

# BEVERLY AND QAMANIRJUAQ CARIBOU MANAGEMENT BOARD

23 April 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. 08EN057 – Uravan Minerals Inc. Garry Lake Project Proposal**

On behalf of the Beverly and Qamanirjuaq Caribou Management Board (BQCMB), I am submitting comments on the proposal from Uravan Minerals Inc. (Uravan) for mineral exploration on their Garry Lake project, which lies on the traditional calving ground of Beverly caribou, north-east of the Thelon Wildlife Sanctuary.

The BQCMB is generally concerned about these proposed activities because they will occur on important habitats used by Beverly and Ahiak caribou during sensitive periods. Of particular concern is that Uravan is proposing to conduct exploration activities on the traditional calving ground of Beverly caribou, in the heart of the area used by this herd for calving in recent years. In addition, these activities are planned in the area proposed by parties to the Thelon Game Sanctuary Management Plan for designation as a special management area to help protect the Beverly caribou herd. There is clear potential for Uravan's proposed activities to impact caribou and important caribou habitat.

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, limited information about Beverly and Ahiak herds, and the uncertain but likely declining population status of these herds.

### **Issues and Concerns:**

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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## 1) Importance of the area to Beverly and Ahiak caribou

Uravan acknowledges in their project application that their properties lie within the Beverly Caribou Protection Area, which is designated under the *Keewatin Regional Land Use Plan* and regulated by Indian and Northern Affairs Canada (INAC). However, they do not acknowledge that they are proposing exploration activities on the **traditional calving ground**<sup>1</sup> of the Beverly caribou herd. They also apparently fail to recognize that their 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.

The Beverly traditional calving ground was identified based on government surveys that delineated annual calving areas up to 1994. The most recent data from calving ground surveys (2007, 2002, 1994, 1993) and from tracking satellite-collared Beverly and Ahiak caribou over the past few years has shown that Uravan's project area is in the **core calving area** for Beverly caribou, may be used by Beverly caribou during the post-calving period and is also used by Ahiak caribou during spring migration to their calving ground farther north.

**Concern:** Uravan is proposing to operate on sensitive and very important calving and post-calving habitat for Beverly and Ahiak caribou. The BQCMB has recommended that long-term legislated protected areas that exclude industrial development be established for calving and post-calving areas<sup>2</sup>, and is very concerned that mineral exploration is being permitted in this area.

## 2) Timing issues

Uravan's land use permit application states that their period of operation will run from July 1<sup>st</sup> 2008 to October 31<sup>st</sup> 2013, and they have asked for a permit to begin June 1<sup>st</sup> 2008. According to the attachment to their project application, they are proposing to conduct drilling activities between August 15<sup>th</sup> and October 31<sup>st</sup> 2008 and March to May 2009, and to operate their Garry Lake camp during the "summer-fall" and "late winter (mid-March to mid-June)" seasons. They also state that they will request approval to operate beyond May 15<sup>th</sup> and to resume operations before July 15<sup>th</sup> in the Caribou Protection Area.

Recent data collected by the Government of the Northwest Territories from satellite-collared female Beverly and Ahiak caribou show that Uravan's project area has been used in recent years by Beverly and Ahiak caribou during the spring migration and calving periods (May-early June) and during the post-calving and late summer periods (July-September). These data indicate that caribou from these herds may use Uravan's project area during much of their project period, that pregnant female caribou may be in the project area prior to May 15<sup>th</sup>, and that caribou cows with calves will likely use the project area between July and September, during which time Uravan plans to operate in 2008. In addition, breeding caribou

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<sup>1</sup> Maps showing the traditional calving ground of Beverly caribou, documented by government surveys up until 1994, are provided on the BQCMB website at [www.arctic-caribou.com/parttwo/mapatlas.html](http://www.arctic-caribou.com/parttwo/mapatlas.html).

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

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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.

It should be noted that the satellite-collar data provide only a partial indication of use of the area by a small number of caribou cows, and provide no information about use of the area by other caribou (such as bulls).

**Concern:** Uravan proposes to operate when caribou that are particularly vulnerable, including pregnant caribou, caribou with newborn calves, and post-calving caribou, will likely be using the area (May-June and July to mid-September).

### 3) Project activities

Airborne geophysical surveys were conducted between May and August 2007. It is not clear if and when these types of surveys will be conducted on Uravan's Garry Lake properties in 2008 or 2009.

**Concern:** Airborne geophysical surveys can potentially cause substantial disturbance impacts on caribou.

### 4) 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 BQCMB and the GNWT believe the herd is likely declining.

**Concern:** Based on June 2007 survey results, extra caution should be exercised during any activities conducted near breeding cows for the entire calving, post-calving and late summer periods (mid-May to mid-September).

### 5) 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.

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, and while caribou are attempting to cross water bodies.

Frequent interruption of caribou feeding during spring migration 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

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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.

**Concern:** Any project activities between May and September will likely cause disturbance to caribou using the area, with potential impacts as described above.

### **6) Proposed mitigation measures – *The Wildlife Mitigation and Monitoring Plan***

The Plan submitted by UraVan, which is additional information requested by NIRB to support their application, is not adequate. The actions they have proposed are not sufficient to protect calving and post-calving caribou, and they are not explained in sufficient detail. Some of the main deficiencies of this Plan are outlined below.

- a) The Plan would be more appropriately titled “Caribou Mitigation Plan”. No monitoring plan is described, and no mitigation measures are proposed for wildlife species other than caribou.
- b) The conformity determination from NPC indicates that UraVan has committed to comply with conditions of the Caribou Protection Measures (CPM), as required by the *Keewatin Regional Land Use Plan*. Their mitigation plan does little more than restate this commitment and then describe how they intend to apply for a release from some of these conditions.
- c) Much of the Plan pertains to work UraVan hopes to conduct between May 15<sup>th</sup> and July 15<sup>th</sup>. No activities should be permitted during this period on the traditional calving ground.
- d) Both the permit application and mitigation plan (under “Risk Management Task Description”) indicate that UraVan intends to obtain a release from restrictions imposed by the CPM to allow them to operate past May 15<sup>th</sup> and/or to resume work before July 15<sup>th</sup> in the Caribou Protection Area:
  - They state that with approval, they will work past May 15<sup>th</sup> and only cease operations “if monitoring information suggests approaching caribou”. However, they provide no monitoring plan.
  - They state that they will resume work before July 15 “if the area in question is not expected to be utilized by caribou cows”. However, they provide no explanation of what information or criteria will be used to develop these expectations, or who will make that determination.
- e) UraVan only addresses the issue of flight heights in terms of cows calving outside the CPA, and it is not clear if they mean only between May 15 and July 15<sup>th</sup>. However, flights between Baker Lake and the camp throughout the project period will cross over the traditional calving ground, including the portion in the CPA, as well as post-calving areas. Helicopters travelling between the camp and work sites (including drilling, prospecting, mapping and sampling sites) will likely pass over groups of caribou and will land on the sensitive calving and post-calving areas.

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Fixed wing and helicopter flights will produce disturbance to caribou in the area throughout the project when aircraft take off and land, and whenever they fly at heights below 610 m agl. This disturbance could be particularly stressful if the flight path of aircraft flying at lower altitudes crosses over large groups of pregnant female caribou during spring migration, cows with newborn calves, or post-calving groups, both within and outside the CPA.

- f) Under “Risk Management Plan” for work between May 15 and July 15, both inside and outside the CPA:
- Uravan states that they will conduct “constant monitoring of the Uravan Minerals camp and surrounding drilling area”, but they provide no details about how this monitoring will be conducted.
  - They state that if caribou move into the camp and/or drilling area, they will stop activities in that area “that may hinder the migration or calving activities of the caribou”. There are several important limitations with this proposal: a) caribou that move into other areas on Uravan’s properties may also be subject to disturbance (e.g., from aircraft transporting personnel from camp to prospecting, sampling or drilling sites, or supply flights), so monitoring should be conducted over a wider area than the camp and/or drilling area; b) activities to be stopped are not described; and c) activities that may hinder caribou feeding, as well as migration and calving, should also be stopped.
- g) Under “Risk Management Plan” in relation to caribou migration, Uravan states that it “has done it’s best to place the exploration camp out of the way of the natural migration path of the caribou”.
- It is not known what information they used to make this determination. Several herds may use the area at different times.
  - In the attachment to their application, Uravan says that their knowledge of wildlife in the area was obtained from geophysical crews who conducted surveys May-June 2007, and that these crews did not report any observations of caribou. However, they were observed flying surveys over groups of caribou on several occasions in June 2007. Thus it does not appear that this is a reliable source of information.
- h) Under “Operations near Designated Crossings”, Uravan states that it will follow the CPM requirements between May 15 and September 1. It does not, however, acknowledge that it is operating in an area where caribou from both the Beverly and Ahiaik herds will likely cross numerous waterbodies where they will be vulnerable to disturbance. Even though these crossings may not be officially designated, it is still very important to avoid disturbance there, including that induced by low level flights. Several notable caribou crossings on rivers near the north edge of Uravan’s properties (at the south end of upper and lower Garry Lake) have been documented by the GNWT.

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### 7) Potential exploration impacts on caribou

Uravan's mitigation plan only addresses requirements of the Caribou Protection Measures, and does not address broader issues about potential impacts of their operations on caribou, or the importance of minimizing these impacts. They should be fully aware that they are operating in an important area for caribou, and that they will need to take measures to avoid or minimize impacts, ***including and beyond the requirements of the CPM.***

**Concern:** Uravan does not appear to recognize the need to minimize the potential impacts of their operations on caribou on the calving grounds. They have inadequately addressed this issue in both their application and mitigation plan (see above). It is not clear that the company is prepared to seriously address these issues.

### 8) Regional cumulative effects

The BQCMB is concerned with the amount of mineral exploration underway and proposed across the range of the Beverly and Qamanirjuaq caribou herds, and particularly on the calving and post-calving areas of Beverly caribou. 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. ***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.

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, Ahik, 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 ground of the Beverly caribou herd. The BQCMB does not agree with permitting exploration activities on calving and post-calving areas, and recommends that Uravan'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), and should include all activities occurring on calving and post-calving areas.
3. If NIRB recommends to INAC that a land use permit be issued, permit conditions should address the following requirements.

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- a) No activities should be permitted, or subsequently approved by a Land Use Inspector, between May 15<sup>th</sup> and July 15<sup>th</sup>. If caribou move into the area before May 15<sup>th</sup> or after July 15<sup>th</sup>, activities (including flights for transporting personnel or supplies, diamond drilling and geophysical surveys) must be suspended immediately. Specifically:
- Project activities must be prohibited between May 15<sup>th</sup> and July 15<sup>th</sup>, as per NPC's conformity requirements regarding the Caribou Protection Measures. No releases should be issued.
  - All activities must be suspended if caribou approach the area during spring migration prior to May 15<sup>th</sup>.
  - Activities should be allowed to resume after July 15<sup>th</sup> **only** if it is demonstrated by a monitoring program approved by GN-DOE and NIRB 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.
- b) A detailed caribou mitigation and monitoring program and shut-down plan approved by NIRB and GN-DOE should be in place before Uravan is allowed to begin operating. The current Plan is not adequate.
- The Plan should include a rigorous caribou monitoring program that includes regular flights at altitudes above 610m agl.
  - An independent caribou monitor should be hired (preferably from Baker Lake) to conduct ground-based surveys to help assess when caribou are moving toward the project area.
  - The monitoring system should ensure that advance notification is received for shutting down project activities (including drilling and airborne surveys) if caribou are approaching. This will be necessary to ensure that potential disturbance is discontinued before caribou reach the project area.
- c) If airborne geophysical surveys are to be conducted as part of this proposed project, they should be described in the application and dealt with adequately in the mitigation and monitoring plan.
- d) It is crucial that project 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 over the traditional calving ground is minimized and carefully monitored. When caribou are in sight, anywhere in the project area or during transit elsewhere, project aircraft should fly at altitudes above 610m agl whenever possible.
- e) 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.

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These comments are provided 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. While the BQCMB's mandate provides a focus on caribou and caribou range, board members are also concerned about 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.

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