

BEVERLY AND QAMANIRJUAQ CARIBOU MANAGEMENT BOARD

12 March 2007

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

Dear Ms. Payette:

NIRB File No. 06AN085 – AREVA's Kiggavik-Sissons Project Proposal

On behalf of the Beverly and Qamanirjuaq Caribou Management Board (BQCMB), I am submitting comments on the proposal from AREVA Resources Canada Inc. for mineral exploration in and around their Kiggavik and Sissons properties west 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 caribou herd during periods when caribou may be using those areas. Consequently there is potential for these activities to impact caribou.

Information is provided below 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.

Importance of the Area to Caribou

Data from past government caribou surveys conducted between 1948 and 1990 indicate that the project area has been used by Beverly caribou during the following periods:

- Spring migration (mid-March to late May)
- Post-calving (late June to end of July)
- Late summer (early August to mid-September)

The survey data were compiled by the BQCMB in a map atlas which is available on the BQCMB website (www.arctic-caribou.com/parttwo/mapatlas.html).

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According to information on locations of satellite-collared caribou in more recent years, the project area has been used by:

- Lorillard caribou between mid-September and December, but primarily in November/December
- Wager Bay caribou in November/December

The locations of satellite-collared caribou from the Lorillard, Wager Bay and Qamanirjuaq herds were compiled and published by the Government of Nunavut, and are also available on the BQCMB website (www.arctic-caribou.com/journey/).

Based on limited information, it appears that the project area can provide important habitat to caribou from various herds throughout most of the year, including spring migration, post-calving, late summer, fall migration and rut, and early winter. The major water crossings that have been identified on the Thelon River to the north of the project area (included on Fig. 2 of project application) also indicate that the area has been used by caribou moving to and from different seasonal habitats.

Potential Disturbance to Caribou

AREVA's 2007 program is scheduled to begin in April, with work continuing through the spring and summer and operations shutting down by the end of September. A similar timeline is planned for 2008. It is therefore likely that caribou using the project area during the period from spring migration to late summer will be subjected to some disturbance from project activities.

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.

Concerns

Disturbance during the most vulnerable parts of the caribou life cycle are of greatest concern. This would include disturbance during spring migration, calving and post-calving periods. 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).

Potential negative impacts on caribou would occur if groups of pregnant cow caribou were disturbed as they move toward the calving ground, because:

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- Cows are sensitive to disturbance at this time – Pregnant cows 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 human activities.
- Added stress to the cows may harm the health of the cow and could decrease calf production or survival.

Frequent interruption of caribou feeding during spring migration through to late 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.

Mitigation of Impacts on Caribou

AREVA has acknowledged concerns about exploration impacts on caribou and has made a verbal commitment to the BQCMB and others to avoid disturbance to caribou and other wildlife wherever possible, to suspend operations if caribou move into the area for calving or post-calving, and to hire a wildlife monitor who would identify when caribou approach the project area. AREVA has also committed to comply with NPC's conformity requirements, including those dealing with low level flights and caribou protection measures.

While AREVA's consultations and commitments to mitigate impacts on wildlife are commendable and encouraging, a few issues remain to be resolved:

1) Exploration on post-calving area.

The BQCMB does not agree with permitting exploration activities on calving and post-calving areas. The Board has recommended establishing long-term legislated protection for calving and post-calving areas¹.

2) Low level flights - NPC's Conformity Determination states that "the project proposal does involve absolutely necessary low level flights" and that "Reasonable comments on the necessity of low level flight" were provided. Therefore it was determined that the proposal conforms to requirements 2.15.3 and 5.4.

¹ Protecting Calving Grounds, Post-Calving Areas and Other Important Habitats for Beverly and Qamanirjuaq Caribou: A Position Paper (BQCMB 2004)

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No definition of “absolutely necessary low level flights” is provided, and no background information explains why these flights will be necessary or why the comments are considered reasonable.

Concerns:

- AREVA indicates on its application to NIRB that fixed wing survey aircraft (presumably for geophysical surveys) will fly at low levels (90-100m) above ground. The assumption is that these are “absolutely necessary low level flights”, although no explanation is provided as to why they can’t be flown above 300m. The statement that “Caribou and other wildlife presence and movement will be taken into account” needs to be clarified.
- Fixed wing aircraft and helicopters will produce disturbance to caribou in the area, including disturbance when flying at low levels (below 300 m) while 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, or cow/calf groups during post-calving and late summer.

3) Cumulative effects of continued exploration across caribou ranges

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 mineral tenure and land use permits are being issued frequently. Two maps available on the BQCMB website (www.arctic-caribou.com/mining.html) show land uses permitted across the caribou ranges (as of November 2006) and mineral rights on the calving grounds (as of September 2006) for these two herds.

AREVA states that “Cumulative effects at this stage are limited to the total amount of aircraft that will be involved in similar activities in the region.” For Beverly and Ahiak caribou, increasing exploration in the upper Thelon watershed as well as past and present exploration and development in northern Saskatchewan are of concern. All the aircraft flights and other exploration activities across the caribou ranges should be considered when evaluating the cumulative effects of human activities on these caribou herds.

Recommendations:

1. No exploration or development activities should be allowed on post-calving areas of the Beverly caribou herd. NIRB should prohibit further exploration and development in post-calving areas identified through surveys and from locations of satellite-collared caribou.

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2. If NIRB permits the proposed project:
- a) 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).
 - b) All activities must be suspended if caribou approach the area during spring migration prior to May 15th.
 - c) Activities should be allowed to resume after July 15th only if post-calving caribou are not in the area.
 - d) 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.
 - e) 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, as it may take up to a day to remove drill rigs and personnel from the area.
 - f) Aircraft pilots should be instructed not to fly over the Beverly calving ground to the northwest of the project area.
 - g) 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

Secretariat Address: P.O. Box 629 Stonewall MB R0C 2Z0
Tel: (204) 467-2438 e-mail: rossthompson@mts.net
website: www.arctic-caribou.com