SKEENA™ RESOURCES

Eskay Creek Revitalization Initial Project Description

July 19, 2021

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Joint Submission to the Impact Assessment Agency of Canada and the BC Environmental Assessment Office

Skeena Resources
Suite #650, 1021 West Hastings Street
Vancouver, BC V6E 0C3

July 19, 2021

EXECUTIVE SUMMARY

Skeena Resources Limited (Skeena Resources) is proposing the Eskay Creek Revitalization (the proposed Project) to restart mining as an open pit at the past producing Eskay Creek (underground) Mine, which operated from 1994 to 2008. Through the development of the Pre-feasibility Study (PFS) in 2020/21, the Project has been updated since the 2019 preliminary economic assessment (PEA). It would be an open pit gold-silver mine, with an estimated total annual production of 2.5 million to 3 million tonnes (6,850 tonnes per day [tpd] to 7,800 tpd) over the 13 to 16 year mine life (construction to closure inclusive). The Project would use facilities and infrastructure of the Eskay Creek underground Mine, which has been in Care and Maintenance since 2008, existing and new waste disposal locations, and the construction of new infrastructure, including a mill.

This document is an Initial Project Description (IPD) for the proposed open pit mine and provides a high level description of the evolving project design and regulatory process. The purpose of the IPD is to support the initiation of the regulatory process on the Project and to provide information for interested parties to understand the preliminary design and provide input to Skeena Resources to help inform subsequent detailed design. Through the IPD, Skeena Resources is providing an early design-stage overview of the Project, with the intention that this document will form the basis for engagement which will help shape the final design of the Project. Supporting references for information in this Executive Summary are detailed later in the report.

Skeena Resources collaboratively engaged with the Tahltan Central Government (TCG), as represented by the Tahltan Heritage Resource Environmental Assessment Team (THREAT), while developing this IPD, and additional engagements with the Tahltan Nation and other Indigenous Peoples will occur going forward. Written contributions from THREAT are italicized in the document.

Skeena Resources will utilize the IPD for entry into the assesment process of the BC *Environmental Assessment Act* (BC EAA 2018) and federal *Impact Assessment Act* (IAA; 2019). As part of the collaborative approach to the regulatory process, Skeena Resources supports the July 16, 2021 request from the Tahltan Nation for the Project to be designated as reviewable under BC EAA (2018).

This IPD provides a synopsis of the Project based on the 2019 Preliminary Economic Assessment (PEA) and subsequent pre-feasibility studies in 2020/21 for the initiation of the regulatory process and engagement with Indigenous Peoples, the public, and regulators. Project information will be updated as studies are released publically and in consideration of feedback to Skeena Resources.

A detailed Environmental Assessment Application for a new EA Certificate for the latest Project Design including assessment of effects, current conditions (baseline) studies, mitigation measures and consideration of feedback from regulators, Indigenous Peoples, and the public will be submitted later in the process. Should an alternate regulatory process be identified through engagement, Skeena will undertake comprehensive work to support efficient review by regulators, Indigenous Peoples, and the public.

Skeena Resources will require a federal Impact Assessment under the Canadian *Impact Assessment Act* (IAA; 2019) required by the proposed open pit mine production over 5,000 tpd, increases in mine operating areas and the construction of a new mill. The Project's production rate of 2.5 million to 3 million tonnes per year (i.e., 6,850 tpd to 7,800 tpd) would be higher than the 5,000 tpd threshold in the federal *Physical Activities Regulations* for an expansion of a designated project.

Skeena Resources will be seeking a substituted review pursuant to the *Impact Assessment Cooperation Agreement between Canada and British Columbia*. Skeena Resources will ask that the Province make a request to the federal Minister of Environment and Climate Change (ECCC) to approve the substitution of the BC Environmental Assessment (EA) process for the federal IA process. If the substitution request is approved for the Project, the Province would commit to meet the legislative requirements of the federal IA process and fulfil the conditions for substitution under the IAA set out in the Cooperation Agreement and the Substitution Decision. At the end of the assessment process, the BC EAO will provide its report to both the Provincial and Federal Ministers for their consideration and decision.

The Eskay Creek Mine has two existing Certificates from 1994 and 2000. Under the BC EAA, a certificate issued under the former Act is continued as an environmental assessment certificate, even though they were issued under earlier BC legislation over two decades ago. Skeena Resources anticipates discussion with regulatory and Indigenous Groups during the regulatory review regarding the fate of the two existing Certificates for the underground mine in relation to issuance of a modern Certificate for the open pit Revitalization Project.

The original application for approval to build the Eskay Creek Mine in 1993 underwent regulatory review, technical review and public feedback resulting in issuance of a Mine Development Certificate (MDC 94-01). The 1994 MDC enabled the initial construction and mine operation with direct ship of high grade ore to smelters and disposal of waste/tailings in the Albino Storage Facility (ASF), followed by MDC amendments in 1997 to increase production and build an onsite mill.

A Project Approval Certificate (PAC M00-01) was issued for the Eskay Creek Mine in 2000, following a combined provincial EA and federal *Canadian Environmental Assessment Act* (CEAA; 1992) Screening review, to permit waste rock and tailings disposal in Tom MacKay Lake (a non-fish bearing lake located 8 km from the mine). The assessment of potential impacts, alternatives, mitigation measures, monitoring programs, public and Indigenous feedback formed part of the earlier assessments and certificate conditions. The non-fish bearing Albino Waste Facility was designated as a Tailings Impoundment Areas (TIA) for the Eskay Creek Mine prior to 2002 under the former regulations (*Metal Mining Liquid Effluent Regulations* [1977] under the federal *Fisheries Act*). Tom MacKay Lake was designated as a TIA under the federal Schedule 2 of the 2002 *Metal Mining Effluent Regulations*, and both facilities were subsequently listed under the Schedule 2.

Valid operating permits and authorizations are held by Skeena Resources for the Eskay Creek underground Mine, waste facilities and infrastructure; although the mine has been in Care and Maintenance since 2008. Future exploration, technical/bulk sample collection and additional land development at the mine site under existing permits and proposed amendments over the next two years will occur separately from the Revitalization Project as part of Reclamation/Closure planning, site maintenance and advanced exploration.

The impact assessment process will be initiated when the BC EAO and the Impact Assessment Agency of Canada (IAAC) accepts the IPD and seeks public comments on the IPD. Regulators, agencies, Indigenous groups and the public will have an opportunity to provide initial feedback on the Project and project components that are being evaluated.

For the purposes of the impact assessment, the primary contact person for Skeena Resources is:

Steve Jennings
Environmental Assessment Manager
Skeena Resources Limited
#650, 1021 West Hastings Street
Vancouver, BC V6E 0C3
Phone: (250) 877-9946
Email: stevejennings@skeenaresources.com

Project Overview and Location

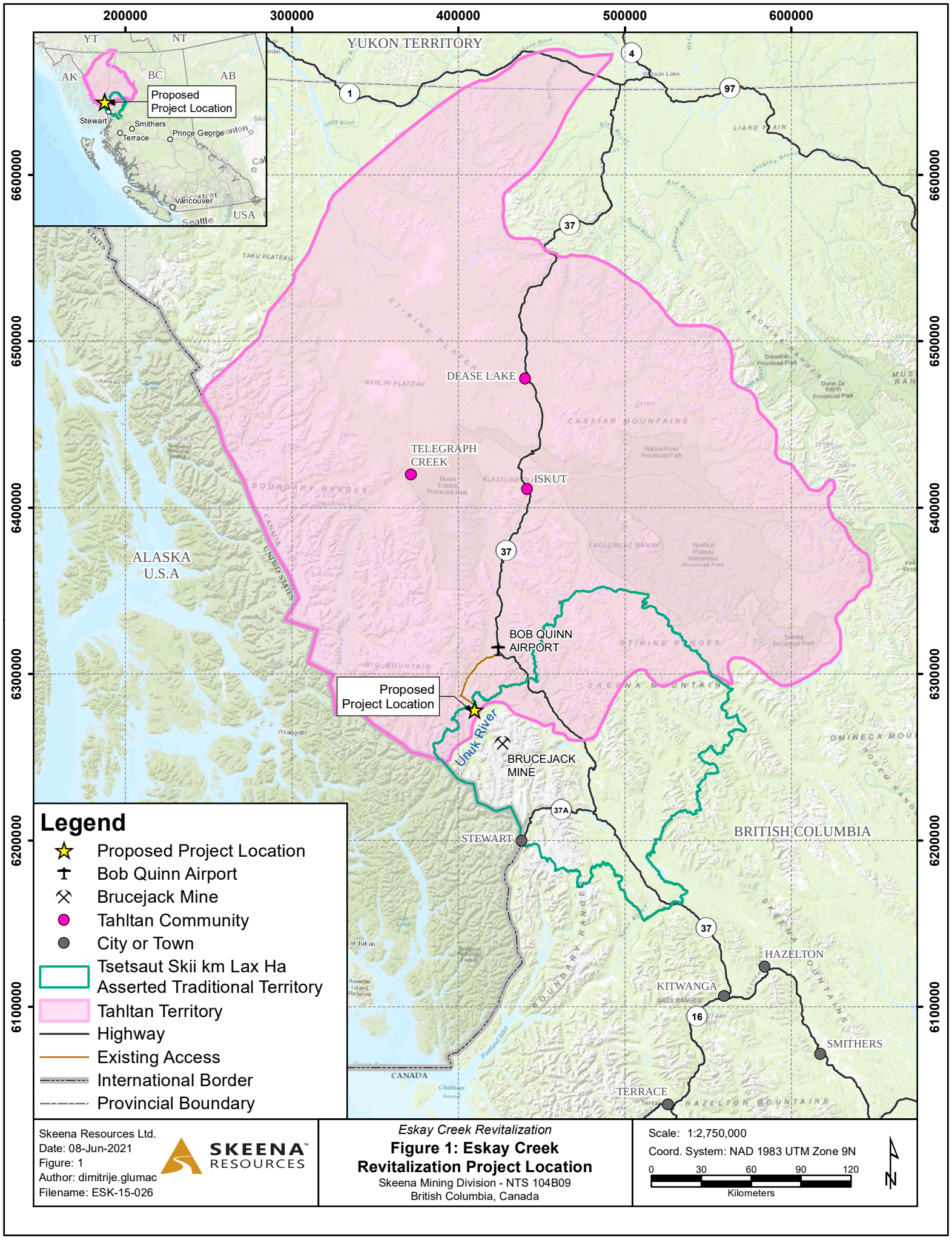
The Project is within the Regional District of Kitimat-Stikine (RDKS) on provincial Crown land mineral tenures held by Skeena Resources. No federal lands would be used for the Project and the Project would have no direct impacts to federal lands.

The Project is accessed via the existing Eskay Creek Mine Road, a 59 kilometre (km) all-season gravel road, that connects to Highway 37 (Stewart Cassiar Highway). The Project is within the territory of the Tahltan Nation and the asserted traditional territory of the Tsetsaut Skii km Lax Ha (Figure 1). The closest Indigenous community is the Tahltan community of Iskut (135 km north; 170 km via road). The other Tahltan communities are located north/northeast of the Project including Dease Lake (190 km northeast; 253 km via road) and Telegraph Creek (142 km north; 362 km via road). Stewart is the closest non-Indigenous community to the Project (83 km to the south; 261 km via road).

As part of the collaborative effort to develop this IPD, the Tahltan Nations' representatives contributed the following text:

The Tahltan are an Athabaskan-speaking people who inhabit the Stikine Country of the northern interior of BC. The Tahltan Nation is comprised of two Nations – the Tahltan Nation and the Iskut Nation – and is governed by a combined tribal council-type organization: the Tahltan Central Government. Tahltan territory encompasses about 93,500 km^2. In the west, the boundary runs parallel to the Alaskan border. In the northeast, it reaches into the Yukon, just west of Watson Lake. The eastern boundary is situated at the height of land between the Stikine and Kechika watersheds, and the southern boundary extends to the mouth of the Iskut River. The south/eastern border includes the upper Nass tributaries and western half of the Stikine plateau, including the sacred headwaters of the Stikine, Nass and Skeena rivers.

The Tahltan Nation's identity and the essence of who we are as a distinct society is integrally tied to Tahltan lands and the wealth of the resources therein. The Tahltan people rely on the same territory and resources that sustained our ancestors for Tahltan society to continue in the future.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Proposed Project Location
Stewart
Smithers
Terrace
Prince George
Vancouver
Seattle
USA
YUKON TERRITORY
DEASE LAKE
TELEGRAPH CREEK
ISKUT
BOB QUINN AIRPORT
Proposed Project Location
Unuk River
BRUCEJACK MINE
STEWART
ALASKA U.S.A
BRITISH COLUMBIA
CANADA
HAZELTON
KITWANGA
SMITHERS
TERRACE
1
4
37
97
37A
16
Legend
Proposed Project Location
Bob Quinn Airport
Brucejack Mine
Tahltan Community
City or Town
Tsetsaut Skii km Lax Ha Asserted Traditional Territory
Tahltan Territory
Highway
Existing Access
International Border
Provincial Boundary
Skeena Resources Ltd.
Date: 08-Jun-2021
Figure: 1
Author: dimitrije.glumac
Filename: ESK-15-026
SKEENA RESOURCES
Eskay Creek Revitalization
Figure 1: Eskay Creek Revitalization Project Location
Skeena Mining Division - NTS 104B09
British Columbia, Canada
Scale: 1:2,750,000
Coord. System: NAD 1983 UTM Zone 9N
0 30 60 90 120
Kilometers
N

Tahltan people continue to practice their traditional economy which includes fishing, hunting, and gathering as well as participating in the modern economy located within and outside of our traditional territory.

The Tahltan Nation has three principal communities: Telegraph Creek, Iskut, and Dease Lake. There are also culturally important villages and assembly sites throughout the Nation, such as, the Tahltan Village, an historic site located at the junction of the Tahltan and Stikine Rivers that was also the traditional summer dwelling place for the Tahltan people. The Tahltan Nation has 16 reserves as part of the Tahltan Band Council and Iskut First Nation.

The Tahltan Central Government (TCG) is the administrative governing body of the Tahltan Nation. The Iskut Band and the Tahltan Band continue to govern Tahltan interest in respect of the Indian Act but have endorsed the TCG as the representative government of the Tahltan Nation in respect of inherent Aboriginal title and rights. The board of the TCG is comprised of one representative from each of the ten Tahltan families; the executive consists of a President, Vice-President, and Secretary-Treasurer. The executive is elected, for three year terms, at the annual general assembly (AGA) held each summer; the family representatives are elected by the families each year and elected/ratified at the AGM [Annual General Meeting]*.*

The TCG is responsible to define and protect Tahltan inherent aboriginal rights and title, to protect the eco-systems and natural resources of Tahltan traditional territory through pursuing sustainable economic development, and to strengthen the cultural wellness of the Tahltan Community by promoting traditional values based on the concepts of caring, sharing, cooperation, truth, honour, fairness and above all, respect.

The guiding principle of the Tahltan Central Government remains the Declaration of the Tahltan Tribe. In 1910, as part of a growing movement to assert First Nations rights on the coast and the southern interior of BC, the chief of the Tahltan Nation, Chief Nanok along with 80 other members of the tribe signed the declaration. The document claims sovereignty over Tahltan land and declares any land interests concerning the traditional territory of the Tahltan Nation to be settled directly with the Tahltan people. It represents a legal declaration of rights of Tahltan individuals to the Canadian government and British monarch. Tahltans have yet to extinguish their Aboriginal title by any other legal process.

Across Canada, the TCG represents approximately 6000 Tahltan Nation members living on- and off-reserve. About one-third (2,000 Tahltan Nation members) live in Tahltan territory, though not all are living on reserve lands, while the remaining 4,000 people live across Canada (Tahltan Nation Development Corporation 2020).

Tahltan Land Use in the Project proximity has been documented by a *Tahltan Knowledge/ Traditional Land Use Study* (Jones, Gray and McLaren 2020) commissioned by Skeena Resources and completed by the Tahltan in November of 2020. A summary of the land use perspective provided by the Tahltan can be found in Section 6.0 of this document.

Over the Project life, direct employment by Skeena staff would be an estimated 3,800 person-years, (214 hourly, 80 salary excluding contractors/consultants), in addition to indirect employment for workers in supplier industries and in businesses benefiting from workers spending their income.

The Project's estimated capital cost is $455 million Canadian (CDN). An additional $81 million CDN in sustaining capital expenditures is expected during the life of the Project for a total capital cost of $536 million CDN. The expected annual operating cost is $135 million CDN. Much of these costs will be spent in Northern BC, employing local and Indigenous contractors and employees. The Project will also generate tax revenue for provincial and federal governments.

Project Need and Purpose

Gold is Canada's most valuable mined mineral with a production value of $9.6 billion and Canadian gold exports valued at $17.3 billion in 2018. The unique properties of gold and the advent of 'nanotechnology' are driving new uses in medicine, engineering and environmental management. Almost every computer, mobile phone, automobile and appliance contains silver. It is also used in electrical switches, solar panels and chemical-producing catalysts and has high, but variable, demand as jewelry and investment products.

The Project's purpose is to undertake sustainable resource extraction of gold and silver concentrates in alignment with the 2019 Canadian Minerals and Metals Plan objectives and to foster economic growth and prosperity in BC, while supporting capacity building, employment and benefits to local Indigenous Peoples and communities.

The Project will be designed, constructed, operated, and decommissioned to meet all applicable BC and Canadian environmental and safety standards and practices. Skeena Resources would develop and implement an Environmental Management System (EMS) that defines the processes by which compliance will be met and demonstrated. The EMS would include ongoing monitoring and reporting to relevant parties at the various project stages to ensure responsible resource development.

Project Description and Project Alternatives

The Project would be a truck and shovel open pit mine with onsite crushing, milling and generate a gold/silver concentrate. Activities during engineering, site preparation and construction would include land clearing and grubbing, blasting, excavating, grading, de-watering, and installing facilities. Ore would be processed at the Project site using conventional milling and flotation to recover a gold-silver concentrate. Concentrate would be trucked from the mine site south to the Port of Stewart along provincial Highways 37 and 37A for shipment to third-party smelters.

Construction materials would be trucked to the Project site from various locations throughout BC and potentially out of province. The Project workforce would be transported to the Project site in company vehicles, which would likely pick up people from select communities, such as Telegraph Creek, Dease Lake, Iskut, Terrace and Smithers. Personnel from outside the region may be flown into a regional airport at either Smithers or Terrace and then transported via company vehicle to the site. The Bob Quinn Lake Aerodrome may also be utilized to transport workers in and out of the site and for emergencies.

The Project is completing the pre-feasibility design stage and information presented in the IPD is based on the project design that has occurred since the PEA was released in 2019. Table 1 identifies the Project components as either new or re-use of existing infrastructure. Some Project components are currently being evaluated, and this evaluation will be informed by feedback on the

IPD and other deliverables produced during the assessment process and ongoing engineering studies. Alternative means for carrying out the Project are being considered, including: ore processing; tailings and waste rock storage management, location and technology; power source; camp facilities; waste and water management; on-site materials transport; and worker transport and rotation. Skeena Resources is not aware of any viable alternatives to the Project in northwest BC that would provide a source of gold and silver available for production in the proposed timeframe.

Table 1 Summary of Project Components

Component	Existing/ Modified	New
Eskay Creek Mine Access Road to Project site, which joins Highway 37 at km 293	x	
Tom MacKay Tailings Storage Facility (TMSF)	x	
Construction of embankments/dams to existing TMSF		x
Power line to Mine site (20 or 54 km in length), which will follow existing roads		x
Open pits (North/Main and South)		x
Overburden and topsoil stockpiles		x
Waste rock storage facility (WRSF; outside and inside open pit later in mine life)		x
Surface and diversion water management structures including ponds, sumps and ditches		x
Tom MacKay Creek diversion tunnel around the Main Pit		x
Haul roads between the mine, the Waste Rock Storage Facility, stockpiles, the Tom MacKay Tailings Facility (via the Eskay Creek Mine Access Road), the crusher, and the mine maintenance facilities. Run of Mine stockpile pads to accommodate ore blending.	x	x
Light vehicle roads – to the process plant, to the existing Eskay Creek Mine Facility (during construction/early operations) and the landfill.	x	x
Primary Crusher, stockpile feed conveyor to the processing plant stockpile		x
Processing Area including:		
• Ore processing plant (mill)		x
• Hazardous Waste Storage Facility		x
• First aid, assay lab, warehouse, and administration		x
• Propane tank storage		x
• Incinerator		x
• Treatment plants for potable water from new wells and sewage treatment		x
• High-voltage main substation connected to new power line		x
Detonator magazine and explosives storage		x
Mine Infrastructure Facility including:		
• Vehicle maintenance, truck parking and wash facilities		x
• Fuel and lube storage		x
• Mine dry		x
Tailings and reclaim pipelines from Processing Mill to TMSF following haul road		x
Helipad for emergency situations		x
Security Buildings		x

Component	Existing/ Modified	New
Eskay Creek Mine Site - existing facilities with additional temporary camps	x	
Core Storage		x
Modular worker accommodations		x
Landfill		x
Water treatment facilities including: new water treatment plant and use of existing mine water settling ponds and D7 discharge location for construction and early operation years	x	x

Project Wastes and Emissions

Waste produced by the Project would include:

- mined waste rock which must be removed to access the ore;
- tailings from milling the ore (deposited in the permitted Tom MacKay Storage Facility);
- hazardous and non-hazardous waste (office, domestic waste and vehicle maintenance wastes);
- sewage; and
- contaminated soil in the event of spills or leaks.

To manage the potential for metal leaching/acid rock drainage, the Project has incorporated design features and mitigation measures that are consistent with waste and water best management practices and historic management approaches at site, including:

- Waste Rock Storage Facility: seepage and runoff collection systems and non-contact water diversions;
- Use of existing water management and proposed water treatment ponds and plants; and
- sub-aqueous disposal of all tailings and PAG waste rock.

Detailed geochemical, water quality, geological, closure/reclamation and hydrology studies are ongoing to characterize and model the Project's interaction with surface and ground water to help define risks and potential mitigation measures, and inform discussions among regulators, interested parties, Indigenous Nations and Skeena Resources.

Industrial and domestic non-hazardous waste would be managed by segregating industrial and domestic waste into appropriate streams. Incinerators would handle domestic/putrescible waste. There would be separate waste collection areas for recyclables while industrial waste would be segregated into waste which could be safely disposed in the new landfill and that which would be disposed off-site. Sewage effluent (liquid discharge via existing or new facilities) and sludge (via existing solid waste) would be disposed on-site. The management of waste collection areas would follow regulatory requirements and best management practices, including standard operating procedures for spill management, fire safety and mitigation to prevent wildlife attractant.

Hazardous waste materials would be segregated, labelled and stored in appropriate containers in a secure area, and shipped to approved off-site disposal facilities. Waste streams would be tracked in accordance with federal and provincial regulations.

The Project's sources of air emissions would include:

- air contaminants (carbon dioxide, nitrogen oxides, sulphur oxides, and particulates) and greenhouse gas (GHG) emissions associated with the combustion of fossil fuels used to power trucks, light vehicles, heavy machinery, ore processing and solid waste incineration;
- fugitive dust (total suspended particulate and fine particulate matter) from blasting and crushing, material handling by mining equipment and hauling, coarse ore stockpiles, and road use; and
- Based on the direct and acquired energy GHG emissions for the construction, operations and decommissioning/closure phases of the Project the total net GHG emissions summed over all years of the Project are 434,376 t CO_2e.The maximum annual net GHG emissions for the construction phase of the Project are in Year -1 with 22,320 t CO_2e. The maximum annual net GHG emissions during the Project are in Year 5 with 42,820 t CO_2e. Annual net GHG emissions for decommissioning/closure are estimated to be the same for all years with 11,191 t CO_2e. Total net emissions by phase will be: construction (33,510 t CO_2e), operations (367,294 t CO_2e), and decommissioning/closure (33,572 t CO_2e).

Water emissions will include: the discharge of contact water (treated and untreated) that has been in contact with potential sources of contamination (i.e., seepage from the WRSF, process water, and pit dewatering); and the discharge/diversion of non-contact water from upstream catchments that has not been in contact with mine workings. Contact water from the WRSF would be collected and treated prior to discharge if testing shows any onset of ML/ARD or potential exceedance of permit limits. If contact water quality from the WRSF or other sources is within permitted parameter limits, and confirmed by testing, this water would be discharged without treatment. Water from pit dewatering would be pumped to a water treatment plant and/or ponds for treatment prior to discharge to the existing mine water polishing ponds and ultimately discharge through permitted effluent discharge point D7 to Ketchum Creek, during the construction and early mine life phases, or combined with process water discharge to the TMSF. Process water would be discharged to the TMSF. Non-contact water would be kept separate from water that has been in contact with mine workings and discharged to the environment without treatment.

Biophysical Environment

Characterization of the biophysical environment was informed by extensive baseline sampling and monitoring studies since the early 1990s; current condition (baseline) studies are in progress in 2021 to update the characterization of the environment.

The Project is located within the Prout Plateau, a rolling subalpine upland with an average elevation of 1,100 m (AMSL), on the eastern flank of the Boundary Ranges of the Coast Mountains between the Unuk River (south) and Iskut River (north). The area is characterized by steep mountains with isolated plateaus, high precipitation, shallow soils, and large rivers draining westward to the ocean. The Eskay Creek Mine site is at approximately 800 m elevation. Mountain

slopes are heavily forested while the sub-alpine terrain around the mine site reflects sparser forest cover and forest type.

The mean annual total precipitation at the former mine site is estimated to be 2,500 ± 500 millimetres (mm). The majority (55–71%) of annual precipitation falls as snow between September and May. Expected extreme temperatures range from -40 degrees Celsius (°C) to +30 °C.

The biogeoclimatic zones in the Project area include Mountain Hemlock (MH), Engelmann Spruce-Subalpine Fir (ESS), and Interior Cedar Hemlock (ICH).

The Project provides habitat for a variety of wildlife species as follows:

- Large wildlife species recorded within the Project area include black bear, moose, grizzly bear, and mountain goat. Small mammals recorded in the Project area include American marten, wolverine (Special Concern; *Species at Risk Act* [SARA]), voles, and hoary marmot.
- Furbearing mammals with suitable habitat in the vicinity of the Project include grizzly bear (Special Concern), wolf, lynx, ermine, mink, fisher, least weasel and snowshoe hare;
- Northern Myotis bat (Endangered), little brown myotis bat (Endangered), American water shrew;
- The Project's transportation route crosses caribou range and the Project area is not overlapped by any caribou herd ranges;
- Mid and lower elevations provide habitat for porcupine, northern flying squirrel and red squirrel. Plovers, Canada goose, harlequin duck and numerous passerine species have been recorded in the area;
- Migratory birds;
- Red-listed species found in the vicinity of the Project include Northern Goshawk (Threatened), Peregrine falcon (Special Concern), Western grebe (Special Concern; *Species at Risk Act* [SARA]), Upland sandpiper and Swainson's hawk;
- Raptors recorded in the area include bald eagle, sharp-shinned hawk and owls; and
- Wood frogs and western toads (Special Concern; SARA) were amphibians recorded near the Project.

No fish have been observed or captured during multiple past sampling periods in the upper tributaries of Ketchum and MacKay creeks (which drain into the Unuk River) in the vicinity of the Project, including the former Albino Lake, Little Tom MacKay Lake, Eskay Creek and Tom MacKay Creek adjacent to the mine site. The alpine lakes and streams in the Tom MacKay Creek watershed are naturally low in plant nutrients and do not contain fish due to impassible waterfalls as well as gradient/velocity barriers to approximately 10 km downstream of the mine site. There are obstacles to fish passage immediately upstream of the confluence of Tom MacKay Creek with Ketchum Creek. Salmon species (pink, chum, chinook, and sockeye), Dolly Varden, and cutthroat trout were observed in the Unuk River about 7–8 km downstream of the mine site but cannot ascend Ketchum and Tom MacKay creeks from the Unuk River to the mine site.

Human Environment

The Project is located at the south boundary of Electoral Area D (i.e., access road and powerline within Iskut Watershed and near Bob Quinn, Iskut communities) and northern edge of Electoral Area A (i.e., the mine site is within Unuk River watershed) of the Regional District of Kitimat-Stikine (RDKS). Area D covers an area of 28,137 km^2 (Statistics Canada 2017). The RDKS population of Area D in 2016 was 99 people (Statistics Canada 2017). No municipal plans relevant to the EA were noted, with the exception of the Bob Quinn Rural Land Use Bylaw 314 Area which includes the Bob Quinn electrical sub-station. Many of the smaller communities in the Electoral Areas D and A have predominantly Indigenous populations that are isolated from one another as well as from the main regional centres of Smithers and Terrace. Approximately one-third of the 40,000 to 45,000 people in the region are Indigenous.

Exploration activity in northwest BC has been an ongoing economic activity dating back to the mid-1800s. The first major discovery was the Premier Gold Mine in 1918, with more recent mines developed including the Snip Gold Mine in 1964 and the Eskay Creek Mine (underground) in 1988. Presently, primary resource industries, principally mining and forestry, comprise a key proportion of the larger regional (northwest and west central BC) employment market at 4.6% and 2.6% respectively and are important to Tahltan communities and members working in regional communities.

Public sector services (Band administration, health and social services) provided a high proportion of employment in Tahltan territory prior to 2013, followed by mining and exploration, and support services. While employment had declined in the mining/exploration sector in the past couple decades due to mine closures (e.g., Huckleberry and Kemess South mines), the startup of the Red Chris Mine, Silvertip Mine and Brucejack Mine in the past 10 years have increased employment opportunities for Indigenous and non-Indigenous workers from northwest BC and Tahltan territory. Advanced exploration projects (Galore Creek, Shaft Creek, Kutcho Creek, Eskay Creek Project) and permitted projects (KSM Project) will provide ongoing employment in the Project area.

The forest industry has been in decline in recent decades, which has significantly weakened the economy and led to a steady decline in the regional population. Since the mid-1990s, the regional population has dropped by almost 15%, although in the 2000s, the rate of decline has begun to slow. Recent major infrastructure projects in Kitimat for Rio Tinto Alcan and LNG Canada are likely to result in a positive economic contribution to the region.

There is well-developed infrastructure in the region, including a paved road from Smithers to the Yukon border (Highway 37) and to port facilities in Stewart (Highway 37A). The 335 km Northwest Transmission Line runs from Terrace to Bob Quinn Lake and north to the Red Chris Mine. There are three hydroelectric facilities (Forrest Kerr, Volcano Creek, and McLymont Creek) supplying power to the BC Hydro grid and owned by Axium Infrastructure Inc. and the Tahltan Nation (minority equity ownership).

Land and resource uses within the region include trapping, guided hunting, commercial recreation and outdoor recreation including fishing, hunting, camping, hiking, snowmobiling, all-terrain vehicle (ATV) riding, and skiing. In the vicinity of the Project, there are mineral and range tenures, guide outfitters and traplines. There are seasonal Tahltan cabins along the Eskay Creek Mine

Road. The Bell 2 Lodge, a year-round resort, is northeast of the Project on Highway 37 and supports a commercial backcountry heli-ski operation.

There are areas of high archaeology potential, which are being further investigated in 2021.

The Project is located within the North West Regional Hospital District (NWRHD), the largest of 23 Regional Hospital Districts in the Province. It serves approximately 80,000 residents in three regional districts. The NWRHD supports two health authorities (Northern Health and Nisga'a Valley Health) and 16 community facilities.

The RDKS contains urban, rural and remote communities of varying sizes and differing demographic, cultural and health profiles. Factors that affect health include income, education, employment, physical environments, health services, social supports, early childhood development and personal health practices. In the NWRHD delivery area, 71.2% of the population reported very good to excellent mental health. Available data suggests that Indigenous peoples and communities in BC have similar rates of cancer to other residents. However, Indigenous peoples were three times more likely than other residents to suffer from rheumatoid arthritis and twice as likely to have had a stroke.

Summary of Engagement Activities

Skeena Resources is committed to early, inclusive and meaningful engagement with Indigenous Peoples, communities and stakeholders during the federal and provincial assessment processes. Skeena Resources has identified potentially impacted Indigenous Groups (Tahltan Nation, Tsetsaut Skii km Lax Ha, Nisga'a Nation and Gitanyow Nation) as well as the Métis people as represented by the Métis Nation British Columbia (MNBC). To date, Skeena Resources collaborated with the TCG (as represented by THREAT) on development of this IPD. Incorporation of environmental and social design principles into the Project from the 1987 Tahltan Central Council's *Resource Development Policy* has been a key engagement outcome with the Tahltan Nation to help achieve desired outcomes. An introductory overview of the Project has also occurred with the Tsetsaut Skii m Lax Ha (TSKLH), Nisga'a Nation and Gitanyow Nation.

The Project is within Tahltan Nation territory and TSKLH asserted traditional territory. Highways 37 and 37A pass through the Nass and Nass Wildlife Areas (as defined in the Nisga'a Final Agreement) of the Nisga'a Nation and the traditional territory of the Gitanyow Nation.

Engagement will occur with Indigenous Groups, Métis, local governments, community-based organizations and the public, both directly by Skeena Resources and through the assessment process. Possible key issues in relation to the Project include, but are not limited to:

- impacts to traditional and current use practices for ceremonial, cultural, medicinal, harvesting, and subsistence purposes, including plants, wildlife and wildlife habitat, fish and fish habitat, and archaeological sites;
- impacts to water quality in the Unuk watershed;
- cumulative effects on water quality and wildlife;
- importance of mining to the economy;

- impacts to hunting and commercial and public recreation; and
- impacts to wildlife, including mountain goats, grizzly bears and moose.

Indigenous Interests

Indigenous interests will be identified through ongoing engagement. Indigenous interests that have been identified by the Tahltan based on engagements to date and Indigenous interests that have been identified during environmental assessment reviews of the Brucejack and KSM mine projects in northwestern BC are summarized in Table 2.

Table 2 Potential Indigenous Interests Related to the Project [1]

Indigenous People	Indigenous Interest	Potential Project Actions
Tahltan	• Concerned about potential social impacts and impacts on fisheries and wildlife. • Interested in education, training and employment benefits. • Interested in opportunities to develop Tahltan businesses and development of business skills. • Interested in developing a management regime that minimizes impacts on water resources, wildlife, fisheries, culturally important areas and protects health and safety of community. • Incorporating Tahltan Knowledge (TK) into design and assessment of Project. • Interested in maximizing energy efficiency. • Approach to EA process best suited to meet Tahltan rights and title.	• Skeena Resources is discussing options for siting Project components with the TCG. • THREAT is invited to collaborate in Working Groups related to Project design (Waste Rock/tailings), environmental management (water, wildlife), Socio-economics and reclamation and closure. • Incorporate the results of the traditional land use study into the Project design, effects assessments and mitigations. • Engage Tahltan on the design and development of environmental management system and management plans. • Continue and enhance development of mentorship, apprenticeship, on-the-job programs to provide education, work experience and skills training and transferable knowledge. Tahltan hired to complete TK/Traditional Land Use Study to be utilized during effects assessment during EA.
TSKLH	• Possible concerns about impacts on TSKLH use of TSKLH trails and spiritual sites and cultural areas. • Interested in employment and contracting opportunities. • Possible concerns about impacts on water, wildlife and fisheries.	• Incorporate knowledge and traditional land use to Project design, effects assessments and mitigations. • Engage with TSKLH during the Early Engagement to understand and discuss TSKLH concerns and interests.
Nisga'a	• Possible interest in employment and economic opportunities. • Possible concerns about Project traffic on highways 37 and 37A, including moose mortality, potential spill into watercourses due to accidents. • Possible concerns about Nisga'a interests in the Nass Area and Nass Wildlife Area.	• Engage with Nisga'a during the Early Engagement to understand and discuss Nisga'a concerns and interests.

[1] References: Canadian Environmental Assessment Agency Comprehensive Study Report (2014), Table 7.0.1; BC Environmental Assessment Office Assessment Report (2014), Part C.

Indigenous People	Indigenous Interest	Potential Project Actions
Gitanyow	• Possible interest in employment and economic opportunities. • Possible concerns about Project traffic on Highways 37 and 37A, including moose mortality, potential spills into watercourses due to accidents and effects on Gitanyow harvesters accessing areas from the highways.	• Engage with Gitanyow during the Early Engagement to understand and discuss Gitanyow concerns and interests.
MNBC	• Concerns about impacts on harvesting activities.	• Project notification to MNBC. • Review of MNBC database.

Potential Project Effects

A preliminary assessment of possible Project effects is identified in Table 3. Potential mitigations for these effects are found in Section 10.1.

Table 3 Preliminary List of Possible Project Effects

Component	Potential Effect
Indigenous Interests	
Physical and Cultural Heritage, Current Use of Lands and Resources for Traditional Purposes, Sites of Historical, Archaeological or Cultural Importance	• Generally, these potential effects are related to the Project's potential impacts to the biophysical environment and the Project's footprint. These could, in combination, potentially affect exercising of Aboriginal rights and traditional land uses in and around the Project area; harvesting plants for food for medicinal and ceremonial purposes; and camping and gathering at sites of cultural, spiritual and historic importance.
Indigenous Peoples' health, social or economic conditions	• Generally, these potential effects are related to the Project's potential impacts to the biophysical environment and to social and economic factors (e.g., related to food security, transmission of knowledge, employment). These could, in combination, potentially affect legal, spiritual and cultural practices; transmission of traditional culture, knowledge and law; and improve employment and economic opportunities.
Physical Environment	
Air Quality and GHG Emissions	• Fugitive dust emissions from material handling, blasting, vehicle and processing can increase ambient particulate matter concentrations that can negatively affect human and wildlife health, and increases in dust fall deposition can affect vegetation and waterbodies. • Combustion emissions from vehicles and equipment can result in increases in ambient concentrations of nitrogen dioxide (NO_2), sulphur dioxide (SO_2) and other contaminants that can negatively affect human health and vegetation.
Noise and Vibration	• Noise from mining can result in increases in noise levels for human and wildlife receptors. • Vibrations from blasting and equipment may affect human and wildlife receptors. • Specific impacts of noise on human health will be identified as part of the Human Health Risk Assessment. • Vibration impacts to geotechnical stability near mine site infrastructure.

Component	Potential Effect
Groundwater	• Changes to groundwater quality and quantity from MLARD (waste piles, pits, underground mine) or chemical contamination (e.g., fuel spills) or over-extraction.
Geology, Soils and Terrain	• Loss of soil profile and changes to terrain from vegetation removal, overburden removal, waste storage rock and development of open-pit mine. • Changes to soil quality due to changes in soil chemical and physical characteristics during mining and reclamation activities. • Long term storage of soils leading to loss of soil productivity.
Hydrogeology	• Changes to groundwater quality and quantity from mining interaction with groundwater table resulting from changes to topography including disturbance to bedrock and surficial materials. • Changes to groundwater quality interactions between groundwater and mine-influenced surface water. • Changes to groundwater quality from water infiltration through waste rock, pit walls, mine pits, etc.
Hydrology and Surface Water Quality	• Changes in water quality downstream of the mine site within the Unuk or Volcano Creek watersheds from discharge of treated mine contact water, site runoff erosion/sedimentation, blasting residue leaching, interactions with groundwater, accidents/spills or ML/ARD risks. • Potential effects could change concentrations of key parameters including metals, physical parameters (pH, temperature, turbidity//total suspended solids [TSS], etc.), which affect suitability to downstream uses, toxicity to aquatic life, nutrient levels. • Changes in flow regime and sediment loading in watercourses streams. • Erosion/deposition associated with changes in surface water flow regime. • Changes in groundwater/surface water interactions.
Biological Environment	
Fish and Fish Habitat/Aquatic Resources	• Direct loss or change in quantity of aquatic habitat due to mine infrastructure. • Change in quantity and quality of aquatic habitat resulting from alteration of stream flows. • Change in water quality resulting in potential health effects to aquatic resources and aquatic species (e.g., fish, benthic invertebrates, amphibians and birds). • Change in amount, suitability, migration and distribution of habitats (including sediment quality) for fish or aquatic organisms from road upgrades or sediment/erosion inputs at stream crossings or along power line.
Vegetation and Ecosystems	• Loss and/or alteration of ecosystems, vegetation and wetlands from land clearing and mine construction. • Health effects on vegetation due to changes in air, water, soil quality and dust deposition. • Deposition of dust on plants and soil, which can result in uptake of metals to plants, which are then consumed by wildlife.

Component	Potential Effect
Wildlife and Wildlife Habitat	• Loss and/or alteration of wildlife habitats, including migratory bird habitat, from land clearing and mine construction. • Sensory disturbance to wildlife (light and noise). • Disruption of wildlife (e.g., bears, small furbearers) seasonal movement patterns in regional and local landscapes. • Direct mortality of wildlife due to vehicle-wildlife collisions and indirect mortalities from mine operations. • Changes to population dynamics, including potentially moose, bears, small furbearers due to changes to predator-prey dynamics. • Health effects on wildlife due to changes in air, water and soil quality. • Loss of riparian habitats affecting water bird and amphibians that use lentic and lotic environments.
Social, Health, Economic and Heritage Environment	
Community Health and Well-being	• Changes to and/or maintenance of community and individual health and well-being. • Provincial and local economic stimulus. • Employment, income, local government revenue generation and gross domestic product benefits. • Health and safety of workers and public. • Changes to wage and non-wage economy due to Project driven changes in hunting, trapping, and gathering. • Changes to local population and demographics due to Project driven labour market changes. • Changes to local community services and infrastructure due to either Project demand or Project-driven population change.
Human Health	• Change to particulate matter concentrations (e.g., $PM_{2.5}$ and PM_{10}) which may cause health risk to workforce. • Deposition of dust to plants and soil, which can result in uptake of metals to plants which are then consumed by people. • Health effects due to changes in water quality. • Increased levels of noise and traffic causing stress or harm, such as sleep disturbance.
Economic	• Provincial and local economic stimulus via Project procurement and contracting for goods, services, and personal services, and consumer spending of employees. • Changes to employment, employment income, and training. • Changes to gross domestic product (GDP). • Changes to local government revenues and expenditures.
Commercial and Public Land Use	• Changes to opportunities associated with public and tenured land and resources, including changes to use of and/or access to certain public lands and waters and availability of certain species.
Heritage Resources	• Effects to heritage resources due to land clearing, mining and associated infrastructure.
Human and Terrestrial Wildlife Health	
Human and Terrestrial Wildlife Health	• Deposition of dust to plants and soil, which can result in uptake of metals and PAHs from mining to plants which are then consumed by people and wildlife which may impact their health. • Water runoff may contribute to changes in water quality to downstream waterbodies which may impact health of humans, fish and wildlife.

Component	Potential Effect
Components of the Environment that are within the Legislative Authority of the Federal Government	
Fish and Fish Habitat	• Direct loss or change in quantity of aquatic habitat due to mine infrastructure. • Change in quantity and quality of aquatic habitat resulting from alteration of stream flows. • Change in water quality resulting in potential health effects to aquatic resources and aquatic species (e.g., fish, benthic invertebrates, amphibians and birds). • Change in amount, suitability, migration and distribution of habitats (including sediment quality) for fish or aquatic organisms from road upgrades or sediment/erosion inputs at stream crossings or along power line. • Authorization of mine waste/tails deposition under MDMER.
Aquatic Species at Risk	• There are no SARA-listed species in the vicinity of the Project.
Migratory Birds	• Loss and/or alteration of migratory bird habitat, from land clearing and mine construction.
Potential Changes Outside of BC and Canada	
Potential Changes outside of BC within Canada	• No potential changes are anticipated outside of BC within Canada.
Potential Changes on Federal Lands	• No potential changes are anticipated on Federal lands.
Potential Changes Outside of Canada	• No anticipated impacts to air, water or wildlife extending outside of BC.

Effects of the Environment on the Project

Environmental factors could lead to environmental effects on the Project's physical infrastructure. These factors include climate change and natural hazards such as natural seismic events, volcanic events, avalanche events, extreme weather events and fire. The Project is located in an area that can experience significant snowfall and water runoff during freshet. It will be important to effectively handle the water flows and storage experienced at the Project site through the different Project phases. Risks associated with climate change and natural hazards would be assessed in the impact assessment and appropriate mitigations incorporated into the Project designs and plans.

Potential Changes to the Environment on Lands outside BC and Canada

No effects will occur in another province in Canada.

The Project is located approximately 40 km from the BC – Alaska border within the Unuk River watershed, a transboundary river. The Project's assessment will include a robust analysis of potential effects within a regional study area, including the tributaries to the upper portion of the Unuk River, and a local study area that encompasses the mine site. The impact assessment will consider potential effects where there is potential for downstream effects on valued components such as water quality, fisheries, and aquatic resources, and other valued components. Mitigation will be put in place to manage potential for impacts and to limit the geographic extent of potential impacts.

Environmental management and compliance monitoring with existing permits for the former underground mine site has occurred since initial development in the mid-1990s under previous owners. Importantly, past assessments and reviews have approved the use of sub-aqueous disposal of PAG tails and waste rock in non-fish bearing lakes as the most suitable long term waste management and MLARD mitigation strategy. The Environmental Assessment Review for the underground Eskay Creek Mine in 2000 for the use of Tom MacKay Lake as a waste disposal facility, and subsequent Project Approval Certificate that was issued, did consider the concerns of First Nations, non-Canadian regulators and parties and potential for effects on fisheries resources and water quality of the Unuk River. The Project Committee Report concluded that, with the implementation of mitigation and compensation strategies and compliance with regulatory authorizations, that development of sub-aqueous storage of tailings in Tom MacKay Lake was not expected to cause significant adverse environmental, economic, social, cultural, heritage and health effects. Environmental effects monitoring programs over the past 20 years have supported the conclusion of no significant adverse environmental effects.

Skeena Resources will continue environmental monitoring and mitigation works to minimize potential risks to adjacent watersheds such that no anticipated impacts would occur to local watercourses or those extending outside of BC. Mitigation and effective EMS to monitor operations and ensure compliance with current and future provincial and federal requirements will continue to build on the track record of avoiding long-term impacts from the site.

Closing

The Project would restart mining as an open-pit operation at the past producing Eskay Creek underground mine. Through the IPD, Skeena Resources is providing an early design-stage overview of the Project, with the intention that this document will form the basis for early engagement which will help shape the final design of the Project. Skeena Resources anticipates undertaking an Environmental Assessment with substitution of the federal impact assessment. The assessment process will be initiated when the BC EAO and IAAC accept the IPD and seek public comments on the IPD. Regulators, agencies, Indigenous groups and the public will have an opportunity to provide initial feedback on the Project and project components that are still being evaluated.

Please provide feedback to the EAO[2], IAAC, or directly to Steve Jennings, Skeena Resources.

[2] https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/environmental-assessments/commenting-on-projects

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LIST OF CONTRIBUTORS TO THE INITIAL PROJECT DESCRIPTION

Contributors	Credentials	Section(s)	Relevant Experience
Sue Craig Advisor, Indigenous and External Relations Skeena Resources	M.Sc., P.Geo.	All	30+ years experience in impact assessment
Steve Jennings Manager, Environmental Assessment Skeena Resources	B.Sc., R.P.Bio.	All	20 years experience in environmental studies
Anne Currie Senior Partner RTEC	B.Sc., MPA	All	30+ years experience in impact assessment
Jocelyne Plourde Sustainability Project Manager Skeena Resources	M.Eng., EIT (AB)	All	5 years experience
Tahltan Heritage Resource Environmental Assessment Team (THREAT)	Professional engineers and scientists	Review of document Text contributions to Executive Summary, Indigenous Interests, Potential Effects, Cumulative Efforts, Engagement	Extensive professional level experience

ACRONYMS AND ABBREVIATIONS

Acronym / Abbreviation	Definition
ABA	Acid Base Accounting
AG	Acid generating
Agency	Impact Assessment Agency of Canada
AIA	Archaeological Impact Assessment
AOA	Archaeological Overview Assessment
ARD	Acid Rock Drainage
ASF	Albino Storage Facility (waste rock)
Barrick	Barrick Gold Corporation (former owner of the historic Eskay Creek Mine)
BAT	Best available technology
BC	British Columbia
BC CDC	British Columbia Conservation Data Centre
BC EAA	British Columbia *Environmental Assessment Act* (2018)
BC EAO	BC Environmental Assessment Office
BMPs	Best Management Practices
BWG	Bilateral Working Group
Canarc	Canarc Resources Corp.
CCAA	British Columbia *Climate Change Accountability Act* (2007)
CEAA	Canadian Environmental Assessment Agency (now IAAC)
CIS LRMP	Cassiar Iskut-Stikine Land and Resource Management Plan
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
COVID-19	Coronavirus-2019
DPD	Detailed Project Description
EA	Environmental Assessment
EAC	Environmental Assessment Certificate
EAO	British Columbia Environmental Assessment Office
ECCC	Environment and Climate Change Canada
EMLI	British Columbia Ministry of Energy, Mines and Low Carbon Innovation
EMS	Environmental Management System
EMPR	British Columbia Ministry of Energy, Mines and Petroleum Resources
ENV	BC Ministry of Environment and Climate Change Strategy
Eskay Creek Mine Road	Eskay Creek Mine Road begins at km 0 on Highway 37 and extends to km 59 to the Eskay Creek Mine site and was built in 1993/94. The first 43 km are under a Special Use Permit (SUP) controlled by Axium. A gate is in place at km 2 and Skeena and other groups utilize the road under Road Use Agreements.

Acronym / Abbreviation	Definition
Historic Eskay Creek Mine (site)	This refers to the underground mine operation and related tailings/waste/mill/ camp infrastructure at the Eskay Creek deposit location which was operated by Homestake/Barrick between 1994 and 2008. Currently, the mine site, tailings/waste storage facilities and underground workings are in Care and Maintenance status, partly reclaimed and actively managed by Skeena Resources.
ESSF	Engelmann Spruce-Subalpine Fir
FLNRORD	BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development
FNHA	First Nation Health Authority
FS	Feasibility Study
GBA+	Gender-Based Analysis
GDP	Gross Domestic Product
GHG	Greenhouse gas
HCT	Humidity cell test
HHRA	Human Health Risk Assessment
IA	Impact assessment
IAA	*Impact Assessment Act, 2019*
IAAC or the Agency	Impact Assessment Agency of Canada
ICH	Interior Cedar Hemlock
Indigenous Groups	Tahltan Nation, Tsetsaut Skii km Lax Ha, Nisga'a Nation, Gitanyow Nation
Indigenous Peoples	Tahltan Nation, Tsetsaut Skii km Lax Ha, Nisga'a Nation, Gitanyow Nation and the Métis are collectively referred to as Indigenous Peoples
IPD	Initial Project Description
LNG	Liquid Natural Gas
NPAG	Non-Potentially Acid Generating
MDC	Mine Development Certificate
MMER	Metal and Mining Effluent Regulations
MDMER	Metal and Diamond Mining Effluent Regulations
MH	Mountain Hemlock
ML	Metal Leaching
ML/ARD	Metal Leaching/Acid Rock Drainage
MMER	Metal Mine Effluent Regulations
MNBC	Métis Nation British Columbia
MoU	2015 Memorandum of Understanding and Cooperation between State of Alaska and Province of BC
NFA	Nisga'a Final Agreement
NGA	National Greenhouse Accounts
NLG	Nisga'a Lisims Government
NPAG	Non Potential Acid Generating

Acronym / Abbreviation	Definition
NP/AP	Neutralizing Potential/Acid Potential
NWA	Nass Wildlife Area
NWRHD	Northwest Regional Hospital District
PAC	Project Assessment Certificate
PAG	Potentially Acid Generating
PEA	Preliminary Economic Assessment
PFS	Pre-feasibility Study
Pit Pond	A ponded waterbody in a mined-out open pit within a mine site
Project	Proposed Eskay Creek Revitalization by Skeena Resources Ltd.
Proponent	Skeena Resources Limited
RCMP	Royal Canadian Mounted Police
RDBN	Regional District Bulkley Nechako
RDKS	Regional District Kitimat Stikine
ROM	Run of mine
Skeena Resources	Skeena Resources Limited
SAAC	Strategic Assessment of Climate Change
SAG	Semi autogenous grinding
SARA	*Species at Risk Act*
SF	Storage facilities
SRK	SRK Consulting Limited
TCG	Tahltan Central Government
TDS	Total dissolved solids
THREAT	Tahltan Heritage Resources and Environmental Assessment Team
TIA	Tailings Impoundment Area
TK	Tahltan Knowledge
TLUS	Traditional Land Use Study
TMSF	Tom MacKayMacKay Storage Facility (tailings)
TRTFN	Taku River Tlingit First Nation
TSKLH	Tsetsaut Skii km Lax Ha
TSS	Total suspended solids
VC	Valued Component
VMS	Volcanogenic massive sulphide
WQG	Water Quality Guidelines
WRSF	Waste Rock Storage Facility

SYMBOLS AND UNITS OF MEASURE

Symbol / Unit of Measure	Definition
%	percent
°C	degrees Celsius
Ag	silver
AMSL	above mean sea level
Au	gold
AuEq	gold equivalent
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CDN	Canadian (dollars)
g/t	grams per tonne
ha	hectare
km	kilometre
km^2	square kilometres
kV	kilovolt
kW	kilowatt
kWh	kilowatt hour
L/s	litres per second
m	metre
m^3	cubic metres
mm	milimetre
m^3/s	cubic meters per second
m^3/day	cubic meters per day
mg/L	milligrams per litre
masl	metres above sea level
Mm^3	million cubic metres
Mt/a	million tonne per annum
MW	megawatt
NO_2	nitrogen dioxide
SO_2	sulfur dioxide
t	tonne
tpd	tonnes per day

1.0 INTRODUCTION

Skeena Resources Limited (Skeena Resources) is proposing the Eskay Creek Revitalization (the proposed Project) to restart mining as an open pit with a new Mine Plan at the past producing Eskay Creek (underground) Mine, which operated from 1994 to 2008. Since 2019, Skeena has undertaken the pre-feasibility study (PFS) to inform project design and recently incorporated the 2021 updated resource estimate into the Project design.

The Project would be an open pit gold-silver mine, with an estimated total annual production of 2.5 million to 3 million tonnes (t) (6,850 tonnes per day [tpd] to 7,800 tpd) over the 13 to 16 year mine life (construction to closure inclusive). The Project will involve construction, operation, decommissioning and closure of an open pit mine and mill operation, concentrate transport and associated infrastructure and activities. The Project would use facilities and infrastructure remaining from the Eskay Creek Mine, in Care and Maintenance since 2008, including existing areas of disturbance, existing and new waste disposal locations, as well as include construction of new infrastructure including a mill.

This document is an Initial Project Description (IPD) for the proposed open pit mine and provides a high level description of the evolving project design and regulatory process. The purpose of the IPD is to support the initiation of the regulatory process on the Project and to provide information for interested parties to understand the preliminary design and provide input to Skeena Resources to help inform subsequent detailed design. Through the IPD, Skeena Resources is providing an early design-stage overview of the Project, with the intention that this document will form the basis for engagement which will help shape the final design of the Project.

Skeena Resources will utilize the IPD for entry into the assesment process of the BC *Environmental Assessment Act* (BC EAA 2018) and federal *Impact Assessment Act* (IAA; 2019). As part of the collaborative approach to the regulatory process, Skeena Resources has provided a letter to the provincial Minister responsible for the EAA, indicating support for the Tahltan Nation's request on July 16, 2021, to the Minister for the proposed Project to be designated as reviewable under Section 11 of the BC EAA (2018).

Skeena Resources will develop an Environmental Assessment (EA) Application and submit for assessment and review under the British Columbia *Environmental Assessment Act* (BC EAA; 2018) and IAA (2019) for the proposed open-pit operation.

Skeena Resources also requires a federal Impact Assessment and review pursuant to the Canadian *Impact Assessment Act* (IAA, 2019) based upon the proposed open pit mine production over 5,000 tpd, greater than 50% increase in mine operating area and construction of a new mill. The Project's production rate of 2.5 million to 3 million tonnes per year (i.e., 6,850 tpd to 7,800 tpd) and increase in mining operations area over 50% of existing disturbance would be higher than the threshold in the *Physical Activities Regulations* for an expansion of a designated project and the Project also requires construction of a new mill.

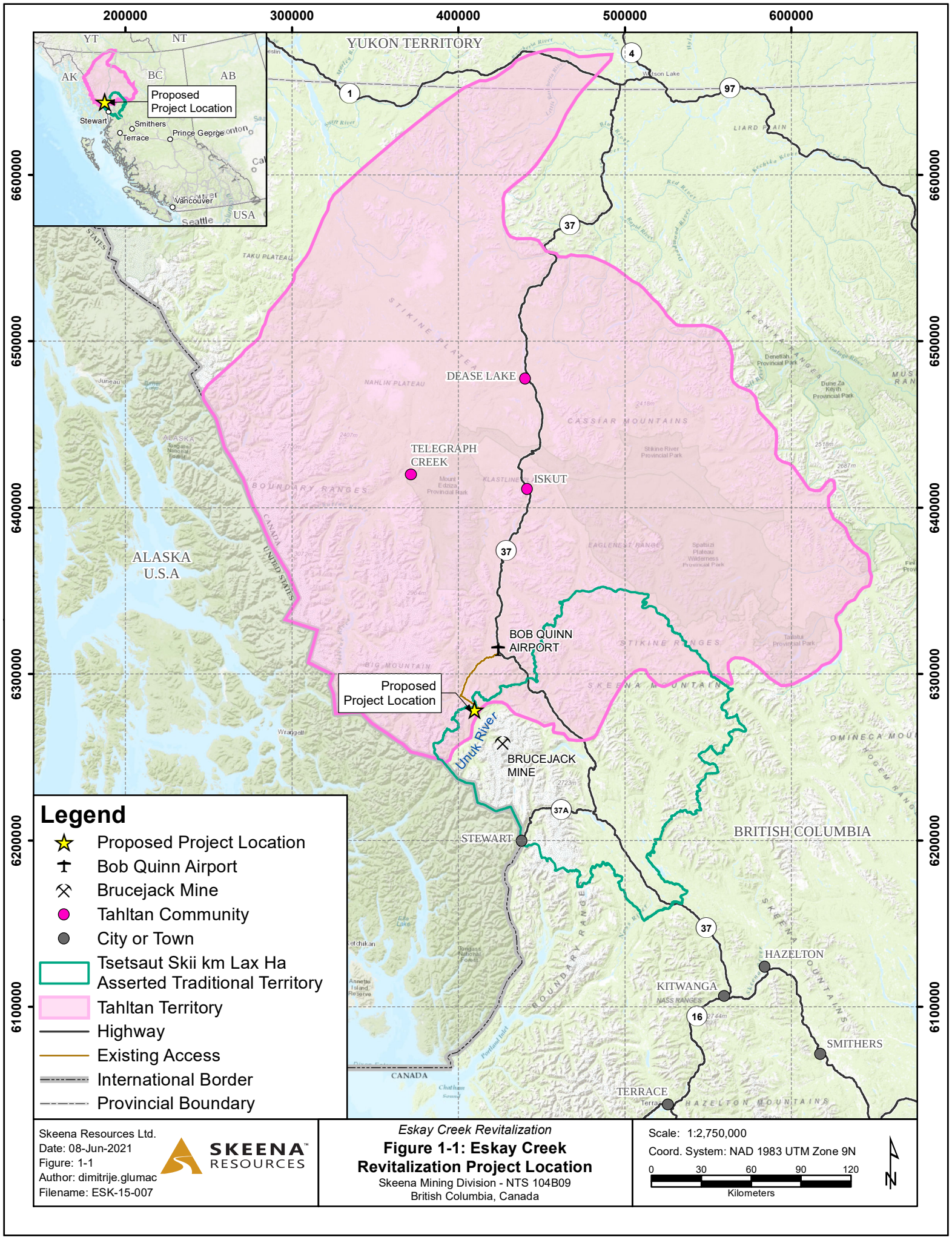
Pursuant to the *Impact Assessment Cooperation Agreement between Canada and British Columbia* ('Cooperation Agreement'; Government of Canada 2020), Skeena Resources will ask that the Province make a request shortly after acceptance of the IPD to the federal Minister of

Environment and Climate Change (ECCC) to approve the substitution of the BC EA process for the federal Impact Assessment (IA) process. If the substitution request is approved by the federal Minister for the Project around 180 days after acceptance of the IPD, the Province would commit to meet the legislative requirements of the federal IA process for the remainder of the assessment process and fulfil the conditions for substitution under the IAA set out in the Cooperation Agreement and the Substitution Decision. At the end of the EA process, the BC EAO will provide its report to both the Provincial and Federal Ministers for their consideration and decision.

The Project is located in northwestern BC, approximately 135 kilometre (km) south of Iskut and 83 km northwest of Stewart (Figure 1-1). The site is accessed via the Eskay Creek Mine Road, a 59 km all-season gravel road, which connects to Highway 37 (Stewart Cassiar Highway). The Project is located within the territory of the Tahltan Nation (1910 Declaration of the Tahltan Tribe) and the asserted traditional territory of the Tsetsaut Skii km Lax Ha (TSKLH). The southern portion of the concentrate haul route along Highway 37 to Meziadin Junction and Hwy 37A west to Stewart passes through territories of the Gitanyow Nation and Nisga'a Nation. The closest local Metis chartered community, represented by the Métis Nation British Columbia (MNBC) is in Terrace, BC.

As required under the BC EAA *Early Engagement Policy*, a companion document to this IPD is the *Eskay Creek Revitalization Engagement Plan*; the key parts are summarized in this document. As required by the Impact Assessment Agency of Canada (Agency or IAAC), the IPD includes a summary of engagement activities (Section 9.0).

Skeena Resources has engaged on the Project and draft IPD with the Tahltan Central Government (TCG) represented by Tahltan Heritage Resource Environmental Assessment Team (THREAT), BC EAO, IAAC, and BC Ministry of Energy, Mines and Petroleum Resources (EMPR; now BC Ministry of Energy, Mines and Low Carbon Innovation (EMLI). The IPD was developed in collaboration with THREAT. Written contributions from THREAT are italicized in the document. The draft IPD was initially provided to THREAT in July 2020, and BC EAO, and IAAC for review and comment in January and June 2021 as well as TSKLH in February 2021.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BC
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Proposed Project Location
Stewart
Smithers
Terrace
Prince George
Vancouver
Seattle
USA
YUKON TERRITORY
DEASE LAKE
TELEGRAPH CREEK
ISKUT
ALASKA U.S.A
BOB QUINN AIRPORT
Proposed Project Location
Unuk River
BRUCEJACK MINE
STEWART
BRITISH COLUMBIA
HAZELTON
KITWANGA
SMITHERS
TERRACE
CANADA
1
4
37
97
37A
16
Legend
Proposed Project Location
Bob Quinn Airport
Brucejack Mine
Tahltan Community
City or Town
Tsetsaut Skii km Lax Ha Asserted Traditional Territory
Tahltan Territory
Highway
Existing Access
International Border
Provincial Boundary
Skeena Resources Ltd.
Date: 08-Jun-2021
Figure: 1-1
Author: dimitrije.glumac
Filename: ESK-15-007
SKEENA RESOURCES
Eskay Creek Revitalization
Figure 1-1: Eskay Creek Revitalization Project Location
Skeena Mining Division - NTS 104B09
British Columbia, Canada
Scale: 1:2,750,000
Coord. System: NAD 1983 UTM Zone 9N
0 30 60 90 120
Kilometers
N

2.0 PROPONENT INFORMATION

The Project proponent is Skeena Resources Limited, a junior Canadian mining exploration company focused on developing prospective precious metal properties in northwestern BC's Golden Triangle. Skeena Resources is publicly traded on the Toronto stock exchange (TSX: SKE.TO, OTCQX: SKREF). Proponent contact information is provided below.

Head Office:	Skeena Resources Ltd. #650, 1021 West Hastings Street Vancouver, BC V6E 0C3 Phone: (604) 684-8725 Fax: (604) 558-7695 Website: https://www.skeenaresources.com
Chief Executive Officer:	Walter Coles President & CEO Skeena Resources Ltd. Email: wcoles@skeenaresources.com Phone: (604) 684-8725
Principal Contact for the Impact Assessment:	Steve Jennings Environmental Assessment Manager Skeena Resources Ltd. Phone: (250) 877-9946 Email: stevejennings@skeenaresources.com
Alternate Contact for the Impact Assessment:	Justin Himmelright Vice President, Sustainability Skeena Resources Ltd. Email: jhimmelright@skeenaresources.com Phone: (604) 684-8725

3.0 PROJECT OVERVIEW

This section of the IPD provides an overview and vision of the Project, including the need for and purpose of the Project, location, mining history and current status, geology and mineralization, and mineral tenure. No federal funding has been requested and no federal support is being provided for the Project. No federal lands would be used to carry out the Project.

3.1 Project Need, Purpose, and Benefits

The prosperity of Canada and BC is linked to economic development opportunities in the natural resources sector. In 2017, the minerals and metals sector accounted for 634,000 direct and indirect jobs in Canada, 5% of nominal Gross Domestic Product and 19% of Canada's total merchandise exports (The Canadian Minerals and Metals Plan 2019).

Gold is Canada's most valuable mined mineral with a production value of $9.6 billion and Canadian gold exports valued at $17.3 billion in 2018 (Natural Resources Canada 2020). The unique properties of gold and the advent of 'nanotechnology' are driving new uses in medicine, engineering and environmental management (World Gold Council 2020). Silver is an essential component in many industries. Almost every computer, mobile phone, automobile and appliance contains silver. It is also used in electrical switches, solar panels and chemical-producing catalysts. Its unique properties make it nearly impossible to substitute and its uses span a wide range of applications (The Silver Institute 2020). Pre-pandemic data suggests that gold and silver production has flat-lined while the demand for these metals is expected to grow with growing population (BBC News 2020; Statista 2020).

The Project is needed to supply precious metals to global markets to support industrial development needs, including the technology, health, automotive and aerospace sectors, as well as consumer and investment demand. Gold has long been central to innovations in electronics.

The COVID-19 pandemic is significantly impacting the global economy. The price of silver fell to its lowest level in more than a decade at the peak of the panic in global markets in mid-March 2020 and then rose to a 5 year peak in August 2020, and was close to that peak by February 2021.The uncertainties presented by COVID-19 make it challenging to forecast silver market conditions. Looking ahead, roughly 80% of silver's demand comes from areas likely to suffer as a result of the COVID-19 crisis. While physical investments are expected to grow, all other demand areas are forecast to suffer losses this year. Declines for supply are predicted as restrictive measures affect a large number of mines (The Silver Institute 2020).

The pandemic has also impacted the demand for gold. The demand for jewellery is lower due to social restrictions, economic slowdown and a strong gold price. Demand for bars and coins strengthened due to strong safe-haven demand in Western markets and Turkey and demand for gold used in technology is weak. The total supply of gold fell by 3% despite a 6% growth in metal recycling (World Gold Council 2020). Once the pandemic ends with the development of a vaccine, with several vaccines already providing promising results, gold and silver production and demand are expected to recover as markets return to normal.

The **purpose of the Project** is to undertake sustainable resource extraction of gold and silver concentrates in alignment with the objectives stated in the Canadian Minerals and Metals Plan (Government of Canada 2019) and to foster economic growth and prosperity in BC, while supporting capacity building, employment and benefits to local Indigenous Peoples and communities (BC Mining Jobs Task Force 2018). The Project would be designed, constructed, operated, and decommissioned to meet all applicable BC and Canadian environmental and safety standards and practices. Skeena Resources would develop and implement an Environmental Management System (EMS) that defines the processes by which compliance would be met and demonstrated. The EMS would include ongoing monitoring and reporting to relevant parties at the various project stages to ensure responsible resource development.

The Project would restart mining as an open pit operation at the past producing Eskay Creek Mine. The Project's expected annual production of precious metals is 0.25 million ounces of gold and 6.9 million ounces of silver. The Project's estimated capital cost is $455 million Canadian (CDN). An additional $81 million CDN in sustaining capital expenditures is expected during the life of the Project for a total capital cost of $536 million CDN. The expected annual operating cost is $135 million CDN. Much of these costs would be spent in Northern BC, employing local and Indigenous contractors and employees. The Project would generate tax revenue for regional, provincial and federal governments.

Skeena Resources is committed to developing the Project in a sustainable manner that will contribute to the local, provincial, and national economies, and will create employment opportunities locally, regionally, and beyond. The past producing Eskay Creek Mine provided many economic and employment opportunities for the Tahltan Nation.

The Project will provide employment and training opportunities to local and regional communities in northwest BC and beyond, including Indigenous Peoples. Over the life of the Project, direct Skeena staff employment would be an estimated 3,800 person-years; including 880 and 2,956 person-years during construction and operations, with additional contractor/consultant employment as well. A small scale workforce would support ongoing monitoring and site management during closure and reclamation. The mine would hire 80 salaried and 214 hourly employees during operations. Additional employment benefits will be created for workers in supplier industries and in businesses benefiting from workers spending their income.

3.2 Project Location

The Project is located within the Regional District of Kitimat Stikine in the Golden Triangle region of BC. The Project is 295 km northwest (467 km via road) from Smithers and 265 km northwest from Terrace (451 km via road; Figure 1-1). The Project is located approximately 40 km from the BC – Alaska border within the headwater tributaries of the Unuk River watershed, a transboundary river. The river originates in the mountains northeast of the Project and crosses into Alaska before discharging into the Pacific Ocean (Figure 1-1). The coordinates of the centre of the mineral deposit are approximately 56° 39′ 13.9968″ N and 130° 25′ 44.0004″ W.

The Project is located within the territory of the Tahltan Nation and the asserted traditional territory of the TSKLH. Three Tahltan communities are located north/northeast of the Project; Iskut (135 km north; 170 km via road), Dease Lake (190 km northeast; 253 km via road), and Telegraph

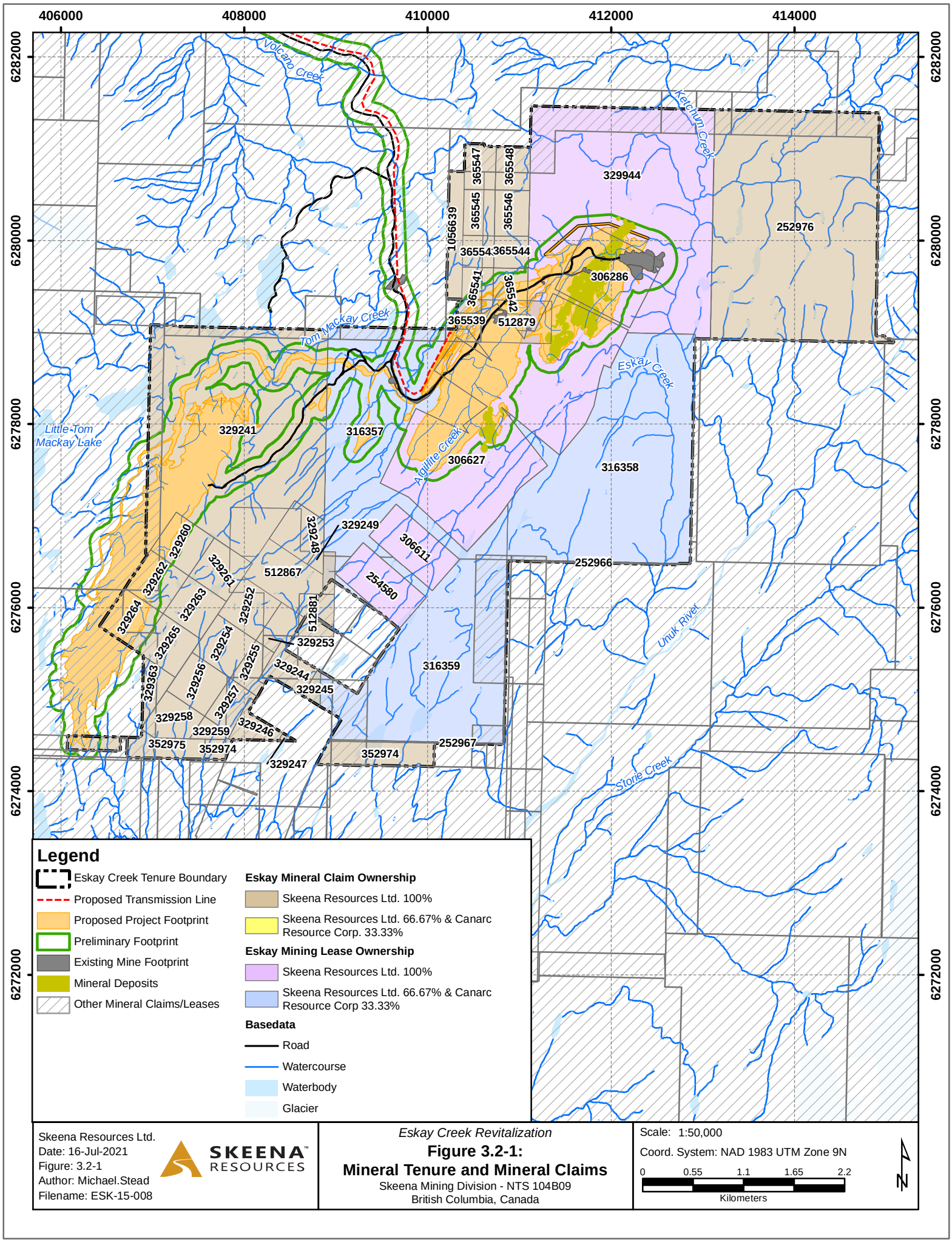
Creek (142 km north; 362 km via road). Stewart is the closest non-Indigenous community to the Project (83 km to the south; 261 km via road).

The mine site is located on provincial Crown land mineral tenures and leases held by Skeena Resources. The Eskay Creek mineral tenures cover a total of 5,093.8 hectares (ha), which includes 40 mineral claims (3,263.5 ha), 8 mining leases (1,830.3 ha), and 2 surface leases (Figure 3.2-1) with the areas adjacent to the Project under other ownership (Section 7.3). Canarc Resources Corp. (Canarc) has a 33% carried interest in several mining leases. All operating decisions related to the property are exclusively Skeena Resources's. Skeena Resources, as the operator, has acquired historical liabilities from Barrick Gold Inc. Canarc carries severed liability for the property.

Distances from themine site to Federal Lands are listed in Table 3.2-1. The Project is not proximate to First Nation land as defined in subsection 2(1) of the *First Nations Land Management Act*. The mine site is 16.8 km from the Nisga'a Nass Area, 49.9 km from the Nass Wildlife Area, and 157.8 km from the Nisga'a Lands.

Table 3.2-1 Distance to Federal Lands (Indian Reserves)

Indigenous Group	Indian Reserve	Distance from the Mine Site (km)
Iskut	Kluachon Lake 1	136
	Iskut 6	137
	Stikine River 7	146
Tahltan	Guhthe Tah 12	147
	Telegraph Creek 6	147
	Telegraph Creek 6a	148
	Tahltan 1	156
	Hiusta's Meadow 2	159
	Tahltan 10	159
	Tahltan Forks 5	172
	Classy Creek 8	173
	Upper Tahltan 4	175
	Salmon Creek 3	185
	Tatcho Creek 11	196
	Tatl'ah Indian Reserve No. 13	203
	Dease Lake 9	206
Gitanyow	Gitanyow 3a	209
	Gitanyow 1	214
	Gitanyow 2	224



Skeena Resources Ltd.
Date: 16-Jul-2021
Figure: 3.2-1
Author: Michael.Stead
Filename: ESK-15-008

SKEENA RESOURCES

Eskay Creek Revitalization

Figure 3.2-1:
Mineral Tenure and Mineral Claims

Skeena Mining Division - NTS 104B09
British Columbia, Canada

Scale: 1:50,000
Coord. System: NAD 1983 UTM Zone 9N

0 0.55 1.1 1.65 2.2
Kilometers

N

3.3 Project History, Status and Existing Infrastructure

The Project area has been the focus of considerable exploration activity dating back to initial prospecting in 1932 which has continued to present day. Exploration drilling in 1988 led to the discovery of the deposit which became the underground Eskay Creek Mine, an underground gold/silver mine that operated from 1994 to 2008. Over the 14-year mine life, approximately 2.2 million tonnes of ore was mined with cut-off grades ranging from 12-15 g/t gold equivalent for mill ore and 30 g/t gold equivalent for direct ship smelter ore (Ausenco 2019).

The past producing Eskay Creek Mine has two environmental assessment certificates (EACs) that were issued under BC legislation more than two decades ago and still apply to the Eskay Creek Mine under transitional provisions of EAA 2018. The original application in 1993 underwent regulatory review and on March 29, 1994, a Mine Development Certificate (MDC 94-01) was issued by the then Ministry of Energy, Mines and Petroleum Resources, with the concurrence of the then Ministry of Environment, Lands and Parks. The MDC was issued to Prime Resources Group Inc. for the development of the Eskay Creek Project (known as Eskay Creek Mine) to enable initial construction and operation, followed by amendments over the next couple years to increase production and build an onsite mill. A proposed mill for the underground operation was considered in 1993 in the vicinity of Houston BC, but this was never permitted or constructed.

A second EAC, called a Project Approval Certificate (PAC M00-01), was issued for the expanded mine on July 21, 2000, following a combined provincial and federal *Canadian Environmental Assessment Act* (CEAA; 1992) Screening review, to permit waste disposal in Tom MacKay Lake (a non-fish bearing alpine lake). The assessment of potential impacts, alternatives, mitigation measures, monitoring programs, public and Indigenous comments formed part of the earlier assessments and certificate conditions. Listing of the two Tailings Impoundment Areas (TIA) for the Eskay Creek Mine occurred in 2002 under the amended federal *Metal Mining Effluent Regulations*.

Homestake Canada Inc. acquired Prime Resources Inc. on January 1, 1999 and merged with Barrick Gold Inc. (Barrick) in 2001. Barrick was the holder of the PAC and was the successor by amalgamation of Prime Resources Group Inc., who was the holder of the Mine Development Certificate (MDC). Skeena Resources acquired the Eskay Creek Mine from Barrick Gold Corporation's wholly-owned subsidiary, Barrick Gold Inc. in August 2020.

On August 12, 2020 Barrick and Skeena Resources jointly submitted an application to transfer 100 percent of both the MDC and the PAC to Skeena under Section 33 of the 2018 *Environmental Assessment Act*. Under transition provisions in the 2018 *Environmental Assessment Act* and predecessor Acts, the MDC and the PAC are deemed to be EACs under the current Act.

Table 3.3-1 provides a summary of key permits and authorizations issued prior to 2008 for the construction and operation of the underground Eskay Creek Mine.

Table 3.3-1 Summary of Key Permits and Authorizations and Status for the Historical Eskay Creek Mine

Date	Description
October 1991	Special Use Permit S17635 issued to construct the Eskay Creek Mine Road.
March 1994	MDC #94-01 issued for the Eskay Creek underground mine project pursuant to the *Mine Development Assessment Act* (1979).
June 1994	*Mines Act* permit M-197 issued approving work system and reclamation program for the Eskay Creek underground mine.
August 1994	Amendment to Permit M-197 issued for construction of the ASF haul road.
September 1994	Amendment to Permit M-197 issued for mine plan changes.
September 1994	Amendment to Permit M-197 issued for operation and construction of settling pond structures.
December 1994	Under federal Metal Mine Liquid Effluent Regulations (MMLER) for Albino Lake waste rock and tailings disposal
November 1996	*Environmental Management Act* permit PR-12977 issued for waste discharges to air and land.
January 1997	*Environmental Management Act* permit PE-10818 issued for discharge of effluent to surface water.
June 1997	Material alteration to MDC #94-01 to construct and operate the mill expansion.
July 1997	Amendment to Permit M-197 issued approving expansion of the processing facility to include gravity and flotation circuits.
September 1997	Variance to Permit M-197 issued to expand the ASF access road.
December 1999	Amendment to Permit M-197 issued to change mill tailings disposal from tailings cake operation to tailings slurry operation.
July 2000	Project Approval Certificate #M00-01 issued for the construction and use of Tom MacKay Lake for waste rock and tailings disposal pursuant to the *Environmental Assessment Act* (1996). Project review also fulfilled the requirements of a Screening Report Pursuant to the *Canadian Environmental Assessment Act* (1992).
July 2000	Amendment to Permit M-197 issued to use Tom MacKay Lake, now TMSF, for waste rock and tailings disposal, and construction of a tailings pipeline from the processing facility to TMSF.
January 2002	Amendment to Permit M-197 issued to increase mining tonnages of direct ship and mill ore to total 750 tonnes per day.
2002	Amendment to MDMER Schedule 2 to list Tom MacKay Lake as a tailings impoundment area.
July 2005	Federal exemption of Tom MacKay Lake from Section 22 of *Navigable Waters Protection Act* under SOR/2005-226
September 2011	Status became Recognized Closed Mine under the federal Metal and Diamond Mining Effluent Regulations (formerly MMER). Care and Maintenance status under BC *Mines Act* permit.

Infrastructure that was developed for the Eskay Creek Mine (Figure 3.3-1) and remains in existence includes the following:

- underground workings, ventilation shafts (three) and three mine portals;
- all-weather roads including the Eskay Mine Access Road;
- Albino Storage Facility (ASF) for waste rock and tails with haul road and small water control structure (i.e., not a large dam);
- Tom MacKay Storage Facility (TMSF) and related pipeline and access road (no dams);

- topsoil storage area;
- burn pit and landfill;
- explosives and detonator magazines;
- administration buildings, warehouse, maintenance and carpentry shop, assay lab, and residence;
- lower mine dewatering station, fuel farm, concrete ore bins, two water supply tanks and pipelines; and
- water treatment facility and four mine water settling ponds.

Onsite accommodations was only re-established at the Eskay Creek Mine in late 2020 to support advanced exploration, reclamation and closure activities going forward since Barrick had eliminated continuous presence of people and supporting accomodations around 2015.

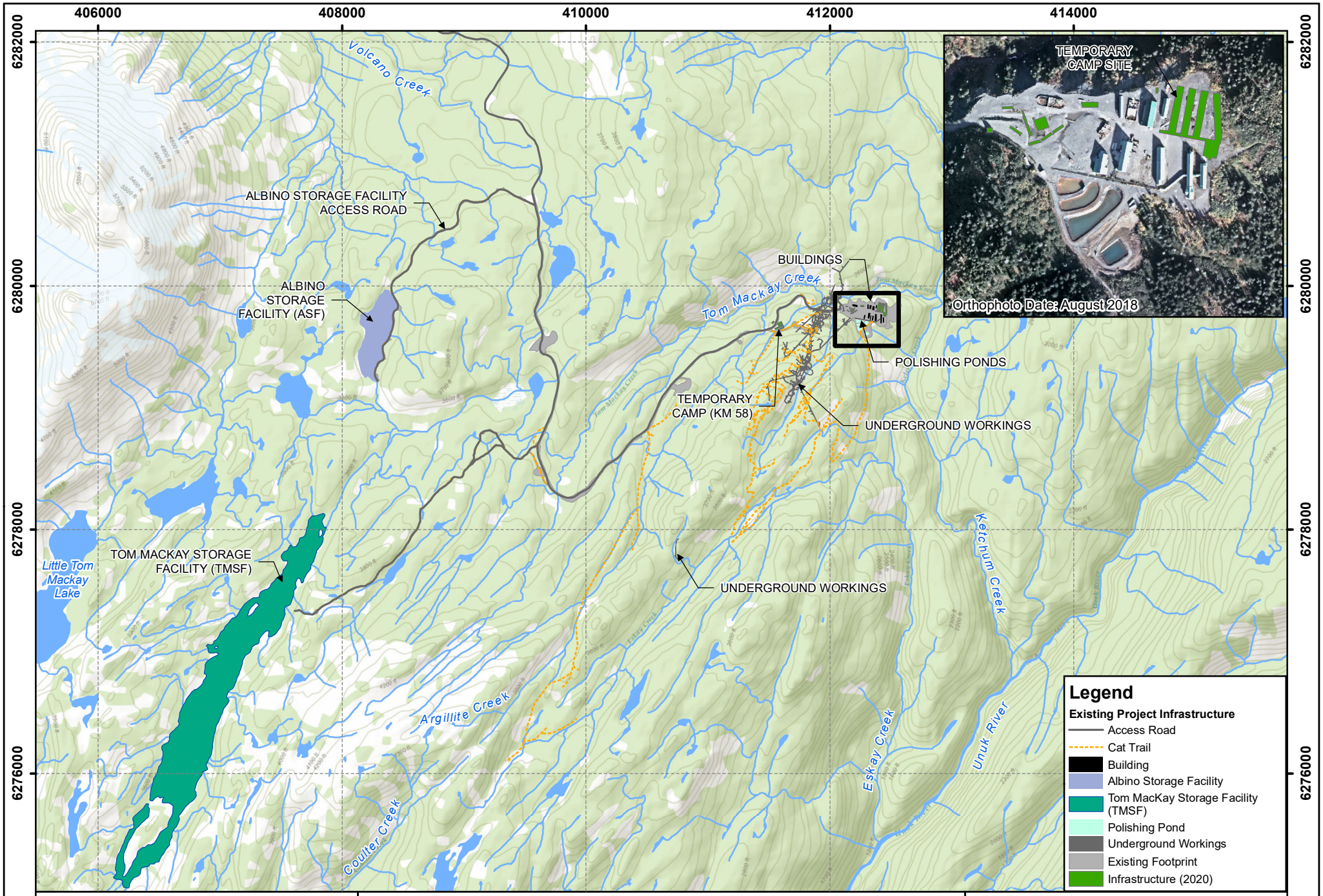
The Eskay Creek Mine has been in care and maintenance since mining operations ceased in 2008, with ongoing site reclamation and treatment of water from underground operations. As of 2011, the Eskay Creek Mine status was considered as 'Recognized Closed Mine' under the federal Metal Mine Effluent Regulations (MMER, now the Metal and Diamond Mining Effluent Regulations, MDMER) of the *Fisheries Act*. Under the BC *Mines Act*, the Eskay Creek Mine has several valid *Mines Act* permits and is considered to be in Care and Maintenance status with ongoing exploration since 2018. Reclamation activities since 2007 included:

- Dismantling and removal of some mine infrastructure, including mill building, 60% of accommodations, assay lab building, aggregate storage facility, truck scale, cold storage facilities, backfill plant, mill thickener and administration building.
- Decommissioning underground workings below 735 masl, which were allowed to flood.
- Dismantling the exposed tailings line and burying the line within the mine site footprint.
- Sealing underground portals and two of the three ventilation raises.
- Seeding two former exploration camp sites.

The former mining operation at the Eskay Creek Mine had relatively little ground disturbance beyond the very compact infrastructure pad at the mine entrance, the Access road and did not require surface waste dumps. The estimated footprint of the former underground mine operation, including the two waterbodies which form the tailings impoundment areas (97 ha) is about 123 ha, excluding the Mine Access Road footprint away from the mine site.

At the end of 2018, the total disturbed land area for reclamation management was 25.9 ha[3] (*2018 Annual Reclamation Report Eskay Creek Mine Permit M-197*, Barrick 2019). Note that this reclamation area excludes the waterbody surfaces of both the Albino and Tom MacKay Storage Facilities (about 97 ha combined) since both these features have tailings and/or waste rock disposed below the water surface. Hence reclamation in the traditional sense (i.e., recontour/revegetate), is not relevant to the water bodies even though they are monitored and inspected.

[3] Excluding TMSF because tailings are underwater and no reclamation is required, and the Eskay Creek Mine Road which is required for reclamation access and exploration activities.



Skeena Resources Ltd.
Date: 15-Jan-2021
Figure: 3.3-1
Author: Michael.Stead
Filename: ESK-15-027.mxd

SKEENA RESOURCES

Eskay Creek Revitalization

Figure 3.3-1:
Existing Infrastructure

Skeena Mining Division - NTS 104B09
British Columbia, Canada

Scale: 1:40,000
Coord. System: NAD83 - UTM Zone 9N

0 0.5 1 1.5 2
Kilometers

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Of the 25.9 ha of disturbed area at the former Mine, 5.7 ha was reclaimed, 3.0 ha was recontoured (including 1.98 ha within the Albino SF waterbody) and 6.7 ha was seeded with grass (Barrick 2019). Table 3.3-2 provides a breakdown of the disturbed and reclaimed areas as of 2018; and no changes occurred in 2019 to those totals while under Barrick ownership. Minor additional disturbance of drill pad locations occurred prior to 2020 but was covered under the *Mines Act* NOW exploration permit which Skeena Resources was responsible for.

Table 3.3-2 Summary of Reclaimed Areas at Eskay Creek Mine pre 2020

Disturbance	Area Disturbed (ha)	Area Recontoured (ha)	Area Seeded or Planted (ha)	Area Revegetated (ha)
Small waste rock pile situated within the Albino SF TIA waterbody footprint presently	1.98	1.98	(n/a - underwater)	(n/a - underwater)
Plant site	5.01	1.04	-	-
Roads	5.90	-	-	-
Linear features	1.75	-	-	-
Other[1]	11.25	-	6.66	5.70
Total	**25.89**	**3.02**	**6.66**	**5.70**

[1] Excluding tailings impoundments of 97 ha, with Albino SF footprint and TMSF footprint (i.e., not disturbed land, formerly waterbodies) because tailings are underwater and no reclamation is required, and the Eskay Creek Mine Road which is required for reclamation access and exploration activities.

As a previously operating mine, Eskay Creek Mine has a large record of existing information to support Project development and the EA (Appendix B). Table 3.3-3 includes a selection of existing studies and surveys used to inform the IPD.

Table 3.3-3 Selection of Existing Studies and Surveys

Report Name	Reference
Independent Technical Report for Eskay Creek Au-Ag Project, Canada *Mineral Resource Statement	SRK 2019
Technical Report on PEA	AMEC 2017
Eskay Creek Project Archaeological Overview Assessment	RTEC 2018
Eskay Creek Gold Mine Site (closed) Tom MacKay Lake Tailings Storage Facility Dam Safety Inspection Report	Barrick 2014a
Eskay Creek Gold Mine Site (closed) Albino Lake Waste Rock Storage Facility Dam Safety Inspection Report	Barrick 2014b
Eskay Creek Mine environmental effects monitoring program and its implications for closure planning. In addition to subsequent Aquatic Effects Monitoring Program studies every 2 years since closure	McGurk et al. 2006
2016 Annual Reclamation Report Eskay Creek Mine Permit M-197	Barrick 2017
2018 Annual Reclamation Report Eskay Creek Mine Permit M-197	Barrick 2019
Application for a Mine Development Certificate, Eskay Creek Project	Hallam Knight Piésold Ltd. 1993
Eskay Creek Mine Mill Expansion an Application for the Approval of a Material Alteration to Eskay Creek Mine: Mine Development Certificate 94-01 and Amendments to Existing Permits	Hemmera 1997
Hemmera. 2000. Tom MacKay Lake Waste Rock and Tailings Project (Environmental Assessment) Eskay Creek Mine	Hemmera 2000

3.4 Existing Permits and Approvals

Table 3.4-1 identifies the existing permits, licences and approvals held by Skeena Resources for the Eskay Creek Mine, which cover the existing conditions while in the 'Care and Maintenance' stage and for the Eskay Mine Access Road. Skeena has ongoing activities under existing permits to fulfill Care/Maintenance obligations, planning for Closure/Reclamation and advanced exploration.

Valid operating permits and authorizations are held by Skeena Resources for the Eskay Creek underground Mine, while the mine is currently in Care and Maintenance status (provincial). Exploration drilling, technical/bulk sample collection and additional land development/clearing at the mine site under existing permits and proposed permit amendments over the next two years will occur separately from the Revitalization Project as part of Reclamation/Closure, site maintenance and Advanced Exploration.

Table 3.4-1 Summary of Existing Federal and Provincial Permits, Licences and Approvals

Authorization	Responsible Agency	Legislation	Purpose
Metal Mining and Diamond Effluent Regulations (MDMER, formerly MMER since 2002, and previously the MMLER) Schedule 2 amendment	ECCC	*Fisheries Act*	Designated Albino Lake as a tailings/waste rock disposal site (TIA) under the MMLER prior to 2002 which was included under Schedule 2 under the MMER.
MDMER Schedule 2 amendment for TMSF	ECCC	*Fisheries Act*	Designated Tom MacKay Lake as a tailings impoundment area and for disposal of tailings/waste rock[2] (since 2002).
Mine Development Certificate MDC (#94-01; 1994)	EAO	*Mine Development Assessment Act*[1]	Issued for the Eskay Creek underground mine project. Under the BC EAA, a certificate issued under the former Act is continued as an environmental assessment certificate under the 2018 Act.
Project Approval Certificate PAC (#M00-01; 2000)	EAO	*Environmental Assessment Act*[1]	Issued for the construction and use of Tom MacKay Lake for the disposal of waste rock and tailings from the existing Eskay Creek Mine. Under the BC EAA, a certificate issued under the former Act is continued as an environmental assessment certificate under the 2018 Act.
Permit M-197	EMPR	*Mines Act*	Authorizes fuel storage, operations, closure, and reclamation and abandonment.
Multi-Year Area Based Permit MX 1-11	EMPR	*Mines Act*	Authorizes exploration on mineral tenures. Required to file annual exploration plan for drill program and trails.
Effluent Discharge Permit PE 10818	BC Ministry of Environment and Climate Change Strategy (ENV)	*Environmental Management Act*	Authorizes discharge from ASF, TMSF and D7.
Effluent Discharge Permit PE 109217	ENV	*Environmental Management Act*	Authorizes passive discharge from underground workings (temporary permit, expired).

Authorization	Responsible Agency	Legislation	Purpose
Waste Authorization PR 12977	ENV	*Environmental Management Act*	Authorizes disposal of camp refuse, inert construction material, sewage sludge, and on-site landfill and incinerator operation.
Special Use Permit S17635	BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD)	*Forestry Act*	Authorizes use of road between km 39.5 (junction with Coast Road) and km 53.8 (mine site).
Lease 740715	FLNRORD	*Land Act*	Authorizes use of Tom MacKay for surface activities associated with TMSF.
Lease 6205507/634309	FLNRORD	*Land Act*	Authorizes use of Albino Lake for surface activities related to ASF.
Occupant Licence to Cut L-51659	FLNRORD	*Forest Act*	Authorizes cutting and of timber for designated mine activities.
Waste Management Septage and Municipal Sewage Waste Permit 5360-09-02-03	Regional District of Kitimat Stikine	*Environmental Management Act*	Authorizes disposal of septage and sewage from Eskay Creek exploration camp to be tipped at Meziadin Landfill.

[1] Under the transition provisions in the BCEAA and predecessor Acts, #MDC94-01 and #M00-01 are deemed to be environmental assessment certificates under the BCEAA 2018.

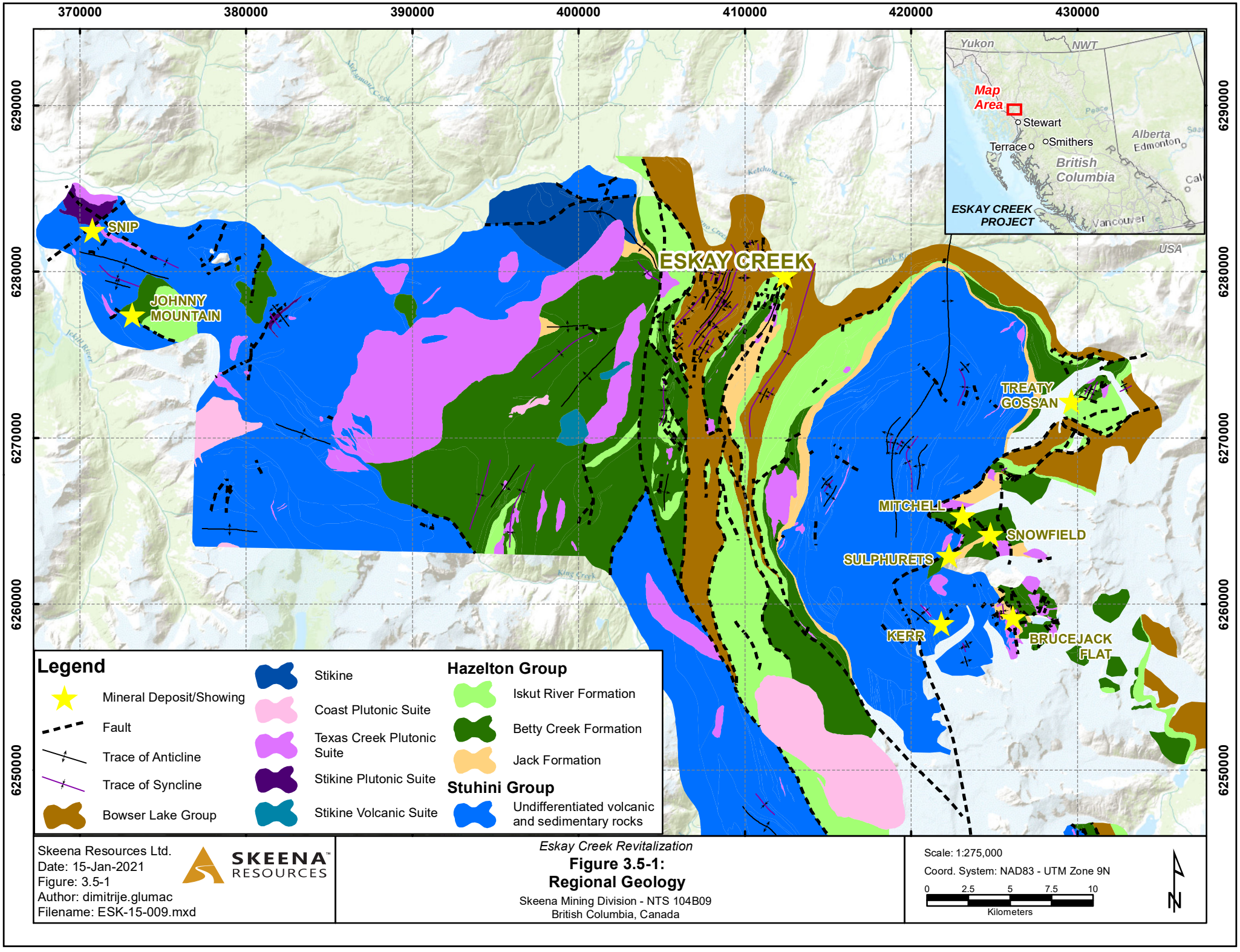
[2] A proclamation exempting Tom MacKay Lake from the operation of Section 22 of the Navigation Protection Act was issued in 2005.

3.5 Geology and Mineralization

The Eskay Creek Mine deposit is classified as an example of a high-grade, precious-metal volcanogenic massive sulphide (VMS) deposit. The Project is located along the western margin of the Stikine Terrane, within the Intermontane Tectonic Belt of the Northern Cordillera. It is hosted within the Jurassic rocks of the Stikinia Assemblage at the stratigraphic transition from volcanic rocks of the uppermost Hazelton Group to the marine sediments of the Bowser Lake Group (Figure 3.5-1).

The Project geology encounters three primary lithologies: andesite, contact mudstone, and rhyolite. The andesite unit overlays the contact mudstone, which overlays the rhyolite. Mineralized zones are mainly within the rhyolite and contact mudstone while the andesite unit is the main host rock as shown in the stratigraphic column in Figure 3.5-2.

Acid rock drainage (ARD) is known to be a potential concern for the Project based on past mining and geochemical testwork. The rhyolite and contact mudstone units were identified as potentially acid generating (PAG) while the results for the andesite units were variable, with both PAG and non-PAG (NPAG) samples. A waste characterization program is currently being completed for the mine plan and to inform mitigation, effects assessment and closure approaches, particularly in relation to post-closure water management scenarios and risks.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ESKAY CREEK
TREATY GOSSAN
MITCHELL
SNOWFIELD
SULPHURETS
KERR
BRUCEJACK
FLAT
Yukon
NWT
Map Area
Stewart
Terrace
Smithers
Alberta
Edmonton
British Columbia
ESKAY CREEK PROJECT
Vancouver
USA
Legend
Mineral Deposit/Showing
Fault
Trace of Anticline
Trace of Syncline
Bowser Lake Group
Stikine
Coast Plutonic Suite
Texas Creek Plutonic Suite
Stikine Plutonic Suite
Stikine Volcanic Suite
Hazelton Group
Iskut River Formation
Betty Creek Formation
Jack Formation
Stuhini Group
Undifferentiated volcanic and sedimentary rocks
Skeena Resources Ltd.
Date: 15-Jan-2021
Figure: 3.5-1
Author: dimitrije.glumac
Filename: ESK-15-009.mxd
SKEENA RESOURCES
Eskay Creek Revitalization
Figure 3.5-1:
Regional Geology
Skeena Mining Division - NTS 104B09
British Columbia, Canada
Scale: 1:275,000
Coord. System: NAD83 - UTM Zone 9N
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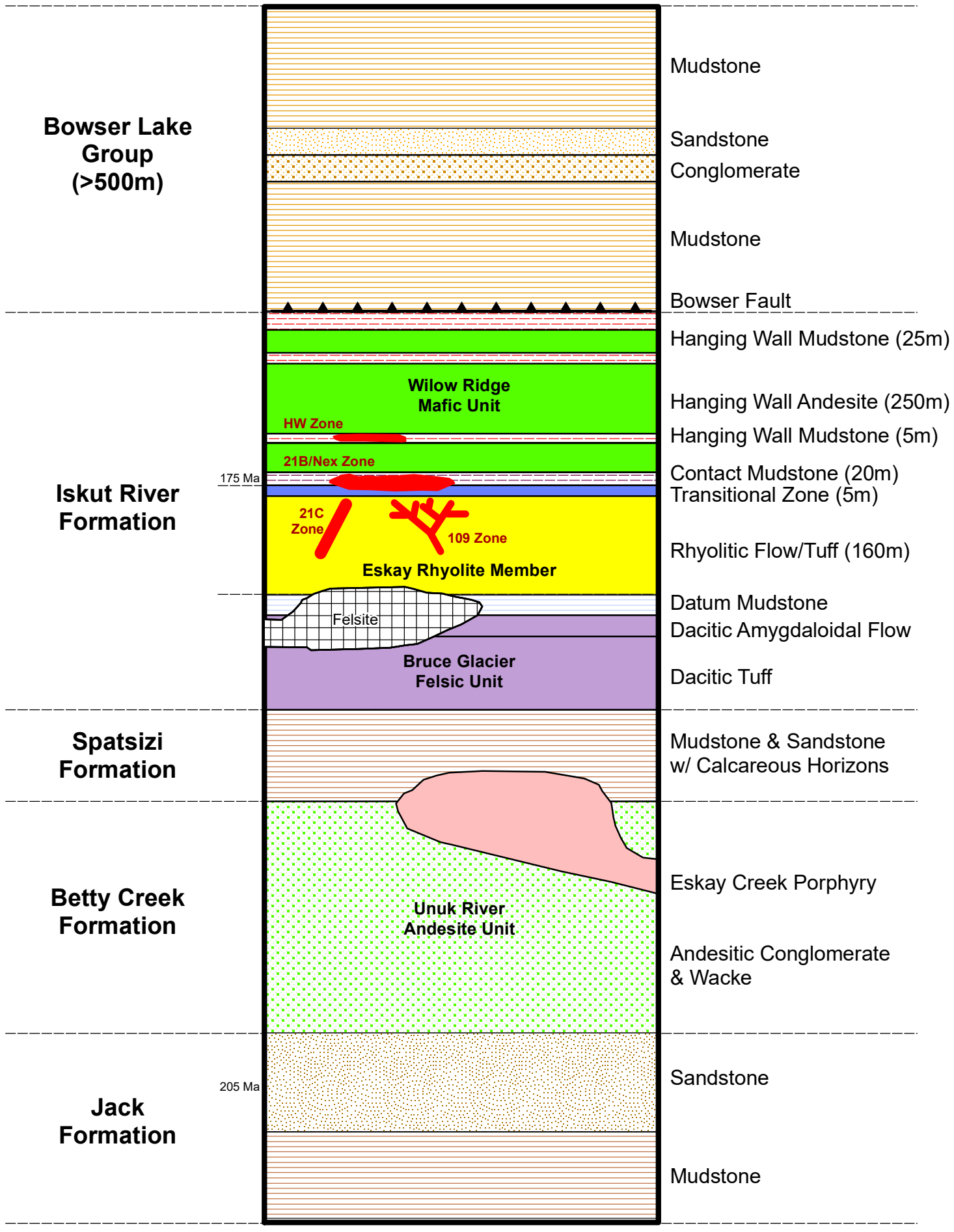
SKEENA RESOURCES

Figure 3.5-2 - Stratigraphic Section



An open pit mineral resource estimate was prepared by Skeena Resources using a cut-off grade of 0.7 grams per tonne gold equivalent in April 2021, and was an update to a February 2019 estimate[4]. The pit constrained Measured Resource total includes 5.12 million gold equivalent ounces within 37.6 million tonnes at an average gold equivalent grade of 4.2 g/t. The pit constrained Inferred resource includes 0.23 million gold equivalent ounces within 5.2 million tonnes at an average gold equivalent grade of 1.4 g/t. Exploration drilling in 2019/20 was successful at converting significant amounts of the inferred resource category to measured and indicated category, and Skeena has adjusted the overall mine plan in mid-2021 to consider how to mine and develop this increased material.

3.5.1 Geochemistry

During the first assessment process in the early 1990s and during underground mining activities, geochemical testing of the various lithologies was completed with a focus on the rhyolite and contact mudstone units; testing included acid base accounting (ABA) and humidity cell testing (HCTs). By end of mining in 2008, the site had accumulated a geochemical database of over 1,000 samples in the various lithologies.

Based on historical data, both rhyolite and contact mudstone units generally had acid neutralization potential to acid producing potential (NP/AP) of less than two and often less than one, which suggests that these units are PAG. Historical sampling of the hanging wall andesite unit was found to generally have NP/AP ratios above two; however, the andesite was not considered to be NPAG as a whole, as sampling within this unit was not as comprehensive as the other two units.

Skeena Resources is undertaking a waste characterization program in 2020/21 to better understand the ARD potential for both tailings, overburden and waste rock, which will include both static and kinetic testing. For waste rock, a focus is to better understand the hanging wall andesite unit. Based on the results of this program, a metal leaching/acid rock drainage (ML/ARD) management plan will be generated as well as geochemical source terms for incorporation into a site-wide water and load balance model. This model will be utilized to estimate water quality in the receiving environment and inform development of mitigation measures.

[4] Mineral resource model was prepared by Kathi Dilworth at Skeena and independently validated and signed off by Shelia Ulansky, P.Geo. at SRK Consulting Inc. (SRK), April 7, 2021.

4.0 PROJECT DESCRIPTION

This section provides an overview of Project components and activities. The Project design described in this IPD is based on the both the 2019 PEA (Ausenco 2019) and the Pre-feasibility Study currently in progress. Significant engineering design work, optimization and mine planning remain to be done and feedback from the public, regulators, Indigenous Groups, and stakeholders will help inform the final Project designs and layout.

To date, Skeena Resources has undertaken exploration programs, updated the Project resource estimates based on drilling results and completed metallurgical testwork. Current condition environmental (baseline) studies have also been started which are described in Section 7.0.

4.1 Summary

Table 4.1-1 identifies the Project components. Figures 4.1-1 and 4.1-2 show the proposed Project layout and components based on the updates underway as part of the Pre-feasibility Study (PFS). The final location, size and dimensions of mine components would be determined following completion of additional engineering studies (PFS, Feasibility Study, technical/bulk sample development) which would inform the detailed mine plan, and consideration of environmental constraints and mitigations as well as feedback from regulators, Indigenous Groups and the public. Section 3.3 summarizes infrastructure remaining at the mine site.

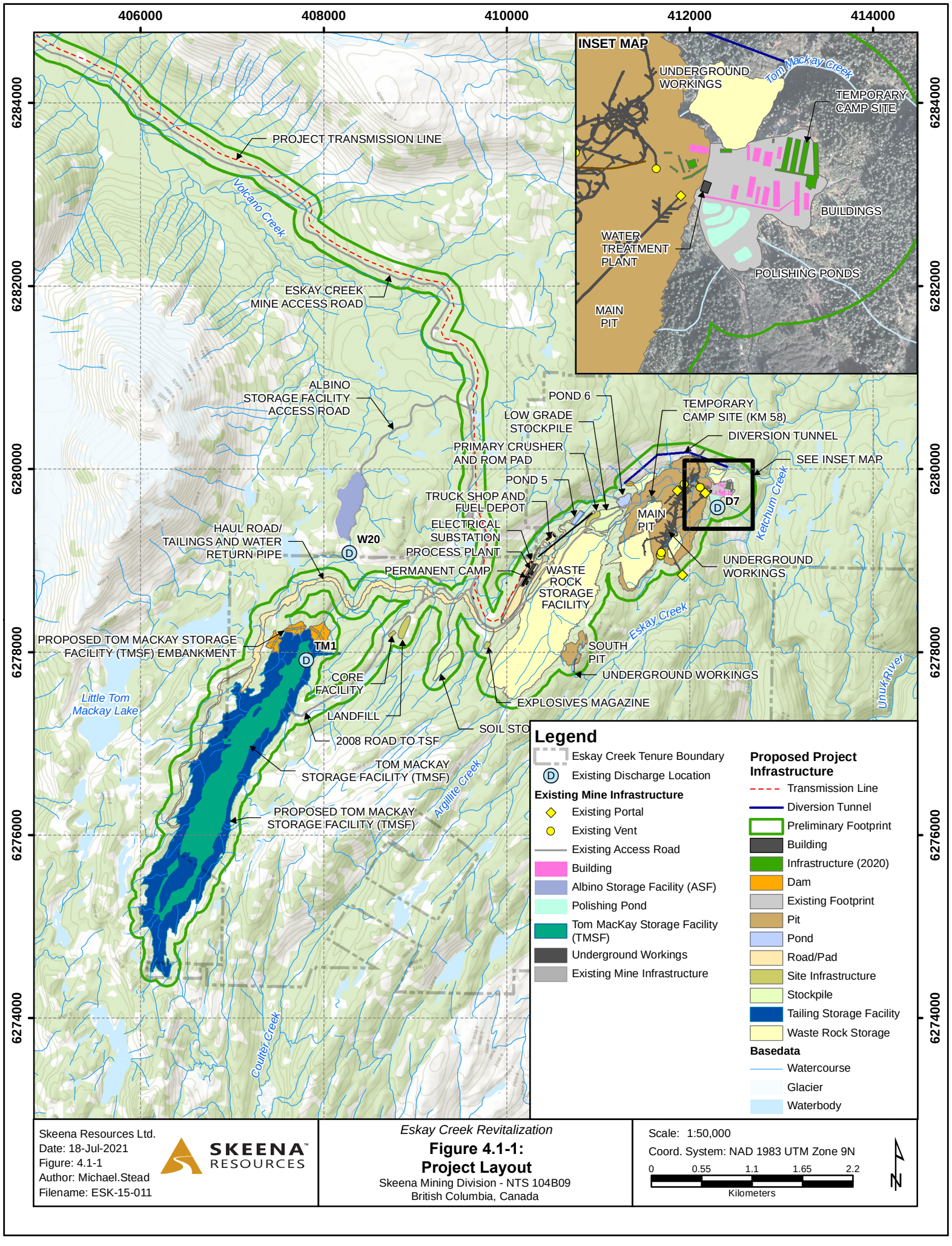
Table 4.1-1 Summary of Project Components

Component	Existing/ Modified	New
Eskay Creek Mine Access Road to Project site, which joins Highway 37 at km 293	x	
Tom MacKay Tailings Storage Facility (TMSF)	x	
Construction of embankments/dams to existing TMSF		x
Power line to Mine site (20 or 54 km in length), which will follow existing roads		x
Open pits (North/Main and South)		x
Overburden and topsoil stockpiles		x
Waste rock storage facility (WRSF; outside and inside open pit later in mine life)		x
Surface and diversion water management structures including ponds, sumps and ditches		x
Tom MacKay Creek diversion tunnel around the Main Pit		x
Haul roads between the mine, the Waste Rock Storage Facility, stockpiles, the Tom MacKay Tailings Facility (via the Eskay Creek Mine Access Road), the crusher, and the mine maintenance facilities. Run of Mine stockpile pads to accommodate ore blending.	x	x
Light vehicle roads – to the process plant, to the existing Eskay Creek Mine Facility (during construction/early operations) and the landfill.	x	x
Primary Crusher, stockpile feed conveyor to the processing plant stockpile		x
Processing Area including:		
• Ore processing plant (mill)		x

Component	Existing/ Modified	New
• Hazardous Waste Storage Facility		x
• First aid, assay lab, warehouse, and administration		x
• Propane tank storage		x
• Incinerator		x
• Treatment plants for potable water from new wells and sewage treatment		x
• High-voltage main substation connected to new power line		x
Detonator magazine and explosives storage		x
Mine Infrastructure Facility including:		
• Vehicle maintenance, truck parking and wash facilities		x
• Fuel and lube storage		x
• Mine dry		x
Tailings and reclaim pipelines from Processing Mill to TMSF following haul road		x
Helipad for emergency situations		x
Security Buildings		x
Eskay Creek Mine Site - existing facilities with additional temporary camps	x	
Core Storage		x
Modular worker accommodations		x
Landfill		x
Water treatment facilities including: new water treatment plant and use of existing mine water settling ponds and D7 discharge location for construction and early operation years	x	x

The Project would be a standard truck and shovel open pit mine. Project access would be via the Eskay Mine Access Road, a multi-use industrial road constructed in the early-1990s. Project activities during the planning, construction, operations, closure and post-closure phases are summarized in Section 4.2.

Ore would be mined via an open pit and hauled to an adjacent crusher, and transported by conveyor to the mill stockpile, and processed using conventional milling and flotation to recover a gold-silver concentrate (Figure 4.1-1). Waste rock from the pit would be hauled to the Waste Rock Storage Facility (WRSF) immediately adjacent to the Main Pit, while PAG waste rock would be hauled to the TMSF. The concentrate would be trucked from the mine site south to the Port of Stewart along provincial highways 37 and 37A and shipped to offshore smelters and refineries for processing. At peak production (approximately 160,000 tonnes/year at 35 tonne payload), approximately 88 average annual trips per week would occur to transport concentrate on these highways.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INSET MAP
UNDERGROUND WORKINGS
Tom Mackay Creek
TEMPORARY CAMP SITE
BUILDINGS
WATER TREATMENT PLANT
POLISHING PONDS
MAIN PIT
PROJECT TRANSMISSION LINE
Volcano Creek
ESKAY CREEK MINE ACCESS ROAD
ALBINO STORAGE FACILITY ACCESS ROAD
POND 6
LOW GRADE STOCKPILE
TEMPORARY CAMP SITE (KM 58)
DIVERSION TUNNEL
PRIMARY CRUSHER AND ROM PAD
SEE INSET MAP
POND 5
TRUCK SHOP AND FUEL DEPOT
D7
MAIN PIT
Ketchum Creek
ELECTRICAL SUBSTATION
HAUL ROAD/ TAILINGS AND WATER RETURN PIPE
W20
PROCESS PLANT
PERMANENT CAMP
WASTE ROCK STORAGE FACILITY
UNDERGROUND WORKINGS
Eskay Creek
PROPOSED TOM MACKAY STORAGE FACILITY (TMSF) EMBANKMENT
TM1
SOUTH PIT
UNDERGROUND WORKINGS
CORE FACILITY
Little Tom Mackay Lake
EXPLOSIVES MAGAZINE
Unuk River
LANDFILL
SOIL STO
2008 ROAD TO TSF
TOM MACKAY STORAGE FACILITY (TMSF)
Argillite Creek
PROPOSED TOM MACKAY STORAGE FACILITY (TMSF)
Coulter Creek
Legend
Eskay Creek Tenure Boundary
Existing Discharge Location
Existing Mine Infrastructure
Existing Portal
Existing Vent
Existing Access Road
Building
Albino Storage Facility (ASF)
Polishing Pond
Tom MacKay Storage Facility (TMSF)
Underground Workings
Existing Mine Infrastructure
Proposed Project Infrastructure
Transmission Line
Diversion Tunnel
Preliminary Footprint
Building
Infrastructure (2020)
Dam
Existing Footprint
Pit
Pond
Road/Pad
Site Infrastructure
Stockpile
Tailing Storage Facility
Waste Rock Storage
Basedata
Watercourse
Glacier
Waterbody
Skeena Resources Ltd.
Date: 18-Jul-2021
Figure: 4.1-1
Author: Michael.Stead
Filename: ESK-15-011
SKEENA RESOURCES
Eskay Creek Revitalization
Figure 4.1-1:
Project Layout
Skeena Mining Division - NTS 104B09
British Columbia, Canada
Scale: 1:50,000
Coord. System: NAD 1983 UTM Zone 9N
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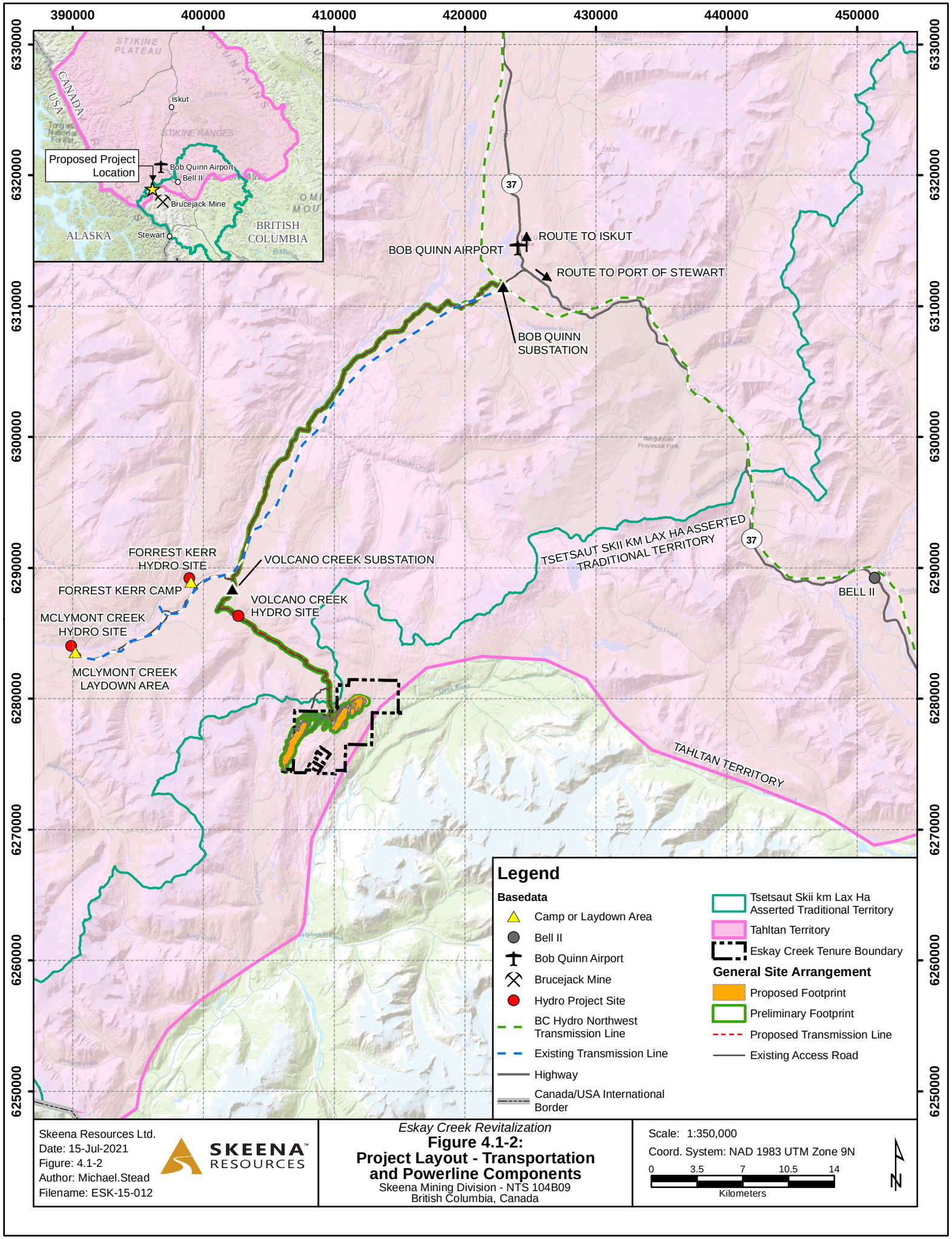
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Proposed Project Location
Iskut
Bob Quinn Airport
Bell II
Brucejack Mine
Stewart
ALASKA
BRITISH COLUMBIA
CANADA
USA
STIKINE RANGES
BOB QUINN AIRPORT
ROUTE TO ISKUT
ROUTE TO PORT OF STEWART
BOB QUINN SUBSTATION
37
FORREST KERR HYDRO SITE
FORREST KERR CAMP
VOLCANO CREEK SUBSTATION
VOLCANO CREEK HYDRO SITE
MCLYMONT CREEK HYDRO SITE
MCLYMONT CREEK LAYDOWN AREA
TSETSAUT SKII KM LAX HA ASSERTED TRADITIONAL TERRITORY
BELL II
TAHLTAN TERRITORY
Legend
Basedata
Camp or Laydown Area
Bell II
Bob Quinn Airport
Brucejack Mine
Hydro Project Site
BC Hydro Northwest Transmission Line
Existing Transmission Line
Highway
Canada/USA International Border
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Tahltan Territory
Eskay Creek Tenure Boundary
General Site Arrangement
Proposed Footprint
Preliminary Footprint
Proposed Transmission Line
Existing Access Road
Skeena Resources Ltd.
Date: 15-Jul-2021
Figure: 4.1-2
Author: Michael.Stead
Filename: ESK-15-012
SKEENA RESOURCES
Eskay Creek Revitalization
Figure 4.1-2:
Project Layout - Transportation and Powerline Components
Skeena Mining Division - NTS 104B09
British Columbia, Canada
Scale: 1:350,000
Coord. System: NAD 1983 UTM Zone 9N
0 3.5 7 10.5 14
Kilometers
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The estimated direct physical footprint of the proposed Project around the mine site is about 491 ha, which includes the open pits, Waste Rock Storage Facility (WRSF), TMSF, process plant, landfill, overburden and topsoil stockpiles, haul roads and access roads at the mine site. This excludes the footprint of the proposed powerline or the existing Eskay Mine Access Road. The total Project footprint is 491 ha and the footprint beyond historic disturbance is 395 ha (i.e. existing disturbance footprint for the former Eskay Creek Mine under the Proposed footprint, excluding ASF, subtracted from proposed Project footprint; Table 4.1-2). The proposed Project footprint does not overlap all of the historic Eskay Creek Mine footprint. Refinements to the footprint are anticipated during the design phase and will be summarized in the Detailed Project Description. The existing disturbance of the historic Eskay Creek underground Mine is approximately 123 ha, inclusive of the 97 ha of waterbody footprint for the ASF and TMSF. Exploration drilling, technical/bulk sample collection and additional land development/clearing at the mine site under existing permits and proposed permit amendments over the next two years are in design and will occur separately from the Revitalization Project as part of Reclamation/Closure, site maintenance and Advanced Exploration within portions of the proposed Project footprint.

Table 4.1-2 Project Component – Initial PFS Design Footprint (July 2021)

Project Component	Total Footprint (ha)	Footprint within Previously Disturbed Area of Former Mine Operation (ha)	New Footprint Beyond Historic Disturbance (ha)
Tom MacKay Storage Facility (TMSF)	203.59	85.64	117.96
Open pits (North/Main and South)	93.12	3.99	89.12
Overburden and topsoil stockpiles	8.08	0.53	7.55
Waste rock storage facility (WRSF) (outside and inside open pit later in mine life)	137.38	3.13	134.25
Haul roads and light vehicle roads	31.73	1.93	29.79
Primary Crusher, stockpile feed conveyor to the processing plant stockpile	1.47	0.03	1.44
Processing Area	8.57	0.01	8.56
Detonator magazine and explosives storage	0.41	0	0.41
Mine Infrastructure Facilities and other buildings	1.73	0.52	1.21
Core Storage	0.32	0	0.32
Landfill	1.68	0	1.68
Water treatment facilities including: new water treatment plant and use of existing mine water settling ponds and D7 discharge location for construction and early operation years	2.82	0.23	2.59
Total	**490.9**	**96.01**	**394.88**

Note: Preliminary footprints and locations of infrastructure may change as detailed engineering studies and optimization work proceeds in 2021/22. Ground disturbance may extend up to 100 m beyond final footprint of component to enable construction.

The Project would use existing infrastructure at the Eskay Creek underground mine as much as practical including: the Eskay Mine Access Road; the haul road to the TMSF; the TMSF to store waste rock and tailings; four settling ponds and the D7 discharge, remaining buildings and nearby gravel airstrip at Bob Quinn Lake Aerodrome.

Infrastructure that was used for the underground Eskay Creek Mine mentioned above (and still in place) includes: burn pit and landfill, administration buildings, warehouse, maintenance and carpentry shop, accommodations building, seacan storage units, power house, lime mixing shelter, vent raise building, “D-Raise” portal shelter (former emergency egress, which is a combined drift and raise feature hence the unusual name), sewage treatment plant, wood shop/ambulance bay, and waste management and boneyard facility (foundation and walls). Onsite accommodations for up to 160 persons was only re-established at the Eskay Creek Mine under existing approvals in late 2020 to support advanced exploration, reclamation and closure activities going forward.

4.1.1 Access, Transportation and Power

Highway 37 and the Eskay Mine Access Road are the main access corridor to the Project. Traffic along Highway 37 has changed with the economic drivers in the region. Estimates for the existing traffic for the transportation routes are summarized in Table 4.1-3 for average annual trips per day (AATD) and significant capacity exists to support the small increase in traffic volume due to the Project. The capacity for Highway 37 is 6,048 one-way trips per day, and historical peak capacities for Highway 37 and 37A are 1,014 and 917 one-way trips per day, respectively.

Table 4.1-3 Estimated Existing Traffic (AATD)

Type of Traffic	Northern Segment of Highway 37	Southern Segment of Highway 37	Highway 37A
Commercial[a]	72	15	57
Non-Commercial[b]	687	744	199
Total	**759[c]**	**759**	**256**

[a] Commercial values taken from active projects from the 2013 KSM Traffic Study.

[b] Inferred from total and commercial values.

[c] Value assumed to be the same as the southern segment.

The Eskay Mine Access Road is a 59 km private industrial road operated by Axium Infrastructure (0 km to 43.5 km) and Skeena Resources (43.5 km to 59 km). This road is the primary egress for the Project. The road is shared primarily with Axium Infrastructure, operator of the three hydroelectric facilities nearby, as well as exploration and logging companies. Load restrictions are limited to 61,000 kilograms (kg) due to bridge restrictions on three of the bridges on the road. Highway 37 has a maximum gross vehicle rating of 72,300 kg. To carry the maximum gross weight of 72,300 kg, the bridges on the Eskay Creek Mine Road would require upgrades or the concentrate loads would be reduced to 40 tonnes instead of 49 tonnes. The Eskay Mine Access Road would also be widened to allow larger equipment to be transported to the Project site. Maintenance needs and/or other projects which use the Access Road may address upgrades outside of the proposed Project scope.

Anticipated Project vehicle traffic includes: concentrate hauling to the Port of Stewart for shipment to third-party smelters; delivery of construction supplies to the Project site; delivery of operating supplies to start the process plant; and transit of personnel to and from the Project site. Construction materials would be trucked to the Project site from various locations throughout BC and potentially out of province. Materials would include building supplies, mill equipment, cable,

piping and construction equipment. During the mine life, consumables such as processing (grinding media, reagents), mining (explosives), ground support in open pit (screen, rebar, rock bolts), water treatment (chemical additives) and miscellaneous (food, camp supplies, cable) and spares would be required. These consumables are expected to be sourced from various locations, but it is anticipated that Smithers or Terrace would be the main point for supplies, materials, and construction equipment.

The Project workforce would be transported to the Project site in company vehicles, which would likely pick up people from select communities, such as Telegraph Creek, Dease Lake, Iskut, Terrace and Smithers. Personnel from outside the region may be flown into a regional airport at either Smithers or Terrace and then transported via company vehicle to the site. The Bob Quinn Lake Aerodrome may also be utilized to transport workers in and out of the site and for emergencies.

The traffic type and volume anticipated from the Project by phase is summarized in Table 4.1-4 and will be updated for the Detailed Project Description once the PFS is complete in Q3 2021

Table 4.1-4 Predicted Traffic Volumes for the Project

Phase	Items	Equipment / Facility Components	Consumables	Concentrate	Personnel
Construction	Vehicle Type*	Deck trucks lowbedhaulers	Tanker train, deck trucks	N/A	Bus Plane
	Origin	Alberta / B.C. U.S.A. Europe. Asia,	Alberta /B.C.		Alberta /B.C.
	Destination	Eskay Creek Mine Site	Mine Site		Mine Site
	Highway usage (North and South segments)	Primarily Highway 37	Highway 37		Highway 37
	AATD	5-10 truck loads	4		variable
	AATW (one way)	40-70 truck loads	28		10 buses 2 planes
Operations	Vehicle Type	N/A	Tanker train, deck trucks	Bulk concentrate B-train	Bus
	Origin		Alberta / B.C.	Mine Site	Stewart, Smithers, Terrace
	Destination		Mine Site	Stewart	Mine Site
	Highway usage		Highway 37 (both segments)	Highway 37 (north segment)and 37A	Highway 37 (both segments) and 37A
	AATD		4	13 (35 tonne load)	varies
	AATW		28	88 (35 tonne load)	8

Phase	Items	Equipment / Facility Components	Consumables	Concentrate	Personnel
Closure	Vehicle Type	Deck truck	Tanker train, deck trucks	N/A	Bus/plane
	Origin	Eskay Creek Mine Site	Alberta / BC		Alberta/B.C
	Destination	Alberta / B.C.	Mine Site		Mine Site
	Highway usage (both segments)	Highway 37	Highway 37		Highway 37
	AATD	1-3	4		1 bus
	AATW	10-15	28		5 buses

* Depending on the origin of the processing equipment there may be opportunities to use ocean freight into the port of Stewart and then trucking to site via Highway 37; which may decrease the truckloads above.

Table 4.1-5 summarizes the estimated AATD for the Project based on available information provided in Table 4.1-4.

Table 4.1-5 Summary of Predicted Traffic Volumes for the Project

Phase	Northern Segment of Highway 37	Southern Segment of Highway 37	Highway 37A
Construction	13	10.5	2.5
Operations	18	5	13
Closure	7	7	0

This Highway 37 and 37A transportation route is also used by other projects in the area, including NewCrest's Red Chris Mine and Pretivm's Brucejack Mine. Seabridge's approved KSM Project plans to use this transportation route as well. Table 4.1-6 provides a comparison of the Project operations traffic estimates with the traffic estimates of other approved or operating projects and existing traffic along Highway 37.

Table 4.1-6 Project Operations Traffic Comparison

Project	Northern Segment of Highway 37	Southern Segment ofHighway 37	Highway 37A
Eskay Creek Revitalization (peak operations, one way trips/day)	18	5	13
Current Traffic	759	759	256
Highway 37 Capacity	6048	6048	N/A
% Increase from current traffic (Eskay only)	2%	1%	5%
% Of Hwy 37 Capacity (Eskay only)	0.3%	0.1%	N/A

During peak operations, highway traffic along Highway 37A (Meziadin to Stewart) may increase by up to 5% relative to current traffic levels. All other phases of project development will constitute

less than a 2% increase in existing traffic levels. Traffic for the Project will be a fraction of a percentage of the highway design capacity.

There is a nearby gravel airstrip at Bronson Strip which is about 40 km west of the Project site The Bronson Strip is a private airstrip operated by Seabridge Gold. The airstrip is 1,500 m long and in fair condition. Skeena Resources does not propose using the Bronson Air Strip to access the Project.

The Bob Quinn Lake Aerodrome is approximately 37 km northeast of the Project. It includes an airstrip (30 m x 1,242 m runway) and heliport. It is a public use facility that is managed by the Bob Quinn Lake Airport Society, administered by a Board of Directors consisting of volunteers mainly from the resource and aviation industries. Skeena Resources is currently using the aerodrome to bring personnel to site for the exploration and geotechnical investigations. The Project will use the aerodrome to supplement ground-based transportation in and out of the Project area and for medical emergencies. The degree to which the aerodrome would be used on a regular basis has not yet been determined.

The Project will not significantly increase the marine traffic using the Port of Stewart via the Portland Canal. The port facilities in Stewart have been reviewed and approved for up to 180 vessels/year (DFO 2009). Currently marine traffic is estimated at 30 vessels/year, many sailing with under-utilized onboard capacity. During operations, the Project is estimated to require up to 8 (20,000 dmt) vessels per year for shipping of concentrates with irregular shipments of bulk supplies or oversized project components. This level of traffic can easily be accommodated within the currently approved levels of marine traffic and the under-utilized on-board capacity of the existing marine traffic.

Power for the Project would rely on the existing hydroelectric power grid nearby and require construction of a new 69 kV powerline and connection at either the Volcano Creek Substation or Bob Quinn Substation. A new transmission line to the Eskay mine site would be constructed alongside the existing Eskay Mine Access Road and be either 56 km (if originating at Bob Quinn Substation) or 20 km (Volcano Creek Substation; Figure 4.1-2). Detailed engineering and power supply discussions during the Feasibility Study stage will confirm the option to be used in the Project and updated in the Detailed Project Description (DPD). Environmental and engineering studies are ongoing in 2021 for the powerline route.

4.1.2 Open Pit Mine Development

The Main Pit would be developed in several phases while the South Pit would be developed in one phase towards the end of the mine life (Figure 4.1-1). The final phase of the Main Pit will extend across the non-fish bearing Tom MacKay Creek and require construction of a diversion tunnel early in the mine life. The Main Pit intersects a portion of the existing underground workings along its northern half within the pit shell, which would be mined as the pit develops deeper in the later stages of mine life. Best practices for advancing open pit mining operations through existing underground voids would be incorporated into the development of mine plans. The South Pit does not have any underground workings within its extents. Pit water management would include pit dewatering during operations phase, snow and runoff management via control structures, including sumps and ditches, for both operations and closure phases.

Figure 4.1-3 shows an early design schematic of the Project as considered in the 2019 PEA, prior to the recently updated design of the Main Pit (Figure 4.1-1) to develop the most recent resources defined along the north pit margin under and across Tom MacKay Creek. The proposed pit extents will be refined based on additional resource modelling, ongoing PFS optimization of mining/milling rates in the Mine Plan and geotechnical investigations in 2021 for the DPD. Figure 4.1-3 will be updated in the DPD to show northward expansion of the Main Pit as also shown in Figure 4.1-1. During the later years of mine life when the northern/deepest section of the Main Pit is excavated, NAG waste rock will be deposited around the south margins of the Main Pit as an Inpit WRSF and also used to cover the pit walls to create stable landforms for closure. A water mananagement plan will be developed at the Feasibility Study phase to consider Indigenous perspectives, regulatory requirements and long term ML/ARD risks and mitigation options (e.g., water treatment, use of the TSF for water discharge, closure covers, etc.).

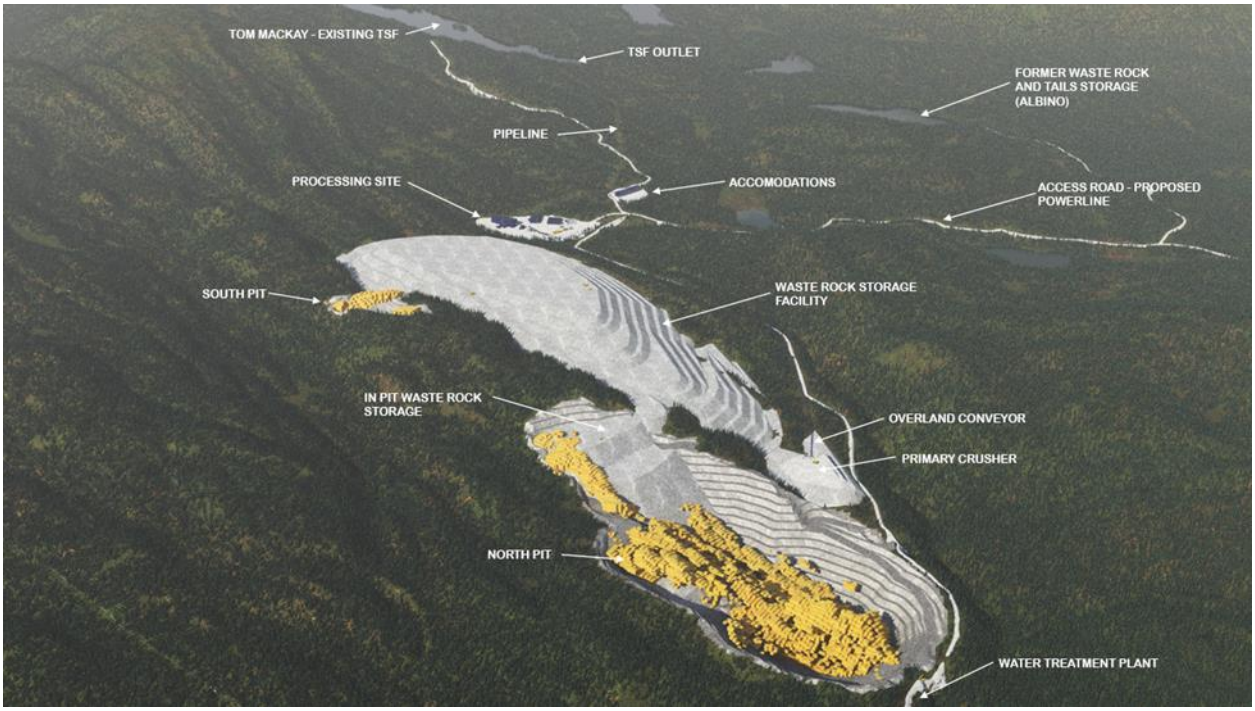


Figure 4.1-3 2019 Preliminary Layout of Revitalization.
Note: This figure will be updated based upon the PFS design in late 2021 and will show the expansion of the Main Pit across Tom MacKay Creek towards the right hand side of the image, new location of the processing mill and accommodations adjacent to the right/north side of the Waste Rock Storage Facility, and expanded TMSF with rock/gravel embankments to create additional storage capacity for tailings and PAG waste rock.

At closure, water will collect in the mined-out Main Pit t to form a pond and inundate the deepest section of the pit walls and the diversion tunnel will be managed as long as required. Long-term water management strategies will be developed during the design phase with input from regulators, the Tahltan Nation and other Indigenous Groups for post-closure water quality and quantity management across the site, including water treatment if required.

A conceptual Closure and Reclamation Plan will be developed during the EA phase and consider Indigenous perspectives and stewardship principles, long-term water quality predictions and water management from the pits, waste dumps and site to comply with discharge permit limits, and

Tahltan requirements. Reclamation steps to achieve revegetation and end land use objectives agreed with regulators, the Tahltan Nation and other Indigenous Groups will also be incorporated. At this early stage of the Project design, baseline data collection and detailed water quality modelling have begun but predictions of post-closure water quality and Closure/reclamation designs incorporating MLARD mitigation techniques are not completed. The outputs of modelling, regulatory requirements and Indigenous perspectives will inform post-closure planning.

4.1.3 Processing Facilities and Tailings/PAG Waste Rock Disposal in the TMSF

Several options were considered for the location of the processing plant (e.g., Figure 4.1-3), with trade-off studies identifying the preferred option as shown on Figure 4.1-1 situated just north of the WRSF beside the existing Access Road. The preferred location will minimize conveyor distance, enable a more compact footprint for infrastructure to minimize disturbance and simplify snow management. The processing plant will be located adjacent to the shops, warehouse, permanent camp, new administration buildings.

Ore from the pits would be trucked to the primary crusher, located adjacent to the northwest of the North Pit and northeast of the External WRSF (Figures 4.1-1 and 4.1-3). Crushed ore would be stockpiled by the primary crusher then transported by an overland conveyor over approximately 1.0 km to the processing plant, located north of the WRSF (Figure 4.1-1). The processing plant would generate both a gold-silver concentrate stream and tailings stream. The tailings slurry would be pumped via a 6 km pipeline to the TMSF.

The existing TMSF waterbody covers 84.4 ha and is approximately 3.4 km long and 0.3 km wide (Figure 4.1-1). The existing volume of the TMSF is 12.9 Million cubic metres (Mm^3) at elevation 1,079 masl, which is the current outlet elevation of the waterbody basin. The existing TMSF was used from 2000 to 2008 and contains approximately 0.41 Mm^3 of tailings (i.e., about 11% of the existing waterbody volume). The TMSF in its current configuration has capacity to contain an additional 8.1 Mm^3) of tailings (Ausenco 2019).

The TMSF is a designated Tailings Impoundment Area under Schedule 2 of the MDMER Regulations under the *Fisheries Act* and is also provincially permitted for tailings disposal. Discussions with federal agencies in July 2021 identified that expansion of the existing TMSF onto non-fish bearing waterbodies immediately adjacent to the existing footprint will not trigger the need for amendment of the existing designation as a TIA under Schedule 2. There is a permitted discharge point into Tom MacKay Creek at the north end of the TMSF which is monitored routinely for water quality and quantity. No impoundment dams exist on the TMSF presently aside from a temporary small water control weir, but three impoundment dams will be constructed to create an expanded TMSF footprint and higher water elevation to contain tails and PAG waste rock from the Project.

There is an approximately 86 m elevation gain from the processing plant to TMSF, and thus, active pumping from the process mill would be required for tailings disposal. The new tailings pipeline and water return line would be constructed within the roadbed of the proposed haul road to the TMSF. The tailings pipeline would continue from the shoreline to a floating barge on the TMSF, and the pipeline which would extend below the water surface close to the bottom of the TMSF to maximize settling and minimize mixing of fine particles into the upper water column.

The barge would be mobile to evenly distribute the tailings at the southern half of the TMSF. The PAG waste rock will be trucked and placed in lifts and berms across the north half of the TMSF impoundment, then submerged and maintained in a flooded state over the long-term.

The TMSF has capacity presently to store tailings and PAG waste rock during the initial years of operations, while maintaining a minimum 3 m of water cover (i.e., 6 to 8 Mm^3) over new waste materials (i.e., tailings and PAG waste rock). However, three small starter embankment dams constructed with NAG materials will be initiated during the Construction phase (Year -1) at the north end of the TMSF to raise the water elevation to an elevation of 1,092 masl (Figure 4.1-1). The starter dams will be expanded in Year 4 during Operations for increased water storage to an elevation of 1,113.5 masl so that a minimum of 3 m of water cover will be maintained over waste rock. The deposited waste rock/tailings will reach a maximum elevation at the end of the mine life of 1,105 masl with 6 m of water cover and final water elevation of 1,111.0 masl, while maintaining a minimum freeboard of 2 m below the dam crest. At closure the water cover will be 6 m higher than the deposited waste rocks/tails for long term management and prevention of MLARD.

At the end of mine life, the TMSF will store 10.9 Mm^3 of tailings and 20.9 Mm^3 of PAG waste rock.

4.1.4 Waste Rock Disposal and Waste Rock Storage Facilities (WRSF)

Waste rock from both the Main and South Pits is anticipated to include PAG and NPAG waste rock. A geochemical waste characterization program to define the acid generating potential of the waste rock is underway. This program will inform the Waste Rock Management Plan, including PAG and NPAG disposal as it becomes available in the mining sequence. The current proposal is to place the NAG waste rock into the WRSF and the in-pit SF later in mine life. The PAG will be placed in the TMSF. Figure 4.1-4 presents the end-of-mine waste rock placement based on the current Project design.

The External WRSF would be a valley fill facility, located adjacent to the western extent of the Main and South Pits. It would cover an approximate area of 100 ha. Towards the end of the mine life, the southern extent of the External WRSF would be used to access and develop the South Pit. The In-Pit WRSF refers to waste rock that is backfilled into the south portion of the Main Pit, which would occur in later years of the mine life. The In-Pit WRSF does not add additional disturbance to the Project.

Water that comes into contact with the WRSFs would be collected in drainage ditches and monitored for water quality. A water conveyance structure (i.e., rock drain or pipe) will convey non-contact water underneath the WRSF to maintain flows in Argillite Creek. If required it would be pumped to the water treatment plant, located north of the Main Pit. At closure the External WFSF would be graded to a stable landform for reclamation, topsoil and/or growing medium added and revegetated.

4.1.5 Water Management Facilities and Water Balance

The current understanding of site water quality from historical monitoring and testing, and new test programs shows leaching of the elements hosted by the sulphides and other trace elements can be expected. In addition, the use of ammonium nitrate-based explosives may result in

nitrogen species in contact waters. Until water quality modelling is completed the specific requirements for water treatment will not be known; however, these heavy elements and nitrogen forms are readily treated using standard water treatment technologies that have been successfully deployed to meet water quality objectives at other mine sites.

The Project's water management facilities would include:

- water ditches and berms to divert clean water around disturbed areas;
- surface water collection sumps and ponds to collect mine contact water;
- a water treatment plant to treat mine contact water early in mine life;
- reuse of process plant water; and
- discharge of treated water into Ketchum Creek via the existing discharge point (D7) or utilized as make-up water for the process plant and discharged with tailings to the TMSF.

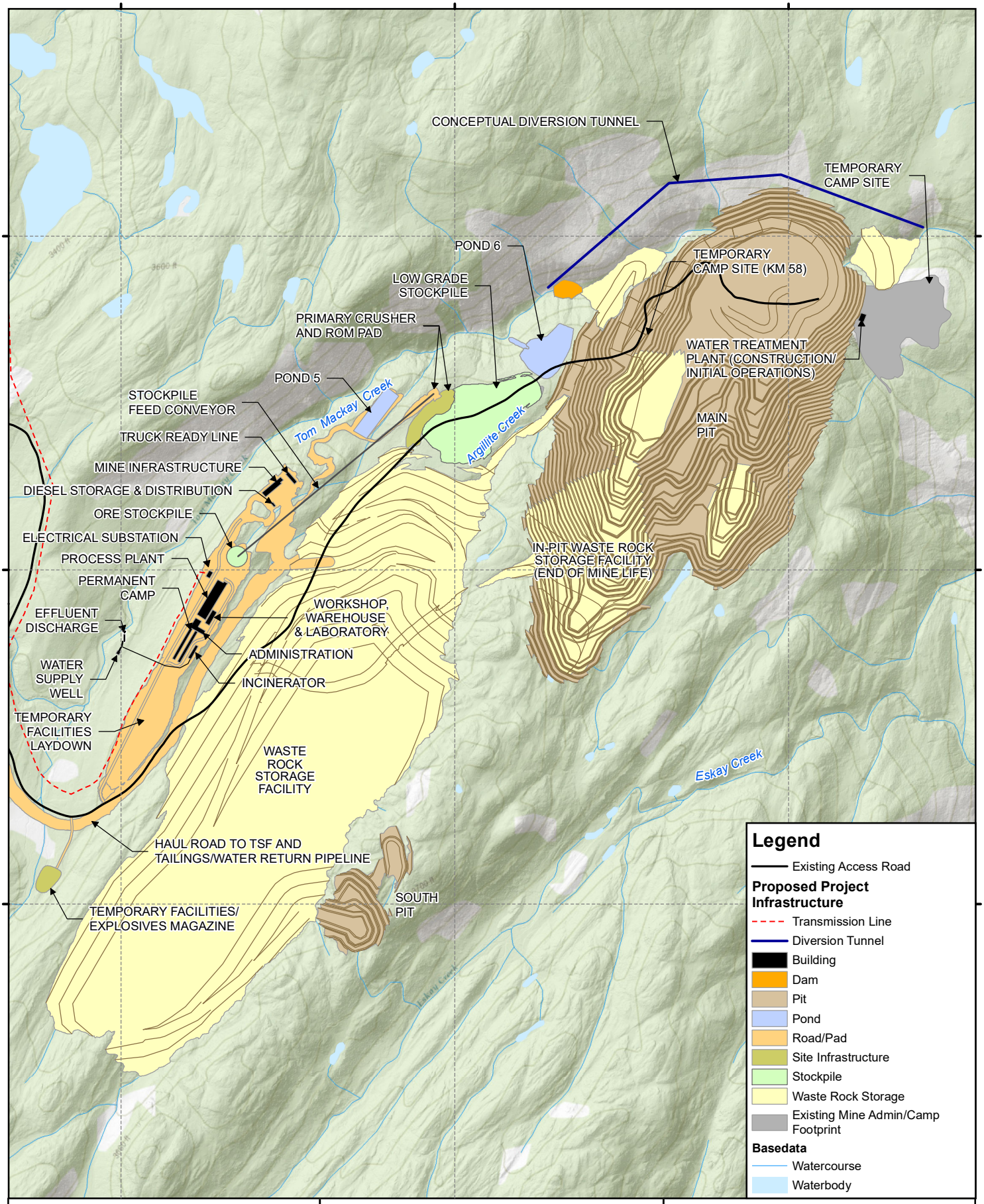
Strategies for water management include collecting surface water from disturbed areas to:

- Manage surface water erosion;
- Recycle mine-contact water whenever possible;
- Manage snow dumps and runoff to avoid impacts onto adjacent watercourses;
- Treat mine-contact water as required; and
- Monitor water quality to meet discharge standards prior to discharge.

A conceptual site-wide water balance was developed. Figure 4.1-5 provides an initial schematic of all inputs being considered with respect to managing water at the Project site. It is important to note that the Project facilities are located within one watershed (Tom MacKay Creek) to help minimize and manage water concerns. The water management approach is conceptual and would be developed with input from Indigenous Peoples and regulators.

Mine contact water and process water requiring treatment would go through the water treatment plant. The final design capacity of the water treatment plant would be considered through subsequent phases of the Project design and would be based on a site-wide water balance which includes an analysis of the quantity and quality of mine contact water. The existing mine water polishing ponds would be utilized.

Detailed geochemical characterization is underway for the waste, tailings and ore to create source term information to be used in water quality modelling during the development of the EA Application. Additional studies underway will help to define if water treatment is needed and specific constituents of concern for ML/ARD. The evaluation of conventional water treatment options (Chemical Precipitation, and Ion Exchange) for the construction and early operations periods was initiated in 2021 and will be refined through the Feasibility Study phase. Investigation of the potential for active and passive treatment alternatives and other mitigative measures (e.g., closure covers) for post-closure will be discussed with Indigenous parterns and regulators during the assessment process. Engineering information will become available for the development of model plans and modelling efforts, which are among the first activities for EAC application development by Skeena.



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Date: 15-Jul-2021
Figure: 4.1-4
Author: Michael.Stead
Filename: ESK-15-041

SKEENA RESOURCES

Eskay Creek Revitalization

Figure 4.1-4: Proposed Infrastructure, Waste Rock Storage Facility and Pits

Skeena Mining Division - NTS 104B09
British Columbia, Canada

Scale: 1:15,000
Coord. System: NAD 1983 UTM Zone 9N

0 0.15 0.3 0.45 0.6
Kilometers

N

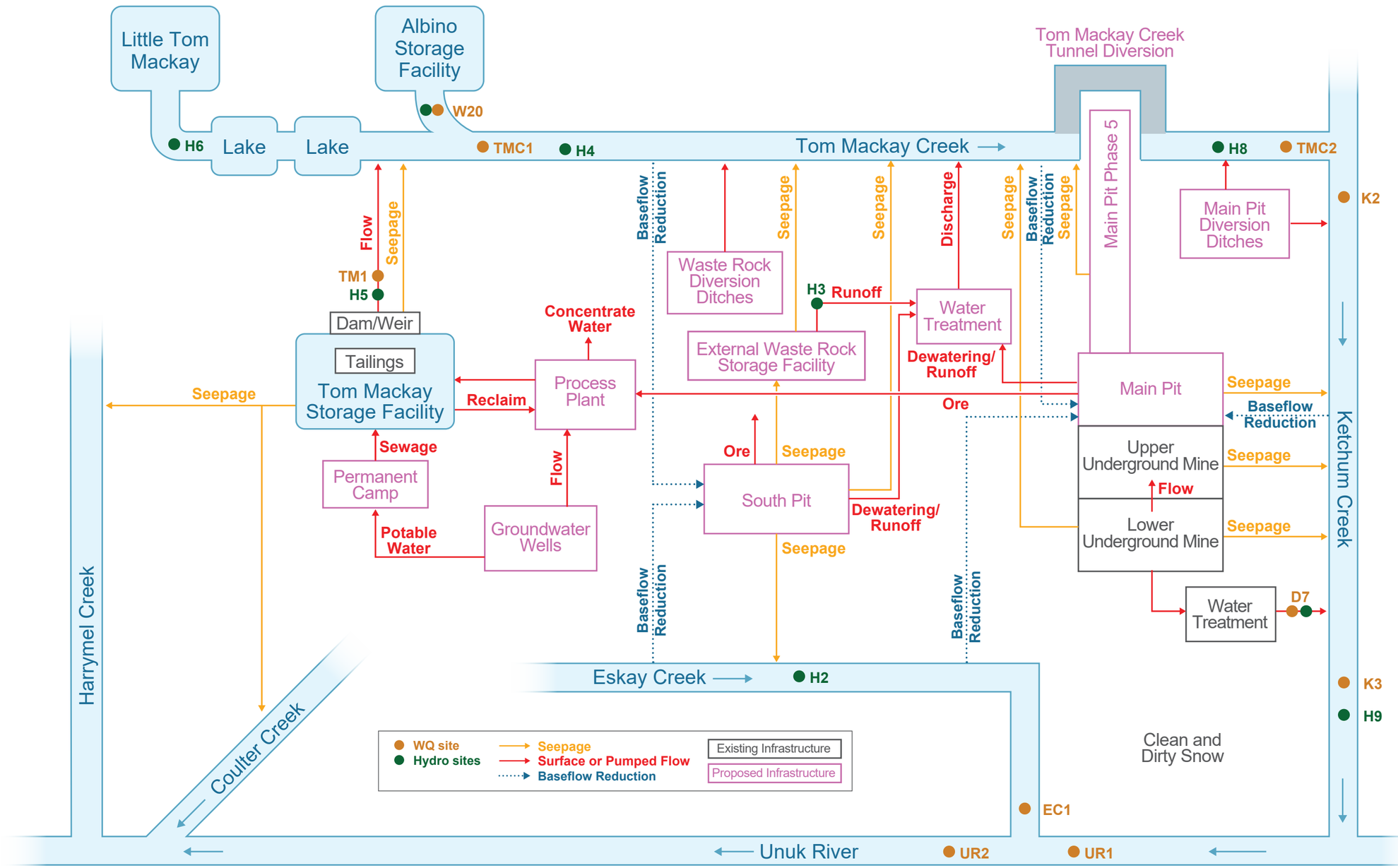


Figure 4.1-5 Eskay Creek Conceptual Water Balance

Engineering information will become available for the development of model plans and modelling efforts, which are among the first activities for EAC application development. Until water quality modelling is completed later in 2021, the specific requirements for water treatment will not be known; however, these heavy elements and nitrogen forms are readily treated using standard water treatment technologies that have been successful deployed to meet water quality objectives at other mine sites.

4.1.6 Project Water Use

Preliminary hydrogeological and hydrology studies indicate that water sources within the Project area near the mine site would be adequate to meet the Project's water requirements. Water would be required for: ore processing; camp operation and employee use; equipment washing; dust suppression; and fire supply.

Potable water would be supplied from groundwater wells and treated and stored within the accommodation and office complex. Groundwater wells would be installed during the construction phase. During operations, water for process make-up would be reclaimed from the TMSF and mine contact water collected within the mine footprint. Freshwater from either surface or groundwater wells would be used for additional process makeup and fire water supply. Freshwater requirements for the processing facility will be refined during the detailed design stage and are currently estimated at 31 litres per second (L/s) on average.

4.2 Project Phases and Activities

Project phases include Construction (2 years), Operation (8-11 years) and Closure/reclamation (3 yrears) over a 13 to 16 year mine life, followed by the Post-closure phase. This would be preceded by the Planning period over the next two to three years including completion of engineering studies (Pre-feasibility, Feasibility), regulatory engagement (IA, AA) and permitting. Table 4.2-1 summarizes activities of each Project phase.

Initial activities during planning, engineering, site preparation and construction would include, but are not limited to, land clearing and grubbing/stripping, blasting, rock crushing, excavating, road upgrades, grading, de-watering, stockpiling of topsoil/aggregates, powerline construction and construction/commissioning of buildings/mill/water management facilities.

During operations, activities will include mining, hauling of supplies/waste rock and concentrate, ore processing, worker transportation/housing, environmental monitoring, waste discharge/ disposal for waste rock/tailings/solid waste and air/water discharges, ongoing maintenance of roads and facilities, progressive reclamation, water treatment and dam construction.

Table 4.2-1 Summary of Project Activities by Phase

Project Phase	Activities
Construction (2 years)	• Site clearing/grubbing • Stockpiling topsoil and other material suitable for reclamation or construction uses • General earthworks, site levelling, foundations, buried services, bridge upgrades • Haul Roads, Pre-stripping pit development, Technical Sample development • Construction of Technical Sample Process Plant, pipelines, crushing/sizing facility, pipelines, power supply, processing. • Construction of process plant, mine infrastructure facilities, crusher, overland conveyor • TSF containment dam, discharge and reclaim pipelines and reclaim barge. • Construction of electrical transmission line, high voltage and medium voltage substations, site medium voltage distribution system. • Construction of Diesel Storage facility • Construction of water management systems, such as drainage ditches, water treatment plant, and water collection sumps and pond. • Transportation of materials and supplies by third parties to support mine and camp operations • Development of onsite utilities and services, including camp facilities
Operations (8 to 11 years)	• Mining the North and South pits, including drilling, blasting and excavation activities • Transportation of ore to processing plant and waste rock to WRSF and TMSF • Mineral processing • Transportation of tailings to TMSF via tailings pipeline and construct embankments • Pit and surface water will be diverted to the process plant. Transportation of concentrate to Stewart for shipping to overseas smelters • Transportation of materials and supplies to support mine and camp operations • Maintenance activities of infrastructure (e.g., roads and powerline right of ways) • Progressive reclamation of disturbed areas where possible • Stockpiling topsoil and other material suitable for reclamation or construction uses • Reclamation planning and reporting • Environmental monitoring and implementing EMS
Reclamation and Closure (3 years)	• Demolition and removal of processing and mine support facilities • Sampling and remediating any contaminated soils • Deactivation of mine site roads, pipelines and powerline. Access may be maintained for monitoring purposes. • Utilization of topsoil and overburden piles to recontour and scarify disturbed areas as appropriate • Placement of cover over the WRSFs • Environmental monitoring • Maintenance of water treatment and management structures
Post Closure (will continue until all conditions in permits have been met)	• Environmental monitoring water quality and reclamation success • Engineered inspections for TMSF embankment and WRSFs • Implementation of follow-up measure, maintenance and repairs as required

4.3 Project Workforce

Table 4.3-1 identifies the current workforce estimates by Project phase. Skeena Resources expects approximately 50% of the Project positions would be filled by northern BC residents (Ausenco 2019). In 2004, the Eskay Creek Mine employed 349 people and 33% were Tahltan Nation members (Barrick, 2004). The former mine's workforce provide an indicator of the Project's potential employment benefits to local communities. Because of the region's history of mineral exploration and mining (Eskay Creek, Snip, Brucejack, Red Chris), Skeena Resources expects there will be suitability trained and experienced workers as well as workers with transferable skills in the region. The workforce would be housed in camp accommodations on the Project site.

Table 4.3-1 Predicted Workforce

Project Phase	Length of Time (years)	Workforce Estimate
Construction	2 years	800 person-years
Operation	8 to 11 years	2,956 person-years (80 salaried and 214 hourly workers)
Closure	3 years	Small scale work force to support ongoing monitoring and site management
Post-Closure	+100 years	Skeena Resources will provide appropriate staffing levels through post-closure. A small crew of maintenance staff will be in place for post-closure, with staff appropriate for the level of post-closure activities.

4.4 Project Design or Siting Constraints

The Project design will be guided by the Environmental and Social Design Principles that are under discussion with Tahltan Nation (refer to Section 6.0). A key principle informing the Project design is minimizing new disturbance by re-utilizing existing disturbed areas. This limits the flexibility for some Project design aspects. It is important that the Project design is robust and can accommodate concerns and issues identified during pending public, regulatory and Indigenous engagements.

A summary of Project design components and their design flexibility is provided in Table 4.4-1. Alternatives for several components (e.g., mining method, worker accommodation) were considered during the 2019 PEA alternatives analysis (see Table 4.7-1 in Section 4.7), which informed whether the components are considered fixed or flexible at this phase of the design. All design components must meet applicable standards, such as the *Health, Safety and Reclamation Code for Mines for British Columbia* and *Dam Safety Guidelines*, and the results of engineering investigations.

To support consideration of development options for the Project, alternatives assessment work is ongoing and information is provided in Section 4.7.

Table 4.4-1 Assessment Design Siting Flexibility

Design Component	Fixed or Flexible	Other Options
Location of ore body	Fixed	• Not applicable
Mining method (i.e., open pit)	Fixed	• Not applicable based on 2019 assessment (i.e., identified ore reserves un-economic for underground mining)
Ore processing	Flexible	• Alternative mill locations • Different milling techniques • Different metal separation techniques • Different reagent selection
Mineral tenure and surface lease	Fixed	• Not applicable
Concentrate transportation	Flexible	• Rail or Truck
Location of historical TSF	Fixed	• Not applicable
Tailings Management	Flexible	• Alternative tailings management technologies • Alternative tailings storage locations • Alternative tailings covers • Alternative dam construction methods
Waste rock management	Flexible	• Alternative waste rock storage facilities locations • Alternative disposal methodology • Alternative stockpile location
Location of camp facilities	Flexible	• Alternative camp facility locations on-site • Alternative camp facility locations off-site
On-site material transport routes	Flexible	• Alternative routes
Power source and infrastructure	Flexible	• Alternative powerline routes • Alternative on-site diesel, hydroelectric, wind, solar or combination.
Water source and management	Flexible	• Alternative groundwater well locations • Alternative water treatment systems
Discharge locations	Flexible	• Alternative discharge locations
Solid waste management	Flexible	• Alternative location onsite vs offsite
Worker transportation	Flexible	• Use of Bob Quinn airstrip • Road transportation from Smithers or Terrace airports • Road transportation from local communities
Worker accommodation	Fixed	• Not applicable (i.e., daily transport from town to site for workers not feasible)
Worker schedule	Flexible	• Different rotation schedules
Borrow source locations	Flexible	• Identification of new borrow sources
Vehicular access	Fixed	• Not applicable

4.5 Emissions, Wastes, and Discharges

This section includes a general discussion of anticipated direct project emissions to air, land and water, including estimated greenhouse gas (GHG) emissions.

4.5.1 Project Air Emissions and Greenhouse Gases

An initial estimate of GHG emissions for the Project was calculated using the methodology in Section 3 of the *Strategic Assessment of Climate Change* (SACC [(ECCC 2020]) and based on project information available as of June 2021. GHG emission estimates will be reviewed as the Project design is further refined.

GHG emissions will be generated during Project from construction and operations mining. Based on the SACC, net GHG emissions are quantified as:

- Net GHG emissions = Direct GHG emissions + Acquired energy GHG emissions - CO_2 captured and stored - Avoided domestic GHG emissions - Offset credits.

At this stage only direct GHG emissions (also referred to as Scope 1) and acquired energy GHG emissions (Scope 2) can be quantified based on available information. All other terms in the net GHG emissions equation are assumed to equal zero. Net GHG emissions were calculated for both the Project's construction, operations and decommissioning/closure phases.

Direct Emissions

Direct GHG emissions are generated by activities that are within the defined scope of the Project and include: emissions from mobile and stationary combustion, emissions from land use change and emissions from industrial processes. At this stage of the Project, estimates of diesel fuel usage for mobile and stationary sources and explosives amounts were calculated by Skeena Resources. These estimates are used to calculate the direct GHG emissions for the Project. Propane will also be used as part of the Project to heat buildings although no estimate of the volume of propane to be used is available. It is assumed that the GHG emissions from propane will be much smaller than those from diesel and therefore the estimated direct GHG emissions totals provided here are a reasonable initial estimate.

Table 4.5-1 shows the diesel and explosives amounts for each year of the Project and the associated direct GHG emissions for those years. The construction phase of the Project is denoted by negative year values and the operations phase is denoted by positive year values.

The decommissioning/closure phase is denoted by the letter "C" before the year in Table 4.5-1. No estimates of fuel or explosives usage is available for the decommissioning/closure phase. Therefore, it is assumed that the direct GHG emissions for the decommissioning/closure phase are on average equal to the direct emissions during the first year of construction.

GHG emission factors for diesel and blasting fuel were obtained from values published by ECCC (2019). Emission factors for emulsion were obtained from National Greenhouse Accounts (NGA) Factors (Australian Government 2008).

Total construction phase direct GHG emissions are estimated to be 21,114 t CO_2e (carbon dioxide equivalent), total operations phase direct GHG emissions are estimated to be 299,117 t CO_2e and total decommissioning/closure phase direct GHG emissions are estimated to be 14,978 t CO_2e.

Acquired Energy Emissions

Acquired GHG emissions are associated with the generation of electricity, heat, steam or cooling, purchased or acquired from a third-party for the Project. Acquired energy GHG emissions for the Project include emissions associated with the generation of purchased or acquired electricity from BC Hydro. The estimated operating load for the operations phase of the Project is 23,663 kilowatts (kW). It is assumed that this load is continuous for all hours of the year. Therefore, the total acquired electricity per year is 207,287,880 kilowatts per hour (kWh).

BC Hydro's GHG intensity is 29.9 tonnes CO_2e/GWh (Province of BC 2021). Based on this intensity the annual acquired energy GHG emissions for the Project are 6,198 t CO_2e. To be conservative it is assumed this annual amount is the same for the construction, operations and decommissioning/closure phases of the Project. Based on this annual amount the total acquired energy GHG emissions for all phases of the Project is 99,168 t CO_2e.

CO_2 Captured and Stored, Avoided Domestic GHG Emissions, and Offset Credits

The three negative terms of the net GHG equation that are shown with zero values in Table 4.5-1 are not expected to be important contributors to the net GHG calculations for the Project. At this point in time, Skeena has not pursued plans for CO_2 capture and storage, or offset credits. Skeena will be assessing these as the Project advances in collaboration with Indigenous groups through workshops and Subject Matter Expert input on technological advancements. The Project is not currently expected to directly contribute to avoided domestic GHG emissions.

Net GHG Emissions

Based on the direct and acquired energy GHG emissions for the construction, operations and decommissioning/closure phases of the Project the total net GHG emissions summed over all years of the Project are 434,376 t CO_2e.The maximum annual net GHG emissions for the construction phase of the Project are in Year -1 with 22,320 t CO_2e. The maximum annual net GHG emissions during the Project are in Year 5 with 42,820 t CO_2e. Annual net GHG emissions for decommissioning/closure are estimated to be the same for all years with 11,191 t CO_2e. See Table 4.5-2 for a summary of maximum emissions by project phase. Table 4.5-2 also shows total net emissions for the construction (33,510 t CO_2e), operations (367,294 t CO_2e) and decommissioning/closure (33,572 t CO_2e) phases.

Under the *Climate Change Accountability Act* (CCAA), British Columbia has committed to reduce total provincial GHG emissions to 40% below 2007 levels by 2030 (38,800,000 t CO_2e/year) and 60% below 2007 levels by 2040 (25,900,000 t CO_2e/year). Net emissions from the Project at peak emissions are estimated to be 42,820 t CO_2e, which represents 0.11% of the CCAA 2030 target. Based on current projections the Project will no longer be operating in 2040 therefore will have no impact on the Province's GHG reduction goals for that year.

Table 4.5-1 Project Direct GHG Emissions by Year in Carbon Dioxide Equivalent (CO_2e)

Year of Operation:		-2	-1	1	2	3	4	5	6	7	8	9	10	11	C1-C3
Emissions Source	**Units**														
Diesel	litres	1,743,798	5,461,586	7,902,637	10,569,315	11,429,069	11,746,411	12,725,174	12,088,876	10,441,691	11,725,332	10,706,258	4,297,251	322,093	-
Blasting Fuel	litres	54,576	257,903	345,519	426,042	432,117	414,043	432,088	388,169	309,698	361,212	307,626	93,162	0	-
Emulsion (explosives)	tonnes	925	4,371	5,856	7,221	7,324	7,018	7,324	6,579	5,249	6,122	5,214	1,579	338	-
Diesel GHG Emissions	CO_2e (kg)	4,688,699	14,685,030	21,248,491	28,418,617	30,730,308	31,583,574	34,215,258	32,504,387	28,075,462	31,526,895	28,786,826	11,554,384	866,038	-
Blasting Fuel GHG Emissions	CO_2e (kg)	146,744	693,447	929,027	1,145,536	1,161,871	1,113,272	1,161,793	1,043,702	832,712	971,221	827,141	250,491	0	-
Emulsion GHG Emissions	CO_2e (kg)	157,254	743,111	995,564	1,227,579	1,245,084	1,193,005	1,245,000	1,118,452	892,351	1,040,779	886,381	268,432	57,375	-
Total GHG Emissions	CO_2e (t)	4,993	16,122	23,173	30,792	33,137	33,890	36,622	34,667	29,801	33,539	30,500	12,073	923	4.993 per year
Total GHG Emissions	**CO_2e (t)**	**21,114**		**299,117**											**14,978**

Table 4.5-2 Maximum GHG Emissions during Construction, Operations and Closure

Project Phase	Maximum Net Emissions	Acquired Energy Emissions	Direct Emissions	CO_2 Captured and Stored	Avoided Domestic GHG Emissions	Offset Credits	Total Net Emissions for the Project by Phase	Total Net Emissions for the Project
	Maximum Annual CO_2e (t)						CO_2e (t)	
Construction	22,320	6,198	16,122	0	0	0	33,510	434,376
Operations	42,820	6,198	36,622	0	0	0	367,294	
Decommissioning/ Closure	11,191	6,198	4,993	0	0	0	33,572	

Under the Paris Agreement, Canada has committed to reducing its GHG emissions by 30% below 2005 levels by 2030. In 2019, the 2005 level was estimated at 730 Mt CO_2e, therefore, Canada's 2030 target is 511 Mt CO_2e. Net emissions from the Project at peak annual emissions are estimated to be 42,820 t CO_2e, which represents 0.008% of the Canadian 2030 target.

An air quality and dust control management plan would be developed and implemented prior to the start of Project construction. Mitigation for airborne emissions may include using cyclones and wet scrubbers for particulate collection, stabilizing and revegetating soil stockpiles, watering haul roads during non-freezing conditions, placing covers on loaded and empty haul truck beds, and minimizing the use of diesel generators.

4.5.2 Project Waste

Waste generated by the Project would include: waste rock, tailings, other wastes from both hazardous and non-hazardous sources (e.g., office, domestic waste and vehicle maintenance wastes); sewage; and contaminated soil in the event of spills or leaks.

The main waste management issue for the Project is the prevention and control of ML/ARD from the tailings, and any AG or PAG waste rock that is produced during mine development or operations. The Project will create waste rock from mine development and tailings as a byproduct of mineral processing. The waste streams would be managed on site as follows:

- NAG waste rock would be deposited in two locations: approximately 80-90% (161.26 Mt) to the external WRSF that would be located to the west of the Main Pit. The remaining 20-10% of NAG waste would be deposited in-pit.
- PAG waste rock (50.35 Mt) would be deposited in the Tom MacKay Tailings Storage Facility.
- PAG tailings (23.88 Mt) and NAG tailings (2.53 Mt) would be deposited sub-aqueously in the TMSF (refer to discussion in Section 4.1.2). The TMSF is already permitted for tailings disposal.

To manage the potential for ML/ARD, the Project has incorporated design features and mitigation measures that are consistent with waste and water best management practices, including:

- WRSF seepage collection systems;
- Water treatment; and
- Subaqueous disposal of all tailings.

Waste management would be a key element of the EMS for the Project. Non-hazardous waste would be managed by segregating industrial and domestic waste into appropriate streams. Project-related waste collection and disposal facilities would include: one or more incinerators for domestic/putrescible waste; separate waste collection areas for recyclables; industrial waste streams for off-site disposal; and sewage effluent and sludge disposal for onsite disposal. The management of waste collection areas would follow regulatory requirements and best management practices for the safety of workers and environment, including standard operating procedures for spill management, fire safety and wildlife attractants

Hazardous waste materials such as spoiled reagents, waste petroleum products and used batteries would be generated throughout the life of the Project. Storage facilities would facilitate the segregation and inventory of the various hazardous waste streams generated during the project. A separate secure storage area would be established with appropriate controls and best management practices to ensure the safety of workers and the environment. Hazardous materials would be labelled and stored in appropriate containers for shipment to approved off-site disposal facilities. Waste streams would be tracked in accordance with federal and provincial regulations, such as the federal *Transportation of Dangerous Goods Act, 1992* (SC 1992, c 34).

4.5.3 Project Water Emissions

Water emissions include the discharge of water that has been in contact with potential sources of contamination (e.g., seepage from the WRSF, process water, tailings and pit dewatering) and the discharge of water (non-contact) from upstream catchments that has not been in contact with mine workings. Water emissions monitoring would be a fundamental component of the EMS and permit management. Water emissions will meet provincial permit limits and national (i.e., MDMER) standards prior to discharge.

Contact water from the WRSF would be collected and treated prior to discharge if testing shows any onset of ML/ARD or concentrations which do not meet permit limits. If contact water quality from the WRSF is within permitted parameter limits, and confirmed by testing, this water would be discharged without treatment. Water from pit dewatering would be pumped to a water treatment plant for treatment prior to discharge to the existing mine water polishing ponds and ultimate discharge through the existing permitted effluent discharge point D7 (Figure 4.1-1, identification number E219595) to Ketchum Creek. Alternatively, collected contact water would be used in the process and pumped to the TMSF with tailings. Other discharges of treated water may be required in the vicinity of the process plant. Process water would be discharged to the TMSF. Non-contact water would be kept separate from water that has been in contact with mine workings and discharged to the environment without treatment.

Feedback from Indigenous Peoples about water use will be incorporated into water emissions planning.

4.6 Alternatives to the Project

Skeena Resources is considering potential alternatives to the Project that are technically and economically feasible and directly related to the Project. The possible alternatives are: 1) not undertaking the Project, 2) changing the timing of the Project, and 3) changing the location of the Project.

The environmental and socioeconomic effects associated with the alternatives to the Project will be further assessed through the assessment process. The ‘no Project’ alternative would not provide the positive socioeconomic effects associated with the Project’s development, and would not fulfill the purpose of the Project. The second alternative would generally have the same environmental effects as those associated with proceeding with the Project as proposed. The third alternative, changing the location, is not possible as the Project is located at a former mine site

that produced high-grade gold and silver ore/concentrate and represents significant advantage in both proximity (e.g., nearby hydropower, built roads, existing disturbance) to critical infrastructure and contains permitted critical infrastructure (TMSF) with unused and potential storage capacity that will support the Project. Skeena Resources is not aware of any viable alternatives of similar scale, including synergies with existing infrastructure, to the Project in northwest BC that would provide a source of gold and silver available for production in the proposed timeframe.

4.7 Alternative Means of Carrying Out the Project

This section considers the potential alternative means of carrying out the Project that Skeena Resources is considering and that are technically and economically feasible, including through the use of best available technologies. An initial alternatives assessment was completed during the PEA in 2019 and alternatives will continue to be assessed and informed by engagement with Indigenous Peoples and stakeholders. Alternatives that are being considered are presented in Table 4.7-1.

Table 4.7-1 Project Alternatives Assessment Based on PEA 2019

Component	Alternatives Considered	Preferred Option
Ore processing location	• Process ore on site • Ship ore offsite to processing facilities with spare capacity	Processing ore on site is preferred given the grades and volume of material to be transported and lack of nearby processing capacity. On site processing is the only economically viable option.
Ore processing	• Different milling techniques • Different metal separation techniques • Different reagent selection	Best available technologies will be used to maximize metal recovery. Preferred milling options to maximize metal recovery based on current test work include semi autogenous grinding (SAG), floatation, and concentrate dewatering. Optimization works will continue into the FS stage in 2022.
Mining method	• Open pit • Underground	A mineral resource model was developed for both open pit and underground mining methods. The ore grades for the near surface ore body are lower grade than for the historical underground (1995-2008) operation. The 2019 PEA presents an open pit mining method.
Concentrate Transportation	• Rail • Shipping	Preferred option is to truck the concentrate to the Port of Stewart for marine shipping and distribution to offshore smelters. There is no rail terminal close to the mine site, which makes rail transportation impractical.
Infrastructure (General)	• Reuse existing infrastructure • Build new infrastructure	Preferred option is to reuse the existing infrastructure where practical to reduce the amount of additional disturbance and cost. New facilitates will be built as needed to support the mine plan.
Power	• Connect to provincial grid • On-site diesel, hydroelectric, wind, solar or combination	Preferred option is to connect to the existing power grid (green energy); main determination is where to connect to the grid; preference is for Volcano Creek hydro-electric facility.

Component	Alternatives Considered	Preferred Option
Tailings Management	• Convention wet vs thickened vs paste vs filtered tailings for disposal • Siting of tailings facility ▫ TMSF ▫ ASF ▫ Co-mingling of tailings in WRSF ▫ Disposal in existing mine infrastructure	The current preferred option for disposal is conventional wet. A best available technology (BAT) assessment is underway in 2021 to determine the final disposal method. Preferred disposal option is into the existing TMSF (has capacity) and expand the existing TMSF to reduce new disturbance; reviewing other options.
	• Dam construction method • Dry or wet cover on TSF at closure	Preferred option of dam built of cement and earth/rock preferred vs cyclone NAG tailings. This is preferred as the embankment is a water retaining structure. Preferred option is wet cover, with test work ongoing for tailings. Address geochemical risk and acid drainage/leaching, managing a dry facility is more challenging in a wet climate.
Waste Rock Management	• Disposal methodology including PAG waste rock into TMSF or ASF or isolating PAG, or co-mingling waste with tailings or NAG • Location of ore, waste rock, overburden, soil and snow stockpiles	Preferred option for waste was determined from PFS studies underway of alternatives and optimization studies on geochem. Sub-aqueous storage of historic PAG waste rock was previously used in ASF for past operations. Current location of proposed waste rock storage facility is being studied compared to other options; current location is feasible with respect to economics and natural valley to fill. Location of stockpiles will focus on minimizing handling of material, as well as haul distance and grades; as well as any potential biophysical, water quality or social effects.
Waste Management (hazardous and solid)	• Solid waste disposal of on site/off site landfill vs incineration • Hazardous waste disposal on site vs off site • Management of hydrocarbon contaminated materials through on-site bioremediation vs off-site disposal	Preferred option is on-site landfill and incineration for solid/putrescible; studies still underway. Preferred option for disposal of hazardous waste is at offsite approved facility. Both of the options for hydrocarbon contaminated materials are being reviewed.
Water Management	• Alternative groundwater well locations • Alternative water treatment systems • Alternative discharge locations	Preferred option for water management has not been determined as studies are underway to optimize treatment configurations. It is anticipated that standard water treatment methods will be used to meet water quality objectives although alternative approaches will be investigated (e.g. passive, closure covers).
Logistics (transportation and accommodation)	• Worker accommodations on-site vs off-site • Worker transportation	Preferred option is provide accommodation for workers on site. There are no existing local accommodation options. Forrest Kerr accommodation will be used during construction to reduce the need for temporary accommodation facilities. Existing accommodations on the Eskay Creek Mine site will be used during construction and other advanced exploration activities but would be decommissioned during the mine life due to proximity to the blast radius of the Main Pit. Worker transportation subject to where workers may come from.

5.0 REGULATORY AND POLICY FRAMEWORK

5.1 BC *Environmental Assessment Act* and Canadian *Impact Assessment Act*

Skeena Resources will utilize the IPD for entry into the assesment process of the BC *Environmental Assessment Act* (BC EAA 2018) and federal *Impact Assessment Act* (IAA; 2019). As part of the collaborative approach to the regulatory process, Skeena Resources supports the request from the Tahltan Nation for the Project to be designated as reviewable under BC EAA (2018).

The Project is reviewable under the federal*IAA* (2019) *Physical Activities Regulations* based on listings for new mill construction, daily production over 5,000 tpd and more than 50 percent increase in the mine operating area (Table 5.1-1). Skeena Resources will seek to obtain a substituted federal impact assessment pursuant to the Canadian IAA (2019) and *Impact Assessment Cooperation Agreement between Canada and British Columbia (2019)*.

Table 5.1-1 Federal Impact Assessment Act, Physical Activities Regulation

Section	Physical Activity
Physical Activities Regulations, federal *Impact Assessment Act*	
19(c)	The expansion of an existing mine, mill, quarry or sand or gravel pit in one of the following circumstances: (c) in the case of an existing metal mine, other than a rare earth element mine, placer mine or uranium mine, if the expansion would result in an increase in the area of mining operations of 50% or more and the total ore production capacity would be 5 000 t/day or more after the expansion
18(d)	The construction, operation, decommissioning and abandonment of one of the following: (d) a new metal mill, other than a uranium mill, with an ore input capacity of 5 000 t/day or more

Skeena Resources will ask that the Province make a request to the federal Minister of Environment and Climate Change to approve the substitution of the BC EA process for the federal impact assessment (IA) process. If the substitution request is approved for the Project, the Province would commit to meet the legislative requirements of the federal IA process and fulfil the conditions for substitution under the IAA set out in the *Impact Assessment Cooperation Agreement between Canada and British Columbia (2019)* and the Substitution Decision. At the end of the assessment process the BC EAO will provide its report to both the Provincial and Federal Ministers for their consideration and decision.

The *Impact Assessment Cooperation Agreement between Canada and British Columbia* (2019) identifies how the two jurisdictions will work together on project impact assessments that are required by both levels of government. This agreement is intended to provide a more predictable and timely process, increase efficiency and certainty, and result in quality assessments that draw on the best available expertise, supporting the shared principle of “one project, one assessment”. The agreement would facilitate the substituted review of the Project, if approved by the federal government.

The IA is requried by the expansion of an existing mine with proposed open pit mine production over 5,000 tpd, greater than 50% increase in mine operating area and construction of a new mill (additional details provided in following paragraphs).

To require a federal IA under Physical Activities Regulation 19(c), two criteria must be met for an existing mine: The Project's production rate of 2.5 million to 3 million tonnes per year (i.e., 6,850 to 7,800 tpd) would be higher than the threshold in the *Physical Activities Regulations* for an expansion of a designated project and will have greater than 50% increase in the area of mining operations compared to the existing Eskay Creek Mine. A*rea of mining operations* means the area at ground level occupied by any open-pit or underground workings, mill complex or storage area for overburden, waste rock, tailings or ore. This was interpreted to not include other infrastructure areas (e.g., landfill, ponds, roads, camps, powerlines). The other requirement for an IA under IAA 18(d) is the construction of a new mill with greater than 5,000 tpd ore throughput.

Table 5.1-2 summarizes the areas of mining operations between the underground Eskay Creek Mine and proposed Project. Figure 4.1-1 shows the anticipated footprint and layout for the new infrastructure of the Project including expanded TMSF, waste dumps, pits and mill complex/ processing plant. The percent increase in area of mining operations from the Eskay Creek Mine to the Project is approximately 418%. Advanced exploration and surface development to support technical/bulk sample extraction under amendments to existing permits over the next two years will be separate from the Revitalization Project regulatory process but occupy portions of the Revitalization Project footprint to minimize disturbance.

Table 5.1-2 Area of Mining Operations Comparison for Closed Eskay Creek Mine and Proposed Project (for federal 'mining operations area' calculation only)

Mine Component	Area of Mining Operations (ha)	
	Eskay Creek Mine Underground	Project Open Pit
Open Pits	n/a	93.1
Underground workings projected to the surface	4.6	n/a
Mill complex, Processing Plant and Mine Buildings	5.9	8.6
Areas for overburden, waste rock, tailings or ore		5.3
TMSF – waterbody for tailings/waste rock including dams	84	211.6
Soil/overburden stockpiles	2	2.8
Ore stockpiles (ROM, fine ore/crusher/conveyor)	0.5	1.5
Waste Rock Storage Facility	Albino SF 13	137.4
Total	**110**	**460.3**
% Increase		**418%**

Note: *Area of mining operations* means the area at ground level occupied by any open-pit or underground workings, mill complex or storage area for overburden, waste rock, tailings or ore. This specifically excludes other components from the federal calculation.

5.2 Other Provincial and Federal Permits, Licences, and Approvals Required for the Project

A summary of provincial and federal authorizations possibly required for the Project are provided in Table 5.2-1 and Table 5.2-2, respectively. The tables identify anticipated amendments to existing authorizations and new authorizations. Permit requirements will be confirmed by regulatory authorities during the assessment process.

Table 5.2-1 Summary of Provincial Permits, Licences and Approvals Possibly Required for the Project

Authorization	Responsible Agency	Legislation	Purpose
Amendment to Permit M-197	BC Ministry of EMPR (now BC Ministry of EMLI)	*Mines Act*, Health, Safety and Reclamation Code for Mines in BC	Approve the new mine plan and reclamation program.
Water System Construction Permit Water System Operating Permit	Ministry of Health	*Drinking Water Protection Act*, Drinking Water Protection Regulation	Authorize construction and operation of potable water supply system for camp and process plant.
Food Facility - Health Approval Application	Ministry of Health	*Drinking Water Protection Act*	Approve opening and operation of food service facility
Sewage Registration *Environmental Management Act*	Ministry of Health	Sewage Registration	Authorize sewage treatment plant
Amendment to *Environmental Management Act* (Effluent) Permit 10818	ENV	*Environmental Management Act*	Authorize discharges from sedimentation ponds, tailings storage facility, seepage
Environmental Management Act (Air) Permit 12977	ENV	*Environmental Management Act*	Authorize discharges from incinerator and process plant
Hazardous Waste Registration	ENV	*Environmental Management Act* Hazardous Waste Regulation	Register hazardous waste transfer facility, plant truck shop
Fuel Storage Registration	ENV	*Environmental Management Act*	Authorize fuel storage
Water Licence	ENV	*Water Sustainability Act*	Authorize storage, use or diversion of surface water or groundwater for one or more purposes.
Approval for Works in and about a Stream (Section 11)	ENV	*Water Sustainability Act*	Approve changes in or about a stream
Investigation or Inspection Permit	FLNRORD	*Heritage Conservation Act*, RSBC 1996, c. 187	Undertake archaeological impact assessment (AIA)
Site Alteration Permit	FLNRORD	*Heritage Conservation Act*	Required to alter an archaeological site (should any be identified and impacted by the Project)
Occupant Licence to Cut	FLNRORD	*Forest Act*	Authorizes cutting and removal of timber on Crown land
Road Use Permit	FLNRORD	*Forest Act*	Authorizes use of existing Road
Amendment to Special Use Permit	FLNRORD	*Forest Act*	Amendments to existing SUPs for Eskay Creek Mine Road may be required
Fish Collection Permit	FLNRORD	*Wildlife Act*	Required for fish salvage (e.g., data collection)
Wildlife Permit	FLNRORD	*Wildlife Act*	Required for amphibian / small mammal capture and release
Licence of Occupation	FLNRORD	*Land Act*, RSBC, 1996, c. 245	Required to occupy Crown land (e.g., transmission line, temporary borrow and gravel pits, construction staging areas)

Table 5.2-2 Summary of Federal Permits, Licences and Approvals Possibly Required for the Project

Authorization	Responsible Agency	Legislation	Purpose
Explosives Permit	Natural Resources Canada	*Explosives Act*	Required to manufacture, store and use explosives
Fisheries Authorization	Fisheries and Oceans Canada	*Fisheries Act*	Required if the Project will result in the harmful alteration, disruption or destruction of fish habitat or death of fish
Metal and Diamond Mining Effluent Regulations (MDMER) Schedule 2 amendment	ECCC	*Fisheries Act*	Schedule 2 listing for TMSF is valid and amendment is not required to account for the increase in TMSF/TIA size into adjacent non-fish bearing waterbodies
Migratory Bird Permit	ECCC	*Migratory Birds Convention Act*	Required if nesting habitats used by migratory birds might be impacted or if activities occur during the nesting season (e.g., clearing of vegetation)
Species at Risk Permit	ECCC	*Species at Risk Act*	Authorizes an activity affecting listed wildlife species, any part of its critical habitat or the residences of its individuals
Environmental Emergency Registration	ECCC	Environmental Emergency Regulations	Registers substances over specified volumes site must have suitable emergency response plan for the substances
Nuclear Safety Authorization	Canadian Nuclear Safety Commission	*Nuclear Safety and Control Act*	Required for possession of instruments containing radioactive material, such as nuclear density gauges (portable and fixed)
Radio Licence	Industry Canada	*Radio Communication Act*	Authorizes use of radio equipment on site.
Navigable Waters Approval	Transport Canada	*Canadian Navigable Waters Act*	Required for works that take place within navigable waters that do not meet works established under the Minor Works Order and which may interfere with navigation
Transportation of Dangerous Goods Permits	Transport Canada	*Transportation of Dangerous Goods Act*	Authorizes transportation and handling of dangerous goods
Strategic Assessment of Climate Change	ECCC	Section 95 of the IAA	Strategic Assessment of Climate Change was deemed a strategic assessment conducted under section 95 of the IAA and applies to all designated projects under the IAA

5.3 Proposed Regulatory Process Schedule and Project Milestones

The timing for the EA assumes a substituted federal review will occur using the BC EA process; should this not be the case, then the timelines below will be re-assessed. Anticipated timelines are summarized Table 5.3-1. This timeline is subject to change based on engineering design studies and discussions with BC EAO, Agency, and Tahltan Nation. Appropriate seasonal work windows will be incorporated into the Project construction schedule. No other seasonal timing constraints have been identified.

Table 5.3-1 Proposed Environmental Assessment and Impact Assessment Schedule and Project Milestones

Milestone/Activity	Start Date	End Date
Skeena Resources engagement with TCG about the Project and potential regulatory process	2018	Ongoing
Skeena Resources engagement with BC EAO and IAAC about the Project and potential regulatory process	2020	Ongoing
Skeena Resources provides draft IPD and draft Engagement Plan to TCG for review and comment	Q3 2020	Q1 2021
Skeena Resources provides draft IPD and draft Engagement Plan to TSKLH	Q2 2021	Q3 2021
Skeena Resources supports the Tahltan Nation request for review of the Project in the assessment process.		Q3 2021
Skeena Resources submits Engagement Plan to BC EAO is fulfilment of BC EAA requirements with IPD		Q3 2021
BC EAO issues 'Designation as Reviewable Project' Order and accepts IPD and Engagement Plan within 10 days of submission, formally starting the Early Engagement Phase of the BC EA process		Q3 2021
IAAC issues acceptance letter to Skeena Resources		Q3 2021
Skeena Resources engagement with TCG, TSKLH, Nisga'a, Gitanyow, local governments and stakeholders on IPD	Q3 2021	Q3 2021
BC EAO makes substitution request		Q3 2021
Joint (IAAC and BC EAO) public comment period on IPD		Q3 2021
Joint (IAAC and BC EAO) Engagement and Public Information Sessions		Q3 2021
IAAC and BC EAO issue Summary of Issues/Engagement and direction for DPD		Q4 2021
Technical Advisory Committee/Community Advisory Committee formed		Q4 2021
Skeena Resources submits DPD to BC EAO and IAAC in fulfilment of BC EAA and IAA requirements		Q4 2021
IAAC issues notification regarding Impact Assessment Determination		Q1 2022
BC EAO issues a Decision		Q1 2022
Skeena Resources engagement with TCG, TSKLH, Nisga'a, Gitanyow, local governments and stakeholders	Q2 2021	Ongoing
Federal Minister issues substitution decision		Q1 2022
BC EAO issues Process Order		Q2 2022
Skeena Resources submits Draft EA/Impact Statement to BC EAO		Q3 2022
BC EAO releases direction for Final EA/Impact Statement		Q4 2022
Skeena Resources submit Final EA/Impact Statement		Q1 2023
BC EAO releases Assessment Report		Q2 2023
BC EAO / IAAC decisions		Q2 2023
EA Certificate Issued		Q2 2023
Permitting	Q4 2022	Q2 2024
Construction		Y2 - Y0
Start of mining operations		Y0 – Y12

5.4 Other Agreements

Agreements that will facilitate Project engagement with the Nisga'a Nation include the Nisga'a Final Agreement (NFA) which came into effect in 2000 (Government of Canada, Government of BC and Nisga'a Nation 2000). The NFA establishes three categories of lands with different specified Nisga'a interests: Nisga'a Lands (approximately 2,000 km^2), the Nass Wildlife Area (NWA; more than 16,000 km^2), and the Nass Area (approximately 27,000 km^2, incorporating Nisga'a Lands and the NWA within it). The NFA affords title to Nisga'a Nation within Nisga'a Lands and defines the rights of Nisga'a Nation to self-government and law-making authority in this area. The NFA also specifies Nisga'a Nation rights to access and make use of natural resources in the NWA and the Nass Area (NLG, Province of BC, and Government of Canada 1998).

The Project is located within the Unuk River watershed in the Ketchum Creek and Tom MacKay creek tributary watersheds, approximately 40 km upstream from the Alaska/BC border across the Unuk River. The Unuk River watershed, and proposed/operating mines within it, fall under the *2015 Memorandum of Understanding and Cooperation (MoU*) between the State of Alaska and Province of BC, like other transboundary rivers. The MoU formalizes the mutual agreement to protect and enhance the shared environment, including transboundary rivers, watersheds and fisheries, for the benefit of both jurisdictions. The MoU established a Bilateral Working Group (BWG), which had three priorities: establish and oversee a technical working group on water monitoring; look for opportunities to build on and enhance participation in mine project EAs and permitting; and identify and share reports on mine discharges, operations and closures.

In November 2017, the BWG approved a two-year joint water quality monitoring program to collect and share seasonal aquatic information in the Taku, Stikine, and Unuk watersheds, in order to characterize aquatic conditions. The joint WQ monitoring program by BC/AK was to characterize the overall health of the transboundary watersheds and monitor potential impacts from mining operations and other industrial development. The sampling program operated in 2018 and 2019, collecting water quality, sediment quality, and benthic invertebrate and fish tissue chemistry data. The Taku River Tlingit First Nation (TRTFN) and the Tahltan Central Government (TCG) have been involved in the monitoring program. The latest monitoring report was released in March 2020 (Torunski 2020). As of May 2021, the BWG recommended that the WQ monitoring program not continue after finding good agreement between the BC/AK results and mining proponent monitoring programs, and that the collected data did not show measurable impact to Alaskan waters from historical mining activities in BC, particularly in the Unuk River with one operating mine (Brucejack Mine), the closed Eskay Creek Mine and the proposed KSM Project (Government of BC news release February 25, 2021).

The Project design is being guided by environmental and social design principles designed in conjunction with Tahltan from the Tahltan Central Council's 1987 *Tahltan Resource Development Policy.* Additional details are provided in Section 6.0.

Potential effects assessed under the IAA must consider any changes to the environment that, as a result of carrying out the project, may occur on federal lands, in a province other than the province in which the project is proposed to be carried out or outside Canada. The Project's EA/Impact Statement will include an assessment of potential effects on downstream resources.

6.0 INDIGENOUS INTERESTS AND LOCATION

This section discusses Skeena Resources preliminary understanding of Indigenous interests and how the Project might interact with those interests. Skeena Resources has identified four potentially impacted Indigenous Groups (Tahltan Nation (Figures 6-1 and 6-5), TSKLH (Figure 6-2), Nisga'a Nation (Figure 6-3) and Gitanyow Nation (Figure 6-4). The Indigenous groups and Métis people and MNBC are collectively referred to as Indigenous Peoples.

Skeena Resources is committed to early, inclusive and meaningful engagement with Indigenous Peoples. Engagement on the Project is discussed in the Engagement Plan posted to ePIC and a summary of engagement is provided in Section 9.

Tahltan Nation

The Project is located within Tahltan Nation territory and the closest communities to the Project are the Tahltan communities of Iskut (135 km to the north or 170 km via road) and Dease Lake (190 km to the northeast or 253 km via road). The Tahltan community of Telegraph Creek is 142 km to the north or 362 km via road. The Tahltan Nation territory encompasses about 95,933 km^2. The Project location in relation to Tahltan territory, Tahltan communities and Tahltan reserves is shown on Figure 6-1. Proximity of the Project to Indigenous reserves is illustrated on Figure 6-5.

As part of the collaborative effort to develop this IPD, the Tahltan Nation's representatives contributed the following text in italics.

The Tahltan are an Athabaskan-speaking people who inhabit the Stikine Country of the northern interior of BC. The Tahltan Nation is comprised of two Nations – the Tahltan Nation and the Iskut Nation – and is governed by a combined tribal council-type organization: the Tahltan Central Government. Tahltan territory encompasses about 93,500 km^2. In the west, the boundary runs parallel to the Alaskan border. In the northeast, it reaches into the Yukon, just west of Watson Lake. The eastern boundary is situated at the height of land between the Stikine and Kechika watersheds, and the southern boundary extends to the mouth of the Iskut River. The south/eastern border includes the upper Nass tributaries and western half of the Stikine plateau, including the sacred headwaters of the Stikine, Nass and Skeena rivers.

The Tahltan Nation's identity and the essence of who we are as a distinct society is integrally tied to Tahltan lands and the wealth of the resources therein. The Tahltan people rely on the same territory and resources that sustained our ancestors for Tahltan society to continue in the future. Tahltan people continue to practice their traditional economy which includes fishing, hunting, and gathering as well as participating in the modern economy located within and outside of our traditional territory.

The Tahltan Nation has three principal communities: Telegraph Creek, Iskut, and Dease Lake. There are also culturally important villages and assembly sites throughout the Nation, such as, the Tahltan Village, an historic site located at the junction of the Tahltan and Stikine Rivers that was also the traditional summer dwelling place for the Tahltan people. The Tahltan Nation has 16 reserves as part of the Tahltan Band Council and Iskut First Nation.

The Tahltan Central Government (TCG) is the administrative governing body of the Tahltan Nation. The Iskut Band and the Tahltan Band continue to govern Tahltan interest in respect of the Indian Act *but have endorsed the TCG as the representative government of the Tahltan Nation in respect of inherent Aboriginal title and rights. The board of the TCG is comprised of one representative from each of the ten Tahltan families; the executive consists of a President, Vice-President, and Secretary-Treasurer. The executive is elected, for three year terms, at the annual general assembly (AGA) held each summer; the family representatives are elected by the families each year and elected/ratified at the AGM* [Annual General Meeting]*.*

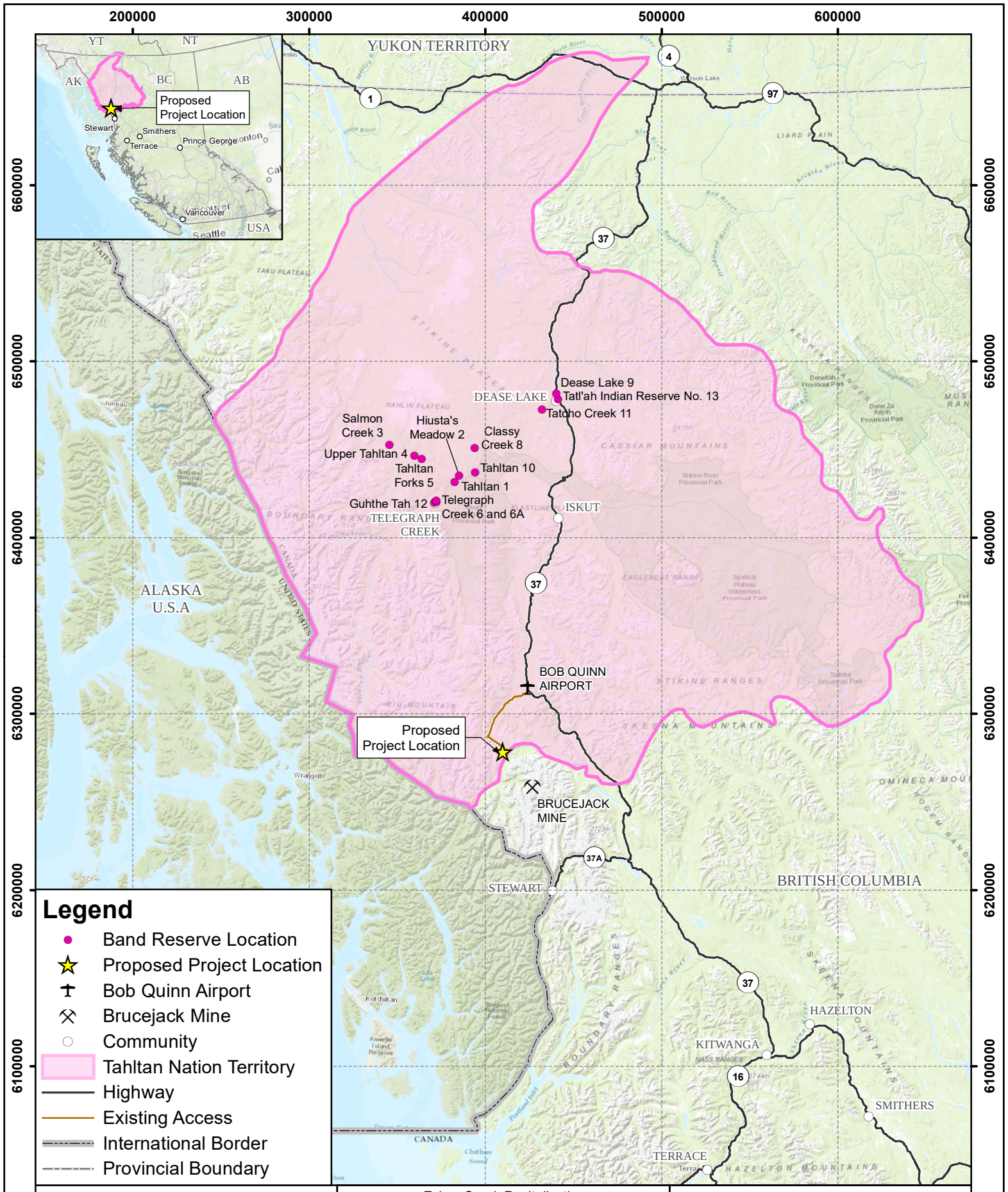
The TCG is responsible to define and protect Tahltan inherent aboriginal rights and title, to protect the eco-systems and natural resources of Tahltan traditional territory through pursuing sustainable economic development, and to strengthen the cultural wellness of the Tahltan Community by promoting traditional values based on the concepts of caring, sharing, cooperation, truth, honour, fairness and above all, respect..

The guiding principle of the Tahltan Central Government remains the Declaration of the Tahltan Tribe. In 1910, as part of a growing movement to assert First Nations rights on the coast and the southern interior of BC, the chief of the Tahltan Nation, Chief Nanok along with 80 other members of the tribe signed the declaration. The document claims sovereignty over Tahltan land and declares any land interests concerning the traditional territory of the Tahltan Nation to be settled directly with the Tahltan people. It represents a legal declaration of rights of Tahltan individuals to the Canadian government and British monarch. Tahltans have yet to extinguish their Aboriginal title by any other legal process.

Across Canada, the TCG represents approximately 6000 Tahltan Nation members living on- and off-reserve. About one-third (2,000 Tahltan Nation members) live in Tahltan territory, though not all are living on reserve lands, while the remaining 4,000 people live across Canada (Tahltan Nation Development Corporation 2020).

The Project design is being guided by the environmental and social design principles from the Tahltan Central Council's 1987 *Tahltan Resource Development Policy* to ensure the Project would:

- Not pose a threat of irreparable environmental damage;
- Not jeopardize, prejudice or otherwise compromise the outstanding Tahltan aboriginal rights claims;
- Provide more positive than negative social impacts on Tahltan people;
- Provide opportunity for the widest possible opportunity for education and direct employment-related training for Tahltan people in connection with the project;
- Provide opportunity for substantial equity participation by Tahltans in the total project;
- Provide opportunity for the widest possible development of Tahltan business opportunities over which the developer may have control or influence; and
- Assist the Tahltan to accomplish the objectives stated above by providing financial and managerial assistance and advice where deemed necessary.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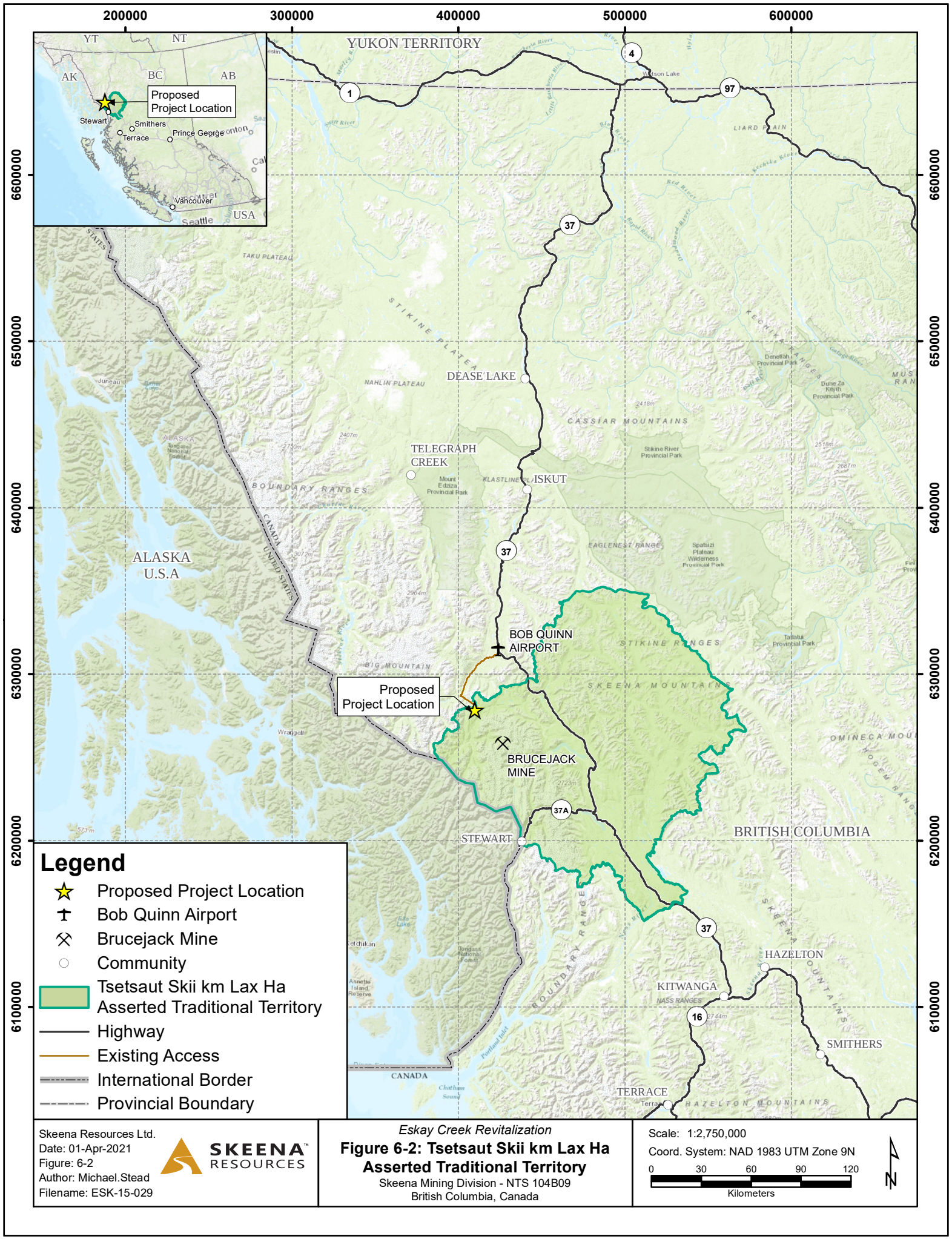
Proposed Project Location
Stewart
Smithers
Terrace
Prince George
Vancouver
Seattle
USA
YUKON TERRITORY
Dease Lake 9
Tatl'ah Indian Reserve No. 13
DEASE LAKE
Tatogga Creek 11
Salmon Creek 3
Hiusta's Meadow 2
Classy Creek 8
Upper Tahltan 4
Tahltan Forks 5
Tahltan 10
Tahltan 1
Guhthe Tah 12
Telegraph Creek 6 and 6A
TELEGRAPH CREEK
ISKUT
ALASKA U.S.A
BOB QUINN AIRPORT
Proposed Project Location
BRUCEJACK MINE
STEWART
BRITISH COLUMBIA
HAZELTON
KITWANGA
SMITHERS
TERRACE
CANADA
1
4
37
97
37A
16
Legend
Band Reserve Location
Proposed Project Location
Bob Quinn Airport
Brucejack Mine
Community
Tahltan Nation Territory
Highway
Existing Access
International Border
Provincial Boundary
Skeena Resources Ltd.
Date: 01-Apr-2021
Figure: 6-1
Author: Michael.Stead
Filename: ESK-15-028
SKEENA RESOURCES
Eskay Creek Revitalization
Figure 6-1:
Tahltan Nation Territory
Skeena Mining Division - NTS 104B09
British Columbia, Canada
Scale: 1:2,750,000
Coord. System: NAD 1983 UTM Zone 9N
0 30 60 90 120
Kilometers
N



Legend

- Proposed Project Location
- Bob Quinn Airport
- Brucejack Mine
- Community
- Tsetsaut Skii km Lax Ha Asserted Traditional Territory
- Highway
- Existing Access
- International Border
- Provincial Boundary

Skeena Resources Ltd.
Date: 01-Apr-2021
Figure: 6-2
Author: Michael.Stead
Filename: ESK-15-029

SKEENA RESOURCES

Eskay Creek Revitalization

Figure 6-2: Tsetsaut Skii km Lax Ha Asserted Traditional Territory

Skeena Mining Division - NTS 104B09
British Columbia, Canada

Scale: 1:2,750,000
Coord. System: NAD 1983 UTM Zone 9N

0 30 60 90 120
Kilometers

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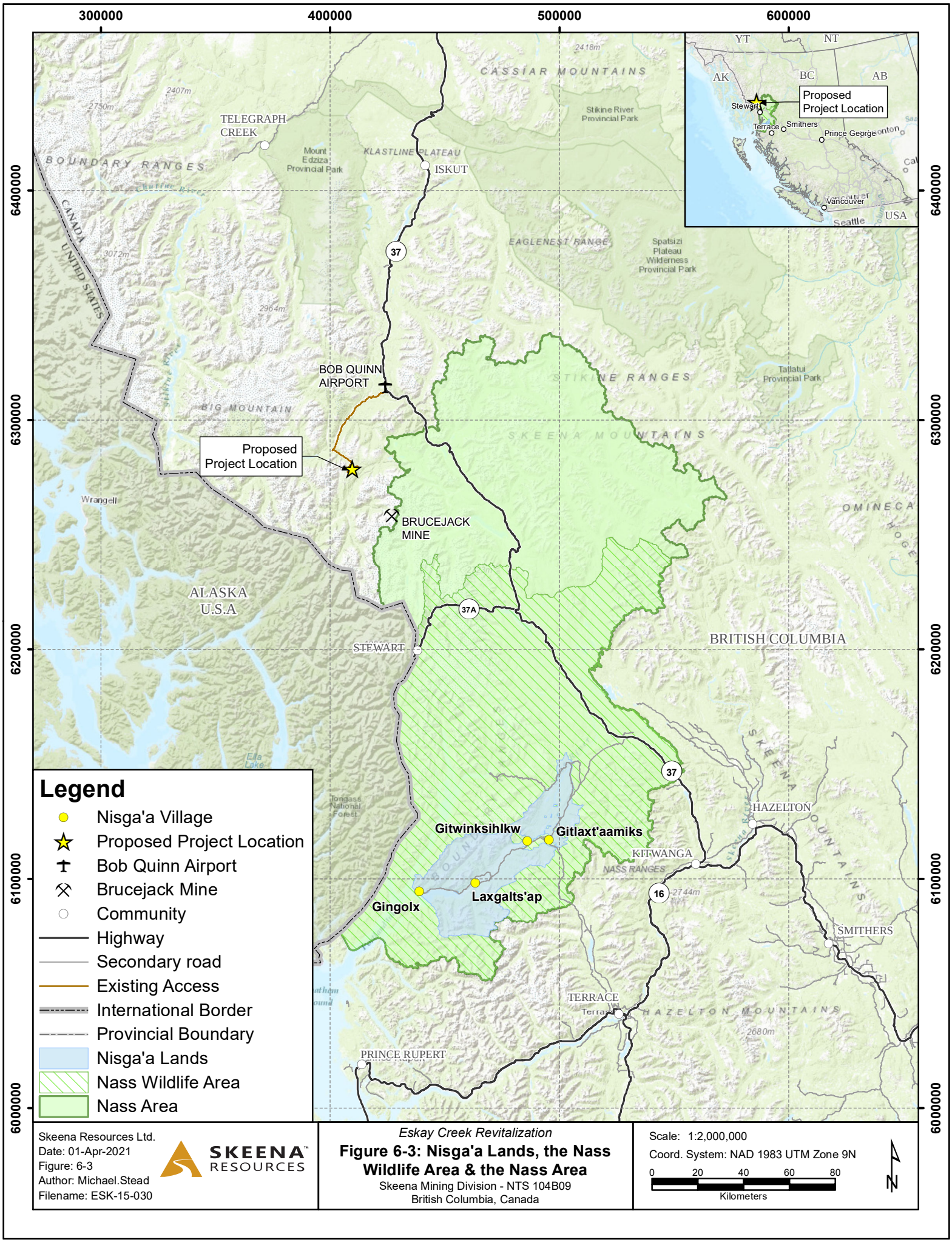
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CASSIAR MOUNTAINS
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2407m
2750m
TELEGRAPH CREEK
Mount Edziza Provincial Park
KLASTLINE PLATEAU
ISKUT
BOUNDARY RANGES
Stikine River Provincial Park
EAGLENEST RANGE
Spatsizi Plateau Wilderness Provincial Park
3072m
2964m
CANADA
UNITED STATES
37
BOB QUINN AIRPORT
BIG MOUNTAIN
STIKINE RANGES
Tatlatui Provincial Park
SKEENA MOUNTAINS
Proposed Project Location
Wrangell
BRUCEJACK MINE
OMINECA
ALASKA U.S.A
37A
STEWART
BRITISH COLUMBIA
Ella Lake
Tongass National Forest
37
HAZELTON
Gitwinksihlkw
Gitlaxt'aamiks
KITWANGA
NASS RANGES
Gingolx
Laxgalts'ap
16
2744m
SMITHERS
TERRACE
HAZELTON MOUNTAINS
2680m
PRINCE RUPERT
YT
NT
AK
BC
AB
Proposed Project Location
Stewart
Terrace
Smithers
Prince George
Vancouver
Seattle
USA
Legend
Nisga'a Village
Proposed Project Location
Bob Quinn Airport
Brucejack Mine
Community
Highway
Secondary road
Existing Access
International Border
Provincial Boundary
Nisga'a Lands
Nass Wildlife Area
Nass Area
Skeena Resources Ltd.
Date: 01-Apr-2021
Figure: 6-3
Author: Michael.Stead
Filename: ESK-15-030
SKEENA RESOURCES
Eskay Creek Revitalization
Figure 6-3: Nisga'a Lands, the Nass Wildlife Area & the Nass Area
Skeena Mining Division - NTS 104B09
British Columbia, Canada
Scale: 1:2,000,000
Coord. System: NAD 1983 UTM Zone 9N
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Kilometers
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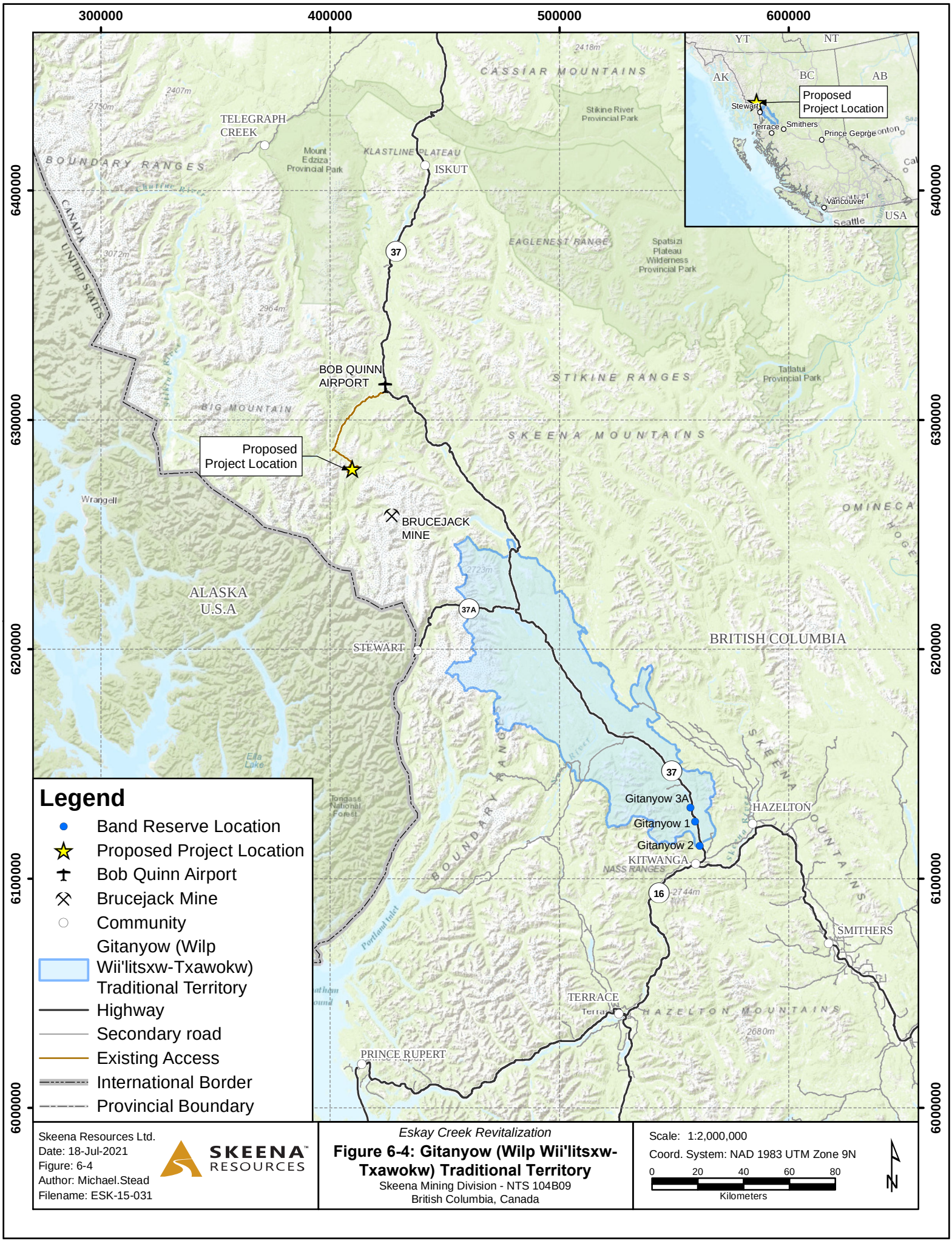
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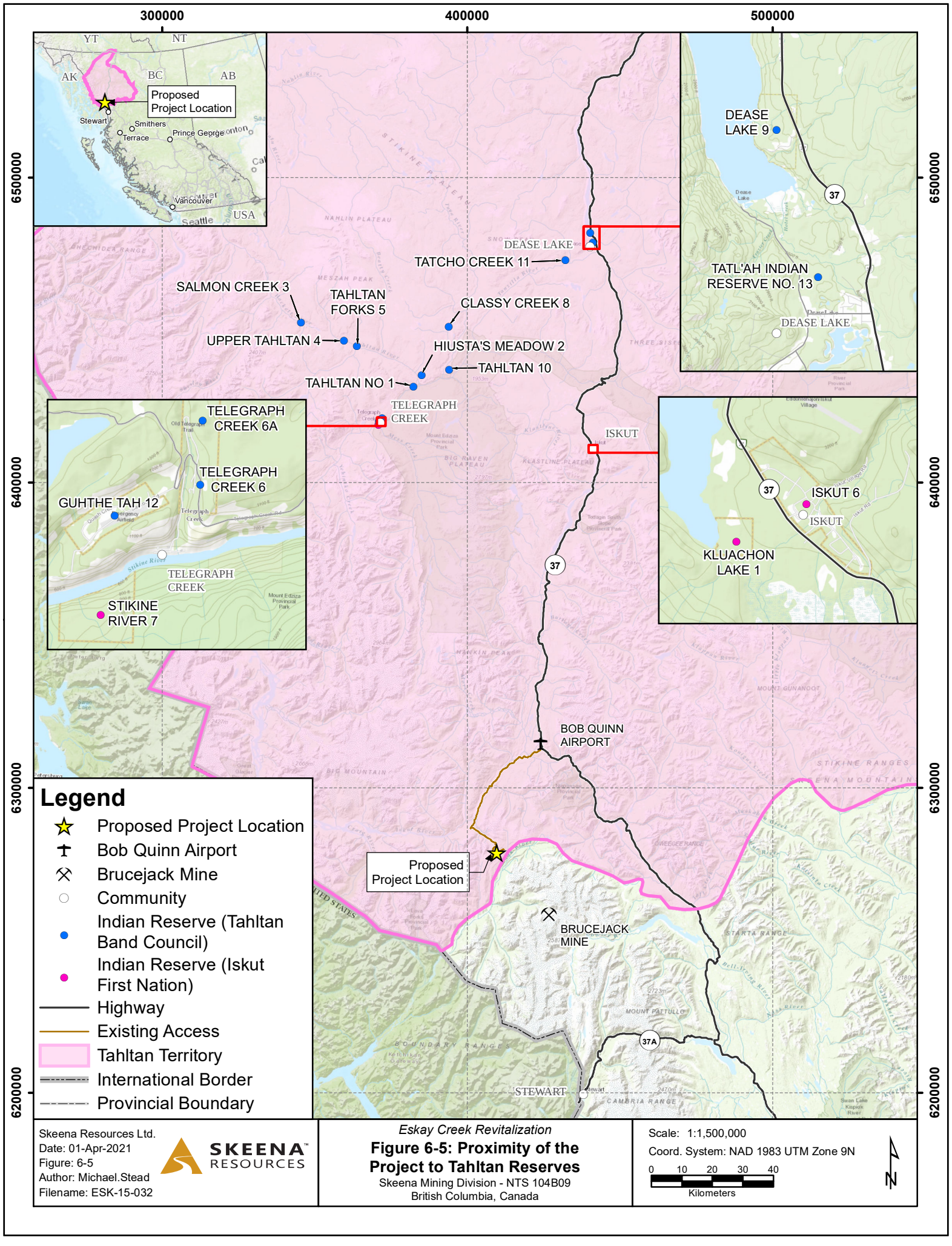
CASSIAR MOUNTAINS
2418m
2407m
2750m
TELEGRAPH CREEK
Mount Edziza Provincial Park
KLASTLINE PLATEAU
ISKUT
BOUNDARY RANGES
Stikine River Provincial Park
EAGLENEST RANGE
Spatsizi Plateau Wilderness Provincial Park
3072m
2964m
CANADA
UNITED STATES
37
BOB QUINN AIRPORT
STIKINE RANGES
Tatlatui Provincial Park
BIG MOUNTAIN
SKEENA MOUNTAINS
Proposed Project Location
Wrangell
BRUCEJACK MINE
OMINECA
ALASKA U.S.A
2723m
37A
STEWART
BRITISH COLUMBIA
Ella Lake
Tongass National Forest
BOUNDARY RANGES
37
Gitanyow 3A
Gitanyow 1
Gitanyow 2
HAZELTON
KITWANGA
NASS RANGES
16
2744m
SMITHERS
TERRACE
HAZELTON MOUNTAINS
2680m
PRINCE RUPERT
YT
NT
AK
BC
AB
Proposed Project Location
Stewart
Terrace
Smithers
Prince George
Vancouver
Seattle
USA
Legend
Band Reserve Location
Proposed Project Location
Bob Quinn Airport
Brucejack Mine
Community
Gitanyow (Wilp Wii'litsxw-Txawokw) Traditional Territory
Highway
Secondary road
Existing Access
International Border
Provincial Boundary
Skeena Resources Ltd.
Date: 18-Jul-2021
Figure: 6-4
Author: Michael.Stead
Filename: ESK-15-031
SKEENA RESOURCES
Eskay Creek Revitalization
Figure 6-4: Gitanyow (Wilp Wii'litsxw-Txawokw) Traditional Territory
Skeena Mining Division - NTS 104B09
British Columbia, Canada
Scale: 1:2,000,000
Coord. System: NAD 1983 UTM Zone 9N
0 20 40 60 80
Kilometers
N



Skeena Resources Ltd.
Date: 01-Apr-2021
Figure: 6-5
Author: Michael.Stead
Filename: ESK-15-032

SKEENA RESOURCES

Eskay Creek Revitalization

Figure 6-5: Proximity of the Project to Tahltan Reserves

Skeena Mining Division - NTS 104B09
British Columbia, Canada

Scale: 1:1,500,000
Coord. System: NAD 1983 UTM Zone 9N
0 10 20 30 40
Kilometers
N

Tahltan Land Use in the Project Proximity has been documented by a *Tahltan Knowledge/ Traditional Land Use Study* (Jones, Gray and McLaren 2020) commissioned by Skeena Resources and completed by the Tahltan in November 2020. A summary of the land use perspective provided by the Tahltan is included below:

The study area is in southwestern Tahltan traditional territory and is dominated by high mountain ranges and extensive glaciers. "Forests of spruce, fir, cedar and hemlock cover the mountain slopes to the limit of tree growth, while in the river valleys cottonwoods grow to considerable size, and groves of alder and willow, with the devil's club and berry bushes, form an almost impenetrable barrier" (Emmons 1911: 9). Annual precipitation equals if not exceeds that of the coast. The summers are wet and cool. In the winter, the heavy snow is deep, with frequent snowslides at higher elevations. Because of the excessive snowfall, the lower river flats remain covered in snow and ice long after spring has arrived in the colder interior. Despite the harshness of the terrain and climate, all the ethnographic and historical sources agree with the Tahltan assertion that their territory extended to the confluence of the Iskut and Stikine rivers (see, e.g., MacLachlan 1981; Albright 1984). One of the earliest recorded accounts of Tahltan territory comes from the geographer George Dawson, who travelled up the Stikine in the 1880s: "The Tahltan claim the hunting-grounds as far down the Stikine, coastward, as the mouth of the Iskoot River, together with all the tributaries of the Iskoot and some of the northern sources of the Nass, which interlock with these" (1888: 192b). G. T. Emmons, who did field work in the area in the first decade of the twentieth century, confirms this picture: "… their hunting grounds, however, cover an extended area including the drainage basin of the Stikine and its tributaries as far down as the mouth of the Iskoot ..." (1911: 6).

The importance of this region had, in part, to do with the resources provided by the rivers and forests: martin, beaver, mink, wolverine, bear, goats, wolves, fishers, trout and salmon. Another more significant reason was the trade that travelled up the rivers and trails. Until the discovery of gold in the Cassiar region in the 1860s radically altered the conditions and patterns of life for everyone in the northwest, the Tahltan jealously guarded their position as middlemen in a coast-interior trade network which stretched from the Pacific coast to the boreal forests east of the Rocky Mountains, and extended back in time over centuries. With the coming of the European fur trade, there was a dramatic increase in the wealth and status that could be acquired through controlling the coast-interior trade networks. This development escalated and sharpened rivalries between interior groups. As will be discussed in the next part of this report, the Tahltan extended their territory to the west and the south early in the nineteenth century, attacking the Tsetsaut on the Unuk River and driving them down to the coast. On the upper Nass, they established themselves as far south as Meziadin Lake. It appears that they also attempted to gain access to the trade on Portland Canal.

While the Iskut River was also used for trade, it was perhaps more important for the Tahltan as a travel corridor, as it provided relatively easy access via the Ningunsaw River to the country draining into the west branch of the upper Nass River. The Tahltan maintained control over the country around Meziadin Lake until roughly the 1860s, and Oweegee, just north of Bowser Lake, remained a principal village and fishing site until the turn of the century. They frequently travelled back and forth between their villages on the Iskut and upper Nass and the tribal headquarters at the confluence of the Stikine and Tahltan rivers, using ancient trails that followed the course of rivers, including Treaty Creek, Ningunsaw River, Unuk River and the Iskut.

The seasonal rounds of Tahltan subsistence activities involved frequent moves between fall, winter and spring camps, a pattern of life that was well adapted to exploiting the various resources the country provided (Albright 1984: 89). Summer village sites were located on the Stikine or at major creek crossings and lake outlets with favourable fishing conditions. By late summer, extended families of 15-25 people dispersed to the tributary creek valleys located between the alpine meadows and subalpine forest. Here they lived in lean-to shelters and hunted marmot, gopher, sheep, goat, bear, caribou and ptarmigan, and collected a variety of berries. During the winter, clan families gathered at large hunting camps in the forested valleys to hunt woodland caribou and other ungulates. In early spring, small groups gathered at smaller lakes and streams to fish, trap small game, and gather edible plants. The terrain and climate of the Coast Mountains, on the other hand, with winters that lasted much longer than in the interior, did not lend themselves to this kind of flexibility. On the contrary, Tahltan who chose to overwinter there found that they were to a large extent dependent on the vagaries of chance for their livelihood. As a Tahltan elder comments: "They mostly lived on goats … because they came down with the snowslides" (Tahltan elder 2005).

The information in this section is based on material from the TAS database, supplemented with material from the ethnographic literature. The earliest ethnographers (G. T. Emmons, James Teit and the Rev. T. P. W. Thorman) spent long periods in Tahltan village in the first two decades of the twentieth century. They gathered their information from Tahltan elders whose memories stretched back to a time when Tahltan patterns of life had not yet been disrupted by Europeans.

A Tahltan elder (1984) describes the life of her grandparents at Oweegee on the Nass. "This is our country, my grandmother and her people work on salmon, dry their salmon. The name of this place is Oweegee, near the mouth of Nass and there's a fall there. And from there, when they come this way [the interview is at Telegraph Creek], they travel along the lakes – this is in the spring – where they catch some small salmon or trout. This is after they use up, use up what they put up in the fall for the winter, and in the spring, they travel along these lakes [e.g., Kinaskan, Mowdade, Mowchilla, Kakiddi and Nuttlude Lakes]. They set up these fish traps at night and they had two women sitting on the bank watching their traps and watching their fish going up into the traps. Whenever they set these traps they have, they peel a tree, and put the tree in the water and set the traps near this tree. They cover these traps up so it will be dark, so that the salmon won't see the traps. And they could see the salmon jumping into the traps. … They make sure it's very quiet around, because if the fish hears any noise, they'll go back down the river." One of the elder's comments appears to address the impact of the fur trade on the beaver population in the region: "There wasn't very many beaver at that time because the people were killing them off." The elder describes other aspects of the seasonal round: "Also bear and grizzly bear, they have hunt dogs to hunt these animals with. And they put up the meat and the grease for their winter use." Treaty Creek was called Kas Xoo, which means "grizzly bear creek," suggesting that this was a popular area to hunt grizzly bears. Ningunsaw River valley is also described as a good place for hunting grizzly bear. "In the fall, they go up the mountain and snare the groundhogs. They make snares out of sinew and babiche, twist it together, and they had the men to help them set the snares. … To keep the meat, they make bags out of salmon, dry salmon skin, after they take the meat off the salmon, what they eat, they keep the skin and they sew bags out of the dry salmon skin and then they put the meat inside of it and keep it for the winter." With the coming of the first snow, they would fish for coho in the rivers using gaffs. "And when the coho is dry, they store them in a cool place, they dig holes in the ground where they store the coho." Thorman

(n.d.) describes in great detail the system of cold storage developed by the Tahltan. According to Thorman, it was the storage pit or duwe'ged (meaning "a safe place dug") that gave the Tahltan a measure of security in their winter food supplies not enjoyed by other Athapaskan groups, and provided the material basis for their strength as a people.

According to a Tahltan elder (1984), the only time her grandparents and their people (the "Nathcotena," as she says, or the Naskoten) would go to Tahltan village was when they were having a potlatch. Then they would send the young men out to gather supplies for the feast. "And when that's all over they all go back to their own country [meaning the upper Nass]." The principal river for fishing was Oweegee tua or Oweegee Creek, which empties into the Bell-Irving above Bowser Lake. Two Tahltan elders (1983 and 1984) both describe hunting and trapping trails that run from Oweegee up the Bell-Irving River to its headwaters, and then over a number of passes into the Klappan watershed, or down Konigus Creek (konigus tua, meaning "all broken up creek," which refers to the trees and bushes damaged by the flooding waters) to the east branch of the upper Nass. In the fall, the Naskoten hunted "groundhog" or ground squirrel in this high country. Other trails connected to the Iskut valley by way of the Ningunsaw River (Tahltan elder 1983; Tahltan elder 2009) or Treaty Creek and the Unuk River (Tahltan elder 1984). A Tahltan elder describes the entire region around Bowser Lake as "Nathcotena country." Figure 12 (note – not included in this document) *shows the boundaries of Tahltan clan territories. It is based on a map produced by Teit, generally regarded as accurate. As can be seen, the Eskay Creek mine site falls within Naskoten territory.*

Skeena Resources is working collaboratively with the Tahltan on a social baseline study and measures to identify and manage potential effects.

TSKLH

The Project is within the asserted TSKLH traditional territory as shown on Figure 6-2. The majority of the TSKLH members reside in Hazelton, located approximately 235 km southeast of the Project. The asserted TSKLH traditional territory encompasses 19,800 km^2, which extends from the north side of the Cranberry River in the south to Beaver Pond in Ningunsaw Pass in the north (Pretium 2014a). The TSKLH do not have any reserves.

Project Location relative to Nisga'a Nation and Gitanyow Nation

Highways 37 and 37A will be used by Project traffic and pass through the Nass Area and Nass Wildlife Area (as defined in the Nisga'a Final Agreement) and the traditional territory of the Gitanyow Nation. No effects from the Project are anticipated on the Nass Watershed. Figure 6-3 identifies the Project location in relation to Nisga'a Lands, Nass Wildlife Area and Nass Area. The Project is 16.8 km from the Nass Area. Figure 6-4 identifies the Project location in relation to the Gitanyow traditional territory and Gitanyow reserves.

Potential Interests in Relation to the Project

Potential Project impacts on Indigenous interests will be identified through ongoing engagement. Indigenous interests that have been identified by the Tahltan, TSKLH, Nisga'a and Gitanyow based on engagements to date and Indigenous interests that have been identified during EA

reviews of the Brucejack and KSM mine projects in northwestern BC are summarized in Table 6-1. Potential Indigenous interests have been compiled from the following documents:

- Brucejack Gold Mine Project: Socio-economic Baseline Report, Appendix 19-A. Pretium Resources Inc. 2014. Brucejack Gold Mine Project, Application for an EAC.
- Tsetsaut / Skii km Lax Ha Traditional Knowledge and Traditional Use Report, Pretium Resources Inc. 2014. Brucejack Gold Mine Project, Application for an EAC.
- Application for an EAC / Environmental Impact Statement for the KSM Project. Prepared by Rescan Environmental Services Ltd. for Seabridge Gold Inc., May 2013.

Given the early stage of the assessment process, Project-specific mitigations are still in development. Skeena Resources will work with the Technical Advisory Committee that is formed as part of the assessment process and Indigenous Peoples to further identify and assess potential approaches to address their interests and concerns.

Table 6-1 Potential Indigenous Interests Related to the Project[5]

Indigenous People	Indigenous Interest	Potential Project Actions
Tahltan	• Concerned about potential social impacts and impacts on fisheries and wildlife. • Interested in education, training and employment benefits. • Interested in opportunities to develop Tahltan businesses and development of business skills. • Interested in developing a management regime that minimizes impacts on water resources, wildlife, fisheries, culturally important areas and protects health and safety of community. • Incorporating Tahltan Knowledge (TK) into design and assessment of Project. • Interested in maximizing energy efficiency. • Approach to EA process best suited to meet Tahltan rights and title.	• Skeena Resources is discussing options for siting Project components with the TCG. • THREAT is invited to collaborate in Working Groups related to Project design (Waste Rock/tailings), environmental management (water, wildlife), Socio-economics and reclamation and closure. • Incorporate the results of the traditional land use study into the Project design, effects assessments and mitigations. • Engage Tahltan on the design and development of environmental management system and management plans. • Continue and enhance development of mentorship, apprenticeship, on-the-job programs to provide education, work experience and skills training, and transferable knowledge. Tahltan hired to complete TK/Traditional Land Use Study to be utilized during effects assessment during EA.
TSKLH	• Possible concerns about impacts on TSKLH use of TSKLH trails and spiritual sites and cultural areas. • Interested in employment and contracting opportunities. • Possible concerns about impacts on water, wildlife and fisheries.	• Incorporate knowledge and traditional land use to Project design, effects assessments and mitigations. • Engage with TSKLH during the Early Engagement to understand and discuss TSKLH concerns and interests.

[5] Information sources include Canadian Environmental Assessment Agency Comprehensive Study Report (2014), Section 5.9 and EAO Assessment Report (2014), Part C.

Indigenous People	Indigenous Interest	Potential Project Actions
Nisg̲a'a	• Possible interest in employment and economic opportunities. • Possible concerns about Project traffic on highways 37 and 37A, including moose mortality, potential spill into watercourses due to accidents. • Possible concerns about Nisg̲a'a interests in the Nass Area and Nass Wildlife Area.	• Engage with Nisg̲a'a during the Early Engagement to understand and discuss Nisg̲a'a concerns and interests.
Gitanyow	• Possible interest in employment and economic opportunities. • Possible concerns about Project traffic on Highways 37 and 37A, including moose mortality, potential spills into watercourses due to accidents and effects on Gitanyow harvesters accessing areas from the highways.	• Engage with Gitanyow during the Early Engagement to understand and discuss Gitanyow concerns and interests.
MNBC	• Concerns about impacts on harvesting activities.	• Project notification to MNBC. • Review of MNBC database.

7.0 EXISTING PHYSICAL, BIOLOGICAL, AND HUMAN ENVIRONMENT

This section summarizes the existing physical, biological and human environment in the Project area based upon information available to date. Table 7-1 lists the historical baseline and permit monitoring studies that were undertaken in the Project area and identifies recent studies in progress for 2020/21 (see Appendix B for listing of historical and recent studies). As additional information is identified during the Early Engagement Phase, the references will be updated and incorporated as appropriate. Figure 7-1 shows the general area around the Project components where studies are underway or will occur.

Extensive biophysical studies were completed to support the 1993 application for a MDC for the Eskay Creek Mine and later permit amendments (Appendix B). Due to the age of the baseline assessments, Skeena Resources will undertake additional environmental, social, economic, heritage, and health studies in 2020/21 to meet current standards, to address refinement of the Project design, and reflect current regulatory requirements in support of provincial and federal EA submissions. Indigenous input to scope, nature and findings of baseline studies will be incorporated as part of ongoing and pending engagement work.

7.1 Physical Environment

The Project is located within the Prout Plateau, a rolling subalpine upland with an average elevation of 1,100 m (AMSL), on the eastern flank of the Boundary Ranges of the Coast Mountains between the Unuk River (south) and Iskut River (north). The area is characterized by steep mountains with isolated plateaus, high precipitation, shallow soils, and large rivers draining westward to the ocean (Figure 1-1). Relief over the Prout Plateau ranges from 500 m in the TMSF area to over 1,000 m in the Unuk River and Ketchum Creek valleys. The Eskay Creek Mine is at approximately 800 m elevation. Mountain slopes are heavily forested while the sub-alpine terrain around the mine site reflects sparser forest cover and forest type.

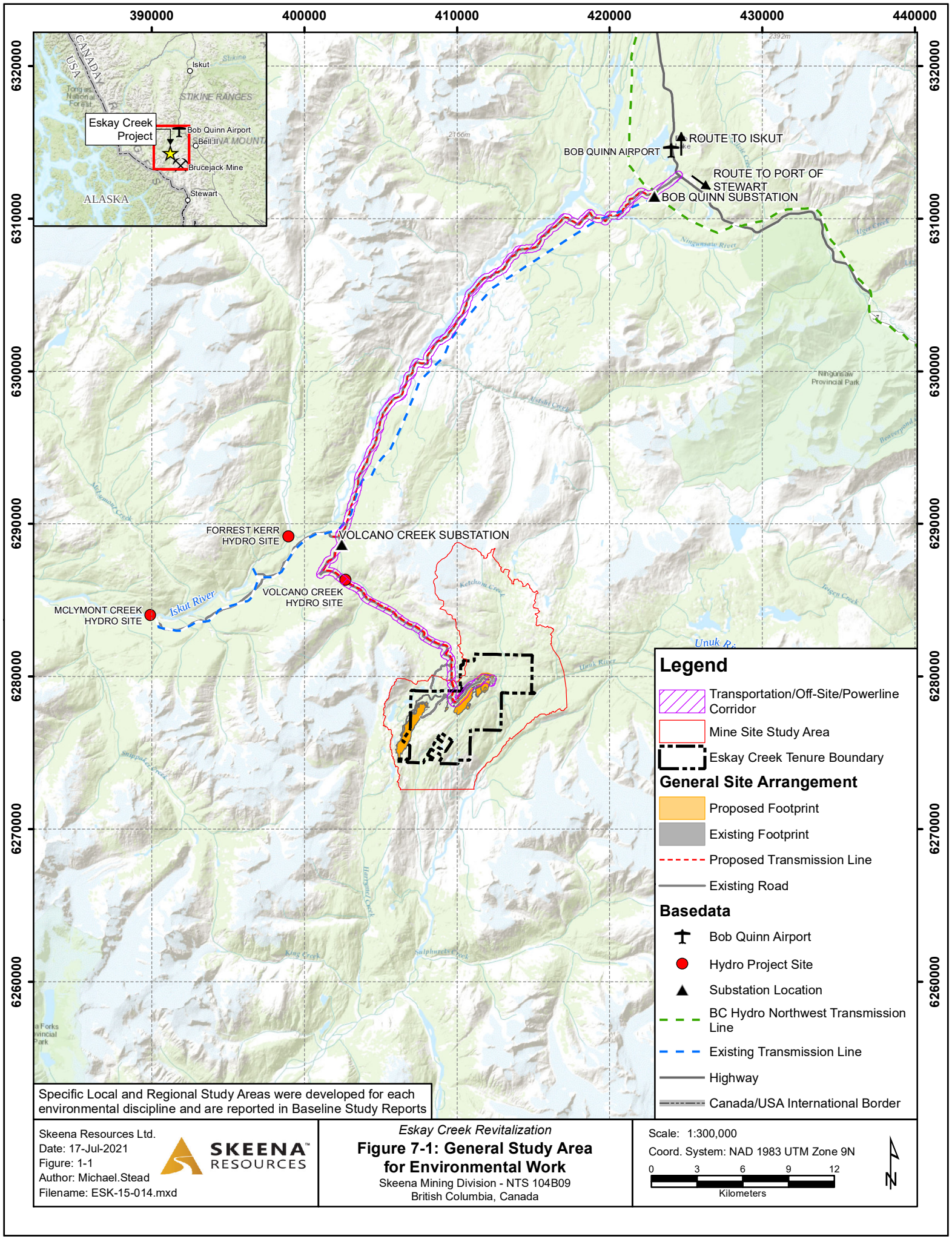
The mean annual total precipitation at the Eskay Creek Mine site is estimated to be 2,500 ± 500 millimetres (mm). The majority (55–71%) of annual precipitation falls as snow between September and May. The average temperature ranges from -10.4 degrees Celsius (°C) in January to +15°C in July (EC 2013). Expected extreme temperatures range from -40 °C to +30 °C (SRK 2019). Exploration and mine site activities can be curtailed by winter conditions due to extreme cold or heavy snowfall.

Regional snowpack data is available but the data is highly variable and location dependent. Snowpack data collected at the Project site between 1990 and 1993 found peak average snowpack (April) of 1,425 ± 567 mm (at elevation 930 m). Cumulative snowfall data collected between 1999 and 2006 ranged from approximately 7.5 m to 17.5 m between September and May. Although annual snowfall is high, the snow avalanche hazard is generally low, except for the Volcano Creek area along the Eskay Creek Mine Road between ASF and TMSF, and along the former TMSF tailings pipeline access road (SRK 2019).

Table 7-1 Summary of Historical and Current Environmental, Social and Human Baseline Studies

Discipline	Pre-Mine Studies	Mining and Post-mining Monitoring	Characterization of Current Conditions Studies	Study Activities
Climate	1990-1993, 1997, 2000	1995-2008	2009 - ongoing	• Installation of new on-site weather station • Installation of wind station
Air Quality	1990-1993, 1997, 2000	-	2020	• Desktop review and model of regional air quality • Dust canister on-site sampling
Noise	-	-	2020	• Noise measurements
Hydrology	1990-1993, 1997, 2000	Operations:1995-2008 Closure: 2008-present	2020-2021	• Modifying historical EA hydrology sites, including installation of dataloggers • Monthly water flow measurements of hydrology sites
Hydrogeology	1990-1991	1995-2008, 2017	2020-2021	• Installation of groundwater wells • Quarterly groundwater quality sampling
Fish and Fish Habitat	1989-1993	Periodically 1997-2011	2020-2021	• Fish surveys to confirm no fish bearing waters and fish barrier locations
Aquatic Resources	1989-1993	Periodically 1997-2011	2020-2021	• Summer benthic and sediment sampling
Water Quality	1990-1993, 1997, 2000	Operations:1995-2008 Closure: 2008-present	2020-2021	• Monthly surface water quality sampling at historical locations • Low-flow water quality sampling (5 in 30)
Wildlife	1990-1993	-	2020-2021	• Winter ungulate survey • Bird surveys • Fur-bearer survey
Ecosystems/Wetlands	1990-1993, 2000	-	2020-2021	• Field surveys of soil, plants, ecosystems, wetlands • Development of terrestrial ecosystem map, terrain stability map and predictive ecosystem map
Waste Characterization	1990-1993, 1997, 2000	2006, 2008	2020-2021	• Static testing of lithologies and new tailings • HCT of lithologies and new tailings • Barrel leach testing of lithologies

Discipline	Pre-Mine Studies	Mining and Post-mining Monitoring	Characterization of Current Conditions Studies	Study Activities
Socio-Economic	-	No longer applicable	2020-2021	• Project socio-economic desktop study • Tahltan socio-economic survey information collected in collaboration with Tahltan and Newcrest • Input-output model
Tahltan Knowledge/Traditional Land Use (TK-TLU)	-	-	2020	• Review of Tahltan territory knowledge and traditional land use within the Project area (Completed by THREAT) • Incorporate Taltan traditional in discipline studies subject to information sensitivity
Archaeology / Cultural Heritage	1990-1993	2018-2020 (exploration)	2020-2021	• *Heritage Conservation Act* permit amendment • Archaeological Impact Assessment (2018)
Human Health	-	-	2020-2021	• Baseline study, Human Health and Ecological Risk Assessment, Gender studies



Specific Local and Regional Study Areas were developed for each environmental discipline and are reported in Baseline Study Reports

Skeena Resources Ltd.
Date: 17-Jul-2021
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Author: Michael.Stead
Filename: ESK-15-014.mxd

SKEENA RESOURCES

Eskay Creek Revitalization

Figure 7-1: General Study Area for Environmental Work

Skeena Mining Division - NTS 104B09
British Columbia, Canada

Scale: 1:300,000
Coord. System: NAD 1983 UTM Zone 9N

0 3 6 9 12
Kilometers

N

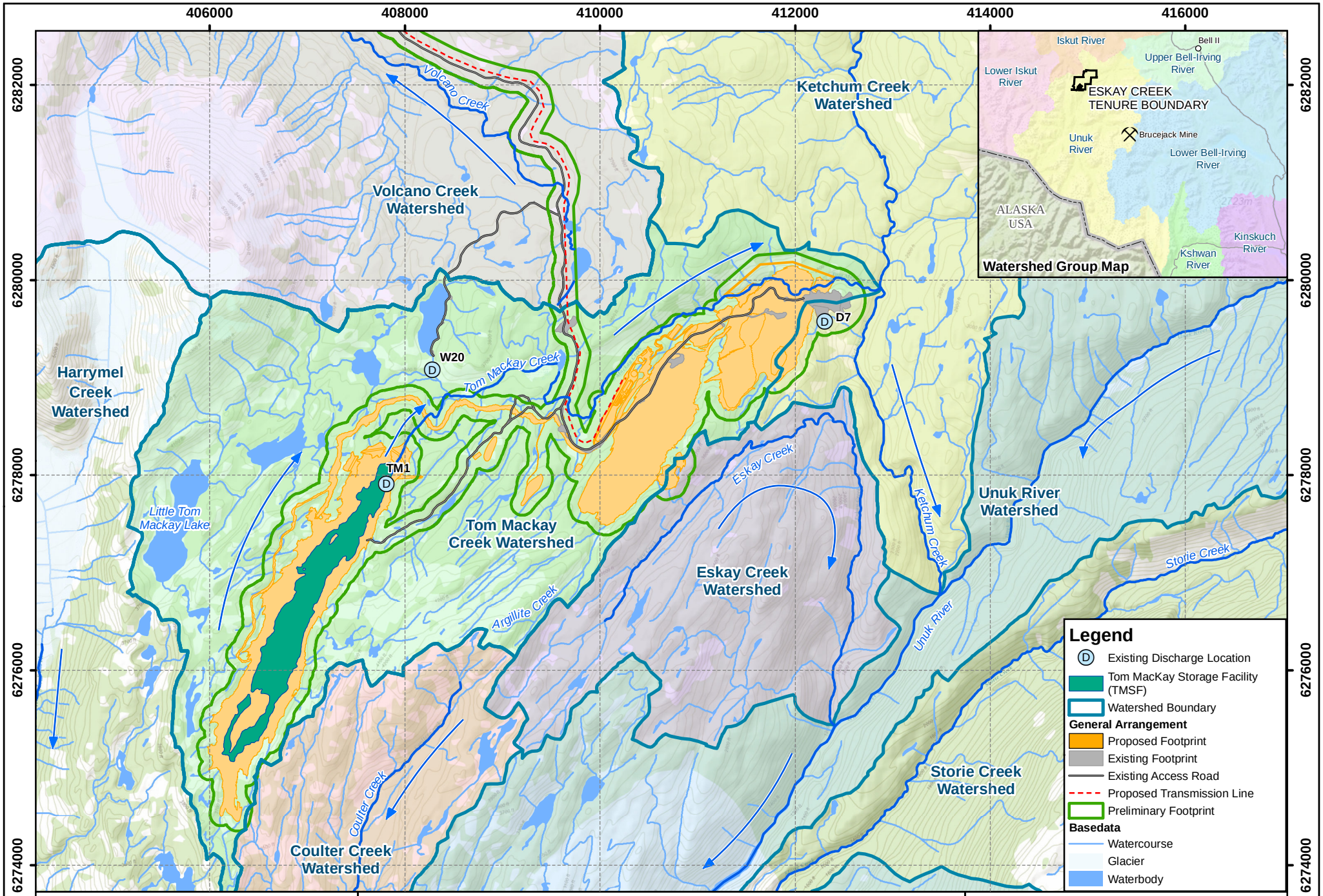
The surficial geology in the area is varied and includes till, colluvium at the base of bedrock outcrops and on steep slopes, organics in poorly drained depressions, and alluvium along streams and lake shorelines (SRK 2019). The moderate elevation (800 to 900 m) around the mine site, cool climate, lengthy snow cover, mineralized parent materials, mass wasting and vegetation processes affects overall mineral weathering and organic composition such that soil development can be weak. Soils vary in thickness over the plateau and include Humic Gleysols (poorly drained, often associated with wetlands/seepages), Cryosols (periodically frozen soils), and Regosols (weakly developed, well drained mineral soils in unconsolidated materials). These soils overlie deposits of glacial till over fragmented bedrock. The main erosional processes in the area include nivation (i.e., snow patch freeze/thaw), cryoturbation (frost churning) and solifluction/freeze-thaw cycles related to steep terrain, high moisture content and cold climate. Soil chemistry exhibits high levels of minerals in parent material with generally acidic soils (pH 4.3 to 6.0; HKP 1993).

The Prout Plateau is drained by tributaries of the Iskut, and Unuk rivers. Volcano Creek is adjacent to the Eskay Creek Mine Road and proposed powerline and drains north into the Iskut River, a major tributary to the Stikine River (Figure 7.1-1). The remainder of the plateau is drained to the south almost exclusively by tributaries to the Unuk River (Figure 7.1-1) including Tom MacKay, Argillite, Ketchum, Eskay and Coulter creeks. The gradient of these drainages increases as the creeks descend from the moderate relief of the Prout Plateau into the deeply incised Unuk River valley. The plateau is occupied by Tom MacKay, Little Tom MacKay and several smaller lakes as well as Argillite Creek, which collectively form the headwaters of the Tom MacKay Creek drainage system immediately adjacent to the mine site. Hydrological monitoring started in the early 1990s on these watersheds with intermittent or continuous data collection, depending on proximity to the mine site, presence of mine site discharges and permit requirements.

The streamflow regime of the area is driven by snowmelt with the majority of runoff occurring in the spring and early summer due to the melting winter snowpack. Typically a period of lower flow occurs throughout the late summer and early fall, when inputs from snow have diminished. Throughout the fall period, short-duration, high-intensity rain events may produce substantial peak events, leading to a bimodal distribution of spring and fall peaks. Annual low flows occur during the winter, when air temperatures remain below freezing and precipitation is stored as snowpack until spring. During the winter low-flow period, most stream flow is dominated by base flows from groundwater discharge. Some streams in the Iskut and Unuk watersheds have glacial inputs. Streams at lower elevations do not typically completely freeze over. Many of the streams are characterized by fast, turbulent flows and cascades, which helps to prevent ice build-up.

7.1.1 Surface Water Quality

Extensive data exists for characterization and monitoring of surface water quality during historical pre-mining baseline studies, operational mining (1995-2008) and post-mining periods. Surface water quality data is available for the Unuk River, Eskay Creek, Ketchum Creek, Argillite Creek, ASF outlet, and TMSF outlet at multiple locations upstream and downstream of the historical Eskay Creek Mine site. The frequency of monitoring has varied over time with intensive sampling during baseline data collection in 1991, followed by quarterly sampling to satisfy operating permit requirements, particularly since end of mining in 2008. Baseline studies in 2020/21 will be compared to the historical pre-development baseline, mining and post-mining water quality data to understand trends over the past 30 years.



Skeena Resources Ltd.
Date: 15-Jan-2021
Figure: 7.1-1
Author: Michael.Stead
Filename: ESK-15-016.mxd

SKEENA RESOURCES

Eskay Creek Revitalization

Figure 7.1-1:
Local Drainage

Skeena Mining Division - NTS 104B09
British Columbia, Canada

Scale: 1:50,000
Coord. System: NAD83 - UTM Zone 9N
0 0.5 1 1.5 2
Kilometers

N

Baseline water quality data from pre-1993 found the project area had two types of water quality; glacial fed streams and mountain runoff streams (no glacial inputs). Eskay and Tom MacKay creeks drain the plateau area immediately around the historical mine site and, prior to mine development in the early 1990s, were characterized as neutral to slightly acidic pH, moderately conductive, clear with low turbidity and low total suspended solids (TSS), moderately low in dissolved solids with low hardness and alkalinity. In contrast, the baseline conditions for the glacial influenced streams of Ketchum Creek and Unuk River had different characteristics including circumneutral pH, high conductivity, moderately to high turbidity with moderate to high TSS, high dissolved solids and moderately high hardness and moderate alkalinity (HKP 1993).

Results of the 2018 quarterly water quality monitoring at the historical mine site discharges were compared to previous operating year results and reported in the 2018 Annual Report and provide the most recent surface water quality overview (Barrick 2019). Stations that were reported in the 2018 Annual Report include:

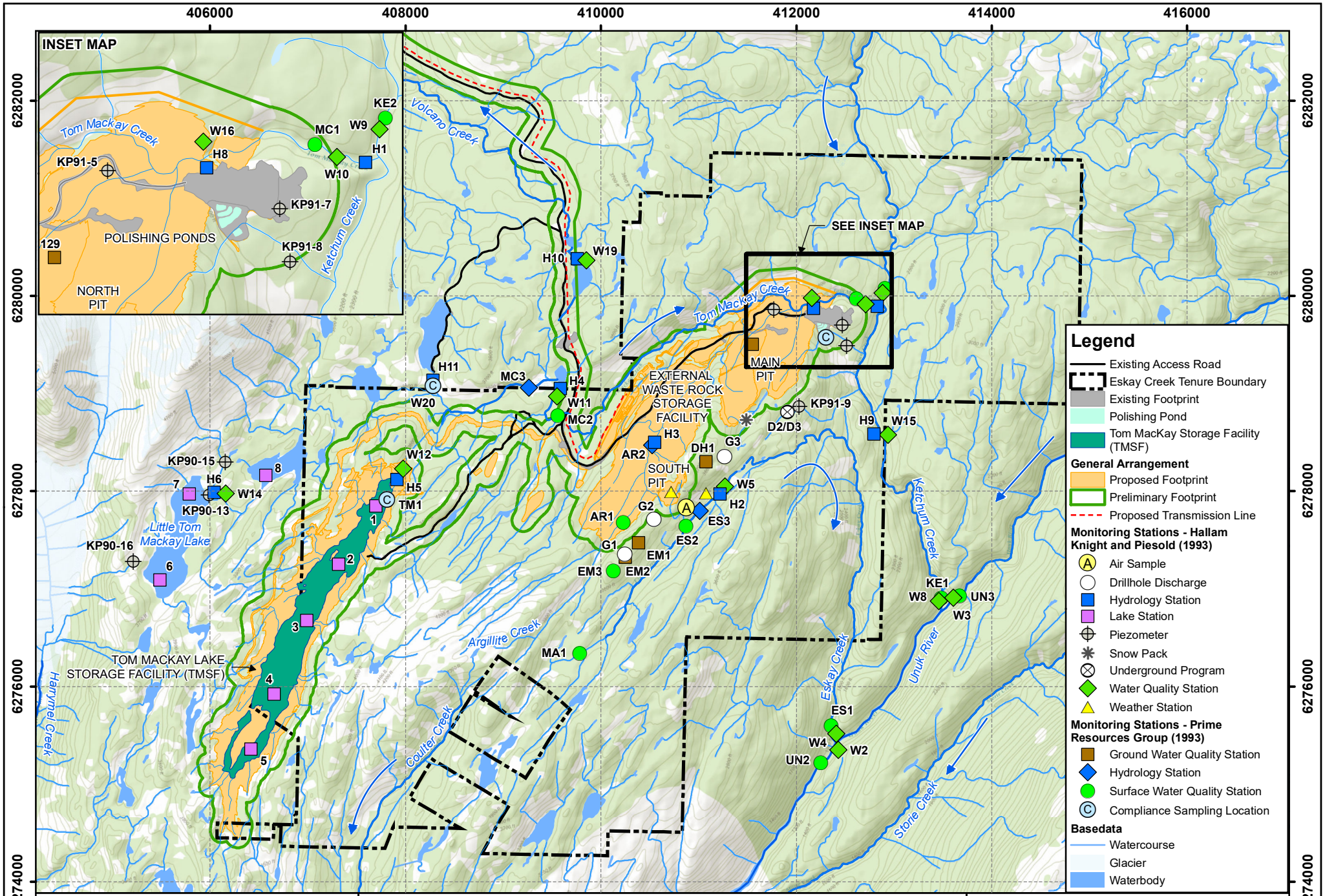
- ASF; sub-aqueous waste rock outlet discharge at site W20 from 1997 to 2018;
- TMSF; sub-aqueous tailings outlet discharge (site TM1) data from 2001 to 2018;
- Ketchum Creek upstream (reference) and downstream (exposure) of the treated mine water discharge at Location D7 (upstream at site W9 and D7 downstream at site W15) data from 2005 to 2018; and
- Treated mine water effluent discharge (Site D7) data from 1997 to 2018.

Sampling locations are shown on Figure 7.1-2. Water quality samples were analyzed for total and dissolved metals (full suite), physical parameters (pH, TSS, total dissolved solids [TDS], turbidity, hardness and conductivity), major anions (alkalinity, acidity, chloride, fluoride, bromide and sulphate) and nutrients (nitrate, nitrite, ammonia and nitrogen). Although there are no known drinking water users on or immediately downstream of Eskay Creek mine site, water quality samples were compared to BC Water Quality Guidelines (WQG) for freshwater aquatic life and Health Canada WQGs for drinking water.

There were no permit limit exceedances in W20 (outlet of Albino SF) or TM1 (outlet of TMSF) in 2018 from the storage facilities (SF). Metals concentrations were similar to previous years indicating that the SFs had reached a steady state in water quality.

Water quality from the SFs generally have circumneutral pH and low TSS (less than 1 mg/l). Dissolved concentrations of cadmium, chromium, copper, iron, lead, mercury, nickel and silver are close to or below the laboratory detection limit. Dissolved aluminum, antimony, arsenic and zinc typically have detectable concentrations but are orders of magnitude below the permit limit.

Within Ketchum Creek near the Eskay Creek Mine, water quality samples taken just upstream (site W9) and downstream (site W15) of the permitted Eskay Mine effluent discharge point at site D7, had exceedances of the freshwater WQG's for aluminium, copper, iron, TSS, and zinc. Typically, exceedances were in both upstream and downstream locations showing the treated effluent discharged at site D7 from the treatment ponds of underground mine water was not impacting water quality in the receiving environment of Ketchum Creek. Upstream exceedances are thought to be a result of the naturally turbid water with high TSS coinciding with elevated total metals concentrations; this is not unusual for streams with glacial inputs.



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Date: 15-Jan-2021
Figure: 7.1-2
Author: Michael.Stead
Filename: ESK-15-015.mxd

SKEENA RESOURCES

Eskay Creek Revitalization

Figure 7.1-2:

1993 Environmental Sampling and Monitoring Locations

Skeena Mining Division - NTS 104B09
British Columbia, Canada

Scale: 1:50,000
Coord. System: NAD83 - UTM Zone 9N
0 0.5 1 1.5 2
Kilometers
N

Metals concentrations in the mine effluent site D7 discharge that were measured in 2018 were consistent with those measured in prior years. Iron and antimony remain well below concentrations observed in pre-closure. Dissolved zinc concentrations have been increasing and in 2018 exceeded the permit limit three times. Even though the zinc concentrations are increasing, effects to the receiving environment from this discharge are not expected (Barrick 2019).

7.2 Biological Environment

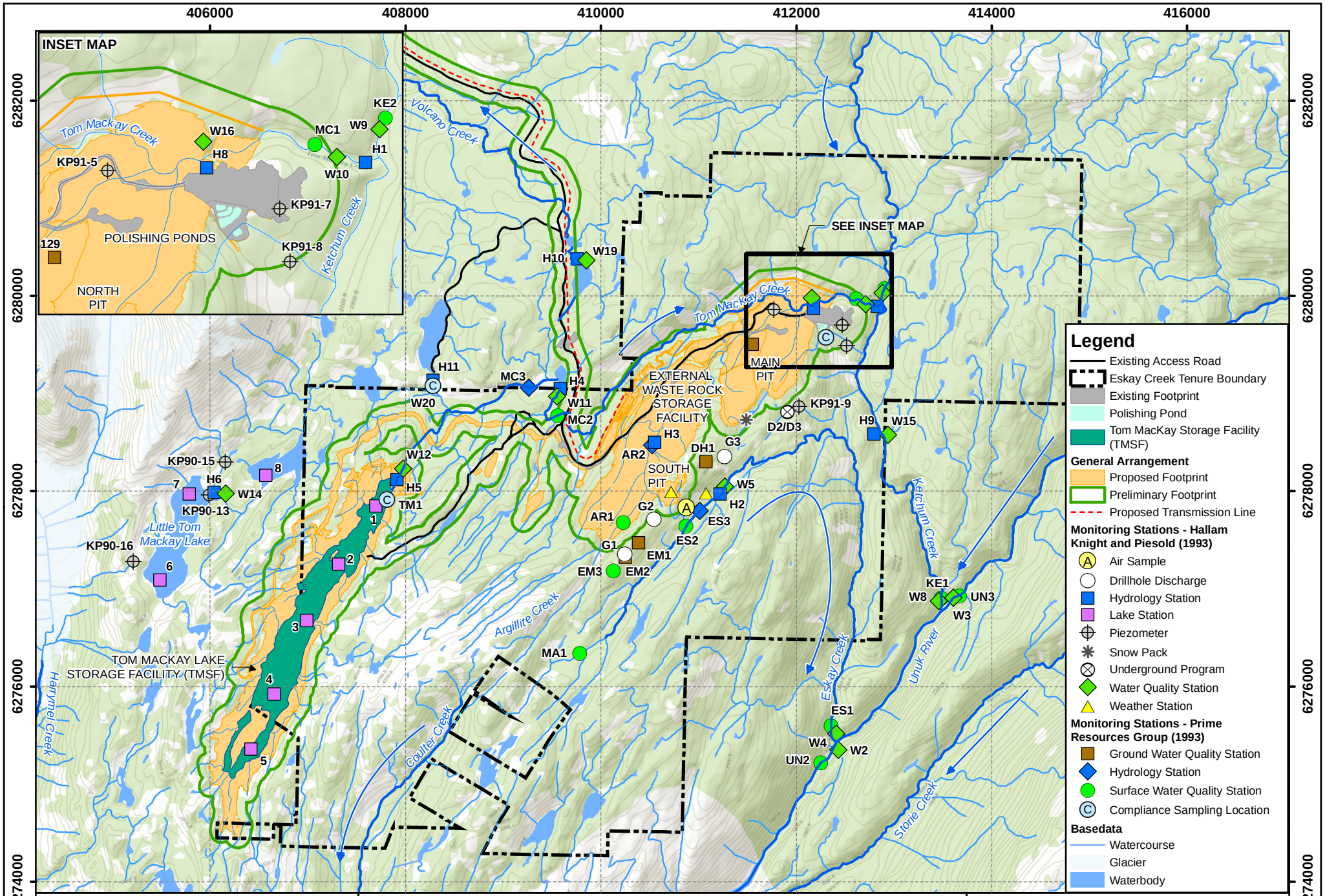
7.2.1 Ecosystems and Vegetation

Based on the FLNRORD 2018 biogeoclimatic zone maps, there are three biogeoclimatic zones: Mountain Hemlock (MH), Engelmann Spruce-Subalpine Fir (ESSF), and Interior Cedar Helmlock (ICH) zones in the Project area (Figures 7.2-1 and 7.2-2).

- The MH occurs in subalpine areas west and southwest of the mine site below the alpine tundra zone. The major tree species include mountain hemlock, subalpine fir with Sitka spruce, and western hemlock occurring at lower elevations (HKP 1993).
- The ESSF occurs in the mine site area and Tom MacKay Creek, lower Argillite Creek, and upper Eskay Creek watersheds. It includes continuous forest cover at its lower and middle elevations and subalpine parkland near its upper limits. Engelmann spruce dominates the canopy of mature stands, while subalpine fir is most abundant in the understorey (Meidinger and Pojar 1991.)
- The ICH occurs in the valley bottoms and low-elevation uplands along Iskut River and Forest Kerr Creek. Vegetation is dominated by black cottonwood with Sitka spruce and birch present in lesser numbers (HKP 1993).

Several kilometres northwest of the mine infrastructure and SFs, the terrain on the Plateau transitions to sub-alpine and alpine tundra zones on the steep slopes (Figures 7.2-1 and 7.2-2).

The mine site and water drainages are located within the MH Zone, which includes two subzones: moist maritime and moist maritime parkland. The moist maritime zone is characterized as a subalpine forest with major tree species including mountain hemlock (*Tsuga mertensiana*), subalpine fir with Sitka spruce (*Picea sitchensis*), and western hemlock (*Tsuga heterophylla*) occurring at lower elevations (HKP 1993). As elevation increases, the subzone transitions to a parkland subzone, which is characterized by discontinuous forest cover interspersed with subalpine heath, lush herb meadows and subalpine bogs and fens (BCMOF 1993). The majority of the mine site infrastructure and a portion of the Eskay Creek Mine Road are located within the parkland subzone and transitions to the forested subzone as elevation decreases. Waterbodies in this zone include the TMSF, ASF, Tom MacKay Creek, Argillite Creek, Ketchum Creek, and Eskay Creek.



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Date: 15-Jan-2021
Figure: 7.1-2
Author: Michael.Stead
Filename: ESK-15-015.mxd

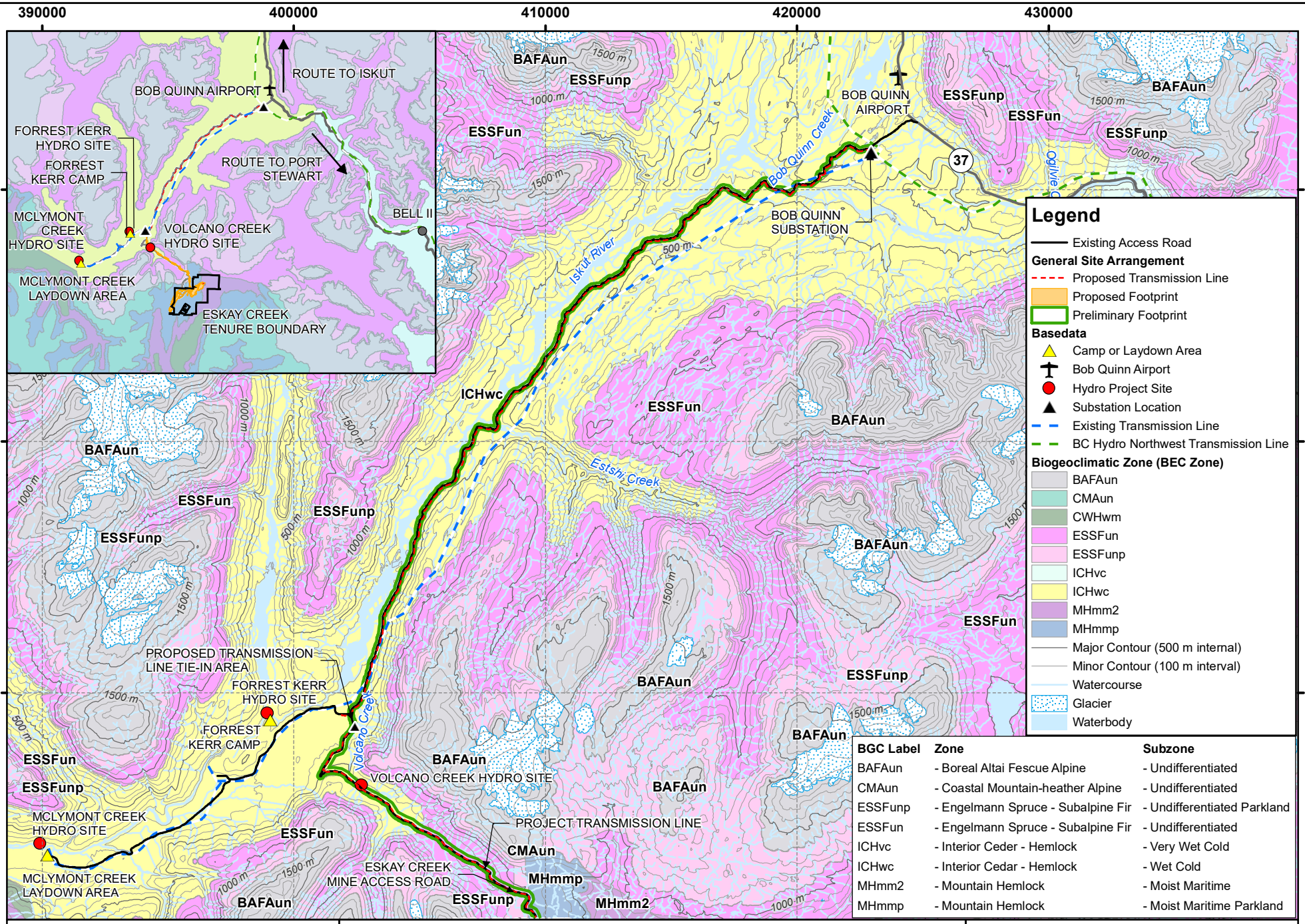
SKEENA RESOURCES

Eskay Creek Revitalization

Figure 7.1-2:
1993 Environmental Sampling and Monitoring Locations

Skeena Mining Division - NTS 104B09
British Columbia, Canada

Scale: 1:50,000
Coord. System: NAD83 - UTM Zone 9N
0 0.5 1 1.5 2
Kilometers



Skeena Resources Ltd.
Date: 15-Jan-2021
Figure: 7.2-2
Author: Michael.Stead
Filename: ESK-15-018.mxd

SKEENA RESOURCES

Eskay Creek Revitalization

Figure 7.2-2:
Off-site Biogeoclimatic Zones

Skeena Mining Division - NTS 104B09
British Columbia, Canada

Scale: 1:200,000
Coord. System: NAD83 - UTM Zone 9N
0 1.5 3 4.5 6
Kilometers
N

7.2.2 Wildlife and Wildlife Habitat

The Project provides habitat for a variety of wildlife species. Large wildlife species recorded within the Project area include black bear (*Ursus americanus*), moose (*Alces alces*) and mountain goat (*Oreamnos americanus*). Small mammals recorded in the Project area include American marten (*Martes americana*), wolverine (*Gulo gulo*), voles, and hoary marmot (*Marmota caligata*). Furbearing mammals with suitable habitat in the Project area include grizzly bear (*Ursus arctos*), wolf (*Canis lupus*), lynx (*Lynx canadensis*), ermine (*Mustela erminea*), mink (*Mustela vison*), fisher (*Pekania pennanti*), least weasel (*Mustela nivalis*), and snowshoe hare (*Lepus americanus*) (HKP 1993). Known wildlife ranges for grizzly bears are shown on Figure 7.2-3.

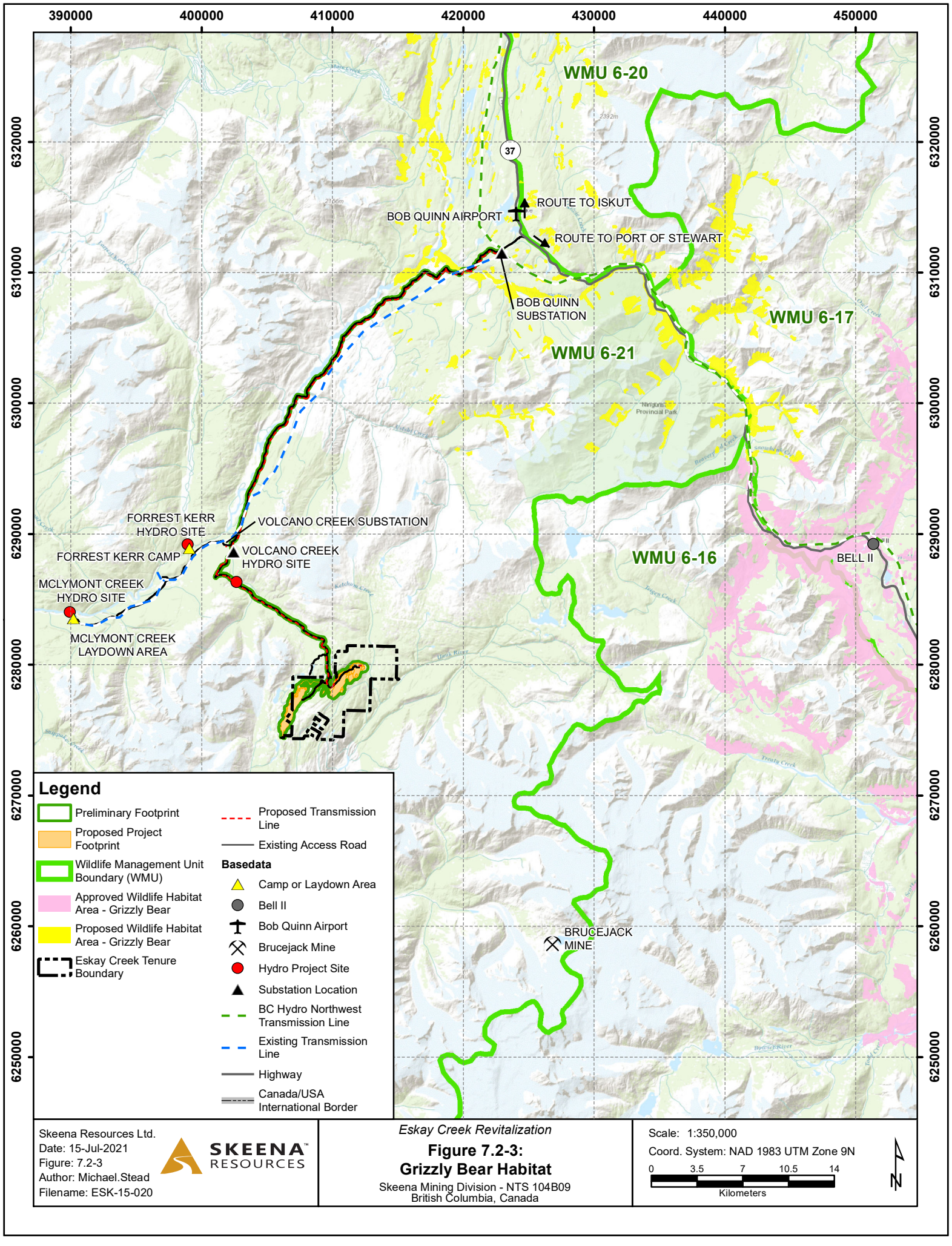
Biophysical inventory mapping identified the Project area is potentially suitable for woodland caribou (*Rangifer tarandus*) and moose (MOE 1982). The Project's transportation route crosses caribou range and the Project area is not overlapped by any caribou herd ranges shown on provincial range mapping as shown on Figure 7.2-4 (Government of BC 2019).

Mid and lower elevations provide habitat for porcupine (*Erethizon dorsatum*), northern flying squirrel (*Glaucomys sabrinus*), and red squirrel (*Sciurus vulgaris*). Plovers, Canada goose (*Branta canadensis*), harlequin duck (*Histrionicus histrionicus*), and numerous passerine species have been recorded in the area. Raptors recorded in the area include bald eagle (*Haliaeetus leucocephalus)*, sharp-shinned hawk (*Accipiter striatus*), and owls. Upland breeding birds (migratory birds) includes varied thrush (*Ixoreus naevius*), pine siskin (*Carduelis pinus*), fox sparrow (*Passerella iliaca*), hermit thrush (*Catharus guttatus*), Wilson's warbler (*Cardellina pusilla*), dark-eyed junco (*Junco hyemalis*), Townsend's warbler (*Dendroica townsendi*), yellow-rumped warbler (*Setophaga coronate*), ruby-crowned kinglet (*Regulus calendula*), sooty grouse (*Dendragapus fuliginosus*), golden-crowned sparrow (*Zonotrichia atricapilla*), and Pacific wren (*Troglodytes pacificus*).

Four species of amphibian and one reptile species are known to inhabit the Project area. They include common garter snake (*Thamnophis sirtalis*), long-toed salamander (*Amystoma macrodactylum*), Western toad (*Anaxyrus boreas*), wood frog (*Rana sylvatica*), and rough-skinned newt (*Taricha granulosa*).

7.2.3 Fish and Fish Habitat

No fish have been observed or captured in the upper tributaries of the Unuk River in the immediate vicinity of the Eskay Creek Mine site and Project, including extensive sampling in headwater lakes (Albino Lake, Little Tom MacKay Lake, and the TMSF), in Eskay Creek and Tom MacKay Creek downstream of the mine. A series of obstacles to fish passage are also located immediately upstream of the confluence of Tom MacKay Creek with Ketchum Creek. The high-alpine, natural lakes and streams in the Tom MacKay watershed, including Albino Lake and TMSF, are naturally low in plant nutrients and proven to not be fish-bearing due to impassible waterfalls as well as gradient/velocity barriers to approximately 10 km downstream of the historical Eskay Creek mine site (McGurk et al. 2006; KP 1993). Fish sampling in 2020 found similar results as past sampling with fish present in the Unuk River at and downstream of the confluence of Ketchum Creek and the Unuk River, but not anywhere upstream in Ketchum or Tom MacKay creek drainages.



Skeena Resources Ltd.
Date: 15-Jul-2021
Figure: 7.2-3
Author: Michael.Stead
Filename: ESK-15-020

SKEENA RESOURCES

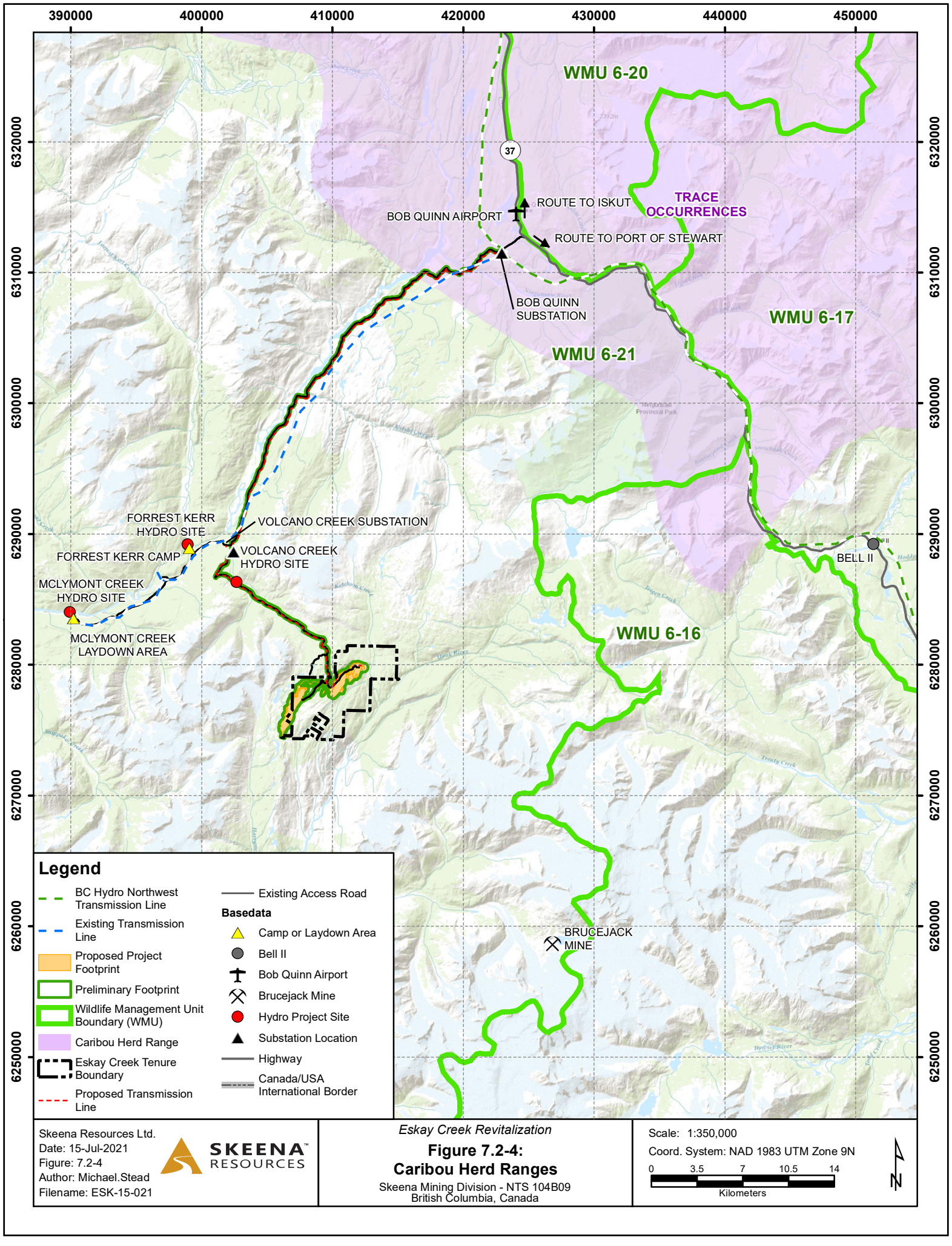
Eskay Creek Revitalization

Figure 7.2-3:
Grizzly Bear Habitat

Skeena Mining Division - NTS 104B09
British Columbia, Canada

Scale: 1:350,000
Coord. System: NAD 1983 UTM Zone 9N
0 3.5 7 10.5 14
Kilometers

N



Skeena Resources Ltd.
Date: 15-Jul-2021
Figure: 7.2-4
Author: Michael.Stead
Filename: ESK-15-021

SKEENA RESOURCES

Eskay Creek Revitalization

Figure 7.2-4:
Caribou Herd Ranges

Skeena Mining Division - NTS 104B09
British Columbia, Canada

Scale: 1:350,000
Coord. System: NAD 1983 UTM Zone 9N
0 3.5 7 10.5 14
Kilometers

N

Pink salmon (*Onchorynchus gorbuscha*), chum salmon (*Onchorynchus keta*), chinook salmon (*O. tshawytscha*), and sockeye salmon *(O. nerka*), as well as Dolly Varden (*Salvelinus malma*), and cutthroat trout (*O. clarkii clarkii*) have been observed 7–8 km downstream of the mine site in the Unuk River (Hemmera 1997). The locations of fish barriers are shown on Figure 7.2-5.

7.2.4 Species of Conservation Concern

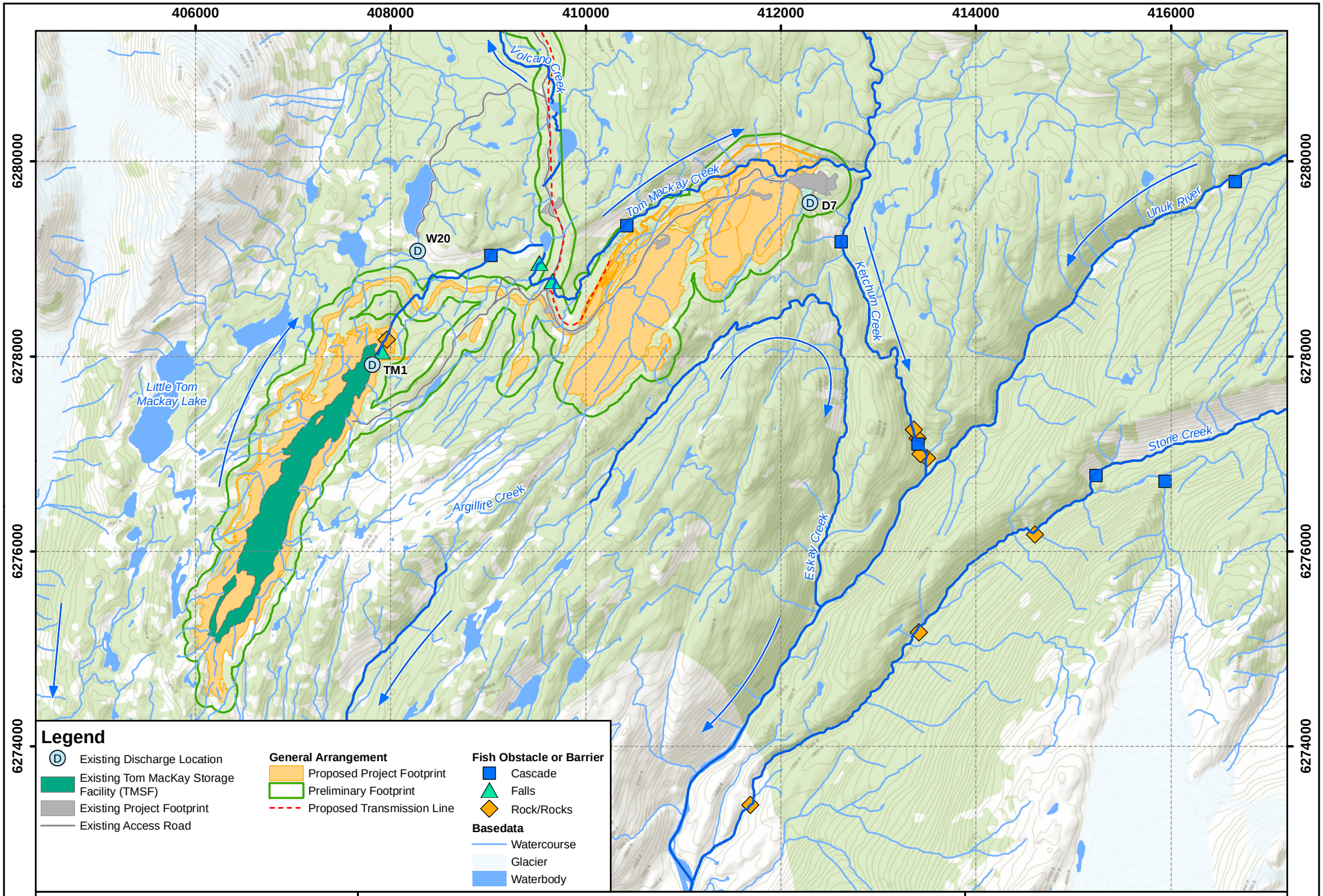
Species of conservation concern information in BC is available from both provincial and federal sources. The Ministry of Environment and Climate Change Strategy (ENV) maintains conservation information on the BC Species and Ecosystems Explorer for several thousand species in the province (BC ENV 2019). Data on known occurrences (referred to as element occurrences) are available through the BC Conservation Data Centre (BC CDC 2019). The BC CDC assigns a provincial rank or listing of red, blue or yellow to a species or ecosystem based on its conservation status within BC. Red-listed species or ecosystems are considered to be at risk of being lost (i.e., Extirpated, Endangered or Threatened) in BC. Blue-listed species or ecosystems are considered to be of Special Concern (formally Vulnerable) in BC. Yellow-listed species or ecosystems includes any species or ecosystems that are at the least risk of being lost.

Species ranking by the federal government is conducted by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), established under Section 14 of the *Species at Risk Act* (SARA). Under the COSEWIC system, species are ranked as Extinct, Extirpated, Endangered, Threatened, Special Concern, Data Deficient, or Not at Risk. Schedule 1 of SARA provides the official list of species at risk. The prohibitions of the Act apply only to those species ranked as Endangered, Threatened or Extirpated (if there is a recovery strategy in place and these species are afforded protection of critical habitat as defined in the relevant recovery strategy).

The provincial, federal, and international conservation status was determined for those species that potentially occur in the Project area. For the purposes of this report, species of conservation concern include:

- Species or populations on the provincial Red and Blue lists and/or provincially ranked as critically imperiled, imperiled, and vulnerable (BC CDC 2021);
- Species classified by COSEWIC as endangered, threatened, or special concern (Government of Canada 2021b);
- Species listed on Schedule 1 of SARA (Government of Canada 2021a); and
- Species globally ranked as imperiled or vulnerable by IUCN (IUCN 2020).

Table 7.2-1 identifies species of conservation concern in the Project area. There are no SARA-listed aquatic species in the vicinity of the Project and 2020/21 baseline studies will update the Project's understanding for new occurrences of species of conservation concern. Searches will be re-run and species and ecological communities will be updated in concert with baseline field studies, as well as through engagement with Indigenous groups and regulators, as the Project progresses.



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Date: 15-Jan-2021
Figure: 7.2-5
Author: Michael.Stead
Filename: ESK-15-022.mxd

SKEENA RESOURCES

Eskay Creek Revitalization

Figure 7.2-5:
Barriers to Fish Passage

Skeena Mining Division - NTS 104B09
British Columbia, Canada

Scale: 1:50,000
Coord. System: NAD83 - UTM Zone 9N
0 0.5 1 1.5 2
Kilometers

N

Table 7.2-1 Species of Conservation Concern in the Project Area

Common Name	Scientific Name	BC Rank	BC List[1]	COSEWIC[2]	SARA[3]	Global Rank
Amphibians						
Western Toad	*Anaxyrus boreas*	S4	Yellow	SC	SC	G4
Birds						
American Bittern	*Botaurus lentiginosus*	S3B, SNRN	Blue	-	-	G5
American Golden-plover	*Pluvialis dominica*	S3S4B	Blue	-	-	G5
Bank Swallow	*Riparia riparia*	S4B	Yellow	T	T	G5
Barn Swallow	*Hirundo rustica*	S3S4B	Blue	T	T	G5
Black Swift	*Cypseloides niger*	S2S3B	Blue	E	E	G4
Brant	*Branta bernicla*	S3M	Blue	-	-	G5
Caspian Tern	*Sterna caspia*	S3B	Blue	NAR	-	G5
Common Nighthawk	*Chordeiles minor*	S4B	Yellow	SC	T	G5
Double-crested Cormorant	*Phalacrocorax auritus*	S3S4	Blue	NAR	-	G5
Great Blue Heron, *fannini* ssp.	*Ardea herodias fannini*	S2S3B,S4N	Blue	SC	SC	G5T4
Gyrfalcon	*Falco rusticolus*	S3S4B, SNRN	Blue	NAR	-	G5
Harlequin Duck	*Histrionicus histrionicus*	S4B, S3N	Yellow	-	-	G4
Horned Grebe	*Podiceps auritus*	S4B, SNRN	Yellow	SC	SC	G5
Lesser Yellowlegs	*Tringa flavipes*	S4S5B	Yellow	T	-	G5
Long-tailed Duck	*Clangula hyemalis*	S2S3B, S4N	Blue	-	-	G5
Northern Goshawk, *laingi* ssp.	*Accipiter gentilis laingi*	S2	Red	T	T	G5T2
Olive-sided Flycatcher	*Contopus cooperi*	S3S4B	Blue	SC	T	G4
Peregrine Falcon, *anatum* ssp.	*Falco peregrinus anatum*	S2?	Red	NAR	SC	G4T4
Peregrine Falcon, *pealei* ssp.	*Falco peregrinus pealei*	S3S4	Blue	SC	SC	G4T3
Red-necked Phalarope	*Phalaropus lobatus*	S3S4B	Blue	SC	SC	G4G5
Rough-legged Hawk	*Buteo lagopus*	S3N	Blue	NAR	-	G5
Rusty Blackbird	*Euphagus carolinus*	S3S4B	Blue	SC	SC	G4
Sandhill Crane	*Grus canadensis*	S4B	Yellow	NAR	-	G5
Short-billed Dowitcher	*Limnodromus griseus*	S2S3B	Blue	-	-	G5
Short-eared Owl	*Asio flammeus*	S3B,S2N	Blue	SC	SC	G5
Snowy Owl	*Bubo scandiacus*	SUN	Unknown	NAR	-	G5
Surf Scoter	*Melanitta perspicillata*	S3B,S4N	Blue	-	-	G5
Swainson's Hawk	*Buteo swainsoni*	S2B	Red	-	-	G5

Common Name	Scientific Name	BC Rank	BC List[1]	COSEWIC[2]	SARA[3]	Global Rank
Tundra Swan	*Cygnus columbianus*	S3N	Blue	-	-	G5
Upland Sandpiper	*Bartramia longicauda*	S2B	Red	-	-	G5
Wandering Tattler	*Tringa incana*	S3B	Blue	-	-	G4G5
Western Grebe	*Aechmophorus occidentalis*	S1B,S2N	Red	SC	SC	G5
Western Screech-owl, *kennicottii* ssp.	*Megascops kennicottii kennicottii*	S2S3	Blue	T	T	G4G5T4
Yellow-billed Loon	*Gavia adamsii*	S2S3N	Blue	NAR	-	G4
Mammals						
American Water Shrew	*Sorex palustris*	S2S4	Blue	-	-	G5
Fisher	*Martes pennanti*	S3	No Status	-	-	G5
Grizzly Bear	*Ursus arctos*	S3?	Blue	SC	SC	G4
Least Weasel	*Mustela nivalis*	S4	Yellow	-	-	G5
Little Brown Myotis	*Myotis lucifugus*	S4	Yellow	E	E	G3
Mountain Goat	*Oreamnos americanus*	S3	Blue	-	-	G5
Northern Myotis	*Myotis septentrionalis*	S3S4	Blue	E	E	G1G2
Wolverine*, luscus* spp.	*Gulo gulo luscus*	S3	Blue	SC	SC	G4T4

[1] BC List Status: Red = Extirpated, Endangered, or Threatened; Blue = Special Concern; Yellow = Not At Risk (BC CDC 2021).

[2] COSEWIC Ranks: E = Endangered; T = Threatened; SC = Special Concern; NAR = Not At Risk; DD = Data Deficient (Government of Canada 2021b).

[3] *Species at Risk Act* (SARA) Federal Schedule 1 Rank: E = Endangered; T = Threatened; SC = Special Concern (Government of Canada 2021a).

7.3 Human Environment

This section discusses the parks and protected areas, commercial and public use, archaeology resources and the socio-economic and health conditions in the Project region.

7.3.1 Relevant Plans, Studies, and/or Regional Assessment

The Project is located within the provincial *Cassiar Iskut-Stikine Land and Resource Management Plan* (CIS LRMP) (ILMB 2000), which encompasses approximately 5.2 million ha. The CIS LRMP is a sub-regional integrated plan that establishes a framework for land use and management objectives. The LRMP aims to satisfy the wide range of overlapping demands on natural resources and cultural heritage within the defined plan area. It provides policy direction on the management of land and resources in the LRMP area. The Project site is located within the General Management Zone and a portion of the Eskay Creek Mine Road is within the Middle Iskut Management Zone.

Skeena Resources is not aware of any Indigenous land use plans overlapping the Project area. A land use plan for the Tahltan Territory is currently being developed by the TCG Lands Department.

A Northwest Wildlife and Environmental Management Advisory Group has been established in the region in part to consider cumulative effects from new incremental industrial traffic along the Highway 37 and Highway 37A corridors. The advisory group is co-chaired by the BC EAO and the FLNRORD with representatives from several municipal, regional, provincial, federal, and Nisga'a Lisims government agencies, regional Indigenous Peoples and industry.

No federal regional assessments, studies or plans have been undertaken in the Project area under Section 92 or 93 of the IAA.

7.3.2 Non Traditional Land Use and Tenure

Land and resource uses within the area surrounding the Project include trapping, guided hunting, commercial recreation and outdoor recreation including fishing, hunting, camping, hiking, snowmobiling, all-terrain vehicle (ATV) riding, and skiing. Tenures in the vicinity of the Project include: multiple mineral tenures held by various parties (Figure 7.3-1); three range tenures (Figure 7.3-2); four guide outfitter licences (Figure 7.3-3); and four traplines (Figure 7.3-4).

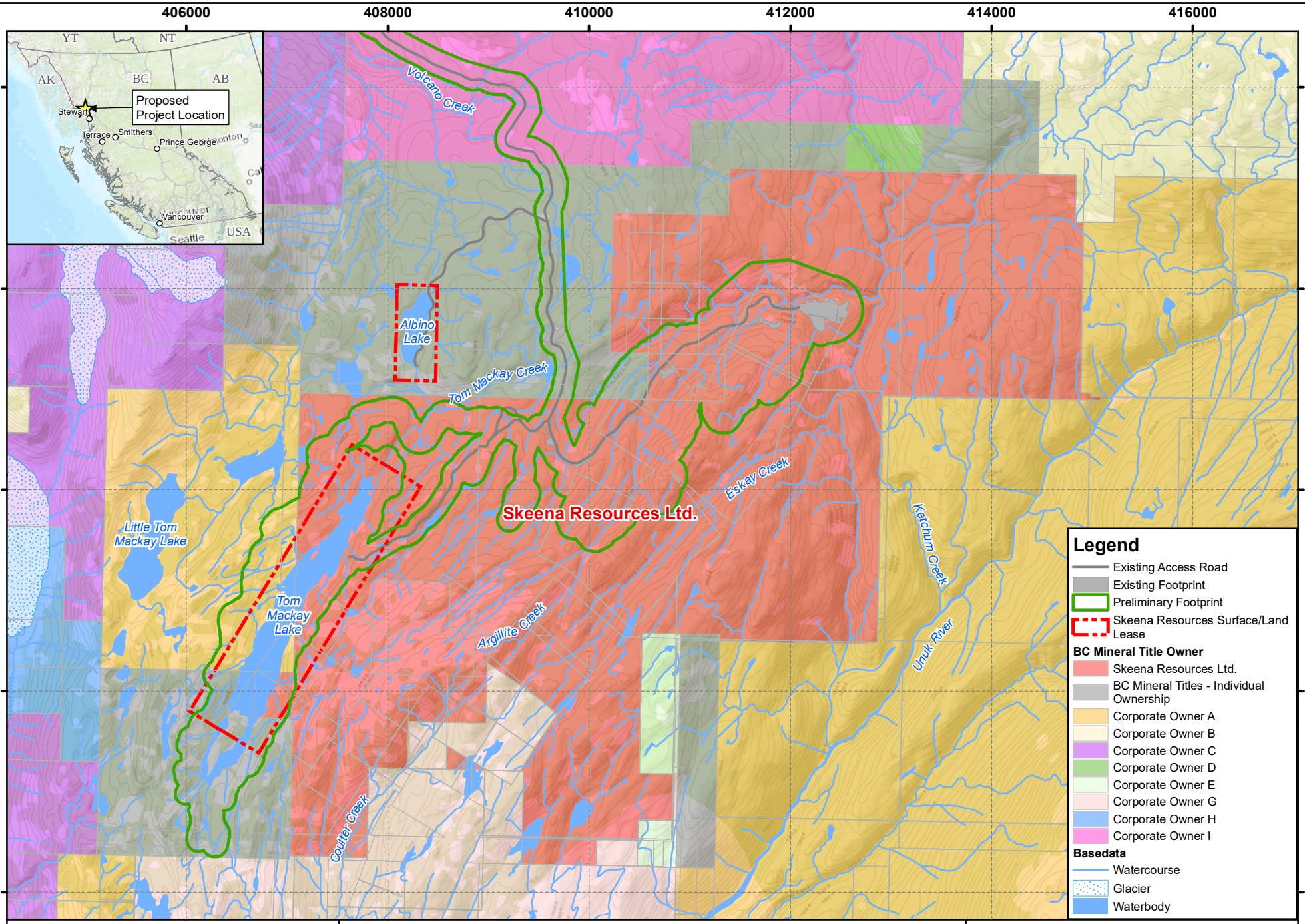
There are seasonal Tahltan cabins along the Eskay Creek Mine Road to support gathering activities in the area and additional engagement about seasonal residences would occur during the Early Engagement phase.

Tenures exist in the vicinity of the Project but not directly over the mineral tenures held by Skeena Resources (Figure 7.3-5). The Bell 2 Lodge, a year-round resort which supports a destination heli-skiing operation with a large commercial recreation tenure, is approximately 42 km northeast of the Project on Highway 37 (Figure 7.3-5). There are three hydroelectric facilities near the Project: Volcano Creek, Forrest Kerr and McLymont.

7.3.3 Parks and Protected Areas

There are no federal, provincial or regional parks, wilderness or conservancy areas, ecological reserves, protected or recreational areas immediately adjacent to the Project. There are four protected areas in the region as follows (Figure 7.3-6):

- Ningunsaw Park, located approximately 20 km northeast of the Project;
- Lava Forks Park, located approximately 28 km southwest of the Project;
- Ningunsaw River Ecological Reserve, located approximately 34 km northeast of the Project;
- Border Lake Park, located approximately 33 km southwest of the Project; and
- Craig Headwaters Protected Area; located approximately 39 km west.



Skeena Resources Ltd.
Date: 15-Jan-2021
Figure: 7.3-1
Author: Michael.Stead
Filename: ESK-15-019.mxd

SKEENA RESOURCES

Eskay Creek Revitalization

Figure 7.3-1:
Adjacent Mineral Tenures

Skeena Mining Division - NTS 104B09
British Columbia, Canada

Scale: 1:50,000
Coord. System: NAD83 - UTM Zone 9N

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Kilometers

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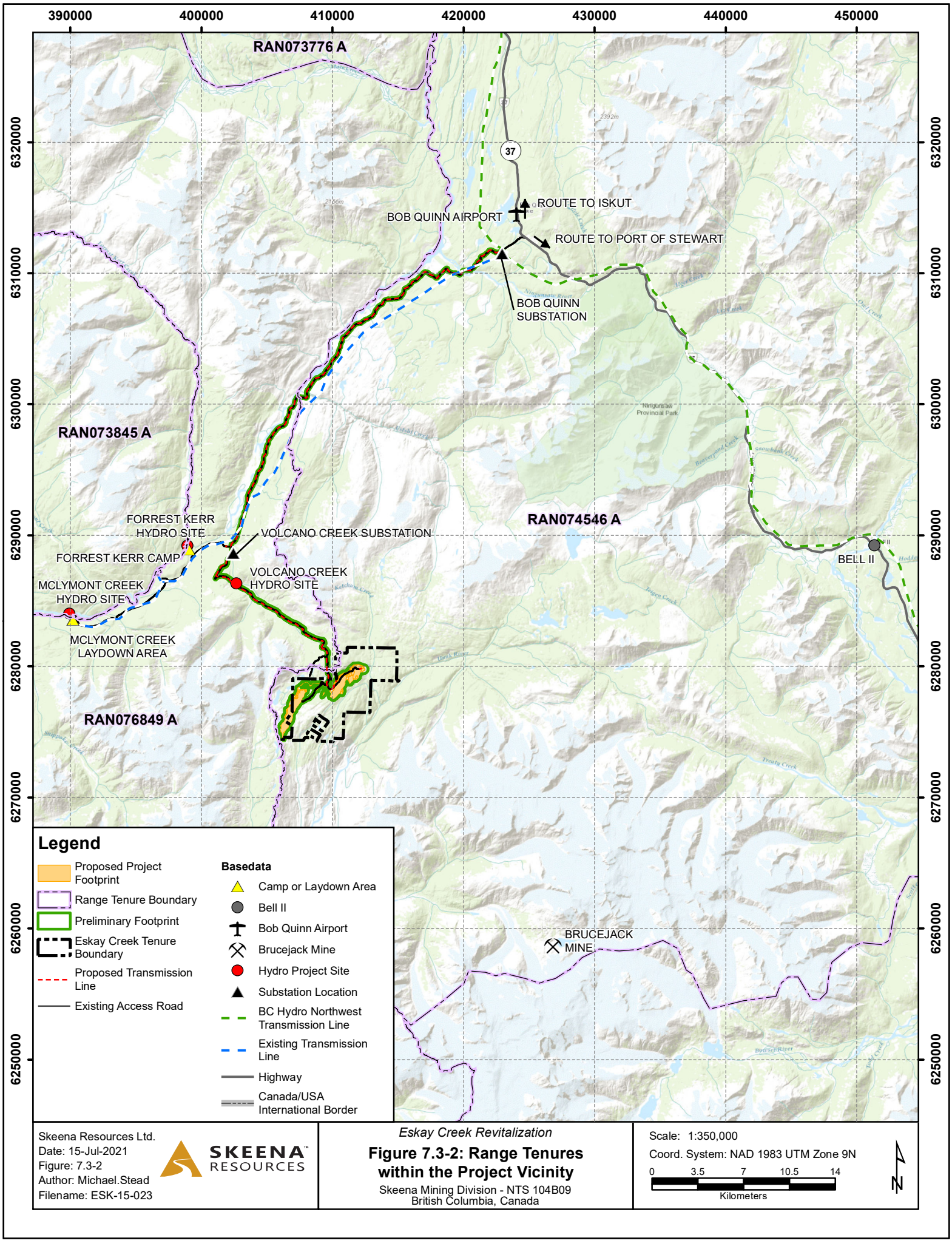

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Date: 15-Jul-2021
Figure: 7.3-2
Author: Michael.Stead
Filename: ESK-15-023

SKEENA RESOURCES

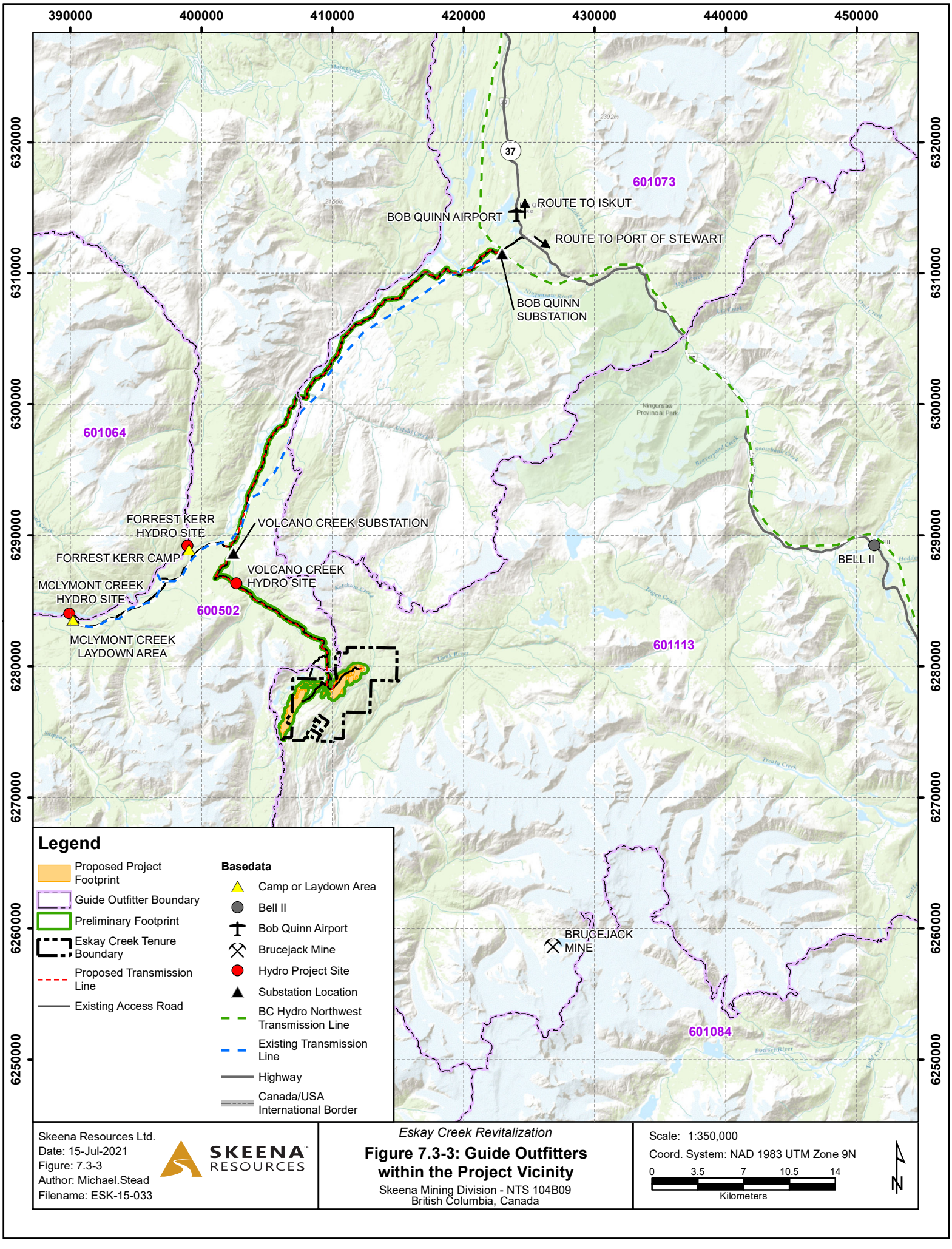
Eskay Creek Revitalization

Figure 7.3-2: Range Tenures within the Project Vicinity

Skeena Mining Division - NTS 104B09
British Columbia, Canada

Scale: 1:350,000
Coord. System: NAD 1983 UTM Zone 9N
0 3.5 7 10.5 14
Kilometers

N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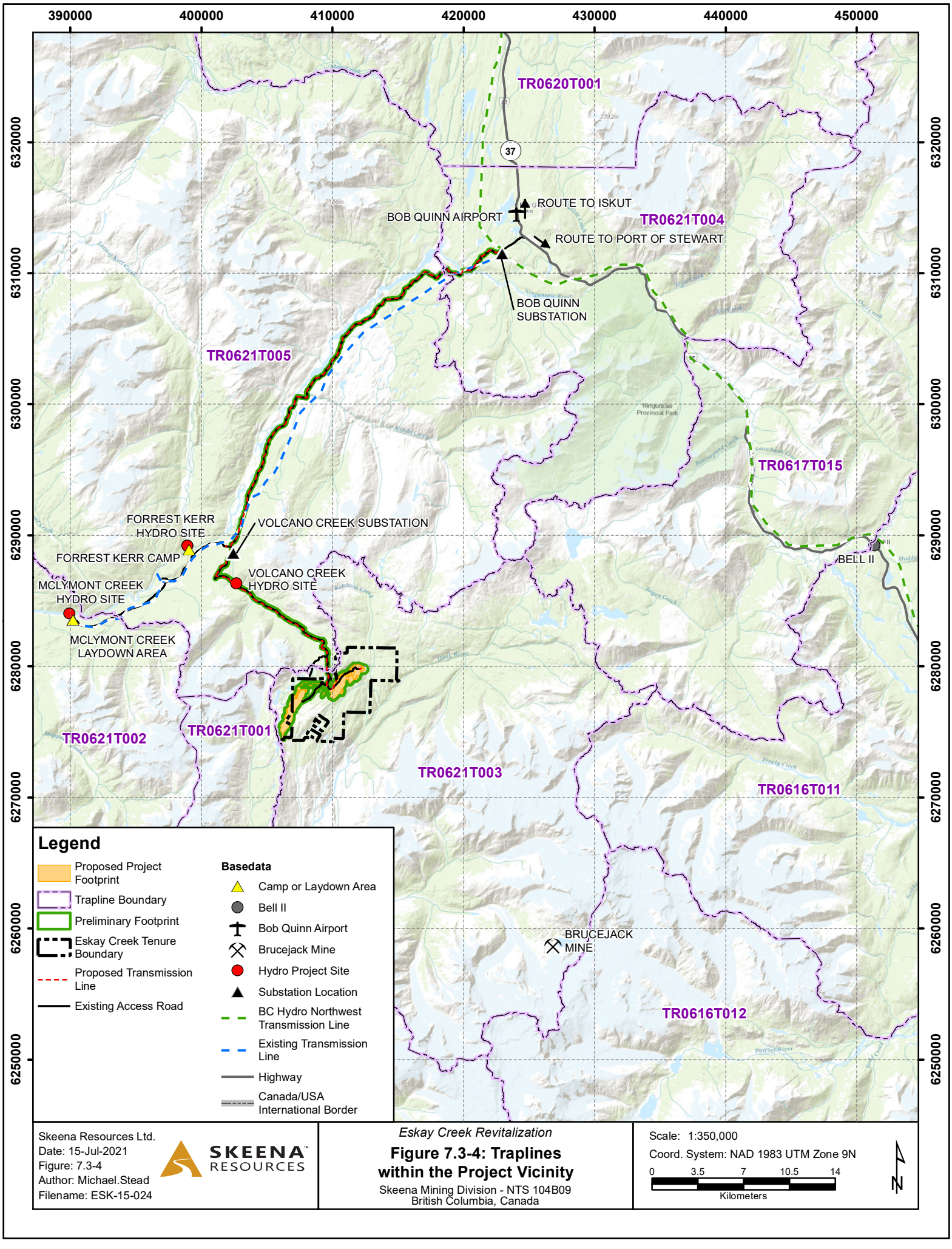
6300000
6290000
6280000
6270000
6260000
6250000
37
601073
ROUTE TO ISKUT
BOB QUINN AIRPORT
ROUTE TO PORT OF STEWART
BOB QUINN SUBSTATION
601064
FORREST KERR HYDRO SITE
VOLCANO CREEK SUBSTATION
FORREST KERR CAMP
VOLCANO CREEK HYDRO SITE
MCLYMONT CREEK HYDRO SITE
600502
MCLYMONT CREEK LAYDOWN AREA
601113
BELL II
BRUCEJACK MINE
601084
Legend
Proposed Project Footprint
Guide Outfitter Boundary
Preliminary Footprint
Eskay Creek Tenure Boundary
Proposed Transmission Line
Existing Access Road
Basedata
Camp or Laydown Area
Bell II
Bob Quinn Airport
Brucejack Mine
Hydro Project Site
Substation Location
BC Hydro Northwest Transmission Line
Existing Transmission Line
Highway
Canada/USA International Border
Skeena Resources Ltd.
Date: 15-Jul-2021
Figure: 7.3-3
Author: Michael.Stead
Filename: ESK-15-033
SKEENA RESOURCES
Eskay Creek Revitalization
Figure 7.3-3: Guide Outfitters within the Project Vicinity
Skeena Mining Division - NTS 104B09
British Columbia, Canada
Scale: 1:350,000
Coord. System: NAD 1983 UTM Zone 9N
0 3.5 7 10.5 14
Kilometers
N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TR0621T004
TR0621T005
TR0617T015
TR0621T002
TR0621T001
TR0621T003
TR0616T011
TR0616T012
BOB QUINN AIRPORT
ROUTE TO ISKUT
ROUTE TO PORT OF STEWART
BOB QUINN SUBSTATION
FORREST KERR HYDRO SITE
FORREST KERR CAMP
VOLCANO CREEK SUBSTATION
VOLCANO CREEK HYDRO SITE
MCLYMONT CREEK HYDRO SITE
MCLYMONT CREEK LAYDOWN AREA
BELL II
BRUCEJACK MINE
Legend
Proposed Project Footprint
Trapline Boundary
Preliminary Footprint
Eskay Creek Tenure Boundary
Proposed Transmission Line
Existing Access Road
Basedata
Camp or Laydown Area
Bell II
Bob Quinn Airport
Brucejack Mine
Hydro Project Site
Substation Location
BC Hydro Northwest Transmission Line
Existing Transmission Line
Highway
Canada/USA International Border
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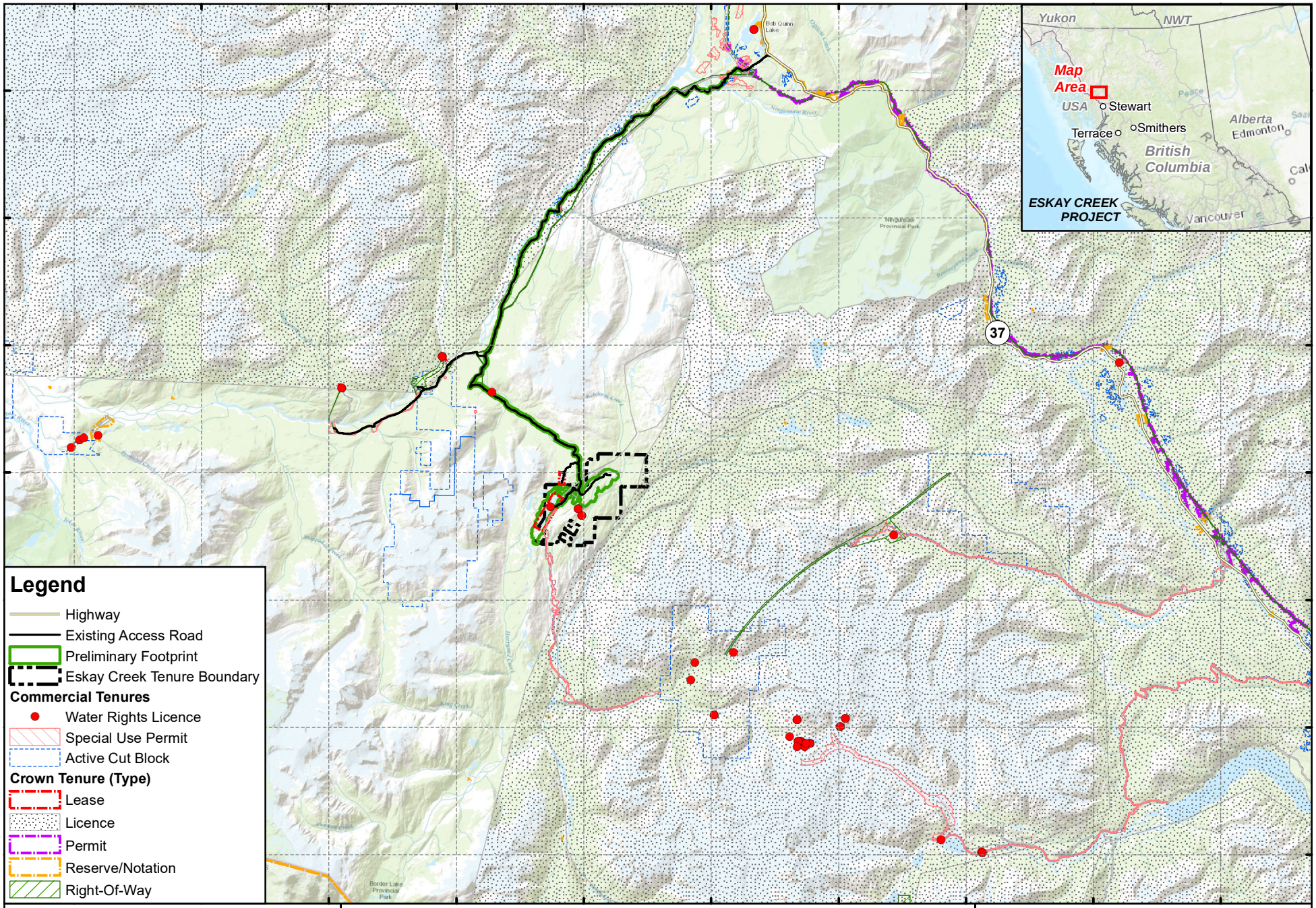
Date: 15-Jul-2021
Figure: 7.3-4
Author: Michael.Stead
Filename: ESK-15-024
SKEENA RESOURCES
Eskay Creek Revitalization
Figure 7.3-4: Traplines within the Project Vicinity
Skeena Mining Division - NTS 104B09
British Columbia, Canada
Scale: 1:350,000
Coord. System: NAD 1983 UTM Zone 9N
0 3.5 7 10.5 14
Kilometers
N



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Date: 15-Jan-2021
Figure: 7.3-5
Author: Michael.Stead
Filename: ESK-15-034.mxd

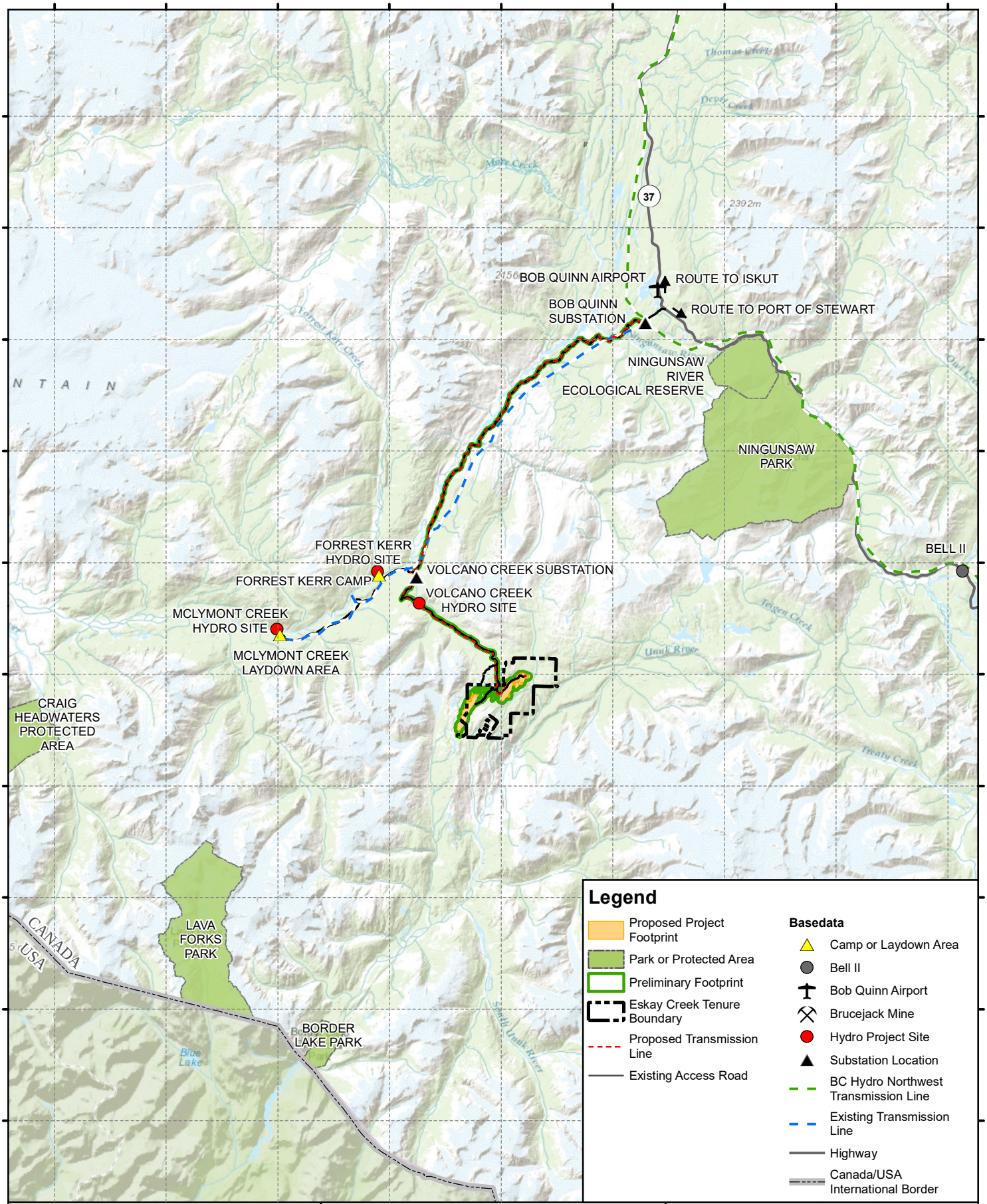
SKEENA RESOURCES

Eskay Creek Revitalization

Figure 7.3-5:
Commercial Tenures within the Project Vicinity

Skeena Mining Division - NTS 104B09
British Columbia, Canada

Scale: 1:400,000
Coord. System: NAD83 - UTM Zone 9N
0 3.5 7 10.5 14
Kilometers
N



Skeena Resources Ltd.
Date: 15-Jul-2021
Figure: 7.3-6
Author: Michael.Stead
Filename: ESK-15-025

SKEENA RESOURCES

Eskay Creek Revitalization Project

Figure 7.3-6: Parks and Protected Areas within the Project Vicinity

Skeena Mining Division - NTS 104B09
British Columbia, Canada

Scale: 1:450,000
Coord. System: NAD 1983 UTM Zone 9N
0 5 10 15 20
Kilometers
N

7.3.4 Archaeology Resources

An Archaeological Overview Assessment (AOA) of the Project area was completed in May 2018, which included a review of existing archaeological data and identification of areas where future interactions with Exploration or site development may occur (RTEC 2018). The AOA identified areas of high archaeology potential, which will require completion of an Archaeological Impact Assessment (AIA) for the Project, which will be undertaken in 2020/21. AIA's have been completed for drill pad locations in 2020 and are planned for 2021. There is a Chance Find Procedure (RTEC 2018) in place for exploration activities. Engagement with the Tahltan Nation will occur regarding proposed AIA areas and reviews of field studies from 2020 work and understanding of latest archaeological standards in Tahltan territory.

7.3.5 Socio-economic Conditions

The Project is located at the southern boundary of Electoral Area D (access road and power line in the Iskut River watershed, Bob Quinn, Iskut communities) and northern edge of Electoral Area A (mine site within Unuk River watershed) of the Regional District of Kitimat-Stikine (RDKS). Area D covers an area of 28,137 km^2 (Statistics Canada 2017). The RDKS population of Area D in 2016 was 99 people (Statistics Canada 2017). Many of the smaller communities in Electoral Areas A and D have predominantly Indigenous populations that are spread across the large territory as well as situated in the main regional centres of Smithers and Terrace. Approximately one-third of the 40,000 to 45,000 people in the region are Indigenous, which is higher than the provincial average (MSBEC 2005).

Exploration activity Northwest BC has been the focus of considerable dating back to the mid-1800s (BC/Yukon Mining 2018). The first major discovery was the Premier Gold Mine in 1918, the Snip Gold Mine in 1964 and the Eskay Creek Underground Mine in 1988. Presently, primary resource industries, principally mining and forestry, comprise a key proportion of the larger regional (northwest and west central BC) employment market at 4.6% and 2.6% respectively and are important to Tahltan communities and members working in regional communities (WorkBC, Regional Labour Market Information 2020; Pretium 2014). Public sector services (Band administration, health and social services) provided a high proportion of employment in Tahltan territory prior to 2013, followed by mining and exploration, and support services (SNDS 2007, *in Pretium 2014*). While employment had declined in the mining/exploration sector in the past couple decades due to mine closures (e.g., Huckleberry and Kemess South mines), the startup of the Red Chris Mine, Silvertip Mine and Brucejack Mine in the past 10 years have increased employment opportunities for Indigenous and non-Indigenous workers from northwest BC and Tahltan territory. Advanced exploration projects (Galore Creek, Shaft Creek, Kutcho Creek, Eskay Creek Project) and permitted projects (KSM Project) will provide ongoing employment in the Project area.

The forest industry has been in decline in recent decades, which has significantly weakened the economy and led to a steady decline in the regional population. Since the mid-1990s, the regional population has dropped by almost 15%, although in the 2000s, the rate of decline has begun to slow (MSBED 2005). Recent major infrastructure projects in Kitimat for Rio Tinto Alcan and LNG Canada are likely to result in a positive economic contribution to the region.

There is well-developed infrastructure in the region, including a paved road from Smithers to the Yukon border (Highway 37) and to port facilities in Stewart (Highway 37A). The 335 km Northwest Transmission Line, built in 2012, runs from Terrace to Bob Quinn Lake and north to the Red Chris Mine. There are three hydroelectric facilities (Forrest Kerr, Volcano Creek, and McLymont Creek) owned by Axium Infrastructure Inc, of which the Tahltan Nation has an equity position in.

Land use is guided by the Cassiar Iskut-Stikine LRMP (see Section 7.3.1) and land uses in the Project region are discussed in Section 7.3.2. Section 4.3 identifies the Project's anticipated workforce.

7.3.6 Health Conditions

The Project is located within the North West Regional Hospital District (NWRHD), the largest of 23 Regional Hospital Districts in the Province. The Hospital District has the same boundaries as the entire RDKS, North Coast Regional District (formerly SQCRD) and the western portion of the Regional District of Bulkley-Nechako (RDBN), serving approximately 80,000 residents in three regional districts. Collectively there are 26 municipalities and electoral areas plus the Nisga'a Nation. The NWRHD supports two health authorities (Northern Health and Nisga'a Valley Health) and 16 community facilities.

Northern Health facilities provide medical and health services at regional hospitals in Smithers and Terrace, supplemented by a range of services at community health centres in smaller municipalities and villages that include digital health, Mental Health and Substance Use, Indigenous Health, Environmental Health, End of Life Care/Palliative Care, Home and Community Care, Community care licensing and Healthy Living support. Northern Health coordinates an assessment network, a regional chronic diseases program, speech and language programs, hearing programs and dental services. A Northern Health bus service is also available for clients needing transportation assistance linking smaller and larger centres Northern Health also works with the Northern Region of the First Nations Health Authority (FNHA) to support primary care, mental wellness and substance abuse programming. FNHA also provides traditional wellness, maternal child health and public health programs in rural and remote Indigenous communities.

The RDKS contains urban, rural and remote communities of varying sizes and differing demographic, cultural and health profiles. Factors that affect health include income, education, employment, physical environments, health services, social supports, early childhood development and personal health practices. In the main regional centre of Terrace, the incident rate for all cancers is slightly below the provincial average (453.3 vs 487/100,000), yet life expectancy in Terrace is below the average in BC (78 years vs. 82.6). In Smithers, cancer rates are considerably lower (383.5/ 100,000) and life expectancy is 80.8. In the Upper Skeena Local Health Area, including Hazelton, life expectancy (78.9) was also lower than the provincial average. In the NWRHD delivery area, 71.2% of the population reported very good to excellent mental health. Available data suggests that Indigenous peoples and communities in BC have similar rates of cancer to other residents. However, Indigenous people were three times more likely than other residents to suffer from rheumatoid arthritis and twice as likely to have had a stroke (BC Community Health Data 2020).

7.3.7 Public and Environmental Safety

Potential effects from accidents or malfunctions would be assessed in the impact assessment and could include:

- Spill incidents to land or water or air, including release of hazardous materials stored on site (reagents, fuel or oils);
- Release of contaminants to water courses;
- Slope failures in open pits or WRSFs;
- Failure of material storage piles;
- Failure or breach of water containment structures;
- Failure or leaking of tailings pipeline system;
- Motor vehicle accidents;
- Accidents resulting from explosive malfunctions such as fly rock or excessive noise;
- Fire or fire-related explosions;
- Prolonged power failure;
- Flood events;
- Landslides;
- Wildfire risk;
- Extreme weather events, such as excessive snowfall; and
- Avalanche along the Eskay Mine Access Road.

Prior to construction, emergency response, emergency preparedness and community response plans will be developed with input from Indigenous and regulators. These plans will include contact information for Indigenous Peoples, BC government and affected communities so they can be notified in the event of an emergency and engaged on larger responses as needed. Spill incidents to water courses related to transportation along Highway 37 was raised during initial engagement on the Project (Section 9).

8.0 EFFECTS OF THE ENVIRONMENT ON THE PROJECT

The Project could be affected by a number of environmental factors from a physical infrastructure perspective. For example, climate change and natural hazards could directly interact with Project facilities and operations. The following environmental factors could lead to environmental effects on the Project's physical infrastructure:

- climate change:
  - warmer and dryer climate in summer could lead to more frequent wildfires;
  - earlier peak flood spring flow and other potential hydrological changes, which need to be considered for Project water management facilities;
  - higher precipitation, especially in winter, could lead to more frequent runoff or flooding; and
  - natural hazards including avalanche events, natural seismic events, extreme weather events, and fire.

The Project is located in an area that experiences significant snowfall and water runoff during freshet. It will be important to effectively handle the water levels that would be experienced at the Project site through the different Project phases. Risks associated with climate change and natural hazards would be assessed in the impact assessment and appropriate mitigations incorporated into the Project designs and plans. Should additional potential effects of the environment on the Project be identified during engagement, they will be summarized in the DPD.

9.0 SUMMARY OF ENGAGEMENT

Skeena Resources is committed to early, inclusive and meaningful engagement with Indigenous Peoples, communities and stakeholders during the federal and provincial assessment processes. To date, Skeena Resources has engaged with federal and provincial government agencies, the Tahltan Nation, Tsetsaut Skii km Lax Ha, Nisga'a Nation and Gitanyow Nation. Engagement activities and methods will take into account COVID-19 restrictions, travel advisories and protective measures, which has already affected Skeena Resources's planned "in-person" engagement with communities and Indigenous Peoples. Alternative methods for engagement (video-conferencing and virtual town halls and workshops) will be considered, subject to input from Indigenous Peoples and communities. Skeena Resources has prepared an Engagement Plan pursuant to the BC EAA which is posted to EAO's ePIC and summarized below.

The principles for Skeena's approach to engagement include:

- Foster cooperation and understanding through transparent, honest, frequent and timely plain language communication with Indigenous Peoples, communities and stakeholders to clearly communicate potential impacts, opportunities and potential solutions associated with the Project;
- Communicate Project plans and activities openly and gather feedback; work to address any concerns including where possible, refining the Project or developing mitigation measures;
- Meet the Indigenous and public consultation requirements of the new provincial EA and federal IA process including public comment periods where feedback will be provided to the government and company; and
- Commit to incorporating principles of Gender Based Analysis (GBA+) and working with the community to mitigate barriers that limit participation and engagement from specific groups in the community. GBA+ goes beyond biological (sex) and socio-cultural (gender) differences and considers: 1) assumptions that are informing policy development (e.g., social factors, norms or stereotypes); 2) who could be left behind or not captured (various groups and genders) by policies; 3) who is consulted when developing policies (those directly affected and risk of being left behind); and 4) the data used to develop policies.

9.1 Summary of Engagement with Indigenous Peoples of Canada

The approach to Indigenous engagement by Skeena Resources will be guided by principles outlined in the federal *Principles Respecting the Government of Canada's Relationship with Indigenous Peoples* (Government of Canada 2018), BC's *Draft Principles that Guide the Province of British Columbia's Relationship with Indigenous Peoples* (Province of British Columbia 2018) and the *United Nations Declaration on the Rights of Indigenous Peoples* (United Nations 2007).

Skeena has also identified the following early engagement objectives with Indigenous Peoples:

- Provide opportunities for transparent and meaningful dialogue with Indigenous Peoples to inform Skeena of their interests in the Project;
- Facilitate assessment by the Indigenous Peoples of potential Project effects to Indigenous Title, Rights and interests and identify the mitigations to remove or reduce potential effects;

- Identify the process for incorporating Indigenous knowledge, interests and concerns in the assessment process;
- Identify opportunities for Skeena and Indigenous Peoples to work collaboratively and mutually benefit in relation to the Project; and
- Support IAAC and the BC EAO's goals with respect to Indigenous Rights, knowledge and reconciliation.

Skeena Resources has identified the Tahltan Nation, TSKLH, Nisga'a Nation and Gitanyow Nation and the Métis (collectively referred to as Indigenous Peoples) as being potentially impacted by the Project. The Project is within the Tahltan Nation territory and TSKLH asserted traditional territory. Highways 37 and 37A pass through the Nass and Nass Wildlife Areas (as defined in the Nisga'a Final Agreement) of the Nisga'a Nation and the traditional territory of the Gitanyow Nation.

Skeena Resources initiated engagement on the Project's exploration program in January 2015 and has frequently engaged with the TCG and THREAT since this time (refer to Appendix C for a summary of engagement activities). Virtual information sessions with members of the Tahltan Nation are planned for June 23/26 2021.

Skeena Resources initiated engagement with TSLKLH in spring 2018 and had an opportunity to engage in person in August of 2020 (refer to Appendix D for a summary of engagement activities). Skeena provided the draft IPD in Q1 2021 for review and comment to TSKLH as well as request input on preferred method of engagement on draft documents.

Skeena Resources held introductory meetings with the Nisga'a Lisims Government and Gitanyow Nation. Skeena has sent an introductory letter to the Métis Nation of British Columbia.

Potential Project impacts on Indigenous interests and concerns include:

- Potential Project effects on Indigenous title, rights and interests, current use of lands and resources for traditional purposes, and health impacts, including food security;
- Potential impacts (direct and indirect) to areas of cultural and spiritual importance, and access to those areas, from mine construction and operations and cultural impacts;
- Potential Project effects to environmental components, ecosystems and plant and animal species of cultural importance or conservation concern, including cumulative effects;
- Potential Project effects to fish and fish habitat due to changes in water quality in the Unuk River watershed, including cumulative effects;
- Potential positive and negative economic effects of the Project (employment and contracting opportunities, tax revenue, and general economic indicators);
- Potential Project effects (direct, indirect) to wildlife and wildlife habitat including cumulative effects;
- Concerns regarding effects of increased industrial traffic on Highway 37 and Highway 37A, including Project vehicle–wildlife interactions, spills and accidents in watercourses and interaction with Indigenous harvesters;

- Interest and participation in baseline data collection to understand interests and evaluate impacts;
- Potential effects to public and environmental safety;
- Potential Project social impacts; and
- Overall cumulative effects of the Project in context of other activity taking place in Indigenous territories.

Skeena Resources will work collaboratively with the IAAC and BC EAO to engage the above Indigenous Peoples during the early engagement phase and subsequent assessment process to understand their interests and the potential effects of the Project, and to develop Project-specific mitigations and accommodations. Should other Indigenous Peoples express interest in the Project, Skeena Resources will work with the IAAC and BC EAO to determine the scope of consultation and adapt engagement planning accordingly.

9.2 Summary of Engagement with Government Agencies and the Public

Skeena Resources started engagement on the Project with government agencies in 2020. Meetings were held with EMPR (now EMLCI), ENV and FLNRORD to provide a Project overview and permitting timelines. Skeena Resources met with the BC EAO and IAAC in March 2020 and September 2020 to provide an overview of the Project and proposed timing for entering the IA/EA processes. Discussions with BC EAO and IAAC were held in December of 2020 regarding Indigenous involvement. In early January of 2021, biweekly meetings between Skeena and BC EAO/IAAC were initiated, with Tahltan participation. On February 24, 2021 Skeena and Tahltan participated in a meeting with BC EAO and IAAC outlining how they work collaboratively. Table 9.2-1 identifies the key provincial and federal government agencies that will likely be involved in the assessment process.

Table 9.2-1 Key Government Agency Contacts

Federal Agency	Provincial Agency
• Impact Assessment Agency of Canada (IAAC) • Fisheries and Oceans Canada (DFO) • Transport Canada (TC) • Environment and Climate Change Canada (ECCC) • Natural Resources Canada (NRCAN) • Health Canada • Crown Indigenous Relations and Northern Affairs Canada • Indigenous Services Canada • Department for Women and Gender Equality • Employment and Social Development Canada • Innovation, Science and Economic Development Canada • Public Safety Canada	• BC Environmental Assessment Office (BC EAO) • Ministry of Energy, Mines and Low Carbon Innovation (EMLI – formerly Energy, Mines and Petroleum Resources (EMPR) • Ministry of Transportation and Infrastructure (MoTI) • Ministry of Environment and Climate Change Strategy (ENV) • Ministry of Forests Lands Natural Resources and Rural Development (FLNRORD) • Northern Health

Skeena Resources will engage with local government, including Regional District of Kitimat-Stikine, Dease Lake Community Advisory Commission, District of Stewart, Town of Smithers, and City of Terrace. No municipal plans relevant to the EA were noted, with the exception of the Bob Quinn Rural Land Use Bylaw 314 Area which includes the Bob Quinn electrical sub-station.

Potentially affected public include:

- holders of trapping, guide outfitting, range, mineral and other land tenures issued by the BC government;
- community-based organizations (Bob Quinn Airport Society, Stikine Airport Society, Dease Lake Volunteer Fire Department, Dease Lake RCMP Detachment, Dease Lake Ambulance, Dease Lake Recreation Society, Terrace RCMP Detachment);
- businesses and business groups (Stewart World Port, Stewart Bulk Terminals, Bell II Lodge, Smithers Chamber of Commerce, Terrace Chamber of Commerce);
- academic institutions (Northern Lights College, Coast Mountain College);
- environmental non-governmental organizations (Northern Confluence Initiative, Southeast Alaska Conservation Council, Rivers Without Borders); and
- self-identified members of the public.

Skeena Resources will engage with the potentially affected public. Some groups may be engaged prior to submission of the IPD to BC EAO and IAAC. Feedback from this engagement will be incorporated into the IPD. Otherwise, engagement may take place after the IPD submission, and feedback will be incorporated into the DPD.

Based on other EA reviews of mine projects in northwestern BC, topics of interest are likely to include:

- Potential positive economic effects of the Project (employment and contracting opportunities, tax revenue);
- Potential effects to public and environmental safety;
- Potential Project effects to fish and fish habitat due to changes in water quality in the Unuk watershed;
- Potential Project effects to wildlife and wildlife habitat; and
- Potential Project effects to recreational fishing and hunting.

10.0 POTENTIAL EFFECTS OF THE PROJECT

This section discusses how the Project might interact with the physical, biological and human environments and possible Project-related environmental and social effects. Table 10-1 indicates potential interactions that might occur during the Project's construction, operations, closure, and post-closure phases.

The potential effects of the Project on environmental, economic, social, heritage and human health will be assessed as part of the federal and provincial assessment processes. The assessment would focus on specific valued components (VC) identified in collaboration with Indigenous Peoples, government agencies and the public. The assessment of potential effects to VCs would include consideration of mitigation measures and plans to avoid, minimize, rehabilitate or offset impact; residual and cumulative effects associated with the Project and reasonably foreseeable developments. A preliminary list of potential effects and mitigation measures is provided in Table 10-2.

10.1 Potential Changes to the Environment Outside of BC and Canada

The Project is located within the headwaters of the Unuk River watershed, approximately 40 km in a straight line northeast from the BC – Alaska border on the Unuk River (Figure 1.1-1). The Project's assessment will include a robust analysis of potential effects within a regional study area and a local study area that encompasses the mine site. The assessment will consider potential effects on VCs where there is potential for downstream effects on VCs such as water quality, fisheries, and aquatic resources, and other VCs. Appropriate mitigation measures will be put in place to manage impacts and to limit the geographic extent of potential effects.

Environmental management and monitoring to comply with regulatory permits and conditions at the former underground mine site has occurred since initial development in the mid-1990s under previous owners. Skeena Resources will continue environmental monitoring and mitigation works to minimize potential risks to adjacent watersheds and comply with existing permits and regulations, such that no anticipated impacts would occur to local watercourses or those extending outside of BC. Mitigation and Environmental Management Systems exist to monitor the existing closed mine site and will be enhanced for the future Project operations and ensure compliance to current and future provincial and federal requirements. This will continue to build on the track record of avoiding long-term impacts from the site.

Table 10-1 Preliminary Identification of Potential Project Interactions

Project Component	Physical Environment							Terrestrial Environment			Human and Socio-economic Environment			Indigenous Rights and Title				
	Air Quality	Climate Change	Noise and Vibration	Groundwater	Surface Water and Hydrology	Surface Water Quality	Fish and Fish Habitat/ Aquatic Resources	Terrain and Soil	Vegetation and Ecosystems	Wildlife and Wildlife Habitat	Community Health and Well-being	Human Health	Economic	Non-Traditional Land Use	Heritage Resources	Indigenous Rights and Title	Indigenous Interests	Current Use of Lands and Resources for Traditional Purposes
Project Construction and Operation (overview level)	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Open pit mine	X	X	X	X	X	X		X	X	X		X			X			
Processing Area	X	X	X		X	X		X	X	X					X			
TMSF and new embankment		X		X	X	X		X	X	X					X			
Road infrastructure (new mine roads and existing access)	X	X	X		X	X	X	X	X	X					X			
Waste rock storage facilities	X	X	X	X	X	X		X	X	X					X			
Overburden and topsoil stockpiles	X	X	X	X	X	X		X	X	X					X			
Water treatment facilities including: new water treatment plant and use of existing mine water settling ponds and discharge location for initial years.				X	X	X	X	X	X	X		X			X			
Conveyors and crushing	X		X					X	X	X					X			
Modular worker accommodation (camp)		X			X			X	X	X	X	X			X			
Detonator magazine and explosives storage	X	X	X		X	X		X	X	X	X	X			X			
Tailings and reclaim pipelines from Processing Area to TMSF following haul road					X	X		X	X	X					X			
Surface water management structures		X		X	X	X	X	X	X	X					X			
Tom MacKay diversion tunnel around the pit		X		X	X	X	X	X	X	X					X			
Power line to Mine site	X	X	X		X	X	X	X	X	X		X			X			
Building infrastructure (operations, security, etc.)		X			X			X	X	X	X	X			X			

Table 10-2 Preliminary List of Possible Project Effects and Mitigations

Component	Potential Effect	Example of Potential Mitigation
Indigenous Interests		
Physical and Cultural Heritage, Current Use of Lands and Resources for Traditional Purposes, Sites of Historical, Archaeological or Cultural Importance	• Generally, these potential effects are related to the Project's potential impacts to the biophysical environment and the Project's footprint. These could, in combination, potentially affect exercising of Aboriginal rights and traditional land uses in and around the Project area; harvesting plants for food for medicinal and ceremonial purposes; and camping and gathering at sites of cultural, spiritual and historic importance.	• Avoid and/or minimize Project interaction with identified sites (reduce the size and timing of impacts).
Indigenous Peoples' health, social or economic conditions	• Generally, these potential effects are related to the Project's potential impacts to the biophysical environment and to social and economic factors (e.g., related to food security, transmission of knowledge, employment). These could, in combination, potentially affect legal, spiritual and cultural practices; transmission of traditional culture, knowledge and law; and improve employment and economic opportunities.	• Health: Monitoring of workers exposure to air quality/dust factors and utlize enhanced dust controls to minimize health effects from dust exposure • Social: Implement a social-economic baseline survey update every 5 to 10 years to characterize changes and continue engagement to support Indigenous knowledge characterization and cataloging for long-term preservation • Economic: Support Indigineous communities agencies with skills inventory, training and skills development.
Physical Environment		
Air Quality and GHG Emissions	• Fugitive dust emissions from material handling, blasting, vehicle and processing can increase ambient particulate matter concentrations that can negatively affect human and wildlife health, and increases in dust fall deposition can affect vegetation and waterbodies. • Combustion emissions from vehicles and equipment can result in increases in ambient concentrations of nitrogen dioxide (NO_2), sulphur dioxide (SO_2) and other contaminants that can negatively affect human health and vegetation.	• Minimize removal of vegetative cover through design stage by stacking, re-use of previously disturbed areas/linear corridors and re-vegetate as soon as practical. • Selection and maintenance of fossil fuel burning equipment to achieve best/cleanest possible emissions, lowest fuel consumption and most efficient operations. • Use cyclones and air scrubbers for particulate collection. • Efficient operation of Project vehicle fleet and equipment to minimize GHG emissions. • Stabilize and re-vegetate soil stockpiles. • Water haul roads when required. • Covering concentrate haul trucks while in transit. • Project would be powered by electricity provided by the Volcano Creek hydroelectric facility. • Utilize electrified equipment/building heating designs where possible, instead of fossil fuels; implement energy conservation programs.

Component	Potential Effect	Example of Potential Mitigation
		• Provide electrical power from Volcano Creek hydro-electric facility to the mine site so onsite generation is not required/minimized. • Subaqueous disposal of tailings and waste rock to reduce the land clearing footprint. • Target lower GHG intensity, higher efficiency transportation methods for people, supplies and products. • Implement an air quality and dust control management plan.
Noise and Vibration	• Noise from mining can result in increases in noise levels for human and wildlife receptors • Vibrations from blasting and equipment may affect human and wildlife receptors • Specific impacts of noise on human health will be identified as part of the Human Health Risk Assessment • Vibration impacts to geotechnical stability near mine site infrastructure	• Use noise minimization equipment where appropriate. • Install engineering controls on equipment (e.g., mufflers, buildings or enclosures, air intake treatments). • Maintain equipment on a regular basis (e.g., replace worn parts, lubricate as required). • Using material to create berms and barriers. • Implement a noise management plan, including scheduling blasting events during daytime hours or other times to accommodate identified receptors. • Include potential vibration impacts in reviews of geotechnical stability.
Groundwater	• Changes to groundwater quality and quantity from MLARD (waste piles, pits, underground mine) or chemical contamination (e.g., fuel spills) or over-extraction.	• Implement groundwater management and monitoring plans during construction, operation and closure to confirm resource status and update water quality models/predictions. • Maximizing water reuse between mill and tailings storage facility to reduce groundwater supplementation and reuse of treated effluent. • Utilize best management practices (BMPs), engineered controls and monitoring of chemical/fuel storage and use to prevent accidental spills/releases. • Implementing a reclamation and closure plan, including a drainage closure plan.
Geology, Soils and Terrain	• Loss of soil profile and changes to terrain from vegetation removal, overburden removal, waste storage rock and development of open-pit mine. • Changes to soil quality due to changes in soil chemical and physical characteristics during mining and reclamation activities. • Long term storage of soils leading to loss of soil productivity.	• Soil salvage, soil stockpile, and soil placement management. • Implement an erosion and sediment control plan. • Implement a reclamation and closure plan incorporating soil salvage plans and targeted end land use objectives.

Component	Potential Effect	Example of Potential Mitigation
Hydrogeology	• Changes to groundwater quality and quantity from mining interaction with groundwater table resulting from changes to topography including disturbance to bedrock and surficial materials. • Changes to groundwater quality interactions between groundwater and mine-influenced surface water. • Changes to groundwater quality from water infiltration through waste rock, pit walls, mine pits, etc.	• Implement an erosion and sediment control plan. • Implement groundwater monitoring plans during construction and operation and adapt to findings. • Implement Project-specific surface water quality management plan. • Implement a reclamation and closure plan, including a closure water management plan.
Hydrology and Surface Water Quality	• Changes in water quality downstream of the mine site within the Unuk or Volcano Creek watersheds from discharge of treated mine contact water, site runoff erosion/sedimentation, blasting residue leaching, interactions with groundwater, accidents/spills or ML/ARD risks. • Potential effects could change concentrations of key parameters including metals, physical parameters (pH, temperature, turbidity/TSS, etc.), which affect suitability to downstream uses, toxicity to aquatic life, nutrient levels. • Changes in flow regime and sediment loading in watercourses streams. • Erosion/deposition associated with changes in surface water flow regime. • Changes in groundwater/surface water interactions.	• Implement surface water management plan during construction and operation. • Design for closure to minimize potential for mine contact water and re-establish the natural drainage at the end of the mine life. • Integrate water management into reclamation and closure planning. • Subaqueous management of PAG materials.
Biological Environment		
Fish and Fish Habitat/Aquatic Resources	• Direct loss or change in quantity of aquatic habitat due to mine infrastructure. • Change in quantity and quality of aquatic habitat resulting from alteration of stream flows. • Change in water quality resulting in potential health effects to aquatic resources and aquatic species (e.g., fish, benthic invertebrates, amphibians and birds). • Change in amount, suitability, migration and distribution of habitats (including sediment quality) for fish or aquatic organisms from road upgrades or sediment/erosion inputs at stream crossings or along power line.	• Avoid and/or minimize Project direct loss of aquatic habitat through selection of mine pit and waste rock storage locations that do not directly interact with fish bearing waterbodies. • Implement appropriate management practices and environmental management plans. • Minimize mine footprint through phased operation and maximize backfill waste deposition. • Implement appropriate management practices (e.g., Standards and Practices for Instream Works) and environmental management plans (e.g., erosion and sediment control plan). • Implement a habitat offset plan to compensate for unavoidable harmful alteration, disruption or destruction of fish habitat. • Implement surface water quality management.

Component	Potential Effect	Example of Potential Mitigation
Vegetation and Ecosystems	• Loss and/or alteration of ecosystems, vegetation and wetlands from land clearing and mine construction. • Health effects on vegetation due to changes in air, water, soil quality and dust deposition. • Deposition of dust on plants and soil, which can result in uptake of metals to plants, which are then consumed by wildlife.	• Implement appropriate management practices and ecosystem/species management plans. • Avoid and/or minimize Project interaction with sensitive and at risk ecosystem and biodiversity elements (reduce the size and timing of impacts). • Design for closure approach to allow for re-establishment of natural ecosystems at the end of the mine life, prevent invasive plant establishment and minimize vegetation losses through re-use of existing disturbed areas. • Minimize mine footprint through progressive and interim reclamation. • Implement appropriate management practices and plans to minimize loss of sensitive vegetation/ecosystems through design, preserve land capacity for reclamation (soil quality) to endemic ecosystems and minimize potential for health effects (metal uptake). • Implement a reclamation and closure plan incorporating specific end land use objectives. • Implement an air quality and dust control plan. • Implement a storm water runoff control plan.
Wildlife and Wildlife Habitat	• Loss and/or alteration of wildlife habitats, including migratory bird habitat, from land clearing and mine construction. • Sensory disturbance to wildlife (light and noise). • Disruption of wildlife (e.g., bears, small furbearers) seasonal movement patterns in regional and local landscapes. • Direct mortality of wildlife due to vehicle-wildlife collisions and indirect mortalities from mine operations. • Changes to population dynamics, including potentially moose, bears, small furbearers due to changes to predator-prey dynamics. • Health effects on wildlife due to changes in air, water and soil quality. • Loss of riparian habitats affecting water bird and amphibians that use lentic and lotic environments.	• Design for closure approach to allow for re-establishment of wildlife supporting ecosystems at the end of the mine life. • During design and operation, develop collaborative approaches to management plans/practices which influence biophysical factors that will maintain/enhance wildlife supporting ecosystems. Minimize Project interaction with wildlife. • Implementing a reclamation and closure plan incorporating targeted end use objectives (e.g., wildlife habitat). • Mitigate habitat loss to migratory birds by reusing existing disturbances, where possible, and timely reclamation. • Implementing erosion control and sediment management plan (e.g., sedimentation ponds). • Conduct habitat clearing outside of the migratory bird nesting period wherever possible to avoid effects on nesting birds and comply with Avoidance Guidelines and other provisions of the *Migratory Birds Convention Act.* • Observing applicable BMPs for wildlife.

Component	Potential Effect	Example of Potential Mitigation
Social, Health, Economic and Heritage Environment		
Community Health and Well-being	• Changes to and/or maintenance of community and individual health and well-being. • Provincial and local economic stimulus. • Employment, income, local government revenue generation and gross domestic product benefits • Health and safety of workers and public. • Changes to wage and non-wage economy due to Project driven changes in hunting, trapping, and gathering. • Changes to local population and demographics due to Project driven labour market changes. • Changes to local community services and infrastructure due to either Project demand or Project-driven population change.	• Community management planning with Indigenous groups and stakeholders to address provision of services and effects to community health and well being. • Seeking input on end land use objectives. • Implementing reclamation and closure plans consistent with end land use objectives. • Skills inventory, training and skills development with Indigenous and local communities. • Employee occupational health and safety plans. • Employment planning. • Plan for local procurement of goods and services. • Work with local government authorities and health, protective, and emergency service organizations to plan for and adjust to anticipated changes in population and associated changes in service demand. • Implement a traffic management plan.
Human Health	• Change to particulate matter concentrations (e.g., $PM_{2.5}$ and PM_{10}) which may cause health risk to workforce. • Deposition of dust to plants and soil, which can result in uptake of metals to plants which are then consumed by people. • Health effects due to changes in water quality. • Increased levels of noise and traffic causing stress or harm, such as sleep disturbance.	• Implementing an air quality and dust control plan, as needed. • Implementing a storm water runoff control plan, as needed. • Noise mitigations.
Economic	• Provincial and local economic stimulus via Project procurement and contracting for goods, services, and personal services, and consumer spending of employees. • Changes to employment, employment income, and training. • Changes to gross domestic product (GDP). • Changes to local government revenues and expenditures.	• Transition planning for mine workers at end of mine life.
Commercial and Public Land Use	• Changes to opportunities associated with public and tenured land and resources, including changes to use of and/or access to certain public lands and waters and availability of certain species.	• Seeking and implementing input on recreational access and end land use objectives. • Implementing reclamation and closure plans consistent with end land use objective.

Component	Potential Effect	Example of Potential Mitigation
Heritage Resources	• Effects to heritage resources due to land clearing, mining and associated infrastructure.	• Conduct archaeological impact assessment to discover previously undocumented archaeological sites within the Project area. • Develop an archaeology chance find procedure. • Where possible, avoid ground disturbing activity within archaeological sites. If disturbance to archaeological site is anticipated to occur, implement mitigation strategies to salvage pre contact cultural heritage information.
Human and Terrestrial Wildlife Health		
Human and Terrestrial Wildlife Health	• Deposition of dust to plants and soil, which can result in uptake of metals and PAHs from mining to plants which are then consumed by people and wildlife which may impact their health. • Water runoff may contribute to changes in water quality to downstream waterbodies which may impact health of humans, fish and wildlife.	• Implement an air quality and dust control plan and site water management plan.
Components of the environment that are within the legislative authority of the Federal Government		
Fish and Fish Habitat	• Direct loss or change in quantity of aquatic habitat due to mine infrastructure • Change in quantity and quality of aquatic habitat resulting from alteration of stream flows • Change in water quality resulting in potential health effects to aquatic resources and aquatic species (e.g., fish, benthic invertebrates, amphibians and birds) • Change in amount, suitability, migration and distribution of habitats (including sediment quality) for fish or aquatic organisms from road upgrades or sediment/erosion inputs at stream crossings or along power line	• Avoid and/or minimize Project direct loss of aquatic habitat through selection of mine pit and waste rock storage locations that do not directly interact with fish bearing waterbodies. • Implement appropriate management practices (e.g., Standards and Practices for Instream Works) and environmental management plans (e.g., erosion and sediment control plan). • Implement a habitat offset plan to compensate for unavoidable harmful alteration, disruption or destruction of fish habitat.
Aquatic Species at Risk	• There are no SARA-listed species in the vicinity of the Project.	• Minimize mine footprint through phased operation and maximize backfill waste deposition.
Migratory Birds	• Loss and/or alteration of migratory bird habitat, from land clearing and mine construction	• Mitigate habitat loss to migratory birds by reusing existing disturbances, where possible, and timely reclamation. • Conduct habitat clearing outside of the migratory bird nesting period wherever possible to avoid effects on nesting birds and comply with Avoidance Guidelines and other provisions of the *Migratory Birds Convention Act.*

Component	Potential Effect	Example of Potential Mitigation
Potential Changes Outside of BC and Canada		
Potential Changes outside of BC within Canada	• No potential changes are anticipated outside of BC within Canada.	• No mitigation measures are proposed.
Potential Changes on Federal Lands	• No potential changes are anticipated on Federal lands.	• No mitigation measures are proposed.
Potential Changes Outside of Canada	• No anticipated impacts to air, water or wildlife extending outside of BC.	• Mitigation measures will be put in place to manage impacts and to limit the geographic extent of potential effects. • Continue environmental monitoring and mitigation works to minimize potential risks to adjacent watersheds and comply with existing permits and regulations

Importantly, past assessments and reviews have approved the use of sub-aqueous disposal of PAG tails and waste rock in non-fish bearing lakes as the most suitable long term waste management and MLARD mitigation strategy. The Environmental Assessment Review for the underground Eskay Creek Mine in 2000 for the use of Tom MacKay Lake as a waste disposal facility, and subsequent Project Approval Certificate that was issued, did consider the concerns of First Nations, non-Canadian regulators and parties and potential for effects on fisheries resources and water quality of the Unuk River. The Project Committee Report concluded that, with the implementation of mitigation and compensation strategies and compliance with regulatory authorizations, that development of sub-aqueous storage of tailings in Tom MacKay Lake was not expected to cause significant adverse environmental, economic, social, cultural, heritage and health effects. Environmental effects monitoring programs over the past 20 years have supported the conclusion of no significant adverse environmental effects.Potential changes to the environment as a result of carrying out the Project are not anticipated on federal lands in BC, or outside of Canada. No potential changes are anticipated outside of BC within Canada.

10.1.1 Potential Transboundary Effects

Consideration of the potential for transboundary effects will be part of the assessment process but Skeena's perspective is that past monitoring has demonstrated little risk to downstream water quality or fisheries resources. Skeena anticipates that through rigorous review, design and planning, along with effective mitigation and management, no transboundary effects will occur due to the Project. Rationale is provided below.

Air

To assess whether a transboundary effect for emissions of criteria air contaminants (CACs) greater than background values from the Project is likely, we examined the results of air quality modelling that was conducted as part of the EA for the KSM project (Seabridge 2013) which is located directly south of the Eskay site.

Air quality dispersion modelling results for the KSM project (a 100,000+ tpd open pit operation across multiple large open pits) show that there may be cases where emissions of CACs from the KSM project, result in ambient concentrations that remain greater than background values for locations in the USA. The contaminants where maximum modelled ambient concentrations remain above background values in the USA include: TSP, PM_{10}, NO_2, and SO_2. It is important to note that the modelled concentrations in the USA were only slightly above background values for all the contaminants previously listed. It is also important to note that the results are considered conservative as the modelling that was conducted followed BC Ministry of Environment guidelines which are designed to produce conservative results.

To compare the results of the KSM project air quality modelling with what would be expected from the Project it is important to compare the scale of the two projects. The magnitude of the emissions of CACs is directly related to the scale of a project including material moved and number of pieces of equipment and vehicles. Therefore, if the magnitude of the emissions of CACs for both projects is similar, and since the projects are very close to each other geographically, it is reasonable to assume that the air modelling results would be similar.

The KSM project was modelled based on an average of 180,000 tpd of ore processed plus 316,000 tpd of waste rock. These values are an indication of the scale of the KSM project. The Project is estimated to have approximately 6,900 tpd of ore processed and 49,000 tpd of waste rock. Based on the total material moved per day (ore plus waste rock) the KSM project is approximately nine times the size of the Project. Therefore, it is reasonable to assume that the KSM project would have CAC emissions roughly nine times as large as the Project. This would result in the Project having much lower ambient CAC concentrations than those reported in the KSM air modelling. In addition, it is likely that the spatial extent of the area where CAC concentrations remain above background concentrations would be much smaller for the Project. Therefore, it is highly likely that ambient CAC concentrations due to the Project would remain below background levels in the USA and that no transboundary effects are likely.

Water

The Project is located in a highly mineralized area. Accordingly, concentrations of several metals (e.g., cadmium, chromium, copper, iron, mercury, nickel and silver) are naturally elevated in streams and rivers near the Mine compared to BC guidelines for the protection of aquatic life (McGurk et al., 2006; Golder 2018). The Eskay Creek Mine discharged to Ketchum Creek. The distance from the mine footprint to the Unuk River along the flow path of Ketchum Creek is approximately 3.8 km, and from the Unuk River at the confluence of Ketchum Creek to the border with Alaska is approximately 44 km along the flow path.

The Eskay Creek Mine EEM monitoring program undertaken from 1997 to 2017 showed that concentrations of certain metals (e.g., antimony and lead) were elevated in Ketchum Creek relative to an upstream reference site during Mine operation (1995-2008), however, metal concentrations decreased following mine closure and are generally similar to or approaching baseline and reference site concentrations (Golder 2018).

Water quality monitoring in the Unuk River (2000-2017) demonstrated that metal concentrations in the Unuk River tend to be higher both upstream (reference station) and downstream of the

confluence with Ketchum Creek and water quality effects associated with Eskay Creek Mine were not detectable in the Unuk River (McGurk et al., 2006; Golder 2018). Overall, water quality tended to be similar at the upstream and downstream monitoring stations in the Unuk River, and elevated metal concentrations in both locations were found to co-occur with elevated concentration of TSS. These results indicate that elevated metals in the Unuk River are a natural occurrence and unrelated to development activities at the Eskay Creek Mine. This is a consistent finding with the 2017-2019 BC/Alaska funded agency monitoring program outcomes referred to earlier.

Discharges from the Eskay Creek Mine have been a very small component of the much larger flows which occur in the Unuk River. The Eskay Creek Mine occurs in the Tom Mackay Creek watershed (24 km^2), a sub-catchment in the lower Ketchum Creek watershed. Ketchum Creek is a tributary to the upper Unuk River with a watershed size of 69 km^2 (including the Tom Mackay Creek watershed) and has an estimated mean annual discharge of 2.8 m^3/s (FLNRORD 2021a). The Unuk River watershed is 1,560 km^2 at the BC/Alaska border, with an estimated mean annual discharge of 111 m^3/s (FLNRORD 2021b). The Ketchum creek watershed makes up 4.5% of the Unuk River watershed in BC and 2.5% of the mean annual discharge, and the Project footprint represents an even smaller proportion of the Unuk River watershed (HCI, 2000).

Until water quality modelling is completed, the specific requirements for water treatment will not be known, however, the expected heavy elements and nitrogen forms are readily treated using conventional water treatment technologies that have been successfully deployed to meet water quality objectives at other mine sites.

Given that former mine-related water quality effects in the Unuk River have not been detectable over an 18-year monitoring period (encompassing mine operations and post-operations), the relatively small contribution of Ketchum Creek to the Unuk River watershed, the potential for Project-related water quality effects in the Unuk River watershed that extends into Alaska are considered to be negligible. The 2000 PAC assessment for the original TMSF found that adverse effects to fish in the Unuk River from metals in the water column are likely not of concern (HCI 2000). The 2000 PAC review concurred that downstream fisheries resources in the Unuk River would not be at risk of significant adverse effects.

The Unuk River contains three species of pacific salmon and the lower Unuk River draining from the border to Burroughs Bay supports the fourth largest escapement of sockeye salmon in south-east Alaska. Salmon have been observed 7 km to 8 km downstream of the Eskay Creek mine site in the Unuk River.

The Project has the potential to result in changes to water quality as a result of the release of contaminants from waste rock and pit walls (Table 10-2). The Project's assessment will include a robust analysis of potential effects to water quality in the Unuk watershed. Appropriate mitigation will be put in place to manage impacts and to limit the geographic extent of potential impacts. Appropriate mitigation will be included as part of the Project and the geographic extent of potential effects to water quality are not expected to extend up to and beyond the BC border.

Wildlife

Several species of large mammals such as moose and grizzly bear occur in the Unuk River watershed. The sedge and willow wetlands used by moose as forage typically flow downslope into the Unuk River, so there is no pathway for changes in water quality in the Unuk River to affect moose. Grizzly bear forage during fall on salmon stocks in the Unuk River. With negligible effects anticipated to water quality in the Unuk River, effects on fish and fish habitat, and therefore on grizzly bear are considered to also be negligible.

10.2 Potential Project Cumulative Effects

The assessment will consider the Project's potential cumulative effects as a result of changes to environmental, economic, social, cultural and health values caused by the combined effect of past, present and potential future human activities. Table 10.2-1 summarizes historical, active and likely projects to occur within the vicinity of the Project in northwest BC that may present cumulative effects in an area broader than the mine site or Tahltan territory. Skeena Resources anticipates engagement on cumulative effects assessment with Indigenous Peoples, regulatory agencies and communities of interest.

Table 10.2-1 Past, Present, and Reasonably Foreseeable Future Projects

Historical Projects	Active Projects	Reasonably Foreseeable Projects
Cassiar Mine	Brucejack Mine	Galore Creek Mine
Golden Bear Mine	Forrest Kerr Hydroelectric	Kitsault Mine
Granduc Mine	Kitimat LNG Facility	KSM Mine
Johnny Mountain Mine	McLymont Creek Hydroelectric	Kutcho Mine
Kitsault Mine	Red Chris Mine	Premier Gold Mine
Snip Mine	Red Mountain Mine	Schaft Creek Mine
Sulphurets Mine	Silvertip Mine	Storie Moly Mine
Tulsequah Chief Mine	Volcano Creek Hydroelectric	Red Mountain Project
		LNG Canada
		Cedar LNG

10.2.1 Tahltan Nation Perspective of Cumulative Effects Assessment in British Columbia

As part of collaboration to develop the IPD for the Project, the Tahltan have provided the text below discussing cumulative effects assessment related to Tahltan Rights and Title.

The northwestern interior of BC is subject to increasing industrial pressures, especially from the mining and oil and gas sectors. Many of these projects are still in the planning phase, and many likely will not see the light of day. Existing projects have already had significant impacts on wildlife and the land, and these changes have altered the way in which Tahltan live on their land. Having the right relationship to the land and maintaining its integrity is at the core of Tahltan cultural and

spiritual identity. Disruptive changes to wildlife habitat and ungulate migration patterns, noise pollution resulting from increased traffic flows and mine activity, the degradation of water and soil quality, increases in non-resident recreational (and usually motorized) use of the land due to easier access – all these changes cumulatively will continue to alter in fundamental ways this relationship to the land, with adverse if incalculable impacts on the health and well-being of Tahltan communities.

First Nations people in the North were categorized, classified and reduced to 'bands' and placed on limited, delineated reserves where their title to land became dependent on federal legislation (Knafla and Westra 2010: 6). As the Fur Trade gave way to an industrial economy focusing on concepts of land that supported mining, forestry and hydro-development, a restless formation and reformation of the geographical landscape into a capitalistic spatial framework was occurring that enforced new relationships between the Europeans and First Nations people and further detached First Nations people from their former lands (Harris 2004: 172). There are multiple and often competing land and resource interests in the Tahltan Nation and all parties must commit to supporting mechanisms for comprehensive land and resource planning that includes full participation of the Industries and Governments involved.

To support this meaningful participation, a commitment can be made to initiatives focused on identifying protected areas due to their cultural and ecological importance or sensitivity, as well as protecting values that contribute to the cultural integrity, environmental health, biological diversity, and ecological processes. Recognizing the cumulative effects to the land, water, wildlife, plants and medicine species which included reassessing the cumulative effects as new mines are developed in the traditional territory over the complete life cycle of the project.

It is the view of the Tahltan Nation that the unregulated access development, incremental resource development primarily through mineral development, incremental pace of development, incremental use of the road area for consumptive purposes, and cumulative effects from all these factors have been and are currently significantly impacting Tahltan Rights and Title in our traditional territory in British Columbia.

11.0 CLOSING

The Eskay Creek Project would restart mining as an open pit at the past producing Eskay Creek underground mine, which operated from 1994 to 2008. The Project would use facilities and infrastructure of the former mine, existing areas of disturbance and construct new infrastructure. The Project would provide employment and other economic benefits to communities in northwest BC.

Through the IPD, Skeena Resources is providing an early design of the Project, with the intention that this document will form the basis for the provincial Early Engagement and federal Planning Phase that will help shape the design and details to include going forward about the Project. The assessment process will be initiated when the BC EAO and IAAC accept the IPD and seek public comments on the IPD. Regulators, agencies, Indigenous groups and the public will have an opportunity to provide initial feedback on the Project and project components that are still being evaluated.

Following the IPD work, Skeena Resource's next step in the assessment process will be the preparation of the DPD, which will present a more refined design for the Project and consider input provided by government agencies, Indigenous groups and the public during the Early Engagement Phase.

Please provide feedback to the EAO, IAAC, or directly to Steve Jennings, Skeena Resources.

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Appendices

Appendix A-1: Concordance Table – BC Environmental Assessment Office

Initial Project Description Guidelines	Section
Executive Summary	
A plain language summary of the IPD that is clear and concise.	Executive Summary
General Information and Contacts	
• Project name;	1.1
• Project location;	1.1
• Project industrial sector and type (e.g., open pit metal mine);	1.1
• Proponent name, mailing address, phone numbers, email address and website URL; and	1.2
• Include the name and contact information of the primary representative for the EA.	1.2
Purpose and Rationale	
• A general rationale for why the project has been proposed; and	2
• Potential project benefits.	2
Legislative and Regulatory Context	
• The type and size of the project, with specific reference to EA Regulatory Triggers [e.g., the EAO Reviewable Project Regulations and Impact Assessment Act (Canada) thresholds];	5.1
• A list of anticipated authorizations and permits;	5.2
• Consider the requirements of any applicable agreements between the Province and Indigenous nations, including treaties;	5.4
• Consider the requirements of any applicable international agreements between the Province and state or federal governments;	5.1
• A description of relevant government policies that the project may not be compatible with; and	5.2
• Proposed timing for conducting the provincial EA and federal EA, if applicable.	5.3
Project Status and History	
• Project history, including past ownership;	3.3
• State if it is a new project or a modification to an existing project;	3.4
• A list of any existing permits or tenure in place;	3.4
• A description of any previous proposal(s) for the project or a similar proposal and the outcomes and history of the proposal(s), if applicable; and	3.3
• If the project was previously declined or terminated, a description of how this proposal differs and how the issues for which the previous proposal was declined or terminated have been addressed.	3.3
Project Timing	
• A list of proposed project phases (e.g., construction, operation, decommissioning, and reclamation) and the anticipated timing and duration of each phase; and	5.3
• Include any known seasonal timing constraints.	5.3

Initial Project Description Guidelines	Section
Project Location, Activities and Components	
• A description of the proposed project's location in a local and regional context, including proximity to communities or locations of interest to the public, government, or Indigenous nations, and key designated or protected areas such as parks or Wildlife Habitat Areas;	3.2 6.0
• Proposed project activities and components;	4.1 4.2
• Proposed on and off-site facilities and equipment;	4.1
• A brief description of proposed activities related to processing, transportation and/or shipping of materials to/from the site;	4.1
• A description of any other project(s) that are needed for the proposed project to proceed and be feasible (e.g., a pipeline would be needed for an oil and gas facility to proceed);	4.1
• A description of the work that has been conducted to arrive at the proposed project as described in the IPD;	4.1
• A list of design or siting constraints that are flexible and those that are not flexible;	4.1
• A list of other design or siting options that may be considered; and	4.4 4.6
• Anticipated daily and annual maximum production or operational capacity of the project (if applicable).	5.1
Indigenous Nation Interests	
• A description of the proximity of the proposed project to Indigenous nations' territory, communities, locations of interest, Indian Act reserve lands, lands subject to a Treaty, or other relevant agreements;	6
• A description of potential project interactions with any identified Indigenous interests;	6
• A description of alignment of the IPD with Indigenous nation laws, customs and policies; and	6
• A list of any issues, concerns, or questions raised by Indigenous nations during engagement on the draft IPD or other information shared in relation to the proposed project.	6
Biophysical Environment	
• A description of the natural setting characteristics, including coastal, foreshore, riparian, mountainous, watersheds, and agricultural land;	7.2
• A description of disturbed area characteristics, including: brown field; contaminated site(s), and any history of development;	Table 4.1-2, Table 5.1-2
• Identification of sensitive or vulnerable species, ecosystems, and/or habitats in the project area; and	7.2
• A list of existing data, including monitoring reports, previous EAs, regional studies, and/or other sources of information that support the understanding of the existing biophysical conditions.	3.3
• Include a table listing any studies that are underway and those that are anticipated, including known guidance and standards to be used in these studies.	Table 7.1
Human and Community Wellbeing	
• A description of the proposed project's proximity to local communities, including seasonal or temporary residences;	7.3
• Identification of the municipalities within which the proposed project is located or where effects may occur;	7.3
• A description of the proposed project's proximity to important or sensitive community and natural places such as: municipal boundaries, parks, schools, hospitals, housing, water supplies, roads, railways, and protected and recreational areas;	7.3

Initial Project Description Guidelines	Section
• A list of existing data, including monitoring reports, previous EAs, regional studies, and/or other sources of information that support the understanding of the existing human environment conditions;	7.3
• Identification of any sensitive or vulnerable economic, social, heritage, or health values that may be affected by the project; and	Table 10.2
• A preliminary understanding of the anticipated size of the workforce for each project phase, where the workforce will be drawn from, and where the workforce will be housed. Refer to the Human and Community Wellbeing Guidelines for further information.	4.3
Emissions, Discharges, and Waste	
• A high-level outline of anticipated direct project waste and emissions to land, air, and water, including estimated greenhouse gas (GHG) emissions.	4.5
▫ This information would include direct emissions that are expected to be above provincial or national standards and emissions that have the potential to interact with Indigenous interests, the biophysical environment, and/or the human environment.	4.5
• A description of proposed mitigation measures and/or project design changes to address emissions, including GHGs.	4.5
Public and Environmental Safety	
• A description of potential malfunctions or accidents associated with the industry or specific to the proposed project and how they will be managed.	7.3.7
▫ Include any proposed outreach to help Indigenous nations, governments and the public better understand the risks and mitigations; and	9.1 9.2
▫ Include any issues raised about public and environmental safety during engagement with Indigenous nations, the public, provincial and federal government agencies, and stakeholders and how issues were considered in developing any mitigation measures or design changes.	9.1
Alternative Means of Carrying out the Project	
• A high-level description of the alternative options for the proposed project, including a rationale for the preferred option that demonstrates how positive and negative effects and/or issues raised during engagement have been considered;	4.7
• The alternative means of undertaking the proposed project may include information related to:	4.7
▫ the use of best available technologies;	
▫ the technical and economic feasibility;	
▫ the potential effects, risks and uncertainties of those alternatives;	
▫ the preferred option and a rationale for this preference; and	
▫ the different options for the project location, project routing, technologies, mitigation, or design.	
Effects of the Environment on the Project	
• An overview of potential effects of natural hazards or processes and climate change on the proposed project.	8
Land and Water Use	
• An outline of the anticipated project footprint and proposed area of disturbance;	4.1
• A description of the land required for the proposed project, including whether the project is located on private lands, provincial or federal Crown lands, or Indian Reserve lands;	4.1 6
• Include the applicable zoning, Agriculture Land Reserve designation, land and resource management plans, and other land use designations (e.g., parks and protected areas) and the legal land descriptions and/or tenure numbers of those lands, if known;	3.2 7.3

Initial Project Description Guidelines	Section
• A description of past uses of the land required for the proposed project, including whether the site has been previously developed; and	3.3
• A description of water requirements for the proposed project, if applicable, and the proposed source of water.	4.1
Land Use Plans	
• A list of all relevant land use plans, including provincial land use plans, Indigenous land use plans, and relevant municipal plans; and	5.1 5.2 5.4 7.3
• An identification of any rezoning or changes in land designations that would be required for the proposed project.	7.3
Project Interactions	
• A description of potential interactions between the proposed project and the biophysical and human environments, including Indigenous interests. It may be helpful to present this information in a table format, refer to the Effects Assessment Policy for examples of interaction tables;	10.1
• A summary of any biophysical feasibility studies undertaken that may be pertinent to understanding potential interactions, if applicable;	7.2
• A list of any activities proposed to be undertaken during the Early Engagement period to inform the development of the DPD or the Application, should the project proceed to an EA; and	8
• An identification of existing cumulative effects in the region that the project may interact with. Refer to the Effects Assessment Policy for more information.	10.2
Maps and Shapefiles	
• Local and regional scale maps of the project showing its location and known off-site components;	Figures 1, 3.3-1, 4.1-1, 4.1-2
• Shapefiles of the proposed project footprint and the footprint of known offsite components:	Separate File
▫ Shapefiles must be in ESRI format and include four file types: .shp, .shx, .dbf, and .prj;	
▫ Please also provide .KMZ files;	
▫ Shapefiles must be in BC Albers (NAD83) projection;	
▫ Shapefile polygons and their corresponding polygons on all maps must be identical in shape, size, and location;	
▫ Spatial features (.shp and .shx) must be represented as polygons, not as points or line features;	
▫ Shapefiles must be named in a way that clearly describes the contents;	
▫ To avoid having ArcGIS generate random errors, follow these best practices: avoid starting names by number, add an underscore instead of a space or dash, and do not include a symbol outside of the underscore; and	
▫ Provide shapefiles demonstrating the overlap of known project components with any identified communities or locations of interest to the public. This may include information regarding specific sites of importance to an Indigenous nation or their territory, if this information is not confidential in nature and an Indigenous nation has agreed to allow the information to be shared.	
• Maps must be presented in the required standard format with legible grids and suitable scaling (typically 1:100,000 to 1:150,000 for centralized projects such as a mine, and up to 1:1,500,000 or 1:1,250,000 scale for linear projects such as a pipeline or transmission line); and	
• Maps must also include a national Topographic System (NTS) Map number, latitude and longitude references, titles, a north arrow, and relevant legends.	

Appendix A-2: Concordance Table – Federal Concordance Table

Impact Assessment Agency	Section
General Information	
• The project's name, type or sector and proposed location.	1
• The proponent's name and contact information and the name and contact information of their primary representative for the purpose of the description of the project.	2
• A summary of any engagement undertaken with any jurisdiction or other party, including a summary of the key issues raised and the results of the engagement, and a brief description of any plan for future engagement.	9
• A list of the Indigenous groups that may be affected by the carrying out of the project, a summary of any engagement undertaken with the Indigenous peoples of Canada, including a summary of key issues raised and the results of the engagement, and a brief description of any plan for future engagement.	9
• Any study or plan, relevant to the project, that is being or has been conducted in respect of the region where the project is to be carried out, including a regional assessment that is being or has been carried out under section 92 or 93 of the Act or by any jurisdiction, including by or on behalf of an Indigenous governing body, if the study or plan is available to the public.	7.3.1
• Any strategic assessment, relevant to the project, that is being or has been carried out under section 95 of the Act.	7.3.1
Project Information	
• A statement of the purpose of and need for the project, including any potential benefits.	3.1
• The provisions in the schedule to the Physical Activities Regulations describing the project, in whole or in part	5.1
• A list of all activities, infrastructure, permanent or temporary structures and physical works to be included in and associated with the construction, operation and decommissioning of the project.	4.1
• An estimate of the maximum production capacity of the project and a description of the production processes to be used.	1
• The anticipated schedule for the project's construction, operation, decommissioning and abandonment, including any expansions of the project.	4.3
• A list of: ▫ potential alternative means of carrying out the project that the proponent is considering and that are technically and economically feasible, including through the use of best available technologies; and ▫ potential alternatives to the project that the proponent is considering and that are technically and economically feasible and directly related to the project.	 4.66 4.7
Location Information	
Description of the project's proposed location, including:	
• its proposed geographic coordinates, including, for linear development projects, the proposed locations of major ancillary facilities that are integral to the project and a description of the spatial boundaries of the proposed study corridor;	3.2
• site maps produced at an appropriate scale in order to determine the project's proposed general location and the spatial relationship of the project components;	Figures 1-1, 3.2-1, 4.1-1, 4.1-2
• the legal description of land to be used for the project, including, if the land has already been acquired, the title, deed or document and any authorization relating to a water lot;	1.1 3.2

Impact Assessment Agency	Section
• the project's proximity to any permanent, seasonal or temporary residences and to the nearest affected communities;	3.2
• the project's proximity to land used for traditional purposes by Indigenous peoples of Canada, land in a *reserve* as defined in subsection 2(1) of the *Indian Act*, *First Nation land* as defined in subsection 2(1) of the *First Nations Land Management Act*, land that is subject to a comprehensive land claim agreement or a self-government agreement and any other land set aside for the use and benefit of Indigenous peoples of Canada; and	7
• the project's proximity to any federal lands;	14.1
• a brief description of the physical and biological environment of the project's location, based on information that is available to the public; and	7.2
• a brief description of the health, social and economic context in the region where the project is located, based on information that is available to the public or derived from any engagement undertaken.	7.3.5 7.3.6
Federal, Provincial, Territorial, Indigneous and Municipal Involvement	
• A description of any financial support that federal authorities are, or may be, providing to the project.	5
• A list of any federal lands that may be used for the purpose of carrying out the project.	5
• A list of any jurisdictions that have powers, duties or functions in relation to an assessment of the project's environmental effects.	5
Potential Effects of the Project	
• A list of any changes that, as a result of the carrying out of the project, may be caused to the following components of the environment that are within the legislative authority of Parliament:	10.2
▫ fish and fish habitat, as defined in subsection 2(1) of the *Fisheries Act*;	10.2
▫ aquatic species, as defined in subsection 2(1) of the *Species at Risk Act*; and	10.2
▫ migratory birds, as defined in subsection 2(1) of the *Migratory Birds Convention Act, 1994*.	10.2
• A list of any changes to the environment that, as a result of the carrying out of the project, may occur on federal lands, in a province other than the province in which the project is proposed to be carried out or outside Canada.	10.1
• With respect to the Indigenous peoples of Canada, a brief description of the impact — that, as a result of the carrying out of the project, may occur in Canada and result from any change to the environment — on physical and cultural heritage, the current use of lands and resources for traditional purposes and any structure, site or thing that is of historical, archaeological, paleontological or architectural significance, based on information that is available to the public or derived from any engagement undertaken with Indigenous peoples of Canada.	10.1 10.2
• A brief description of any change that, as a result of the carrying out of the project, may occur in Canada to the health, social or economic conditions of Indigenous peoples of Canada, based on information that is available to the public or derived from any engagement undertaken with Indigenous peoples of Canada.	10.1 10.2
• An estimate of any greenhouse gas emissions associated with the project.	4.5.1
• A list of the types of waste and emissions that are likely to be generated — in the air, in or on water and in or on land — during any phase of the project.	4.5
Summary	
• A plain-language summary of the information that is required under items 1 to 24 in English and in French.	Separate file

Appendix B: List of Environmental and Human Environment Data Sources

Data sources for the Eskay Creek Project are provided below. The preliminary lists will be added to as additional information is provided and will be updated as further baseline data is collected in the field and though engagement with Indigenous groups, stakeholders and regulators.

Environment

AMEC Foster Wheeler (AMEC). 2017. *Eskay Creek Mine: Laboratory Kinetic Testing Update 2017*: report prepared by AMEC Foster Wheeler Environment and Infrastructure.

Ausenco Engineering Canada Inc. (Ausenco). 2019. Skeena Resources Limited. Eskay Creek Project, BC, Canada. *NI 43-101 Technical Report on Preliminary Economic Assessment.*

Barrick Gold Corporation (Barrick). 2014a. *Eskay Creek Gold Mine Site (closed) Tom MacKay Lake Tailings Storage Facility Dam Safety Inspection Report.* Barrick Gold Corporation.

Barrick. 2014b. *Eskay Creek Gold Mine Site (closed) Albino Lake Waste Rock Storage Facility Dam Safety Inspection Report.* Barrick Gold Corporation.

Barrick. 2017. *2016 Annual Reclamation Report Eskay Creek Mine Permit M-197*. Barrick Gold Inc. Eskay Creek.

Barrick. 2019. *2018 Annual Reclamation Report Eskay Creek Mine Permit M-197.* Barrick Gold Inc. Eskay Creek.

Environment Canada. *2013. Climate Data Online. Canada's National Climate Archive.* Available at http://www.climate.weatheroffice.gc.ca/climateData/canada_e.html. Accessed November 2019.

Golder Associates Ltd. 1998. *Hydrogeological Characterisation and Mine Water Inflow and Control.* Eskay Creek Mine. Dated September 1998.

Government of BC. 1988. *Biogeoclimatic zones of British Columbia, 1988. Map, 1:2,000,000.*

Government of BC. 2019. *Caribou in British Columbia.* Available at: https://governmentofbc.maps.arcgis.com/apps/MapSeries/index.html?appid=60eef687ed3a44a1881b1b79e47c7f41. Accessed November 2019.

Hallam Knight Piésold Ltd. (HKP). 1993: Application for a Mine Development Certificate, Eskay Creek Project.

Hemmera Envirochem Inc. (Hemmera). 1997. Eskay Creek Mine Mill Expansion an Application for the Approval of a Material Alteration to Eskay Creek Mine: Mine Development Certificate 94-01 and Amendments to Existing Permits.

Hemmera. 2000. Tom MacKay Lake Waste Rock and Tailings Project (Environmental Assessment) Eskay Creek Mine.

Lifeways of Canada Limited. 2021. *Fossil Impact Assessment Preliminary Study (DRAFT)*. Eskay Creek Project.

McGurk, M., F. Landry, and R. MacGillivray. 2006. *Eskay Creek Mine environmental effects monitoring program and its implications for closure planning.* British Columbia Technical and Research Committee on Reclamation, Proceedings of the Thirtieth Annual British Columbia Mine Reclamation Symposium, Smithers, BC, 19-22 June 2006. Bitech Publishers Ltd.

Meidinger, D., and J.Pojar. 1991: *Ecosystems of British Columbia, BC Ministry of Forests Research Branch, Special Report Series; no. 6.* Victoria, B.C. 330 pp.

RTEC. 2020a. *Eskay Creek Project 2020 Air Quality Baseline Report Eskay Creek Project 2020 Air Quality Baseline Report 2020 Air Quality Baseline Report (DRAFT)*. Eskay Creek Project. Prepared for Skeena Resources Ltd.

RTEC. 2020b. *Eskay Creek Project 2020 Air Quality Baseline Report Eskay Creek Project 2020 Air Quality Baseline Report Interim Report for Skeena Resources' HCA Permit 2020-0195.* Eskay Creek Project. Prepared for Skeena Resources Ltd.

RTEC. 2020c. *Eskay Creek Project 2020 Air Quality Baseline Report Eskay Creek Project 2020 Air Quality Baseline Report Soil Classification Report (DRAFT).* Eskay Creek Project. Prepared for Skeena Resources Ltd.

RTEC. 2021a. *Eskay Creek Project 2020 Air Quality Baseline Report Eskay Creek Project 2020 Air Quality Baseline Report Cumulative Aquatic Resources Baseline, 1991 to 2020 (DRAFT).* Eskay Creek Project. Prepared for Skeena Resources Ltd.

RTEC. 2021b. *Eskay Creek Project 2020 Air Quality Baseline Report Eskay Creek Project 2020 Air Quality Baseline Report Fish and Fish Habitat Baseline Study (DRAFT)*. Eskay Creek Project. Prepared for Skeena Resources Ltd.

RTEC. 2021c. *Eskay Creek Project 2020 Air Quality Baseline Report Eskay Creek Project 2020 Air Quality Baseline Report 2020 Groundwater Monitoring Network Installation (DRAFT).* Eskay Creek Project. Prepared for Skeena Resources Ltd.

RTEC. 2021d. *Eskay Creek Project 2020 Air Quality Baseline Report Eskay Creek Project 2020 Air Quality Baseline Report 2020 Hydrology Baseline Report (DRAFT)*. Eskay Creek Project. Prepared for Skeena Resources Ltd.

RTEC. 2021e. *Eskay Creek Project 2020 Air Quality Baseline Report Eskay Creek Project 2020 Air Quality Baseline Report 2020 Noise Baseline Report (DRAFT).* Eskay Creek Project. Prepared for Skeena Resources Ltd.

RTEC. 2021f. *Eskay Creek Project 2020 Air Quality Baseline Report Eskay Creek Project 2020 Air Quality Baseline Report Terrain Stability and Geohazards Mapping (DRAFT)*. Eskay Creek Project. Prepared for Skeena Resources Ltd.

RTEC. 2021g. *Eskay Creek Project 2020 Air Quality Baseline Report Eskay Creek Project 2020 Air Quality Baseline Report 2020 Vegetation and Ecosystems Mapping Baseline Report (DRAFT).* Eskay Creek Project. Prepared for Skeena Resources Ltd.

RTEC. 2021h. *Eskay Creek Project 2020 Air Quality Baseline Report Eskay Creek Project 2020 Air Quality Baseline Report Surface Water Quality Cumulative Baseline, 1990 to 2020 (DRAFT).* Eskay Creek Project. Prepared for Skeena Resources Ltd.

RTEC. 2021i. *Eskay Creek Project 2020 Air Quality Baseline Report Eskay Creek Project 2020 Air Quality Baseline Report Wildlife Baseline Report (DRAFT).* Eskay Creek Project. Prepared for Skeena Resources Ltd. LIFEWAYS OF CANADA LIMITED

SRK Consulting (SRK). 2019. *Independent Technical Report for Eskay Creek Au-Ag Project, Canada. 01 November 2018*. Final Report. Available at https://www.skeenaresources.com/assets/docs/maps/Eskay%20Creek_NI43-101%20Report_2CS042.001_20181101.pdf. Accessed August 2019.

Human Environment

Ausenco Engineering Canada Inc. (Ausenco). 2019. Skeena Resources Limited. Eskay Creek Project, BC, Canada. *NI 43-101 Technical Report on Preliminary Economic Assessment.*

Hallam Knight Piésold Ltd (HKP). 1993: Application for a Mine Development Certificate, Eskay Creek Project.

Hemmera Envirochem Inc. (Hemmera). 1997. Eskay Creek Mine Mill Expansion an Application for the Approval of a Material Alteration to Eskay Creek Mine: Mine Development Certificate 94-01 and Amendments to Existing Permits.

Hemmera. 2000. *Tom MacKay Lake Waste Rock and Tailings Project* (Environmental Assessment) Eskay Creek Mine.

Ministry of Small Business and Economic Development (MSBEC). 2005. Northwest BC Mining Projects. Socio Economic Impact Assessment. Available at http://www.llbc.leg.bc.ca/public/PubDocs/bcdocs/379509/socio_econ_impact_asses.pdf. Accessed August 2019.

Pretium Resources Inc. 2014a. *Brucejack Gold Mine Project, Application for an Environmental Assessment Certificate.* Appendix 19-A: Brucejack Gold Mine Project: Socio-economic Baseline Report. Available at: https://projects.eao.gov.bc.ca/api/public/document/5886900fe036fb01057688f2/download/Appendix%2019-A.%20Socio-Economic%20Baseline.pdf. Accessed February 2021.

Pretium Resources Inc. 2014b. *Brucejack Gold Mine Project, Application for an Environmental Assessment Certificate, Tsetsaut / Skii km Lax Ha Traditional Knowledge and Traditional Use Report,* at: https://projects.eao.gov.bc.ca/api/public/document/5886900de036fb01057688de/download/Appendix%2025-B.%20Tsetsaut%20Skii%20km%20Lax%20Ha%20TK-TU%20Report.pdf. Accessed February 2021.

Rescan Tahltan Environmental Consultants. 2018. *Eskay Creek Project Archaeological Overview Assessment.*

Seabridge. 2013. *Application for an Environmental Assessment Certificate/ Environmental Impact Statement for the KSM Project.* Prepared by Rescan Environmental Services Ltd. for Seabridge Gold Inc., May 2013.

Tahltan Nation. 1910. *Tahltan Tribe Indigenous Title and Rights Declaration.* Available at https://tahltan.org/central-government/. Accessed February 2020

Appendix C: Summary of Skeena Resources Engagement with Tahltan Central Government on Eskay Creek Revitalization

Date	Activity	Description
January 2018	In person meeting with TCG President and Chiefs of the Tahltan Band and Iskut First Nation and Skeena management in Vancouver	Signing of Skeena – Tahltan Communication Agreement (scope includes Eskay Creek).
February to June 2018	Presentation (March 9, 2018), emails, letters, phone calls with TCG President, Tahltan Band and Iskut First Nation Chiefs and Council, THREAT Project Manager and TCG Lands Director and Skeena	Engagement on Eskay Creek Multi-Year Area Based Exploration Permit.
May 2018	Email to THREAT Project Manager	Engagement on proposed Road Use Agreement for all road users using the Eskay Creek Mine Road from km 43.5 to km 54 (Area covered by Skeena Resources Special Use Permit).
June 2018	Email to THREAT Archaeological Representative	Invitation to comment on proposed Archaeological Field Assessments.
August 2018	Emails to TCG Lands Director	Notification of reportable spill (dry cement) and follow-up on questions on spill.
November 2018	Email to THREAT Project Manager	Transmittal of proposed 2019 capacity budgets for Tahltan involvement in the Eskay Creek Project.
January 2019	In person presentation by Skeena management to TCG President and Chiefs of the Tahltan Band and Iskut First Nation and Skeena management in Vancouver	Engagement on results of Skeena's 2018 exploration program, proposed 2019 program and results of social performance tracking of Tahltan participation in Skeena's projects.
February 2019	In person presentation by Skeena management to Tahltan leadership in Dease Lake	Engagement on results of 2018 exploration program, proposed 2019 exploration program, and activities at Eskay Creek.
February to April 2019	Email, in person meetings with THREAT Project Manager	Update on Eskay Creek Preliminary Economic Assessment (PEA) and metallurgy program.
June 2019	Emails, in person meeting with TCG Lands Director in Dease Lake	Engagement on proposed 2019 exploration program and *Mines Act* Notice of Work (NoW) amendment application.
July 2019	Email to THREAT Project Manager	Transmittal of PEA table of contents, including communication related to sections for THREAT review.
December 2019	Phone call with THREAT Project Manager	PEA, NoW, proposed baseline studies and IPD discussed.
December 2019	Email to THREAT Project Manager	Transmittal of proposed 2020 capacity budgets for Tahltan involvement in the Eskay Creek Project.
December 2019	Email to THREAT Project Manager	Transmittal of Metallurgical section of PEA, followed by draft PEA later in month for review.

Date	Activity	Description
January 2020	In person presentation by Skeena management to TCG President and Chiefs of the Tahltan Band and Iskut First Nation in Vancouver	Presented PEA, 2019 exploration results and work from 2019, 2020 exploration program, social performance metrics relating to Tahltan participation in Skeena projects.
January 2020	In person meeting with Tahltan Nation Development Corporation Special Projects Manager Lead Mining Exploration and Skeena management and in Vancouver	Reviewed 2020 exploration program and discussed contract and employment opportunities.
February 2020	In person meeting with TCG THREAT Project Manager and Skeena VP Sustainability, Advisor Permitting, EA and Sustainability Coordinator	Discussed vision and objectives for EA review, reviewed current project layout and discussed project design principles, permitting strategy, and process for seeking Tahltan input on draft IPD.
February 2020	Email to TCG THREAT Project Manager	Project Description Overview of Eskay Creek to inform TK/TLU study to be undertaken by Tahltan.
March 2020	In person meeting with Skeena VP Sustainability, Advisor Permitting, Advisor EA and Sustainability Coordinator and TCG THREAT Project Manager in Vancouver	Continued discussion on collaborative approach for EA review including vision and objectives for future EA workshop where gaps in data and knowledge would be discussed, as well as how TK will be incorporated differently than it has in historical EAs; discussion of potential consultants for Socio-economic study for EA and mentorship program for Tahltan students. Provided update on timeline of IPD.
March 2020	Phone meeting with Skeena VP Sustainability and Advisor Indigenous & External Affairs and TCG THREAT Project Manager	Reviewed proposed timelines for IPD and discussed draft EA Agreement, Tahltan TK/TLU study timing. Updates on EA workshop and Tahltan Mentorship Program provided.
March 2020	Video conference with Skeena Sustainability Team* and TCG THREAT Project Manager	Introductory meeting with BC EAO and Agency on the Eskay Creek Project.
April 2020	Video conference with THREAT team and Skeena Sustainability Team* Skeena Chief Operating Officer	Introductory meeting with THREAT team on Eskay Creek Project and discussion on EA process.
April 2020	Emails between TCG Tahltan Project Manager and Skeena Resources Advisor Indigenous & External Affairs	Transmittal of socio-economic baseline proposal for Tahltan review and comment.
April to November 2020	Emails between TCG Lands Director, TCG Negotiator and TCG Communications Director and Skeena Advisor Indigenous & External Affairs	Regular updates to provide a summary of the numbers of non-Tahltan working the Territory and how Skeena is managing these personnel to prevent any transmission of COVID to the Tahltan communities.
April to June 2020	Emails & calls with TNDC Lead Mining Exploration Services and Skeena Resources Exploration Manager	Provided updates on contracting opportunities at Eskay Creek.

Date	Activity	Description
May to June 2020	Emails & calls between TCG Employment Director and TCG Training Director and Skeena Advisor Indigenous & External Affairs and Tahltan Skeena Resources Engineering Intern	Discussed using Tahltan OnTrack Database to post Project employment opportunities.
May 6, 2020	Email to TCG THREAT Project Manager from Skeena Advisor Indigenous & External Affairs	Sent memo re potential options for approach to EA review.
May 26, 2020	Call with TCG Lands Department and Skeena Sustainability Team*	Discussed Eskay Notice of Work (NoW) exploration permit amendments.
June 8, 2020	Call with TCG Lands Department and Skeena VP Sustainability and Skeena Advisor Indigenous & External Affairs	Discussed additional amendments to Eskay Creek NoW.
June 24, 2020	Email to TCG THREAT Project Manager from Skeena Advisor Indigenous & External Affairs	Provided Tahltan/Skeena TK Protocol for signature.
July 3, 2020	Email to TCG THREAT Project Manager from Skeena Advisor Indigenous & External Affairs	Provided updated EA review memo and Eskay Permit Matrix for review and comment.
July 6, 2020	Email to TCG THREAT Project Manager from Skeena Advisor Indigenous & External Affairs	Provided draft IPD and draft EP for review and comment.
July 9, 2020	Email to TCG THREAT Project Manager from Skeena Archaeological Consultant	Provided Invitation to comment on updated AIA for Eskay Creek.
July 21, 2020	Call with TCG THREAT Project Manager and Skeena VP Sustainability and Skeena Advisor Indigenous & External Affairs	Discussed updated EA review memo and Eskay permit matrix. Reviewed updated Tahltan Environmental and Social Design Principles, RFP for Socio-economic work, and gap analysis on baseline work.
July 24,26 2020	Email to TCG THREAT Project Manager from Skeena Advisor Indigenous & External Affairs	Provided matrix for upcoming Alternatives Assessment for review and comment.
July 28, 2020	Call with TCG Lands Department and Skeena VP Sustainability and Skeena Advisor Indigenous & External Affairs	Confirmed meeting August 6 to discuss EA review memo and permit matrix. Several THREAT team members in field so unavailable to review IPD; would get comments to Skeena by mid-September.
July 30, 2020	Call with THREAT, Skeena Sustainability Team* and Skeena consultants	Alternative Assessment Matrix Review
August 6, 2020	Call with THREAT, Skeena Sustainability Team*	Discussed EA review memo and Skeena rankings and ranking system. Additional option proposed for memo.
August 11, 2020	Call with THREAT Project Manager and VP Sustainability and Skeena Advisor Indigenous & External Affairs	Discussed upcoming calls on Alternative Assessment and Gap Analysis. Update on Tahltan Mentorship Program.

Date	Activity	Description
August 25, 2020	Call with THREAT and Skeena Sustainability Team*	Review of Alternatives Assessment Matrix during which THREAT provide input as to specific areas of interest including: Water Management, Waste Rock & Tailings.
August 26, 2020	Call with THREAT and Skeena Sustainability Team*	Baseline gap review and discussion of specific areas of interest to Tahltan including: Wildlife/Fish/Aquatics and Socio-Economic/Socio-cultural.
September 8, 2020	Email to TCG THREAT Project Manager from Skeena Advisor Indigenous & External Affairs	Provided draft workplan for EA process for review and comment.
September 16, 2020	Call with THREAT Project Manager and VP Sustainability and Skeena Advisor Indigenous & External Affairs	Discussed EA review options; Skeena/Tahltan working groups to ensure Tahltan input through mine design; environmental technician roles at site and status of TLUS report.
September 17, 2020	Call with THREAT Project Manager and VP Sustainability and Skeena Advisor Indigenous & External Affairs, BC EAO and IAAC	Initiated discussions on whether existing MDC certificates were valid which led to discussion on amendment vs new EA. Skeena shared that they had been discussing with Tahltan the different potential approaches in the revised EA process.
September 22, 2020	Call with THREAT Project Manager and VP Sustainability and Skeena Advisor Indigenous & External Affairs	Confirmed working groups and THREAT members. Discussed EA review approach and when comments on IPD and EP may be received.
September 28, 2020	Email to TCG THREAT Project Manager from Skeena Advisor Indigenous & External Affairs	Provided more detailed EA workplan as well as updated RFP for Socio-economic baseline work for comment and review.
September 29, 2020	Call with THREAT Project Manager and VP Sustainability and Skeena Advisor Indigenous & External Affairs	Detailed workplan review led to discussions re development of EA agreement for Eskay Project. Further discussion on EA review approach (amendment vs EA). Confirmation that latest version of Tahltan Environmental, Social Design Principles are adequate for now.
October 7, 2020	Email to TCG THREAT Project Manager from Skeena Advisor Indigenous & External Affairs	Copied on final version of RFP for Socio-economic baseline work that went out to list agreed upon between THREAT and Skeena.
October 13, 2020	Call with THREAT Advisor and VP Sustainability and Skeena Advisor Indigenous & External Affairs	Discussion of agreements and associated workplans and EA review approach; as well as status of comments on IPD/EP, TLUS report and the Socio-economic RFP.
October 20, 2020	Call with THREAT Advisor and VP Sustainability and Skeena Advisor Indigenous & External Affairs	Discussions continued on EA review approach, workplan and technical reports available for review relating to proposed power interconnections and early layout optimization. Noted EA manager role has been posted on Tahltan OnTrack system.
October 22, 2020	Email from TCG THREAT Project Manager from Skeena Advisor Indigenous & External Affairs	Transmittal of Tahltan TLUS report on Eskay Creek.
October 27, 2020	Call with THREAT Project Manager, THREAT Advisor and VP Sustainability and Skeena Advisor Indigenous & External Affairs	Discussion continued on EA review and also on discussion re proposals received for Socio-economic baseline.

Date	Activity	Description
October 29, 2020	Email to TCG THREAT Project Manager from Skeena Advisor Indigenous & External Affairs	Details on Waste Rock and Tailings Working Group beginning next week and having Tahltan participation in the group.
November 3, 2020	Call with THREAT Project Manager and VP Sustainability and Skeena Advisor Indigenous & External Affairs	Discussion continued on EA review, Waste Rock and Tailings Working Group, agreement on award of contract for Socio-economic baseline studies, and sharing of documents of interest related to Project Design.
November 3, 2020	Email from THREAT Project Manager to VP Sustainability and Skeena Advisor Indigenous & External Affairs	Outlining questions on draft IPD related to water management, including water quality.
November 17, 2020	Email from THREAT Project Manager to VP Sustainability and Skeena Advisor Indigenous & External Affairs	July 2020 draft IPD with tracked comments from THREAT.
November 17, 2020	Call with THREAT Project Manager and VP Sustainability and Skeena Advisor Indigenous & External Affairs	Discussion continued on EA review, THREAT comments on draft IPD, Waste Rock and Tailings Working Group and Water Working Group.
November 27, 2020	Email to TCG THREAT Project Manager from Skeena Advisor Indigenous & External Affairs	Provided updated draft of IPD and draft EP for review and comment.
December 2020	Multiple emails between VP Sustainability and Skeena Resources Advisor Indigenous & External Affairs with THREAT Project Manager and Newcrest	Discussion re working on collection of Tahltan social baseline information together.
December 2020	Multiple emails between VP Sustainability and Skeena Resources Advisor Indigenous & External Affairs with TCG Employment & Contracting Director	Discussions focused on contracts and employment at site in 2020 and 2021 work.
December 16, 2020	Call with 3 Nations COVID EMC lead and VP Sustainability and Skeena Resources Advisor Indigenous & External Affairs	Discussion re activities at Eskay Creek camps and how COVID being managed; active COVID conversations/email between Skeena and Tahltan EMCS for rest of December.
December 16, 2020	Call with THREAT Project Manager and VP Sustainability and Skeena Resources Advisor Indigenous & External Affairs	Discussion continued on EA review, THREAT comments on draft IPD, Waste Rock and Tailings Working Group and Water Working Group.
January 2021	Multiple emails and participation on weekly Tahltan EMC/industry calls (started Jan 12, 2020) with Tahltan EMC leads and VP Sustainability and Skeena Resources Advisor Indigenous & External Affairs	Continued discussions on management of COVID and keeping people at site and Tahltan communities safe.
January 12, 2021	Call between VP Sustainability, Eskay Mine Manager and Skeena Resources Advisor Indigenous & External Affairs with TCG Employment & Contracting Director	Discussions focused on contracts and employment at site in 2021.

Date	Activity	Description
January 12, 2021	Call with THREAT team members and Skeena to discuss baseline work, waste and water management	Discussion re baseline work planned for 2021, options reviewed for waste management and narrowing of options, overview of water oversight team and approach; scheduling of meeting to factor Tahltan design criteria into the options being reviewed.
January 14, 2021	Presentation to TCG executive, directors and family representatives	Update on Skeena Resources, 2020 work at site, Tahltan involvement at site and plans going forward.
January 19, 2021	Biweekly calls started between Advisor indigenous & External Affairs, THREAT Project Lead, TCG Communications Director and Newcrest	Discussion re collecting Tahtlan social baseline info from the perspective of what metrics Tahltan would like to monitor and collaboration of what data required for Newcrest and Skeena as projects go forward.
January 19, 2021	Email from THREAT Project Manager to Skeena Advisor Indigenous & External Affairs	Included initial comments on IPD from THREAT member.
January 20, 2021	Call with THREAT Advisor and VP Sustainability and Skeena Resources Advisor Indigenous & External Affairs	Discussion continued on EA review, THREAT comments on draft IPD, Waste Rock and Tailings Working Group and Water Working Group.
January 26, 2021	Call with THREAT and Skeena technical team	Walk through of Waste Management Options looked at; discussion re ML/ARD, location of facilities
February 2021	Multiple emails and participation on weekly Tahltan EMC/industry calls Tahltan EMC leads and VP Sustainability and Skeena Resources Advisor Indigenous & External Affairs	Continued discussions on management of COVID plans for rapid testing at site.
February 5, 2021	Call with THREAT Project Manager and VP Sustainability and Skeena Resources Advisor Indigenous & External Affairs	Discussion focused on looking at how best to interact/engage/share information as the Project advances.
February 16, 2021	Call with THREAT Advisor and VP Sustainability and Skeena Resources Advisor Indigenous & External Affairs	Tahltan shared working on Tahltan design criteria, including how Tahltan Knowledge would be applied to EAs.
February 24, 2021	Call with BC EAO/IAAC and THREAT advisor, Skeena Resources Advisor Indigenous & External Affairs & Sustainability Coordinator	Review of coordinated first 100 days of process once IPD submitted between IAAC and BC EAO.

Date	Activity	Description
March 2021	Biweekly calls started between Advisor indigenous & External Affairs, THREAT Project Lead, TCG Communications Director, TCG Membership & Genealogy Director and Newcrest Senior and Superintendent Community Relations	Discussion on collecting Tahltan social baseline info from the perspective of what metrics Tahltan would like to monitor and collaboration of what data required for Newcrest and Skeena as projects go forward.
	Calls with Newcrest, Advisor Indigenous & External Affairs Skeena and Tahltan Key Informants	Discussion with key informants in Tahltan communities to inform information collected/studies in Social Baseline Project.
	Weekly Tahltan EMC/industry calls Tahltan EMC leads and VP Sustainability and Skeena Resources Advisor Indigenous & External Affairs	Continued discussions on management of COVID and keeping people at site and Tahltan communities safe.
March 2, 2021	Call with THREAT Advisor and VP Sustainability and Skeena Resources Advisor Indigenous & External Affairs	Discussion re status of IPD/EP, meeting on February 24, 2021 re: first 100 days and baseline reports for review.
March 3, 2021	Email from Skeena Resources Advisor Indigenous & External Affairs to THREAT	Provided notification of new documents (mainly 2020 draft baseline reports) posted to SharePoint site for Tahltan review.
March 12, 2021	Call with TCG Lands Manager and TCG advisor, Coast Mountain Hydro and Advisor Indigenous & External Affairs and Skeena Permit & Compliance Manager	Review of renewal of km 32 quarry permit.
March 21, 2021	E-Mail from Skeena Resources Advisor Indigenous and External Relations to THREAT Project Leader	Cultural Heritage Report sent to THREAT for review.
March 30, 2021	E-mails from Skeena Resources Advisor Indigenous and External Relations to Tahltan Community Members	Interview requests sent to Tahltan Community members to contribute to Social Baseline Study.
April 2021	Weekly Tahltan EMC/industry calls Tahltan EMC leads and VP Sustainability and Skeena Resources Advisor Indigenous & External Affairs	Continued discussions on management of COVID and keeping people at site and Tahltan communities safe.
	Calls with Newcrest, Advisor Indigenous & External Affairs Skeena and Tahltan Key Informants	Discussion with key informants in Tahltan communities to inform information collected/studies in Social Baseline Project.
	Biweekly calls started between Advisor indigenous & External Affairs, THREAT Project Lead, TCG Communications Director, TCG Membership & Genealogy Director, TCG Lead Socio-Cultural Working Group and Newcrest Senior and Superintendent Community Relations	Discussion on collecting Tahltan social baseline info from the perspective of what metrics Tahltan would like to monitor and collaboration of what data required for Newcrest and Skeena as projects go forward.

Date	Activity	Description
April 5, 2021	E-mail from Skeena Resources Advisor Indigenous & External Affairs to THREAT Project Lead	2020 Reclamation Reports for Eskay provided to THREAT advisors.
April 7, 2021	E-mail from Skeena Resources EA Manager to THREAT Project LEAD, BC EAO/IAAC representatives	Providing Traffic Memo for the Eskay Creek Revitalization to THREAT for review.
April 19, 2021	Virtual Meeting with Skeena Resources Sustainability Team and THREAT Representatives	Meeting discussing Complex Amendment and federal IA stage.
April 29, 2021	Virtual Meeting with Skeena Resources Advisor Permitting and Compliance and TCG Advisors	Provided update on Eskay Creek Mine Lease Renewals.
April 30, 2021	E-mail from Skeena Resources EA Manager to THREAT Project Lead	Regarding the development of Biweekly THREAT and Skeena Technical workshops to increase meeting efficiency and communication.
May 2021	Virtual Biweekly THREAT/Skeena technical workshop (May 6th & May 20th)	Two half day workshops held in May with presentations from Skeena Resources PFS team regarding project design, presentation from consultants regarding waste rock, tailings and water management, updates on 2021 workplans and various open discussions addressing THREAT questions and concerns.
	Calls with Newcrest, Advisor Indigenous & External Affairs Skeena and Tahltan Key Informants	Discussion with key informants in Tahltan communities to inform information collected/studies in Social Baseline Project.
	Biweekly calls started between Advisor indigenous & External Affairs, THREAT Project Lead, TCG Communications Director, TCG Membership & Genealogy Director, TCG Lead Socio-Cultural Working Group and Newcrest Senior and Superintendent Community Relations	Discussion on collecting Tahltan social baseline info from the perspective of what metrics Tahltan would like to monitor and collaboration of what data required for Newcrest and Skeena as projects go forward.
	Biweekly call with THREAT Project Lead and advisor, Skeena Resources Advisor Indigenous & External Affairs & EA Manager & Sustainability Manager & Engagement Coordinator	Two biweekly update meetings hosted in May focused on providing THREAT schedules and documents, and requesting THREAT review and feedback.
	Biweekly Tahltan EMC/industry calls Tahltan EMC leads and VP Sustainability and Skeena Resources Advisor Indigenous & External Affairs	EMC calls adjusted to biweekly frequency Continued discussions on management of COVID and keeping people at site and Tahltan communities safe.
	Biweekly call with BC EAO/IAAC and THREAT advisor, Skeena Resources Advisor Indigenous & External Affairs & Sustainability Coordinator & Engagement Coordinator	Discussion regarding progress in complex amendment application and coordinating communication between Skeena, THREAT and regulators.
May 14, 2021	E-mail from Skeena Resources Advisor to THREAT Project Lead	Providing THREAT Updated Mining Lease Application for feedback.

Date	Activity	Description
May 19, 2021	Posting to sharepoint from Skeena EA Manager to THREAT Lead and advisor	Mulitple draft baseline reports for Tahltan review including: Air Quality, Noise, Fish & Fish Habitat, Hydrogeology Network, Terrain Stability.
May 26, 2021	E-mail from Skeena Resources Advisor and THREAT Project Lead	E-mail providing Draft of Skeena Resources 2021-2023 Annual Works Program.
May 27, 2021	E-Mail from Skeena Resources Advisor Indigenous & External Affairs and THREAT Project Lead	E-mail regarding the development of a Secondment Agreement to allow a Skeena Resources Tahltan Mentee to also contribute work to Tahltan Stewardship Initiative.
June 2021	Virtual Biweekly THREAT/Skeena technical workshop	Two half day workshops held in June with presentations from Skeena Resources PFS team presenting updates on project design, presentation from consultants regarding 2021 baseline studies and various open discussions addressing THREAT questions and concerns.
	Calls with Newcrest, Advisor Indigenous & External Affairs Skeena and Tahltan Key Iformants	Discussion with key informants in Tahltan communities to inform information collected/studies in Social Baseline Project.
	Biweekly calls started between Advisor indigenous & External Affairs, THREAT Project Lead, TCG Communications Director, TCG Membership & Genealogy Director, TCG Lead Socio-Cultural Working Group and Newcrest Senior and Superintendent Community Relations	Discussion on collecting Tahltan social baseline info from the perspective of what metrics Tahltan would like to monitor and collaboration of what data required for Newcrest and Skeena as projects go forward.
	Biweekly Tahltan EMC/industry calls Tahltan EMC leads and VP Sustainability and Skeena Resources Advisor Indigenous & External Affairs	EMC calls adjusted to biweekly frequency Continued discussions on management of COVID and keeping people at site and Tahltan communities safe.
June 2, 2021	Posting to sharepoint from Skeena EA Manager to THREAT Lead and advisor	Soilds draft baseline reports for Tahltan review.
June 10, 2021	Presentation from Skeena Resources VP Sustainability to Tahltan Leadership	Update on Skeena Resources, 2021 work at site, Tahltan involvement at site and plans going forward.
June 23, 2021	Skeena Resources hosted virtual open house for Tahltan members	Virtual open house chaired by Skeena Resources VP Sustainability & Sustainability Manager & Engagement Coordinator to introduce project and address questions and concerns from Tahltan community members.
June 26, 2021	Skeena Resources hosted virtual open house for Tahltan members	Virtual open house chaired by Skeena Resources VP Sustainability & Sustainability Manager & Engagement Coordinator to introduce project and address questions and concerns from Tahltan community members.

***** Skeena's Sustainability Team includes: VP Sustainability, Advisor EA, Advisor Permitting, Advisor Indigenous & External Affairs and Sustainability Coordinator

Appendix D: Summary of Skeena Resources Engagement with TSKLH on Eskay Creek Revitalization

Date	Activity	Description
February 26, 2018	Letter to Chief sent by email and with a hard copy was delivered by regular mail.	Provided summary of 2018 exploration program
March 5, 2018	Phone call with Chief	Left a message to request a meeting. No response.
March 12, 2018	Email to Chief	Left a message to check on availability for meeting in Hazelton during the following week. No response
March 15, 2018	Phone call with Chief	Call from Hazelton. Follow up on invitation to meet. Left a message to provide contact information and check on availability for a meeting. No response.
July 9, 2020	Email to Chief	Invitation to comment on Archaeological Field Work.
July 28, 2020	Phone call with Chief	Skeena offered to have a meeting and walk through project. Primarily interested in employment opportunities. Skeena agreed to forward job postings.
August 14, 2020	Meeting in Kispiox Valley with head of SKLH business entity	Provided overview of project and discussion focused on employment opportunities.
September 3, 2020	Zoom call with head of SKLH business entity	Discussed contract with TVVL Ventures for workers at site.
October to February 2020	Email/calls with TSKLH business entity	Continued discussions with TVVL Ventures for workers at site.
February 9, 2020	Email from VP Sustainability to Chief	Shared draft version of IPD/EP and offered to meet to discuss
February 16, 2020	Email and letter from Chief to VP Sustainability	Interested in meeting and need time to review the documents
February 19, 2020	Call with Chief and VP Sustainability and Skeena Resources Advisor Indigenous & External Affairs	Discussion re rights and title and capacity funding to review documents.
March 1 & 8, 2021	Emails between Chief to VP Sustainability	Discussion re rights and title and capacity funding to review documents.
April 5, 2021	Email from Advisor Indigenous & External Affairs to Chief	Shared interim report related to Heritage and Culture in project area