

# **Barren-ground Caribou and Cumulative Effects**

**Written Submission to MVEIRB for EA0607-003**

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**UR-Energy Screech Lake Environmental Assessment**

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For BQCMB**

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## **Assessment of Cumulative Effects on Barren-ground Caribou**

***Following is a preliminary list of information required to allow a meaningful assessment of cumulative effects on barren-ground caribou. This is provided for consideration by MVEIRB and other parties responsible for cumulative impact assessment.***

### **1) At individual level**

- How individual caribou are affected by mineral exploration activities (energetic costs of responses to drilling noise or other human activities, restricted access to key water crossings or feeding areas; exposure to contaminants; loss of habitat).
- How development impacts accumulate in caribou through annual movements across range, in a single year and over many years (exploration and mining on SK winter range, exploration on NWT spring migration range, exploration on NU calving ground)
- How development impacts interact with other impacts (loss of winter range from fires, climate change impacts).
- What level of accumulated impacts affects caribou health. (health of migrating pregnant female caribou, calf survival, chance of pregnancy).

Each of these will vary with changes in:

- Relative status of pregnant female caribou on spring migration (relatively healthy and strong vs. undernourished and extremely stressed).
- Ability of individual caribou to adjust to all environmental influences, including human activities.

## **2) At herd level**

- What level of accumulated impacts on individual caribou results in effects at the herd level  
(such as lower pregnancy rates, lower calf survival, decreasing population, reduced herd health)
- How well caribou herds can adjust to all environmental influences, including human activities.

These will vary with factors such as:

- Population size and trend (increasing, stable, decreasing)
- Overall herd health.
- Seasonal distribution and movements.
- Harvest levels
- Effects of environmental conditions on caribou.

## **3) At level of caribou-human system**

- What level of accumulated impacts on caribou herds results in reduced availability of caribou to communities  
(reduced herd size, changes in migration patterns)
- How well communities can adjust to reduced availability of caribou  
(dependence on caribou, availability of alternatives)
- What is the economic loss to communities and outfitters that will occur if caribou are not available for harvest.
- How well can governments respond to economic pressures resulting from loss of availability of caribou for communities.