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Baffinland Iron Mines Corporation

CULTURAL HERITAGE RESOURCE PROTECTION PLAN

BAP-PH1-830-P16-0006

Rev 3

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TRACK CHANGES TABLE

A review and update of the Cultural Heritage and Resource Protection Plan has been undertaken, with the following salient revisions to the March 13, 2014 version (BAF-PH1-830-P16-0006, Rev 2).

Index of Major Changes/Modifications in Revision 3

Item No.	Description of Change	Relevant Section
1	Added Track Changes Table	-
2	Updated measures for managing known sites	2.3.2
3	Updated Incident Reporting	3.1

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1 INTRODUCTION

This Cultural Heritage Resource Protection Plan (CHRPP) has been developed to support the construction, operation and closure of the Mary River Project. This document replaces a previous version of the CHRPP dated March 13 2014. December 2010.

Archaeological resources are non-renewable, finite resources and are of value not only to local communities, but to the territory of Nunavut, Canada, and to the entire world. They are important sources of historical knowledge and cultural identity. Archaeological sites can be disturbed by any activity that causes ground disturbance and are often not readily identifiable by the untrained eye. Specifically for mining projects, archaeological sites can be directly affected by such activities as mine excavations, construction of camps, dock and associated facilities, construction of both winter and all season roads, and the development of quarry and borrow sites. Sites can also be affected by ongoing operations and road use, as well as by the presence of increased numbers of people in an area.

The North Baffin Region and the Project area have a very rich archaeological history. This CHRPP describes the processes by which ground disturbing activities can be carried out with appropriate assessments by project archaeologists, and also lays out the procedures for addressing chance finds of archaeological resources during construction activities.

1.1 SITE CONDITIONS

1.1.1 ARCHAEOLOGICAL POTENTIAL

Archaeological studies have been conducted in the Mary River area since 2006, and many sites have been discovered in Milne Inlet, along the Milne Inlet Tote Road, the proposed railway alignment and at Steensby Inlet. No sites have been discovered to date at the Mary River mine site. The sites that have been found to date vary greatly in size and significance, from a single tent ring to a site consisting of over 35 stone features of various types including circles, caches and traps, and are important from a cultural, historical, and legal perspective. Cultural heritage resources have been identified by Baffinland and have been reported in the Final Environmental Impact Statement (FEIS) and in greater detail in an Archaeological Mitigation Plan issued to the GN-DCH concurrent with the FEIS submission in early 2012.

The archaeological potential in any region is initially based on an assessment of natural resources, environment and landscape features and how these combine in any specific area to provide possibilities for meeting basic human needs of food, water and shelter. The following factors are of primary importance in human location (not listed in any particular order):

1. Fresh water
2. Level, dry camp area of suitable size or other shelter possibilities such as caves and overhangs
3. Animal and plant resources

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4. Wood or other fuel for heating and cooking
5. Reasonable travel routes
6. Exposure (south facing often preferred)
7. View of surrounding area, both for game sighting and defensive purposes
8. Sources of workable stone or other specific raw materials needed.

Generally speaking, the more of these factors that combine in any particular location, the higher the potential for archaeological remains. In this region of the Arctic, coastal areas are of high potential due to the presence of a wide range of food sources. Inland, given that caribou hunting was one of the primary pursuits, the locations that offer the highest archaeological potential are elevated landforms providing dry ground (for camping) overlooking a shallow lake, river narrows, or grassy meadows preferred by caribou. Waterlogged or sloped land or very high, irregular bedrock outcrops typically present low archaeological potential. Convenient travel routes such as gentle river valley terraces or long, continuous sections of esker are also considered to have good archaeological potential. The range of landforms and ground types between these extremes are variously rated low, moderate or high potential, depending on specific features and setting at each location.

Archaeological potential ratings are estimates of the chances of encountering archaeological resources based on available data. They are presented here so that individuals involved with earthmoving activities are aware of the types of conditions to look for that may be more likely to host archaeological features. The ratings do not imply that sites will definitely be found in high potential areas or that no sites will be found in low potential areas. The emphasis in field investigations is generally placed on areas judged to exhibit moderate or greater potential for archaeological resources. However, since human behaviour can be variable, sites can occur in unexpected locations. Consequently, site personnel must be aware of the possibility of encountering archaeological sites anywhere on the Project.

1.2 LEGISLATIVE FRAMEWORK

There are a number of laws and regulations pertaining to the conduct of archaeological investigations in Nunavut. There are also several organizations with legislated roles and responsibilities. The primary laws that specify those roles are:

- The Nunavut Land Claims Agreement (NLCA, 1993)
- Nunavut Archaeological and Paleontological Sites Regulations (NAPSR, 2001)

There are two Nunavut agencies involved in the administration or preservation of Inuit heritage within Nunavut: the Government of Nunavut, Department of Culture and Heritage (GN-DCH), and the Inuit Heritage Trust (IHT). GN-DCH is the Designated Agency under the Nunavut Land Claims Agreement (NLCA) responsible for administering all regulations concerning archaeology. GN-DCH is also responsible for granting research permits to qualified applicants and for overseeing that investigations are properly

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conducted and documented. The Inuit Heritage Trust (IHT) was created under Article 33 of the NLCA to “support, encourage and facilitate the conservation, maintenance, restoration and display of archaeological sites and specimens in the Nunavut Settlement Area.”

The Nunavut Archaeological and Paleontological Sites Regulations (NAPSR) of the Nunavut Act apply to all lands and waters within Nunavut, excluding National Parks and National Historic Sites (NAPSR 2001). These regulations contain provisions for the protection of archaeological and paleontological resources of Nunavut and the conduct of archaeological investigations. They specify the conditions of permits required to conduct investigations.

The Government of Nunavut has also prepared a Human Remains Policy, which states that “*Any archaeological investigation or analysis of human remains or associated grave goods will be conducted in a manner that is sensitive to Nunavummiut values, ethical and scientific principles, and which complies with all applicable laws, codes of conduct, and conventions*” (Government of Nunavut, 2001). The excavation of human remains will be permitted only under exceptional circumstances. Human remains are defined as skeletal, cremated, or any other traces of human bodies found in either marked or unmarked graves, surface, or subsurface locations. Grave goods are defined as any objects or specimens directly associated with gravesites or human remains.

1.3 RESPONSIBILITIES

The Environmental Manager or his designate will be responsible for maintaining documentation and incident reporting, as well as for retaining qualified archaeologists for conducting site reconnaissance and assessing chance finds as required.

The Training Manager will be responsible to arrange for the appropriate training and site orientation for all employees with regard to compliance with the NAPSR. This training will be included in the new employee orientation program, with refresher training accomplished at least annually for all employees. Employee training will focus on not disturbing identified sites and the procedures for responding to newly identified sites and reporting those sites or incidents immediately to the Environmental Superintendent.

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2 IMPACT-MITIGATING ACTIONS

There are two types of impacts that may occur to archaeological resources: direct and indirect.

A direct impact is the physical disturbance of an archaeological site or artefacts, often caused by an activity directly associated with land disturbance. It can occur at any phase of the development, but is most commonly associated with construction activities.

An indirect impact is disturbance by an activity not directly related to the development of the Project. For instance, more people living and working in an area can increase the potential for disturbance of sites at some distance from the actual development. As well, a development may result in improved access to an area, resulting in an increase in non-Project related people to the region. Impacts to archaeological resources are generally immediate, and are usually permanent.

2.1 DIRECT IMPACTS AND MITIGATION

Activities associated with the construction phase of the Project will be the primary source of direct impacts to archaeological resources. Facilities such as the mine, stockpiles, railway, borrow sites, and port facilities have a footprint that will result in localized ground disturbance.

There are three basic mitigation measures that can be applied to direct impacts on archaeological resources: avoidance, site protection, and systematic data recovery. Specific mitigation measures are selected based on site-specific requirements.

- **Avoidance:** Avoidance of archaeological resources is the preferred mitigation measure, and has been applied to the Mary River Project design wherever possible. The results of archaeological surveys were used in Project planning to avoid identified sites and high potential areas.
- **Site Protection:** Sites which will not be impacted directly, but which are located near Project activities, are protected through flagging and archaeological constraints mapping including exclusion zones. Exclusion zones have been identified at both Milne Port and Steensby Port.
- **Systematic Data Recovery:** Sites that cannot be avoided within the development footprint will undergo systematic data recovery. This process includes surface collection, detailed mapping, and subsurface testing to collect information about the site, and recovery of artifacts. This technique is limited to sites that cannot be avoided and is conducted prior to site disturbance. Authorization from GN-DCH is required prior to initiating any systematic data recovery program.

Mitigation plans have been implemented on an annual basis and most sites within the proposed development areas (and all sites within the current project footprint) having been mitigated by systematic data recovery. The Environmental Manager or his designate will continue to retain qualified project archaeologists as required by the Project to develop mitigation plans as part of archaeological permit applications submitted to GN-DCH for review. The mitigation plan/permit application will include a description of the sites and the mitigation method to be applied. Because of the sensitivity of heritage

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resources, these plans/permit applications will not be available to the public. While GN-DCH is ultimately responsible for the issuing of archaeological permits, wider consultation with other stakeholders is also required, including approval of permit applications by the Inuit Heritage Trust.

All mitigation requests must be approved by GN-DCH prior to any disturbance of cultural resources. GN-DCH will then issue a permit to the qualified archaeologist prior to any site disturbance or data recovery program implementation.

2.2 INDIRECT IMPACTS AND MITIGATION

Indirect impacts are associated with improved access to the region and increased Project and non-Project related human presence in the area. Project related personnel may inadvertently pick up artifacts or disturb rock features, or drive ATV's or snowmobiles over sites close to the development areas. While the Mary River Project will not be open to the public, the construction of docks at Milne Inlet and Steensby Inlet, and improvements to the Milne Inlet Tote road, will result in improved access, and may increase the number of non-project related users in the area.

Mitigation measures for indirect impacts will include:

- Enforcement of environmental protection measures as described in Section 2.3.
- Training of supervisory personnel in protection procedures and reporting protocols
- Staff training and site orientation
- Additional site specific protection measures will be developed as required

2.3 ENVIRONMENTAL PROTECTION MEASURES

The following environmental protection measures are contained within Baffinland's Environmental Protection Plan (EPP). These measures reflect the contents of current land use permits and licences, the Government of Nunavut's Human Remains Policy, and the applicable legislation governing archaeology in Nunavut.

2.3.1 GENERAL MEASURES

The following measures will be implemented to minimize the potential for impacting any archaeological site:

- Do not deviate from already disturbed areas or established routes (existing roads and camp areas).
- Check with the Environmental Manager or his designate to see if archaeological clearances have been done before operating equipment on previously undisturbed ground, and assume an area has not been approved for use until you find out otherwise. Never disturb previously undisturbed land without authorisation from the Environmental Manager or his designate.

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- Remember that archaeological sites could still be uncovered during work even if surficial clearance has been obtained, so be observant and careful.
- Do not build new inukshuks or rock piles or unnecessarily disturb rocks – building new rock piles can clutter the archaeological record, and the rocks used may unknowingly come from an existing archaeology site.
- If human remains or associated grave goods are discovered during any aspect of work, either within a recognized archaeological site or elsewhere, work will stop immediately and the appropriate authorities will be contacted, including the RCMP, Office of the Chief Coroner, and the GN-DCH. The GN-DCH will provide appropriate assistance and advice in determining the correct course of action. Site personnel are responsible for notifying the Environmental Manager or his designate, who will complete an incident report and notify the appropriate government agencies.

2.3.2 MEASURES FOR MANAGING KNOWN SITES

The following measures will be implemented to limit the potential for impacting any known archaeological site:

- Artifacts must be left where they are found. If artifacts are disturbed or removed, their location shall be reported to the Environmental Manager or his designate.
- Do not publicly disclose the location of an archaeological site, as archaeological site locations must be kept confidential to prevent unauthorized disturbance of the site.
- Known sites in close proximity to Project activities that must be avoided will have painted stakes with black and yellow flagging, and/or rope installed at the 30 m buffer from the site. Employees will be instructed that these areas are not to be entered or disturbed.
- Remain more than 30 m from all known or suspected archaeological sites, staying as far as possible from any temporary protection measures such as flagging, stakes or fencing.
- Sites that cannot be avoided will be mitigated by the designated archaeology team prior activities taking place that will affect the site.

2.3.3 MEASURES FOR SITES DISCOVERED DURING PROJECT RELATED ACTIVITIES

The following measures will be implemented to minimize the potential for impacting archaeological sites in the event that chance finds of cultural or archaeological resources or human remains are identified:

- Stop ongoing excavation and contact the Environmental Manager or his designate, who will mobilize a qualified archaeologist to the site to assess the significance of the find.
- Depending on the significance of the find, arrange for the qualified archaeologist to inventory the area for additional artifacts that may be present.
- Coordinate with government officials, local stakeholders, and the specialist in developing a suitable mitigation plan as needed.

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- Record the results of all inventories, including the artifacts found, their final disposition, and any other relevant information.

3 REPORTING

3.1 INCIDENT REPORTING

A Cultural Heritage Chance Find Discovery Report found in Baffinland's EPP or an incident report will be completed by the Environmental Manager or his designate if an archaeological site is discovered during Project related activities, or if a known site is disturbed.

The Environmental Manager or his designate will notify the GN-DCH should such an incident occur, and will retain a qualified archaeologist to investigate a suspected archaeological site or assess and mitigate a disturbed site if required. The RCMP and Chief Coroner will be contacted immediately in the case of a suspected discovery of human remains.

3.2 ANNUAL REPORTING

Annual reporting consists of:

- **Project Archaeologist Permit Report** - When active on the Project, qualified archaeologists working under a permit issued by the Government of Nunavut, Department of Culture and Heritage (GN -DCH) are required to report on archaeological work performed in the previous year under the permit. This is typically carried out during the construction phase of the Project; reporting will not occur when archaeological assessment and mitigation efforts are not required (i.e., during normal operation conditions).
- **Reporting on General Activities Related to Archaeology in the NIRB Annual Report** – Baffinland is required to generate an annual report each March 31 for the previous calendar year. Within this report, Baffinland will summarize any activities relevant to archaeology. This may include:
 - ◆ A summary of any permit-authorized archaeological assessment or mitigation work undertaken and described in an Archaeologist Permit Report
 - ◆ Any chance finds of new archaeological sites and the actions taken (i.e., reporting to GN -DCH or assessment by a project archaeologist)
 - ◆ Any cultural heritage related activities supported by the company, such as elder or community visits, field camp support, etc.

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4 COMMITMENT SUMMARY AND IMPLEMENTATION PLAN

The following is a summary of the commitments made in this CHRPP. It includes a cross reference to where in the CHRPP the commitment is made, when the commitment needs to be implemented.

Reference Number	CHRPP Section Reference	Commitment	Frequency or Completion Milestone
CHRPP-1	1.1	Update the Heritage Resource Protection Plan to better reflect current Project conditions.	Completed for construction. Further update only as required
CHRPP-2	1.3, 2.2	Employees will undergo new employee orientation training that includes respect for heritage sites and procedures for responding to chance finds.	All Baffinland and construction contractor employees prior to being assigned work activities
CHRPP-3	1.3	Annual refresher training will be required of all employees, which will include a component on emergency response to maintain currency on processes and procedures.	Annually
CHRPP-4	2.1	The Environmental Manager or his designate will retain qualified project archaeologists to develop mitigation plan that identify which mitigation strategies will be employed and the mitigation required for identified heritage resources.	As required
CHRPP-5	2.2	Training of supervisory personnel in response procedures for identified cultural resources.	Annually
CHRPP-6	2.3.1	Implement general protection procedures for all archaeological sites.	As required
CHRPP-7	2.3.2	Implement management procedures for protecting known sites	Ongoing throughout Project life
CHRPP-8	2.3.3	Implement response procedures for chance finds of heritage resources.	As required
CHRPP-9	3.1	Prepare an annual report summarizing what work has been done under the existing permits for submittal to GN-DCH for each year that heritage resource mitigating actions are carried out.	Annually while heritage resource mitigation actions are accomplished
CHRPP-10	3.1	General activities that are not location-specific relating to archaeology will be summarized in the NIRB Annual Report.	Annually
CHRPP-11	3.2	Complete an incident report if an archaeological site is discovered during Project related activities, or if a known site is disturbed	As required

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