

BEVERLY AND QAMANIRJUAQ CARIBOU MANAGEMENT BOARD

2 March 2007

Leslie Payette
Manager Environmental Administration
Nunavut Impact Review Board
P.O.Box 1360
Cambridge Bay, Nunavut
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Dear Ms. Payette:

NIRB File No. 07EN001 - Starfield Resources-Ferguson Lake Project Proposal

On behalf of the Beverly and Qamanirjuaq Caribou Management Board (BQCMB), I am submitting comments on Starfield Resources' submission "Responses on comments for the application of an airstrip and ROW for the Ferguson Lake Project" and Wildlife Management Plan. Our comments will focus on their responses to concerns related to barren-ground caribou.

It is encouraging to see that Starfield Resources recognizes some of the potential impacts of their operation on Qamanirjuaq caribou. However, the response they submitted to NIRB does not reduce the BQCMB's concerns about the proposed activities in the Ferguson Lake, Arviat-Ferguson Lake and Rankin Inlet-Ferguson Lake areas. The fact remains that these activities will occur on range of the Qamanirjuaq caribou herd, in particularly sensitive areas during periods when caribou may be using those areas. Although Starfield's Wildlife Management Plan addresses some of the key caribou-related issues, there is still potential for project activities to impact caribou negatively with significant long-term consequences for the caribou herd and communities that rely on the herd.

Our primary concerns that remain with this project proposal are as follows.

- The proponent does not appear to fully recognize:
 - a) the vulnerability of caribou during the spring migration, calving, and post-calving periods
 - b) the effects their operations may have on this caribou herd.
- The proponent's response, including the Wildlife Management Plan, does not adequately address the caribou-related concerns described by the BQCMB and other parties.

Information is provided below to explain these concerns more fully.

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A. Vulnerability of Caribou to Disturbance

Spring Migration - Disturbance of pregnant cow caribou as they move toward the calving ground is a concern because:

- 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.

Calving and Post-calving Periods - Disturbance of caribou during calving and post-calving periods is a concern because:

- Cows need uninterrupted foraging time to produce milk until calves become foragers at about 3 weeks of age.
- The 3-week period after birth is the time when calves are most sensitive to the maternal and environmental conditions that affect their growth and most vulnerable to predation.
- Cows and calves are also particularly vulnerable during these periods because they gather together in groups.

B. 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.

Disruption of Feeding – Frequent interruption of caribou feeding during post-calving and 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.

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C. Inadequate Mitigation for Caribou-Related Concerns

Exploration in calving and post-calving areas

In our previous comments on this application, both the BQCMB and the GNU-DOE stated that the new Ferguson Lake project site and airstrip are located at the western edge of the traditional calving ground and post-calving area used by Qamanirjuaq caribou. However, Starfield's response states that we "have identified areas to the south and east of the Ferguson Lake project site as being important for caribou calving and post-calving". To be clear, I reiterate that the Ferguson Lake project site and airstrip are located on the traditional calving and post-calving areas for Qamanirjuaq caribou, an area with documented use by caribou during calving and post-calving periods.

The BQCMB has recommended establishing long-term legislated protection for caribou calving and post-calving areas, to protect these important habitats for future use by caribou¹. Until these protected areas are established, no exploration or development activities should be allowed on the traditional calving and post-calving areas of the Qamanirjuaq caribou herd.

Airstrip construction and operation

The proponent has agreed to suspend all operations between May 15th and July 15th if caribou are in the area, which is to be determined by a ground-based caribou monitor and incidental observations reported by pilots. This reinforces their commitment to abide by NPC's conformity requirements concerning Caribou Protection Measures and partially addresses the similar recommendation made by GNU-DOE.

The Wildlife Management Plan states that they will conduct a lake-crossing survey before every aircraft landing and takeoff, and that takeoff will be delayed until "caribou have left the area". The Plan does not describe mitigation that will be conducted to address two of the three issues they identify concerning aircraft flights, elevation of flights and number of flights.

Additional mitigation required

- 1) Although May 15th is considered to be the approximate time when calving usually begins, calving may begin earlier, as indicated in GNU-DOE's comments. Pregnant cows may arrive in or travel through the project area before mid-May as well. The full extent of the key sensitive period occurs from 1 April through 31 August. Therefore the proponent should be required to suspend all operations

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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when caribou are in the area during this extended period, not just between May 15th and July 15th.

- 2) The caribou monitoring program should determine when caribou are moving toward the project site and airstrip, and should not be restricted to identifying when caribou are in the project area. All project activities, including airstrip construction and use of the airstrip and helipad by aircraft, should be stopped when caribou are approaching the area, rather than after caribou have reached the area and have been subjected to disturbance.
- 3) The proponent should be required to ensure that all its contractors and sub-contractors follow the regulations concerning heights of aircraft, and that they report any infractions immediately. Simply stating that regulations exist does not provide mitigation.
- 4) The proponent should be required to operate with the minimum number of flights between April 1st and August 31st. Even if caribou are not located in the immediate project area, they will be affected by aircraft if flights over them are frequent.
- 5) Aircraft pilots should be instructed not to fly over calving and post-calving areas, or over groups of caribou between April 1st and August 31st. This is important whether caribou are in the vicinity of the project site or not; however, this is essential when caribou are near the airstrip or helipad.

Cat Train ROW

The proponent has acknowledged that the Cat train may encounter pregnant cow caribou as they move toward the calving ground during spring migration. Despite this, the proponent does not have a plan to ensure that the Cat Train avoids caribou. Instead, the proposed mitigation is “Cat drivers will stop whenever groups of traveling caribou are encountered and allow the caribou to proceed.” This is apparently intended to avoid blocking or diverting caribou movements, as per recommendations provided to NIRB by the BQCMB (3a) and GNU-DOE. However, the proposed mitigation addresses only part of the potential impact, as disturbance and stress to caribou will be caused when migrating caribou meet the Cat train and their migration is interrupted.

Additional mitigation required

- 1) Concerted efforts should be made to ensure that encounters between the Cat train and migrating caribou do not occur. The Cat train should stop well *before* it encounters migrating caribou, and it should not proceed across the migration route until after caribou have passed well beyond the ROW.
- 2) This requires a caribou monitoring program that includes monitors (preferably hired from Kivalliq communities) who scout ahead of the Cat train to determine when caribou are approaching the Cat train ROW (as per BQCMB recommendation 3c).

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Other Issues

- A meaningful conformity determination to the *Keewatin Regional Land Use Plan* has not been conducted for the proposed new airstrip. Although the proponent indicated in its application that the new camp will involve “low-level flights by aircraft at less than 300 metres”, NPC’s conformity determination states that the project “does not involve low flights”. It is clear that the proponent’s airstrip and flights will occur where they will disturb wildlife, since they will occur on a caribou calving ground and post-calving area – this does NOT conform to NPC conformity requirement 2.15.3. *To reiterate our previous recommendation:* A proper conformity determination should be conducted for the airstrip before screening of the proposal is completed by NIRB.
- The proponent’s Wildlife Management Plan should include plans to monitor the effectiveness of mitigation measures.
- “The project area” should be defined by NIRB in consultation with GNU-DOE to ensure that mitigation efforts will protect caribou; for instance, so it is clear when “caribou have left the area” and aircraft can take off from the camp airstrip.
- 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.
- The review of this proposal, and the overall project, should include an assessment of the cumulative effects of exploration activities across the range of Qamanirjuaq caribou, especially in areas used by caribou during spring migration, calving, and post-calving periods.

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
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