

December 4, 2015

Sophia Granchinho
Senior Technical Advisor
Nunavut Impact Review Board
P.O Box 1360
Cambridge Bay, NU X0B 0C0

Sent VIA Email: info@nirb.ca

RE: NIRB 15EN050: Part 4 Screening for Agnico Eagle Mines Ltd.'s "Amaruq Meadowbank and White Hills" project proposal

Dear Ms. Granchinho,

The Government of Nunavut (GN) would like to thank the NIRB for the opportunity to provide comments regarding the NIRB's Part 4 Screening for Agnico Eagle Mines Ltd.'s "Amaruq, Meadowbank and White Hills" project proposal.

The GN has reviewed the Proponent's proposed project and we are pleased to provide our detailed comments in the attached Appendix.

The GN appreciates this opportunity to provide feedback in the assessment process for this project. Should you have any questions regarding this submission, please contact me at 867-975-7830 or by email at asimonfalvy@gov.nu.ca

Qujannamiik,

[Original Signed By]

Agnes Simonfalvy
Avatiliriniq Coordinator

APPENDIX

Socio-Economic Comments

Archaeological Sites

The Government of Nunavut (GN) makes the following recommendations for the proposed project.

Project Proposal Part 1 Form p. 1 Section 2-1: The Department of Culture and Heritage has to be consulted. Project Proposal Part 1 Form p. 1 Section 2-2: Application for an Archaeology permit is required (March 31)

Screening Part 2 D Form: Acts, regulations and guidelines that apply to project activities: Add Nunavut Archaeological and Palaeontological Guidelines and Regulations.

Screening part 2 D Form: Add Archaeology Permit to the list of permits required to conduct the project.

Screening Part 2 Form: The project proposal puts forward geophysics activities, prospecting and the drilling of approximately 30 holes per year between February 2016 and February 2018. The schedule for all project activities is planned to run between February and November.

The Department of Culture and Heritage would like to clarify if the proposed number of holes (30 holes/per year) encompasses the three exploration areas (Meadowbank/Amaruq/White Hills).

CH would also like to confirm that specific drill locations and associated layout locations be determined and archaeologically assessed ahead of the snow-covered season. Activity and vehicle traffic during the snow-covered season may pose a threat to recorded and unrecorded archaeological resources.

The Permittee shall have a professional archaeologist and/or palaeontologist perform the following Functions associated with the Types of Activities listed below or similar development activities:

Activity Types	Function
a) Large scale prospecting	Archaeological/Palaeontological Overview Assessment
b) Diamond drilling for exploration or geotechnical purpose or planning of linear disturbances	Archaeological/Palaeontological Overview Assessment and/or Inventory and Documentation and/ or Mitigation
c) Construction of linear disturbances, Extractive disturbances, Impounding disturbances and other land disturbance activities	Archaeological/Palaeontological Overview Assessment and/or Inventory and Documentation and/ or Mitigation

The above-mentioned activities require either a Nunavut Archaeologist Permit or a Nunavut Palaeontologist Permit.

The GN – Department of Culture and Heritage recommends that:

- (1) An overview assessment of the three exploration areas be conducted.
- (2) All land drill holes (including drill layout) and water-hose route be visually assessed by a qualified archaeologist prior to drilling (during the snow-free season).
- (3) All aircraft landing areas be visually inspected before landing or dropping any material as not to interfere with potential archaeological features.
- (4) The applicant provides details about the overland winter travel routes that will be used for equipment transportation.

All archaeological and palaeontological sites in Nunavut are protected by law. The applicant must understand that it is their responsibility to ensure that no heritage resource sites are disturbed in the course of their activities. No person shall alter, or otherwise disturb an archaeological site, or remove any artifact from an archaeological site. Moreover, the building of inuksuit is not recommended.

Environmental and Human Health Comments

The GN has reviewed this project proposal and has wildlife recommendations for this exploration program. This Project spatially and temporally overlaps the range of Ahiak, Lorillard, and Wager Bay caribou herds. Although the Proponent's exploration Project lies outside the critical calving/key access corridor range, disturbances such as noise can still have the potential to impact sensitive life history stages for caribou. The proposed Project overlaps migration corridors, rut range, and winter range. Please refer to the attached maps.

Our detailed comments are as follows:

Caribou

Core habitat delineation is the product of multi-year Geographic Information System (GIS) spatial kernel analysis of collared caribou cows also incorporating monitoring data and *Inuit Qaujimaqatuqangit*. Scientific research (including telemetry and monitoring) and *Inuit Qaujimaqatuqangit* have clearly shown that barren ground caribou annually and predictably use core calving and post-calving habitats as they are known to offer spatial and temporal segregation from factors that may decrease survival, including predation and industrial activities. Migration routes are also important, disruption of migrating caribou can displace the pregnant cows into areas of suboptimal calving habitat, leading to increased predation, poorer forage quality and the imprinting of calves to poorer habitat. *Inuit Qaujimaqatuqangit* and the scientific monitoring of patterns of habitat use by caribou have supported the importance of critical calving, post-calving areas and migration routes

to the long-term survival of caribou. Caribou play a key role in the maintenance of Inuit traditional lifestyles, including subsistence harvesting.

The first priority for application of mitigation measures is to avoid adverse impacts on wildlife in the Project area for the duration of the proposed activities. Avoidance can be achieved both spatially and temporally. Since the proposed Project overlaps migration routes and wintering habitat the GN recommends Project activities be required to take place outside these time periods so as to avoid risks to migrating and rutting caribou. The Proponent's activities should be prohibited during the following timing windows for these caribou herds:

Grey Hills – see map #2

- Overlaps rut range for the Lorillard and Ahiak caribou herds. Prohibition of activity is recommended October 10th to November 10th.

Muskox –see map #3

- Overlaps rut range for the Lorillard and Ahiak caribou herds. Prohibition of activity is recommended October 10th to November 10th.
- Overlaps fall migration (post breeding) for the Lorillard herd, recommend prohibition of activity November 10th to December 15th.

Meadowbank – see map #4 and #5

- Overlaps rut range for the Lorillard caribou herd. Prohibition of activity is recommended October 10th to November 10th.

Meadow River – see map #6, #7, and #8

- Overlaps rut range for Lorillard caribou herd. Prohibition of activity is recommended October 10th to November 10th.
- Portions overlap the Ahiak herd spring migration. Prohibition of activity is recommended April 6th to June 12th.

Depending on the number of crews occupying any one area, a large amount of aerial traffic could be expected in each area for extended periods. Aircraft activities have been shown to affect wildlife such as caribou, muskoxen and birds in behaviour, development and reproductive success. However, by raising flight altitudes, studies have shown that it can alleviate some of the negative effects. Therefore, the GN recommends that unless there is a specific requirement for low level flights, aircraft activities should maintain a minimum altitude of 610 meters above ground level in places where there are occurrences of wildlife. In areas where there are observed large concentrations of birds, flight level is restricted to 1,000 meters vertical distance and 1,500 meters horizontal distance from the birds. The GN recommends the Proponent develop a detailed 'Caribou Mitigation and Monitoring Plan'. At a minimum this document should include:

- Detailed descriptions of project activities, timeframes, duration and intensity, field site locations and flight paths with associated shape files.

- The identification of caribou use and caribou habitat within the proposed footprint of the activity and its associated areas of influence. Information for these can be obtained from the GN-DoE Wildlife Research Section.
- The identification of project overlaps with known areas of ecological significance and their associated timing windows (ex. caribou calving, post-calving grounds and migration routes).
- The identification of potential impacts the proposed activities might have on caribou and caribou habitat use.
- A description of how impacts including cumulative impacts, will be avoided and/or minimized (ex. relocating activities, following timing windows, mitigation measures etc.).
- A description as to the mechanisms involved in detecting caribou in and around project activities.
- An activity suspension plan, should the Proponent choose to implement operation suspensions as mitigation measures.

Other Wildlife

Muskox

Muskox occur throughout the majority of Nunavut with the exception of Baffin Island. Muskox may be in a weakened condition by late winter and increased energy expenditure resulting from frequent harassment could have negative consequences for both breeding adults and young. Please do not approach muskox closer than ~200 meters during calving season (April-June). Approaching a muskox herd during this time may cause the herd to break up and/or stampede. Displacement from calving areas could have negative effects on muskox breeding. Also, please note that male muskox can become increasingly agitated during breeding season (Aug-Sept) and it is advised to be vigilant during this period when in areas frequented by Muskox.

Grizzly Bears

Grizzly bears occur throughout the project area and may be disturbed by activities. More specifically, the area of interest is identified as having very high wildlife sensitivity for grizzly bears. Grizzly bears have very low reproductive rates and require large tracts of habitat in order to meet their ecological requirements. Breeding takes place from Mid-May until early July but will only be successful if the female has enough fat reserves built up over the summer feeding period to sustain her and the developing fetus over the winter.

There is a high probability of encounters with grizzly bears in the project area. Grizzly bears can be easily attracted to human installations and waste management is especially important in such conditions. Potential human-bear encounters can result in injury or death to either the bear or the humans. Increased bear-human contact can lead to an increase in defense-of-life-and-property kills. Cumulatively these impacts could threaten the long-term viability of this species. All possible efforts to avoid these conflicts must be made. The Proponent should plan to:

- avoid human-bear conflict

- have a bear deterrent and waste management strategy
- have a human safety strategy

The Proponent is strongly advised to meet with local hunters to discuss local traditional knowledge of bears in the region. All camp members should be fully aware and trained in the human-bear encounter avoidance plans. The applicant is strongly encouraged to meet with the Wildlife Officer in the nearest community in order to receive a briefing on proper procedures to avoid bear encounters, proper procedures should a bear be encountered and proper procedures to follow should any kind of an incident related to such an encounter occur. Also, if a defense kill does occur, the Proponent should be aware that an investigation by a Wildlife Officer will follow any incident related to the death of a bear; the investigation will try to determine how the incident occurred, whether the Proponent was acting responsibly, whether human and bear safety was adequately addressed, whether bear deterrents and human safety measures were met, and whether the Proponent acted negligently. The Proponent should be made aware that pursuant to Section 74(1) of the *Wildlife Act*:

Pursuit of wild animal

74 (1) No person shall chase, weary, harass or molest a wild animal.

Raptors

Nesting raptors occur throughout this area and may be disturbed by activities. SARA listed species in the area include Peregrine Falcon, *anatum-tundrius* complex (Special concern, Schedule 1) and Short-eared Owl (Special Concern, Schedule 1). The GN recommends that the Proponent refrain from approaching nesting raptors during the critical timing window (May – July 15). Nesting raptors are extremely vulnerable during this period and may abandon nests if perceived to be at risk. Breeding raptors disturbed at this stage of nesting may not have sufficient time to re-nest. Avoiding nesting raptors during this timeframe minimizes the risk of destroying active nests, birds or their eggs etc. and reduces the likelihood of contraventions under the *Wildlife Act*:

Bird's nests

72(2) Unless lawfully harvesting down, no person shall injure, molest or destroy

- (a) the nest of a bird when the nest is occupied by a bird or its egg; or
- (b) the nest of any bird of prey or prescribed bird.

Significant disturbance

73(1) No person shall, unless authorized by a licence,

- (a) engage in any activity, other than harvesting, that is likely to result in a significant disturbance to a substantial number of wildlife; or
- (b) break into, destroy or damage any abode of a bear, fox, beaver, muskrat, weasel, wolf or wolverine outside any municipality or prescribed area.

Approaching the nest site near the time of fledging (where chicks fly from the nest) often leads to premature nest departure. During the last few weeks of nesting, disturbance at the

nest often causes young raptors to jump out of the nest, leading to death from exposure, predation, starvation, or trauma from the fall itself. Maintain field sites at a distance of at least 100 meters from a nest site during the latter part of the nesting stage (August 15 – September).

Additionally, do not disturb nesting birds of any kind during conditions of poor weather (rain, snow, high winds) which can stress chicks since their ability to thermoregulate may not be adequately developed to fully protect them from cold weather.

Monitoring

The GN requests that the Proponent monitor and report on any wildlife sightings in the area of operations during the time of operation. These reports may be sent to the Ecosystems Biologist, Wildlife Research Section, BOX 209, Igloolik, Nunavut, X0A 0L0 or via email at mwilson@gov.nu.ca.

Impacts on wildlife habitat or Inuit harvest activities

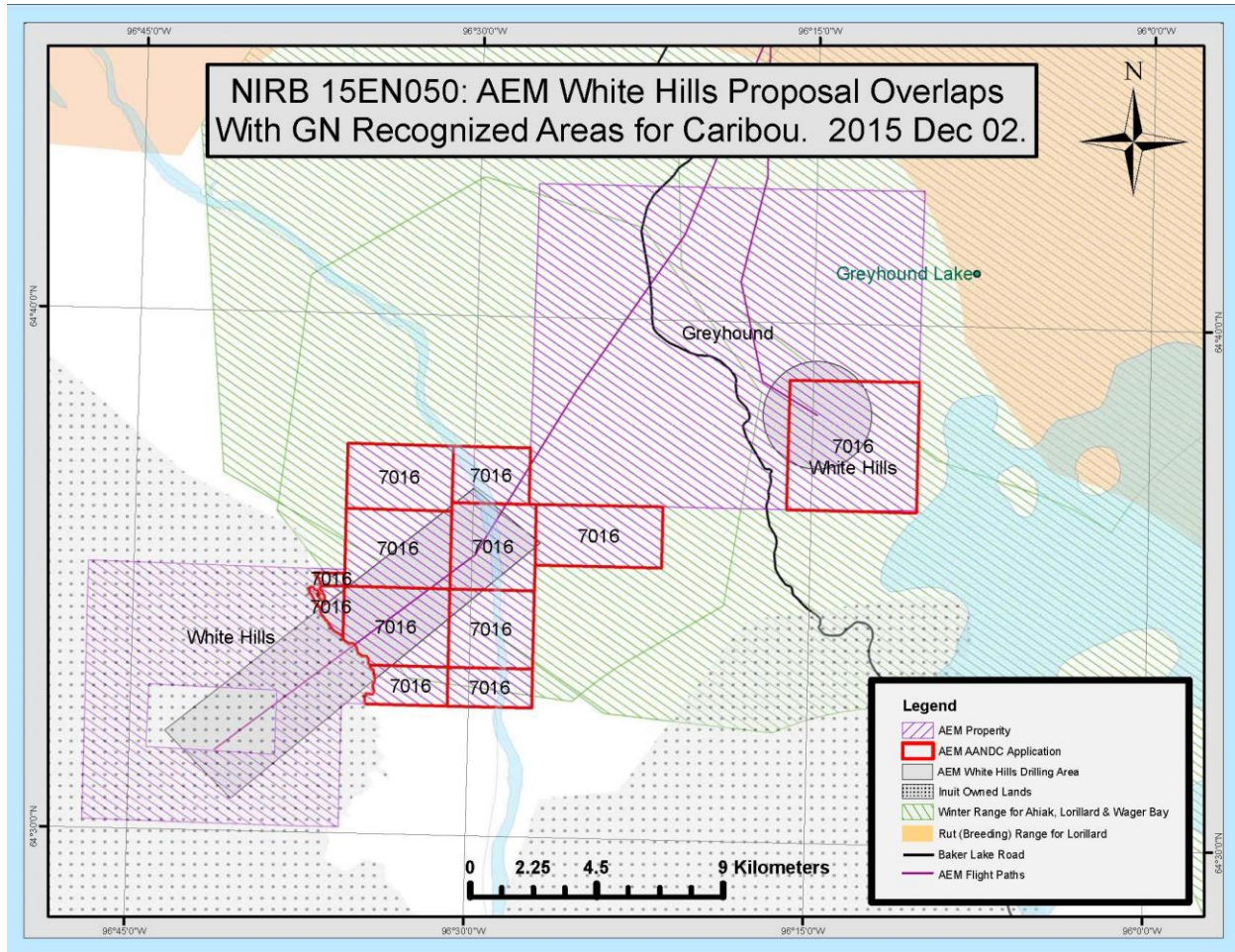
The GN cannot provide comment on whether the Project is likely to cause significant adverse impacts on wildlife habitat or Inuit harvest activities as no assessment has been provided. However, Inuit harvest activities are dependent on the availability of wildlife resources.

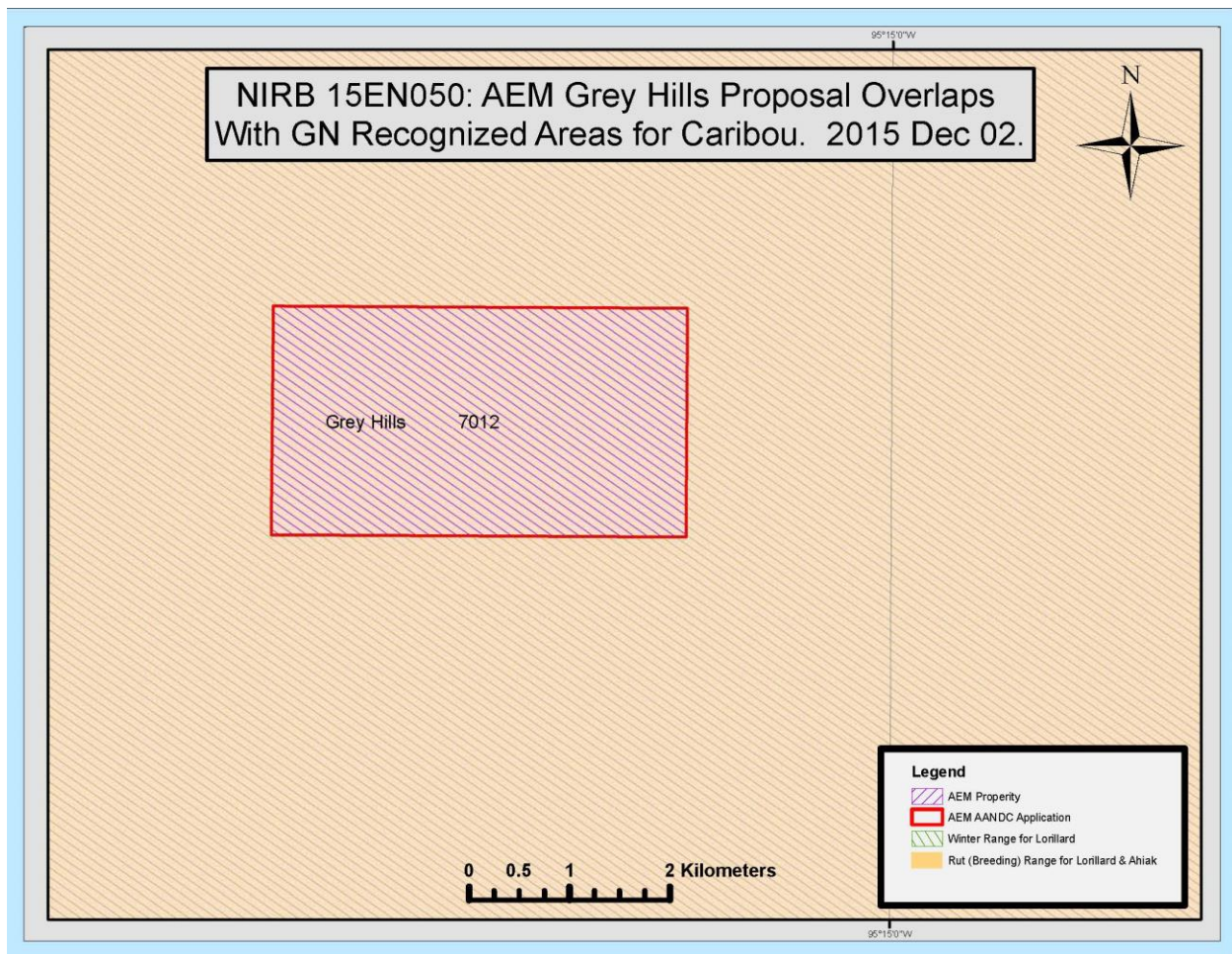
Public Concern

The GN cannot provide comment as to whether the Project proposal is likely to arouse significant public concern as no record of community consultations have been provided. However, through participation at NIRB Community Information Sessions in Kivalliq communities, the GN has observed community members express concerns regarding development activity near sensitive caribou habitat.

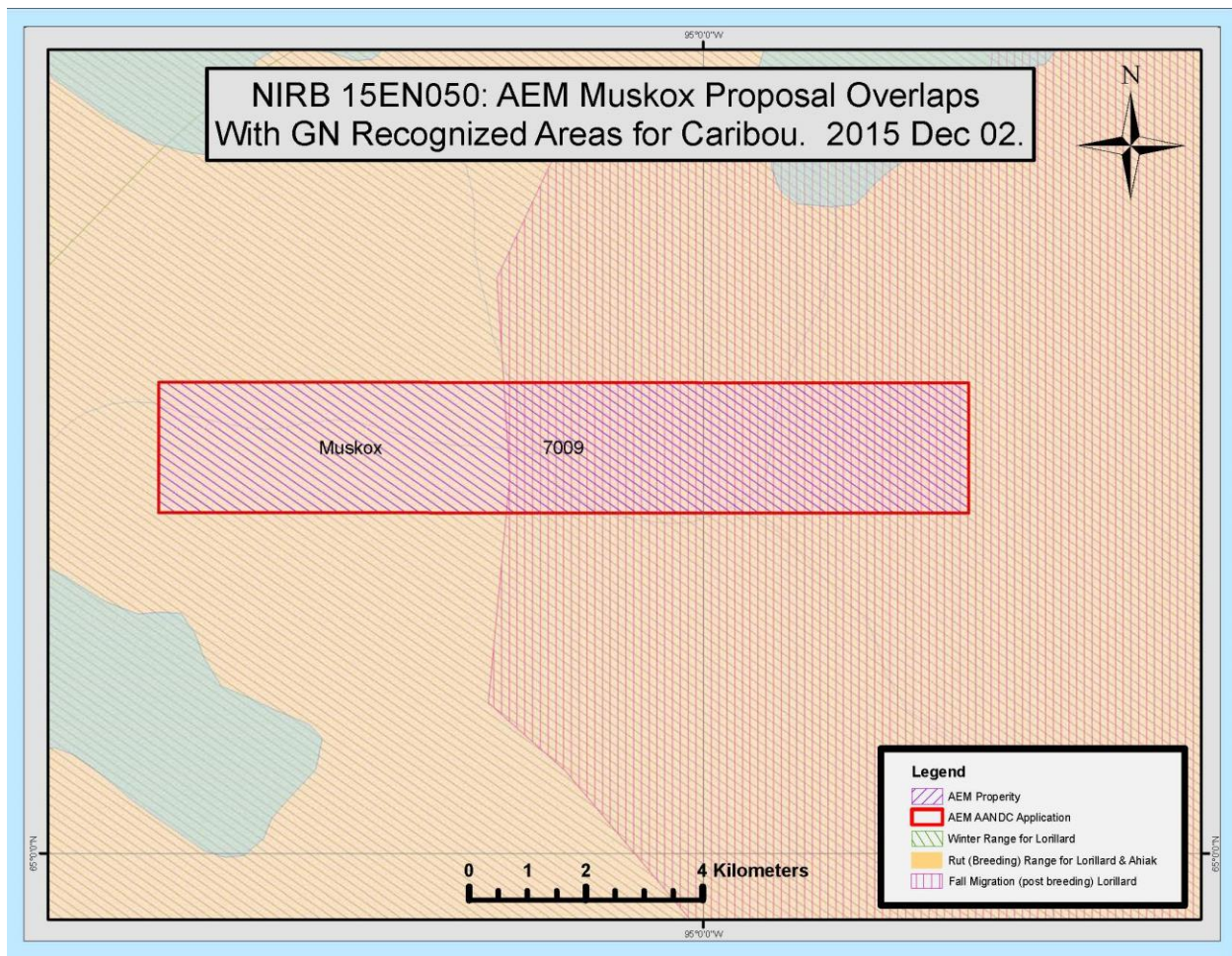
Cumulative Effects

As no cumulative effect assessment was provided with the Project proposal, the GN cannot provide specific comments. However, the GN is concerned that multiplying exploration activities in the Meadowbank region can cumulatively lead to significant environmental change. In particular, multiple, interacting development actions can lead to the fragmentation of caribou habitat.

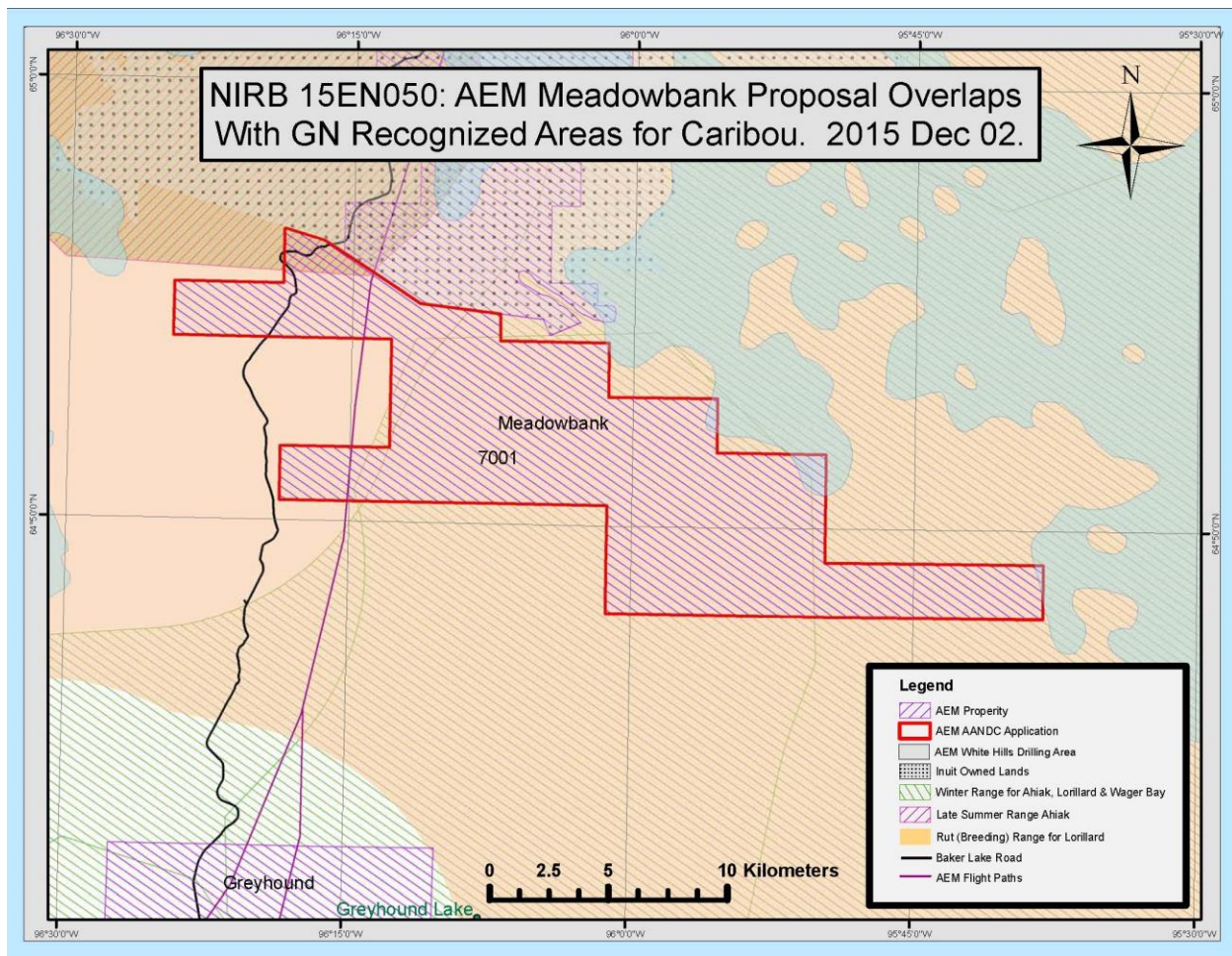




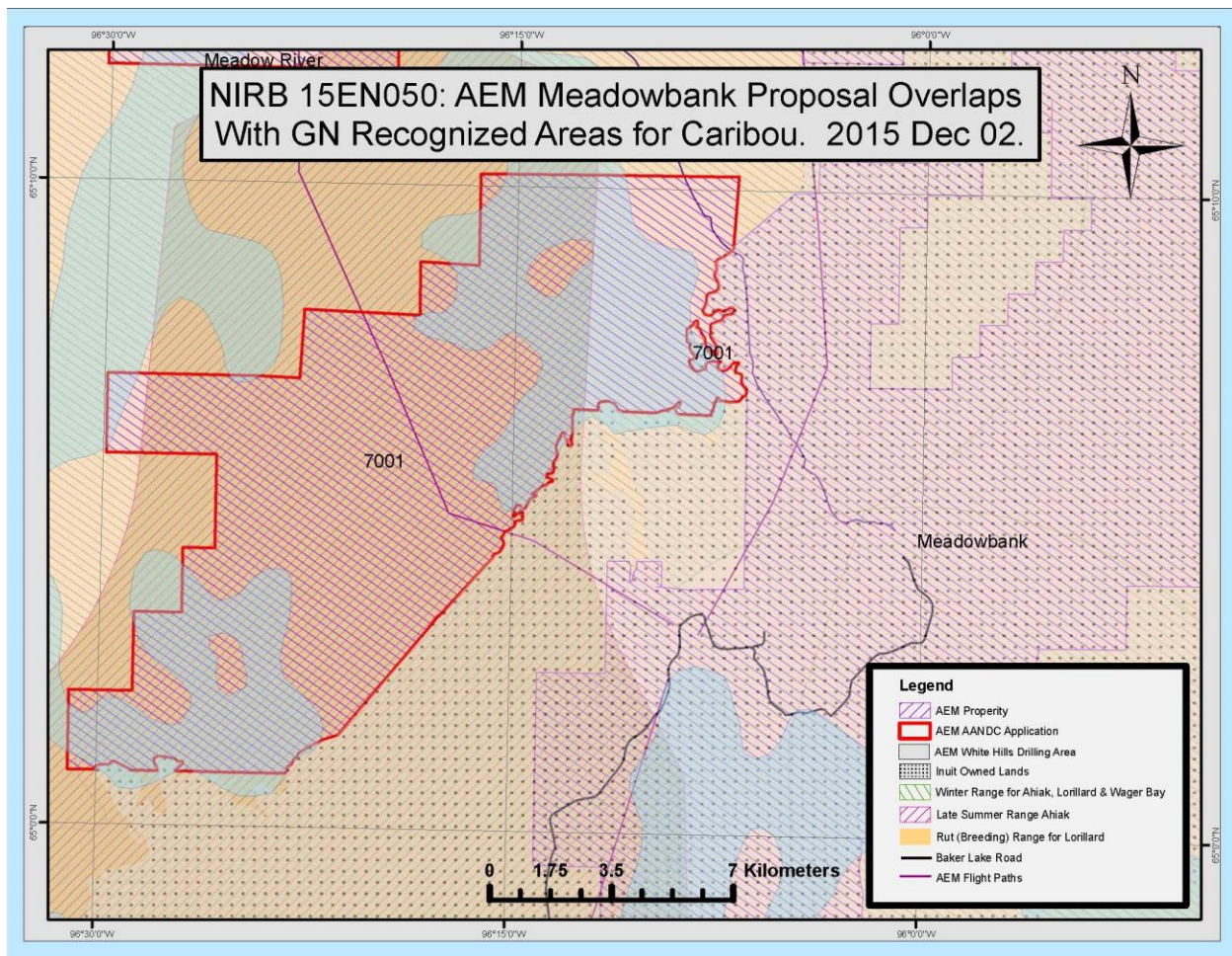
Map 2, Grey Hills



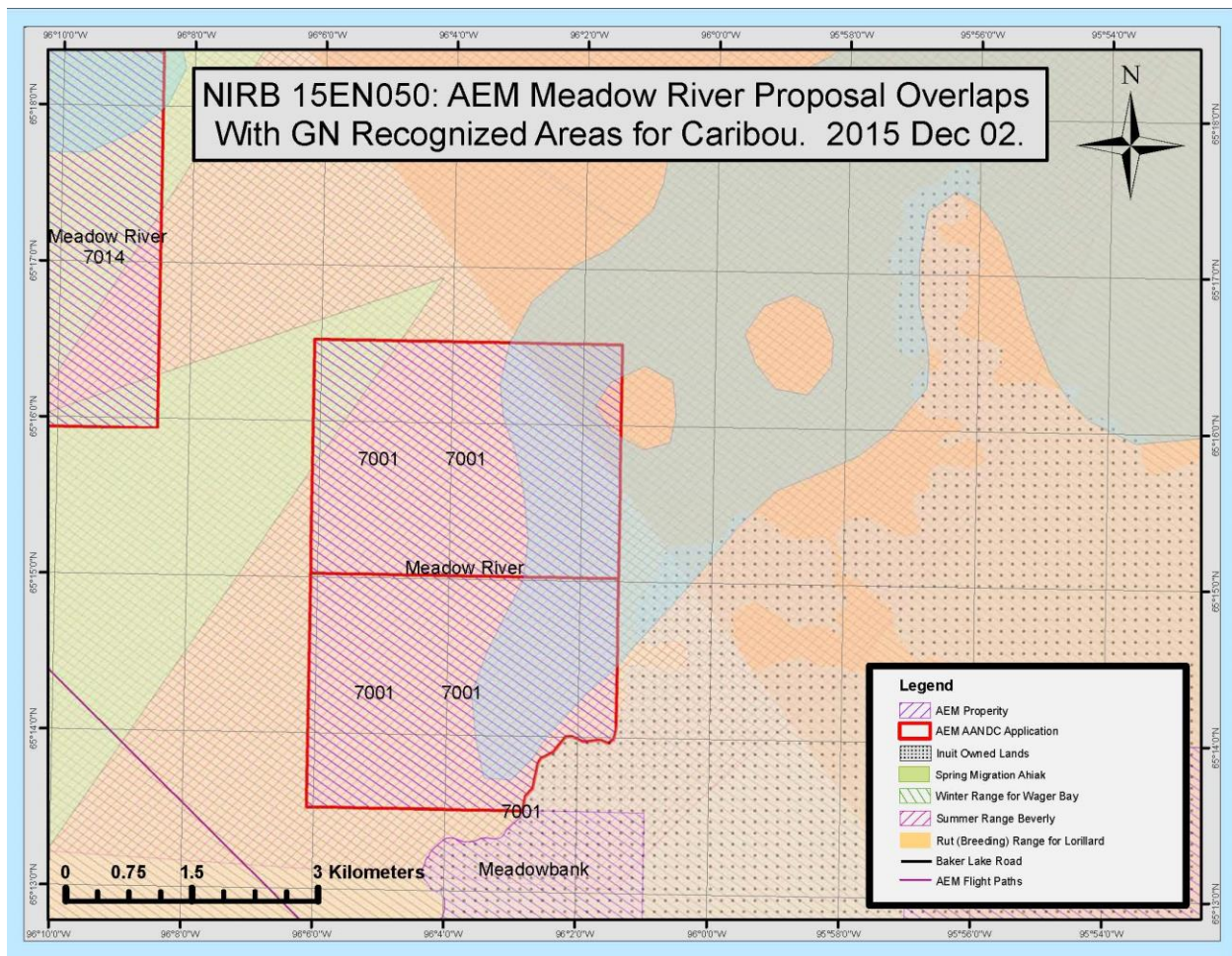
Map 3, Muskox



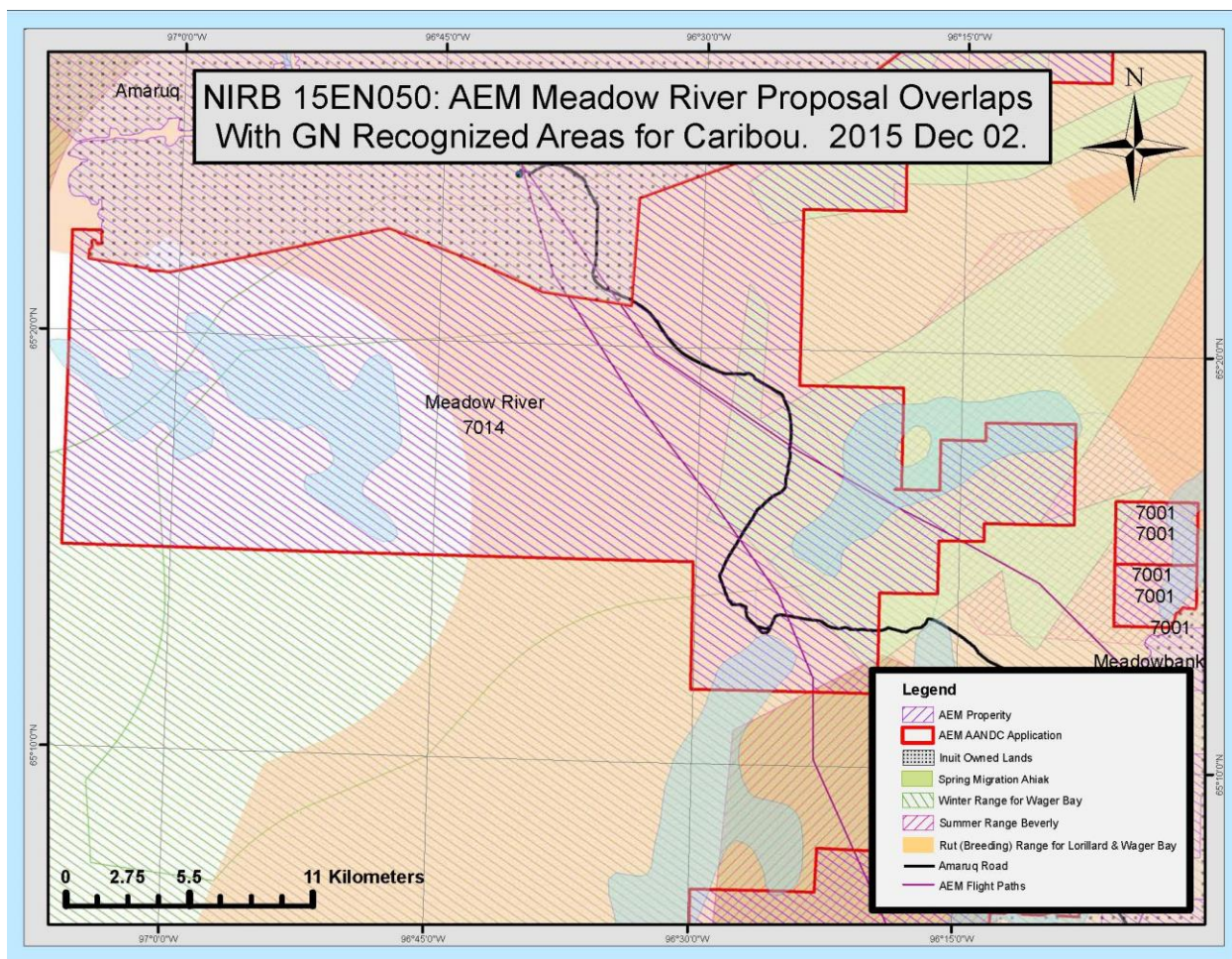
Map 4, Meadowbank



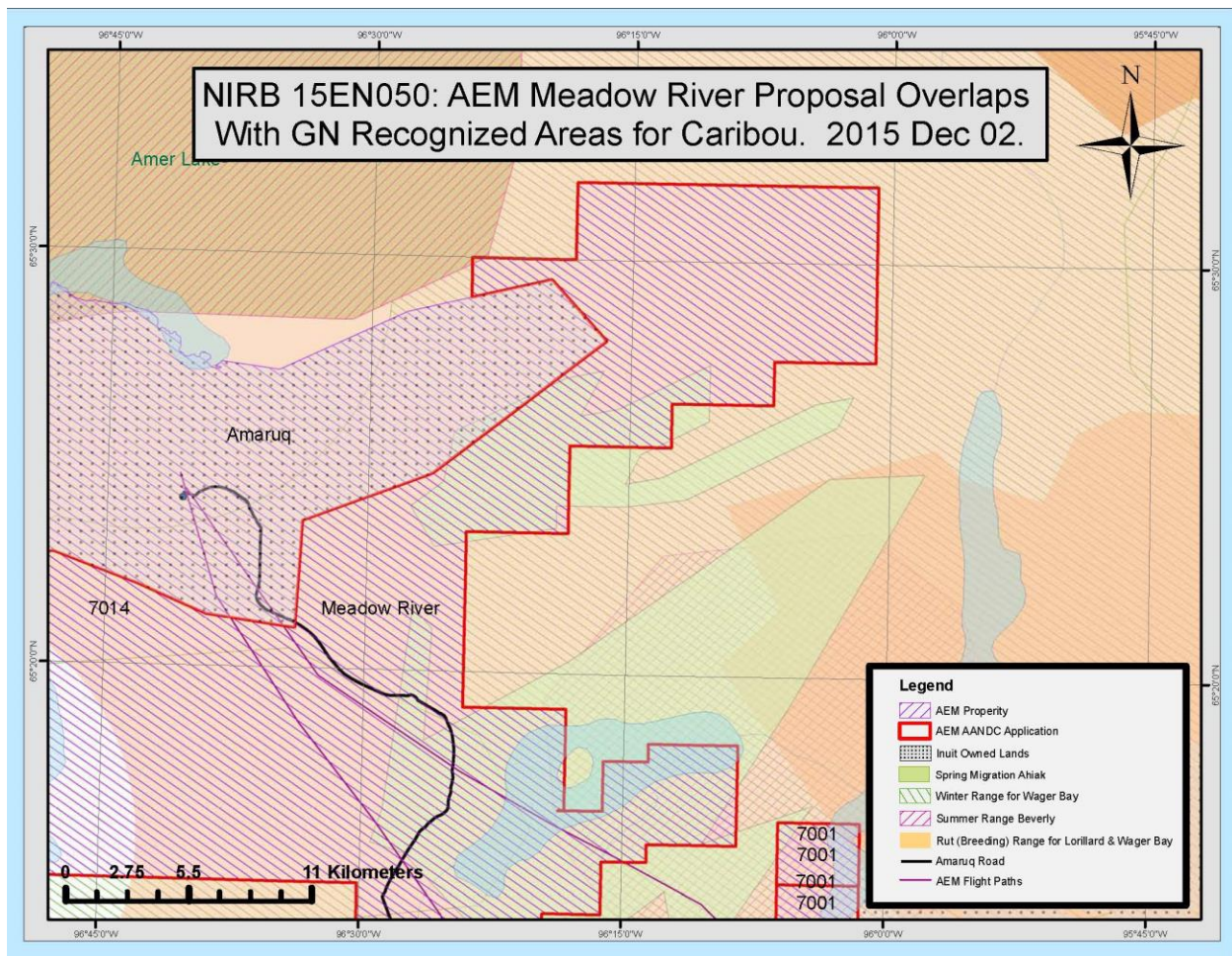
Map 5, Meadowbank



Map 6, Meadow River



Map 7, Meadow River



Map 8, Meadow River