

ARCHAEOLOGICAL STUDIES
Proposed Quarries between
Meadowbank and Amaruk

Agnico Eagle Mines Ltd.



Prepared for:
Agnico Eagle Mines Ltd.
Val-d'Or, Quebec

Prepared by:
Stantec Consulting Ltd.
Calgary, Alberta

Project Number: 124910368.900

November 2016

This document contains sensitive information about heritage resources that are protected under provisions of the Nunavut Archaeological and Palaeontological Sites Regulations. This information is to be used to assist in planning the proposed project only. It is not to be disseminated, and no copies of this document are to be made without written permission of the Nunavut Department of Culture and Heritage.



Stantec Consulting Ltd.
130 – 2886 Sunridge Way NE
Calgary AB T1Y 7H9
Tel: (403) 245-5661

November 21, 2016
File: 124910368.900

Attention: Mr. Ryan Vanengen
Agnico Eagle Mines Ltd.
Meadowbank Division
Baker Lake, Nunavut, Canada
X0C 0A0

Dear Mr. Vanengen,

I am pleased to submit to you this report entitled *Archaeological Studies, Proposed Quarries between Meadowbank Mine and Amaruk Exploration Site*. Should you have any questions regarding this project, please do not hesitate to contact me.

Regards,

STANTEC CONSULTING LTD.

A handwritten signature in blue ink, appearing to read "J. Tischer".

Jennifer Tischer, M.A.
Senior Archaeologist, Principal
Phone: 403-806-1314
Email: Jennifer.Tischer@Stantec.com

Table of Contents

PROJECT PERSONNEL	III
1.0 INTRODUCTION	1
1.1 Project Description	1
1.2 Objectives.....	3
2.0 ENVIRONMENTAL SETTING	5
2.1 Introduction	5
2.2 Regional Environment.....	5
2.3 Project Environment	5
3.0 HERITAGE RESOURCES	6
3.1 Definition	6
3.2 Nature of Heritage Resources	6
3.3 Mitigative Options	6
3.4 Cultural Context	7
4.0 METHODS.....	9
4.1 Record Review.....	9
4.2 Review of Previous Studies	9
4.3 Field Studies	9
4.4 Review of Maps and Imagery	10
4.5 Formulation of Recommendations	10
4.6 Site Designation	10
5.0 RESULTS	11
5.1 Record Review.....	11
5.2 Review of Previous Studies	11
5.3 Field Studies	12
5.3.1 Archaeological Sites Identified.....	12
5.4 Review of Maps and Imagery	12
5.5 Summary	15
6.0 REFERENCES CITED	17

ARCHAEOLOGICAL STUDIES
Proposed Quarries between Meadowbank and Amaruq

LIST OF FIGURES

Figure 1-1	Location of proposed quarries along the Haul Road	2
------------	---	---

LIST OF APPENDICES

APPENDIX A	QUARRY SOURCE AND ARCHAEOLOGICAL SITES MAPBOOK.....	A.1
-------------------	---	-----

Project Personnel

Senior Archaeologist

Jennifer Tischer, M.A.

Archaeologists

Matthew Munro, M.A.

Phillip Innes, M.A.

Michael Cowtan, B.A.

GIS Analyst

Evan Strangward, B.A.

Report Author

Jennifer Tischer, M.A.

ARCHAEOLOGICAL STUDIES

Proposed Quarries between Meadowbank and Amaruq

Introduction
November 2016

1.0 Introduction

At the request of Agnico Eagle Mines Ltd. (Agnico Eagle), Stantec Consulting Ltd. (Stantec) conducted Archaeological Impact Assessment (AIA) field studies for proposed hard rock quarries located between Meadowbank Mine and the Amaruq Exploration site. These quarries are proposed to be used as borrow sources for the construction of the road between Meadowbank and Amaruq.

The AIA studies were conducted under Nunavut Archaeological Permit 2016-020A, during which various components associated with the Whale Tail Project were subject to archaeological assessment and mitigation studies, as part of ongoing archaeological studies related the Whale Tail Project on the Amaruq lease. These components included assessment of the proposed quarries, assessment of route and borrow source footprint changes since the original investigation in 2015, supplemental assessment around the proposed Whale Tail Pit, and archaeological excavation at three sites recorded in 2015.

This report provides a summary of the results of the archaeological investigations undertaken for the proposed quarry locations only, and is intended for use as supporting documentation for **Agnico Eagle's regulatory application for the quarries**. The final AIA report that is required as part of the archaeological permit obligations will include the full results of the AIA conducted under Permit 2016-020A.

1.1 Project Description

Esker borrow sources will be used for the Project, and were previously assessed relative to archaeological sites (Tischer 2016). However, Agnico Eagle has determined that additional borrow material will be required. Currently 13 hard rock quarry locations are proposed for use; these quarries are named based on their location (km) along the planned Haul Road to the Whale Tail pit, and include the following:

- 10+500
- 13+200
- 15+800
- 17+000
- 25+350
- 26+250
- 30+050
- 34+900
- 42+900
- 50+600
- 52+000
- 53+650
- 61+150

ARCHAEOLOGICAL STUDIES Proposed Quarries, Whale Tail Project

Introduction
November 2016

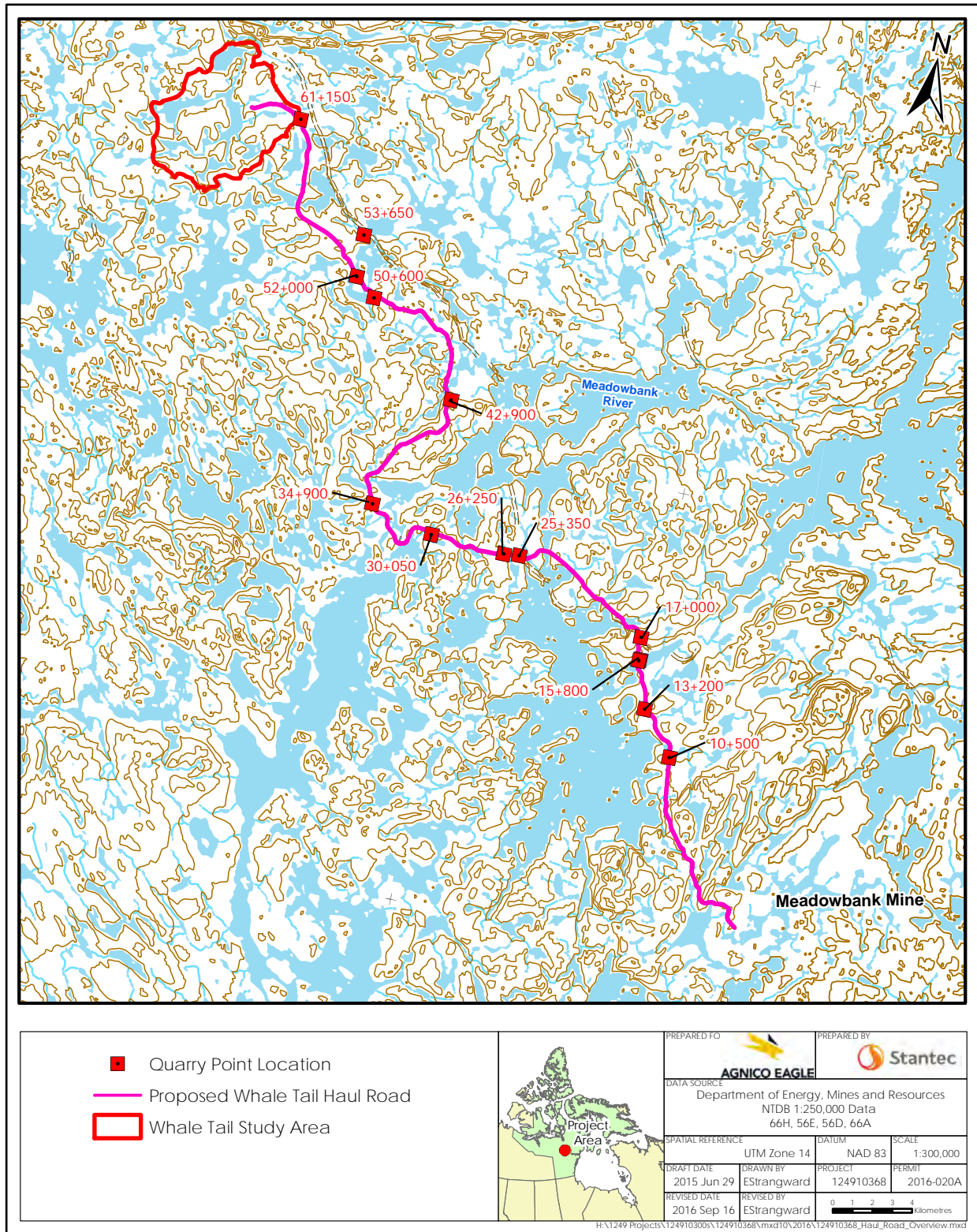


Figure 1 1 Location of proposed quarries along the Haul Road

ARCHAEOLOGICAL STUDIES

Proposed Quarries between Meadowbank and Amaruq

Introduction

November 2016

Quarry locations are illustrated in Figure 1-1 and detailed quarry footprints are illustrated in Appendix A. The quarries range in size between 3900 m² and 200223 m². Extraction will include a controlled explosion followed by crushing for use of the material in constructing the Haul Road.

Most of the proposed quarries are immediately adjacent to or very close to the planned Haul Road route (or planned access to esker borrow locations in the case of quarry 53+650), although some short access roads (all less than 200 m in length) will be required to access the quarry locations. Not all 13 quarry locations will be used; more quarry locations have been planned than will be required, in the case that some prove not suitable for use based on the environmental assessment.

1.2 Objectives

The objectives of the AIA and this summary report are to:

- Revisit any previously recorded archaeological sites relative to the proposed quarry locations.
- Assess the quarry locations to identify archaeological sites in conflict with the quarry footprints.
- Provide information relative to the archaeological field study coverage and the perceived potential of quarry activities to impact archaeological sites.
- Provide a summary and recommendations to Agnico Eagle regarding the proposed use of the quarries relative to archaeological sites.

2.0 Environmental Setting

2.1 Introduction

Precontact economic strategies as well as many aspects of the material culture of the human inhabitants were intimately related to the opportunities and constraints provided by the regional environment that they occupied. In many respects, regional environment also strongly influenced where certain activities were conducted and consequently, where archaeological sites, testimony to precontact use and occupation, are located. The distribution of precontact sites in the barren grounds includes a wide variety of landforms but sites are most frequently associated with coastlines and lake shores, river and creek margins, eskers and kames, and bedrock knolls. This distribution pattern partially reflects environmental opportunities presented to human populations as well as cultural preferences in site location. Terrain influenced many forms of human activity, directing travel, biasing routes of communication, enhancing or limiting resource procurement activities, and restricting human occupation areas to selected localities. As a result, human populations were not uniformly distributed across the landscape, but were non-randomly clustered within the most suitable habitats. Because of the close relationship that precontact occupants had with the environment, a brief description of the regional and local environments is provided.

2.2 Regional Environment

The Meadowbank Mine is located within the Northern Arctic Ecozone and within the Wager Bay Plateau Ecoregion. Terrain is generally level and low with gently rolling hills interspersed by lakes and drainages. The Meadowbank Mine is located approximately 70 km north of the hamlet of Baker Lake, and the Amaruq Exploration site and Whale Tail Project is approximately 50 km northwest of Meadowbank.

2.3 Project Environment

The approved Amaruq exploration access road is currently under construction. The road will be an all-season road that lies mainly on land, avoiding lake edges and crossing a number of small and medium-sized drainages. The terrain through which the road will extend will include a variety of terrain features, including boulder fields, level elevated landforms, lower terrain associated with lakes and drainages, and glacial features. Water crossings will necessitate the installation of culverts and bridges. A long, well-defined esker generally runs parallel to the road (to the east of the road) along the northern half of the road; borrow materials will be extracted from a number of areas along this esker as well as several other locations. Additional quarry material will be needed, and will be obtained from hard rock quarries within proximity of the road. Material from the Vault Pit at the south end of the road has been used for the initial construction of the access road, but additional material will be quarried from appropriate landforms along the road. The proposed quarry locations generally consist of elevated bedrock landforms.

3.0 Heritage Resources

3.1 Definition

Heritage resources are identified by the Nunavut Archaeological and Palaeontological Sites Regulations (Nunavut Government 2001) and consist of archaeological artifacts more than 50 years old and fossils including natural casts, preserved tracks, coprolites, and plant remains as well as shells, exoskeletons of invertebrates, and vertebrate remains. Precontact archaeological sites are composed of artifacts, features, and residues of native origin. They predate the arrival of Europeans and are typically characterized by modified bone and stone, and stone structures. Historic sites are characterized by structures, features, and objects of European influence. These sites date back to contact with the Europeans but also include remains of more recent activity (i.e., more than 50 years). Historic sites less than 50 years old are generally associated with contemporary land use and document continued use and occupation of an area to the present time. Cultural landscapes consisting of either natural or man-made features important to a **society's** sense of place are also important heritage resources. Although palaeontological sites contain fossils of plants or animals or fossilized evidence of their existence, also of geological interest are type sites for geological formations.

3.2 Nature of Heritage Resources

Heritage resources are non-renewable and are susceptible to alteration, damage, and destruction by construction and development activities. The value of heritage resources cannot be measured in terms of individual artifacts or biological specimens, rather the value of these resources lies in the integrated information which is derived from the relationship of the individual artifacts and fossil specimens, associated features, spatial relationships (distribution), and contextual situations. Interpretation of heritage resource materials, and the ability to interpret the significance of particular sites in a landscape, is based on an understanding of the nature of the relationship between individual archaeological and palaeontological materials as well as the sediments and strata within which they are contained. As such, removal or mixing of cultural or fossil bearing sediments results in the permanent loss of information basic to the understanding of these resources. As a result, heritage resources are increasingly susceptible to destruction and depletion through disturbance.

3.3 Mitigative Options

Adverse primary impacts to heritage resource sites, identified prior to the construction stage of development, can be significantly reduced or eliminated by avoidance or adequate study. Site avoidance can be achieved through alteration of the Project footprint. If avoidance is not feasible, adequate study of archaeological sites generally involves scientific investigations that are designed to systematically explore and reconstruct the activities that are represented at the site. These investigations may involve the systematic collection of surface site materials, detailed

mapping, photographic documentation of sites, or the excavation of buried sites. Community consultation regarding heritage sites may also be considered for identified sites.

3.4 Cultural Context

Early intensive archaeological field study in the interior Canadian Shield focused on the central barren lands and is largely restricted to the work of Noble (1971) with some areally defined surveys by Gordon (1975) and Metcalf (1979). More recently, intensive impact assessment studies of defined project areas have been completed in the interior shield, including Blower (2003), Bussey (1994, 1995, 1997), Fedirchuk (1995, 1996a, 1996b, 2001), Kroker (1996), Novecosky (2008), Tischer (2002, 2007, 2008, 2010, 2012, 2013, 2015, 2016) and Unfreed (1997). Regional syntheses have been provided by Gordon (1975), Noble (1977), and Wright (1981). A summary of the chronological framework is presented below.

In the interior, the earliest archaeological materials that occur are collectively referred to as the Northern Plano Tradition. These remains are recognized on the basis of the presence of lenticular Agate Basin and Acasta notched projectile points. Sites of this time period are widely scattered in the barren grounds. In the southern Keewatin District, sites of this time period are associated with major caribou crossings or fisheries (Harp 1961). Westward, eskers figure prominently in site association (Noble 1981: 97). The similarity in style to projectile points found further south has prompted the suggestion that people of the northwestern plains seasonally exploited the barrens (Wright 1981: 87). Although the basic economic lifestyle did not change in the succeeding Shield Archaic Period between approximately 4,000 and perhaps 1,000 B.C., lanceolate projectile points continue to serve as horizon markers during this period. Sites of the Shield Archaic occur northward along the Kazan-Dubawnt-Thelon river system. The Shield Archaic is replaced by the Arctic Small Tool Tradition, attributable to Palaeo-Eskimo peoples.

Sometime after approximately 3,500 B.C., Palaeo-Eskimo populations began to take up occupation along the coast of the central Arctic stretching eastward to Greenland. Identifiable on the basis of specialized microlithic and diagnostic standard size tools as well as a variety of bone, antler and ivory materials, these early occupations are assigned to either Pre-Dorset/Independence I (2,200-800 B.C.), a transitional phase, or Dorset (500 B.C. – A.D. 1,450) temporal affiliations (Maxwell 1984). Early, Palaeo-Eskimo sites occur at Dismal Lake (Harp 1958) and Bloody Falls (McGhee 1970). Both sea mammals and terrestrial ungulates (primarily caribou) were exploited; undoubtedly fish and fowl were also included in the subsistence pattern. The succeeding Dorset sites in the eastern and High Arctic suggest an increasing emphasis on sea mammals for winter subsistence and perhaps an increasing use of caribou in summer at inland lakes and of fishing weirs. The final archaeological phase is termed Thule and represented by the 'typical Eskimo' sites in the arctic (McGhee 1984). Thought to have developed in northern Alaska, it rapidly spread eastward to Greenland after approximately A.D. 1,000. Characteristic of Thule culture was a dependence on whale hunting, supplemented by seal, fish, caribou and fowl, and winter villages consisting of several semi-subterranean houses as well as the appropriate hunting and survival tools and material goods.

ARCHAEOLOGICAL STUDIES

Proposed Quarries between Meadowbank and Amaruq

Heritage Resources

November 2016

The Project area falls within the traditional territory of the Caribou Inuit, which is located west of Hudson's Bay and extends from the tree line to just north of Baker Lake. The Caribou Inuit depended almost entirely on fish and caribou, and rarely visited the coast to hunt seals. According to McGhee (1990), the Thule ancestors of the Caribou Inuit, spreading down the coast of Hudson's Bay approximately 1,200 B.C., would have encountered the immense herds of caribou that migrate from the tree line north to the summer calving grounds around Chesterfield Inlet. However, given that the barrenlands were occupied by Chipewyan, the Inuit would not have been able to make much use of the caribou resource. When smallpox decimated the Chipewyan populations in the 1780s, the Inuit, who had by now acquired trade goods such as traps and rifles as a result of interaction with the Hudson's Bay Company, were able to move inland and efficiently hunt caribou.

4.0 Methods

In order to meet the objectives of the archaeological studies, the following tasks were conducted: 1) review of the existing archaeological site data base, 2) review of previous archaeological studies within the general Project area, 3) archaeological impact assessment field studies, 4) review of maps and satellite imagery to evaluate archaeological potential and field study coverage, and 5) formulation of recommendations for use or avoidance of the proposed quarries relative to archaeological sites.

4.1 Record Review

In order to ensure that all recorded archaeological sites were considered during the 2016 archaeological studies, a site data request, including a Nunavut site data license, was submitted to the Department of Culture and Heritage, Government of Nunavut, to determine if archaeological sites are on record within proximity of the Whale Tail Project. **Staff at Nunavut's** Department of Culture and Heritage responded to provide site information for previously recorded archaeological sites identified within the general project area.

4.2 Review of Previous Studies

In addition to requesting recorded site data from the Department of Culture and Heritage, Government of Nunavut, the results of previous studies undertaken for various project components north of the Meadowbank Mine were reviewed. This included the archaeological studies conducted relative to exploration activities in 2011 (Tischer 2012), the archaeological studies conducted for exploration activities on the Amaruq lease in 2013 (Tischer 2013), the 2014 archaeological studies conducted relative to the exploration activities (Tischer 2015) and the 2015 archaeological studies conducted for the proposed Whale Tail Project and associated access road/borrow sources (Tischer 2016). These studies were reviewed relative to field study coverage, as well as relative to identified archaeological sites.

4.3 Field Studies

Archaeological field studies were conducted in July 2016. The quarry shapes and sizes were not known during the field studies, but point data was provided by Agnico Eagle. During the field studies, the point locations provided for each quarry were accessed by helicopter and a relatively large area was subject to traverse by the archaeological crew, focusing on the areas perceived to have moderate to high potential to contain archaeological sites. All proposed quarry locations consist of bedrock landforms, and as such surficial inspection was the means of identifying archaeological sites; shovel testing was not determined to be necessary. Inspection for stone features and archaeological cultural material (lithic, bone or historic artifacts) was conducted at each quarry location.

4.4 Review of Maps and Imagery

Subsequent to completion of the field studies, Agnico Eagle provided detailed drawings illustrating the size and extent of each quarry. This information was reviewed using satellite imagery and tracked logs of the archaeological field studies to assess the field study coverage of each quarry location, and to confirm the archaeological potential of each quarry location as observed in the field.

4.5 Formulation of Recommendations

Based on the review of the quarry footprints, the field study coverage, and the identified archaeological site locations, recommendations were formulated as to the need for any supplemental archaeological studies and relative to the proposed use of the quarries by Agnico Eagle.

4.6 Site Designation

Archaeological sites are referred to by a Borden Number which consists of a four letter symbol accompanied by a number (i.e., LdNs-11). This uniform site designation scheme for archaeological sites in Canada was developed by archaeologist Charles Borden (1954). Within this system and north of latitude 62°, the upper case letters represent major blocks 2° by 4° in size (i.e., L = 64° to 66° latitude; N = 104° to 112° longitude) and the lower case letters denote 10' and 20' units within the major block (i.e., d = 30' to 40' latitude; s = 0' to 20' longitude). The numbers are assigned sequentially by the Archaeological Survey of Canada, Canadian Museum of Civilization and refer to specific sites within each unit.

Results
November 2016

5.0 Results

5.1 Record Review

The site file search obtained from the Nunavut Department of Culture and Heritage confirmed that all archaeological sites on record within proximity of the Project have been recorded during the assessments conducted for the Meadowbank and Whale Tail Projects (see section 5.2).

5.2 Review of Previous Studies

Archaeological sites recorded during previous studies that are within proximity of the proposed quarries include:

- LgLa-20 - approximately 175 m west of the 10+500 quarry boundary
- LhLa-6 and LhLa-7 - approximately 250 m southeast of the 23+350 quarry boundary
- LiLb-3 - approximately 350 m north of the 53+650 quarry boundary
- LiLb-1 - approximately 625 m east of the 61+150 quarry boundary

A review of archaeological study coverage from previous studies revealed that several of the planned quarry location were assessed or partially assessed during studies conducted in previous years. These include:

- Quarry 10+500 – portions of this quarry were assessed under Permit 2011-015A (Tischer 2012) as part of an investigation of exploration areas, and under Permit 2015-026A (Tischer 2016) as part of the assessment of the planned Haul Road.
- Quarry 13+200 – portions of this quarry were assessed under Permit 2015-026A (Tischer 2016) as part of the assessment of the planned Haul Road.
- Quarry 17+000 – this quarry was assessed under Permit 2015-026A (Tischer 2016) as part of the assessment of Esker #1, associated with the planned Haul Road.
- Quarry 25+350 – this quarry was assessed under Permit 2015-026A (Tischer 2016) as part of the assessment of Esker #2, associated with the planned Haul Road.

Quarry 10+500 and 13+200 were reassessed during the current study. Quarries 17+000 and 25+350 were not reassessed during the current study as they had been completely and thoroughly assessed during the 2015 AIA field studies.

5.3 Field Studies

Field studies were conducted with point data for the quarries, but no shapes/sizes known. As such, a large area around each point was assessed, focusing on surficial inspection of areas with moderate to high potential archaeological to contain unrecorded archaeological sites. During the study, two new archaeological sites were identified in conflict with proposed quarry locations.

5.3.1 Archaeological Sites Identified

Site LhLa-11

This site consists of at least 10 stone features situated on a high landform overlooking a large lake to the east. The features include tent rings, caches and stone markers. At least one lithic (stone tool) artifact was observed, and historic period materials (metal) was also observed, suggesting that this site was used on more than one occasion over time (ie. both the prehistoric and historic periods). The site extends over the north half of proposed Quarry 15+800 (see Appendix A, Map 11).

Site LiLb-4

This site consists of at least 25 stone features and several scatters of lithic debitage (tool making debris) and stone tools covering a relatively large area. The site is on an area of varied bedrock; Esker #4 is across a narrow lake to the east. Stone features at the site include a variety of tent rings, some of which are unusually large, as well as a number of hearths, cairns, and marker rocks. At least two stone chopping tools were observed. This site extends over a significant portion of proposed Quarry 53+650 (see Appendix A, Map 2).

5.4 Review of Maps and Imagery

After completion of the field survey (during which the quarry footprints were unknown), a desktop review of the final planned quarry footprints against satellite imagery and tracked logs of the archaeological field studies was conducted. The review confirmed that most of the proposed quarries were located on terrain features that would be considered to be of high or moderate potential to contain archaeological sites, based on the nature of the landform and proximity to water sources. However, some quarries were considered to be of low archaeological potential due to the low profile of the landform or the lack of proximity to water sources. A summary of the archaeological potential, field assessment coverage, results of the assessment and recommendations relative to use of each proposed quarry are provided in Table 5-1.

ARCHAEOLOGICAL STUDIES
Proposed Quarries between Meadowbank and Amaruq

Results
November 2016

Table 5-1 Summary of quarry location assessment

Quarry	Perceived Archaeological Potential	Archaeological Study Coverage	Archaeological Sites identified	Comments	Recommendations
10+500	Moderate	Quarry source fully assessed (2016)	None	Site LgLa-20 is approximately 150 m to the west	Clearance to use quarry source
13+200	Moderate	Quarry source fully assessed (2016)	None	N/A	Clearance to use quarry source
15+800	High	Quarry source fully assessed (2016)	Site 2016-2	Site LhLa-11 extends across the north half of the quarry	Proposed quarry will not be used
17+000	High	Quarry source fully assessed (2015)	None	N/A	Clearance to use quarry source
25+350	High	Quarry source fully assessed (2015)	None	N/A	Clearance to use quarry source
26+250	Low	West portion of quarry assessed; areas with the best archaeological potential were fully assessed.	None	N/A	Clearance to use quarry source
30+050	Moderate	Quarry source fully assessed (2016)	None	N/A	Clearance to use quarry source
34+900	Moderate	Eastern 2/3 of quarry assessed; areas with the best archaeological potential were fully assessed.	None	N/A	Clearance to use quarry source
42+900	Low	Northern portion of quarry assessed; areas with the best archaeological potential were fully assessed.	None	N/A	Clearance to use quarry source
50+600	Moderate	Quarry source fully assessed (2016)	None	N/A	Clearance to use quarry source

ARCHAEOLOGICAL STUDIES

Proposed Quarries between Meadowbank and Amaruq

Results

November 2016

Table 5-2 Summary of quarry location assessment - continued

Quarry	Perceived Archaeological Potential	Archaeological Study Coverage	Archaeological Sites identified	Comments	Recommendations
52+000	High	Quarry source fully assessed (2016)	None	N/A	Clearance to use quarry source
53+650	High	Central portion of quarry was assessed (within the site 2016-3 boundary); north, west and southern areas were not assessed and are of high potential to contain additional archaeological features.	Site 2016-3	Site LiLb-4 extends across the central portion of the quarry, and additional unrecorded features may be present outside of the currently defined site boundary.	Proposed quarry will not be used
61+150	Low	Quarry source fully assessed (2016)	None	N/A	Clearance to use quarry source

ARCHAEOLOGICAL STUDIES

Proposed Quarries between Meadowbank and Amaruq

Results

November 2016

As noted in Section 5.3.1 and Table 5-1, two archaeological sites were identified in conflict with two proposed quarry locations. Based on these findings, these two proposed quarry sites (15+800 and 53+650) are no longer considered for use by Agnico Eagle. In the future, if these quarry sites are necessary, additional consultation with stakeholders and studies relative to archaeology would need to take place prior to any impacts at the quarries, including additional assessment (at quarry 53+650) and detailed archaeological mapping/excavation of the sites (at both quarry 15+800 and 53+650).

5.5 Summary

The 13 proposed quarry locations were assessed relative to archaeology during either the 2015 and/or 2016 field season. The assessment coverage of each of these quarry locations is considered to be adequate relative to the archaeological potential at each quarry, with the exception of quarry 53+650, at which site 2016-3 was identified; the potential for additional archaeological features to be present is high, and the entire footprint was not assessed during field studies.

Two quarries (15+800 and 53+650) were not recommended for use due to the presence of large archaeological sites. The archaeological sites identified at these quarries are both relatively large and complex and the sites would require significant additional archaeological investigation before the quarries could be used. As a result of these findings, at this time, Agnico Eagle is no longer proposing to use these locations as quarry sites. Ongoing avoidance of these quarries by any project activities is recommended. It is further recommended that the remaining 11 quarries can be used by Agnico Eagle.

The results of the impact assessment conducted for the quarries will be presented in the final AIA report prepared as required for submission to the Department of Culture and Heritage, Government of Nunavut, including detailed description, maps, and photographs of the archaeological sites. The recommendations summarized in this report will be presented to the regulators in the AIA report. If the regulators have any concerns with these recommendations, they will advise Agnico Eagle.

6.0 References Cited

- Blower, D. 2003. Heritage Resources Studies Mitigation and Assessment 2002. Bathurst Inlet Port and Road Project. Nunavut Permit 02-035A. Fedirchuk McCullough & Associates Ltd. Nunavut Department of Culture and Heritage. Iqaluit.
- Borden, C. E. 1954. A uniform site designation scheme for Canada. *Anthropology in British Columbia*, Vol. 4: 44-48.
- Bussey, J. 1994. Report on field investigations for the BHP NWT Diamonds Project (preliminary). Points West Heritage Consulting Ltd. Consultant's report on file, Prince of Wales Northern Heritage Centre. Yellowknife.
- Bussey, J. 1995. 1995 Archaeological investigations for the BHP Diamonds Inc. Points West Heritage Consulting Ltd. Consultant's report on file, Prince of Wales Northern Heritage Centre. Yellowknife.
- Bussey, J. 1997. 1996 Archaeological investigations for the BHP Diamonds Inc. Points West Heritage Consulting Ltd. Consultant's report on file, Prince of Wales Northern Heritage Centre. Yellowknife.
- Fedirchuk, G.J. 1995. Heritage resource impact assessment Kennecott Southwest Diavik Property. Fedirchuk McCullough & Associates Ltd. Consultant's report on file, Prince of Wales Northern Heritage Centre. Yellowknife.
- Fedirchuk, G.J. 1996a. Heritage resources studies Lytton Minerals Limited Jericho Project. Fedirchuk McCullough & Associates Ltd. Consultant's report on file, Prince of Wales Northern Heritage Centre. Yellowknife.
- Fedirchuk, G.J. 1996b. Heritage resources studies Mountain Province Mine Kennady Project. Fedirchuk McCullough & Associates Ltd. Consultant's report on file, Prince of Wales Northern Heritage Centre. Yellowknife.
- Fedirchuk, G.J. 2001. Heritage resource studies Bathurst Inlet Port and Road Project. Fedirchuk McCullough & Associates Ltd. Nunavut Department of Culture and Heritage. Iqaluit.
- Gordon, B.H.C. 1975. Of men and herds in barrenland prehistory. Canada, National Museum of Man, Archaeological Survey of Canada. Ottawa.
- Harp, E. Jr. 1958. Prehistory of the Dismal Lake Area, N.W.T., Canada. *Arctic*, Vol. 11, no. 4:219-249.
- Harp, E. Jr. 1961. The archaeology of the Lower and Middle Thelon, Northwest Territories. Arctic Institute of North America. Technical Paper No. 8. Montreal.

ARCHAEOLOGICAL STUDIES

Proposed Quarries between Meadowbank and Amarug

References Cited

November 2016

- Kroker, S. 1996. Ulu mine project archaeological impact assessment, phase II. Quaternary Consultants Limited. Consultant's report on file, Prince of Wales Northern Heritage Centre. Yellowknife.
- McGhee, R. 1970. Excavation at Bloody Falls, N.W.T., Canada. *Arctic Anthropology*, Vol. 6, no. 2: 53-72.
- McGhee, R. 1984. Thule Prehistory of Canada. In *Handbook of North American Indians*, Vol. V. Arctic, pp. 369-376. Smithsonian Institution, Washington.
- McGhee, R. 1990. *Canadian Arctic Prehistory*. Canadian Museum of Civilization. Hull.
- Maxwell, M. S. 1984. Pre-Dorset and Dorset Prehistory in Canada. In, *Handbook of North American Indians* Volume 5 Arctic. Pp 359-368. Smithsonian Institution, Washington.
- Metcalf, F. 1979. Rawalpindi River archaeological survey 1978. Manuscript on file, Archaeological Survey of Canada. Ottawa.
- Noble, W.C. 1971. Archaeological surveys and sequences in Central District of Mackenzie, N.W.T. *Arctic Anthropology*, Vol. 8, no. 1: 102-145.
- Noble, W.C. 1977. The Taltheilei Shale Tradition: an update. In *Problems in the Prehistory of the North American Subarctic: the Athapaskan questions*. Edited by J.W. Helmer, S. Van Dyke, and F.J. Kense. University of Calgary, Calgary.
- Noble, W.C. 1981. Prehistory of the Great Slave Lake and Great Bear Lake Region. *Handbook of North American Indians* Volume 6, Subarctic. Pp. 97-129. Smithsonian Institution. Washington.
- Novecosky, B. 2008. Report on Archaeological Baseline Collection for the Kiggavik/Sissons Uranium Project, Nunavut. Consultant's report on file. Nunavut Department of Culture and Heritage. Iqaluit.
- Nunavut Government. 2001. Archaeological and Palaeontological Sites Regulations.
- Tischer, J.C. 2002. Heritage Resources Studies Final Report: Izok Mine Project. FMA Heritage Resources Consultants Inc. Consultant's report on file. Nunavut Department of Culture and Heritage. Iqaluit.
- Tischer, J.C. 2007. Archaeological Impact Assessment Cumberland Resources Meadowbank Mine All-Season Road and Borrow Sources Nunavut Permit 2006-027A. FMA Heritage Resources Consultants Inc. Consultant's report on file. Nunavut Department of Culture and Heritage. Iqaluit.

ARCHAEOLOGICAL STUDIES

Proposed Quarries between Meadowbank and Amaruq

References Cited
November 2016

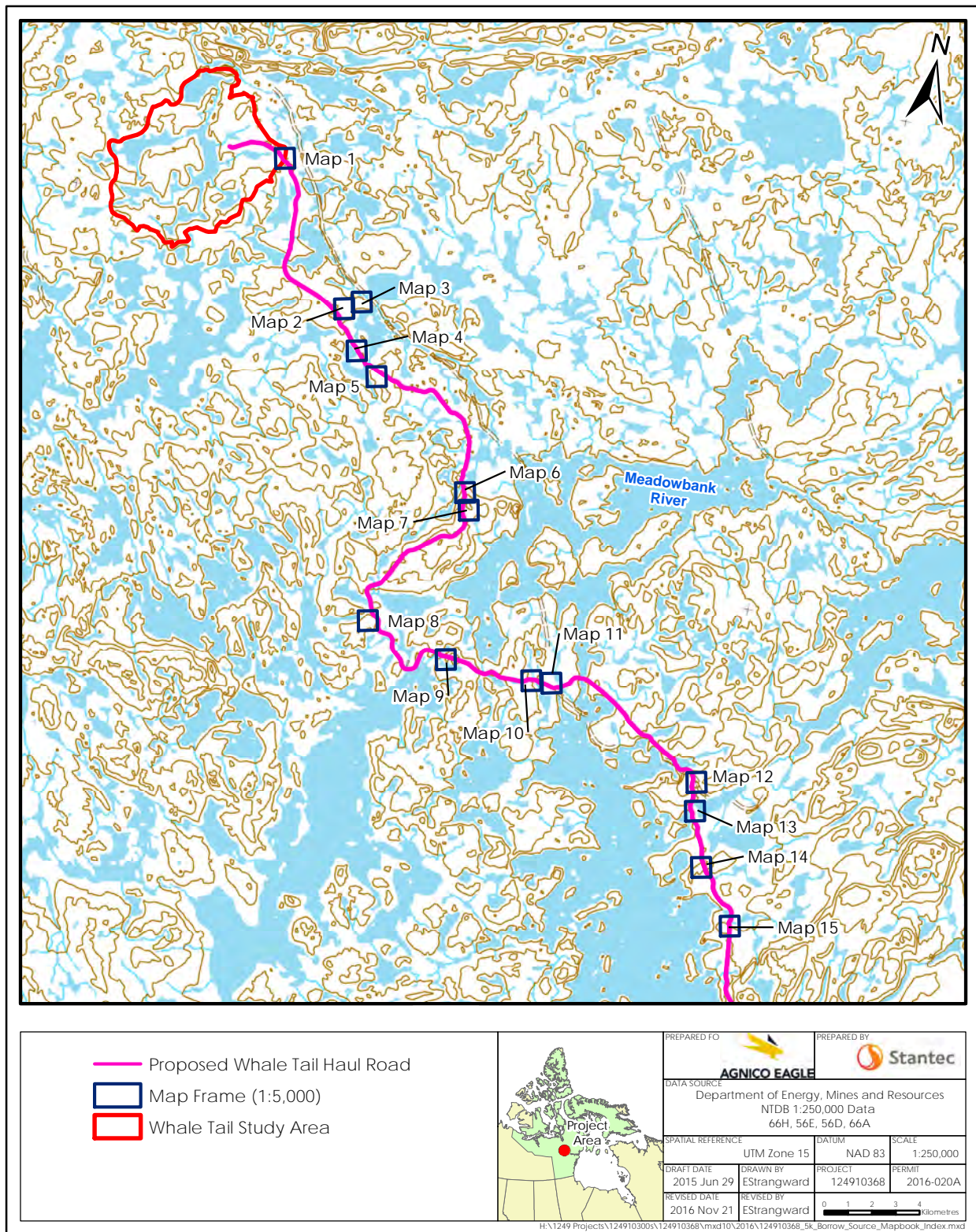
- Tischer, J.C. 2008. Archaeological Studies Pacific Ridge Exploration Ltd. Baker Basin Project Nunavut Permit 2007-026A. **FMA Heritage Resources Consultants Inc. Consultant's report on file.** Nunavut Department of Culture and Heritage. Iqaluit.
- Tischer, J.C. 2010. Archaeological Impact Assessment 2010 Agnico-Eagle Mines Limited Meadowbank Gold Project Nunavut Permit 10-022A. **FMA Heritage Inc. Consultant's report on file.** Nunavut Department of Culture and Heritage. Iqaluit.
- Tischer, J.C. 2012. Archaeological Impact Assessment Agnico-Eagle Meadowbank 2011 Exploration Studies, Nunavut Permit 11-015A. Stantec Consulting Ltd. **Consultant's report on file.** Nunavut Department of Culture and Heritage. Iqaluit.
- Tischer, J.C. 2013. Archaeological Impact Assessment Agnico-Eagle Meadowbank 2013 Exploration Studies Permit Number Nunavut 13-015A. Nunami-Stantec Limited. **Consultant's report on file.** Nunavut Department of Culture and Heritage. Iqaluit.
- Tischer, J.C. 2015. Archaeological Impact Assessment Agnico-Eagle Meadowbank 2014 Exploration Studies Permit Number Nunavut 14-017A. Nunami-Stantec Limited. **Consultant's report on file.** Nunavut Department of Culture and Heritage. Iqaluit.
- Tischer, J.C. 2016. Archaeological Impact Assessment Agnico Eagle Mines: Meadowbank Division – Whale Tail Pit and Haul Road, and 2015 Exploration Activities Permit Number Nunavut 15-026A. **Consultant's report on file.** Nunavut Department of Culture and Heritage. Iqaluit.
- Unfreed, W.J. 1997. Continuing inventory: heritage resources impact assessment Kennecott Diavik Property. Fedirchuk McCullough & Associates Ltd. Consultant's report on file, Prince of Wales Northern Heritage Centre. Yellowknife.
- Wright, J.V. 1981. Prehistory of the Canadian Shield. In *Handbook of North American Indians*, Vol. VI. Subarctic, pp. 86-96. Smithsonian Institution. Washington.

Appendix A

Quarry Source and Archaeological Sites Mapbook

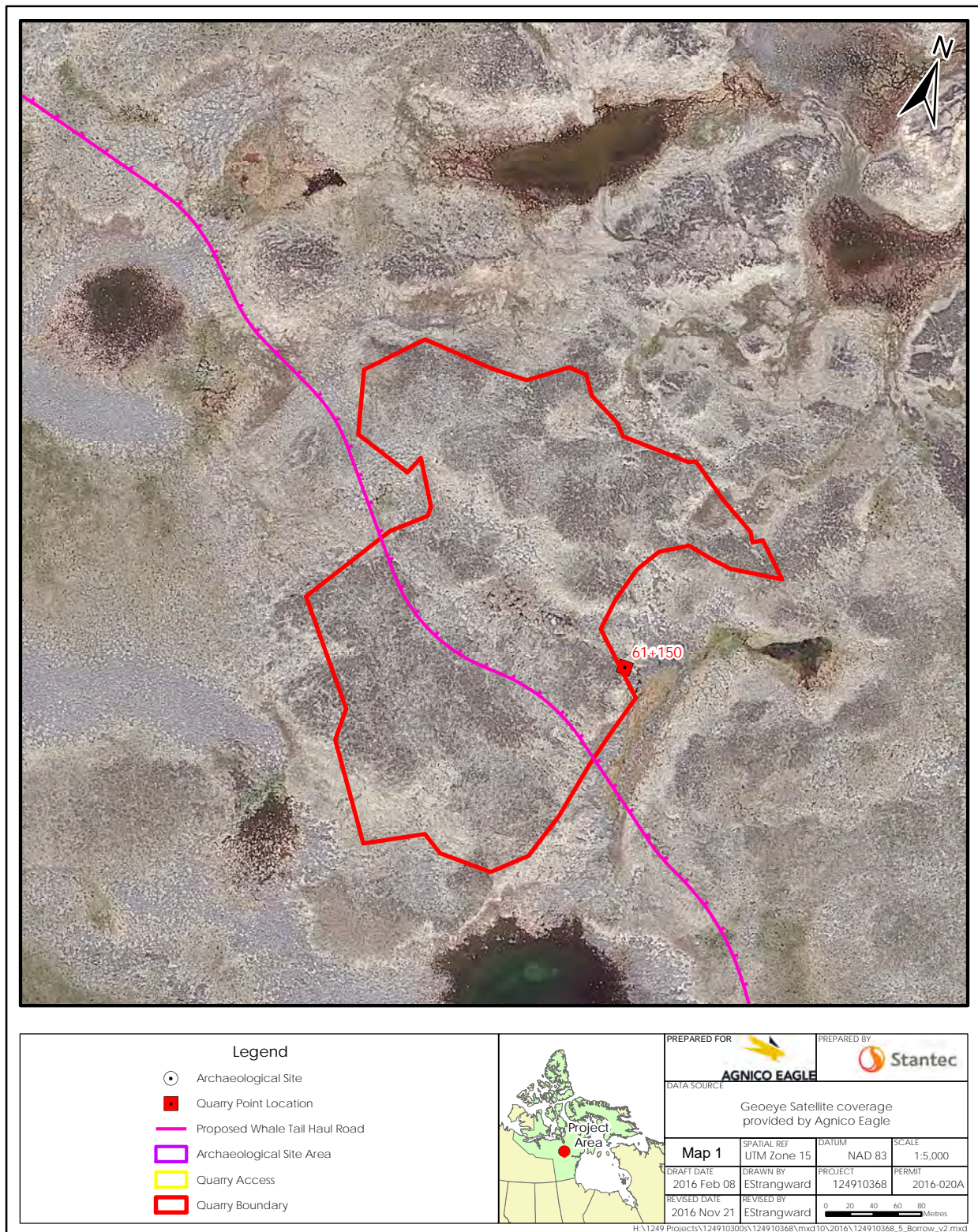
ARCHAEOLOGICAL STUDIES

Proposed Quarries between Meadowbank and Amarug



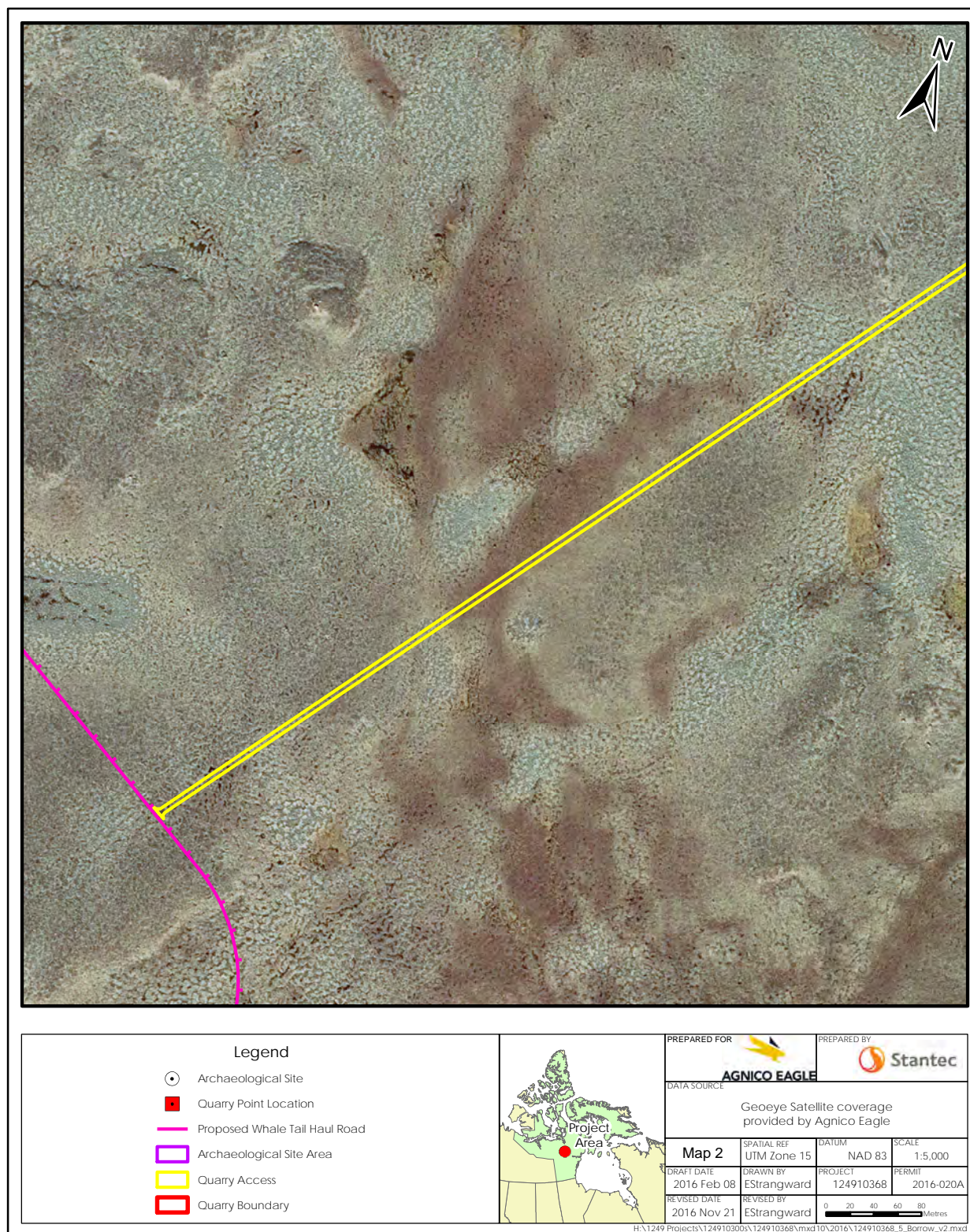
ARCHAEOLOGICAL STUDIES

Proposed Quarries between Meadowbank and Amarug

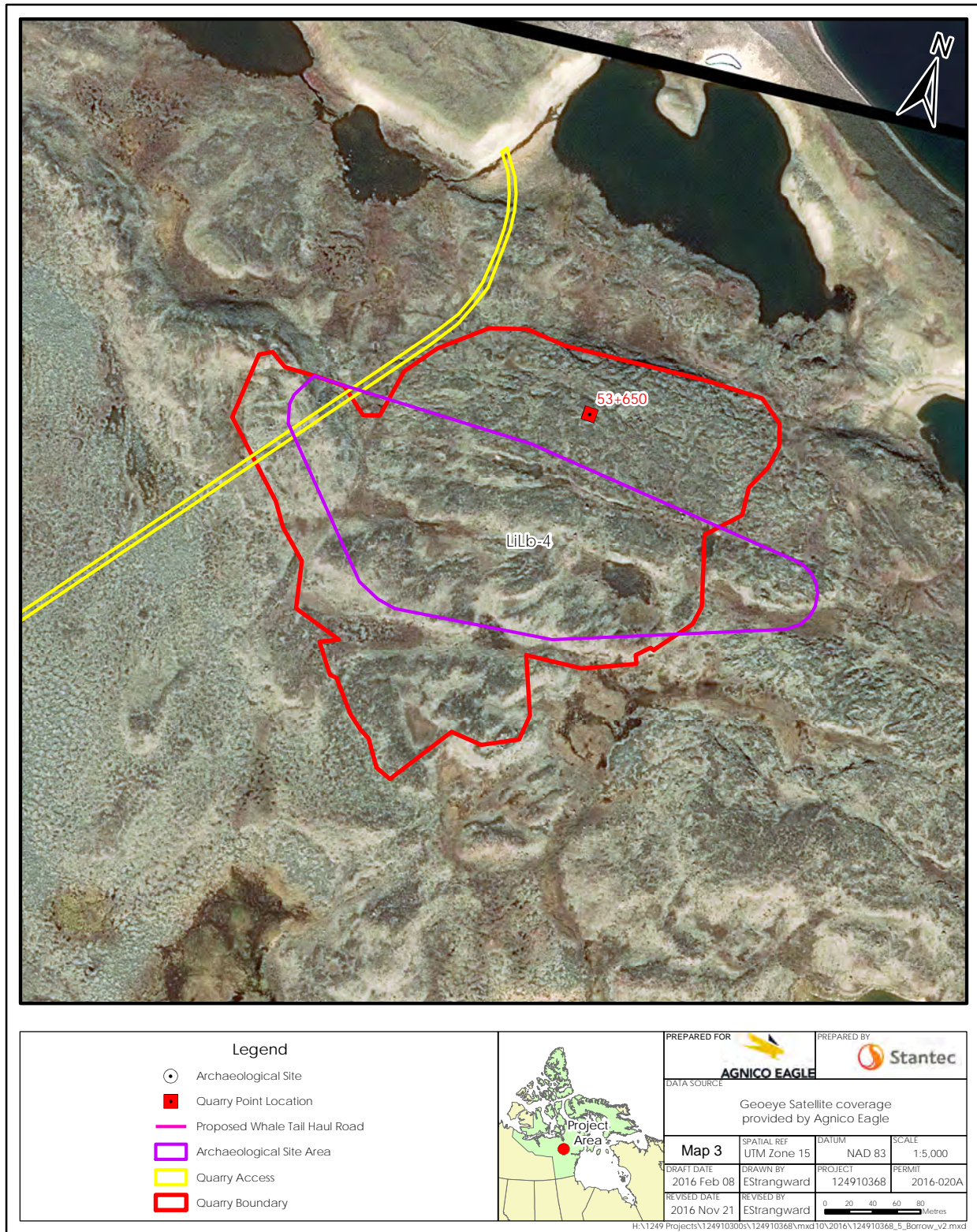


ARCHAEOLOGICAL STUDIES

Proposed Quarries between Meadowbank and Amarug

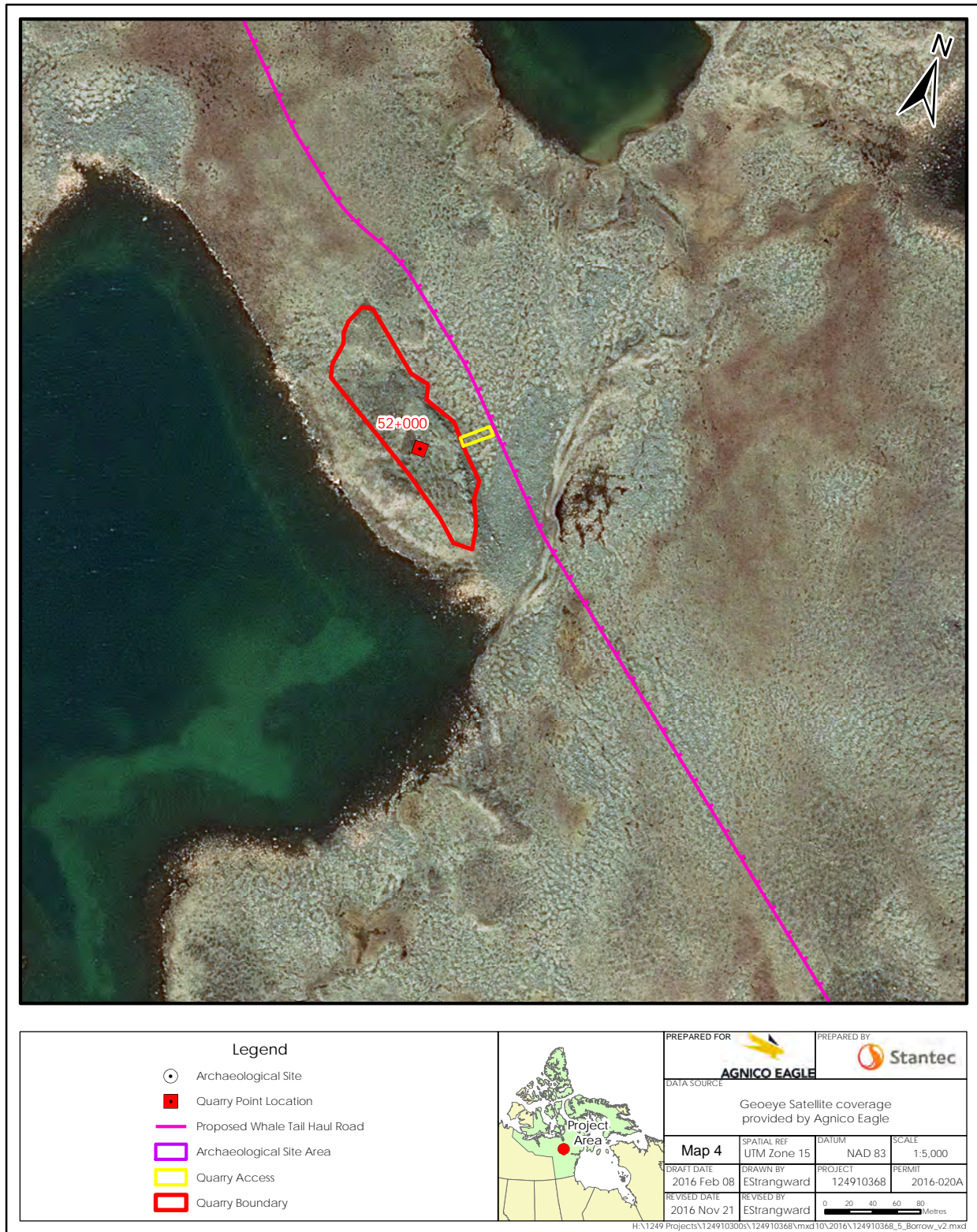


ARCHAEOLOGICAL STUDIES Proposed Quarries between Meadowbank and Amaruq



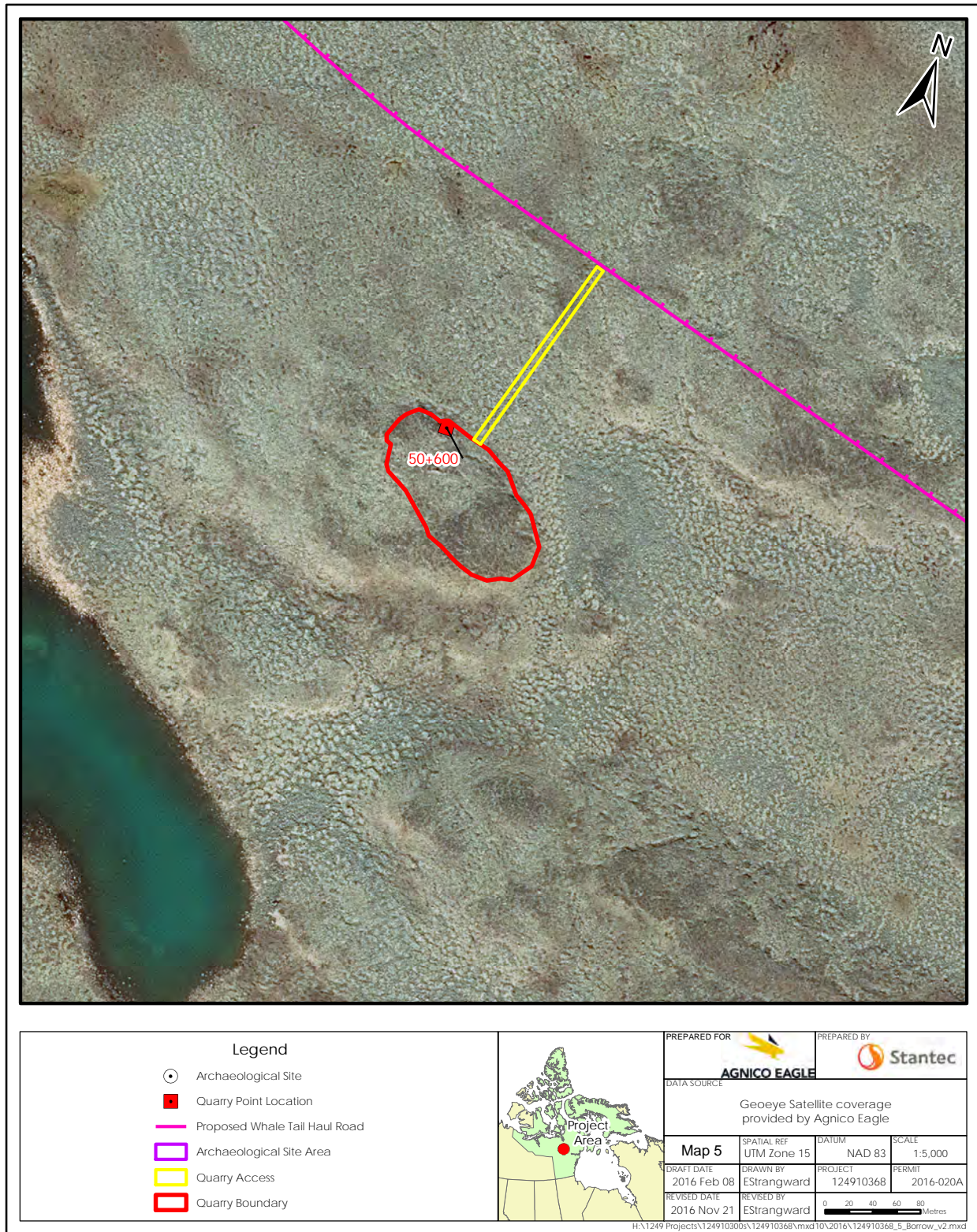
ARCHAEOLOGICAL STUDIES

Proposed Quarries between Meadowbank and Amaruaq



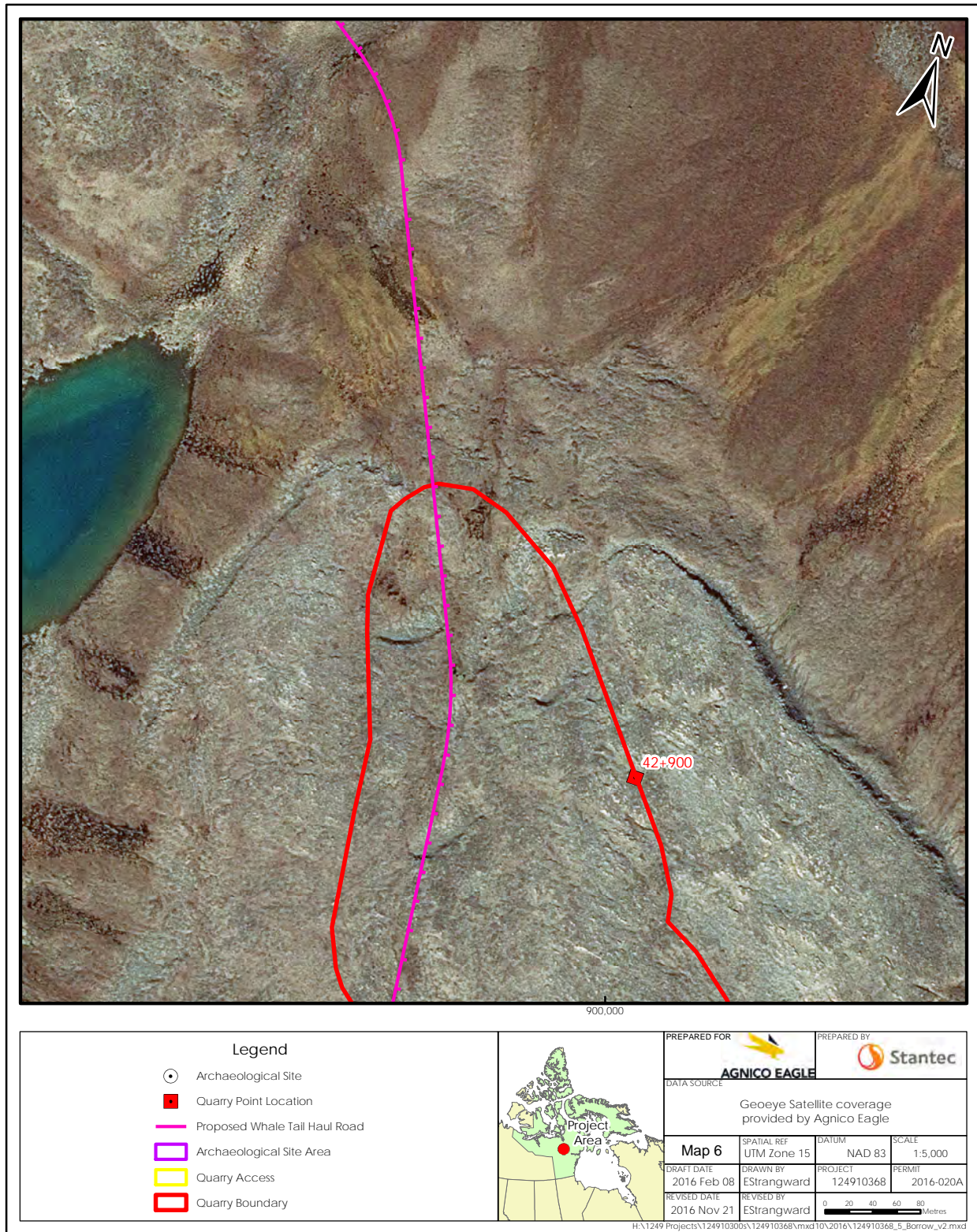
ARCHAEOLOGICAL STUDIES

Proposed Quarries between Meadowbank and Amarug



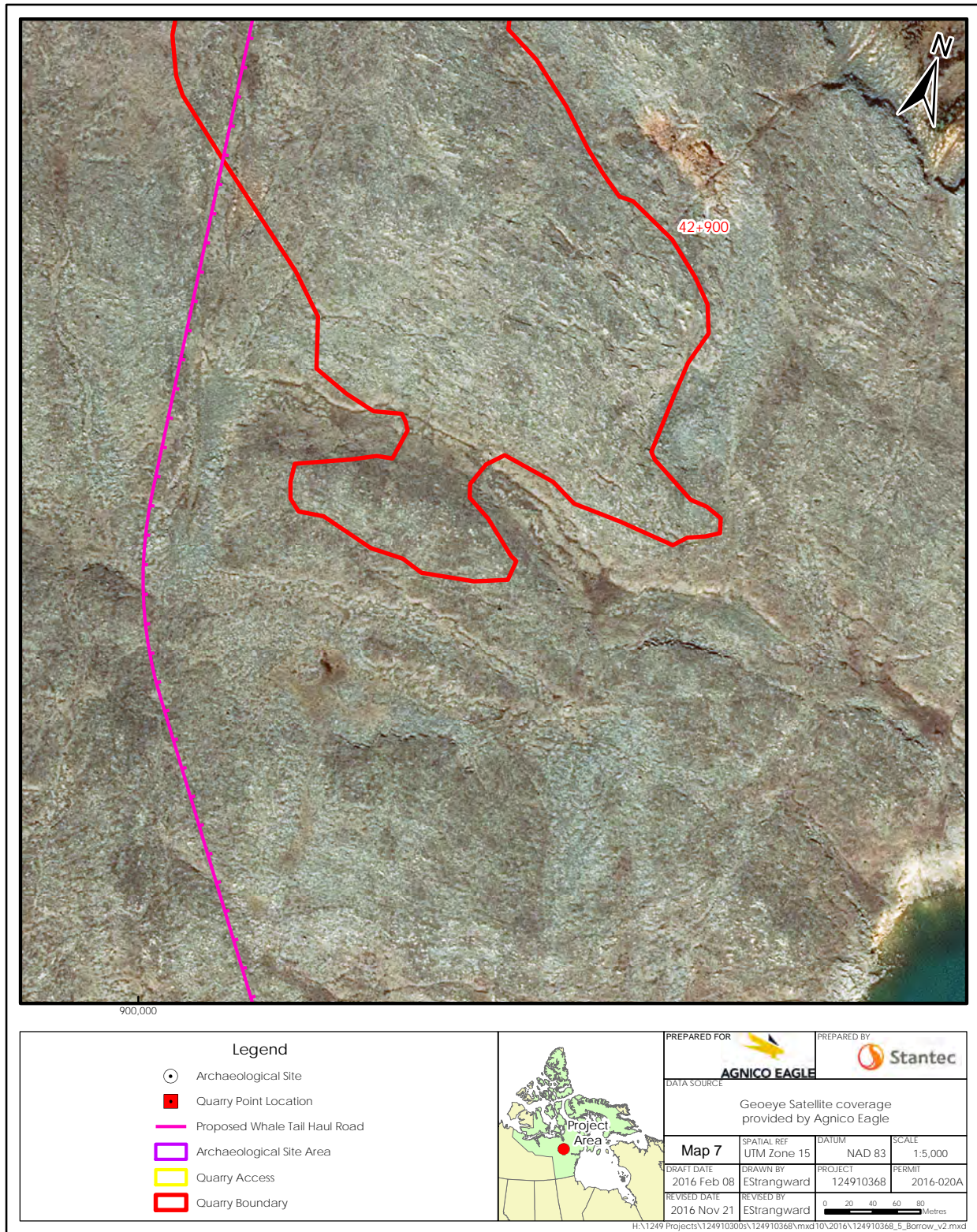
ARCHAEOLOGICAL STUDIES

Proposed Quarries between Meadowbank and Amarug



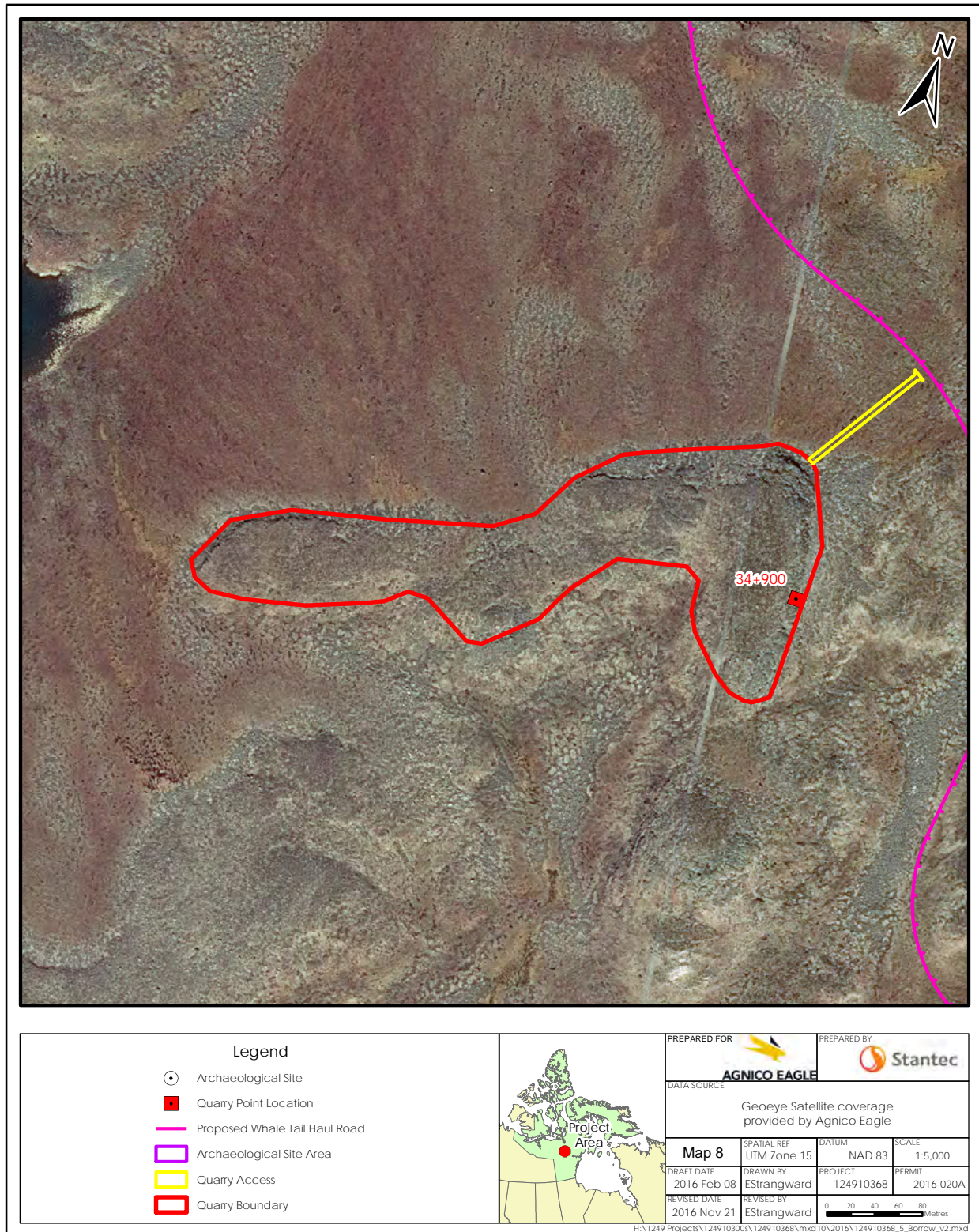
ARCHAEOLOGICAL STUDIES

Proposed Quarries between Meadowbank and Amarug



ARCHAEOLOGICAL STUDIES

Proposed Quarries between Meadowbank and Amarug

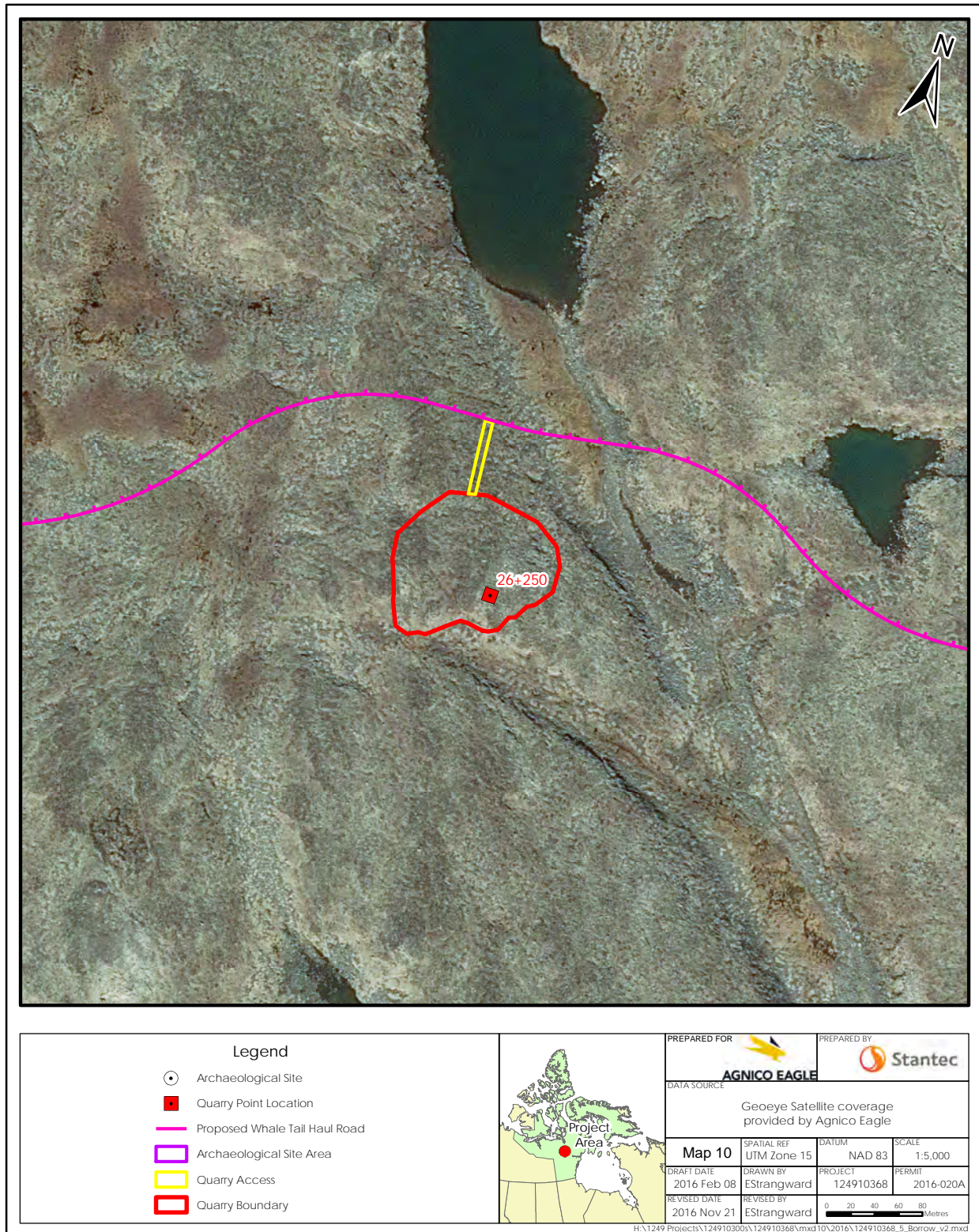


Proposed Quarries between Meadowbank and Amarug



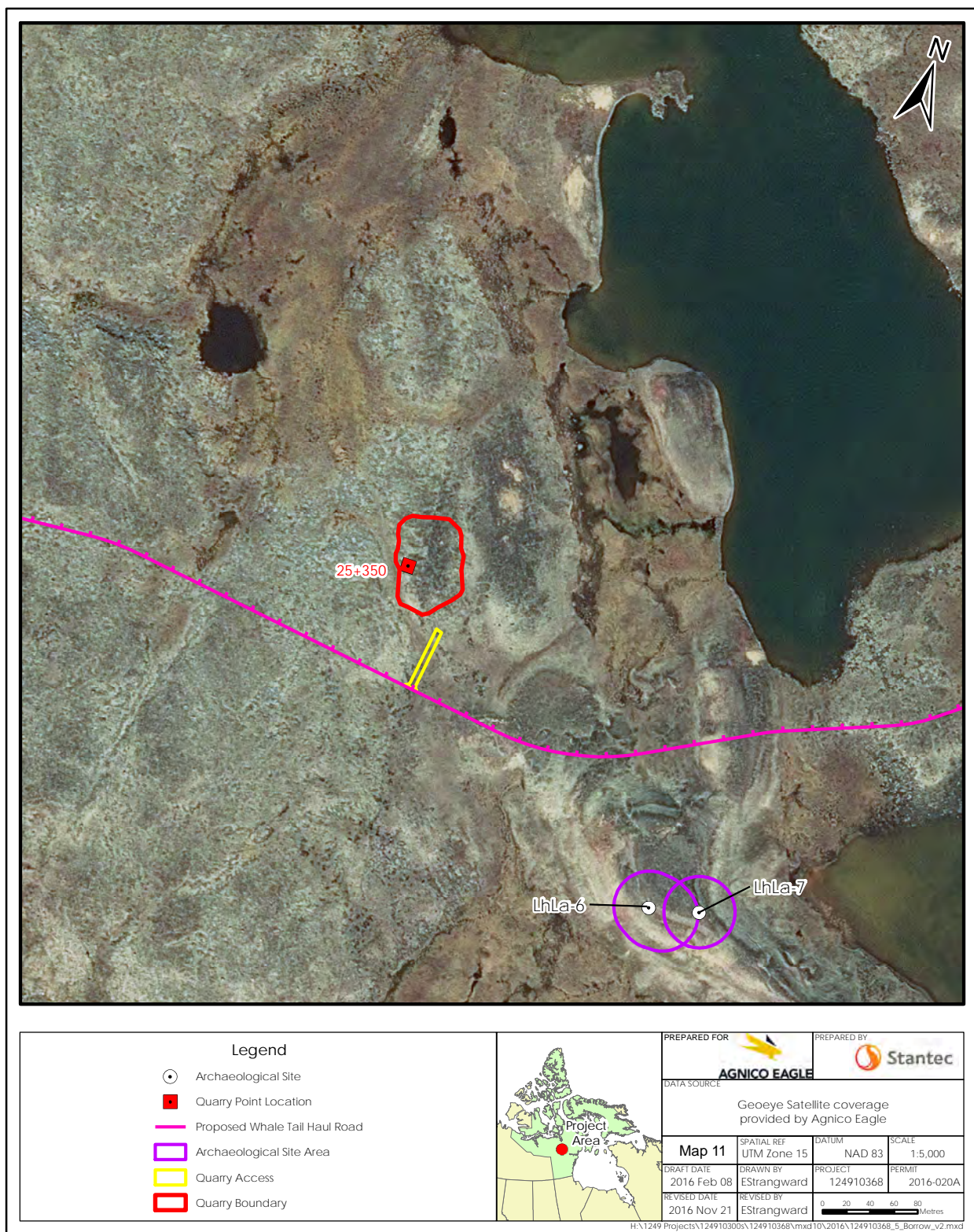
ARCHAEOLOGICAL STUDIES

Proposed Quarries between Meadowbank and Amarug



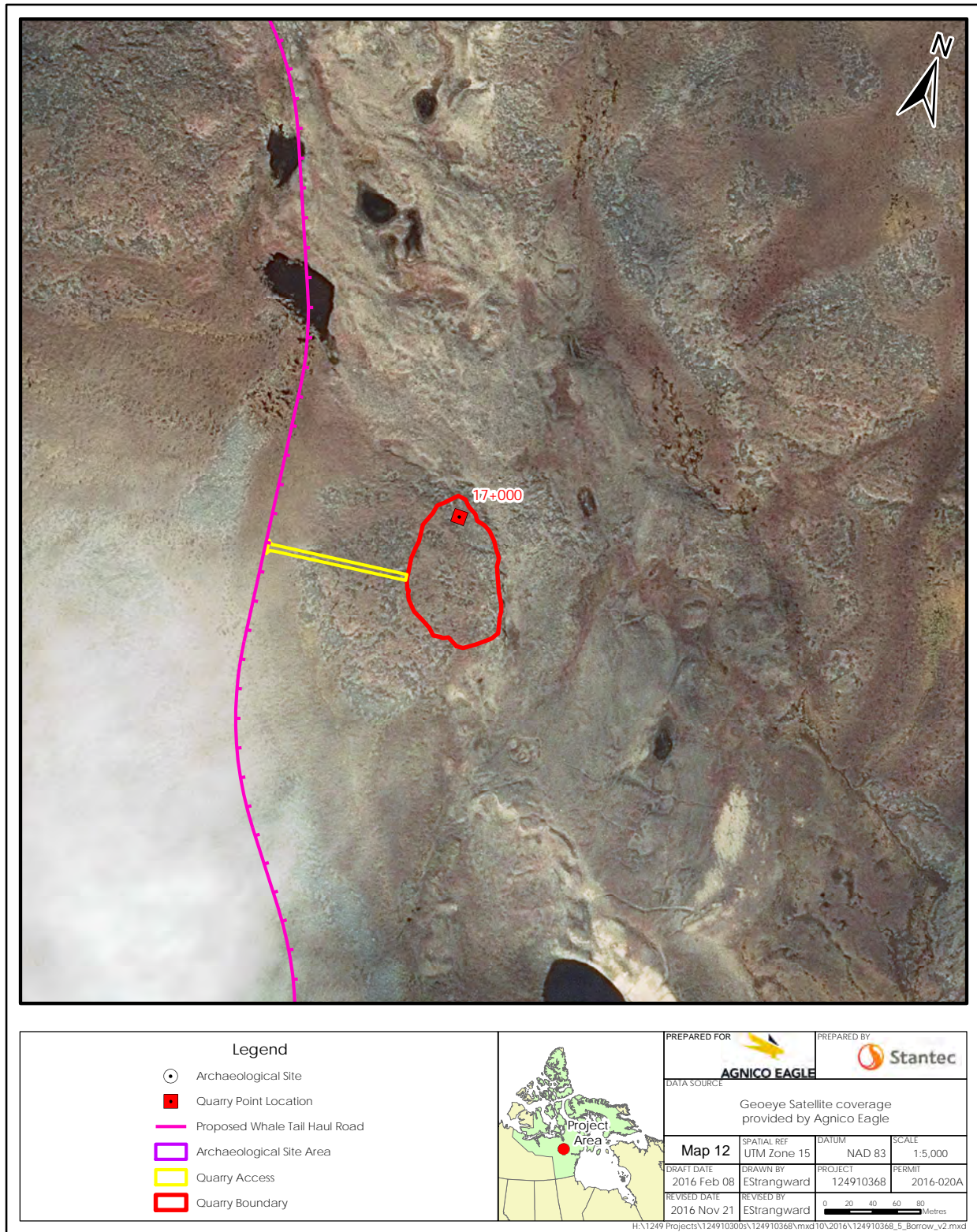
ARCHAEOLOGICAL STUDIES

Proposed Quarries between Meadowbank and Amarug



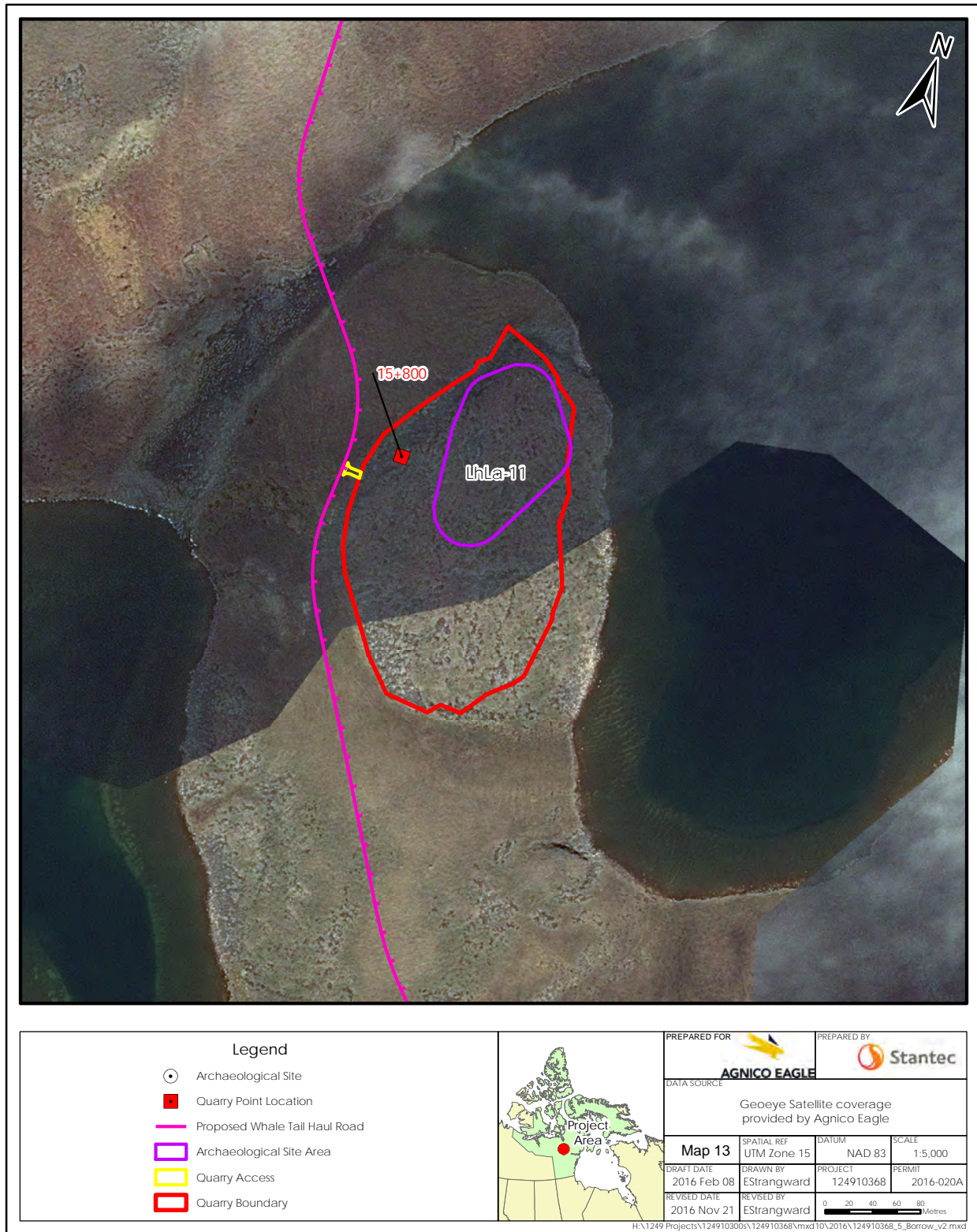
ARCHAEOLOGICAL STUDIES

Proposed Quarries between Meadowbank and Amarug



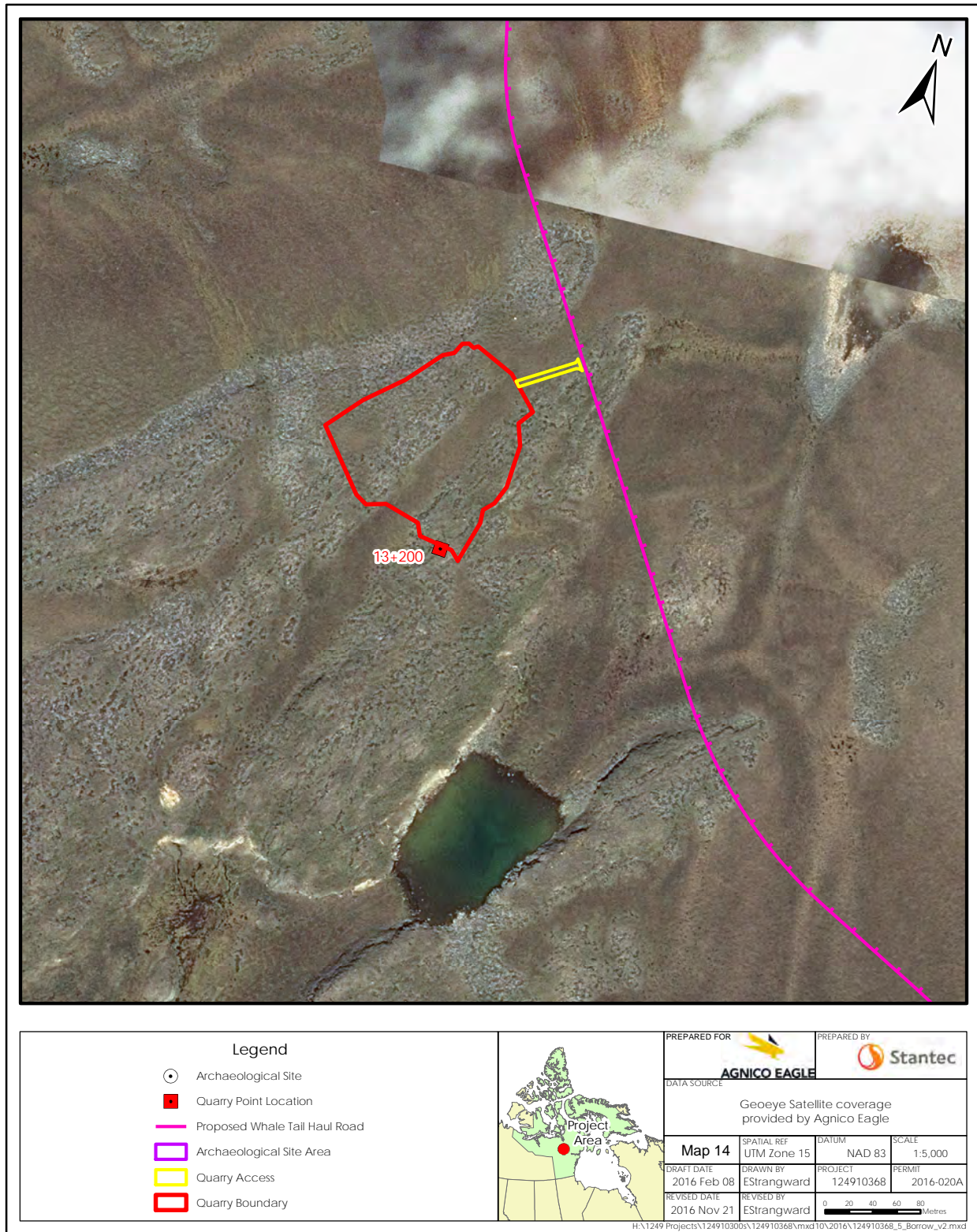
ARCHAEOLOGICAL STUDIES

Proposed Quarries between Meadowbank and Amarug



ARCHAEOLOGICAL STUDIES

Proposed Quarries between Meadowbank and Amarug



Proposed Quarries between Meadowbank and Amarug

