

# SCREENING DECISION REPORT NIRB FILE NO.: 08EN043

NIRB File No.: 08EN043 KIA File No.: KVL308C07

May 22, 2008

Mr. Jose Kusugak President Kivalliq Inuit Association Rankin Inlet, NU

E-Mail: jkusugak@kivalliqinuit.ca

Re: Screening Decision for Meliadine Resources Ltd.'s "Meliadine East" Project Proposal

Dear Mr. Jose Kusugak:

The primary objectives of the Nunavut Land Claims Agreement are set out in section 12.2.5 of the Land Claims Agreement. This section reads:

In carrying out its functions, the primary objectives of the Nunavut Impact Review Board (NIRB or Board) shall be at all times to protect and promote the existing and future well-being of the residents and communities of the Nunavut Settlement Area, and to protect the ecosystemic integrity of the Nunavut Settlement Area. NIRB shall take into account the well-being of the residents of Canada outside the Nunavut Settlement Area.

Section 12.4.4 of the Nunavut Land Claim Agreement (NLCA) states:

Upon receipt of a project proposal, NIRB shall screen the proposal and indicate to the Minister in writing that:

- a) the proposal may be processed without a review under Part 5 or 6; NIRB may recommend specific terms and conditions to be attached to any approval, reflecting the primary objectives set out in Section 12.2.5;
- b) the proposal requires review under Part 5 or 6; NIRB shall identify particular issues or concerns which should be considered in such a review;
- c) the proposal is insufficiently developed to permit proper screening, and should be returned to the proponent for clarification; or
- d) the potential adverse impacts of the proposal are so unacceptable that it should be modified or abandoned.

#### NIRB Assessment and Decision

After a thorough assessment of all material provided to the Board (please see Procedural History and Project Activities in **Appendix A**), in accordance with the principles identified within Section 12.4.2 of the NLCA, the decision of the Board as per Section 12.4.4 of the NLCA is:

**12.4.4** (a): the proposal may be processed without a review under Part 5 or 6; NIRB may recommend specific terms and conditions to be attached to any approval, reflecting the primary objectives set out in Section 12.2.5.

# Recommended Terms and Conditions, pursuant to Section 12.4.4(a) of the NLCA

The Board is recommending the following or similar project-specific terms and conditions be imposed upon the Proponent through all relevant legislation:

#### General

- 1. Meliadine Resources Ltd. (the Proponent) shall maintain a copy of the Screening Decision issued by the Nunavut Impact Review Board (NIRB) at the site of operation at all times and shall ensure that all employees/contractors associated with the project are aware of the terms and conditions contained therein.
- 2. The Proponent shall forward copies of all permits required for this project to the NIRB prior to the commencement of the project.
- 3. The NIRB shall be notified of any changes in operating plans or conditions associated with this project prior to any such changes.
- 4. The Proponent shall submit to the NIRB, Kivalliq Inuit Association (KIA) and Government of Nunavut Department of Environment (GN-DOE) a revised Fuel Contingency Plan within 45 days after the date of issuance of this Screening Decision. The Plan will include reference of the comments submitted by the GN-DOE (**Appendix B**).
- 5. The Proponent shall submit a comprehensive annual report to the NIRB, KIA and GN-DOE by March 31<sup>st</sup> of each year. The report must contain, but not be limited to, the following information:
  - a. A summary of activities undertaken for the reporting years, including local hires and initiatives;
  - b. A work plan for the following year;
  - c. A wildlife monitoring report with a "Wildlife Log" to record and map wildlife observations and critical habitats including:
    - Location (i.e., latitude and longitude);
    - Species;
    - Number of animals;
    - Description of the gender and age (young present?) of animals if possible;
    - Description of the animal activity (behavior prior to encounter and response to human presence);
    - Observations and locations of denning, calving areas, caribou crossings, raptor nests;
    - Timing of critical life history events observed such calving, mating, denning, nesting;
    - All potential impacts to wildlife from project activities;
    - All actions / mitigation measures taken to reduce adverse impacts to wildlife; and
    - An analysis of the effectiveness of mitigation measures implemented with regards to wildlife based on the results of the "Wildlife Log".
  - d. Site photos before and after project conduction;
  - e. A summary of how the Proponent has complied with the NIRB terms and conditions contained within this Screening Decision, and the terms and conditions associated with all authorizations for the project.

#### Fuel Storage and Spill Contingency Plan

6. The Proponent shall use self-supporting insta-berms at barreled fuel catch locations, spill kits and drip pans or other similar preventative measures when refueling equipment at the project site.

- 7. The Proponent shall immediately report to the NT/NU 24-hour Spill Line (867) 920-8130, and activate the Spill Contingency Plan upon any spill of fuel or hazardous materials, adjacent to or into a water body, regardless of quantity.
- 8. The Proponent shall remove hydrocarbon contaminated soils from site, and transport and treat contaminated soils at an approved disposal site.

# **Waste Management:**

- 9. The Proponent shall ensure camp sewage is directed to a properly constructed sump instead of relying on a natural depression, unless the depression is situated in such a manner as to ensure sewage does not leach into any surrounding water body.
- 10. The Proponent shall incinerate all combustible and food wastes daily in an appropriate device to ensure the complete combustion of wastes.
- 11. The Proponent is recommended to use a dual chamber, forced-air incinerator for the disposal of combustible camp wastes, and make efforts to comply with *the Canada-Wide Standards for Dioxins and Furans*, and *the Canada-Wide Standards for Mercury Emissions*. Efforts made to achieve compliance shall be reported as part of the annual report.
- 12. The Proponent shall ensure that no waste oil and waste wood treated with preservatives (creosote, pentachlorophenol or heavy metal solutions) will be incinerated on site. All waste oil will be transported off site and disposed of in an approved facility. A waste manifest must accompany the shipment of all waste oil products and all parties must register at GN-DoE with Robert Eno at reno@gov.nu.ca or (867) 975-7748.

#### Wildlife

- 13. The Proponent shall ensure that there is no damage to wildlife habitat in conducting this operation.
- 14. Harassment of wildlife is contrary to the *Wildlife Act*. This includes persistently worrying or chasing animals, or disturbing large groups of animals. Deliberate feeding of any wildlife is absolutely prohibited. The Proponent shall not hunt or fish, unless proper Nunavut authorizations have been acquired
- 15. The Proponent shall ensure that unless there is a specific requirement for low level flights, aircraft 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. It is recommended that aircraft avoid critical and sensitive wildlife areas at all times by choosing alternate flight corridors
- 16. The Proponent shall implement the following mitigation measurements regarding caribou:
  - During the period of May 15 to July 15, when caribou are observed calving in the project area the Proponent shall suspend all operations, particularly overflights by aircraft of less than 300 m above ground, and the use of snowmobiles and ATV's (all-terrain vehicles) outside the immediate vicinity of the camp. Furthermore, following July 15, when caribou with new calves are observed in the area, all project activities shall be suspended.
  - Flights of less than 300 m above ground should be avoided when caribou are in sight of the project area.
  - During caribou migration, the proponent shall not locate or operate so as to block or cause diversion to migrating caribou. The Proponent shall cease activities that may interfere with migration such as airborne geophysics surveys or movement of equipment or personnel, until the caribou have passed.

- 17. The Proponent shall not disturb nesting raptors from April 15 to September 1, keeping at least 1.5 km away from known nest sites when in transit by aircraft and avoiding approaching nests closely while on foot.
- 18. The Proponent should follow procedures outlined in the "Safety in Bear Country Manual", and should contact the Regional Biologist or the Wildlife Manager indicated below for information and advice on measures which should be taken to minimize the possibility of bear-human conflicts. GN wildlife contacts include: Manager: Dan Shewchuck, (867) 857-2828, <a href="description-university description-university left-should-region">description-university left-should-region</a> and should contact the Regional Biologist or the Wildlife Manager indicated below for information and advice on measures which should be taken to minimize the possibility of bear-human conflicts. GN wildlife contacts include: Manager: Dan Shewchuck, (867) 857-2828, <a href="description-university left-should-region-university left-should-region-university left-should-region-university-left-shou

# **Drilling**

- 19. The Proponent is required to use biodegradable and non-toxic additives. The Canadian Environmental Protection Act lists calcium chloride (CaCl) as a toxic substance. The Proponent shall therefore ensure that if CaCl is used as a drill additive, all sumps containing CaCl are properly constructed and located in such a manner as to ensure that the contents will not enter any water body.
- 20. If an artesian flow is encountered, the drill hole will be immediately plugged and permanently sealed.

# **Physical Environment**

- 21. The Proponent shall ensure that all new camp structures are located on gravel, sand or other durable land.
- 22. The Proponent shall not move any equipment or vehicles unless the ground surface is in a state capable of fully supporting the equipment or vehicles without rutting or gouging. The Proponent shall suspend overland travel of equipment or vehicles if rutting occurs.
- 23. The Proponent shall ensure that the land use area is kept clean and tidy at all times.

#### Others

- 24. The Proponent shall adhere to conditions stated in attached **Appendix C:** Archaeological and Palaeontological Resources Terms and Conditions for Land Use Permit Holders.
- 25. The proponent shall endeavor to continue local hiring during the project operation.

# OTHER NIRB CONCERNS AND RECOMMENDATIONS

With respect to NIRB's primary objectives, it is recommended that:

# Kivalliq Inuit Association (KIA)

- KIA imposes strict mitigation measures, conditions and monitoring requirements, pursuant to the Inuit Owned Land Use Permit, which require Meliadine Resources Ltd. to respect the ecosystem in the project area. These mitigation measures, conditions and monitoring requirements should be in regard to:
  - o Wildlife and habitats protection.
  - o Use, storage, handling and disposal of chemicals or toxic materials.
  - o Petroleum fuel storage.

# Government of Nunavut – Department of Environment (GN-DOE)

• The GN-DOE conduct a review of "wildlife log" results following submission of the required annual report and report its findings to NIRB and KIA regarding the possible impacts of the project on

wildlife, as well as any recommendations regarding mitigation measures to minimize the associated impacts.

# Regulatory Requirements

In addition, the Proponent is advised that the following legislation may apply to the project:

- 1. The Proponent shall ensure compliance with the *Fisheries Act* (http://laws.justice.gc.ca/en/showtdm/cs/F-14///en). Section 35(1) of the *Fisheries Act* specifies that unless authorized by federal regulation, no person shall carry on any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat. Section 36(3) of the *Fisheries Act* specifies that unless authorized by federal regulation, no person shall deposit or permit the deposit of a deleterious substance in any type in water frequented by fish or in any place under any conditions where the deleterious substance may enter such a water body.
- 2. The Proponent shall ensure compliance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* which states that "no person shall use, or permit the use of, waters in Nunavut except in accordance with the conditions of a licence," and "no person shall deposit or permit the deposit of waste (a) in waters in Nunavut; or (b) in any other place in Nunavut under conditions in which the waste, or any other waste that results from the deposit of that waste, may enter waters in Nunavut" (http://www.canlii.org/ca/sta/n-28.8/whole.html).
- 3. The *Migratory Birds Convention Act* and *Migratory Birds Regulations* which state that no person disturb or destroy the nests or eggs of migratory birds, and that no person shall deposit or permit to be deposited oil, oil wastes or any other substance harmful to migratory birds in any waters or any area frequented by migratory birds (http://laws.justice.gc.ca/en/showtdm/cs/M-7.01)
- 4. The Species at Risk Act (<a href="http://laws.justice.gc.ca/en/showtdm/cs/S-15.3">httached in Appendix D</a> is a list of Species at Risk in Nunavut. The Proponent should consult the Species at Risk Public Registry (<a href="http://www.sararegistry.gc.ca/">http://www.sararegistry.gc.ca/</a>) to identify any Species at Risk within the project location. Further, the Proponent shall develop monitoring plans for each relevant Species at Risk in accordance with any applicable status reports, recovery strategies, action plans, and management plans posted on the Species at Risk Public Registry and in consultation with the Government Organization with Primary Management Responsibility. Monitoring plans should record the locations and frequency of observing species of special concern and note any actions taken to avoid contact or cause disturbance to the species, its residence, or its critical habitat.
- 5. The *Transportation of Dangerous Goods Regulations*, *Transportation of Dangerous Goods Act* (<a href="http://www.tc.gc.ca/tdg/menu.htm">http://www.tc.gc.ca/tdg/menu.htm</a>), and the *Environmental Protection Act* (<a href="http://laws.justice.gc.ca/en/C-15.31/text.html">http://laws.justice.gc.ca/en/C-15.31/text.html</a>) which present the requirements for the handling, storing, managing and transportation of dangerous goods, including hazardous wastes, fuel and contaminated material. The Proponent must ensure that proper shipping documents accompany all movements of dangerous goods. The Proponent must register with GN-DOE by contacting Robert Eno at 867-975-7748 or reno@gov.nu.ca.
- 6. The *Nunavut Wildlife Act* contains provisions to protect and conserve wildlife and wildlife habitat, including specific protection measures for wildlife habitat and species at risk.
- 7. Aeronautics Act (<a href="http://laws.justice.gc.ca/en/A-2/">http://laws.justice.gc.ca/en/A-2/</a>) which is concerned with the regulation and supervision of aeronautic matters such as aerodrome certification, pilots, aircraft, operations, safety, construction and maintenance of airports.

# **Validity of Land Claims Agreement**

*Section 2.12.2* 

Where there is any inconsistency or conflict between any federal, territorial and local government laws, and the Agreement, the Agreement shall prevail to the extent of the inconsistency or conflict.

Dated May 22, 2008 at Sanikiluaq, NU.

Lucassie Arragutainaq, Chair

#### APPENDIX A

# **Procedural History**

On April 7, 2008 the Nunavut Impact Review Board (NIRB or Board) received Meliadine Resources Ltd.'s (Meliadine Resources) *Meliadine East* Project Proposal from the Kivalliq Inuit Association (KIA). Also on April 7, the NIRB received a positive conformity determination (Keewatin Regional Land Use Plan) from the Nunavut Planning Commission for this project proposal. The NIRB has assigned this project proposal file number **08EN043**.

Upon a preliminary completeness check, NIRB determined that there was insufficient information to conduct a Part 4 screening. On April 11, 2008 NIRB requested Meliadine Resources provide further information on or before April 18, 2008, and additional information was provided by April 23, 2008.

On April 23, 2008 the project proposal was distributed to the communities of Hamlet of Rankin Inlet as well as interested Federal and Territorial Agencies and Inuit Organizations for comments by May 14, 2008.

On or before May 14, 2008, the NIRB received comments from the following parties:

- Government of Nunavut, Department of Environment (GN-DOE)
- Kangiqliniq HTO (Rankin Inlet )

All comments provided to NIRB regarding this project proposal can be viewed on NIRB's ftp-site, at the following location <a href="ftp-nirb.ca">ftp.nirb.ca</a> - /SCREENINGS/COMPLETED SCREENINGS/2008 SCREENINGS/08EN043-Meliadine Resources Ltd

# **Project Activities**

This project is located in the Keewatin Region of Nunavut, 15 km north of the Hamlet of Rankin Inlet. The purpose of the proposed diamond drilling program is designed to expand the size of the deposit and to increase the confidence on the Discovery deposit area of Meliadine East property. The proposed project would be conducted from June to September in 2008 and 2009.

The project proposal includes the following activities/components:

- Campsite renovation (operation was authorized by KIA Land Lease KVL204J31);
- Helicopter operation for drop-offs and pick-ups of site personnel and site supplies;
- Geological mapping and prospecting:
- Diamond drilling (20-30 holes, approximately 4000 m);
- Fuel storage;
- Waste disposal; and
- Drill site restoration upon the close of the field season.

# APPENDIX B Comments from Government of Nunavut – Department of Environment



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Department of Environment

Ministère de l'Environnement

May 14, 2008

Leslie Payette Manager Environmental Administration Nunavut Impact Review Board

via Email to: | lpayette@nirb.ca

# RE: NIRB FILE # 08EN043 – Meliadine Resources Ltd. – Meliadine East Gold Exploration Project

Dear Ms. Payette:

The Government of Nunavut, Department of Environment (DOE) has reviewed the project proposal from Meliadine Resources Ltd. for the Meliadine East Gold Exploration Project and camp operation 15 km north of Rankin Inlet. The DOE believes the project will not result in significant adverse effects although the potential for negative environmental impacts exists. The DOE therefore requests that the proponent implements the following recommendations based on the *Environmental Protection Act* and the *Wildlife Act* regarding spill contingency, abandonment & restoration, and wildlife.

# A. ABANDONMENT AND RESTORATION

# 1. Solid Waste Management

The proponent indicated open burning of wood wastes in Section 2.3.4 and 3.3 of the Abandonment & Restoration Plan. The DOE would like to state that open burning remains a last option for the management of solid waste (i.e., untreated wood) unless the proponent fails to identify a feasible and practical alternative. In general, proponents are required to comply with the *Canada-Wide Standards for Dioxins and Furans*, and the *Canada-Wide Standards for Mercury Emissions* (details provided below), for management and incineration of municipal or camp wastes. If open burning is to be carried out due to lack of other appropriate options, the proponent is required to follow the procedures below in consistent with DOE policy titled: *Municipal Solid Wastes Suitable for Open Burning*.

- The principle of source reduction should be utilized to reduce, reuse and recycle materials otherwise bound for landfill.
- Solid wastes that are conditionally suitable for open burning are paper products, paperboard packing and <u>untreated wood wastes</u> only. Other



wastes such as hazardous wastes should be contained in a designated area and be managed appropriately.

- The appropriate materials are segregated and burned in a controlled manner and at a controlled site.
- Standard burning conditions shall apply, such as burning on days where winds are light and blowing away from any nearby community/camp.
- Materials are burned in manageable volumes so that fires do not get out of control.

# 2. Final Inspections

Final inspections of the entire site should be conducted by the proponent and lead agency to make sure that all areas of the site have been reclaimed as much as possible to its previous condition. Soil samples and pictures before and after the project would make this process easy on the proponent and leading agencies involved in determining areas of concern.

# 3. Drill Sumps

The sumps should only be used for inert drilling fluids, not any other materials or substances. The sumps should be properly closed out.

#### 4. Incineration

The Government of Nunavut is a signatory to the *Canada-Wide Standards for Dioxins and Furans*, and the *Canada-Wide Standards for Mercury Emissions*. DOE therefore has the following comments to make regarding air emission from incineration of camp wastes.

For a camp of 15-20 people as proposed, the proponent shall apply appropriate technologies to ensure complete combustion of wastes, and the use of a dual chamber, forced-air incinerator is recommended. The proponent shall make determined efforts to achieve compliance with the Canada-wide Standards. Efforts should include the implementation of a comprehensive waste management strategy (especially waste segregation) that is designed to reduce and control the volumes of wastes produced, transported, and disposed of.

Waste wood treated with preservatives such as creosote, pentachlorophenol or heavy metal solutions should not be burned. Additionally, plastics, electrical wire, asbestos and building demolition wastes (except clean wood) are wastes likely to produce dioxins and furans when burned and should be excluded from incineration. Lastly, incineration of hazardous wastes is strongly discouraged.



# **B. SPILL CONTINGENCY PLAN**

Based on DOE's Spill Contingency Planning and Reporting Regulations, and Contingency Planning and Spill Reporting in Nunavut: a Guide to the New Regulations, DOE recommends the following:

# 1. General

- The name, job title and <u>24 hour telephone number</u> for the persons responsible for activating the contingency plan should be included in the plan. This ensures the employee discovering the spill can activate a response and provides a 24 hour point of contact for the authority investigating the spill.
- The DOE contact number listed in the spill plan is inaccurate. The correct number is (867) 975-7700. Please update the list to include the Manager of Pollution Control at DOE (867) 975-7748, as well.
- A site map that is intended to illustrate the facilities relationship to other areas that may be affected by the spill should be included. The map should be to scale and be large enough to include the location of your facility, nearby buildings or facilities, roads, culverts, drainage patters, and any nearby bodies of water.
- The DOE monitors the movement of hazardous wastes, from generators, carriers to receivers of the wastes, through the use of a tracking document known as a Waste Manifest. A Waste Manifest must accompany all movements, and all parties must register with DOE by contacting Robert Eno at (867)975-7748 or <a href="mailto:reno@gov.nu.ca">reno@gov.nu.ca</a>. This procedure should be discussed in the spill plan.

# 2. Fuel Storage

To prevent spreading in the event of a spill, fuel stored in drums should be located, whenever practical, in a natural depression a minimum distance of 90 feet from all streams, preferably in an area of low permeability. All fuel storage containers should be situated in a manner that allows easy access and removal of containers in the event of leaks or spills. Large fuel caches in excess of 20 drums should be inspected daily.

# 3. Chemical Storage

All chemicals should be stored in a safe and chemically-compatible manner a minimum of 90 feet from all bodies of water. The applicant should be required to remove unused chemicals for reuse or disposal to an approved site using methods approved by the Land Use Inspector. Material safety data sheets (MSDS) should be provided for each chemical and be posted in a central location; accessible by all camp personnel. Camp personnel should be



conversant in the handling of these chemicals as well as able to deal with any accidents or spills.

# 4. Location of Hazardous Materials

Hazardous materials stored on-site should be marked so they will be visible under all conditions, in all seasons. This recommendation is intended to help prevent possible injuries to camp personnel and/or damage to the containers. Unless otherwise specified by the land use inspector or license -issuing agency, all hazardous materials should be removed from the site upon completion of the activity. The proponent is referred to DoE's *Environmental Guideline for the General Management of Hazardous Waste*.

# C. WILDLIFE

The project is located in an area where caribou, carnivores and raptors may be encountered. To prevent and minimize project related impacts on wildlife, it is important that the proponent is aware of the types of wildlife species, their distribution and their abundance in the project area, prior to the start of the project. DOE therefore asks the proponent records all wildlife observations in a 'wildlife log', and maps the location of any sensitive wildlife sites such as denning sites, calving areas, caribou crossing sites, and raptor nests. The timing of critical life history events (i.e., calving, mating, denning and nesting) should also be identified. Additionally, the proponent should indicate potential impacts from the project, and ensure that operational activities are managed and modified to avoid impacts on wildlife and sensitive sites; the log and maps will be a useful tool to achieve this. Below are wildlife specific recommendations that DOE advises the proponent to implement.

#### 1. Caribou

- During the period of May 15 to July 15 when caribou are observed with calves in the area, the proponent should suspend all operations, particularly blasting, overflights by aircraft of less than 610 m above ground, and the use of snowmobiles and ATV's (all-terrain vehicles) outside the immediate vicinity of the camp.
- Flights of less 610 m above ground should be avoided when caribou are in sight of operation.
- During caribou migration, the proponent shall not locate and operate so as to block or cause diversion to migrating caribou. The proponent shall cease activities that may interfere with migration such as airborne geophysics surveys or movement of equipment or personnel, until the caribou have passed.



 Between May 15 and Sep. 1, the proponent shall not construct any camp, cache any fuel, conduct blasting or drilling operations, operate ground, air or water based mobile equipment, including geophysics surveys, within 10 km of caribou crossings.

# 2. Human-carnivores conflicts

It is likely that during operations the proponent will encounter bears, wolves, foxes and wolverines. The proponent is advised to minimize odors that potentially attract carnivores through timely camp housekeeping and bearproof storage of food and food waste. Should the proponent experiences any interaction with carnivores, they are advised to contact the local Conservation Officer. All camp members should be fully aware and trained in the human - bear/wolf/fox/wolverine encounter avoidance plans especially in avoidance of any feeding (advertently or inadvertently by leaving food out) of these species. The proponent must discourage food conditioning of all wildlife species, negative reinforcement is encouraged.

The proponent should take all possible measures to avoid wildlife encounters, specifically bears. These measures include use of an alarmed trip wire around the site perimeter and wildlife monitors. DOE requests that wildlife monitors working for the proponent carry shot guns and have cracker shells, rubber bullets, and bean bag rounds available to use as deterrents. The proponent should follow procedures outlined in the "Safety in Bear Country Manual", and should contact the Regional Biologist or the Wildlife Manager indicated below for information and advice on measures which should be taken to minimize the possibility of bear-people conflicts.

# 3. Raptor Nesting Areas

Raptor nests occur throughout Nunavut, and most of the prospecting areas likely contain at least a few nest sites. The proponent should not disturb nesting raptors from 15 April to 1 September by staying at least 1.5 km away from them when in transit by aircraft and by avoiding approaching them closely while on foot.

The following is a list of general precautions that must be considered when conducting prospecting activities near Peregrine Falcon, Gyrfalcon, and other raptor nests (most of these precautions will also apply to all nesting bird species):

 Disturbance is most harmful early in the nesting period (May and June for Peregrine Falcon and Gyrfalcon, similar for Rough-legged Hawk): raptors will attempt to maximize their chances of successfully raising young. If they decide early in the breeding period that their nest is at risk, they may abandon it. If nests are disturbed at this stage of nesting, there may not be sufficient time to renest. All disturbances to nests during the early part of



the nesting cycle must be avoided (avoid nest sites from late May through to mid-July).

Individuals show variability in their response to disturbance: Different birds will show different responses to varying levels of disturbance. This may result from the general health of the bird, weather conditions, previous life experiences, and adaptability. Therefore, treat all nest sites with equal precaution, regardless of the response of the bird. Do not disturb raptor nests during conditions of poor weather (rain, snow, high winds).

Approaching the nest site near the time of fledgling (where chicks fly away from the nest) often leads to premature nest departure: During the last few weeks of nesting, severe disturbance at the nest often causes young raptors to jump out of the nest. This can cause death from exposure, predation, starvation, or trauma from the fall itself. All activity within 100m of a nest site during the latter part of the nest stage (10-20 August for peregrine falcons in this region) must be avoided.

#### 4. Aircraft Disturbance

Aircraft activities have been shown to affect wildlife such as caribou, muskoxen and birds in behaviour, development and reproductive success as well as subject the wildlife to adverse weather conditions and accidental damage or injury. However, by raising flight altitudes, studies have shown that it will alleviate some of the negative effects. Therefore, DOE recommends that the following protection measures are taken to reduce aircraft disturbance on wildlife.

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. As a good practice, it is recommended to avoid critical and sensitive wildlife areas at all times by choosing alternate flight corridors.

# 5. Recording Wildlife Observations and Critical Habitat

DOE requests the proponent records and reports wildlife observations near the project area annually to a Regional Wildlife Biologist at the end of the operational season. This information will inform workers the kinds of wildlife present on site, prepare them for wildlife encounter, and allow them to modify activities accordingly to avoid wildlife. Additionally, this will assist the government and the applicant with collection of wildlife data. The reports should include location (i.e., latitude and longitude), species, number of animals, a description of the animal activity, and a description of the gender and age of animals if possible. It is important to record the presence and number of animals as well as any young



observed. For example, observations of wolves and their young during the summer will be an indicator of denning in the proximity.

# 6. DOE Contact (Wildlife Division)

# **Kivalliq Region**

Manager, Wildlife

-Dan Shewchuck, (867) 857-2828, dshewchuk@gov.nu.ca

Biologist, Kivalliq Region

-Mitch Campbell, (867) 857-2828, mcampbell@gov.nu.ca

The DOE thanks NIRB for the opportunity to provide comments on the project proposal from the Meliadine Resources Ltd. Please contact us if you have further questions.

Yours sincerely,

# Original signed by

Froeydis Reinhart Coordinator/Scientist, Environmental Assessment Department of Environment Government of Nunavut P.O. Box 1000, Stn. 1360 Iqaluit, Nu X0A 0H0

PH: (867) 975-7735 FX: (867) 975-7739

EM: freinhart@gov.nu.ca



#### APPENDIX C

Government of Nunavut – Department of Culture, Language, Elders and Youth Standard Terms and Conditions



#### **BACKGROUND**

Archaeology

As stated in Article 33 of the Nunavut Land Claims Agreement:

The archaeological record of the Inuit of Nunavut is a record of Inuit use and occupancy of lands and resources through time. The evidence associated with their use and occupancy represents a cultural, historical and ethnographic heritage of Inuit society and, as such, Government recognizes that Inuit have a special relationship with such evidence, which shall be expressed in terms of special rights and responsibilities. [33.2.1]

The archaeological record of Nunavut is of spiritual, cultural, religious and educational importance to Inuit. Accordingly, the identification, protection and conservation of archaeological sites and specimens and the interpretation of the archaeological record is of primary importance to Inuit and their involvement is both desirable and necessary. [33.2.2]

In recognition of the cultural, spiritual and religious importance of certain areas in Nunavut to Inuit, Inuit have special rights and interests in these areas as defined by Article 33 of the Nunavut Land Claims Agreement. [33.2.5]

# Palaeontology

Under the Nunavut Act<sup>1</sup>, the federal government can make regulations for the protection, care and preservation of palaeontological sites and specimens in Nunavut. Under the *Nunavut Archaeological and Palaeontological Sites Regulations*<sup>2</sup>, it is illegal to alter or disturb any palaeontological site in Nunavut unless permission is first granted through the permitting process.

# **Definitions**

As defined in the *Nunavut Archaeological and Palaeontological Sites Regulations*, the following definitions apply:

"archaeological artifact" means any tangible evidence of human activity that is more than 50 years old and in respect of which an unbroken chain of possession or regular pattern of usage cannot be demonstrated, and includes a Denesuline archaeological specimen referred to in section 40.4.9 of the Nunavut Land Claims Agreement.

"palaeontological site" means a site where a fossil is found.

#### "fossil" includes:

- (a) natural casts
- (b) preserved tracks, coprolites and plant remains; and
- (c) the preserved shells and exoskeletons of invertebrates and the eggs, teeth and bones of vertebrates.

#### **Terms and Conditions**

- 1) The permittee shall not operate any vehicle over a known or suspected archaeological or palaeontological site.
- 2) The permittee shall not remove, disturb, or displace any archaeological artifact or site, or any fossil or palaeontological site.
- 3) The permittee shall immediately contact the Department of Culture, Language, Elders and Youth (867) 934-2046 or (867) 975-5500 or 1 (866) 934-2035 should an archaeological site or specimen, or a palaeontological site or fossil be encountered or disturbed by any land use activity.
- 4) The permittee shall immediately cease any activity that disturbs an archaeological or palaeontological site encountered during the course of a land use operation, until permitted to proceed with the authorization of the Department of Culture, Language, Elders and Youth, Government of Nunavut.
- 5) The permittee shall follow the direction of the Department of Culture, Language, Elders and Youth and DIAND in restoring disturbed archaeological or palaeontological sites to an acceptable condition.
- 6) The permittee shall provide all information requested by the Department of Culture, Language, Elders and Youth concerning all archaeological sites or artifacts and all palaeontological sites and fossils encountered in the course of any land use activity.
- 7) The permittee shall make best efforts to ensure that all persons working under authority of the permit are aware of these conditions concerning archaeological sites and artifacts, and palaeontological sites and fossils.
- 8) The permittee shall avoid the known archaeological and/or palaeontological sites listed in Attachment 1.

- 9) The permittee shall have an archaeologist or palaeontologist perform the following functions, as required by the Department of Culture, Language, Elders and Youth:
  - a) survey
  - b) inventory and documentation of the archaeological or palaeontological resources of the land use area
  - c) assessment of potential for damage to archaeological or palaeontological sites
  - d) mitigation
  - e) marking boundaries of archaeological or palaeontological sites
  - f) site restoration

The Department of Culture, Language, Elders and Youth shall authorize by way of a Nunavut Archaeologist Permit or a Nunavut Palaeontologist Permit, all procedures subsumed under the above operations.

# APPENDIX D

# Species at Risk in Nunavut

This list includes species listed on one of the Schedules of SARA (*Species at Risk Act*) and under consideration for listing on Schedule 1 of SARA. These species have been designated as at risk by COSEWIC (Committee on the Status of Endangered Wildlife in Canada). This list may not include all species identified as at risk by the Territorial Government.

- Schedule 1 is the official legal list of Species at Risk for SARA. SARA applies to all species on Schedule 1. The term "listed" species refers to species on Schedule 1.
- Schedule 2 and 3 of SARA identify species that were designated at risk by the COSEWIC prior to October 1999 and must be reassessed using revised criteria before they can be considered for addition to Schedule 1.
- Some species identified at risk by COSEWIC are "pending" addition to Schedule 1 of SARA. These species are under consideration for addition to Schedule 1, subject to further consultation or assessment.

Schedules of SARA are amended on a regular basis so it is important to periodically check the SARA registry (<a href="www.sararegistry.gc.ca">www.sararegistry.gc.ca</a>) to get the current status of a species.

Updated: January 3, 2007

	COCENHO		Government Organization
	COSEWIC		with Lead Management
Species at Risk	Designation	Schedule of SARA	Responsibility <sup>1</sup>
Eskimo Curlew	Endangered	Schedule 1	EC
Ivory Gull	Endangered <sup>2</sup>	Schedule 1	EC
Peregrine Falcon	Threatened	Schedule 1	Government of Nunavut
(subspecies anatum)			
Ross's Gull	Threatened	Schedule 1	EC
Harlequin Duck	Special Concern	Schedule 1	EC
(Eastern population)			
Felt-leaf Willow	Special Concern	Schedule 1	Government of Nunavut
Peregrine Falcon	Special Concern	Schedule 3	Government of Nunavut
(subspecies tundrius)			
Short-eared Owl	Special Concern	Schedule 3	Government of Nunavut
Fourhorn Sculpin	Special Concern	Schedule 3	DFO
Peary Caribou	Endangered <sup>3</sup>	Pending	Government of Nunavut
Beluga Whale	Endangered	Pending	DFO
(Eastern Hudson Bay			
population)			
Beluga Whale	Threatened	Pending	DFO
(Cumberland Sound			
population)			
Beluga Whale	Special Concern	Pending	DFO

(Western Hudson Bay population)			
Beluga Whale	Special Concern	Pending	DFO
(Eastern High Arctic –			
Baffin Bay population)			
Bowhead Whale	Threatened <sup>4</sup>	Pending	DFO
(Hudson Bay-Foxe			
Basin population)			
Bowhead Whale	Threatened <sup>4</sup>	Pending	DFO
(Davis Strait-Baffin			
Bay population)			
Porsild's Bryum	Threatened	Pending	Government of Nunavut
Atlantic Walrus	Special Concern	Pending	DFO
Narwhal	Special Concern	Pending	DFO
Rusty Blackbird	Special Concern	Pending	Government of Nunavut
Barren-ground	Special Concern <sup>3</sup>	Pending	Government of Nunavut
Caribou (Dolphin and			
Union population)			
Grizzly Bear	Special Concern	Pending	Government of Nunavut
Polar Bear	Special Concern	Pending	Government of Nunavut
Wolverine (Western Population)	Special Concern	Pending	Government of Nunavut

<sup>&</sup>lt;sup>1</sup> Environment Canada has a national role to play in the conservation and recovery of Species at Risk in Canada, as well as responsibility for management of birds described in the Migratory Birds Convention Act (MBCA). Day-to-day management of terrestrial species not covered in the MBCA is the responsibility of the Territorial Government. Populations that exist in National Parks are also managed under the authority of the Parks Canada Agency. EC = Environment Canada, DFO = Department of Fisheries and Oceans

<sup>&</sup>lt;sup>2</sup> Designated as Endangered by COSEWIC in April 2006 and it is expected that the category of concern in SARA will also be changed from Special Concern to Endangered.

<sup>&</sup>lt;sup>3</sup> Peary Caribou was split into three separate populations in 1991: Banks Island (Endangered), High Arctic (Endangered) and Low Arctic (Threatened) populations. The Low Arctic population also included the Barren-ground Caribou - Dolphin and Union population. In May 2004 all three population designations were de-activated, and the Peary Caribou, Rangifer tarandus pearyi, was assessed separately from the Barren-ground Caribou (Dolphin and Union population), Rangifer tarandus groenlandicus. The subspecies pearyi is composed of a portion of the former "Low Arctic population" and all of the former "High Arctic" and "Banks Island" populations, and it was designated Endangered in May 2004. Although SARA lists Peary Caribou on Schedule 2 as three separate populations, the most current designation is the COSEWIC designation of the subspecies pearyi as Endangered.

<sup>&</sup>lt;sup>4</sup> The "Eastern and Western Arctic populations" of Bowhead Whale were given a single designation of Endangered in April 1980 by COSEWIC. These were split into two populations to allow separate designations in April 1986. The Eastern population was not re-evaluated in April 1986, but retained the Endangered status of the original "Eastern and Western Arctic populations". The Eastern Arctic population was further split into two populations (Hudson Bay-Foxe Basin population and Davis Strait-Baffin Bay population) in May 2005, and both these populations were designated as Threatened. Both these populations are under consideration for addition to Schedule 1. Although SARA lists the Eastern Arctic population as Endangered (Schedule 2), the most current designation is the COSEWIC designations of the Hudson Bay-Foxe Basin and Davis Strait-Baffin Bay populations as Threatened.