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February 21, 2014

File: L020-11

Chief Louis Balsillie
Deninu K'ue First Nation
P.O. Box 279
Fort Resolution NT X0E 0M0

Dear Chief Balsillie:

Gahcho Kué Project Winter Access Road 2014 Caribou Monitoring Program

Thank you for your correspondence of February 13, 2014 regarding the Gahcho Kué (GK) Project Winter Access Road 2014 Caribou Monitoring Program. De Beers Canada Inc. (De Beers) appreciates your interest in the project and in particular, the time you've taken to provide your comments to us as part of the Land Use Permit review process (MV2005C0032 and MV2005L2-0015).

As you highlighted in your letter, one of our standard operating procedures on the GK winter road is to cede the right-of-way to wildlife. This means, that when wildlife are on the road, traffic will stop to allow them to pass. Once wildlife has passed, traffic may resume at a reduced speed (10km) until wildlife are no longer visible in the area. This reduced speed limit is a new mitigation measure implemented following the internal review of our standard operating procedures as discussed with the Deninu K'ue First Nation and other Aboriginal Parties on February 5, 2014.

The wildlife right-of-way procedure applies to the banks of the road and the road itself. Application of the procedure beyond the banks of the road is a matter of driver discretion and will depend on the behaviour of the animals (e.g. running, bedded, grazing etc.) as well as general conditions in the area (e.g. good visibility or poor etc.).

It is worth noting that the speed limits on the winter road are very slow. The speed limit on the ice is 25 km/h for loaded trucks and 35 km/h for empty trucks. On portages, the speed limit is 30 km/h regardless of load and just 10 km/h when exiting or entering a portage. It is De Beers as well as other winter road operators' experience that these speed limits are appropriate and that the limits will mitigate the risk of a vehicle-wildlife collision to the greatest extent possible while still allowing safe transport of materials to the site.

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De Beers has updated the Gahcho Kué Winter Access Road 2014 Caribou Monitoring Technical Memorandum with additional detail. Further information on long term winter road monitoring will be provided within the final versions of the WWHPP and WEMP. Wildlife monitoring results will be made available annually within a wildlife summary report.

De Beers looks forward to continuing to engage Deninu K'ue First Nation on the wildlife monitoring as well as other programs as the Project proceeds through the regulatory permitting stage and during the life of the mine.

If you have any questions or further comments please contact me at 867-688-8701.

Regards,



Veronica Chisholm

cc Willard Hagen, Chair MVLWB
Linda Vanden Berg, LVB Strategic Negotiations and Research
Marc d'Entremont, LGL Limited.
Sarah McLean, De Beers Canada Inc.

Attachment: Gahcho Kué Winter Access Road 2014 Caribou Monitoring Technical Memorandum

TECHNICAL MEMORANDUM

Gahcho Kué Winter Access Road 2014 Caribou Monitoring

Introduction

The Gahcho Kué winter access road (GK access road) connects the Gahcho Kué project site to the Tibbitt to Contwoyto winter road beginning at kilometre 271 on Mackay Lake. The 125 km long road is located at the northern edge of the winter ranges of the Bathurst, Beverly and Ahiak caribou herds. The proximity of this herd to winter roads presents both a serious cause for concern in terms of safety for the animals and drivers, but also an opportunity to better understand the interactions between the caribou and winter roads through monitoring.

This document describes De Beers approach to monitoring the GK winter access road for wildlife, with a focus on caribou, during the 2014 haul season. It is a working document which will be revised and adjusted as additional information becomes available. The monitoring programs described within this document will ultimately be incorporated into the final versions of the Wildlife and Wildlife Habitat Protection Plan (WWHPP) and Wildlife Effects Monitoring Plan (WEMP) for the GK project and access road. The final versions of those plans will be submitted to the MVLWB as part of the mine land use permit application (MV2005C0032).

Regulatory Background

The potential effects of the winter access road on caribou were assessed within the Environmental Impact Statement submitted to the Mackenzie Valley Environmental Impact Review Board in December 2010. Following completion of the review process, the Review Panel issued their decision report (EIR 0607-001) recommending approval of the project (July 19, 2013). The decision report includes three measures related to caribou.

Measure 1 De Beers will:

- *Minimize impacts to caribou and the extent of the zone of influence around the mine site to the extent that is technically feasible.*
- *Prior to construction, develop a caribou protection plan that ensures protection of caribou and caribou habitat. The caribou protection plan should include an adaptive management framework demonstrating how the Wildlife Effects Monitoring Program and the Wildlife and Wildlife Habitat Protection Plan are linked.*

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Measure 2 De Beers will:

- *Construct and operate the Winter Access Road in a way that minimizes its adverse effects as a partial barrier to caribou movement and migration;*
- *Monitor to determine the presence and behaviour of caribou along the winter access road using means in addition to satellite collar data, such as track counts and visual observations; and*
- *Ensure that the caribou protection plan, the wildlife effects monitoring program and the wildlife and wildlife habitat protection plan address the effects on caribou movement and behaviour along the winter access road.*

Measure 3 De Beers will:

- *Monitor project specific effects (e.g. size of the Zone of influence, changes in habitat, effects of the Winter Access Road on caribou movement and behaviour) and will report to the GNWT and make the results public on how project specific effects contribute to cumulative effects for the duration of the Project.*

In addition to the measures above, the Review Panel suggested that any follow-up barren-ground caribou monitoring programs should include, but not be limited to:

- *monitoring the zone of influence and its likely causes (e.g. noise, dust, mine activity) (can be completed as part of the Wildlife Effects Monitoring Program);*
- *using results from monitoring the extent of the zone of influence and likely causal mechanisms (completed as part of the Wildlife Effects Monitoring Program) to intensify or reduce mitigations that will minimize the zone of influence;*
- *monitoring the presence of caribou along the winter access road and the effects of the road on caribou movement and behaviour;*
- *describing action levels that will be used to determine when monitoring or mitigations or changes to existing mitigation are necessary; and*
- *demonstrating how existing baseline information (such as the caribou trails as a model for likely caribou approaches to the site) and Traditional Knowledge are incorporated in monitoring and management plans.*

The primary mechanisms for addressing the above measures and guidance are the Wildlife and Wildlife Habitat Protection Plan (WWHPP), the Wildlife Effects Monitoring Plan (WEMP). Drafts of the WWHPP and WEMP, incorporating caribou protection measures, were submitted to the Mackenzie Valley Land and Water Board as part of the mining and milling Type A Land Use Permit (MC2005C0032) and Water

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Licence (MV2005L2-0015) applications. Once the review processes for those applications concludes, both plans (WWHPP and WEMP) will be updated to address comments received and knowledge gained during the review. A concordance table relating the MVEIRB measures to De Beers application materials is included as Table 1.

The caribou monitoring described in this document is designed to address the MVEIRB's measures and suggestions as they relate to activities planned for the 2014 winter road operation. The only activities occurring in 2014 however are pioneering earth works at the GK site and construction and operation of the winter road. These early works activities are authorized under the Exploration Type B Land Use Permit (MC2008C022) and the Type A Land Use Permit (MV2013C0019).

MONITORING APPROACH

The 2014 GK access road monitoring program takes a multi-tiered, multi-scale approach. There are four main components to the program:

- Wildlife Sightings Log;
- Winter Access Monitoring;
- Behavioural Monitoring; and
- Distribution Monitoring

The wildlife sightings log and winter access monitoring will take place along the full length of the GK access road. The behavioural monitoring will occur where caribou are present and visible from the road and the distribution monitoring, if triggered, will occur within approximately 20 km the road. Each survey will contribute additional information regarding the occurrence, behaviour, movements, and distribution of caribou in the vicinity of the GK access road. Each method will build on knowledge gained from the others. This multi-scale, multi-tiered approach will enable De Beers to respond appropriately to the occurrence of caribou in the area and will provide valuable information regarding potential influence of the road on caribou.

In addition to these site-based monitoring programs, De Beers sponsors range-scale monitoring and research of the Bathurst caribou herd led by the Government of Northwest Territories, Department of Environment and Natural Resources. A summary of this program, and De Beers involvement with it will be included in the final version of the Wildlife Effects Monitoring Program.

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WILDLIFE SIGHTINGS LOG

The wildlife sighting log program allows staff and contractors working at site and along the GK road to record and report wildlife observations. The program encourages communication among staff and builds interest and understanding of wildlife issues and company environmental policies. The Environmental Coordinator on site will administer the program. The primary objectives of the wildlife sightings log program are to:

- Create a record of all incidental wildlife sightings
- Encourage environmental awareness and participation by staff
- Develop site-specific mitigations as necessary

The wildlife sightings log program is also described in the WWHPP (section 5.1).

Methods

Wildlife sighting logs will be maintained at various locations around the Project site, including the kitchen and the main office where staff regularly check-in and out for the day. Staff and contractors will be asked to record their wildlife observations each day at the end of their shift. The data form will include the following categories of information: species, location, number, behaviour, and comments.

Reporting of caribou, grizzly, and wolverine observations is mandatory for all staff and contractors. Reporting sightings of other species is strongly encouraged. A summary of wildlife sightings will be provided annually within the wildlife monitoring report.

Frequency and Duration

The Wildlife Sighting Log program will operate 365 day/year. The log will be maintained throughout construction, operations, and closure. The Environmental Coordinator will review the logs weekly and ensure that observations of key species are relayed to staff as necessary. ENR will be updated regarding wildlife occurrences on a regular basis.

Action Levels

All caribou sightings must be reported to the Environmental Coordinator or to Site Security.

If large animals such as caribou or bears are observed along the road, an announcement will be made on the radio notifying other drivers of the hazard. If wildlife are on the road or the banks of the road, traffic will stop and wait for them to cross (i.e. wildlife have the right-of-way). Once wildlife has passed, traffic may resume at a reduced speed (10km) until wildlife are no longer visible in the area.

If caribou are observed at any designated construction areas, the presence of caribou will be announced on the radio and the Environment Coordinator will be called immediately. The Environment Coordinator

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will work with the necessary staff to ensure work in construction areas is delayed until the caribou move on. Environment and Natural Resources (ENR) will be notified.

WINTER ACCESS ROAD MONITORING

The winter access road monitoring program involves security personnel driving the GK access road on a daily basis during the hauling season. The program was initiated in 2013 consistent with a commitment made by De Beers through the EIR process. During the winter road operating season of 2014, Security personnel will continue to monitor recreational/hunter use of the road, wildlife harvesting from the road, as well as wildlife occurrence along the road. An Aboriginal Environmental Monitor will frequently accompany security during their surveys.

Access monitoring is designed to address three main objectives with respect to wildlife:

- documenting recreational use of the winter roads;
- detecting wildlife occurrence along the roads; and
- informing the mitigation and management of the roads

Methods

During the daily drive of GK road, security staff will monitor the use of the road by truck traffic and recreational users. Security staff will note the type of vehicles present on the road and types of activity of the users. Where possible the following types of information will be recorded regarding recreational use of the road: location, number and type of vehicles, number and type of accessory vehicles, number of people in party, purpose of trip, species hunted etc.

Security staff will note the location of any wildlife carcasses seen, the species (if possible), day, time and any other related information such as whether or not predators/scavengers are present. Photographs and a GPS location at the site will be taken if possible. Disclosure of information by recreational users and hunters is optional and voluntary.

All wildlife observed along the roads will be noted and recorded. When an animal is detected, the observer will estimate the distance from the road to the animal. The location of the observation will be recorded. A photo will be taken where conditions are favourable. The species and age of the animal (adult vs. juvenile) will be recorded if known.

Frequency and Duration

Winter access road monitoring will occur daily, so long as conditions are safe, during the hauling season in February and March.

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Action Levels

At the end of every survey, the results of the survey will be conveyed to the Environment Coordinator. The Environment Coordinator will distribute the information to other users of the road as necessary.

All caribou sightings will be reported to the Environmental Coordinator or to Site Security.

If a wildlife collision occurs, the Environment Coordinator will be called immediately. The Environment Coordinator will report the collision to ENR.

BEHAVIOURAL MONITORING

Behavioural monitoring of caribou along the winter road will be conducted in areas where caribou are present during the haul season. The objective of the behavioural monitoring program is to:

- describe caribou behaviour in relation to the winter road
- inform management and mitigation strategies to reduce the risks for caribou

Behavioural monitoring methods are similar to those implemented at Diavik and Ekati mines. The monitoring will be conducted by a crew of two observers stationed along the winter road in a truck. Observers will conduct instantaneous behavioural scans of caribou groups at 8 minute intervals for at least 40 minutes (a minimum of four observations per group). Caribou behaviours will be categorized as either feeding, bedded, standing, alert, walking, trotting, or running. The number of animals engaged in each type of behaviour will be recorded. In addition to behaviour, observers will record the number, sex composition, and location of each group. The response (or lack of a response) of caribou to any apparent stressors such as vehicle, aircraft, or predators will also be recorded. General site conditions will be noted.

These instantaneous behavioural scans will be repeated at multiple locations along the road where caribou are present. The minimum group size for conducting this work is one caribou.

Frequency and Duration

Monitoring will occur during the haul season while caribou are present.

Action Levels

Behavioural monitors will report their observations to the Environment Coordinator daily and inform him/her of any particular areas of elevated risk to caribou or drivers. They will also advise as to any additional factors that seem to stress caribou or alter their behaviour (e.g. speed of vehicles, loud

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noises). The results of the behavioural monitoring will be presented in the annual wildlife summary report.

DISTRIBUTION MONITORING

Winter track counts or aerial surveys may be conducted to document the distribution of caribou in relation to the road. Initiation of the distribution monitoring component of the program will be contingent upon the presence of caribou in the area, support from ENR for conducting the work, and coordination with other parties to ensure the methods are consistent and repeatable, results are meaningful, and recommendations are widely applicable.

Methods

The choice between aerial survey or ground based winter track count will be made on the basis of animal welfare, abundance and distribution of caribou observations, site conditions, and the availability of staff and equipment. ENR will be contacted prior to initiation of either of these surveys.

If an aerial survey is conducted, the methods will follow general survey techniques outlined in the WEMP. The pilot will maintain a minimum altitude to avoid disturbing caribou. The flight will follow pre-determined transects and the location of all caribou will be recorded in UTM.

The methods used for the ground-based snow tracking survey will also follow standard methods for winter tracking. Observers will use snow-machines to travel transect lines at increasing distance from the road. All animal tracks will be recorded. These data will be used to estimate track counts/km/day, to identify and delineate caribou trails, cratering locations, bedding locations and other signs of caribou in the area.

Frequency and Duration

If initiated, distribution monitoring will occur during the haul season.

Action Level

The results of the distribution monitoring will be communicated to the Environmental Coordinator at the end of the survey. The Environment Coordinator will distribute the information to other users of the road as necessary. The results of the survey will be presented in the annual wildlife summary report.

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Table 1.0 Concordance of Joint Panel Decision Report Measures and De Beers regulatory documents.

| Act | Regulatory Mechanism/Decision Report | Requirement | De Beers Document |
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| <p>Mackenzie Valley Resource Management Act: 135.</p> <p>(1) After considering the report of a review panel, the federal Minister and responsible ministers to whom the report was distributed may agree to</p> <p>(a) adopt the recommendation of the review panel or refer it back to the panel for further consideration</p> | <p>MVEIRB Panel Decision, July 19, 2013. Measure 1</p> | <p>Minimize impacts to caribou and the extent of the zone of influence around the mine site to the extent that is technically feasible.</p> | <p>WWHPP (Section 4)</p> |
| | | <p>Prior to construction, develop a caribou protection plan that ensures protection of caribou and caribou habitat. The caribou protection plan should include an adaptive management framework demonstrating how the Wildlife Effects Monitoring Program and the Wildlife and Wildlife Habitat Protection Plan are linked.</p> | <p>WWHPP (Section 4)</p> |
| | <p>MVEIRB Panel Decision, July 19, 2013. Measure 2</p> | <p>Construct and operate the Winter Access Road in a way that minimizes its adverse effects as a partial barrier to caribou movement and migration;</p> | <p>WWHPP (Section 4)</p> |
| | | <p>Monitor to determine the presence and behavior of caribou along the winter access road using means in addition to satellite collar data, such as track counts and visual observations; and</p> | <p>WWHPP : (Section 5.5 and 5.6) and GK Winter Access Road 2014 Caribou Monitoring Technical Memo</p> |

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| | | Ensure that the caribou protection plan, the wildlife effects monitoring program and the wildlife and wildlife habitat protection plan address the effects on caribou movement and behavior along the winter access road. | WWHPP : (Section 5.5 and 5.6); WEMP (Section 2.3.7) and GK Winter Access Road 2014 Caribou Monitoring Technical Memo |
| | MVEIRB Panel Decision, July 19, 2013. Measure 3 | Monitor project specific effects (e.g. size of the Zone of influence, changes in habitat, effects of the Winter Access Road on caribou movement and behavior) and will report to the GNWT and make the results public on how project specific effects contribute to cumulative effects for the duration of the Project. | WWHPP (Section 5.5) and WEMP (Section 2.3), SOIL AND VEGETATION MONITORING PROGRAM (Section 3.1) |
| | MVEIRB Panel Decision, July 19, 2013. Suggested Follow-up Program for barren ground caribou | monitoring the zone of influence and its likely causes (e.g. noise, dust, mine activity) (can be completed as part of the Wildlife Effects Monitoring Program); | WEMP (Section 2.3.7.1 & Table B-1) |
| | | using results from monitoring the extent of the zone of influence and likely causal mechanisms (completed as part of the Wildlife Effects Monitoring Program) to intensify or reduce mitigations that will minimize the zone of influence; | WEMP (Section 3.0); Adaptive Management Plan |

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| | | monitoring the presence of caribou along the winter access road and the effects of the road on caribou movement and behavior | WWHPP : (Section 5.5 and 5.6) and GK Winter Access Road 2014 Caribou Monitoring Technical Memo |
| | | describing action levels that will be used to determine when monitoring or mitigations or changes to existing mitigation are necessary; | WWHPP : (Sections 5.5, 5.6, 7.0) and GK Winter Access Road 2014 Caribou Monitoring Technical Memo |
| | | demonstrating how existing baseline information (such as the caribou trails as a model for likely caribou approaches to the site) and Traditional Knowledge are incorporated in monitoring and management plans. | WEMP (Table B-1, Section 2.1) , WWHPP (Section 1.3) |