

BEVERLY AND QAMANIRJUAQ CARIBOU MANAGEMENT BOARD

8 February 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. 08EN001 – Bayswater North Thelon Project Proposal

On behalf of the Beverly and Qamanirjuaq Caribou Management Board (BQCMB), I am submitting comments on the proposal from Bayswater Uranium Corporation (Bayswater) for mineral exploration on their properties north-east of the Thelon Wildlife Sanctuary and northwest of Baker Lake. 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.

The BQCMB is concerned about these proposed activities because they will occur on range of the Beverly and Ahiak caribou herds during periods when caribou may be using those areas. Of particular concern is their proposal to conduct exploration activities on the traditional calving ground of Beverly caribou. There is clear potential for Bayswater's proposed activities to impact caribou.

This issue should be given serious consideration at any time, given the importance of caribou to Aboriginal and other people across the caribou ranges - communities in Nunavut, the Northwest Territories (NWT) and northern Saskatchewan rely on the Beverly and Ahiak herds. However, the current context means that a proper assessment of projects of this nature must recognize that caribou protection is critical. This situation includes documented declines in five NWT caribou herds, a lack of information about Beverly and Ahiak herds, and the uncertain but likely declining population status of these herds.

Following is a description of the BQCMB's major 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.

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Issues and Concerns:

1) Importance of the area to Beverly and Ahiak caribou

Bayswater acknowledges in their project description report that some project activities are proposed “within the Caribou calving area designated by the Keewatin Regional Land Use Plan” (Sec. 2.4, p. 12). However, they do not appear to recognize that diamond drilling on the Permit 2 block, the camp location, and the airstrip location are all proposed on the **traditional calving ground** of Beverly caribou. And although the Amer West block does not lie within the traditional calving ground, it lies on key post-calving range of Beverly caribou, and aircraft travelling between the airstrip and that property for purposes of diamond drilling will fly over the traditional calving ground repeatedly. As well, the project area is on the spring migration route of both Beverly and Ahiak caribou¹.

The proposed project also lies in a special management area (SMA) proposed in the Thelon Game Sanctuary Management Plan, which was intended to protect the Beverly calving area. This SMA was seen to be critical for protecting the caribou herds for both the Inuit and Dene people of the Thelon region.

Concern: Bayswater proposes to operate in a sensitive and very important area that includes the Beverly herd’s calving and post-calving areas. The BQCMB has recommended that long-term legislated protected areas that exclude industrial development be established for calving and post-calving areas².

2) Timing issues

Bayswater proposes to conduct each season’s activities between the beginning of April and the end of September, starting with camp mobilization and geophysical surveys 1 April 1 through to May 15, drill mobilization and diamond drilling June 1- September 15, and camp demobilization September 15-30. They will not start diamond drilling activity in the Permit 2 area until August 1st.

The GNWT has collected a limited amount of information from satellite-collared female Beverly and Ahiak caribou. These data show that the proposed project area has experienced recent use (since 2001) by Beverly caribou during the spring migration, calving and post-calving periods (May-July), and by Ahiak caribou between spring migration and late summer (May-September).

¹ Maps showing the traditional calving ground, post-calving range and spring migration range of Beverly caribou documented by government surveys up until 1994 are provided on the BQCMB website at www.arctic-caribou.com/parttwo/mapatlas.html.

² Protecting Calving Grounds, Post-Calving Areas and Other Important Habitats for Beverly and Qamanirjuaq Caribou: A Position Paper (BQCMB 2004)

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These available data indicate that caribou may use the project area during the entire project period (May-September), that pregnant female caribou may be in the project area prior to May 15th (possibly as early as mid-April), and that caribou cows with calves could use the project area during June and early July.

The limited amount of recent information on use of the project area by caribou, especially Beverly caribou, complicates assessment of potential impacts of proposed project activities on the herd. This is because the satellite-collar data only provide a partial indication of use of the area by caribou, including use by Beverly caribou cows and cows with calves, and provide no information about use of the area by other caribou (such as bulls). In addition, breeding caribou from other herds (e.g., Lorillard, Wager Bay, Melville) may use the Beverly calving ground and proposed project area in April/May and August/September.

Concerns: Bayswater proposes to operate when caribou will likely be using the area, including pregnant caribou, caribou with newborn calves, and post-calving caribou (April 1 – May 15 and June 15 – July 15). If this occurs, activities such as flights for camp mobilization, diamond drilling and geophysical surveys must be suspended immediately.

3) Results of 2007 Beverly calving ground survey

A survey of the Beverly herd by the Government of the NWT Dept. of Environment and Natural Resources (ENR) found low numbers and densities of calving caribou on the calving grounds in June 2007. This raises further concerns about the health and status of the herd. The BQCMC and the GNWT believe the herd is likely declining.

Concern: Based on June 2007 survey results on the Beverly calving ground, extra caution should be exercised during any activities conducted near breeding cows for the entire calving and post-calving periods.

4) Effects of disturbance on caribou

Disturbance to caribou can result in obvious behavioural changes, such as running away from aircraft or vehicles. However, disturbance can also cause stress to caribou when behavioural changes are less obvious (e.g., walking), or when they are not apparent to an observer (e.g., when feeding stops but the animal's head remains lowered). It is generally difficult for people to recognize that caribou are undergoing stress if observations are made primarily from aircraft (at elevations above 300m in altitude), unless the animals are running away.

Frequent interruption of caribou feeding during spring migration and late summer can have a significant negative effect on the condition of individual animals.

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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.

Disturbance during the most vulnerable parts of the caribou life cycle are of greatest concern. This includes disturbance during spring migration, calving and post-calving periods. Exploration project activities such as drilling and geophysical surveys could occur near caribou while they are particularly sensitive to disturbance (e.g., while caring for young calves). They may also occur while caribou are attempting to cross water bodies, during which time they are extremely vulnerable to disturbance.

During spring migration:

- Cows are heavily pregnant, have minimal fat reserves and are moving long distances towards their calving grounds; they need all their reserves for travel and development of their young.
- Impacts on cows and their unborn young can occur if they use more energy to avoid exploration activities.

During calving and post-calving periods:

- Caribou cows are more likely to react to disturbance than during other seasons.
- Cows and calves are very vulnerable to disturbance and predation.
- Until about 3 weeks after birth (until end of June or early July), cows need to feed continuously without interruptions to provide milk to their calves.
- Frequent interruptions to feeding can result in loss of calves.

Concern: Bayswater's project activities from April 1 to May 15 and from June 1 to September 30th will likely cause disturbance to caribou using the area with potential impacts as described above.

5) Proposed mitigation measures

April 1 – May 15th - No mitigation measures are indicated for the period before May 15th. However, Ahiak cows may migrate through the area in April and May during ground geophysical surveys, and Beverly cows may move through the area during May. These animals will be vulnerable to disturbance (see above).

Mitigation measures proposed in Section 6.4 require further explanation as follows:

- Pilot training to reduce wildlife disturbance. – What training will be provided?
- Monitoring to implement the Caribou Protection Measures. – Monitoring is required to determine the locations of migrating caribou and identify when operations must be suspended. Does Bayswater have a monitoring plan? If so,

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what methods will be used, and who will do the monitoring? At what distance will operations be suspended?

- Caribou have “right-of-way”. - What does this mean? Will activities be stopped when caribou approach?
- Monitoring from May 15-August 15. – What protocols will be used to detect calves and cows within 5km of exploration activities? Who will conduct the monitoring? How long will activities be suspended?
- Survey for caribou in Permit 2 area – What survey method and flight heights will be used?

Caribou protection measures - The project description report indicates that Bayswater will suspend operations between May 15 and July 15 and will comply with other conditions of the caribou protection measures (CPM) as required by the *Keewatin Regional Land Use Plan*. However, the BQCMB does not believe this will be sufficient to provide long-term protection of the Beverly calving ground, as CPM do not provide protection for the important habitat provided by the area.

Low level flights - The airstrip will be on the traditional calving ground, and supply flights between Baker Lake and the airstrip will likely pass over groups of caribou. Helicopters travelling between the camp and drill sites will cross over traditional calving grounds and post-calving areas, will land on these sensitive areas, and will likely pass over groups of caribou.

Concern: Fixed wing and helicopter flights will produce disturbance to caribou in the area throughout the project, including aircraft taking off and landing. This disturbance could be particularly stressful if the flight path of aircraft crosses over large groups of pregnant female caribou during spring migration, cows with newborn calves, or post-calving groups. It is crucial that aircraft fly at low levels (below 300 m agl) only when necessary for safety reasons and that the amount of time aircraft spend at low levels is minimized and carefully monitored.

6) Potential for cumulative effects

Potential cumulative effects are an issue at several scales, including within calving grounds and across caribou ranges, since caribou accumulate impacts as they move from one seasonal range to another.

Concern: As we have stated repeatedly in our comments submitted to NIRB earlier this year on mineral exploration proposals, the BQCMB is concerned with the amount of mineral exploration underway and proposed across the range of the Beverly and Qamanirjuaq caribou herds. This includes exploration activities in the Kivalliq region of Nunavut, where numerous companies have been issued mineral tenure and land use permits over the past few years. Two maps available on the BQCMB website (www.arctic-caribou.com/mining.html) show land uses permitted across the caribou

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ranges and mineral rights on the calving grounds (as of October 2007) for these two herds.

There is a need for a regional assessment of the cumulative impacts of mineral exploration and other land use activities, including activities in the Kivalliq region of Nunavut. While the BQCMB's mandate provides a focus on caribou and caribou range, board members are concerned with the broader ecological effects of human land use activities and the long-term impacts these activities will have on the sustainability of traditional lifestyles and livelihoods for northern 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. Furthermore, because so little is known about the status and vulnerability of the Beverly, Qamanirjuaq, and other barren-ground caribou herds that use seasonal ranges in the Kivalliq region, the potential adverse effects and their accumulating impacts on caribou are not highly predictable.

Recommendations:

1. No exploration or development activities should be permitted on the traditional calving area of the Beverly caribou herd. The Board does not agree with permitting exploration activities on calving and post-calving areas, and recommends that Bayswater's application not be approved.
2. 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., larger than individual project areas).
3. If NIRB permits the proposed project, permit conditions should include:
 - a) A detailed monitoring program and shut-down plan approved by NIRB and GN-DOE should be in place before Bayswater is allowed to begin operating.
 - b) Project activities must be prohibited between May 15th and July 15th if caribou are in the project area, as per NPC's conformity requirements regarding the caribou protection measures (2.6 and 2.15.7). No releases should be issued.
 - c) All activities must be suspended if caribou approach the area during spring migration prior to May 15th.

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- d) Activities should be allowed to resume after July 15th only if it is demonstrated by monitoring that post-calving caribou are not in the area. Diamond drilling should not be initiated unless caribou are at least 5 km away from the drill sites.
- e) The proponent should be required to establish a rigorous caribou monitoring program. An independent caribou monitor should be hired (preferably from Baker Lake) to determine when caribou are moving toward the project area. The monitoring system should ensure that at least one day's advance notification is received for shutting down project activities (including drilling and geophysical surveys) if caribou are approaching. This will be necessary to ensure that potential disturbance is discontinued before caribou reach the project area, since it may take up to a day to dismantle the drill and remove personnel from the project area.
- f) NIRB should ensure that regular inspection of project operations is conducted, and that NIRB's permit terms and conditions and NPC's conformity requirements 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
Baker Lake HTO