

BEVERLY AND QAMANIRJUAQ CARIBOU MANAGEMENT BOARD

18 July 2008

Leslie Payette
Manager Environmental Administration
Nunavut Impact Review Board
P.O.Box 1360
Cambridge Bay NU X0B 0C0

Dear Ms. Payette:

NIRB File No. 08EN052 – Kivalliq Energy – Angilak Project Proposal

On behalf of the Beverly and Qamanirjuaq Caribou Management Board (BQCMB), I am submitting comments on the proposal from Kivalliq Energy Corp. (Kivalliq Energy) for mineral exploration on their property west of Whale Cove and southwest of Baker Lake, NU. This is in accordance with the mandate of the BQCMB, which is to advise governments and caribou range communities on ways to protect the Beverly and Qamanirjuaq caribou herds and their ranges.

Following is a description of the BQCMB's concerns with this project, and recommendations to address them. This information is intended to help NIRB to identify the potential impact of the proposed project activities on caribou as well as actions that should be taken to avoid or minimize these impacts.

Issues and Concerns:

The BQCMB is concerned about these proposed activities because they will occur when Beverly and Qamanirjuaq caribou may be using this area, which means there is potential for Kivalliq Energy's proposed activities to impact caribou. The BQCMB's main concerns about the proposed activities proposed are described below.

1)Timing and location – In their permit application to INAC, Kivalliq Energy states that the period of operation will be from March until the end of October, and in the NIRB Part 1 form they state it will be from May to October. This should be clarified. They also state that they expect to continue working in this area until 2013.

Past survey data (collected between 1948 and 1990) show that caribou have used the project area during the spring migration, post-calving, late summer, and fall migration/rut periods (mid-March to late May and July to late October)¹. Available data from radio-collared caribou indicate that caribou cows have used the area in recent years during May (spring migration) and August (late summer)². Therefore caribou may be encountered in the project area throughout the project's proposed period of operation.

¹ BQCMB. 1999. Protecting Beverly and Qamanirjuaq Caribou and Caribou Range. Part I: Background Information. 40 pp. Beverly and Qamanirjuaq Caribou Management Board, Ottawa ON. Available on-line at: www.arctic-caribou.com/bevreport.html

² GN-DOE. 2006. Journey of the Caribou. CD-ROM. Gov. NU – Dep. of Environment, Arviat NU.

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It is possible that cows with young calves may use the area while Kivalliq Energy is conducting their exploration activities, specifically during the post-calving period through late summer (July to August/September). Bull caribou may also occupy the project area at anytime throughout this operating period. Caribou in this area are expected to be primarily from the Qamanirjuaq herd, although Beverly and Ahiak caribou may also use the area as well.

2) Aircraft flights

Kivalliq Energy proposes to use helicopters for moving fuel, supplies and personnel to their camp and between work sites throughout their operating period, and for moving diamond drills between sites starting in 2009. They state that the helicopter will be required to fly at heights not less than 300 metres whenever possible. They also plan to conduct low-elevation (below 100 m agl) airborne geophysical surveys beginning this year, although they state that they will not do so when caribou are in the area.

Fixed wing and helicopter flights will produce disturbance to caribou in the area throughout the project, particularly when aircraft take off and land and when they fly at levels below 610 m agl. Airborne surveys, especially those conducted at low elevation and with tight transect spacing, can affect the movements and feeding patterns of caribou. This disturbance could have significant negative impacts if the flight path of aircraft crosses over large groups of cows with newborn calves or post-calving groups, so Kivalliq Energy should be held to their commitment to cancel planned flights if caribou are in the area. However, they should not conduct low-level surveys when caribou are within 5 km (not 1 m) of the area.

3) Effects of disturbance on caribou - Frequent interruption of caribou feeding during the summer can have a significant negative effect on the condition of individual animals. Caribou need to feed continuously through the summer (to end of August) to ensure that they are in good condition during the fall migration and rutting period and have reserves for winter. Insufficient feeding can lead to increased calf mortality rates, reduced pregnancy rates, and lower calf production the following year, and may result in a decrease in herd size.

4) Caribou Protection Measures - We note that in NIRB's Screening Decision Report for the proposal by Uranium North for their Dubawnt Lake project, NIRB did not include recommendations for applying the Caribou Protection Measures (CPM). We believe that application of CPM is the minimum recommendation that should be made to INAC for land use permits for mineral exploration in areas which could be used by caribou during the calving or post-calving periods, and which contain important water crossings used by caribou during migration.

We recommend that you include CPM in your recommendations to INAC for Kivalliq Energy's Angilak project. Although they have agreed to comply with CPM in their reply to NPC's conformity determination, the CPM should be part of their land use permit terms and conditions. (Note we do not know if INAC included CPM in Uranium North's permit, as the terms and conditions are not included in the INAC letter and permit posted on your ftp site.)

5) Wildlife monitoring and mitigation – It is good that Kivalliq Energy has committed to adhere to INAC's Caribou Protection Measures, and that they outline additional mitigation measures for caribou in their Wildlife Mitigation Measures document, including hiring local wildlife monitors. However, they do not explain how monitoring will be conducted by the locally hired wildlife monitors to ensure that they do not conduct activities within 1 km of caribou. Because caribou are likely to be encountered by Kivalliq Energy in their project area, they should have a monitoring plan and clear directions for staff on what actions to take when caribou are encountered. It is the BQCMB's view that a buffer of 5 km (not 1 km) between potentially disturbing project activities (drilling, airborne surveys, other low-level flights) and

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newborn calves should be used to ensure that disturbance does not have negative impacts during the extremely vulnerable post-calving period.

6) Potential for cumulative effects

Kivalliq Energy acknowledges concerns for potential cumulative effects from exploration activity in the region. However, they have not provided the information requested by NIRB about how the effects of their project will interact with others in a regional context.

The BQCMB therefore recommends a regional assessment of the cumulative impacts of mineral exploration and other land use activities, including activities in the Kivalliq region of Nunavut. This assessment should be conducted by the appropriate government agencies and regulatory boards in consultation with exploration companies and communities. From the BQCMB's perspective it is clear that continued assessment of individual projects on a case-by-case basis will not be adequate to ensure that significant adverse eco-systemic and socio-economic effects will be prevented.

Recommendations:

- 1) Regulatory and other territorial and federal government agencies (i.e., in Nunavut NIRB, GN, INAC) should be taking action to identify and mitigate potential cumulative effects of human land use activities, including mineral exploration, on barren-ground caribou. This assessment of cumulative effects should occur at a regional scale (i.e., much larger than individual project areas).
- 2) If the proposed activities are permitted:
 - a) Permit conditions should address potential disturbance effects of proposed activities on caribou. ***In addition to the Caribou Protection Measures***, permit conditions should include the following.

All project activities

- All project activities must be stopped between May 15th and July 15th if caribou cows and/or calves are in the project area, as per NPC's conformity requirements regarding INAC's Caribou Protection Measures. This includes suspending drilling, blasting, flights below 610m agl, and operation of snowmobiles and all-terrain vehicles outside of camp.
- Drilling, survey activities and flights below 610m agl should not be resumed unless caribou are at least 5 km away from the areas where these activities are conducted.
- No exploration activities should be conducted within 5 km of designated water crossings or block or cause diversion to migrating caribou

Airborne surveys, low-level flights

- Low-level (below 300m agl) surveys, including airborne geophysical surveys, should not be conducted from May to August if caribou cows or cow/calf groups are in the area.
- Minimum flight altitudes of 610m should be maintained at all times except when taking off and landing and when required for safety reasons; the amount of time aircraft spend at lower levels should be minimized.

Monitoring and mitigation

- A monitoring and mitigation plan (not just mitigation measures) that is approved by NIRB and GN-DOE should be in place before Kivalliq Energy is allowed to begin operating.
- The caribou monitoring program should be established with the intent of determining *in advance* when caribou are moving toward survey areas and drill rigs to ensure that

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- adequate notification is received for shutting down drilling or airborne survey operations if caribou are approaching. This will be necessary to ensure that potential disturbance is discontinued before caribou reach the project area.
- An independent caribou monitor should be hired (preferably from a Nunavut community) specifically to conduct the monitoring work.
- b) NIRB should ensure that regular inspection of project operations is conducted, and that NIRB's permit terms and conditions, NPC's conformity requirements and INAC's caribou protection measures are enforced.

Please let me know if you require further information or have any questions about these comments from the BQCMB.

Sincerely,

[original signed by]

Leslie Wakelyn
BQCMB Biologist

cc: Jerome Denechezhe, BQCMB Chairperson