticipates the surface mine will produce 750,000 tons per annum of saleable coal at an average strip ratio of 4.5:1 BCM/ROMt, with a mine life of 25 years, including construction, operations and reclamation phases. The expected footprint of the mine is 1000 ha, including buffers.

Objectives and Scope of Archaeological Overview

The goal of this archaeological overview was to use a detailed research methodology and the application of geographic and environmental indicators for archaeological potential for the Project, southwest of Telkwa, BC. In order to make recommendations for this development, proximity to water, elevation, slope, and aspect were all assessed as environmental indicators for archaeological potential within the Study Area.



The objectives of this report are as follows:

- Explain the cultural, historical and archaeological background of the Wet'suwet'en within the Study Area and adjacent regions
- Describe the Study Area and explain how parameters were determined
- Discuss the environmental context of the region with attention to high cultural potential
- Conduct a background library and records search of ethnographic, archaeological and historic documents pertinent to the Study Area
- Provide an overview of historic and prehistoric knowledge of the Study Area
- Describe the methodology that was used during this Archaeological Overview Assessment (AOA)
- Prepare an overview assessment report as described in the Appendix A of the British Columbia Archaeological Impact Assessment Guidelines, and
- Make key recommendations about the Study Area



Project Personnel

Rick Budhwa was the project director. Dana Evaschuk, Jocelyn Franks, and Sean O'Rourke provided project management support and technical and report writing services.

External Review

This project was subjected to a quality assurance and technical review process. More specifically, this project was reviewed in detail by external objective and reputable archaeological and cultural consulting agencies. Feedback from these agencies has been carefully considered by Crossroads CRM and incorporated into this report, where applicable.

Qualifications Summary

Crossroads Cultural Resource Management (Crossroads CRM) is a locally established cultural resource management firm based in Smithers, British Columbia. Our members have been servicing British Columbia and abroad for over 20 years. We have extensive experience working with provincial First Nations, particularly the Wet'suwet'en, in natural and cultural resource management. Further, over the years we have established a trusted and respected relationship with the Wet'suwet'en Hereditary Chiefs. Every member of the Crossroads CRM team uniquely combines education, experience, and cultural sensitivity and respect for First Nations—which allows us to effectively liaise and work between industry, government, and First Nations contexts, as well as integrate cross cultural ideas and management.



2. STATEMENT ON TRADITIONAL KNOWLEDGE IN RESOURCE MANAGEMENT

Traditional knowledge (TK) is very important to any AOA. TK has been given many different labels – for example, traditional ecological knowledge (TEK), traditional ecological knowledge and wisdom (TEKW), Indigenous ecological knowledge, Indigenous knowledge, and Aboriginal traditional knowledge (ATK). Berkes (1993) created a frequently referenced definition of traditional ecological knowledge:

TEK is a cumulative body of knowledge and beliefs, handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment. Further, TEK is an attribute of societies with historical continuity in resource use practices; by and large, these are non-industrial or less technologically advanced societies, many of them indigenous or tribal.

In this AOA, this field of knowledge will be referred to as traditional knowledge (TK). For example, the Government of Northwest Territories (GNWT) (2005) defines traditional knowledge as:

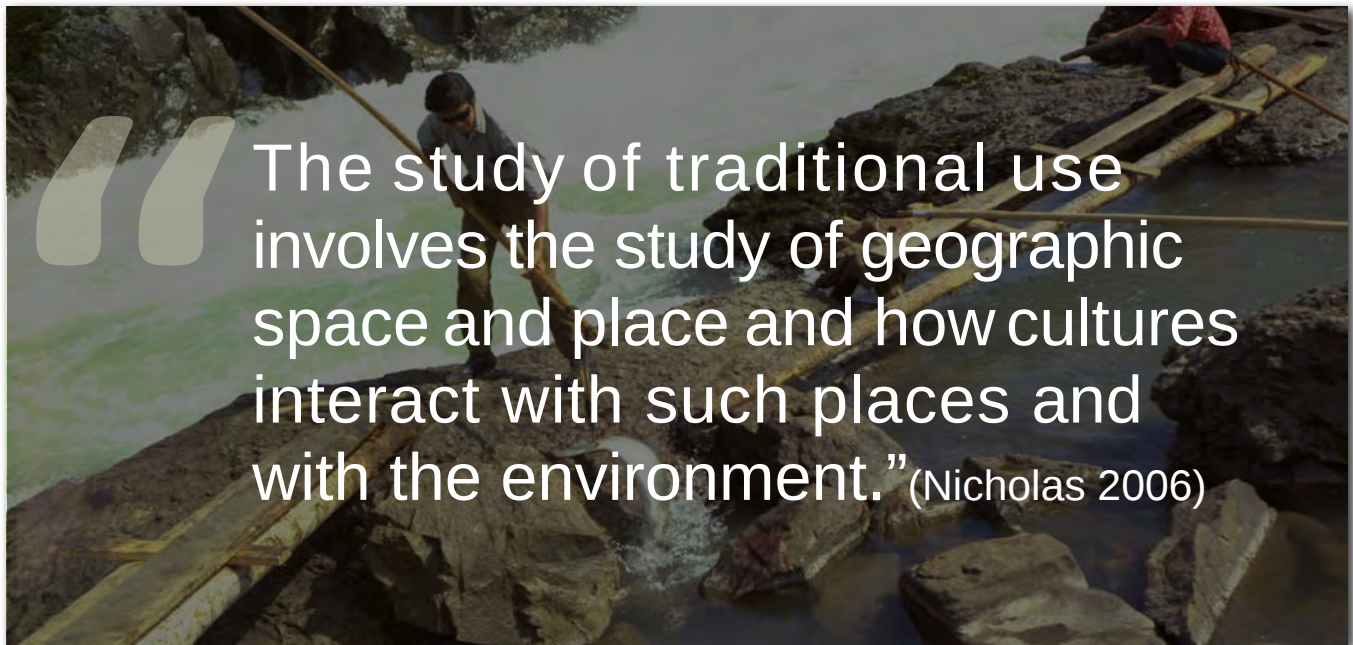
Knowledge and values, which have been acquired through experience, observation, from the land or from spiritual teachings, and handed down from one generation to another.

The term “traditional” used in describing this knowledge does not imply this knowledge is non-technical in nature or old, but “tradition-based.” It is “traditional” because it is created in a manner that reflects the traditions of the communities from which it arises, therefore not relating to the nature of the knowledge itself, but to the way in which that knowledge is created, preserved, and disseminated. TK is collective in nature and is often considered the property of the entire community, and not belonging to any single individual within the community. It is transmitted through specific cultural and traditional information exchange mechanisms.

Given the variety of references for TK, how TK is researched, documented, and collected can also vary



significantly. TK is present in written ethnographies, oral histories, interviews, land-use inventories, archived transcripts and recordings, public hearings, media, scientific meetings, and in the 1980's and 1990's court cases of the Gitksan and Wet'suwet'en First Nations - where TK was well documented in the Delgamuukw-Gisdaywa court cases in the B.C. Supreme Court and in the Supreme Court of Canada. In the last few decades, TK has been gathered in greater frequency to assist land-use decision-making and resource managers, as well as record and document invaluable information from Indigenous elders who continue to practice traditional lifeways, such as language, oral histories, and seasonal rounds. In the last ten to fifteen years, TK has become an important component of many resource management processes, and even more so in recent years as landmark court cases (i.e. Delgamuukw-Gisdaywa, Haida Nation v. Weyerhaeuser, Taku Tlingit v. Tulsequah Chief Mine) have reinforced the importance of appropriate consultation and accommodation with First Nations people in resource-use practices that significantly impact First Nation traditional territories. Gathering, respecting, and incorporating TK is an important component of that process, as is integrating that TK with the western-scientific viewpoint predominant in resource management processes.



“The study of traditional use involves the study of geographic space and place and how cultures interact with such places and with the environment.” (Nicholas 2006)

3. PROPOSED PROJECT

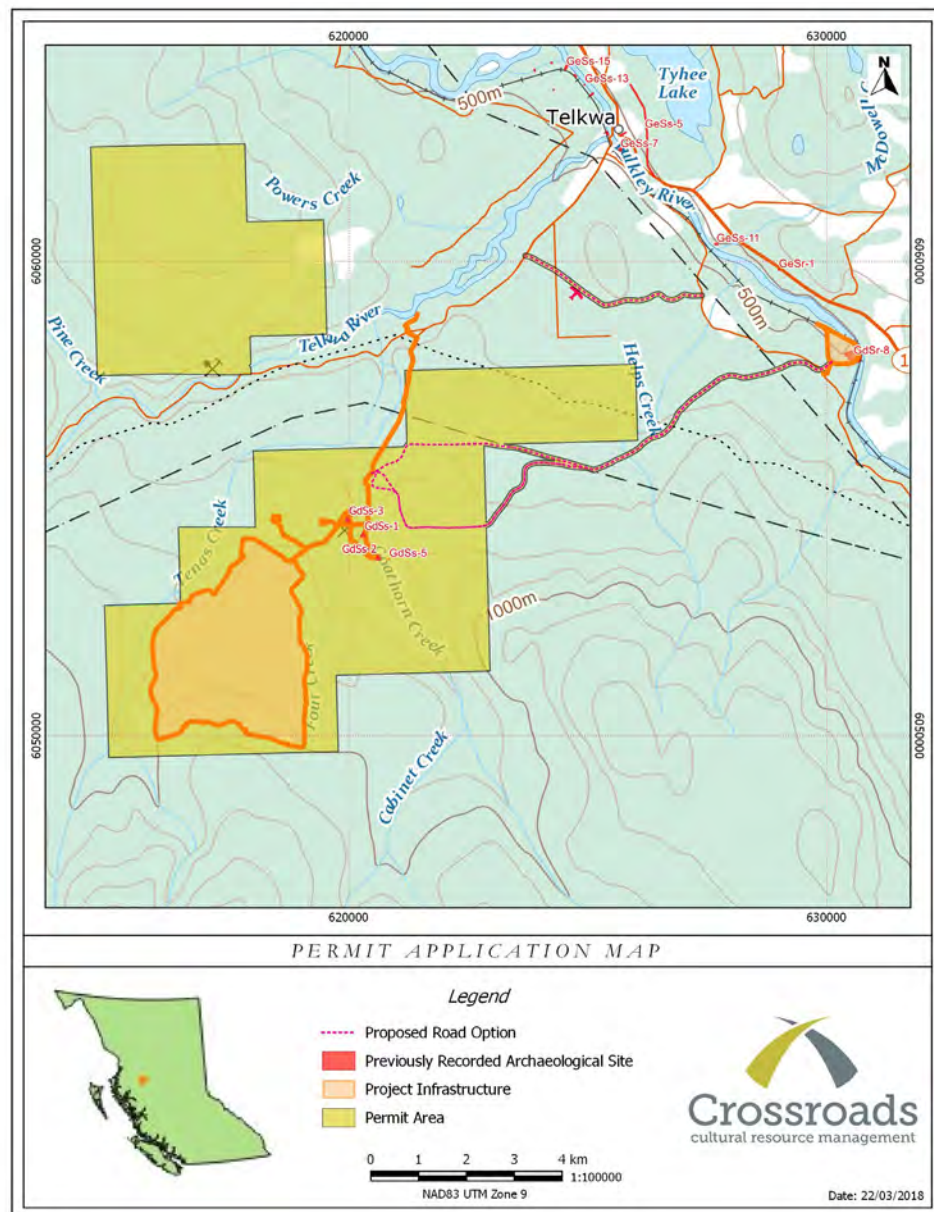
The proposed Tenas Project is a small surface mine comprised of a shallow open pit. It includes a proposed metallurgical coal operation and associated transportation elements and operational facilities. The surface mining will be conducted as a conventional truck/shovel operation comparable to conventional quarry operations in the region.

Project Boundaries

The general location of the Project is in NTS Mapsheets 93L-065/066; see Figure 1 for development location map. The Project is located in the Bulkley Valley, in the eastern foothills of the Coast Mountains, at the western edge of the Central Interior Plateau.

The Study Area includes the tenured area for the Project and the load out loop. All project boundaries and infrastructure will have a 50m buffer (these boundaries are as of December 2018).

Figure 1: Project Boundaries



Anticipated Locations of Project Infrastructure

The project includes one surface pit, a waste rock disposal area, coal processing infrastructure and ancillary infrastructure, such as storage, maintenance facilities, and access. A proposed rail siding and stockpile facilities are proposed to connect with the main rail lines adjacent to the Bulkley River, just south of Telkwa. See Figures 2 and 3 for infrastructure locations.

Figure 2: Mid-Range Map with Project Infrastructure 1 of 2

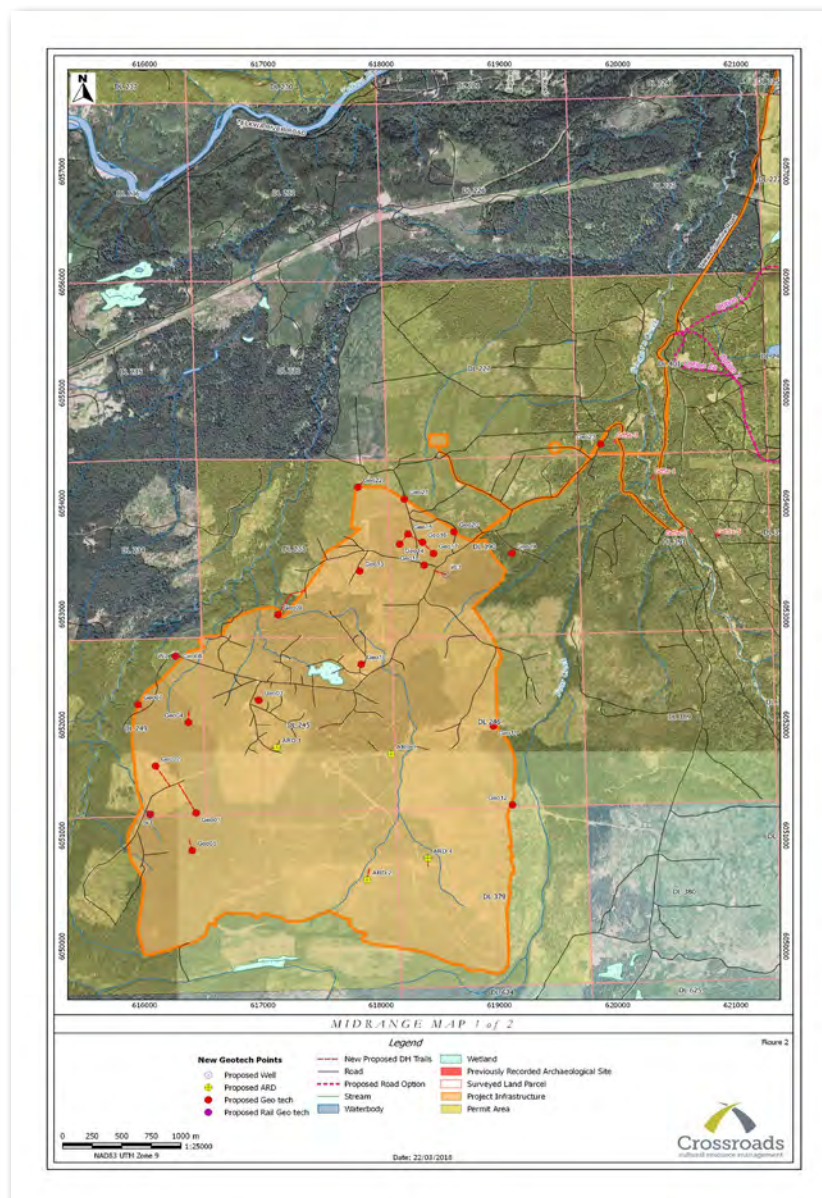


Figure 3: Mid-Range Map with Project Infrastructure 2 of 2

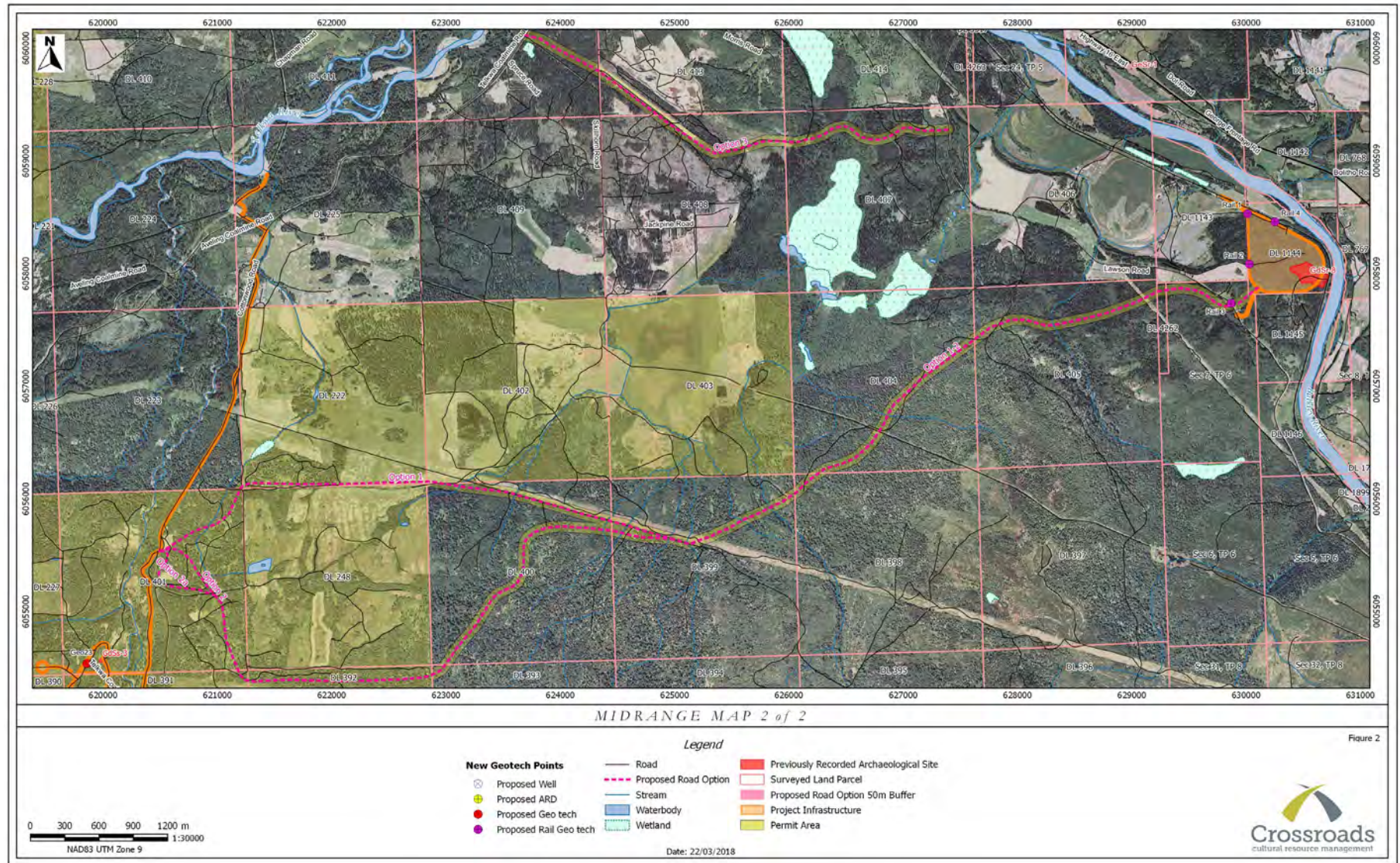
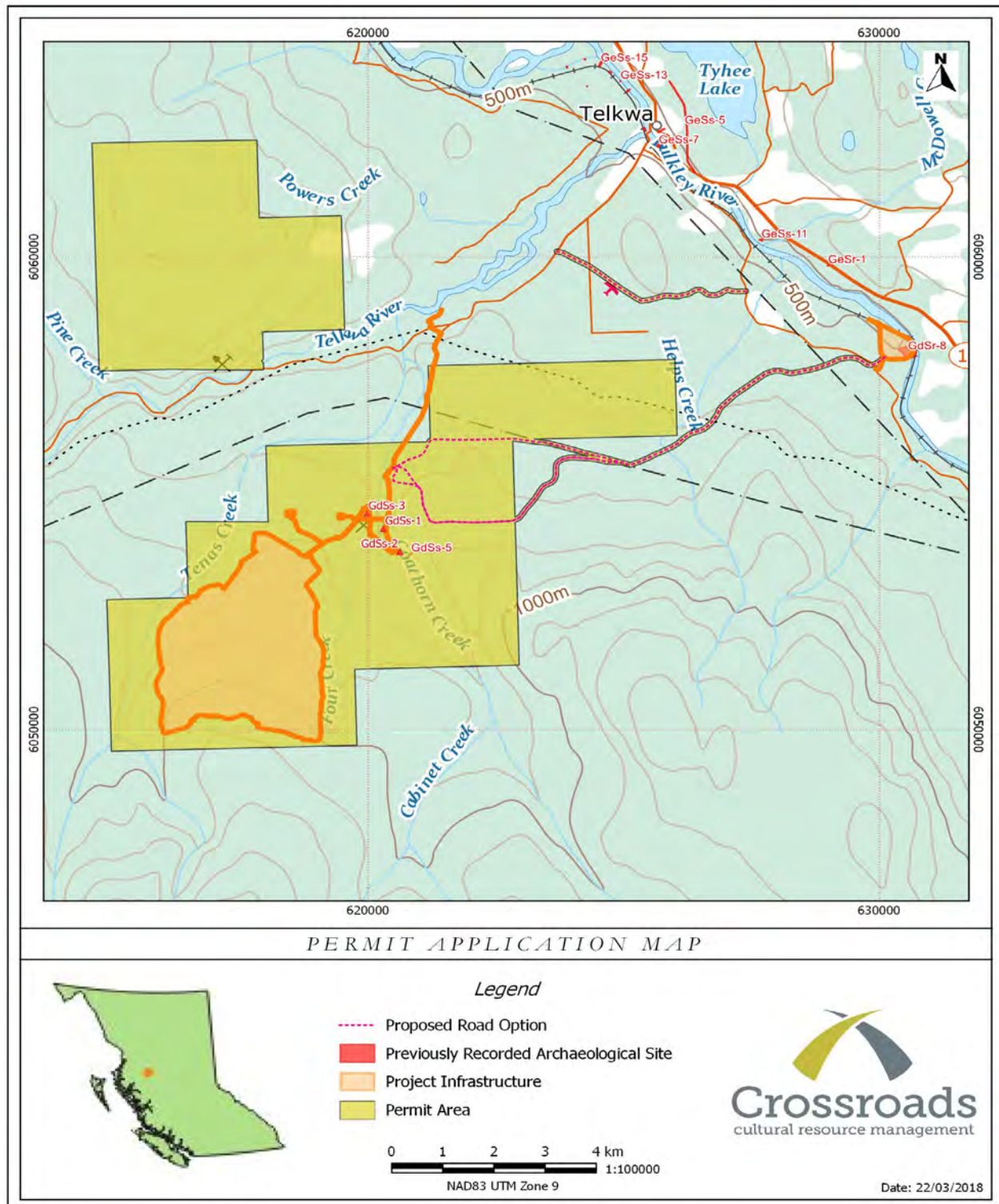


Figure 2

Figure 4. Previously Recorded Archaeological Site Locations



Given the locations, landscape contexts, and site make up of previously established archaeological sites, we have determined the following archaeological potential exists in the Project area, particularly in close proximity to sources of water:

- There is a high potential for Culturally Modified Trees (CMTs) in forested contexts throughout the Project area
- There is a high potential for seasonal campsites related to hunting or fishing and trail networks in the Project area

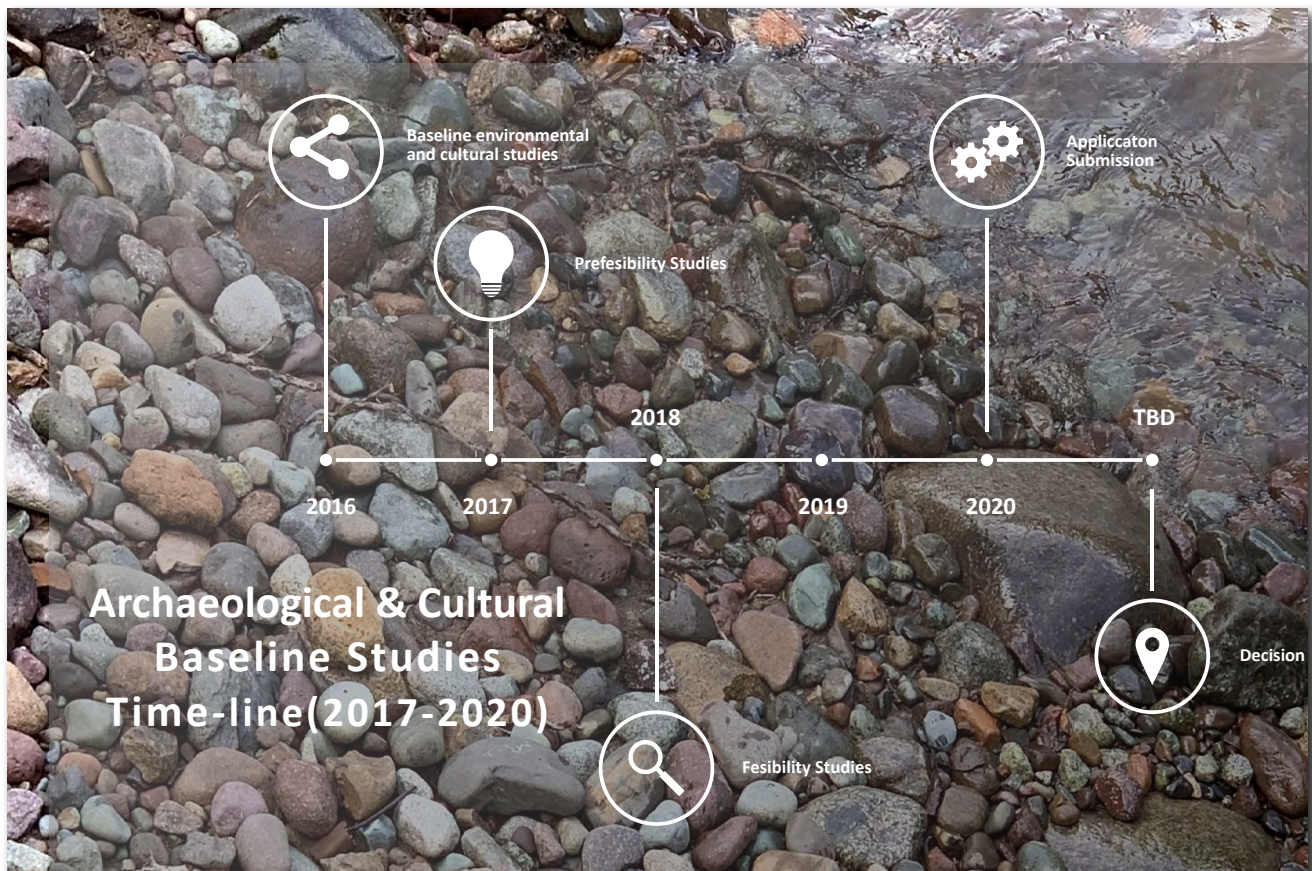
Project Scheduling

Baseline environmental and cultural studies for the Project began in late 2016. Prefeasibility studies were conducted in 2017, and feasibility studies are being conducted in 2018. In 2019, Telkwa Coal will submit applications for the Project to regulators. A decision about whether the Project will go forward will be made in 2020. If this decision is affirmative, construction will begin in the same year, and mine operations and environmental monitoring will commence in 2021.

Following completion of this AOA, in Fall 2018 Crossroads CRM will conduct preliminary field reconnaissance and an Archaeological Impact Assessment (AIA) to further evaluate the Project area's archaeological potential and evaluate the Project's potential to affect archaeological resources.

Throughout all Project stages, Crossroads CRM will engage in dialogue with the Wet'suwet'en and the local community on issues related to archaeology and cultural use.





Proposed Roadways

At this stage in the Project, the location of the access road leading to the coal deposit has yet to be finalized. There are currently three access road options. Once a route has been finalized, Crossroads, in collaboration with the Office of the Wet'suwet'en, will perform preliminary field reconnaissance (and AIA if deemed necessary) along the decided route.



4. STUDY AREA

The Study Area is situated in the Bulkley-Nechako region, near the confluence of the Telkwa and Bulkley rivers. Goathorn Creek, a major tributary to the Telkwa River, lies within the Study Area. The Project is located adjacent to Canadian National Rail's (CNR) mainline.

The local area is located at the northwestern edge of the Nechako Plateau section of the Interior Plateau, bordering the Skeena Mountains to the north and the Bulkley Ranges of the Hazelton Mountains to the west. The Nechako Plateau is generally flat to rolling terrain with distinctive glacial features, for example, eskers, and numerous lakes of all sizes (Holland 1964). The Bulkley River is an important drainage basin, dissecting the edge of the Plateau and flowing north into the Skeena, as part of the Pacific watershed.

The Study Area falls within the sub-boreal spruce zone (SBS), which dominates the central interior of British Columbia and is characteristic of the Bulkley Valley. Much of the arable lowlands along the Bulkley Valley have been logged in the past and converted to farmland. Where forested areas exist, they are composed largely of white and hybrid spruce and sub-alpine fir, with lodgepole pine, aspen stands and birch. This area supports a variety of large mammals, including: moose, mule deer, white tail deer, black bear, grizzly bear, grey wolf, cougar, and at higher elevations, bighorn sheep, mountain goat, and caribou. Smaller mammals, such as coyote, porcupine, beaver and fox, as well as fur bearing species, such as snowshoe hare, mink, marten and fisher, are common in this territory. Salmon can be found in many of the streams and rivers throughout the project area in general (Meidinger et al. 1991, Hewer 1998).

Two major events drastically altered the landscape of the area. In 1914, a forest fire swept the valley destroying many buildings and forested areas. In more recent years, the Mountain Pine Beetle epidemic killed off the regrown forests. This combined with the increased settlement of the area caused the extirpation of the Woodland Caribou (Ministry of Environment 2000, 4). Today, the Telkwa herd consists of less than 100 caribou and range south of Highway 16 between Smithers and Houston, BC (Hatter and Post n.d., 124, Cichowski 2014). Caribou calve in alpine areas and normally winter in low elevation pine forests and are reliant on old growth forests for their survival (Ministry of Environment, Lands, and Parks 2000, 3). This Project lies within the northeastern portion of the Telkwa Mountains Caribou Wildlife Habitat Area.



Photo by Steve Forrest



5. CULTURAL AND HISTORICAL SETTING

The Study Area is encompassed by the traditional territory of the Cas'Yex (Grizzly House) of the Gitdumden (Bear Wolf) clan of the Wet'suwet'en (Figures 5 and 6). The Laksilyu (Small Frog) clan of the Wet'suwet'en share a border with the Gitdumden clan between the Project's coal deposit and load-out area. Traditional Wet'suwet'en life ways revolved around the summer salmon food fishery; during the rest of the year, family groups dispersed to their Houses' resource areas (Rabnett 2000, i). Fish bone artifacts found during an excavation in Moricetown indicates the Wet'suwet'en have continuously inhabited the region for about 6000 years up to the present (Allbright 1987). Early explorers of the Bulkley Valley reported that the landscape was primarily comprised of open pastures with deciduous forest stands and berry patches (Rabnett 2000, 12). Prior to the ban of controlled burning, the Wet'suwet'en traditionally maintained their resource harvest areas using fire to manage wildlife and plants (Gottesfeld 1994).



... While an archaeological site is considered a traditional land use site, a traditional land use site is not always an archaeological site."

Fishing, hunting, trapping, and gathering occurred (and continues to occur) on the territories. Elk, caribou, deer, bear, rabbits, and marten were the most commonly hunted animals. In the early 1900s, sheep and caribou populations began to decrease, and moose and mule deer became more common (Rabnett 2000, 11). Berries, including blueberries, huckleberries, and soapberries, were harvested and dried, and trees were used for medicines, tools, building, or firewood (Mills 2004, 141, 145-146).



Figure 5. Wet'suwet'en Territory in British Columbia

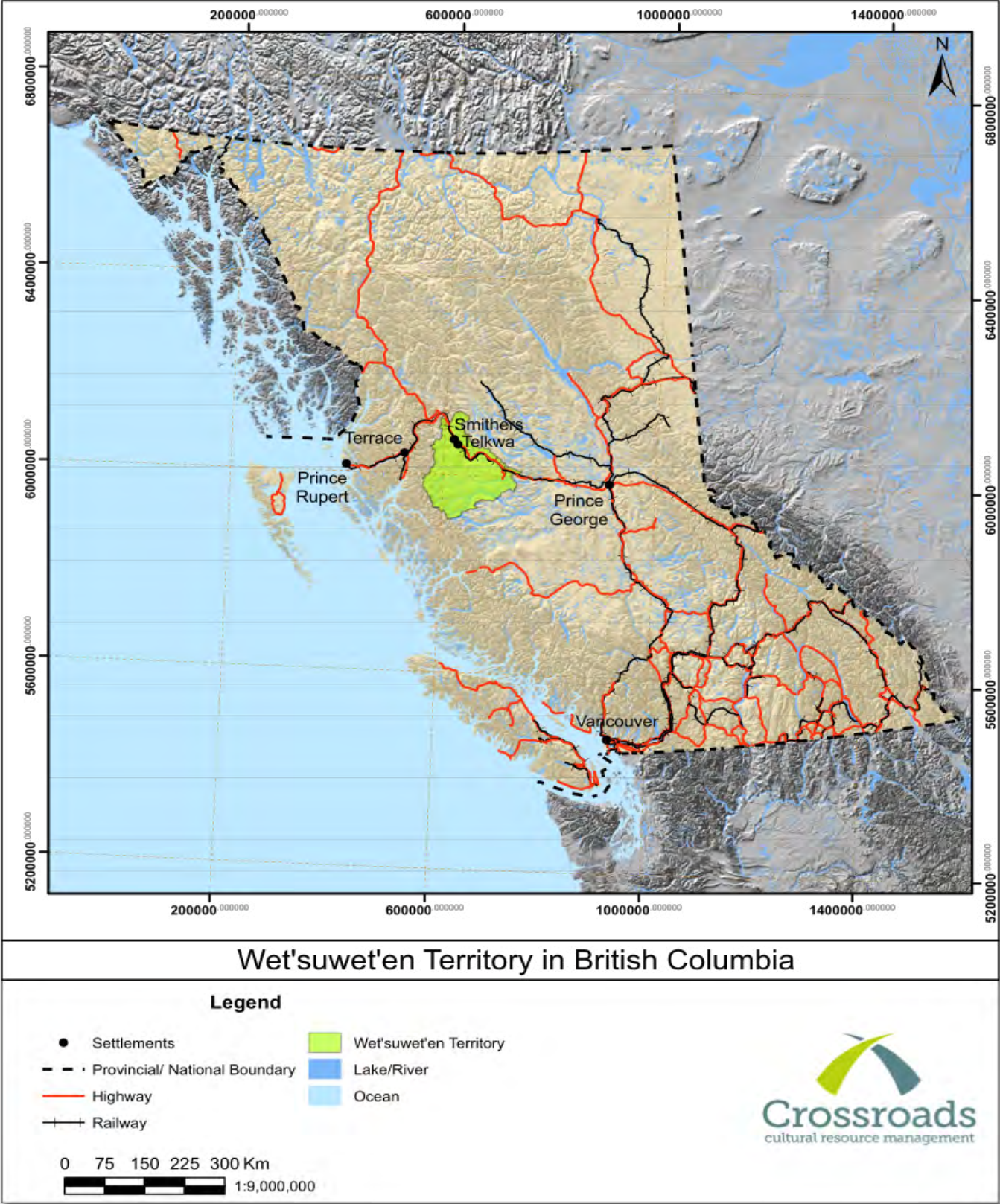
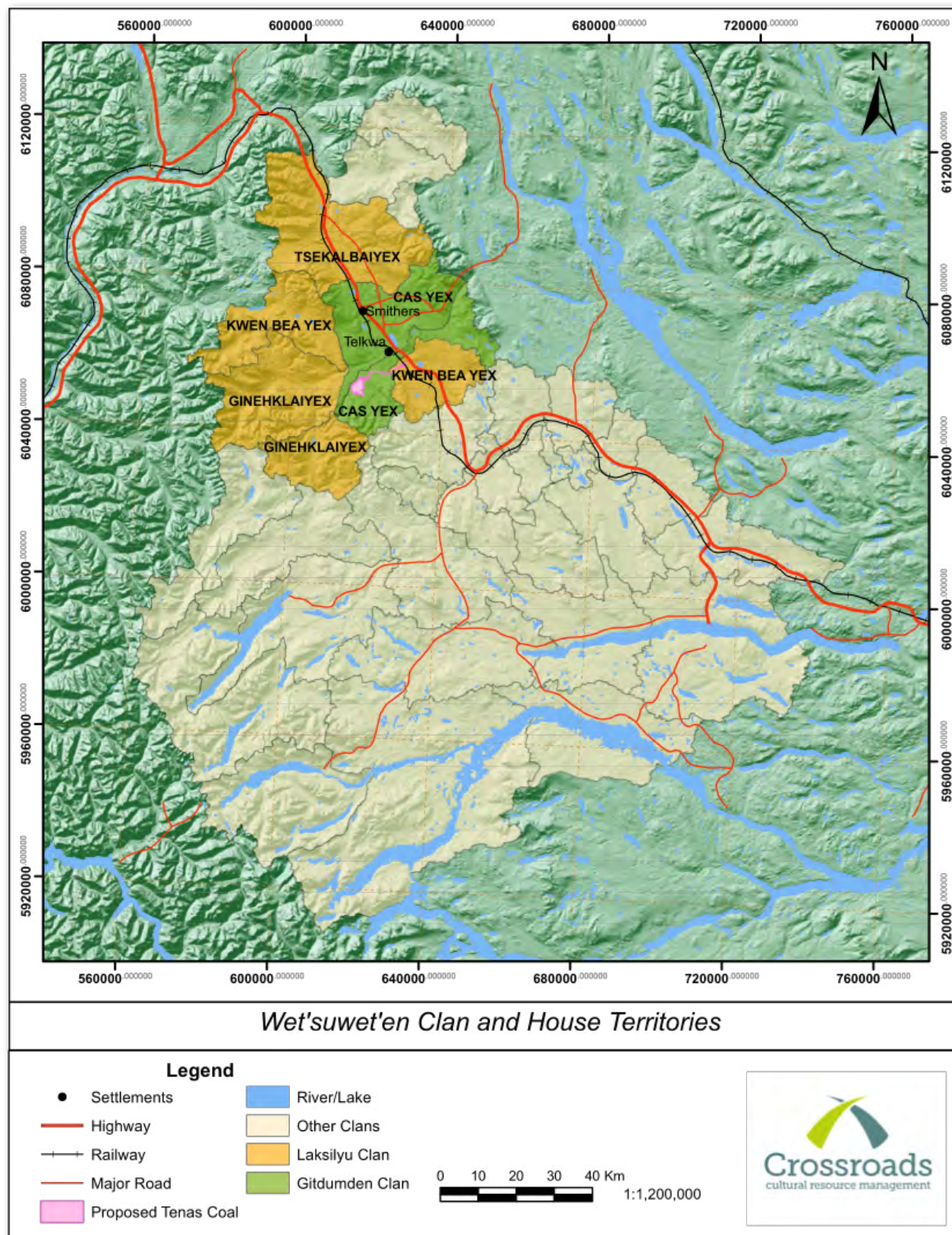
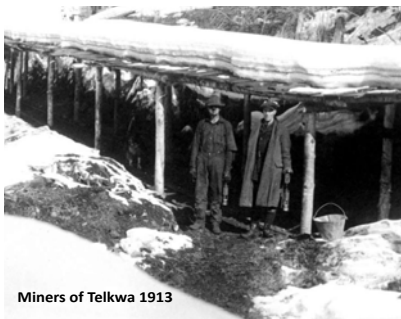


Figure 6. Wet'suwet'en Clan and House Territories



Contact with Europeans commenced in this region with the Gitksan trading in European goods from the coast. During the 1820s, the Hudson's Bay Company built forts in the Babine area to directly trade with these western Carrier groups (Tobey 1981). In the Telkwa area, more direct and lasting contact with Europeans commenced as prospectors began traveling through the area looking for gold and mineral deposits to claim. These prospectors' stories of the region's terrain led to the development of a pack trail and telegraph line from the south, first up to Quesnel, then west along Fraser Lake, and up along the high bluffs over the Bulkley River, to head north to Telegraph Creek (Cassidy 1987). This line, known as The Telegraph Trail, passed along the east and south sides of Tyhee Lake. The area's earliest settlement, Aldermere, was established near the southeast side of Tyhee Lake, along the trail, in the early 1900s. Aldermere became a stopping point and rest station along the trail. By 1907, though, the focus of European settlement in this part of the Valley was moving to the current site of Telkwa, near the confluence of the Bulkley and Telkwa Rivers, where the Grand Trunk Pacific Railway was being constructed (Bulkley Valley Heritage Club 1973; Village of Telkwa 2009). The small town of Hubert was constructed during this time period along the Grand Trunk Rail line, roughly 4.5 KM east of Telkwa, in the vicinity of the Project's load out loop (Gent 2016). Hubert was originally intended to be the halfway point





along the rail line between Prince George and Prince Rupert; however, after the surrounding lands were bought by property speculators, the town was dismantled, and Smithers was made the new dividing point. A BC Land and Titles Search of relevant property parcels—PID # 013-581-180, # 015-077-802, # 012-469-301, # 015-103-765, and # 015-842-819—indeed indicates that the lands around the former settlement of Hubert have since been reverted to Crown land.

Since European contact, the Bulkley Valley has been an active prospecting and mining area (L'Orsa 2013). In the late 1800s and early 1900s, mineral prospectors were drawn to the Bulkley Valley, particularly after it was decided the Grand Trunk Railway was to run through it. These prospectors, however, were more interested in coal and other minerals, such as copper, than gold, and many copper deposits were discovered in the Telkwa mountain range. By 1906, W. W. Leach drafted a detailed contour map of the general geology of the Telkwa River area that included information on these newly identified deposits. Although early prospectors in the Bulkley Valley discovered numerous small veins of copper, lead, zinc, silver, and gold, they failed to locate larger deposits until the 1960s, when a substantial mineral deposit (the "Davidson deposit") was found within Hudson Mountain, approximately 8 km northwest of the Smithers rail station. Prospecting activity decreased in the 1930s during the Great Depression, but picked up following World War II, reaching a peak in the 1960s, during the Great Copper Rush. Notable mines in the Telkwa mountains and the Hudson Bay Mountain areas included Duthie, Conin, and Dome Mountain mines, as well as the coal mine in Telkwa. Although some mines in the Bulkley Valley, such as the Bell and Granisle copper mines, have since closed down, others, such as the Huckleberry Mine (copper, gold, silver, and molybdenum) continue to operate.





6. METHODOLOGY

Research Plan

The Project footprint was assessed in the office to determine the need for an AIA. The footprint was reviewed to determine areas of archaeological potential within each portion of the development area. Assessments were undertaken through examination of orthophotos, topographic information, forest cover information, geological information, ethnographic information, site distribution maps, and our personal knowledge of the area.

ARCHAEOLOGICAL OVERVIEW ASSESSMENT PROCESS

01 **RECORDS
SEARCH**

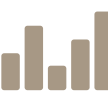
Background library reviewing and existing literature. Literature that pertains to the area.

02 **DIRECT
CONSULTATION**

Wet'suwet'en and Bulkley Valley Museum consultation for knowledge in the study area.

03 **SITE VISIT**

Overview flight of study area by helicopter.

04 **REPORT
PREPARATION**

Archaeological impact assessment and consultations with office of Wet'suwet'en

Phase I - Background Library and Records Search

This phase sought to review the existing literature that pertains to the Telkwa area, acquired via desk-based research and consultation. Wet'suwet'en history has been well documented due to the Delgamuuk'w/Gisdaway Court Case that also demonstrates that title to the area by the Wet'suwet'en has not been extinguished. Recent land use management plans and a review of currently documented archaeological values contributed to this project. As outlined in the BC Archaeological Impact Assessment Guidelines (Province of BC, 2000) research conducted for this Project will include:

- a check of extant records including the B.C. Archaeological Site Inventory, Remote Access to Archaeological Data ("RAAD"), legal land survey records, and other relevant records and inventory files;
- a review of all previous archaeological and ethnographic investigations in the Study Area and adjacent areas;
- a review of relevant information from published and unpublished sources such as local and regional history, prehistory and ethnography

This check of background information includes a synthesis of biogeophysical, ethnographic, and archaeological information, essential to:

- identifying the limits of available data and gaps in existing knowledge;
- evaluating the physical and cultural potential of the landscape;
- assessing temporal changes to the landscape and the resulting impacts on settlement and subsistence patterns;
- formulating cultural land-use patterns;
- evaluating previous archaeological studies;
- assessing the integrity of the Study Area; and
- framing research or resource management objectives through an appropriate survey and sampling strategy.

Phase II - Direct Communication

Communication was started with the Office of the Wet'suwet'en, the Bulkley Valley Museum, and individuals with knowledge of the Study Area. The results of these consultations are included in this report.

BULKLEY VALLEY
museum



Phase III – Site Visit

An overview flight of the Study Area was conducted in a helicopter, including several vehicle accessed site visits. Ground truthing will occur during the preliminary field reconnaissance stage of the project.

Phase IV - Report Preparation

This final report was prepared in accordance with Appendix A of the BC Archaeological Impact Assessment Guidelines and communication with the Office of the Wet'suwet'en and the client.



7. RESULTS: ARCHAEOLOGICAL AND CULTURAL HERITAGE POTENTIAL

Description of Past Land Use

The review of all pertinent records indicates the proposed development area has experienced a high degree of surface level disturbances in the recent past. The area is frequented by recreationalists who use the area for hiking, skiing, hunting, horseback riding, snowmobiling and ATVing. These activities can contribute to additional surface level disturbances within the Study Area.

With reference to the knowledge and oral traditions of the Wet'suwet'en, the Project is situated within Cas'Yex territory, and this area would have frequented for resource harvesting. The Wet'suwet'en oral and documented history indicates this area was used heavily until they were evicted in the early 20th century and moved to small reserves nearby (McCreary 2018). This forced resettlement was due to a series of interrelated events: In 1901, the BC government sold territory the Wet'suwet'en were living on and cultivating near Telkwa to settlers, displacing many Wet'suwet'en families (Gitxsan 2013). Wet'suwet'en along the route of the Grand Trunk Railway were displaced to facilitate the railway's construction in 1908 (Gitxsan 2013). In 1911, the year Smithers was founded as the regional hub for the railway, families in and near the town site were forcibly relocated so the settlement could be built (McCreary 2018). Further relocation occurred after Premier McBride and J. McKenna signed an agreement in 1912 to establish a Royal Commission to review (and adjust, if necessary) the sizes of Indian Reservations in BC (Gitxsan 2013).



Summary of Archaeological Sites

The review of RAAD resulted in five registered archaeology sites within a two kilometer radius of the Study Area. These sites were identified in previous archaeological impact assessments. GdSs 1, GdSs 2, GdSs 3 and GdSs 4 indicate that historic mining and logging activity occurred in the area in the early to mid-1900s. In an archaeology assessment conducted in 1984, artifacts found include metal objects, timbers, glass, boots and concrete foundations. Archaeological inventory and impact assessment in 1997 determined that most of what was recorded in 1984 is no longer identifiable. In the general vicinity of GdSs 1, three historic CMTs were identified and recorded, all being lodgepole pine trees.

GdSs 5 is located east of Goathorn Creek. Road construction exposed a cache of three obsidian bifaces on a high terrace above Goathorn Creek. All subsequent shovel tests were negative. A chert cobble and some basalt shatter were identified nearby. Site may have been a hunting blind or an isolated artifact cache. A recent spruce CMT (1998 investigation) was recorded near GdSs 5, while attempts to relocate the archaeological site came back negative.

GdSr 8 is located within the proposed load out loop area. The site was originally recorded in 1975 as 4 cultural depressions. Archaeological surveys in 1997 resulted in 6 additional cultural depressions, as well as a CMT being identified and recorded. The larger of the depressions is likely a subterranean pit-house structure, with the smaller depressions likely acting as a cache or possibly cooking or roasting pits (Hewer 1998). Previous project plans were changed due to the presence of this site and no further archaeological investigations occurred in the vicinity.

The majority of these sites are associated geographically with the Bulkley and Telkwa Rivers and their tributaries. Site forms for GdSs 1-5 and GdSr 8 are included in **Appendix B**.



Evaluation

The compilation of these results indicates that there are archaeological sites within this proposed project area, and there is the potential for further sites to be identified. Most notable is the presence of GdSr 8, a series of cultural depressions that will need to be examined further. Due to its proximity to the Bulkley River and the presence of possible pit-house structure remains, it is likely that GdSr 8 was a seasonal hunting or fishing camp.

The traditional knowledge of the area and the close proximity of two significant water sources and numerous archaeological sites further indicates the whole area has archaeological potential. To be specific, the likelihood of CMT's, seasonal campsites, lithic scatters, and trail networks, as well as historic sites associated with mining, existing within the Project area is high.

Table 1: Summary of Archaeological Sites within Study Area

Site#/ Permit#	Environmental Setting	Type	Recorded Visits
GdSs 1 (1984-035, 1997-285)	SW of Telkwa in the Goathorn Creek Valley in Lot 391 on the east side of the creek, 300m NW of the bridge	CMTs, Historic (Bulkley Valley Collieries #3 Mine)	1984, 1997
GdSs 2 (1984-035, 1997-285)	SW of Telkwa, in the Goathorn Creek Valley, in Lot 39, 90 m SE of the bridge crossing on east side of the creek	Historic (Cassiar Camp, Bulkley Valley Collieries #1 Mine)	1984, 1997
GdSs 3 (1984-035, 1997-285)	Western slope of the Goathorn Creek Valley, 1 km NW of the confluence of Goathorn and Four Creeks	Historic (Bulkley Valley Collieries #2 Mine)	1984, 1997
GdSs 4 (1984-035, 1997-285)	In the Goathorn Creek Valley SW of Telkwa on a broad terrace on the west side of the creek below Coal Mine Road	Historic	1984, 1997
GdSs 5 (1990-011, 1997-285)	South of Telkwa River on the eastern terrace overlooking Goathorn Creek 225m west of the eastern boundary of Lot 391 and 1350m south of the lot's northern boundary	CMT, Lithics	1990, 1997
GdSr 8 (1997-285)	Terrace on south bank of Bulkley River	Cultural depressions, CMT	1975, 1997

8. EVALUATION AND DISCUSSION

Information Gaps

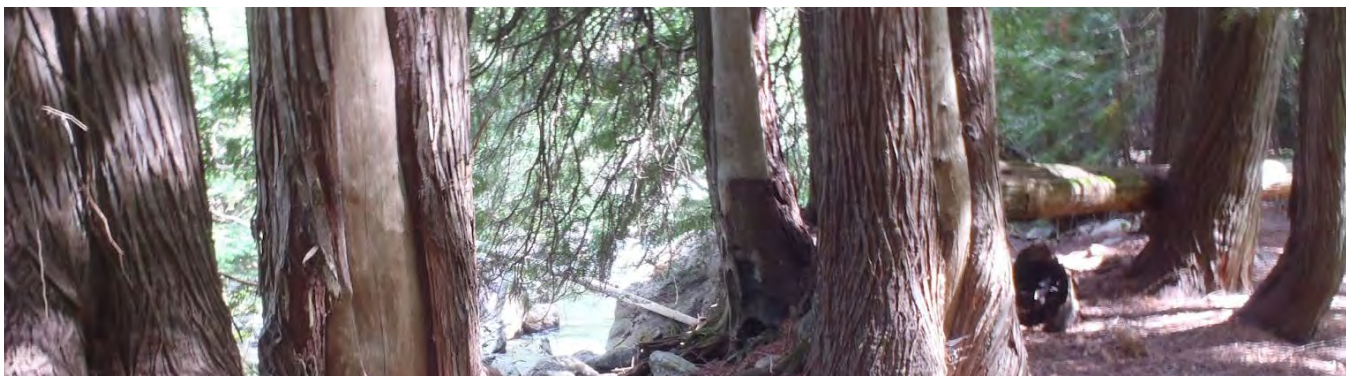
Through consultation with the Office of the Wet'suwet'en and review of pertinent literature, we have made our best effort to include all information relevant to the Project in this report. However, knowledge gaps still exist, and the information we have included does not provide a complete picture. For example, oral histories provide just one perspective. Further, past archaeological inventories have also provided limited information. For example, some of registered archaeological sites within the project area have not had the full extent of their site boundaries determined.

Archaeological Potential of Study Area

Based on the previously established archaeological sites within the Study Area, as well as the search of pertinent records and direct consultation described above, the types of sites that could occur within the Project area are:

Culturally modified trees (CMTs)—trees that have been some how altered through traditional forest use by Indigenous peoples (Archaeology Branch 2001).

Trails—routes of travel that exist between resource areas, sites of habitation, and locations associated with fishing, hunting, and/or plant collection. Some trails may still be visible if they were well-used and in areas of sparse vegetation, or if the use of a trail has been continued to the present or recent past. Some trails may also have become current roads or development trails, for example, routes constructed for logging activity. Such roadways are often constructed on top of trails created by Indigenous persons in the past, because Indigenous trail systems were designed to maximize efficiency of transportation between resource areas. At present, local area users (e.g., hunters, recreationists) commonly use roads constructed for resource development. Given the high level of disturbance trails and roadways have continuously been subjected to, it is difficult to distinguish between trails established in the past vs. those created more recently.



Cultural features—remnants of cultural activity that are non-portable, or a human modified component of an archaeological site. Examples of cultural features often found in northwestern BC include post moulds, hearths, and pits. Some cultural features may be visible on the ground, but others may be evident solely through subsurface ground inspections (e.g., shovel testing).

Lithic scatters—groups of stone artifacts, such as tools (e.g., projectile points, scrapers, and knives) and associated waste-flakes due to their manufacture and maintenance. Lithic scatters may be found both on the surface and buried under the surface.

Historic features associated with mining and logging activity—for example, metal objects, such as tools or debris, or concrete associated with former mining building foundations. Some historic features may be visible on the ground, but others may be evident solely through subsurface ground inspections (e.g., shovel testing).

Significance of Archaeological Resource Values

Archaeological sites are traditional use sites (and therefore the pursuit of archaeological evidence is the pursuit of traditional use); but a traditional use site is not necessarily an archaeological site. For First Nations, there is no difference in “importance” between an archaeological site and a traditional use site or area (Budhwa 2006, Rabnett 2000:5-7; Nicholas 2006). For example, sacred grizzly habitat is as important to First Nations as a village site. Moreover, while there are traditional use “sites” and “areas”, traditional use can only be understood in a larger context. The study of traditional use involves the study of geographic space and place and how cultures interact with such places and with the environment (Nicholas 2006).



The importance of obtaining traditional use and oral information cannot be over-emphasized within this assessment process. An archaeological site is the physical remains of an event of human activity and may only represent certain aspects of cultural activity, such as food gathering, processing and preservation (Rabnett 2000:5-7). Traditional use sites and areas are places of cultural importance where people generally performed all manner of activity (Budhwa 2005, 2006).

The Office of the Wet'suwet'en considers all cultural heritage resources of high value, regardless of their protection status under the Heritage Conservation Act (HCA). However, not all sites have high significance. Due to the density and type of CMTs, and the site location within the traditional territory of the Wet'suwet'en, ethnic significance is estimated to be high.

First Nations cultural heritage requires sensitive and thoughtful management. The Wet'suwet'en believe that 'everything is connected to the land', a concept referred to as 'yintah'. The Wet'suwet'en have validated their oral history in Delgamuukw and think that this should facilitate blanket designation of their trail network and associated camps and villages as pre-1846 cultural infrastructure. Until Wet'suwet'en traditional knowledge is included in relevant archaeological predictive models, the OW is of the opinion that the management of their cultural heritage should be done on a contextual basis. Therefore, they do not recognize 1846, or any date for that matter, as a critical date for protection.

Impacts on Archaeological Resource Base

Six previously found archaeological sites (GdSs 1, GdSs 2, GdSs 3, GdSs 4, GdSs 5, and GdSr 8) exist within the proposed project's boundaries. See figures 4 and 5 for site locations. See Results: Summary of Archaeological Sites section for detailed site information, and Appendix B for site forms.



... everything is connected to the land, a concept referred to as yintah.”

9. MANAGEMENT RECOMMENDATIONS

- Given the written and oral information consulted for this study, we consider the potential for archaeological and cultural heritage in the Study Area to be of high potential. Therefore, we recommend that an Archaeological Impact Assessment (AIA) be conducted for this proposed project prior to any development or disturbance of lands.
- A Preliminary Field Reconnaissance (PFR) of the Study Area, in collaboration with the Office of the Wet'suwet'en, should also be conducted prior to the AIA to determine whether there are any creeks, other water sources, or other significant features or trails that may require assessment. This PFR will be conducted prior to the AIA.
- We recommend that the oral histories of the Wet'suwet'en should be integrated into the Cultural Impact Assessment, as this is an under researched area.



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11. APPENDIX A - Maps

Figure 7: Permit Area Overview Map

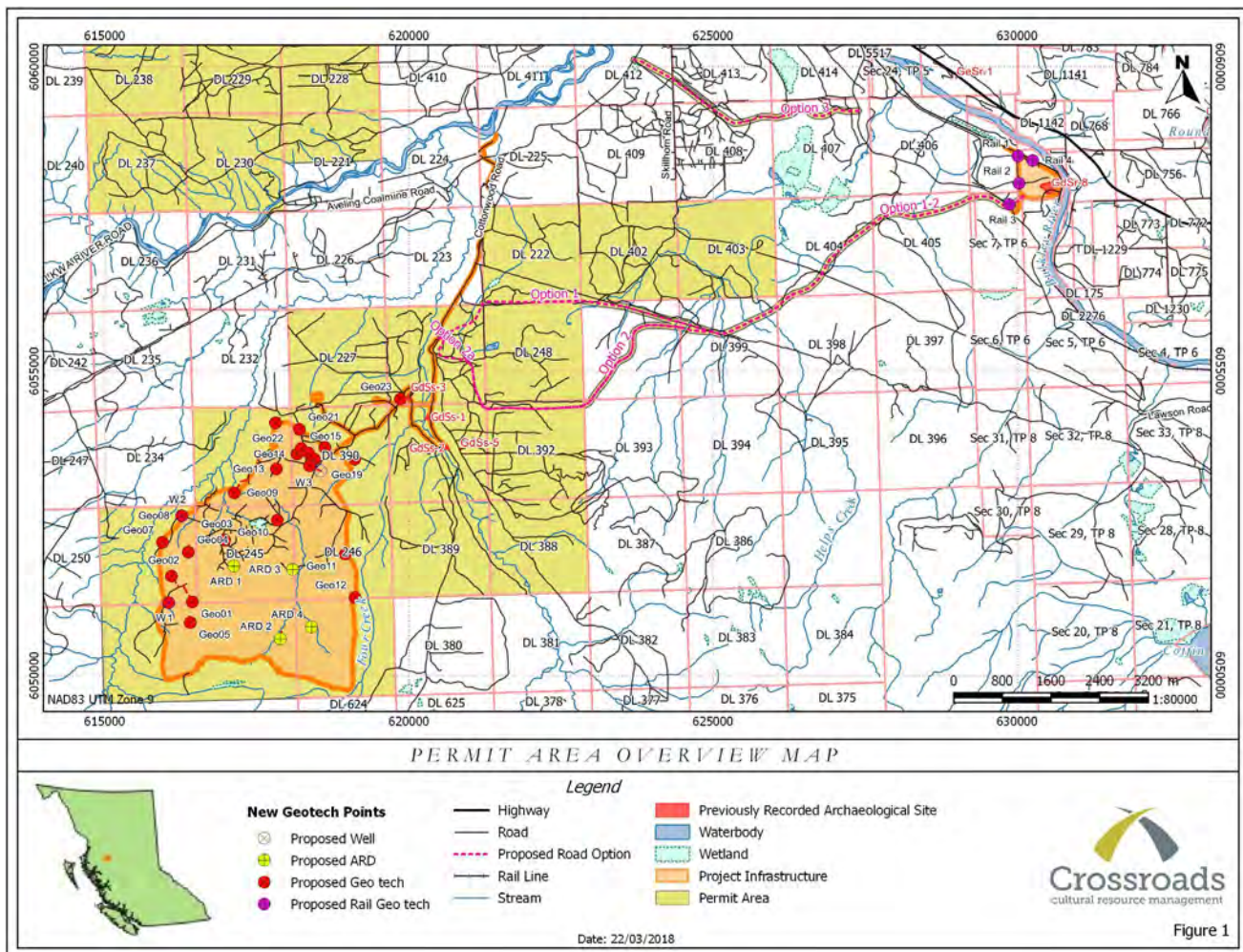
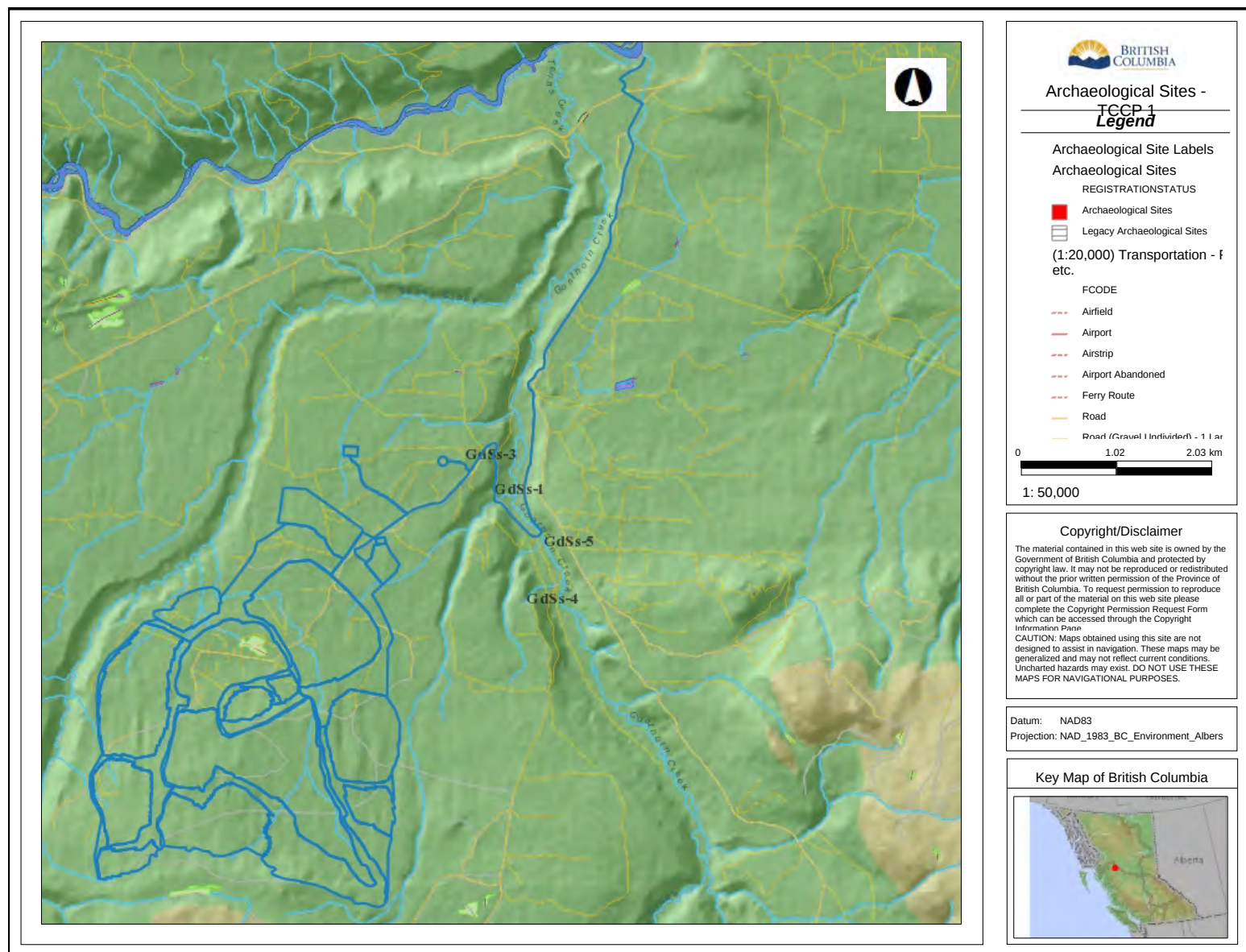
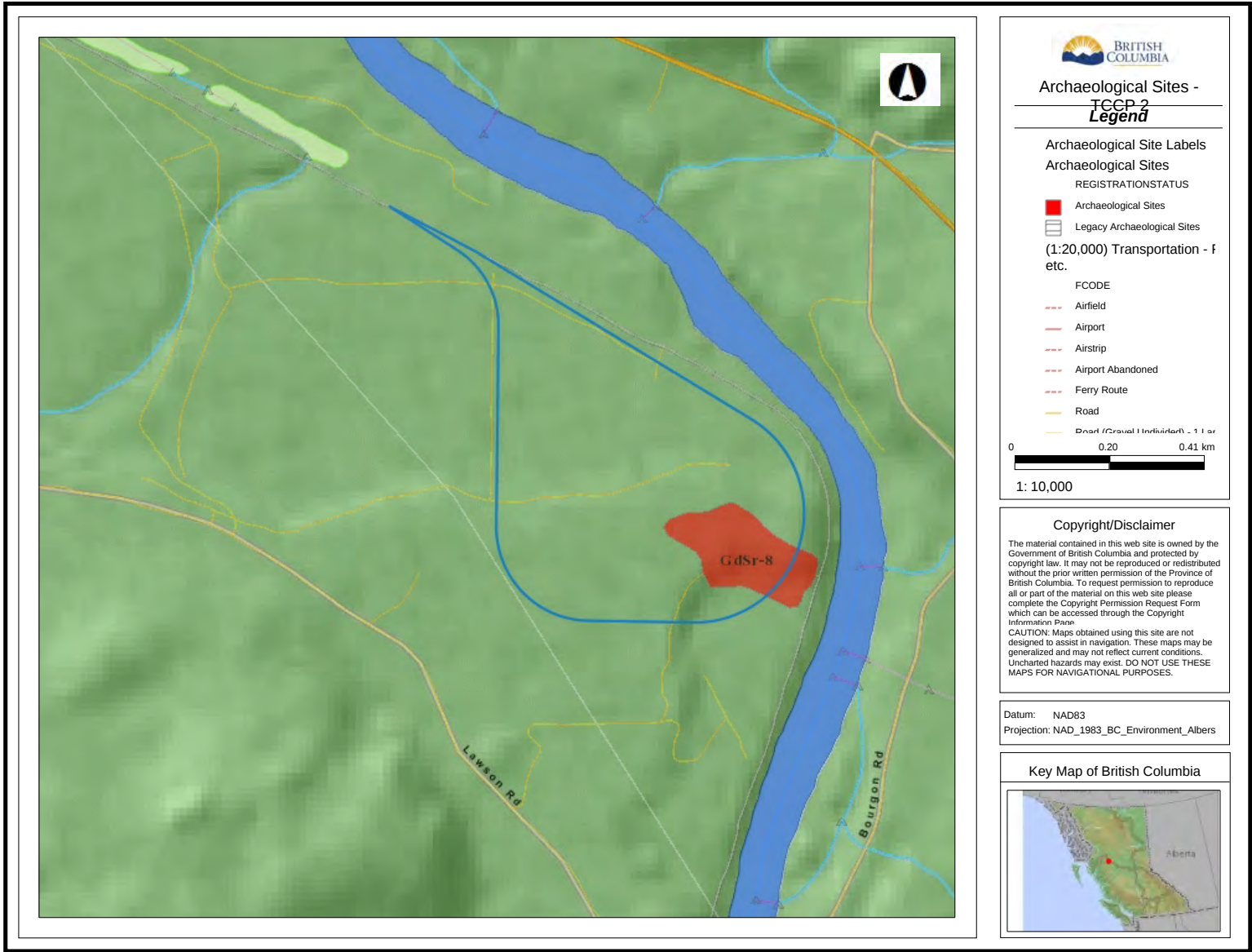


Figure 8: TCCP RAAD Map Tenas Pit



See page 43 for Form

Figure 9: TCCP RAAD map Loadout



See page 48 for Form

12. APPENDIX B - Site Forms

Site Form for Figure 7, TCCP RAAD map Tenas Pit

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Borden Number: GdSs-1**Site Name****Site Name**

Bulkley Valley Collieries #3 Mine

Temporary Number

GdSs-T1

NTS Reference**Mapsheet Number**

93L.065

Map Reference**Lat**

54.62129872

Long

-127.1368273

Easting

620297

Northing

6054246

UTM Zone

9

Spatial Accuracy

1:10K

Location**Description**

(1984) Site is located southwest of the village of Telkwa in the Goathorn Creek Valley in Lot 391 on the east side of the creek, 300 m northwest of the bridge.

Site Access

(1984) From the bridge across the Bulkley River at Telkwa, proceed 10.4 km southwest then south along Coal Mine Road (Cole Mine Road). Site is situated on the right (W) side of the road on a terrace about Goathorn Creek.

Legal Description**Legal Type**

Range

Lot

Legal Number**Legal Description**

R: 5

DL: 391

Typology**Typology**

TRADITIONAL USE,Culturally Modified Tree,other modified tree,blazed

HISTORIC,Building,Industrial/mining,

HISTORIC,Cultural Material,surface,refuse

TRADITIONAL USE,Culturally Modified Tree,bark-stripped,large rectangular scar

HISTORIC,Building,Industrial/General,unidentified structure

HISTORIC,Other Structure,Habitation,foundation

STR,STR,STR,STR

TRADITIONAL USE,Culturally Modified Tree,bark-stripped,

TRADITIONAL USE,Culturally Modified Tree,

Feature

Depth: From	Depth: To	Length	Width	Height Tag	Thickness	Depth	Diameter
		.2	0	1.3	0	0	0

Stratum Description

Cultural,Feature,CMT 03-3,2nd blaze on CMT 03,Side is given

S.

Shape**Slope**

0

Orientation**Species****Side**

Depth: From	Depth: To	Length	Width	Height Tag	Thickness	Depth	Diameter
		0	0	0	0	0	0

Stratum Description

Cultural,Feature,01,Cookhouse for mining camp,Recorded in 1984. Moved to Mr. Gething's property and is now his living quarters.

Shape**Slope**

0

Orientation**Species****Side**

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<i>Depth: From</i>	<i>Depth: To</i>	<i>Length</i>	<i>Width</i>	<i>Heigh Tag</i>	<i>Thickness</i>	<i>Depth</i>	<i>Diameter</i>
		0	0	0	0	0	0
Stratum Description			Shape	Slope	Orientation	Species	Side
Cultural,Feature,05,Various timber features from buildings,Recorded in 1984				0			
<i>Depth: From</i>	<i>Depth: To</i>	<i>Length</i>	<i>Width</i>	<i>Heigh Tag</i>	<i>Thickness</i>	<i>Depth</i>	<i>Diameter</i>
		0	0	0	0	0	.3
Stratum Description			Shape	Slope	Orientation	Species	Side
Cultural,Feature,CMT 03,Bark-stripped and/or kindling removal tree.,Recorded in 1997. Not clear from site form if the tree was bark-stripped and then utilized for kindling or if the recorders were unclear whether the utilization was bark stripping or kindling exploitation.				0		lodgepole pine	
<i>Depth: From</i>	<i>Depth: To</i>	<i>Length</i>	<i>Width</i>	<i>Heigh Tag</i>	<i>Thickness</i>	<i>Depth</i>	<i>Diameter</i>
		0	0	0	0	0	0
Stratum Description			Shape	Slope	Orientation	Species	Side
Cultural,Feature,06,Outhouse,Recorded in 1997				0			
<i>Depth: From</i>	<i>Depth: To</i>	<i>Length</i>	<i>Width</i>	<i>Heigh Tag</i>	<i>Thickness</i>	<i>Depth</i>	<i>Diameter</i>
0	0						
Stratum Description			Shape	Slope	Orientation	Species	Side
Natural,Stratum,01,(1997) Surface							
<i>Depth: From</i>	<i>Depth: To</i>	<i>Length</i>	<i>Width</i>	<i>Heigh Tag</i>	<i>Thickness</i>	<i>Depth</i>	<i>Diameter</i>
		1.2	.1	.2	0	0	0
Stratum Description			Shape	Slope	Orientation	Species	Side
Cultural,Feature,CMT 01-1,Rectangular scar,Side is given as E. No kindling removal scar is noted.				0			
<i>Depth: From</i>	<i>Depth: To</i>	<i>Length</i>	<i>Width</i>	<i>Heigh Tag</i>	<i>Thickness</i>	<i>Depth</i>	<i>Diameter</i>
		0	0	0	0	0	0
Stratum Description			Shape	Slope	Orientation	Species	Side
Cultural,Feature,04,Living quarters for mining camp,Recorded in 1984.				0			
<i>Depth: From</i>	<i>Depth: To</i>	<i>Length</i>	<i>Width</i>	<i>Heigh Tag</i>	<i>Thickness</i>	<i>Depth</i>	<i>Diameter</i>
		.4	.1	.5	0	0	0
Stratum Description			Shape	Slope	Orientation	Species	Side
Cultural,Feature,CMT 03-1,Rectangular scar,Side is given as N. No kindling removal scar is noted.				0			
<i>Depth: From</i>	<i>Depth: To</i>	<i>Length</i>	<i>Width</i>	<i>Heigh Tag</i>	<i>Thickness</i>	<i>Depth</i>	<i>Diameter</i>
		0	0	0	0	0	0
Stratum Description			Shape	Slope	Orientation	Species	Side
Cultural,Feature,07,Concrete foundation material,Recorded in 1984.				0			
<i>Depth: From</i>	<i>Depth: To</i>	<i>Length</i>	<i>Width</i>	<i>Heigh Tag</i>	<i>Thickness</i>	<i>Depth</i>	<i>Diameter</i>
0	0						
Stratum Description			Shape	Slope	Orientation	Species	Side
Natural,Stratum,01,(1984) Surface							
<i>Depth: From</i>	<i>Depth: To</i>	<i>Length</i>	<i>Width</i>	<i>Heigh Tag</i>	<i>Thickness</i>	<i>Depth</i>	<i>Diameter</i>
		0	0	0	0	0	0
Stratum Description			Shape	Slope	Orientation	Species	Side
Cultural,Feature,03,washhouse for mining camp,Recorded in 1984				0			

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Depth: From	Depth: To	Length	Width	Heigh Tag	Thickness	Depth	Diameter
		.2	0	.5	0	0	0

Stratum Description

Cultural,Feature,CMT 03-2,First blaze on CMT 03,Side is given as E.

Shape**Slope**

0

Orientation**Species****Side**

Depth: From	Depth: To	Length	Width	Heigh Tag	Thickness	Depth	Diameter
		0	0	0	0	0	.5

Stratum Description

Cultural,Feature,CMT 01,Bark-stripped and/or kindling tree with rectangular scar,Recorded in 1997. Not clear from site form if the tree was bark-stripped and then utilized for kindling or if the recorders were unclear whether the utilization was bark stripping or kindling exploitation.

Shape**Slope**

0

Orientation**Species**

lodgepole pine

Side

Depth: From	Depth: To	Length	Width	Heigh Tag	Thickness	Depth	Diameter
		1.2	.1	0	0	0	0

Stratum Description

Cultural,Feature,CMT 02-1,Rectangular scar,Side is given as NE. No kindling removal scar is noted.

Shape**Slope**

0

Orientation**Species****Side**

Depth: From	Depth: To	Length	Width	Heigh Tag	Thickness	Depth	Diameter
		0	0	0	0	0	0

Stratum Description

Cultural,Feature,02,Scales,Recorded in 1984

Shape**Slope**

0

Orientation**Species****Side**

Depth: From	Depth: To	Length	Width	Heigh Tag	Thickness	Depth	Diameter
		0	0	0	0	0	.3

Stratum Description

Cultural,Feature,CMT 02,Bark-stripped and/or kindling removal tree with rectangular scar,Recorded in 1997. Not clear from site form if the tree was bark-stripped and then utilized for kindling or if the recorders were unclear whether the utilization was bark stripping or kindling exploitation.

Shape**Slope**

0

Orientation**Species**

lodgepole pine

Side**Feature List****Description****Archaeological Culture****Description****Date**

Unadjusted	Unadjusted Var	Adjusted Var	Adjusted	Remarks	To date	To date	To date
From date	From date	From date	Method	Source	1956	qualifier	calendar
1929	Circa	AD	Historic Source	Historic buildings and a statements from informant.		Circa	AD

Site Dimensions**Length**

175

Width

40

Disturbance**Percent Intact****Condition****Status**Disturbed
Unknown**Factor**

Road Construction

HistoryPresent
Future**Date**

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15%

Unknown

Present

Condition

Description

18-OCT-97, by 1997, all constituents of this historic mining site had been removed.

26-AUG-84,

26-AUG-84, Road widening may disturb site.

Environmental

Elevation (GIS): upper	Elevation (GIS): lower	Elevation (user): lower	Elevation (user): upper	Comments
4663	-19	700	700	5 m above Goathorn Creek

Site Visit

Site Visit Type	Date Affl Permit	Description
	18-OCT-97, I.R. Wilson Consultants Ltd., 1997, 285	Archaeological Inventory and Impact Assessment, Telkwa Coal Project, Telkwa, B.C.
Unknown	26-AUG-84, I.R. Wilson Consultants Ltd., 1984, 35	Telkwa Coal Project

Site Visit Team

Person Name

Nussberger, Chantal

Wilson, Ian

Gething, Lloyd

Unfreed, Wendy

Anfossi, Jamie

Warner, Jane

Site Visit Roles

Person Role

Informant

Recorder

Permit Holder

Revisor

Observer

Testor

Cultural Material

Type	Status Det Desc Rep	Date	Location
Other	Observed, Metal objects, timbers, concrete foundation, boots, heater, glass all left in situ, Historic artifacts and features, N/A	26-AUG-84	Surface
Other	Observed, These shovel tests yielded no subsurface cultural materials, 12 shovel tests, N/A	01-JAN-84	Parallel to Coal Mine Road

Reference

Author Title

Hewer, Tony, 1997-285,

Warner, Jane, 1984-035, Stage II. Heritage Resource Inventory and Impact Assessment Telkwa Project

Tenure

Government Level	Legal Instrument	Protection Type	Reference Number	Startdate	Description
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Authority

Type	Subtype	Agency Name	Remarks
GIS Land Districts		Range 5 Coast District	
GIS Municipalities		Bulkley-Nechako, Subd. B	
GIS Regional District		Bulkley-Nechako	
Corporate		Unknown	1984: Owner is unknown. Mining site of Bulkley Valley Collieries.

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Remarks

Dated Remarks

26-AUG-84, This was the mine camp for the Bulkley Valley Coleries #3 mine which was opened by Asa Robinson in 1949 and abandoned in 1956. Present at the site were a cookhouse, scales, washhouse, and living quarters. These facilities may predate this though as Gething states, they also served the #1 mine (1929-1937). In about 1949, the miners began commuting from Telkwa so the cookhouse was abandoned. This was moved to Gething's property where it serves as his living quarters. The actual #3 mine was approximately one half mile south. A total of twelve shovel tests oriented parallel to Coal Mine Road were excavated at this site. None yielded subsurface cultural materials.

18-OCT-97, In October 1997, while conducting an archaeological inventory and impact assessment for Manalta Coal Ltd.'s Telkwa Coal project, HCA Permit 1997-285, I. R. Wilson Consultants Ltd. revisited previously recorded historic sites GdSs-001 to GdSs-004 along Goathorn Creek. All constituents of the historic mining and camping sites have been removed since their initial recording in 1984, and thus, GdSs-001 to GdSs-004 could not be re-evaluated. However, an historic outhouse was identified and recorded in the vicinity of the reported GdSs-001 location. As well, three previously unrecorded CMTs were identified and recorded in the general vicinity. All CMTs were increment bored and dated to the 1930's, and are thus not considered archaeological. These CMTs are traditional use features, but may be related to early mining or camping in the Goathorn Creek Valley.

Site Form for Figure 8, TCCP RAAD map Loadout

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Detailed Site Report

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Borden Number: GdSs-2**Site Name****Site Name**

Cassiar Camp

Bulkley Valley Collieries #1 Mine

Temporary Number

GdSs T2

GdSs T2

NTS Reference**Mapsheet Number**

93L.065

Map Reference**Lat**

54.61686307

Long

-127.13203105

Easting

620620

Northing

6053761

UTM Zone

9

Spatial Accuracy

Site Map (Detailed)

Location**Description**

(1984) Site is located southwest of Telkwa, in the Goathorn Creek Valley, in Lot 39, 90 m southeast of the bridge crossing on the east side of the creek.

Site Access

(1984) From the the bridge crossing the Bulkley River at Telkwa, proceed 10.7 km southwest and south along Coal Mine Road (Cole Mine Road) to bridge crossing Goathorn Creek. Instead of crossing bridge take track proceeding east (left). The site is approximately 75 m along this dirt track.

Legal Description**Legal Type**

Range

Lot

Legal Number**Legal Description**

R: 5

DL: 391

Typology**Typology**

STR,STR,STR,STR

HISTORIC,Building,Industrial/mining,

Feature

Depth: From	Depth: To	Length	Width	Heigh Tag	Thickness	Depth	Diameter
0	0						

Stratum Description

Cultural,Stratum,01,(1984) Surface: Historic debris

Depth: From	Depth: To	Length	Width	Heigh Tag	Thickness	Depth	Diameter
0	0	0	0	0	0	0	0

Stratum Description

Cultural,Feature,01,Log and timber features,

Depth: From	Depth: To	Length	Width	Heigh Tag	Thickness	Depth	Diameter
0	0	0	0	0	0	0	0

Stratum Description

Cultural,Feature,02,Concrete slabs used for foundation,

Feature List**Description****Archaeological Culture****Description**

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Historic,

Date

<i>Unadjusted</i>	<i>Unadjusted Var</i>	<i>Adjusted Var</i>	<i>Adjusted</i>	<i>Remarks</i>	<i>To date</i> 1937	<i>To date</i> <i>qualifier</i> Before	<i>To date</i> <i>calendar</i> AD
<i>From date</i> 1929	<i>From date qualifier</i> After	<i>From date calendar</i> AD	<i>Method</i> Historic Source	<i>Source</i> Informant, Lloyd Gethin	<i>Remarks</i>		

<i>Unadjusted</i>	<i>Unadjusted Var</i>	<i>Adjusted Var</i>	<i>Adjusted</i>	<i>Remarks</i>	<i>To date</i> 1907	<i>To date</i> <i>qualifier</i> Circa	<i>To date</i> <i>calendar</i> AD
<i>From date</i> 1906	<i>From date qualifier</i> Circa	<i>From date calendar</i> AD	<i>Method</i> Historic Source	<i>Source</i> Publication, Leach, 1901906 is uncertain.	<i>Remarks</i>		

Site Dimensions

<i>Length</i>	<i>Width</i>
60	40

Disturbance

<i>Percent Intact</i>	<i>Condition</i>	<i>Status</i>	<i>Factor</i>	<i>History</i>	<i>Date</i>
		Disturbed	Rec Use	Future	
		Disturbed		Present	
		Disturbed	Unknown	Present	25-AUG-84

Condition

Description

25-AUG-84,(1984) Continued use as a recreational site.

01-OCT-97,1997: At this time, all constituents of the site have been removed.

25-AUG-84,Estimated only 5% of the site remains.

Environmental

<i>Elevation (GIS): upper</i>	<i>Elevation (GIS): lower</i>	<i>Elevation (user): lower</i>	<i>Elevation (user): upper</i>	<i>Comments</i>
4663	-19	700	700	2 m above Goathorn Creek

Site Visit

<i>Site Visit Type</i>	<i>Date Affl Permit</i>	<i>Description</i>
	01-OCT-97,I.R. Wilson Consultants Ltd.,1997,285	Archaeological Inventory and Impacat Assessment, Telkwa Coal Project, Telkwa, B.C.
Unknown	25-AUG-84,I.R. Wilson Consultants Ltd.,1984,35	Telkwa Coal Project

Site Visit Team

Person Name

Hewer, Tony
 Gething, Lloyd
 Warner, Jane
 Wilson, Ian
 Unfreed, Wendy

Site Visit Roles

Person Role

Permit Holder
 Observer
 Recorder
 Informant
 Revisitor

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Cultural Material

Type	Status Det Desc Rep	Date	Location
Other	Observed,Metal objects, concrete left in situ. See features.,Historic debris,N/A	25-AUG-84	Surface

Reference

Author Title

Hewer, Tony,1997-285,

Leach, W.W.,1907, The Telkwa River and Vicinity, B.C.

Warner, Jane,1984-035, Stage II. Heritage Resource Inventory and Impact Assessment Telkwa Project

Tenure

Government Level	Legal Instrument	Protection Type	Reference Numbe	Startdate	Description
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Authority

Type	Subtype	Agency Name	Remarks
GIS RegionalDistrict		Buckley-Nechako	
GIS LandDistricts		Range 5 Coast District	
GIS Municipalities		Bulkley-Nechako, Subd. B	
Corporate		Unknown	1984. Owner is unknown. Mining site of Bulkley Valley Collieries #1 Mine

Remarks

Dated Remarks

01-OCT-97,In October 1997, while conducting an archaeological inventory and impact assessment for Manalta Coal Ltd.'s Telkwa Coal project, HCA Permit 1997-285, I.R. Wilson Consultants Ltd. revisited previously recorded historic sites GdSs 001 to 004 along Goathorn Creek. All constituents of the historic mining and camping sites have been removed since their initial recording in 1984, and thus GdSs-002 could not be re-evaluated.

25-AUG-84,This area has likely served as a mining camp throughout the first half of this century. Leach (1907) identifies this area as the site of Cassiar Camp, a mining camp extant in 1906. Informant Lloyd Gething states this site was the Bulkley Valley Collieries #1 Mine, opened by Asa Robinson. It opened in 1929 and closed about 1937. The mine was operated by steam and the cement slabs were the foundation for the steam boiler. This boiler was subsequently sold by Gething in 1953 to a Smithers resident for use in a greenhouse. The houses which were once present at the site were hauled to Telkwa and Smithers when the operation closed. Likely all remains at the site date to this period of use. Gething states the facilities recorded for the #3 Mine camp also serviced the #1 Mine. The area is currently used as a recreational site by hunters and campers.

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Borden Number: GdSs-3**Site Name****Site Name**

Bulkley Valley Collieries #2 Mine

Temporary Number

GdSs T3

NTS Reference**Mapsheet Number**

93L.065

Map Reference**Lat**

54.62426391

Long

-127.14170754

Easting

619974

Northing

6054568

UTM Zone

9

Spatial Accuracy

1:50K

Location**Description**

(1984) The site is located in the Goathorn Creek Valley southwest of the village of Telkwa. It is on a sideslope on the western side of the valley 1 km northwest of the confluence of Goathorn and Four Creeks.

Site Access

(1984) From the bridge across the Bulkley River at Telkwa proceed Southwest then South 10.7 km along Coal Mine (Cole Mine) Road to the bridge over Goathorn Creek. Cross the bridge then take dirt track to immediate right (north). Follow this narrow track on the west side of Goathorn Creek over the Four Creek bridge and then continue for another 450 m (approximately). Site is to the left (west) of the road.

Legal Description**Legal Type**

Range

Lot

Legal Number**Legal Description**

R: 5

DL: 401

Typology**Typology**

HISTORIC,Building,Industrial/General,unidentified structure

STR,STR,STR,STR

HISTORIC,Building,Industrial/mining,

Feature

<i>Depth: From</i>	<i>Depth: To</i>	<i>Length</i>	<i>Width</i>	<i>Heigh Tag</i>	<i>Thickness</i>	<i>Depth</i>	<i>Diameter</i>	
0	0							
<i>Stratum Description</i>				<i>Shape</i>	<i>Slope</i>	<i>Orientation</i>	<i>Species</i>	<i>Side</i>
Cultural,Stratum,01,Surface,Surface - Historic debris								
<i>Depth: From</i>	<i>Depth: To</i>	<i>Length</i>	<i>Width</i>	<i>Heigh Tag</i>	<i>Thickness</i>	<i>Depth</i>	<i>Diameter</i>	
		0	0	0	0	0	0	
<i>Stratum Description</i>				<i>Shape</i>	<i>Slope</i>	<i>Orientation</i>	<i>Species</i>	<i>Side</i>
Cultural,Feature,02,machine shed,Dimensions not taken								
<i>Depth: From</i>	<i>Depth: To</i>	<i>Length</i>	<i>Width</i>	<i>Heigh Tag</i>	<i>Thickness</i>	<i>Depth</i>	<i>Diameter</i>	
		0	0	0	0	0	0	
<i>Stratum Description</i>				<i>Shape</i>	<i>Slope</i>	<i>Orientation</i>	<i>Species</i>	<i>Side</i>
Cultural,Feature,01,Coal bin,Dimensions not taken.								
<i>Depth: From</i>	<i>Depth: To</i>	<i>Length</i>	<i>Width</i>	<i>Heigh Tag</i>	<i>Thickness</i>	<i>Depth</i>	<i>Diameter</i>	
		0	0	0	0	0	0	
<i>Stratum Description</i>				<i>Shape</i>	<i>Slope</i>	<i>Orientation</i>	<i>Species</i>	<i>Side</i>
Cultural,Feature,03,Blacksmith shop,Dimensions not taken.								

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Feature List

Description

Archaeological Culture

Description

Historic,

Date

Unadjusted	Unadjusted Var	Adjusted Var	Adjusted	Remarks	To date	To date qualifier	To date calendar
From date	From date qualifier	From date calendar	Method	Source	Remarks		
1938	Exact	AD	Historic Source	Informant, Lloyd Gethin		Exact	AD

Site Dimensions

Length	Width
0	0

Disturbance

Percent Intact	Condition	Status	Factor	History	Date
		Disturbed		Present	
		Disturbed	Road Construction	Future	
		Disturbed	Mining	Future	
15%			Unknown	Present	

Condition

Description

27-AUG-84,Telkwa Coal Project,

27-AUG-84,Telkwa Coal Project,(1984) Disturbance possible from road construction

01-OCT-97,Archaeological Inventory and Impact Assessment, Telkwa Coal Project, Telkwa, B.C.,As of 1997, all constituents of the site had been removed.

27-AUG-84,Telkwa Coal Project,(1984) Disturbance possible from coal mining

Environmental

Elevation (GIS): upper	Elevation (GIS): lower	Elevation (user): lower	Elevation (user): upper	Comments
4663	-19	720	720	

Site Visit

Site Visit Type

Unknown

Date Affl Permit

31-OCT-84,I.R. Wilson Consultants Ltd.,1984,35

01-OCT-97,I.R. Wilson Consultants Ltd.,1997,285

Description

Telkwa Coal Project

Archaeological Inventory and Impact Assessment, Telkwa Coal Project, Telkwa, B.C.

Site Visit Team

Person Name

Unfreed, Wendy

Warner, Jane

Hewer, Tony

Wilson, Ian

Gethin, Lloyd

Site Visit Roles

Person Role

Observer

Permit Holder

Informant

Recorder

Revisor

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Detailed Site Report

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Cultural Material

Type	Status Det Desc Rep	Date	Location
Other	Observed, Historic features and debris were observed but left in situ., Historic debris, N/A	27-AUG-84	Surface of historic site

Reference**Author Title**

Hewer, Tony, 1997-285,

Warner, Jane, 1984-035, Stage II. Heritage Resource Inventory and Impact Assessment Telkwa Project

Tenure

Government Level	Legal Instrument	Protection Type	Reference Numbe	Startdate	Description
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Authority

Type	Subtype	Agency Name	Remarks
Corporate		1984: Unknown	In 1984 owner is unknown. Recorded as Bulkley Valley Collieries #2 Mine mining site.
GIS LandDistricts		Range 5 Coast District	
GIS Municipalities		Bulkley-Nechako, Subd. B	
GIS RegionalDistrict		Buckley-Nechako	

Remarks**Dated Remarks**

01-OCT-97, In October 1997, while conducting an archaeological inventory and impact assessment for Manalta Coal Ltd.'s Telkwa Coal project, HCA Permit 1997-285, I.R. Wilson Consultants Ltd. revisited previously recorded historic sites GdSs 001 to 004 along Goathorn Creek. All constituents of the historic mining and camping sites have been removed since their initial recording in 1984, and thus GdSs-002 could not be re-evaluated.

31-OCT-84, The Bulkley Valley Collieries #2 Mine was opened in 1938 and closed in 1958. Present at the site was a coal bin, machine and blacksmith shop. Many tools from the blacksmith shop were subsequently moved to Gething's coal operation. At the time of the field program, this site was outside the proposed zone of impact, so was not recorded in detail other than to note its location. Should development plans change to include any mining of West Goathorn and/or road upgrading this site should be properly recorded.

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Borden Number: GdSr-8

Site Name

Site Name

Temporary Number

GdSr-6

NTS Reference

Mapsheet Number

93L.066

Map Reference

Lat	Long	Easting	Northing	UTM Zone	Spatial Accuracy
54.65236763	-126.97635026	630558	6057989	9	Site Map (Detailed)

Location

Description

(1975) On S. bank of Bulkley River, and south side of CNR tracks. Site is located on the second terrace above the river. From Telkwa, located on Hwy. 16, follow the road on the south bank of the river for approximately 4 miles. The site is located to the west of a large cultivated meadow area. A trail passes the site

(1997) Near Hubert, on the west bank of the Bulkley River south of the town of Telkwa. The site is located on the second terrace above the Bulkley, on the west side of the CNR tracks. GdSr-008 starts on the lip of the terrace immediately adjacent to the tracks and continues north and west into the forest.

Site Access

(1997) GdSr-008 is on private land. From the town of Telkwa on Highway 16, cross the Bulkley River. Drive approximately 350 m and turn left (south) onto Lawson Road. Follow Lawson Road for approximately 6 km, and turn left (east) onto private land at Lot 1143. The private road leads to the CNR tracks paralleling the Bulkley River. Once on the tracks, walk approximately 500 m where the site is located on the second terrace above the river, immediately north of a gully where the Bulkley River turns noticeably to the south.

Typology

Typology

TRADITIONAL USE,Culturally Modified Tree,

PRECONTACT,Subsistence Feature,Cultural Depression,Cache Pit

STR,STR,STR,STR

TRADITIONAL USE,Culturally Modified Tree,bark-stripped,large rectangular scar

TRADITIONAL USE,Culturally Modified Tree,bark-stripped,

PRECONTACT,Other Feature,Cultural Depression,Function Unassigned

Site Dimensions

Length	Width
350	150

Disturbance

Percent Intact	Condition	Status	Factor	History	Date
100%				Present	
	Good			Present	
		Unknown	Unknown	Future	
		Unknown	Logging	Future	01-JAN-98

Condition

Description

01-OCT-97,Potential logging/development of 'loadout' area for Coal Mine Access and Rail Loop, Manalta Coal Ltd., Telkwa Coal Project, Box 598, Telkwa, B.C.

20-AUG-75,Site is in good condition

20-AUG-75,Disturbance is unlikely

October 31, 2017

Normal Site Report

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Borden Number: GdSr-8

Condition

Description

01-OCT-97, In 1997 the site was intact

Environmental

Elevation (GIS): upper	Elevation (GIS): lower	Elevation (user): lower	Elevation (user): upper	Comments
4663	-19	518	518	(1997) Approximately 20 m above the Bulkley River

Site Visit

Site Visit Type

Date Affl Perm

08-OCT-97, I.R. Wilson Consultants Ltd., 1997, 285
20-AUG-75, ASAB, 1975, 4

Description

Archaeological Inventory and Impact Assessment, Telkwa Coal Project, Telkwa, B.C.
Archaeological Reconnaissance Nechako Area - Summer 1975

Site Visit Team

Person Name

Hewer, Tony
Rilkoff, John
Sneed, Paul
Wilson, Ian

Site Visit Roles

Person Role

Recorder
Revisor
Permit Holder
Testor

Reference

Author Title

Rafferty, Pauline, 1975-004, Archaeological Reconnaissance of the Bulkley-Nechako Area - Summer 1975
Hewer, Tony, 1997-285,

Remarks

Date Remarks

08-OCT-97, The original 4 cultural depressions were relocated by I.R. Wilson Consultants Ltd. in October 1997 during an archaeological inventory and impact assessment for a proposed coal mine development, HCa Permit 19970285. Upon site inspection, an additional 6 depressions and an historic CMT were identified. The additional depressions were located to the west of the original four, in a hummocky, forested area on the second terrace above the Bulkley River, north of a large gully. A total of 22 shovel tests were excavated in the vicinity of GdSr-008; all were archaeologically negative.
20-AUG-75, This is a habitation site with 2 house depressions and 2 cache pits. The site has a NE exposure and has very little ground cover in the site area. Hubert, near where the site is located, was once a thriving railway town. Nothing remains now except a large farm on north side of the river.



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