



**Brucejack Gold Mine
2018 CEAA Annual Report**

Report Authored By:
Pretium Resources Inc.

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Table of Contents

EXECUTIVE SUMMARY	ii
RÉSUMÉ.....	iv
1 Introduction	1
2 Condition 2.5.1: Update on Implementation of Decision Statement Conditions.....	1
3 Condition 2.5.2 Informed Technology and Knowledge	1
4 Condition 2.5.3: Considerations from Consultation	2
4.1 Condition 2.4.2.....	5
4.2 Conditions 5.2 and 5.4	6
4.3 Condition 5.3.....	7
4.4 Conditions 6.6 and 6.7	7
4.5 Condition 6.8.....	8
4.6 Condition 7.1.....	10
4.7 Conditions 9.2 and 9.4	10
5 Condition 2.5.4: Follow-up Programs	11
5.1 Condition 3.4: Water Quality and Fish and Fish Habitat Follow-up Program.....	11
5.2 Condition 5.4: Tsetsaut/Skii km Lax Ha Lodge Ambient Air Quality Monitoring Follow-up Program	12
5.3 Condition 6.8: Effectiveness of Mitigation Measures to Avoid Mortality of Fauna Follow-up Program	12
6 Condition 2.5.5: Additional Mitigation Measures Implemented.....	13

FIGURES:

Figure 1: Brucejack Gold Mine Location Map	3
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APPENDIX:

APPENDIX A – Decision Statement Conditions - Implementation Activities Undertaken.

EXECUTIVE SUMMARY

Pretium Resources Inc. (Pretium) received the Canadian Environmental Minister's Decision Statement on July 30, 2015 for the Brucejack Gold Mine, an underground gold mine located 65 km north of Stewart, British Columbia (BC). Construction activities commenced on September 5, 2015 with commercial operation achieved on July 1, 2017. 2018 marks the first full calendar year of gold production.

The Implementation Schedule provided to Nisga'a Lisims Government, Tahltan Central Government, Tsetsaut Skii km Lax Ha Chief and the Canadian Environmental Assessment Agency (CEAA) in August 2015 was updated on February 24, 2017. The latest update of the Implementation Schedule was disseminated to CEAA and Nisga'a Lisims Government, Tahltan Central Government and Tsetsaut Skii km Lax Ha Chief on March 13, 2019.

At the mine site, fish and fish habitat protection continued to be achieved through the Operations Water Treatment Plant and continued use of the three turbidity curtains at the outlet of Brucejack Lake. Tailings were generated in 2018 and deposited as a thickened slurry on the bottom of Brucejack Lake. Waste rock from surface development (very limited quantity) and underground activities was sub-aqueously disposed of into Brucejack Lake in 2018. Effluent monitoring continued as per BC *Environmental Management Act* permit 107835. The Metal and Diamond Mining Effluent Regulations (MDMER) First Biological Monitoring Study report was filed with Environment and Climate Change Canada on July 12, 2018.

To protect Western Toad (*Anaxyrus boreas*) during migration, five toad tunnels and a modified bridge were installed along the Brucejack Access Road in 2016 and 2017. Monitoring toad use of the tunnels and the modified bridge was undertaken with remote trail cameras (installed in May 2018) until August 31, 2018. Ground surveys were also conducted between June and August 2018. A monitoring report was submitted to CEAA on September 28, 2018.

Air quality management focused on measures to reduce fugitive dust. In 2017, Tsetsaut Skii km Lax Ha relocated their lodge, monitoring of air quality continued at the new lodge location. The 2018 air quality report monitoring at the lodge was sent to Nisga'a Lisims Government and Tsetsaut Skii km Lax Ha on March 20, 2019.

Pretium continued to maintain a security gate at the start of the Brucejack Access Road during 2018. The "No Hunting, No Fishing, No Trapping Policy" remained in place. Screening for firearms and fishing equipment continues at the security facility located at Wildfire Camp on the access road at km 1.

Measures to protect wildlife on Brucejack Access Road are enhanced by posting wildlife signage, toad tunnels, reminder signs regarding speed limits, education programs and reducing high snowbanks along

the road. Reducing high snow banks allows large ungulates the opportunity to escape rather than being trapped on the road and endangered by vehicle traffic.

No heritage or archaeological sites were discovered during 2018 activities.

Record keeping continued during 2018 using the systems established in 2015.

Throughout 2018 Pretivm consulted with Nisga'a Nation, Tahltan Nation and Tsetsaut Skii km Lax Ha through the British Columbia Mine Development Review Committee and BC Environmental Assessment Office while permitting an expansion of the daily production, an increase in the total mineable resource and a reduction in the planned mine life. The new permitted average annual rate of production is 1,387,000 tonnes (average rate of 3,800 tonnes per day); a total production of 18.5 million tonnes will result in an approximate 14 year mine life.

In 2018 Pretivm worked closely with local and regional communities to provide information and to maximize benefits associated with employment, training, and business opportunities. Pretivm is in regular contact with Indigenous group's employment representatives to communicate job postings, provide information about required skills and experience, and organize recruitment events. Pretivm continues to work with Indigenous group's to identify training needs and opportunities, as well as opportunities for Indigenous owned businesses to provide goods and services. As of December 31, 2018 Pretivm's workforce comprises 619 direct employees, 58% of whom were residents of northwestern British Columbia, and 38% of whom self-identified as Indigenous.

RÉSUMÉ

Le 30 juillet 2015, Pretium Resources Inc. (Pretivm) a reçu la déclaration de décision de la ministre de l'Environnement du Canada relativement au projet de mine d'or Brucejack, une mine d'or souterraine située à 65 km au nord de Stewart en Colombie-Britannique (C.-B.). Les travaux de construction ont débuté le 5 septembre 2015 et l'exploitation commerciale a débuté le 1^{er} juillet 2017. L'année 2018 a donc marqué la première année civile complète de production d'or pour cette mine.

Le calendrier de mise en œuvre remis au gouvernement Nisga'a Lisims, au conseil central de Tahltan, au chef de la nation Tsetsaut Skii km Lax Ha et à l'Agence canadienne d'évaluation environnementale (ACEE) en août 2015 a été mis à jour le 24 février 2017. La version la plus récente du calendrier a été remise à l'ACEE, au gouvernement Nisga'a Lisims, au conseil central de Tahltan et au chef de la nation Tsetsaut Skii km Lax Ha le 13 mars 2019.

Sur le site de la mine, la protection du poisson et de l'habitat du poisson a continué d'être assurée par l'usine de traitement des eaux de l'exploitation ainsi que par l'utilisation continue des trois rideaux de confinement installés au point de décharge du lac Brucejack. Les résidus produits en 2018 ont été déposés sous forme de boues épaisses au fond du lac Brucejack. Les roches stériles (en quantité très limitée) provenant du développement en surface et des travaux souterrains ont été placées dans les eaux du lac Brucejack en 2018. La surveillance des effluents s'est poursuivie en vertu du permis 107835 de l'*Environmental Management Act* de la C.-B. La première étude de suivi biologique effectuée en vertu du *Règlement sur les effluents des mines de métaux et des mines de diamants* (REMM) a été déposée auprès d'Environnement et Changement climatique Canada le 12 juillet 2018.

Afin de protéger le crapaud de l'Ouest (*Anaxyrus boreas*) durant sa migration, cinq tunnels à amphibiens et un pont modifié ont été aménagés le long de la route d'accès Brucejack en 2016 et en 2017. L'utilisation des tunnels et du pont par les amphibiens a été surveillée à l'aide de caméras de suivi à distance (installées en mai 2018) jusqu'au 31 août 2018 et des relevés de terrain ont été effectués entre juin et août 2018. Un rapport de suivi a ensuite été présenté à l'ACEE le 28 septembre 2018.

La gestion de la qualité de l'air était axée sur des mesures visant à réduire les poussières diffuses. La nation Tsetsaut Skii km Lax Ha a déplacé son pavillon en 2017 et la surveillance de la qualité de l'air s'est poursuivie au nouvel emplacement. Le rapport de 2018 sur la surveillance de la qualité de l'air au pavillon a été envoyé au gouvernement Nisga'a Lisims et à la nation Tsetsaut Skii km Lax Ha le 20 mars 2019.

Pretivm a maintenu une barrière de sécurité à l'entrée de la route d'accès Brucejack durant l'année 2018. La consigne « Interdiction de chasser, de pêcher et de piéger » reste en vigueur. L'examen visant à détecter toute arme à feu et tout matériel de pêche s'est poursuivi au point de sécurité du camp Wildfire au kilomètre 1 de la route d'accès.

Des mesures de protection de la faune sur la route d'accès Brucejack ont été améliorées par l'ajout de panneaux indiquant la présence de la faune, l'aménagement de tunnels à amphibiens, l'ajout de panneaux visant à rappeler les limites de vitesse, la mise en œuvre de programmes d'éducation et la réduction des amas de neige le long de la route. Réduire le nombre de grands amas de neige permet notamment aux grands ongulés de fuir plutôt que de rester bloqués sur la route et de courir des risques en raison de la circulation.

Aucun site patrimonial ou archéologique n'a été découvert durant les travaux de développement de 2018.

La tenue des dossiers s'est effectuée en 2018 selon les systèmes établis en 2015.

Les consultations effectuées en l'année 2018 par Pretivm avec les représentants des nations Nisga'a, Tahltan et Tsetsaut Skii km Lax Ha par l'entremise du British Columbia Mine Development Review Committee (Comité d'examen du développement minier en Colombie-Britannique) et du Bureau d'évaluation environnementale de la Colombie-Britannique ont permis d'augmenter la production quotidienne et la ressource exploitable totale et de réduire la durée de vie prévue de la mine. Ainsi, en raison du nouveau taux de production moyen annuel autorisé de 1 387 000 tonnes (taux moyen de 3 800 tonnes par jour), pour une production totale de 18,5 millions de tonnes, l'on prévoit que la mine sera exploitée pendant environ 14 ans.

En 2018, Pretivm a collaboré étroitement avec les communautés locales et régionales afin de fournir de l'information et de maximiser les avantages associés à l'emploi, à la formation et aux occasions d'affaires. Pretivm communique régulièrement avec les représentants responsables de l'emploi des groupes autochtones pour leur transmettre des offres d'emploi, leur donner de l'information sur les compétences et l'expérience requises et pour organiser des activités de recrutement. Pretivm continue de travailler avec les groupes autochtones afin d'établir les besoins et les occasions de formation et de voir comment les entreprises de différents groupes autochtones pourraient offrir leurs biens et services. Ainsi, au 31 décembre 2018, Pretivm avait embauché 619 employés directs dont 58 % sont des résidents du nord-ouest de la Colombie-Britannique et 38 % qui se sont déclarés autochtones.

1 Introduction

The Brucejack Gold Mine is a gold-silver underground mine located approximately 65 km north of Stewart, British Columbia (Figure 1). Current permitted production totals 18.5 million tonnes of mineralized material at an average annual rate of 1,387,000 tonnes on a calendar year basis, i.e. an average rate of approximately 3,800 tonnes per day over a minimum 14-year mine life.

Pretium received a BC Environmental Assessment Certificate (EAC # M15-01) on March 26, 2015 and a Canadian Environmental Assessment Act, 2012 Minister's Decision Statement, issued under Section 54, on July 30, 2015. All of the various provincial and federal permits required to construct, operate and decommission the mine have been received. Surface construction activities began at the Brucejack Mine Site on September 5, 2015; commercial production was achieved on July 1, 2017. 2018 marked the first full calendar year of gold production.

This report has been developed to meet Decision Statement Condition 2.5: *the Proponent shall, from the reporting year where construction starts, submit to the Agency an annual report*. The report is laid out such that each heading addresses an annual reporting requirement as defined within the subheadings of Condition 2.5.

2 Condition 2.5.1: Update on Implementation of Decision Statement Conditions

Condition 2.5.1: The proponent shall document in the annual report implementation activities undertaken in the reporting year for each of the conditions set out in this Decision Statement.

Refer to Appendix A for the table titled *Brucejack Gold Mine Project: Implementation activities undertaken (as per CEAA Decision Statement Condition 2.5.1)* for a compilation of implementation activities that took place during 2018.

3 Condition 2.5.2 Informed Technology and Knowledge

Condition 2.5.2: The proponent shall document in the annual report how it has considered and incorporated the factors set out in condition 2.1 in the implementation of the conditions set out in this Decision Statement.

Condition 2.1: The Proponent shall, throughout all phases of the Designated Project, ensure that its actions in meeting the conditions set out in this Decision Statement are informed by the best available information and knowledge, including community and Aboriginal traditional knowledge, are based

on validated methods and models, are undertaken by qualified individuals, and have applied the best available economically and technologically feasible measures.

In 2018 Pretivm continued to engage the services of numerous reputable consulting companies (Lorax Environmental Services Ltd., ERM Consultants Canada Ltd., BGC Engineering Inc., SRK Consulting, Northwest Invasive Plant Council, Nautilus Environmental Company Inc., WSP Canada Inc.) to provide the qualified professionals (e.g. R.P.Bio., P. Eng., P. Geo.) to implement all activities according to requirements. For example these activities included, archaeological assessment (ERM), MDMER First Biological Study reporting (ERM), pre-clearing surveys for bats and birds prior to tree cutting (independent suitably qualified R.P.Bio.), invasive plant species survey (Northwest Invasive Plant Council), ongoing water quality monitoring in Brucejack Creek (Lorax Environmental), monitoring ambient air quality parameters at the Tsetsaut Skii km Lax Ha Lodge (ERM), monitoring the use of wildlife tunnels and a modified bridge for the passage of Western Toad (*Anaxyrus boreas*) beneath the access road (ERM), ground water monitoring well installations (BGC), toxicity testwork on aquatic organisms (Nautilus Environmental) and applications and consultation through the Mine Development Review Committee and the BC Environmental Assessment Office, for amendments to authorizations for the production increase; BC EA Certificate, BC *Mines Act* permit and BC *Waste Management Act* permits (Lorax, ERM, BGC). WSP Canada (formerly OpusDaytonKnight) supported Pretivm with the operation of the sewage treatment plants.

4 Condition 2.5.3 Considerations from Consultation

The proponent shall document in the annual report for conditions set out in this Decision Statement for which consultation is a requirement, how the Proponent has considered any views and information that the Proponent received during or as a result of the consultation.

The following sections identify the Decision Statement conditions that required consultation, and how the Proponent has considered the views and information received as per the requirements set out in Condition 2.2:

- *2.2.1 provide a written notice of the opportunity for the party or parties being consulted to present their views on the subject of the consultation;*

Consultation comments were requested from Nisga'a Lisims Government (NLG), Tahltan Central Government (TCG) and Tsetsaut Skii km Lax Ha Nation (TSKLH) regarding various reports filed in response to conditions of permits and authorizations. Those reports include the 2017 Economic and Social Effects Annual Report, 2017 Annual Ambient Air Quality at TSKLH Lodge, 2017 Annual Glacier Ablation Report, 2017 Annual Report for Mines Act Permit M-243 and Effluent Permits 107835 and 107025, 2017 CEAA Annual Report, a new 2018 Economic and Social Effects Management Plan, as well as throughout the process of amending the BC *Mines Act* permit and the BC *Waste Management*

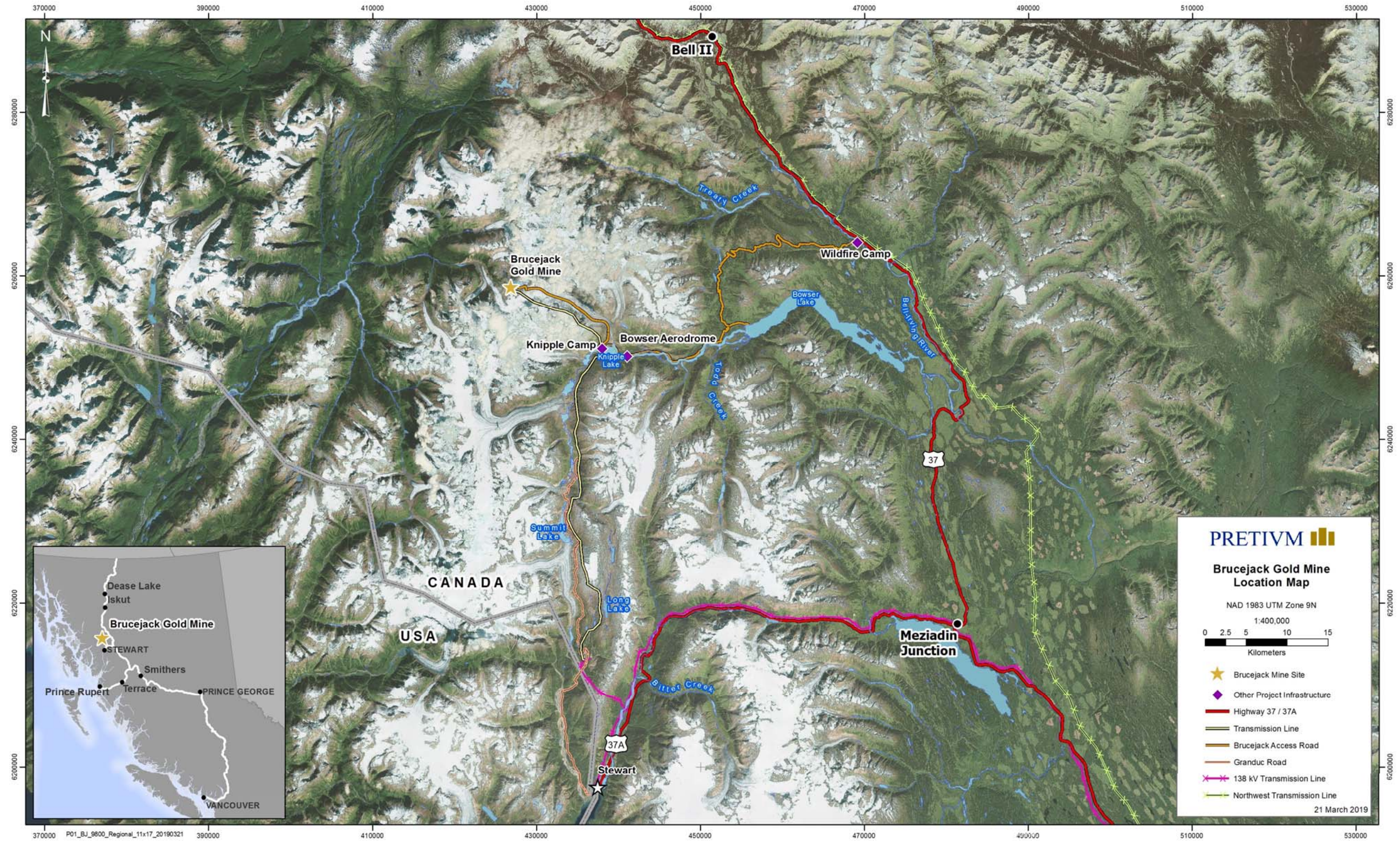


Figure 1. Brucejack Gold Mine Location Map

Act discharge permit for the production increase and the EA Certificate, applied for in December 2017 and April 2018, respectively.

- *2.2.2 provide sufficient information and a reasonable period of time to permit the party or parties being consulted to prepare their views;*

Documents or copies of permit applications were distributed electronically and all parties were given a minimum of 30 days to respond to the requests for comment.

- *2.2.3 provide a full and impartial consideration of any views presented by the party or parties being consulted; and*

Responses received from the parties being consulted and Pretium responses are tabulated in 2.2.4.

- *2.2.4 advise the party or parties that have provided comments on how the views and information received have been considered by the Proponent.*

Responses received from the parties being consulted are:

- To the 2018 updated Economic and Social Effects Mitigation Plan
 - 1 response from TSKLH asking: “Does this document mean TSKLH is excluded from future contract opportunities”
 - Pretium response: “No that is not the intent”
- To the 2017 Glacier Ablation Report
 - 1 response from NLG asking for the information on the sampling of outflow from Knipple Glacier
 - Pretium response: In a 2013 Mine Review Committee Working Group meeting Pretium committed to sampling the water and sediment in the outflow for the remainder of 2013 and all 2014. Pretium also committed to continue sampling the outflow for hydrocarbons and process chemicals should there be a spill on the glacier and that the sample results were contained in the 2014 Cumulative Surface Water Quality Report.
 - Follow up response from NLG asking for a copy of the 2014 Cumulative Surface Water Quality Report.
 - Pretium response: The report was distributed to NLG in 2015. The individual requesting the report had not received a copy, one was sent to him.
- To the amendment applications for the production increase responses by party:
 - NLG – (1) In February 2018 expressed concerns about an increase in traffic as a result of the production increase.
Pretium response: The anticipated traffic will remain within the original estimates considered in the environmental assessment process in 2013 and no change to potential effects is anticipated;
 - (2) In September 2018 expressed ongoing concerns regarding that the access road was not included in the original EA review, about uncertainty in potential effects to water quality , and the chronology of initial permitting.

Pretium responded with a memorandum outlining the chronology of exploration of Brucejack and the application for the access road. The memorandum pointed out that the VOK orebody had been intersected by only 2 drill holes at the time of the initial road application and that one of the exploration programs, the bulk sample, would have cost as much if not more in helicopter fees than the estimated costs of the access road construction and that, access by road, allowed expenditures to be concentrated on essential programs that continued proving up a mineral deposit to the point that a production decision could be made. As well, the memorandum pointed out that upgrades to the access road were reviewed in the initial EA review, that use of Knipple Glacier was covered in the EA review and that as a result of Nisga'a concerns expressed during the EA review process, about the access road not being in the EA review, Pretium had an effects assessment report prepared that had been subject to four rounds of NLG review and revisions before the report was finalized. The memorandum was included in the EAO assessment of the production increase.

TCG – (1) expressed a concern that some surface water parameters exceed monthly and maximum BC guidelines and that Pretium did not provide adequate rationale for the allowance of those exceedances regardless of the receiving environment;

- (2) requested further rationale for the exclusion of groundwater quantity and quality from the assessment of the application;
- (3) referenced another project and requested post-disturbance archaeological surveys.

Pretium responses: (1) toxicity testwork conducted by Nautilus Environmental demonstrated that the proposed discharge concentration limits will not negatively affect the aquatic resources of Brucejack Creek or the environment downstream; (2) the vertical extent of the mine remains unchanged and the lateral extent is not significant so the predicted total groundwater inflow rate into the mine results in a negligible change; (3) this concern was directed to the Province by TCG and the Province responded.

TSKLH – expressed their view that the Province had not consulted adequately or properly engaged. The Province responded.

4.1 Condition 2.4.2

Discuss consultation activities relative to Condition 2.4.2: Where the results of the monitoring and analysis indicate issues with respect to accuracy of the environmental assessment and/or the effectiveness of any mitigation measures that may lead to adverse environmental effects, identify the means by which the Proponent determines whether additional mitigation measures are required, including the need for consultation with other parties in reaching that determination.

There were no exceedances of MDMER water quality authorized limits of deleterious substances in 2018.

Water quality monitoring Brucejack Creek at the discharge compliance point indicates that arsenic concentration is increasing at a faster rate than predicted and may exceed levels originally modelled, however, current modeling forecasts concentrations will not exceed those in MDMER Schedule 4 Authorized Limits of Deleterious Substances. This premature increase in the anticipated arsenic concentrations resulted in a request to amend the BC discharge permit limits up to 10 µg/L total arsenic. The change was consulted upon with BC Ministry of Environment and Climate Change Strategy, NLG, TCG, TSKLH, EAO and other Mine Development Review Committee members. Toxicity testwork by Nautilus Environmental on *P. subcapitata* in Algae Growth Tests indicate that the forecast arsenic concentrations will not negatively affect aquatic resources.

If continued water quality monitoring and additional toxicity tests suggest arsenic concentrations increasing above current forecasts then mitigation measures will be investigated and consulted upon.

4.2 Conditions 5.2 and 5.4

Discuss consultation activities relative to Condition 5.2: The Proponent shall, in consultation with the Nisga'a Nation and Tsetsaut/Skii km Lax Ha, monitor and assess any changes to ambient air quality at the Tsetsaut/Skii km Lax Ha Lodge that result from the Designated Project during all phases for particulate matter (10 microns in diameter or less) and fine particulate matter (2.5 microns in diameter or less) using the Canadian Ambient Air Quality Standards of the Canadian Council of Ministers of the Environment as a benchmark, as well as for nitrogen oxide, sulphur dioxide and carbon monoxide.

Ambient air quality monitoring at the Tsetsaut Skii km Lax Ha Lodge was conducted throughout 2018. As in past years monitoring was supported by the installation of a passive air sampling system (PASS) at the Lodge and use of a portable 3M EVM-7 Environmental Monitor. Ambient NO₂ and SO₂ were measured monthly with the PASS sampler, while monitoring for PM₁₀, PM_{2.5} and CO was completed quarterly using the portable air analyzer. A memorandum regarding the 2018 monitoring results at the Tsetsaut Skii km Lax Ha Lodge was prepared and has been provided to the NLG and Tsetsaut Skii km Lax Ha on March 20, 2019. To date, following issuance of these monitoring reports there have not been any requests for a follow up by either the NLG or TSKLH. Any future request for consultation on results of monitoring will be followed up by Pretivm.

Discuss consultation activities relative to Condition 5.4: The Proponent shall develop and implement, in consultation with the Nisga'a Nation and Tsetsaut/Skii km Lax Ha, a follow-up program based on the monitoring specified in condition 5.2 to evaluate the effectiveness of mitigation measures identified under condition 5.1. The follow-up program shall start with construction and ceases at the end of the decommissioning phase.

During the permitting process in 2015, Pretivm consulted the NLG and TSKLH on the development of the Air Quality Monitoring Plan. Ambient air quality monitoring results for 2016, 2017 and 2018 were below Canadian Ambient Air Quality Standards of the Canadian Council of Ministers of the Environment benchmarks. The memorandum regarding 2018 monitoring results at the Lodge was provided to the NLG and TSKLH for review on March 20, 2019. No responses to the 2016 and 2017 reports were received.

In July 2017 Bowser Camp was deactivated and re-established as Bowser West Camp in the westernmost corner of Bowser License of Occupation. TSKLH also moved their Lodge to Bowser West site in 2017. During 2018, dust suppression mitigation was undertaken using water and a Ca/Mg chloride brine mixture applied around the general Bowser site and on the access road.

4.3 Condition 5.3

Discuss consultation activities relative to Condition 5.3: The Proponent shall develop and implement, in consultation with the Nisga'a Nation and Tsetsaut/Skii km Lax Ha, a mechanism for receiving noise complaints due to noise caused by the Designated Project during all phases, and respond in a timely manner to any noise complaint received.

A Noise Complaint Form was developed by Pretivm and provided to the NLG and TSKLH for their review and input on September 2, 2015. The form was revised based on comments received from the Tsetsaut/Skii km Lax Ha on September 2, 2015 and reissued shortly thereafter. No other comments and no complaints were received in 2018.

4.4 Conditions 6.6 and 6.7

Discuss consultation activities relative to Condition 6.6: The Proponent shall, following consultation with Tsetsaut/Skii km Lax Ha, provide access to the Project Area to the Tsetsaut/Skii km Lax Ha for traditional purposes, to the extent that such access is safe.

Discuss consultation activities relative to Condition 6.7: The Proponent shall, following consultation with the Nisga'a Nation, provide access to the Project Area for the Nisga'a Nation to exercise rights under the Nisga'a Final Agreement, to the extent that such access is safe.

The Traffic and Access Management Plan, which states that "Persons authorized to use the Brucejack Access Road will include First Nations people conducting traditional use activities under authorization of their Nation's government", was reviewed during the *Mines Act-Environmental Management Act* Permits Application review process in 2015, at which time comments from the Tsetsaut/Skii km Lax Ha were received and reflected in the Traffic and Access Management Plan. No comments were received from the Nisga'a Nation. No requests for site access related to traditional use activities occurred in 2018.

4.5 Condition 6.8

Discuss consultation activities relative to Condition 6.8: Develop and implement, in consultation with the Nisga'a Nation and Tsetsaut/Skii km Lax Ha, a follow-up program to determine the effectiveness of the mitigation measures used to avoid mortality of fauna, including ungulates and furbearers, along the access road and to verify the accuracy of the environmental assessment.

During the permitting process in 2015, Pretivm consulted the Nisga'a Nation and the Tsetsaut Skii km Lax Ha on the development of the Wildlife Management Plan (WMP). Pretivm proposed that the Wildlife Advisory Committee would be an appropriate venue for discussion of the effectiveness of mitigation measures, wildlife mortalities, accuracy of impacts to wildlife and potential additional mitigation measures. As per the WMP, Pretivm established a Wildlife Advisory Committee with NLG, TSKLH, TCG and BC Ministry of Forests, Lands and Natural Resource Operations attending the initial committee meeting in April, 2016 and a second meeting in May 2017.

In 2017 the committee discussed electric fencing around portions of lower elevation camps, access road improvements, possibilities of establishing a no shooting zone around the access road, wolverine near camps, bear awareness, mountain goat monitoring, moose observations along the access road, waste management and wildlife attractants, wildlife incident/observation reporting, spill prevention training, and snow bank management along the access road in winter. A number of attempts were made to schedule a meeting in 2018 but committee member conflicting schedules precluded a meeting.

The monitoring activities outlined in the WMP were ongoing in 2018. The number of wildlife observations in 2018 were 562 separate reports with a total count of approximately 1,000 animals. However, these reports and total count is far from indicative of actual animal numbers. Repeated observations by different people of the same animals on the same day or over a short time period occur; for example a single wolverine was sighted 9 minutes apart at the same location by different individuals, or another example of 3 bears sighted 8 times within a 1 km stretch of road over a 5 day period, including more than once some days. Along the access road vehicle drivers concentrate on safe driving which means larger animals that present an immediate concern are usually observed but smaller animals are not seen unless they happen to obviously intrude onto the road. Where more people congregate, such as camps or outdoor work areas, provides the main opportunity to observe large and small animals and those at a distance. Sightings are naturally weighted towards larger animals of concern for traffic and personal safety while commonplace occurrences such as migrating flocks of birds rarely get recorded.

Where wildlife sightings accounts become of more value is for where to direct mitigation efforts and at what time of year. The most common sightings reported in 2018 were black bears (35% of reports), followed by moose (21% of reports), fox (18% of reports) and mountain goats (6% of reports). Bears are of particular concern for personnel safety. By area, black bear sightings in 2018

were: east of Bell Irving River 2%, Bell Irving River to Wildfire Creek 8.7%, between Wildfire Creek and along the plateau north of Wildfire Creek to Scott Creek headwaters 15.8%, along Scott Creek valley 22.4%, along Bowser River valley from Scott Creek to Bowser Camp area, 12.8%, Bowser River valley from Bowser Camp area to Knipple Camp area (including the camps) 25.0%, west of Knipple Camp to Knipple Glacier 18.4%. By timing, monthly black bear sightings in 2018 were: April 2.6%, May 40.8%, June 24.5%, July 15.8%, August 4.6%, September 6.1% and October 5.6%. In 2018 the earliest black bear sightings were in the last 10 days of April in the Wildfire Camp area. Elsewhere along the access road the earliest black bear sightings were in May.

Grizzly bear sightings, total of 12 (although 1 was a repeated road sighting within 20 minutes at the same location), were more widespread than in 2017, 2 sightings were east of Bell Irving River along Highway 37 near the security gate, 2 on the mountain sides above Knipple Glacier and the other 7 separate sightings spread along Bowser River valley. 50% of sightings along the access road were in the 43 to 44 km area. Grizzly sightings were between July and October.

Moose sightings in 2018 were solely along Scott Creek valley and Bowser River valley other than 2 sightings near Wildfire Camp. 15% of sightings were along Scott Creek valley, 84% along Bowser River valley portion of the access road – 26% from 36 to 41 km, 14% from 41 to 46 km, 11% from 46 to 51 km, 23% from 51 to 56 km and 10% from 56 to 58 km. Moose sighting locations correlate to seasons, more consistently than for other large animals. By timing monthly moose sightings were: January 9% and February 11%, restricted to the 36 to 41 km area, March 10% and April 6% with 1/3rd in Scott Creek valley and 2/3rds in 36 to 41 km, May 6% - May marks the spread of moose westward with 71% of those sightings between Scott Creek and Bowser Camp, June 18%, July 6%, and August 6% with all but 1/5th of those west of Bowser Camp, September 10% with 1/4th in Scott Creek valley and the remainder along Bowser River valley from Scott Creek to West of Knipple Camp - September marks the beginning of moose movement towards lower elevation wintering locations, October 6% and November 5% in lower Scott Creek valley and Bowser River valley with greater numbers east of Bowser Camp, and December 6% most moving closer to Scott Creek from Bowser Camp area.

A comparison of actual wildlife mortalities as a result of vehicular traffic to forecasted mortalities indicates forecasts were overestimated; the only mortality estimates in the environmental assessment were large mammals. No mortalities were recorded for species forecast in the EA assessment. In 2018 mortalities can be divided between those known to be the result of project activities and those found deceased with no apparent injury. Three of four mortalities were struck by vehicles on the access road, including a muskrat, a grouse and a Bushy Tailed Wood Rat. The only other mortality confirmed as related to the Project was a barn swallow that flew into the mill building and struck interior structures. Other animals found deceased, with no visible injuries or sufficiently close to a structure to attribute the mortality to a collision with that structure (i.e. the cause of mortality is unknown) were a grouse, ten Chipping Sparrows and two Wilson's Warblers. Mortalities are a subject for discussion with Aboriginal groups attending the Wildlife Committee meetings as is the effectiveness of mitigation plans and potential adaptive management measures.

4.6 Condition 7.1

Discuss consultation activities relative to Condition 7.1: Develop and implement, in consultation with Aboriginal groups, an archaeological and heritage resources management plan for the Designated Project prior to construction.

The Heritage Management Plan, and associated Heritage Chance Find Procedure, was reviewed by Aboriginal groups during the *Mines Act-Environmental Management Act* Permits Application review process and completed in 2015. No comments were received. During construction activities in 2017 crews were made aware of and trained to use the Chance Find Procedure. No new archaeological or heritage resources were identified during construction activities. In 2018 Brucejack Project areas were include in a regional archaeological overview assessment undertaken in conjunction with Pretium exploration activities not connected with the Project.

4.7 Conditions 9.2 and 9.4

Discuss consultation activities relative to Condition 9.2: The Proponent shall, prior to construction, consult with Aboriginal groups to identify potential accidents and malfunctions that may result in an adverse environmental effect, and on the measures to be applied to prevent such accidents and malfunctions.

Discuss consultation activities relative to Condition 9.4: Develop and implement a communication plan, in consultation with Aboriginal groups that shall include:

9.4.1: The types of accidents or malfunctions requiring a notification by the Proponent to the respective Aboriginal groups;

9.4.2: The manner by which Aboriginal groups shall be notified by the Proponent of an accident or malfunction and of any opportunities for the Aboriginal groups to assist in the response to the accident or malfunction; and

9.4.3: The contact information of the representatives of the Proponent that the Aboriginal groups may contact and of the respective Aboriginal groups to which the Proponent provides notification.

Pretium sent a letter on September 4, 2015 to Aboriginal groups regarding Conditions 9.2 and 9.4.

Specifically the letter stated that Pretium considered the consultation undertaken during the *Mines Act-Environmental Management Act* Permits Application review process to have by and large fulfilled Condition 9.2, to consult with Aboriginal groups to identify potential accidents and malfunctions that may result in an adverse environmental effect, and on the measures to be applied to prevent such

accidents and malfunctions. Though Pretivm did encourage groups to review the materials provided in the letter regarding accidents and malfunctions and invited suggestions for change or additions to the plan or further consultation on the matters, Pretivm received no responses to date.

With regards to development and implementation of a communications plan concerning accidents and malfunctions (Condition 9.4), the September 2015 letter from Pretivm suggested to the Tsetsaut Skii km Lax Ha and the Tahltan Central Government (TCG) that the methods of notification and contact information included in the Aboriginal Consultation Plan (developed in consultation with these groups) be used. For the Nisga'a Lisims Government (NLG), Pretivm suggested that the Impacts and Benefits Agreement between Pretivm and NLG provide the platform for fulfilling Condition 9.4. In 2017 an IBA was reached with the TCG and that agreement will provide the platform for fulfilling Condition 9.4.

Regarding notification to Aboriginal groups about types of accidents and malfunctions, Condition 9.4.1, Pretivm provided in the September 2015 letter a table of types of accidents and malfunctions, and associated risk and mitigation strategies to prevent the accident or malfunction. The table was intended as a basis for discussion of notification. Pretivm also asked Aboriginal groups for suggestions on how they would like to assist in response to an accident or malfunction, as per Condition 9.4.2. To date Pretivm has received no responses from any of the Aboriginal groups to this letter.

Tsetsaut Skii km Lax Ha participated in company risk assessment meetings in prior years in the Vancouver office, follow-up meetings by conference calls and until late 2018 in monthly Joint Occupational Health and Safety Committee meetings at the mine site.

In 2018 no accidents or malfunctions occurred that had the potential to cause adverse environmental effects.

5 Condition 2.5.4: Follow-up Programs

Condition 2.5.4: The proponent shall document in the annual report the results of the follow-up program requirements identified in conditions 3.4, 5.4 and 6.8.

5.1 Condition 3.4: Water Quality and Fish and Fish Habitat Follow-up Program

The Proponent shall develop and implement a water quality and fish and fish habitat follow-up program that shall include:

3.4.1 Monitoring the quality of water flowing from Brucejack Lake into Brucejack Creek to verify the accuracy of the water quality and fish and fish habitat predictions in the environmental assessment; and

3.4.2 Determining whether mitigation measures implemented to protect the quality of water flowing from Brucejack Lake into Brucejack Creek and downstream fish and fish habitat are effective.

Water flowing from Brucejack Lake to Brucejack Creek continued to be monitored as per MDMER regulations and Appendix B of Effluent Discharge permit 107835, as well as the Aquatic Effects Monitoring Plan, during the reporting period. No exceedances of MDMER discharge limits were recorded.

While exceedances of BC discharge permit limits for arsenic occurred a toxicity study conducted by Nautilus Environmental concluded that the arsenic concentrations did not pose a negative risk to aquatic life in Brucejack Creek.

The MDMER First Biological Monitoring Study was conducted in 2017 and the interpretive report was filed with Environment and Climate Change Canada in July 2018. Water quality monitoring continues at the discharge compliance point and reference sample locations for the environmental effects monitoring.

5.2 Condition 5.4: Tsetsaut/Skii km Lax Ha Lodge Ambient Air Quality Monitoring Follow-up Program

The Proponent shall develop and implement, in consultation with the Nisga'a Nation and Tsetsaut/Skii km Lax Ha, a follow-up program based on the monitoring specified in condition 5.2 to evaluate the effectiveness of mitigation measures identified under condition 5.1. The follow-up program shall start with construction and ceases at the end of the decommissioning phase.

In 2018, monthly passive monitoring of sulphur dioxide (SO₂) and nitrogen dioxide (NO₂) as well as quarterly ambient particulate and carbon monoxide (CO) sampling was completed at the Tsetsaut Skii km Lax Ha (TSKLH) Lodge. Results indicated that annual average concentrations for SO₂ and NO₂ and all results for CO and PM_{2.5} were below the respective benchmarks (Canadian Ambient Air Quality Standards of the Canadian Council of Ministers of the Environment); no additional mitigation measures are required.

Details of the 2018 air quality monitoring results at the TSKLH Lodge were made available in the memorandum to NLG and TSKLH on March 20, 2019.

5.3 Condition 6.8: Effectiveness of Mitigation Measures to Avoid Mortality of Fauna Follow-up Program

The Proponent shall develop and implement, in consultation with the Nisga'a Nation and Tsetsaut/Skii km Lax Ha, a follow-up program to determine the effectiveness of the mitigation

measures used to avoid mortality of fauna, including ungulates and furbearers, along the access road and to verify the accuracy of the environmental assessment.

During the permitting process in 2015, Pretivm consulted the Nisga'a Nation and the Tsetsaut/Skii km Lax Ha on the development of the Wildlife Management Plan (WMP). The monitoring activities outlined in the WMP were ongoing in 2017. The wildlife observations in 2018 were recorded in a log kept by environmental staff. Mortality rates for bears and moose predicted in the environmental assessment of the project have not occurred. Mitigation measures in effect are considered effective.

6 Condition 2.5.5: Additional Mitigation Measures Implemented

Condition 2.5.5: The proponent shall document in the annual report any additional mitigation measures implemented or proposed by the Proponent, as determined under condition 2.4.

Condition 2.4: The Proponent shall, where a follow-up program is a requirement of a condition set out in this Decision Statement:

2.4.1. Undertake monitoring and analysis to verify the accuracy of the environmental assessment as it pertains to the particular condition and/or to determine the effectiveness of any mitigation measure(s);

2.4.2. Where the results of the monitoring and analysis indicate issues with respect to the accuracy of the environmental assessment and/or the effectiveness of any mitigation measures that may lead to adverse environmental effects, identify the means by which the Proponent determines whether additional mitigation measures are required, including the need for consultation with other parties in reaching that determination; and

2.4.3. If additional mitigation measures are required pursuant to condition 2.4.2, implement and monitor these additional mitigation measures pursuant to condition 2.4.1.

No additional mitigation measures to those presented within Component Plans under the Environmental Management System and within permits, were required to be implemented or proposed in 2018.

APPENDIX A:
Decision Statement Conditions
Implementation Activities Undertaken

Section	Sub-section	Condition	Implementation Activities Undertaken
2	General Conditions		
2.1		The Proponent shall, throughout all phases of the Designated Project, ensure that its actions in meeting the conditions set out in this Decision Statement are informed by the best available information and knowledge, including community and Aboriginal traditional knowledge, are based on validated methods and models, are undertaken by qualified individuals, and have applied the best available economically and technologically feasible measures.	Refer to 2018 CEAA Annual Report Section 3.
2.2		The Proponent shall, where consultation is a requirement of a condition set out in this Decision Statement:	Consultation is guided by the Aboriginal Consultation Plan developed by Pretivm, as a condition of their Environmental Assessment Certificate, with review and input from First Nations. Consultation activities will also be directed per the Impact Benefit Agreements established with the Nisga'a Nation and Tahltan Nation, and those that may be established with the Tsetsaut Skii km Lax Ha. In addition, consultation activities are undertaken during permit amendments when such amendments are overseen by the BC Mine Development Review Committee or during BC Environmental Assessment Certificate amendments when overseen by BC EAO.
	2.2.1	Provide a written notice of the opportunity for the party or parties being consulted to present their views on the subject of the consultation;	This practice has been implemented and will continue for the duration of the Project.
	2.2.2	Provide sufficient information and a reasonable period of time to permit the party or parties being consulted to prepare their views;	This practice has been implemented and will continue for the duration of the Project.
	2.2.3	Provide a full and impartial consideration of any views presented by the party or parties being consulted; and	This practice has been implemented and will continue for the duration of the Project.
	2.2.4	Advise the party or parties that have provided comments on how the views and information received have been considered by the Proponent.	This practice has been implemented and will continue for the duration of the Project.
2.3		The Proponent shall, where consultation with Aboriginal groups is a requirement of a condition set out in this Decision Statement, and prior to initiating that consultation, communicate with each Aboriginal group to determine the manner by which to satisfy the consultation requirements referred to in condition 2.2.	Consultation will be guided by the Aboriginal Consultation Plan developed by Pretivm, as a condition of their Environmental Assessment Certificate, with review and input from First Nations. Consultation activities will also be directed per the Impact Benefit Agreements established with the Nisga'a Nation and Tahltan Nation, and those that may be established with the Tsetsaut Skii km Lax Ha.
2.4		The Proponent shall, where a follow-up program is a requirement of a condition set out in this Decision Statement:	
	2.4.1	Undertake monitoring and analysis to verify the accuracy of the environmental assessment as it pertains to the particular condition and/or to determine the effectiveness of any mitigation measure(s);	Monitoring and analysis of data to verify the accuracy of the environmental assessment has been implemented as per BC <i>Mines Act</i> permit M-243 issued by the Ministry of Energy, Mines and Petroleum Resources, BC <i>Environmental Management Act</i> permits 107835 (effluent) and 107025 (air) issued by the Ministry of Environment and Climate Change Strategy, and Metal and Diamond Mining Regulation as required under the <i>Fisheries Act</i> , in addition to various other permits and management plans that require monitoring.
	2.4.2	Where the results of the monitoring and analysis indicate issues with respect to the accuracy of the environmental assessment and/or the effectiveness of any mitigation measures that may lead to adverse environmental effects, identify the means by which the Proponent determines whether additional mitigation measures are required, including the need for consultation with other parties in reaching that determination; and	Refer to 2018 CEAA Annual Report Section 4.1.
	2.4.3	If additional mitigation measures are required pursuant to condition 2.4.2, implement and monitor these additional mitigation measures pursuant to condition 2.4.1.	No additional mitigation measures have been required to date.
2.5		The Proponent shall, from the reporting year where construction starts, submit to the Agency an annual report, including an executive summary of the annual report in both official languages. The annual report shall be submitted by the Proponent no later than March 31 following the reporting year. The Proponent shall document in the annual report:	Refer to this and earlier CEAA Annual Reports.
	2.5.1	Implementation activities undertaken in the reporting year for each of the conditions set out in this Decision Statement;	Implementation activities undertaken are tabulated in this Appendix.
	2.5.2	How it has considered and incorporated the factors set out in condition 2.1 in the implementation of the conditions set out in this Decision Statement;	Refer to 2018 CEAA Annual Report Section 3.

Section	Sub-section	Condition	Implementation Activities Undertaken
	2.5.3	For conditions set out in this Decision Statement for which consultation is a requirement, how the Proponent has considered any views and information that the Proponent received during or as a result of the consultation;	Refer to 2018 CEAA Annual Report Section 4.
	2.5.4	The results of the follow-up program requirements identified in conditions 3.4, 5.4 and 6.8; and	Refer to 2018 CEAA Annual Report Section 5.
	2.5.5	Any additional mitigation measures implemented or proposed by the Proponent, as determined under condition 2.4.	No additional mitigation measures were required in 2018.
2.6		The Proponent shall publish on the Internet, or any similar medium, the annual report and the executive summary referred to in condition 2.5, the archaeological and heritage resources management plan referred to in condition 7.1, and the implementation schedule and any updates or revisions to that schedule referred to in condition 10, upon submission of these documents to the parties referenced in the respective conditions. The Proponent shall keep these documents publicly available for twenty-five years following the end of operation or until the end of decommissioning of the Designated Project, whichever comes first.	The Heritage Management Plan and the Implementation Schedule are available on Pretivm's website at: http://www.pretivm.com/sustainability/default.aspx
2.7		The Proponent shall notify the Agency in writing no later than 60 days after the day on which there is a transfer of ownership, care, control or management of the Designated Project in whole or in part.	Not applicable. No activity undertaken.
2.8		In the event another party becomes the Proponent of the Designated Project, it is bound by the conditions set out in this Decision Statement.	Not applicable. No activity undertaken.
3	Fish and fish habitat		
3.1		The Proponent shall, for all effluent discharges, comply with the <i>Fisheries Act</i> , the Metal and Diamond Mining Effluent Regulations (MDMER), and any discharge limits for effluent set by British Columbia that meet or exceed the requirements of the <i>Fisheries Act</i> and the Metal and Diamond Mining Effluent Regulations. In addition, the Proponent shall:	Pretivm has implemented effluent monitoring as per <i>Environmental Management Act</i> permit 107835, the Brucejack Aquatic Effects Monitoring Plan and MDMER criteria. The First Biological Monitoring Design Study, per MDMER requirements, sampling was initiated in 2017 and reported upon in July 2018.
	3.1.1	Design and construct the perimeter ditching around the waste rock stockpile, mill building and portals to accommodate a 200-year rain-on-snow event;	Construction completed in 2017.
	3.1.2	Capture and divert surface drainage and mine water effluent to the water treatment plant for treatment prior to discharge into Brucejack Lake;	This practice has been implemented and will continue for the duration of the Project.
	3.1.3	Immobilize tailings and deposit potentially acid generating rocks on the bottom of Brucejack Lake where they shall remain submerged at all times or in decommissioned stopes; and	This practice has been implemented and will continue for the duration of the Project.
	3.1.4	Use multiple turbidity curtains at the outlet of Brucejack Lake.	This practice has been implemented and will continue for the duration of the Project.
3.2		The Proponent shall protect fish and fish habitat during all phases of the Designated Project, which shall include the implementation of mitigation measures to avoid causing harm to fish and fish habitat when using explosives or conducting activities in or around water frequented by fish, as well as on the Knipple Glacier.	At the mine site the mine water treatment plant continues to be operational, as well, three turbidity curtains were installed at the outlet of Brucejack Lake; a Standard Operating Procedure and management plan related to the crossing of the Knipple Glacier is in place, as are Emergency and Spill Response Plans; monitoring for hydrocarbons is undertaken downstream of the Knipple Glacier continued in 2018.
3.3		The Proponent shall, during decommissioning, reclaim riparian habitats along the access road which shall include the planting of native plant species.	No decommissioning activities were undertaken in riparian habitats 2018.
3.4		The Proponent shall develop and implement a water quality and fish and fish habitat follow-up program that shall include:	Refer to 2018 CEAA Annual Report Section 5.1
	3.4.1	Monitoring the quality of water flowing from Brucejack Lake into Brucejack Creek to verify the accuracy of the water quality and fish and fish habitat predictions in the environmental assessment; and	This practice has been implemented and will continue for the duration of the Project.
	3.4.2	Determining whether mitigation measures implemented to protect the quality of water flowing from Brucejack Lake into Brucejack Creek and downstream fish and fish habitat are effective.	Refer to 2018 CEAA Annual Report Section 5.1
4	Migratory birds		

Section	Sub-section	Condition	Implementation Activities Undertaken
4.1		The Proponent shall carry out all phases of the Designated Project in a manner that protects and avoids harming, killing or disturbing migratory birds or destroying, disturbing or taking their nests or eggs. In this regard, the Proponent shall take into account Environment Canada's Avoidance Guidelines. The Proponent's actions in applying the Avoidance Guidelines shall be in compliance with the <i>Migratory Birds Convention Act, 1994</i> and with the <i>Species at Risk Act</i> .	Pre-clearing surveys for raptor nests and migratory birds continued in 2018 for those areas where timber and brush was cleared in 2018. No raptor nests were found nor were migratory bird nests disturbed.
4.2		The Proponent shall design and build the transmission line in a manner that prevents electrocution, discourages nesting and makes the transmission line more visible to migratory birds taking into account the Avian Power Line Interaction Committee's Suggested Practices for Avian Protection on Power Lines.	Construction completed in March 2017. A review of transmission line design and construction by a Senior Wildlife Scientist with ERM Consultants Canada confirms that the design of the transmission line and construction met the condition.
5	Health and Aboriginal peoples		
5.1		The Proponent shall implement mitigation measures to manage air emissions of the Designated Project during all phases, including:	
	5.1.1	Those mitigation measures required to comply with the Waste Discharge Regulation under British Columbia's <i>Environmental Management Act</i> for operational air emissions;	Mitigation measures implemented continued during 2018 to manage air emissions were as per the <i>Environmental Management Act</i> permit 107025 and the Brucejack Air Quality Management Plan.
	5.1.2	Fugitive dust best management practices; and	In 2018, a calcium/magnesium chloride brine was applied to the Brucejack Access Road from km 0 to km 59 and to the lower camp areas to assist in suppressing fugitive dust. Road watering also continued to be used as a mitigation measure for managing fugitive dust along the Brucejack Access Road, Bowser West Camp, Bowser Aerodrome and at the mine site.
	5.1.3	Use of low-sulphur diesel fuel equipment and pollution control equipment on mobile heavy equipment.	This practice has been implemented and will continue for the duration of the Project.
5.2		The Proponent shall, in consultation with the Nisga'a Nation and Tsetsaut Skii km Lax Ha, monitor and assess any changes to ambient air quality at the Tsetsaut Skii km Lax Ha Lodge that result from the Designated Project during all phases for particulate matter (10 microns in diameter or less) and fine particulate matter (2.5 microns in diameter or less) using the Canadian Ambient Air Quality Standards of the Canadian Council of Ministers of the Environment as a benchmark, as well as for nitrogen oxide, sulphur dioxide and carbon monoxide.	Refer to 2018 CEAA Annual Report Section 4.2.
5.3		The Proponent shall develop and implement, in consultation with the Nisga'a Nation and Tsetsaut Skii km Lax Ha, a mechanism for receiving noise complaints due to noise caused by the Designated Project during all phases, and respond in a timely manner to any noise complaint received.	This practice has been implemented and will continue for the duration of the Project.
5.4		The Proponent shall develop and implement, in consultation with the Nisga'a Nation and Tsetsaut Skii km Lax Ha, a follow-up program based on the monitoring specified in condition 5.2 to evaluate the effectiveness of mitigation measures identified under condition 5.1. The follow-up program shall start with construction and ceases at the end of the decommissioning phase.	Refer to 2018 CEAA Annual Report Section 4.2.
5.4.1		The Proponent shall inform the Nisga'a Nation and Tsetsaut Skii km Lax Ha in cases of exceedances at the Tsetsaut Skii km Lax Ha Lodge of the Canadian Ambient Air Quality Standards of the Canadian Council of Ministers of the Environment parameters specified in condition 5.2.	Ambient air quality monitoring at this site continued in 2018. No exceedances were noted in the Tsetsaut Skii km Lax Ha Lodge results. A report was provided on March 20, 2019.
6	Current use of lands and resources for traditional purposes		
6.1		The Proponent shall provide Aboriginal groups with the implementation schedule and any updates or revisions to that schedule as stated in condition 10 at the same time the Proponent provides the schedule to the Agency.	The Implementation Schedule was provided to Aboriginal groups and the Agency August 2015. An updated schedule was provided on February 24, 2017 and another on March 13, 2019.
6.2		The Proponent shall prohibit any hunting, fishing and trapping within the Project Area by the Proponent's employees and contractors hired by the Proponent, unless an employee or a contractor is provided access for traditional purposes as per condition 6.6 or for exercising rights as per condition 6.7.	This practice has been implemented and will continue for the duration of the Project.
6.3		The Proponent shall prohibit public access to the access road.	This practice has been implemented and will continue for the duration of the Project.

Section	Sub-section	Condition	Implementation Activities Undertaken
6.4		The Proponent shall impose speed limits on the access road taking into account provincial guidelines.	Speed limits are established in the Brucejack Traffic & Access Management Plan based on the road design, and signage in both directions of travel has been posted along the Brucejack Access Road to advise of road speed. In addition, speed limits are discussed in the Safe Work Instructions (SWI) road procedure which is issued to all drivers/contractors prior to travelling the access road.
6.5		The Proponent shall construct and maintain gaps in snow banks large enough to provide passage for fauna, including ungulates and furbearers.	Once the depth of snow warranted it, gaps in the snow banks were constructed and maintained along the access road during 2018. Additionally, for much longer sections, the grader cut down the height of the snow banks to allow for wildlife passage along the length of the banks, not just at gaps. Grading practices will continue to be evaluated on an ongoing basis through the winter.
6.6		The Proponent shall, following consultation with Tsetsaut Skii km Lax Ha, provide access to the Project Area to the Tsetsaut Skii km Lax Ha for traditional purposes, to the extent that such access is safe.	Refer to 2017 CEAA Annual Report Section 4.4.
6.7		The Proponent shall, following consultation with the Nisga'a Nation, provide access to the Project Area for the Nisga'a Nation to exercise rights under the Nisga'a Final Agreement, to the extent that such access is safe.	Refer to 2017 CEAA Annual Report Section 4.4.
6.8		The Proponent shall develop and implement, in consultation with the Nisga'a Nation and Tsetsaut Skii km Lax Ha, a follow-up program to determine the effectiveness of the mitigation measures used to avoid mortality of fauna, including ungulates and furbearers, along the access road and to verify the accuracy of the environmental assessment.	Refer to 2017 CEAA Annual Report Section 4.5 and Section 5.3.
7	Physical and cultural heritage and structures, sites or things of ... significance		
7.1		The Proponent shall develop and implement, in consultation with Aboriginal groups, an archaeological and heritage resources management plan for the Designated Project prior to construction. The archaeological and heritage resources management plan shall take into account British Columbia's Handbook for the Identification and Recording of Culturally Modified Trees. The archaeological and heritage resources management plan shall include:	Refer to 2017 CEAA Annual Report Section 4.6. A Heritage Management Plan and accompanying Heritage Chance Find Procedure was developed in 2015 and implemented prior to the start of construction activities and in use throughout 2018.
	7.1.1	A description of structures, sites or things of historical, archaeological, paleontological or architectural significance (including Culturally Modified Trees) that may be encountered by the Proponent during construction;	A Heritage Management Plan and accompanying Heritage Chance Find Procedure was developed and implemented prior to the start of construction activities.
	7.1.2	Procedures and practices for on-site monitoring of construction activities that may affect a structure, site or thing of historical, archaeological, paleontological or architectural significance (including a Culturally Modified Tree) and for the identification and removal of the resource; and	A Heritage Management Plan and accompanying Heritage Chance Find Procedure was developed in 2015 and implemented prior to the start of construction activities and in use throughout 2018.
	7.1.3	A chance find protocol if a previously unidentified structure, site or thing of historical, archaeological, paleontological or architectural significance (including a Culturally Modified Tree) is discovered by the Proponent or brought to the attention of the Proponent by an Aboriginal group or another party during construction.	A Heritage Management Plan and accompanying Heritage Chance Find Procedure was developed in 2015 and implemented prior to the start of construction activities and in use throughout 2018.
8	Species at risk		
8.1		The Proponent shall conduct pre-clearing surveys to determine distribution of Little Brown Myotis (<i>Myotis lucifugus</i>) and Northern Myotis (<i>Myotis septentrionalis</i>), and establish a 50-metre buffer zone around active hibernacula and active roosts.	This practice has been implemented and will continue for the duration of the Project. No clearing of timber suitable for bat roosts was completed in 2018, no bat roosts were found.
8.2		The Proponent shall, prior to construction and throughout all phases of the Designated Project, install and maintain roosting structures to offset if there is loss of Little Brown Myotis (<i>Myotis lucifugus</i>) and Northern Myotis (<i>Myotis septentrionalis</i>) bat roosting habitat.	No roosting structures were found during the bat roosting surveys in 2015 or during clearing activities in 2015 through 2018, no monitoring is required and no mortalities observed. However, five bat houses were installed in appropriate habitat along the access road and 5 five along the transmission line in 2017.
8.3		The Proponent shall monitor mortality of Little Brown Myotis (<i>Myotis lucifugus</i>) and Northern Myotis (<i>Myotis septentrionalis</i>) and their usage at buffer-zones and of roosting structures, to determine the effectiveness of the mitigation measures during construction and operation.	No roosting structures were found during the bat roosting surveys in 2015, during clearing activities, or during avian surveys in 2018 and no mortalities observed.
8.4		The Proponent shall construct wildlife tunnels and fencing along the access road to allow passage of the Western Toad (<i>Anaxyrus boreas</i>) beneath the road as close as possible to existing migration corridors taking into account British Columbia's Guidelines for Amphibian and Reptile Conservation during Urban and Rural Land Development in BC.	To protect Western Toad (<i>Anaxyrus boreas</i>) during migration, five toad tunnels and a modified bridge were installed along the Brucejack Access Road in 2016 and 2017. All sites were fenced to direct toads to the corridors. Monitoring of toad use of the tunnels and bridge continued through August 2018. A report of monitoring was submitted to CEAA in September 2018.

Section	Sub-section	Condition	Implementation Activities Undertaken
9	Accidents or malfunctions		
9.1		The Proponent shall take all reasonable measures to prevent accidents and malfunctions that may result in adverse environmental effects and shall implement emergency response procedures and contingencies developed in relation to the Designated Project.	All management plans relevant to mitigate for accidents and malfunctions have been implemented.
9.2		The Proponent shall, prior to construction, consult with Aboriginal groups to identify potential accidents and malfunctions that may result in an adverse environmental effect, and on the measures to be applied to prevent such accidents and malfunctions.	Refer to 2018 CEAA Annual Report Section 4.7.
9.3		In the event of an accident or malfunction with the potential to cause adverse environmental effects, the Proponent shall:	No accidents or malfunctions with the potential to cause adverse environmental effects occurred in 2018.
	9.3.1	Notify relevant federal and provincial authorities, including notifying the Agency in writing of the accident or malfunction as soon as possible in the circumstances;	Not applicable no such occurrence in 2018.
	9.3.2	Implement immediate measures to minimize any adverse environmental effects associated with the accident or malfunction;	Not applicable no such occurrence in 2018.
	9.3.3	Submit a written report to the Agency as soon as possible in the circumstances, but no later than 30 days after the day on which the accident or malfunction took place. The written report shall include:	Not applicable no such occurrence in 2018.
	9.3.3.1	A description of the accident or malfunction and of its adverse environmental effects;	Not applicable no such occurrence in 2018.
	9.3.3.2	The measures that were taken by the Proponent to mitigate the environmental effects of the accident or malfunction;	Not applicable no such occurrence in 2018.
	9.3.3.3	A description of any residual environmental effects, and any additional measures required to address residual environmental effects; and	Not applicable no such occurrence in 2018.
	9.3.3.4	If an emergency response plan was implemented, details concerning its implementation.	Not applicable no such occurrence in 2018.
	9.3.4	As soon as possible in the circumstances, but no later than 90 days after the day on which the accident or malfunction took place, submit a written report to the Agency on the changes made to avoid a subsequent occurrence of the accident or malfunction and on the implementation of any additional measures to mitigate residual environmental effects.	Not applicable no such occurrence in 2018.
9.4		The Proponent shall develop and implement a communication plan, in consultation with Aboriginal groups, that shall include:	Refer to 2018 CEAA Annual Report Section 4.7.
	9.4.1	The types of accidents or malfunctions requiring a notification by the Proponent to the respective Aboriginal groups;	Refer to 2018 CEAA Annual Report Section 4.7.
	9.4.2	The manner by which Aboriginal groups shall be notified by the Proponent of an accident or malfunction and of any opportunities for the Aboriginal groups to assist in the response to the accident or malfunction; and	Refer to 2018 CEAA Annual Report Section 4.7.
	9.4.3	The contact information of the representatives of the Proponent that the Aboriginal groups may contact and of the respective Aboriginal groups to which the Proponent provides notification.	Refer to 2018 CEAA Annual Report Section 4.7.
10	Implementation Schedule		
10.1		The Proponent shall submit an implementation schedule for conditions contained in this Decision Statement to the Agency, or anyone designated pursuant to section 89 of the <i>Canadian Environmental Assessment Act, 2012</i> , at least 30 days prior to construction. The implementation schedule shall indicate the commencement and completion dates for each activities relating to conditions set out in this Decision Statement.	The Implementation Schedule was provided to Aboriginal groups and the Agency August 2015.
10.2		The Proponent shall submit an update to this implementation schedule in writing to the Agency, or anyone designated pursuant to section 89 of the <i>Canadian Environmental Assessment Act, 2012</i> , every two years on or before March 31, until completion of the activities.	Revised schedules were provided on February 24, 2017 and March 13, 2019.

Section	Sub-section	Condition	Implementation Activities Undertaken
10.3		The Proponent shall provide the Agency, or anyone designated pursuant to section 89 of the <i>Canadian Environmental Assessment Act, 2012</i> , with a revised implementation schedule if any change occurs from the initial schedule or any subsequent updates. The Proponent shall provide the revised implementation schedule at least 30 days prior to the implementation of the change.	A revised schedule was provided on March 13, 2019 for production expansion activities that are anticipated to be implemented by December 31, 2019.
11	Record keeping		
11.1		The Proponent shall maintain a written record, or a record in an electronic format compatible with that used by the Agency, and retain and make available that record to the Agency, or anyone designated pursuant to section 89 of the <i>Canadian Environmental Assessment Act, 2012</i> , at a facility close to the Designated Project (local facility). The record shall include information related to the implementation of the conditions set out in this Decision Statement, and the results of all associated monitoring, including:	All records required under the Decision Statement are kept in electronic format accessible at the Brucejack Mine Site and from Pretium's offices in Smithers and Vancouver.
	11.1.1	the place, date and time of any sampling, as well as techniques, methods or procedures used;	This practice continued during 2018.
	11.1.2	the dates and the analyses that were performed;	This practice continued during 2018.
	11.1.3	the analytical techniques, methods or procedures used in the analyses;	This practice continued during 2018.
	11.1.4	the names of the persons who collected and analyzed each sample and documentation of any professional certifications relevant to the work performed that they might possess; and	This practice continued during 2018.
	11.1.5	the results of the analyses.	This practice continued during 2018.
11.2		The Proponent shall retain and make available upon demand to the Agency, or anyone designated pursuant to section 89 of the <i>Canadian Environmental Assessment Act, 2012</i> , the information contained in condition 11.1 at a facility close to the Designated Project (or at a location within Canada and agreed upon by the Agency, should the local facility no longer be maintained). The information shall be retained and made available throughout construction and operation, and for twenty-five years following the end of operation or until the end of decommissioning of the Designated Project, whichever comes first.	Required information can be accessed from the Brucejack Mine Site or either of Pretium's offices in Smithers and Vancouver.