



# Kátł'odeeche First Nation

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Mackenzie Valley Land and Water Board (MVLWB)  
Yellowknife, NT

RE: Land Use Permit and Water Licence Applications of the Confirmation and Exploration Program (MV2020L8-0012 MV2020C0017) - Intervention

Dear Jacqueline Ann Ho,

## **Introduction – Kátł'odeeche First Nation traditional territory**

The Pine Point Mining Limited confirmation exploration program is in the traditional territory of the Kátł'odeeche First Nation. Kátł'odeeche Dene people have hunted, trapped, harvested, lived and occupied the area of the Pine Point Mining for time immemorial. Living on the land, we developed spiritual beliefs, values, knowledge and skills that the land taught us. Our daily relationship and interaction with the land and its resources enabled us to develop economic, social and environmental systems that were embedded in our language and culture. By practicing these beliefs, values, knowledge and skills we developed integrity as a people and apply this integrity to the fullest degree possible.

We firmly believe that if we divert from this integrity, both we and the land will suffer. We, the KFN Dene still rely on the land to sustain us.

Within the context of the Pine Point Mining Limited's Confirmation Exploratory Program (CEP) and the associated Water License and Land Use Permit, KFN's main goals in participating in the permitting process is to address and ensure the following:

- Ensure there is adequate habitat across the range of the caribou in the Pine Point area to maintain a healthy and sustainable population of boreal caribou.
- Ensure there is adequate information to inform sound management decisions, including boreal caribou ecology, key habitat and population indicators and cumulative effects.
- Participate in the collaborative management of boreal caribou, using adaptive management practices
- Ensure that water quality in the study area is maintained

## **Caribou and Caribou Habitat in the Pine Point Region**

### ***The importance and sensitivity of boreal caribou***

Boreal caribou (medzih) are very important to Kát'odeeche Dene, from a spiritual, cultural and traditional harvest perspective. Kát'odeeche Dene highly respect and value boreal caribou; their meat is eaten, and the hide is highly valued for making clothing and drums. This respect and value carry with it certain obligations not to unduly harm or disrespect this animal. Respecting rules about the use of meat and hide, including sharing harvests and not wasting meat, are also considered essential to this approach.

Boreal caribou are considered a distinct population of woodland caribou. Boreal caribou occupy the forest year-round, and do not migrate and startle easily, move quickly and are very elusive. Boreal caribou move among a variety of habitats based on their seasonal requirements (Conference of Management Authorities. 2017).

Over the winter season, boreal caribou prefer mature forests where lichens are available. This overwintering habitat is considered very important and during this time, boreal caribou typically gather

in larger numbers in the trees and they spend less time in open and muskeg areas (Conference of Management Authorities. 2017).

During the spring and over the summer, predator avoidance becomes a priority. At this time, boreal caribou space themselves out throughout the range, often where access is difficult for predators. They also seek out open, elevated areas exposed to the wind, to avoid insects. In the fall, during and after the rut, they move through various habitats (Conference of Management Authorities. 2017).

Lichens are an important food source for boreal caribou. Boreal caribou typically prefer dense, mature or old growth pine or spruce forests with ground and tree lichens. Boreal caribou eat a variety of foods, depending on the season (Conference of Management Authorities. 2017).

Their occupation of specific forest areas and diet high in lichens, which is slow to recover, makes them more vulnerable to disturbance and development of access road and land clearing (Conference of Management Authorities. 2017).

### ***Threats to boreal caribou and boreal caribou habitat***

As of 2011, in the NWT, approximately 69% of the boreal caribou range was undisturbed habitat. “Undisturbed habitat is defined in the national recovery strategy (Environment Canada 2012) as areas that have not burned within the past 40 years, and areas that are further than 500 m from human disturbance footprints visible on 1:50,000 scale Landsat imagery. Habitat in the southern NWT is more disturbed and more fragmented compared to habitat in the northern NWT” (Conference of Management Authorities. 2017).

Boreal caribou are also impacted by linear corridors (i.e. roads) by increasing predator access and hunting efficiency (Bergerud et al. 1984; James and Stuart-Smith 2000). As the landscape becomes more disturbed through roads or land clearing, the relationship between boreal caribou and their predators (mainly wolves) changes. Habitat disturbance increases tends to increase alternative vegetation which support more alternative prey; this results in a higher number of predators in boreal caribou habitat. This increases the risk of caribou being killed by predators, which increases

predation and can lead to population declines. High predation rates caused by high levels of habitat disturbance have been responsible for serious boreal caribou population declines in much of Canada.

Roads also increase predator hunting efficiency by increasing predator access, line of sight, travel speed, search efficiency, and encounter rates (James and Stuart-Smith 2000). In northeastern Alberta, caribou that occupied habitats near linear corridors were at higher risk of predation than caribou that utilized habitats further from corridors (James and Stuart-Smith 2000).

Roads and development sites also impact caribou through avoidance, displacement and habitat fragmentation; caribou avoid new well sites by up to 1 km during calving and avoid old well sites up to 500 m during both calving and late winter. Caribou will avoid roads and development sites for reasons such as traffic, avoidance of crossing a non-natural opening, and human presence. This avoidance of wells, roads and disturbance initially results in increases densities of caribou in suitable areas (Dyer et al. 2001). Which makes them more predictable, concentrated, and easier to find for predators (Dyer et al. 2001).

### ***Boreal Caribou in the NWT and NWT Species at Risk designation***

There are approximately 6000 to 7000 boreal caribou in the NWT. This is a crude estimate based on the estimated density of caribou in different regions (derived from community and scientific knowledge), multiplied by the size of the range in each region. Generally, within the southern portion of the NWT (where the majority of NWT's boreal caribou occur) there is evidence of population decline.

In 2012, boreal caribou were assessed by the NWT Species at Risk Committee as threatened in the NWT. Boreal caribou were subsequently listed as a threatened species under the territorial Species at Risk (NWT) Act in 2014. This means boreal caribou are likely to become endangered in the NWT if nothing is done to reverse the factors leading to its extirpation or extinction. The NWT boreal caribou population was classified as "likely self-sustaining" by Environment Canada (EC)

in 2012 based on habitat conditions at that time and the current understanding of a single NWT population with a continuous range (Environment Canada 2012). “Likely self-sustaining” was determined based on EC’s disturbance management thresholds model, which identifies 65% undisturbed habitat as a threshold that provides a measurable probability (60%) for a population to be self-sustaining. This is considered a minimum threshold because at 65% undisturbed habitat there remains a significant risk (40%) that a population will not be self-sustaining.

### ***Boreal Caribou in Pine Point***

Information on boreal caribou in Pine Point was provided by the GNWT 2021. “The GNWT started monitoring boreal caribou in the Pine Point and Buffalo Lake areas in 2015 using GPS collars, with the goal of having at least 15 active collars in each of these areas on an annual basis. The GNWT also monitors boreal caribou to the west of the Hay River in the Hay River Lowlands study area and monitored in the Cameron Hills area up until 2010. Boreal caribou monitoring programs across the South Slave administrative region indicate relatively little movement of boreal caribou from east to west across the Hay River, as well as little spatial overlap between caribou collared in the Pine Point area and those collared west of Buffalo Lake. This suggests that boreal caribou in the Pine Point area represent a small local population within the broader NWT boreal caribou range. Annual spring classification surveys of boreal caribou conducted in the Pine Point area between 2018- and 2020 have recorded 42 to 63 boreal caribou in the area. Although the spring composition surveys are not designed to estimate abundance, given that multiple collared caribou often occur within the groups classified, the GNWT believes that most of the caribou groups in this area have been counted in these surveys. The GNWT suggests that a reasonable population estimate for boreal caribou in the Pine Point area may be 100- to 150 individuals. Boreal caribou movement data collected over the past 5 years (up to end of June 2020) indicates substantial use of the Proponent’s CEP area, particularly to the west and south of the most heavily disturbed areas of the former Pine Point Mine site.” (GNWT 2021).

As there is no baseline data of boreal caribou prior to 2015, it is challenging to understand what boreal caribou extent and population in the Pine Point area looked like prior to the former Pine Point mine. As a result, it is impossible to determine pre-development caribou population size and extent. From the map of boreal caribou distribution provided by the GNWT, boreal caribou extensively use the western portion of the study area where there is largely undisturbed and

restored caribou habitat. Boreal caribou do not migrate or occupy the most heavily disturbed, brownfield area disturbed by the Pine Point Mine (i.e. eastern extent of the project). The lack of boreal caribou in the heavily disturbed, eastern portion of the study area further demonstrates the vulnerability of boreal caribou in the Pine Point Study Area to development and disturbance.

KFN submits the following written intervention and recommendations on the Land Use Permit and Water Licence Applications of the Confirmation and Exploration Program for consideration by the Board.

***Issues with PPML's submission***

PPML has indicated that they will work to avoid boreal caribou habitat by predominately placing boreholes, drill sites and roads in brownfield areas. As pointed out by KFN during the technical sessions, some of the sites that have been previously disturbed or potentially brownfield sites, are in fact revegetated and contain boreal caribou habitat. KFN has further worked with PPML and other parties to investigate boreal caribou habitat and the sites proposed by PPML for advanced exploration work. KFN continues to recommend that no disturbance areas occur within 500 metres of the Ejie Tue Dehe (Buffalo River). There is at least one drill site within 500 metres of the Buffalo River. KFN recommends that this site be removed from consideration.

PPML provided KFN with information on where the drill sites/boreholes will be located, however, there is currently no information on where the road network to access the sites will be located. KFN further recommends that PPML indicate road location and if roads will be sited on linear disturbances (that have not been revegetated). If roads will be sited on linear disturbance, KFN further recommends that PPML indicate how many kms will be sited on previous linear disturbances versus new access.

KFN supports the GNWT's recommendation that PPML work with the GNWT to conduct a population survey to determine how many boreal caribou occur within the project area. PPML has indicated that they will work with PPML on this issue. KFN recommends that a KFN member take part in these population surveys as they take part in any population survey that occurs within the KFN Traditional Territory.

PPML has not characterized the potential habitat loss from the Project. In particular, the effects to winter and calving habitat are not sufficiently characterized, the effects of impacts to seasonal movement corridors are not included, and the thresholds of significance for habitat loss and other pathways of impact are not sufficient. The proposed monitoring and mitigation measures are not adequate to address the project effects with respect to the potential impacts of the CEP on boreal caribou. KFN recommends that PPML complete a Wildlife Mitigation and Monitoring Plan that includes information on potential habitat loss from the project and effects to winter and calving habitat. The plan should include a Dene-centric perspective of the potential significance of habitat loss, fragmentation and mortality from the project on Boreal Caribou. The plan should further identify mitigation measures, program monitoring to assess if the mitigation measures are working and adaptive management.

KFN recommends support for KFN and KFN community members to engage in ongoing collaboration with the proponent to further develop the monitoring plan and develop standards and conditions for minimizing project activities.

KFN recommends that the Annual Report provides an update on the drill sites, roads and trails, boreholes and sumps or any other disturbance that has been developed over the last year. KFN further recommends that PPML provide an update on the amount of reclamation that has occurred onsite compared to the total amount of disturbance, which includes photos of the sites and their recovery.

### ***Issues with reclamation plan and boreal caribou***

KFN recommends that the first method for the protection of boreal caribou is avoiding damage and disturbance to boreal caribou habitat to the greatest extent possible. Recovery of usable habitat is questionable and can take a significant period of time. In the case of the reclamation of roads, PPML currently does not have any definitive plans on when or if roads will be reclaimed, KFN considers that the roads will be on the landscape for at least 20 years or potentially in perpetuity. Golder Associates developed a Boreal Caribou Habitat Restoration Toolkit for address restoration

of boreal caribou habitat ( <http://www.bcogris.ca/sites/default/files/bcip-2018-04-boreal-caribou-restoration-framework-final.pdf>). This toolkit contains a summary of habitat restoration treatments that are specific to disturbance features within boreal caribou habitat, designed to limit humans/predators/primary prey (i.e. moose) access and to allow for regeneration to native species. KFN recommends that Golder's approach be used for roads that are developed but are not going to be used in the future.



## References

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