

* The total of 63 flakes came for the 4 sampling units (DP 1-4) and several flakes that lay outside the main concentrations of debitage. The total number of flake at the site has been estimated as being in excess of 175 flakes. The qualitative total of flake at the site would be closer to 98%.

Table 3 XMH-993 Density Plots (DP)

DP#	Coordinates	Primary	Secondary	Tertiary	Flake Total	Tool Total	Artifact Total
DP 1	DP S9.90/W3.40	1	0	13	14	2	16
DP 2	DP S10.90/W2.40	0	0	28	28	4	32
DP 3	DP S4.30/E1.20	0	0	3	3	0	3
DP 4	DP S7.80/E1.50	0	0	10	10	0	10
	TOTALS	1	0	54	55	6	61

Table 4. Lithic tools recorded from XMH-993.

FS#	Artifact Type	Material	Color	Length	Width	Weight
FS 2	biface fragment	basalt	gray	47.9mm	29mm	18.6gm
FS 36	microblade, proximal	chert	green	8.1mm	8.8mm	0.1gm
FS 48	end scraper fragment	unidentified *		14.6mm	10.3mm	0.6gm
FS 91	microblade core	chert	green	31.7mm	21.7mm	8gm
FS 94	biface fragment	basalt	gray	2.9mm	19.6mm	4gm
FS 102	microblade core rejuvenation flake	chert	green	16.8mm	9.7mm	0.6gm
FS 116	microblade, proximal	unidentified *		12.7mm	5.7mm	0.2gm
FS 123	uniface fragment	chert	green	28.8mm	14.3mm	2.3gm
FS 128	uniface, retouched flake	chert	dark gray	40.2mm	24mm	4.4gm
FS 132	microblade, medial	chert	brown	11.3mm	5.9mm	1gm
FS 137	microblade, medial	chert	green	7.1mm	3.7mm	0.05gm
FS 138	microblade, proximal	chert	green	14.5mm	4.3mm	0.1gm
FS 152	uniface fragment	chert	green	28.9mm	20.2mm	4.3gm
FS 191	uniface fragment	basalt	gray	22.3mm	13.3mm	0.6gm

XMH-994

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-994 is located along the southern end of a north/south trending ridge. This is the southern termination of the same ridge XMH-993 is located on, but at a lower elevation. The area to the east and west slopes down very gradually. The ground rises gradually to the north for approximately 50 meters before a steep rise up to XMH-993. To the south, it slopes down gradually for about 50 meters before a steep drop off. Overall the site is broad and flat with potential to extend quite far in all directions. Further



Figure 57: General view of site, XMH-994 heading north

testing will confirm the exact boundaries of the site. The Granite Range is visible to the southeast and the Alaska Range to the southwest. A small lake is located 200 meters east of the site, but is not visible. There is no surface visibility at all due to vegetation. UTM coordinates for the site are:

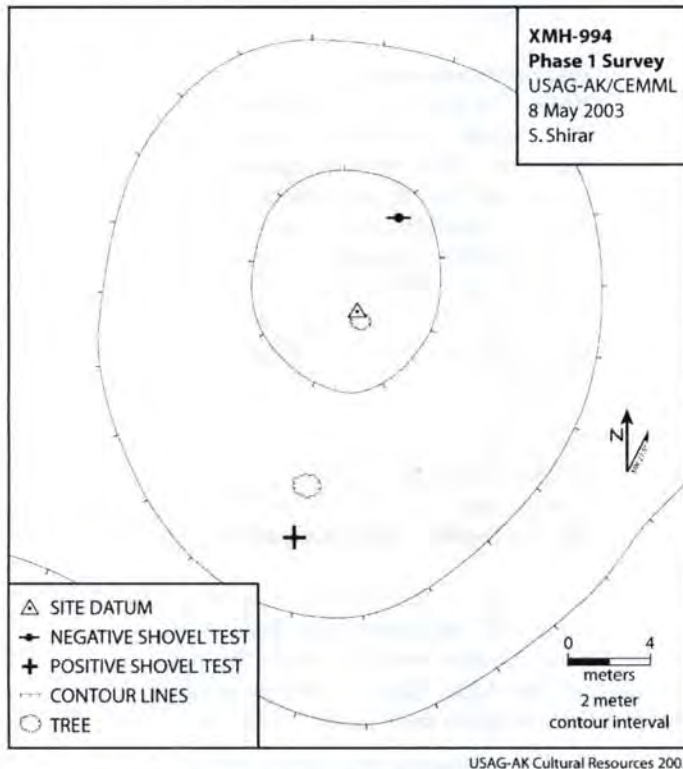


Figure 58: Site map of test at XMH-994

A total of two shovel tests were excavated to glacial till but only one produced cultural material (ST 1). ST 1 contained four chert flakes light gray in color and four chert flakes dark-gray in color found in a 30cm X 30cm shovel test at depths ranging from 0-20cms. The shovel test was 25cm deep, with three distinct layers, 0-5cm is the organic layer (2.5/2), 5-20cm is a dark yellowish/brown loess (10yr4/4), and 20-25cm is glacial till. These eight flakes were collected.

Recommendations

XMH-994 has been classified as a buried site and could potentially contain more cultural material. This site lies outside the APE for the proposed fire brake project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-995

Latitude: [REDACTED]
Longitude: [REDACTED]
Determination: Not evaluated

Site XMH-995 is located on a north/south trending ridge overlooking Dalon Lake, which is visible to the northwest. The Granite Range can be seen to the southeast and the Alaska Range is visible to the southwest. The ground drops off quickly from the top of the ridge in all directions. The southern and northern terminations of the ridge are marked by open areas with forest in between. A game trail runs through the forested area. UTM coordinates for the site are:



Figure 59: General view of site, XMH-995 heading north

A total of three shovel tests were excavated to glacial till. However, only one shovel test (ST1) produced any artifacts. ST1 contained on chert flake dark gray in color found in a 30cm X 30cm shovel test at an approximate depth of 15-20cms. The shovel test was 50cm deep, with three distinct layers, 0-5cm is the organic layer (2.5/2), 5-40cm is a dark yellowish brown loess (10yr 4/4), and 40-50cm is glacial till. This artifact was collected.

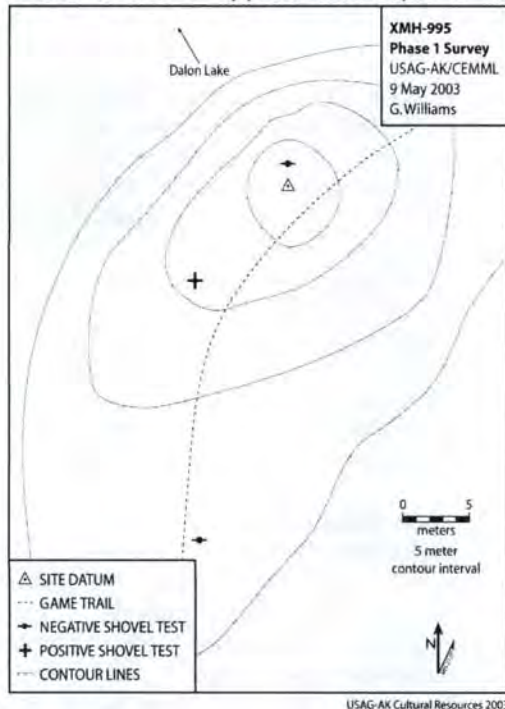


Figure 60: Site map of test at XMH-995

the ridge. There is steep slope off of all edges of the ridge. Dalon Lake is visible to the west, Granite Range to the southeast, and the Alaska Range to the southwest. UTM coordinates for the site are: [REDACTED]

XMH-996 consists of one basalt flake, one chert flake tan in color, and one rhyolite flake. There were no tools found at this site. Three density plots were placed on the site, each with one artifact contained in them. DP 3N/2.5E contained one primary basalt flake. DP 3.3N/2.1E contained one tertiary rhyolite flake. DP 1.5N/6.9E contained one tertiary green chert flake. Artifact density is calculated as being up to 1 artifact per-square meter. A flake type analysis indicates both primary and late stage lithic reduction occurred at the site. Subsurface examinations have not yet been conducted.



Figure 61: General view of site, XMH-996 heading north

Recommendations

XMH-995 has been classified as a buried site and could potentially contain more cultural material. This site lies outside the APE for the proposed fire brake project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-996

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

XMH-996 is located on a north/south trending ridge with approximately 50% surface visibility. The artifacts were found on the southern end of

Recommendations

XMH-996 has initially been classified as a small lithic scatter where both primary and late stage lithic reduction occurred. This site lies outside the APE for the proposed fire brake project, and therefore was not evaluated to determine eligibility for inclusion in the National Register of

Historic Places (NRHP). However, if the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility for inclusion in the NRHP.

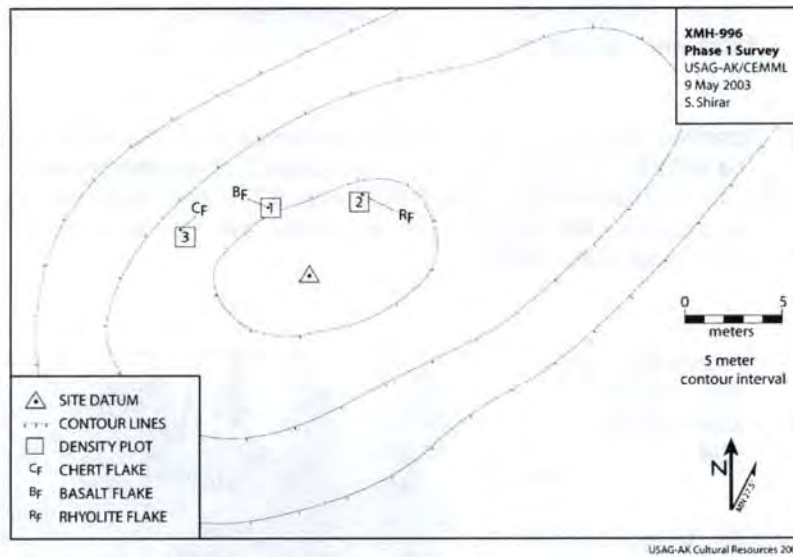


Figure 62: Site map of test at XMH-996

XMH-997

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-997 is located along the northern end of a north/south trending ridge. This is the same ridge that XMH-993 is on but at a lower elevation. There is steep slope extending off of the ridge in all directions from the top. There are no good views of the mountains or of any water although there is a small lake located approximately 100 meters to the east according to the map. The site has no surface visibility due to vegetation. UTM coordinates for the site are: [REDACTED]



Figure 63: General view of site, XMH-997 heading south

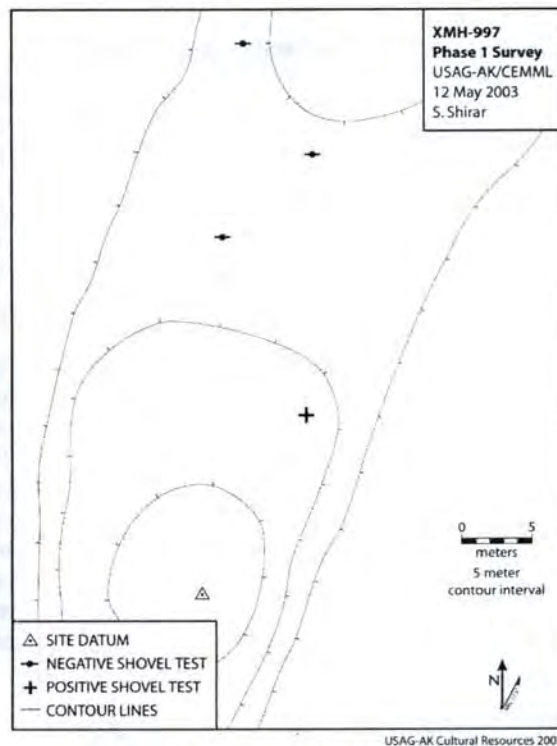


Figure 64: Site map of test at XMH-997

A total of four shovel tests were excavated to glacial till but only one shovel test (ST1) produced artifacts. ST1 contained one basalt flake and one chert flake found in a 30cm X 30cm test pit at an approximate depth of 5-15cmbs. The shovel test was 30cm deep, with three distinct layers, 0-5cm was the organic layer (10yr2/2), 5-24cm was a yellow/brown silt (10yr3/4), and 24-30cm is glacial till. These artifacts were collected.

Recommendations

XMH-997 has been classified as a buried site and could potentially contain more cultural material. This site lies outside the APE for the proposed fire brake project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-998

Latitude: [REDACTED] **Figure 66:**
Longitude: [REDACTED] **Site map of**
Determination: Not **test at XMH-**
998

Site XMH-998 is located on the [REDACTED] th/south trending ridge in the [REDACTED] 93 and XHM-997. The Granite Range is visible to the southeast. There is steep slope on either side of the ridge to the east and west. The site is located at a lower elevation than XMH-993 and at a higher elevation than XMH-997. The only surface visibility is along a game trail running the length of the ridge. UTM coordinates for the site are: [REDACTED]



Figure 65: General view of site, XMH-998 heading north

A total of three shovel tests were excavated

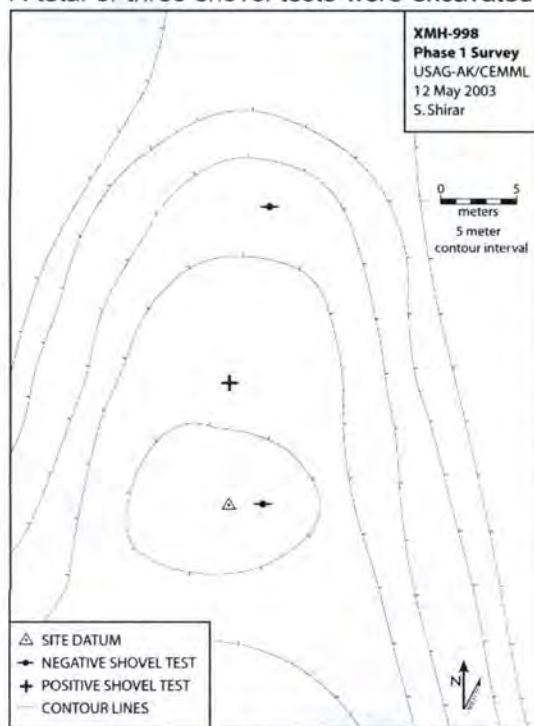


Figure 66: Site map of test at XMH-998

to glacial till but only one produced cultural material (ST1). ST1 contained two chert flakes found in a 30cm X 30cm shovel test unit at depths ranging from 0-10cmbs. The shovel test had three distinct layer, 0-5cmbs is the organic layer (10yr2/2), 5-20cmbs is yellowish brown loess (10yr4/6), and 20+cmbs is glacial till. These artifacts were collected.

Recommendations

XMH-998 has been classified as a buried site and could potentially contain more cultural material. This site lies outside the APE for the proposed fire brake project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-999

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-999 is located on a small knoll with sparse tree cover approximately 250 meters south of FB site #2 and approximately 100 meters east and 80 meters south of FB site #3. The mountains cannot be seen due to trees. A small lake bed can be seen to the southwest when there are no leaves on the trees. There is 0% surface visibility on this site due to ground vegetation. UTM coordinates for the site are: [REDACTED]



Figure 67: General view of site, XMH-999 heading south

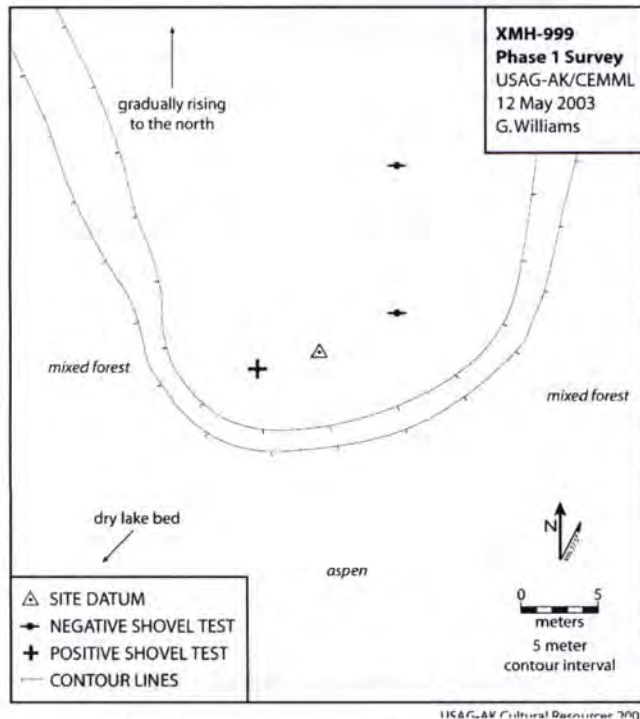


Figure 68: Site map of test at XMH-999

A total of three shovel tests were excavated to glacial till but only one produced cultural materials (ST2). ST2 contained on chert flake dark gray in color found in a 30cm X 30cm shovel test at a depth of 15-20cms. The shovel test was 30cm deep with three distinct layers, 0-5cm is the organic layer (10yr2/2), 5-20cm is dark yellow brown sandy silt (10yr4/4), and 20-30cm is glacial till. This flake was collected.

RECOMMENDATIONS

XMH-999 has been classified as a buried site and could potentially contain more cultural material. This site lies outside the APE for the proposed fire brake project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-1051

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1051 is located on a narrow, short northwest/southeast trending ridge. The site is approximately 100 meters west of lake, however lake can only be seen when there are no leaves on the trees. The mountains cannot be seen due to trees. There is 10% surface visibility on this site due to ground vegetation. UTM coordinates for the site are: [REDACTED]

XMH-1051 consists of one basalt flake found on the surface. No other artifacts were found on the surface or during shovel testing, site was labeled as an isolated find (IF). A total of eight shovel tests were put in along one transects at ten-meter intervals. The artifact was not collected.

Recommendations

XMH-1051 has initially been classified as an isolated find; however the site could potentially contain more cultural material. This site lies outside the APE for the proposed fire brake project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the APE is moved by later design alteration, or if further projects are proposed in the area, the



Figure 69. General view of site, XMH-1051

site should be evaluated to determine eligibility for inclusion in the NRHP.

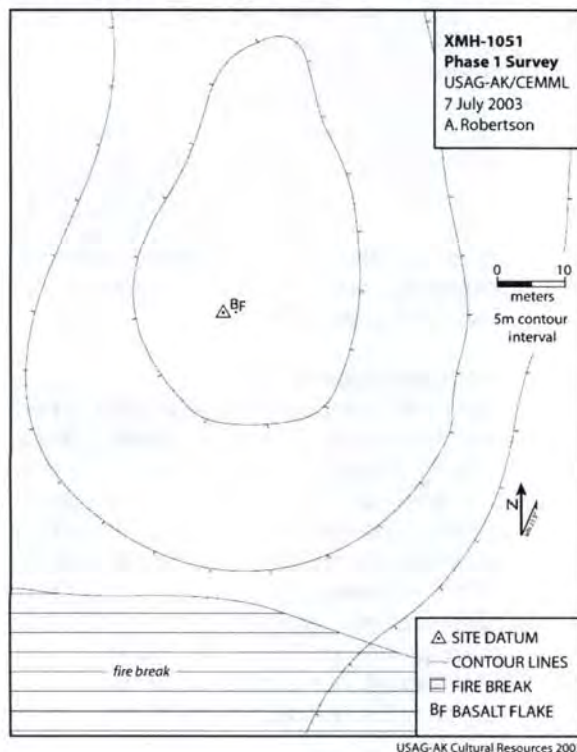


Figure 70 . Site map of test at XMH-1051

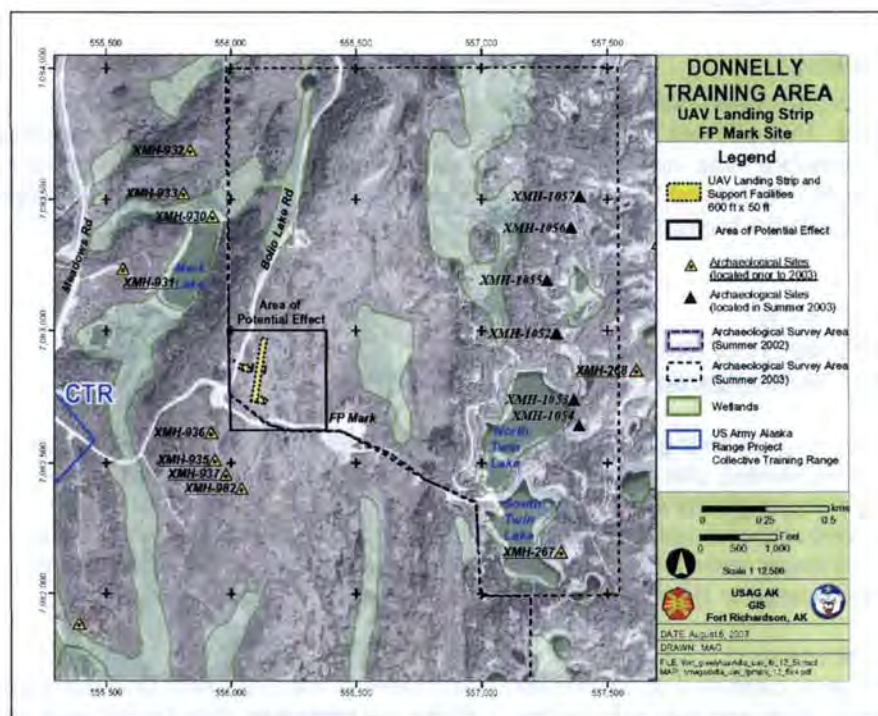
4.3 Unmanned Aerial Vehicle Launch and Recovery Site

The United States Army has proposed construction of an Unmanned Aerial Vehicle (UAV) launch and recovery site located within U.S. Army Garrison Alaska (USAG-AK) lands, on Ft. Wainwright, Alaska. The project involves the construction of a 600 ft. long, 50 ft. wide runway to launch and recover UAVs and support facilities, including a 3000 ft² one-story building to store and conduct maintenance on the UAV launch site. The building will be located adjacent to the runway with access to Bolio Lake Road. A 100 ft. perimeter will be Hydro-axed around the runway to control vegetation. Construction is scheduled for September 2003.

SURVEY AND FIELD METHODS

In the summers of 2002 and 2003, two archaeological survey crews (each comprised of four archaeologists) employed by the Center for Environmental Management of Military Lands (CEMML), Colorado State University, conducted a pedestrian survey of the proposed UAV launch and recovery project at Ft. Wainwright's Donnelly Training Area. The project's Area of Potential Effect (APE) encompassed an area larger than the anticipated construction footprint, in order to ensure coverage of areas that may incur secondary impacts during construction or use.

Parallel pedestrian transects spaced at 20m were walked systematically across the APE and surrounding area. Transect survey units were partitioned according to existing roads and trails where possible. Systematic sub-surface shovel testing was undertaken in areas considered to have high probability for containing archaeological sites. Areas that were shovel tested included but were not limited to: landforms affording a view of surrounding terrain; lake margins; ridgelines; terrace edges; hilltops; benches adjacent to steeper slopes; and bluffs. Shovel tests were typically 30cm in diameter and excavated into glacial till or consolidated outwash. All soil removed was screened through ¼" hardware cloth.



Results/Summary

Pedestrian survey of the proposed project area failed to identify any cultural resources within the boundaries of the proposed project's Area of Potential Effect (APE). All previously recorded archaeological sites or historic properties fall outside the proposed project area. Subsequently, the proposed project will have no effect on historic properties.

CULTURAL RESOURCES

Eighteen prehistoric sites have been recorded within 1.5 kilometers of the proposed project area (Figure 71). To the east of the APE area are 8 sites. Two sites (XMH-267 and XMH-268) were recorded during the 1979 survey (Holmes 1979). Six new sites were recorded during the CEMML, 2003 survey for this project. These Sites (XMH-1052, XMH-1053, XMH-1054, XMH-1055, XMH-1056, and XMH-1057) are located around North Twin Lakes.

To the south of the proposed project area, 4 sites were recorded during surveys conducted by the CEMML, in 2002 (Hedman et al. 2003). These Sites (XMH-982, XMH-935, XMH-936, and XMH-937) are located on a low north-south trending ridge between Mark Lake and Big Lake. To the northwest of the proposed project area, 4 sites were recorded near Mark Lake (Hedman et al. 2003). XMH-930 is located on the north shore of Mark Lake; XMH-931, XMH-932, XMH-933 all overlook the lake from the glacial moraine on the western side. Following is a description of each recorded site near the currently proposed project area:

XMH-267

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-267 is located on a glacial moraine knoll. A number of flakes were observed scattered about the ground on the southwest slope of a sparsely vegetated glacial moraine knoll overlooking South Twin Lake. A total of 21 waste flakes and two retouched flakes were collected. A road runs just east of the site (Holmes 1979).

Recommendations

XMH-267 has initially been classified as a large lithic scatter and could potentially contain more cultural material. This site lies outside the APE for the proposed UAV launch and recovery site project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-268

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-268 is located on a glacial moraine knoll. Site affords a 360 degrees unobstructed view of the surrounding terrain. An isolated biface fragment observed in a disturbed area on the west side of a road along a glacial moraine ridge, east of North Twin Lake. The fragment appears to be the basal segment of a notched point or knife (Holmes 1979). The artifact was collected in 1979, and no artifacts were observed on the surface in 2003. Several dwarf birch and spruce trees were encountered in the area, as well as tall scrub.

RECOMMENDATIONS

XMH-268 has been classified as an isolated find; however the site could potentially contain more cultural material. This site lies outside the APE for the proposed UAV launch and recovery site project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP.

However, if the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-930

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-930 is located along the north Shore of Mark Lake. The surrounding area is characterized by mixed forest with sparse grass cover along the lake shore. Surface visibility is high due to sparse vegetation. The site may become inundated if lake levels become higher. Three chert flakes, one utilized chert flake, and one unifacially worked flake tool were observed on the surface. The area has been impacted by heavy vehicle traffic and modern use along the lakeshore. Artifacts were collected to prevent loss or further damage. No subsurface examinations will be needed, as artifacts were observed lying on glacial till. UTM coordinates for the site are: [REDACTED]



Figure 72: General view of site, XMH-930 heading east

RECOMMENDATIONS

XMH-930 has initially been classified as a small lithic scatter and could potentially contain more cultural material. This site lies outside the APE for the proposed UAV launch and recovery site project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-931

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-931 is located along a large ridge extending to the edge of Mark Lake. The site is approximately 100 meters west of Mark Lake, overlooking an unnamed lake to the south. The site consists of an isolated find identified during pedestrian survey: a single chert flake observed in an exposure from a road cut. SUBSURFACE EXAMINATIONS HAVE YET TO BE CONDUCTED. UTM COORDINATES FOR THE SITE ARE: [REDACTED]



Figure 73: General view of site, XMH-931 heading east

RECOMMENDATIONS

XMH-931 has been classified as an isolated find; however the site could potentially contain more cultural material. This site lies outside the APE for the proposed UAV launch and recovery site project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-932

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-932 is located on an east-west trending ridge, 250 meters north of Mark Lake. The site location has a commanding view of Mark Lake and the surrounding area. Surface visibility is high due to sparse vegetation. One chert flake and one basalt flake were observed on the exposed surface of a south-facing slope. SUBSURFACE EXAMINATIONS HAVE YET TO BE CONDUCTED. UTM COORDINATES FOR THE SITE ARE: [REDACTED]



Figure 74: General view of site, XMH-932 heading northeast

RECOMMENDATIONS

XMH-932 has initially been classified as a small lithic scatter and could potentially contain more cultural material. This site lies outside the APE for the proposed UAV launch and recovery site project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-933

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-933 is located on a flat ridge top overlooking Mark Lake approximately 150 meters to the south. Surface visibility is low with a high degree of vegetation. Two chert flakes were observed on the exposed surface of a tree fall. A total of four shovel tests were excavated with negative results. UTM COORDINATES FOR THE SITE ARE: [REDACTED]



Figure 75: General view of site, XMH-933 heading north

RECOMMENDATIONS

XMH-933 has initially been classified as a small lithic scatter and could potentially contain more cultural material. This site lies outside the APE for the proposed UAV launch and recovery site project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the APE is moved by later design alteration, or if further

projects are proposed in the area, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-935

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-935 is located on a low north-south trending ridge, situated between Mark Lake and Big Lake. Site location is approximately .6 kilometer south of Mark Lake and 1.2 kilometers north-northwest of Big Lake. Surface visibility is high due to large naturally eroded areas with sparse vegetation. Site XMH-935 is to the north and site XMH-937 is to the south along the same landform.



Figure 76: General view of site, XMH-935 heading north



Figure 77: Photo of Microblade From XMH-935

XMH-935 CONSISTS OF one light-gray chert microblade observed in an exposed area on the surface. THE MICROBLADE IS 34MM LONG, 7.2MM AT THE PLATFORM 9.9MM WIDE AT ITS WIDEST POINT, AND WEIGHS APPROXIMATELY 1.2GM. THE MICROBLADE HAS REMNANTS OF BIFACIAL REMOVALS FROM THE CORE ON ONE MARGIN AND THE REMNANTS OF A PERVERSE MICROBLADE REMOVAL ON THE OTHER MARGIN. THIS MICROBLADE MAY HAVE BEEN AN EARLY REMOVAL FROM THE

CORE. SUBSURFACE EXAMINATIONS HAVE YET TO BE CONDUCTED. UTM COORDINATES FOR THE SITE ARE:

[REDACTED]

RECOMMENDATIONS

XMH-935 has been classified as an isolated find; however the site could be a microblade production site and potentially contain more cultural material. This site lies outside the APE for the proposed UAV launch and recovery site project, and therefore was not evaluated to determine eligibility for



Figure 78: General view of site, XMH-936 heading west

inclusion in the NRHP. However, if the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-936

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-936 is located on a low north-south trending ridge between Mark Lake and Big Lake. Site location is approximately .3 kilometers south of Mark Lake, and 1.1 kilometers north-northwest of Big Lake. Surface visibility is high due to large naturally eroded areas with sparse vegetation. Sites XMH-935 and XMH-937 are to the south along the same landform. Three chert flakes were observed on the surface. SUBSURFACE EXAMINATIONS HAVE YET TO BE CONDUCTED. UTM COORDINATES FOR THE SITE ARE: [REDACTED]

RECOMMENDATIONS

XMH-936 has initially been classified as a small lithic scatter and could potentially contain more cultural material. This site lies outside the APE for the proposed UAV launch and recovery site project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-937

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-937 is located on a low north-south trending ridge between Mark Lake and Big Lake. SITE LOCATION is approximately .5 kilometers south of Mark Lake and 1.2 kilometers northwest of Big Lake. Surface visibility is high due to large naturally eroded areas with sparse vegetation. Sites XMH-935 and XMH-936 are to the north along the same landform. A total of five chert tertiary flakes were observed on the ground surface in an eroded spot on the northeast slope of a long finger ridge. SUBSURFACE EXAMINATIONS HAVE YET TO BE CONDUCTED. UTM COORDINATES FOR THE SITE ARE: [REDACTED]

RECOMMENDATIONS

XMH-937 has initially been classified as a small lithic scatter and could potentially contain more cultural material. This site lies outside the APE for the proposed UAV launch and recovery site project, and therefore was not evaluated to determine eligibility for



Figure 79: General view of site, XMH-937 heading west



Figure 80: General view of site, XMH-942 heading north

inclusion in the NRHP. However, if the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-942

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-942 is located along the western edge of a broad ridge, overlooking the north end of Big Lake and the surrounding meadow that makes up the Big Lake basin. The site was located during systematic shovel testing in association with pedestrian survey. A total of 13 shovel tests were excavated. Two shovel tests were positive, yielding one dark gray chert finishing flake and one obsidian biface thinning flake. All artifacts were collected. UTM COORDINATES FOR THE SITE ARE: [REDACTED]

Recommendations

XMH-942 has been classified as a buried site and could potentially contain more cultural material. This site lies outside the APE for the proposed UAV launch and recovery site project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-982

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-982 is located on a low, narrow north-south trending moraine between Mark Lake and Big Lake. The site location is approximately .5 kilometers south of Mark Lake and 1.2 kilometers North West of Big Lake. The site is paralleled by mixed forest on the west and a broad meadow to the east. Large, naturally-eroded areas with good surface visibility are prevalent atop the ridge. Site XMH-937 is located 70 meters to the northwest. The site consists of a quartz biface located during systematic shovel testing. A total of 4 shovel tests were excavated along the crest and near the southern end of the moraine. One positive shovel test yielded one quartz biface. UTM COORDINATES FOR THE SITE ARE: [REDACTED]



Figure 81: General view of site, XMH-982 heading east

Recommendations

XMH-982 has been classified as a buried site and could potentially contain more cultural material. This site lies outside the APE for the proposed UAV launch and recovery site project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-1052

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1052 is located on a southwest-northwest trending ridge, which is approximately 50 meters long. Site affords approximately a 180 degrees unobstructed view of the surrounding terrain to the south, with Donnelly Dome visible, but partially obstructed by Windy Ridge. There is an unobstructed view of the Alaska Range to the southwest as well. North Twin Lake is approximately 100 meters to the



Figure 82. General view of site, XMH-1052 heading south

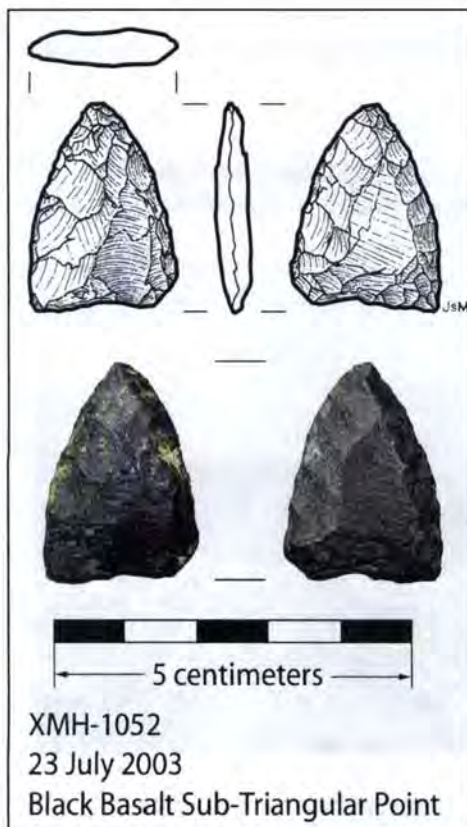


Figure 83. Illustration and photo of the projectile point from XMH-1052

Small sub-triangular points, similar to the one found at XMH-1052, are found at some of the oldest sites in interior Alaska. These sites are attributed to the Nenana/Chindadn complex and date to between 10,000 and 11,000 years before present. Nenana/Chindadn complex triangular and sub-triangular projectile points are present at the lower

south
, but
is not
visibl

e. A small pond is located 75 meters to the southeast and a second small pond is located 30 meters to the northeast, both of which can be seen from the northwest portion of the ridge. There is approximately 50% surface visibility on either end of the ridge with thick vegetation, consisting of large alder bushes, in the middle. UTM coordinates for the site are: [REDACTED]

XMH-1052 consists of one basalt projectile point (Figure 83) and one opaque, white chert scraper (Figure 84) observed on the surface of the site. The projectile point is triangular in shape, 2.6cm long, 2.1cm wide at its base, and weighs approximately 3.0gm. The scraper is 2.2cm long, 2.0cm wide, and also weighs approximately 3.0gm. The projectile point was collected due to its uniqueness, while the scraper was left on the surface of the site. Full subsurface examinations have yet to be conducted. No density plots were calculated.

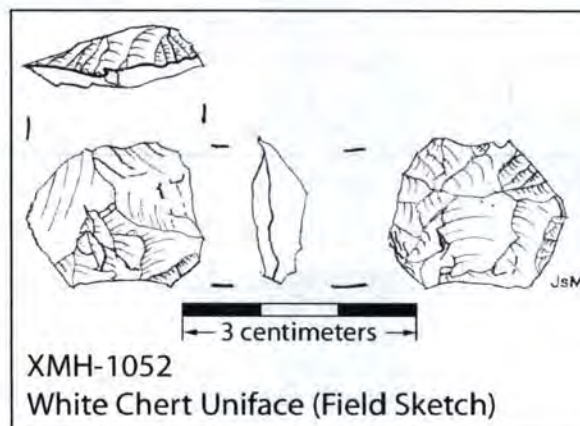


Figure 84. Illustration of the unifacial end scraper from XMH-1052

components of Broken Mammoth (Holmes 1996), Swan Point (Holmes et al. 1996), Healy Lake (Cook 1996) in the Tanana Valley; Dry Creek (Hoffecker et al. 1996), Moose Creek (Pearson 1997) in the Nenana Valley and one refit point from Owl Ridge (Hoffecker et al. 1996) in the Teklanika Valley. These points are small, usually no more than 3.5cm in length and 3cm wide, have a thin profile usually no more than .5cm, and are basally thinned. These are all characteristics, which the projectile point from XMH-1052 processes.

These small triangular points are similar in size and construction to Chindadn points that are teardrop in shape. These two point types co-occur at the Healy Lake and Moose Creek sites (Pearson 1997). Some archaeologists (Holmes 2000) refer to these small triangular projectile points as Chindadn type 2 while others refer to them as "Paleo-Indian" projectile points (Yesner 1996:270).

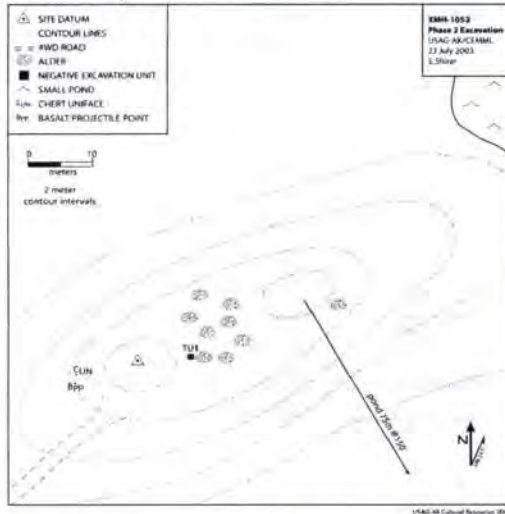


Figure 85: Site map of test at XMH-1052

Small unifacial end scrapers are also common in the Nenana/Chindadn sites (Cook 1996; Goebel et al. 1996) and are similar in size and construction to the small end scraper found at XMH-1052 (Figure 84).

RECOMMENDATIONS

XMH-1052 has been classified as a tool use site; however the site could potentially contain more cultural material. The presents diagnostic artifacts (small triangular point and end scraper) attributed to the Nenana/Chindadn complex suggest the site could date to Pleistocene-Holocene boundary. Further investigation is needed. This site lays outside the APE for the proposed Unmanned Aerial Vehicle (UAV) launch and recovery site project, and therefore was not evaluated to determine eligibility for inclusion in the National Register of Historic Places (NRHP). However, if the

APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-1053

Latitude: [REDACTED]
Longitude: [REDACTED]
Determination: Not evaluated

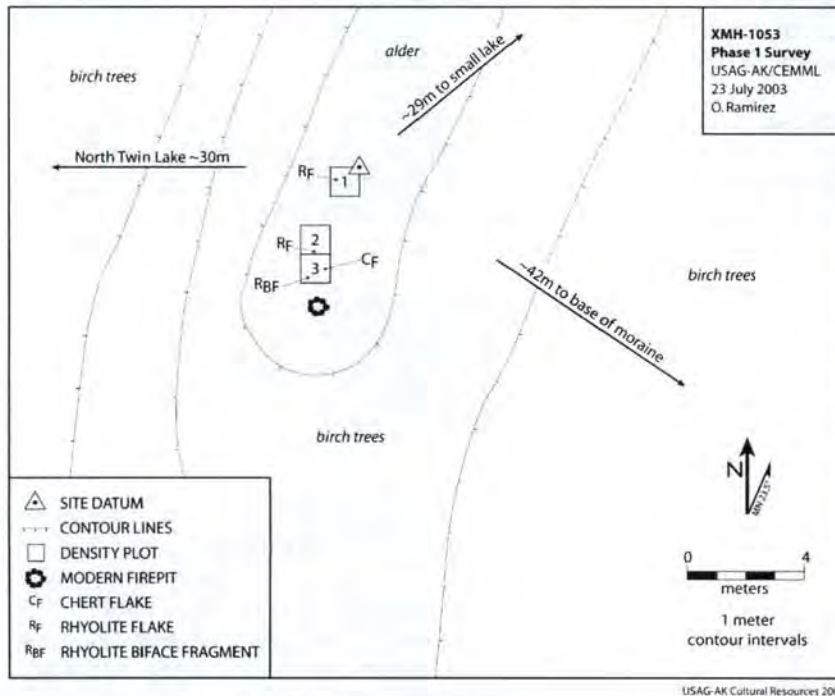
Site XMH-1053 is located on the southern termination of an 80 meters long north-south trending ridge. The view-shed is minimal due to thick tree cover. North Twin Lake is visible through the trees to the southwest and is approximately 30 meters from the site. A small pond is located 75 meters north of the datum and is visible from the northern termination of the ridge. Surface visibility is approximately 75% along the ridge due to erosion. UTM coordinates for the site are: [REDACTED]



Figure 86. General view of site, XMH-1053

The site consists of six tertiary flakes, and one rhyolite biface fragment identified on the surface. Three density plots were calculated at the site. DP S1/W1 consisted of one rhyolite tertiary flake. DP S3/W2 consisted of one rhyolite tertiary flake. DP S4/W2 consisted of one chert tertiary flake

and one rhyolite biface fragment. Artifact density is calculated as being up to 1.33 artifacts per-square meter. A flake type analysis indicates late stage lithic reduction occurred at the site. Subsurface examinations have yet to be conducted. None of the artifacts were collected.



Recommendations

XMH-1053 has initially been classified as a small lithic scatter where late stage lithic reduction occurred. This site lies outside the APE for the proposed UAV launch and recovery site project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility for inclusion in the NRHP.

Figure 87: Site map of test at XMH-1053

XMH-1054

Latitude: [REDACTED]
Longitude: [REDACTED]
Determination: Not evaluated

Site XMH-1054 is located on a broad, flat bench, which lies southwest of a prominent knoll. The Alaska Range is visible to the southwest and Donnelly Dome can barely be seen through the trees to the south-southeast. There is an 180 degree view-shed. The nearest water source is North Twin Lake, located approximately 100 meters to the west, which is not visible. Surface visibility is approximately 30%. UTM coordinates for the site are: [REDACTED]



Figure 88: General view of site, XMH-1054 heading south

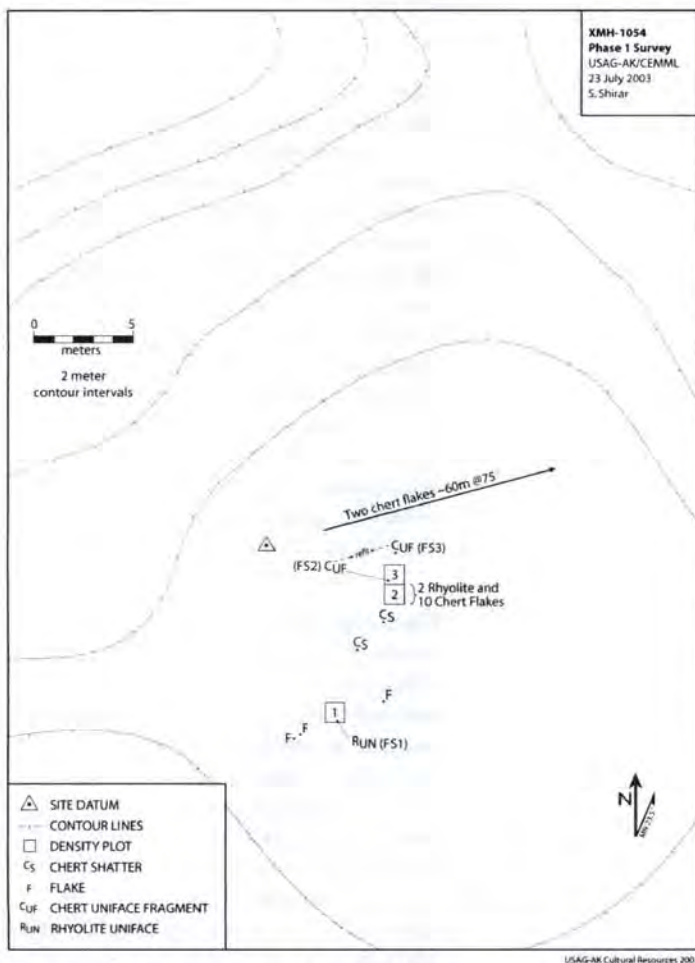


Figure 89: Site map of test at XMH-1054

XMH-1054 consists of lithic debitage and tools located on the exposed surface. Three density plots were calculated at the site. DP S2/E6 contained one chert tertiary flake and one chert uniface (FS2). DP S3/E6 contained 12 flakes (3 secondary and 9 tertiary). DP S9/E3 contained one rhyolite scraper (FS1). Artifact density is calculated as being up to 5 artifacts per-square meter. A flake type analysis indicates late stage lithic reduction occurred at the site. Subsurface examinations have yet to be conducted. None of the artifacts were collected.

Recommendations

XMH-1054 has initially been classified as a large lithic scatter where late stage lithic reduction occurred. This site lies outside the APE for the proposed UAV launch and recovery site project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility for

XMH-1055

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1055 is located on a moraine approximately 100 meters west of a small lake, and offers a relatively unobstructed view of the area to the east. The "L" shaped moraine is vegetated primarily with moss, lichen, and sparse dwarf birch. Several small spruce trees are scattered throughout the area. The forest surrounding the moraine is mixed, containing both spruce and birch. Several large areas at the crest of the moraine were completely devoid of vegetation, with underlying soil exposed at the surface. UTM



Figure 90: General view of site, XMH-1055 heading north

coordinates for the site are: [REDACTED]

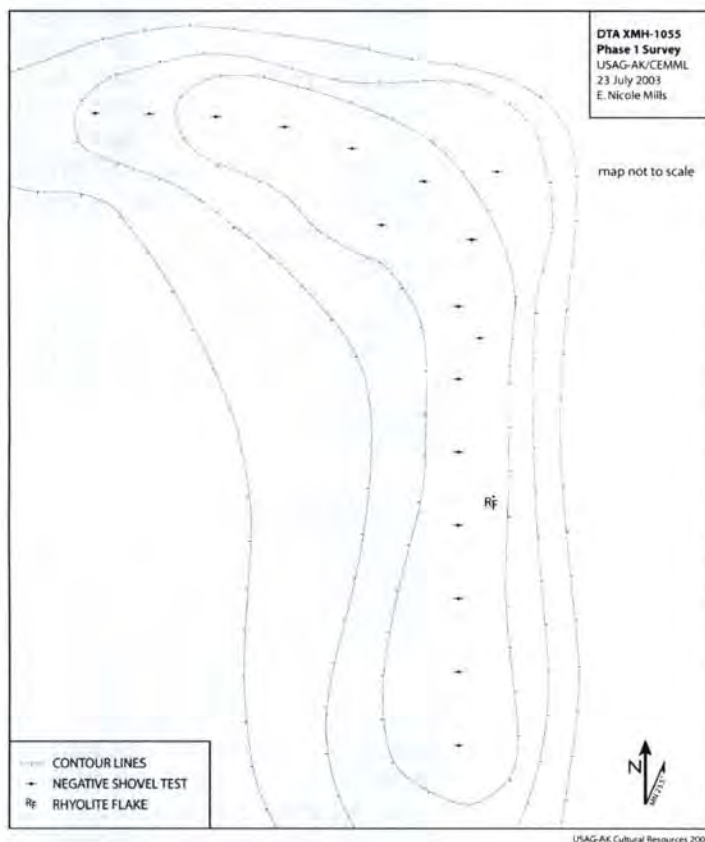


Figure 91: Site map of test at XMH-1055

XMH-1055 is an isolated find located on a moraine, and consists of a single secondary rhyolite flake identified on the surface, slightly down slope of the crest of the moraine. A thorough examination of the surface of the moraine was conducted, yet no additional artifacts were encountered. A single transect of shovel tests was placed along the narrow crest of the moraine at 5 meter intervals. A total of 17 shovel tests were excavated, yet no additional artifacts were encountered. No density plots were calculated.

Recommendations

XMH-1055 has initially been classified as an isolated find; however the site could potentially contain more cultural material. This site lies outside the APE for the proposed UAV launch and recovery site project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-1056

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1056 is located on the crest of a north-south trending moraine. The moraine on which the site was identified is approximately 250 meters long and has a narrow crest. The site was identified near the northern end in an area that rises approximately 20 meters above the main portion of the moraine. Two small lakes are located near the site, but neither is visible from the site. The first lake lies 150 meters to the south, while the second lies 150 meters northeast. The crest of the moraine on which the site was



Figure 92: General view of site, XMH-1056 heading west

identified is devoid of trees and offers an almost unobstructed 360° view of the surrounding landscape. Vegetation at the site is represented primarily by moss, lichen, and forbs. The side slopes of the moraine contain some dwarf spruce as well as dwarf birch. The crest of the moraine contains several large patches of barren soil in which the underlying soil is exposed at the surface. Wind most likely plays a role in erosion at the site. UTM

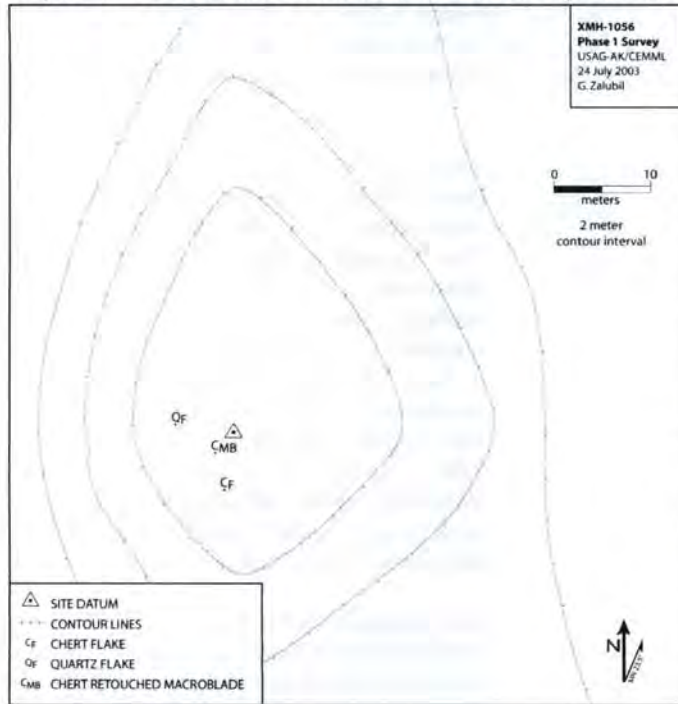


Figure 93: Site map of test at XMH-1056

coordinates for the site are: [REDACTED]

XMH-1056 consists of three prehistoric artifacts; one white quartz flake, one gray chert flake, and one fragment of a unifacially retouched gray chert blade. All three artifacts were encountered on the surface of the site within ten meters of each other at the crest of the moraine. The chert flake exhibits use-wear/retouch on its margins and the unifacially retouched blade is made from the same material type as the chert flake encountered at the site. The chert blade weighs 2.5 grams and measures 3.5 cm long by 1.5 cm wide. Subsurface examinations have yet to be conducted. No density plots

were calculated.

Recommendations

XMH-1056 has initially been classified as a small lithic scatter where both primary and late stage lithic reduction occurred. This site lies outside the APE for the proposed UAV launch and recovery site project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-1057

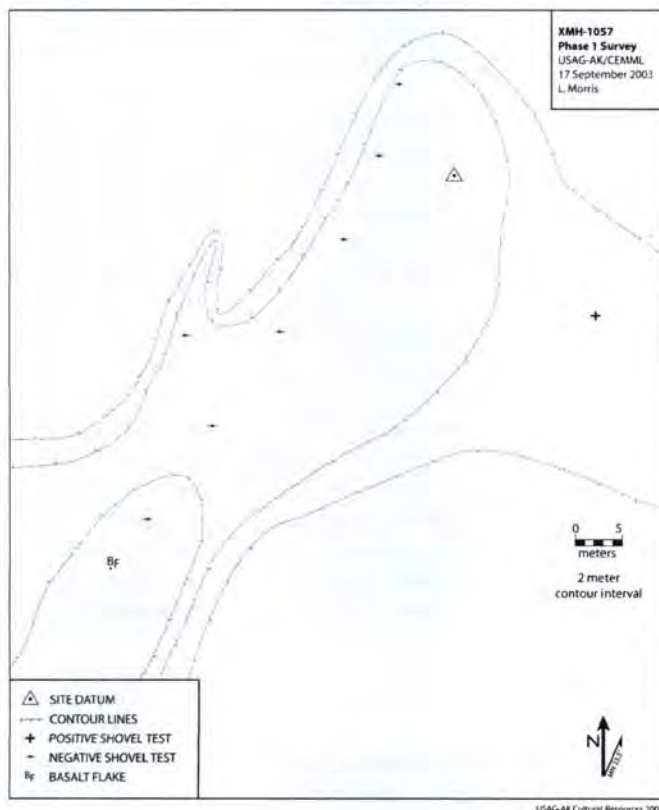
Latitude: [REDACTED]
Longitude: [REDACTED]
Determination: Not evaluated

XMH-1057 is located on the northern extent of a prominent north-south trending ridge. The site is located approximately 120 meters north of site XMH-1056 along the same landform. The portion of the moraine on which the site was identified rises approximately two meters above the surrounding landscape. The closest water source to the site is a small lake, located approximately 100 meters east of the site.



Figure 94: General view of site, XMH-1057 heading south

A second small lake is located approximately 250 meters to the south of the site. Although the area in which the site was identified lacks substantial vegetation, the surrounding area contains tall trees and obstructs views of the surrounding area. The ground surface of the site is vegetated primarily by moss, lichen, and forbs, with several barren areas scattered around. Several dwarf birch and spruce trees were encountered in the area, as well as several mature spruce and birch trees. UTM coordinates for the site are: [REDACTED]



XMH-1057 was first identified by the presence of a large primary basalt flake encountered on the ground surface. The ground surface was thoroughly examined; however no additional artifacts were encountered. Upon completion of the surface examination, a total of eight shovel tests were excavated. From a single shovel test two biface fragments from a single biface were recovered. The biface fragments were manufactured from a dark-gray banded chert. No density plots were calculated at this site.

RECOMMENDATIONS

XMH-1057 has been classified as a buried site and could potentially contain more cultural material. This site lies outside the APE for the proposed UAV launch and recovery site project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility for inclusion in the NRHP.

Figure 95. Site map of test at XMH-1057

4.4 Cold Weather/ Automotive Test Complex

In 2003, U.S. Army Cold Regions Test Center (CRTC) proposed to construct a Cold Weather/Automotive Test Complex on lands at Donnelly Training Area, Fort Wainwright. The purpose of this facility is to enhance CRTC's capability to test current and future Army ground vehicles in cold weather conditions and on ice.

There were two alternatives considered for the site of this project. Figure 96 shows the two general areas, Jarvis West and Donnelly Drop Zone. The size of the facility and requirements for the proximity to utilities, relatively flat topography, and noninterference with firing fans and USAG activities eliminated most other options. The preferred alternative for the site is located at Jarvis West Training Area approximately nineteen kilometers southwest of Delta Junction, and five kilometers west of the Richardson Highway. For more details on the Cold Weather/Automotive Test Complex see Chapter (Robertson 2004).

Archaeological field crews, employed by the Center for Environmental Management of Military Lands (CEMML), Colorado State University, were contracted by CRTC to conduct surveys of all areas potentially impacted (both directly and indirectly) by proposed undertaking. Four crews, comprised of four archaeologists each, conducted surveys at Donnelly Training Area.

SURVEY AND FIELD METHODS

Parallel pedestrian transects spaced at 20m were walked systematically across the APE and surrounding area. Transect survey units were partitioned according to existing roads and trails where possible. When existing roads did not provide for practical unit boundaries, a one square kilometer work unit was defined. Systematic sub-surface shovel testing was undertaken in areas considered to have high probability for containing archaeological sites. Areas that were shovel

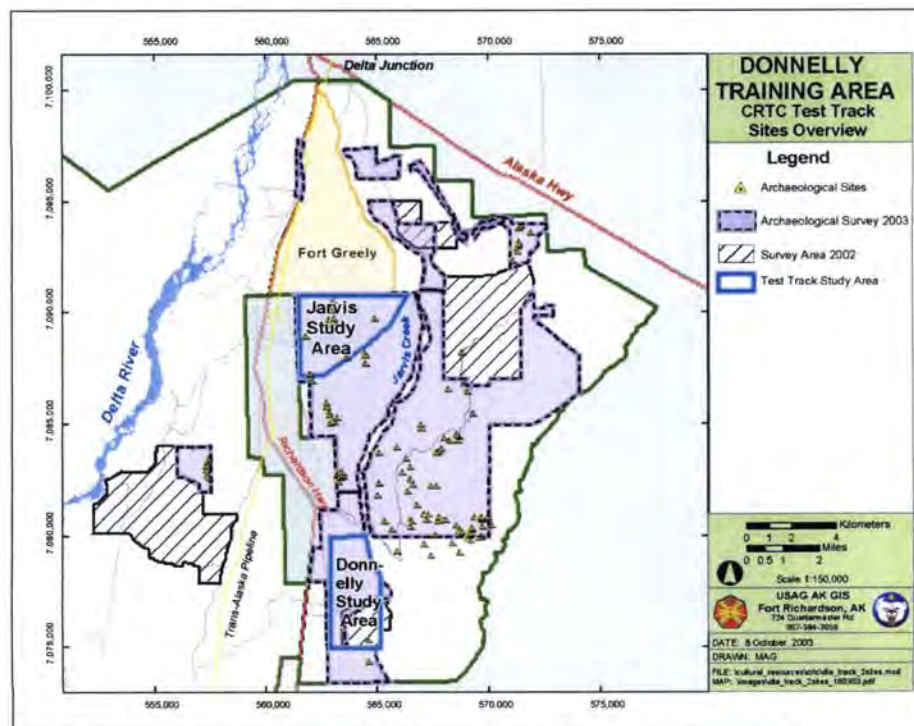


Figure 96: Area Surveyed and Location of the Two Proposed Alternatives

tested included but were not limited to: landforms affording a view of surrounding terrain; lake margins; ridgelines; terrace edges; hilltops; benches adjacent to steeper slopes; and the bluffs

over looking Jarvis Creek. Shovel tests were typically 30cm in diameter and excavated into glacial till or consolidated outwash. All soil removed was screened through ¼" hardware cloth.

Results/Summary

For details on the archaeological review and analysis, which was conducted for this project, refers to (Robertson 2004). A copy can be obtained from the U.S. Army Cold Regions Test Center. All cultural resources identified during the CRTC study are discussed in the report.

4.4.1 Cultural Resources in the Jarvis West Alternative

Fourteen prehistoric sites are located in the Jarvis West alternative (XMH-1058, XMH-1059, XMH-1060, XMH-1061, XMH-1062, XMH-1063, XMH-1064, XMH-1065, XMH-1066, XMH-1067, XMH-1068, XMH-1069, XMH-1070 and XMH-1071) and five prehistoric sites have been recorded within one kilometer of the proposed project area (XMH-1074, XMH-1075, XMH-1076, XMH-1077 and XMH-1078) (Figure 97). Following is a description of each recorded site in and around the Jarvis west proposed project area:

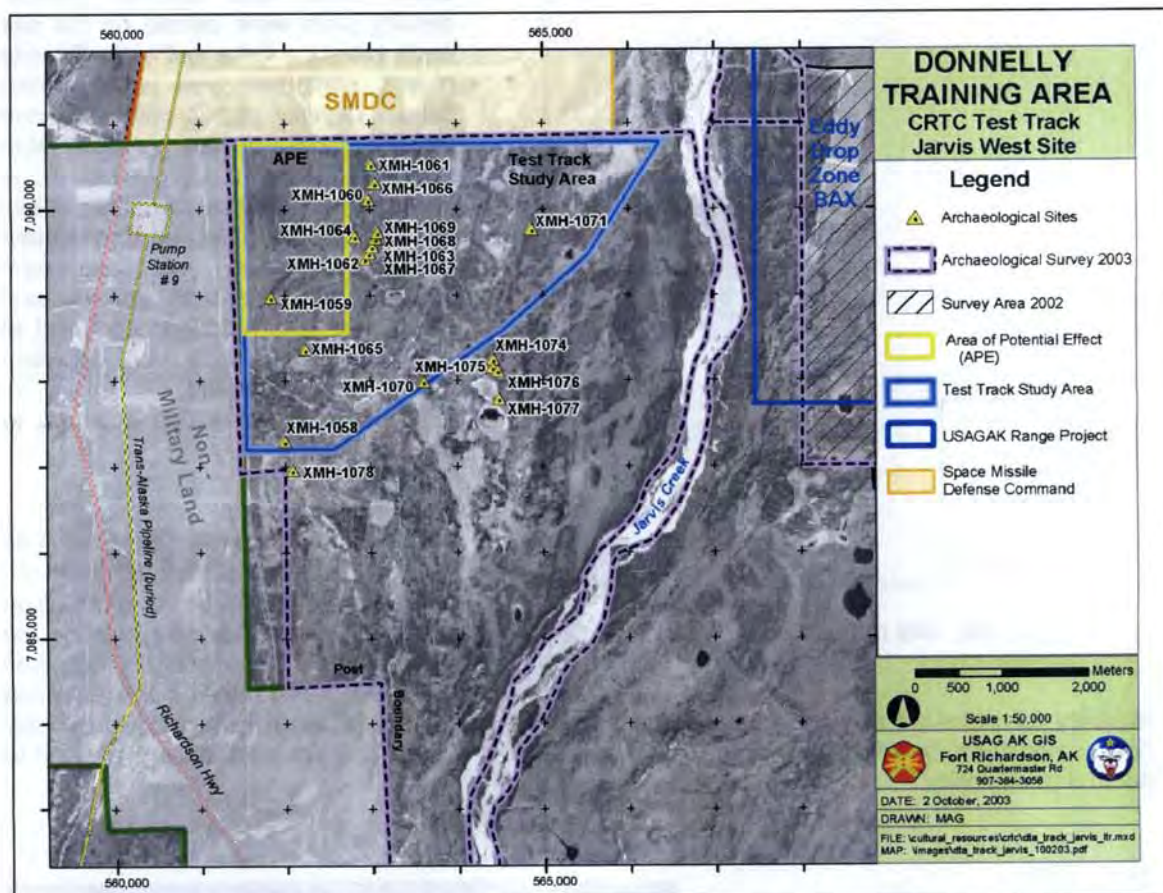


Figure 97: Location of Archaeological Sites in the Jarvis West Alternative

XMH-1058

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1058, is located on the northern end of a narrow north/south running ridge. It is a knoll rising slightly above the rest of the ridge (Figure 98). Donnelly dome is visible to the south, the Granites are visible to the southeast, and the Alaska Range is visible to the southwest.



Figure 98: General view of site XMH-1058, heading south

The closest water source is a small lake that can be seen from the highest point on the knoll looking northwest, 30 meters away. There is 70-80% surface visibility. The entire area was burned by the 1999 forest fire. UTM coordinates for the site are: [REDACTED]

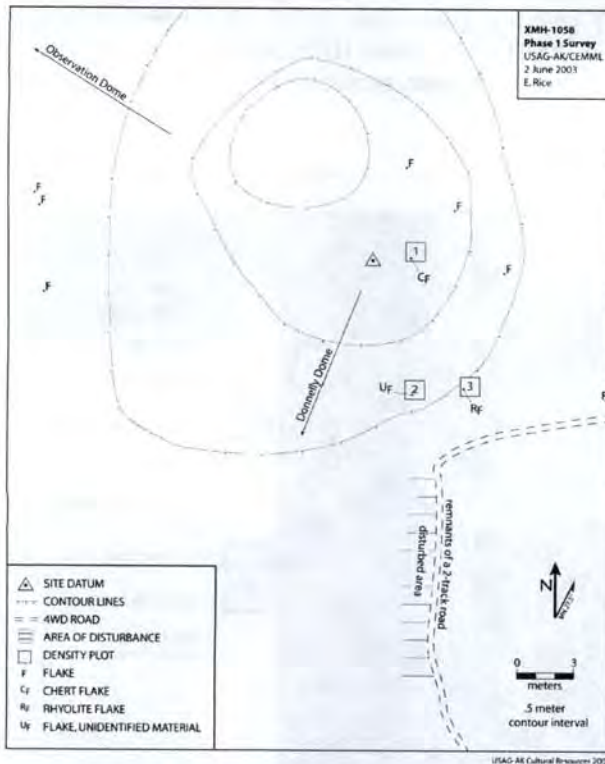


Figure 99: Site map of testing at XMH-1058

Site XMH-1058 consists of 10 pieces of lithic debitage located on the surface, no tools were found (Figure 99). The flakes consist of a mix of chert, basalt and rhyolite. Three density plots were placed on the site each with one flake in them. Density plot 1 contained one tertiary chert flake. Density plot 2 contained one tertiary flake of an unidentifiable material. Density plot 3 contained one primary rhyolite flake. Artifact density is calculated as being up to 1 artifact per-square meter. A flake type analysis indicates both primary and late stage lithic reduction occurred at the site. No artifacts were collected during the recording of this site. Subsurface examinations have yet to be conducted.

Recommendations

XMH-1058 has initially been classified as a small lithic scatter where both primary and late stage lithic reduction occurred. This site lies outside the APE for this proposed project, and was not evaluated to determine

eligibility for inclusion in the National Register of Historic Places. If the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility.

XMH-1059

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not Eligible

Site XMH-1059 is located on the western margin of a small, flat moraine and encompasses approximately 25m² (Figure 100). The moraine rises approximately 5 m above the surrounding landscape and is relatively flat, sloping slightly to the south. Currently, the closest water source to the site is a small dried lakebed located approximately 1.5km to the east of the site. A second small lake is located approximately 3km to



Figure 100: General view of site XMH-1059, heading north

the east, while Jarvis Creek lays approximately 5km to the east.

The forest that once covered the site was burned by a 1999 forest fire, leaving only charred trunks and stumps of spruce and birch trees. The tallest vegetation at the site is represented by dwarf poplar, while the groundcover includes various forbs, grasses, sedges, moss, and lichen. This lack of vegetation offers a virtually unobstructed 360° view of the surrounding area. From the site Donnelly Dome is visible to the south, a large portion of the Alaska Range to the southwest, and the Granite Mountains to the southeast. Several areas, specifically on the

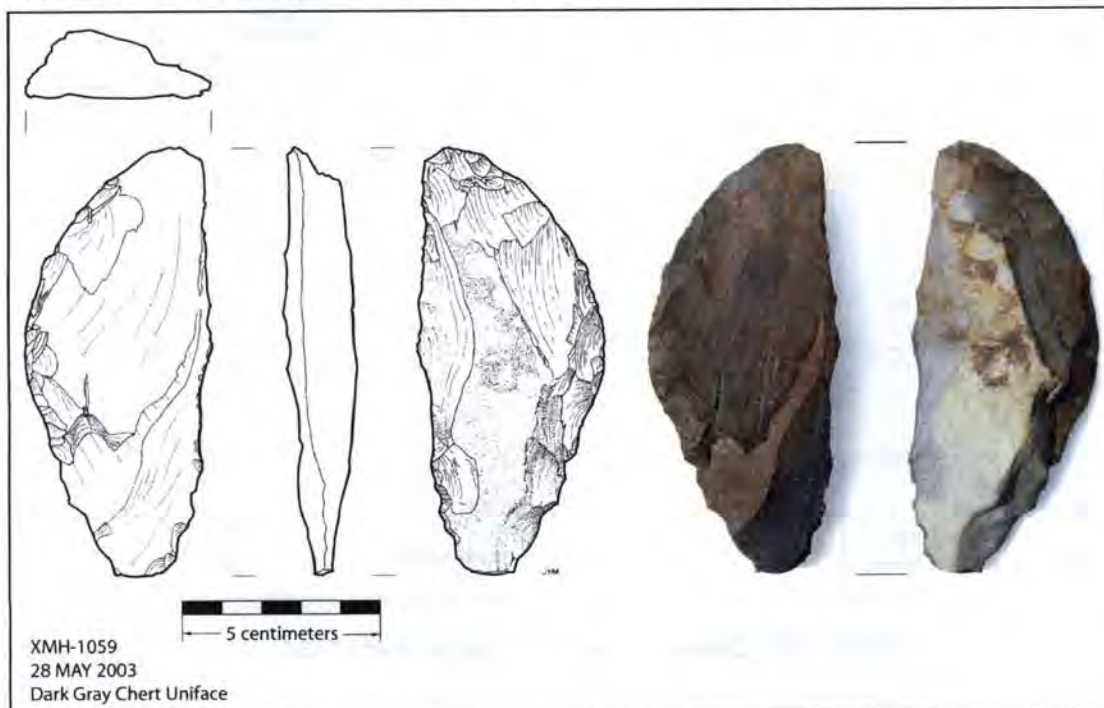


Figure 101: Unifacial tool from XMH-1059

western edge of the landform, contained glacial till exposed at the surface and offer excellent surface visibility. UTM coordinates for the site are: [REDACTED]

The site consists of a single unifacial tool found on the surface. The artifact exhibits both unifacial and bifacial reduction; however its primary form of reduction is unifacial (Figure 101). A portion of one lateral margin is bifacially worked, the rest of that side, along with one end of the artifact is unifacially worked. The other lateral margin exhibits light to medium unifacial retouch. The tool is 104.3mm long, 44.5mm wide, 15.5mm thick and weighs 67.5 gm (see Figure 101). The tool is manufactured from dark gray chert and has cortex on its dorsal surface. This artifact was collected.

An intensive examination of the ground surface was unable to locate any additional artifacts. A shovel test grid was laid out over the landform, and a total of 72 shovel tests were excavated, no additional artifacts were found. A typical soil profile consisted of approximately 2 cm of very dark gray loess (7.5YR3/1) representing soil affected by a forest fire in 1999. The very dark gray loess was underlain by 14cm of brown loess (7.5YR4/6). Directly beneath the brown loess was yellowish brown sandy loess (10YR5/8). Shovel tests were abandoned upon encountering glacial till (10YR5/8). All shovel tests were excavated to at least 10cm into dense glacial till.

FINDINGS

Pedestrian survey and 72 shovel tests produced a total of only one surface artifact. This finding suggests that XMH-1059 is an isolated find. The paucity of cultural material leads to the conclusion that XMH-1059 does not contain enough information that is important to our understanding of the regions prehistory or history and is not eligible for inclusion in the National Register of Historic Places.

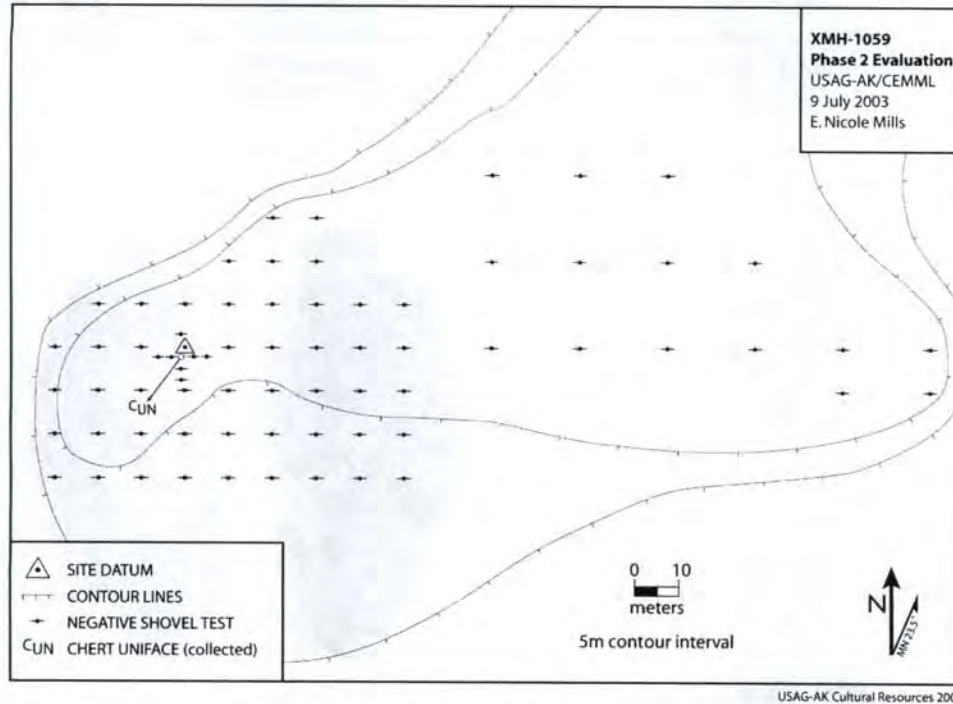


FIGURE 102: SITE MAP OF EVALUATIONS AT XMH-1059.

XMH-1060

Latitude: [REDACTED]
Longitude: [REDACTED]
Determination: Not Eligible

Site XMH-1060 is located on a north-south trending ridge approximately 40m south of a small rise along the ridge crest (Figure 102). The site encompasses 25m² and includes a single prehistoric artifact. The western face of the ridge rises sharply while the eastern face has a gentler slope. The rise is elevated approximately 5m above the southern extension of the ridge but <1m above the northern portion of the ridge. The nearest water source to the site is a small dried lakebed located approximately 1km south of the site.



Figure 103: General view of site XMH-1059, heading north

A second lake is located approximately 2.5km east-southeast while Jarvis Creek lies 3.5km east of the site. The site and the surrounding area experienced a fire episode in 1999, which at that time removed most of the vegetation.

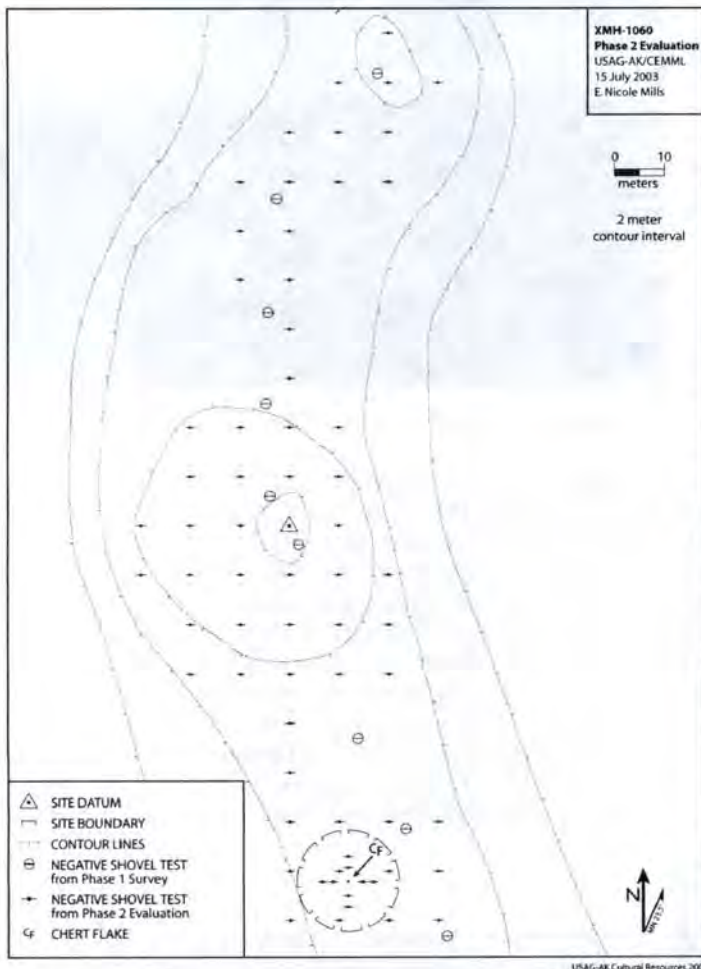


FIGURE 104: SITE MAP OF EVALUATIONS AT XMH-1060.

The charred remains of spruce and birch trees are still standing but do not obstruct one's view. The top of the rise offers a 360° view of the surrounding area. Donnelly Dome and the Granite Mountains can be seen to the south and southeast, respectively. A portion of the Alaska Range can be seen to the southwest. The vegetation in and around the site consists of dwarf birch, moss, lichen, grass, and sedge. Several areas, specifically on the surface of the rise contained exposed glacial till and offered excellent surface visibility. Approximately 50% of the ground surface in the area is void of vegetation and exposed.

XMH-1060, consist of a single flake fragment of light gray chert. An intensive examination of the ground surface was unable to locate any additional artifacts (Figure 10). A shovel test grid was laid out over the landform, and a total of 76 shovel tests were excavated. No artifacts were found. The majority of shovel tests excavated at the site exhibited the same soil profile (STP

S60 E20). A typical soil profile consisted of approximately 1cm of very dark grayish brown loess (10YR3/3) representing soil affected by a forest fire in 1999. The very dark grayish loess was underlain by 12cm of brown sandy loess (7.5YR4/4). Directly beneath the brown sandy loess is dark yellowish brown sandy loess (10YR4/6). Shovel tests were abandoned upon encountering glacial till. Shovel tests were excavated to at least 10cm into dense glacial till.

FINDINGS

Pedestrian survey and 76 shovel tests produced a total of only one flake found on the surface. This finding suggests that XMH-1060 is an isolated find. The paucity of cultural material leads to the conclusion that XMH-1060 does not contain enough information that is important to our understanding of the regions prehistory or history and is not eligible for inclusion in the National Register of Historic Places.

XMH-1061

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Eligible

Site XMH-1061 is located on a high point of a north-south trending ridge. It also has a secondary component on a bench 50m south-southwest of the datum. The site is located on and around a hilltop that is 50 x 40m (Figure 105). The area has burned recently in the 1999 forest fire, many dead and burnt spruce trees surround the site. The hilltop rises 25 meters above the surrounding terrain to the east and west, and 10m above the rest of the ridge to the north and south. The descending slope is relatively steep to the west, and gradually sloping to the north, east, and south. The hilltop crest has been eroded by wind and is devoid of large trees, but does contain dwarf aspen and grasses. There is approximately 40% ground visibility at the site. The bench to the south-southwest of the hilltop, where artifacts were also found on the surface, has vegetation comparable with the hilltop. To the north of the hilltop, the sloping terrain is thick with dead spruce trees and willow shrubs. To the south of the hilltop and east of the bench, the vegetation consists of dead and burnt spruce trees, grasses, fireweed, and cranberries. The nearest water source is Canister Lake located approximately 1500 meters to the northeast, which cannot be seen from the site. The view shed from the top of the site is approximately 200 degrees. There are good views of Donnelly Dome, the Alaska Range, and the Granite Mountains on a clear day.



Figure 105: General view of site XMH-1061, heading [REDACTED]

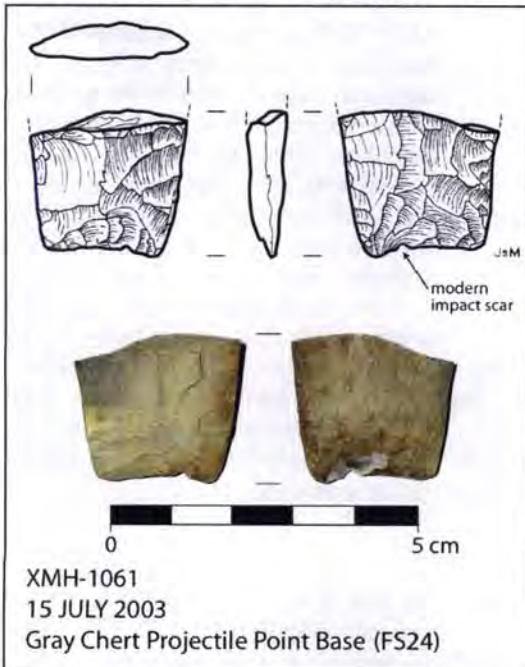


Figure 106: Biface Fragment from XMH-1061

XMH-1061 consists mainly (91%) of lithic debitage. 26 flakes were found on the surface and an additional five flakes, were found subsurface in either shovel tests or test units. Two tools were found at the site, both on the surface. FS24 is a chert biface fragment and is most likely a Basel fragment of a projectile point (Figure 106). It is gray in color, 23.75mm long, 25.70mm wide, and weighs 4.22gm. This artifact was collected. FS9 is a large flake core of unidentified material with several large flakes taken off of it. Chert, basalt, rhyolite, quartz, and obsidian (a non-locally occurring material type) were present among the debitage. A total of eleven density plots were placed on the site. Artifact density is calculated as being up to 1.27 artifacts per-square meter. Both flake type analysis and the presence of the flake core indicates both primary and late stage lithic reduction occurred at the site (Tables 5 and 6).

Shovel tests were systematically placed throughout the site area at intervals of 10m. Four shovel tests were placed at 5m intervals near positive shovel tests in the northwest corner of the site. A total of 58 shovel tests were excavated. The depth of shovel tests varied, but all were excavated to glacial till. A total of four shovel tests were positive with each containing one artifact apiece. Subsurface artifacts were found 10-20cm below the surface in all positive shovel tests. Based on the results of the survey and testing, the site area is estimated at approximately 120 x 60m.

Three 1 x 1m test units were excavated at site XMH-1061. One unit was placed at the base of the hill to the southeast of the site datum, near a positive shovel test. The second and third test units were placed near positive shovel tests and surface artifacts on the slope of the hill north-northwest of the site datum. The units were excavated in 5cm levels until glacial till was reached throughout the entire unit floor. Test units one and two contained no cultural material. Test unit three contained one artifact recovered from level four, 15-20cm below the surface (Figure 107). No subsurface features were identified at the site. Soil thickness varied 10-60cm across the site. The top of the site has sustained considerable wind erosion, and soil 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 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. Soil down-slope

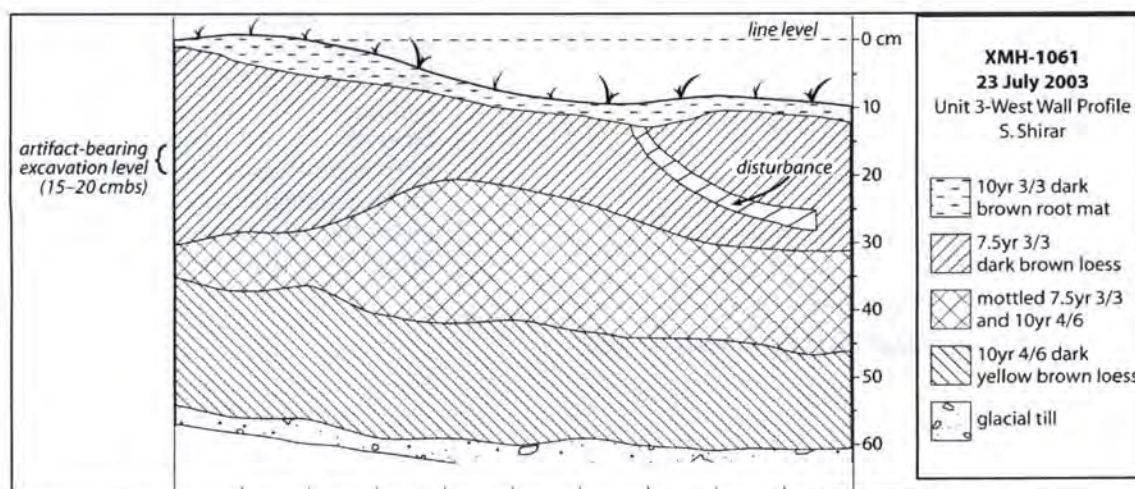


FIGURE 107. SOIL PROFILE OF TEST UNIT 3 XMH-1061

from the top of the site shows more deposition, averaging 45cm. Soil in these areas consists of loosely compacted, dark brown, organically rich loess that is present to an average of 5cm below the surface. Below this organic horizon, the soil consists of moderately compacted brown to dark brown loess with a low density of gravels and cobbles. Below this is a third layer, consisting of moderately compacted yellow brown loess with a moderate density of gravels and cobbles. Glacial till is encountered below these loess deposits, consisting of very loosely compacted yellow brown sandy loess, with a high density of gravels and cobbles.

FINDINGS

Pedestrian survey, 58 shovel tests and three test units produced a total of 29 artifacts at XMH-1061: 24 found on the surface, and 5 recovered from below the surface. A total of two tools were found including: 1 chert projectile point fragment, and a large flake core. The remaining finds are lithic debitage.

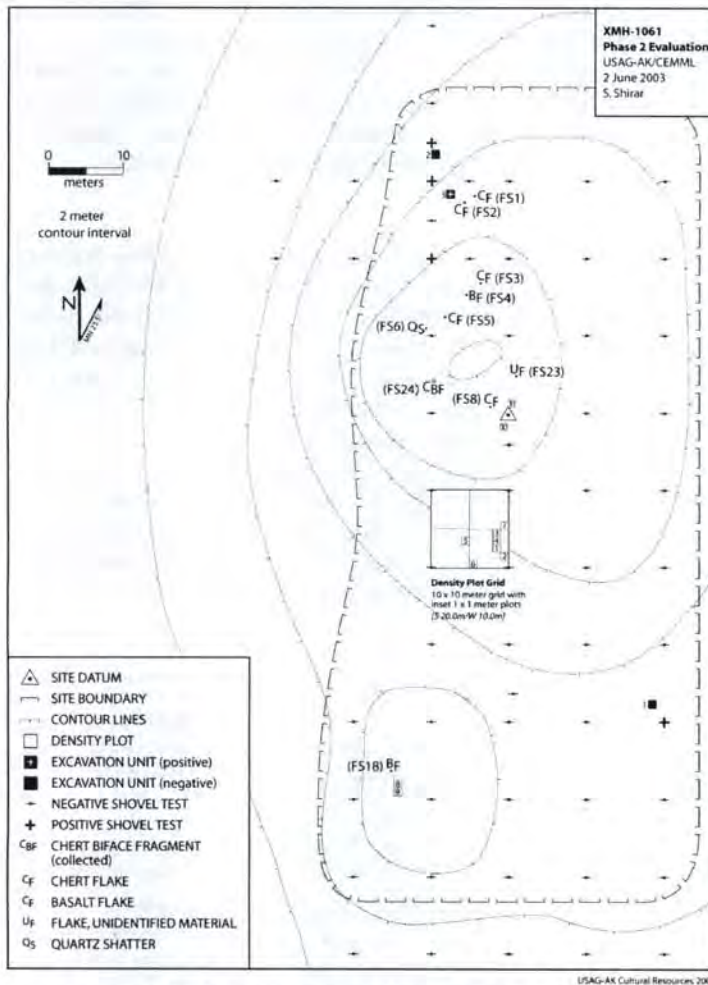


FIGURE 108: SITE MAP OF EVALUATIONS AT XMH-

XMH-1061 is a large lithic scatter with both surface and buried components. Both primary reduction of locally occurring material type and late stage lithic reduction or tool maintenance of non-locally occurring material types occurred at the site. With tool fragments and associated lithic debitage, non-locally occurring material types and buried cultural material XMH-1061 is in an excellent position to contribute to our knowledge of prehistoric land use patterns. *In situ* artifacts and soil stratigraphy indicate that if datable material were collected it may be used to date human use of the site and diagnostic artifacts, potentially contributing to a broader regional context. XMH-1061 is an intact archaeological site with integrity and little evidence of previous impacts. 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 region's prehistory.

Table 5. Flake types from site XMH-1061.

	Artifact Class	
	Frequency	% of Assemblage
Primary flakes	1	8%
Secondary flakes	1	8%
Tertiary flakes	10	84%
Total*	12	100%

*This total represents a sample, the number of flake found in eleven 1m x 1m density plots.

Table 6. Catalog of Artifacts from site XMH-1061.

FS #	Artifact Description	Artifact Material	Location
1	tertiary flake	gray chert	surface
2	tertiary flake	gray chert	surface
3	tertiary flake	gray chert	surface
4	tertiary flake	basalt	surface
5	secondary flake	gray chert	surface
6	shatter	quartz	surface
7	tertiary flake	quartz	surface DP11
8	tertiary flake	gray chert	surface
9	core	unidentified	surface DP10
10	primary flake	unidentified	surface DP10
11	tertiary flake	gray chert	surface DP7
12	secondary flake	gray chert	surface DP3
13	tertiary flake	obsidian	surface DP4
14	tertiary flake	gray chert	surface DP1
15	tertiary flake	gray chert	surface DP2
16	shatter	quartz	surface DP5
17	tertiary flake	rhyolite	surface DP6
18	tertiary flake	basalt	surface
19	tertiary flake	quartz	surface DP8
20	tertiary flake	quartz	surface DP9
21	tertiary flake	quartz	surface DP9
22	tertiary flake	quartz	surface DP9
23	primary flake	unidentified	surface
24	point base	gray chert	surface
25	tertiary flake	basalt	ST N30/W10
26	tertiary flake	unidentified	ST S40/E20
27	tertiary flake	unidentified	ST N20/W10
28	tertiary flake	unidentified	ST N35/W10
29	tertiary flake	gray chert	TU#3 Lvl.4

XMH-1062

Latitude: [REDACTED]

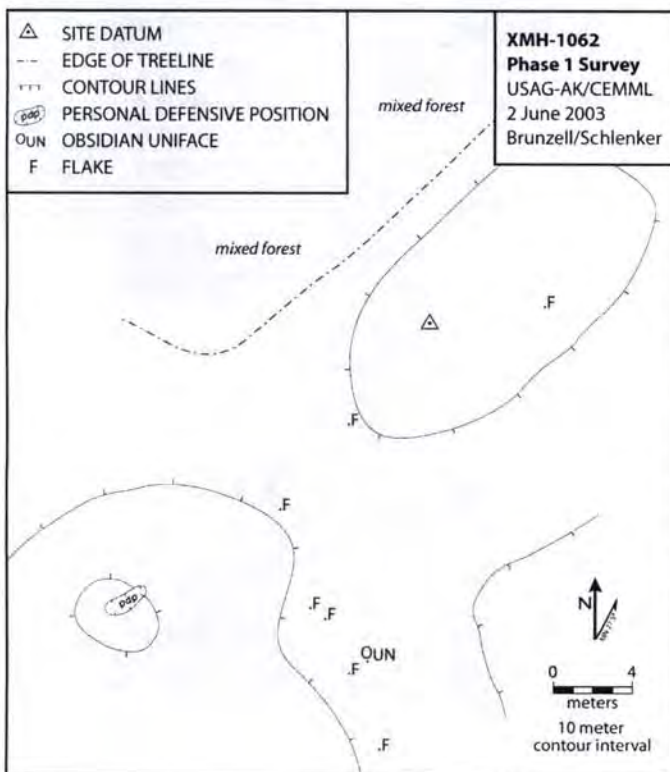
Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1062 is located on a high glacial moraine overlooking a wide expanse, with a particularly unobstructed view to the south and west (Figure 109). The nearest existing water is a marsh approximately 600 meters to the east/southeast. Surface visibility is high (approximately 80%) because of site disturbances including bulldozer tracks crossing site, as well as Aeolian deflation and sheet washing (heightened by recent 1999 burn). The vegetation in and around the site consists of mixed forest, dwarf birch, and forbs. A 4-wheel drive road is located to the north of the site. UTM coordinates for the site are: [REDACTED]



Figure 109: General view of site XMH-1062, heading northeast



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Figure 110: Site map of testing at XMH-1062.

Site consists of one high quality obsidian unifacially retouched flake fragment and several rough quality tertiary quartzite and chert flakes (Figure 110). The retouched flake is high quality translucent obsidian with black specks. No shovel test pits or density plots were conducted. No artifacts were collected.

Recommendations

XMH-1062 has initially been classified as a small lithic scatter containing one tool made of obsidian, a non-locally occurring material type. This site lies outside the APE for this proposed project, and was not evaluated to determine eligibility for inclusion in the National Register of Historic Places. If the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility.

XMH-1063

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1063 is located on a high point of a glacial moraine east/northeast of XMH-1062 and south/southwest of XMH-1067. The nearest known water is a marsh approximately 600 meters to the east/southeast. Site provides a 360° unobstructed view of the surrounding terrain. One significant disturbance includes a road that bisects the site. No shovel test pits were necessary, as a recent 1999 burn had afforded approximately 80% visibility. Vegetation consists of needle leaf forest, moss/lichen, dwarf scrub and grasses. UTM coordinates for the site are: [REDACTED]

XMH-1063 consists of three tertiary gray chert flakes, and one likely quartz flake core (Table 6). A preliminary flake type analysis indicates late stage lithic reduction occurred at the site. However the presence of a flake core indicates that primary lithic reduction may have occurred at the site as well. No density plots were calculated or artifacts collected.

Recommendations

XMH-1063 has initially been classified as a small lithic scatter where late stage lithic reduction occurred. This site lies outside the APE for this proposed project, and was not evaluated to determine eligibility for inclusion in the National Register of Historic Places. If the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility.

XMH-1064

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1064 is located in the lowlands, not associated with any nearby glacial moraines. The nearest known water is a marsh approximately 1 km to the southeast. No significant view of the surrounding landscape is possible. Surface visibility is relatively high due to a recent 1999 burn. Vegetation consists of dwarf scrub forbs and grasses. UTM coordinates for the site are: [REDACTED]

XMH-1064 consists of a gray/green chert flake core of good quality, and is partially burned. No subsurface testing or density plots were conducted. No artifacts were collected during the recording of this site.

Recommendations

XMH-1064 has initially been classified as an isolated find. This site lies outside the APE for this proposed project, and was not evaluated to determine eligibility for inclusion in the National Register of Historic Places. If the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility.



Figure 111: General view of site XMH-1065, heading northeast

XMH-1065

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not Eligible

Site XMH-1065 is located on a large moraine approximately 50m wide and 160m in length (Figure 111). Cultural material was encountered in the central portion of the moraine. The majority of the side slopes are steep and the crest of the moraine is relatively flat. The moraine rises approximately 15m above the surrounding landscape. A large, heavily disturbed area is at the northern portion of the moraine. This area is a result of the road construction that exposed glacial till. The nearest water source to the site is North Alyeska Lake, located 1km to the southeast. A forest fire in 1999 removed most vegetation from the surrounding area and the site now offers an excellent view of the surrounding landscape. Donnelly Dome is visible to the south, a portion of the Alaska Range to the south and southwest, and Granite Mountains to the southeast. The vegetation on site is represented primarily by dwarf birch, grass/sedge, and some scattered forbs. Approximately 75% of the ground surface is void of vegetation and offers excellent visibility. [REDACTED]

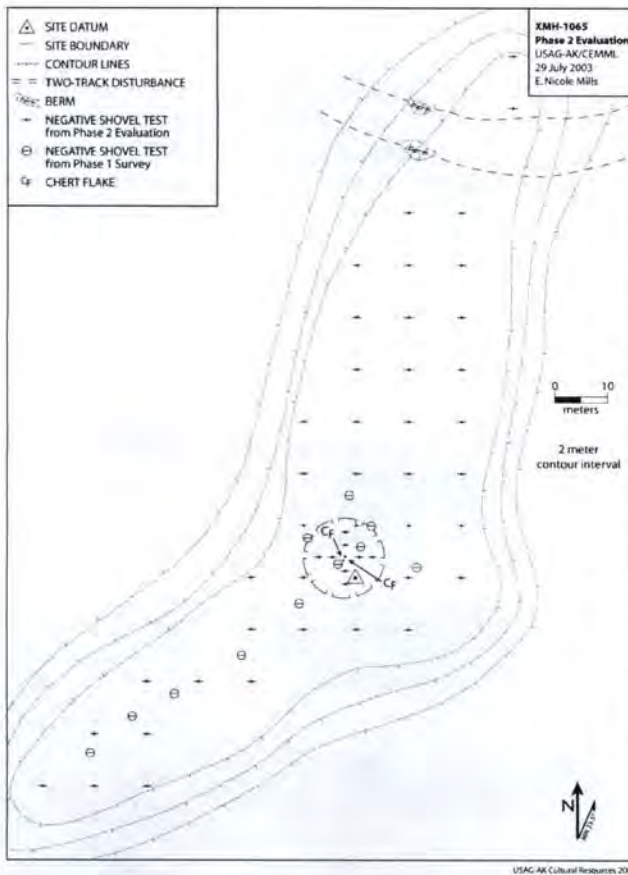


Figure 112: Site map of evaluations at XMH-1065

density plots were calculated at site.

Site XMH-1065 consists of two gray chert flakes found on the surface (Figure 112). The flakes were found in an area exposed by an uprooted spruce tree. The two flakes were less than 30cm apart. A thorough investigation of the surface was conducted, no additional artifacts were found. When the site was first recorded a total of 12 shovel tests were excavated at 10m intervals. 47 more shovel tests were placed at the site in the evaluation phase, bringing the total number of shovel tests to 59. None of the shovel tests excavated yielded cultural material. Shovel tests were excavated to a diameter of 30cm and at least 10cm into glacial till. Glacial till was encountered anywhere from the surface of the shovel probe to 30cm below surface. The majority of shovel tests excavated at the site exhibited the same soil profile (STP N0 E0). A typical soil profile consisted of approximately 2cm of black loess (7.5YR2.5/1) representing soil affected by the 1999 forest fire. The black loess was underlain by 8cm of strong brown sandy loess (7.5YR4/6). Directly beneath the strong brown sandy loess was strong brown loess/sand (7.5YR4/6). Shovel tests were ended upon encountering the glacial till. No

FINDINGS

Pedestrian survey and 59 shovel tests produced only two flakes found on the surface. This finding suggests that XMH-1065 is a small lithic scatter. The paucity of cultural material leads to the conclusion that XMH-1065 does not contain enough information that is important to our understanding of the regions prehistory or history and is not eligible for inclusion in the National Register of Historic Places.

XMH-1066

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not Eligible

Site XMH-1066 is located on a hilltop that was burned in the 1999 forest fire (Figure 113). The burn and wind erosion has increased surface visibility. Site provides a 360° unobstructed view of the surrounding terrain. The nearest water source is 900 meters away, but no water sources are visible from site. Vegetation consists of mix forest, low scrub and forbs. UTM coordinates for the site are: [REDACTED]



FIGURE 113: GENERAL VIEW OF SITE XMH-1066, HEADING SOUTH.

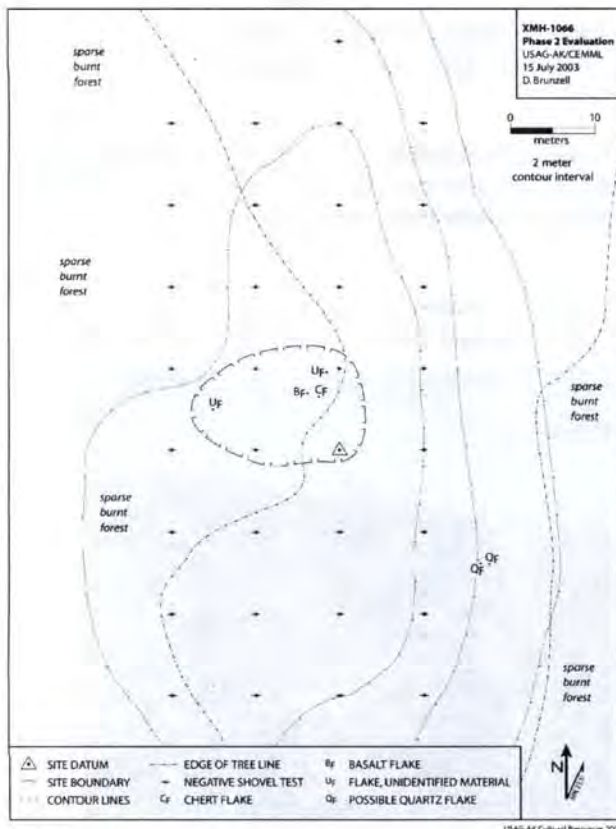


FIGURE 114: SITE MAP OF TESTING AT XMH-1066.

XMH-1066 consists of six flakes found on the surface of the southeast slope of the hill (Figure 114). Artifacts found include; one tertiary black chert flake, one tertiary black basalt flake, and one tertiary gray-brown chert flake. Preliminary flake type analysis indicates late stage lithic reduction occurred at the site. No artifacts were collected during the recording of this site. Preliminary subsurface testing did not produced any artifacts.

Thirty two shovel tests were placed at the site in the evaluation phase. None of the tests yielded cultural material. Shovel tests were excavated to a diameter of 30cm and at least 10cm into glacial till. The majority of shovel tests excavated at the site exhibited the same soil profile (STP N10 W20). A typical soil profile consisted of approximately 2cm of black loess (10YR 2/2) representing soil affected by a forest fire in 1999. The black loess was underlain by 4cm of dark brown loess (10YR3/3). Directly beneath the dark brown sandy loess was tan loess (10 YR 4/4). Shovel tests were abandoned upon

encountering the glacial till. No density plots were calculated at site.

FINDINGS

Pedestrian survey and 32 shovel tests produced only six flakes found on the surface. This finding suggests that XMH-1066 is a small lithic scatter. The paucity of cultural material leads to the conclusion that XMH-1066 does not contain enough information that is important to our understanding of the regions prehistory or history and is not eligible for inclusion in the National Register of Historic Places.

XMH-1067

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1067 is located on a glacial moraine and provides a 360° unobstructed view of the surrounding terrain (Figure 115). The nearest existing water is a marsh approximately 600 meters to the southeast. The recent 1999 burn has cleared much of the native vegetation and afforded approximately 0% visibility. Vegetation consists of mixed forest, moss/ lichen, and forbs. Natural quartz appears to be outcropping at the top of the moraine. A two-track 4-wheel drive road provides easy access to the site, although no modern disturbances are apparent. UTM coordinates for the site are: [REDACTED]



FIGURE 115: GENERAL VIEW OF SITE XMH-1066, HEADING WEST.

XMH-1067 consists of two chert flakes (tertiary) and one possible quartz flake. Preliminary flake type analysis indicates late stage lithic reduction occurred at the site. No artifacts were collected during the recording of this site. No shovel test pits or density plots were conducted.

Recommendations

XMH-1067 has initially been classified as a small lithic scatter where late stage lithic reduction occurred. This site lies outside the APE for this proposed project, and was not evaluated to determine eligibility for inclusion in the National Register of Historic Places. If the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility.

XMH-1068

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1068 is located on a glacial moraine and provides an 180° unobstructed view of the surrounding terrain to the south-southwest (Figure 116). The nearest known water source is a marsh approximately 650



Figure 116: General view of site XMH-1068, heading southwest

meters to the southeast. Surface visibility was high (approx. 70%) due to the recent 1999 burn. Vegetation consists of mixed forest, moss/lichen, dwarf scrub and forbs. A nearby two-track 4-wheel drive road makes the site easily accessible, and some evidence of military activity (shells, personal defensive positions, etc.) is apparent. UTM coordinates for the site are: [REDACTED]

XMH-1068 consists of three tertiary chert flakes of fair quality (gray, tan, and red/white respectively) found on the surface. No shovel test pits or density plots were conducted. Preliminary flake type analysis indicates late stage lithic reduction occurred at the site. No artifacts were collected during the recording of this site.

Recommendations

XMH-1068 has initially been classified as a small lithic scatter where late stage lithic reduction occurred. This site lies outside the APE for this proposed project, and was not evaluated to determine eligibility for inclusion in the National Register of Historic Places. If the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility.

XMH-1069

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1069 is located on a glacial moraine and provides a 360° unobstructed view of the surrounding terrain (Figure 117). The nearest known water source is a marsh approximately 650 meters to the southeast. Surface visibility was high due to the recent 1999 burn. Vegetation consists of mixed forest, moss/lichen, dwarf scrub and grasses. Close proximity to a two-track 4-wheel drive road make the site easily accessible, although no major modern disturbances are apparent. UTM coordinates for the site are: [REDACTED]



*FIGURE 117: GENERAL VIEW OF SITE XMH-1069,
HEADING SOUTH*

XMH-1069 consists of three tertiary chert flakes. Of these, the largest is gray, of rough quality, and measures 5.5cm in height, 5cm in width, and .5cm thick. The other chert flakes are tan and gray, respectively. Preliminary flake type analysis indicates late stage lithic reduction occurred at the site. No shovel test pits or density plots were conducted.

Recommendations

XMH-1069 has initially been classified as a small lithic scatter where late stage lithic reduction occurred. This site lies outside the APE for this proposed project, and was not evaluated to determine eligibility for inclusion in the National Register of Historic Places. If the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility.

XMH-1070

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1070 is located on a broad, gradually rising southeast/northwest trending ridge overlooking a large boggy area to the southwest, possibly an older lakebed (Figure 118). There is a clear view of the Granite Mountains to the southeast, the Alaska Range to the southwest, and Donnelly dome almost due south. The nearest water source is South Alyeska Lake approximately 500 meters to the southeast. Surface visibility at the site is estimated at 10-20%. Vegetation consists of needle leaf forest, moss/lichen, and dwarf scrub. UTM coordinates for the site are: [REDACTED]



FIGURE 118: GENERAL VIEW OF SITE XMH-1070, HEADING SOUTH

XMH-1070 consists of two tertiary basalt flakes found during systematic shovel testing along two transects ten meters apart with shovel test units spaced at ten meter intervals. A total of six shovel tests were excavated 30cm in diameter to glacial till. One positive shovel test (ST3) contained two flakes at a depth of 0-5cms. The shovel test was 25cm deep, with three distinct layers, 0-5cm is the organic layer, 5-12cm is reddish brown loess, and 12-25cm is glacial till. Preliminary flake type analysis indicates late stage lithic reduction occurred at the site. The artifacts were collected. No density plots were calculated.

Recommendations

XMH-1070 has been classified as a buried site and could potentially contain more cultural material. This site lies outside the APE for this proposed project, and was not evaluated to determine eligibility for inclusion in the National Register of Historic Places. If the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility.

XMH-1071

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1071 is located on the apex of a glacial moraine and provides a 360° unobstructed view of the surrounding terrain (Figure 119). The nearest water source is a marsh approximately 250 meters to the southwest. Additionally a small lake is located approximately 550 meters northwest. Surface visibility is low (approximately 10%). Vegetation consists of needle leaf forest, moss/lichen, and dwarf scrub. UTM coordinates for the site are: [REDACTED]



FIGURE 119: GENERAL VIEW OF SITE XMH-1071, HEADING WEST.

[REDACTED]

XMH-1071 consists of a single tertiary green chert flake yielded from a positive shovel test pit. A total of two shovel tests were excavated 30cm in diameter to glacial till. One positive shovel test (ST1) contained one flake at a depth of 13-26cms. The shovel test was 31cm deep, with four distinct layers, 0-8cm is the organic layer, 8-13cm is brown loess, 13-26 cm is yellow/brown sandy loess and 26cm+ is glacial till. This artifact was collected. No density plots were calculated.

Recommendations

XMH-1071 has been classified as a buried site and could potentially contain more cultural material. This site lies outside the APE for this proposed project, and was not evaluated to determine eligibility for inclusion in the National Register of Historic Places. If the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility.

XMH-1074

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1074 is located on a high point of a north/south running glacial moraine, and provides a 360° unobstructed view of the surrounding terrain (Figure 120). South Alyeska Lake is approximately 300 meters to the south. Surface visibility was high (approx. 60%) due to the recent 1999 burn. Vegetation consists of mixed forest with a ground cover of low scrub and moss lichen. UTM coordinates for the site are: [REDACTED]



*FIGURE 120: GENERAL VIEW OF SITE XMH-1074,
HEADING NORTH.*

XMH-1074 consists of three rhyolite flakes, two tertiary and one secondary, which were observed on the ground surface. Preliminary flake type analysis indicates later stages lithic reduction occurred at the site. No artifacts were collected or density plots calculated during the recording of this site. Subsurface examinations have yet to be conducted.

Recommendations

XMH-1074 has initially been classified as a small lithic scatter where later stages lithic reduction occurred. This site lies outside the APE for this proposed project, and was not evaluated to determine eligibility for inclusion in the National Register of Historic Places. If the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility.

XMH-1075

Latitude: [REDACTED]
Longitude: [REDACTED]
Determination: Not evaluated

Site XMH-1075 is located on the south side of a north/south running glacial moraine (Figure 121). Site has a south/southwest view overlooking North and South Alyeska Lakes approximately 150 meters to the south, with a clear view of Donnelly Dome and the Alaska Range. Site has approximately 50% surface visibility, surrounded by a mixed forest with a ground cover of low scrub and moss/lichen. UTM coordinates for the site are: [REDACTED]

[REDACTED] XMH-1075 consists of five tertiary basalt flakes located on the ground surface



FIGURE 121: GENERAL VIEW OF SITE XMH-1075, HEADING SOUTH

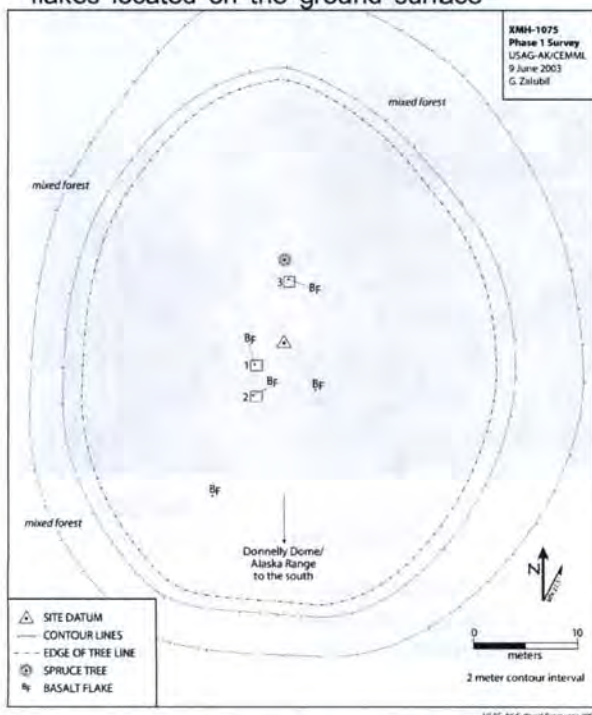


FIGURE 122: SITE MAP OF TESTING AT XMH-1075.

(Figure 122). Three density plots were placed on the site. DP S03.1/W03 contained one tertiary basalt flake. DP S06.1/W03 contained one tertiary basalt flake. DP N05.2/W0.0 contained one tertiary basalt flake. No primary or secondary flakes were located. Artifact density is calculated as being up to 1 artifact per-square meter. A flake type analysis indicates late stage lithic reduction occurred at the site. No shovel tests were excavated or artifacts collected during the recording of this site.

Recommendations

XMH-1075 has initially been classified as a small lithic scatter where late stage lithic reduction occurred. This site lies outside the APE for this proposed project, and was not evaluated to determine eligibility for inclusion in the National Register of Historic Places. If the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility.

XMH-1076

Latitude: [REDACTED]
Longitude: [REDACTED]
Determination: Not evaluated

Site XMH-1076 was located on a southeast/northwest running glacial moraine with an unobstructed view to the South. The site is approximately 200m from a small un-named pond to the Southwest. Surface visibility was high due to sparse ground vegetation. Vegetation consists

of mixed forest, dwarf scrub and grasses. UTM coordinates for the site are: [REDACTED]

XMH-1076 consists of a single primary chert flake located on the surface. A total of 12 shovel tests were excavated along two parallel transects 10m apart. Shovel tests were 30cm in diameter and excavated from 10 to 20 cm deep to glacial till; all shovel tests were negative. No artifacts were collected or density plots calculated during the recording of this site.

Recommendations

XMH-1076 has initially been classified as an isolated find. This site lies outside the APE for this proposed project and was not evaluated to determine eligibility for inclusion in the National Register of Historic Places. If the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility.

XMH-1077

Latitude: [REDACTED]

Longitude: [REDACTED]

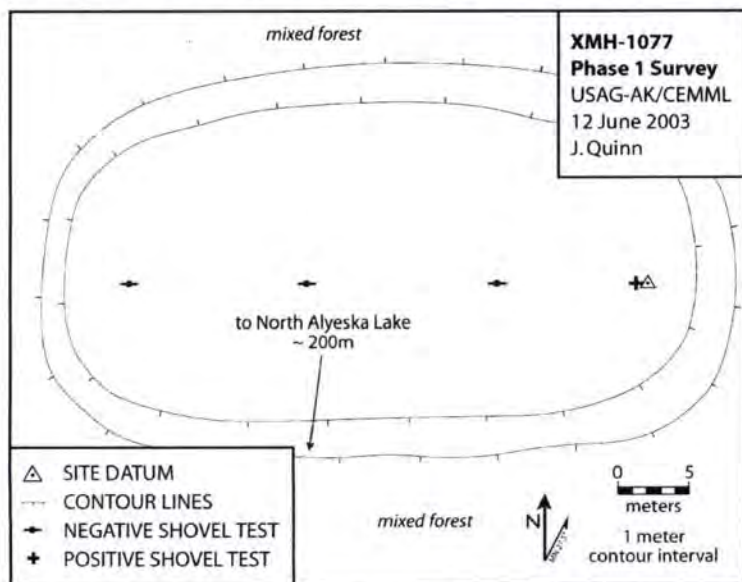
Determination: Not evaluated



Figure 123: General view of site XMH-1077, heading north.

Site XMH-1077 is located on the crest of an east/west running ridge (Figure 123). The nearest water source, South Alyeska Lake is 100 meters to the south. Site has an unobstructed view to the south of the lake and the Alaska Range. Site has low visibility due to moss/lichen ground cover surrounded by a mixed forest with low scrub. UTM coordinates for the site are: [REDACTED]

XMH-1077 consists of two tertiary chert flakes found in a shovel test pit (Figure 124). Site was found during systematic shovel testing along one transect with shovel test units spaced at approximately 10 meter intervals. A total of four shovel tests were excavated to glacial till. However, only one shovel test unit (ST 4) produced cultural material. ST 4 contained two tertiary chert flakes, found in a 30cm x 30cm shovel test at an approximate depth of 15cm. Shovel test was 50cm deep, with four distinct layers, 0-7cm organic, 7-18cm is a 7.5YR 3/3 loess, 18-46cm is a 10YR 4/4 loess, 46-50cm is glacial till. The artifacts were collected. No density plots were calculated.



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Figure 124: Site map of testing at XMH-1077

potentially contain more cultural material. This site lies outside the APE for this proposed project, and was not evaluated to determine eligibility for inclusion in the National Register of Historic

Recommendations

XMH-1077 has been classified as a buried site and could

Places. If the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility.

XMH-1078

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1078 is located on an east / west running glacial moraine, and provides a 360° unobstructed view of the surrounding terrain (Figure 125). The nearest known water source is a dry lakebed approximately 650 meters to the south. Surface visibility is about 70%. Vegetation consists of broad leaf forest, dwarf scrub, forbs and grasses. UTM coordinates for the site are:

[REDACTED]



Figure 125: General view of site XMH-1078, heading south

XMH-1078 consists of three flakes found on the surface, one tertiary black and gray basalt flake, one tertiary chert flake and one primary reduction greenish gray flake. Preliminary flake type analysis indicates both primary and late stage lithic reduction occurred at the site. No map was made; density plots or shovel tests were conducted. No artifacts were collected during the recording of this site.

Recommendations

XMH-1078 has initially been classified as a small lithic scatter where both primary and late stage lithic reduction occurred. This site lies outside the APE for this proposed project, and was not evaluated to determine eligibility for inclusion in the National Register of Historic Places. If the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility.

4.4.2 Cultural Resources in the Donnelly Drop Zone Alternative

Two prehistoric sites are located in the Donnelly Drop Zone alternative for the Cold Weather/Automotive Test Complex (XMH-1072 and XMH-1073) (Figures 126). Both sites are located on a bluff that overlooks the Jarvis Creek floodplain. This alternative will not be impacted by this project. The preferred alternative for the Cold Weather/Automotive Test Complex is in the Jarvis West Study Area (Figure 97), to the east of Jarvis Creek and immediately south of the Strategic Missile Defense Command missile field on Fort Greely.

Following is a description of each recorded site in the Donnelly Drop Zone proposed project area:

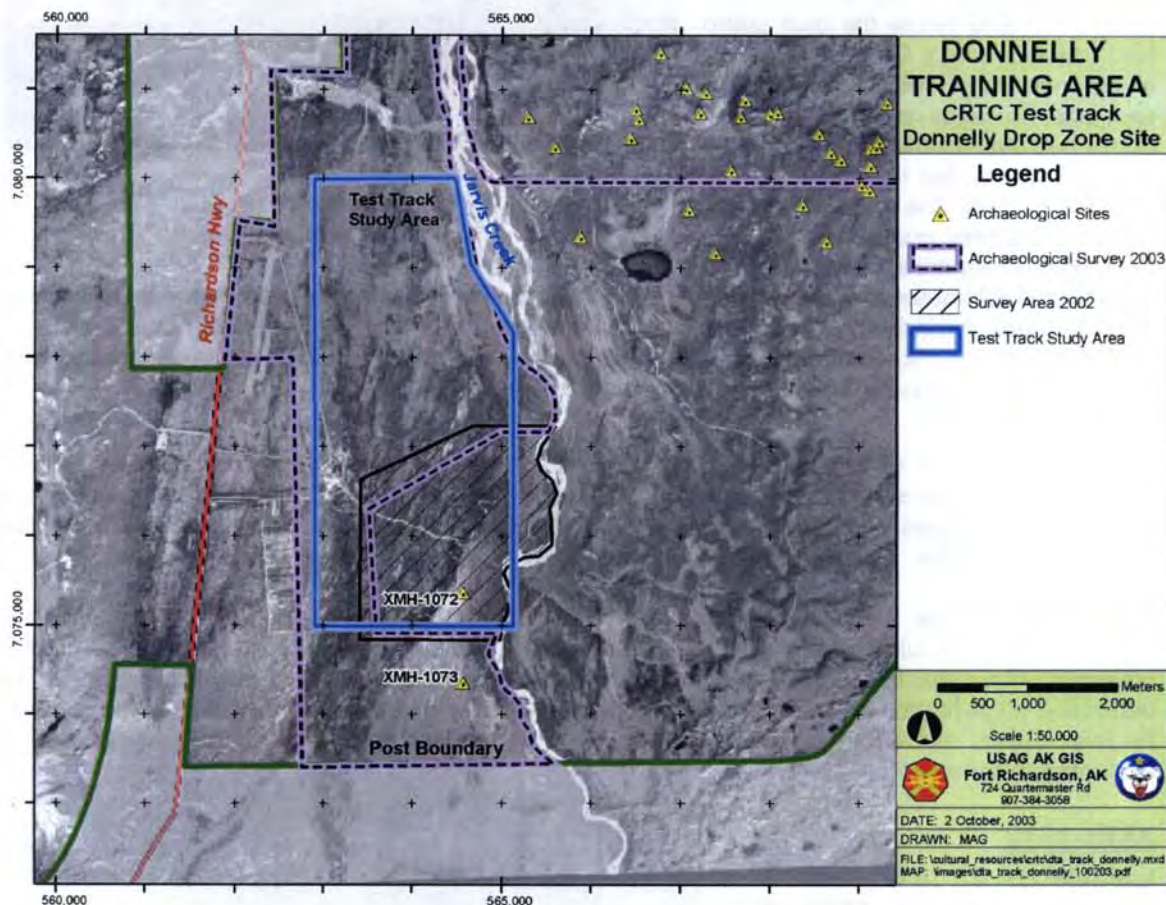


Figure 126. Location of Archaeological Sites in the Donnelly Drop Zone Alternative

XMH-1072

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1072 is located on a bluff overlooking Jarvis Creek; the bluff extends for 2 kilometers north and 3 kilometers south (Figure 127). The bluff is elevated 15 meters above the surrounding terrain. The surrounding area is generally flat on top of the bluff going west and below the bluff going east towards Jarvis Creek. The creek is approximately 400 meters to the east and no lakes exist in the area. Some hills are visible on the far side of Jarvis Creek, but the creek itself is not visible from the bluff. The bluff provides the only good vantage point in the immediate area. Site XMH-1073

is located 1 kilometer to the south on the same bluff. The edge of the bluff has experienced a small amount of wind erosion, and thus a small degree of surface visibility was observed at the site. Vegetation consists of mixed forest, moss/lichen, and dwarf scrub UTM coordinates for the sites are: [REDACTED]



Figure 127: General view of site XMH- 1072, heading north

XMH-1072 consists of one tertiary gray chert flake and two secondary quartz flakes on the surface. All artifacts were observed within a 10-meter area on the bluff edge. Flake type analysis indicates later stages lithic reduction occurred at the site. No artifacts were collected during the recording of this site. Subsurface examinations have yet to be conducted at the site.

Recommendations

XMH-1072 has initially been classified as a small lithic scatter where later stages lithic reduction occurred. This site lies outside the APE for this proposed project, and was not evaluated to determine eligibility for inclusion in the National Register of Historic Places. If the APE is moved by later design alteration, or if further projects are proposed in the area, the site should be evaluated to determine eligibility.

XMH-1073

Latitude: [REDACTED]

Longitude: [REDACTED]

27)

Determination: Not evaluated

Site XMH-1073 is located on a bluff overlooking Jarvis Creek, that extends for 3 kilometers north and 2 kilometers south (Figure 128). The bluff is elevated 15 meters above the surrounding terrain that drops off suddenly to the east. The surrounding area is generally flat on top of the bluff going west and below the bluff going east towards



Figure 128: General view of site XMH- 1073, heading north.

Jarvis Creek. The creek is approximately 400 meters to the east and no lakes exist in the area. Some hills are visible on the far side of Jarvis Creek, but the creek itself is not visible from the bluff. The bluff provides the only good vantage point in the immediate area. Site XMH-1072 is located 1 kilometer to the north on the same bluff. The edge of the bluff has experienced a small amount of wind erosion, and thus a small degree of surface visibility was observed at the site.

Vegetation consists of mixed forest, moss/lichen, and dwarf scrub. UTM coordinates for the site are: [REDACTED]

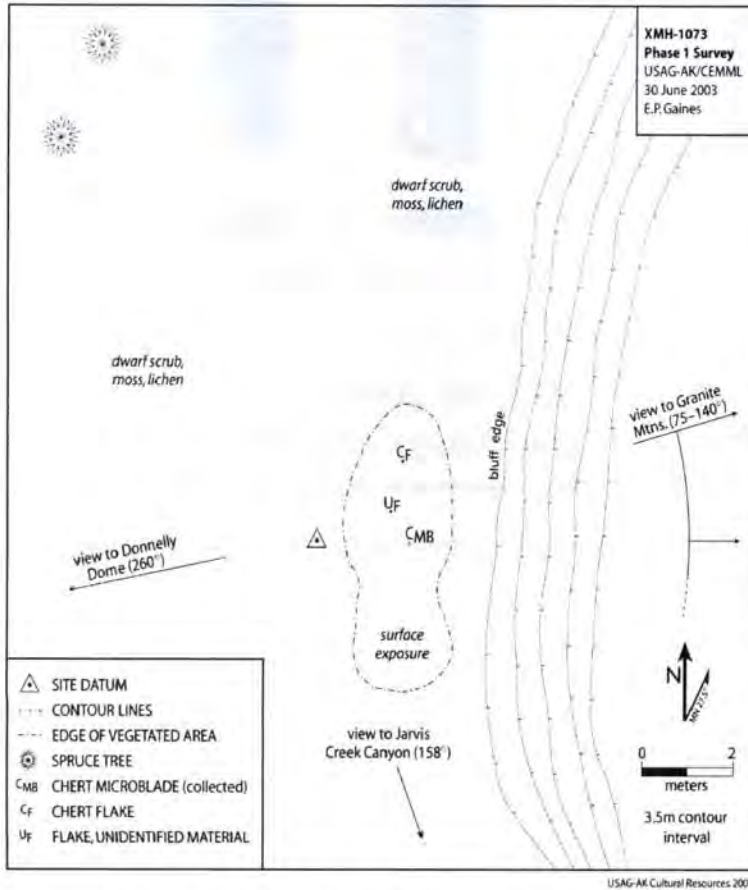


Figure 129: Site map of testing at XMH- 1073.

outside the APE for this proposed project, and was not evaluated to determine eligibility for inclusion in the National Register of Historic Places. If the APE is moved by later design alteration, or if further projects are proposed in the area the site should be evaluated to determine eligibility.

XMH-1073 consists of one microblade and two flakes identified on the ground surface (Figure 129). The gray chert microblade (collected) weighs .49 grams and measures 24.3 mm in height and 9.6 mm in width (Figure 130). The other two artifacts at the site include a secondary tan chert flake and one tertiary gray-banded chert flake with multiple flake scars. These artifacts were observed within a 2-meter area on the bluff edge. One artifact was collected during the recording of this site. Subsurface examinations have yet to be conducted at the site.

Recommendations

XMH-1073 has initially been classified as a small lithic scatter containing microblade technology. This site lies

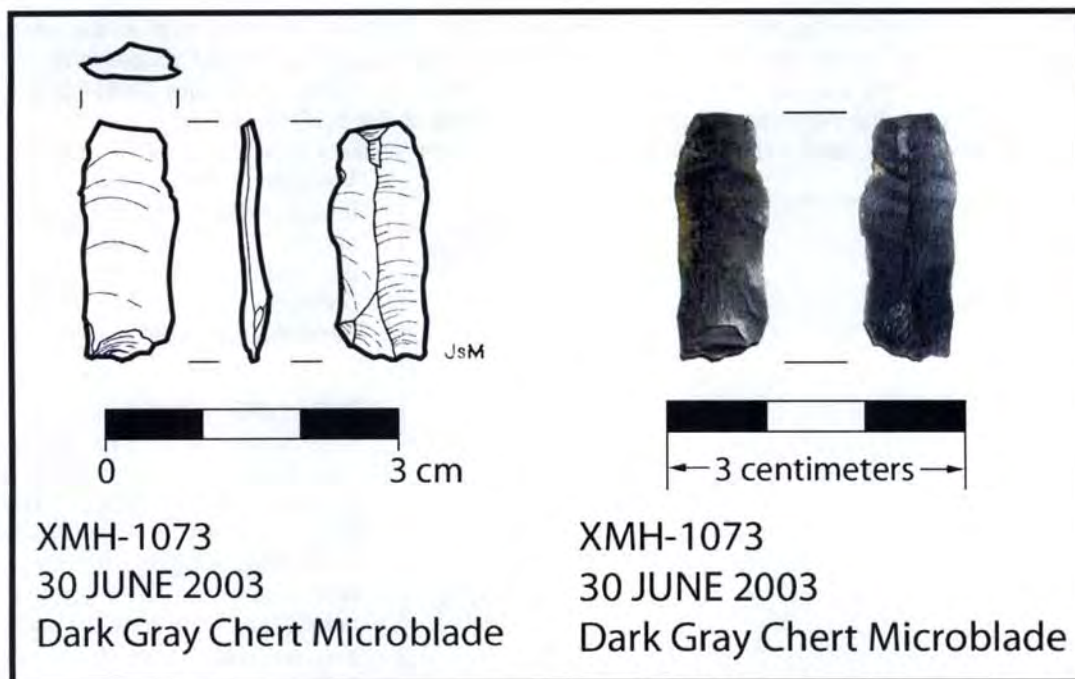


Figure 130: Microblade from XMH-1073.

4.5 Battle Area Complex (BAX) Firing Fan

The United States Army has proposed a Battle Area Complex (BAX) a range development project on lands at Ft. Wainwright's Donnelly Training Area. The Battle Area Complex 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 were three alternatives considered for the siting of this project. Figure 131 shows the three general areas; Texas Range, Eddy Drop Zone, and Donnelly Drop Zone. Survey for the construction footprints of the three BAX alternatives was conducted in 2002 (Hedman et al. 2003). The focus of the 2003 survey was the Firing Fans or Surface Danger Zone for the alternatives. The firing fan of the Texas Range alternative was located in an active impact area and was not surveyed due to safety concerns. The firing fan of the Eddy Drop Zone alternative (Figure 132), being the preferred alternative, received the majority of the resources for this survey. However, the Eddy Drop Zone (firing south) and Donnelly Drop Zone (firing north)

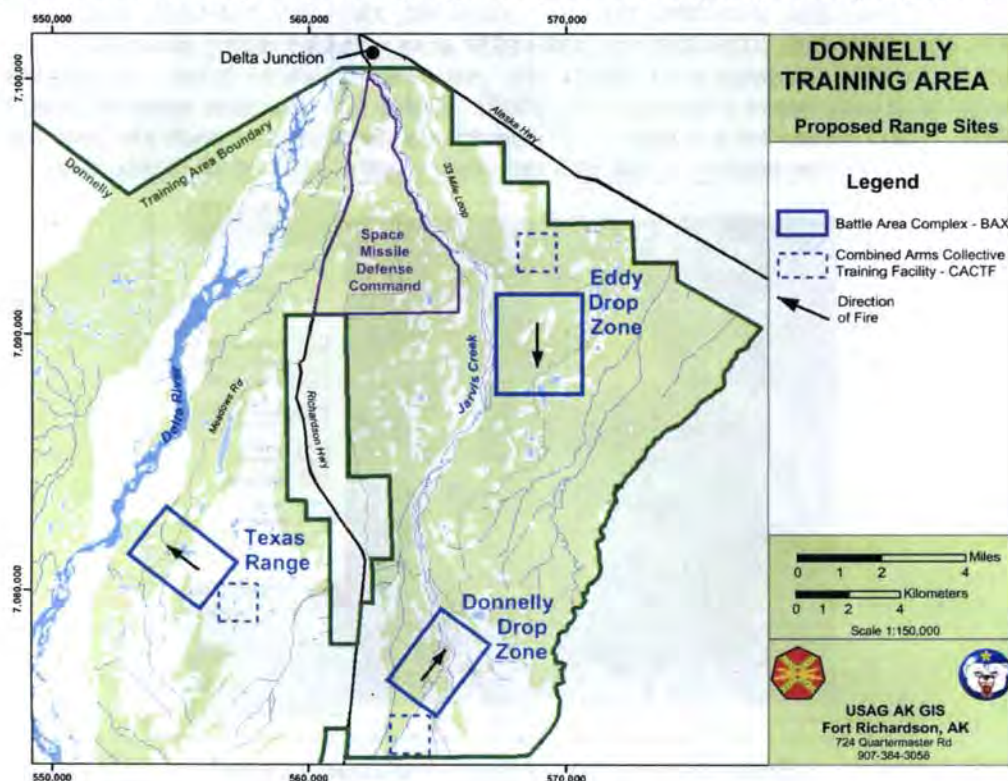


Figure 131. Map of the three BAX alternatives.

firing fan alternatives over lap, and therefore a large portion of the Donnelly Drop Zone alternative was also completed.

SURVEY AND FIELD METHODS

During the summer of 2003, an archaeological survey crew of sixteen archaeologists employed by the Center for Environmental Management of Military Lands (CEMML), Colorado State University, conducted a survey of the two proposed range construction areas.

Parallel pedestrian transects spaced at 20m were walked systematically across the APE and surrounding area. Transect survey units were partitioned according to existing roads and trails where possible. When existing roads did not provide for practical unit boundaries, a one square kilometer work unit was defined. Systematic sub-surface shovel testing was undertaken in areas considered to have high probability for containing archaeological sites. Areas that were shovel tested included but were not limited to: landforms affording a view of surrounding terrain; lake margins; ridgelines; terrace edges; hilltops; benches adjacent to steeper slopes; and the bluffs overlooking Jarvis Creek. Shovel tests were typically 30cm in diameter and excavated into glacial till or consolidated outwash. All soil removed was screened through ¼" hardware cloth.

Results/Summary

No sites will be evaluated to determine eligibility for inclusion in the National Register of Historic Places (NRHP) until one of the firing fan alternatives for the BAX is chosen.

CULTURAL RESOURCES

One hundred and four prehistoric sites have been recorded within of the proposed Eddy Drop Zone firing fan alternative area (Figures 132). Four sites (XMH-277, XMH-278, XMH-284 and XMH-292) were recorded during the 1979 survey (Holmes 1979). Fifteen sites (XMH-880, XMH-881, XMH-883, XMH-884, XMH-886, XMH-887, XMH-888, XMH-889, XMH-890, XMH-891, XMH-892, XMH-894, XMH-920, XMH-928, and XMH-929) were recorded during surveys conducted by the CEMML, in 2002 (Hedman et al. 2003). For more information on these sites see the 2002 archaeological survey report (Hedman et al. 2003). Eighty five new sites were recorded during the CEMML, 2003 survey for this project. Following is a description of each site near the Eddy Drop Zone firing fan alternative area that was recorded in both 1979 and 2003 recorded:

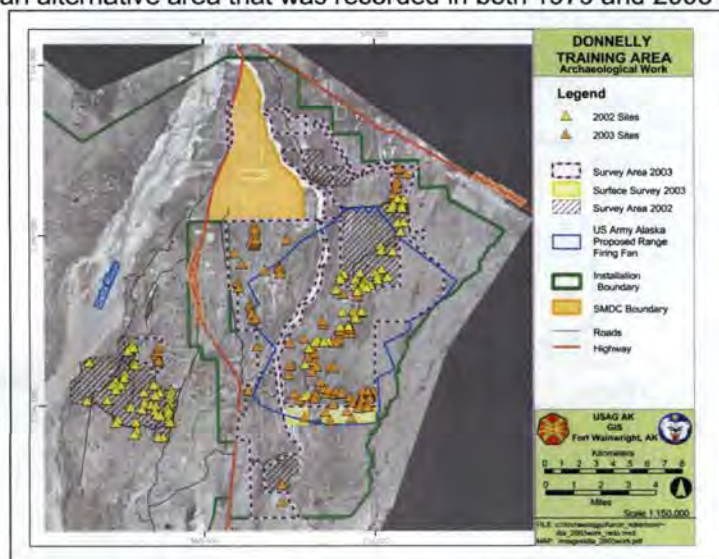


Figure 132: Location of Eddy Drop Zone firing fan

XMH-1084

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

The site is located on a north/south trending moraine. Site affords a 360 degree unobstructed view of the surrounding terrain. The nearest known water is a marsh, approximately 200 meters northwest; in wet years this marsh may be a lake. Surface visibility is approximately 40%. The ground surface of the site is vegetated primarily by dwarf scrub, moss, lichen, and forbs, with several barren areas scattered around. UTM coordinates for the site are: [REDACTED]



Figure 133: General view of site, XMH-1084 heading north

XMH-1084 consists of two tertiary basalt flakes of good quality and one tertiary rhyolite flake of fair quality. Preliminary flake type analysis indicates late stage lithic reduction occurred at the site. Subsurface examinations have yet to be conducted or density plots calculated. No artifacts were collected.

Recommendations

XMH-1086 has initially been classified as a small lithic scatter where later stages of lithic reduction occurred. This site lies inside the boundaries of one of three firing fan alternatives for the proposed BAX project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the site falls into the APE of the chosen firing fan alternative, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-1085

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site is located on a high point at the south end of a north-south trending ridge with an unobstructed view to the east, south and west. No water sources are visible in the immediate area; however Spring Lake is located approximately 600 meters to the north. Due to heavy ground cover surface visibility is minimal in the immediate area. The ground surface of the site is vegetated primarily by tall scrub and forbs. UTM coordinates for the site are: [REDACTED]



**FIGURE 134 : GENERAL VIEW OF SITE, XMH-1085
HEADING WEST**

XMH-1085 consists of one dark-gray tertiary chert flake found in a shovel test pit. A total of two shovel tests were excavated to glacial till but only one produced cultural material (ST 2). ST 2 contained one chert flake in a 30cm X 30cm shovel test at depths ranging from 10-35cmbs with four distinct layers; 0 to 5 cm below the surface contains the organic root mat or o-horizon, 5 to 9 cm a b-horizon of reddish orange silty soil, 9 to 14 centimeters below the surface is a silty sandy mixture some gravels, and 14 to 31 cm is an orange silty sandy soil with a high density of gravels that appears to be glacial till. The one flake was collected. The positive shovel test is located 3 meters due south of the site datum.

Recommendations

XMH-1085 has been classified as a buried site and could potentially contain more cultural material. This site lies inside the boundaries of one of three firing fan alternatives for the proposed BAX project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the site falls into the APE of the chosen firing fan alternative, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-1086

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1086 is located on a high point at the southern end of a north/south running ridge. The site is elevated approximately 20 meters above the surrounding terrain with an unobstructed view to the south, east and west. No lakes are visible in the immediate vicinity; however Spring Lake is located approximately 700 meters to the north. Due to wind erosion there is a moderate degree of surface visibility. The ground surface of the site is vegetated primarily by tall scrub and forbs, with several barren areas scattered around. UTM coordinates for the site are: [REDACTED]

XMH-1086 consists of 10 pieces of lithic debitage found on the southern slope of the high point. One dark gray chert tertiary flake was located at the far southern end of the site, and 9 quartz or quartz crystal flakes were found 2 meters north of the chert flake. All of the quartz flakes were found within a low to moderate density artifact concentration that is 2 meters in diameter. Three Density Plots (DP) were calculated at the site, two were placed over the artifact concentration and the third over the chert flake. DP1 (S11 / W0.5) contained 1 quartz or quartz crystal secondary flake. DP2 (S11 / E0.5) contained the majority of the artifacts from the concentration with 7 secondary flakes and 1 tertiary flake. DP3 (S13.5 / E0.5) contained the single chert flake. Artifact density is calculated as being up to 3.33 artifacts per-square meter. A flake type analysis indicates later stages of lithic reduction occurred at the site. Subsurface excavations have yet to be conducted.



*FIGURE 135: GENERAL VIEW OF SITE, XMH-1086
HEADING SOUTH*

Recommendations

XMH-1086 has initially been classified as a small lithic scatter where later stages of lithic reduction occurred. This site lies inside the boundaries of one of three firing fan alternatives for the proposed BAX project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the site falls into the APE of the chosen firing fan alternative, the site should be evaluated to determine eligibility for inclusion in the NRHP.

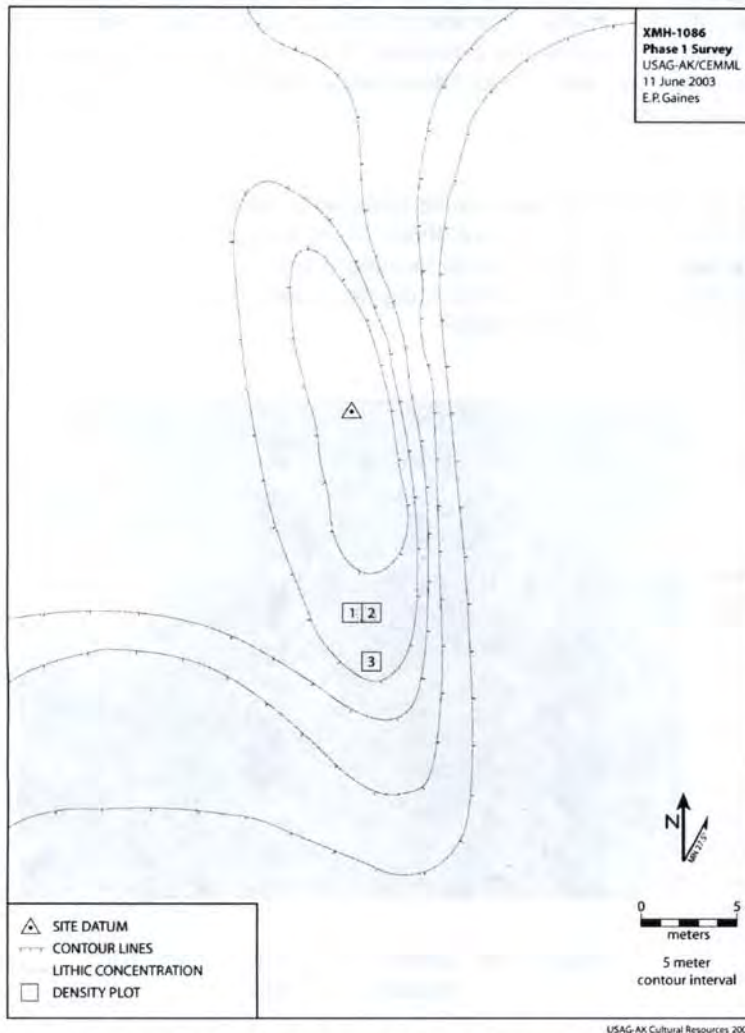


Figure 136: Site map of testing at XMH-1086.

XMH-1087

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site is located on a high point at the south end of a north/south trending ridge elevated 5 meters above the surrounding terrain. Site affords a 180 degree unobstructed view of the surrounding terrain to the east and south. No lakes are visible from the site, but Spring Lake is located 700 meters to the north. Due to heavy ground cover, surface visibility is



Figure 137: General view of site, XMH-1087 heading east

minimal. The ground surface of the site is vegetated primarily by tall scrub and forbs. UTM coordinates for the site are: [REDACTED]

XMH-1087 consists of a blade fragment found in a shovel test pit. A total of two shovel tests were excavated to glacial till but only one produced cultural material (ST 1). ST 1 is located 12 meters south of the site datum, and contained one dark-gray chert blade fragment that measures 42 mm in length and 19 mm in width, and weighs 5.5 grams. The shovel test was 30cm deep, with three distinct layers; 0 to 5cm below the surface contains the o-horizon, 5 to 13cm below the surface contains a red brown loess with some roots, and 13 to 34cm below the surface contains an orange brown sandy silty soil containing glacial till.

Recommendations

XMH-1087 has been classified as a buried site and could potentially contain more cultural material. This site lies inside the boundaries of one of three firing fan alternatives for the proposed BAX project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the site falls into the APE of the chosen firing fan alternative, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-1088

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site is located on a high point at the south end of a north/south trending ridge elevated 5 meters above the surrounding terrain. Site affords a 180 degree unobstructed view of the surrounding terrain to the east and south. No lakes are visible from the site, but Spring Lake is located less than 600 meters to the north. Due to heavy ground cover, surface visibility is minimal in the immediate area. The ground surface of the site is vegetated primarily by dwarf scrub and forbs. UTM coordinates for the site are: [REDACTED]



Figure 138: General view of site, XMH-1088 heading southwest

XMH-1088 consists of one piece of green chert shatter found in a shovel test pit. A total of two shovel tests were excavated to glacial till but only one produced cultural material (ST 2). ST 2 contained one piece of green chert shatter that was recovered from a depth of 5 to 17 cm below the surface and measures 19 mm in length, 17 mm in width, and weighs 2.75 grams. The shovel test was 30cm deep, with three distinct layers; an organically rich o horizon exists 5cm below the surface, and moderately compacted brown silt exists below the o horizon to an average depth of 20 cm below the surface, followed by a loosely compacted sandy, silty soil with a high density of gravels.

Recommendations

XMH-1088 has been classified as a buried site and could potentially contain more cultural material. This site lies inside the boundaries of one of three firing fan alternatives for the proposed BAX project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the site falls into the APE of the chosen firing fan alternative, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-1089

Latitude: [REDACTED]

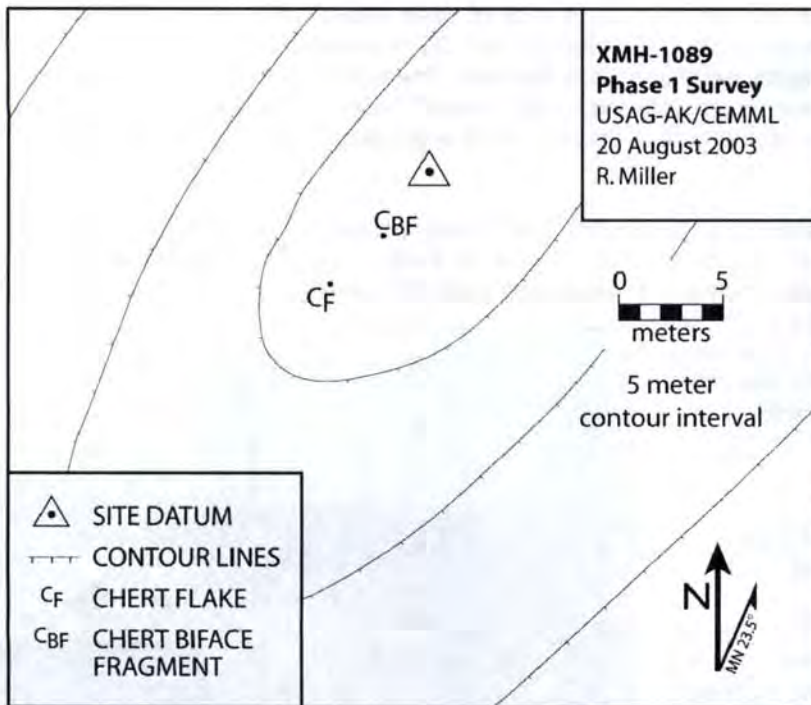
Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1089 is located on the top of a high point on a northeast/southwest trending ridge. The site is elevated only 10 meters above the surrounding terrain and is approximately 20 meters in diameter. Site affords approximately a 180 degree unobstructed view of the surrounding terrain to the south and east. Two other sites are located on the same landform; XMH-1090 is 150 meters to the southwest and XMH-1091 is 300 meters to the southwest. No water sources are visible in the immediate area, but a small unnamed lake is located approximately 600 meters to the west. Due to wind erosion and recent episodes of forest fires, a high degree of surface visibility was observed at the site. The ground surface of the site is vegetated primarily by dwarf scrub and forbs, with several large barren areas scattered around. The site has also been impacted by military activity; it has been cleared of vegetation and the remnants of a small temporary structure are present. UTM coordinates for the site are: [REDACTED]



Figure 139: General view of site, XMH-1089 heading east



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Figure 140: Site map of testing at XMH-1089.

XMH-1089 CONSISTS OF ONE BASALT BIFACE FRAGMENT AND ONE GRAY CHERT FLAKE. THE BIFACE FRAGMENT IS 5.0CM LONG, 3.0CM WIDE, AND WEIGHS APPROXIMATELY 14.0GM. SUBSURFACE TESTING HAS YET TO BE CONDUCTED AT THE SITE. NO ARTIFACTS WERE COLLECTED.

Recommendations

XMH-1089 has initially been classified as a small lithic, however the site could potentially contain more cultural material. This site lies inside the boundaries of one of three firing fan alternatives for the proposed BAX project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the site falls into the APE

of the chosen firing fan alternative, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-1090

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1090 is located on the top of a high point on a northeast/southwest trending ridge. The site is elevated only 10 meters above the surrounding terrain to the south and gradually descends in all other directions. Numerous other hills are present both southwest and northeast of the site with large expanses of muskeg to the east and south. Site affords approximately a 180 degree unobstructed view of the surrounding terrain to the south and east. No water sources are visible in the immediate area, but a small unnamed lake is located approximately 500 meters to the west, northwest. There is approximately 50% surface visibility with vegetation, consisting low scrub, moss, lichen, and forbs. Also the site has been minimally disturbed by military activity. UTM coordinates for the site are: [REDACTED]



Figure 141: General view of site, XMH-1090 heading west

XMH-1090 consists of a small gray chert flake. A total of three shovel tests were excavated to glacial till but only one produced cultural material (ST 1). ST 1 contained one flake found in a 30cm X 30cm shovel test at depths ranging from 3-10cms. The soil consisted of the following; 3 cm below the surface there was a gray silt loam, light brown silt to a depth of 17 cm, and an orange /brown silt with a moderate amount of gravels which was considered to be glacial till.

Recommendations

XMH-1090 has been classified as a buried site and could potentially contain more cultural material. This site lies inside the boundaries of one of three firing fan alternatives for the proposed BAX project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the site falls into the APE of the chosen firing fan alternative, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-1091

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1091 is located on top of a high point on a northeast/southwest trending ridge. The site is elevated only 10 meters above the surrounding terrain to the south and gradually descends in all other directions. Numerous other hills are present both southwest and northeast of the site with large expanses of muskeg to



Figure 142: General view of site, XMH-1091 heading east

the east and south. Site affords approximately a 180 degree unobstructed view of the surrounding terrain to the south and east. No water sources are visible in the immediate area, but a small unnamed lake is located approximately 500 meters to the northwest. Due to wind erosion and recent episodes of forest fire, a moderate amount of surface visibility was observed at the site. The ground surface of the site is vegetated primarily by low scrub, moss, lichen and forbs. UTM coordinates for the site are: [REDACTED]

XMH-1091 consists of four gray chert tertiary flakes all of which appear to be the same material. Preliminary flake type analysis indicates later stages of lithic reduction occurred at the site. No primary or secondary flakes were located. Subsurface examinations have yet to be conducted or density plots calculated. No artifacts were collected.

Recommendations

XMH-1091 has initially been classified as a small lithic scatter where late stage lithic reduction occurred. This site lies inside the boundaries of one of three firing fan alternatives for the proposed BAX project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP.

XMH-1092

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1092 is located on a narrow northwest/southeast trending ridge. There are not any good landmarks visible in any direction due to tree cover. There is a very small, nearly dry pond visible approximately 30 meters to the southwest. Guitar Lake is located approximately 500 meters to the southwest. There is good ground cover and thus no surface visibility at the site. UTM coordinates for the site are: [REDACTED]



Figure 143: General view of site, XMH-1092 heading south

XMH-1092 consists of seven tertiary chert flakes found in one shovel test pit. A total of two shovel tests were excavated 30cm in diameter to glacial till. One positive shovel test (ST1) contained seven tertiary chert flakes, one tertiary basalt flake, and one tertiary flake of an unidentified material at a depth of 15-35cmbs. The shovel test was 55cm deep, with four distinct layers, 0-5cm is the organic layer, 5-15cm is a dark yellowish brown loess, 15-35cm is a light yellowish brown loess, and 35-55cm is glacial till. The artifacts were collected. No density plots were calculated.

Recommendations

XMH-1092 has been classified as a buried site and could potentially contain more cultural material. This site lies inside the boundaries of one of three firing fan alternatives for the proposed BAX project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the site falls into the APE of the chosen firing fan alternative, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-1093

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1093 is located on a small, narrow north/south trending ridge. Site affords a 360 degree unobstructed view of the surrounding terrain. The Alaska Range is visible to the southwest and Donnelly Dome is visible to the south, but the Granite Mountains are unobstructed by a prominent ridge to the east. The nearest water source is a small, unnamed lake located one kilometer to the northeast. The ground surface of the site is vegetated primarily by low scrub, moss, and lichen, with a surface visibility is estimated at 10%. UTM coordinates for the site are:



Figure 144: General view of site, XMH-1093 heading south

XMH-1093 consists of one basalt flake found in a shovel test pit. A total of four shovel tests were excavated 30cm in diameter to glacial till. One positive shovel test (STB) contained one tertiary basalt flake found at a depth of 20-25cmbs. The shovel test was 45cm deep with four distinct layers, 0-6cm is the organic layer, 6-21cm is dark yellow brown loess, 21-38cm is dark red brown loess, and 38-45cm is glacial till. No density plots were calculated or artifacts collected.

Recommendations

XMH-1093 has been classified as a buried site and could potentially contain more cultural material. This site lies inside the boundaries of one of three firing fan alternatives for the proposed BAX project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the site falls into the APE of the chosen firing fan alternative, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-1094

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1094 is located on a northeast/southwest trending ridge with 33 mile loop trail (33ML) running through the middle of it. Donnelly Dome is visible to the southwest and the Granite Mountains can be seen to the east. The nearest water source is North Caribou Lake located approximately one and a half kilometers to the southwest. The ground surface of the site is vegetated primarily by low scrub, forbs, grasses and sedges, with several barren areas scattered around. Surface visibility is approximately 75% due to



Figure 145: General view of site, XMH-1094 heading west

33ML running the length of the ridge. UTM coordinates for the site are: [REDACTED]

Site XMH-1094 consists entirely of one gray chert uniface fragment found on the surface in the middle of 33ML. The uniface is 43.02mm long, 32.35mm wide, and weighs 10.20gm. The artifact was collected due to the fact that it was in a roadway. No density plots were calculated.

RECOMMENDATIONS

XMH-1094 has been classified as an isolated find; however the site could potentially contain more cultural material.

This site lies inside the boundaries of one of three firing fan alternatives for the proposed BAX project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the site falls into the APE of the chosen firing fan alternative, the site should be evaluated to determine eligibility for inclusion in the NRHP.

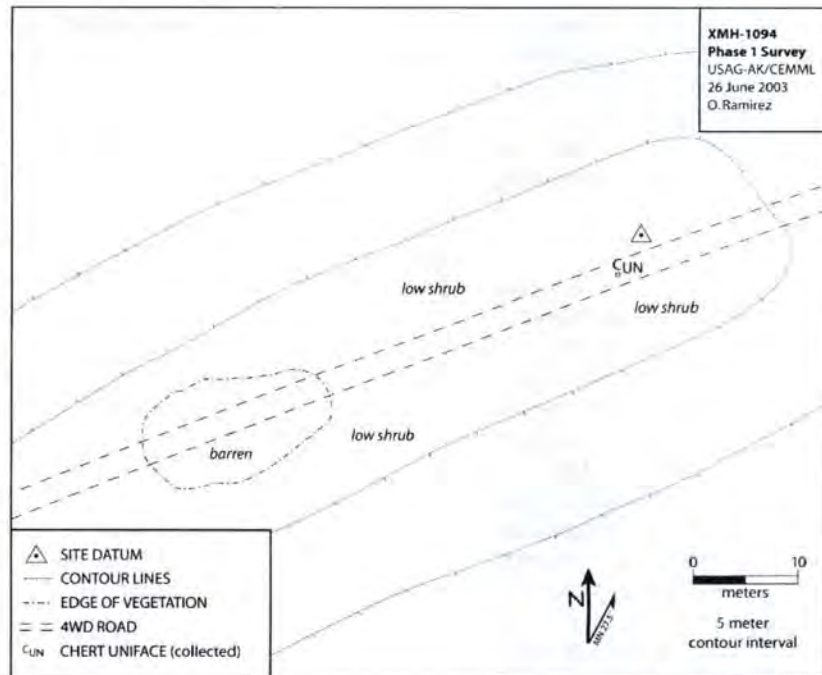


Figure 146: Site map of testing at XMH-1094.

XMH-1095

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

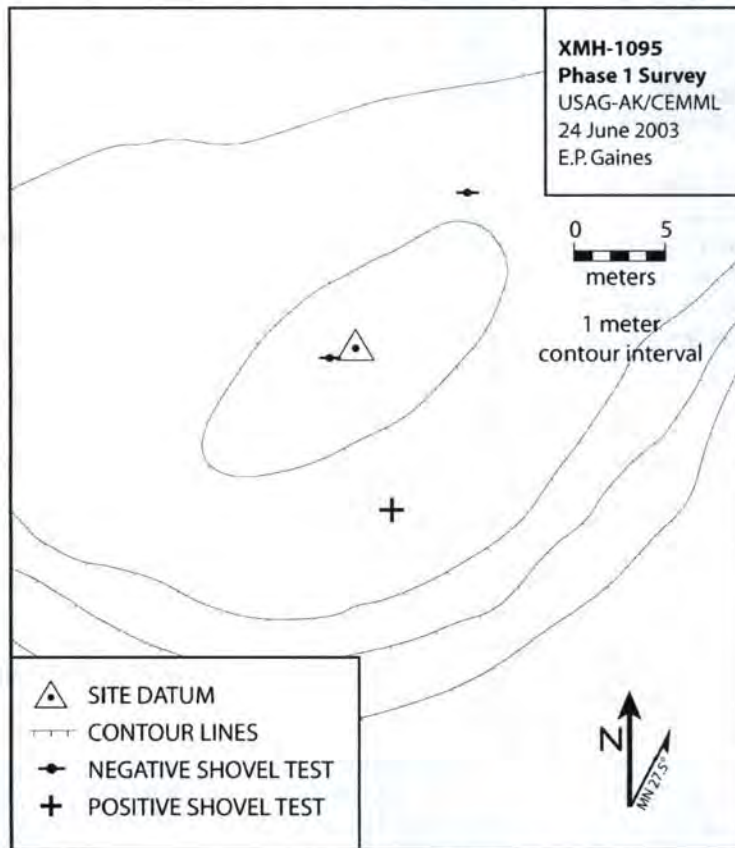
Site XMH-1095 is located on a small rise, approximately 5 meters above the surrounding terrain. Site affords approximately a 180 degree unobstructed view of the southeast with a view of Granite Mountain. The eastern slope of the rise steeply slopes down to the surrounding area while the western, northern and southern slopes are gentle. To the east of the site is a low, swampy area that contains some small patches of muskeg. The closest water source to the site is a small lake located approximately 1km to the northwest. The ground surface in and around the site is not visible due to vegetation. The majority of the area is covered with sapling birch intermingled with a moderate



Figure 147: General view of site, XMH-1095 heading east

amount of deadfall. The ground surface was covered with dwarf scrub, moss, and lichen. No obvious subsurface disturbance was noted at the site. UTM coordinates for the site are: [REDACTED]

XMH-1095 consists of two dark-gray chert flakes found in a shovel test pit. A total of three shovel tests were excavated at the site, one of which yielded cultural materials. Shovel test #1 yielded two chert flakes, while shovel tests #2 and #3 yielded no cultural materials. The soil profile encountered in shovel test #1 consisted of approximately 6 cm of dark brown root mat underlain by 6 cm of a red silt. The red silt was underlain by 16 cm of a beige-brown silt which was in turn underlain by 15 cm of yellow-orange silt with glacial till. The excavation of shovel tests at the site was ceased upon encountering glacial till. The artifacts collected from the shovel probe were collected from approximately 6-12cm below the surface. No density plots were calculated.



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Figure 148: Site map of testing at XMH-1095.

Recommendations

XMH-1095 has been classified as a buried site and could potentially contain more cultural material. This site lies inside the boundaries of one of three firing fan alternatives for the proposed BAX project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the site falls into the APE of the chosen firing fan alternative, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-1096

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1096 is located on top of a small isolated hill. The hilltop is approximately 25 meters in diameter and is elevated 10 to 15 meters above the surrounding terrain. A 2 kilometer or longer southeast/northwest running ridge can be seen to the southeast. Site affords a 360 degree unobstructed view of the surrounding terrain and good views of the



Figure 149: General view of site, XMH-1096 heading south

Granite mountains. No lakes are visible in the immediate area, but Caribou Lakes are located approximately 1 kilometer to the southwest. Due to wind erosion and recent episodes of forest fires, a high degree of surface visibility was observed at the site. UTM coordinates for the site are: [REDACTED]

XMH-1096 consists of 3 pieces of lithic debitage identified on the ground surface. These pieces include one piece of tan chert shatter, one piece of gray chert shatter, and one black basalt tertiary flake. All artifacts were found on the southeast slope of the hill within a 15 meters diameter area. Subsurface excavations have yet to be conducted.

RECOMMENDATIONS

XMH-267 has initially been classified as a small lithic scatter and could potentially contain more cultural material. This site lies inside the boundaries of one of three firing fan alternatives for the proposed BAX project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the site falls into the APE of the chosen firing fan alternative, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-1097

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1097 is located on a small isolated hilltop. The hilltop is approximately 20 meters in diameter and is elevated 10 to 15 meters above the surrounding terrain. Site affords a 360 degree unobstructed view of the surrounding terrain. No lakes are visible in the immediate vicinity, but Caribou Lakes are located less than 1 kilometer to the west. Due to wind erosion and recent episodes of forest fires, a high degree of surface visibility was observed. UTM coordinates for the site are: [REDACTED]



Figure 150: General view of site, XMH-1097 heading north

XMH-1097 consists of one fine-grained black basalt tertiary flake and one black chert secondary flake. Both flakes were observed on the surface of the southeast slope of the hill within a 5 meters diameter area. Subsurface excavations have yet to be conducted.

RECOMMENDATIONS

XMH-1097 has initially been classified as a small lithic scatter and could potentially contain more cultural material. This site lies inside the boundaries of one of three firing fan alternatives for the proposed BAX project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the site falls into the APE of the chosen firing fan alternative, the site should be evaluated to determine eligibility for inclusion in the NRHP.

XMH-1098

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1098 is located on a small isolated hilltop. The hilltop is approximately 15 meters in diameter and is elevated 15 to 20 meters above the surrounding terrain. The surrounding terrain

consists of isolated hills that are separated by generally flat areas in between. Site affords a 360 degree unobstructed view of the surrounding terrain. No lakes are visible in the immediate vicinity, but Caribou Lakes are located less than 1 kilometer to the west. Due to wind erosion and recent episodes of forest fires, a high degree of surface visibility was observed. The ground surface of the site is vegetated primarily by moss and lichen, with some low scrub. UTM coordinates for the site are: [REDACTED]

XMH-1098 consists of a gray chert uniface found on the ground surface. The uniface fragment is 22 mm in width and 15 mm in height and weighs 1.75 grams. No artifacts were collected or subsurface excavations conducted.

Recommendations

XMH-1098 has been classified as an isolated find; however the site could potentially contain more cultural material. This site lies inside the boundaries of one of three firing fan alternatives for the proposed BAX project, and therefore was not evaluated to determine eligibility for inclusion in the NRHP. However, if the site falls into the APE of the chosen firing fan alternative, the site should be evaluated to determine eligibility for inclusion in the NRHP.



Figure 151 : General view of site, XMH-1098 heading south

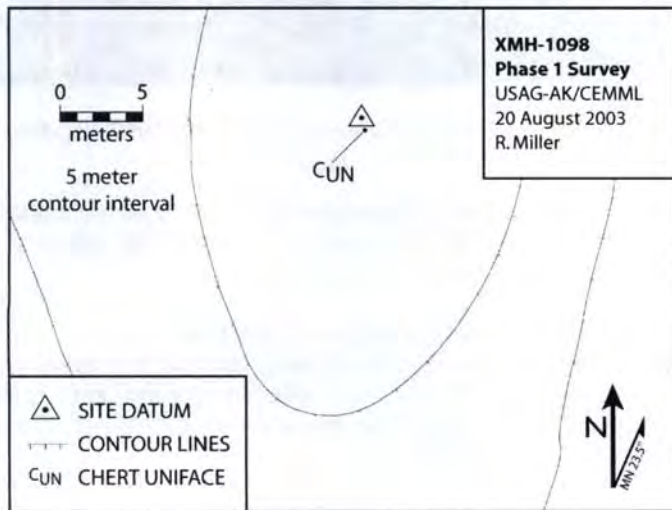


Figure 152: Site map of testing at XMH-1098.

XMH-1099

Latitude: [REDACTED]

Longitude: [REDACTED]

Determination: Not evaluated

Site XMH-1099 is located on a small isolated hilltop. The hilltop is approximately 25 meters in diameter and is elevated 20 meters above the surrounding terrain. The surrounding terrain consists of isolated hills that are separated by generally flat areas. Site affords a 360 degree unobstructed view of the surrounding terrain. No lakes are visible in the immediate vicinity, but Caribou Lakes are located less than 1 kilometer to the west. Due to wind erosion and recent episodes of forest fires, a high degree of surface visibility was observed. UTM coordinates for the site are: [REDACTED]



Figure 153: General view of site, XMH-1099 heading south

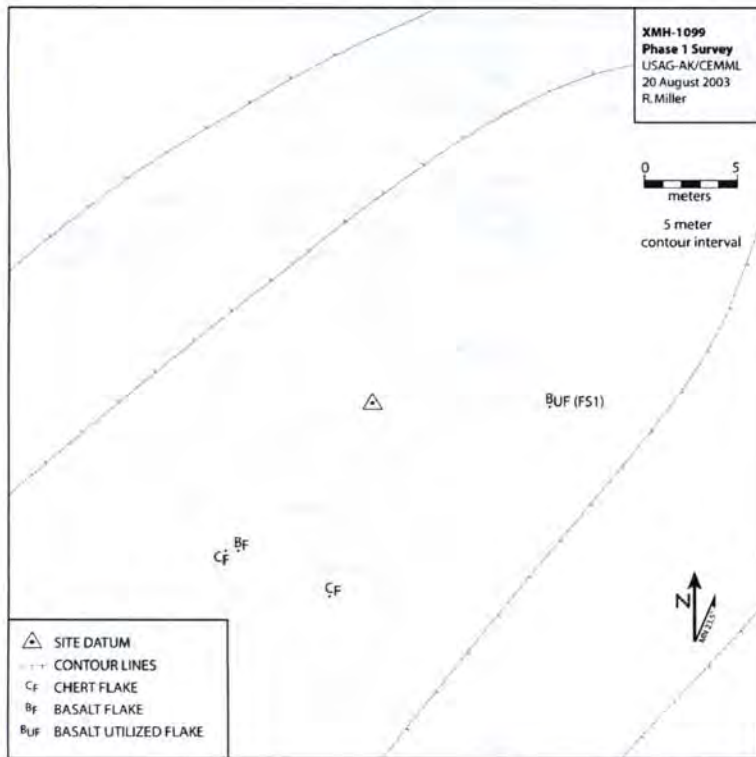


Figure 154: Site map of testing at XMH-1099.

XMH-1099 consists of 4 pieces of lithic debitage observed on the ground surface. The pieces include one large black fine grained basalt primary flake with use wear present on one of the sides, flake measures 69 mm in height, 46 mm in width and weighs 38 grams. The other pieces include an tan chert secondary flake, a light gray chert secondary flake, and a fine grained black basalt tertiary flake. All artifacts were observed on the top of the hill within 15 meters of each other. Subsurface excavations have yet to be conducted.

RECOMMENDATIONS

XMH-1099 has initially been classified as a small lithic scatter and could potentially contain more cultural material. This site lies inside the boundaries of one of three firing fan alternatives for the proposed BAX project, and therefore was not evaluated to

determine eligibility for inclusion in the NRHP. However, if the site falls into the APE of the chosen firing fan alternative, the site should be evaluated to determine eligibility for inclusion in the NRHP.