Annual Report

Archaeological Survey and Evaluation:
Donnelly Training Area, Fort Wainwright, Alaska 2005

United States Army Garrison, Alaska Cultural Resources
Bifaces from U.S. Army Lands in Alaska

2006

Archaeological Survey and Evaluation: Donnelly Training Area, Fort Wainwright, Alaska 2005

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1.0 Introduction

In 2005, the U.S. Army Alaska (USARAK) and United States Army Garrison, Alaska (USAG-AK) undertook the development of several proposed projects which triggered an archaeological and cultural resources analysis of proposed areas of potential effect. This report details the archaeological review and analysis which was conducted for each undertaking, on lands at Donnelly Training Area, Fort Wainwright (Figure 1). The survey was conducted by the USAG-AK and the Center for Environmental Management of Military Lands (CEMML, Colorado State University).

Survey and sub-surface testing were conducted following procedures defined in USAG-AK archaeological methodology (Raymond-Yakoubian and Robertson 2005a) and Integrated Cultural Resources Management Plan (ICRMP; Office of History and Archaeology 2001). Where archaeological sites were identified within a project's area of potential effect (APE), evaluative testing was conducted to determine eligibility for listing in the National Register of Historic Places (NRHP), based on National Register Criteria detailed in 36 CFR 79, and pursuant to Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 CFR 800).

Archaeological field crews, comprised of employees of the CEMML, Colorado State University, conducted surveys of areas potentially impacted (both directly and indirectly) by proposed undertakings and conducted the testing to determine eligibility for listing in the NRHP. Five archaeological survey crews, each consisting of four archaeologists, conducted the work in the DTA.

1.2 Setting

The Donnelly Training Area (DTA) is located in central Alaska, north of the Alaska Range in the Tanana River valley. The Post lies 120 miles south of the Arctic Circle near the city of Delta Junction. The DTA consists of the West and East Training Areas and three outlying training sites: Gerstle River Training Area, Black Rapids Training Area and Whistler Creek Rock Climbing Area. For the purposes of this report, only the DTA East and West are discussed. The DTA West is an 894 square-mile parcel bounded by the Delta River to the east and the Little Delta River to the west. It covers approximately 571,995 acres. The East Training Area is an 81 square-mile parcel stretching east of the Delta River to Granite Creek. It covers approximately 51,590 acres.

The DTA has the northern continental climate of interior Alaska, which is characterized by short, moderate summers, long, cold winters and low precipitation and humidity. Weather is influenced by mountain ranges on three sides that form an effective barrier to the flow of warm, moist maritime air during most of the year. Surrounding upland areas tend to aid drainage and the settling of cold arctic air into the Tanana Valley lowlands (Natural Resources Branch 2001).

The Alaska Meteorological Team (AMT) at the Central Meteorological Observatory, Fort Greely and Donnelly Training Area, monitors weather at the post. Average monthly temperatures range from -6.4ºF in January to 60.0ºF in July, with an average annual temperature of 27.4ºF. The record low temperature is -63ºF, and the record high is 92ºF. The average frost-free period is 95-100 days (based on 27 years of AMT data).

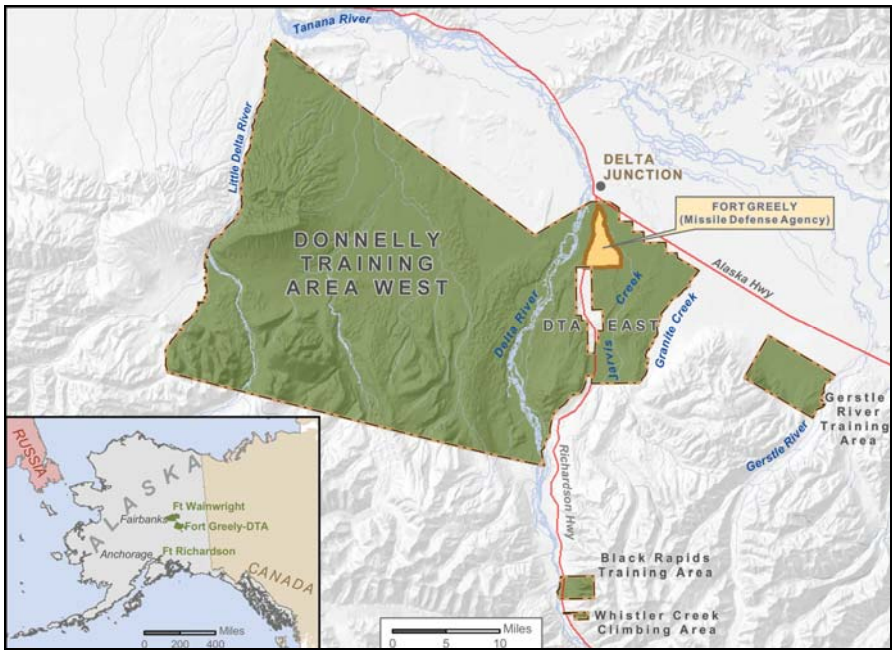

Figure 1. Location of Fort Wainwright's Donnelly Training Area

Prevailing winds are from the east-southeast from September through March and from the west, southwest, or south from April through August. Average wind velocity is 8.2 miles per hour (mph). The greatest wind speeds occur during winter, with a high of 104 mph recorded in the month of February. Winds are 5 mph or less only 13.6 percent of the time and wind speeds greater than 60 mph have been recorded in every month. Thunderstorms are infrequent and occur only during summer (based on 20 years of AMT data) (Natural Resources Branch 2001).

Average annual precipitation is 11.12 inches, which falls over 90.4 days, mostly during summer and early fall. Average monthly precipitation ranges from a low of 0.24 inches in April to a high of 2.38 inches in June. Average annual snowfall is 40.5 inches, with a record 99.7 inches in 1945 (based on 27 years of AMT data) (Natural Resources Branch 2001).

2.0 Literature Review

2.1 History

The DTA lands fall within an area occupied at the time of Euro-American contact by Lower-Middle Tanana Athabascans (Andrews 1975:177; McKennan 1981:564; Mishler 1986). Traditional settlement patterns were focused on a widely mobile seasonal round, with the fall caribou hunt playing a pivotal role in subsistence preparations for the winter, while summer activities were focused at fish camps and in berry and root collecting and sheep hunting (McKennan 1981:565). These activities frequently had a communal focus, with several local 'bands' connected by common interest, geography and intermarriage. Despite anthropological attempts to define 'boundaries' for the peoples living in the lower Tanana River valley, natural terrain served as the only definable 'boundary' to settlement patterns (McKennan 1981).

As Euro-American traders, miners, missionaries and explorers moved into the Tanana River valley, the traditional lifestyles of local Athabascan groups were disrupted. Access to trade goods and the development of the fur trade not only affected traditional material culture, but also began to dramatically affect subsistence activities and settlement patterns. Similarly, the advent of missionaries in the Interior of Alaska profoundly affected traditional social organization. The introduction of mission schools for Native children and the doctrine of new religious beliefs contributed to an erosion of traditional settlement patterns and practices (McKennan 1981).

In 1898, the discovery of gold in the Tanana uplands began a rush of Euro-American settlement into the Tanana River valley. As the economic importance of the Tanana Valley increased, the need for reliable transportation routes and communication systems rose in tandem. Existing trails, such as the Bonnifield, Donnelly-Washburn and Valdez-Fairbanks trails saw increased use and development in the first decade of the 20th century. This increase in activity also resulted in the establishment of several roadhouses and posts. In 1906 Congressional appropriations led to improvement of the Valdez-Fairbanks trail, crossing the Alaska Range south of Delta Junction, following the Tanana River to Fairbanks. Completion of the Alaska Railroad in 1923 was followed two decades later by construction of the Alaska Highway in 1942, firmly tying the Alaskan interior to the outside.

Development in the Alaskan interior increased dramatically with the advent of World War II and the subsequent military build-up in Alaska. Of particular significance was the development of airfields near Delta Junction (Fort Greely), Fairbanks (Ladd Field, later Fort Wainwright), and 26 miles southeast of Fairbanks (Eielson Air Force Base). These locations began as lend-lease bases and cold weather testing centers, but soon expanded with the increased need for military support during World War II and later, the Cold War.

2.2 Prehistory

As noted by John F. Hoffecker (1996), Beringian archaeology is in an early phase of development, with archaeologists on both sides of the Bering Strait still working on the construction of cultural chronologies. That being said, it should come as no surprise that there is a lot of debate involved in the creation of a prehistoric chronology for Interior Alaska. This section offers a brief comparison of two different views on the chronology: the chronology present in Alaskan archaeology in some form since the 1960s that has been modified over the years and one proposed by eminent Alaskan archaeologist Charles Holmes in the mid-1990s.

Traditional chronologies of Alaskan prehistory divide time into periods based on tool forms. The broadest classification divides Alaskan prehistory into three traditions: the American Paleoarctic

Tradition, the Northern Archaic Tradition and the Athapaskan Tradition. Because of the almost continuous flux involved with the many subcategories of an Alaskan prehistory, this section will discuss the broadest classification.

- The American Paleoarctic Tradition (12,000-6,000 BP). This tradition includes the Denali Complex, originally defined by West (1967) includes distinctive microblade cores, core tablets and their derivative microblades, large blades, biconvex bifacial knives, certain end-scraper forms, and burins. West (1981) later stated the Denali Complex is a regional variant of the American Paleoarctic Tradition defined by Anderson (1970). Also included within this Tradition is the Chindadn, so-named by Cook (1969) from the Athapaskan word for "ancestor", Complex. The Chindadn Complex is also called the Nenana Complex. The defining characteristic of the Chindadn Complex is the presence of Chindadn points—bifacially flaked triangular or tear dropped shaped projectile points. Scholars have at times (e.g. Dixon 1999) situated the Nenana Complex before the American Paleoarctic Tradition in terms of chronology. However, there is some debate as to whether or not the Chindadn Complex definitely predates the Denali Complex, so for simplicity's sake they are both included in the American Paleoarctic Tradition.

- The Northern Archaic Tradition (6,000-2,000 BP). The hallmark of the Northern Archaic Tradition is the presence of side-notched points (Anderson 1968b). There are generalized resemblances between this tradition and the Archaic cultures of the Great Plains of the lower 48 states, although it is uncertain that any of the Northern Archaic traits, other than most likely the side-notched points, originated outside of the western subarctic region (Clark 1992). Anderson (1968) correlated the advent of Northern Archaic technologies with the full establishment of the taiga forest, comparing these technologies to those of the forest-oriented Archaic cultures of the lower 48 states.

- The Athapaskan Tradition (2,000 BP-1880 AD). The Athapaskan Tradition includes cultures generally believed to be the ancestors of the Athapaskan tribes who occupy Interior Alaska today. The Athapaskan Tradition includes a reorganization of raw materials, which de-emphasized stone tool making and increased the emphasis on the manufacture of items from native copper and organic materials (Dixon 1985).

An intermediary period known as the Late Denali Complex was once suggested (e.g. Dixon 1985) as taking place after the Northern Archaic Tradition, during which microblades reappeared. However, it is now generally accepted that the Northern Archaic Tradition includes microblade technology.

Holmes (1995, 2001) has proposed an alternative chronology for the Tanana valley. Holmes avoids some of the complications of earlier attempts to create a chronology, in that he does not focus solely on artifact form. Instead, the time periods he suggests are arranged chronologically and "divided according to environmental and cultural criteria" (Holmes 2001:156). These periods are: the Beringian Period, the Transitional Period, the Early Taiga Period, the Late Taiga Period and the Athapaskan Period (Holmes 1995). Holmes' periods encompass the traditional typologies and situate them within an environmental framework to create a chronology for Interior Alaskan prehistory.

- During the Beringian Period, defined as greater than 11,000 years BP, there was still a land connection between Alaska and Siberia, and as of yet no boreal forest in Beringia. Some artifact assemblages from this period lack microblades; others have them. This difference may be attributable to differences in site environment,

function, or seasonality. Holmes proposes the term “East Beringian Complex” to describe these earliest assemblages.

- The Transitional Period, occurring from 11,000 to 8,500 yr. BP, is marked by major environmental changes: the land connection to Siberia disappears, animals become extinct, substantial climatic changes occur, and forestation begins. By around 9,000 BP, spruce-birch forest had replaced the shrub tundra.
- The Early Taiga period, 8,500 to 5,000 BP, marks the full establishment of the boreal forest. During this period, the American Paleoarctic Tradition gives way to the Northern Archaic Tradition.
- The Middle Taiga period, from 5,000 to ca. 2,500 yr. BP, sees a continuation of the artifact types of the Northern Archaic Tradition, which include microblades and burins.
- The Late Taiga period, ca. 2,500 yr. BP to modern, encompasses the disappearance of microblade technology from the archaeological record. It is also during this period that we see the beginning of the Athabaskan tradition in Alaska, which leads the technology shift outlined above and to ethnically recognizable Athabaskan groups.

This combination of chronological, environmental and cultural criteria provides flexibility that is lacking in more traditional chronologies, which are divided according to artifact types.

2.3 Archaeology

Twenty-four archaeological investigations have been conducted on DTA since 1963, identifying approximately 380 sites to date (Table 1). Twenty of these sites comprise the Donnelly Ridge Archaeological District, which is within DTA East. The majority of the archaeological surveys conducted in DTA have been limited to DTA East, which comprises 25 percent of the entire Donnelly Training Area.

Frederick West conducted the first regional survey of the Alaska Range foothills in the 1960s (West 1967). His survey at DTA included the Donnelly and Delta moraine physiographical areas. West located the 12 sites that comprise the Donnelly Ridge Archaeological District. This collection of sites has played a significant role in defining the Denali Complex of the American Paleoarctic Tradition.

In 1978, a reconnaissance-level survey was conducted in various areas of Fort Greely and DTA, resulting in the discovery of 62 sites (Holmes 1979). A 1979 survey located four sites (Bacon and Holmes 1980). Northern Land Use Research, Inc. conducted limited archaeological surveys in various areas of DTA during the summer of 1998, resulting in the identification of 16 additional sites (Higgs et al. 1999). Other smaller surveys have also been conducted for specific project areas. All of the sites that have been identified have been located in one of three physiographic settings: high points, bluffs or terraces overlooking a major river or site drainage, or lake margins. There is an inherent bias in these findings, however, as archaeological investigations have frequently focused on high probability settings such as these.

USARAK began archaeological surveys of large blocks of land within DTA East in 2002 to address proposed infrastructure construction on DTA East. Unlike previous surveys, these provided 100 percent pedestrian coverage of areas under consideration and an aggressive sub-surface testing strategy. These surveys (conducted 2002-2005) covered 53,500 acres and identified over 265 new sites of which approximately 91 have been evaluated for eligibility for listing in the NRHP. This includes one site that may be from the Athabascan Tradition or Early Contact period, which has been determined eligible for the NRHP, and one historic era site

(possibly relating to Transportation and Infrastructure) that has not yet been evaluated for eligibility.

The lands within DTA have likely supported human populations for 10,000 to 12,000 years. Because it was ice-free during the Wisconsin glaciation, interior Alaska contains the oldest verifiable prehistoric remains in the state and is significant in understanding the peopling of the New World. The oldest radiocarbon date for any item found on DTA is 8,555 (± 380) years BP, from charcoal at site XMH-00297. Some undated material resembles artifacts dating back to 12,000 BP.

Table 1. Archaeological survey of DTA East [1]

Year	Researcher	Survey Location	Result
1963-64	West	Various locations on DTA	25 archaeological sites found
1977	Rabich and Reger	XMH-00253	1 site investigated
1979	Bacon	XM-1 Tank Range	No archaeological sites found
1979 [2]	Holmes	Various locations on DTA	62 archaeological sites found
1979 [2]	Bacon and Holmes	Various locations on DTA	6 archaeological sites found
1980a	Steele	Bison Trail DTA East	3 archaeological sites found
1980b	Steele	Squad Assault Range DTA East	No archaeological sites found
1980	Bacon	Cantonment	No archaeological sites found
1982	Steele	Various locations on DTA	No archaeological sites found
1982	Steele	Donnelly Dome Quarry Site	No archaeological sites found
1983	Steele	Texas Range Powerline	1 archaeological site found
1985	Kotani	XMH-00297	1 site investigated
1988	Reynolds	Donnelly Dome WACS	1 archaeological site found
1992	Staley	Various locations on DTA	No archaeological sites found

1995 [2]	Gamza	Sullivan's Roadhouse	1 site investigated
1998 [2]	Higgs et al.	Various locations on DTA	16 archaeological sites found
2002	Goodman	Powerline on DTA East	No archaeological sites found
2002	Hedman et al.	Texas Range, Donnelly DZ, Eddy DZ	110 archaeological sites found [3]
2003	Robertson et al.	Eddy DZ	104 archaeological sites found [3]
2004	Raymond-Yakoubian and Robertson	North Texas and Eddy DZ	10 archaeological sites found
2005	Robertson et al.	Texas Range, DTA Training Areas	39 archaeological sites found

[1] Less than 1 percent of the surveyed area represented in this table was conducted on DTA West.
[2] A portion of this survey was conducted on DTA West.
[3] Some of these sites represent previously reported sites whose locations were not well documented and which were relocated to obtain more accurate data.

3.0 Methodology

To further build baseline knowledge of the archaeological resources on Army lands in Alaska, and to meet Section 106 obligations, USAG-AK will pursue a comprehensive inventory strategy in 2005. This will result in an intensive, full-coverage survey of survey units. Unless the survey area is stratified, all accessible areas of each "area of potential effect" (APE) will be subjected to pedestrian survey and all high probability locations will be subjected to subsurface survey when practical. Areas that are considered inaccessible include high angle slopes (greater than 40 degrees) and wetlands. Pre-season reconnaissance and air photo analysis may be used to enhance the effectiveness of large tract surveys. This will result in the elimination of some low probability portions of the APE from pedestrian transect survey. Stratification of survey areas will be based on previous research, distribution of known sites and knowledge of the survey area terrain. Stratification will result from an understanding of the cultural resources that are expected to be encountered in the survey area and the demonstrated distribution of site types among high and low probability terrain. This methodology report documents justification for survey stratification and elimination of portions of the APE from field survey.

3.1 Pedestrian Survey Methods

All areas not eliminated by pre-survey reconnaissance or classified as wetlands or steep slopes will be surveyed. Areas will be surveyed using a transect interval of no more than 20 meters. Transect intervals will decrease in areas of dense vegetation to insure a visual inspection of the entire survey area. Transect intervals will also decrease in areas deemed to have a high potential for containing archaeological sites. Transect intervals below the 20 meter minimum will be decided in the field by the field crew leader in consultation with the appropriate Post Archaeologist. Transect survey units will be partitioned according to existing roads and trails where possible. When roads do not provide for practical unit boundaries, a one square kilometer work unit will be used.

All areas of high potential for subsurface material will be systematically shovel tested. There will be approximately 20 meters between tests and test intervals may be closer. An example of an area that may be tested in 20 meter intervals is a long ridgeline or large landform that offers a number of undifferentiated high probability locations. A shorter test interval will be used to test small, isolated, high probability landforms such as an isolated knoll, prominence with a view, lakeside terraces, stream mouths, or level benches adjacent to steeper slopes (this list is not complete and is meant as an example of locations that may be tested intensively). Shovel tests will be square or round and measure at least 30cm in diameter and will be excavated to the maximum depth possible. All soil removed will be screened through ¼ inch hardware cloth. The number of tests and approximate location of testing will be recorded by crew leaders. If deep testing is warranted, bucket auger testing will be initiated following the same placement and recording protocols. Oakfield soil probes will be used when necessary to identify sites and features or to delineate site boundaries.

Crew leaders will use GPS, topographic maps and air photos to record field data. All spatial data will be entered into GIS data files. Crewmembers will record their activities in field notebooks. Data recorded daily will include date, crew names, crew leader name, activity (e.g. survey, shovel testing, site sampling) and details of crew and individual tasks and activities. Recordation of incidental observations regarding weather conditions, technical problems, task efficiency, and task and project coordination will also be encouraged.

3.1.1 High and Low Probability Locations

Surveys carried out by USAG-AK archaeologists at DTA East in 2002 and 2003 (Hedmen et al. 2003 and Robertson et al. 2004) indicate that important environmental aspects contributing to site placement include the view shed, elevation relative to the immediately surrounding terrain, and distance to water. Lake margins and the tops of small knolls and ridgelines provide the highest probability locations for archaeological sites. Elevated portions of clear streams and anadromous fish streams, stream confluences and islands are also considered high probability locations. Other high probability locations include benches adjacent to steeper slopes and leading edges of terraces.

Low probability terrain on DTA lands includes flat expanses of spruce forest that lack water, wetlands and slopes greater than 40 degrees. Full coverage surveys have failed to locate any archaeological sites in these settings.

3.2. Site Criteria

3.2.1 Prehistoric Site Designation

The minimum required for designation of a prehistoric archaeological site will be the presence of a single artifact on the ground surface, a single positive shovel test, or a single identifiable feature such as a house depression, cache pit, or hearth. "Sites" defined on the basis of sub-surface finds will minimally include a single identifiable artifact or feature such as a flake, manuport, or hearth. Site boundaries will be determined during the evaluation phase.

Once a site has been identified, a USAG-AK site form will be filled out, a sketch map will be drawn using compass and tape, and an aluminum survey cap will be installed. Survey caps will be placed on a length of rebar and inserted so that approximately 5cm extends above the ground surface. Survey caps will be stamped with the site's AHRS number. If time allows, site boundaries will be determined during the site identification phase (see "Site Evaluation Procedures").

3.2.2 Historic Site Designation

Historic archaeological sites are those sites that are greater than 50 years of age that reflect historic period activities and could not otherwise be designated as a prehistoric site. Most standing structures that are attributable to the military use of these lands will lie beyond the purview of archaeological inventory. USAG-AK lands contain several property types that are in excess of 50 years of age. Examples include homesteads and mining remains, trap line cabins and guide cabins, aircraft wrecks, roadhouse remains, early trails and early communication systems. Any property deemed in excess of 50 years in age will be documented as a site in the manner prescribed in this methodology.

3.6 Artifact Collection

Artifact collection will be limited to artifacts retrieved from shovel tests, important diagnostic artifacts found on the surface, and artifacts that are in immediate danger of destruction. All artifacts collected will be recorded on a site map. Artifacts collected will be bagged and labeled in accordance with USAG-AK and University of Alaska Museum standards.

3.7 Threatened Resources

In the case of cultural material being in immediate danger of destruction, USAG-AK's Cultural Resource Manager will be notified. Appropriate mitigation measures will be determined in

consultation with the Alaska State Historic Preservation Officer and interested Tribal Governments.

3.8 Human Remains

Any human remains, sacred objects, funerary objects, or objects of cultural patrimony that are encountered will be avoided. Work will stop in the immediate vicinity of the find, measures will be taken to protect remains, and the Cultural Resource Manager will be notified immediately so that appropriate action can be taken.

4.0 NRHP Eligibility Evaluations

4.1 Archaeological Sites

The site Evaluation Phase will occur once the entire APE has been inventoried. This phase will focus on evaluating identified sites for eligibility for inclusion in the National Register of Historic Places.

As site testing is inherently destructive, the minimum amount of testing necessary to make eligibility determinations will be undertaken. Evaluations will include the minimum number of shovel tests necessary to determine the aerial and sub-surface extent, site integrity and the nature of the information the site may yield. Shovel tests will follow the standard dimensions outlined previously and will be excavated and recorded in a manner that allows for determining the depth of cultural material, thickness of deposits and the location of cultural material concentrations across the site. Evaluation Phase shovel testing will be recorded on USAG-AK shovel test forms (see Appendix). All excavated soil will be screened through ¼ inch hardware cloth. All sub-surface testing will be mapped with compass and tape. Location of positive tests and site boundaries will be clearly indicated on both a USGS 1:63,360 and a DMA 1:50,000 map as well as on a site sketch map. All test excavations will use 10cm arbitrary levels unless clear stratigraphy dictates otherwise. Each level will be recorded on USAG-AK excavation level forms. These forms, along with the USAG-AK photo log, provide for complete documentation of plan drawings, profile drawings, level photographs, soil level descriptions, artifact descriptions and feature descriptions. Artifact collection, care, and labeling will be performed to USAG-AK standards. Artifacts will be curated at the University of Alaska Museum, under an existing Memorandum of Understanding (MOU).

4.2 Determinations of Eligibility

As many of the recorded sites on USAG-AK lands are small, shallow lithic scatters and discrete surface scatters, evaluation may only require shovel testing and a thorough examination of the ground surface to determine eligibility. Typically, the most important factor in evaluating eligibility for these types of sites is how well the site satisfies Criterion D of the National Register Criteria for Evaluation (research potential). As such, integrity of the site is very important. Even very small sites and sites lacking datable material are very important for understanding Interior Alaskan prehistory and local site formation processes. In cases where site integrity is difficult to assess, 1m x1m test units will be excavated strategically across the site to determine the extent of any site disturbance and the presence, location and densities of buried cultural material. Once the cultural deposit has been characterized and the integrity has been assessed, a determination of whether the site contains information that can significantly contribute to important research questions will be addressed.

Results of the Evaluation Phase work at each site will be presented in a formal Determination of Eligibility report. These reports will be submitted to the Alaska State Historic Preservation Officer for review and concurrence and then distributed among interested parties. These reports will contain a complete description of the evaluation methodology, site characteristics, level of integrity and discussion of the research potential of the site. Reports will include all pertinent maps, photos and tables.

5.0 Undertakings

USARAK has proposed one major range development project, and USAG-AK has proposed several smaller projects on lands at Fort Wainwright's Donnelly Training Area (DTA). The DTA's major range development project, the Battle Area Complex (BAX), is a range designed for gunnery training of vehicle-mounted weapon systems and dismounted infantry platoons, either independently of or simultaneous with supporting vehicles. 51 sites assosated with this project were evaluated for eligibility to the National Register of Historic Places, pursuant to 36 CFR 800.

The smaller projects within the DTA included; Upgrade Vehicle Access at Bolio Lake, Designation of Three Engineer Digging Sites, Battalion Forward Operating Base Upgrades, Timber Sale and 3 road upgrade projects (Windy Ridge Road, Meadows Road, and the Old Richardson Highway).

Archaeological surveys of the proposed projects were conducted in May, June, July, August and September of 2005. A total of 39 new archaeological sites were identified and recorded in the areas surveyed during the 2005 summer field season.

Archaeological field crews, comprised of employees of the Center for Environmental Management of Military Lands (CEMML, Colorado State University), conducted surveys of areas potentially impacted (both directly and indirectly) by proposed undertakings and conducted the testing to determine eligibility for listing in the NRHP. Five archaeological survey crews each comprised of four archaeologists, conducted the work in the DTA. The DTA archaeologist, Aaron C. Robertson and Julie Raymond-Yakoubian were the supervising archaeologists for these projects.

Table 2. General survey results for DTA

	2002	2003	2004	2005	**Total**
Areas Accessible for Archaeological Survey	600,271	600,271	600,271	600,271	**600,271**
Number of Field Crew	16	16	8	20	**60**
Total Acreage Surveyed	10,872	29,404	2,223	10,118	**52,617**
Recorded Archaeological Sites	100	116	10	39	**265**
Number of Sites Evaluated for Listing in NHRP	20	5	32	51	**108**
Number of Sites Eligible for Listing in NHRP	8	1	19	15	**43**
Percentage of Land Surveyed	2%	5%	<0.5%	2%	**9%**

5.1 Battle Area Complex (BAX)

The BAX is designed for gunnery training and would meet qualification requirements of crew-served, vehicle-mounted weapon systems. The BAX range would also support dismounted infantry platoon tactical live-fire operations, either independently of or simultaneous with supporting vehicles. Units would acquire skills needed to detect, identify, engage and defeat stationary and moving targets in a tactical array. Primary features of the BAX include course roads with crossover capability, stationary armor targets, moving armor targets, stationary infantry targets, moving infantry targets, machine gun bunkers and breaching obstacles. All targets would be fully automated and the event-specific target scenario would be computer-driven and scored from the control facility. The range operating system would be fully capable of providing instrumented after-action reviews. In addition to the range, the BAX would include an after-action review facility, ammunition breakdown building, ammunition loading dock, operations/storage building, arctic latrines, bleacher enclosure, bivouac and unit staging area, covered mess area, building information systems, electric service, water and septic system, storm drainage and general site improvements.

There are three alternatives being considered for the siting of these projects: Texas Range, Eddy Drop Zone and Donnelly Drop Zone (Figure 2). On March 17, 2006 USARAK released the BAX/CACTF Supplemental Draft EIS listing Eddy Drop Zone as its preferred alternative.

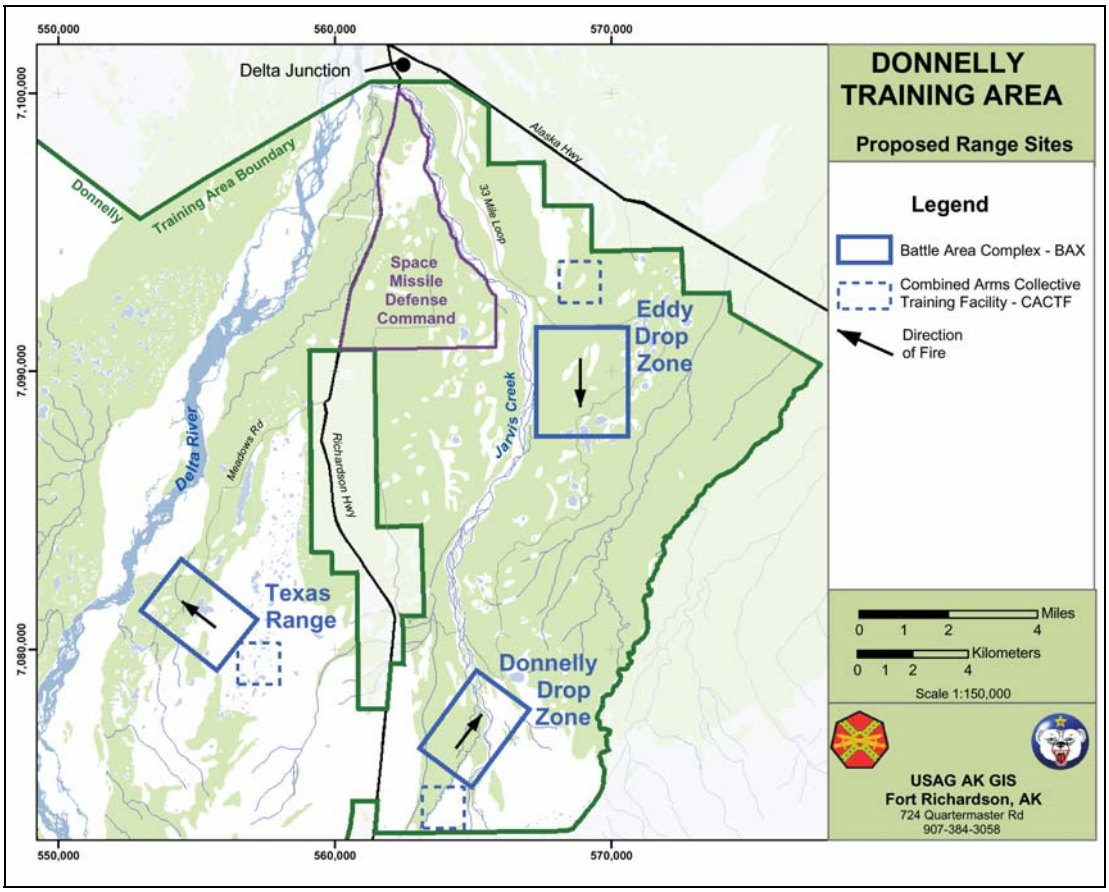

Figure 2. Location of the three BAX alternatives

5.1.1 Survey History for BAX Project

Survey for the construction footprints of the three BAX alternatives was conducted in 2002 and 2003 (Hedman et al. 2003; Robertson et al. 2004). The focus in 2003 was completion of the surveys for the firing fans or "surface danger zones" for the alternatives. The firing fan for the Texas Range alternative is located in an active impact area and was not surveyed due to safety concerns. The firing fans for the Eddy Drop Zone alternative (firing south) and Donnelly Drop Zone alternative (firing north) overlap and this area received the majority of the resources for survey in 2003 (Robertson et al. 2004). The focus of the 2004 field season was to start the site evaluations and determinations of eligibility (DOEs) for listing in the National Register of Historic Places (NRHP) for sites located in the construction footprint and firing fans for the three alternatives of the BAX project (Raymond-Yakoubian and Robertson 2005b). The focus of the 2005 field season was to continue the site evaluations and DOEs for listing in the NRHP for sites located in the construction footprint and firing fans for the three alternatives of this project.

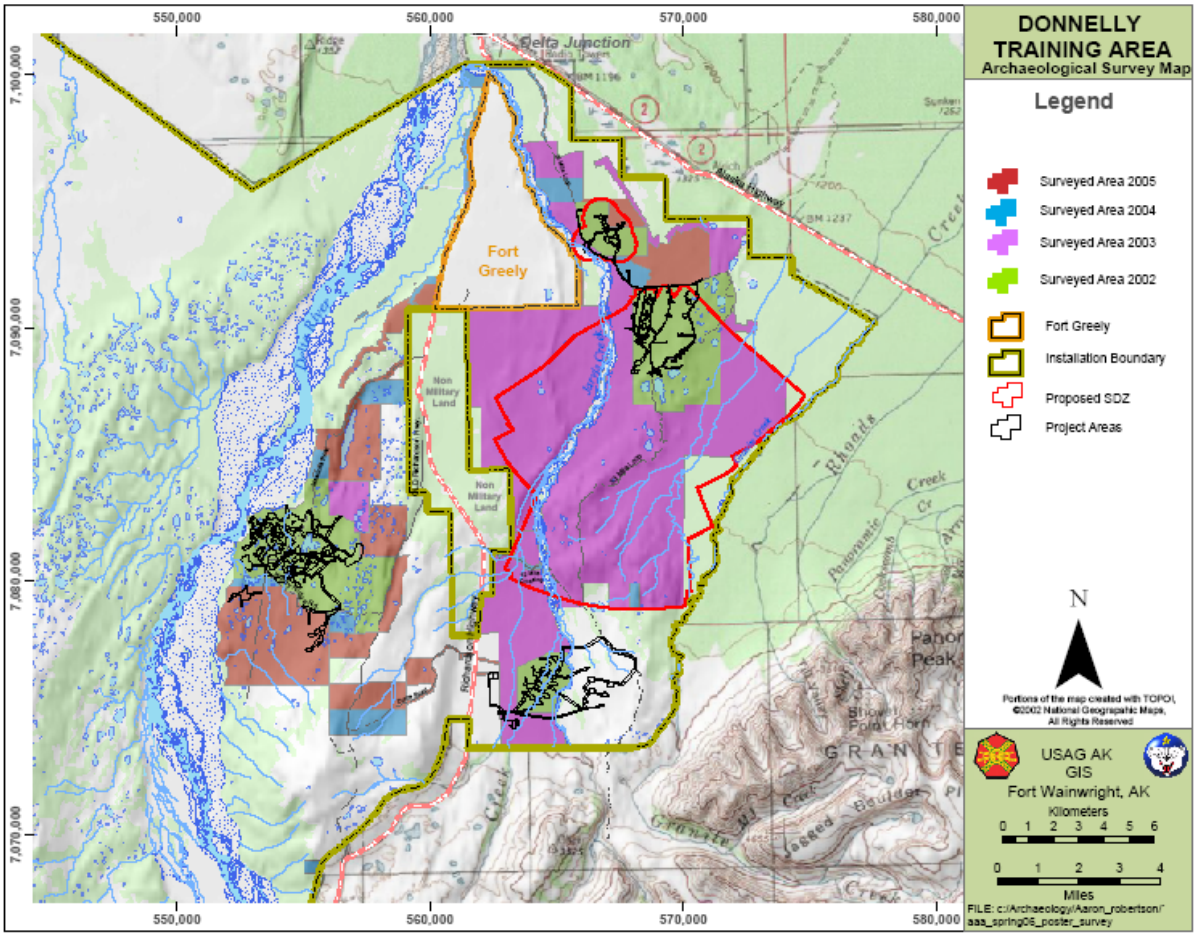

Figure 3. Location of the three BAX alternatives and history of survey for the BAX/CACTF project

A full description of the evaluations to determine eligibility for inclusion in the National Register of Historic Places conducted in 2005 field season are listed below:

SITE #	Location	NRHP STATUS
XMH-00012	Texas BAX	Eligible
XMH-00265	Texas BAX	Eligible
XMH-00266	Texas BAX	Eligible
XMH-00267	Texas BAX	Not Eligible
XMH-00293	Texas BAX	Not Eligible
XMH-00325	TexasCACTF	Not Eligible
XMH-00930	Texas BAX	Eligible
XMH-00931	Texas BAX	Eligible
XMH-00933	Texas BAX	Eligible
XMH-00934	Texas BAX	Not Eligible
XMH-00935	Texas BAX	Not Eligible
XMH-00936	Texas BAX	Not Eligible
XMH-00937	Texas BAX	Not Eligible
XMH-00938	Texas BAX	Not Eligible
XMH-00942	Texas BAX	Eligible
XMH-00943	Texas BAX	Not Eligible
XMH-00944	Texas BAX	Not Eligible
XMH-00946	Texas BAX	Eligible
XMH-00947	Texas BAX	Not Eligible
XMH-00949	Texas BAX	Eligible
XMH-00950	Texas BAX	Not Eligible
XMH-00951	Texas BAX	Not Eligible
XMH-00952	Texas BAX	Not Eligible
XMH-00953	Texas BAX	Not Eligible
XMH-00954	Texas BAX	Not Eligible
XMH-00961	Texas BAX	Not Eligible
XMH-00962	Texas BAX	Eligible
XMH-00963	Texas BAX	Not Eligible
XMH-00964	Texas BAX	Not Eligible
XMH-00965	Texas BAX	Not Eligible
XMH-00966	Texas BAX	Not Eligible
XMH-00967	Texas BAX	Not Eligible
XMH-00968	Texas BAX	Not Eligible
XMH-00974	Texas BAX	Not Eligible
XMH-00975	Texas BAX	Not Eligible
XMH-00976	Texas BAX	Not Eligible
XMH-00977	Texas BAX	Eligible
XMH-00978	Texas BAX	Not Eligible
XMH-00982	Texas BAX	Not Eligible
XMH-01072	Donnelly BAX	Not Eligible
XMH-01073	Donnelly CACTF	Not Eligible
XMH-01173	Texas BAX	Not Eligible
XMH-01174	Texas CACTF	Eligible
XMH-01193	Texas CACTF	Not Eligible
XMH-01202	Texas BAX	Not Eligible
XMH-01208	Texas BAX	Eligible

XMH-01213	Texas BAX	Eligible
XMH-01214	Texas BAX	Not Eligible
XMH-01215	Texas BAX	Eligible
XMH-01270	Texas BAX	Not Eligible
XMH-01271	Texas BAX	Not Eligible

XMH-00012
Latitude:
Longitude:
Determination: Eligible

Site XMH-00012 is located on a northwest-southeast trending moraine. The nearest water source is Beaver Lodge Lake, which is located 100m (meters) to the north. The view shed at the site is 180° to the southwest. Visible landmarks include the Alaska Range to the southwest, the Delta River to the west-northwest, Windy Ridge to the east and Beaver Lodge Lake to the north. Surface visibility at the site is estimated to be 75 percent.

Site XMH-00012 consists of 85 flakes and eight tools. The site was identified in a 1964 survey when seven tools (including two biface fragments) and 31 flakes were recorded on the surface of the site (West 1967). All of the original 38 artifacts were collected and are presently being housed at the University of Alaska Museum. The site was evaluated in 2005 and one tool and 25 flakes were found on the surface and an additional 29 flakes were found subsurface in either shovel tests or test units. The tool, a unifacial scraper fragment, was collected and is 3.3cm long, 2cm wide and weighs 3g. Chert, basalt, quartz and rhyolite are present among the debitage.

Figure 4. General view of site XMH-00012, facing west

Shovel tests were systematically placed throughout the site area at intervals of 10m. Two shovel tests were placed at 5m intervals near the surface scatter. A third shovel test was placed at a 5m interval south of the site datum, on the edge of the landform. A total of 32 shovel tests were excavated. The depth of shovel tests varied, but all were excavated to glacial till. One shovel test was positive and contained two flakes which were found 0-7cm below the surface.

One 1m x 1m test unit was excavated at site XMH-00012. The test unit was placed 5m south and 1m west of the site datum, near the positive shovel test. The test unit was excavated in 10cm levels until glacial till was reached throughout the entire unit floor. The test unit contained 27 flakes, found in levels 1 and 2 at 0-5cm below the surface. No subsurface features were identified at the site. Soil thickness varied 2-41cm across the site. The top and southwest facing portions of the site have sustained considerable wind erosion, and soil deposition averaged only 5cm. Soil in this area consists of loosely compacted, dark brown, organically rich loess to an average depth of 5cm. Glacial till is encountered below this organic horizon and consists of yellow brown sandy loess with a high density of gravels and cobbles. Soil on the northeast facing portion of the site shows more deposition, averaging 20cm. Soil in this area consists of loosely compacted, dark brown, organically rich loess that is present to an average depth of 8cm. Below this organic horizon, the soil consists of moderately compacted brown loess with a low density of gravel and cobbles. Glacial till is encountered below this loess deposit and consists of loosely compacted yellow brown sandy loess with a high density of gravel and cobbles.

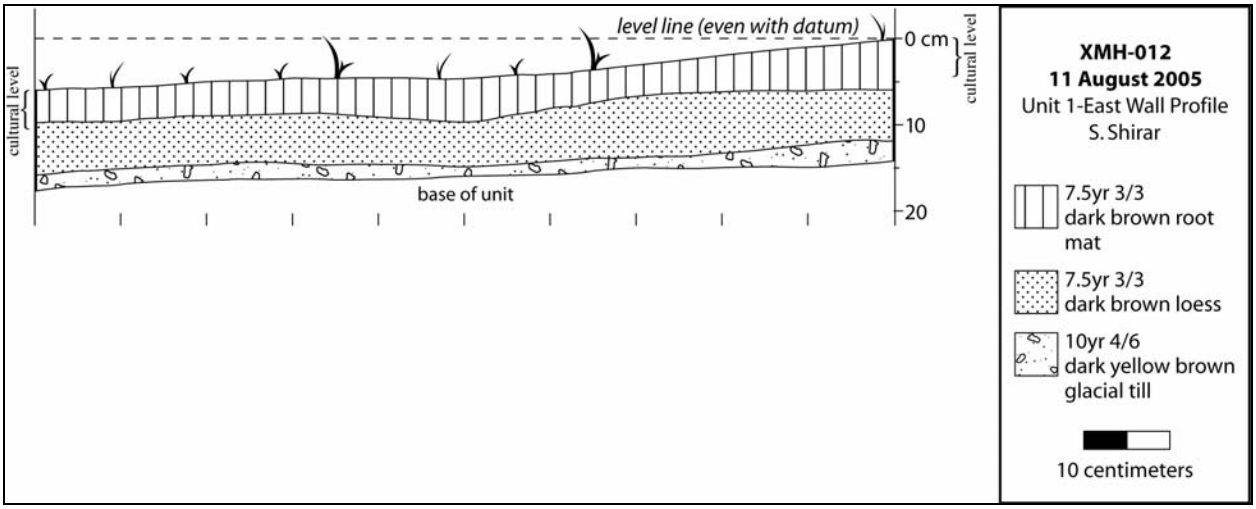

Figure 5. Soil profile of test unit from XMH-00012

Findings

A total of 85 artifacts were recorded at XMH-00012 from surface and subsurface contexts, in both shovel test pits and test units. Eight tools, including two biface fragments and one scraper fragment, were found on the surface. Materials at the site include chert, basalt, quartz and rhyolite. Based on the results of the survey and testing, the site area is estimated at approximately 12m x 20m.

Site XMH-00012 is a large lithic site with both surface and sub-surface components. With buried cultural material and multiple tool types, XMH-00012 is in an excellent position to contribute to our knowledge of prehistoric land use patterns. *In situ* artifacts and soil stratigraphy indicate datable material and diagnostic artifacts may be present and could be used to date human use of the site, potentially contributing to a broader regional context. Site XMH-00012 is an intact archaeological site with integrity. The site is eligible for inclusion in the National Register of Historic Places under criterion D, for its potential to yield information important in understanding the prehistory of the region.

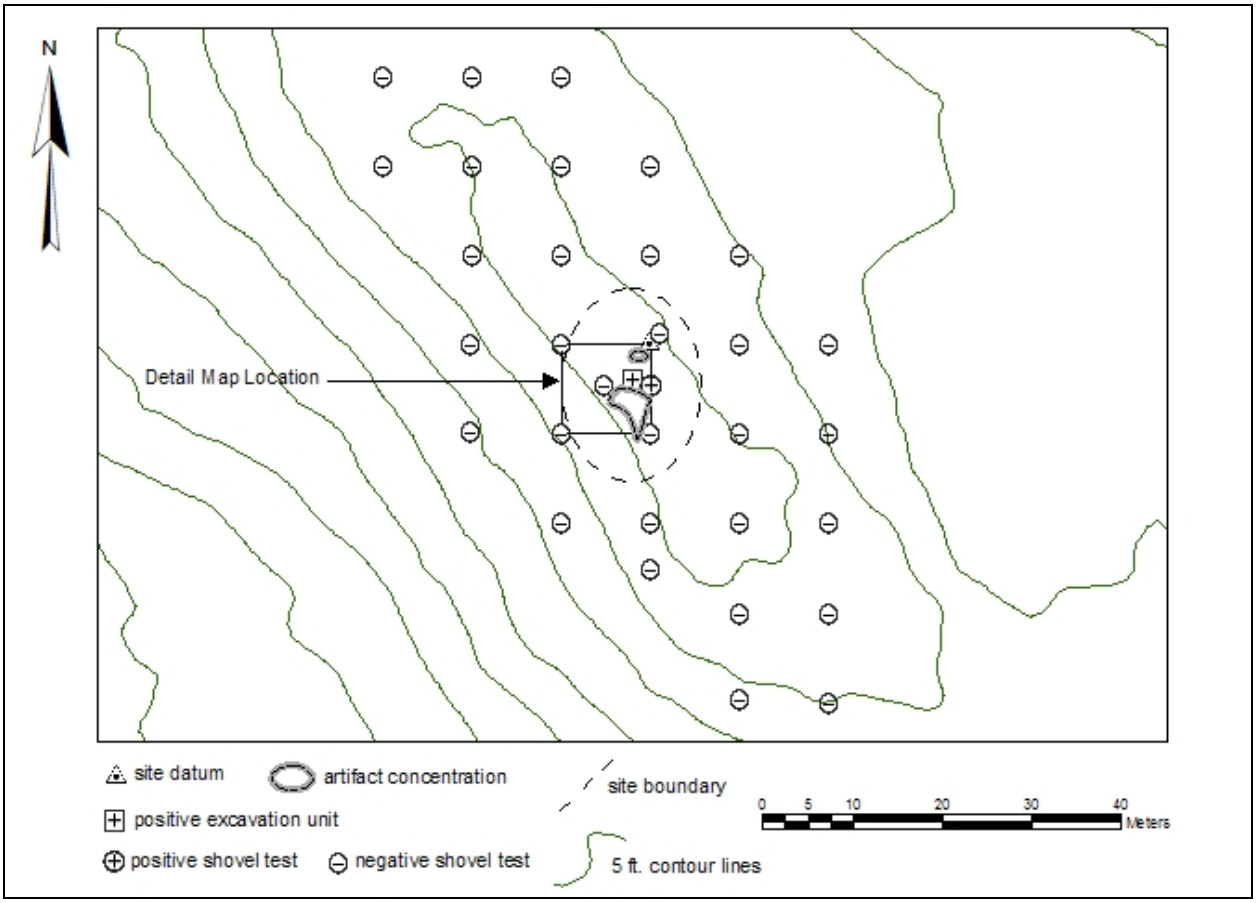

Figure 6. Site map from XMH-00012

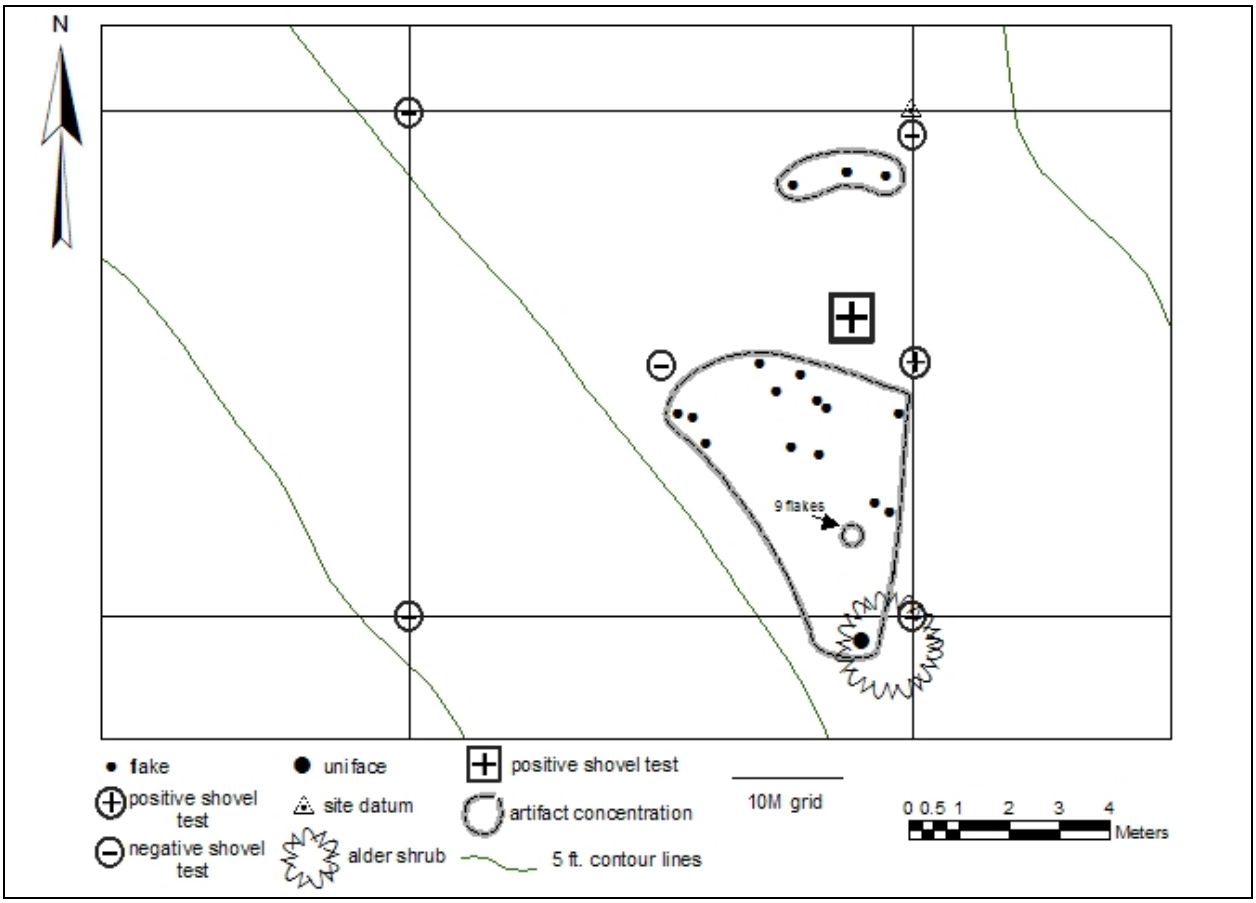

Figure 7. Detail map for XMH-00012

XMH-00265
Latitude:
Longitude:
Determination: Eligible

Site XMH-00265 is located on a small moraine on the southwest side of Big Lake. Big Lake is the closest water source and is situated at the eastern base of the landform upon which the site is located. The view shed at the site is approximately 360°. Donnelly Dome is visible to the south and the Alaska Range can be seen to the west and southwest. Surface visibility at the site is close to zero, with only a few small barren patches on the crest of the moraine along a foot trail.

Site XMH-00265 was identified in a 1979 survey when three gray chert flakes were found on the surface of a foot trail which crosses the moraine (Holmes 1979). This site was revisited in 2002, and 12 shovel tests were excavated on the landform; three of these test pits produced cultural material. Additionally, the 2002 crew noted a flake scatter to the west of the moraine (Hedman et al. 2003). These were most likely the flakes noted in 1979.

Site XMH-00265 consists entirely of lithic debitage. Artifacts include three surface flakes and 2 subsurface flakes (1 from the 2002 Phase I test pits and one small tertiary basalt flake

recovered from the Phase II test excavation unit). The 2005 crew was unable to relocate the surface flakes noted in the 1979 and 2002 surveys.

Figure 8. General view of site XMH-00265, facing south

Shovel tests were systematically placed throughout the site area at intervals of 10m during the 2005 evaluation. A total of 31 new shovel tests were excavated. The depths of the shovel tests varied, but all were excavated to glacial till. None of the 31 shovel tests were positive.

One 1m x 1m test unit was excavated at site XMH-00265. The unit was placed directly on top of the northernmost positive shovel test pit from the 2002 Phase I investigation. The unit was excavated in 10 centimeter (cm) levels until glacial till was reached throughout the entire unit floor. The unit contained 1 artifact, found 10-20cm below the surface. No subsurface features were encountered during the excavation of this unit. The stratigraphy of the test unit consisted of a 5cm in depth very dark gray root mat, on top of an approximately 10cm in depth very dark brown loess layer which contained the artifact, over an approximately 10cm in depth strong brown loess layer, and finally strong brown glacial till. The loess layers situated above till had a very low density of gravels and were moderately compacted. Glacial till was very compacted with a high density of gravel and larger cobbles. This soil profile is very similar to what was found in the shovel test pits located throughout the site. The soil thickness at the site was relatively uniform, ranging from 20- 40cm. The root mat over loess over till profile described above for test unit one holds true for the rest of the site, the only variation is in color. Some test pits showed a more yellow or redder brown loess and the same for till, although texture was consistent across the site.

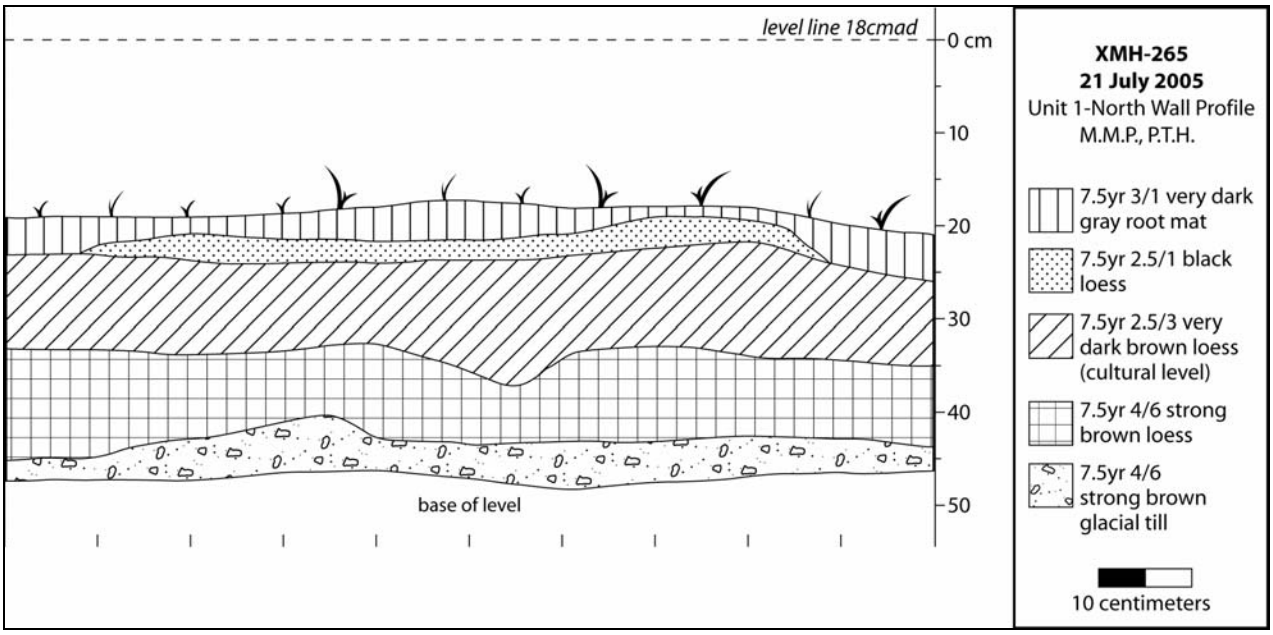

Figure 9. Soil profile of test unit from XMH-00265

Findings

A total of five artifacts were recovered from XMH-00265. Three were recovered from the surface and two were recovered from below the surface. The materials at the site include chert and basalt. Based on the results of survey and testing the site area is estimated at approximately 90m x 20m.

Site XMH-00265 is a small lithic site with both surface and buried components. With buried cultural material, XMH-00265 is in an excellent position to contribute to our knowledge of prehistoric land use patterns. *In situ* artifacts and soil stratigraphy indicate that datable material and diagnostic artifacts may be present and could be used to date human use of the site, potentially contributing to knowledge of human activity in a broader regional context. Site XMH-00265 is an intact archaeological site with integrity. The site is eligible for inclusion in the National Register of Historic Places under criterion D for its potential to yield information important in understanding the prehistory of the region.

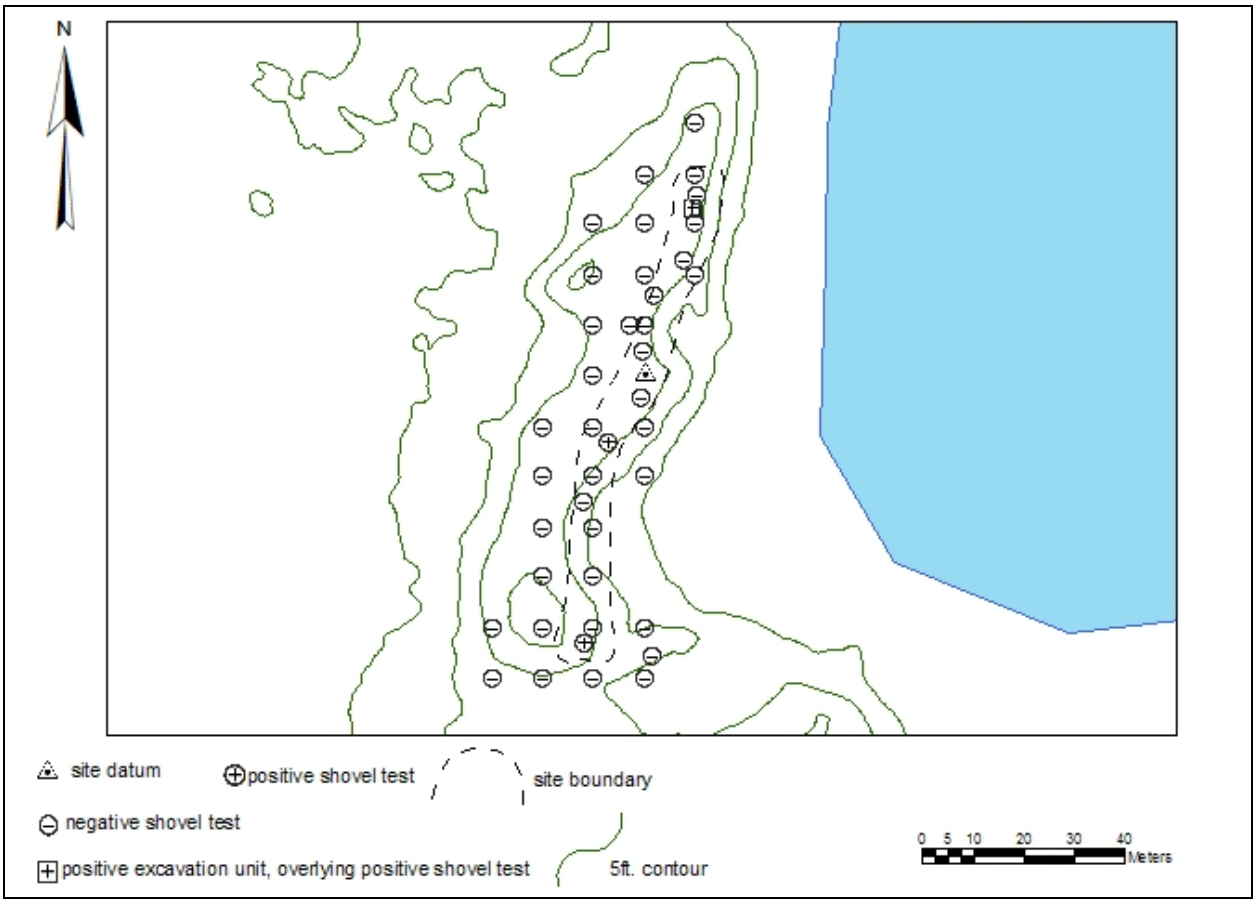

Figure 10. Site map from XMH-00265

XMH-00266
Latitude:
Longitude:
Determination: Eligible

Site XMH-00266 is located on a small moraine approximately 100m south of Big Lake. There are three water sources in close vicinity to the site: Big Lake, a small unnamed kettle pond 150m to the west, and another small unnamed kettle pond 200m to the east. Surface visibility is estimated to be one percent, with a few barren patches visible on the northwestern end of the moraine.

Site XMH-00266 was identified in a 1979 survey when fire cracked rocks, indicating a hearth, and butchered animal bones were observed in a test pit (Holmes 1979). This site was revisited in 2002 and several shovel tests were excavated on the landform; one black chert flake was found in a shovel test (Hedman et al. 2003). No surface artifacts were reported in either investigation.

Site XMH-00266 consists of over 525 artifacts, including one flake tool and two microblade fragments. All artifacts were found sub-surface in either shovel test pits or the excavation unit. In total, nine flakes came from shovel test pits and over 516 artifacts were located in the

excavation unit. Artifact materials were primarily gray basalt, with some chert and an unidentified material. Additionally, the test unit yielded several bone fragments.

Figure 11. General view of site XMH-00266, facing south

Shovel tests were systematically placed throughout the site area at intervals of 10m during the 2005 evaluation. A total of 37 new shovel tests were excavated. The depths of the shovel tests varied, but all were excavated to glacial till. Three of these shovel tests were positive. One positive shovel test yielded seven flakes, including one found in situ in the west wall at a depth of 20cm.

One 1m x 1m test unit was excavated at site XMH-00266 and was situated directly west of the positive shovel test with the in situ flake. The unit was excavated in 10cm levels until glacial till was reached throughout the entire unit floor. A total of 11 levels were excavated to bring the unit down to a uniform glacial till. No subsurface features were found during the excavation of this unit. Test unit 1 was covered by a very thick root mat. Under the organic mat was the mottled dark brown and dark yellowish brown moderately compact loess soil layer from which the majority of the artifacts came from. This layer contained a pocket of dark reddish brown loess of the same compactness in the western side of the unit. This soil layer was approximately 35cm thick, and overlaid a thinner (5-10cm) layer of dark yellowish brown loess. Below this was a gray mottled with dark yellowish brown loess layer of comparable thickness. Below this was a thick (30-40cm) layer of dark yellowish brown loess with small amounts of gray loess. This layer included isolated sand pockets of the same color. These were the most substantial layers lying on top of glacial till, which was very compacted with a high density of gravel and larger cobbles, and mottled gray and dark yellowish brown in color.

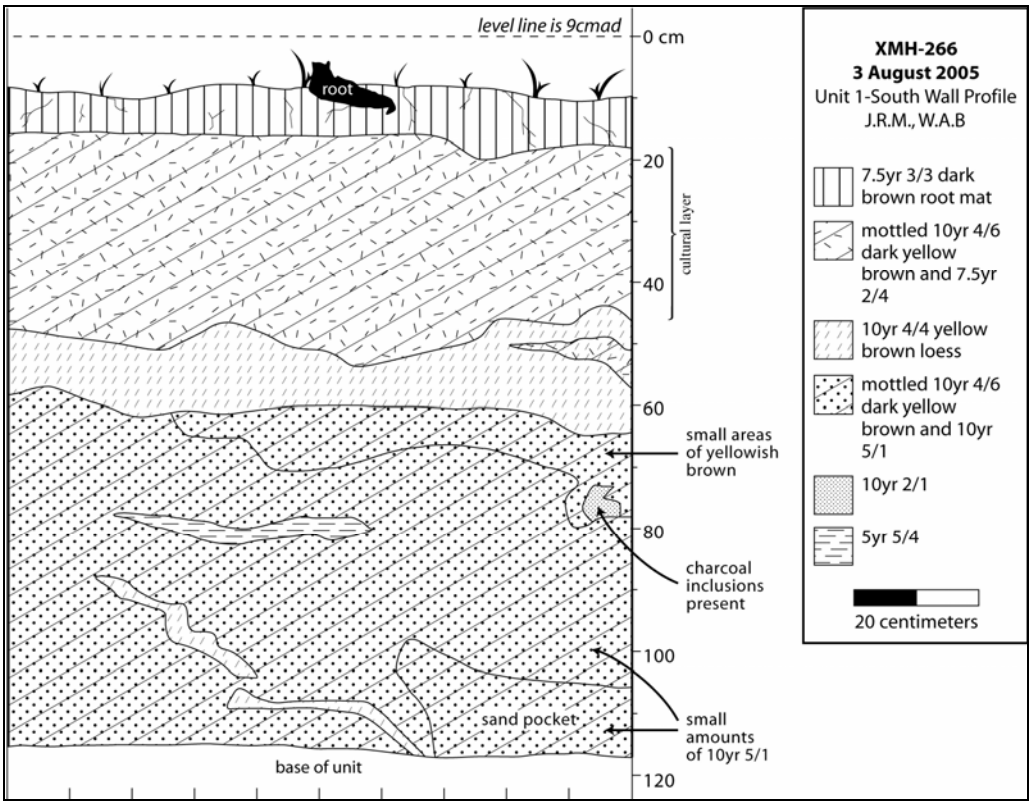

Figure 12. Soil profile from test unit at XMH-00266

Soil thickness at the site varied from very shallow on the top of the moraine, to deeper as the moraine went down in elevation. The stratigraphy was predominantly similar to that of test unit 1.

Findings

More than 525 artifacts were recovered from XMH-00266. All artifacts were recovered from below the surface, including one flake tool and two microblade fragments. Based on the results of survey and testing, the site area is estimated at approximately 10m x 40m.

Site XMH-00266 is a large, buried site with a dense concentration of late stage lithic debitage, formalized and expedient tools and bone fragments. With such a large amount of buried cultural material XMH-00266 is in an excellent position to contribute to our knowledge of prehistoric land use patterns. *In situ* artifacts and soil stratigraphy indicate datable material and diagnostic artifacts may be present and could be used to date human use of the site, potentially contributing to knowledge of human activity in a broader regional context. Site XMH-00266 is an intact archaeological site with integrity. The site is eligible for inclusion in the National Register of Historic Places under criterion D, for its potential to yield information important in understanding the prehistory of the region.

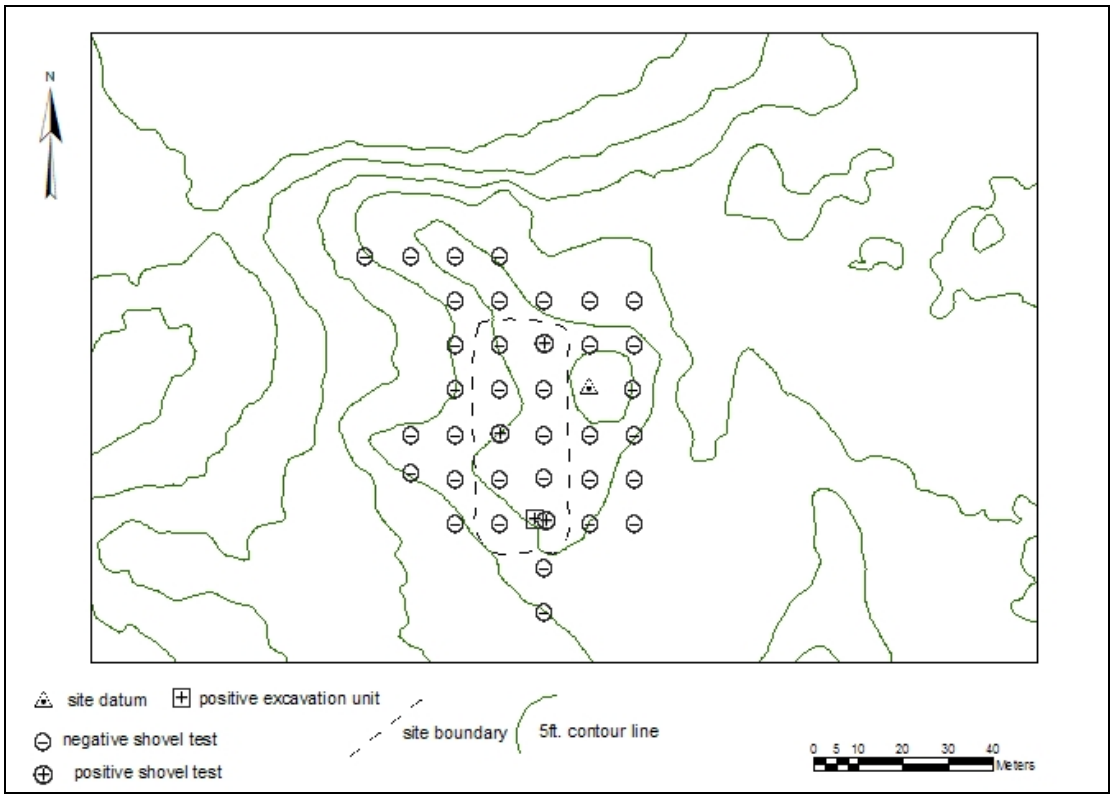

Figure 13. Site map from XMH-00266

XMH-00267
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-00267 is located on a high glacial knoll. The nearest water source is South Twin Lake, which is located 100m away to the west. The view shed from the top of the site is approximately 180˚. Visible landmarks include Donnelly Dome to the south-southeast, the Alaska Range to the southwest, the Delta River to the west, Windy Ridge to the east and South Twin Lake to the west. Surface visibility at the site is 50 percent.

Site XMH-00267 consists of 28 flakes and three flake tools. The site was identified in a 1979 survey when two flake tools and 21 chert and rhyolite flakes were recorded on the surface of the site (Holmes 1979). All of the original 23 artifacts were collected and are presently being housed at the University of Alaska Museum. The site was evaluated in 2005 and seven more flakes of chert, rhyolite and basalt and one chert flake tool were located. The flake tool is 4.2cm long, 3.1cm wide and weighs 4g.

Shovel tests were systematically placed throughout the site area at intervals of 10m during the 2005 evaluation. A total of 37 new shovel tests were excavated. The depths of the shovel tests varied, but all were excavated to glacial till. None of the 37 shovel tests were positive and no new artifacts were found during the 2005 evaluation. Based on the results of the survey and testing, the site area is estimated at approximately 13m x 14m.

Figure 14. General view of site XMH-00267, heading southwest

Because none of the shovel tests were positive, no 1m x 1m test units were excavated at the site. No subsurface features were identified through shovel testing. Soil thickness varied 0-35cm across the site. Most of the landform exhibited extensive wind erosion resulting in very shallow deposition across the site, with only two shovel tests going deeper than a few centimeters. Shovel tests averaged a depth of 10cm across the site. Soil at the site consists of loosely compacted, dark brown, organically rich loess to an average depth of 3cm. Below this organic horizon, the soil consists of moderately compacted yellow brown loess with a low density of gravels and cobbles. Glacial till is encountered below this loess deposit and consists of yellow brown sandy loess with a high density of gravels and cobbles.

Findings

Pedestrian survey and 37 shovel tests produced a total of 31 surface artifacts. The paucity of cultural material indicates that XMH-00267 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

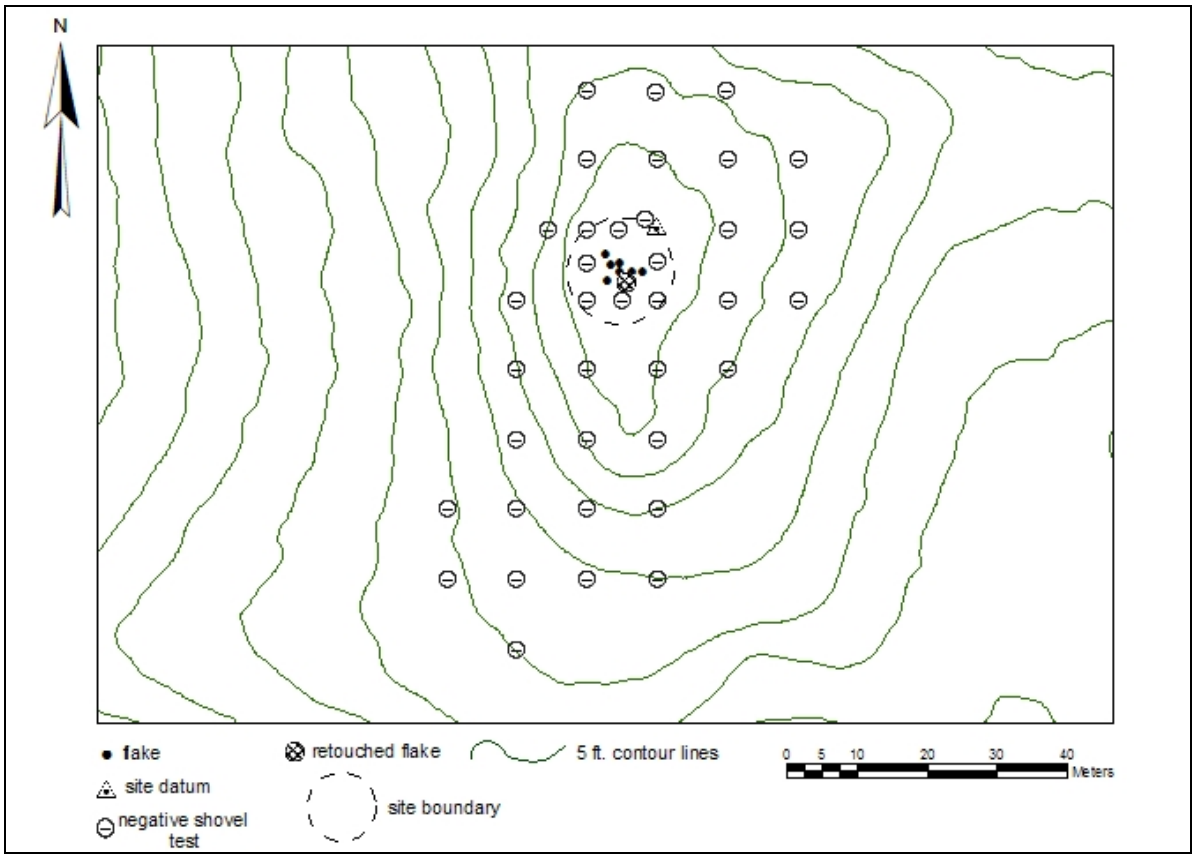

Figure 15. Site map of XMH-00267

XMH-00293
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-00293 is located on the disturbed edge of a gravel pit, which was formerly the top of an east-west trending ridge. The nearest water source is a small, unnamed lake located 200 meters (m) to the southwest. The view shed at the site is limited due to surrounding vegetation, but the Alaska Range can be seen to the southwest. Surface visibility is estimated to be about 25 percent.

Site XMH-00293 was originally located in 1978 and consisted of a unifacial side scraper found in a disturbed area on the edge of the gravel pit (Holmes 1979). The artifact was collected during the original survey and has been accessioned to the University of Alaska Museum. This site was relocated during the 2005 field season and no new artifacts were located. No shovel tests were excavated at the site due to the lack of soil and high degree of disturbance.

Findings
Pedestrian survey produced a total of only one artifact. This finding suggests that XMH-00293 is an isolated find. The area where the tool was located is heavily disturbed by a gravel pit and has lost integrity. The paucity of cultural material and lack of integrity indicates that XMH-00293

does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

Figure 16. Site XMH-00293, facing southeast

XMH-00325
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-00325 is located on a small north-south trending knoll that rises at the center of three kettle lakes. The knoll is the southern endpoint of a low ridgeline that extends to the north several hundred meters before turning east. The nearest water sources are three unnamed kettle lakes that lie 75m to the south, 30m to the northwest and 60m to the northeast. All three lakes are visible from the site. Due to the site's location in a valley, the only visible landmark is Donnelly Dome to the south-southeast. The ridgeline is devoid of tall trees and slightly eroded, with dwarf alder covering 90 percent of the site, other vegetation five percent, and surface erosion the remaining five percent.

Site XMH-00325 consists of four waste flakes discovered in the back-dirt of a rodent burrow during a 1983 Phase I survey (Steele 1983). No additional artifacts were located during the 2005 evaluation.

Two shovel tests were placed 2m from the rodent burrow during 1983; both were negative. Shovel tests were placed systematically through the site at intervals of 10m during the 2005 evaluation. A total of 57 shovel tests were excavated. The depth of each shovel test varied, but all were excavated to glacial till. None of the shovel tests were positive. Based on the results of survey and testing the site area is estimated at approximately 10m x 10m.

Figure 17. General view of site XMH-00325, facing west

Because none of the shovel tests yielded cultural material, no 1m x 1m test units were excavated at site XMH-00325. Soil thickness for the 57 shovel tests varied from 0-46cm across the site and soil depth averaged 26.5cm. Overall the site sits in a valley between two ridges, creating a wind corridor that has left the entire knoll considerably wind eroded. Soil in the site area consists of a dark brown loess root mat to an average depth of 7.3cm. Below this organic horizon, the soil consists of brown and yellow-brown loess with a medium to high density of gravel and pebbles. Glacial till is encountered below this and consists of yellow and yellow brown sandy loess with a high density of gravels, pebbles and cobbles.

Findings

Pedestrian survey and 57 shovel tests produced a total of only two surface artifacts. The paucity of cultural material indicates that XMH-00325 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

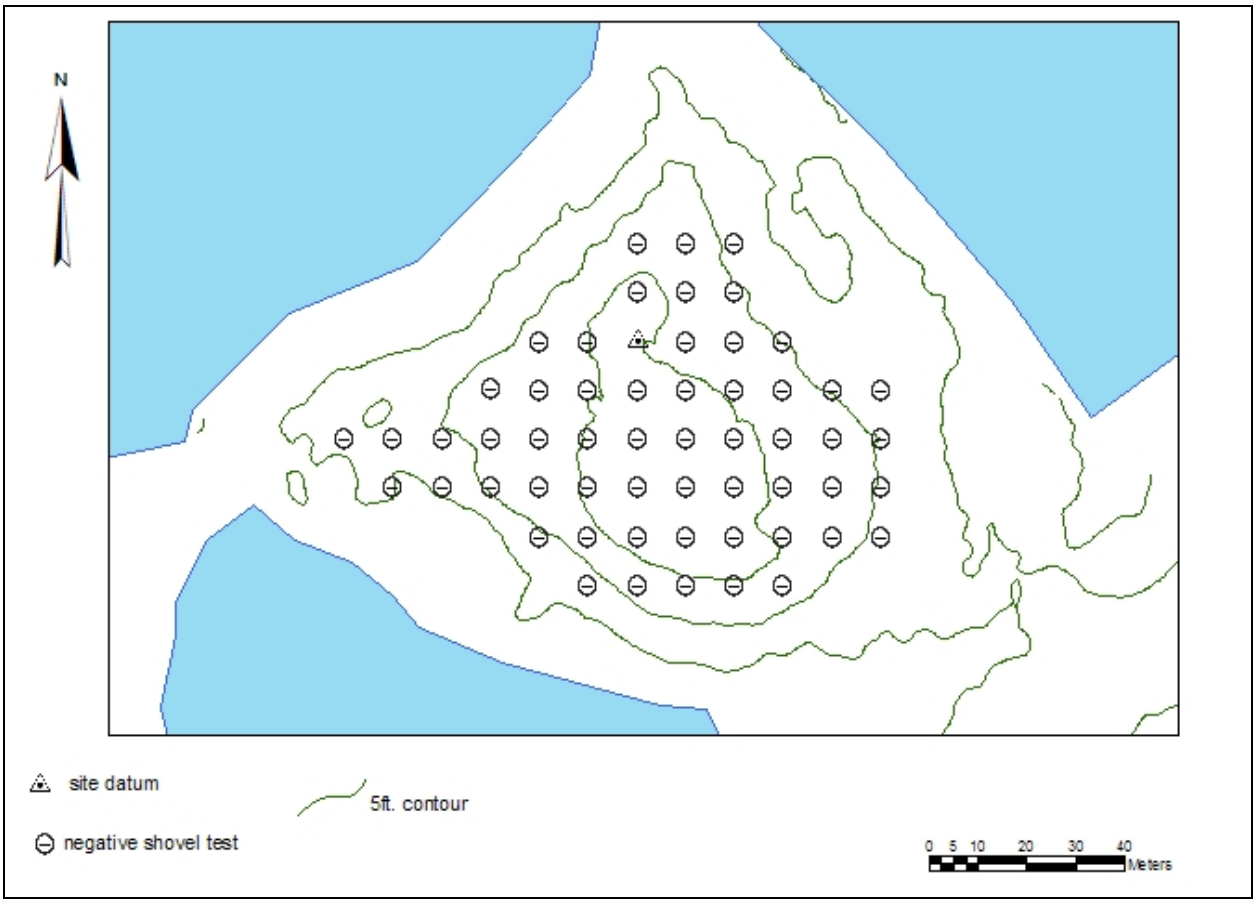

Figure 18. Site map of XMH-00325

XMH-00930
Latitude:
Longitude:
Determination: Eligible

Site XMH-00930 is located on the northern shore of Mark Lake. The view shed from the site is limited because it is located in a depression. The peaks of the Alaska Range are visible to the southwest. Surface visibility is estimated at 75 percent in the beach area on the shores of Mark Lake, but the site is highly vegetated where the beach rises up into a forested area.

Site XMH-00930 consists of eight flakes and one flake tool recovered from both the surface and below the surface. The site was discovered during a 2002 Phase I survey of the lakeshore. One flake tool and four flakes were found on the beach. The artifacts were collected, because of risk of damage or disturbance from the lake or military activity in the area. During the 2005 site evaluation one additional flake was located in a shovel test pit, from 1-95cmbs (centimeters below the surface). No surface artifacts were found during the evaluation of the site.

Shovel tests were systematically placed throughout the site area at intervals of 10m during the 2005 evaluation. A total of 16 shovel tests were excavated. The depths of the shovel tests varied, but all were excavated to glacial till. None of the 16 shovel tests were positive and only

one new artifact was found during the 2005 evaluation. Based on the results of the survey and testing, the site area is estimated at approximately 30m x 40m.

Figure 19. General view of site XMH-00930, facing west

Soil thickness varies across the site. Soil thickness at the location of the positive shovel test (upslope of the beach) is deep—exceeding 293cm in depth. The soil here consists of the following layers: a very dark gray organic mat (0-16cmbs), pale brown sand (16-67cmbs), light olive brown very compact loess (67-105cmbs), mixing layers of olive brown sand and light olive brown compact loess (105-253cmbs), and finally gray clay overlying olive yellow sand from 253-293cmbs. Excavation of the shovel test was terminated at 293cmbs, which was the limit of the bucket augur. In order to explore what lies beneath the sands of the beach, one shovel test was excavated on the lake shore. This shovel test revealed a 64cm thick layer of brown compacted loess on top of approximately 60cm of pale brown sand which lies above the water table, which was reached at 120cmbs. Because of the extreme depth of soil in the area upslope of the bank, and the proximity of the water table on the beach, no 1mx1m test units were excavated at XMH-00930.

Findings

A total of six artifacts were recovered from XMH-00930. Four were recovered from the surface and five were recovered from below the surface. The materials at the site include chert and basalt. Based on the results of survey and testing the site area is estimated at approximately 30m x 40m.

Site XMH-00930 is a small lithic site with both surface and buried components. With buried cultural material, XMH-00930 is in an excellent position to contribute to our knowledge of prehistoric land use patterns. *In situ* artifacts and soil stratigraphy indicate datable material and diagnostic artifacts may be present and could be used to date human use of the site, potentially contributing to a broader regional context. Site XMH-00930 is an intact archaeological site with integrity. The site is eligible for inclusion in the National Register of Historic Places under criterion D for its potential to yield information important in understanding the prehistory of the region.

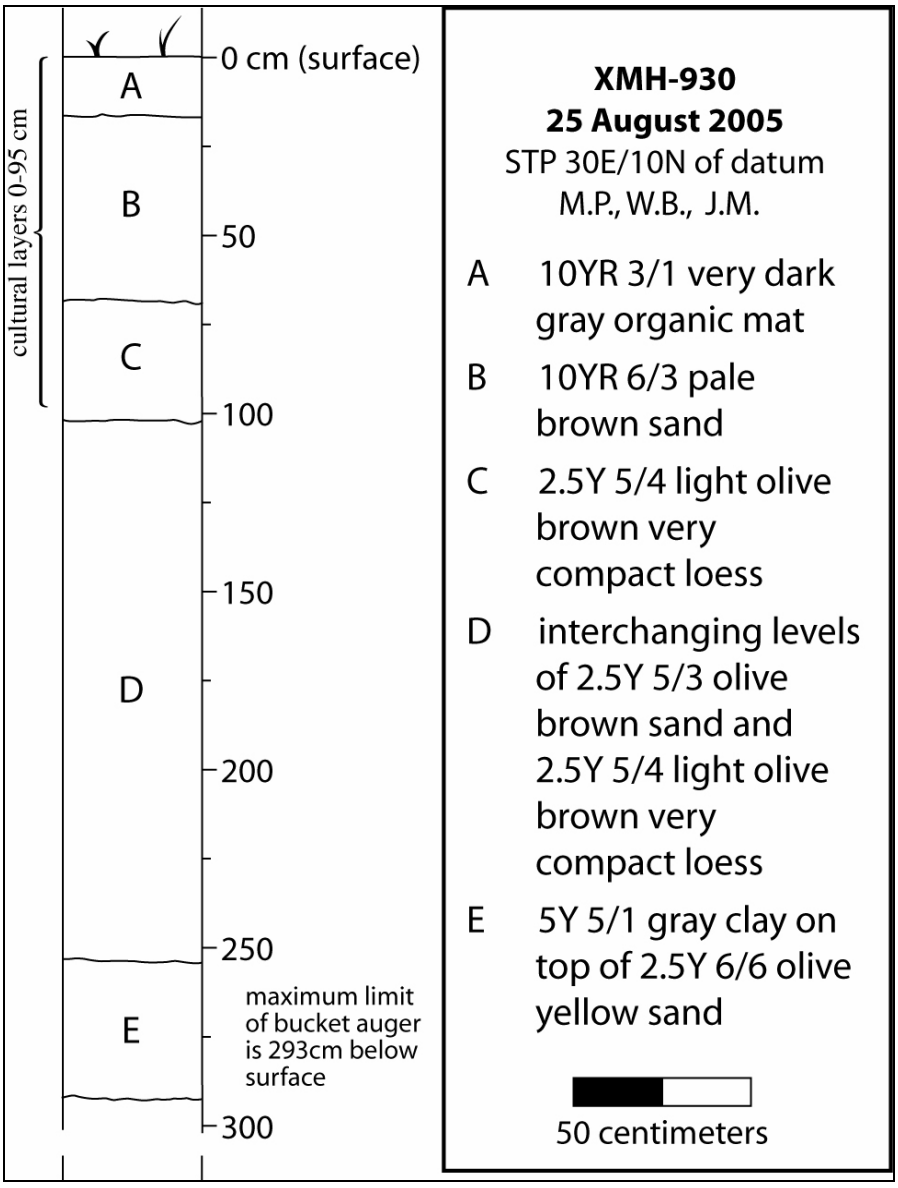

Figure 20. Soil profile of positive test pit from XMH-00930

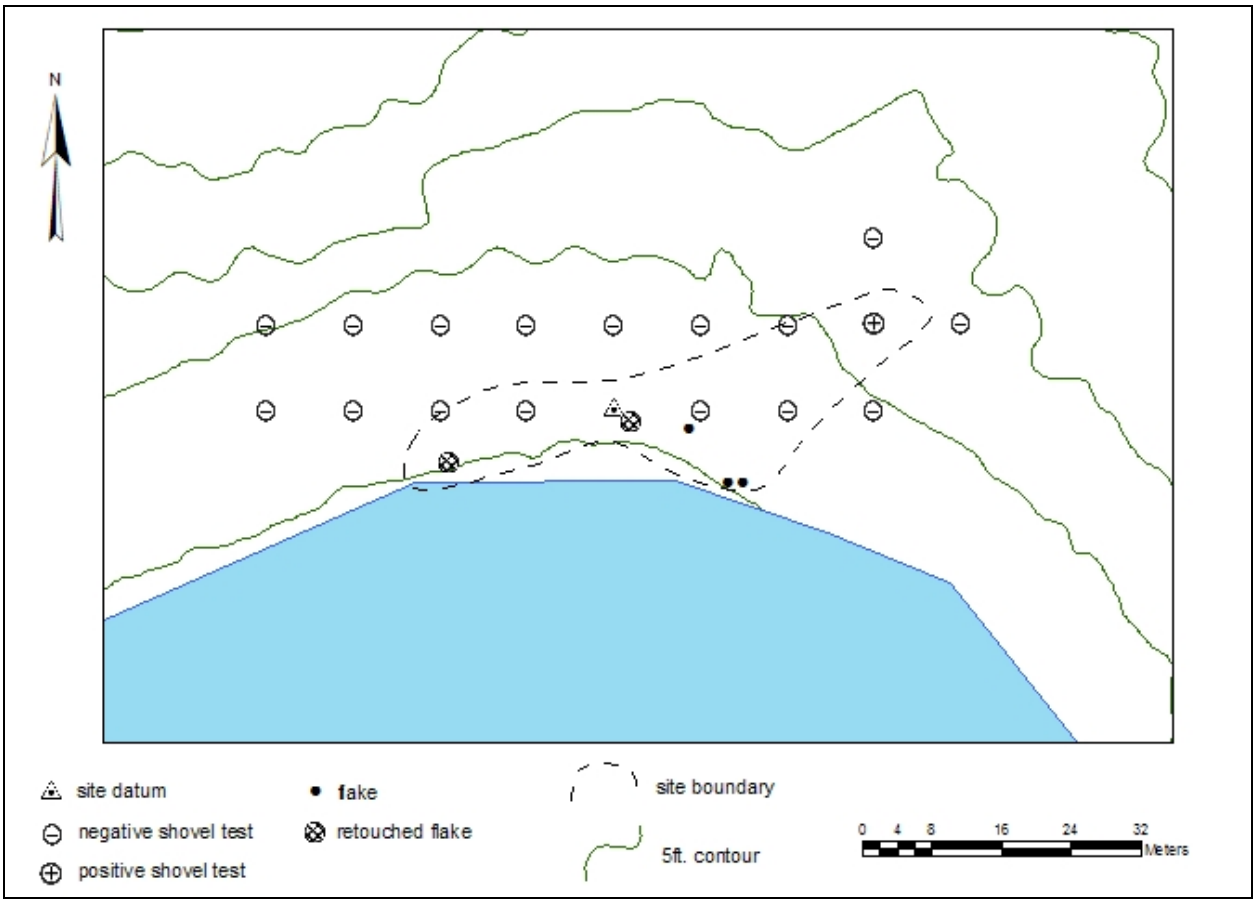

Figure 21. Site map of XMH-00930

XMH-00931
Latitude:
Longitude:
Determination: Eligible

Site XMH-00931 is located on a ridge above Mark Lake immediately north of the access road to the lake. Mark Lake is located 150m to the southeast of the site, and an unnamed pond is 200m to the south of the site. The unnamed pond is visible, while the view of Mark Lake is blocked by thick foliage. Also visible from the site is Donnelly Dome to the south-southeast and the Alaska Range to the south. The surface visibility is 100 percent at the road cut bank and on the road surface, with approximately 0-5 percent visibility across the remainder of the site. The site is rich in vegetation including spruce, birch and aspen trees, large shrubs, cranberry bushes, grasses, moss and lichens.

Site XMH-00931 consists of six flakes recovered from both the surface and below the surface. Two flakes were discovered during a 2002 Phase I survey, a small chert flake found in the road cut bank and a retouched flake located on the access road. Both flakes were removed from the area in 2002 due to their location near and on the access road and the likelihood of destruction from vehicle traffic. Four additional flakes were recovered sub-surface during the 2005 evaluation, but no additional surface artifacts were located.

Figure 22. General view of site XMH-00931, facing north

Shovel tests were systematically placed throughout the site area at intervals of 10m during the 2005 evaluation. A total of 20 new shovel tests were excavated. The depths of the shovel tests varied, but all were excavated to glacial till. One shovel test was positive and yielded a small yellow-brown chert flake from a depth of 40-48cmbs. Based on the results of the survey and testing, the site area is estimated at approximately 25m x 15m.

One 1m x 1m excavation unit was placed at site XMH-00931. The unit was placed 50cm to the south of the positive shovel test pit. The northeast corner of the unit is located 10.5m to the south and 0.25cm east of the site datum. The unit was excavated in 10cm levels until glacial till was reached throughout the entire unit floor. The unit yielded three artifacts. All three were recovered from level two, from 10-15cm below the unit datum. All three artifacts are chert flakes brown/gray in color. No subsurface features were identified within the unit or site. Soil thickness varied from 0-290cm across the site. Soil deposition was deeper on the eastern portion of the site where it is more heavily forested. Along the 10m east and 20m east grid lines, soil deposition averaged 101cm. For the remainder of the site soil depth averaged 38cm. Soil in the area consists of a loosely compacted, organically rich, dark brown root mat to an average depth of 9cm. Below this organic horizon, the soil consists of moderately compacted yellow-brown sandy loess with a very low density of gravel and pebbles. Below this second level glacial till is encountered and consists of yellow-brown sandy loess with a moderate to high density of gravels, pebbles and cobbles.

Findings

A total of six artifacts were recovered from XMH-00931. Two were recovered from the surface and four were recovered from below the surface. The materials at the site consisted of different types of chert. Based on the results of survey and testing the site area is estimated at approximately 25m x 15m.

Site XMH-00931 is a small lithic site with both surface and buried components. With buried cultural material, XMH-00931 is in an excellent position to contribute to our knowledge of prehistoric land use patterns. *In situ* artifacts and soil stratigraphy indicate datable material and

diagnostic artifacts may be present and could be used to date human use of the site, potentially contributing to a broader regional context. Site XMH-00931 is an intact archaeological site with integrity. The site is eligible for inclusion in the National Register of Historic Places under criterion D for its potential to yield information important in understanding the prehistory of the region.

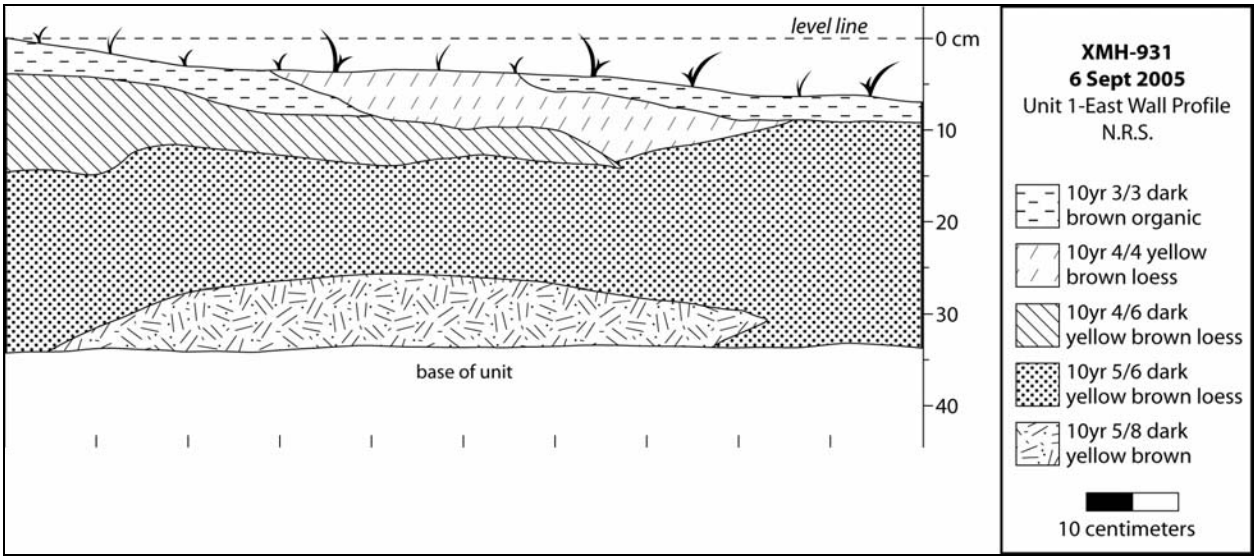

Figure 23. Soil profile from test unit at XMH-00931

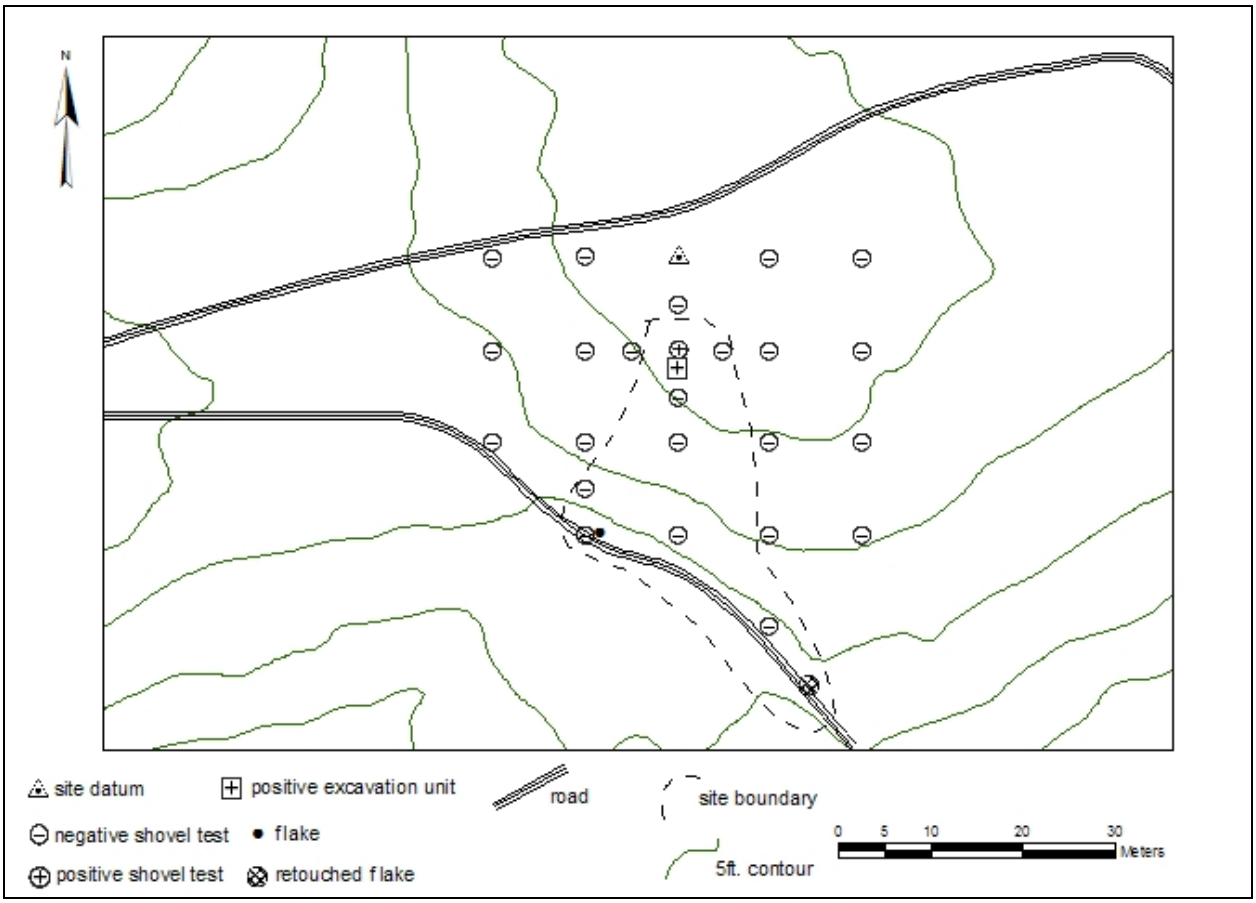

Figure 24. Site map of XMH-00931

XMH-00933
Latitude:
Longitude:
Determination: Eligible

Site XMH-00933 is located on a ridge above Mark Lake, which is 400m to the south. The view shed is 180º and Donnelly Dome is visible to the south, the Alaska Range to the west and a ridge just past Mark Lake to the east. Surface visibility is very poor, less than one percent.

Site XMH-00933 consists of three artifacts recovered from both the surface and below the surface. Two flakes, a gray chert and a black chert flake were discovered in an area exposed by a fallen tree during a 2002 Phase I survey. One additional flake, in two pieces, was recovered sub-surface in the 2005 evaluation. The evaluation failed to locate any additional surface artifacts.

Shovel tests were systematically placed throughout the site area at intervals of 10m during the 2005 evaluation. A total of 22 new shovel tests were excavated. The depths of the shovel tests varied, but all were excavated to glacial till. One of the 22 shovel tests was positive during the 2005 evaluation. Based on the results of the survey and testing, the site area is estimated at approximately 10m x 10m.

Figure 25. General view of site XMH-00933, facing north

Two test units were excavated in 2005 near the surface artifacts and the positive shovel test. Test unit 1 was placed between the two locations, 50cm east of the datum on the 0 north line, with the unit on the south side of the line. This unit was negative, and unit two was placed directly over the positive shovel test, 20cm west of unit one, with the datum in the north wall of the unit. The second chert flake was recovered in test excavation unit two at 15-17 cmbd (below the datum). The units were excavated in 10cm levels until they reached the same depth as the positive shovel test, 35 cmbd. No subsurface features were identified at the site.

Soil deposition across site XMH-00933 ranged from 7– 43 cm, with an average thickness of 20cm. The topsoil layer is 1-10cm in depth, most often dark brown loess with high organic content. This is followed by moderately compact light brown loess, sometimes with red, orange or yellow shadings. Underlying this is glacial till, composed of loess, in varying colors, and a high concentration of pebbles and gravels. Soil in the test units was clearly disturbed by roots, and had a more sandy composition.

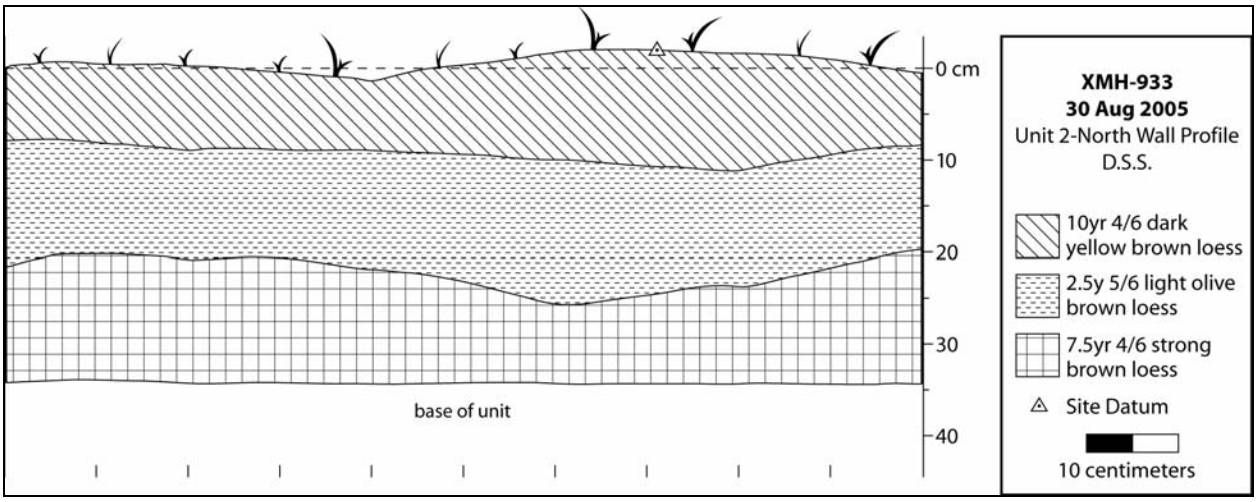

Figure 26. Soil profile from test unit at XMH-00933

Findings

A total of three artifacts were recovered from XMH-00933. Two were recovered from the surface and one flake in two pieces was recovered from below the surface. The materials at the site consisted of different types of chert. Based on the results of survey and testing the site area is estimated at approximately 10m x 10m.

Site XMH-00933 is a small lithic site with both surface and buried components. With buried cultural material, XMH-00933 is in an excellent position to contribute to our knowledge of prehistoric land use patterns. *In situ* artifacts and soil stratigraphy indicate datable material and diagnostic artifacts may be present and could be used to date human use of the site, potentially contributing to a broader regional context. Site XMH-00933 is an intact archaeological site with integrity. The site is eligible for inclusion in the National Register of Historic Places under criterion D for its potential to yield information important in understanding the prehistory of the region.

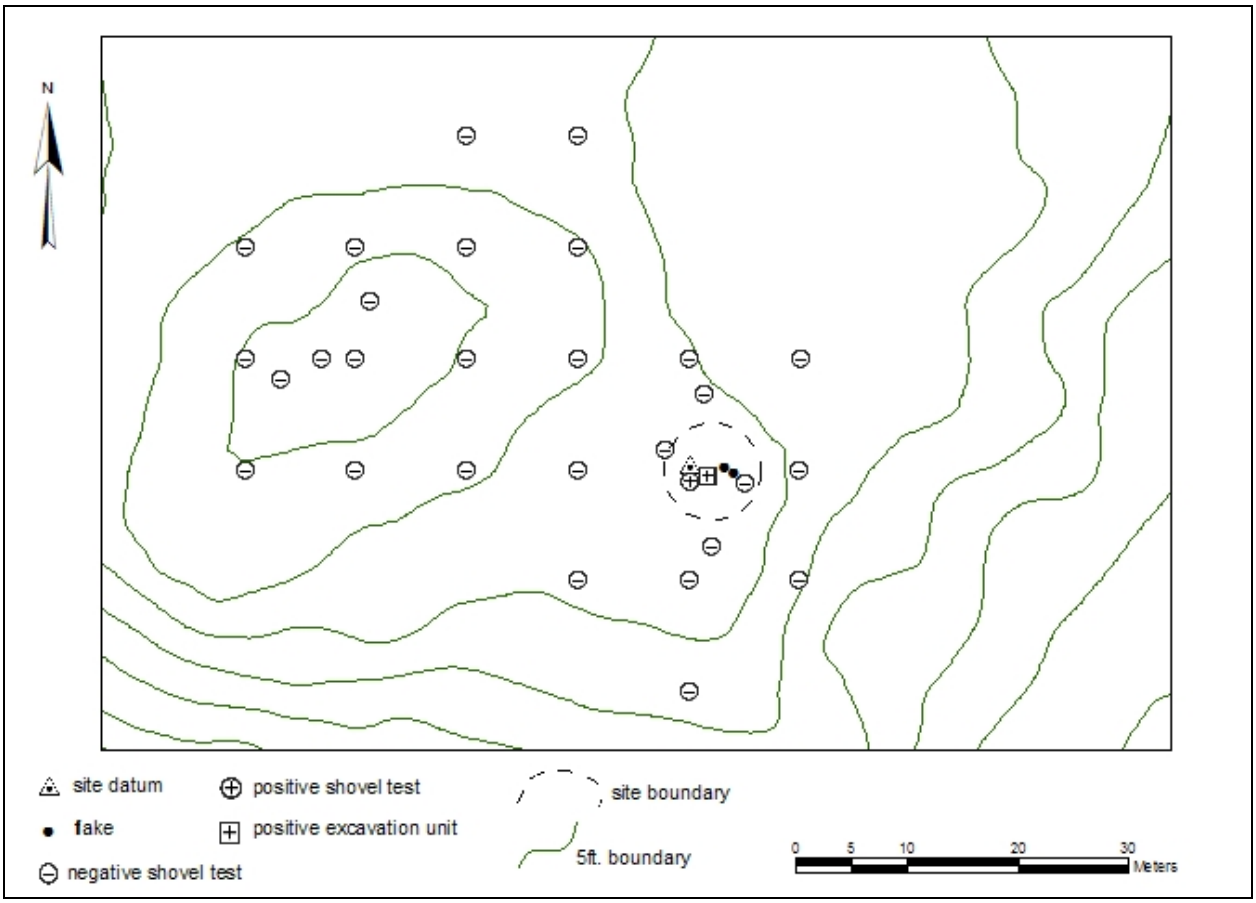

Figure 27. Site map of XMH-00933

XMH-00934
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-00934 is located on a small, low finger ridge extending south from a larger ridge. The nearest water source is Big Lake, which is located 500m to the southwest. The view shed is a full 360º. Windy Ridge is visible to the southeast, Donnelly Dome to the south and the Alaska Range and the Delta River to the west. Surface visibility is poor and is estimated to be less than 5 percent.

Site XMH-00934 consists of two artifacts. This site was located during a 2002 Phase I survey. One basalt and one chert flake were found on the surface (Hedman et al. 2003), but were not collected. Another artifact identified in the 2002 survey was later deemed an ecofact. No additional artifacts were discovered at XMH-00934 during 2005 Phase II evaluations and the three flakes found during the Phase I survey could not be relocated.

Shovel tests were systematically placed throughout the site area at 5m intervals, due to the size of the finger ridge, during the 2005 evaluation. A total of 20 new shovel tests were excavated. The depths of the shovel tests varied, but all were excavated to glacial till. None of the 20

shovel tests were positive and no new artifacts were found during the 2005 evaluation. Based on the results of the survey and testing, the site area is estimated at approximately 5m x 5m.

Figure 28. General view of site XMH-00934, heading south

Because no subsurface artifacts were found, no test units were excavated. Soil thickness varied from 2–83cm across the site, with thicker deposition to the north. The organic layer was composed of loosely compacted dark brown loess, with an average depth of 6cm. The following soil layer consisted of moderately compact loess, with colors varying from medium brown to red brown. Glacial till was encountered under this layer, composed of yellow brown loess with a high level of cobbles and gravels.

Findings

Pedestrian survey and 20 shovel tests produced a total of only two surface artifacts. The paucity of cultural material indicates that XMH-00934 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

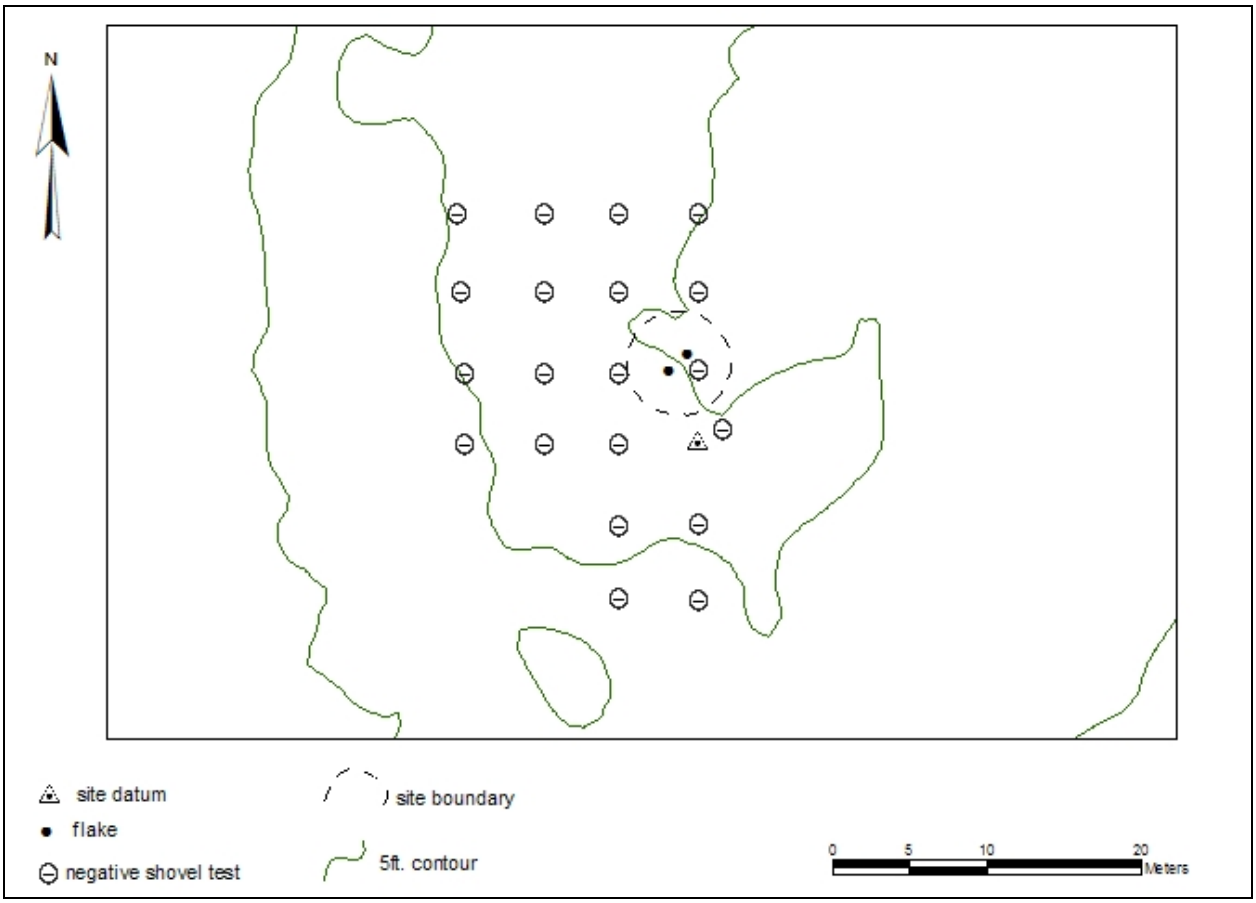

Figure 29. Site map of XMH-00934

XMH-00935
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-00935 is located on a long, low ridge that runs north-south. Sites XMH-00936, XMH-00937 and XMH-00982 are also on the same ridge. The nearest water source is Mark Lake, which is located 550m to the north. The view shed at the site is approximately 270º, with vegetation blocking views to the north. The Alaska Range is visible to the southwest, Donnelly Dome to the south and Windy Ridge to the southeast. Less than five percent of the surface is visible.

Site XMH-00935 consists of one brown-gray chert microblade found during Phase I investigations in 2002 (Hedman et al. 2003). Shovel tests were systematically placed throughout the site area at intervals of 10m during the 2005 evaluation. A total of 24 new shovel tests were excavated. The depths of the shovel tests varied, but all were excavated to glacial till. None of the 24 shovel tests were positive and no new artifacts were found during the 2005 evaluation. Based on the results of the survey and testing, the site area is estimated at approximately 5m x 5m.

Figure 30. General view of site XMH-00935, facing south

No test units were excavated due to the lack of subsurface cultural materials. The soil thickness varied from 0–43cm throughout the site. Soil in the area consists of an organic layer of dark brown loess, with an average depth of 6cm. Beneath the loess is moderately compact loess, predominantly red brown, with a low percentage of gravels and cobbles. In some areas the soil has a higher organic composition and is loamy silt/loess. Glacial till appeared after this layer as a yellow brown loess (occasionally red or light brown) with a high density of cobbles and gravels.

Findings

Pedestrian survey and 24 shovel tests produced a total of only one artifact. This finding suggests that XMH-00935 is an isolated find. The paucity of cultural material indicates that XMH-00935 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

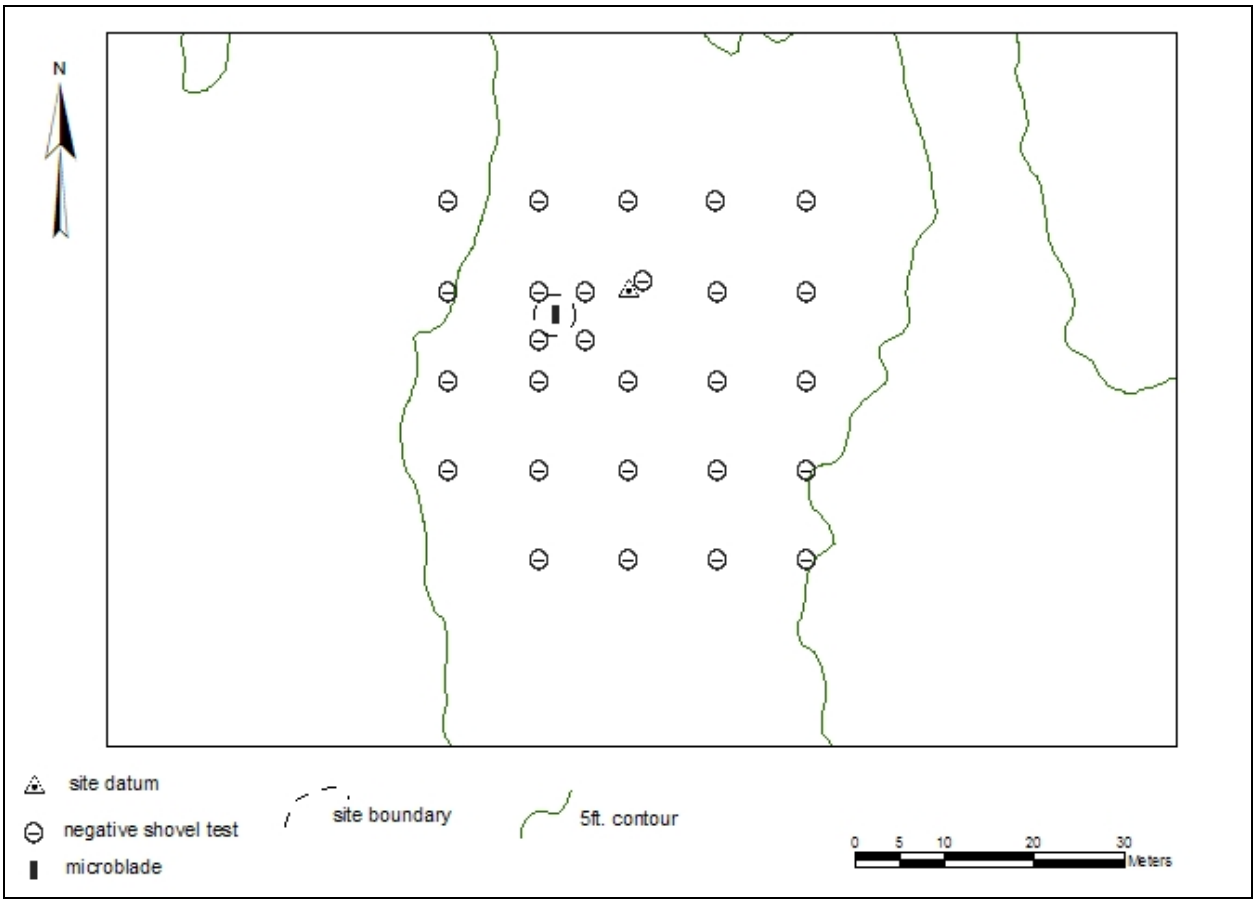

Figure 31. Site map of XMH-00935

XMH-00936
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-00936 is located on a long, low, north-south trending ridge. Sites XMH-00935, XMH-00937 and XMH-00982 are located further south on the same ridge. The northern portion of the site is elevated approximately 2m higher than the southern portion. Mark Lake is the nearest water source, located 450m to the north. The view shed is a full 360º, with the Delta River and Alaska Range visible to the west, Donnelly Dome to the south and the Granite Mountains to the east. Surface visibility is approximately 15 percent.

Site XMH-00936 consists of three artifacts. Three tertiary, dark gray chert flakes were found on the surface during a 2002 Phase I survey (Hedman et al. 2003). Shovel tests were systematically placed throughout the site area at intervals of 10m during the 2005 evaluation. A total of 32 new shovel tests were excavated. The depths of the shovel tests varied, but all were excavated to glacial till. None of the 32 shovel tests were positive and no new artifacts were found during the 2005 evaluation. Based on the results of the survey and testing, the site area is estimated at approximately 10m x 30m.

Figure 32. General view of site XMH-00936, facing south

Two 1m x 1m test units were excavated at XMH-00936 in 2005, near two flakes. Due to the extremely shallow to non-existent soil deposition, the units were excavated in 5cm levels until glacial till was reached throughout the unit floor. Neither test unit contained any cultural materials and no subsurface features were identified at the site. Erosion and varying landforms caused a range in soil deposition depths from 0–101cm, with the deeper deposition found in a slight depression before the northern slope. The organic layer is composed of moderately compact, dark brown loess with an average depth of 6cm. Below this is a layer of mildly compact loess, with colors ranging from yellow brown to red brown to gray brown to light or dark brown. There is no consistent pattern of soil deposition or color, and it may change between one and four times before glacial till is encountered. The till has a high cobble and gravel content mixed with loess of various colors.

Findings

Pedestrian survey, 32 shovel tests and two 1m x1m test excavation units produced a total of only three surface artifacts. The paucity of cultural material indicates that XMH-00936 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

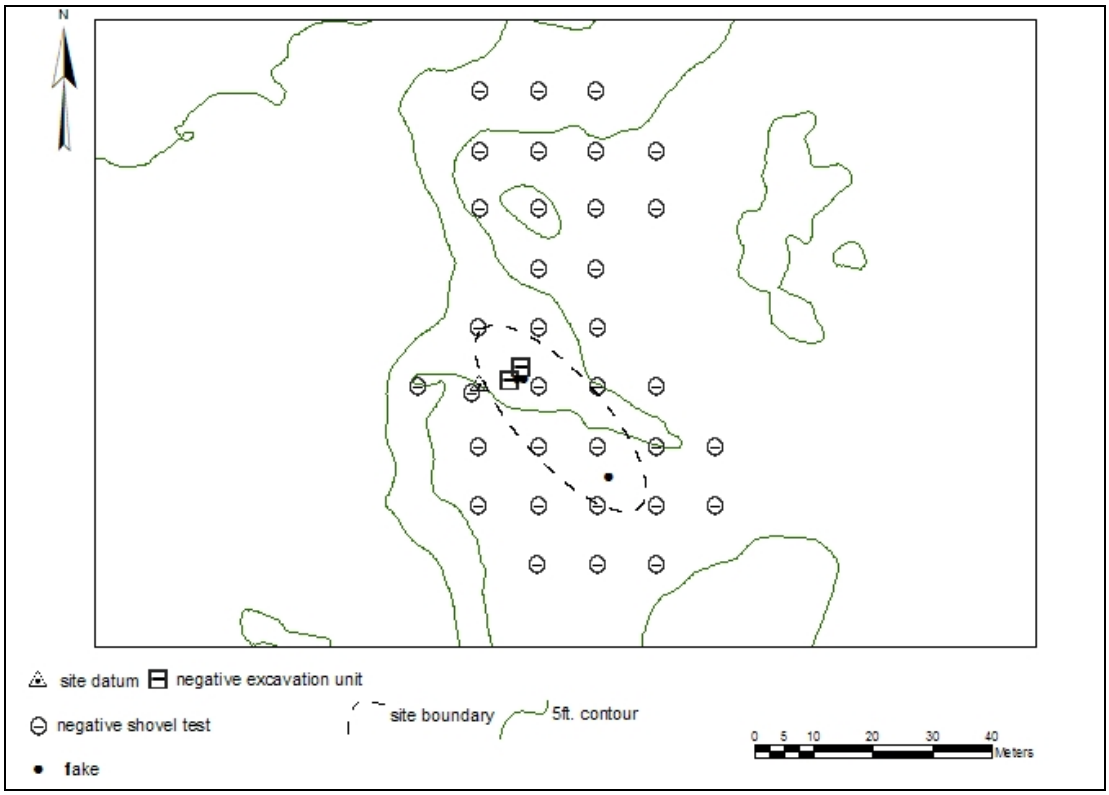

Figure 33. Site map of XMH-00936

XMH-00937
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-00937 is found on a long, low, north-south trending ridge. Sites XMH-00935, XMH-00936, and XMH-00982 are also located on this ridge. Mark Lake is located 600m to the north and is the nearest water source. The view shed at the site is approximately 270º with views to the north blocked by vegetation. The Alaska Range is visible to the west, Donnelly Dome to the south and the Granite Mountains to the east. Surface visibility is less than 15 percent.

Site XMH-00937 consists of five chert flakes found in a buffalo wallow during 2002 Phase I investigations (Hedman et al. 2003). Only one flake was relocated in 2005. Shovel tests were systematically placed throughout the site area at intervals of 10m during the 2005 evaluation. A total of 39 new shovel tests were excavated. None of the 39 shovel tests were positive and no new artifacts were found during the 2005 evaluation. The depths of the shovel tests varied, but all were excavated to glacial till. Based on the results of the survey and testing, the site area is estimated at approximately 10m x 10m.

Figure 34. General view of site XMH-00937, facing south

No test units were excavated due to the lack of subsurface cultural materials. Soil deposition varied from 4-50cm across the site area. The shallowest soil was found in the eroded buffalo wallow. Due to the uneven soil deposition, there is a range of soil colors and textures. The organic layer has an average depth of 6cm and is composed of dark brown loess. Below this is a loess layer, moderately compact and brown, with some red and light brown variations, followed by a layer of similar composition, but light brown in soil color. Glacial till appears in the next layer and is composed of yellow brown loess with a high density of cobbles and gravels.

Findings

Pedestrian survey and 39 shovel tests produced a total of five surface artifacts. The paucity of cultural material indicates that XMH-00937 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

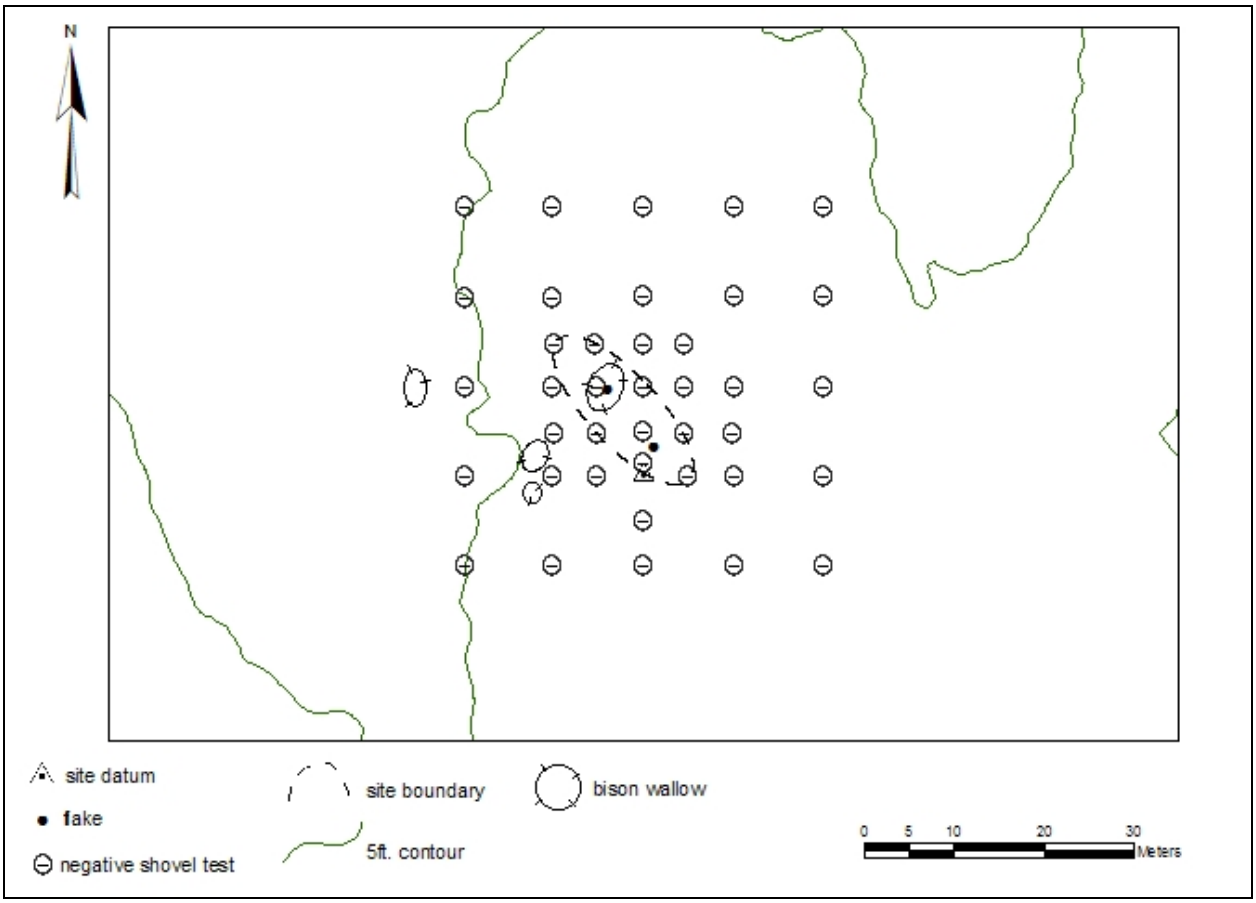

Figure 35. Site map of XMH-00937

XMH-00938
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-00938 is located on a moraine situated on the west side of Big Lake. The Alaska Range is visible to the west and southwest and Donnelly Dome can be seen to the south. There is zero surface visibility at the site. There are two water sources close to the site including Big Lake to the east and a small kettle pond to the west.

The site was discovered during the 2002 field season and consists of four flakes found in a single shovel test pit (Hedman et al. 2003). These artifacts were later deemed ecofacts. A total of 19 shovel tests were excavated along the top of the moraine in 2002, all negative. Shovel tests were systematically placed throughout the site area at intervals of 10m during the 2005 evaluation. A total of 29 new shovel tests were excavated. The depths of the shovel tests varied, but all were excavated to glacial till. None of the new 29 shovel tests were positive and no new artifacts were found during the 2005 evaluation.

Figure 36. General view of site XMH-00938, facing east

Findings

Pedestrian survey and 48 shovel tests produced no artifacts. Additionally, the artifacts recorded in 2002 were later determined to be ecofacts. This finding suggests that XMH-00938 was not an archaeological site. Therefore, site XMH-00938 is not eligible for inclusion in the National Register of Historic Places.

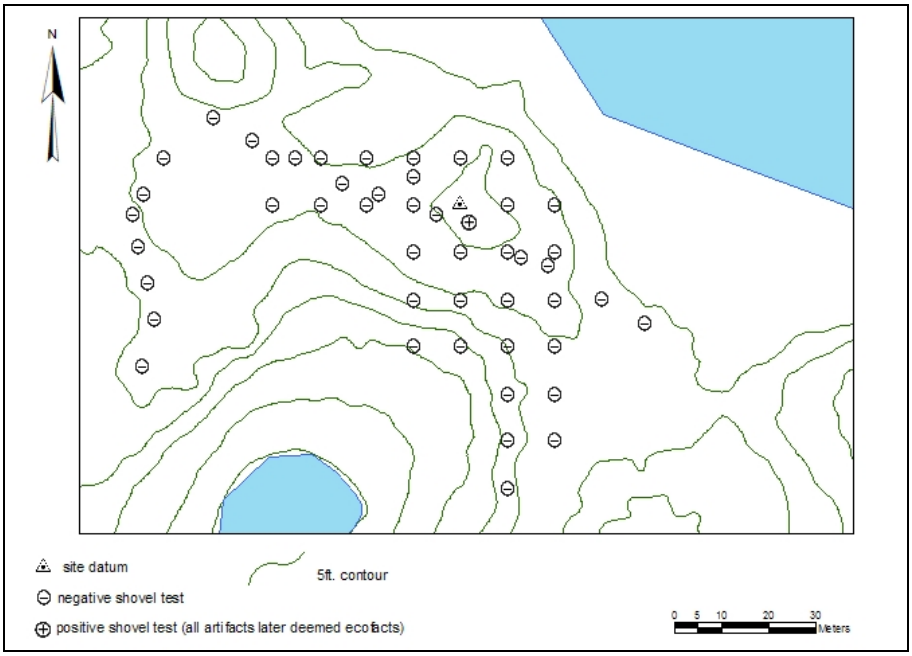

Figure 37. Site map of XMH-00938

XMH-00942
Latitude:
Longitude:
Determination: Eligible

Site XMH-00942 is located on the southern edge of a north-south trending glacial moraine. The nearest water source is Big Lake, located 70m to the west of the site datum. The view shed at the site is extremely limited due to surrounding vegetation. Visible landmarks include the Alaska Range to the west and Big Lake to the west. Surface visibility at the site is five percent and is limited to one small exposure on the western edge of the site.

Site XMH-00942 consists of eight artifacts: seven chert flakes and one obsidian flake. One obsidian flake and one chert flake were found in shovel tests during a Phase I survey conducted in 2002 (Hedman et al. 2003). The artifacts were found in separate test pits at depths of 7-32cmbs. In all, 13 shovel tests were excavated in 2002, two of which were positive (containing one flake each). Both flakes were collected. Five additional chert flakes were found in a test unit and one chert flake was found on the surface during the 2005 Phase II investigations.

Figure 38. General view of site XMH-00942, heading south

Shovel tests were systematically placed throughout the site area at 10m intervals. A total of 35 shovel tests were excavated during the 2005 Phase II evaluation of the site. The depths of shovel tests varied, but all were excavated to glacial till. None of the 35 shovel tests were positive. Based on the results of the survey and testing, the site boundaries are estimated to be 15m x 65m.

One 1m x 1m test unit was excavated at XMH-00942. The test unit was placed next to one of the original positive shovel tests from the 2002 survey. The southeast corner of the test unit is

located 3m west and 0m north of the site datum. The test unit was excavated in 10cm levels until glacial till was reached throughout the entire unit floor. The test unit yielded a total of five artifacts, all from level 2, located 10-20cm below the unit datum. No subsurface features were identified at the site. Soil thickness varied 5-62cm across the site. Areas around the edges of the landform are eroded due to the slope and therefore have a lesser amount of deposition, averaging 10cm. Soil in these areas consists of loosely compacted, dark brown, organically rich loess to an average depth of 5cm. Below this organic horizon, the soil is moderately compacted yellow brown loess with a low density of gravels and cobbles. Glacial till is encountered below this loess deposit and consists of loosely compacted yellow brown sandy loess with a high density of gravels and cobbles. The areas on top of the landform do not show signs of erosion and therefore are characterized by deeper soil deposits, averaging 40cm. Soil in these areas consists of loosely compacted, dark brown, organically rich loess to an average depth of 10cm. Below this organic horizon, the soil is moderately compacted brown loess with a low density of gravels and cobbles. Glacial till is encountered below this loess deposit and consists of loosely compacted yellow brown sandy loess with a high density of gravels and cobbles.

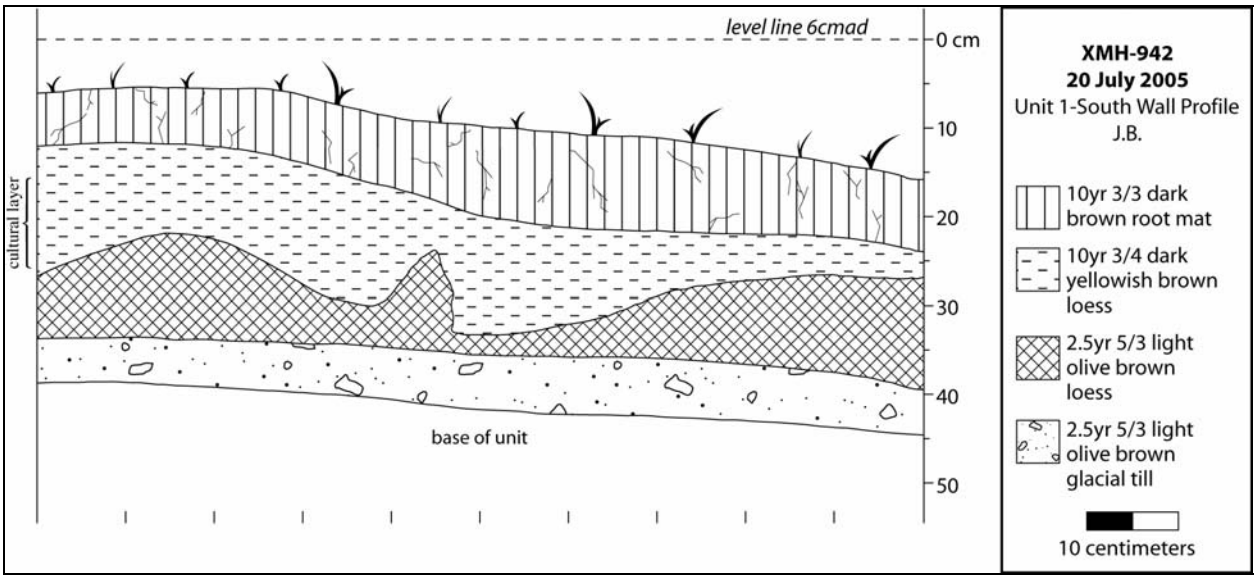

Figure 39. Soil profile from test unit at XMH-00942

Findings

A total of eight artifacts were recorded at XMH-00942. One was recovered from the surface and seven were recovered from below the surface. The materials at the site include chert and obsidian. Based on the results of survey and testing the site area is estimated to be approximately 15m x 65m.

Site XMH-00942 is a small lithic site with both surface and buried components. With the presence of obsidian, a non-locally occurring material type, and buried cultural material XMH-00942 is in an excellent position to contribute to our knowledge of prehistoric land use patterns. *In situ* artifacts and soil stratigraphy indicate datable material and diagnostic artifacts may be present and could be used to date human use of the site, potentially contributing to a broader regional context. Site XMH-00942 is an intact archaeological site with integrity. The site is eligible for inclusion in the National Register of Historic Places under criterion D, for its potential to yield information important in understanding the prehistory of the region.

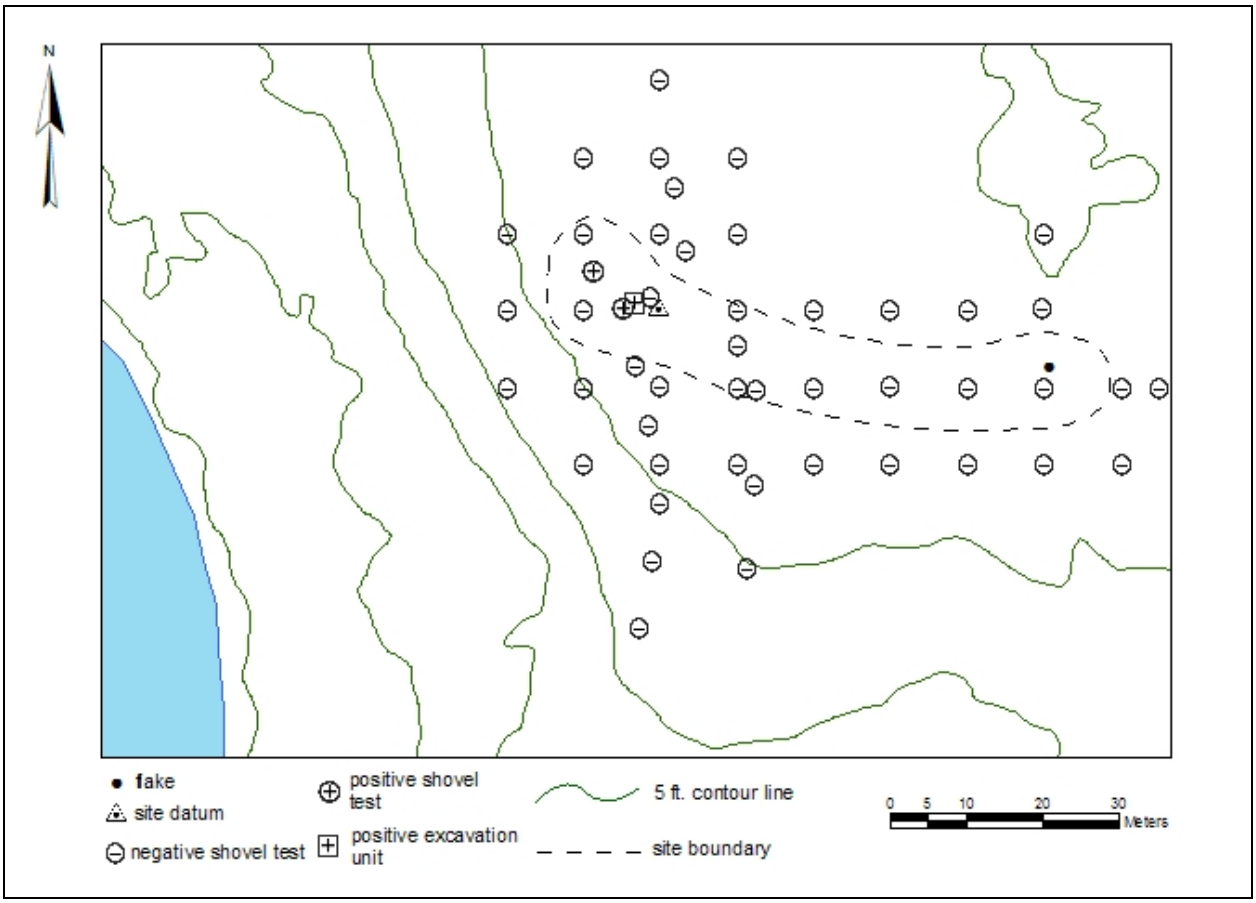

Figure 40. Site map of XMH-00942

XMH-00943
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-00943 is located on a moraine overlooking Big Lake on its southeastern edge. The Alaska Range is visible to the west and southwest and Donnelly Dome can be seen to the south. There is no surface visibility at the site.

Site XMH-00943 consists of four flakes. These flakes were discovered during the 2002 Phase I survey (Hedman et al. 2003). Twelve shovel tests were excavated in 2002 in two parallel lines down the center of the moraine. Two test pits yielded cultural material including a broken quartz flake, a late stage reduction flake of tan chert, a cortical flake of tan rhyolite and a relatively large edge-modified flake of tan rhyolite. The artifacts were collected. No artifacts were found on the surface.

Shovel tests were systematically placed throughout the site area at intervals of 10m during the 2005 evaluation. A total of 34 new shovel tests were excavated. The depths of the shovel tests varied, but all were excavated to glacial till. None of the 34 shovel tests were positive and no new artifacts were found during the 2005 evaluation. Based on the results of the survey and testing, the site area is estimated at approximately 10m x 30m.

Figure 41. General view of site XMH-00943, facing west

None of the 2005 shovel tests were positive and the crew was unable to accurately locate the positive shovel test pits from 2002 due to incomplete maps. As a result, no 1m x 1m test units were excavated at site XMH-00943. The soil thickness at the site varied, but for most of the site thickness ranged from 10-50cm before terminating at glacial till. The soil here consists of a dark brown organic mat averaging 10cm in thickness, followed by a layer of brown loess, giving way to thinner layer of light or yellow brown loess above a light or yellow brown glacial till. This differed from the shovel tests in the northern portion of the grid shovel tests were excavated through many layers of sand. These shovel tests showed a profile of a thick very dark brown organic mat (15-20cm) above 10-20cm of brown loess above 50-60cm of brown sand on top of brown sandy glacial till. These sandy shovel tests were located on the edge of the moraine closest to Big Lake, and it is possible that this area was once part of the lake bed, or the lake shore.

Findings

Pedestrian survey and 46 shovel tests produced a total of only four surface artifacts. The paucity of cultural material indicates that XMH-00943 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

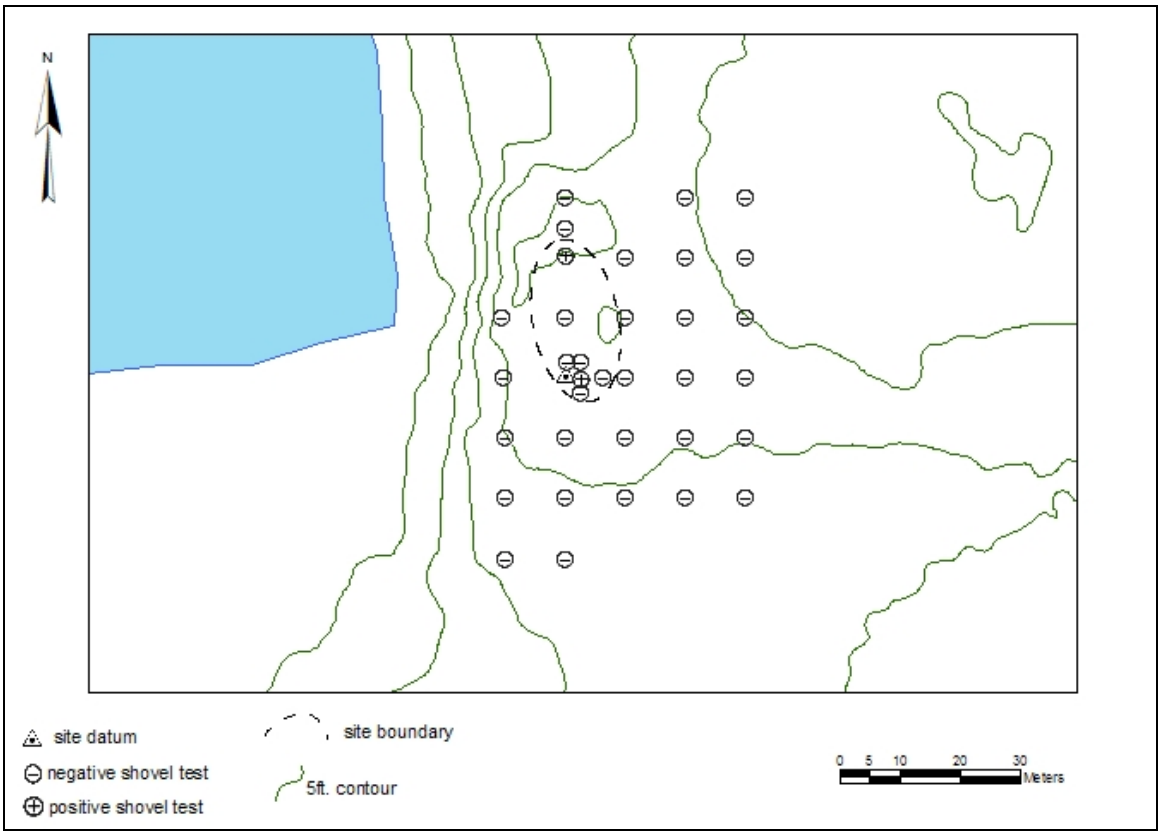

Figure 42. Site map of XMH-00943

XMH-00944
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-00944 is located on a large glacial knoll. The nearest water sources to the site are an unnamed pond located 125m to the northwest and a second unnamed pond located 100m to the north. The view shed at the site is estimated to be 180°. Donnelly Dome is visible to the south-southeast, Windy Ridge to the east and the Alaska Range to the southwest. Surface visibility is estimated to be 50 percent.

Site XMH-00944 consists of eight flakes. One black chert tertiary flake was found on the surface of the landform during a 2002 Phase I survey (Hedman et al. 2003). The site was evaluated in 2005 and the flake was relocated and an additional six flakes were found on the surface of the site, totaling seven surface flakes altogether.

Shovel tests were systematically placed throughout the site area at 10m intervals. Two shovel tests were placed at 5m intervals off of the positive shovel test and the surface flakes. A total of 26 shovel tests were excavated at the site. The depths of the shovel tests varied but all were excavated to glacial till. One shovel test was positive, containing one tertiary basalt flake. Chert, basalt and quartz were present among the debitage. No tools were found at the site. Based on the results of survey and testing, the boundaries of the site are estimated to be 18m x 16m.

One 1m x 1m test unit was excavated at the site. The test unit was placed next to the positive shovel test. The northeast corner of the test unit is located 9m south and 0m east of the site datum. The test unit was excavated in 10cm levels until glacial till was reached throughout the entire unit floor. Due to the shallow nature of the soil deposition at the site, the test excavation unit was only a few centimeters deep. The test unit yielded no additional artifacts. No further test units were excavated at the site because the sub-surface flake was found on a relatively steep slope and soil deposition at the site was minimal. No subsurface features were identified at the site.

Figure 43. General view of site XMH-00944, facing south

Soil thickness at the site varied 0-45cm across the site. Most of the site has sustained extensive wind erosion and is characterized by shallow soil deposits, averaging 10cm in depth. The deposition consists of loosely compacted, dark brown, organically rich loess to an average depth of 4cm. Below this organic horizon, the soil consists of moderately compacted brown loess with a low density of gravels and cobbles. Glacial till is encountered below this loess deposit and consists of loosely compacted yellow brown sandy loess with a high density of gravels and cobbles. A small bench located 10-20m north and west of the site datum had deeper soil deposits. In this area the soil deposition averaged 30cm. The soil in this area consists of loosely compacted, dark brown, organically rich loess to an average depth of 10cm. Below this organic horizon, the soil consists of moderately compacted brown loess with a low density of gravels and cobbles. Glacial till is encountered below this loess deposit and consists of yellow brown sandy loess with a high density of gravels and cobbles.

Findings

Pedestrian survey and 26 shovel tests produced a total of only eight artifacts. The paucity of cultural material indicates that XMH-00944 does not contain additional information that is

important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

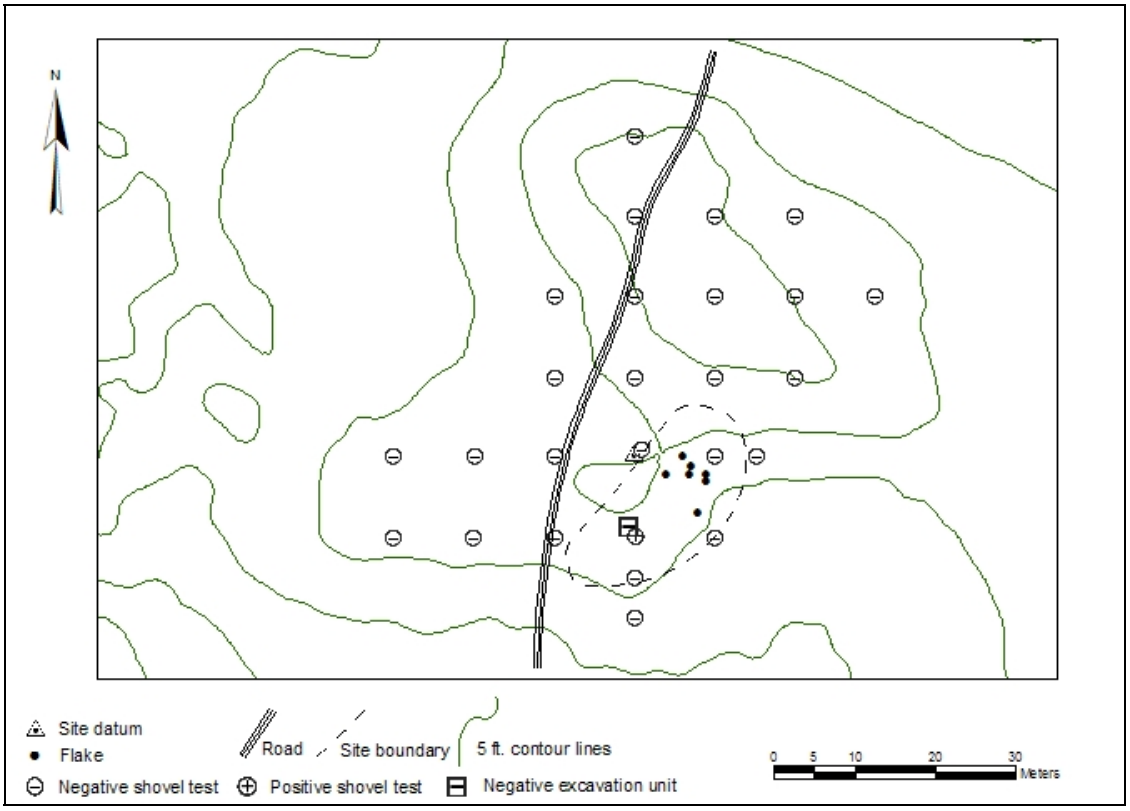

Figure 44. Site map of XMH-0944

XMH-00946
Latitude:
Longitude:
Determination: Eligible

Site XMH-00946 is located on an east-west trending ridge. The nearest water source to the site is a small, unnamed lake located 100m to the south. The view shed at the site is very poor due to mature forest covering the ridge. No landmarks are visible from the site. There is no surface visibility at the site.

Site XMH-00946 consists of two flakes and a tci thos. One tertiary rhyolite flake was found in a shovel test pit at a depth of 10-33cm below the surface during Phase I investigations conducted during the 2002 field season (Hedman et al. 2003). Nine shovel test pits were excavated to glacial till in 2002 but only one was positive. A tci thos and another tertiary rhyolite flake were found in a test unit during the 2005 Phase II excavation. The tci thos, retouched along one edge, is gray in color, 13cm long, 4.1cm wide and weighs 35.5g. All of the artifacts were found subsurface and all the artifacts were collected.

Shovel tests were systematically placed throughout the site area at intervals of 10m. A total of 28 shovel test were excavated during the Phase II evaluation. The depth of shovel tests varied, but all were excavated to either glacial till or the permafrost layer. None of the 28 shovel tests were positive.

Figure 45. General view of site XMH-00946, facing south

One 1m x 1m test unit was excavated at site XMH-00946. The unit was placed next to the original positive shovel test. The northwest corner of the unit is located 4m south and 1m west of the site datum. The unit was excavated in 10cm levels until glacial till was reached throughout the entire unit floor. The test unit yielded two artifacts. One was recovered from level two, 16cm below the unit datum and the second was recovered from level three, 20-30cm below the unit datum. No subsurface features were identified at the site. Soil thickness varied 30-90cm across the site with no pattern as to where the soil was deeper or shallower. Soil in the area consists of loosely compacted, very dark brown, organically rich loess to an average depth of 15cm. Below this organic horizon, the soil consists of moderately compacted yellow brown loess with a low density of gravel and cobbles. Below this second layer is another layer which consists of yellow brown loess mottled with olive brown loess, also with a low density of gravel and cobbles. Glacial till is encountered below these loess deposits and consists of olive brown sandy loss with a high density of gravels and cobbles.

Findings

A total of three artifacts at were recovered from XMH-00946. All artifacts were recovered from below the surface. Based on the results of survey and testing, the site area is estimated at approximately 5m x 10m.

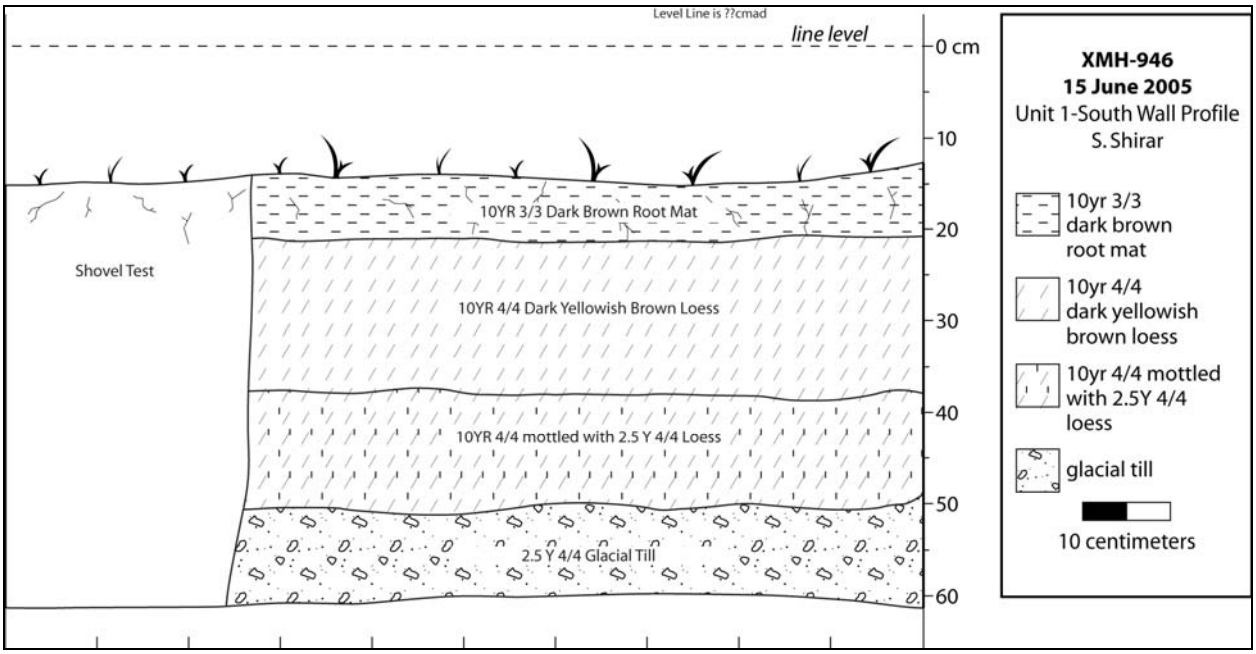

Figure 46. Soil profile of test unit from XMH-00946

Site XMH-00946 is a small buried site with late stage lithic debitage, and could potentially contain more cultural material. With such buried cultural material XMH-00946 is in an excellent position to contribute to our knowledge of prehistoric land use patterns. *In situ* artifacts and soil stratigraphy indicate datable material and diagnostic artifacts may be present and could be used to date human use of the site, potentially contributing to a broader regional context. Site XMH-00946 is an intact archaeological site with integrity. The site is eligible for inclusion in the National Register of Historic Places under criterion D, for its potential to yield information important in understanding the prehistory of the region.

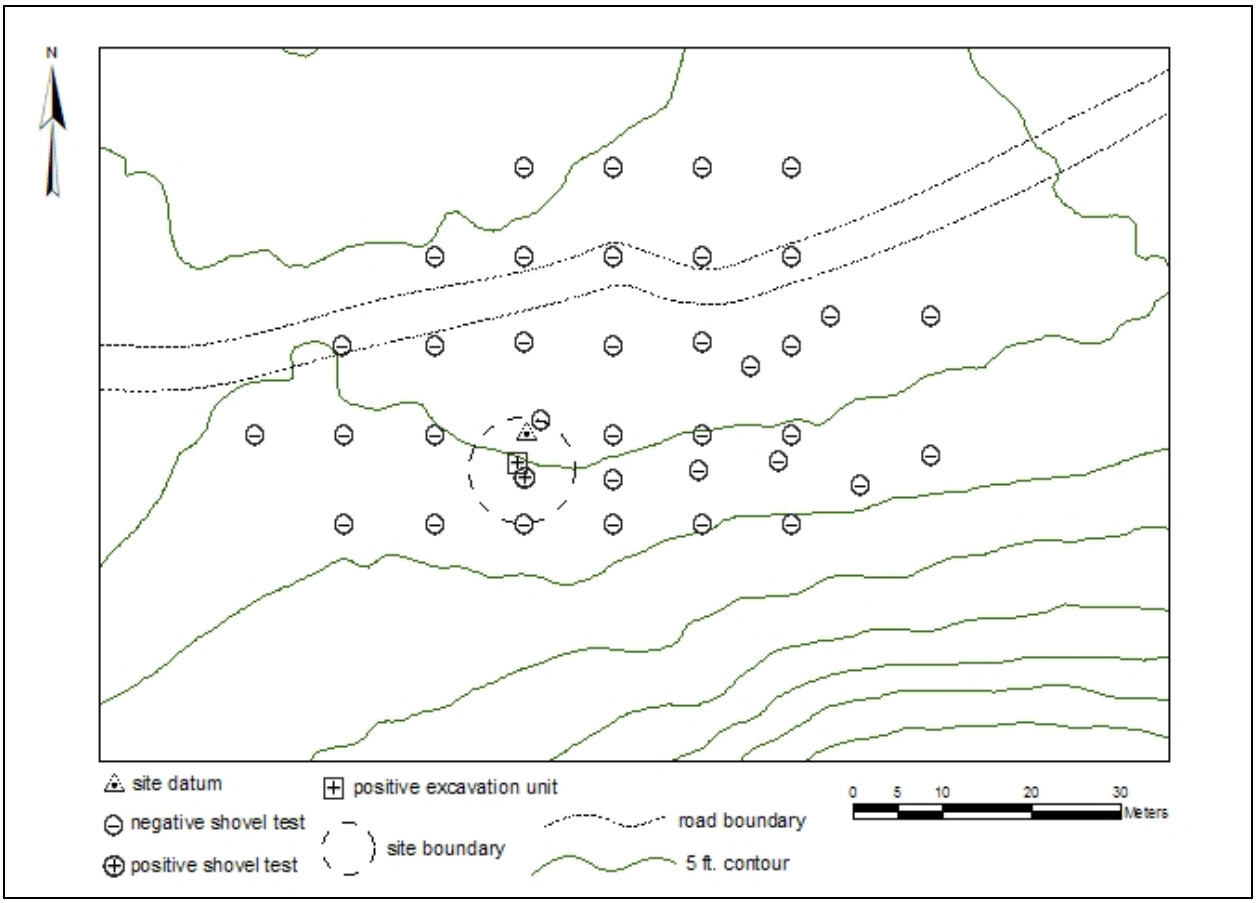

Figure 47. Site map of XMH-00946

XMH-00947
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-00947 is located on a low northeast-southwest trending ridge. The nearest water source to the site is a small, nearly dry, unnamed lake located 75m to the south. The view shed at the site is limited due to its low elevation, vegetation and higher surrounding ridges. Visible landmarks include Windy Ridge to the east and Donnelly Dome to the southeast. There is no surface visibility at the site.

Site XMH-00947 consists of one flake found during 2002 Phase I survey (Hedman et al. 2003). Fourteen shovel tests were excavated in 2002; one shovel test was positive, containing a dark gray basalt flake, which was collected.

Shovel tests were systematically placed throughout the site area at intervals of 10m during the 2005 evaluation. A total of 21 new shovel tests were excavated. The depths of the shovel tests varied, but all were excavated to glacial till. None of the 21 shovel tests were positive and no new artifacts were found during the 2005 evaluation. Based on the results of survey and testing, the site area is estimated at approximately 5m x 5m.

Figure 48. General view of site XMH-00947, facing south

Findings

Pedestrian survey and 35 shovel tests produced a total of only one artifact. This finding suggests that XMH-00947 is an isolated find. The paucity of cultural material indicates that XMH-00947 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

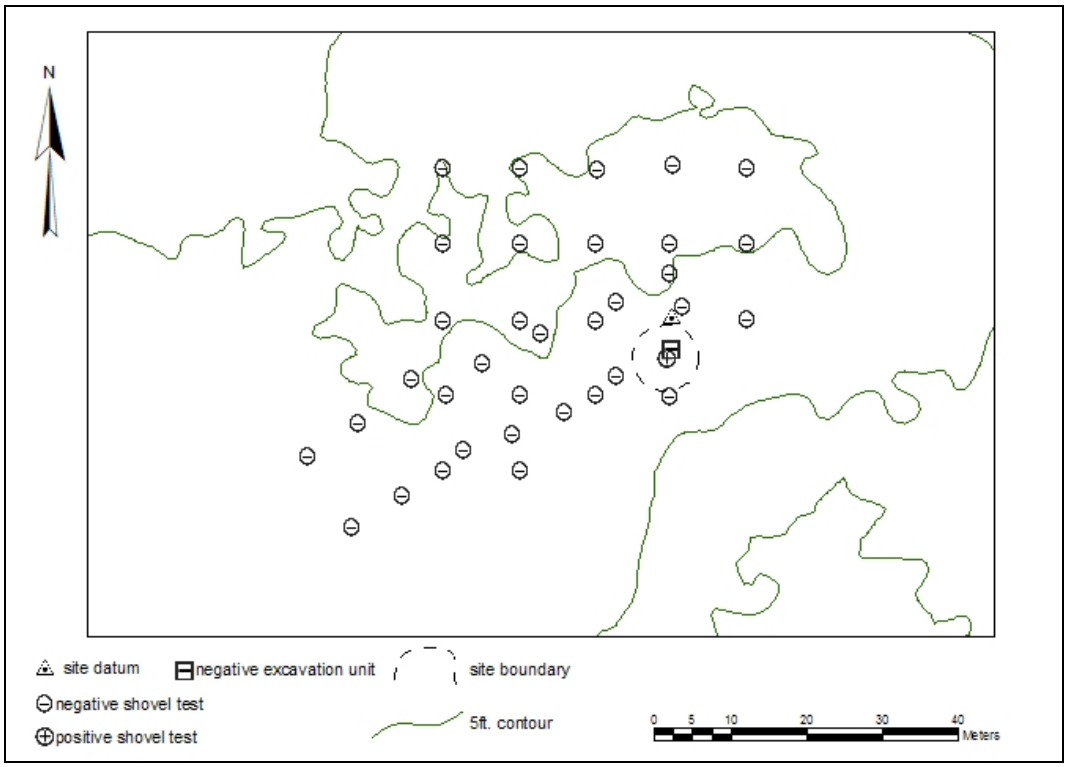

Figure 49. Site map of XMH-00947

XMH-00949
Latitude:
Longitude:
Determination: Eligible

Site XMH-00949 is located on a small northwest-southeast trending glacial moraine. The nearest water source is a small, unnamed pond located 400m to the east. The view shed at the site is a full 360°. Visible landmarks include the Alaska Range to the southwest, Donnelly Dome to the south-southeast, the Delta River to the northwest and Windy Ridge to the east. Surface visibility at the site is estimated to be 50 percent.

Site XMH-00949 consists of one obsidian scraper found on the surface during Phase I investigations conducted during the 2002 field season (Hedman et al. 2003). The scraper is 1.25cm long, 1.5cm wide and weighs 1.8g. The artifact was collected during the initial survey phase. During Phase II, shovel tests were systematically placed throughout the site area at intervals of 10m. A total of 20 shovel tests were excavated. None of the 20 shovel tests excavated contained any cultural materials. The depths of shovel tests varied, but all were excavated to glacial till. Based on the results of survey and testing, the site boundaries are estimated to be 5m x 5m.

Since none of the shovel tests excavated at the site contained any cultural materials, no 1m x 1m test units were excavated at the site. Soil thickness varied from 0-25cm across the site. The top and south facing slopes of the landform have sustained extensive wind erosion and therefore show evidence of shallow soil deposition, averaging 8cm. Soil in these areas consists of loosely compacted, dark brown, organically rich loess to an average depth of 4cm. Below this organic horizon, the soil consists of moderately compacted brown loess with a low density of gravels and cobbles. Glacial till is encountered below this loess deposit and consists of loosely compacted yellow brown sandy loess with a high density of gravels and cobbles.

Figure 50. General view of site XMH-00949, facing west

Figure 51. Obsidian scraper from site XMH-00949

The north facing slope of the landform has been better protected against wind erosion and therefore the soil deposition is deeper, averaging 20cm. Soil in this area consists of loosely compacted, dark brown, organically rich loess to an average depth of 5cm. Below this organic horizon, the soil consists of moderately compacted brown loess with a low density of gravels and cobbles. Glacial till is encountered below this loess deposit and consists of loosely compacted yellow brown sandy loess with a high density of gravels and cobbles.

Findings

Pedestrian survey and 20 shovel tests produced a total of only one artifact. This finding suggests that XMH-00949 is an isolated find. However, because the artifact is made of obsidian, a non-locally occurring material type, XMH-00949 is in an excellent position to contribute to our knowledge of prehistoric land use patterns and potentially contribute to a broader regional context. Site XMH-00949 is an intact archaeological site with integrity. The site is eligible for inclusion in the National Register of Historic Places under criterion D, for its potential to yield information important in understanding the prehistory of the region.

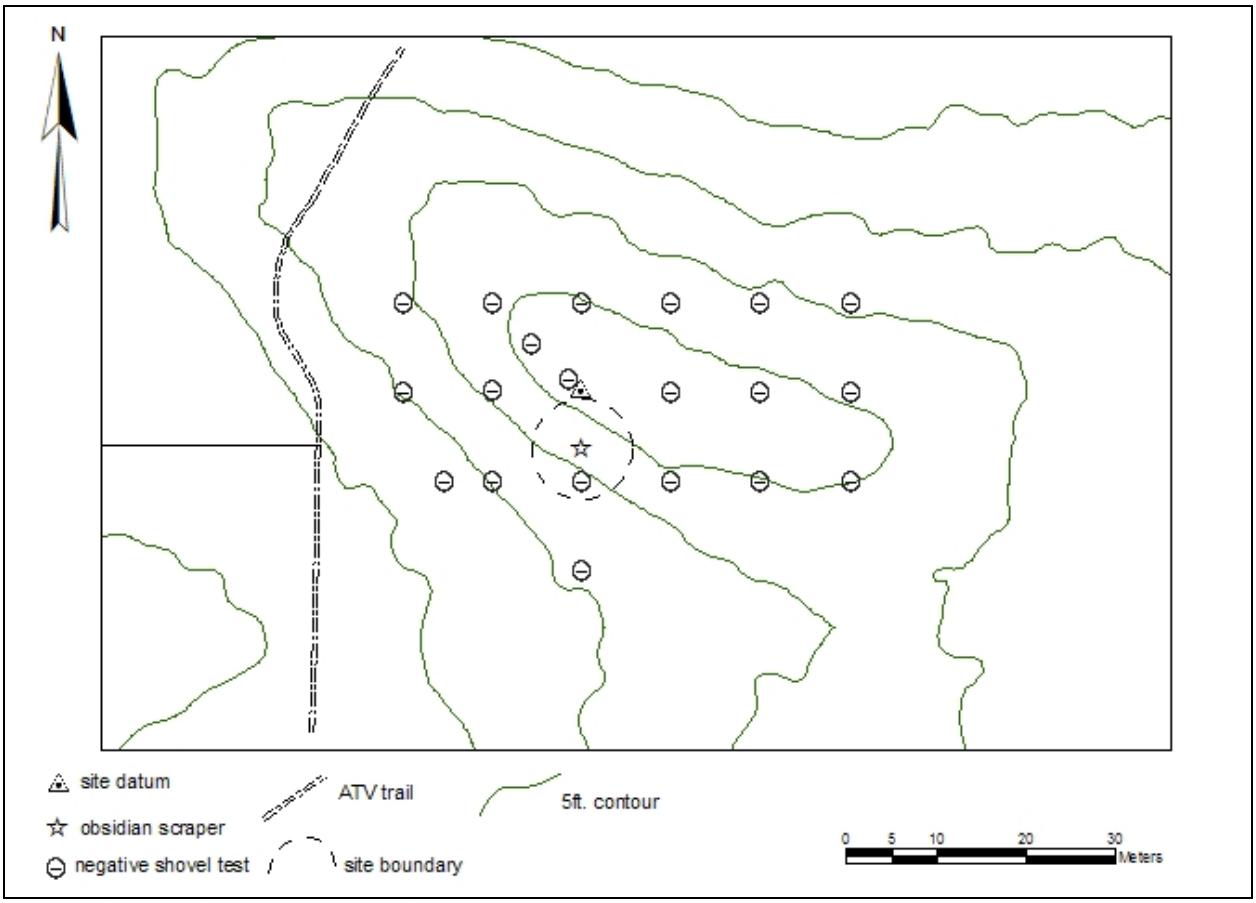

Figure 52. Site map of XMH-00949

XMH-00950
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-00950 covers four low knolls that run into each other, forming an area raised approximately 3-4m above the surrounding meadow. The nearest water source is a small unnamed lake 500m east/southeast of the site. The view shed is a full 360º. Visible landmarks include the Delta River, the Alaska Range, Donnelly Dome, the Granite Mountains and Windy Ridge. Surface visibility is estimated at 50 percent.

Site XMH-00950 was located during a 2002 Phase I survey and consists of three artifacts. A projectile point and two flakes (one chert and one quartz) were found on the surface (Hedman et al. 2003). The projectile point was collected in 2002. Only the chert flake was relocated during 2005 and no additional artifacts were discovered at XMH-00950 during the Phase II evaluation.

Shovel tests were systematically placed throughout the site area at intervals of 10m during the 2005 evaluation. A total of 56 new shovel tests were excavated. The depths of the shovel tests varied, but all were excavated to glacial till. None of the 56 shovel tests were positive and no new artifacts were found during the 2005 evaluation. Based on the results of the survey and testing, the site area is estimated at approximately 10m x 10m.

Figure 53. General view of site XMH-00950, facing east

Due to lack of cultural materials in the shovel tests, no 1m x1m test units were excavated. Soil thickness varied from 0-69cm across the site. The high spots on the knolls as well as the southern slopes are severely wind eroded, exposing the glacial till on the surface. Soil deposition is heavier on the north slopes where it averages 55cm; elsewhere the average soil deposition is 15cm. The soil consists of loosely compacted organically rich loess, ranging in color from light to dark brown. In the shallower areas, this is followed by glacial till mixed with orange or red brown sandy loess containing a high density of cobbles and gravels. In the areas with greater deposition, the organic horizon is followed by moderately compacted red or orange brown loess. The next soil layer consists of yellow brown loess with a low percentage of cobbles and gravels, followed by a glacial till layer with the same yellow brown loess, but a much higher density of cobbles and gravels.

Findings

Pedestrian survey and 56 shovel tests produced a total of only three surface artifacts. The paucity of cultural material indicates that XMH-00950 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

Figure 54. Artifact from XMH-00950

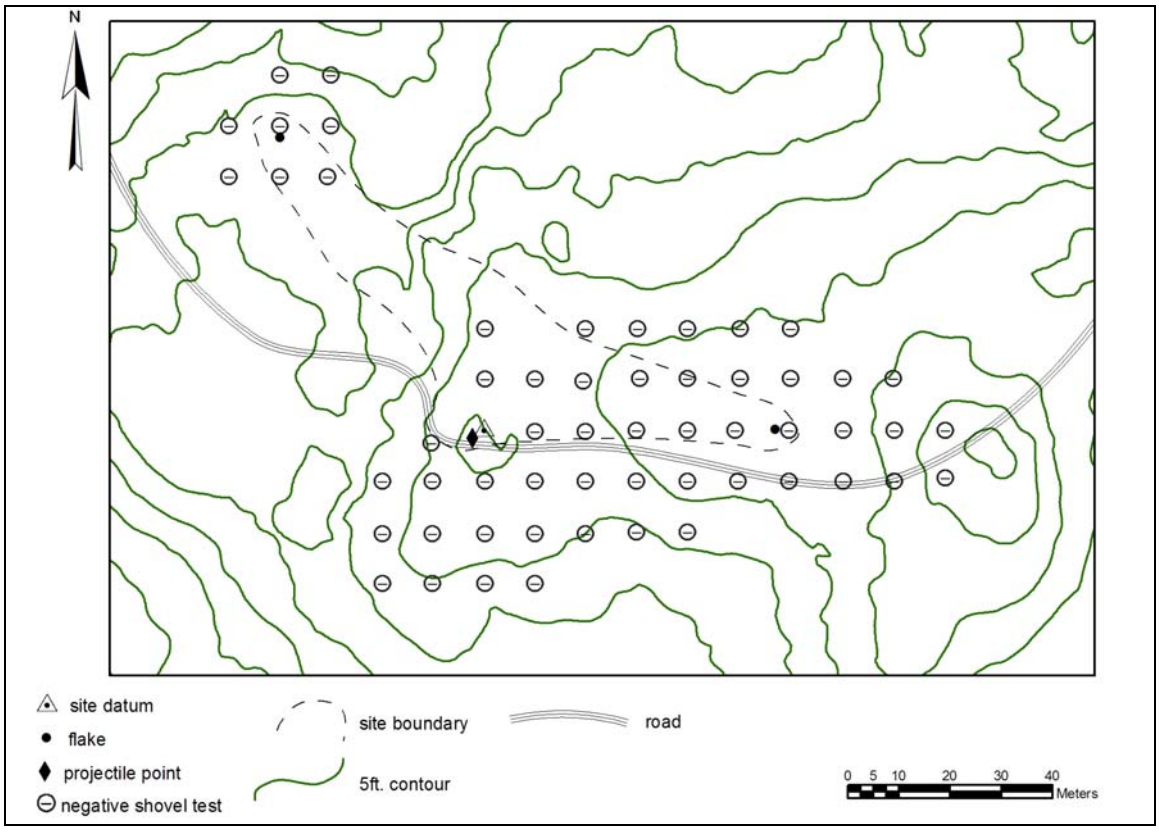

Figure 55. Site map of XMH-00950

XMH-00951
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-00951 is located on a small, northeast-southwest trending glacial moraine. The nearest water source is a small, unnamed pond located 250m to the southeast. The view shed at the site is a full 360°. Visible landmarks include Donnelly Dome to the south-southeast, Windy Ridge to the east, the Alaska Range to the southwest and the Delta River to the northwest. Surface visibility at the site is estimated to be 25 percent.

Site XMH-00951 consists of three flakes found during Phase I survey. One black chert flake and two quartz flakes were found on the surface of the site during the 2002 field season (Hedman et al. 2003). These artifacts were not collected. The 2005 Phase II investigation of the site yielded no further artifacts in either subsurface testing or on the surface. The quartz flakes were not relocated and they may have been ecofacts; the black chert artifact was also not relocated.

Figure 56. General view of site XMH-00951, facing east

Shovel tests were systematically placed throughout the site area at intervals of 10m. A total of 23 shovel tests were excavated at the site. The depths of shovel tests varied, but all were excavated to glacial till. None of the shovel tests contained any cultural materials. Based on the results of survey and testing, the site area is estimated to be 10m x 10m.

Because none of the shovel tests excavated at the site contained any cultural materials, no 1m x 1m test units were excavated at the site. No subsurface features were identified at the site. Soil thickness varied from 0-32cm across the site. The top and southwest facing portions of the site have sustained considerable wind erosion and therefore deposition is thin in these areas, averaging 10cm. The soil in these areas is characterized by loosely compacted, dark brown, organically rich loess to an average depth of 5cm. Below this organic horizon, the soil is moderately compacted yellow brown loess with a low density of gravels and cobbles. Glacial till is encountered underneath this loess deposit and consists of loosely compacted yellow brown sandy loess with a high density of gravels and cobbles. The northeast facing portions of the landform are better protected from wind erosion and therefore deposition is deeper here, averaging 25cm. The soil in this area of the site is characterized by loosely compacted, dark brown, organically rich loess to an average depth of 15cm. Below this organic horizon, the soil is moderately compacted reddish brown loess with a low density of gravels and cobbles. Glacial till is encountered below this loess deposit and consists of loosely compacted yellow brown sandy loess with a high density of gravels and cobbles.

Findings

Pedestrian survey and 23 shovel tests produced a total of only 3 surface artifacts. The paucity of cultural material indicates that XMH-00951 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

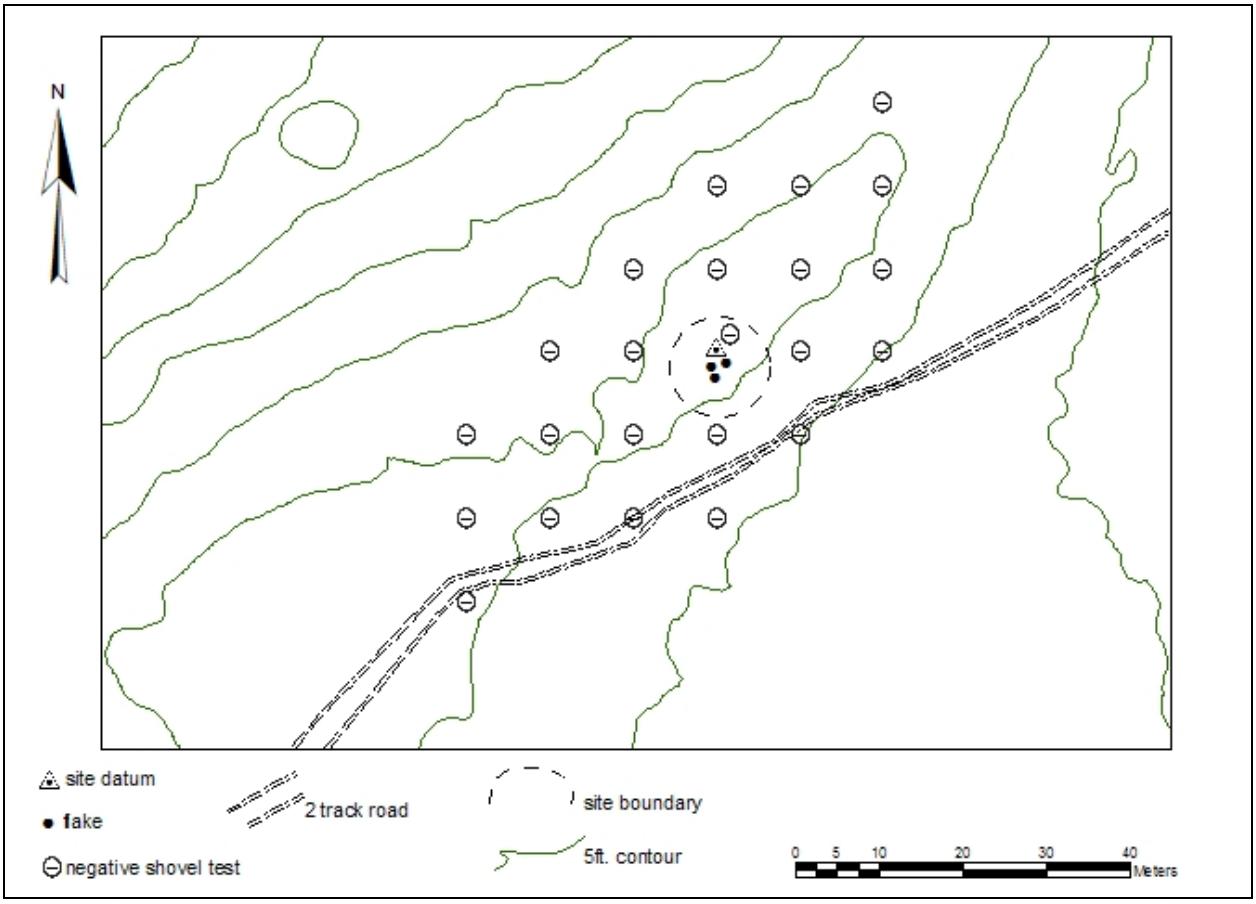

Figure 57. Site map of XMH-00951

XMH-00952
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-00952 is located on the mid-point of a low north-east to south-west trending ridge. The nearest water source is an unnamed kettle lake on the far side of another ridge, approximately 100m to the north-northeast, which is not visible from the site. On clear days, Donnelly Dome is visible to the south-southeast, Windy Ridge to the east, and the Delta River to the west over a broad meadow. The ridgeline is devoid of tall trees and fairly eroded. Dwarf aspen, moss, lichens and cranberry bushes abound on the northern, western, and eastern portions of the landform, while the southern edge is largely devoid of any vegetation. On the south-facing slope there is approximately 80-90 percent visibility, while the rest of the site has about 30 percent visibility. The small knoll to the southwest of the datum has comparable vegetation and topography.

Site XMH-00952 consists of two flakes found on the surface. One gray chert flake was located in the 2002 phase I survey (Hedman et al. 2003) and an additional black chert flake during the 2005 evaluation. Another artifact, a "tested" quartz cobble identified in the 2002 survey was later deemed an ecofact.

Figure 58. General view of site XMH-00952, facing north

Shovel tests were placed systematically through the site at intervals of 10m. Five shovel tests were placed at 5m intervals; two on the southwest knoll near the surface flakes, one to the south of the datum, and the other two on the north and east edges of the ridge where the edges sloped sharply. Due to the nature of the ridgeline, a square grid was impossible and unnecessary, therefore the grid stretched from the southwest to the northeast covering the

entire ridgeline from the low southern knoll to the high ridge on the northeast, with the datum located centrally. A total of 22 shovel tests were excavated. The depth of each shovel test varied, but all were excavated to glacial till. None of the shovel tests were positive. Based on the results of survey and testing the site area is estimated at approximately 10m x 25m.

Due to the lack of positive shovel tests and the small amount of surface artifacts located, 1m x 1m test excavation units were deemed unnecessary. Soil thickness for the 22 shovel tests varied 0-50cm across the site. The top of the site was considerably wind eroded, and soil deposition only averaged 12cm. Soil in the site area consists of a dark brown loess root mat to an average depth of 3cm. Below this organic horizon, the soil consists of brown and yellow brown loess with a medium to high density of gravel and pebbles. Glacial till is encountered below this and consists of yellow and yellow brown sandy loess with a high density of gravels, pebbles and cobbles. Further down the slope the depth of soil increased to an average of 22cm. Soil in lower site areas consists of a dark brown loess root mat to an average depth of 4cm. Below this organic horizon, the soil consists of brown and yellow brown loess with a medium to high density of gravel and pebbles. Glacial till is encountered below this and consists of yellow and yellow brown sandy loess with a high density of gravels, pebbles and cobbles.

Findings

Pedestrian survey and 20 shovel tests produced a total of only two surface artifacts. The paucity of cultural material indicates that XMH-00952 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

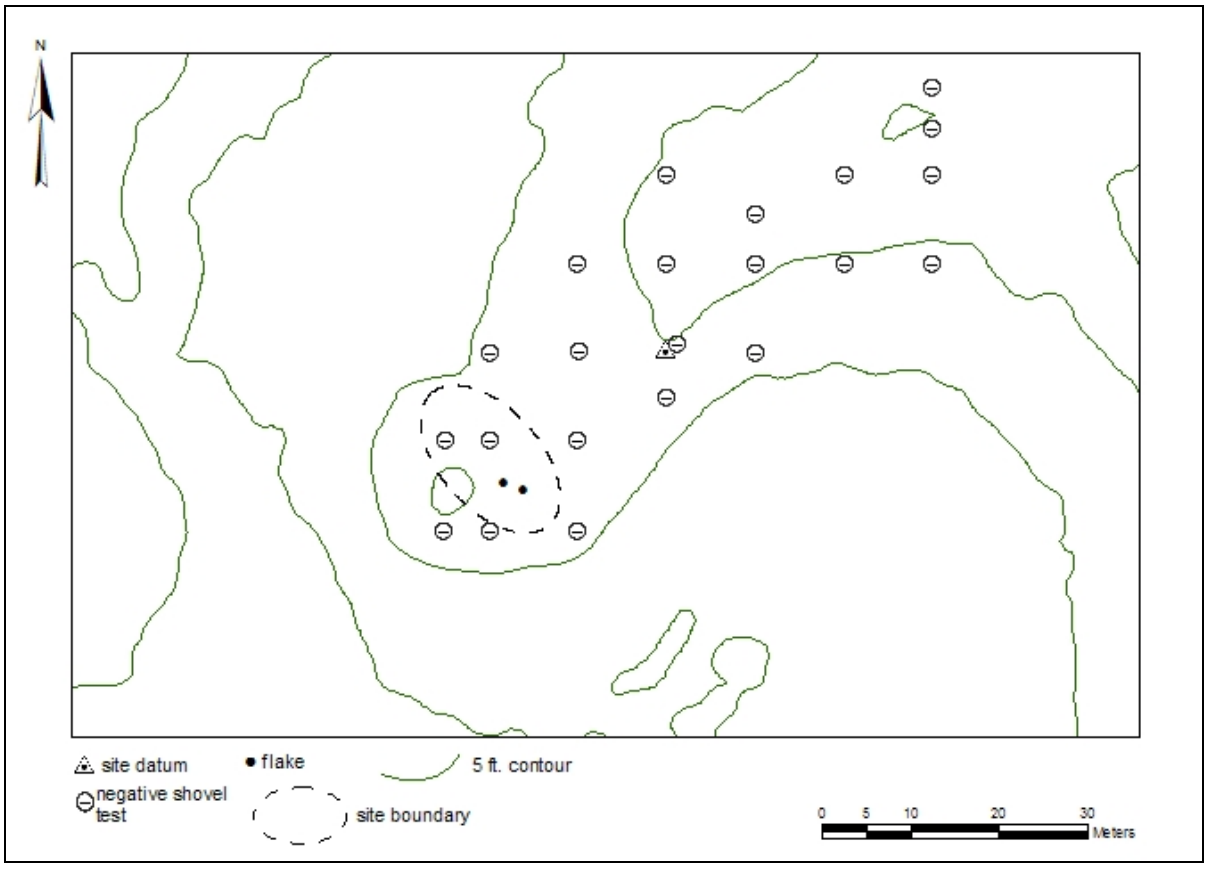

Figure 59. Site map of XMH-00952

XMH-00953
Latitude:
Longitude:
Determination: Eligible

Site XMH-00953 is located on the southwest end of a northeast-southwest trending glacial moraine. The nearest water sources are a small, unnamed pond located 30m southwest of the site and a small, unnamed pond located 50m to the north of the site. The view shed at the site is estimated to be 90°. Visible landmarks include the Alaska Range to the southwest, Donnelly Dome to the south-southeast and Windy Ridge to the east. Surface visibility at the site is estimated to be 75 percent.

Site XMH-00953 consists of 39 artifacts (38 flakes and a biface fragment). Six flakes were found during the 2002 Phase I survey. None of the artifacts were collected. These six flakes were relocated and an additional 32 flakes were found on the surface in two major concentrations. Concentration #1 is located just east of the site datum and consists of 21 secondary and tertiary flakes. Concentration #2 is located approximately 15m northwest of the site datum and consists of 15 secondary and tertiary flakes. The two other flakes at the site were found outside of the concentrations to the west of the site datum. One tool was found at the site within concentration #2 and consists of a rhyolite biface fragment. Chert, rhyolite, basalt, and an unidentified material are present among the debitage. Only the biface fragment was collected from the site.

Figure 60. General view of site XMH-00953, facing west

Shovel tests were systematically placed throughout the site area at 10m intervals. Seven shovels tests were placed at 5m intervals near the artifact concentrations and along the edges of the landform. Also, four shovel tests were judgmentally placed along the far northeast portion of the landform, approximately 55-90m from the site datum. A total of 40 shovel tests were

excavated at the site. The depths of the shovel tests varied, but all were excavated to glacial till. None of the shovel tests contained any cultural materials.

Because none of the shovel tests were positive, no 1m x 1m test units were excavated at the site. No subsurface features were identified at the site. Soil thickness varied from 0-54cm across the site. Most of the landform exhibited extensive wind erosion resulting in shallow soil deposition across most of the site, with only two shovel tests going deeper than 20cm. Shovel tests averaged a depth of 10cm across the site. Soil at the site consists of loosely compacted, dark brown, organically rich loess to an average depth of 4cm. Below this organic horizon the soil consists of moderately compacted yellow brown loess with a low density of gravels and cobbles. Glacial till is encountered below this loess deposit and consists of loosely compacted yellow brown sandy loess with an extremely high density of gravels and cobbles.

Findings

A total of 39 artifacts were found on the surface at XMH-00953. The materials at the site include chert, rhyolite, basalt and an unidentified material. Based on the results of survey and testing the site area is estimated at approximately 45m x 25m.

Site XMH-00953 is a small lithic site. With two distinct concentrations of artifacts each exhibiting different stages of lithic reduction, and formalized tools XMH-00953 is in an excellent position to contribute to our knowledge of prehistoric land use patterns and potentially contributing to a broader regional context. Site XMH-00953 is an intact archaeological site with integrity. The site is eligible for inclusion in the National Register of Historic Places under criterion D for its potential to yield information important in understanding the prehistory of the region.

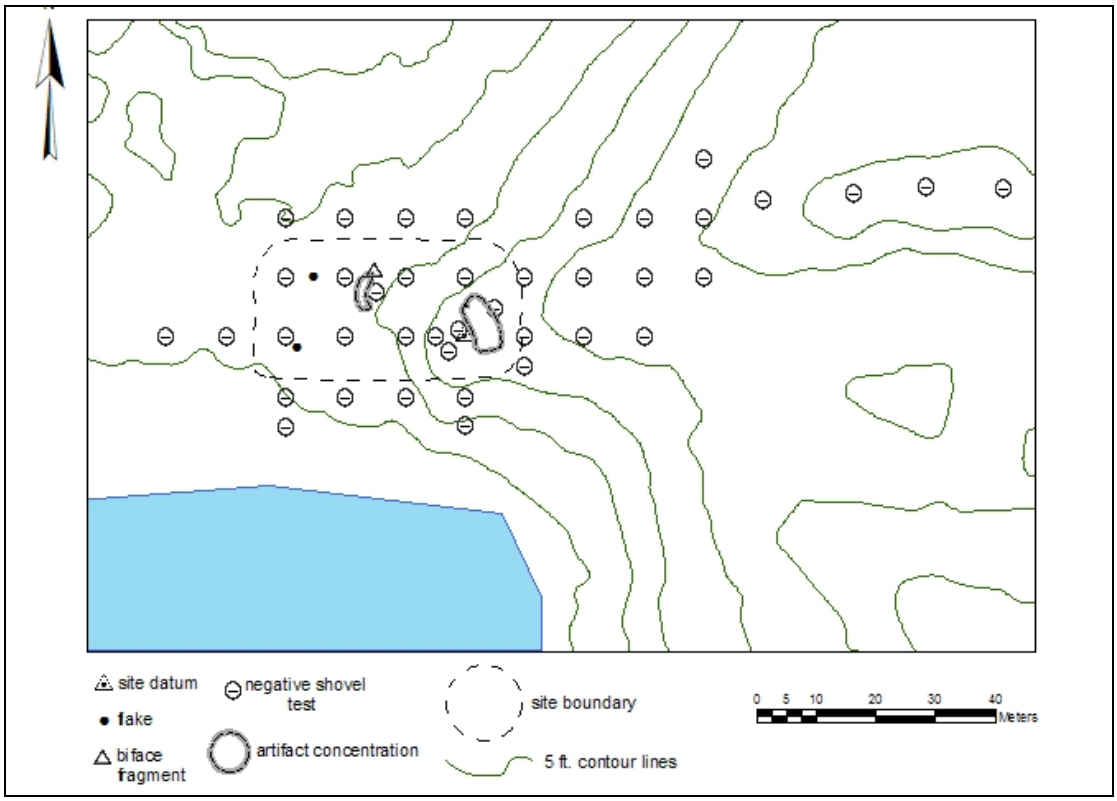

Figure 61. Site map from XMH-00953

XMH-00954
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-00954 is located on a glacial knoll. The nearest water source is a small, unnamed pond located 100m to the south. The view shed at the site is 180° to the south. Visible landmarks include the Alaska Range to the southwest, Donnelly Dome to the south-southeast, Windy Ridge to the east and the Delta River to the west. Surface visibility at the site is estimated to be 75 percent.

Site XMH-00954 consists entirely of one primary basalt flake found on the surface during 2002 phase I survey (Hedman et al. 2003). The 2005 Phase II investigation of the site yielded no further artifacts either on the surface or in subsurface deposits. The surface flake was not collected.

Figure 62. General view of site XMH-00954, facing south

Shovel tests were systematically placed throughout the site area at intervals of 10m. Two shovel tests were placed at 5m intervals to avoid digging on the sloping edges of the knoll. A total of 27 shovel tests were excavated at the site. The depths of the shovel tests varied, but all were excavated to glacial till. None of the shovels tests contained any cultural materials. Based on the results of survey and testing the site area is estimated at approximately 5m x 5m.

Because none of the 27 shovel tests excavated at the site contained any cultural materials, no 1m x 1m test units were excavated at the site. No subsurface features were identified at the site. Soil thickness varied from 0-35cm across the site. Most of the site has sustained a heavy amount of wind erosion and therefore soil deposits were thin, averaging 10cm. Soil at the site consists of loosely compacted, dark brown, organically rich loess to an average depth of 3cm. Below this organic horizon, the soil is moderately compacted yellow brown loess with a low density of gravels and cobbles. Glacial till is encountered below this loess deposit and consists of loosely compacted yellow brown sandy loess with a high density of gravels and cobbles.

Only one shovel test had a depth greater than 20cm and most likely represents an anomaly in the landform.

Findings
Pedestrian survey and 27 shovel tests produced a total of only one artifact. This finding suggests that XMH-00954 is an isolated find. The paucity of cultural material indicates that XMH-00954 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

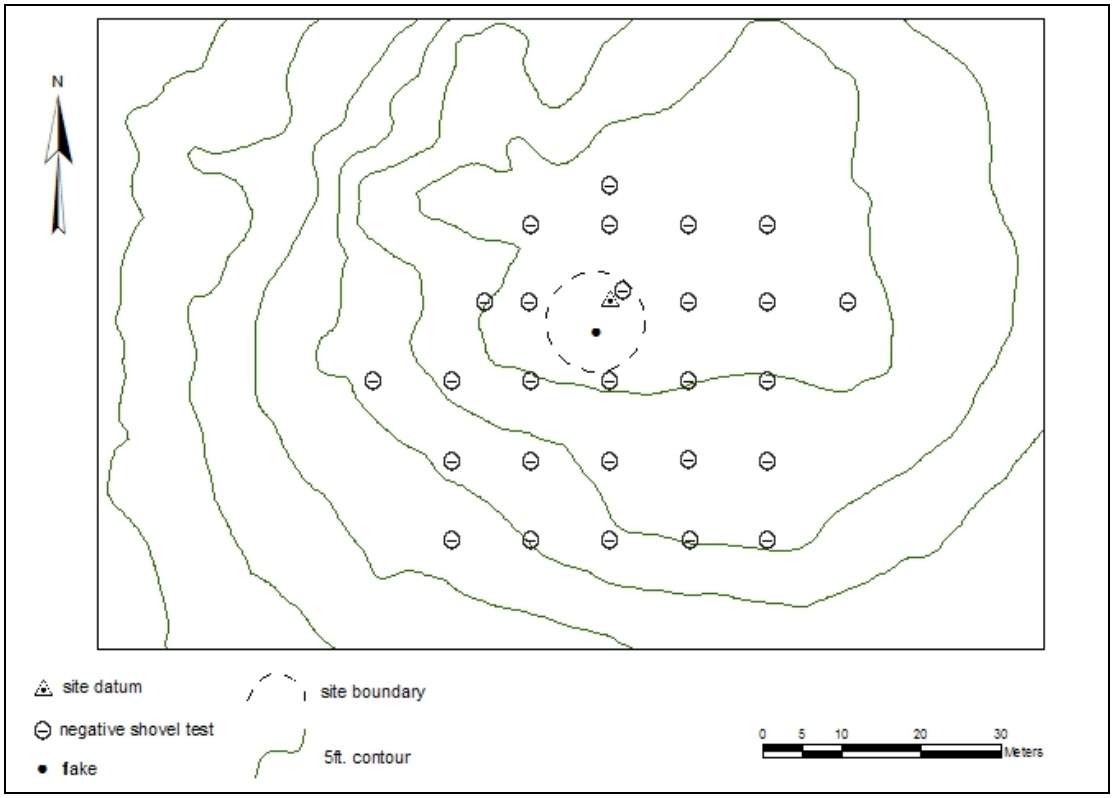

Figure 63. Site map for XMH-00954

XMH-00961
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-00961 is located on the high point of a ridge line. The ridge and highpoint trend roughly north-south, patterned with very small undulating hills along the formation. The site is located on a small knoll atop the ridge that measures 25m x 20m. The nearest water source is a bog located 35m to the southeast of the datum; additionally, there is an unnamed lake approximately 300m west of the datum, which cannot be seen from the site. To the northwest of the site is a broad meadow rising up to the bluff edge above the Delta River some miles distant. To the east are alternating plains, kettle lakes and ridges, leading up to Windy Ridge. To the west are more plains and undulating hills, with the Alaska Range in the distance. There is approximately 25 percent ground visibility at the site. Vegetation over the site includes dwarf alder, birch and aspen, lichens and moss, as well as cranberry and blueberry bushes. Lower

elevations on the eastern side contain bog-muskeg and grass sedges.

Site XMH-00961 consists of two quartz fragments found in a 2002 Phase I survey (Hedman et al. 2003). Both quartz fragments identified in the 2002 survey were later deemed ecofacts.

Shovel tests were placed systematically throughout the site at intervals of 10m. One shovel test was placed 7m east of the datum, due to the extreme slope of the knoll's eastern edge. A total of 27 shovel tests were excavated. The depth of the shovel tests varied, but all were excavated to glacial till. All shovel tests were negative

Because none of the shovel tests excavated at the site contained any cultural materials, no 1m x 1m test units were excavated at the site. Soil thickness ranged from 6-78cm across the site. The western and southwestern slopes of the site have sustained the most wind erosion, with soil deposition averaging 31.4cm. Soil in the site area consists of a dark brown loess root mat with an average depth of 5cm. Below this organic horizon, the soil consists of medium brown and yellow brown loess with a medium to high density of gravel and pebbles. Glacial till is encountered below this and consists of yellow and yellow brown sandy loess with a high density of gravels, pebbles and cobbles. The northern, eastern and northwestern areas of the site have the most vegetation and ground cover, with little erosion, with an average soil deposition of 46.1cm. Soil in the site area is topped by a dark brown loess root mat to an average depth of 10cm. Below this organic horizon, the soil consists of brown and yellow brown loess with a low to medium density of gravel and pebbles. Glacial till is encountered below this and consists of yellow and yellow brown sandy loess with a high density of gravels, pebbles and cobbles.

Findings
Pedestrian survey and 27 shovel tests during Phase II produced no artifacts. Additionally, the "artifacts" recorded in 2002 were subsequently determined to be ecofacts. This finding suggests that XMH-00961 is not an archaeological site. Therefore, site XMH-00961 is not eligible for inclusion in the National Register of Historic Places.

XMH-00962
Latitude:
Longitude:
Determination: Eligible

Site XMH-00962 is located on a low knoll. The nearest water source is Lonestar Lake, located 150m to the south. The view shed at the site is poor due to low elevation and higher surrounding ridges. Visible landmarks include Windy Ridge to the east, Donnelly Dome to the southeast and the Alaska Range to the southwest. Surface visibility at the site is estimated to be 25 percent.

Site XMH-00962 consists of 207 artifacts including one biface fragment and one flake tool. During pedestrian survey in 2002 over 100 flakes and a small biface fragment were found on the surface (Hedman et al. 2003). No shovel tests were excavated and no artifacts were collected in 2002. The Phase II investigations located 105 flakes on the surface, 2 flakes in shovel tests and an additional 100 flakes in test units. A total of two tools were found at the site. A gray-green chert biface fragment was found on the surface during Phase I survey and measures 1.6cm long and 1.2cm wide and weighs 1.5g. Additionally, a dark gray basalt flake tool, which measures 6.4cm long and 4.1cm wide and weighs 27.5g, was found subsurface. Both of these tools were collected. Chert, basalt and rhyolite were present among the debitage.

All 102 of the flakes found subsurface were collected. The 105 flakes located on the surface were not collected.

Shovel tests were systematically placed throughout the site area at intervals of 10m during the 2005 evaluation. A total of 23 new shovel tests were excavated. The depths of the shovel tests varied, but all were excavated to glacial till. Two of the 23 shovel tests were positive, each containing one artifact. Subsurface artifacts were found 12-25cm below the surface in all of the positive shovel tests. Based on the results of the survey and testing, the site area is estimated at approximately 30m x 10m.

Figure 64. General view of site XMH-00962, facing north

Two 1m x 1m test units were excavated at site XMH-00962. The units were excavated in 10cm levels until glacial till was reached throughout the entire unit floor. Test unit one contained no cultural material. Test unit two contained a total of 101 artifacts, all found 1-40cm below the surface. Two artifacts were found in level one, 21 artifacts were found in level two, 76 artifacts were found in level three, and 2 artifacts were found in level four. No subsurface features were identified at the site.

Soil thickness varied from 15-65cm across the site. Deposition at the top of the site, south of the site datum was thinner, averaging 25cm. Soil in this area consists of loosely compacted, dark brown, organically rich loess to an average depth of 7cm. Below this organic horizon, the soil consists of moderately compacted brown loess with a low density of gravel and cobbles. Glacial till is encountered below this loess deposit and consists of yellow brown sandy loess with a high density of gravel and cobbles. Near the site datum and to the north deposition was deeper, averaging 60cm. Soil in this area consists of loosely compacted, dark brown organically rich loess to an average depth of 15cm. Below this organic horizon, the soil consists of moderately compacted brown loess with a low density of gravel and cobbles. A layer of yellow brown loess mottled with gray and brown loess is encountered next. Glacial till is found

below this second loess layer and consists of yellow brown sandy loess with a high density of gravel and cobbles.

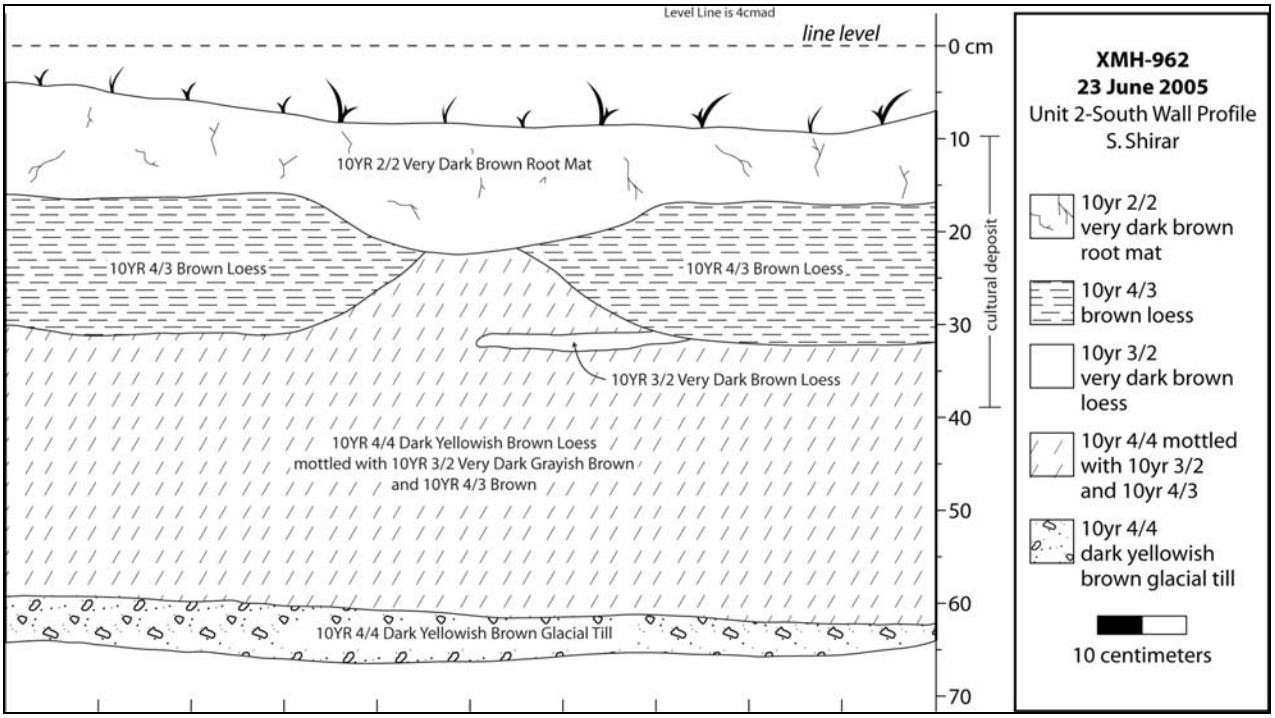

Figure 65. Soil profile of test unit 2, XMH-00962

Findings

More than 207 artifacts were recorded at XMH-00962**.** At least 105 were recorded from the surface, including a biface fragment found in 2002 and an additional 100 artifacts were recovered from below the surface. Material types found at the site include chert, basalt and rhyolite. Based on the results of survey and testing the site area is estimated at approximately 30m x 10m.

Site XMH-00962 is a large lithic site with both surface and buried components. With such a large amount of buried cultural material XMH-00962 is in an excellent position to contribute to our knowledge of prehistoric land use patterns. *In situ* artifacts and soil stratigraphy indicate datable material and diagnostic artifacts may be present and could be used to date human use of the site, potentially contributing to a broader regional context. Site XMH-00962 is an intact archaeological site with integrity. This site is eligible for inclusion in the National Register of Historic Places under criterion D, for its potential to yield information important in understanding the prehistory of the region.

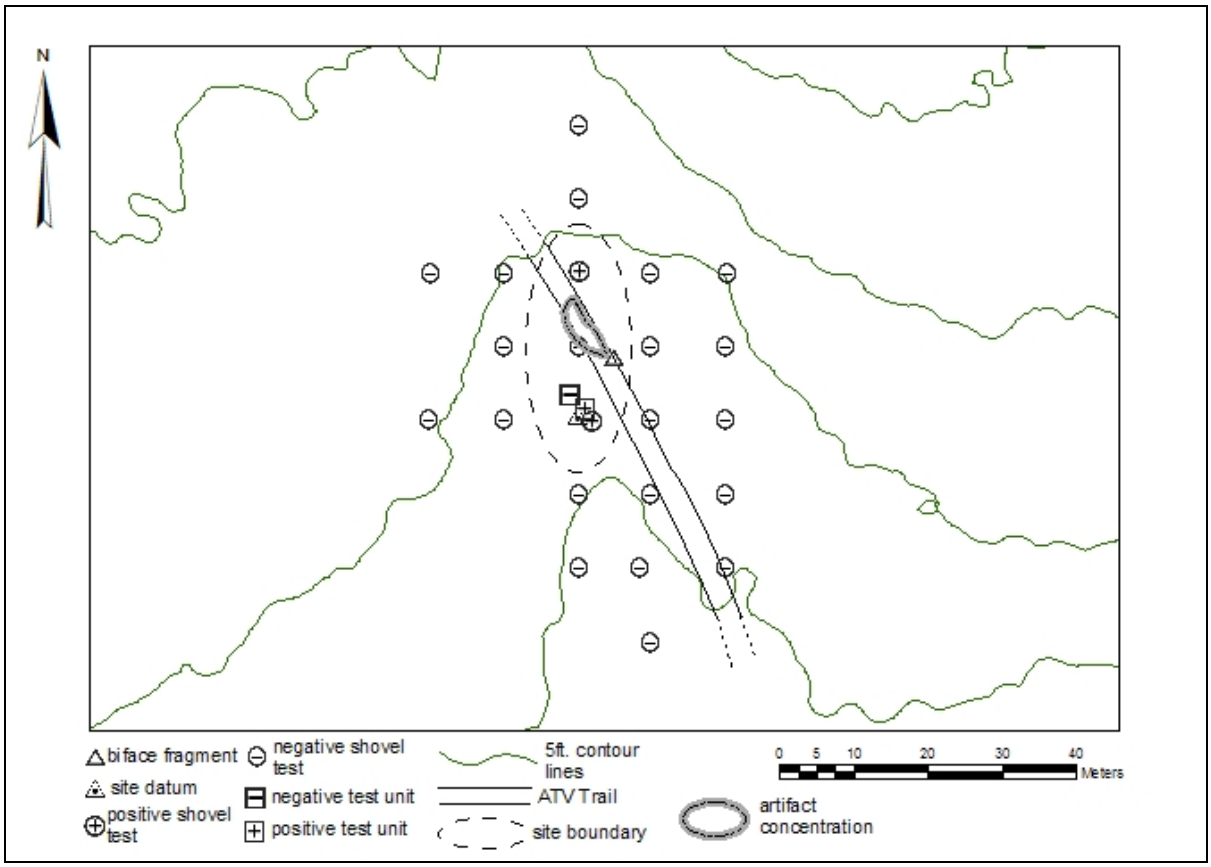

Figure 66. Site map of XMH-00962

XMH-00963
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-00963 is located on a high glacial knoll. The view shed at the site is a full 360°. The nearest water source to the site is a small, unnamed lake located 100m to the east-northeast. The Alaska Range is visible to the southwest, the Delta River to the northwest, Donnelly Dome to the south-southeast, the Granite Mountains to the southeast, Windy Ridge to the east and Big Lake to the northwest. Surface visibility at the site is estimated to be 50 percent.

Site XMH-00963 consists of one gray chert flake tool found on the surface during a Phase I survey conducted during the 2002 field season (Hedman et al. 2003). The artifact was not collected during the initial survey phase and could not be relocated during the 2005 Phase II evaluation. Shovel tests were systematically placed throughout the site area at intervals of 10m. A total of 18 shovel tests were excavated at the site. The depths of shovel tests varied, but all were excavated to glacial till. None of the 18 shovel tests were positive. Based on the results of survey and testing, the site area is estimated to be 5m x 5m.

Since no subsurface cultural deposits were located through shovel testing, no 1m x 1m test units were excavated at the site. Soil thickness varied from 2-20cm across the site. Most of the landform has suffered extensive wind erosion, and soil deposition is minimal. Deposition was

fairly uniform at the site and for the most part averaged about 10cm. Soil was characterized by loosely compacted, dark brown, organically rich loess to an average depth of 5cm. Below this organic horizon, the soil consisted of moderately compacted brown loess. Glacial till was encountered below this loess deposit and consisted of loosely compacted yellow brown sandy loess with a high density of gravels and cobbles.

Figure 67. General view of site XMH-00963, facing south

Findings

Pedestrian survey and 18 shovel tests produced a total of only one artifact. This finding suggests that XMH-00963 is an isolated find. The paucity of cultural material indicates that XMH-00963 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

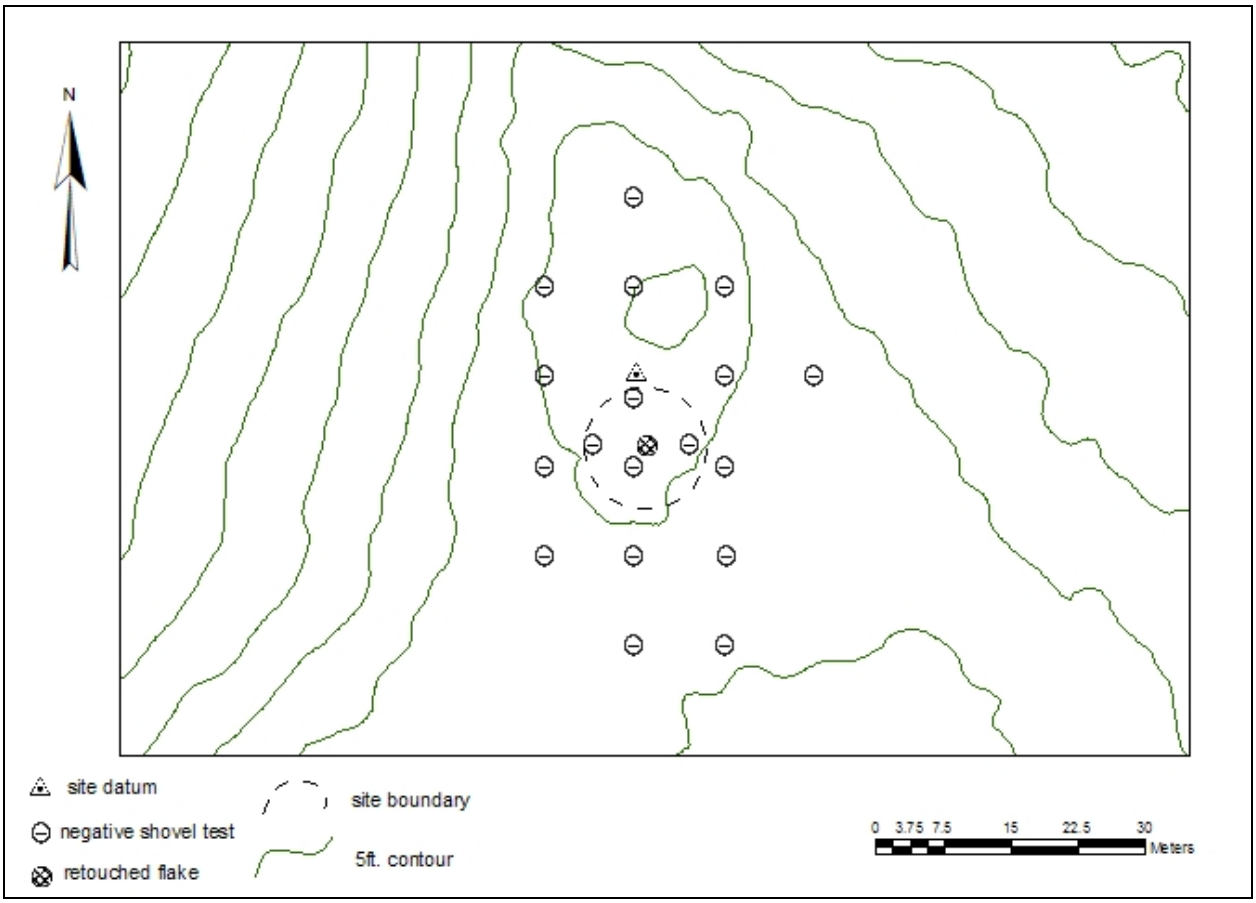

Figure 68. Site map of XMH-00963

XMH-00964
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-00964 is located in a depression between two knolls. The depression between the knolls measures 12m x 7m. The nearest water sources are three unnamed kettle lakes surrounding the site. From the datum, one lake lies directly south at approximately 65m, while the other two lie to the northwest at 60m and to the northeast at 50m, respectively. The southern lake is visible from the datum while the other two are visible from the northern knoll. Visible landmarks include Windy Ridge to the east and Donnelly Dome to the south. The view shed at the site is approximately 270° degrees and ground visibility is approximately 50 percent. Vegetation over the site includes heavily browsed dwarf alder, birch, aspen and willow. Lichens, moss, grasses, sedges, low growing forbs and cranberry and blueberry bushes also cover the area.

Site XMH-00964 consists of 13 artifacts. Seven artifacts were found on the surface during Phase I survey conducted during the 2002 field season (Hedman et al. 2003). These artifacts included five gray banded chert flakes, one large basalt flake tool and one large basalt reduction fragment, all located in the small depression between the knolls. These artifacts were not

collected during the initial survey. These artifacts were relocated during the 2005 Phase II evaluation and an additional six new artifacts including one basalt flake, one gray chert flake, three gray banded chert flakes and one retouched basalt flake tool were located in the depression. Two quartz "artifacts" identified in the 2002 survey were later deemed ecofacts.

Shovel tests were placed systematically throughout the site at intervals of 10m. Three shovel tests were placed 5m apart at the southern edge of the southern knoll, due to the steep descent of its slope and proximity to the southern kettle lake. A total of 33 shovel tests were excavated. The depth of the shovel tests varied, but all were excavated to glacial till. All shovel tests were negative, and based on the surface survey and shovel tests the site area is estimated at approximately 80m x 40m.

Because all shovel tests were negative, no test units were excavated. Soil thickness varied from 0-68cm across the site. There was no specific area of the site that yielded uniform soil depth, and overall the site area contains fairly shallow soil, with soil deposition averaging 23.9cm. Soil in the site area consists of a dark brown loess root mat with an average depth of 6 cm. Below this organic horizon, the soil consists of brown and reddish brown loess with a medium to high density of gravel and pebbles.

Figure 69. General view of site XMH-00964, facing east

Glacial till is encountered below this and consists of brown and reddish brown sandy loess with a high density of gravels, pebbles and cobbles.

Findings

Pedestrian survey and 33 shovel tests produced a total of only 13 surface artifacts. The paucity of cultural material indicates that XMH-00964 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

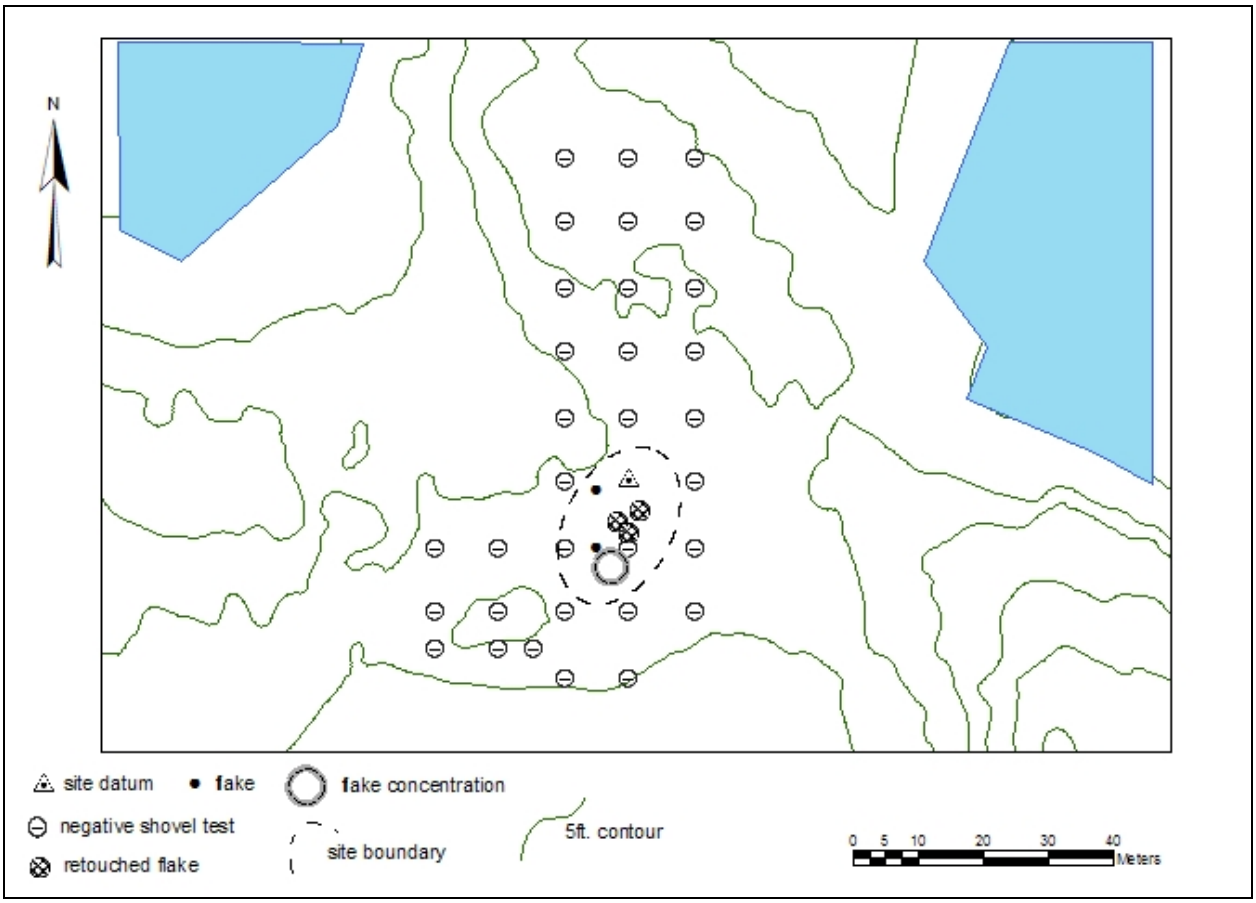

Figure 70. Site map of XMH-00964

XMH-00965
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-00965 is located on the south slope of a north-west to south-east trending ridge. The nearest water sources are two lakes, one directly west of the datum at approximately 90m, the second to the northwest of the datum at approximately 100m. Both are visible from the site. Donnelly Dome is clearly visible to the south, Windy Ridge to the east and the Delta River to the west. There is approximately 70-80 percent visibility on the southern slope and hilltop, and 20 percent ground visibility for the over the site area. The ridge is heavily covered with alder, birch, willow and aspen.

Site XMH-00965 consists entirely of two pieces of a white quartzite cobble found in a 2002 phase I survey (Hedman et al. 2003). The quartz fragments identified in the 2002 survey were later deemed to be ecofacts. No artifacts were found during the 2005 phase II evaluation.

Shovel tests were placed systematically throughout the site at 10m intervals. Four shovel tests were placed at 5m intervals; two in the northwest corner near the datum, and two in the southwest corner of the site. A total of 23 shovel tests were excavated. The depth of the shovel tests varied, but all were excavated to glacial till. None of the 23 shovel tests contained any

cultural materials. With the eastern slope eventually rising to meet another hill 75m distant and the west and north slopes descending sharply, the majority of the shovel tests were placed on the southern, exposed slope.

Because no shovel tests contained any cultural material, no 1m x 1m test units were excavated. Soil thickness varied from 0-41cm across the site. Soil deposition averaged 19.6cm. Soil in the site area consists of a dark brown loess root mat with an average depth of 5cm. Below this organic horizon, the soil consists of medium brown and yellow brown loess with a medium to high density of gravel and pebbles. Glacial till is encountered below this and consists of yellow and yellow brown sandy loess with a high density of gravels, pebbles, and cobbles.

Figure 71. General view of site XMH-00965, facing south

Findings

Pedestrian survey and 23 shovel tests produced no artifacts. Additionally, the "artifacts" recorded in 2002 were subsequently determined to be ecofacts. This finding suggests that XMH-00965 was not an archaeological site. Therefore, site XMH-00965 is not eligible for inclusion in the National Register of Historic Places.

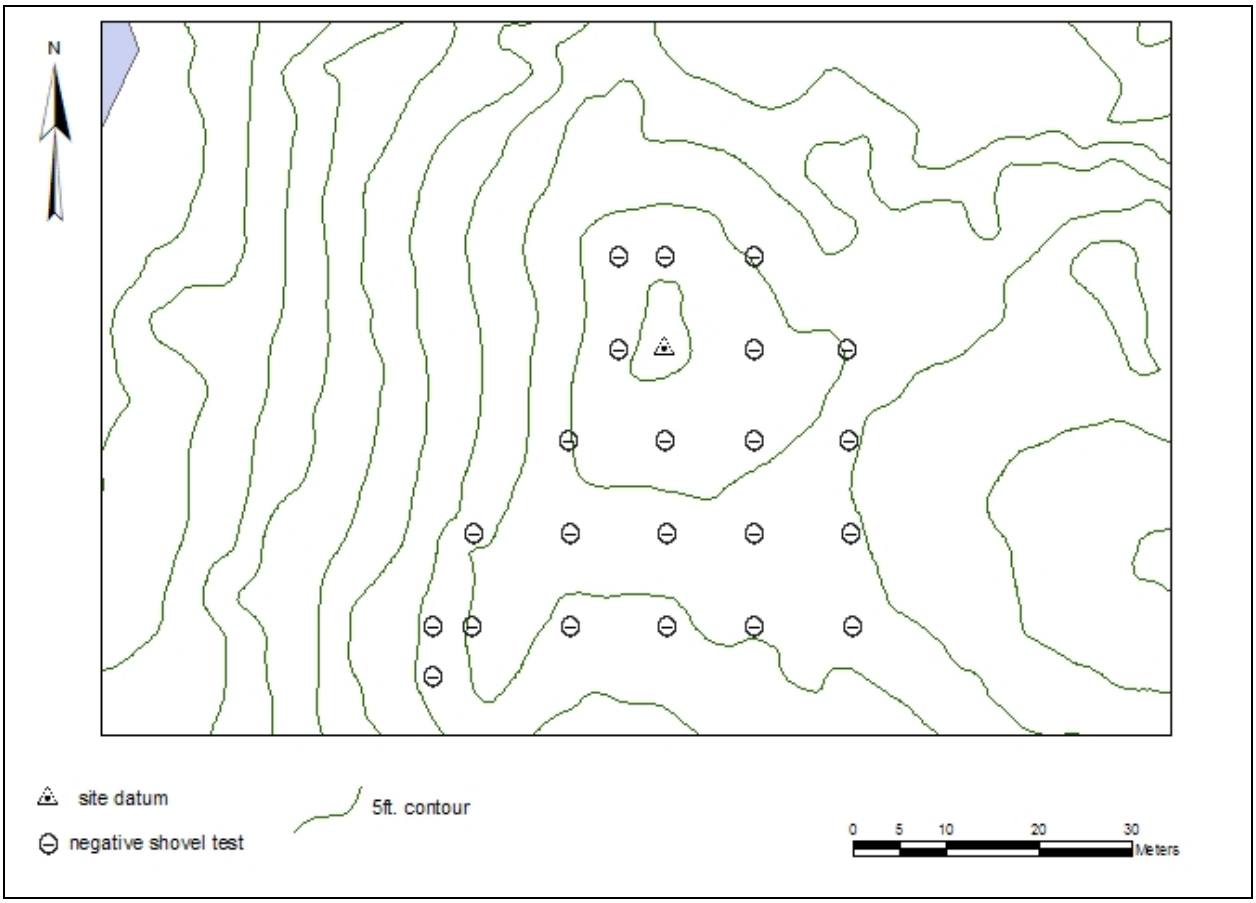

Figure 72. Site map of XMH-00965

XMH-00966
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-00966 is located on a broad bench extending from a large moraine and overlooks a small kettle lake approximately 100m to the west. Surface visibility at the site is poor and less than 1 percent of the surface is visible. The view shed is 360°. Landmarks visible from the site include the Alaska Range and Donnelly Dome.

Site XMH-00966 consists of two artifacts. One chert scraper was located in a shovel test pit approximately 5-15cm below the surface during Phase I survey conducted during the 2002 field season (Hedman et al. 2003). This artifact was collected during the initial survey phase. One new gray chert flake was located in a shovel test pit 5m from the 2002 positive shovel test during the 2005 Phase II evaluation.

Shovel tests were placed systematically throughout the site at intervals of 10m and 5m. A total of 52 shovel tests were excavated. The depth of the shovel tests varied, but all were excavated to glacial till. All but two shovel tests were negative, and based on the surface survey and shovel tests, the site area is estimated at approximately 10m x 10m.

Three 1m x 1m test units were excavated at XMH-00966 during the 2005 Phase II evaluation. All of the test units were excavated to glacial till, and none of them contained cultural material. Soil deposition was shallow in all three test pits and consisted of a dark brown organic mat for approximately 5cm, on top of a dark brown or yellowish brown loess with extensive root disturbance, on top of till. The glacial till was a dark yellowish brown compact loess with a high density of gravels. Soil thickness varies across the site, ranging from 8-80cm. However, most of the shovel tests revealed a soil thickness of 15-30cm. Soil consists of a very dark brown organic mat to an average depth of 5cm, followed by a dark or yellowish brown loosely compacted loess layer approximately 10-20cm in thickness, on top of a dark or yellowish brown till (very compacted loess with a high gravel density).

Figure 73. General view of site XMH-00966, facing south

Findings

Pedestrian survey and 52 shovel tests produced a total of only two artifacts. The paucity of cultural material indicates that XMH-00966 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

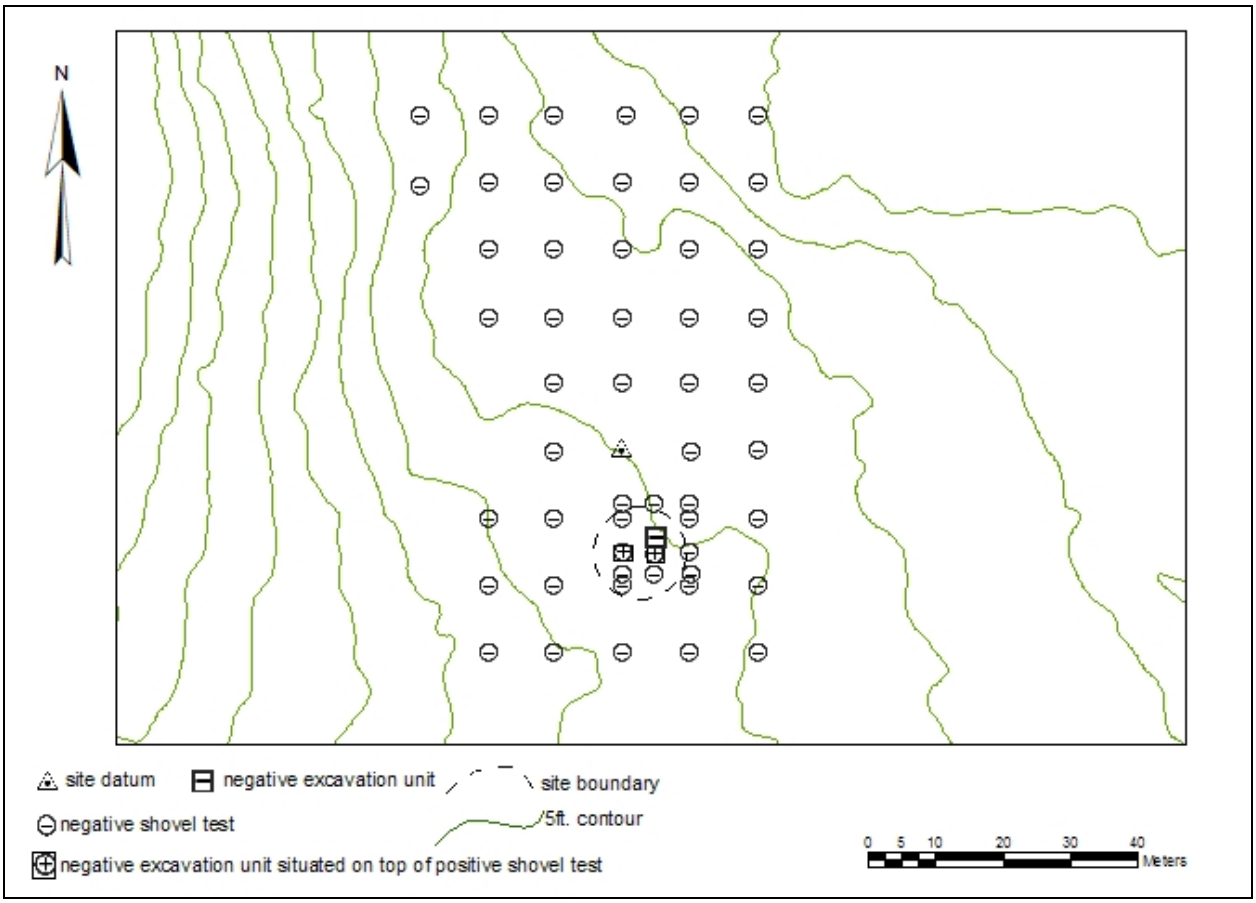

Figure 74. Site map of XMH-00966

XMH-00967
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-00967 is located on the high point of a roughly north-south trending ridge located in a lowland area. The site is located on and around a small knoll that measures approximately 10m x 20m, with a secondary component on a bench that extends west and northwest of the datum. The nearest water source is a small unnamed lake lying approximately 300m to the west-southwest, which cannot be seen from the site. The Alaska Range is clearly visible to the west, Windy Ridge to the east and the Delta River to the north. There is approximately 35 percent ground visibility at the site. Vegetation on the knoll and the adjacent bench includes alder, birch, aspen, cranberry and blueberry bushes, scrub brush, moss and lichens. The bog running parallel to the knoll on the east contains bog-muskeg and grass sedges.

Site XMH-00967 consists of five flakes found on the surface. Two flakes were located in the 2002 Phase I survey (Hedman et al. 2003) and an additional three were found during the 2005 evaluation. All of the flakes are made of gray chert.

Shovel tests were placed systematically throughout the site at 10m intervals. Six shovel tests were placed at 5m intervals around the datum. A total of 60 shovel tests were excavated and

none contained any cultural material. The depth of shovel tests varied, but all were excavated to glacial till. Based on the results of the survey and testing, the site area is estimated at approximately 70m x 80m.

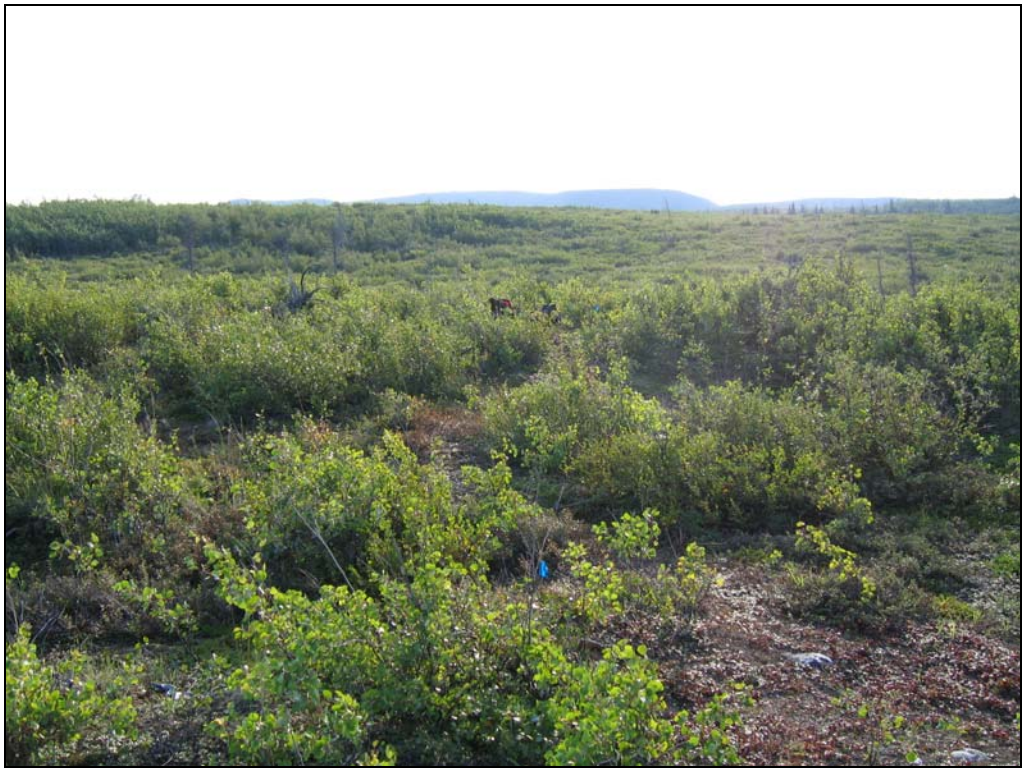

Figure 75. General view of site XMH-00967, facing west

Because none of the shovel tests excavated at the site contained any cultural material, no 1m x 1m test units were excavated at the site. Soil thickness varies from 0-59cm across the site. The top of the knoll has sustained some wind erosion, as has the southwest and western slopes and soil deposition in these areas averages only 23cm. Soil in the site area consists of a dark brown loess root mat to an average depth of 4cm, which is situated on top of medium brown and yellow brown loess with a medium to high density of gravel and pebbles. Glacial till is encountered below this and consists of yellow and yellow brown sandy loess with a high density of gravels, pebbles and cobbles.

Findings

Pedestrian survey and 60 shovel tests produced a total of only five surface artifacts. The paucity of cultural material indicates that XMH-00967 does not contain additional information that is important to our understanding of the prehistory or history of the region and therefore is not eligible for inclusion in the National Register of Historic Places.

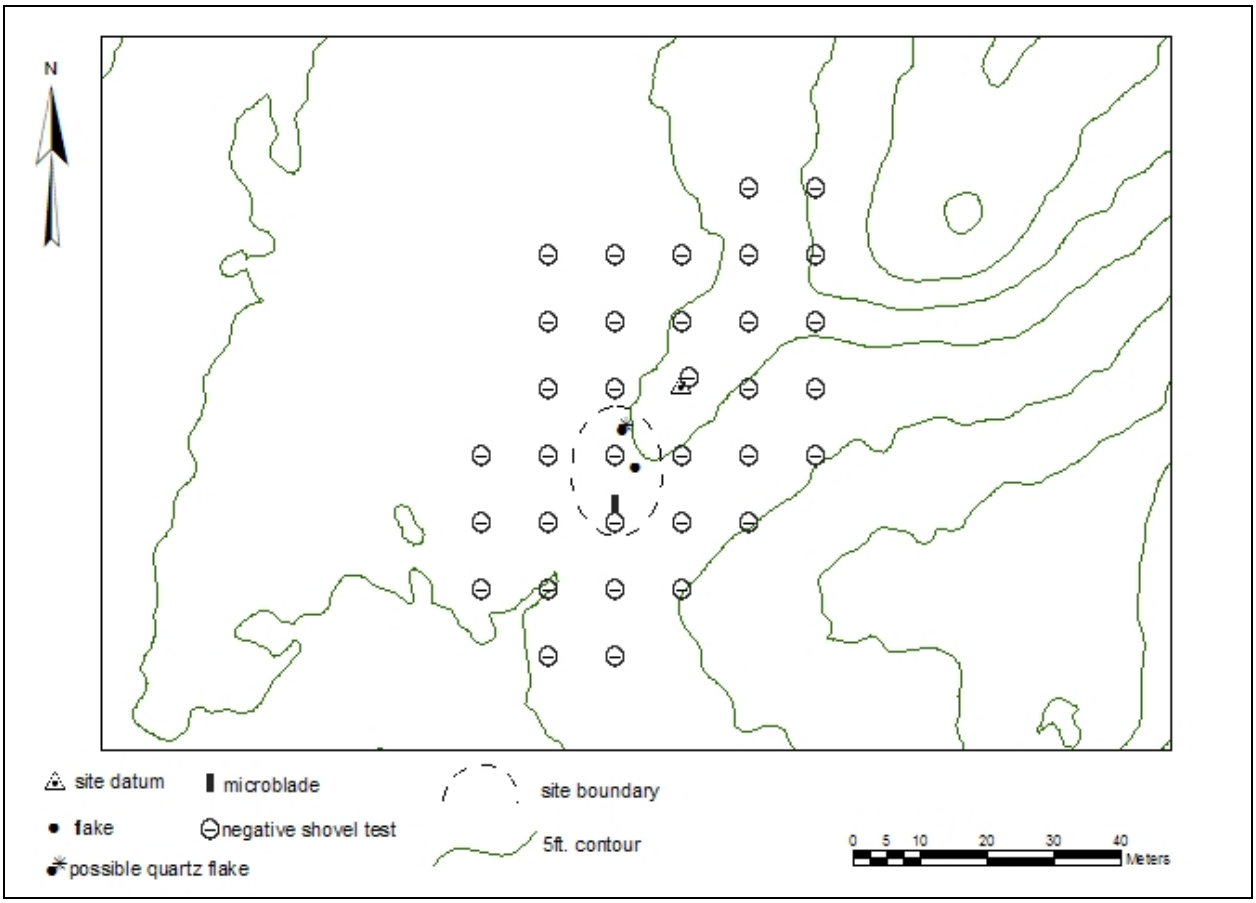

Figure 76. Site map of XMH-00967

XMH-00968
Latitude:
Longitude:
Determination: Not Eligible

What was identified in 2002 as site XMH-00968 is located in the middle of a high narrow moraine on the northwest side of Ghost Lake. Ghost Lake is the nearest water source and is located less than 100m away. The view shed at this location is a full 360°. The Alaska Range and Donnelly Dome are visible to the southwest and south, respectively. Surface visibility is 100 percent on top of the landform.

What was identified as XMH-00968 consists entirely of one white quartz cobble found in a 2002 Phase I survey (Hedman et al. 2003). The quartz cobble identified in the 2002 survey was later deemed an ecofact.

No artifacts were found during the 2005 Phase II evaluation. The landform on which XMH-00968 is situated is heavily wind-eroded. Surface visibility is 100 percent, and the surface of the landform was closely examined but no cultural materials were located.

Findings

Pedestrian survey produced no artifacts. Additionally, the "artifact" recorded in 2002 was subsequently determined to be an ecofact. This finding suggests that XMH-00968 was not an archaeological site. Therefore, site XMH-00968 is not eligible for inclusion in the National Register of Historic Places.

XMH-00974
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-974 is located on a heavily disturbed bench overlooking Lonestar Lake, which is 30m to the south. Windy Ridge Road runs through the middle of the site. The view shed at the site is estimated to be 90°. Visible landmarks include Donnelly Dome to the southeast, Windy Ridge to the east and the Alaska Range to the southwest. Surface visibility at the site is estimated to be 25 percent.

This site was found during pedestrian survey in 2002. The site consists of three artifacts, all found on the surface. Artifacts include one chert flake, one quartz flake and a flake tool. The flake tool was collected from the site in 2002. No shovel tests were excavated at the site during Phase I investigations. During Phase II investigations in 2005, the two uncollected surface flakes were relocated and no additional artifacts were found on the surface or through subsurface testing. Shovel tests were systematically placed throughout the site area at intervals of 10m. A total of 31 shovel tests were excavated. The depth of shovel tests varied, but all were excavated to glacial till. None of the shovel tests contained cultural material. Based on the results of survey and testing, the site area is estimated at approximately 10m x 15m.

Figure 77. General view of site XMH-00974, facing west

Because no shovel tests were positive, no test units were excavated at the site. Additionally, no subsurface features were identified. Site XMH-00974 is heavily disturbed as a result of the

presence of Windy Ridge Road and its associated pullouts. Deposition on the landform is highly irregular, also as a result of the construction and use of the road. Soil thickness ranged from 30-137cm across the site. Soil in the shallower test pits (0-50cm) consists of loosely compacted, dark brown, organically rich loess to an average depth of 15cm. Below this organic horizon, the soil consists of a brown and gray mottled loess layer with few gravels and cobbles. Glacial till is encountered below this loess deposit and consists of yellow brown to light brown sandy loess with an abundance of gravel and cobbles. Soil in the deeper test pits (50-137cm) consists of loosely compacted, dark brown, organically rich loess to an average depth of 20cm. Below this organic horizon there are several layers of loess. The first is moderately compacted and brown. The second is moderately compacted and mottled with brown, yellow brown and gray brown. The third is also moderately compacted, but yellow brown. Glacial till is encountered below the third loess layer and consists of loosely compacted yellow brown sandy loess with a very high density of gravel and cobbles.

Findings

Pedestrian survey and 31 shovel tests produced a total of only three surface artifacts. In addition, the site area is highly disturbed by the presence of Windy Ridge Road and associated pull off areas that have compromised the integrity of the site. The paucity of cultural material and lack of integrity indicates that XMH-00974 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

Map removed

Figure 78. Site map of XMH-00974

XMH-00975
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-00975 is located on a high spot along a prominent north-south trending ridge. The nearest water source to the site is an unnamed lake located 200m to the northeast. The view shed at the site is a full 360°. Visible landmarks include the Alaska Range to the southwest, Donnelly Dome to the south and Windy Ridge to the northeast. Surface visibility is estimated to be 25 percent.

Site XMH-00975 consists entirely of one gray chert tertiary flake located in the 2002 Phase I survey (Hedman et al. 2003). The artifact was not collected. No additional artifacts were located during the 2005 evaluation. Shovel tests were placed systematically throughout the site area at intervals of 10m. A total of 28 shovel tests were excavated. None of the shovel tests were positive. Based on the results of survey and testing, the site area is estimated at approximately 5m x 5m.

Since no cultural materials were found subsurface in any of the shovel tests, no 1m x 1m test units were excavated at the site. Soil thickness varied from 0-40cm across the site. Three small high spots in the site area have sustained extensive wind erosion and therefore glacial till is exposed at the surface. Deposition across the rest of the site area is rather uniform and averages 25cm. Soil in these areas consists of loosely compacted, dark brown, organically rich loess to an average depth of 13cm. Below this organic horizon, the soil consists of yellow brown loess with a low density of gravels and cobbles. Glacial till is encountered below this loess deposit and consists of yellow brown sandy loess with a high density of gravels and cobbles.

Figure 79. General view of site XMH-00975, facing south

Findings
Pedestrian survey and 28 shovel tests produced a total of only one artifact. This finding suggests that XMH-00975 is an isolated find. The paucity of cultural material indicates that XMH-00975 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

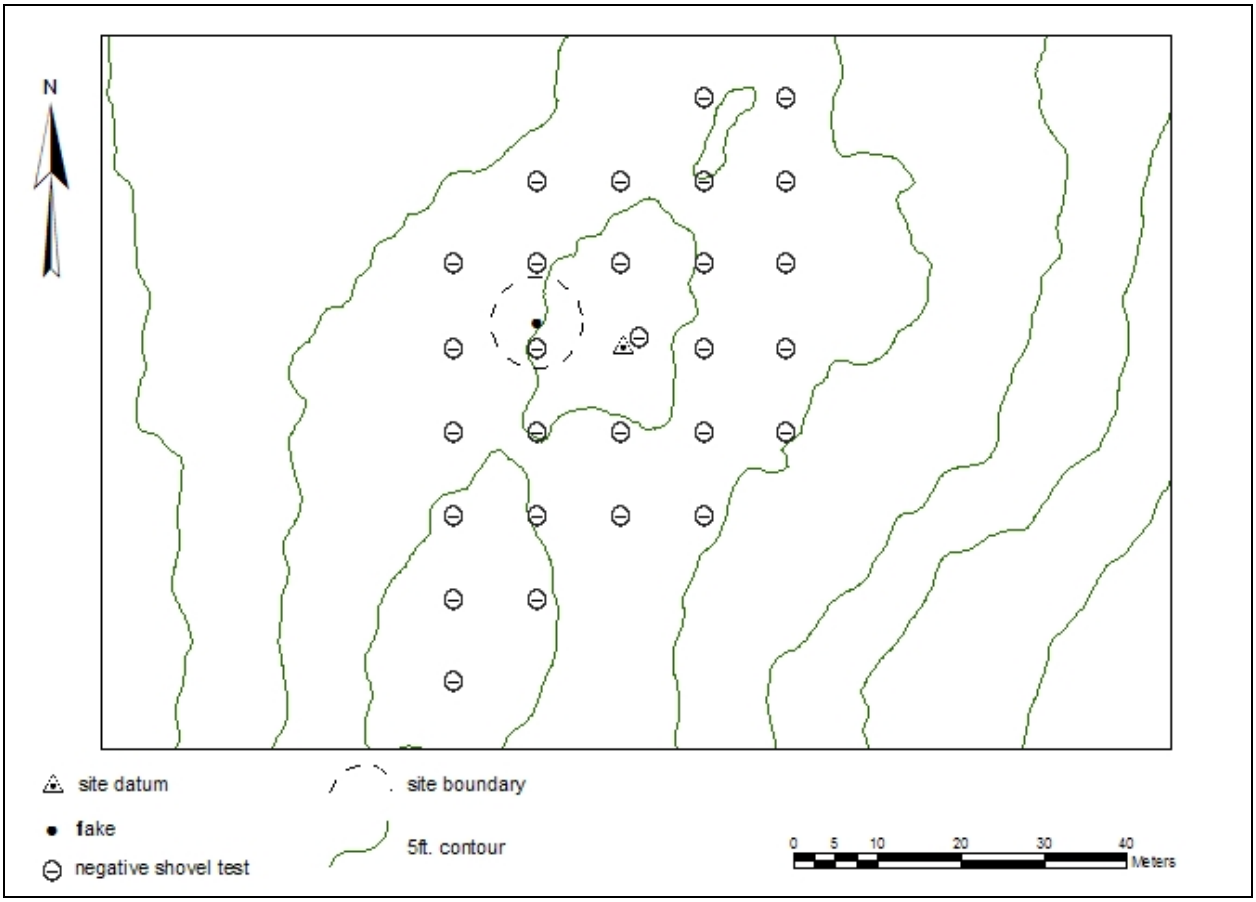

Figure 80. Site map of XMH-00975

XMH-00976
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-00976 is located on the eastern edge of a high, prominent north-south trending ridge. The nearest water source to the site is an unnamed lake located 125m to the east. The view shed is fairly complete, obstructed only to the north by a high knoll. Visible landmarks include the Alaska Range to the southwest, Donnelly Dome to the south and Windy Ridge to the east. Surface visibility at the site is estimated to be 75 percent.

Site XMH-00976 consists of one red brown tertiary chert flake located in the 2002 Phase I survey (Hedman et al. 2003) and an additional red brown chert microblade fragment located during the 2005 Phase II evaluation. Both artifacts were found on the surface. The microblade is 9mm long, 3mm wide and weighs less than 1g. The microblade was collected but the flake was left in-situ.

Shovel tests were systematically placed throughout the site area at intervals of 10m. A total of 34 shovel tests were excavated. The depth of the shovel tests varied, but all were excavated to glacial till. None of the shovel tests were positive. Based on the results of the survey and testing, the site area is estimated at approximately 20m x 10m.

Since none of the shovel tests revealed any buried cultural materials, no 1m x 1m test units were excavated at the site. Soil thickness varied from 0-70cm across the site. Areas near the datum and to the southeast have sustained considerable wind erosion and deposition only averaged 15cm. Soil in this area consists of loosely compacted, dark brown, organically rich loess to an average depth of 5cm. Below this organic horizon, the soil consists of yellow brown loess with a low density of gravels and cobbles. Glacial till is encountered below this loess deposit and consists of yellow brown sandy loess with a high density of gravels and cobbles. The areas north and west of the datum showed deeper soil and deposition averaged 40cm. Soil in these areas consists of loosely compacted, dark brown, organically rich loess to an average depth of 15cm. Below this organic horizon, the soil consists of yellow brown loess with a low density of gravels and cobbles. Glacial till is encountered below this loess deposit and consists of gray brown sandy loess with a high density of gravels and cobbles.

Figure 81. General view of site XMH-00976, facing southwest

Findings

Pedestrian survey and 34 shovel tests produced a total of only two surface artifacts. The paucity of cultural material indicates that XMH-00976 does not contain additional information

that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

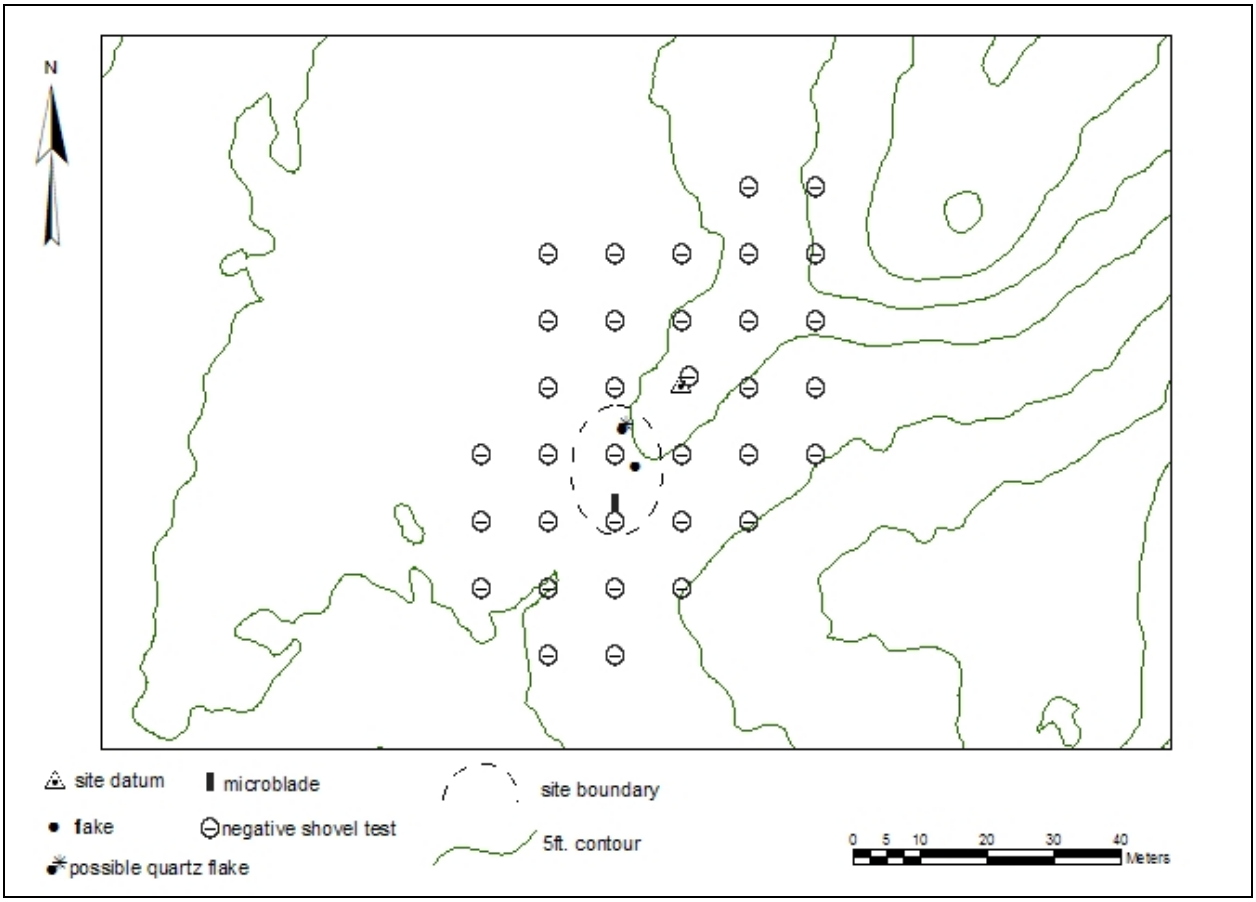

Figure 82. Site map of XMH-00976

XMH-00977
Latitude:
Longitude:
Determination: Eligible

Site XMH-00977 is located on top of a high glacial knoll. A secondary road heads north off of Windy Ridge Road up to the top of the knoll. The nearest water is a small unnamed pond located approximately 100m to the east. The Delta River is visible some miles distant to the west, while to the east are alternating kettle lakes, glacial kames and ridges leading up to Windy Ridge. Donnelly Dome and the Alaska Range are visible to the south. There is approximately 15 percent ground visibility at the site. Vegetation over the site includes heavily browsed alder, birch and aspen, and some willow, as well as lichens, moss, irises, grasses, sedges, and cranberry and blueberry bushes.

The site was located during a 2002 Phase I survey (Hedman et al. 2003). Shortly after the site was located the U.S. Air Force placed a large Threat Emitter on top of the site. Several artifacts recovered in 2002 were not relocated during the 2005 Phase II evaluation and they may be

under the gravel cap which was laid down for the Threat Emitter. No Section 106 consultation was conducted with the USAG-AK prior to the undertaking.

Site XMH-00977 consists of one obsidian flake tool and four flakes. One obsidian flake tool and two chert flakes were located in the 2002 Phase I survey (Hedman et al. 2003). The obsidian artifact was collected but the flakes were left in-situ at the site. The two chert flakes were not relocated during the 2005 evaluation of the site. However two additional flakes were located, one obsidian flake and one black chert flake.

Shovel tests were placed systematically throughout the site at intervals of 10m, around the current location of the Threat Emitter. A total of 68 shovel tests were excavated. The depth of the shovel tests varied, but all were excavated to glacial till. All shovel tests were negative, and based on the surface survey and shovel tests, the site area is estimated at approximately 20m x 20m.

Because all shovel tests were negative, no 1m x 1m test units were excavated. Soil thickness varied from 0-74cm across the site. Soil in the site area consists of a dark brown loess root mat to an average depth of 7cm. Below this organic horizon, the soil consists of brown and yellow brown loess with a low to medium density of gravel and pebbles. Glacial till is encountered below this and consists of yellow and yellow brown sandy loess with a high density of gravels, pebbles, and cobbles.

Figure 83. General view of site XMH-00977, facing northwest

Figure 84. View of U.S. Air Force Threat Emitter on site XMH-00977, facing northeast

Findings

Pedestrian survey and 68 shovel tests produced a total of five artifacts, two of them obsidian. This finding suggests that XMH-00977 is a small lithic scatter; however the site could potentially contain more cultural material under the Threat Emitter. With the presence of obsidian, a non-locally occurring material type, XMH-00977 is in an excellent position to contribute to our knowledge of prehistoric land use patterns and potentially contribute to a broader regional context. Site XMH-00977 is an intact archaeological site with integrity. The site is eligible for inclusion in the National Register of Historic Places under criterion D, for its potential to yield information important in understanding the prehistory of the region.

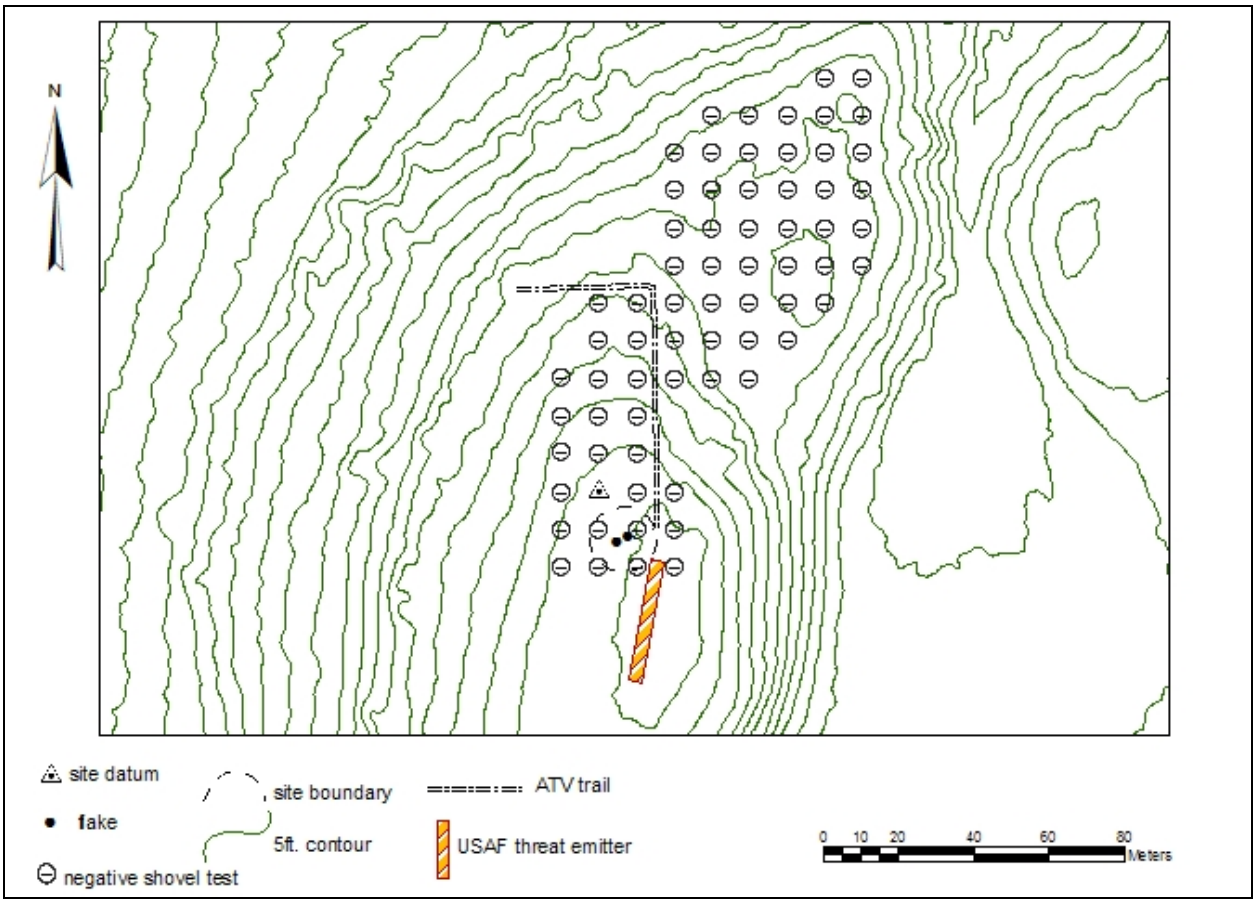

Figure 85. Site map of XMH-00977

XMH-00978
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-00978 is located on a high spot along a prominent north-south trending ridge. The nearest water source to the site is a small, unnamed pond located 100m to the southeast. The view shed at the site is a full 360°. Visible landmarks include the Alaska Range to the southwest, Donnelly Dome to the south, Windy Ridge to the northeast and the Granite Mountains to the east. Surface visibility at the site is estimated to be 50 percent.

Site XMH-00978 consists of two flake tools, both found on the surface. One gray basalt flake tool was located in the 2002 Phase I survey (Hedman et al. 2003). This tool is 6.2cm long, 3.6cm wide and weighs 20g. An additional gray chert flake tool was found during the 2005 evaluation. This tool is 6.6cm long, 4.4cm wide and weighs 37g. Neither of these tools was collected from the site.

Shovel tests were systematically placed throughout the site area at intervals of 10m. A total of 27 shovel tests were excavated. The depth of the shovel tests varied, but all were excavated to

glacial till. None of the 27 shovel tests excavated were positive. Based on the results of survey and testing, the site area is estimated at approximately 15m x 25m.

Because no subsurface cultural deposits were located through shovel testing, no 1m x 1m test pits were excavated. Soil thickness varied from 0-70cm across the site. Deposition south of the site datum was thinner, averaging 25cm. Soil in this area consists of loosely compacted, dark brown, organically rich loess to an average depth of 15cm. Below this organic horizon, the soil consists of moderately compacted yellow brown loess with a low density of gravel and cobbles. Glacial till is encountered below this loess deposit and consists of yellow brown sandy loess with a high density of gravels and cobbles. Deposition north of the datum was deeper and averaged 55cm. Soil in this area consists of loosely compacted, dark brown, organically rich loess to an average depth of 15cm. Below this organic horizon, the soil consists of moderately compacted yellow brown loess mottled with red brown and gray brown loess with a low density of gravels and cobbles. Glacial till is encountered below this mottled loess deposit and consists of yellow brown sandy loess with a high density of gravels and cobbles.

Figure 86. General view of site XMH-00978, facing south

Findings

Pedestrian survey and 27 shovel tests produced a total of only two surface artifacts. The paucity of cultural material indicates that site XMH-00978 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

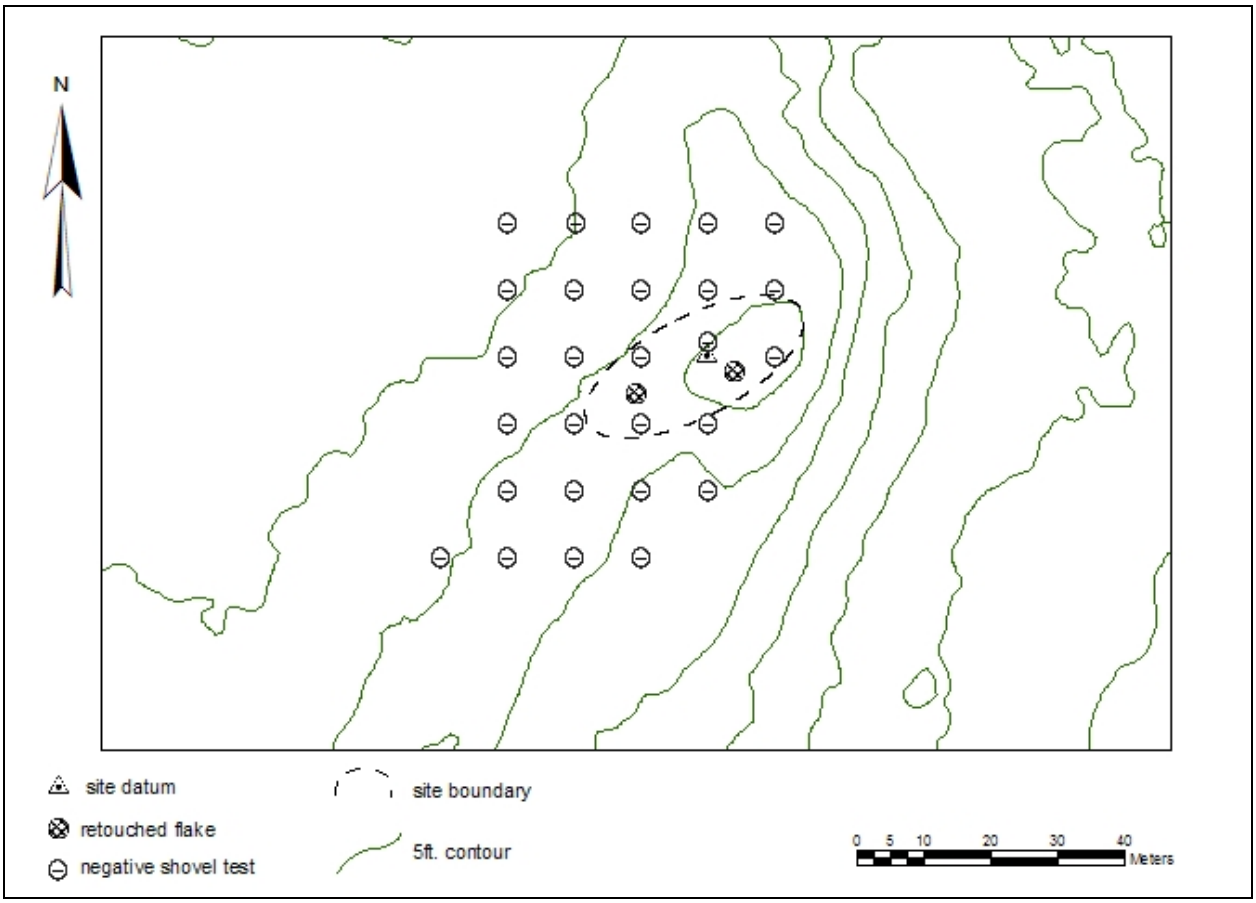

Figure 87. Site map of XMH-00978

XMH-00982
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-00982 is located on a long, low, north-south trending ridge. Sites XMH-00935, XMH-00936, and XMH-00937 are located on this same ridge. The view shed at the site is approximately 270º with views to the northeast blocked by vegetation. The Alaska Range is visible to the west, Donnelly Dome to the south and the Granite Mountains to the east. Surface visibility is estimated to be less than one percent.

Site XMH-00982 consists of a quartz biface found in a shovel test pit during 2002 Phase I investigations. This was one of four test pits, and the only positive one, and was excavated along the southern end of the landform in 2002 (Hedman et al. 2003). The biface, which is 15cm long, was collected. Shovel tests were systematically placed throughout the site area at intervals of 10m and 5m during the 2005 evaluation. A total of 36 new shovel tests were excavated. The depths of the shovel tests varied, but all were excavated to glacial till. None of the 36 shovel tests excavated during the evaluation were positive and no new artifacts were found. Based on the results of the survey and testing, the site area is estimated at approximately 5m x 5m.

Figure 88. General view of site XMH-00982, facing south

Two 1m x 1m test units were excavated at XMH-00982 in 2005; these were situated on and near the positive shovel test from the 2002 field season. Test unit 1 was positioned with the southwest corner in the positive shovel test. Test unit 2 was offset from the positive shovel test 50cm to the west. Both test units were sterile. Soil thickness at the site is approximately 20cm. The soil consists of a black organic mat approximately 5cm thick, followed by dark yellowish brown loess on top of strong brown loess. Beneath this is dark yellowish brown loess followed by the same color glacial till.

Findings

Pedestrian survey, 36 shovel tests and two 1m x 1m excavation units produced a total of only one artifact. This finding suggests that XMH-00982 is an isolated find. The paucity of cultural material indicates that XMH-00982 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

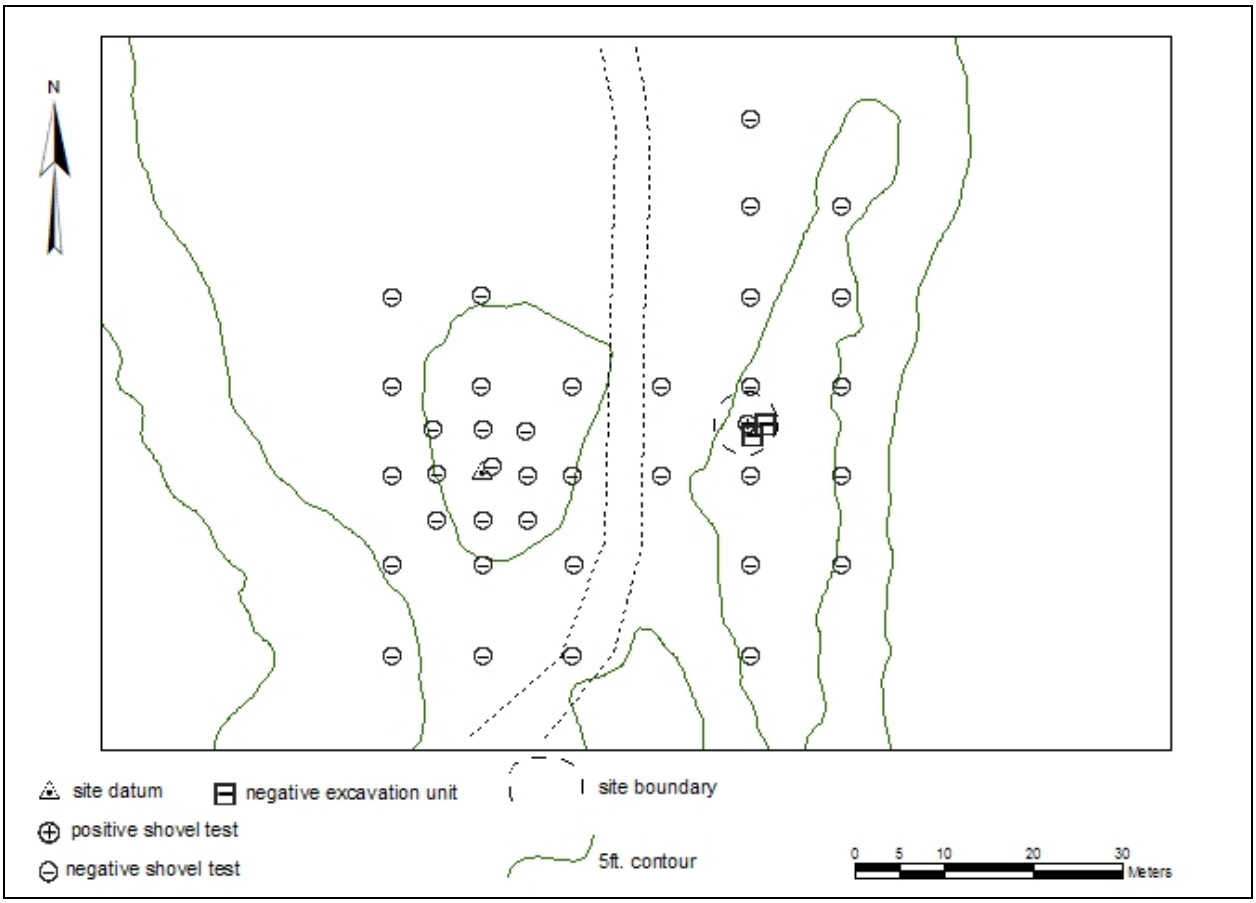

Figure 89. Site map of XMH-00982

XMH-01072
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-01072 is located on a long north-south trending bluff. Jarvis Creek is the nearest water source, located 500m to the east. The view shed is excellent at 270º, with Donnelly Dome and the Alaska Range in the southwest, and the Granites stretching from the south to the east. The view north is blocked by vegetation. Surface visibility is five percent.

Site XMH-01072 consists of one tertiary chert flake found during a 2003 Phase I survey (Robertson et al. 2004). No artifacts were collected in 2003. The 2005 crew was unable to relocate the surface flake noted in the 2003 survey. No additional artifacts were found during the 2005 Phase II evaluation of the site. Two secondary quartz flakes identified in the 2003 survey were later deemed to be ecofacts.

Shovel tests were systematically placed throughout the site area at intervals of 10m during the 2005 evaluation. A total of 25 new shovel tests were excavated. The depths of the shovel tests varied, but all were excavated to glacial till. None of the 25 shovel tests were positive. Based on the results of survey and testing the site area is estimated at approximately 5m x 5m.

Figure 90. General view of site XMH-01072, facing west

Because none of the shovel tests were positive, no 1m x 1m test units were excavated at site XMH-01072. Soil thickness varied from 4cm along the bluff edge to 107cm on the valley floor. The soil is composed of organically rich, dark brown loess averaging 10cm in depth. Under this horizon is a moderately compact layer of loess in a variety of colors, often mottled. Glacial till is encountered below this deposit and consists of loess, most often gray brown with a high density of pebbles and gravels.

Findings

Pedestrian survey and 25 shovel tests produced a total of only one artifact. This finding suggests that XMH-01072 is an isolated find. The paucity of cultural material indicates that XMH-01072 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

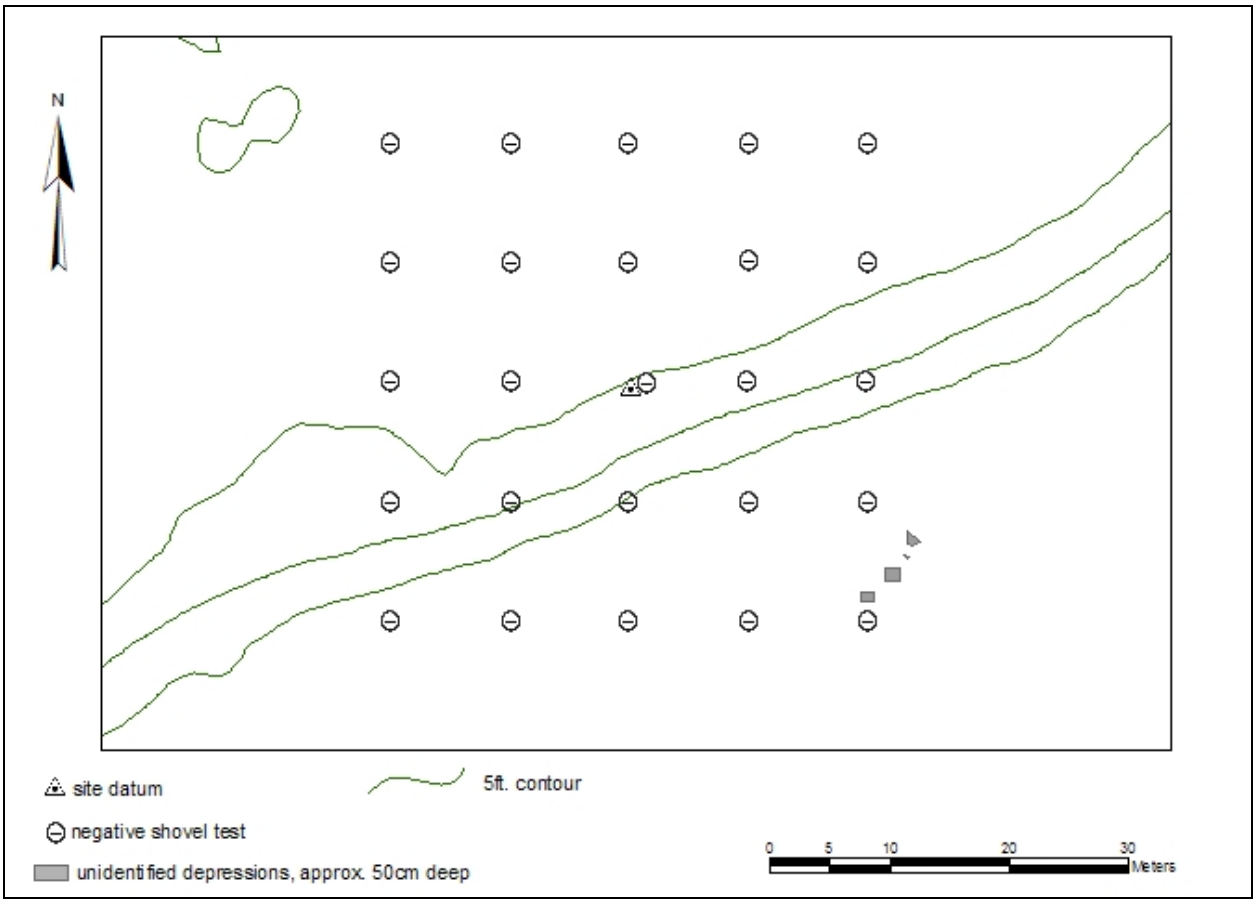

Figure 91. Site map of XMH-01072

XMH-01073
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-01073 is located on a long north-south trending bluff about 500m from Jarvis Creek, which is the nearest water source. The view shed is a full 360º with Donnelly Dome to the southwest, and the Granites to the southeast. Surface visibility is approximately five percent.

Site XMH-01073 consists of three artifacts found during a 2003 Phase I survey (Robertson et al. 2004). A gray chert microblade, a brown secondary flake of unknown material and a banded gray tertiary chert flake were discovered on the surface of the site. The microblade was collected in 2003. No additional artifacts were found during the 2005 Phase II evaluation of the site.

Shovel tests were systematically placed throughout the site area at intervals of 5m during the 2005 evaluation. A total of 25 new shovel tests were excavated. The depths of the shovel tests varied, but all were excavated to glacial till. None of the 25 shovel tests were positive. Based on the results of survey and testing the site area is estimated at approximately 10m x 10m.

Figure 92. General view of site XMH-01073, facing north

Because none of the shovel tests were positive, no 1m x 1m test units were excavated at site XMH-01073. Soil thickness varied from 4cm– 50cm across the site. There are two eroded spots near site datum where till is exposed at the surface. Soil composition varies considerably across the site, as shovel tests cover the bluff top and a portion of the down slope. The organic layer consists of dark brown loess with high organic content, with depths from 1cm–14cm, with the deeper deposits found on the down slope of the bluff. Below this the soil changes to moderately compact loess in colors ranging from brown to red brown to orange brown to gray and yellow brown. Glacial till is encountered below this, and is composed of loess with a high density of pebbles and gravels.

Findings

Pedestrian survey and 25 shovel tests produced a total of only three surface artifacts. The paucity of cultural material indicates that XMH-01073 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

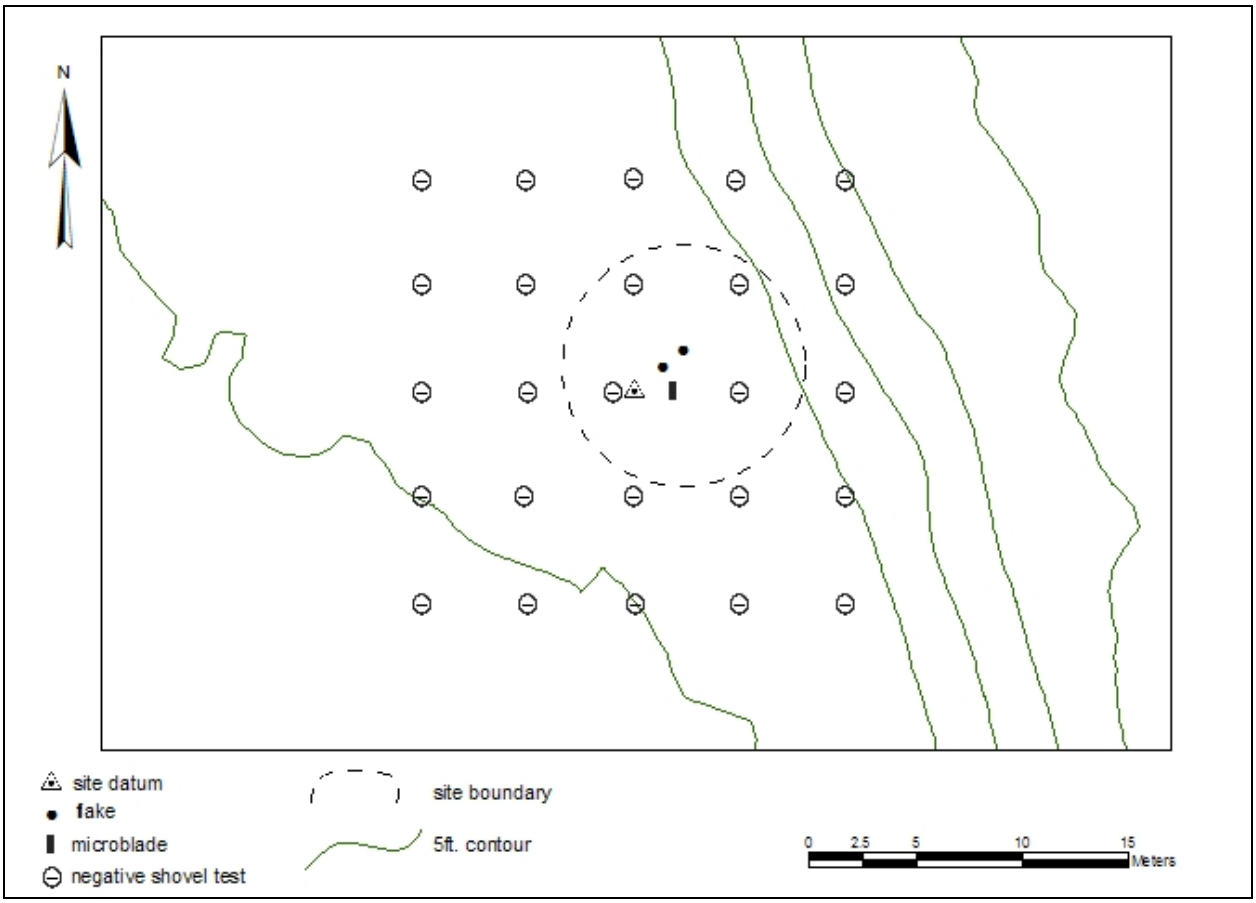

Figure 93. Site map of XMH-01073

XMH-01173
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-01173 is located on a bench just below the high point of a northwest-southeast trending glacial moraine. The view shed at the site is 180^{o} and the Alaska Range can be seen in the southwest. The nearest water sources, four unnamed small ponds, are also visible from the site. They are located 30m to the southwest, 50m to the south, 60m to the north and 100m to the northeast, respectively. Surface visibility at the site is approximately 90 percent. Where the moraine drops off in all four directions, small scrub and young trees begin to obscure ground visibility.

Site XMH-01173 consists of seven flakes found during a 2004 Phase I survey (Raymond-Yakoubian and Robertson 2005b). These seven tertiary flakes, composed of chert and rhyolite, were discovered on the surface of the site in close proximity to one another. No artifacts were collected in 2004 and no additional artifacts were found during the Phase II evaluation of the site.

Shovel tests were placed systematically through the site at intervals of 10m during the 2005 evaluation. A total of 21 shovel tests were excavated. The depth of each shovel test varied, but

all were excavated to glacial till. None of the shovel tests were positive. Based on the results of survey and testing the site area is estimated at approximately 10m x 10m.

Figure 94.General view of site XMH-01173, facing northwest

Because none of the shovel tests were positive, no 1m x 1m test units were excavated at site XMH-01173. The soil thickness at the site was relatively shallow in all areas, with an average depth to glacial till of 20cm. The soil consists of a very dark brown organic mat, ranging in thickness from 5-10cm, which was located either on top of a layer of brown loess, or, in the areas of shallower deposition, directly on top of brown or yellowish-brown till. The eastern portion of the shovel test grid extended lower in elevation than the remainder of the shovel test grid, and it was in this area that the shovel tests reached their maximum depths, which were still less than 40cm to till.

Findings

Pedestrian survey and 25 shovel tests produced a total of only seven surface artifacts. The paucity of cultural material indicates that XMH-01173 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

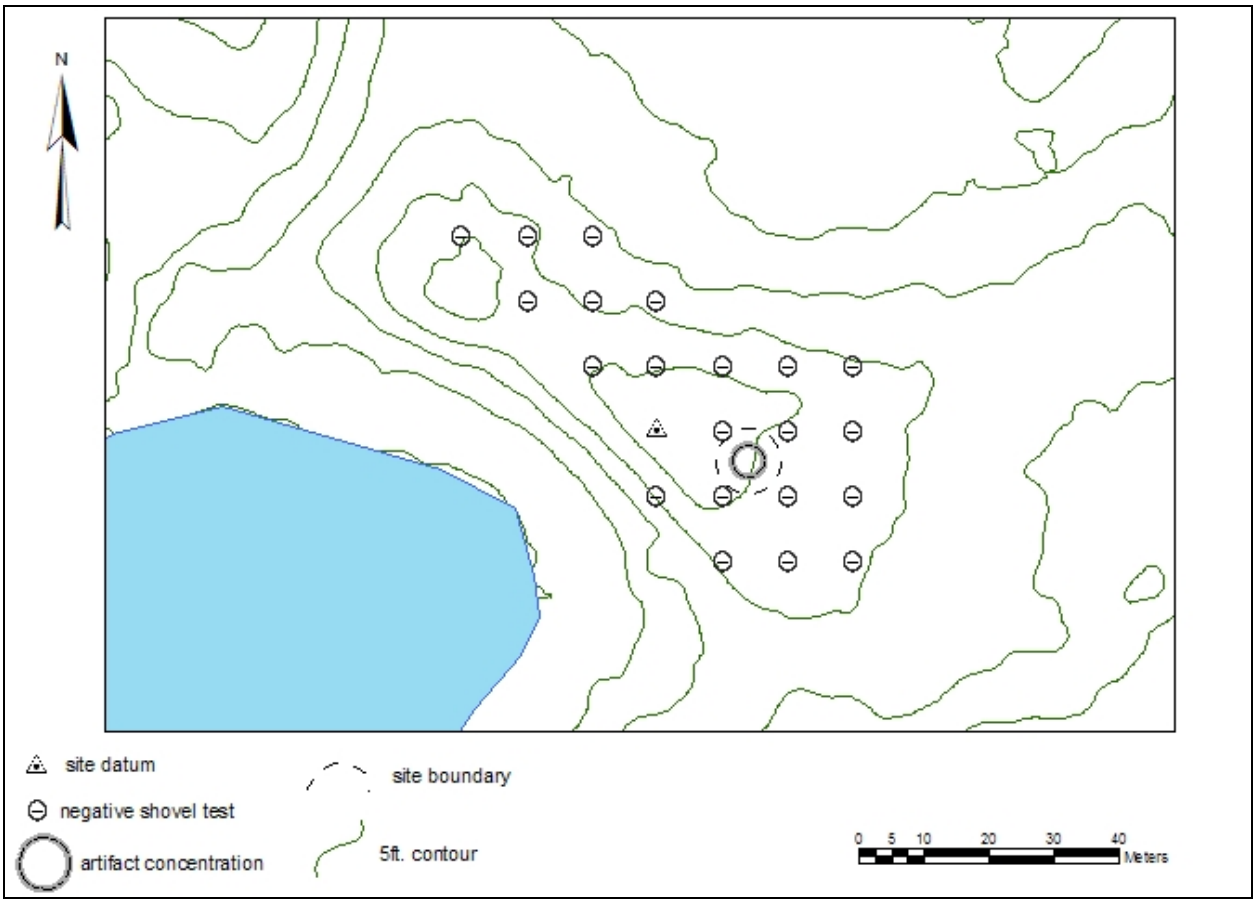

Figure 95. Site map of XMH-01173

XMH-01174
Latitude:
Longitude:
Determination: Eligible

Site XMH-01174 is located on an east-west trending finger ridge extending off of a more prominent north-south trending ridge. The view shed at the site is 180°. Donnelly Dome is visible to the southeast, the Alaska Range is visible to the southwest and Windy Ridge can be seen to the northeast. The nearest water sources are two unnamed kettle lakes. One is located 30m to the southeast and the other is 75m to the northeast. These two kettle lakes look as if they were connected into one larger lake at some point in time. Surface visibility at the site is approximately 90 percent.

Site XMH-01174 consists entirely of one obsidian scraper found on the surface during Phase I investigations. The obsidian scraper is 4.2cm long, 4.0cm wide, and weighs 18.5g. Shovel tests were systematically placed throughout the site area at intervals of 10m. A total of 45 shovel tests were excavated, none of which were positive. The depth of shovel tests varied, but all were excavated to glacial till. Based on the results of the survey and testing, the site area is estimated at approximately 5m x 5m.

Figure 96. General view of site XMH-01174, facing east

Because none of the shovel tests were positive, no 1m x 1m test units were excavated at site XMH-01174. Soil thickness varied from 0-55cm across the site. Wind erosion appears to have impacted approximately 90 percent of the site where there is no soil deposition at all. However some areas of the site do have deposition down to an average depth of 30cm. Soil in these areas consists of loosely compacted dark brown, organically rich loess to an average depth of 12cm. Below this organic horizon the soil consists of moderately compacted yellow brown loess with a low density of gravels and cobbles. Glacial till is encountered below this loess deposit and consists of yellow brown sandy loess with a high density of gravels and cobbles.

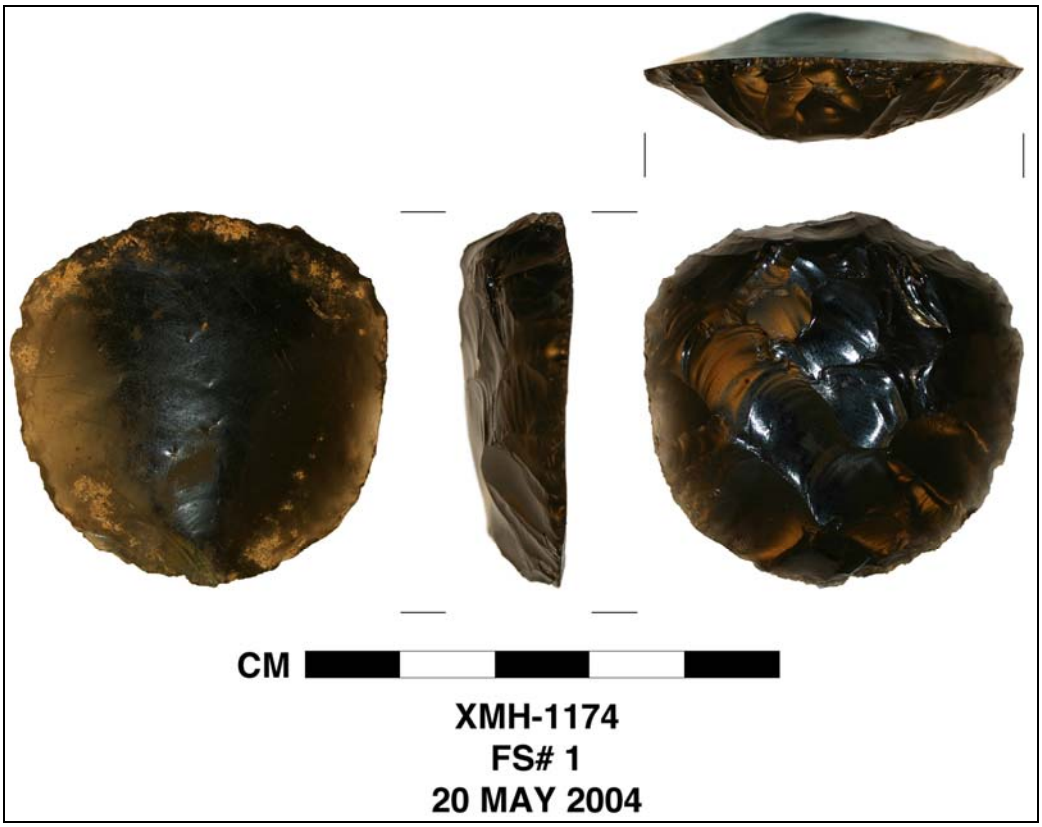

Figure 97. Obsidian scraper from site XMH-01174

Findings

Pedestrian survey and 45 shovel tests produced a total of only one obsidian artifact. This finding suggests that XMH-01174 is an isolated find. However, with the presence of obsidian, a non-locally occurring material type, XMH-01174 is in a position to contribute to our knowledge of prehistoric land use patterns and potentially contribute to a broader regional context. Site XMH-01174 is an intact archaeological site with integrity. The site is eligible for inclusion in the National Register of Historic Places under criterion D, for its potential to yield information important in understanding the prehistory of the region.

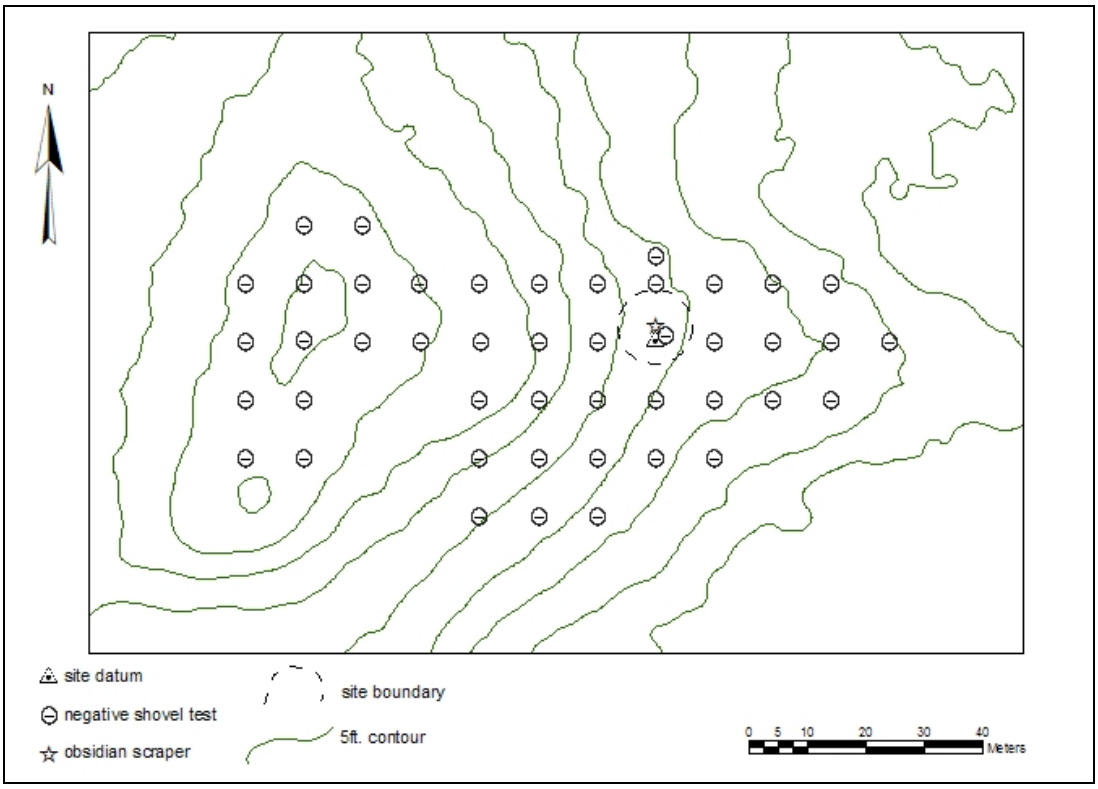

Figure 98. Site map of XMH-01174

XMH-01193
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-01193 is located on a north-south trending ridge to the west of Windy Ridge. The nearest water sources are two lakes situated approximately 100m to the east. The view shed at the site is roughly 360^{o} —it is interrupted somewhat to the northeast by Windy Ridge, but the top portion of Donnelly Dome can still be seen. Additional landmarks visible from the site are the Alaska Range to the west and southwest and the Delta River to the west.

Site XMH-01193 was identified during the 2005 field season and consists of one artifact. One dark gray chert tertiary flake was found on the surface during the Phase I survey. No additional artifacts were found during the later Phase II evaluation of the site. No artifacts were collected.

Shovel tests were systematically placed throughout the site area at intervals of 10m. A total of 26 shovel tests were excavated. Five of these shovel tests were located in areas of one hundred percent surface visibility, none of which contained any cultural material. Additionally, an intensive examination of the surface area was performed. The depth of shovel tests varied, but all were excavated to glacial till. Based on the results of the survey and testing, the site area is estimated at approximately 5m x 5m.

Figure 99. General view of site XMH-01193, facing northwest (flag marks location of artifact)

Because none of the shovel tests were positive, no 1m x 1m test units were excavated at site XMH-01193. Shovel tests at the southern end of the landform were deeper than those at the northern end and depths ranged from 15-66cm. The top layer consists of an organic mat, ranging in color from dark gray to very dark brown, with average thickness falling from 5-10cm. Between this mat and till are layers consisting of loess in various shades of brown. The layers tended toward a darker brown nearer the surface which gave way to a lighter or yellowish brown closer to till. Glacial till consists of brown to yellowish brown loess with a very high density of gravels and cobbles.

Findings

Pedestrian survey and 26 shovel tests produced a total of only one artifact. This finding suggests that XMH-01193 is an isolated find. The paucity of cultural material indicates that XMH-01193 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

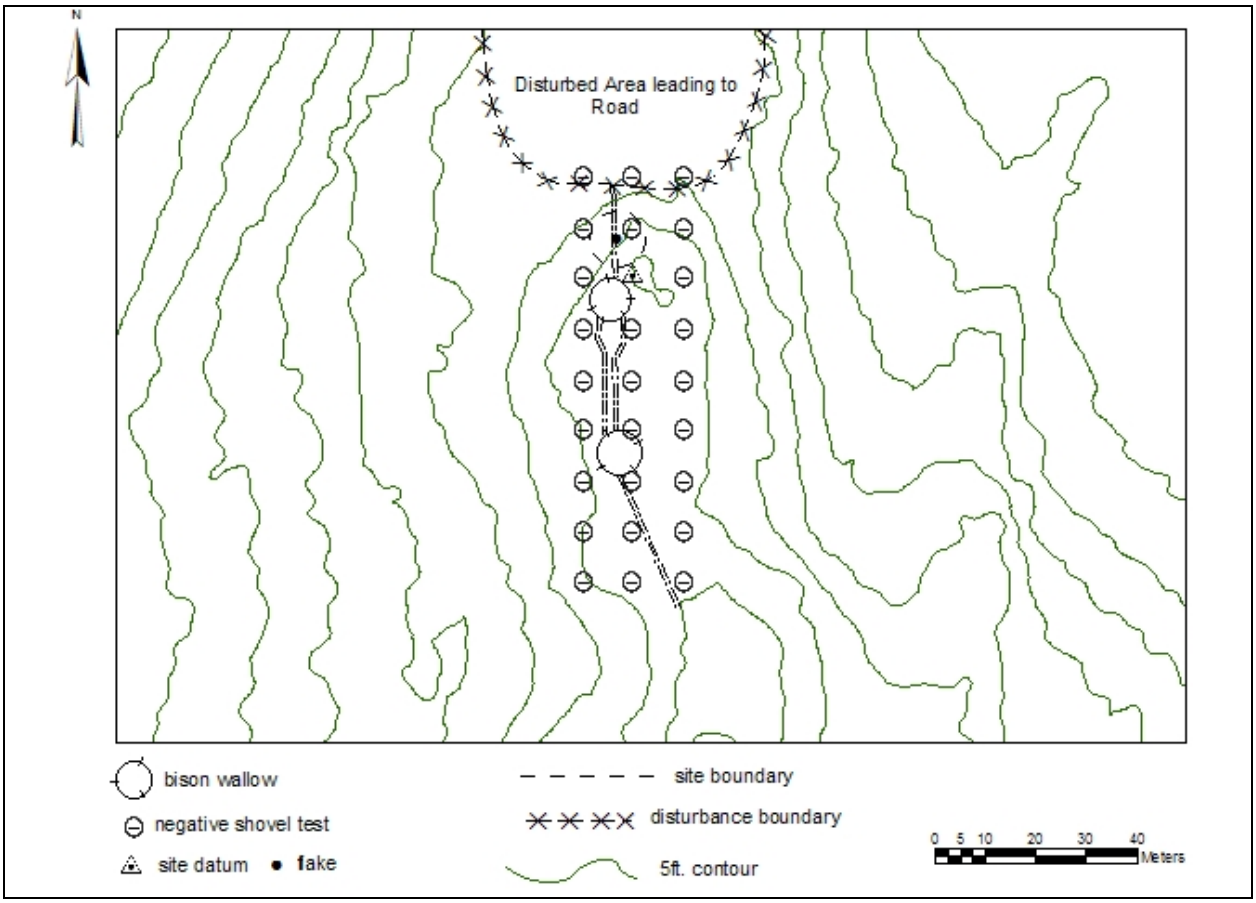

Figure 100. Site map of XMH-01193

XMH-01202
Latitude:
Longitude:
Determination: Eligible

Site XMH-01202 is located on a bench next to a high, prominent knoll. The nearest water to the site is a small, unnamed pond located 200m to the northwest. South Twin Lake is located just beyond the pond and is visible from the site. The view shed at the site is 360°. Visible landmarks include: the Alaska Range to the southwest, the Delta River to the west, Donnelly Dome to the south and Windy Ridge to the south-southeast. Surface visibility at the site is estimated at 50 percent.

Site XMH-01202 consists entirely of one dark gray chert biface and two gray chert tertiary flakes found during the 2005 Phase I survey. The chert biface is 8.5cm long, 4cm wide and weighs 49g. No further artifacts were found during later Phase II investigations. All three of the artifacts were collected. Shovel tests were systematically placed throughout the site area at 10m intervals. A total of 27 shovel tests were excavated. None of the 27 shovel tests contained any cultural materials. The depth of shovel tests varied, but all were excavated to glacial till.

Based on the results of survey and testing, the site area is estimated to be approximately 5m x 5m.

Figure 101. General view of site XMH-01202, facing east

Because none of the shovel tests were positive, no 1m x 1m test units were excavated at the site. Soil thickness varied 0-34cm across the site. Much of the site area has sustained considerable wind erosion and therefore contains little or no soil deposition. Generally, soil across the site averaged a depth of about 7cm. This soil is characterized by loosely compacted, dark brown, organically rich loess to an average depth of 2cm. Below this organic horizon, the soil consists of moderately compacted brown loess. Glacial till is encountered below this loess deposit and consists of yellow brown sandy loess with a high density of gravels and cobbles. The area of the site along the 10N (10m north of the datum) line showed deeper soil deposits, averaging 25cm. The soil in this area consists of loosely compacted, dark brown, organically rich loess to an average depth of 5cm. Below this organic horizon, the soil consists of moderately compacted, brown loess. Glacial till is encountered below this loess deposit and consists of yellow brown sandy loess with a high density of gravels and cobbles.

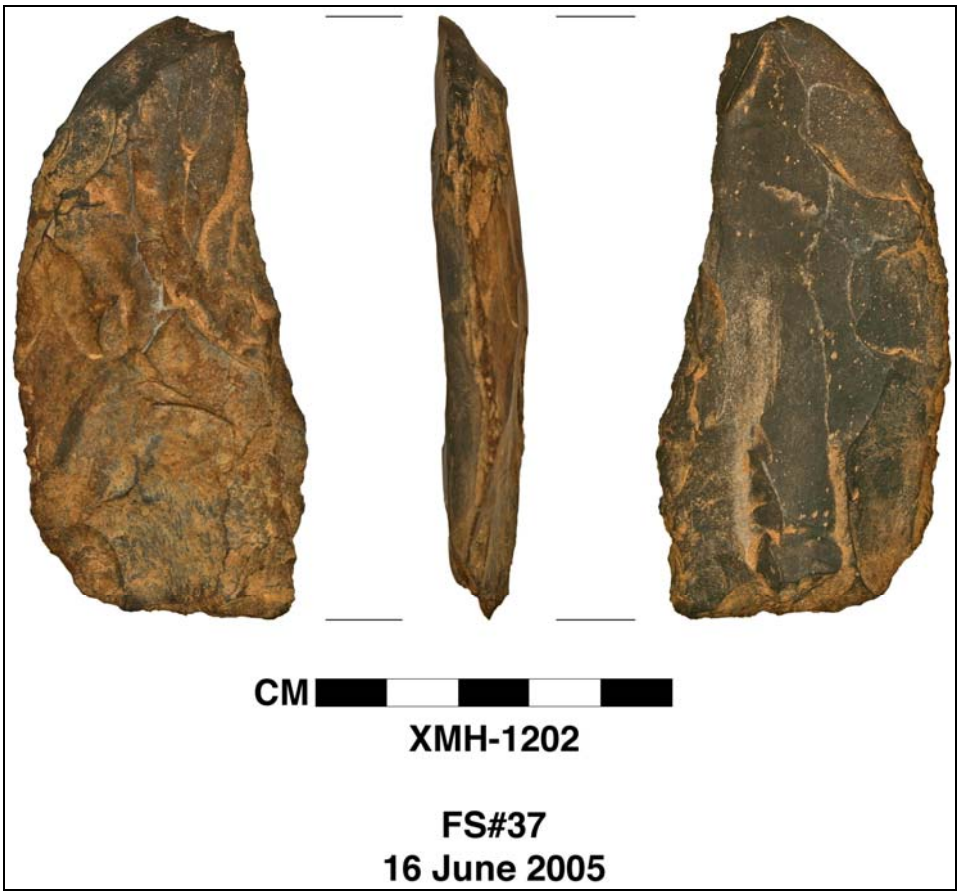

Figure 102. Biface from XMH-01202

Findings

Pedestrian survey and 27 shovel tests produced a total of only three surface artifacts. The paucity of cultural material indicates that XMH-01202 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

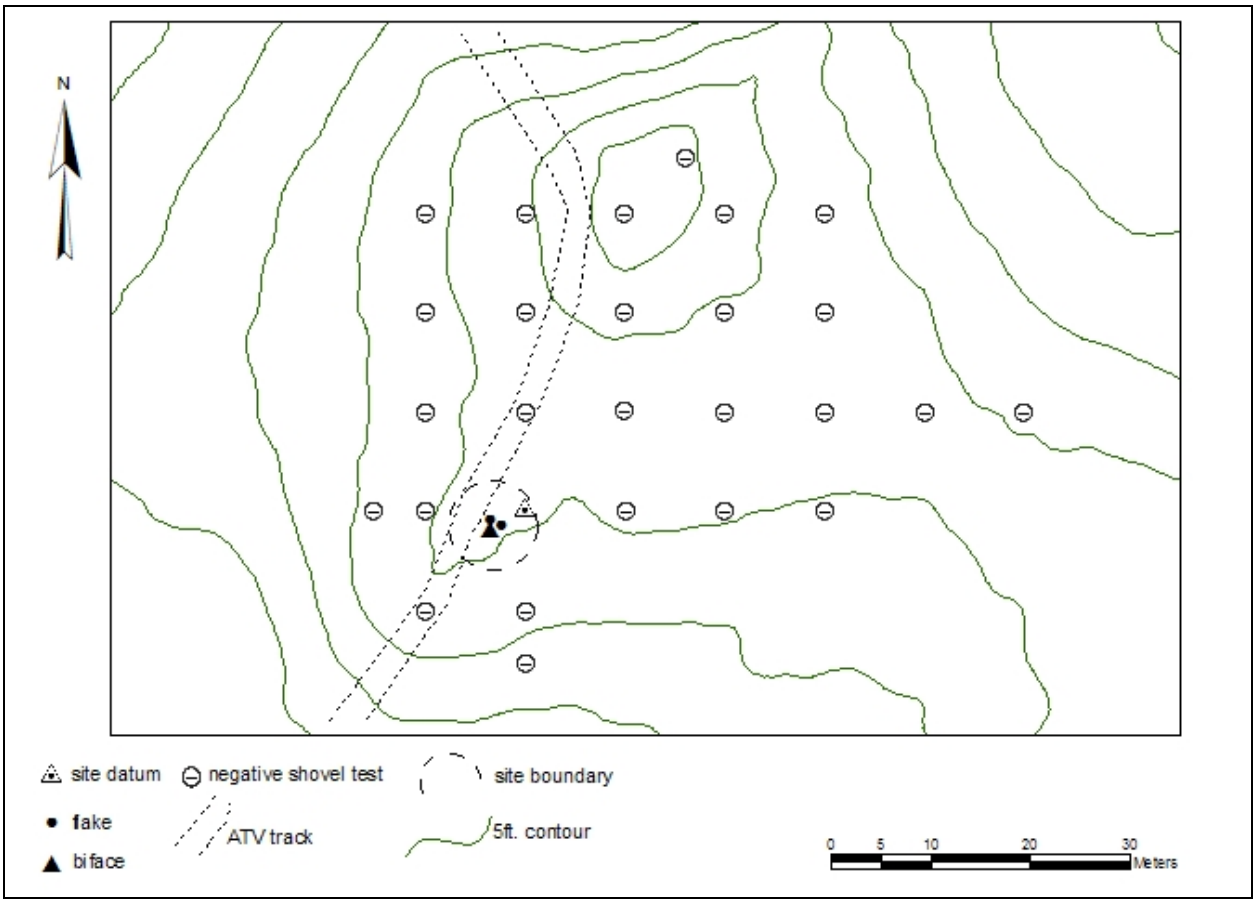

Figure 103. Site map of XMH-01202

XMH-01208
Latitude:
Longitude:
Determination: Eligible

Site XMH-01208 is located on a narrow, east-west trending moraine. The nearest water source is Beaver Lodge Lake, which is located 50m to the south. The view shed at the site is 90^{o} degrees to the southwest. Visible landmarks include the Alaska Range to the southwest and Windy Ridge to the east. Surface visibility at the site is estimated at 15-20 percent.

Site XMH-01208 consists of 18 artifacts. One flake was found on the surface during the 2005 Phase I survey and 17 additional artifacts were found subsurface in either shovel tests or test units during later testing of the site. Subsurface artifacts include seven flakes from one shovel test and four flake tool fragments and six flakes from the test unit. The four flake tool fragments are made of an unidentified material and refit into one tool that has been unifacially retouched that is 4.2cm long, 2.2cm wide, and weighs 4g. All 17 subsurface artifacts were collected. The one surface flake was not collected. Chert, basalt, quartz and an unidentified material were present among the debitage.

Shovel tests were systematically placed throughout the site area at intervals of 10m. Five shovel tests were dug at 5m intervals to avoid excavating on the slopes of the landform. A total of 26 shovel tests were excavated at the site. The depths of shovel tests varied, but all were excavated to glacial till. One shovel test (located 0m north and 10m east of the datum) was positive, yielding seven flakes from a depth of 4-10cm below the surface. Based on the results of survey and testing, the site boundaries are estimated to be 22m x 11m.

Figure 104. General view of site XMH-01208, facing east

One 1m x 1m test unit was excavated at XMH-01208. The unit was placed on the top of the landform, near the positive shovel test located 10m east of the site datum. The unit was excavated in 10cm levels until glacial till was reached throughout the entire unit floor. The test unit contained seven artifacts recovered from levels one and two. All seven of the artifacts were found 0-20cm below the unit datum. No subsurface features were identified at the site. Soil thickness varied from 0-44cm across the site. The south facing portions of the landform have minimal soil deposition at an average of 5cm. Soil in these areas consists of loosely compacted, brown, organically rich loess to an average depth of 5cm. Below this organic horizon, glacial till is encountered; till consists of loosely compacted yellow brown sandy loess with a high density of gravels and cobbles. The top and northern slope of the landform is better protected from the effects of wind erosion and therefore shows deeper soil deposits, averaging 30cm. Soil in these areas consists of loosely compacted, dark grayish brown, organically rich loess to an average depth of 10cm. Below this organic horizon, the soil consists of moderately compacted red, brown, yellow, and gray mottled loess with a low density of gravels and cobbles. Glacial till is encountered below this loess deposit and consists of loosely compacted yellow brown sandy loess with a high density of gravels and cobbles.

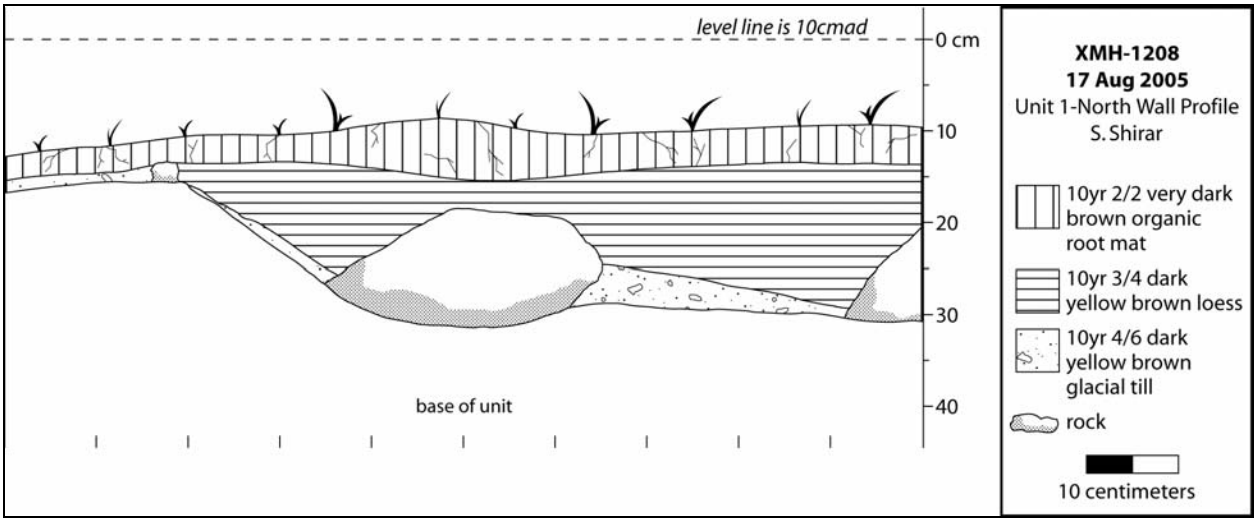

Figure 105. Soil Profile from XMH-01208

Findings

A total of 18 artifacts were recovered from XMH-01208. One was recovered from the surface and 17 were recovered from below the surface. The materials at the site include chert, basalt, quartz and an unidentified material. Based on the results of survey and testing the site area is estimated at approximately 22m x 11m.

Site XMH-01208 is a small lithic site with both surface and buried components. With buried cultural material, XMH-01208 is in an excellent position to contribute to our knowledge of prehistoric land use patterns. *In situ* artifacts and soil stratigraphy indicate datable material and diagnostic artifacts may be present and could be used to date human use of the site, potentially contributing to a broader regional context. Site XMH-01208 is an intact archaeological site with integrity. The site is eligible for inclusion in the National Register of Historic Places under criterion D for its potential to yield information important in understanding the prehistory of the region.

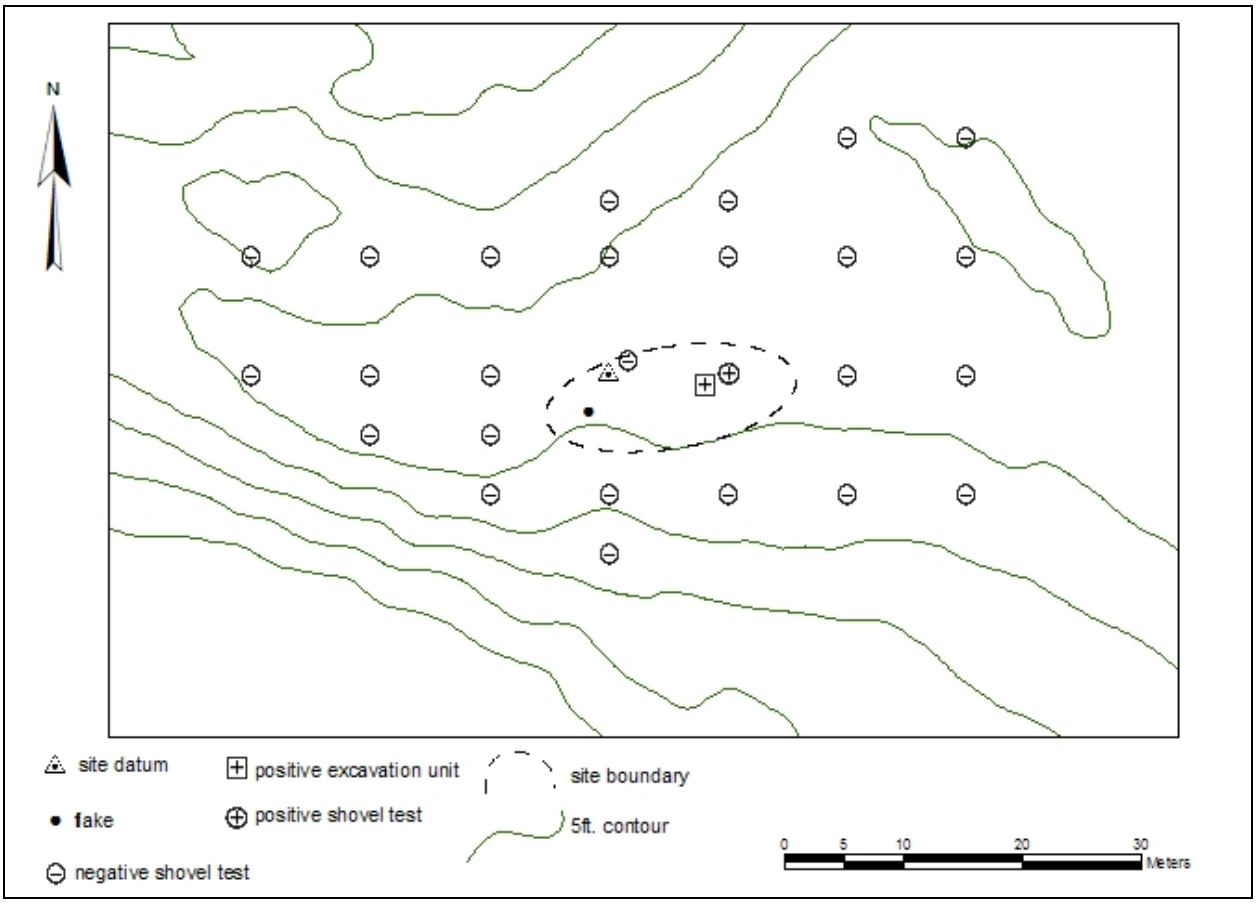

Figure 106. Site map of XMH-01208

XMH-01213
Latitude:
Longitude:
Determination: Eligible

Site XMH-01213 is located on a bench extending off of a higher ridge located to the south. The nearest water source is South Twin Lake, located 100m to the north. The view shed at the site is limited due to vegetation and higher surrounding ridges. Windy Ridge, to the east, is the only visible landmark. Surface visibility at the site is estimated to be 25 percent.

Site XMH-01213 consists of two artifacts. One chert or argillite flake and one chert core were found subsurface. The flake was found in a shovel test during the Phase I survey of the area. The core was found in a test unit during the later Phase II evaluation of the site. Both of the artifacts were collected.

Shovel tests were systematically placed throughout the site area at intervals of 10m. Six shovel tests were placed at 5m intervals at the site. A total of 27 shovel tests were excavated during the Phase II evaluation of the site. The depths of the shovel tests varied, but all were excavated to glacial till. Outside of the original Phase I shovel test, none of the additional 27 that were excavated contained any cultural materials. Based on the results of survey and testing, the site boundaries are estimated to be 12m x 10m.

Figure 107. General view of site XMH-01213, facing east

One 1m x 1m test unit was excavated at XMH-01213. The test unit was placed 1.5m south and 1.5m west of the site datum, near the original positive shovel test excavated during Phase I survey. The test unit was excavated in 10cm levels until glacial till was reached throughout the entire unit floor. The test unit contained one chert core found in level one at 9cm below the unit datum. No subsurface features were identified at the site. Soil thickness varied from 2-32cm across the site. The northern edge and northern slope of the site are exposed and have sustained a considerable amount of wind erosion, making soil deposition thin. Soil in these areas averages 5cm and consists of loosely compacted, dark brown, organically rich loess to an average depth of 5cm. Glacial till is encountered below this organic horizon and consists of loosely compacted yellow brown sandy loess with a high density of gravels and cobbles. The southern portions of the site are protected from the effects of wind erosion by mature trees and thick vegetation, making soil deposits deeper. Soil in these areas averages 20cm and consists of loosely compacted, dark brown/black, organically rich loess to an average depth of 10cm. Below this organic horizon, the soil consists of moderately compacted gray brown loess with a low density of gravels and cobbles. Glacial till is encountered below this loess deposit and consists of loosely compacted gray brown sandy loess with a high density of gravels and cobbles.

Findings

A total of two artifacts were recovered from XMH-01213. All artifacts were recovered from below the surface. Based on the results of survey and testing, the site area is estimated at approximately 12m x 10m.

Site XMH-01213 is a small buried site with late stage lithic debitage, and the site could potentially contain more cultural material. With such buried cultural material XMH-01213 is in an excellent position to contribute to our knowledge of prehistoric land use patterns. *In situ* artifacts and soil stratigraphy indicate datable material and diagnostic artifacts may be present

and could be used to date human use of the site, potentially contributing to a broader regional context. Site XMH-01213 is an intact archaeological site with integrity. The site is eligible for inclusion in the National Register of Historic Places under criterion D, for its potential to yield information important in understanding the prehistory of the region.

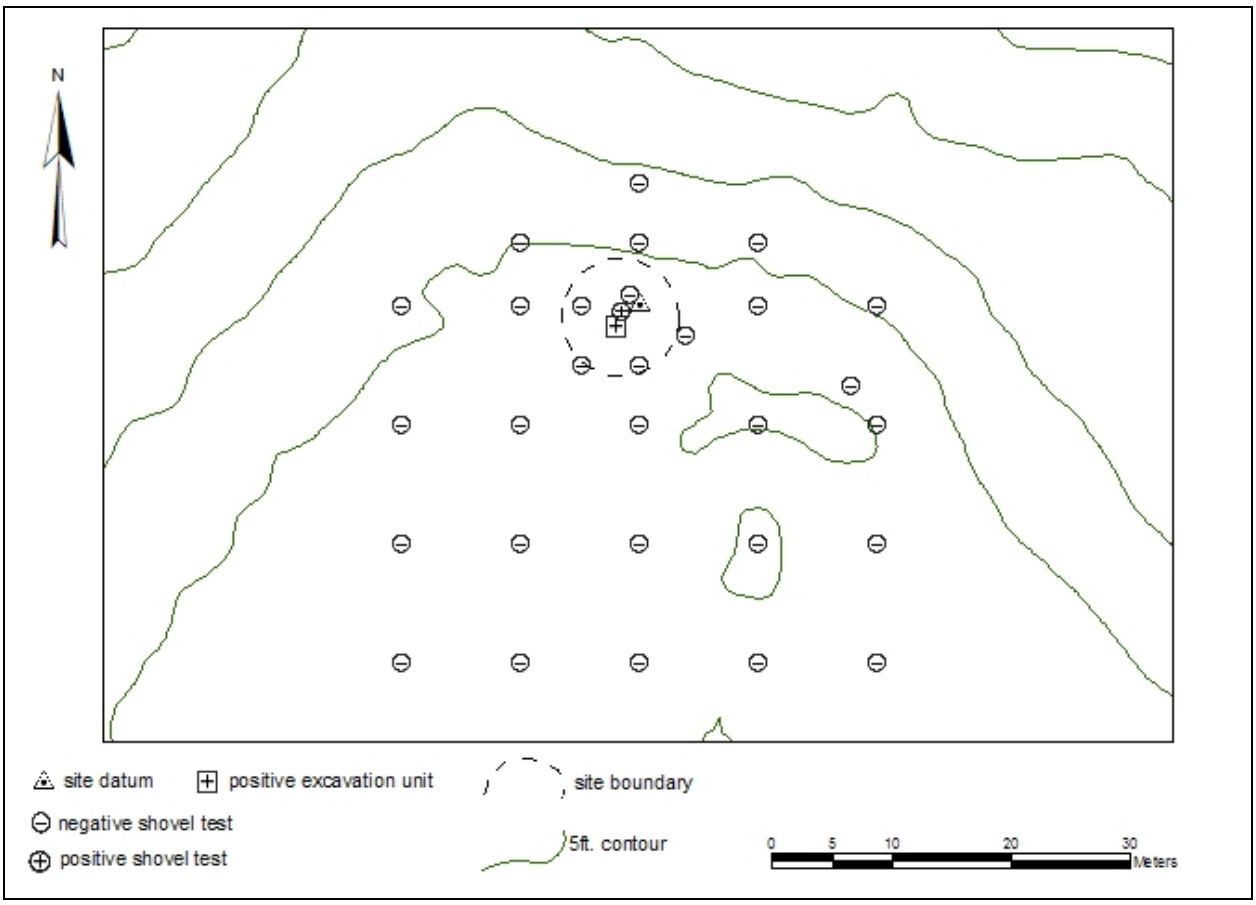

Figure 108. Site map of XMH-01213

XMH-01214
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-01214 is located on a southwest-northeast trending moraine. The nearest water source is a small, unnamed lake located 75m to the east. The view shed is limited due to vegetation and higher surrounding ridges. Visible landmarks include Donnelly Dome to the south, the Alaska Range to the southwest and Windy Ridge to the east. Surface visibility is estimated to be 50 percent.

Site XMH-01214 consists of three basalt flakes found on the surface. One basalt tertiary flake was found during Phase I survey, and two additional basalt tertiary flakes were found during Phase II evaluation. Both the survey and the evaluation were conducted during the 2005 field season. None of the surface artifacts were collected. Shovel tests were systematically placed throughout the site area at intervals of 10m. A total of 30 shovel tests were excavated at the

site (13 during Phase I and 17 during Phase II). None of the 30 test pits excavated at the site contained cultural materials. The depth of the shovel tests varied, but all were excavated to glacial till. Based on the results of the survey and testing, the site area is estimated to be approximately 10m x 13m.

Figure 109. General view of site XMH-01214, facing south

Because none of the shovel test pits excavated contained any cultural material, no test units were excavated at the site. Soil thickness varied 2-33cm across the site. A portion of the south/southwest facing edge of the landform has suffered from extensive wind erosion and showed no deposition at all. The center and northern portions of the landform showed some soil deposition, and in this area the soil averaged approximately 10cm in depth. Soil in this area of the landform consists of loosely compacted, organically rich, dark brown loess to an average depth of 4cm. Below this organic horizon, the soil consists of moderately compacted, light brown sandy loess to an average depth of 10cm. Glacial till is encountered below this sandy loess deposit and consists of yellow brown sandy loess with an extremely high density of gravels and cobbles.

Findings

Pedestrian survey and 30 shovel tests produced a total of only three surface artifacts. The paucity of cultural material indicates that XMH-01214 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

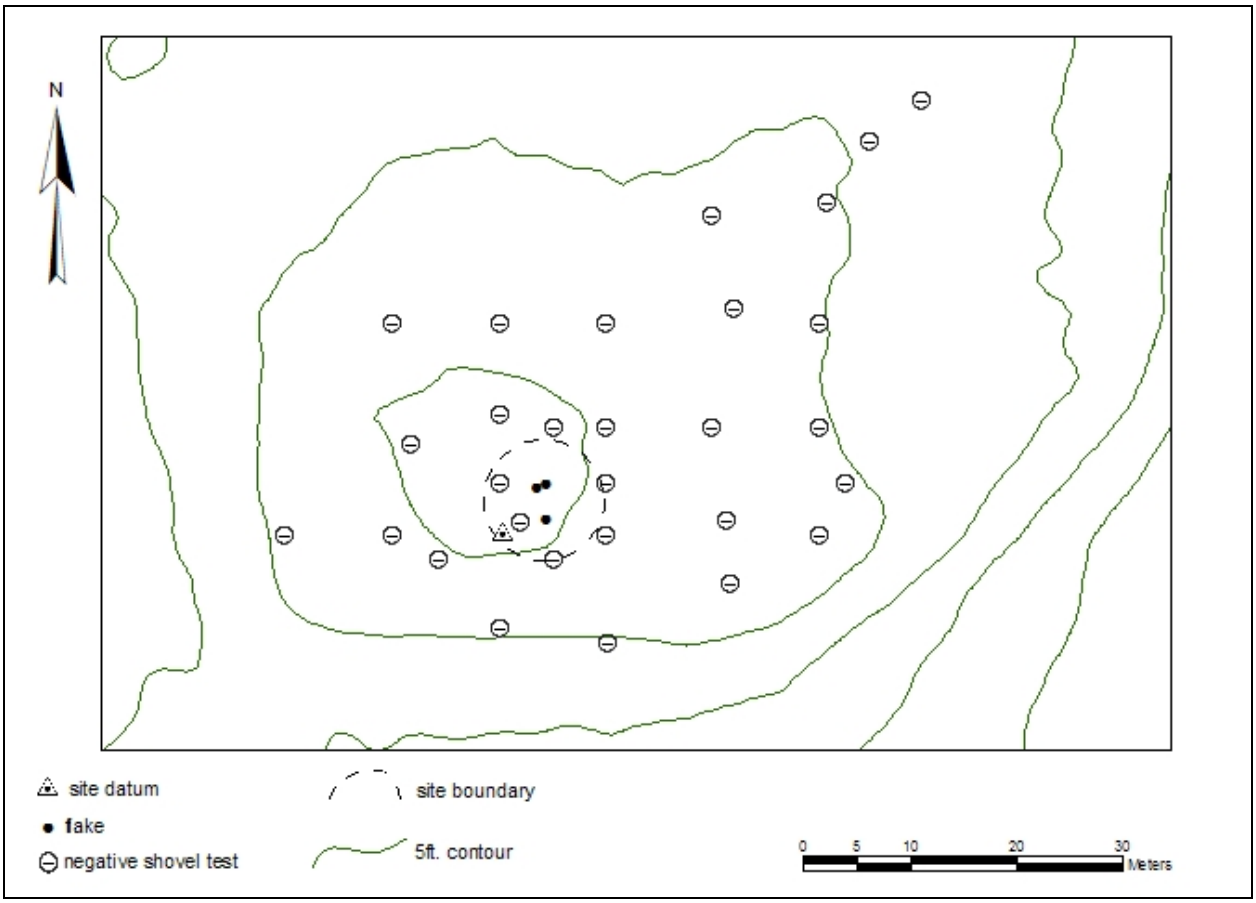

Figure 110. Site map of XMH-01214

XMH-01215
Latitude:
Longitude:
Determination: Eligible

Site XMH-01215 is located on a prominent knoll. The nearest water source is a small, unnamed pond located 50m to the southeast. The view shed at the site is a full 360°. Visible landmarks include Windy Ridge to the east, the tip of Donnelly Dome to the south, the Alaska Range to the southwest, the Delta River to the west and Twin Lakes to the northwest. Surface visibility at the site is estimated to be 75 percent.

Site XMH-01215 consists of 21 flakes and one flake tool. Six flakes were found on the surface and an additional 15 flakes were found subsurface in either shovel tests or test units. One rhyolite flake tool was found on the surface and was collected. The flake tool is 3.2cm long, 2.6cm wide and weighs 7g. Chert, basalt, rhyolite and quartz were present among the debitage. Shovel tests were systematically placed throughout the site area at intervals of 10m. Two shovel tests were placed at 5m intervals near the surface concentration of artifacts. A total of 23 shovel tests were excavated. The depth of shovel tests varied, but all were excavated to glacial till. One shovel test was positive, yielding one artifact from a depth of 0-10cmbs.

Figure 111. General view of site XMH-01215, facing northeast

One 1m x 1m test unit was excavated at site XMH-01215. The unit was placed on the slope of the landform, near the positive shovel test, northeast of the site datum. The unit was excavated in 10cm levels until glacial till was reached throughout the entire unit floor. The test unit contained 14 artifacts recovered from levels 1, 2 and 3. All 14 of the artifacts were found 0-10cm below the surface but, due to the slope of the unit, they were scattered throughout the 3 levels. No subsurface features were identified at the site.

Soil thickness varied 0-34cm across the site. The site has sustained a considerable amount of wind erosion and most of the site showed little soil deposition, averaging only 10cm in most areas. The soil in these areas consists of loosely compacted, dark brown, organically rich loess to an average depth of 5cm. Below this organic horizon, the soil consists of moderately compacted red brown loess with a low density of gravels and cobbles. Glacial till is encountered below this loess deposit and consists of loosely compacted yellow brown sandy loess with a high density of gravels and cobbles. Along the far eastern portion of the site grid, 2 shovel tests showed some deeper loess deposits, averaging 30cm. The soil in this area consists of loosely compacted, dark brown, organically rich loess to an average depth of 5cm. Below this organic horizon, the soil consists of moderately compacted yellow brown loess with a low density of gravels and cobbles. Glacial till is encountered below this loess deposit and consists of yellow brown sandy loess with a high density of gravels and cobbles. Also, several areas across the site are barren and have been eroded down to a point where glacial till is visible at the surface.

Findings

A total of 22 artifacts were recovered from XMH-01215. Seven were recorded from the surface and 15 were recovered from below the surface. The materials at the site include chert, basalt, rhyolite and quartz. Based on the results of survey and testing the site area is estimated at approximately 13m x 10m.

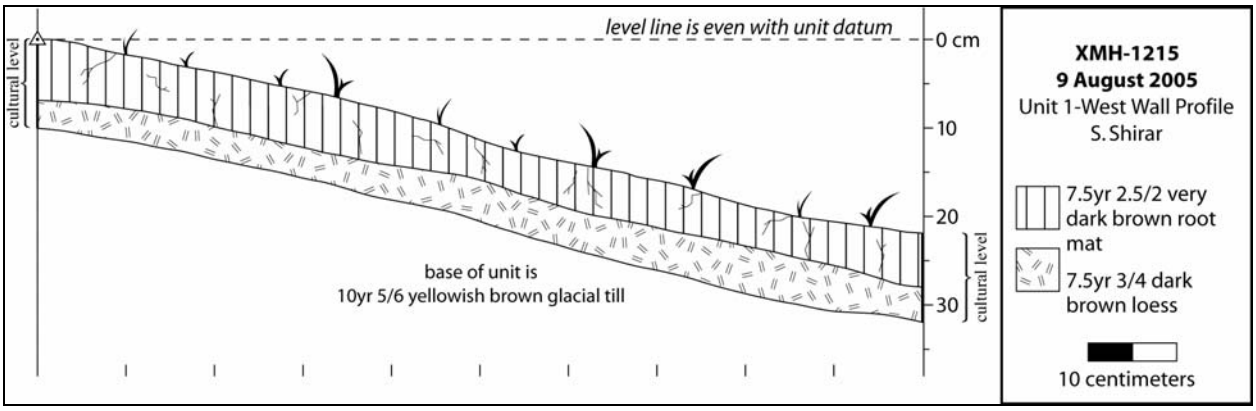

Figure 112. Soil profile of test unit from XMH-01215

Site XMH-01215 is a small lithic site with both surface and buried components. With buried cultural material, XMH-01215 is in an excellent position to contribute to our knowledge of prehistoric land use patterns. *In situ* artifacts and soil stratigraphy indicate datable material and diagnostic artifacts may be present and could be used to date human use of the site, potentially contributing to a broader regional context. Site XMH-01215 is an intact archaeological site with integrity. The site is eligible for inclusion in the National Register of Historic Places under criterion D for its potential to yield information important in understanding the prehistory of the region.

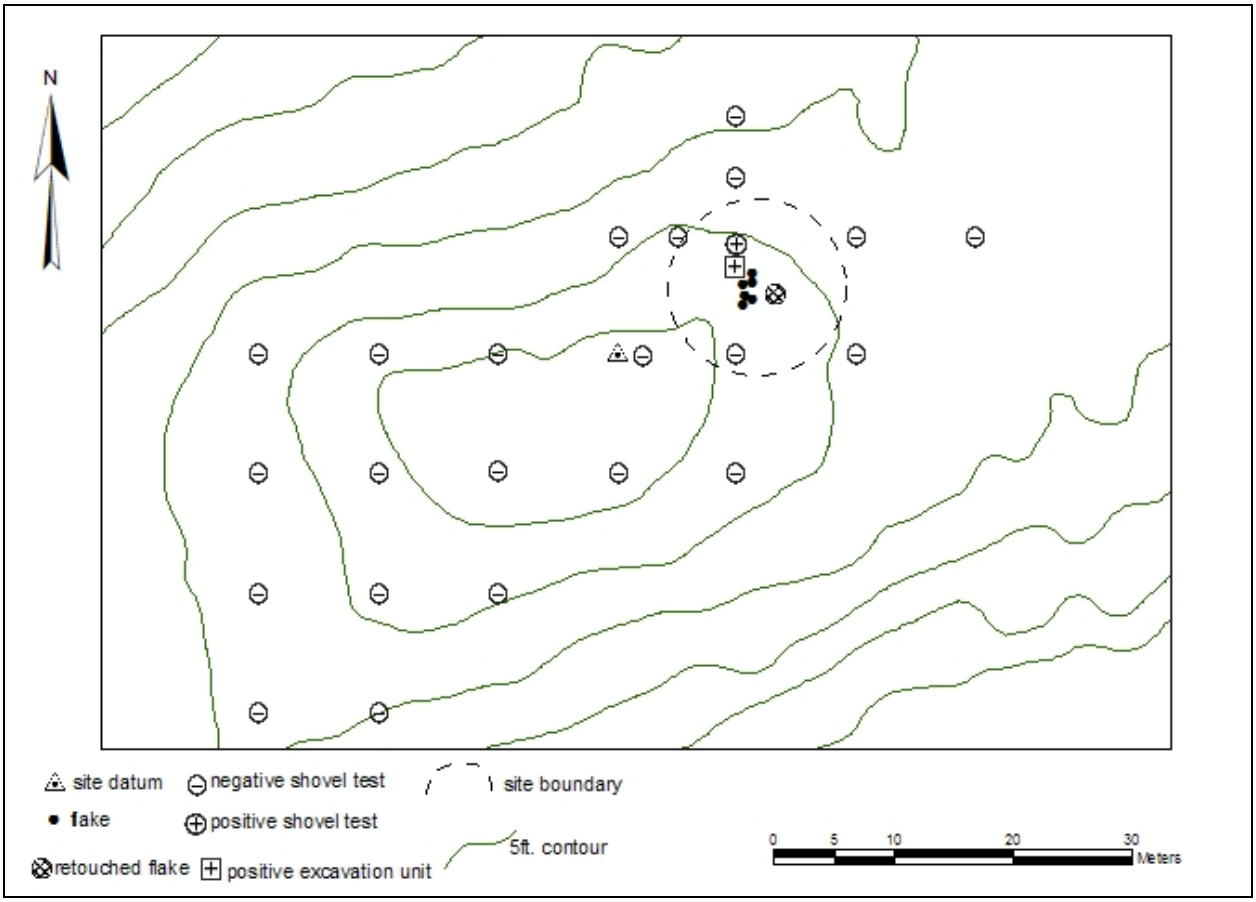

Figure 113. Site map of XMH-01215

XMH-01270
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-01270 is located on the northern end of a southwest/northeast trending moraine. Donnelly Dome can be seen to the southeast, and the Alaska Range to the southwest. There are approximately a dozen lakes to the north; the closest is approximately 300m away. The view shed at the site is a full 360°. The Delta River is located to the west, and the Granite Mountains to the east. Surface visibility at the site is 100 percent; the site is windswept barrens devoid of soil deposition.

Site XMH-01270 was identified during the 2005 field season and consists of one artifact. One tertiary chert flake was discovered on the surface during the Phase I survey. No additional artifacts were found during the later Phase II evaluation of the site. No artifacts were collected.

For this evaluation, no shovel tests were excavated due to the lack of soil deposition on the moraine. Instead, the surface of the landform was intensively examined. No cultural materials were found during the course of this examination. It appears that the flake found during Phase I is an isolated artifact.

Figure 114. General view of site XMH-01270, facing north

Findings
Pedestrian survey and Phase II evaluation produced only one surface artifact. The paucity of cultural material indicates that XMH-01270 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

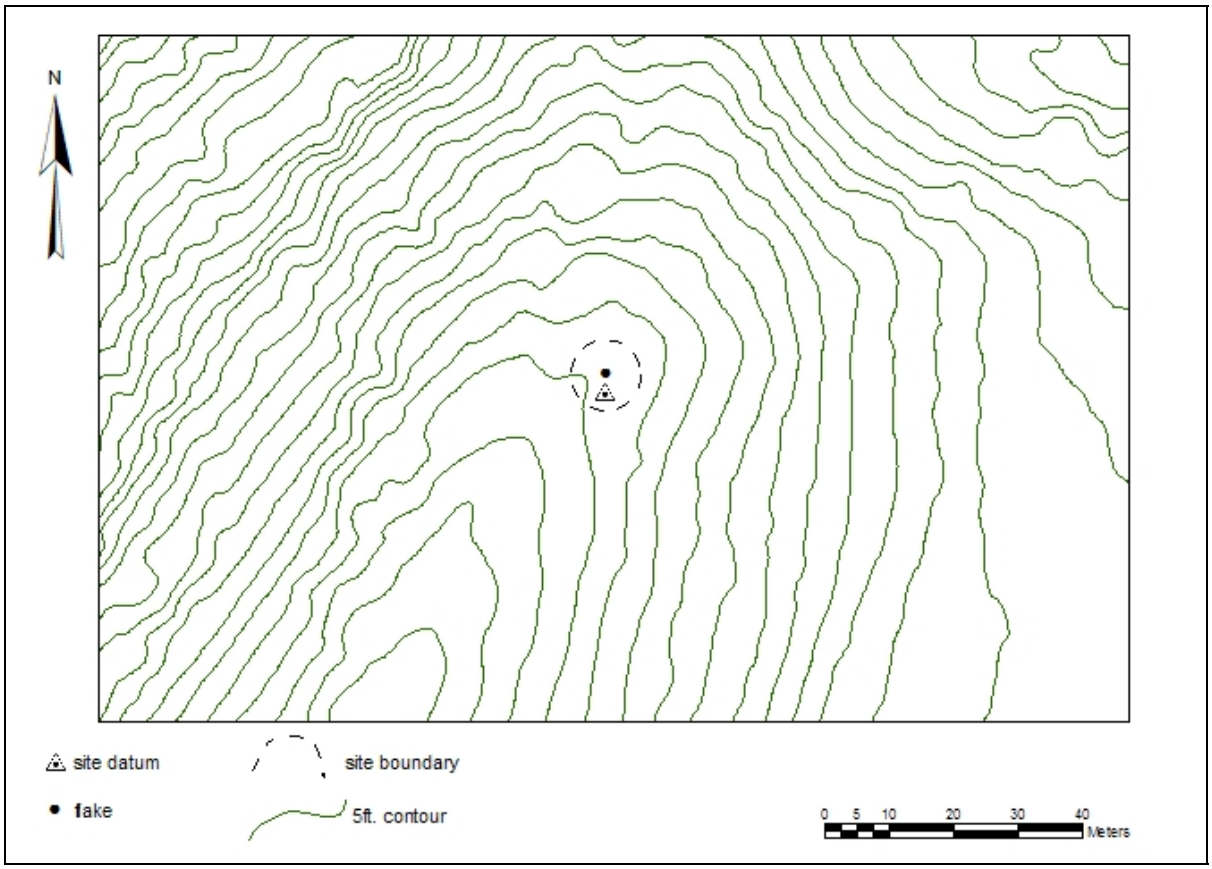

Figure 115. Site map of XMH-01270

XMH-01271
Latitude:
Longitude:
Determination: Not Eligible

Site XMH-01271 is located on a southwest/northeast trending moraine. Donnelly Dome can be seen to the east, and the Alaska Range to the south and southwest. The view shed at the site is a full 360°. The Delta River is located to the west, and the Granite Mountains to the east. Surface visibility at the site is 100 percent; the site is windswept barrens devoid of soil deposition.

Site XMH-01270 was identified during the 2005 field season and consists of one artifact. One tertiary chert flake was discovered on the surface during the Phase I survey. No additional artifacts were found during the later Phase II evaluation of the site. No artifacts were collected.

For this evaluation, no shovel tests were excavated due to the lack of soil deposition on the moraine. Instead, the surface of the landform was intensively examined. No cultural materials were found during the course of this examination. It appears that the flake found during Phase I is an isolated artifact.

Findings
Pedestrian survey and Phase II evaluation produced only one surface artifact. The paucity of cultural material indicates that XMH-01271 does not contain additional information that is

important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

Figure 116. General view of site XMH-01271, facing north

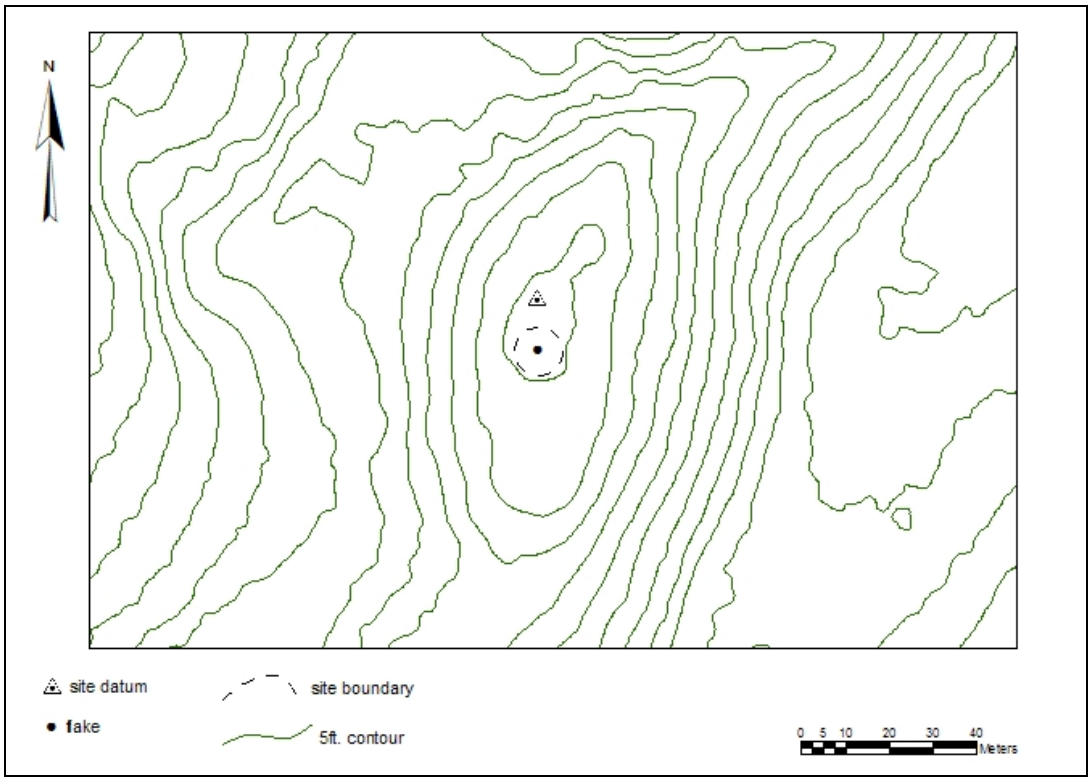

Figure 117. Site map of XMH-01271

5.2 Upgrade Vehicle Access at Bolio Lake

Bolio Lake is stocked with fish and is a popular recreation area for the military, civilian and local residents. The lake is also used during the winter months for various tests by the Cold Regions Test Center (CRTC), which has their main facility nearby. Currently, there is a trail that loops from the Wahlgren Highway around the north end of the lake to access a picnic area and canoe launch on the west shore. Because the lake has receded in recent years, a network of vehicle tracks and ruts is being created between the trail and the current lake shore. A small inlet stream (less than 1m wide) is also being eroded and disturbed by this uncontrolled vehicle access. Repair of the trail and access control in this shore area is needed to prevent further damage and erosion. The total project area is approximately 5.1 acres.

The proposed project involves upgrading the existing lake access trail by placing six inches of gravel over geo-textile material, blocking one of two access points off the Wahlgren Highway and providing barriers and signs to direct traffic onto the trail. A gate will be installed to allow CRTC to access the lake from the north shore during winter. Rehabilitation of the tracked and rutted area will be accomplished by ripping the soil that has been compacted and letting the area re-seed naturally. This is primarily a wetland area and commercially available grass seed mixes are inappropriate. Willow fascines may be installed during spring if needed. The stream crossing will be hardened with a standard low water crossing design incorporating larger-sized rock, shallow approaches and very little fine material.

5.2.1 Bolio Lake Results/Summary

In July 2005 the Bolio Lake access upgrade and repair project location was investigated by a crew of four archaeologists employed by the CEMML. No historic properties were identified by visual inspection or shovel testing within the area of potential effect. As a result, USAG-AK has determined that there are no historic properties located within the Bolio Lake upgrades and repairs project area. All other previously recorded archaeological sites or historic properties at the Donnelly Training Area fall outside of the proposed project area. Based on the information presented above, USAG-AK has determined that no historic properties will be affected by the proposed project.

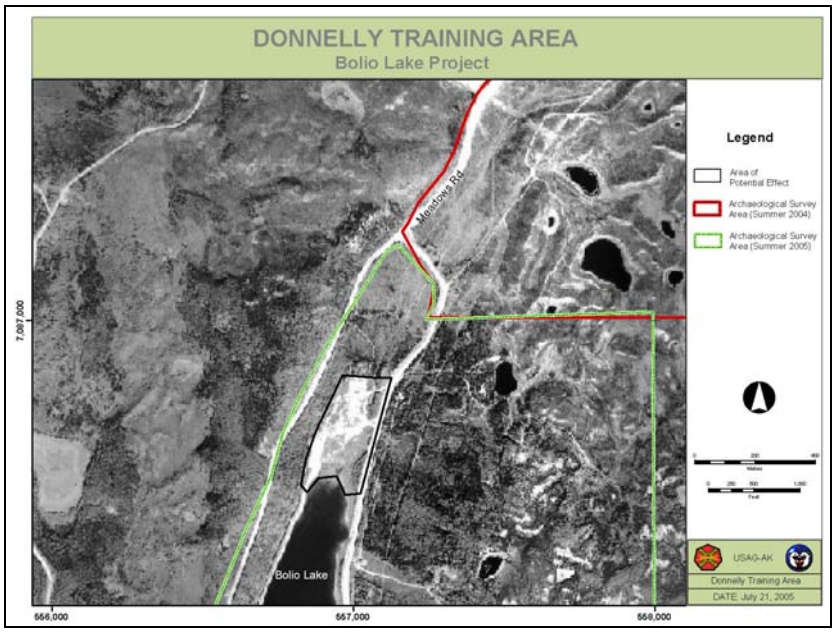

Figure 118. Project area for Bolio Lake Upgrades and Repairs

5.3 Designation of Three Engineer Digging Sites

USAG-AK has proposed to designate three areas within DTA East as engineer digging sites, or "sandboxes." These areas would be set aside for repeated digging operations and would be allowed to remain disturbed. The purpose of these sandbox sites is to provide areas where engineer companies can operate heavy equipment such as bulldozers, graders and backhoes. These companies need to gain experience constructing trench systems, tank traps, hull-down positions and other large-scale digging projects. Designation of dedicated digging areas will decrease the number of areas that are disturbed for this type of training.

Two of the sandbox sites will be designated at existing engineer training locations at Firing Point (FP) Audrey and FP Mark. These two locations will continue to be used within their current boundaries and will not be expanded. FP Audrey and Mark are appropriate locations because engineer companies are often associated with the artillery units that currently use the Firing Points. A third sandbox location is required, however, because FP Audrey and Mark are not of sufficient size to construct a tank trap and FP Audrey is within the Collective Training Range, which creates conflicts in scheduling.

The third designated sandbox site will be located in Training Area 49, in the vicinity of Observation Point (OP) 3 and the Main Supply Route. This area was formerly dominated by black spruce and aspen prior to the 1999 Donnelly Flats Fire. The area is currently vegetated by aspen, willows, shrubs and grasses. The terrain is very level and flat, which will minimize erosion potential.

All three of the proposed sandbox locations are in areas that have been surveyed for cultural resources. No known sites are located within the boundaries of any of the three proposed training locations. Companies training within the FP Audrey and Mark areas will be limited to the existing disturbed areas. Once finalized the third area, in the vicinity of OP3 will be cleared to the size indicated on Figure 5 (approximately 4 acres). Once cleared, no digging, trenching or other ground disturbing activities will be permitted outside of the existing disturbed area at any of the three sandbox locations.

5.3.1 Three Engineer Digging Sites Section 106 (NHPA) Inventory

The areas encompassing the proposed sandbox locations at FP Audrey and FP Mark were surveyed for cultural resources prior to 2005. The area encompassing the proposed sandbox location in OP3 was surveyed in 2005. This inventory work was completed by crews of archaeologists employed by the Center for Environmental Management of Military Lands (CEMML, Colorado State University). CEMML archaeologists William Hedman (2002) and Aaron Robertson (2003-2005) and Julie Raymond-Yakoubian (2005) were the supervising archaeologists for these inventories.

Pedestrian survey and subsurface testing did not identify any cultural resources in any of the three proposed project areas. There are no known sites located within 500 meters (m) of the proposed FP Audrey sandbox location. There are four sites located approximately 500m from the proposed FP Mark sandbox location. There are no known sites located within 500m of the proposed OP3 sandbox location.

5.3.2 Three Engineer Digging Sites Cultural Resources

There are no known archaeological sites located within any of the three areas of potential effect. Sites XMH-00935, XMH-00936, XMH-00937 and XMH-00982 are near, but outside of, the area of potential effect for the proposed FP Mark site. None of these four sites will be affected by the proposed project, but each site is briefly described below. Therefore, no historic properties will be affected by the proposed activities.

XMH-00935
Site XMH-00935 is located on a long, low ridge that runs north-south. Sites XMH-00936, XMH-00937 and XMH-00982 are also on the same ridge. The nearest water source is Mark Lake, which is located 550m to the north. The view shed at the site is approximately 270º, with vegetation blocking views to the north. The Alaska Range is visible to the southwest, Donnelly Dome to the south and Windy Ridge to the southeast. Less than five percent of the surface is visible.

Site XMH-00935 consists of one brown-gray chert microblade found during phase I investigations in 2002 (Hedman et al. 2003). Shovel tests were systematically placed throughout the site area at intervals of 10m during the 2005 evaluation. A total of 24 new shovel tests were excavated. The depths of the shovel tests varied, but all were excavated to glacial till. None of the 24 shovel tests were positive and no new artifacts were found during the 2005 evaluation. Based on the results of the survey and testing, the site area is estimated at approximately 5m x 5m.

Findings
Site XMH-00935 was evaluated during the 2005 field season and was determined not eligible for listing in the NRHP (See Section 5.1 this report). Pedestrian survey and 24 shovel tests produced a total of only one artifact. This finding suggests that XMH-00935 is an isolated find.

XMH-00936
Site XMH-00936 is located on a long, low, north-south trending ridge. Sites XMH-00935, XMH-00937 and XMH-00982 are located further south on the same ridge. The northern portion of the site is elevated approximately 2m higher than the southern portion. Mark Lake is the nearest water source, located 450m to the north. The view shed is a full 360º, with the Delta River and Alaska Range visible to the west, Donnelly Dome to the south and the Granite Mountains to the east. Surface visibility is approximately 15 percent.

Site XMH-00936 consists of three artifacts. Three tertiary, dark gray chert flakes were found on the surface during a 2002 Phase I survey (Hedman et al. 2003). Shovel tests were systematically placed throughout the site area at intervals of 10m during the 2005 evaluation. A total of 32 new shovel tests were excavated. The depths of the shovel tests varied, but all were excavated to glacial till. None of the 32 shovel tests were positive and no new artifacts were found during the 2005 evaluation. Based on the results of the survey and testing, the site area is estimated at approximately 40m x 30m.

Findings
Site XMH-00936 was evaluated during the 2005 field season and was determined not eligible for listing in the NRHP (See this Section 5.1 report). Pedestrian survey, 32 shovel tests and two 1m x1m test excavation units produced a total of only three surface artifacts.

XMH-00937
Site XMH-00937 is found on a long, low, north-south trending ridge. Sites XMH-00935, XMH-00936, and XMH-00982 are also located on this ridge. Mark Lake is located 600m to the north and is the nearest water source. The view shed at the site is approximately 270º with views to the north blocked by vegetation. The Alaska Range is visible to the west, Donnelly Dome to the south and the Granite Mountains to the east. Surface visibility is less than 15 percent.

Site XMH-00937 consists of five chert flakes found in a buffalo wallow during 2002 Phase I investigations (Hedman et al. 2003). Only one flake was relocated in 2005. Shovel tests were systematically placed throughout the site area at intervals of 10m during the 2005 evaluation. A total of 39 new shovel tests were excavated. None of the 39 shovel tests were positive and no new artifacts were found during the 2005 evaluation. The depths of the shovel tests varied, but all were excavated to glacial till. Based on the results of the survey and testing, the site area is estimated at approximately 10m x 10m.

Findings
Site XMH-00937 was evaluated during the 2005 field season and was determined not eligible for listing in the NRHP (See Section 5.1 this report). Pedestrian survey and 39 shovel tests produced a total of five surface artifacts.

XMH-00982
Site XMH-00982 is located on a long, low, north-south trending ridge. Sites XMH-00935, XMH-00936, and XMH-00937 are located on this same ridge. The view shed at the site is approximately 270º with views to the northeast blocked by vegetation. The Alaska Range is visible to the west, Donnelly Dome to the south and the Granite Mountains to the east. Surface visibility is estimated to be less than one percent.

Site XMH-00982 consists of a quartz biface found in a shovel test pit during 2002 Phase I investigations. This was one of four test pits, and the only positive one, and was excavated along the southern end of the landform in 2002 (Hedman et al. 2003). The biface, which is 15cm long, was collected. Shovel tests were systematically placed throughout the site area at intervals of 10m and 5m during the 2005 evaluation. A total of 36 new shovel tests were excavated. The depths of the shovel tests varied, but all were excavated to glacial till. None of the 36 shovel tests excavated during the evaluation were positive and no new artifacts were found. Based on the results of the survey and testing, the site area is estimated at approximately 5m x 5m.

Findings
Site XMH-00982 was evaluated during the 2005 field season and was determined not eligible for listing in the NRHP (See Section 5.1 this report). Pedestrian survey, 36 shovel tests and two 1m x 1m excavation units produced a total of only one artifact. This finding suggests that XMH-00982 is an isolated find.

5.3.3 Three Engineer Digging Sites Results/Summary
Pedestrian survey and subsurface testing of the three proposed areas of potential effect have not identified any National Register eligible cultural resources. All other previously-recorded historic properties in the Donnelly Training Area also fall outside the project areas. Based on the above information, USAG-AK has determined that no historic properties will be affected by the proposed activities and seeks your concurrence on this finding.

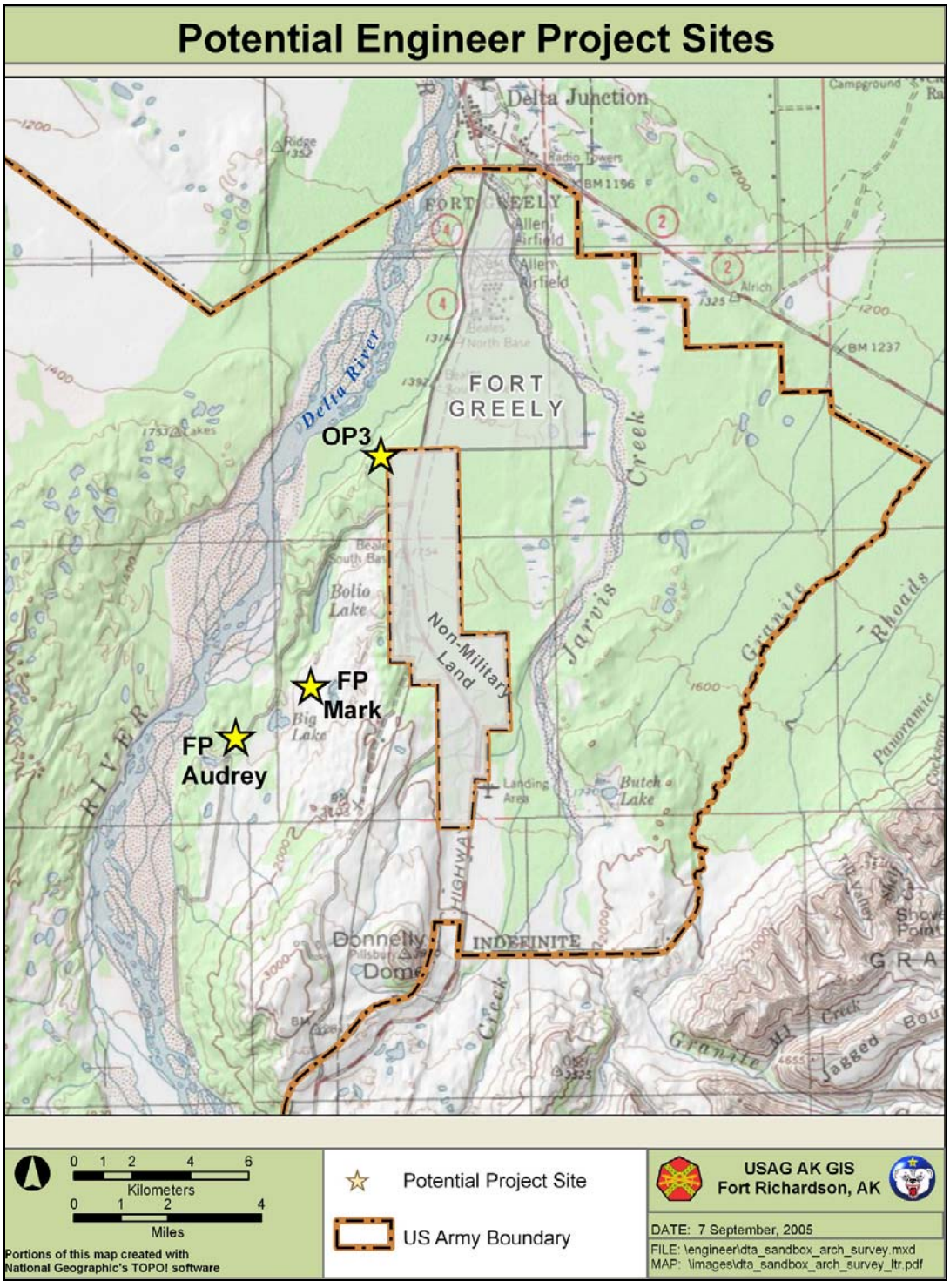

Figure 119. Map showing the three proposed engineer digging areas or “sandboxes”

Map removed

Figure 120. Map showing location of FP Mark APE and archaeological sites

5.4 Battalion Forward Operating Base Upgrades

USAG-AK has proposed to upgrade the Battalion Forward Operating Base (FOB) in the Donnelly Training Area East. The proposed project will improve approximately two acres of unimproved trails with a network of hardened trails and tent pads. These improvements will be accessed via the existing FOB or from Observation Point Road. The purpose of this project is to improve access and control erosion by confining bivouac activities to hardened surfaces through grading and the installation of geotextile and fill material.

5.4.1 Battalion FOB Section 106 (NHPA) Inventory

In August of 2005 the proposed FOB upgrades were pedestrian surveyed by a crew of five archaeologists employed by the CEMML. Julie Raymond-Yakoubian was the supervising archaeologist for this work.

The proposed project is located in a flat area between the Richardson Highway to the east and Observation Point Road to the west. The vegetation in the project area is composed of small diameter aspen and scattered black spruce with an under story of berry bushes, grasses and mosses. Portions of the project area had been previously disturbed by vegetation clearing, trail use and other troop training activities. Pedestrian survey and subsurface testing did not identify any cultural resources in the proposed FOB upgrade project area.

5.4.2 Battalion FOB Cultural Resources

There are two known sites located within 500m of the proposed FOB upgrade. Sites XMH-00273 and XMH-00287 have been determined not eligible for listing in the National Register of Historic Places based on re-investigations of the sites in 2004.

XMH-00273

Site XMH-00273 is located on a glacial outwash terrace that over looks the Delta River, approximately 900m west of the Richardson Highway. The site consists of two retouched flakes, several flakes of different material types and a larger cobble core on the surface (Holmes 1979: 84-85). This site was previously determined not eligible for listing in the National Register of Historic Places. The location on the original AHRS card is off by several hundred meters and the correct UTM coordinates for the site are:

This site is located approximately 200m southwest of the project area.

XMH-00287

Site XMH-00278 is located on a glacial outwash terrace that over looks the Delta River, approximately 600m west of the Richardson Highway. The site consists of a retouched flake and several flakes of different material types on the surface of a heavily disturbed area (roads, power lines, gravel pits and clearing) (Holmes 1979:86). The location on the original AHRS card is off by several hundred meters and the correct UTM coordinates for the site are:

This site is located approximately 150m northwest of the project area.

Results/Summary

Pedestrian survey and subsurface testing of the proposed project area did not identify any National Register eligible cultural resources. There are two sites located within the vicinity of the proposed project. USAG-AK has determined that sites XMH-00273 and XMH-00287 are not eligible for the National Register and seeks your concurrence on these findings. Both of these sites are located outside of the project area. All other previously-recorded historic properties in the Donnelly Training Area also fall outside the project area. Based on the above information, USAG-AK has determined that no historic properties will be affected by the proposed activities and seeks your concurrence with this finding.

5.5 Timber Sale on Donnelly Training Area

USAG-AK has proposed to sell approximately 10 acres of timber from the DTA East. This sale will occur during the winter of 2006, and the timber will likely be used as firewood because of its small diameter size. Usable dead spruce will be cut from an area approximately 130 acres in size (the actual total area cut will be approximately 10 acres). Trees will be cut using a chainsaw and will be dragged with a skidder. The wood will then be loaded onto pickup trucks and hauled from the sale area.

5.5.1 Timber Sale Section 106 (NHPA) Inventory

In July 2005 USAG-AK cultural resources staff reviewed the proposed project and the existing literature on cultural resources within the DTA. A portion of the area encompassing the proposed timber sale was surveyed for cultural resources in August 2005. This inventory work was completed by a crew of five archaeologists employed by the CEMML. Julie Raymond-Yakoubian was the supervising archaeologist for this project.

5.5.2 Timber Sale Cultural Resources

There are two known sites located within 500 meters of the proposed timber sale area.

XMH-00296

Site XMH-00296 was identified in 1978 and consists of two chert flakes found on the surface (Holmes 1979). This site was revisited in 2005 and no new artifacts were located. Site XMH-00296 has not been evaluated for eligibility for listing in the National Register of Historic Places. This site is more than 100m north of Windy Ridge Road and is also approximately 100 feet higher in elevation than the roadbed.

This site falls outside of the area of potential effect for the proposed project and no further action is recommended at this time.

XMH-01221

Site XMH-01221 was identified during pedestrian survey in 2005. The site consists of several fragments of blue-green colored chert shatter and a large (approximately 7cm x 55cm) unifacially flaked chopping or scraping tool. The site is located on a small kame overlooking a pond to the north. The entire site area was burned in a forest fire several years ago and there are many downed trees. Site XMH-01221 has not been evaluated for eligibility for listing in the National Register of Historic Places.

This site falls outside of the area of potential effect for the proposed project and no further action is recommended at this time.

5.5.3 Timber Sale Results/Summary

Pedestrian survey and subsurface testing of a portion of the proposed project area did not identify any National Register eligible cultural resources. The remainder of the project area has a low potential for containing cultural resources. All other previously-recorded historic properties in the Donnelly Training Area also fall outside the project area. Based on the above information, USAG-AK has determined that no historic properties will be affected by the proposed activities and seeks your concurrence on this finding.

Map removed

Figure 121. Location of Timber Sale on DTA

5.6 Road Upgrade and Maintenance

USAG-AK has proposed to install signage and access controls and to perform regular maintenance on several gravel roads throughout the DTA. The roads proposed for regular maintenance and occasional installation of signage and access controls are Meadows Road, Windy Ridge Road and the Old Richardson Highway. Numerous training areas in DTA are accessed by these three gravel roads, including many of the Firing Points, Observation Points, the Cold Regions Test Center test facilities, the Bondsteel Combined Arms Live Fire Exercise Range, and the Collective Training Range. Regular maintenance is required of these roads to keep these training areas accessible. Additionally, with increased training and testing loads, added measures such as signs, flag poles and ditching are also required periodically.

USAG-AK is proposing to conduct regular road maintenance activities such as grading, pothole and side ditch repair, and snow plowing along the Meadows Road, Windy Ridge Road, Old Richardson Highway loop. USAG-AK is also proposing to occasionally install, as needed, additional signage and access control gates along this loop of roads. All work will be confined to within 50 feet of the existing road footprint.

5.6.1 Road Upgrade Section 106 (NHPA) Inventory

The entire length of the Meadows Road, Windy Ridge Road and Old Richardson Highway loop has been archaeologically surveyed at various times throughout the 2002, 2004 and 2005 field seasons (Figure X). At least 80m on both sides of each of these roads has been inventoried for historic properties, and for most of the loop, much more than 80m on either side has been investigated. This work was completed by crews of archaeologists employed by the CEMML. CEMML archaeologists Bill Hedman (2002), Aaron Robertson (2003 and 2005) and Julie Raymond-Yakoubian (2005) were the supervising archaeologists for these inventories.

5.6.2 Road Upgrade Cultural Resources

There are three known archaeological sites located in close proximity to the proposed project areas. Additionally, one site (XMH-00974) is located within the Windy Ridge Road area of potential effect. USAG-AK has determined that this site is not eligible for inclusion in the National Register of Historic Places (see this report). Sites XMH-00296, XMH-01206 and XMH-01222 are near, but outside of, the areas of potential effect for the Windy Ridge Road, Old Richardson Highway and Meadows Road projects, respectively. None of these three sites will be affected by the proposed maintenance activities or sign or access controls installation, and site XMH-00974 is not eligible for the National Register. Therefore, no historic properties will be affected by the proposed activities.

XMH-00296

Site XMH-00296 was identified in 1978 and consists of two chert flakes found on the surface (Holmes 1979). This site was revisited in 2005 and no new artifacts were located. This site is in the vicinity of the proposed activities along Meadows Road. Site XMH-00296 has not been evaluated for eligibility for listing in the National Register of Historic Places. This site is more than 100m north of Meadows Road and is also approximately 100 feet higher in elevation than the roadbed. This site falls outside of the area of potential effect for the project and no further action is recommended at this time.

XMH-00974

Site XMH-00974 is located on a heavily disturbed bench overlooking Lonestar Lake, which is 30m to the south. Windy Ridge Road runs across the middle of the site. The view shed at the site is estimated to be 90°. Visible landmarks include Donnelly Dome to the southeast, Windy

Ridge to the east and the Alaska Range to the southwest. Surface visibility at the site is estimated to be 25 percent.

This site was found during pedestrian survey in 2002. The site consists of three artifacts, all found on the surface. Artifacts include one chert flake, one quartz flake and a flake tool. The flake tool was collected from the site in 2002. No shovel tests were excavated at the site during this phase of investigations.

Findings
Site XMH-00974 was evaluated during the 2005 field season and was determined not eligible for listing in the NRHP (See Section 5.1 this report). Pedestrian survey and 31 shovel tests produced a total of only three surface artifacts. In addition, the site area is highly disturbed by the presence of Windy Ridge Road and associated pull off areas has compromised the integrity of the site.

XMH-01206
Site XMH-01206 is located on a north-south trending ridge, adjacent to Windy Ridge Road and west of the Trans-Alaska Pipeline. The view shed is restricted, due to high ridges obstructing the view in all directions, except to the northeast. The tops of Donnelly Dome and the Alaska Range are in view, and the extreme tops of the Granite Mountains can be seen. The nearest water source is a small unnamed pond, located approximately 50m to the west. Surface visibility at the site is estimated to be 75 percent. Alders, spruce, moss/lichen, labrador, and some cranberries have grown up on the site.

Site XMH-01206 was found through visual survey of the landform and consists of one piece of lithic debitage. This artifact is a tertiary chert flake and is gray with small tan inclusions. No shovel test pits were excavated at the site and no artifacts were collected from the site. This site is in the vicinity of the proposed activities along the Old Richardson Highway. Site XMH-01206 has not been evaluated for eligibility for listing in the National Register of Historic Places. This site is more than 50m west of the Old Richardson Highway and approximately 100 feet higher in elevation than the road. This site falls outside of the area of potential effect for the project.

XMH-01222
Site XMH-01222 is located on a small knoll and is surrounded by other knolls (both higher and lower in elevation). The area experienced forest fires in the recent past and vegetation in the area consists of mostly burned spruce trees with scattered birch and with a ground cover of mosses, lichens and grasses. The view shed is approximately 180° to the south, and Bolio Lake is visible in this direction.

This site consists of one large potential scraper, bifacially retouched along one edge recovered from a shovel test. This site has not been evaluated for eligibility for listing in the National Register of Historic Places. This site is in the vicinity of the proposed activities along Meadows Road, but is located more than 30m west of roadbed and is approximately 50 feet higher in elevation. This site falls outside of the area of potential effect for the project. No further action is recommended at this time.

5.6.3 Road Upgrade Results/Summary

Three known sites, XMH-00296, XMH-01206 and XMH-01222, are located in the vicinity of the proposed road maintenance and sign and access control installation activities, but are outside of the areas of potential effect. Site XMH-00974 is located within the area of potential effect for the proposed Windy Ridge Road activities. USAG-AK has determined that XMH-00974 is not eligible for the National Register. Therefore, no National Register eligible cultural resources have been identified within the areas of potential effect for the proposed activities. All other previously-recorded historic properties in the Donnelly Training Area also fall outside the project areas.

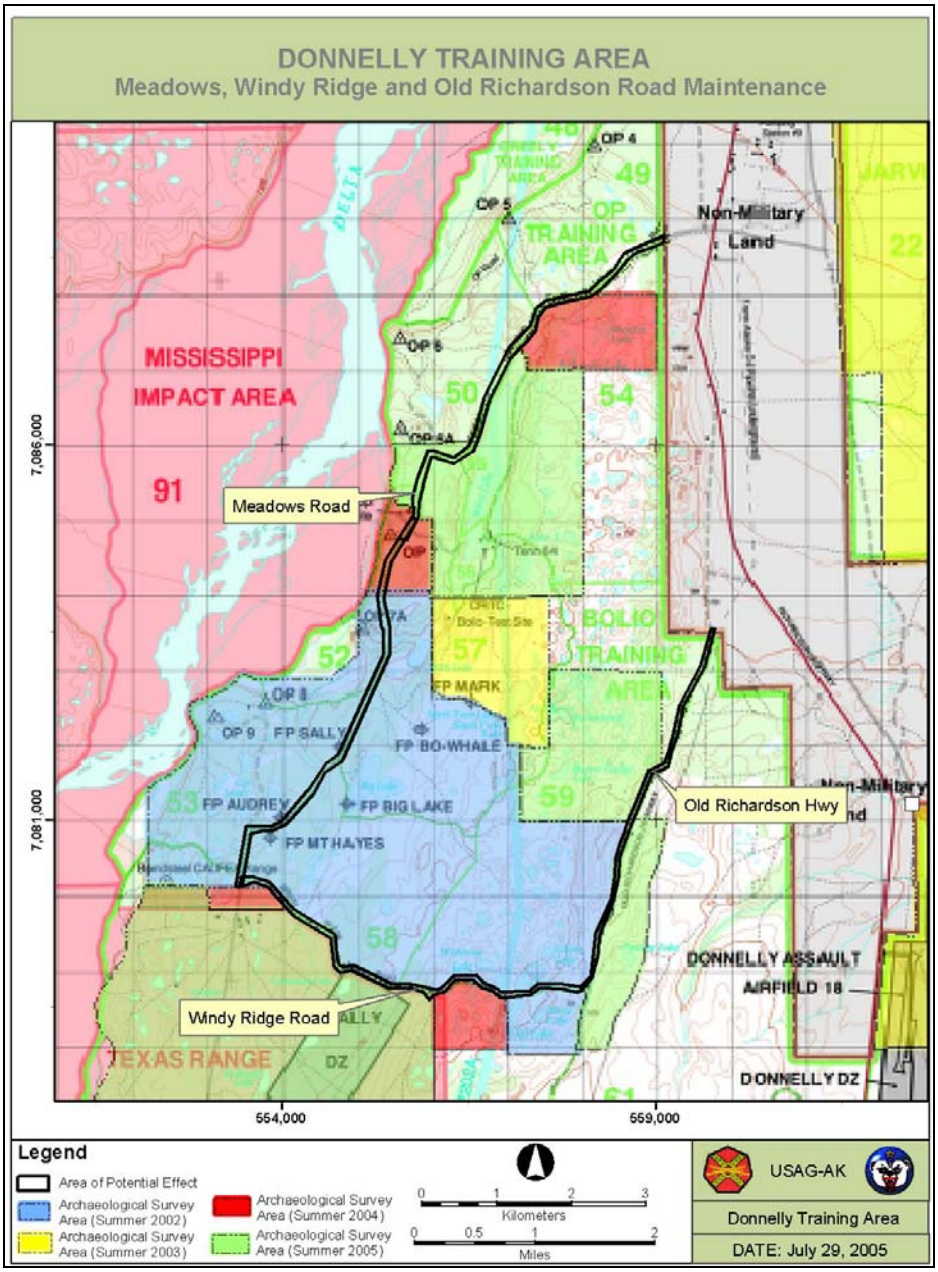

Figure 122. Map showing Meadows Road, Windy Ridge Road and the Old Richardson Highway

Map removed

Figure 123. Northern portion of Meadows Road area of potential effect

Map removed

Figure 124. Southern portion of Meadows Road area of potential effect

Map removed

Figure 125. Windy Ridge Road area of potential effect

Map removed

Figure 126. Old Richardson Highway area of potential effect

6.0 Survey and New Sites 2005

During the summer of 2005, five archaeological survey crews (each comprised of four archaeologists) employed by CEMML conducted a Phase I pedestrian survey for one major range development project (BAX), as well as several smaller projects on the DTA and Fort Greely.

10,118 acres were archaeologically surveyed on the DTA and 3816 acres were archaeologically surveyed on Fort Greely, Space Missile Defense Command (SMDC) during the 2005 summer field season, and a total of 39 new archaeological sites were identified. Eight of these sites are located on Fort Greely SMDC. These sites (XMH-01223, XMH-01224, XMH-01225, XMH-01226, XMH-01227, XMH-01228, XMH-01229 and XMH-01230) are described in Robertson et al. 2005. The following is a description of 23 of the new sites recorded in 2005. Sites XMH-01193, XMH-01202, XMH-01208, XMH-01213, XMH-01215, XMH-01270, and XMH-01171 are described in Section 5.1 of this report.

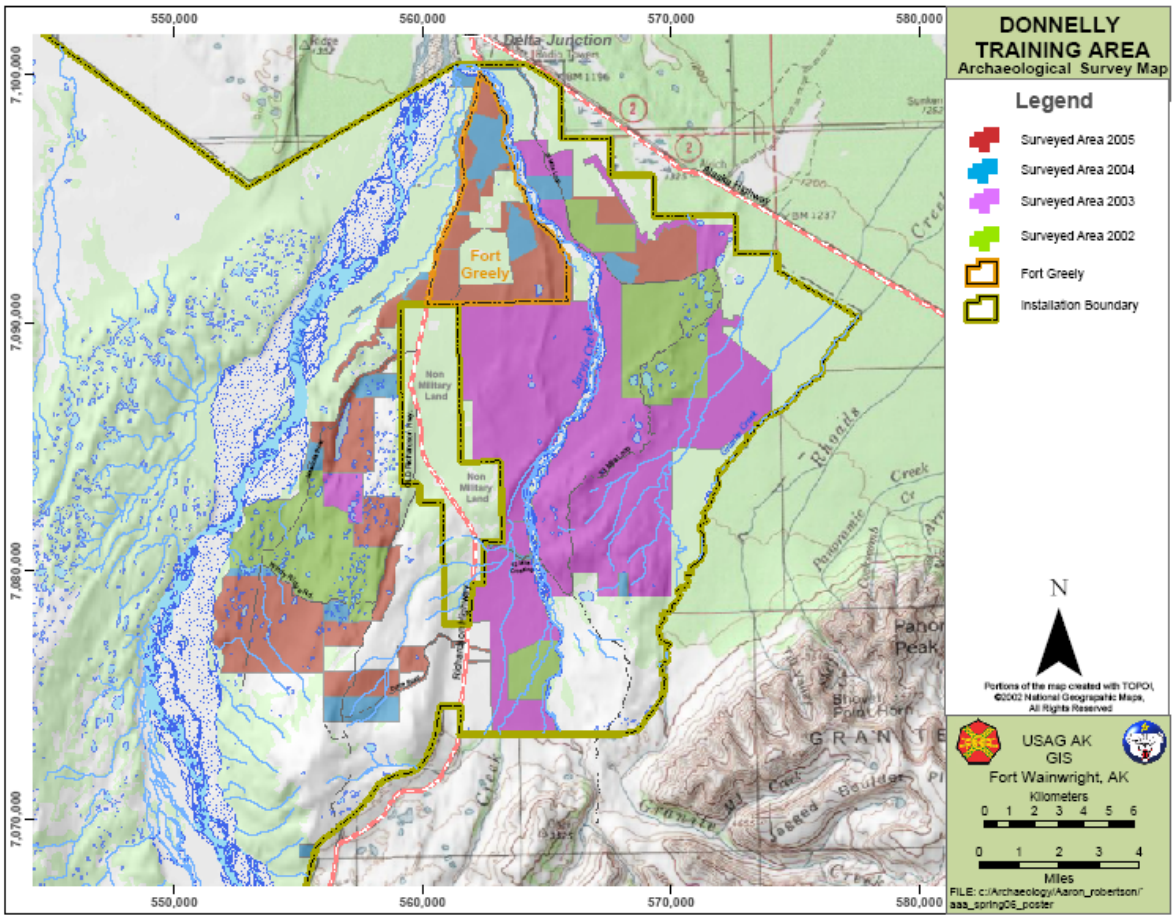

Figure 127. Areas surveyed on DTA 2002-2005

Table 3. Archaeological Sites Located in 2005

Site #	Easting	Northing	Project	NRHP Status
XMH-1193			BAX 2005	Not Eligible
XMH-1194			BAX 2005	Not Evaluated
XMH-1195			BAX 2005	Not Evaluated
XMH-1196			BAX 2005	Not Evaluated
XMH-1197			BAX 2005	Not Evaluated
XMH-1198			BAX 2005	Not Evaluated
XMH-1199			BAX 2005	Not Evaluated
XMH-1200			BAX 2005	Not Evaluated
XMH-1201			BAX 2005	Not Evaluated
XMH-1202			BAX 2005	Not Eligible
XMH-1203			BAX 2005	Not Evaluated
XMH-1204			BAX 2005	Not Evaluated
XMH-1205			BAX 2005	Not Evaluated
XMH-1206			BAX 2005	Not Evaluated
XMH-1207			BAX 2005	Not Evaluated
XMH-1208			BAX 2005	Eligible
XMH-1209			BAX 2005	Not Evaluated
XMH-1210			BAX 2005	Not Evaluated
XMH-1211			BAX 2005	Not Evaluated
XMH-1213			BAX 2005	Eligible
XMH-1214			BAX 2005	Not Eligible
XMH-1215			BAX 2005	Eligible
XMH-1216			BAX 2005	Not Evaluated
XMH-1217			BAX 2005	Not Evaluated
XMH-1218			BAX 2005	Not Evaluated
XMH-1219			BAX 2005	Not Evaluated
XMH-1220			BAX 2005	Not Evaluated
XMH-1221			ITAM 2005	Not Evaluated
XMH-1222			ITAM 2005	Not Evaluated
XMH-1223			SMDC 2005	Not Evaluated
XMH-1224			SMDC 2005	Not Evaluated
XMH-1225			SMDC 2005	Not Evaluated
XMH-1226			SMDC 2005	Not Evaluated
XMH-1227			SMDC 2005	Not Evaluated
XMH-1228			SMDC 2005	Not Evaluated
XMH-1229			SMDC 2005	Not Evaluated
XMH-1230			SMDC 2005	Not Evaluated
XMH-1270			BAX 2005	Not Eligible
XMH-1271			BAX 2005	Not Eligible

XMH-01194
Latitude:
Longitude:
Determination: Not evaluated

XMH-01194 is located on the southeast end of a northwest/southeast trending moraine. The nearest water source is a small unnamed pond located 75 meters to the southwest. The view shed at the site is poor due to higher surrounding ridges and is approximately 60° directly to the southwest. The tops of the Alaska Range can be seen just barely through the trees. Surface visibility at the site is estimated at 50 percent.

The site was found through systematic transecting of the area at 20m intervals. The site was found on the surface of the landform. In total, 14 tertiary flakes were located, eight rhyolite and six chert. No shovel tests were excavated at the site. No artifacts were collected from the site.

Recommendations
This site has initially been classified as a small lithic scatter; however, the site could potentially contain more cultural material. This site lies outside the area of potential effect (APE) for any currently proposed projects and was therefore not evaluated to determine its eligibility for inclusion in the National Register of Historic Places (NRHP). If future projects are proposed in the area, this site should be evaluated to determine its eligibility.

Figure 128. General view of site XMH-01194, facing west

XMH-01195
Latitude:
Longitude:

Determination: Not evaluated

XMH-01195 is located on a bench extending off the west end of a high ridge. The site is located in proximity to four different water sources: a large lake 100m to the northwest, a small pond 200m to the southwest, a large pond 50m to the south, and another pond 75m to the north. All four of the water sources are unnamed. The view shed at the site is 180°. Visible landmarks include the Alaska Range to the southwest, the Delta River to the west, and Donnelly Dome to the south. Surface visibility at the site is estimated to be 25 percent.

The site was located through systematic transecting of the area, with transects spaced at 20m intervals. The site was found on the surface. Artifacts consist of 13 chert flakes found on the surface. No shovel tests were excavated at the site. No artifacts were collected from the site.

Recommendations
This site has initially been classified as a small lithic scatter; however, the site could potentially contain more cultural material. This site lies outside the APE for any currently proposed projects and was therefore not evaluated to determine its eligibility for inclusion in the NRHP. If future projects are proposed in the area, this site should be evaluated to determine its eligibility.

Figure 129. General view of site XMH-01195, facing north

XMH-01196
Latitude:
Longitude:
Determination: Not evaluated

XMH-01196 is located on a narrow north/south trending moraine. The nearest water source is Dalon Lake located 500m to the northeast. The view shed at the site is approximately 180°.

Landmarks visible from the site include: the Granite Mountains to the south, Donnelly Dome to the southwest and the Alaska Range to the west. Surface visibility at the site is estimated at 10 percent.

The site was found by digging shovel tests. One line of shovel tests was staggered across the top of the landform at 5m intervals. A total of three shovel tests were excavated down to glacial till. Of the three, one shovel test was positive, yielding one fine-grained tertiary basalt flake at an estimated depth of 10-15cmbs. The artifact was collected.

Recommendations
This site has been initially classified as a buried site. This site lies outside the APE for any currently proposed projects and was therefore not evaluated to determine its eligibility for inclusion in the NRHP. If future projects are proposed in the area, this site should be evaluated to determine its eligibility.

Figure 130. General view of site XMH-01196, facing northeast

XMH-01197
Latitude:
Longitude:
Determination: Not evaluated

Site XMH-01197 is located on a bench that extends on a gradual uphill slope to the west and a steeper slope off to the east and south. The nearest water source is Dome Lake, located 2km to the south. The Alyeska pipeline is located approximately 400m to the east. The Granite Mountains are visible to the east and Donnelly Dome to the southeast. Vegetation at the site

consists of dwarf willow and alder bushes and there is no surface visibility.

At the site, two shovel tests were excavated at a distance of 20m from each other. The second shovel test yielded two black chert tertiary flakes at a depth of 0.5cm-33cmbs.

Recommendations
This site has initially been classified as a small lithic scatter; however, the site could potentially contain more cultural material. This site lies outside the APE for any currently proposed projects and was therefore not evaluated to determine its eligibility for inclusion in the NRHP. If future projects are proposed in the area, this site should be evaluated to determine its eligibility.

Figure 131. General view of site XMH-01197, facing east

XMH-01198
Latitude:
Longitude:
Determination: Not evaluated

Site XMH-01198 is located approximately 30m north of 33 Mile Loop Road. The view shed is 270° to the south, west and north. The Granite Mountains are visible to the south. The surface is a glacial knoll with slight disturbance from wind erosion and human activity. There is an ATV trail along the east side of the site. The terrain consists of dwarf scrub brush and scattered birch trees. There are moss/lichens on the surface. The nearest water source is Jarvis Creek, located approximately 3km to the west.

In total, eight flakes were found on the surface: six gray, black, or brown chert tertiary flakes, one black basalt tertiary flake, and one mottled green rhyolite tertiary flake.

Recommendations
This site has initially been classified as a small lithic scatter; however, the site could potentially contain more cultural material. This site lies outside the APE for any currently proposed projects and was therefore not evaluated to determine its eligibility for inclusion in the NRHP. If future projects are proposed in the area, this site should be evaluated to determine its eligibility.

Figure 132. General view of site XMH-01198, facing north

XMH-01199
Latitude:
Longitude:
Determination: Not evaluated

Site XMH-01199 is located on the most elevated landform along a ridge line running from south to north. The Old Richardson Highway is located approximately 300m to the west of the site and the Alyeska Pipeline is located approximately 150m north of the site. Visible landmarks include Donnelly Dome to the south, the Alaska Range to the west and south and the Granite Mountains to the east. The nearest water source is Pipeline Lake, located approximately 300m to the south. Vegetation at the site consists of patches of wind erosion exposure and lichens, alders, willows and scattered black spruce.

There was one artifact found on the surface: a gray/brown banded chert flake.

Recommendations
This site has been initially classified as an isolated find; however, the site could potentially contain more cultural material. This site lies outside the APE for any currently proposed projects and was therefore not evaluated to determine its eligibility for inclusion in the NRHP. If future projects are proposed in the area, this site should be evaluated to determine its eligibility.

Figure 133. General view of site XMH-01199, facing south

XMH-01200
Latitude:
Longitude:
Determination: Not evaluated

Site XMH-01200 is located on an east-west trending ridge, skewed slightly to the north. The view shed at the site is approximately 180°, with open views to the north and west. The Delta River is visible to the north and west, and the Alaska Range can be seen in the west. The closest water sources to the site are two small lakes located approximately 150m to the northwest. Surface visibility at the site is estimated to be 25 percent.

Site XMH-01200 was found through visual survey of the landform; only one artifact (a dull lavender-gray chert scraper) was found here. No shovel test pits were excavated at the site. No artifacts were collected from the site.

Recommendations

This site has been initially classified as an isolated find; however, the site could potentially contain more cultural material. This site lies outside the APE for any currently proposed projects and was therefore not evaluated to determine its eligibility for inclusion in the NRHP. If future projects are proposed in the area, this site should be evaluated to determine its eligibility.

Figure 134. General view of site XMH-01200, facing southwest

XMH-01201
Latitude:
Longitude:
Determination: Not evaluated

Site XMH-01201 is located just off the western shoreline of a medium-sized lake to the north of Donnelly Dome. It is located in a slightly depressed basin, but the view shed is still approximately 360°. Donnelly Dome is visible to the south, the Granite Mountains can be seen in the east, and the Alaska Range is visible in the southwest. The closest water source is the lake on whose shore the site sits; this is the only water source visible from the site. Surface visibility at the site is estimated to be 50 percent.

Site XMH-01201 was found through visual survey of the landform when a light gray chert biface was observed on the surface. This tool is 9cm long, 4cm wide and weighs 40g. No density plots were calculated at the site. No shovel test pits were excavated at the site. No artifacts were collected from the site.

Recommendations

This site has been initially classified as an isolated find; however, the site could potentially contain more cultural material. This site lies outside the APE for any currently proposed projects and was therefore not evaluated to determine its eligibility for inclusion in the NRHP. If future projects are proposed in the area, this site should be evaluated to determine its eligibility.

Figure 135. General view of site XMH-01201, facing east

XMH-01203
Latitude:
Longitude:
Determination: Not evaluated

XMH-01203 is located on a southeast-northwest trending ridge. The nearest water source is a small unnamed pond located 100m to the northwest. The view shed at the site is a full 360°. Visible landmarks include: the Alaska Range to the southwest, Donnelly Dome to the south-southeast, the Delta River to the west, and Windy Ridge to east. Surface visibility is estimated at 75 percent.

The site was found through systematic visual survey of the area, walking transects at 20m intervals. Artifacts include 10 tertiary flakes consisting of chert and basalt and one rhyolite projectile point. All of the artifacts were found on the surface. No shovel tests were excavated at the site. The projectile point was collected but the flakes were not.

Recommendations
This site has initially been classified as a small lithic scatter; however, the site could potentially contain more cultural material. This site lies outside the APE for any currently proposed projects and was therefore not evaluated to determine its eligibility for inclusion in the NRHP. If future projects are proposed in the area, this site should be evaluated to determine its eligibility.

Figure 136. General view of site XMH-01203, facing west

XMH-01204
Latitude:
Longitude:
Determination: Not evaluated

XMH-01204 is located on a small moraine. The view shed is approximately 180°, with clear sight lines to the south. The nearest water source is a long, unnamed lake to the east, at a distance of roughly 50m. The Alaska Range is visible to the southwest, and the top of Donnelly Dome is visible over a higher moraine located between it and the site. Surface visibility is estimated to be 75 percent. Moss/lichen, willow, and alder have grown on the site, and spruce trees are growing along the edges of the site.

XMH-01204 was found through visual survey of the landform, and consists of lithic debitage. Artifacts include: one light gray tertiary basalt flake; one gray, primary basalt flake; one dark gray tertiary chert flake; and one dark purple chert shatter. No shovel test pits were excavated at the site. No artifacts were collected from the site.

Recommendations
This site has initially been classified as a small lithic scatter; however, the site could potentially contain more cultural material. This site lies outside the APE for any currently proposed projects and was therefore not evaluated to determine its eligibility for inclusion in the NRHP. If future projects are proposed in the area, this site should be evaluated to determine its eligibility.

Figure 137. General view of site XMH-01204, facing east

XMH-01205
Latitude:
Longitude:
Determination: Not evaluated

XMH-01205 is located on the top of the north end of Windy Ridge. The view shed at the site is a full 360°. Landmarks visible from the site include: the Granite Mountains to the east, the Alyeska Pipeline to the east, Donnelly Dome to the south, the Alaska Range to the southwest, and the Delta River to the west. The closest water source to the site is Beaver Lodge Lake, located 500m to the northwest. Surface visibility at the site is estimated to be 75 percent.

Site XMH-01205 was found through visual survey of the landform and consists entirely of lithic debitage. Artifacts at the site include one dark gray tertiary chert flake, one banded tertiary chert flake, and one gray tertiary chert flake. No shovel test pits were excavated at the site. No artifacts were collected from the site.

Recommendations
This site has initially been classified as a small lithic scatter; however, the site could potentially contain more cultural material. This site lies outside the APE for any currently proposed projects and was therefore not evaluated to determine its eligibility for inclusion in the NRHP. If future projects are proposed in the area, this site should be evaluated to determine its eligibility.

Figure 138. General view of site XMH-01205, facing northeast

XMH-01206
Latitude:
Longitude:
Determination: Not evaluated

XMH-01206 is located on a north-south trending ridge, adjacent to Windy Ridge Road and west of the Alyeska Pipeline. The view shed is poor, due to high ridges obstructing the view in all directions except the northeast. The tops of Donnelly Dome and the Alaska Range are in view, and the extreme tops of the Granite Mountains can be seen. The nearest water source is a small unnamed pond, located approximately 50m to the west. Surface visibility at the site is estimated to be 75 percent. Alders, spruce, moss/lichen, labrador, and some cranberries have grown up on the site.

Site XMH-01206 was found through visual survey of the landform and consists of one piece of lithic debitage: a gray (with small tan inclusions) tertiary chert flake. No shovel test pits were excavated at the site. No artifacts were collected from the site.

Recommendations
This site has been initially classified as an isolated find; however, the site could potentially contain more cultural material. This site lies outside the APE for any currently proposed projects and was therefore not evaluated to determine its eligibility for inclusion in the NRHP. If future projects are proposed in the area, this site should be evaluated to determine its eligibility.

Figure 139. General view of site XMH-01206, facing south

XMH-01207
Latitude:
Longitude:
Determination: Not evaluated

XMH-01207 is located on top of a southwest-northeast trending ridge situated to the west of Windy Ridge. The view shed is estimated to be 180°, with clear visibility to the east, north, and south. The Granite Mountains are in view to the east, the top of Donnelly Dome can be seen to the southeast, and the Alaska Range is visible to the south. The nearest water is found in two small lakes, located below and east of the ridge, at a distance of approximately 75m. Surface visibility is limited; it is estimated to be 25 percent.

Site XMH-01207 was found through visual survey of the landform, and consists of lithic debitage. The only artifact found was one gray tertiary chert flake. No shovel test pits were excavated at the site. No artifacts were collected from the site.

Recommendations
This site has been initially classified as an isolated find; however, the site could potentially contain more cultural material. This site lies outside the APE for any currently proposed projects and was therefore not evaluated to determine its eligibility for inclusion in the NRHP. If future projects are proposed in the area, this site should be evaluated to determine its eligibility.

Figure 140. General view of site XMH-01207, facing south

XMH-01209
Latitude:
Longitude:
Determination: Not evaluated

XMH-01209 is located on a high, narrow, north-south trending ridge. The nearest water sources are Beaver Lodge Lake located 200m to the southwest and a small unnamed pond located 200m to the northwest. The view shed at the site is 180°. Visible landmarks include: the Alaska Range to the southwest, Windy Ridge to the east, the Delta River to the west, and South Twin Lake to the northwest. Surface visibility at the site is estimated at 75 percent.

The site was found through systematic visual survey, walking transects at 20m intervals through the site area. The only artifact found at the site was one dark gray chert projectile point fragment 3.5cm long, 3cm wide and weighing 11gm. The artifact was found on the surface and was not collected. No shovel tests were excavated at the site.

Recommendations
This site has been initially classified as an isolated find; however, the site could potentially contain more cultural material. This site lies outside the APE for any currently proposed projects and was therefore not evaluated to determine its eligibility for inclusion in the NRHP. If future projects are proposed in the area, this site should be evaluated to determine its eligibility.

Figure 141. General view of site XMH-01209, facing north

XMH-01210
Latitude:
Longitude:
Determination: Not evaluated

XMH-01210 is located on a low lying knoll. The nearest water sources are a small unnamed pond located 30m to the southeast and Beaver Lodge Lake located 75m to the north. The view shed at the site is limited due to the low elevation of the landform and higher surrounding ridges. Visible landmarks include: the tips of the Alaska Range to the southwest, Windy Ridge to the east, and the Delta River to the west. Surface visibility at the site is estimated to be 50 percent.

The site was found through systematic visual survey, walking transects spaced 20m apart through the area. The only artifact found at the site was one primary basalt flake found on the surface. No shovel tests were excavated at the site. The artifact was not collected.

Recommendations
This site has been initially classified as an isolated find; however, the site could potentially contain more cultural material. This site lies outside the APE for any currently proposed projects and was therefore not evaluated to determine its eligibility for inclusion in the NRHP. If future projects are proposed in the area, this site should be evaluated to determine its eligibility.

Figure 142. General view of site XMH-01210, facing west

XMH-01211
Latitude:
Longitude:
Determination: Not evaluated

XMH-01211 is located on a low north-south trending moraine. The nearest water source is Beaver Lodge Lake located 50m to the east. The view shed at the site is approximately 180° and is limited due to vegetation and higher surrounding ridges. Visible landmarks include: the Alaska Range to the southwest, the Delta River to the west, and Windy Ridge to the east. Surface visibility at the site is estimated to be 5-10 percent.

The site was found by excavating one line of shovel tests across the top of the landform with test pits spaced 10m apart. A total of 13 shovel tests were excavated down to glacial till. Of the thirteen shovel tests one was positive, yielding one dark gray primary chert pressure flake at an estimated depth of 5-10cmbs. The artifact was collected.

Recommendations
This site has been initially classified as a buried site. This site lies outside the APE for any currently proposed projects and was therefore not evaluated to determine its eligibility for inclusion in the NRHP. If future projects are proposed in the area, this site should be evaluated to determine its eligibility.

Figure 143. General view of site XMH-01211, facing southwest

XMH-01216
Latitude:
Longitude:
Determination: Not evaluated

Site XMH-01216 is located on a bench-like moraine that extends west off a higher and longer ridge. The view shed at the site is excellent—almost 360°. The view shed is only slightly obscured to the southeast by a higher ridge (Windy Ridge). The Alaska Range is visible to the southwest, the Delta River to the west, and the tip of Donnelly Dome to the southeast. The nearest water source is a lake approximately 300m to the west. There are also numerous small drainages to the east; judging from the terrain it is possible these drainages were much more extensive in the past. Surface visibility at the site is estimated to be 50 percent.

Site XMH-01216 was found through visual survey of the landform. One artifact was found—the base of a projectile point, made of gray basalt. The point remnant is 2.5cm long and 3cm wide, and weighs 7g. The point was collected, so as to prevent it being looted. The UTM coordinates for this broken point are: No shovel test pits were excavated at the site.

Recommendations
This site has been initially classified as an isolated find; however, the site could potentially contain more cultural material. This site lies outside the APE for any currently proposed projects and was therefore not evaluated to determine its eligibility for inclusion in the NRHP. If future projects are proposed in the area, this site should be evaluated to determine its eligibility.

Figure 144. General view of site XMH-01216, facing northeast

XMH-01218
Latitude:
Longitude:
Determination: Not evaluated

XMH-01218 is located on an east-west trending ridge. The nearest water source is a small unnamed lake approximately 150m to the northwest. The view shed is almost 360º with Donnelly Dome visible to the south and the Alaskan Range to the west. Surface visibility is approximately 20 percent.

The site was found through systematic visual survey, walking 20m transects through the area. A single artifact was found on the surface--a grey chert tertiary flake. No shovel tests were excavated, nor density plots calculated, nor were any artifacts collected.

Recommendations
This site has been initially classified as an isolated find; however, the site could potentially contain more cultural material. This site lies outside the APE for any currently proposed projects and was therefore not evaluated to determine its eligibility for inclusion in the NRHP. If future projects are proposed in the area, this site should be evaluated to determine its eligibility.

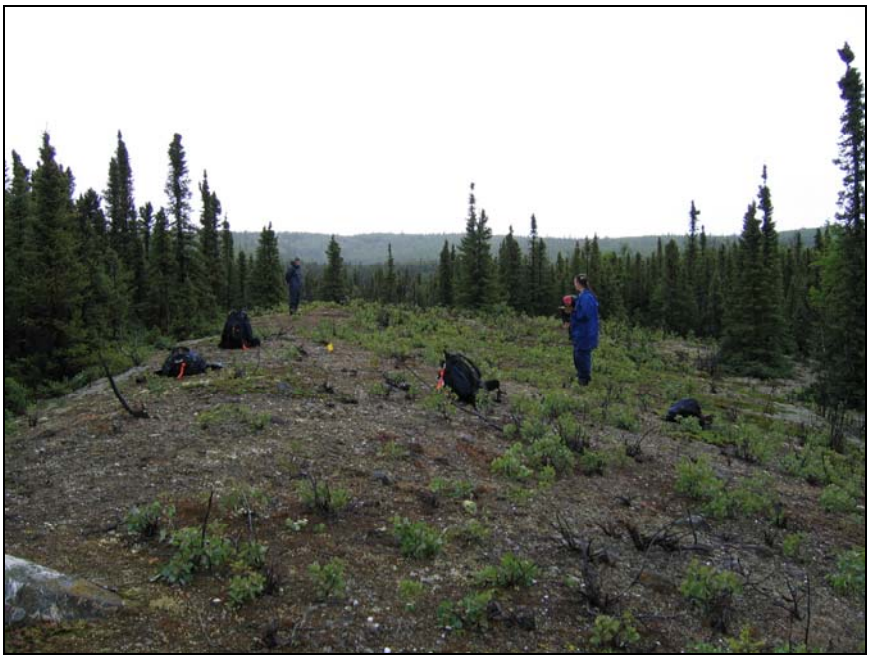

Figure 145. General view of site XMH-01218, facing east

XMH-01219
Latitude:
Longitude:
Determination: Not evaluated

Site XMH-01219 is located on a small moraine, trending roughly north-south, which benches off a larger ridge to the east (Windy Ridge). Surface visibility at the site is moderately good—approximately 50 percent of the surface is visible. The view shed is approximately 180°. It is blocked only in the east by the higher Windy Ridge. The Delta River is visible to the west, and the Alaska Range can be seen in the west and southwest. The closest water source is a medium-sized lake approximately 250m to the west. There are two other proximal lakes—one 500m to the southwest, and the other 500m to the northwest.

Site XMH-01219 was found through visual survey of the landform; two artifacts were found here. The first artifact is a gray chert tertiary flake. The second is a light gray piece of chert angular debris. No shovel test pits were excavated at the site. No artifacts were collected from the site.

Recommendations
This site has initially been classified as a small lithic scatter; however, the site could potentially contain more cultural material. This site lies outside the APE for any currently proposed projects and was therefore not evaluated to determine its eligibility for inclusion in the NRHP. If future projects are proposed in the area, this site should be evaluated to determine its eligibility.

Figure 146. General view of site XMH-01219, facing west

XMH-01220
Latitude:
Longitude:
Determination: Not evaluated

Site XMH-01220 is located on a low northeast-southwest trending ridge. The nearest water source is Luke Lake, located approximately 50m northwest of the site. The view shed is 90º to the west and is very limited due to heavy vegetation in other directions. The Alaska Range is the only visible landmark. Surface visibility is low and is estimated at less than 15 percent.

Two tertiary flakes were found during a systematic pedestrian survey of the area with transects spaced at 20m intervals. One flake was grey-green chert and the other was white quartz. The artifacts were not collected and no shovel tests were excavated.

Recommendations
This site has initially been classified as a small lithic scatter; however, the site could potentially contain more cultural material. This site lies outside the APE for any currently proposed projects and was therefore not evaluated to determine its eligibility for inclusion in the NRHP. If future projects are proposed in the area, this site should be evaluated to determine its eligibility.

Figure 147. General view of site XMH-01220, facing east

XMH-01221
Latitude:
Longitude:
Determination: Not evaluated

Site XMH-01221 was identified during pedestrian survey in 2005. The site is located on a small kame overlooking a pond to the north. The entire site area was burned in a forest fire several years ago and there are many downed trees.

Site XMH-01221 was identified during pedestrian survey with transects spaced 20m apart. The site consists of several fragments of blue-green colored chert shatter and a large (approximately 7cm x 55cm) unifacially flaked chopping or scraping tool. No shovel tests were excavated, no density plots were calculated and no artifacts were collected.

Recommendations
This site has initially been classified as a small lithic scatter; however, the site could potentially contain more cultural material. This site lies outside the APE for any currently proposed projects and was therefore not evaluated to determine its eligibility for inclusion in the NRHP. If future projects are proposed in the area, this site should be evaluated to determine its eligibility.

XMH-01222
Latitude:
Longitude:
Determination: Not evaluated

Site XMH-01222 is located on a small knoll and is surrounded by other knolls (both higher and lower in elevation). The area experienced forest fires in the recent past and vegetation in the area consists of mostly burned spruce trees with scattered birch and with a ground cover of mosses, lichens and grasses. The view shed is approximately 180° to the south, and Bolio Lake is visible in this direction.

This site consists of one large potential scraper, bifacially retouched along one edge recovered from a shovel test.

Recommendations

This site has been initially classified as a buried site. This site lies outside the APE for any currently proposed projects and was therefore not evaluated to determine its eligibility for inclusion in the NRHP. If future projects are proposed in the area, this site should be evaluated to determine its eligibility.

7.0 Protection and Mitigation of Effect

7.1 12-Mile Crossing Trail Project

Site XMH-01171 was discovered during the 2003 field season (Robertson et al. 2004). During the 2004 field season, field technicians under the direction of DTA archaeologist Aaron C. Robertson conducted Phase II evaluation of the site and found it eligible (Raymond-Yakoubian and Robertson 2005b). Although site XMH-01171 did not fall into the APE for a proposed road upgrades on 12-Mile Crossing Trail, investigators deemed that its close proximity to the construction activity may expose it to potentially hazardous secondary effects. Therefore, protective measures were proposed to prevent or mitigate these possible effects. These included placing large boulders to seal off the area of the site from activity on the road. Because placing large boulders between the road and the site was deemed too costly, an alternative barrier was erected. A fence composed of recycled metal pipes with steel cable running in-between was set up to restrict access to the site from the road (Figures 148). The construction of this barrier was accomplished under the supervision of the DTA archaeologist, Aaron C. Robertson.

Figure 148. Fence separating road from XMH-01171

7.2 Gravel Source and Access Road Project along 33-Mile Loop Road

This project involved the construction of a three-acre Gravel Source which will be used for the road upgrades project currently under way on 33 Mile Loop Road. Although road access to the Gravel Source already existed at the time the project was proposed, three archaeological sites (XMH-00922, XMH-00923, and XMH-00924**)** would have been impacted by the traffic of heavy trucks and other construction equipment. These sites were located and recorded during the 2002 and 2003 field seasons (Hedman et al. 2003; Robertson et al. 2004). Therefore, to best

protect these archaeological sites, cultural resource investigators decided to build a new road and block off the old one. The new road was designed to avoid all archaeological sites, and no cultural material was found inside the project's APE. Additionally, blocking off the old road will allow the natural vegetation to grow back, providing further cover and protection for the archaeological resources. The old road was blocked by placing several large boulders at its entrance.

Figure 149. New road and boulders blocking access to the old road, along which the archaeological sites lie

8.0 Updated Site Information: Site Locations

USAG-AK has undertaken archaeological inventories on the DTA during the summer field seasons of 2002 to 2005. As a result, more than 265 new archaeological sites have been located. However, some archaeological sites recorded in the 1960s and 1970s had poor location information. Several other archaeological sites recorded in the 1960s and 1970s were relocated during recent surveys. The location information for these five sites has now been correctly plotted and is listed in Table 11.

Table 4. Relocated Archaeological Sites, DTA

Site #	Easting	Northing	Datum	Last Visited
XMH-00012			WGS84	2005
XMH-00267			WGS84	2005
XMH-00270			WGS84	2005
XMH-00324			WGS84	2005
XMH-00325			WGS84	2005

In 2004 USAG-AK conducted archaeological surveys in the northern part of DTA East and located two new sites (XMH-01177 and XMH-01178) during the summer field seasons (Raymond-Yakoubian and Robertson 2005b). These sites were given AHRS numbers for the Mt. Hayes quad; however, these two sites are in the Big Delta quad not the Mt. Hayes quad. This error was discovered in winter 2006 and has been amended. These two sites have been given new and appropriate AHRS prefixes and have been renumbered. Site XMH-01177 is now XBD -00269 and XMH-01178 is now XBD -00270.

Map removed

Figure 150. Location of archaeological sites with new IDs

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