



# AGNICO EAGLE

MELIADINE GOLD MINE

## Cultural and Heritage Resources Protection Plan

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NOVEMBER 2021

VERSION 2\_NIRB



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## EXECUTIVE SUMMARY

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The Cultural and Heritage Resources Protection Plan contains four key elements:

- heritage awareness training for staff, contractors, and subcontractors;
- overview assessments of developments associated with possible location alternative;
- Archaeological Impact Assessments of proposed development areas with moderate to high archaeological potential; and
- mitigation of sites that are located within 30 metres of a proposed development.

Awareness training is completed by all employees, contractors, and visitors, working at the Meliadine Mine. The training includes basic information regarding what archaeological resources in the local study area look like, that these resources are protected by law, and what actions need to be taken should Meliadine mining activities come into conflict with an archaeological site. The actions to be taken include immediately contacting Supervisors, who will immediately stop work located near the possible archaeological site until the situation is clarified by a qualified archaeologist in consultation with the Department of Culture and Heritage, Government of Nunavut.

Overview assessments will be completed to assist in the early planning stages of infrastructure, and Archaeological Impact Assessments will be conducted for all identified locations with moderate to high archaeological potential located within the proposed footprint of mine infrastructure. Depending on the results of the Archaeological Impact Assessments, mitigation of archaeological sites will be completed. Mitigation in archaeological terms includes avoiding sites or scientific documentation of sites. Where possible, mine infrastructure will be placed to avoid known archaeological sites. Where avoidance or protection is not possible, scientific documentation of heritage resources will be implemented. The scientific documentation of sites will vary based on the archaeological significance assigned to the sites, and may include photographic documentation, recording of the site location, and/or excavation of features.

The Meliadine Mine does not impinge on the goals of the Park. The impact the Mine has on heritage resources is restricted to areas outside the Park boundary; therefore, does not constrain the ongoing protection of the heritage values of the Iqalugaarjuup Nunanga Territorial Park.



**DOCUMENT CONTROL**

Version	Date	Section	Page	Revision	Author
1	April 2014			First draft of the Shipping Management Plan	Golder Associates Ltd.
2_NIRB	November 2021			Updated to address Meliadine Extension application submission to NIRB for review and approval	Permitting Department

## SECTION 1 • INTRODUCTION

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Agnico Eagle Mines Limited (Agnico Eagle) is operating the Meliadine Gold Mine (the Mine or Meliadine Mine) approximately 25 kilometres north from Rankin Inlet, and 80 kilometres southwest from Chesterfield Inlet in the Kivalliq region of Nunavut.

Nunavut Impact Review Board (NIRB) Project Certificate No.006 was issued in 2015 and the environmental assessment of the Meliadine Mine, resulting in the issuance of Project Certificate No.006 in 2015, included approval of a multi-phase approach to development, including mining of Tiriganiaq deposit using open pit and underground mining methods) and mining of the Pump, F Zone, Discovery, and Wesmeg deposits using open pit methods.

The Meliadine Extension proposes to include underground mining and associated saline water management infrastructures at the Pump, F Zone, and Discovery deposits, development of a new portal and associated infrastructures in the Tiriganiaq-Wolf area, construction and operation of a windfarm, and use of additional borrow pits and quarries. The life of the mine would be extended by an additional 11 years until 2043, closure will occur from 2044 to 2050, and post-closure from 2051 to 2060. Options/alternatives are also proposed as part of the Meliadine Extension and include construction and operation of an on-site airstrip, and use of exhausted open pits to store tailings and waste rock.

The Plan is divided into the following components:

- A review of the regulations and guidelines relating to archaeological and palaeontological work in Nunavut (Section 2);
- A summary of the archaeological site inventory in the Meliadine Mine area (Section 3);
- A description of Agnico Eagle's Heritage Management Plan (Section 4); and
- A discussion on the heritage values of the Iqalugaarjuup Nunanga Territorial Park (Section 5).

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## SECTION 2 • REGULATIONS AND GUIDELINES

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In 2003 the Government of Nunavut (GN) published Guidelines for Applicants and Holders of Nunavut Territory Archaeology and Paleontology Permits (Guidelines). This document contains a summary of key regulation and legislation applicable to Nunavut's heritage resources. It also includes Guidelines for Developers, and the GN Human Remains Policy.

The archaeological and paleontological resources of Nunavut are unique and non-renewable resources that provide information about Nunavut's human and natural past. These resources are public property and held in trust for all Nunavummiut by the GN. An archaeological site is any location where an artifact is found. An artifact is defined as 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 use cannot be demonstrated (GN 2003). A fossil includes natural cast, preserved tracks, coprolites, and plant remains; and the preserved shells and exoskeleton of invertebrates and the eggs, teeth, and bones of vertebrates (GN 2003).

The main legal documents relating to archaeological and palaeontological work in Nunavut include Section 33 of the *Nunavut Land Claims Act*, and the *Nunavut Archaeological and Paleontological Site Regulations* developed pursuant to Section 51(1) of the *Nunavut Act* (Government of Canada 1993a,b; GN 2003). An associated policy document is the *Guidelines for Applicants and Holders of Nunavut Territory Archaeology and Palaeontology Permits* (GN 2003). The *Historic Places Act* (Government of Canada 1988), the *Territorial Land Use Regulations* (Government of Canada 2016), and *Access to Information and Protection of Privacy Act* (Government of Canada 1994) are other legal documents relevant to heritage investigation in Nunavut and the Meliadine Mine.

These documents:

- define Nunavut's heritage;
- outline Government and non-Government bodies responsible for protection of Nunavut's heritage;
- restrict activities that can take place within specific distances of heritage resources;
- outline permission required to search for, or disturb archaeological or paleontological sites;
- outline legal consequences for failing to obtain permits prior to site disturbance or investigation;
- outline reporting requirements related to archaeological or paleontological investigations;
- restrict the distribution of geographic locations of heritage resources;
- require land use activities be stopped should archaeological sites be encountered;
- require artifacts are returned to designated agencies for storage;
- provide guidance should human remains be discovered; and
- provide guidance to developers to protect heritage resources.

The *Guidelines for Developers* describes five types of studies that can be conducted to protect heritage resources: overviews, reconnaissance, inventory, assessment, and mitigation. Overviews involve the collection of existing archaeological data that allows recommendations for future studies to be made. Reconnaissance involves fieldwork to verify the potential presence of heritage resources. Inventory involves intensive fieldwork which systematically records heritage resources. Assessment involves the collection of detailed information, such as size, volume, complexity, and content of heritage resources (GN 2003:53). Mitigation limits adverse impacts to heritage resources. Mitigation strategies are developed in consultation with and must be approved by the GN Department of Culture and Heritage.

Preferred mitigation strategies include avoidance (e.g., relocate infrastructure) and protection (erection of barrier) of heritage resources. If neither strategy can be implemented, scientific documentation of heritage resources can be implemented. Scientific documentation may include recording locations, mapping or measuring features, taking photographs, describing, and excavating. Surveillance and monitoring may be applied as part of a mitigation strategy.



### SECTION 3 • INVENTORY OF ARCHAEOLOGICAL RESOURCES IN THE MELIADINE MINE AREA

The inventory of archaeological sites in the Meliadine Mine area is the result of academic research conducted in the 1970s and ongoing archaeological assessments.

Baseline archaeological assessments were completed to support the development of the Final Environmental Impact Statement for the Meliadine Mine (2014 FEIS or Approved Project). The possible cultural affiliations for the archaeological sites that have been identified within the Local Study Area (LSA) include Pre-Dorset, Dorset, and Neoeskimo (Thule and Inuit). The most common features include caches, hunting blinds, and tent rings; however, there are qarmat, sod houses, and kayak caches. Since the 2014 FEIS, additional archaeological field studies have been carried out and are summarized below.

Local Study Area	Current
Mine Infrastructure	76 sites: <ul style="list-style-type: none"> <li>• 52 sites included in the 2014 FEIS</li> <li>• 24 new sites identified recorded after the Approved Project.</li> </ul>
AWAR	62 sites: <ul style="list-style-type: none"> <li>• 10 sites recorded prior to the 2014 FEIS located in the LSA</li> <li>• 48 sites included in the 2014 FEIS</li> <li>• 4 new sites identified after the Approved Project</li> </ul>
Rankin Inlet	1 site included in the 2014 FEIS
<b>Total</b>	<b>139</b>

The total of 139 archaeological sites were recorded in the LSA area. Since the Approved Project submission, 28 new sites were identified throughout archaeological assessment conducted for the Meliadine Mine. Additionally, 10 sites recorded prior to the 2014 FEIS (1970s-80s) were included to the current total as they are located within the LSA area. Given the confidential nature of archaeological sites, their locations are not provided in this document (e.g., on figures).

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**SECTION 4 • HERITAGE MANAGEMENT PLAN**

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As discussed below, the results from Agnico Eagle’s overviews, impact assessments, and mitigation for the Meliadine Mine have been considered and incorporated into each stage of the archaeological work that has been conducted to date, including the design and implementation of the Cultural and Heritage Resources Management Plan.

The Cultural and Heritage Resources Protection Plan contains five key elements:

- heritage awareness training for staff, contractors, and subcontractors;
- overview assessments of developments associated with possible location alternatives (e.g., tailings and waste rock storage facilities, exploration targets);
- Archaeological Impact Assessments of proposed development areas with moderate to high archaeological potential;
- mitigation of sites that are located within 30 m of a proposed development; and
- monitoring archaeological sites periodically throughout the Meliadine Mine construction and operation phases.

Awareness training is completed by all employees, contractors, and visitors, working at the Meliadine Mine. Awareness training has been identified as a critical aspect of the Cultural and Heritage Resources Protection Plan based on the Traditional Knowledge studies. The training includes Archaeological Awareness Training (Appendix A) which outlines the basic information regarding what archaeological resources in the LSA could look like, that these resources are protected by law, and what actions need to be taken should Meliadine Mine activities come into conflict with an archaeological site. The actions to be taken include immediately contacting Supervisors, who will immediately stop work located near the possible archaeological site until the situation is clarified by a qualified archaeologist in consultation with the Department of Culture and Heritage, GN.

Overview assessments will be completed to assist in the early planning stages of infrastructure. Such studies were completed for the existing infrastructure, including the tailings and waste rock storage facilities, windfarm, and alternative airstrip. The overview has also assisted in assessment of heritage potential for future exploration target areas. Areas proposed for future exploration drilling have also been subject to overview studies and will continue to be reviewed based on their potential.

Archaeological Impact Assessments will be conducted for all identified locations with moderate to high archaeological potential located within the proposed footprint of mine infrastructure. These studies have been completed for the footprints for the mine infrastructure. Future exploration target areas and new developments with moderate to high archaeological potential will be assessed for heritage resources.

Depending on the results of the Archaeological Impact Assessments, mitigation of archaeological sites will be completed. Mitigation in archaeological terms includes avoiding sites or scientific documentation of sites. Where possible, mine infrastructure will be placed to avoid known archaeological sites. There are

sites within the LSA which will be avoided because the mine components are further than 30 m away from archaeological sites. There are other sites for which barriers, in the form of wooden stakes, have been placed 30 m from the edge of the sites.

Where avoidance or protection is not possible, scientific documentation of heritage resources will be implemented. The scientific documentation of sites will vary based on the archaeological significance assigned to the sites, and may include photographic documentation, recording of the site location, and/or excavation of features. Summaries of site mitigation completed in the Meliadine Mine area to date are presented in detail in the 2014 FEIS (Volume 9, Agnico Eagle 2014). Permit reports are on file with the Department of Culture and Heritage, GN.

Monitoring of sites is conducted when project activities will occur just beyond the 30 m boundary. Monitoring occurs either during or after project activities have taken place; yearly during construction and less frequently during operations. A valid Nunavut Archaeologists Permit must be held to monitor archaeological sites. Monitoring activities are reported to the Government of Nunavut, Department of Culture and Heritage (GN-CH) as part of Nunavut's permitting system. The archaeologist, in consultation with GN-CH, will determine if heritage avoidance strategies are working. If avoidance strategies are not working as evidenced by project activities infringing on the 30 m buffer, or damage to a heritage site, the heritage sites will be mitigated using scientific documentation.

**SECTION 5 • PROTECTION HERITAGE VALUES OF THE IQALUGAARJUUP NUNANGA TERRITORIAL PARK**

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There were three main goals in developing the Iqalugaarjuup Nunanga Territorial Park (Government of Northwest Territories 1991).

- 1) The first goal was to protect and conserve the natural and culture resources of the Iqalugaarjuup Nunanga Territorial Park area. The objectives of this goal include scientific research, monitoring, and protection of archaeological sites; reduce theft and vandalism; and educate the public about the significance of the sites.
- 2) The second goal was to improve the economic situation of the Kivalliq region, specifically Rankin Inlet. One of the objectives of this goal is to promote the importance of cultural resources in the Rankin Inlet region.
- 3) The third goal is to provide other benefits for the community, including the preservation of the history of Inuit culture.

The Meliadine Mine does not impinge on the goals of the Iqalugaarjuup Nunanga Territorial Park. The impact the Mine has on heritage resources is restricted to areas outside the Iqalugaarjuup Nunanga Territorial Park boundary; therefore, does not constrain the ongoing protection of the heritage values of the Iqalugaarjuup Nunanga Territorial Park.

**SECTION 6 • REFERENCES**

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Agnico Eagle (Agnico Eagle Mines Limited). 2014. Final Environmental Impact Statement (FEIS) - Meliadine Gold Project, Nunavut from: <ftp://ftp.nirb.ca/02-REVIEWS/ACTIVE%20REVIEWS/11MN034-Agnico Eagle%20MELIADINE/2-REVIEW/09-FINAL%20EIS/FEIS>.

GN (Government of Nunavut). 2003. Guidelines for applicants and holders of Nunavut Territory archaeology and palaeontology permits. Department of Culture, Language, Elders and Youth, Iqaluit.

Government of Canada. 1988. Historical Resources Act, RSNWT (Nu) 1988, c H-3.

Government of Canada. 1993a. Nunavut Act (S.C. 1993 c.28).

Government of Canada. 1993b. Nunavut Land Claims Agreement Act S.C. 1993, c.29.

Government of Canada. 1994. Access to Information and Protection of Privacy Act, SNWT (Nu) 1994, c 20.

Government of Canada. 2016. Territorial Land Use Regulations CRC c 1524. Las amended on June 13, 2016.

Government of Northwest Territories. 1991. Meliadine River Park Master Plan Report on File with Department of Environment, Parks Division Government of Nunavut.

**APPENDIX A • ARCHAEOLOGICAL AWARENESS TRAINING**

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Archaeological sites are common throughout the area between Rankin Inlet and the Meliadine Mine area. It is where the Inuit lived and hunted long ago.

It is against the law to disturb or destroy archaeological sites.

The below pictures of archaeological sites will give you an idea what to look for. Archaeological sites can come in many different shapes and sizes. If you see such a rock formation, immediately contact your Supervisor, who will immediately stop work located near the possible archaeological site until the situation is clarified by a qualified archaeologist in consultation with the Department of Culture and Heritage, GN.



**Fox trap**



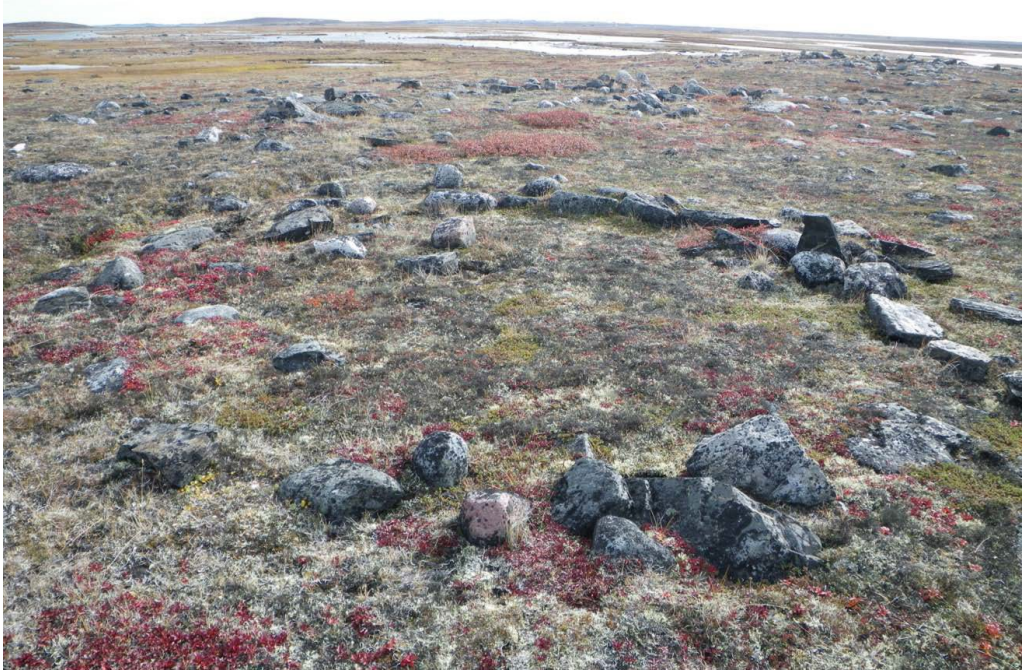


**Fox trap**



**Stone ring**





**Stone ring**



**Tent ring**





**Tent ring**



**Directional marker**





**Cairn on left and Inukshuk on right**