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http://www.enr.gov.nt.ca/sites/default/files/web_pdf_wd_bear_safety_brochure_1_may_2015.pdf.

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APPENDIX A: PREVIOUSLY-SCREENED PROJECT PROPOSALS

The original project proposal (NIRB File No. 11EN010), was received by the NIRB from Agnico Eagle Mines Ltd. (now Agnico Eagle Mines Ltd.; Agnico Eagle) for a Class A Land Use Permit (LUP) with Indian and Northern Affairs Canada (INAC; now Indigenous and Northern Affairs Canada) for the “Pipe Dream Winter Road and Mining Exploration” project proposal. On March 10, 2011 the NIRB received a positive conformity determination (Keewatin Regional Land Use Plan) from the Nunavut Planning Commission (NPC) for this file. Finally, on March 15, 2011 INAC referred Agnico Eagle’s “Pipe Dream Winter Road and Mining Exploration” project proposal to the NIRB for screening. The project proposal was screened by the Board in accordance with Part 4, Article 12 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada* (Nunavut Agreement). On April 21, 2011 the NIRB issued a Nunavut Agreement 12.4.4(a) screening decision to the Minister of Indian and Northern Affairs which indicated that the proposed project could proceed subject to the NIRB’s recommended project-specific terms and conditions.

Agnico Eagle’s original “Pipe Dream Winter Road and Mining Exploration” project was located within the Kivalliq region, on two (2) properties: the Meadowbank Exploration Project area, approximately 90 kilometers (km) north of the Hamlet of Baker Lake and the Greyhills Exploration Project area, approximately 43 km northeast of the Hamlet of Baker Lake. The Proponent indicated that it intended to continue conducting exploration activities, and construct and operate a winter road network near the Meadowbank project area.

These proposed activities were located near the Meadowbank Exploration Camp, which was included within the scope of the NIRB’s Review of the Meadowbank Gold Mine project (File No. 03MN107) that had been permitted to proceed pursuant to the NIRB’s Project Certificate No. 004 issued December 30, 2006. Following an evaluation of the project scope, the NIRB determined that the “Pipe Dream Winter Road and Mining Exploration” project activities were not included within the scope of the Board’s previous Review of the Meadowbank Gold Mine Project and as such, these activities were treated as a new project subject to screening in accordance with Article 12 of the Nunavut Agreement.

According to the previously screened project proposal, the scope of the project included the following undertakings, works or activities:

- Construction and operation of winter road network, approximately 26.5 km in length:
 - Originating at the Meadowbank Exploration Camp at km 100 of the Meadowbank All Weather Private Access Road,
 - Maximize passage over frozen lakes,
 - Preparation include removal of snow from lake ice without flooding;
- Approximately 13,000 metres (m) total on land and on ice diamond (exploration) drilling on Inuit Owned Land and Crown land at the Meadowbank and Greyhills Exploration Projects:
 - Approximately 78 drilling sites located within 19 different areas (areas to be connected via proposed winter road);
- Geological mapping, prospecting, some trenching, geophysical surveying;

- Access via winter road, supported by helicopter;
- Project personnel based out of the Meadowbank Exploration Camp (NIRB File No. 03MN107); and,
- Transportation of fuel and chemical materials on an as-needed basis to support drilling activities.

Additional authorization and extension requests associated with the “Amaruq Exploration” project previously known as “Pipe Dream Winter Road and Mining Exploration” project have also been reviewed by the NIRB following screening of the original project proposal (File No. 11EN010). In each instance where the NIRB received applications up to and including June 2014, the NIRB confirmed that the application was exempt from the requirement for further screening pursuant to Section 12.4.3 of the Nunavut Agreement and that the activities therein remained subject to the terms and conditions recommended in the original April 21, 2011 Screening Decision Report. On February 10, 2015, after receiving an application for additional activities at site, the NIRB issued additional terms and conditions associated with the “Amaruq Winter Access” project. On November 4, 2015 after receiving an application for additional activities at site, the NIRB issued additional terms and conditions associated with the “Amaruq Exploration Access Road” project. The following is a summary of the previously screened project activities:

The scope of the activities and components associated with the previous August 10, 2011 Nunavut Water Board (NWB) Type “B” Water Licence (No. 2BE-MEA0813) amendment application included:

- Conducting drilling activities within the 30 m high water mark of proximal water bodies; and
- Disposal of all drill waste a minimum of 30 m from the ordinary water mark of proximal water bodies.

The Proponent’s March 22, 2012 application to amend its AANDC (Aboriginal Affairs and Northern Development Canada; now renamed INAC) Land Use Permit (No. N2011C0010) included a request to conduct exploration activities on additional Crown land from April 2012 to August 2014 and included the following components:

- Approximately 30 drill sites per year for a total of 60 sites;
- Drilling to be conducted on land and on ice, with sites located approximately 15 km northwest and up to 20 km northeast of the previously permitted exploration sites (NIRB File No. 11EN010).

The Proponent’s May 29, 2012 application for a new KIA Land Use Licence (No. KVL312C03) proposed additional exploration activities associated with its “IVR property” to take place on Inuit Owned Lands, approximately 50 kilometres northwest of the Meadowbank Mine site. The activities and components were determined to be related to the NIRB’s 11EN010 screening, and included:

- Prospecting, geophysical work, and soil sampling;
- Trenching to enhance surface rock exposure for geological mapping and channel sampling (4 to 8 trenches);

- On-land and on-ice drilling of approximately 30 or more holes per year (dependent upon results obtained);
- Short term storage of fuel and chemicals at drill sites, including diesel, gasoline and propane;
- Transportation of personnel, fuel and equipment to exploration sites via helicopter;
- Use of water for drilling activities as permitted under the amended Type “B” Water Licence; and,
- Backhaul of any waste produced to the Meadowbank mine site for disposal (NIRB File No. 03MN107); and
- Use of Meadowbank Exploration Camp (NIRB File No. 03MN107).

The activities and components associated with the previous January 21, 2013 Type “B” Water licence (*associated* NIRB File No. EX160; NWB File No. 2BE-MEA0813) amendment included a request to add two (2) exploration areas to the licence: “IVR Exploration” and “south Meadowbank area”.

The Proponent requested a two (2) year extension to its AANDC Land Use Permit (No. N2011C0010) in the May 23, 2013 extension application, to continue land use operations.

The Proponent’s March 27, 2014 application for an amendment to its project and a new AANDC Land Use Permit (No. N2013F0030) included additional activities and components:

- Development and operation of a winter access road, approximately 53 km in length from the Meadowbank mine site to the IVR Exploration site;
 - Winter road mostly located on lakes with 9 km located on land;
 - No use of water for preparation of winter road;
- Use of winter access road to transport material, equipment and fuel for exploration activities;
- Archaeological investigation to be conducted in the summer of 2014.

In addition, Agnico Eagle’s June 27, 2014 Type “B” Water Licence (*associated* NIRB File No. EX211; NWB File No. 2BE-MEA1318) amendment application included the establishment of a 50 person temporary exploration camp consisting of 12 tents.

The Proponent’s November 18, 2014 applications for an amendment to its project and a Land Use Licence (No. KVCL314C01) included the following additional activities and components:

- Amendments under Agnico Eagle’s Land Use Permit (No. N2013F0030) with AANDC included:
 - Development and operation of an alternative winter access road, approximately 79 kilometres in length and 5 metres (m) wide, from the Meadowbank mine site to the Amaruq (IVR) exploration area to transport materials, equipment and fuel for exploration activities;
 - Winter road mostly located on lakes with 7 km located on land with a total area of 3.5 hectares;
 - Winter access road to be used from February to May with approximately 4 trips per day;

- No use of water for preparation of winter road;
 - Archaeological investigation of the proposed winter access route to be completed in the summer of 2015.
- Amendments under Agnico Eagle's NWB Water Licence (No. 2BE-MEA1318) included:
 - Potential installation of an airstrip approximately 15 m wide and 500 m long at the south side of the proposed exploration camp using gravel from an esker near proposed location;
 - Potential transportation of materials, drills and personnel between the Meadowbank and Amaruq sites via airplane;
 - Installation of accommodations trailers for up to 60 personnel;
 - Storage of fuel (diesel, gasoline, aviation fuel, and propane) and hazardous materials and chemicals (oil, glycol, and grease) in double-walled tanks and/or drums stored in lined berms;
 - Installation of a "Bionest" water treatment system to treat sewage and grey water before discharge into the environment;
 - Accumulated sludge (solid materials) to be disposed of in a pit near the site biennially (every two (2) years) and treated with lime and covered with a minimum of 30 centimetres (cm) of compacted soil;
 - Potential alternative disposal of grey water in a sump to be released to the environment following treatment;
 - Incineration of combustible solid waste;
 - Non-combustible solid waste including scrap metal, hazardous waste, contaminated soil and snow to be transported to an approved facility;
 - Empty barrels to be reused or transported to a recycling facility via barge;
 - Total water consumption of 299 cubic metres (m³/day) for all project related activities (including camp and drill activities).
 - Additional water consumption of 30 cubic m³/day to be used for drilling activities for a total 280 m³/day; and
 - Additional water consumption for domestic use of 10 m³/day to be used for a total of 19 m³/day.
- The new Commercial Lease with the KIA (No. KVCL314C01) included the following activities:
 - Camp construction, including installation of accommodations trailers, construction of a garage and gravel pad, and installation of a Bionest waste water treatment system;
 - Camp to be re-opened February 2015;
 - Use and construction of two (2) gravel pits;
 - Construction of gravel roads to support exploration, approximately 5 m wide and 0.40 m thick, within the KIA commercial lease area;
 - Drilling activities to commence March 2015, with up to 6 drills anticipated to be in operation for the 2015 season;
 - Storage capacity of 400,000 Litres (L) with tanks to be refilled during the winter season;
 - Installation of 9 - 55,000 Litre (L) and 2 – 100,000 L double-walled tanks;

- Continuation of archaeological investigations in the Amaruq region;
- Additional water use for drilling activities as permitted under the amended NWB Type “B” water licence.

The Proponent’s July 16, 2015 applications for amendments and new permits to its project included new AANDC LUP (No N2015F0026), new KIA Land Use Licence (Nos. KVRW1501 & KVCA15Q02) and new NWB Type “B” water licence (NWB File No.: 8BC-AEA1525) and included the following additional activities and components:

- Development of a private single lane, all-season exploration access road linking the Meadowbank mine site to the Amaruq exploration project site to facilitate year round exploration operations including transport of fuel, equipment and personnel to site and include the items listed below. The road will traverse approximately 40 km on Crown Land with the remaining 22.5 km on Inuit Owned Land (IOL).
 - All-season access road to be 62.5 kilometres (km) long and 6.5 metres wide;
 - Installation of three (3) bridges;
 - Installation of eight (8) large open bottomed arch culverts;
 - Installation of twenty-eight (28) corrugated round culverts;
 - Development of six (6) spur roads to access six (6) of the seven (7) eskers to be used for borrow pits;
 - Development of pullouts approximately every 400 ± 50 m to accommodate two (2) road traffic;
- Use of non-potentially acid generating (NPAG) waste rock from the Vault Pit as quarry material to construct first 17 km of road;
- Use of seven (7) eskers for borrow material to build remainder of road;
- Transportation of materials, equipment and fuel for construction activities;
- Storage and use of fuel in double-walled tanks along the road to distribute fuel to equipment;
- Construction crew to be accommodated at existing and approved Agnico Eagle facilities;
- Additional archaeological studies to be conducted prior to construction of road; and
- Winter road not expected to continue to be used once the single lane access road has been developed.

The Proponent’s May 12, 2016 project proposal included the following additional activities and components:

- Construction of the new infrastructure in late 2016 with underground work on the ramp to continue through 2017, and operations then planned to occur year round from 2018 to 2020;
- Develop a portal and access ramp 5.2 m wide x 5.2 m high, up to 5,200 m in length and 340 m in depth;
- Develop a rock quarry with surface area up to 27,307 square metres (m^2) for extraction of 150,000 to 350,000 tonnes of rock material for construction purposes;
 - Use of quarry material for construction of a services pad (1.5 to 2.0 m depth and surface area up to 31,716 m^2) and an operations pad (1.5 to 2.0 m depth and surface area up to 42,506 m^2) located near the portal;
- Develop a waste rock storage pad to store up to 319,800 m^3 (612,400 tonnes) waste rock adjacent to the portal;

- Use of waste rock material for construction of the underground development and/or elsewhere on the exploration site;
- Develop a storm water storage pond (AP-5);
- Develop a ramp laydown area with offices, a warehouse, and a garage constructed next to the portal;
- Advanced mineral exploration including underground drilling and ongoing surface drilling;
- Collect 9,000 to 15,000 tonnes bulk ore sample(s) from underground to explore deep sections of the gold ore body at Amaruq;
- Storage and use of explosives with two (2) cap and four (4) explosive magazines to be established;
- Use of fuel for equipment;
- Use of water for development of ramp;
- Use of calcium chloride for underground dust control and drilling with brine collected in small sumps for the brine re-circulation system for reuse;
- Amaruq modular camp facilities adapted to accommodate up to 200 personnel from 140 with the addition of two (2) new wings to the camp;
- Increase in sewage and grey water treatment capacity by adding one (1) Bionest with capacity to treat 13,500 litres/day and a second Bionest with a capacity to treat 6,000 litres/day) at the Amaruq camp;
- Increase on site fuel storage by addition of four (4) – 50,000 litre double-walled bulk fuel storage tanks at the Amaruq property; and
- Use of existing infrastructure including airstrip at the Amaruq property.

Appendix B

Species at Risk in Nunavut

Due to the requirements of Section 79(2) of the Species At Risk Act (SARA), and the potential for project-specific adverse effects on listed wildlife species and its critical habitat, measures should be taken as appropriate to avoid or lessen those effects, and the effects need to be monitored. Project effects could include species disturbance, attraction to operations and destruction of habitat. This section applies to all species listed on Schedule 1 of SARA, as listed in the table below, or have been assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), which may be encountered in the project area. This list may not include all species identified as at risk by the Territorial Government. The following points provide clarification on the applicability of the species outlined in the table.

- 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.

If species at risk are encountered or affected, the primary mitigation measure should be avoidance. The Proponent should avoid contact with or disturbance to each species, its habitat and/or its residence. All direct, indirect, and cumulative effects should be considered. Refer to species status reports and other information on the species at risk Registry at <http://www.sararegistry.gc.ca> for information on specific species.

Monitoring should be undertaken by the Proponent to determine the effectiveness of mitigation and/or identify where further mitigation is required. As a minimum, this monitoring should include recording the locations and dates of any observations of species at risk, behaviour or actions taken by the animals when project activities were encountered, and any actions taken by the proponent to avoid contact or disturbance to the species, its habitat, and/or its residence. This information should be submitted to the appropriate regulators and organizations with management responsibility for that species, as requested.

For species primarily managed by the Territorial Government, the Territorial Government should be consulted to identify other appropriate mitigation and/or monitoring measures to minimize effects to these species from the project.

Mitigation and monitoring measures must be undertaken in a way that is consistent with applicable recovery strategies and action/management plans.

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

Updated: October 2016

Species at Risk ¹	COSEWIC Designation	Schedule of SARA	Government Organization with Primary Management Responsibility ²
Migratory Birds			
Eskimo Curlew	Endangered	Schedule 1	ECCC
Buff-breasted Sandpiper	Special concern	Pending	ECCC
Ivory Gull	Endangered	Schedule 1	ECCC
Ross's Gull	Threatened	Schedule 1	ECCC
Harlequin Duck (Eastern population)	Special Concern	Schedule 1	ECCC
Rusty Blackbird	Special Concern	Schedule 1	GN
Peregrine Falcon	Special Concern (<i>anatum-tundrius</i> complex ³)	Schedule 1 - Threatened (<i>anatum</i>) Schedule 3 – Special Concern (<i>tundrius</i>)	GN
Short-eared Owl	Special Concern	Schedule 3	GN
Red Knot (<i>rufa</i> subspecies)	Endangered	Schedule 1	ECCC
Red Knot (<i>islandica</i> subspecies)	Special Concern	Schedule 1	ECCC
Horned Grebe (Western population)	Special Concern	Pending	ECCC
Red-necked Phalarope	Special concern	Pending	ECCC
Vegetation			
Felt-leaf Willow	Special Concern	Schedule 1	GN
Blanket-leafed Willow	Special Concern	Schedule 1	GN
Porsild's Bryum	Threatened	Schedule 1	GN
Terrestrial Wildlife			
Peary Caribou	Endangered	Schedule 1	GN
Peary Caribou (High Arctic Population)	Endangered	Schedule 2	GN
Peary Caribou (Low Arctic Population)	Threatened	Schedule 2	GN
Barren-ground Caribou (Dolphin and Union population)	Special Concern	Schedule 1	GN
Marine Wildlife			
Polar Bear	Special Concern	Schedule 1	GN/DFO
Grizzly Bear	Special Concern	Pending	GN
Wolverine	Special Concern	Pending	GN
Atlantic Cod, Arctic Lakes	Special Concern	Pending	DFO
Atlantic Walrus	Special Concern	Pending	DFO
Beluga Whale (Cumberland Sound population)	Threatened	Pending	DFO
Beluga Whale (Eastern Hudson Bay population)	Endangered	Pending	DFO
Beluga Whale (Western Hudson Bay population)	Special Concern	Pending	DFO
Beluga Whale (Eastern High Arctic – Baffin Bay population)	Special Concern	Pending	DFO
Bowhead Whale (Eastern Canada – West Greenland population)	Special Concern	Pending	DFO
Bowhead Whale (Eastern Arctic population)	Special Concern	Schedule 2	DFO
Killer Whale (Northwest Atlantic / Eastern Arctic populations)	Special Concern	Pending	DFO
Grey Whale (Eastern North Pacific population)	Special Concern	Schedule 1	DFO

Species at Risk ¹	COSEWIC Designation	Schedule of SARA	Government Organization with Primary Management Responsibility ²
Humpback Whale (Western North Atlantic population)	Special Concern	Schedule 3	DFO
Narwhal	Special Concern	Pending	DFO
Fish			
Northern Wolffish	Threatened	Schedule 1	DFO
Atlantic Wolffish	Special Concern	Schedule 1	DFO
Bering Wolffish	Special Concern	Schedule 3	DFO
Fourhorn Sculpin	Special Concern	Schedule 3	DFO
Roundnose Grenadier	Endangered	Pending	DFO
Spotted Wolffish	Threatened	Schedule 1	DFO
Thorny Skate	Special Concern	Pending	DFO
Atlantic Cod, Arctic Lakes	Special Concern	Pending	DFO
Blackline Prickleback	Special Concern	Schedule 3	DFO

Notes: DFO: Fisheries and Oceans Canada; ECCC: Environment and Climate Change Canada; GN: Government of Nunavut

¹The Department of Fisheries and Oceans has responsibility for aquatic species.

²Environment and Climate Change 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.

³The *anatum* subspecies of Peregrine Falcon is listed on Schedule 1 of SARA as threatened. The *anatum* and *tundrius* subspecies of Peregrine Falcon were reassessed by COSEWIC in 2007 and combined into one subpopulation complex. This subpopulation complex was assessed by COSEWIC as Special Concern.

Appendix C

Archaeological and Palaeontological Resources Terms and Conditions for Land Use Permit Holders



INTRODUCTION

The Department of Culture and Heritage (CH) routinely reviews land use applications sent to the Nunavut Water Board, Nunavut Impact Review Board and the Indigenous and Northern Affairs Canada. These terms and conditions provide general direction to the permittee/proponent regarding the appropriate actions to be taken to ensure the permittee/proponent carries out its role in the protection of Nunavut's archaeological and palaeontological resources.

TERMS AND CONDITIONS

- 1) The permittee/proponent shall have a professional archaeologist and/or palaeontologist perform the following **Functions** associated with the **Types of Development** listed below or similar development activities:

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

Note that the above-mentioned functions require either a Nunavut Archaeologist Permit or a Nunavut Palaeontologist Permit. CH is authorized by way of the *Nunavut and Archaeological and Palaeontological Site Regulations*³ to issue such permits.

- 2) The permittee/proponent shall not operate any vehicle over a known or suspected archaeological or palaeontological site.

³ P.C. 2001-1111 14 June, 2001

- 3) The permittee/proponent shall not remove, disturb, or displace any archaeological artifact or site, or any fossil or palaeontological site.
- 4) The permittee/proponent shall immediately contact CH at (867) 934-2046 or (867) 975-5500 should an archaeological site or specimen, or a palaeontological site or fossil, be encountered or disturbed by any land use activity.
- 5) The permittee/proponent 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 CH.
- 6) The permittee/proponent shall follow the direction of CH in restoring disturbed archaeological or palaeontological sites to an acceptable condition. If these conditions are attached to either a Class A or B Permit under the Territorial Lands Act Indigenous and Northern Affairs Canada directions will also be followed.
- 7) The permittee/proponent shall provide all information requested by CH concerning all archaeological sites or artifacts and all palaeontological sites and fossils encountered in the course of any land use activity.
- 8) The permittee/proponent shall make best efforts to ensure that all persons working under its authority are aware of these conditions concerning archaeological sites and artifacts and palaeontological sites and fossils.
- 9) If a list of recorded archaeological and/or palaeontological sites is provided to the permittee/proponent by CH as part of the review of the land use application the permittee/proponent shall avoid the archaeological and/or palaeontological sites listed.
- 10) Should a list of recorded sites be provided to the permittee/proponent, the information is provided solely for the purpose of the proponent's land use activities as described in the land use application, and must otherwise be treated confidentially by the proponent.

Legal Framework

As stated in Article 33 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada* (Nunavut Agreement):

Where an application is made for a land use permit in the Nunavut Settlement Area, and there are reasonable grounds to believe that there could be sites of archaeological importance on the lands affected, no land use permit shall be issued without written consent of the Designated Agency. Such consent shall not be unreasonably withheld. [33.5.12]

Each land use permit referred to in Section 33.5.12 shall specify the plans and methods of archeological site protection and restoration to be followed by the permit holder, and any other conditions the Designated Agency may deem fit. [33.5.13]

Palaeontology and Archaeology

Under the *Nunavut Act*⁴, the federal government can make regulations for the protection, care and preservation of palaeontological and archaeological sites and specimens in Nunavut. Under

⁴ s. 51(1)

the *Nunavut Archaeological and Palaeontological Sites Regulations*⁵, it is illegal to alter or disturb any palaeontological or archaeological 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 site” means a place where an archaeological artifact is found.

“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 Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement).

“palaeontological site” means a site where a fossil is found.

“fossil” includes:

Fossil means the hardened or preserved remains or impression of previously living organisms or vegetation and includes:

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

Guidelines for Developers for the Protection of Archaeological Resources in the Nunavut Territory

(Note: Partial document only, complete document at: www.ch.gov.nu.ca/en/Archaeology.aspx)

Introduction

The following guidelines have been formulated to ensure that the impacts of proposed developments upon heritage resources are assessed and mitigated before ground surface altering activities occur. Heritage resources are defined as, but not limited to, archaeological and historical sites, burial grounds, palaeontological sites, historic buildings and cairns. Effective collaboration between the developer, the Department of Culture, and Heritage (CH), and the contract archaeologist(s) will ensure proper preservation of heritage resources in the Nunavut Territory. The roles of each are briefly described.

CH is the Nunavut Government agency which oversees the protection and management of heritage resources in Nunavut, in partnership with land claim authorities, regulatory agencies, and the federal government. Its role in mitigating impacts of developments on heritage resources is as follows: to identify the need for an impact assessment and make recommendations to the appropriate regulatory agency; set the terms of reference for the study depending upon the scope of the development; suggest the names of qualified individuals

⁵ P.C. 2001-1111 14 June, 2001

prepared to undertake the study to the developer; issue an archaeologist or palaeontologist permit authorizing field work; assess the completeness of the study and its recommendations; and ensure that the developer complies with the recommendations.

The primary regulatory agencies that CH provides information and assistance to are the Nunavut Impact Review Board, for development activities proposed for Inuit Owned Lands (as defined in Section 1.1.1 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada* (Nunavut Agreement)), and the Indigenous and Northern Affairs Canada, for development activities proposed for federal Crown Lands.

A developer is the initiator of a land use activity. It is the obligation of the developer to ensure that a qualified archaeologist or palaeontologist is hired to perform the required study and that provisions of the contract with the archaeologist or palaeontologist allow permit requirements to be met; i.e. fieldwork, collections management, artifact and specimen conservation, and report preparation. On the recommendation of the contract archaeologist or palaeontologist in the field and the Government of Nunavut, the developer shall implement avoidance or mitigative measures to protect heritage resources or to salvage the information they contain through excavation, analysis, and report writing. The developer assumes all costs associated with the study in its entirety.

Through his or her active participation and supervision of the study, the contract archaeologist or palaeontologist is accountable for the quality of work undertaken and the quality of the report produced. Facilities to conduct fieldwork, analysis, and report preparation should be available to this individual through institutional, agency, or company affiliations. Responsibility for the curation of objects recovered during field work while under study and for documents generated in the course of the study as well as remittance of artifacts, specimens and documents to the repository specified on the permit accrue to the contract archaeologist or palaeontologist. This individual is also bound by the legal requirements of the *Nunavut Archaeological and Palaeontological Sites Regulations*.

Types of Development

In general, those developments that cause concern for the safety of heritage resources will include one or more of the following kinds of surface disturbances. These categories, in combination, are comprehensive of the major kinds of developments commonly proposed in Nunavut. For any single development proposal, several kinds of these disturbances may be involved

- *Linear disturbances: including the construction of highways, roads, winter roads, transmission lines, and pipelines;*
- *Extractive disturbances: including mining, gravel removal, quarrying, and land filling;*
- *Impoundment disturbances: including dams, reservoirs, and tailings ponds;*
- *Intensive land use disturbances: including industrial, residential, commercial, recreational, and land reclamation work, and use of heritage resources as tourist developments.*

- *Mineral, oil and gas exploration: establishment of camps, temporary airstrips, access routes, well sites, or quarries all have potential for impacting heritage resources.*

Types of Studies Undertaken to Preserve Heritage Resources

Overview: An overview study of heritage resources should be conducted at the same time as the development project is being designed or its feasibility addressed. They usually lack specificity with regard to the exact location(s) and form(s) of impact and involve limited, if any, field surveys. Their main aim is to accumulate, evaluate, and synthesize the existing knowledge of the heritage of the known area of impact. The overview study provides managers with baseline data from which recommendations for future research and forecasts of potential impacts can be made. A Class I Permit is required for this type of study if field surveys are undertaken.

Reconnaissance: This is done to provide a judgmental appraisal of a region sufficient to provide the developer, the consultant, and government managers with recommendations for further development planning. This study may be implemented as a preliminary step to inventory and assessment investigations except in cases where a reconnaissance may indicate a very low or negligible heritage resource potential. Alternately, in the case of small-scale or linear developments, an inventory study may be recommended and obviate the need for a reconnaissance.

The main goal of a reconnaissance study is to provide baseline data for the verification of the presence of potential heritage resources, the determination of impacts to these resources, the generation of terms of reference for further studies and, if required, the advancement of preliminary mitigative and compensatory plans. The results of reconnaissance studies are primarily useful for the selection of alternatives and secondarily as a means of identifying impacts that must be mitigated after the final siting and design of the development project. Depending on the scope of the study, a Class 1 or Class 2 Permit is required for this type of investigation.

Inventory: A resource inventory is generally conducted at that stage in a project's development at which the geographical area(s) likely to sustain direct, indirect, and perceived impacts can be well defined. This requires systematic and intensive fieldwork to ascertain the effects of all possible and alternate construction components on heritage resources. All heritage sites must be recorded on Government of Nunavut Site Survey forms. Sufficient information must be amassed from field, library and archival components of the study to generate a predictive model of the heritage resource base that will:

- allow the identification of research and conservation opportunities;
- enable the developer to make planning decisions and recognize their likely effects on the known or predicted resources; and
- make the developer aware of the expenditures, which may be required for subsequent studies and mitigation. A Class 1 or 2 permit is required.

Assessment: At this stage, sufficient information concerning the numbers and locations of heritage resources will be available, as well as data to predict the forms and magnitude of impacts. Assessments provide information on the size, volume, complexity and content of a

heritage resource, which is used to rank the values of different sites or site types given current archaeological knowledge. As this information will shape subsequent mitigation program(s), great care is necessary during this phase.

Mitigation: This refers to the amelioration of adverse impacts to heritage resources and involves the avoidance of impact through the redesign or relocation of a development or its components; the protection of the resource by constructing physical facilities; or, the scientific investigation and recovery of information from the resource by excavation or other method. The type(s) of appropriate mitigative measures are dictated by their viability in the context of the development project. Mitigation strategies must be developed in consultation with, and approved by, the Department of Culture and Heritage. It is important to note that mitigation activities should be initiated as far in advance of the construction of the development as possible.

Surveillance and monitoring: These may be required as part of the mitigation program.

Surveillance may be conducted during the construction phase of a project to ensure that the developer has complied with the recommendations.

Monitoring involves identification and inspection of residual and long-term impacts of a development (i.e. shoreline stability of a reservoir); or the use of impacts to disclose the presence of heritage resources, for example, the uncovering of buried sites during the construction of a pipeline.