



Advanced Explorations Inc.

**ROCHE BAY MAGNETITE PROJECT
WILDLIFE MONITORING AND MITIGATION PLAN**

April 2011

1.0 INTRODUCTION

The Roche Bay Magnetite exploration program (the project) has the potential to affect wildlife and wildlife habitat in the area. Potential negative wildlife/wildlife habitat effects include: mortality, loss of habitat, displacement/avoidance of habitat, and habituation/attraction to personnel and/or the camp. Advanced Explorations Inc. (AEI) strives to minimize these potential negative effects, and in doing so, a Wildlife Monitoring and Mitigation Plan was developed. This plan will inform on-site personnel of appropriate monitoring and management practices/procedures that when executed will minimize negative effects to wildlife and their habitats. As part of this plan, an educational component has been added.

For this plan, wildlife species of interest are those that occur within and immediately adjacent to the project site during project operations, those that are important harvestable species to the local people, and those with special conservation status. These species or species groups of concern are provided in Table 1. Critical wildlife habitat, such as nests and dens are also of special interest to this plan. A list of protection measures directed at specific topics of concern for the project is provided at the end of this report in Table 2.

TABLE 1. SPECIES OR SPECIES GROUPS OF CONCERN TO THE ROCHE BAY EXPLORATION PROJECT

Species or Species Group	Species or Species Group
Polar Bear	All whales
Arctic Fox	Waterfowl and seabirds
Wolf	Peregrine Falcon
Barren-ground Caribou	Other raptors
All seals	Shorebirds and upland breeding birds
Walrus	

2.0 MONITORING

By implementing a monitoring program, project related negative effects on wildlife and their habitats can be minimized. Participation in the monitoring program is required by all personnel on-site. As part of the wildlife and wildlife habitat monitoring program, the following tasks are required:

- Vigilance by all on-site personnel for wildlife and critical wildlife habitat (*e.g.* nests) while completing their daily activities
- Inform others working in the area of the presence of wildlife and/or critical wildlife habitat; and
- Record each wildlife and/or critical wildlife habitat sighting in a designated log book/sheet and post where publicly available. An example Wildlife Sightings Log Sheet is provided in Appendix A.

By documenting and informing others of wildlife and critical wildlife habitat present in the area, mitigation measures can be implemented, wherever necessary, to minimize effects.

3.0 MITIGATION

Negative effects to wildlife and wildlife habitat from the project can be minimized or avoided with adherence to established mitigation practices and procedures. Management of potentially detrimental activities, such as traffic flow (including aircraft, all-terrain vehicles, and boats), waste and food storage and disposal, hunting/fishing activities, and deliberate wildlife harassment were targeted as having the greatest potential for negative wildlife effects. The Nunavut Impact Review Board (NIRB) Screening Decision Report (September 6, 2007) recommendations to protect wildlife and wildlife habitat are also included to provide a comprehensive mitigation list.

As part of the wildlife and wildlife habitat mitigation practices/procedures the following tasks are required to minimize or avoid potential negative wildlife effects from the project:

- Give wildlife the right-of-way;
- Remain open to Traditional Knowledge-based suggestions to solve wildlife-associated problems
- Remain on designated trails/roads to minimize disturbance to habitat and possible migratory bird nests;
- Restrict aircraft activities to a minimum altitude of 610 m above ground level where wildlife occur, unless low-level flying is specifically required (landing/takeoff);
- Maintain a vertical distance of 1,000 m and a horizontal distance of 1,500 m between aircraft and migratory bird colonies, unless in possession of an approved wildlife research permit to do so;
- Ensure aircraft do not, unless for emergency purposes, land in areas occupied by wildlife;
- Avoid active raptor nests and concentrations of nesting/molting waterfowl (including with aircraft) until nesting is complete and young have fledged, unless in possession of an approved wildlife research permit to do so;
- Incinerate all waste foods and human garbage daily, and remove incinerator ash and non-combustible wastes to an approved off-site facility for disposal;
- Strictly prohibit feeding and deliberate harassing and disturbing of wildlife;
- Ensure minimal disturbance to any nesting or denning wildlife;
- Temporarily suspend activities if they appear to be interfering with caribou migration or calving until animals have departed;
- Erect a bear fence around camp, particularly to include the kitchen, food storage tents, and incinerator;

- Secure oils and other attractants located outside the bear fence to prevent wildlife access;
- Promptly clean up all spills (*e.g.* oil, coolant, etc); and
- Prohibit hunting and fishing by on-site personnel, unless proper Nunavut authorizations are acquired.

4.0 EDUCATION

An educational component has been added to the Wildlife Monitoring and Mitigation Plan. The purpose of this educational component is to ensure on-site personnel are conscious of potential negative effects daily activities may have on wildlife, and be aware of monitoring and mitigation practices and procedures to minimize or avoid these effects. The educational program will be presented as an on-site orientation completed by trained personnel. In addition, an introduction to Parks Canada's Safety In Polar Bear Country pamphlet and/or the Safety in Bear Country Society informational video (Polar Bears: a guide to safety) is highly recommended during this orientation.

5.0 CLOSURE

EBA is pleased to present Advanced Explorations Inc. with this Wildlife Monitoring and Mitigation Plan. The objective was to prepare a document to meet NIRB's Terms and Conditions as well as to provide a program to minimize or avoid negative wildlife effects related to activities associated with the Roche Bay Magnetite project. We are confident the Plan provided supports this objective.

Respectfully submitted,
EBA Engineering Consultants Ltd.

Prepared by:



Karla Langlois, B.Sc., P.Biol.
Environmental Scientist
Environmental Practice
(Direct Line: (867) 766-3728, ext. 104)

Reviewed by:



Richard Hoos, M.Sc., R.P.Bio
Principal Consultant
Environmental Practice
Direct Line: (604) 685-0275, ext 239

Table Two: Topics of Concern and their associated Protection Measures for the Roche Bay Magnetite Project

Topics of Concern	Protection Measures
Wildlife Access	• Site will be surrounded by a fence to discourage the entrance of wandering wildlife particularly around the kitchen, food storage tents, and incinerator
Wildlife Harassment	• The company will not allow for the harassment of wildlife; wherein harassment includes, but is not limited to ○ Persistently worrying or chasing animals, or disturbing large groups of animals ○ Taunting wildlife ○ Causing physical injury or death • The feeding of wildlife is prohibited, to discourage the development of nuisance wildlife • Pets are prohibited • Employees will undergo Wildlife Safety instruction as part of their orientation, which will encompass Bear awareness, Wildlife feeding, wildlife avoidance and various discouraged behaviors
Ecologically Sensitive Areas	• Every precaution will be taken to avoid disturbing or damaging wildlife sensitive areas such as nesting or breeding sites • Employees will remain on designated trails/roads to minimize disturbance to habitat and possible migratory bird nests
Wildlife Movements	• Measures will be taken to avoid restricting wildlife movement between areas. • Employee movements will be limited to travel to and from work and living quarters along a specified route • Wildlife will be given the right-of-way • Activities will be temporarily suspend if they appear to be interfering with caribou migration or calving until animals have departed
Wildlife Mortality	• All wildlife deaths will be recorded, and reported to supervising officials • All mortalities on site will be removed promptly and disposed of properly to avoid attracting predators

Topics of Concern	Protection Measures
Wildlife Monitoring/Reporting	• A log book will be maintained onsite for the recording and reporting of wildlife sightings • Records will include species, number of individuals, composition of group, location, time and activity engaged in. Sightings of wildlife close to known contaminants will also be reported verbally to an onsite officer to ensure actions can be taken to reduce or prevent wildlife access to these areas • Log books detailing animal sightings will be kept confidential and for official use only • Documented wildlife sightings will be reported to the Department of the Environment on an annual basis • Any unusual behavior by animals must be reported verbally in addition to being recorded in the log book
Hunting and Fishing	• Hunting and fishing by on-site personnel is prohibited, unless proper Nunavut authorizations are acquired.
Weapons and Firearms	• The only weapons or firearms allowed on site are those carried and maintained by company appointed bear monitors
Aircraft	• Aircraft will not fly below 610 m when wildlife are present • Aircraft will maintain a vertical distance of 1,000 m when flying above any groups, or colonies of migratory birds and not land within 1,500 m • Aircraft will not touch down in areas where wildlife are present except in emergencies • Aircraft will avoid passing large gatherings/colonies of waterfowl or seabirds on the seaward side within 3 km of the gathering

Topics of Concern	Protection Measures
Migratory Birds	- Measures taken to protect migratory birds will depend on experience as operations expand. - Any and all nests found with eggs in them, or that are being tended by an adult during the breeding season will be avoided until the young have hatched and left the area of the nest - Any Red Knot sightings, or sightings of other endangered or threatened birds, will be recorded in the log book, and reported to the Canadian Wildlife Service.
Fisheries	- The company will not allow for the deposition of any deleterious substances into the waterbodies, aside from those permitted for tailings use - The company will not allow for any streams or rivers to be obstructed or altered except for those for which permits have been granted - Hunting and fishing by on-site personnel is prohibited, unless proper Nunavut authorizations are acquired.
Bears	- The company will devise a bear awareness program to ensure all project staff are trained in appropriate bear/carnivore detection and deterrent techniques. - All garbage will be collected on a daily basis and disposed of correctly to prevent wildlife from coming in contact with potentially harmful items. All food wastes and debris which can be incinerated will be stored in wildlife proof containers for a short period of time before being incinerated - All petroleum-based products will be made inaccessible to wildlife - Any occurrences of bear or other carnivores being found at the site will be investigated to determine if it was encouraged, or attracted to that location. Upon discovery or the attractant, measures will be taken to mitigate the risk - Employee accommodations will be outfitted with bear deterrent devices which will be maintained in good working order for the duration of the operation.
Caribou	- All Caribou sightings will be reported in the wildlife log book based on the categories listed under Wildlife Monitoring/Reporting - All hunting of Caribou by on-site personnel is prohibited - Caribou are not to be approached except when necessary to discourage them away from potentially harmful locations
Raptors	- All Raptor sightings will be reported in the wildlife log book based on the categories listed under 'Wildlife Monitoring/Reporting' - Raptor nests will be avoided and protected when they are identified - Nests discovered outside of the breeding season will be protected in accordance to the Migratory Bird Act

Topics of Concern	Protection Measures
Bowhead Whales and Marine Mammals	• Marine mammal sightings will be reported in log books kept, with special precedence put on the sightings of at-risk species and specifically the Bowhead whale • Log books will include the addition of a section to record any avoidance behaviour, or lack-there-of an animal
Traditional Use	• Traditional uses of the land will not be discouraged by the company • Hunting and fishing by on-site personnel is prohibited, unless proper Nunavut authorizations are acquired. • Marine hunting activities will be allowed to continue, however the company asks that hunting not occur near the lay-down area or on ice at risk by operations • Traditional Bowhead hunts are fully supported by the company. The company will coordinate activities with community members to ensure a hunting party and project operations do not interfere

APPENDIX

APPENDIX A EXAMPLE WILDLIFE SIGHTINGS LOG SHEET



Roche Bay: Wildlife Observation Log

Date	Time	Species	Number	Location	Animals Activity/Behaviour/Dir ection of travel/other comments	Animal(s) Observed By