

Proposed Phase II Archaeological Survey of Two Routes through Gates of the Arctic National Park and Preserve Associated with the Ambler Mining District Industrial Access Road Project (AMDIAR)



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I. Introduction

A. Title

Proposed Phase II Archaeological Survey of Two Routes through Gates of the Arctic National Park and Preserve Associated with the Ambler Mining District Access Project

B. Date of Proposal

April 16, 2014

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E. Abstract

Northern Land Use Research Alaska, LLC (NLURA) proposes to conduct a Level II “Evaluation Phase” cultural resources helicopter and pedestrian survey with subsurface testing for determinations of site eligibility for the National Register of Historic Places within the North Option and South Option study areas of the Ambler Mining District Industrial Access Road Project (AMDIAR) Brooks East Corridor through National Preserve lands within Gates of the Arctic National Park and Preserve.

Key Words: Archaeology, Cultural Resources

II. Overview

A. Statement of Issue

The Alaska Industrial Development and Export Authority (AIDEA) proposes to identify, design, and construct a transportation corridor between the Dalton Highway and the Ambler mineral belt. The Ambler Mining District Industrial Access Road Project (AMDIAR) would establish a road from the Ambler mineral belt to the existing highway system in Alaska's interior to provide all-season access to state lands and facilitate the exploration and development of mineral resources within the Ambler mineral belt.

Construction of the AMDIAR through the GAAR is consistent with the provisions of the Alaska National Interest Lands Conservation Act (ANILCA) [Public Law 96-487, Title II, Sec. 201(4)(b)], which includes a provision for an Ambler Right-of-Way Access Easement for surface transportation purposes across the Western (Kobuk River) unit of the Gates of the Arctic National Preserve (from the Ambler Mining District to the Alaska Pipeline Haul Road) and states that the Secretary of the Interior shall permit such access in accordance with the provisions C, D and E of Section 201(4) of the Act (See Appendix A for full text of ANILCA Section 201(4)).

B. Literature summary

In preparation for this proposal, the Alaska Office of History and Archaeology Integrated Business System (OHA IBS) was searched for Alaska Heritage Resources Survey (AHRS) sites located within one mile of the study area centerlines for the proposed AMDIAR North and South Options through GAAR. This search revealed 52 AHRS sites within one mile of the study area centerlines, one of which is within the 300 foot wide study area (Table 1).

There is some discrepancy between the descriptions of the site locations given on the AHRS cards and where the sites are plotted on the OHA IBS maps; some of the sites described as within GAAR are shown on the OHA IBS map as outside park boundaries. The vast majority of the sites shown on Table 1 were recorded in 1983, before GPS was available to archaeologists. As a result, the location information for these sites is relative rather than absolute. In addition, any irregularities in site location may have been compounded by Alaska Office of History and Archaeology (OHA) mapping practices, which have been known to plot sites with accurate GPS location data significant distances from their actual locations.

Table 1. AHRS sites within the one mile of the proposed AMDAP North and South Option studyarea centerlines through GAAR

AHRS Number	Site Name and Description of Cultural Resources	NHRP Eligibility	Reference
HUG-00005	Norutak 1. Approximately 160 m (525 ft) long prehistoric site. Giddings (1963) identified Norton ceramics. Contained lithic material including flakes, microblades, an end scraper and a chopper/scraper with a bifacial edge.	No determination of eligibility (NDE)	Clark 1974
HUG-00006	Norutak 7. Sixteen square meters (172 square feet) excavated at this prehistoric site yielded a unifacial knife, projectile points, end scrapers, flake knives or side scrapers, retouch flakes, utilized flakes, a possible microblade, a possible burin core a hide scraping stone and an adze shaped scraper.	NDE	Clark 1974
HUG-00016	HUG-00016. A single chert flake found on the surface.	NDE	(Kunz et al. 1984:123)
HUG-00024	HUG-00024. A large fragment of lunate knife/biface and two large waste flakes found on the surface.	NDE	(Kunz et al. 1984:129-130)
HUG-00025	HUG-00025. Surface scatter of chert and obsidian lithics including waste flakes, reduced obsidian cobbles, chert microblades and an obsidian point.	NDE	(Kunz et al. 1984:130-133)
HUG-00028	HUG-00028. A retouched obsidian flake, a small obsidian waste flake and a chert waste flake found on the surface.	NDE	(Kunz et al. 1984:133-134)
HUG-00029	HUG-00029. Surface scatter of obsidian lithics including microblades, microblade cores, larger blades, flake knives, and waste flakes.	NDE	(Kunz et al. 1984:134-136)
HUG-00037	HUG-00037. Over 100 microblades, a large number of flakes, a multi-faceted burin, and a core tablet were noted during surface reconnaissance. A test pit yielded a multi-faceted burin, a wedge-shaped microblade core, and a number of microblades.	NDE	(Kunz et al. 1984:143-145)

AHRS Number	Site Name and Description of Cultural Resources	NHRP Eligibility	Reference
HUG-00041	HUG-00041. Lithics scatter containing approximately 20 microblade fragments, numerous waste flakes, three large blade fragments, a microblade core tablet, a beaked graver-like tool, and an end scraper on a blade	NDE	(Kunz et al. 1984:146-147)
HUG-00103	HUG-00103. A flake and a retouched flake found on the surface.	NDE	(Kunz et al. 1984:219)
HUG-00104	HUG-00104. Three chert flakes in exposures on a terrace.	NDE	(Kunz et al. 1984:220)
HUG-00132	HUG-00132. Test probes produced a linear stamped sherd and a burinated fragment of a parallel flaked point.	NDE	Clark 1974
HUG-00133	Norutak 3. Prehistoric site that yielded a small obsidian microblade and a large retouched chert microblade.	NDE	Clark 1974
HUG-00134	Norutak 5. Two cache pits and a 36 m long surface scatter of artifacts and flakes including a chert biface, four chert biface fragments, three microblade segments and some possibly utilized flakes.	NDE	Clark 1974
HUG-00193	HUG-00193. A single chert projectile point proximal fragment found on the surface.	NDE	NPS 2010 Electronic AHRS Card
HUG-00195	HUG-00195. A single dark gray chert flake found on the surface.	NDE	2010 NPS GAAR Site Files (Fairbanks, AK)
XSP-00056	XSP-00056. Two loci of lithic material. Locus A includes several chert flakes and calcined bone. Locus B includes a obsidian side notch point, a basal fragment and several obsidian flakes.	NDE	(Kunz et al. 1984:25-26)
XSP-00057	XSP-00057. Approximately 50 obsidian and chert flakes with some microblade fragments on the surface.	NDE	(Kunz et al. 1984:26-28)
XSP-00058	XSP-00058. Four chert and obsidian flakes located on the surface.	NDE	(Kunz et al. 1984:28-29)

AHRS Number	Site Name and Description of Cultural Resources	NHRP Eligibility	Reference
XSP-00059	XSP-00059. Approximately 50 flakes and microblade fragments on the surface. Subsurface testing yielded additional material including flakes, microblade fragments and a primary bruin spall.	NDE	(Kunz et al. 1984:29-30)
XSP-00060	XSP-00060. A single microblade fragment.	NDE	(Kunz et al. 1984:31-32)
XSP-00061	XSP-00061. Ten obsidian and chert flakes found along a game trail. Twenty-two obsidian and chert flakes and chert microblade fragment recovered from three subsurface tests.	NDE	(Kunz 1984:32-33)
XSP-00065	XSP-00065. Single chert flake found on the surface.	NDE	(Kunz et al. 1984:36)
XSP-00068	XSP-00068. Chert projectile point fragment and chert blade like flake.	NDE	(Kunz et al. 1984:40-41)
XSP-00069	XSP-00069. Obsidian, chert and basalt flakes, retouch flake and the base of a projectile point found along a game trail.	NDE	(Kunz et al. 1984:41-42)
XSP-00070	XSP-00070. Obsidian core tablet or core fragment.	NDE	(Kunz et al. 1984:42-43)
XSP-00071	XSP-00070. Two possible boulder Spall Scrapers and a chert flake.	NDE	(Kunz et al. 1984:43-44)
XSP-00072*	XSP-00072. A single chert flake (possible microblade fragment) found in an exposure.	NDE	(Kunz et al. 1984:45)
XSP-00074	XSP-00074. Numerous chert and quartzite flakes found on surface and in subsurface test.	NDE	(Kunz et al. 1984:46-47)
XSP-00075	XSP-00075. Single chert flake found on surface.	NDE	(Kunz et al. 1984:47)
XSP-00076	XSP-00076. A single chert flake found on surface.	NDE	(Kunz et al. 1984:48)
XSP-00079	XSP-00079. Seven chert and obsidian flakes on surface, variety of chert and obsidian flakes recovered for a two test pits.	NDE	(Kunz et al. 1984:54-55)
XSP-00080	XSP-00080. Three lithic scatters containing chert, basalt and obsidian flakes along a game trail.	NDE	(Kunz et al. 1984:55-56)
XSP-00096	XSP-00096. Single chert flake fond on surface.	NDE	(Kunz et al. 1984:225)

AHRS Number	Site Name and Description of Cultural Resources	NHRP Eligibility	Reference
XSP-00097	XSP-00097. Single chert flake found on surface.	NDE	(Kunz et al. 1984:225-226)
XSP-00119	XSP-00119. Surface scatters at two loci along ridge. Locus A, 20-25 waste flakes, a biface and large retouch flake, all chert. Locus B, two chert flakes and an obsidian flake.	NDE	(Kunz et al. 1984:184-185)
XSP-00127	XSP-00127. Approximately 50 obsidian waste flakes and a single chert flake found on surface.	NDE	(Kunz et al. 1984:196-197)
XSP-00128	XSP-00128. Basalt, chert and obsidian flakes and an end scraper fragment found on surface.	NDE	(Kunz et al. 1984:197-198)
XSP-00129	XSP-00129. Three loci covering approximately 100 m. Locus A, a single chert flake. Locus B, chert and obsidian flakes and a side scraper. Locus C, a basalt flake knife/flesher and two chert flakes. All on surface.	NDE	(Kunz et al. 1984:199-200)
XSP-00131	XSP-00131. Several surface lithic concentrations including 20-25 obsidian microblades, a chert microblade core or core tablet fragment, a chert microblade fragment, a utilized obsidian flake and a chert flake. Additional microblades located in a test pit.	NDE	(Kunz et al. 1984:202-203)
XSP-00135	XSP-00135. Three waste flakes and a notched and utilized flake found on surface. Three waste flakes in a test pit. All chert.	NDE	(Kunz et al. 1984:209)
XSP-00136	XSP-00136. Three chert flakes found on the surface and in a test pit.	NDE	(Kunz et al. 1984:210)
XSP-00137	XSP-00137. One chert and one obsidian flake found in a frost boil.	NDE	(Kunz et al. 1984:210-211)
XSP-00139	XSP-00139. A single utilized obsidian flake found on surface.	NDE	(Kunz et al. 1984:213)
XSP-00140	XSP-00140. Small cluster of lithics including a possible burinated basalt flake, a basalt waste flake and three obsidian waste flakes.	NDE	(Kunz et al. 1984:214)

AHRS Number	Site Name and Description of Cultural Resources	NHRP Eligibility	Reference
XSP-00141	XSP-00141. Lithic scatter containing 20-25 obsidian microblades, two with retouch and a blade retouched from a beak-like tool. Three obsidian flakes from a test pit.	NDE	(Kunz et al. 1984:215)
XSP-00142	XSP-00142. Five chert places found on surface. Retouched flake tool and bifacially flaked tool fragment from a test pit.	NDE	(Kunz et al. 1984:216-217)
XSP-00143	XSP-00143. Two chert flakes and an obsidian flake found on surface.	NDE	(Kunz et al. 1984:217-218)
XSP-00144	XSP-00144. One obsidian flake and one chert flake found on surface.	NDE	(Kunz et al. 1984:218-219)
XSP-00407	XSP-00407. Lithic scatter consisting of two black chert interior flakes. Site is likely more extensive.	NDE	NPS 2010 Electronic AHRS Card
XSP-00436	XSP-00436. Lithic scatter of black chert bifaces, biface fragments, biface blanks, performs and flakes eroding out of a moraine.	NDE	NPS 2010 Electronic AHRS Card
XSP-00450	XSP-00450. A single rusted can and three pieces of sawn wood.	NDE	NPS 2010 Electronic AHRS Card

* Indicates sites located within the 300 foot wide study area.

Source: Alaska Office of History and Archaeology Integrated Business System (OHA IBS) April, 2013.

Forty-two of the AHRS sites identified within one mile of the study area centerlines for the two proposed options through GAAR were discovered during a Phase I cultural resources inventory conducted in 1983. This survey included 11 weeks of pedestrian survey and subsurface testing supported by raft, helicopter and fixed wing aircraft. The 1983 research located a total of 214 prehistoric sites and 10 historic sites within GAAR. Most of the prehistoric sites were small, reflecting short-term hunting activities. The vast majority of the sites were attributed to Athabascan peoples, though there was some evidence that Eskimo peoples may have utilized the area. The sites were roughly dated between 7000 and 200 years B.P. (Kunz et al. 1984).

The historic sites identified during the 1983 survey represented a number of historic events including pre 1885 non-native exploration, the 1898-1899 Kobuk gold rush and later hunting or trapping activity. More recent sites (considered modern at the time of the survey) were noted along the Kobuk River, which the researchers associated with the use of the Kobuk as a means of transportation for various recreational activities (Kunz et al. 1984).

Two of the known AHRs sites in the study area (XSP-00407 and XSP-00450) were described by NPS personnel in 2010. One is a prehistoric lithic scatter and the other a small historic artifact scatter. These sites were described from information included on the AHRs cards.

None of the sites within 1 mile of the Brooks East Corridor study area centerline have been determined eligible for listing on the National register of Historic Places (NRHP); none have been determined ineligible for listing on the NRHP. Fifty-one of the sites are prehistoric lithic scatters. One site (XSP-00450) is a small historic scatter.

C. Scope of Study

AIDEA has contracted with DOWL HKM and Northern Land Use Research Alaska, LLC (NLURA) to conduct a Level II, "Evaluation Phase" cultural resources survey (as defined by the OHA in Historic Preservation Series No. 11, revised 2003 (Alaska Department of Natural Resources 2003)). The purpose of a Level II or "Evaluation" survey is to locate sites and gather enough information to complete a DOE recommendation.

This proposal is for a Level II, helicopter and archaeological cultural resources survey within the 300 foot wide corridor along those sections of the North Option and South Option of the AMDIAR Brooks East Corridor study area that pass through the National Preserve section of GAAR (Figure 1, Figure 2, Figure 3, Figure 4 and Figure 5). The proposed date of the survey is July or August of 2014.

D. Intended Use of the Results

The 2014 Level II cultural resources survey and evaluation will result in National Register of Historic Places (NRHP) recommendations of eligibility (ROEs) for sites located within the 2014 survey corridor. This research is part of the regulatory process for the consideration of the effect of federal undertakings on historic properties defined by Section 106 of the National Historic Preservation Act (NHPA). The information gathered will also contribute to the environmental assessment required by the National Environmental Protection Act (NEPA) and be incorporated into the environmental and economic analysis specified by Title II, Sec. 201(4) of ANILCA, to determine the preferred route for the Ambler right-of-way and establish any terms and conditions which may be required for the issuance of that right-of-way.

III. Objective/hypothesis to be tested

The objective of the 2014 Level II evaluation covered by this proposal is to identify sites within the North and South Options of the Brooks East Corridor through GAAR and evaluate their eligibility to be listed on the NRHP.

IV. Methods

A. Description of the Study Area.

The study area for this proposal is two 300 foot wide corridors, the North and South Option routes, of the Brooks East Corridor through the National Preserve section of GAAR. The North Option (Figure 2, Figure 3 and Figure 4) is approximately 25 miles long and would pass roughly east-west along the north edge of Nutuvukti Lake and south of Walker Lake. This route is located within Gates of the Arctic National Preserve just south of the boundary with the Gates of the Arctic Wilderness. Helicopter landings and pedestrian surveys will be confined to the Gates of the Arctic National Preserve.

The South Option (Figure 2 and Figure 5) is approximately 17 miles long and would pass south along the Reed River Valley, cross south of Nutuvukti Lake and exit the Preserve just north of Norutak Lake (approximately 17 miles within GAAR). The South Option study area is located entirely within Gates of the Arctic National Preserve.

Both the North and South Option study areas cross the Kobuk Wild and Scenic River and are located within lands with wilderness characteristics.

Appendix B is a list of the Meridians, Townships, Ranges and Sections (MTRS) within GAAR through which the North and South Option study areas pass.

B. Procedures

This proposal covers a Level II, “Evaluation” survey of the Brooks East Corridor North and South Option study areas of the AMDIAR within the National Preserve of GAAR. Level II evaluations include survey and testing in order to determine site boundaries and make recommendations on the eligibility of sites for listing on the NRHP.

All research covered by this proposal will comply with the General Conditions for Conducting Research in Gates of the Arctic National Park and Preserve, any special conditions established for the project by the NPS (see Appendix A for the draft guidelines for project review established for the Ambler Mining District Access NEPA review) and any permit stipulations.

1. Pre-field

Prior to the commencement of fieldwork, NLURA will identify known historic and prehistoric resources within and adjacent to the study area. Appendix B lists the Alaska Heritage Resources Survey (AHRs) sites shown on the OHA IBS within a mile of the Brooks East Corridor North and South Option study area centerlines within GAAR. NLURA has also received site information listed on the NPS Archaeological Sites Management Information System (ASMIS).

NLURA will install a data dictionary that meets or exceeds the data gathering needs of the NPS on the GPS units used in the field to insure that data collected will be consistent with NPS data collection standards.

Prior to the commencement of the fieldwork, NLURA will develop a GIS probability model, which will be used to identify locations within the survey areas that have a higher potential to

contain cultural resources potentially eligible for listing on the NRHP. The purpose of this model is to identify areas for pedestrian survey and subsurface testing during the fieldwork phase of the project.

During the pre-field phase, NLURA will apply for an ARPA permit for a Level II survey and excavations for evaluation of sites within GAAR.

Per the NPS draft Guiding Principles for Project Review (Appendix A), NLURA will provide language for a public notice, which will include a description of the project, a range of project dates, a description of the means of access and the location of the study area(s). This notice will be sent to all the Resident Zone Communities.

2. Fieldwork

Timing: July or August 2014.

Duration: 18 Days

Access: Turbine Helicopter (A-Star AS355 or similar).

Lodging: Dahl Creek Camp or Bettles.

Personnel: Eleven (11) total; seven (8) NLURA archaeologists (six (6) field personnel, one (1) field director, one (1) GIS specialist), one (1) NPS archaeologist or archaeological technician (if available), one (1) subsistence advisor, and one (1) pilot

a. Fieldwork methods

The proposed Level II survey and evaluation will combine three methods of field observation: helicopter survey, pedestrian survey and sub-surface testing.

1. Helicopter survey and landings

The helicopter survey would involve over-flights along the Brook East Corridor North and South Option survey areas within GAAR at elevations at or below 500 feet AGL. Every effort will be made not to make low level passes over park visitors, raptor nests or other sensitive areas designated by the GAAR personnel prior to the survey. As much as possible, low level helicopter flight will be restricted to the vicinity of the study area. The purpose of the helicopter survey is to identify locations that, in the professional opinion of the archaeologists involved have a high probability to contain cultural resources potentially eligible for listing on the NRHP.

Detailed mapping is not generally possible during a helicopter survey due to a number of factors including helicopter speed, elevation and the technical limitations of high precision GPS units. The general location of high probability areas located during the helicopter survey will be recorded with Garmin GPS units and marked on a paper map. Aerial photographs will be taken of high probability areas identified during the aerial survey to facilitate their relocation.

Helicopter landings will be made in order to conduct pedestrian and subsurface testing of high probability areas identified by the GIS probability model developed for the survey area by NLURA and during the helicopter survey. It is estimated that this will include between 4 and 10

helicopter landings per day, based on the areas to be surveyed and obstacles (such as rivers) that need to be crossed by the survey crews. The helicopter landings would total between 72 and 180 helicopter landings over the 18 days of survey.

The exact location of the helicopter landings will be determined in consultation with the pilot to insure aircraft safety. In general, landings will be made in close proximity to the sites to be tested, within or adjacent to the proposed Brooks East Corridor North and South Option study areas. No landings will be made within the Gates of the Arctic Wilderness. Landings may be made within or adjacent to the proposed crossings of the Kobuk Wild River corridor.

2. Pedestrian survey and subsurface testing



The purpose of the pedestrian survey and subsurface testing is to identify sites and evaluate their eligibility for listing on the NRHP. Access to survey areas will be by helicopter. Where practicable, multiple high probability areas will be tested from a single helicopter landing.

During the pedestrian survey, in areas of sufficient surface visibility, investigators will walk parallel transects spaced across the survey area at 5m to 15m intervals. Surface inspection at prehistoric sites requires sufficient surface visibility to permit a reasonable likelihood of finding cultural material and is used primarily to identify locations where shovel testing should occur.

Shovel tests will be placed at the discretion of the field supervisor on sites deemed likely to contain subsurface features or artifacts. Shovel tests will involve the excavation of a 50cm x 50cm hole. NLURA policy is to excavate shovel tests to a depth sufficient to reach sterile soils. In residual soils this may be as little as 10cm below the A horizon. In aeolian, alluvial or colluvial sediments, all tests will be excavated to one meter (the safe depth established for excavations by OSHA) unless outwash gravels, streambed gravels, bedrock, frozen sediments or the water table are encountered. Field crews will use hand tools including shovels, saws root snips and trowels to excavate shovel test units. One-inch cores (Oakfield Probes) may be used to investigate stratigraphy below the base of shovel tests where pre-cultural strata could not be reached. The standard interval between shovel tests is 15m, though smaller intervals are acceptable if deemed necessary to provide sufficient coverage of a given land form. Sediments removed from shovel tests will be screened to ensure the identification of artifacts. NLURA will collect artifacts during the proposed Level II pedestrian survey and subsurface testing. Artifacts found in situ during the excavation of test units will be recorded photographically and detailed notes will be taken on their placement and association with other artifacts and stratigraphy within the unit.

Once a site is identified through a positive shovel test, evaluation of the site for inclusion on the National Register of Historic Places will begin, including additional shovel tests to determine site boundaries. Where possible, samples of datable material will be collected during subsurface testing.

All shovel tests will be backfilled to the original ground surface and the organic root mat will be replaced as much as possible to leave minimal trace of the archaeological investigation.

Standard fieldwork methods include written field notes documenting the terrain, surface geology, soils and vegetation as well as information on traces of human activity within the survey area. Notes will also include information on the areas surveyed, test units excavated, stratigraphy, sites, features and artifacts discovered. Where appropriate, site sketch maps will be made. 

Survey areas, sites, features and artifacts will be digitally photographed and GPS mapped. NLURA typically employs Trimble® GeoXT™ GPS units with an average real-time +/- 0.75 meter accuracy for field recording. These units will be loaded with a data dictionary that will meet the needs of the NPS, which will be used by field technicians to describe sites, features and artifacts encountered during the survey. GPS units will be used to record the location of helicopter landings, areas surveyed, test units, isolated artifacts and any other items of interest deemed useful by the archaeologists in the field.

GPS data, site sketch maps, photographs, scanned paper forms, data sheets and field notes, progress reports and quality control review sheets will be downloaded daily onto a central computer and hard drives.

Data collection methods will be consistent with the standards established by the NPS for recording archaeological sites within the GAAR. GPS data will be collected with sufficient accuracy to meet the requirements of the NPS. All GIS products will be delivered in the format specified by the NPS. All GIS data provided to the NPS will have the attached metadata required by the NPS.

C. Collections

NLURA will collect artifacts during the 2014 Level II survey and evaluation covered by the research proposal. Collection will be consistent with the provisions of the NPS Collection Permit. 

D. Analysis

The data gathered will be entered into a geodatabase and used to determine the NRHP eligibility of the sites recorded.

E. Schedule

The pre-field phase of this project is scheduled to begin in June of 2014. Fieldwork phase is scheduled to be carried out in July or August, 2014. Site data, including detailed descriptions and locations, will be delivered to NPS in a timely fashion. An end of season summary report will be submitted to the NPS by February 15, 2015. A final ARPA Report will be completed within six months of the completion of the fieldwork.

F. Budget

Funding for this project is provided by the Alaska Industrial Development and Export Authority (AIDEA). An exact budget cannot be provided for this project at this time.

V. Products

A. Publications and Reports

An end of season summary report will be submitted to the NPS by February 15, 2015. A final ARPA Report will be completed within six months of the completion of the fieldwork.

B. Collections



NLURA will collect artifacts during the 2014 field season. After analysis, collected artifacts will be returned to the NPS, in keeping with the provisions of the NPS Collections Permit.



C. Data and Other Materials

Photographic documentation of all sites and survey areas will be provided to the NPS. All GIS products will be delivered in the format specified by the NPS. All GIS data provided to the NPS will have the attached metadata required by the NPS. GPS data will be collected with sufficient accuracy to meet the requirements of the NPS.

Data will be provided to the NPS prior to submission to the OHA, to prevent discrepancies and duplication.

VI. Literature Cited

Blanchard, Morgan, David Guilfoyle and Gerad Smith

2014 *Level I Cultural Resources Survey-2013 Ambler Mining District Industrial Access Road Project*. Northern Land Use Research Alaska, LLC.

Kunz, Michael L., Peter G. Phippen, Richard E. Reanier and Mark Standley

1984 *Upper Kobuk River Drainage: Report of Phase I of a Cultural Resources Survey and Inventory in Gates of the Arctic National Park and Preserve*. Department of the Interior, National Park Service, Gates of the Arctic National Park and Preserve.

VII. Qualifications

See attached vitas for key personnel.

VII. Supporting Documentation

A. Safety

The proposed project will include helicopter survey and multiple landings. Each survey crew will carry a 12 gauge shotgun for bear protection.

B. Access to study sites

Access to the study sites will be by twin engine A-Star AS 355 helicopter for a period of 18 days with between 72 and 180 helicopter landings. The exact number of helicopter landings is dependent on the areas to be surveyed and obstacles to be crossed during the pedestrian surveys.

Personnel for this project will be based at Dahl Creek Camp or Bettles.

C. Use of mechanized and other equipment

No caches will be made within the GAAR. Excavations will be made using hand tools. No flagging or markers will be left in the field.

D. Chemical use

Not applicable

E. Ground disturbance

This project will involve the excavation of an unknown number of 50cm x 50cm shovel tests. These excavations will be a maximum of 1m in depth. All shovel tests will be backfilled to the original ground surface and the organic root mat will be replaced as much as possible to leave minimal trace of the archaeological investigation. One-inch cores (Oakfield Probes) may be used to investigate stratigraphy below the base of shovel tests where pre-cultural strata could not be reached.

F. Animal welfare

Not applicable.

G. NPS assistance

At the request of the NPS, the applicant will accommodate an NPS archeologist on the helicopter during the fieldwork phase of this project. However, completion of the proposed research is not

dependant on the participation of NPS personnel and the fieldwork described in this proposal would go forward should NPS personnel be unavailable to participate.

H. Wilderness “minimum requirement” protocols

The North and South Option of AMDAP are located in a National Preserve section of GAAR and will cross the Kobuk Wild River Corridor.

The proposed study areas are located in a region that has received comparatively little archaeological research. The only large-scale research projects in the study area were conducted in 1983 (Kunz et al. 1984) and the 2013 Level I survey conducted by NLURA covering the previously 2,000 foot wide corridor of the North and South Options of the AMDIAR along the entire route, including the portions within GAAR (Blanchard et al. 2014). The proposed research in 2014 incorporates information gathered during the 2013 Level I survey.

Information gathered during 2014 survey will contribute new information about the archaeological record within the AMDIAR study Area, the Gates of the Arctic National Preserve and the GAAR as a whole.

The proposed research is also consistent with the provisions of the Alaska National Interest Lands Conservation Act (ANILCA) [Public Law 96-487, Title II, Sec. 201(4)(b)], which includes a provision for an Ambler Right-of-Way Access easement for surface transportation purposes across the Western (Kobuk River) unit of the Gates of the Arctic National Preserve (from the Ambler Mining District to the Alaska Pipeline Haul Road) and states that the Secretary of the Interior shall permit access in accordance with the provisions C, D and E of Section 201 (4) of the Act (See Appendix A for full text of ANILCA Section 201(4)).

Figures

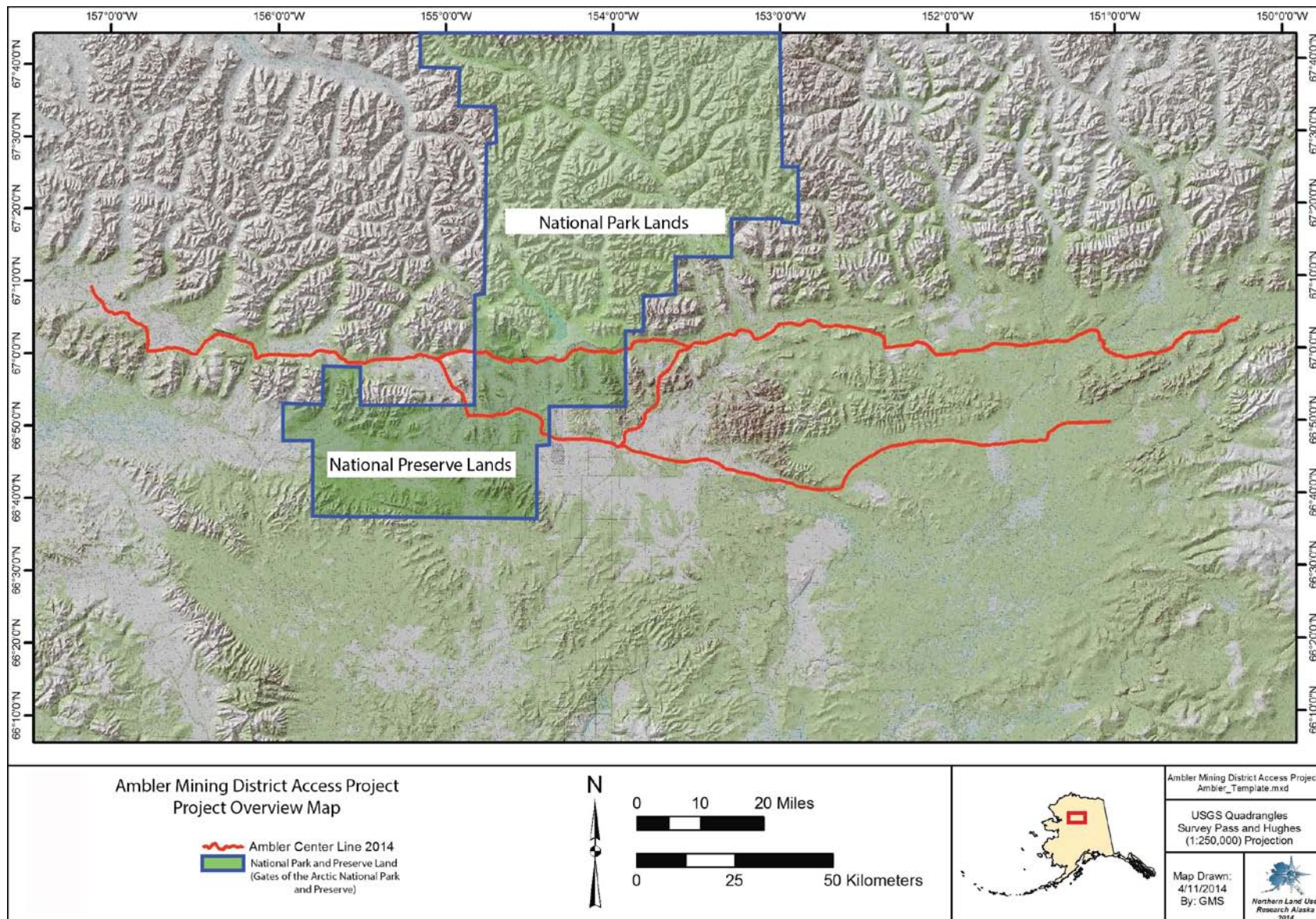


Figure 1. Ambler Mining District Access Project Route (Brooks East Corridor) project location map.

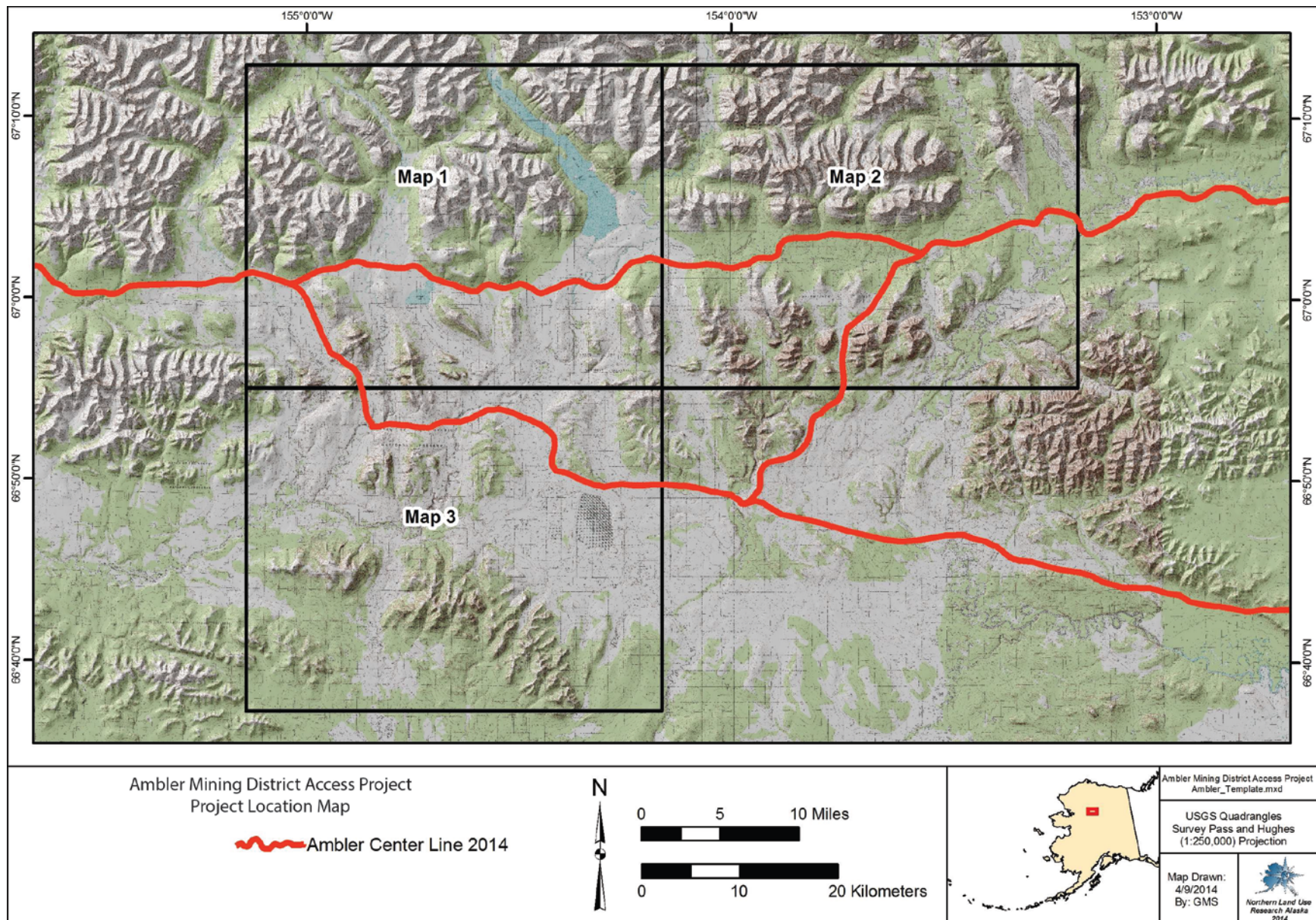


Figure 2. Detail of Ambler Mining District Access Project Route (Brooks East Corridor) showing the section of the North and South option routes inside GAAR.

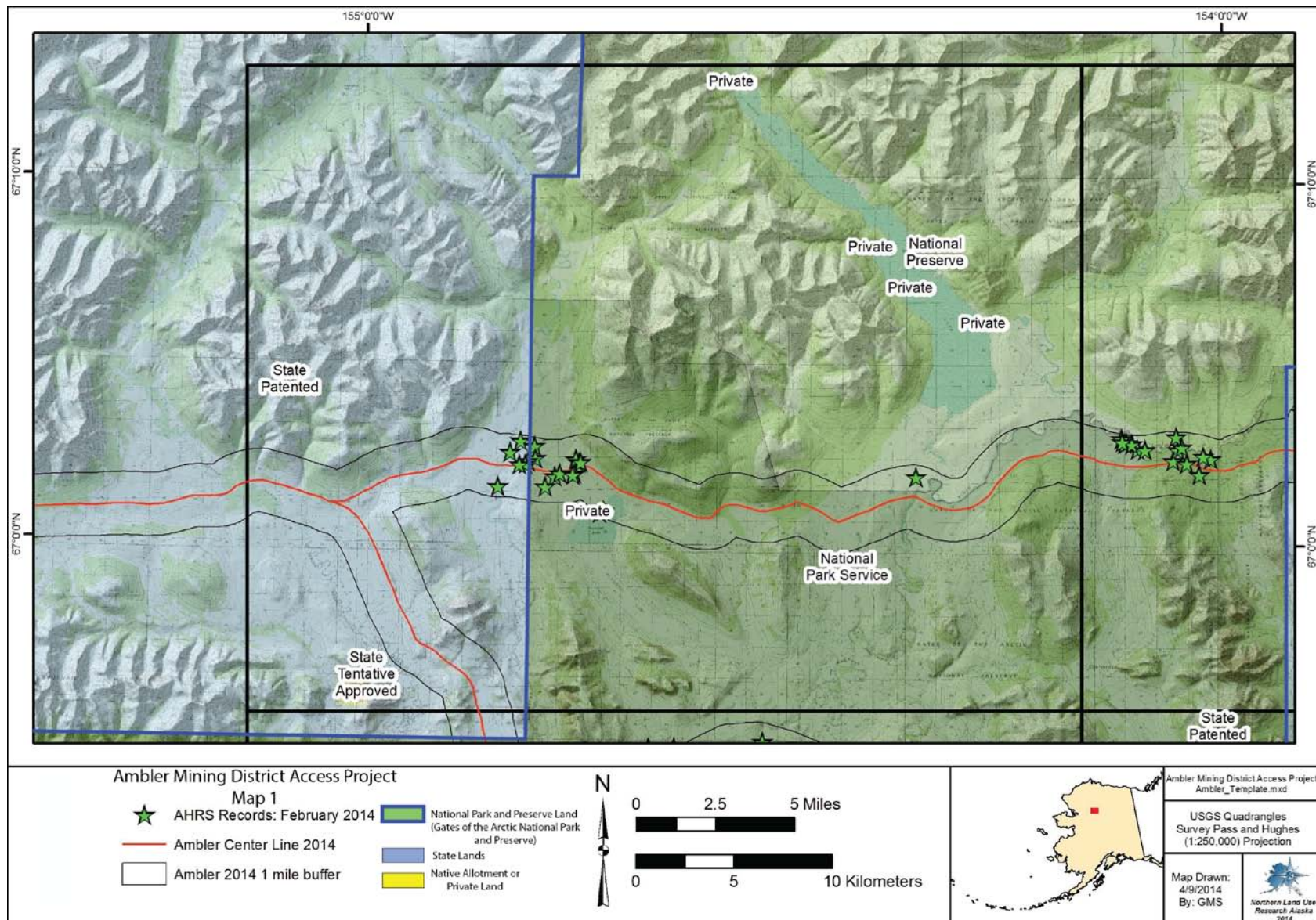


Figure 3. Detail of Ambler Mining District Access Project Route (Brooks East Corridor) showing known AHRS sites within one mile of the North Option study area centerline within GAAR (Map 1 in Figure 2).

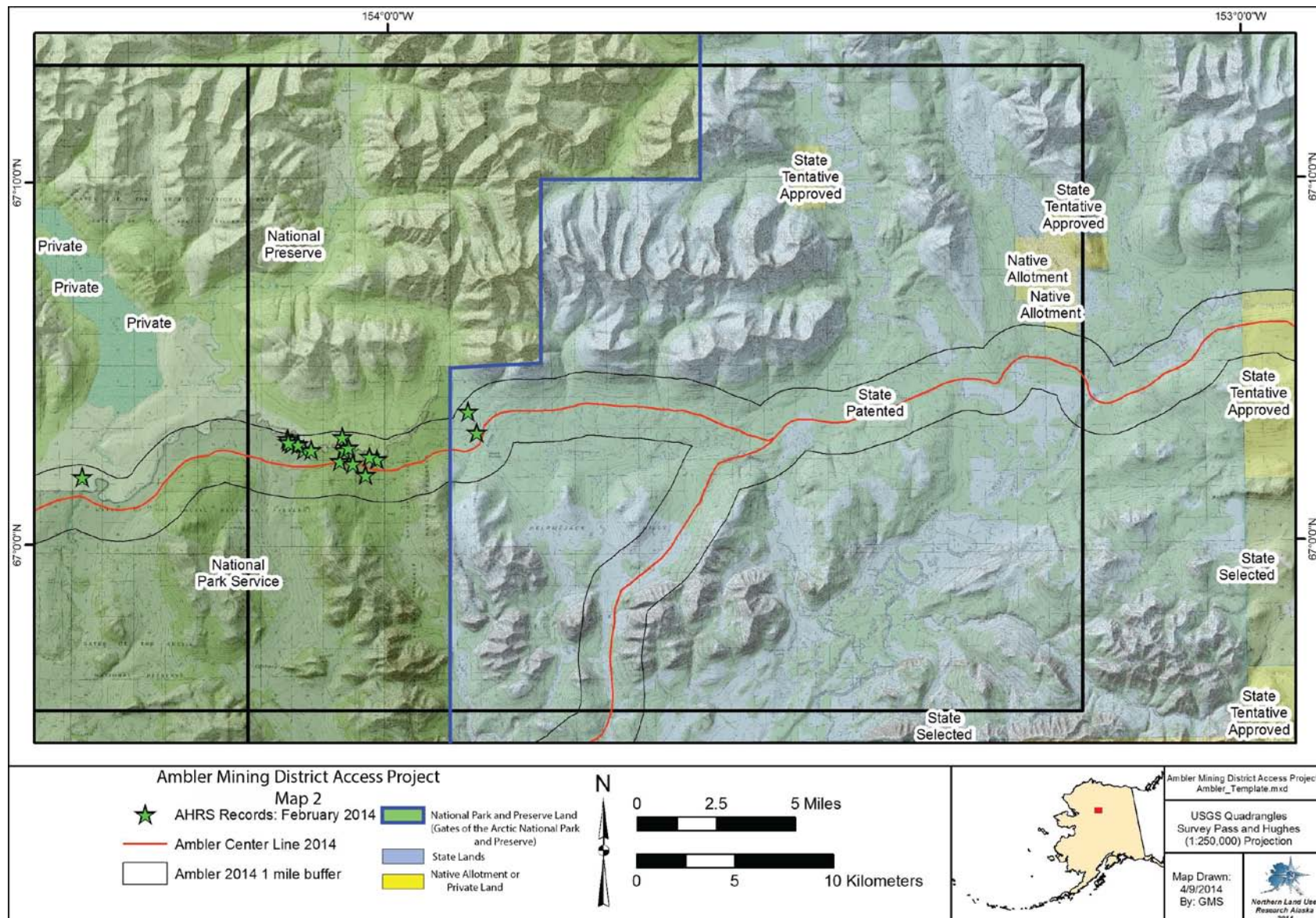


Figure 4. Detail of Ambler Mining District Access Project Route (Brooks East Corridor) showing known AHRS sites within one mile of the North Option study area centerline within GAAR (Map 2 in Figure 2).

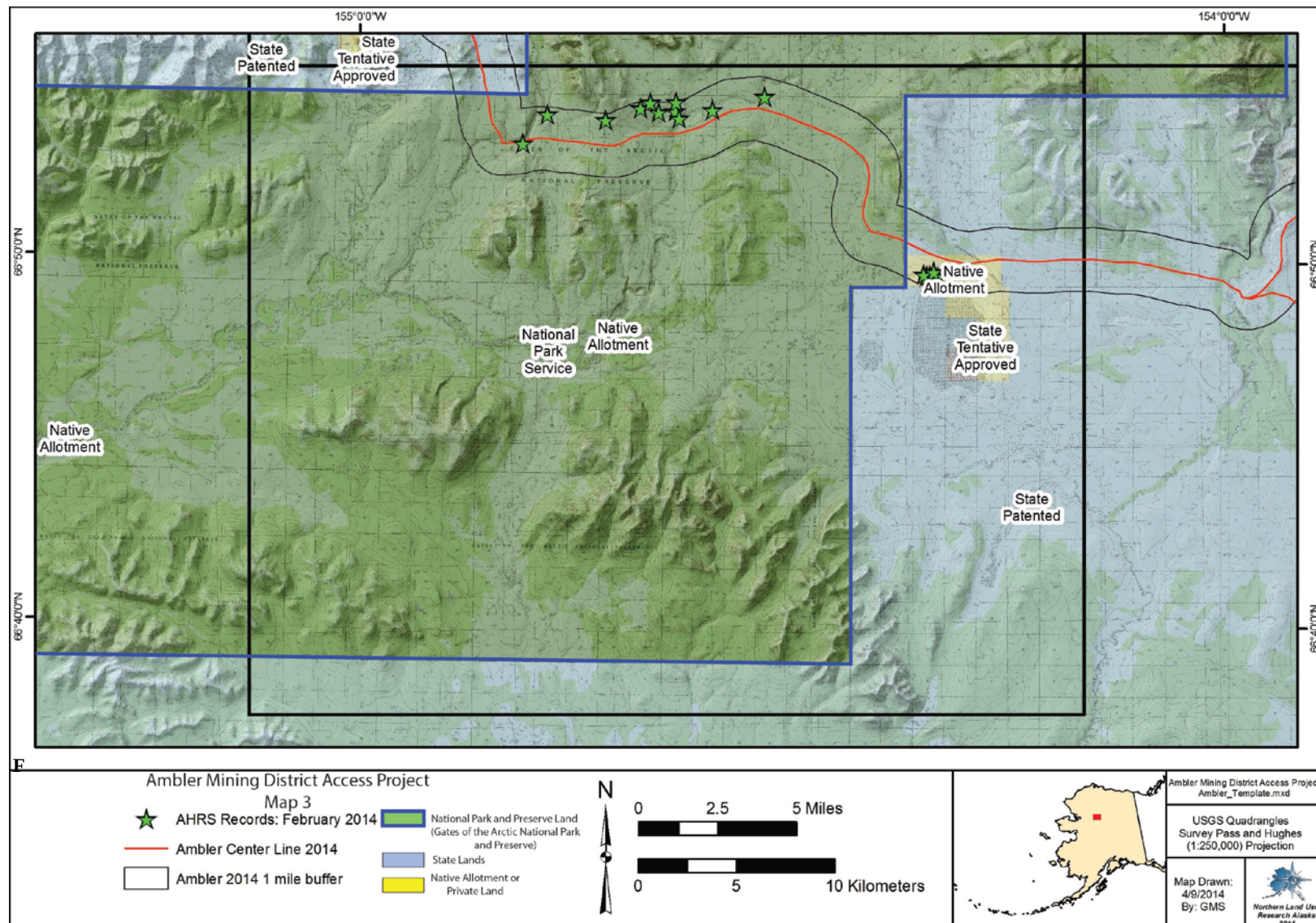


Figure 5. Detail of Ambler Mining District Access Project Route (Brooks East Corridor) showing known AHRS sites within one mile of the South Option study area centerline within GAAR (Map 3 in Figure 2).

Appendix A. National Park Service, Draft Document, Guiding Principles for Project Review

Ambler Mining District Access
NEPA Review for Project Proposals
Contact Information:
Greg Dudgeon, Superintendent
Gates of the Arctic National Park & Preserve
907-457-5752

ANILCA 201. Sect. (4)

(b) Congress finds that there is a need for access for surface transportation purposes across the Western (Kobuk River) unit of the Gates of the Arctic National Preserve (from the Ambler Mining District to the Alaska Pipeline Haul Road) and the Secretary shall permit such access in accordance with the provisions of this subsection.

(c) Upon the filing of an application pursuant to §1104 (b), and (c) of this Act for a right-of-way across the Western (Kobuk River) unit of the preserve, including the Kobuk Wild and Scenic River, the Secretary shall give notice in the Federal Register of a thirty-day period for other applicants to apply for access.

(d) The Secretary and the Secretary of Transportation shall jointly prepare an environmental and economic analysis solely and for the purpose of determining the most desirable route for the right-of-way and terms and conditions which may be required for the issuance of that right-of-way. This analysis shall be completed within one year and the draft thereof within nine months of the receipt of the application and shall be prepared in lieu of an environmental impact statement which would otherwise be required under §102(2)(C) of the National Environmental shall be deemed to satisfy all requirements of that Act and shall not be subject to judicial review. Such environmental and economic analysis shall be prepared in accordance with the procedural requirements of §1104(e). The Secretaries in preparing the analysis shall consider the following-

- (i) Alternative routes including the consideration of economically feasible and prudent alternative routes across the preserve which would result in fewer or less severe adverse impacts upon the preserve.
- (ii) The environmental and social and economic impact of the right-of-way including impact upon wildlife, fish, and their habitat, and rural and traditional lifestyles including subsistence activities, and measures which should be instituted to avoid or minimize negative impacts and enhance positive impacts.

(e) Within 60 days of the completion of the environmental and economic analysis, the Secretaries shall jointly agree upon a route for issuance of the right-of-way across the preserve.

Such right-of-way shall be issued in accordance with the provisions of §1107 of this Act. This document is meant to address the National Park Service requirements for NEPA review. This includes among others, park legislation, legal requirements, and administrative commitments. In an effort to reduce redundant and duplicate analysis of project proposals, a set of guiding principles has become necessary to address multiple projects through standard mitigating measures for proposed activities in Gates of the Arctic National Park and Preserve (GAAR).

Laws and park mandates:

1. Wilderness Section 4(c)
2. NHPA Section 106
3. ANILCA Section 810
4. Migratory Bird Treaty Act

Wilderness Act of 1969:

PROHIBITION OF CERTAIN USES

Section (4)(c) Except as specifically provided for in this Act, and subject to existing private rights, there shall be no commercial enterprise and no permanent road within any wilderness area designated by this Act and, except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act (including measures required in emergencies involving the health and safety of persons within the area), there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area.

National Historic Preservation Act of 1966:

Section 106 of the National Historic Preservation Act of 1966 (NHPA) requires Federal agencies to take into account the effects of their undertakings on historic properties, and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment. The historic preservation review process mandated by Section 106 is outlined in regulations issued by ACHP. Revised regulations, "Protection of Historic Properties" (36 CFR Part 800), became effective August 5, 2004, and are summarized below.

The responsible Federal agency first determines whether it has an undertaking that is a type of activity that could affect historic properties. Historic properties are properties that are included in the National Register of Historic Places or that meet the criteria for the National Register. If so, it must identify the appropriate State Historic Preservation Officer/Tribal Historic Preservation Officer * (SHPO/THPO*) to consult with during the process. It should also plan to involve the public, and identify other potential consulting parties. If it determines that it has no undertaking, or that its undertaking is a type of activity that has no potential to affect historic properties, the agency has no further Section 106 obligations.

Alaska National Interest Lands Conservation Act of 1980:

SUBSISTENCE AND LAND USE DECISIONS

Section 810 (a) In determining whether to withdraw, reserve, lease, or otherwise permit the use, occupancy, or disposition of public lands under any provision of law authorizing such actions, the head of the Federal agency having primary jurisdiction over such lands or his designee shall evaluate the effect of such use, occupancy, or disposition on subsistence uses and needs, the availability of other lands for the purposes sought to be achieved, and other alternatives which would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes. No such withdrawal, reservation, lease, permit, or other use, occupancy or disposition of such lands which would significantly restrict subsistence uses shall be effected until the head of such Federal agency has implemented a program to allow residents of certain communities to access the park for subsistence activities. The following are GAAR Resident Zone communities:

- Anaktuvuk Pass
- Nuiqsut
- Wiseman
- Alatna
- Allakaket
- Bettles
- Evansville
- Kobuk
- Shungnak
- Ambler
- Hughes

The National Park Service looks at local and regional conditions as they relate to site-specific conditions. In our attempts to effectively address multiple projects, all proposed activities within GAAR boundaries for preliminary engineering and environmental field investigation related to the Ambler Mining District Access Project will use the following guidelines.

Mitigating Measures:

1. All activities are required to produce a public notice that includes:
 - description of project
 - range of project dates
 - access means including: airplane, helicopter, motor boat
 - location of study area(s)
 - provide this to all the Resident Zone Communities (City government and Tribal Council)
2. All field activities are required to provide:
 - End of the season summary report by February 15 of the following year.
 - Project data must be provided to the National Park Service.

- Follow up meeting with Gates of the Arctic staff in October after each summer field season is required.
3. Project aircraft must abide by the GAAR Sensitive Areas Map as provided.
 4. Direct overflights (under 2,000 feet above ground level) of the visiting public or subsistence users are prohibited.
 5. All emergencies encountered must be reported to the superintendent and the Bettles Ranger Station (907-692-5494) at the earliest possible time.

Appendix B: Meridian, Township, Range and Sections (MTRS) crossed by the North Option and South Option Study Areas of the Brooks East Corridor within GAAR.

Meridian	Township	Range	Section	MTRS
Kateel River	017N	018E	2	K017N018E02
Kateel River	017N	018E	11	K017N018E11
Kateel River	017N	018E	12	K017N018E12
Kateel River	017N	019E	1	K017N019E01
Kateel River	017N	019E	7	K017N019E07
Kateel River	017N	019E	8	K017N019E08
Kateel River	017N	019E	9	K017N019E09
Kateel River	017N	019E	10	K017N019E10
Kateel River	017N	019E	11	K017N019E11
Kateel River	017N	019E	12	K017N019E12
Kateel River	017N	020E	3	K017N020E03
Kateel River	017N	020E	4	K017N020E04
Kateel River	017N	020E	5	K017N020E05
Kateel River	017N	020E	6	K017N020E06
Kateel River	017N	020E	10	K017N020E10
Kateel River	017N	020E	11	K017N020E11
Kateel River	017N	020E	14	K017N020E14
Kateel River	017N	020E	23	K017N020E23
Kateel River	017N	020E	25	K017N020E25
Kateel River	017N	020E	26	K017N020E26
Kateel River	019N	019E	19	K019N019E19
Kateel River	019N	019E	20	K019N019E20
Kateel River	019N	019E	21	K019N019E21
Kateel River	019N	019E	25	K019N019E25
Kateel River	019N	019E	26	K019N019E26
Kateel River	019N	019E	27	K019N019E27
Kateel River	019N	019E	28	K019N019E28
Kateel River	019N	020E	25	K019N020E25
Kateel River	019N	020E	26	K019N020E26
Kateel River	019N	020E	27	K019N020E27
Kateel River	019N	020E	28	K019N020E28
Kateel River	019N	020E	29	K019N020E29
Kateel River	019N	020E	30	K019N020E30
Kateel River	019N	020E	34	K019N020E34
Kateel River	019N	021E	13	K019N021E13
Kateel River	019N	021E	14	K019N021E14
Kateel River	019N	021E	15	K019N021E15

Meridian	Township	Range	Section	<i>MTRS</i>
Kateel River	019N	021E	21	K019N021E21
Kateel River	019N	021E	22	K019N021E22
Kateel River	019N	021E	24	K019N021E24
Kateel River	019N	021E	28	K019N021E28
Kateel River	019N	021E	29	K019N021E29
Kateel River	019N	021E	30	K019N021E30
Kateel River	019N	022E	13	K019N022E13
Kateel River	019N	022E	18	K019N022E18
Kateel River	019N	022E	19	K019N022E19
Kateel River	019N	022E	20	K019N022E20
Kateel River	019N	022E	21	K019N022E21
Kateel River	019N	022E	22	K019N022E22
Kateel River	019N	022E	23	K019N022E23
Kateel River	019N	022E	24	K019N022E24