

Findings

Pedestrian survey and 22 shovel tests produced a total of only three surface artifacts. This finding suggests that XMH-01103 is a small surface lithic scatter with no diagnostic tools or artifacts. The paucity of cultural material indicates that XMH-01103 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

XMH-01107

Latitude:

Longitude:

Determination: Eligible

Site XMH-01107 is located at the top of a large isolated hill. The site has a 360° unobstructed view of the surrounding terrain, including views of a large ridge to the west and , which is approximately 1km to the south. The closest water source is a small (20m diameter) dry lake located 200m southeast of the site. Due to recent episodes of forest fires, there is a moderate to high degree of surface visibility at the site. UTM coordinates for the site are:



Figure 60. General view of site XMH-01107, facing south

Table 5. Lithic assemblage recorded from XMH-01107

Artifact Class	Frequency	% of Assemblages
Bifaces		
Bifacial tool	1	2%
Projectile point (fragment)	2	4%
Biface fragments	3	5%
Unifaces		
End scrapers and fragments	3	5%
Uniface fragment	1	2%
Burins		
Possible burin spall	1	2%
Debitage		
Flakes	42	73%
Shatter	4	7%
Total	57	100%

Site XMH-01107 consists of 57 artifacts, 11 of which are tools or tool fragments. Forty-four pieces of lithic debitage were found on the surface of the site, as were all of the tools. Additionally, two pieces of flaked stone were found in two different shovel tests. One light gray bifacially worked tool was found at the site. This artifact has been reworked from the base of a projectile point fragment. Other bifacially worked tools include two lanceolate projectile point fragments, one gray chert fragment, a brown rhyolite tool fragment, two gray chert tool fragments that refit, and one gray chert tool fragment.

Findings

Pedestrian survey and 22 shovel tests produced a total of only three surface artifacts. This finding suggests that XMH-01103 is a small surface lithic scatter with no diagnostic tools or artifacts. The paucity of cultural material indicates that XMH-01103 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

XMH-01107

Latitude:

Longitude:

Determination: Eligible

Site XMH-01107 is located at the top of a large isolated hill. The site has a 360° unobstructed view of the surrounding terrain, including views of a large ridge to the west and , which is approximately 1km to the south. The closest water source is a small (20m diameter) dry lake located 200m southeast of the site. Due to recent episodes of forest fires, there is a moderate to high degree of surface visibility at the site. UTM coordinates for the site are:



Figure 60. General view of site XMH-01107, facing south

Table 5. Lithic assemblage recorded from XMH-01107

Artifact Class	Frequency	% of Assemblages
Bifaces		
Bifacial tool	1	2%
Projectile point (fragment)	2	4%
Biface fragments	3	5%
Unifaces		
End scrapers and fragments	3	5%
Uniface fragment	1	2%
Burins		
Possible burin spall	1	2%
Debitage		
Flakes	42	73%
Shatter	4	7%
Total	57	100%

Site XMH-01107 consists of 57 artifacts, 11 of which are tools or tool fragments. Forty-four pieces of lithic debitage were found on the surface of the site, as were all of the tools. Additionally, two pieces of flaked stone were found in two different shovel tests. One light gray bifacially worked tool was found at the site. This artifact has been reworked from the base of a projectile point fragment. Other bifacially worked tools include two lanceolate projectile point fragments, one gray chert fragment, a brown rhyolite tool fragment, two gray chert tool fragments that refit, and one gray chert tool fragment.

Shovel tests were systematically placed across the site at intervals of 5-10m where slope and vegetation allowed. A total of two of the shovel tests were positive, with each containing one artifact. Subsurface artifacts were found from 10-35cmbs. Soil thickness in the shovel tests varied from 20-50cm in depth. Soil stratigraphy and deposition was generally uniform throughout the top of the hill where little deposition occurred. The soil here consists of a loosely compacted, dark brown, organically rich loess to an average depth of 5cmbs. Below this organic horizon the soil consists of a moderately compacted brown to light brown loess with a low density of gravels. Glacial till is encountered below this loess deposit and consists of a yellowish brown sandy silty soil with a high density of gravels and cobbles to an average depth of 30cmbs. Down slope from the top of the hill soil deposition was thicker and averaged 50cm in depth. The soil here consists of a loosely compacted, dark brown, organically rich loess to an average depth of 8cmbs. Below this organic horizon the soil consists of a moderately compacted brown to light brown loess with a low to moderate density of gravels. Glacial till is encountered below this loess deposit and consists of a yellowish to reddish brown sandy silty soil with a high density of gravels and cobbles to an average depth of 55cmbs.

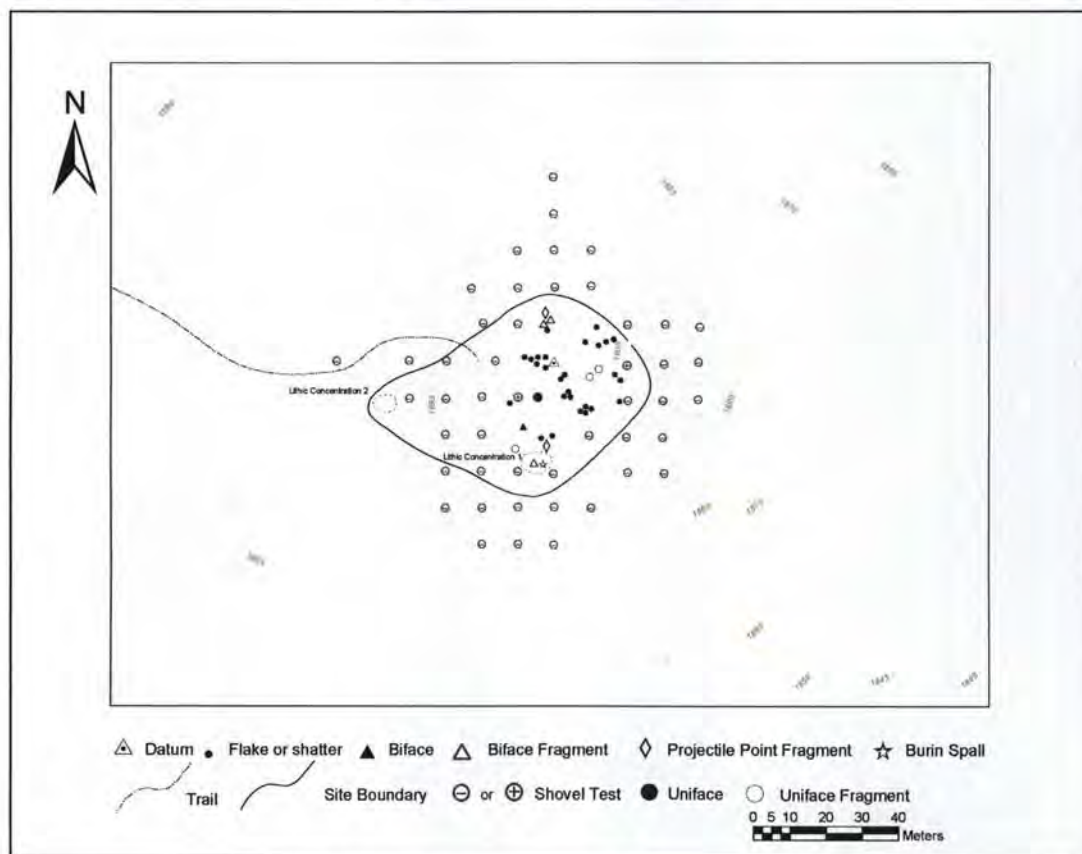


Figure 61. Site map of XMH-01107

Findings

A total of 57 artifacts were recorded at XMH-01107. Fifty-five of these artifacts were recorded on the surface and two artifacts were recovered from below the surface. The materials at the site include light gray chert, gray chert, red chert, white chert, fine-grained basalt, rhyolite, and quartz. Based on the results of the survey and testing, the site area is estimated at approximately 40m x 55m.

Site XMH-01107 is a large site with both surface and buried components. With buried cultural material, XMH-01107 is in an excellent position to contribute to our knowledge of prehistoric land use patterns. In situ artifacts and soil stratigraphy indicate datable material and diagnostic artifacts may be present and could be used to date human use of the site, potentially contributing to a broader regional context. Site XMH-01107 is an intact archaeological site with integrity. The site is eligible for inclusion in the National Register of Historic Places under criterion D for its potential to yield information important in understanding the prehistory of the region.

XMH-01109

Latitude:

Longitude:

Determination: Eligible

Site XMH-01109 is located on a large east-west trending ridge that extends to the east of . The site has a 360° unobstructed view of the surrounding terrain with views of the Granite Mountains to the southeast and Donnelly Dome to the southwest. The closest water source is a small (40m diameter) lake located 200m to the southeast which is not visible from the site.

is approximately 1km to the northwest and is visible from the site. Due to recent forest fires surface visibility at the site is moderate. UTM coordinates for the site are:



Figure 62. General view of XMH-01109, facing north

Site XMH-01109 consists of 17 artifacts. Three flakes were recorded on the surface and 14 flakes were recovered from below the surface, either from shovel tests or the excavation unit. The site was originally described as consisting of three pieces of lithic debitage observed on the ground surface during the 2003 phase 1 survey. During the phase 2 investigations 14 subsurface artifacts were located.

Shovel tests were systematically placed at the site at intervals of 5m and 10m. Due to severity of slope and density of vegetation, shovel tests were randomly placed in locations where excavation was possible. A total of 21 shovel tests were excavated at the site. The depth of the shovel tests varied, but all were excavated down to glacial till. One of the shovel tests was positive and contained three artifacts (two of the pieces are refits) at a depth of 5cmbs.

One 1m x 1m test unit was excavated at site XMH-01109. The unit was placed within 1m of the positive shovel test and was excavated in 10cm levels. Shovel tests and the excavation unit revealed soil deposition that varied from 10-40cm in depth across the site. The soil consists of a loosely compacted, dark brown, organically rich loess to an average depth of 5cm. Below this organic horizon the soil consists of a moderately compacted brown to light brown loess with a low density of gravels. Glacial till is encountered below this loess deposit and consists of a yellowish brown sandy silty soil with a high density of gravels and cobbles.

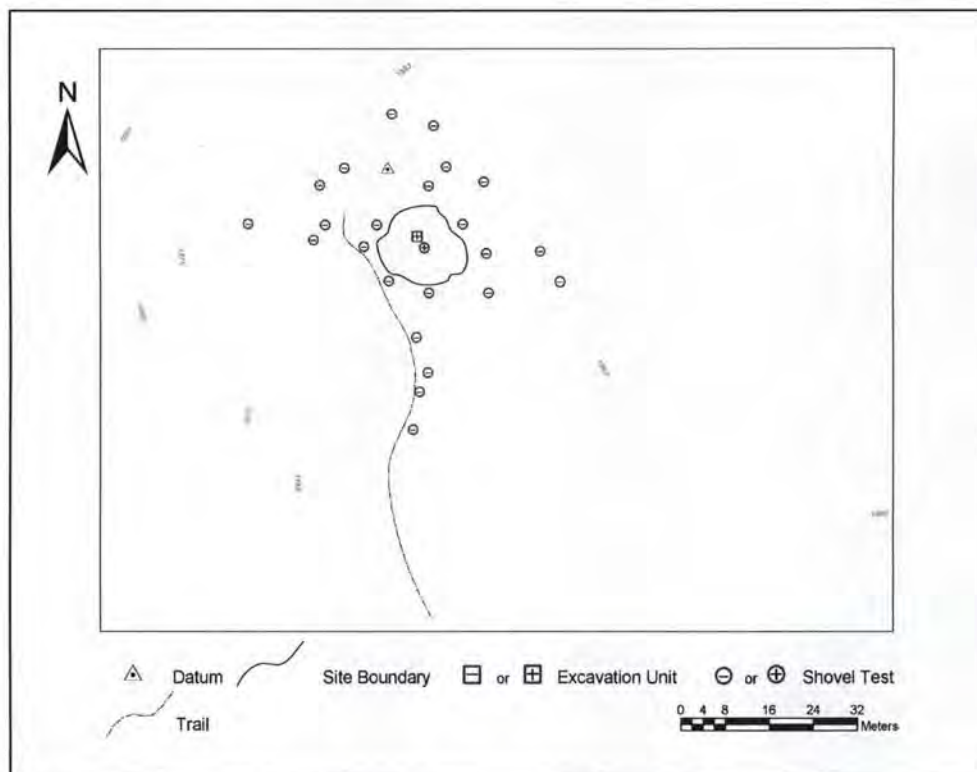


Figure 63. Site map of XMH-01109

Findings

A total of 17 artifacts were recovered from XMH-01109. The majority of these were recovered from below the surface. The materials at the site include chert and quartz. Based on the results of survey and testing, the site area is estimated at approximately 10m x 10m.

Site XMH-01109 is a small buried site where late stage lithic reduction occurred. With buried cultural material, XMH-01109 is in an excellent position to contribute to our knowledge of prehistoric land use patterns. In situ artifacts and soil stratigraphy indicate datable material and diagnostic artifacts may be present and could be used to date human use of the site, potentially contributing to a broader regional context. Site XMH-01109 is an intact archaeological site with integrity. The site is eligible for inclusion in the National Register of Historic Places under criterion D for its potential to yield information important in understanding the prehistory of the region.

XMH-01110

Latitude:

Longitude:

Determination: Eligible

Site XMH-01110 is located on a northeast-southwest trending bluff overlooking to the west. Donnelly Dome is visible to the southwest, the Alaska Range to the west, and the Granite Mountains to the east. The nearest water source is located approximately 500m to the northwest. is approximately 1km to the south. There is no surface visibility at the site due to vegetation. UTM coordinates for the site are:

Site XMH-01110 consists of two flakes recovered from below the surface in shovel tests and the excavation unit. These flakes were collected. Shovel tests were systematically placed throughout the site area at intervals of 10m. Two shovel tests were placed at 5m intervals near the positive shovel test (from phase 1) just north of the site datum. A total of 26 (6 in 2003 and 20 in 2004) shovel tests were excavated to glacial till.

One 1m x 1m test unit was excavated at site XMH-01110. This test unit was placed northeast of the site datum near the positive shovel test excavated in 2003. The unit was excavated in 10cm levels until glacial till was reached throughout the entire unit floor. The test unit contained one artifact recovered from level two, 10-20cm below the unit datum, which was the northwest corner of the unit. No subsurface features were identified at the site. Soil thickness varied from 30-70cm across the site. The entire landform is very well vegetated and soil deposition averaged 45cm.



Figure 64. General view of XMH-01110, facing west

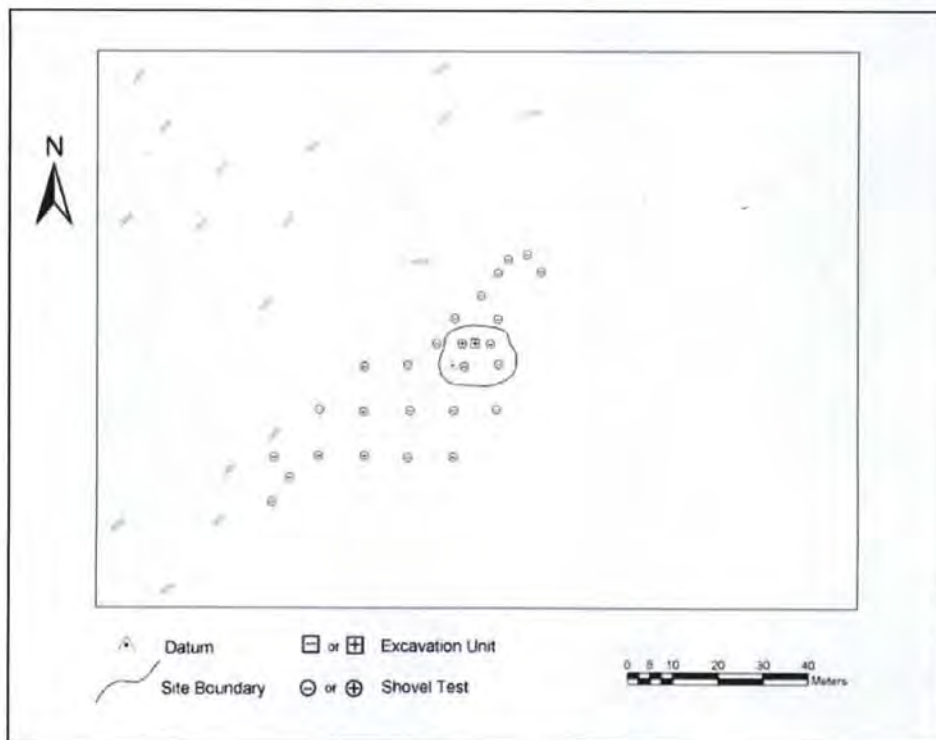


Figure 65. Site map of XMH-01110

Soil at the site 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 reddish brown loess with a low density of gravels and cobbles. Below this is a third layer, consisting of moderately compacted yellow brown loess, also with a low density of gravels and cobbles. Glacial till is encountered below this layer and consists of yellow brown sandy loess with a very high density of gravels and cobbles.

Findings

A total of two artifacts were recovered from XMH-01110, all from below the surface. The materials at the site include chert and basalt. Based on the results of survey and testing, the site area is estimated at approximately 15m x 15m.

Site XMH-01110 is a small buried site where late stage lithic reduction occurred. With buried cultural material, XMH-1110 is in an excellent position to contribute to our knowledge of prehistoric land use patterns. Despite the low density of artifacts, in situ artifacts and soil stratigraphy indicate datable material and diagnostic artifacts may be present and could be used to date human use of the site, potentially contributing to a broader regional context. Site XMH-01110 is an intact archaeological site with integrity. The site is eligible for inclusion in the National Register of Historic Places under criterion D for its potential to yield information important in understanding the prehistory of the region.

XMH-01112

Latitude:

Longitude:

Determination: Not Eligible

Site XMH-01112 is located on a hilltop that is part of a larger north-south trending ridgeline. The hill slopes up to the south and continues on to a larger, more elevated hill where XMH-01107 is located. Views are restricted in this direction but are unobstructed to the north, with views of a large expanse of generally flat terrain and to approximately 2km to the northwest. The closest water source is a small (20m diameter) dry lake that is immediately down slope from the hill and 50m to the west. The hilltop has burned recently and has experienced some wind erosion and, as a result, there is approximately 50 percent ground visibility at the site. UTM coordinates for the site are:



Figure 66. General view of XMH-01112, facing north

Site XMH-01112 consists of one gray chert flake recorded on the surface. This site was originally identified during a 2003 pedestrian survey as consisting of two flakes observed on the surface. However, during the 2004 evaluation of the site, the second artifact was deemed to be an ecofact.

Shovel tests were systematically placed throughout the site area at intervals of 10m. A total of six shovel tests were excavated at the site, none of which contained cultural material. The depth of the shovel tests varied, but all were excavated to glacial till.

Findings

Pedestrian survey and six shovel tests produced a total of only one surface artifact. This finding suggests that XMH-01112 is an isolated find. The paucity of cultural material indicates that XMH-01112 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

XMH-01113

Latitude:

Longitude:

Determination: Not Eligible

Site XMH-01113 is located on a hilltop at the southern end of an east-west running ridge that continues 250m to the north. At the north end of the ridge is a larger hill that is approximately 15m higher in elevation. Views are obstructed in this direction and are limited in all other directions by the surrounding hills. Seventy meters to the north of the southern end of the ridge there is another high point. Site XMH-01114 has been identified on this high point, at the north end of the ridge, and consists of over 200 pieces of lithic debitage. The entire area in the vicinity of XMH-01113 has been burned and all high points on the ridge have at least 75 percent surface visibility. However, only a single projectile point fragment was found on the southern end



Figure 67. General view of XMH-01113, facing east

of the ridge, approximately 200m south of XMH-01114. The nearest water source is a small (15m diameter) lake located to the west of the hill. No other lakes are visible from the southern end of the ridge. UTM coordinates for the site are:

Site XMH-01113 consists of a single gray chert projectile point fragment found on the surface. The projectile point fragment is most likely a midsection fragment and measures 21.6mm in width, 22.4mm in height and weighs 3.5g. No other surface artifacts were observed on the southern end of the ridge or between XMH-01113 and the northern end where XMH-01114 is located. Site XMH-01113 was originally identified during a 2003 pedestrian survey as consisting of a projectile point fragment, two quartz flakes, and chert shatter observed on the surface. During the 2004 evaluation of the site the quartz flakes and chert shatter were deemed to be ecofacts.

Shovel tests were systematically placed throughout the southern end of the hill and the high point between the southern and the northern ends of the ridge 70m to the north. A total of 16 shovel tests were excavated, none of which contained cultural material. The depth of the shovel tests varied, but all were excavated to glacial till. Based on the results of the survey and testing, the site area is estimated at approximately 10m x 10m.

No test units were excavated at the site because no subsurface materials were recovered from any of the shovel tests. Based on the shovel tests, soil thickness varied from 20–50cm in depth. Soil stratigraphy and deposition was generally uniform throughout the south slope of the hill where excavations were conducted. The soil consists of loosely compacted, dark brown, organically rich loess to an average depth of 5cmbs. Below this organic horizon, the soil consists of a moderately compacted brown to light brown loess with a low density of gravels. Glacial till is encountered below this loess deposit and consists of a yellowish brown sandy loess with a high density of gravels and cobbles.

Findings

Pedestrian survey and 16 shovel tests produced a total of only one surface artifact. This finding suggests that XMH-01113 is an isolated find. The paucity of cultural material indicates that XMH-01113 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

XMH-01115

Latitude:

Longitude:

Determination: Eligible

Site XMH-01115 is located on a large east-west running ridge. The ridge is approximately 350m in length with a high point near the middle. The site occurs on the high point and continues east onto a smaller and lower hilltop which is part of the same landform. During phase 1 survey, artifact concentrations at the high point and the lower hill to the east were originally given separate site numbers (XMH-01115 and XMH-01117) because the artifacts identified on the surface of these hills were separated by over 70m. However, during phase 2 evaluations, subsurface testing identified artifacts between the two hills, as well as on the surface to the west. As a result of the phase 2 investigations, the two sites were "combined" and now fall under the single AHRs number of XMH-01115. The high point where XMH-01115 was originally located is now referred to as locality A, and the lower hill to the east where XMH-01117 was originally located is now referred to as locality B. Views from both localities are unobstructed to the north with views of a large expanse of generally flat terrain, but hills surround the site in all other directions and thus views are limited. No lakes (or dry lakes) are visible from either of the localities, and the closest water source is a small dry lake that is approximately 300m to the west. UTM coordinates for the site are:



Figure 68. General view of XMH-01115, facing south

Site XMH-01115 consists of 71 artifacts: 1 projectile point, 3 biface fragments, 24 microblades or microblade sections, 2 microblade core fragments, microblade core rejuvenation flakes and lithic debitage. The lithic debitage includes 34 tertiary flakes, 5 secondary flakes and 1 piece of shatter. Out of the total of 71 artifacts found at the site, 27 of them were found on the surface. These artifacts include 16 tertiary flakes, 3 secondary flakes and 1 piece of shatter or angular debris. The tools include a rhyolite projectile point and three biface fragments. The remaining 44 artifacts were found below the surface either in positive shovel tests or in the test unit. These artifacts included 24 microblades or microblade sections, 2 microblade core fragments, microblade core rejuvenation flakes and lithic debitage. The lithic debitage includes 15 tertiary flakes and 2 secondary flakes. Materials at the site include dark gray chert, gray chert, light gray chert, white chert, black chert, black fine-grained basalt, and brown rhyolite.

Shovel tests were systematically placed throughout both of the hilltops at intervals of 10m where slope and vegetation would allow. A total of four of the shovel tests were positive. Two shovel tests at locality A produced three artifacts at an average depth of 17cmbs and one of the shovel tests at locality B produced one artifact at a depth of

10cmbs. The fourth positive shovel test was placed between localities A and B and produced a total of 15 artifacts from depths of 10–40cmbs.

Table 6. Lithic assemblage recorded from XMH-01115

Artifact Class	Frequency	% of Assemblages
Bifaces		
Projectile point	1	1%
Biface fragments	3	4%
Microblade Cores and Microblades		
Microblade core	2	3%
Microblade core rejuvenation flakes	1	1%
Microblades	24	34%
Debitage		
Flakes	39	55%
Shatter	1	1%
Total	71	100%

One 1m x 1m test unit was excavated at site XMH-01115. This unit was established adjacent to the positive shovel test that was placed between the localities. The unit was excavated in 10cm levels until reaching glacial till throughout the entire unit floor. Based on the test unit and nearby shovel tests, soil thickness between the localities averaged 45cm in depth. Soil in this area consists of loosely compacted, dark brown, organically rich loess that is present to an average depth of 0-10cmbs. Below this organic horizon the soil consists of a moderately compacted brown to dark brown loess. Below this, there is a layer consisting of moderately compacted brown to yellowish reddish brown loess. Glacial till is encountered below these loess deposits and consists of a very loosely compacted brown sandy, silty loess with a high density of gravels and cobbles.

The area between the localities is only slightly lower than locality B, but seems to have been shielded from wind. Both the shovel test and test unit between the localities revealed evidence of burning down to glacial till, 45-50cmbs. Charcoal chunks and flecks were observed within heavily mottled silty soil beginning immediately below the surface and continuing until glacial till was encountered. Artifacts were encountered throughout the excavation unit as well. Twenty-four artifacts were recovered from the unit, 21 of which came from approximately 45cmbs. Of these 21 artifacts, 16 were microblades or microblade sections. Also observed within the unit were five granitic cobbles at various levels beginning at approximately 20cmbs and continuing until 45cmbs. These cobbles did not appear to be modified, arranged, or fire-affected in any way. No other evidence of burning was observed, and some reddish soil and light gray soil was encountered that were both determined to be the result of the decomposing granite. Charcoal samples were collected from the lower levels to be analyzed at another time.

Findings

A total of 71 artifacts were recorded at XMH-01115, 27 of which are associated with microblade production. Forty-four artifacts were found below the surface either in positive shovel tests or in the test unit. Materials at the site include dark gray chert, gray chert, light gray chert, white chert, black chert, black fine-grained basalt and brown rhyolite. Based on the results of the survey and testing, the site area is estimated at approximately 90m x 25m.

Site XMH-01115 is a large lithic site where microblade production occurred. With buried cultural material, XMH-01115 is in an excellent position to contribute to our knowledge of prehistoric land use patterns. In situ artifacts and soil stratigraphy indicate datable material and diagnostic artifacts may be present and could be used to date human use of the site, potentially contributing to a broader regional context. Site XMH-01115 is an intact archaeological site with integrity. The site is eligible for inclusion in the National Register of Historic Places under criterion D for its potential to yield information important in understanding the prehistory of the region.

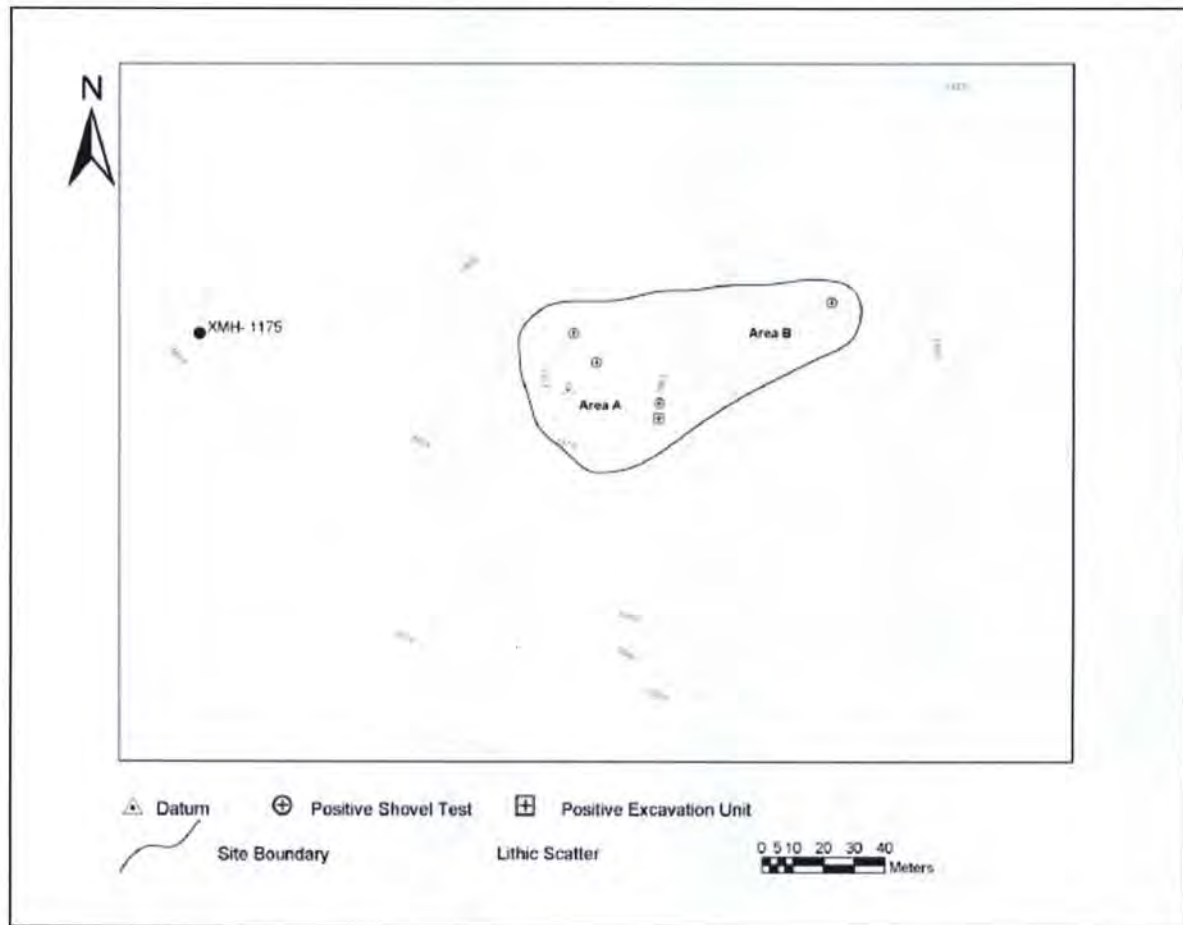


Figure 69. Site map of XMH-01115

XMH-01116

Latitude:

Longitude:

Determination: Eligible

Site XMH-01116 is located at the top of an isolated hill. The hill is elevated 50m above the generally low hilly terrain. The site has a 360° unobstructed view of the surrounding terrain, including which is less than 1km to the southwest. A high degree of surface visibility was observed at the site. UTM coordinates for the site are:

Site XMH-01116 consists of 19 artifacts. Eight flakes and one biface fragment were found on the surface and an additional 10 flakes were found subsurface in either shovel test pits or test units. Chert, quartz, basalt, an unidentified material and obsidian (a non-locally occurring material type) were present among the debitage.

Shovel tests were systematically placed throughout the site area at intervals of 10m. A total of 28 shovel test pits were excavated at the site. The depth of the shovel test pits varied, but all were excavated to glacial till. A total of two shovel test pits were positive. One of the positive shovel test pits contained two artifacts and the other positive shovel test pit contained one artifact. Subsurface artifacts were found from 5-30cmbd in both positive shovel test pits.



Figure 70. General view of XMH-01116, facing southwest

One 1m x 1m test unit was excavated at site XMH-01116. The southwest corner of the unit was placed 9m east and 1.5m south of the site datum, near a positive shovel test pit. The test unit was excavated in 10cm levels until glacial till was reached throughout the entire unit floor. The test unit contained seven artifacts in total. Two artifacts were recovered from level one, 0-10cmbd. Two more artifacts were recovered from level two, 10-20cmbd. An additional three artifacts were recovered from level three, 20-30cmbd. No subsurface features were identified at the site. Soil thickness varied from 0-65cm in depth across the site. The south and southwest portions of the site have sustained considerable wind erosion, and soil deposition only averaged 2-3cm in depth. A total of nine shovel tests were attempted in this area of the site, though no real excavation occurred due to lack of soils. Where there is soil in this area, it consists of loosely compacted, dark brown, organically rich loess to an average depth of 2cm. Glacial till is encountered below this organic horizon and consists of yellow brown sandy loess with a high density of gravels and cobbles. Soil on the north and northeast portions of the site shows more deposition, averaging 30cm in depth. Soil in these areas consists of loosely compacted, dark brown, organically rich loess that is present to an average of 5cmbd. Below this organic horizon, the soil consists of moderately compacted yellow brown loess with a low density of gravels and cobbles. Glacial till is encountered below this loess deposit and consists of yellow brown sandy loess with a high density of gravels and cobbles.

Findings

A total of 19 artifacts were recorded at XMH-01116. Nine artifacts, including a biface fragment, were found on the surface and 10 artifacts were found subsurface in either shovel test pits or test units. Materials at the site include chert, quartz, basalt, and obsidian. Based on the results of the survey and testing, the site area is estimated at approximately 20m x 35m.

Site XMH-01116 is a small site with both surface and subsurface components. With buried cultural material and the presence of obsidian (a non-locally occurring material type), XMH-01116 is in an excellent position to contribute to our knowledge of prehistoric land use patterns. In situ artifacts and soil stratigraphy indicate datable material and

Site XMH-01116 consists of 19 artifacts. Eight flakes and one biface fragment were found on the surface and an additional 10 flakes were found subsurface in either shovel test pits or test units. Chert, quartz, basalt, an unidentified material and obsidian (a non-locally occurring material type) were present among the debitage.

Shovel tests were systematically placed throughout the site area at intervals of 10m. A total of 28 shovel test pits were excavated at the site. The depth of the shovel test pits varied, but all were excavated to glacial till. A total of two shovel test pits were positive. One of the positive shovel test pits contained two artifacts and the other positive shovel test pit contained one artifact. Subsurface artifacts were found from 5-30cmbs in both positive shovel test pits.



Figure 70. General view of XMH-01116, facing southwest

One 1m x 1m test unit was excavated at site XMH-01116. The southwest corner of the unit was placed 9m east and 1.5m south of the site datum, near a positive shovel test pit. The test unit was excavated in 10cm levels until glacial till was reached throughout the entire unit floor. The test unit contained seven artifacts in total. Two artifacts were recovered from level one, 0-10cmbs. Two more artifacts were recovered from level two, 10-20cmbs. An additional three artifacts were recovered from level three, 20-30cmbs. No subsurface features were identified at the site. Soil thickness varied from 0-65cm in depth across the site. The south and southwest portions of the site have sustained considerable wind erosion, and soil deposition only averaged 2-3cm in depth. A total of nine shovel tests were attempted in this area of the site, though no real excavation occurred due to lack of soils. Where there is soil in this area, it consists of loosely compacted, dark brown, organically rich loess to an average depth of 2cm. Glacial till is encountered below this organic horizon and consists of yellow brown sandy loess with a high density of gravels and cobbles. Soil on the north and northeast portions of the site shows more deposition, averaging 30cm in depth. Soil in these areas consists of loosely compacted, dark brown, organically rich loess that is present to an average of 5cmbs. Below this organic horizon, the soil consists of moderately compacted yellow brown loess with a low density of gravels and cobbles. Glacial till is encountered below this loess deposit and consists of yellow brown sandy loess with a high density of gravels and cobbles.

Findings

A total of 19 artifacts were recorded at XMH-01116. Nine artifacts, including a biface fragment, were found on the surface and 10 artifacts were found subsurface in either shovel test pits or test units. Materials at the site include chert, quartz, basalt, and obsidian. Based on the results of the survey and testing, the site area is estimated at approximately 20m x 35m.

Site XMH-01116 is a small site with both surface and subsurface components. With buried cultural material and the presence of obsidian (a non-locally occurring material type), XMH-01116 is in an excellent position to contribute to our knowledge of prehistoric land use patterns. In situ artifacts and soil stratigraphy indicate datable material and

diagnostic artifacts may be present and could be used to date human use of the site, potentially contributing to a broader regional context. Site XMH-01116 is an intact archaeological site with integrity. The site is eligible for inclusion in the National Register of Historic Places under criterion D for its potential to yield information important in understanding the prehistory of the region.

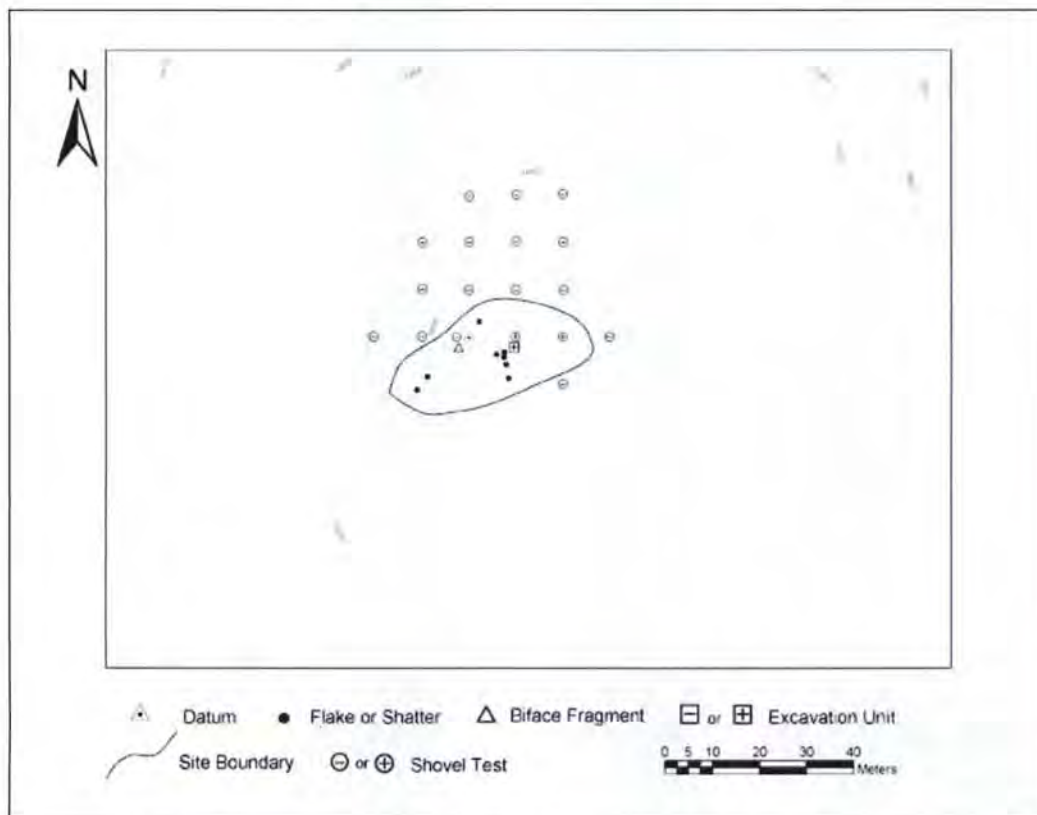


Figure 71. Site map of XMH-01116

XMH-01127

Latitude:

Longitude:

Determination: Not Eligible

Site XMH-01127 is located at the top of a hill elevated 25m above the surrounding terrain. There is a small dry lake located 100m away to the south. The site has an approximately 180° unobstructed view of the surrounding terrain to the north. Due to recent episodes of forest fires, there is a high degree of surface visibility at the site. UTM coordinates for the site are:

Site XMH-01127 consists of two artifacts recorded from the surface. Site XMH-01127 was originally identified during a 2003 pedestrian survey as consisting of two flakes on the surface. During the 2004 evaluation of the site, no new artifacts were located. Shovel tests were systematically placed throughout the site area at intervals of 10m. A total of 25 shovel tests were excavated, none of which contained any cultural materials.

The depth of shovel tests varied, but all were excavated to glacial till. Based on the results of the survey and testing, the site area is estimated at approximately 10m x 10m.

No 1m x 1m test units were excavated at XMH-01127 because no subsurface artifacts were located through shovel testing. Soil thickness varied from 0-70cm in depth across the site. The southern portions of the site have sustained considerable wind erosion, and soil deposition only averaged 4cm. Soil in these areas consists of loosely compacted, dark brown, organically rich loess to an average depth of 4cm. Glacial till is encountered below this organic horizon and consists of moderately compacted yellow brown sandy loess with a high density of gravels and cobbles. The northern portions of the site show more soil deposition, averaging 40cm. Soil in these areas consists of loosely compacted, dark brown, organically rich loess to an average depth of 7cm. Below this organic horizon, the soil consists of moderately compacted yellow brown loess with a low density of gravels and cobbles. Glacial till is encountered below this loess deposit and consists of moderately compacted yellow brown sandy loess with a high density of gravels and cobbles.

Findings

Pedestrian survey and 25 shovel tests produced a total of only two surface artifacts. The paucity of cultural material indicates that XMH-01127 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

XMH-01145

Latitude:

Longitude:

Determination: Eligible

Site XMH-01145 is located on a high point of a north-south running glacial moraine. A dry lake was observed approximately 200m to the southwest. The site has a 300° unobstructed view of the surrounding terrain to the east, south and west. Donnelly Dome and the Granite Mountains fall within this viewshed. To the north, a slightly taller moraine obstructs the view. Due to recent forest fires, there is approximately 60 percent surface visibility at the site. Site disturbance in the form of a road going from _____, generally following the spine of the moraine, has contributed to some loss of integrity. Numerous military shell casings are also present. UTM coordinates for the site are:



Figure 72. General view of site XMH-01145

Site XMH-01145 consists of 10 artifacts. Seven flakes were found on the surface and an additional three flakes were found subsurface in either shovel test pits or test units. Tools at the site consist of two uniface fragments that refit and one microblade. Chert and basalt were present among the debitage.

A total of 46 shovel test pits were excavated at the site. A 10m shovel test grid was established, although some shovel tests were excavated at 5m intervals on the northern part of the site. Five meter interval tests were excavated here because more soil was

present and the likelihood of encountering subsurface artifacts was considered to be greater. All shovel tests were excavated to glacial till. Only one shovel test was positive, and contained one flake found from 0-36 cmbs.

Two 1m x 1m test units were excavated at XMH-01145. Test unit one was placed to the south of the positive shovel test and did not encounter any cultural material. A second test unit was placed 1m east of the positive shovel test. The only artifact found in unit two was a large unifacially-retouched gray chert flake previously broken into 2 pieces. Soil depths averaged 0-10cm on top of the landform and approximately 20-40cm at the northern part of the site. Surface artifacts were collected from the road.

Table 7. Lithic assemblage recorded from XMH-01145

Artifact Class	Frequency	% of Assemblages
Unifaces		
Uniface retouched flake fragment	2	20%
Microblade Cores and Microblades		
Microblades	1	10%
Debitage		
Flakes	7	70%
Total	10	100%

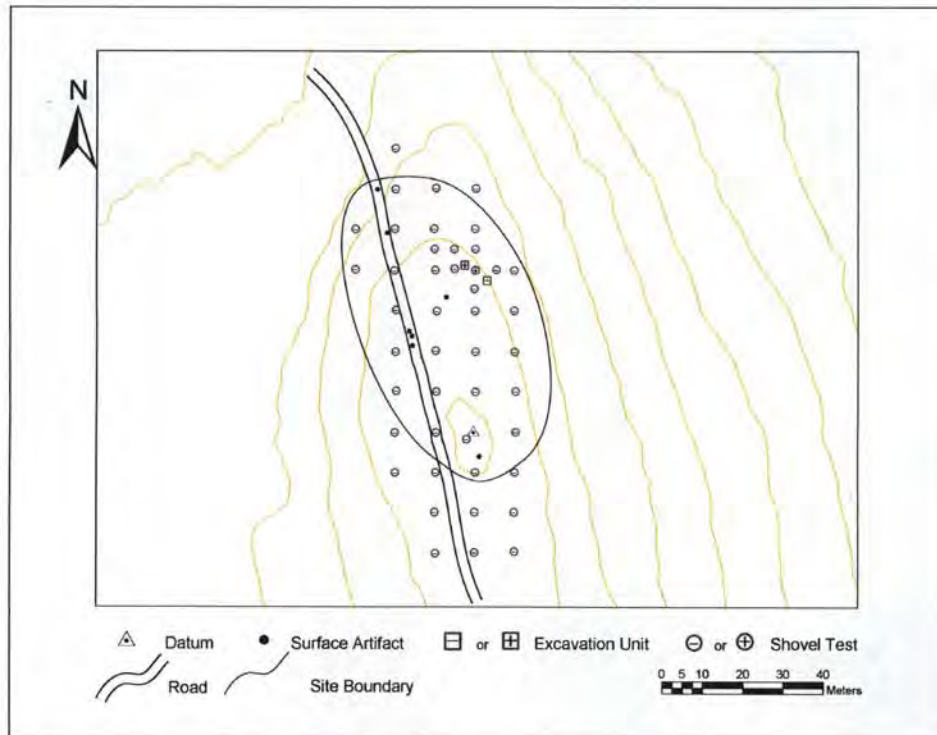


Figure 73. Site map of XMH-01145

Findings

A total of 10 artifacts were recorded at XMH-01145. Seven artifacts, including a microblade, were found on the surface and three artifacts were found subsurface in either shovel test pits or test units. Materials at the site include chert and basalt. Based

on the results of the survey and testing, the site area is estimated at approximately 50m x 75m.

Site XMH-01145 is a low-density site with both surface and subsurface components. With buried cultural material and multiple tool types, XMH-01145 is in an excellent position to contribute to our knowledge of prehistoric land use patterns. In situ artifacts and soil stratigraphy indicate datable material and diagnostic artifacts may be present and could be used to date human use of the site, potentially contributing to a broader regional context. Despite some disturbance, site XMH-01145 is an intact archaeological site with integrity. The site is eligible for inclusion in the National Register of Historic Places under criterion D, for its potential to yield information important in understanding the prehistory of the region.

XMH-01146

Latitude:

Longitude:

Determination: Eligible

Site XMH-01146 is located on a south facing, gradually sloping glacial moraine. Site XMH-01145 is located approximately 89m to the north. The closest water source is 400m to the southeast. A dry lake is present to the southwest at a distance of approximately 100m. The site has a 250° unobstructed view of the surrounding terrain to the east, north and west. The view to the north is obstructed by a slightly taller rise where site XMH-01145 is located. There is some site disturbance in the form of a two-track road that cuts through the site. Visibility in the roadway is at least 80 percent, and off of the road visibility is approximately 10-20 percent. UTM coordinates for the site are:



Figure 74. General view of site XMH-01146, facing south

Site XMH-01146 consists mainly of lithic debitage. One biface fragment and more than 20 flakes were found on the surface, and an additional flake was found subsurface in a shovel test. Chert is the only material type present among the debitage. Shovel tests were systematically placed throughout the site area at intervals of 10m. A total of 43 shovel tests were excavated at the site. The depth of shovel tests varied, but all were excavated to glacial till. One shovel test was positive and contained one artifact at a depth of 0-8cmbs.

One 1m x 1m test unit was excavated at XMH-01146. The southwest corner of the test unit was placed 20m south and 8m east of the site datum, near a concentration of surface artifacts. The unit was excavated in 10cm levels until glacial till was reached throughout the entire unit floor. The test unit contained no cultural material. No subsurface features were identified at the site. Soil thickness varied from 1-40cm across the site. Throughout approximately 90 percent of the site, the landform has experienced considerable wind erosion and soil deposition averaged only 5cm. Soil in these heavily eroded areas consists of loosely compacted, dark brown, organically rich loess to an average depth of 5cm. Glacial till is encountered below this organic horizon and consists of yellow brown sandy loess with a high density of gravels and cobbles. Some

areas down slope from the top of the site show more deposition, averaging 30cm. Soil in these areas consists of loosely compacted, dark brown, organically rich loess that is present to an average depth of 5cmbs. Below this organic horizon, the soil consists of moderately compacted brown to reddish brown loess with a low density of gravels and cobbles. Glacial till is encountered below this loess deposit and consists of yellow brown sandy loess with a high density of gravels and cobbles.

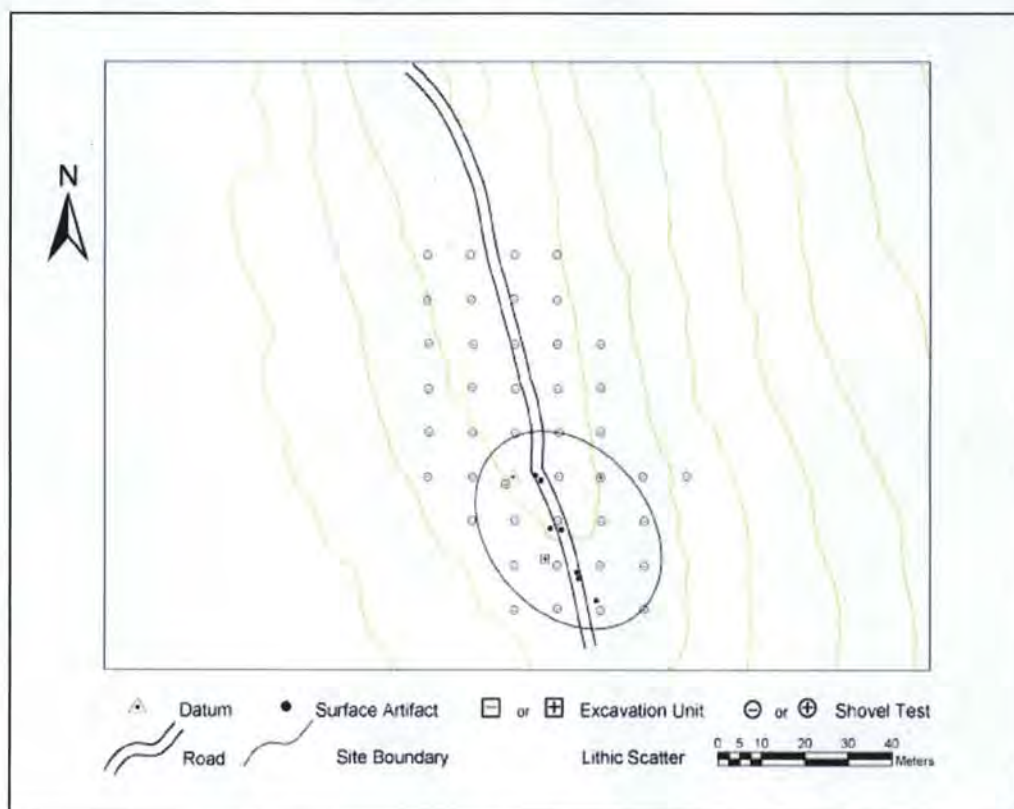


Figure 75. Site map of XMH-01146

Findings

More than 20 artifacts were recorded at XMH-01146. The majority of these artifacts, including a biface fragment, were found on the surface and one artifact was found subsurface in a shovel test pit. Chert was the only material found at the site. Based on the results of the survey and testing, the site area is estimated at approximately 35m x 25m.

Site XMH-01146 is a small site with both surface and subsurface components. With buried cultural material, XMH-01146 is in an excellent position to contribute to our knowledge of prehistoric land use patterns. In situ artifacts and soil stratigraphy indicate datable material and diagnostic artifacts may be present and could be used to date human use of the site, potentially contributing to a broader regional context. Site XMH-01146 is an intact archaeological site with integrity, despite some site disturbance. The site is eligible for inclusion in the National Register of Historic Places under criterion D for its potential to yield information important in understanding the prehistory of the region.

XMH-01160

Latitude:
Longitude:
Determination: Not Eligible

Site XMH-01160 is located on a northwest-southeast trending glacial moraine which follows. The site is on a large high point where and a secondary dirt road intersect. The high point slopes gradually (2-3 percent) on all sides except to the north, which slopes 5 percent. This slope leads down to a low flat area. The nearest water sources are , which is approximately 300m to the southeast, and , which is 350m to the southwest. Neither of the lakes are visible from the site. The view shed is mostly obscured by trees, but Granite Mountain is visible to the southeast. Surface visibility is 75 percent across the undisturbed portion of the site.



Figure 76. General view of site XMH-01160, facing west

Much of the site has been heavily disturbed, however, by the two roads crossing it, by many ATV trails extending away from the road, and by next to the intersection. Additionally, the area has been cleared of trees in various places along the road by mechanical equipment. The site has been used as both a military bivouac and a hunting camp. UTM coordinates for the site are:

Site XMH-01160 consists of four artifacts: two surface artifacts and two subsurface artifacts. During the initial investigations of the site in 2003, two artifacts, a chert flake and an obsidian microblade section, were found on the road surface and were collected. The following year, during the site evaluation, two chert tertiary flakes were recovered from one shovel test.

Shovel tests were systematically placed throughout the site area at intervals of 5 and 10m. No shovel tests were placed on the road since this area has been graded down to glacial till. A total of 36 shovel tests were excavated at the site. Sixteen of the shovel tests were placed at 5m intervals either in the area of the positive shovel tests or in the vicinity of surface artifacts. The depths of the shovel tests varied, but in all cases were excavated down to glacial till. In the one positive shovel test artifacts were found at a depth of 5-15cmbs.

Two 1m x 1m test units were excavated at the site. These units were placed adjacent to the one positive shovel test. No artifacts were found in either of the units. The soil thickness varied from 15-35cm throughout the site. The test units revealed soil deposition to an average depth of 15cm below the surface. A rich organic dark brown soil was initially encountered to a depth of 5cm below the surface. Recent trash was found immediately below the moss mat in the vicinity of the test unit in an area that appears to have heavily disturbed. Below this rich organic layer, brown silt with dark reddish brown mottles was encountered. Below this layer, dark yellow brown sandy silt with a low density of gravels was encountered. Glacial till was encountered below this layer to an average depth of 35cmbs.

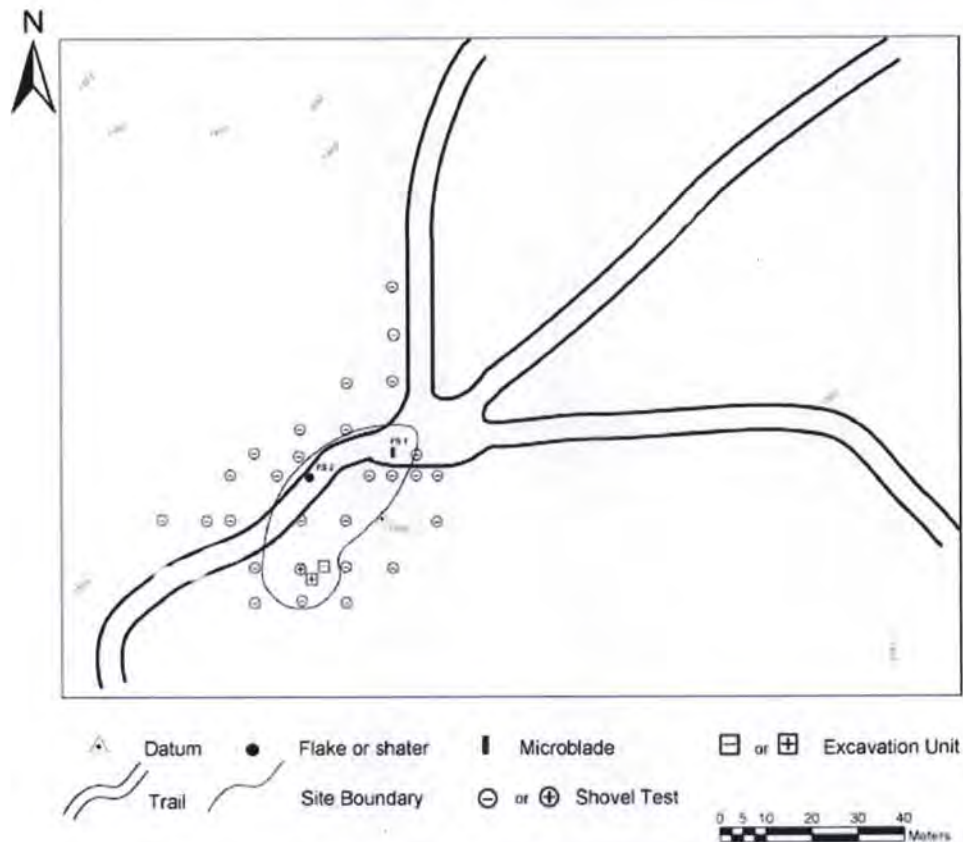


Figure 77. Site map of XMH-01160

Findings

A total of four artifacts were recovered from XMH-01160. A chert flake and an obsidian microblade section were recovered from the surface and two chert flakes were recovered from below the surface. Based on the results of the survey and the testing, the site area is estimated at 34m x 20m.

Site XMH-01160 is a heavily disturbed site that has lost all integrity. Despite the presence of obsidian and a microblade, which may have made the site eligible under criterion D, the site disturbance is too widespread. The paucity of cultural material and the highly disturbed context indicates that XMH-01160 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

3.2 Beales Road Upgrades

USAG-AK has proposed a road upgrade project located within Army lands on Fort Wainwright, Alaska. The project involves the construction of two new bridges, an access gate, road realignments, a water point and the adding of rip rap to prevent bank erosion along Beales Road at Fort Wainwright's DTA. The proposed road upgrades are along Beales Road, which is located approximately 7-10km south of Delta Junction and 1km west of the Richardson Highway.

The project involves the construction of railcar bridges to KD Range and Georgia Range, realignment of Beales South Road and construction of a gate, road realignment to access Wills Range, a water point at Observation Point 2 (OP2), and placement of rip rap at Arkansas Bridge. All projects are located along Beales Road in the DTA (Figure 78). Construction is scheduled for August 2004. The following is a description of each part of the Beales Road upgrade project.

Railcar Bridges to KD Range and Georgia Range

KD Range and Georgia Range are located in the Wills Range Small Arms Complex, DTA. These ranges are currently not directly accessible from Beales Road due to the Delta River Slough or "overflow channel" that runs parallel to Beales Road. Alternate access is via the road to Arkansas Range, which comes into the middle portion of the range, presenting a safety hazard if the range is in use. Access needs to be established on the east side of these ranges, closest to Beales Road. Concrete pilings will be poured on either side of the overflow channel and set back a few feet from the bank itself. Rip rap will be placed upstream and downstream of the pilings. A railcar bed will then be placed on the pilings, and gravel approaches will be constructed in the existing roadways. The Railcar Bridges project will encompass approximately 3.2 acres, including area within the overflow channel.

Beales South Road Realignment and Gate (Beales Range Complex Upgrade)

The Beales Range Complex is located in the Wills Range Small Arms Complex, DTA. This facility is the maintenance center for all ranges within the DTA and experiences significant seasonal flooding that impedes access at various times throughout the year. This project will re-route and harden the access road into the complex. The Beales Range Complex Upgrade will encompass up to 1.2 acres.

Wills Range Access

The Wills Range Access project is located at the intersection of Beales North Road and the road to Arkansas Range. The newly installed bridge that provides access to this area is at a slightly different angle than the old bridge. The road leading to the Range needs to be realigned in order for larger vehicles to access the range. The Arkansas Range road leads to the winter crossing of the Delta River and the winter trail that provides winter access to the northern portion of DTA West. The Air Force utilizes this road heavily during the winter months to maintain their targets in the Oklahoma Impact Area (Oklahoma Range). Large targets and scrap metal are often hauled using semi tractor-trailers that require a larger turning radius at this intersection. In addition, when the overflow channel cannot contain all of the water, flooding occurs across the road at this location. The construction area encompasses 3.8 acres.

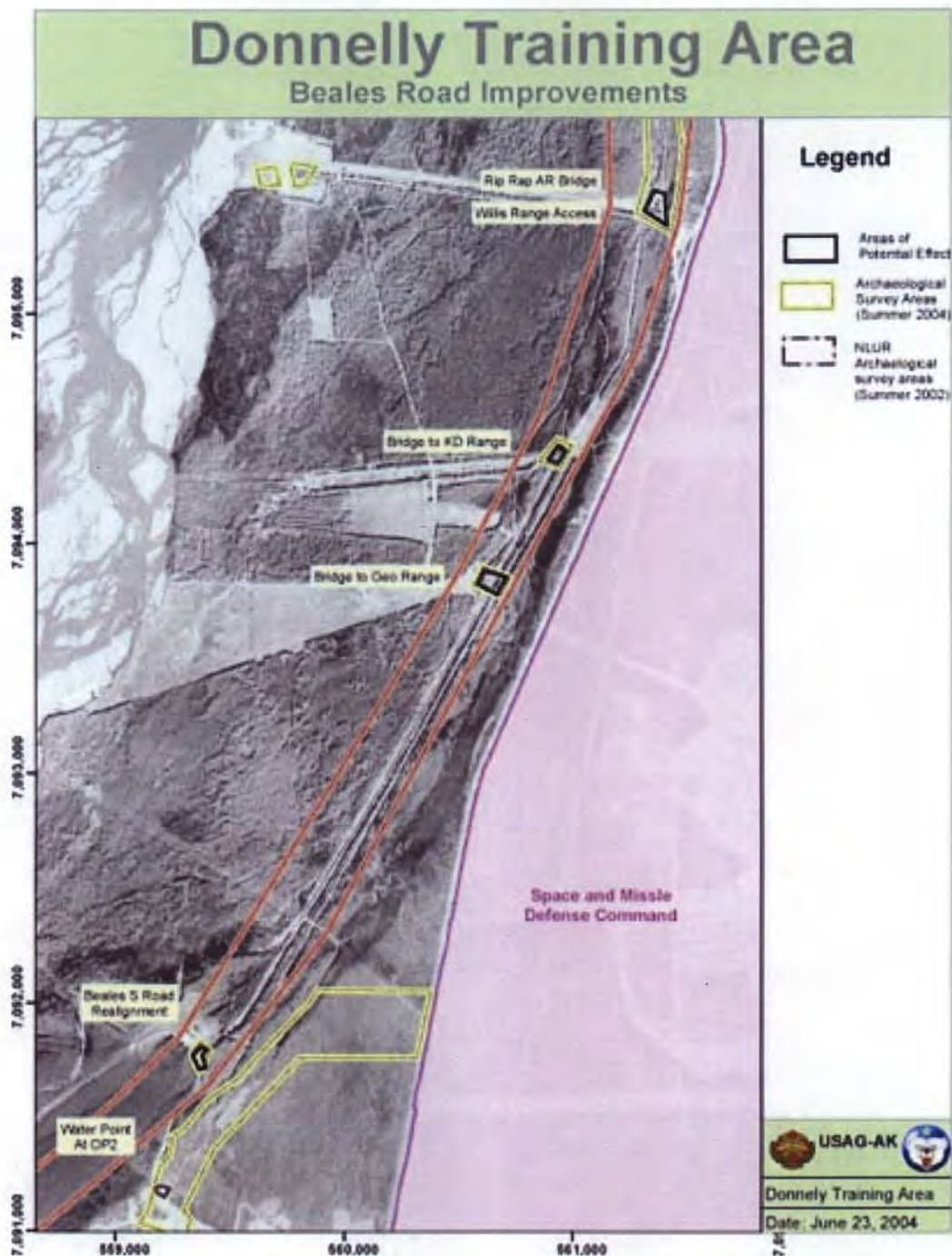


Figure 78. Location of the APE for the Beales Road project, Donnelly Training Area

Water Point at OP2

OP2 is near the new loading ramps and bivouac site constructed as part of the realignment of Fort Greely to the Space and Missile Defense Command. The facilities at OP2 are necessary to support troops deployed to DTA for training exercises. Additional facilities required to fully support deployed troops will be located in this general area. A water point consists of a well, a holding tank in a small heated building, a fill spout to allow filling of large water tankers, a hardened access road to the fill spout, and

protective barriers around the building. The water point at OP2 project will encompass approximately 1.9 acres.

Rip Rap Arkansas Range Bridge

The Arkansas Bridge Rip Rap project, located in the Wills Range Complex, DTA, will install large rocks along an existing railcar bridge crossing over a slough of the Delta River. This area is prone to flooding and while the installation of the bridge and removal of culverts have improved the hydrology of the area, bank erosion can still occur and compromise the integrity of the newly installed bridge. The rip rap armoring proposed for the Arkansas Range Rail Car Bridge will consist of an 18in. blanket of 12in. minus rock rip rap underlain with geo-textile material and toed in 2ft below the existing slough bed. The rip rap blanket will extend 40ft upstream and 120ft downstream of the rail car bridge on both banks. This project will require 416 cubic yards of bulk material excavation, and 436 cubic yards of rock rip rap. Commercial rip rap will be used for this project. This project will encompass approximately 0.12 acres.

Surveys and Field Methods

In the summer of 2002, one archaeological survey crew (comprised of two archaeologists) employed by Northern Land Use Research, Inc. (NLUR) surveyed the majority of Beales Road for a Golden Valley Electric Association, Inc. power line (Goodman et al. 2002). No cultural material was located and all but one of the project areas (water point at OP2) was covered by the 2002 NLUR survey.

In the summer of 2004, one archaeological survey crew (comprised of four archaeologists) employed by CEMML conducted a pedestrian survey of the proposed Beales Road upgrade project. The survey area was limited to the APE for all but one of the project areas (water point at OP2), due to previous coverage by the 2002 NLUR survey.

The project's 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 approximately 20m intervals 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 subsurface 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 ¼in. hardware cloth. No cultural material was observed inside the APE.

Results

Pedestrian survey of the proposed project area failed to identify any cultural resources within the APE for the proposed projects. All but one of the project areas (water point at OP2) are located in the Delta River flood plane. All archaeological sites in the vicinity are located outside of the APE on the Delta River flood plane. The water point at OP2, located on the terrace, is the closest to an archaeological site (XMH-00273). This site is from the construction footprint of the water point at OP2 (Figure 79). The DTA archaeologist will

monitor the site during the construction of water point at OP2 to ensure that no damage occurs to XMH-00273.

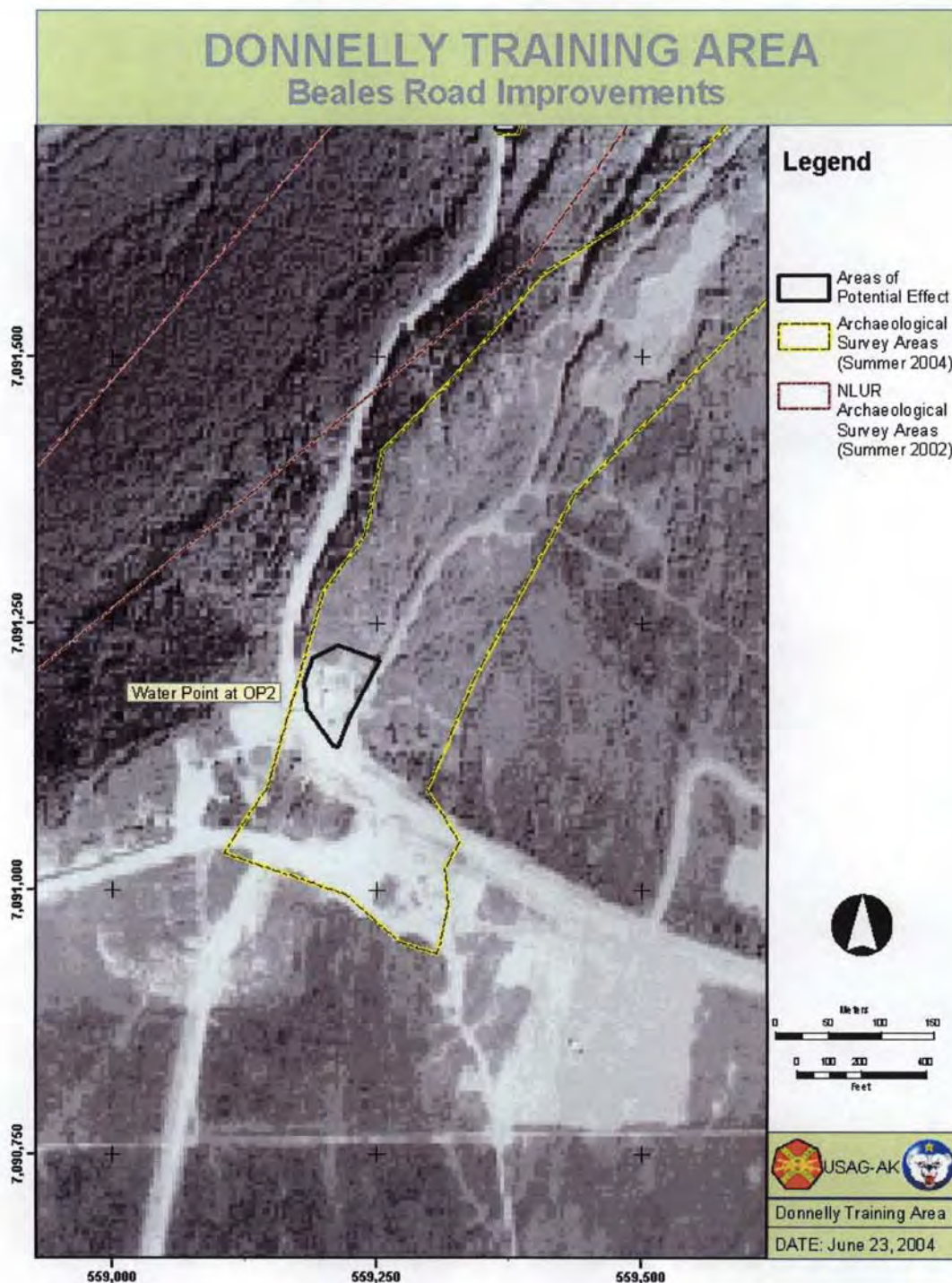


Figure 79. Location of the APE for the Water Point at OP2 and XMH-00273

Cultural Resources

Three prehistoric sites have been previously recorded within 1km of the proposed project area. These sites (XMH-00253, XMH-00273 and XMH-00287) are located

the Delta River. All but one of the project areas (water point at OP2) are located in the flood plain 100m below the terrace, in area that has not yet produced any cultural material (Bacon and Holmes 1979; Goodman et al. 2002; Higgs et al. 1999; Holmes 1979).

The following is a description of each recorded site near the currently proposed project area.

XMH-00253

Latitude:

Longitude:

Determination: Not evaluated

Site XMH-00253 is located on a glacial outwash terrace that overlooks , next to , approximately west of the Richardson Highway. The site was identified in 1976 and investigated in 1977 and consists of numerous flakes, scrapers, microblade cores, microblades, rejuvenation flakes, a core tablet, a burin, and burin spalls (Rabich and Reger 1978). This site was revisited in 2003 and no new artifacts were located. UTM coordinates for the site are:

Recommendations

Site XMH-00253 has been classified as a microblade production site. This site lies outside the APE for the proposed projects 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-00273

Latitude:

Longitude:

Determination: Not evaluated

Site XMH-00273 is located on a glacial outwash terrace that overlooks , approximately of the Richardson Highway. The site was identified in a 1979 survey and consists of two retouched flakes, several flakes of different material types and a large cobble core found on the surface (Holmes 1979). This site was revisited in 2004 for this project and no new artifacts were located. The location on the AHRS card is off by several hundred meters. The correct UTM coordinates for the site are:

Recommendations

Site XMH-00273 has been classified as a small lithic scatter. This site lies outside the APE for the proposed projects 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-00287

Latitude:

Longitude:

Determination: Not evaluated

Site XMH-00278 is located on a glacial outwash terrace that overlooks , approximately of the Richardson Highway. The site was identified in a 1979 survey and consists of a retouched flake and several flakes of different material types found on the surface (Holmes 1979). According to the 1979 site report, the site area was heavily disturbed by "roads, power lines, gravel pits and clearing" (Holmes 1979:86). This site was revisited in 2004 for this project and no new artifacts were located. The location on the AHRS card is off by several hundred meters. The correct UTM coordinates for the site are:

Recommendations

Site XMH-00278 has been classified as a small lithic scatter. 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.

3.3 12 Mile Crossing Trail Upgrades

USAG-AK has proposed road upgrades located within lands on Fort Wainwright, Alaska. The proposed road upgrades are along 12 Mile Crossing Trail, located approximately 7-10km south of Delta Junction, and 1km west of the Richardson Highway in the DTA (Figure 80).

The Ober Creek Low Water Crossing project is located in the Ober Training Area along what is known as 12 Mile Crossing Trail in the DTA. This project will re-shape and install a rip rap blanket along both banks of the Ober Creek crossing. This project will also grade and improve 1.8km of the 12 Mile Crossing Trail from the base of the hill east to Jarvis Creek. The Ober Creek Low Water Crossing is 1.3km from the base of the hill on the western end and 0.5km from Jarvis Creek on the eastern end of the Trail. 12 Mile Crossing Trail is a key access point for Training Areas 19 and 20 and is the southern entrance and exit point for 33 Mile Loop Trail, which is the main access to Training Areas 5-11. The current low water crossing is unimproved and has erosion features associated with the banks. The existing trail width ranges from 6-10m, with the final graded base width to be 9.7m wide. This project will encompass approximately 3.8 acres, 95 percent of which has already been disturbed by construction of the trail and by fuel break clearings along either side of the trail.

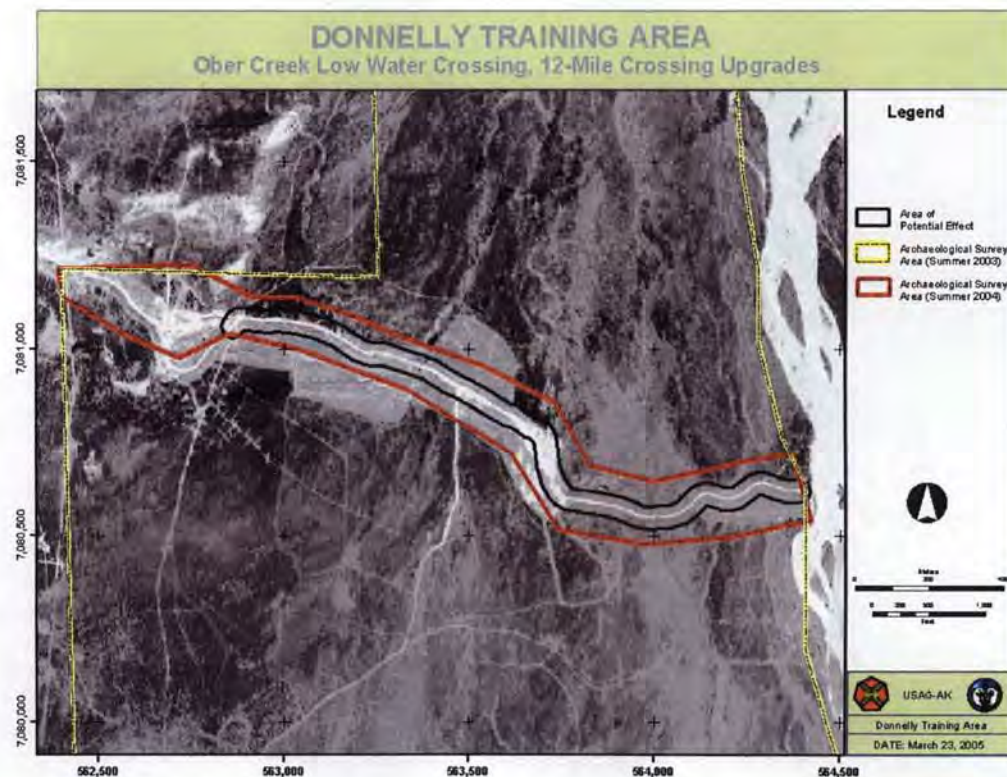


Figure 80. Location of the APE for the 12 Mile Crossing Trail upgrades

Survey and Field Methods

In the summers of 2003 and 2004, two archaeological survey crews (each comprised of four archaeologists) employed by CEMML conducted a pedestrian survey in the area of the proposed road upgrades along 12 Mile Crossing Trail project in the DTA. The project's 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 approximately 20m intervals 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 subsurface 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 ¼in. hardware cloth. One archaeological site was observed inside the APE.

Cultural Resources

Three prehistoric sites (XMH-00282, XMH-01171 and XMH-01172) have been previously recorded within 1km of the proposed project area (Figure 80). The following is a description of each recorded site near the currently proposed project area.

XMH-00282

Latitude:

Longitude:

Determination: Not evaluated

Site XMH-00282 is located on a small barren knoll, with trails that go all around it. The site is approximately _____ of the Richardson Highway. The site was identified in 1978 and consists of five flakes of three material types (Holmes 1979). This site was revisited in 2004 for this project and no new artifacts were located. The location on the AHRs card is off by several hundred meters. The correct UTM coordinates for the site are:

Recommendations

Site XMH-00282 has been classified as a small lithic scatter. 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-01171

Latitude:

Longitude:

Determination: Eligible

Site XMH-01171 is located on the southern edge of a terrace overlooking the _____. The nearest water source is _____ located 1.5km to the east-

southeast. The view shed at the site is 180°. The Granite Mountains are visible to the southeast and Muskeg Hill can be seen to the east. Surface visibility at the site is 75 percent. UTM coordinates for the site are:



Figure 81. General view of site XMH-01171, facing south

Site XMH-01171 consists mainly of lithic debitage. More than 250 flakes were found on the surface and an additional 33 flakes were found subsurface in either shovel tests or test units. Chert, basalt, rhyolite, quartzite and obsidian (a non-locally occurring material type) were present among the debitage.

Seventeen tools were found at the site. In addition to these artifacts, more than 100 of the over 250 flakes found at the site are of brown and clear glass. Whether this glass is from the contact or historic period is presently unknown. A clear glass scraper was also found at the site.

A total of 121 shovel test pits were excavated at the site. A 10m shovel test grid was established, although some shovel tests were excavated at 5m intervals on the northern portion of the site. Five meter interval tests were excavated here because more soil was present and the likelihood of encountering subsurface artifacts was considered to be greater. All shovel tests were excavated to glacial till. A total of eight shovel tests were positive, six of which contained just one flake each. The other two shovel tests contained two flakes each. Subsurface artifacts were found from 1-40cmbs in all positive shovel tests.

One 1m x 1m test unit was excavated at site XMH-01171. The unit was placed just inside the tree line to the north-northeast of the site datum, in between two positive shovel tests. The test unit was excavated in 10cm levels until glacial till was reached throughout the entire unit floor. The test unit contained a total of 24 artifacts recovered from levels two, three, four and five, 10-50cmdbd. No subsurface features were identified at the site. Soil thickness varied from 0-90cm across the site. The southwest and northeast portions of the site have sustained considerable wind erosion as well as road, vehicle and various amounts of military disturbance. As a result, soil deposition at these portions of the site averages only 15cm in depth. Soil in these deflated areas consists of loosely compacted, dark brown, organically rich loess to an average depth of 4cm. Below this organic horizon, the soil consists of moderately compacted yellow brown loess with a low density of gravels and cobbles. Glacial till is encountered below this loess deposit and consists of moderately compacted yellow brown sandy loess with a high density of gravels and cobbles.

The area of the site located between the datum and sub-datum shows the most deposition and the least amount of disturbance. The soil in this portion of the site averages 45cm in depth and consists of loosely compacted, dark brown, organically rich loess to an average depth of 7cm. Below this organic horizon, the soil consists of moderately compacted yellow brown loess with a low density of gravels and cobbles. Glacial till is encountered below this loess deposit and consists of moderately compacted yellow brown loess with a high density of gravels and cobbles.

Table 8. Lithic assemblage recorded from XMH-01171

Artifact Class	Frequency	% of Assemblages
Bifaces		
Biface fragments	10	<4%
Unifaces		
End scrapers (1 of glass)	2	<1%
Uniface, flake tool	1	<1%
Burins		
Possible burin spall	1	<1%
Microblade Cores and Microblades		
Microblades	1	<1%
Flake Cores	2	<1%
Debitage		
Flakes (100+ of glass)	250+	>93%
Shatter	2	<1%
Total	269+	100%

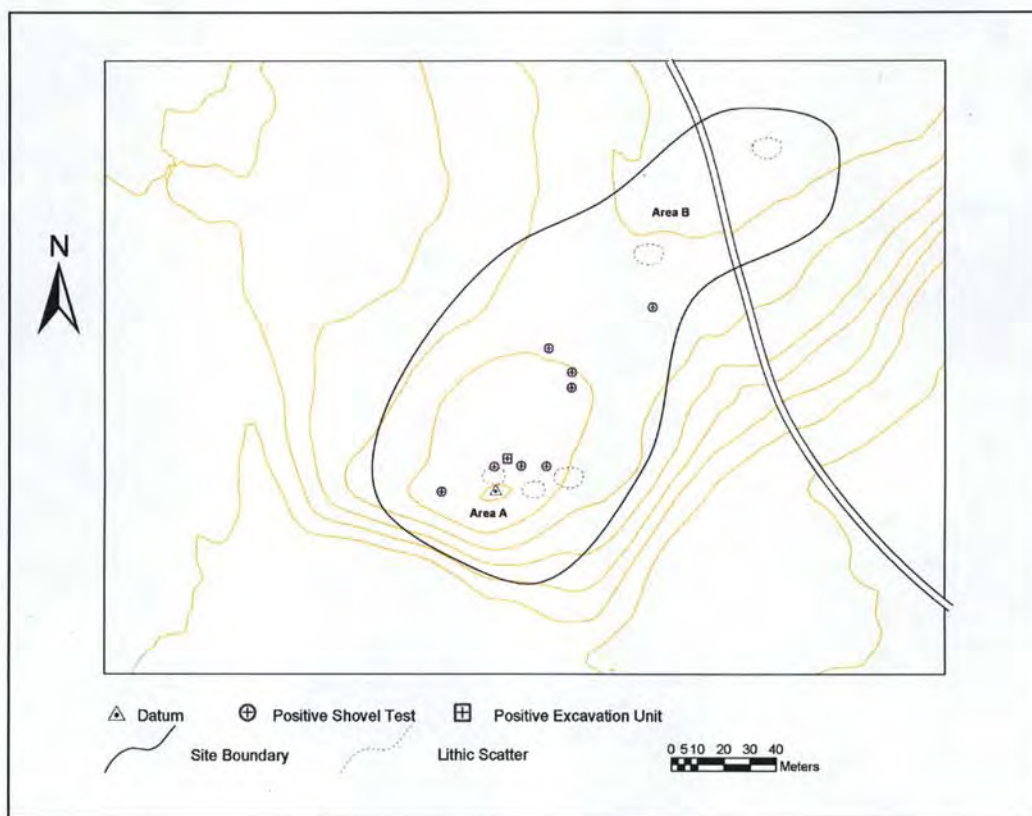


Figure 82. Site map of XMH-01171

Findings

More than 250 artifacts were recorded at XMH-01171, 17 of which are tools. Thirty-three artifacts were found below the surface either in positive shovel tests or in the test unit. Materials at the site include chert, basalt, rhyolite, quartzite, glass and obsidian (a non-locally occurring material type). Based on the results of the survey and testing, the site area is estimated at approximately 100m x 100m.

Site XMH-01171 is a high-density site with both surface and subsurface components. With buried cultural material and multiple tool types, including possible contact period artifacts, XMH-01171 is in an excellent position to contribute to our knowledge of prehistoric land use patterns. In situ artifacts and soil stratigraphy indicate datable material and diagnostic artifacts may be present and could be used to date human use of the site, potentially contributing to a broader regional context. Site XMH-01171 is an intact archaeological site with integrity. The site is eligible for inclusion in the National Register of Historic Places under criterion D, for its potential to yield information important in understanding the prehistory of the region.

XMH-01172

Latitude:

Longitude:

Determination: Not Eligible

Site XMH-01172 is located on a very low terrace overlooking a boggy, muskeg area to the east. The closest water to the site is

. The site is located in an area that has been mechanically cleared and as a result the view shed is a full 360°. However, the site is at such a low elevation that not much is visible. The Granite Mountains can be seen to the southeast and Muskeg Hill is visible to the east. There is little or no vegetation and approximately 95 percent surface visibility at the site. The road to

runs through the site and the surface has been heavily disturbed by the construction of the road, vehicle traffic, and blading. In addition, wind and water erosion, exacerbated by the lack of vegetation, has taken a toll on the site. UTM coordinates for the site are:



Figure 83. General view of XMH-01172, facing north

Site XMH-01172 consists of 82 artifacts recorded from the site. Thirty-three flakes were discovered on the exposed surface and two artifact concentrations were identified. Concentration one is located east of the road and contained 13 chert and basalt flakes. Concentration two is west of the road and contained 14 dark gray chert tertiary flakes, many of which were very small (less than 1/4 in.). Two flakes with worked edges were collected. Twenty-seven of the surface flakes were dark gray chert; the remaining 6 flakes were basalt, banded chert and brown chert.

Shovel tests were systematically placed throughout the site area at intervals of 10m. A total of 23 shovel tests were excavated, three of which contained cultural material. The depth of shovel tests varied, but all were excavated to glacial till. The three positive shovel tests contained one flake each. Shovel test depths ranged from 0-30cm, with loess on top of the till. Based on the results of survey and testing, the site area is estimated at approximately 20m x 40m.

One 1m x 1m test unit was excavated at site XMH-01172. The unit was placed to the south of the site datum, next to a positive shovel test and surface concentration one. The area had a small amount of vegetation protecting it and appeared to have a greater deposition of soil. The test unit was excavated in 10cm levels until glacial till was

reached throughout the entire unit floor. The test unit contained a total of 46 artifacts recovered from levels one, two and three, 0-30cmbd. A portion of level two was heavily disturbed. The majority of artifacts came from 15-25cmbd (levels two and three) and from the SE corner in intact loess. Fourteen flakes were plotted in-situ from 20-26cmbd. All the artifacts from the test unit were dark gray chert tertiary flakes and many were very small (less than 1/4in.). Ninety percent or more of the artifacts at this site were dark gray chert. No subsurface features were identified at the site. The unit was excavated to glacial till.

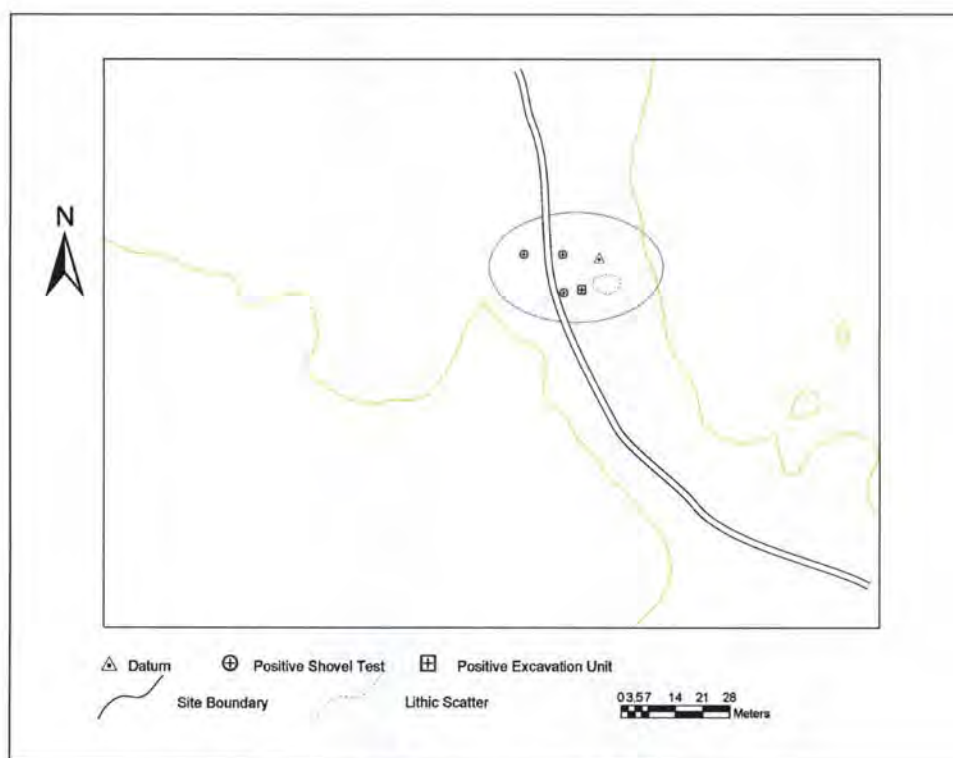


Figure 84. Site map of XMH-01172

Findings

Pedestrian survey and 23 shovel tests produced a total of 82 artifacts. Most of these artifacts were found on a heavily disturbed surface. Despite the large amount of cultural material, loss of integrity at XMH-01172 is indicated by heavy site disturbance caused by the construction of the road and parking area, vehicle traffic and wind and water erosion. As a result, site XMH-01172 does not contain additional information that is important to our understanding of the prehistory or history of the region and is not eligible for inclusion in the National Register of Historic Places.

Results

Only one archaeological site (XMH-01172) was located within the boundaries of the APE for the proposed road upgrades on 12 Mile Crossing Trail. A site evaluation determined that XMH-01172 does not contain enough information that is important to our understanding of the region's prehistory or history and is not eligible for inclusion in the National Register of Historic Places.

While site XMH-01171 does not fall into the APE for this project, its close proximity may expose it to secondary impacts from the road construction. To protect the site from any

inadvertent damage during construction and any subsequent military training,

The DTA archaeologist will be on site and will
monitor the construction for this project.

All other previously recorded archaeological sites or historic properties fall outside the proposed project area. Subsequently, the proposed project will have no effect on historic properties.

3.4 33 Mile Loop Trail Upgrades

USAG-AK has proposed road upgrades located along 33 Mile Loop Trail, approximately 7-10km south of Delta Junction and 1km west of the Richardson Highway between Eddy Drop Zone and Fleet Street at Fort Wainwright's DTA.

The proposed upgrades will allow for travel during wet times of the year and will consist of two parts: one west of the "shortcut" hill and one east of it. The western section has one stretch adjacent to Eddy Drop Zone that is rutted and has never been upgraded but is passable most of the year and another section that was severely impacted by the spring 2004 floods. These sections will be graded, compacted, have gravel added in 6in. lifts where needed and be compacted again. Cutouts may be needed on the low side of the road to prevent water from ponding on the road. Three grouted low water crossings will also be installed. Two will be improvements to existing low water crossings in the area where the road was damaged during the 2004 flood and the third one will replace the culverts at the base of "shortcut" hill. Existing berms on the south side of the road, in the damaged area, and at the location of the two existing low water crossings need to be opened up to a minimum width of 100ft. Material removed from the berm will be used in one of two places. It can be added to the remaining section of berm or the material can be used to assist in directing the water into the opened up areas. Most of the work will be completed in the original footprint of the road. The removal of portions of the berm and installation of cutouts may extend the work outside the original footprint of the road.

The eastern section of the trail has several mud holes that have been detailed for repair. The proposed upgrade includes five mud hole repairs along 0.8 miles of trail. Generally, the treatment at each site calls for grading the trail, installing geotextile and then building up the roadbed to raise it above the level of water that accumulates in these mud holes. Gravel will be utilized from nearby sources and will be added and compacted in 6in. lifts. The two possible gravel sources for this project have been surveyed and the State Historic Preservation Office (SHPO) has concurred with USAG-AK's findings that no sites are located within these sources (Sackett 2000 and Robertson 2003). Some of the areas to be upgraded call for the installation of culverts. In addition, three or four of the ridge tops that the trail crests are too peaked to allow for vehicles with long trailers to pass. These sites will be leveled the minimum necessary to allow for safe travel. The remaining portions of trail are on natural gravel substrate and will only require grading and crowning. There is one archaeological site near the project area that will be protected from damage

. Most of the work will be performed in the original road footprint. The only work that may be performed outside the footprint would be the cutouts.

The objective of this project is to improve the mud holes, reduce the sharp peaks, and grade the remaining portions of this short section of trail. The mud holes make it almost impossible for wheeled vehicles to drive on 33 Mile Loop Trail without getting stuck or making side cuts around them. This "road propagation" widens the existing trail and degrades large amounts of land.

Surveys and Field Methods

In the summers of 2002, 2003 and 2004, two archaeological survey crews (each comprised of four archaeologists) employed by CEMML conducted a pedestrian survey

in the area of the proposed road upgrades along 33 Mile Loop Trail. The project's 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. No archaeological sites were observed inside the APE.

Survey methods consisted of parallel pedestrian transects spaced at 20m 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 subsurface 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 ¼in. hardware cloth.

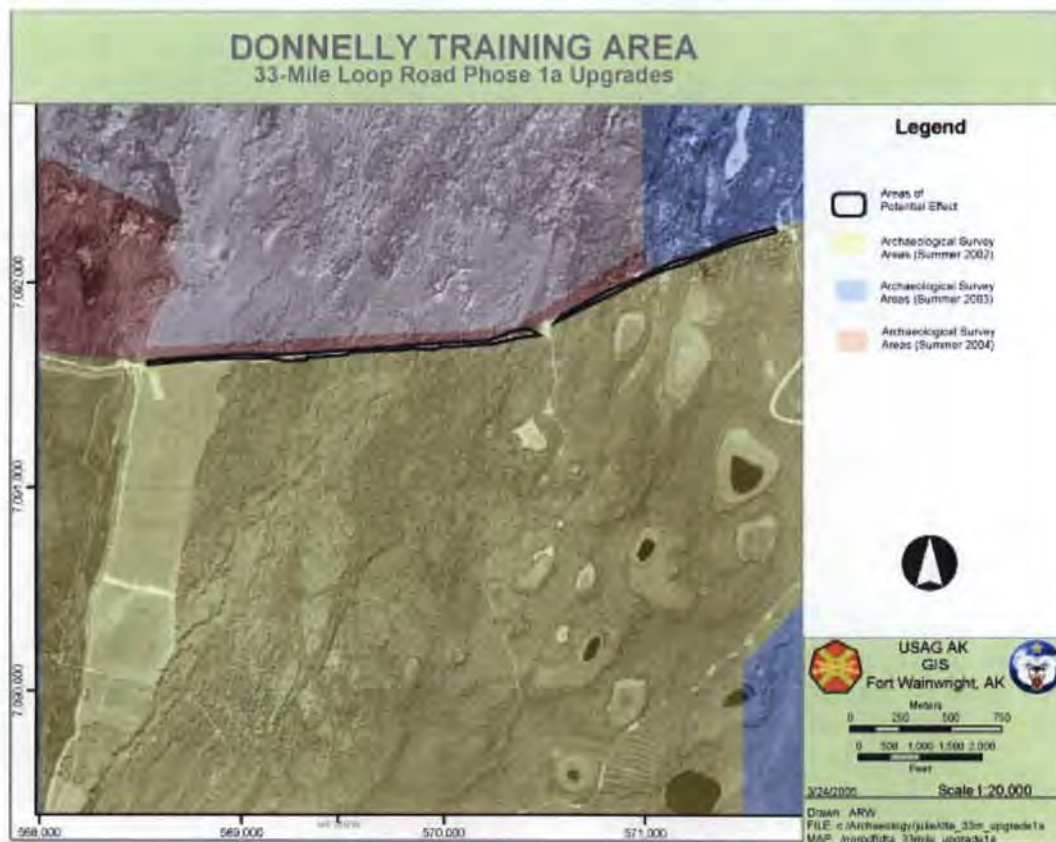


Figure 85. Project area, 33 Mile Loop Trail upgrades

Results

Pedestrian survey of the proposed project area failed to identify any cultural resources within the boundaries of the proposed project's APE. All previously recorded archaeological sites or historic properties fall outside the proposed project area. Most of the work will be completed in the original footprint of the road. Subsequently, the proposed project will have no effect on historic properties. The two possible sources of the gravel for this project have been surveyed and the SHPO has concurred with the

findings that no historic properties are located within these sources (Sackett 2000 and Robertson 2003).

Cultural Resources

Twelve prehistoric sites (XMH-00290, XMH-00291, XMH-00895, XMH-00896, XMH-00897, XMH-00898, XMH-00899, XMH-00901, XMH-00980, XMH-00992, XMH-00994, and XMH-00999) have been previously recorded within 1km of the proposed project area (Figure 85). However, only three of these sites (XMH-00290, XMH-00291, XMH-00895) are the proposed project area. The following are descriptions of the three sites near the currently proposed project area.

XMH-00290

Site XMH-00290 is located on the , at the intersection of 33 Mile Loop Trail and an unnamed trail. The site was identified in 1978 and consists of numerous flakes and two biface fragments (Holmes 1979). This site was revisited in 2004 for this project and no new artifacts were located. The correct UTM coordinates for the site are:

Recommendations

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

XMH-00291

Site XMH-00291 is located on a glacial moraine knoll, east of the intersection of . The site was identified in 1978 and consists of two chert flakes found on the surface (Holmes 1979). This site was revisited in 2002 for this project and no new artifacts were located. The correct UTM coordinates for the site are:

Recommendations

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

XMH-00895

Site XMH-00895 is located at of a north/south trending ridge of a glacial moraine, 20m to the north of is located approximately 250m to the south and is roughly 500m to the east. The site was identified in 2002 and consists of single unifacially worked banded chert flake found on the surface of the at the base of a moraine and to the north of (Hedman et al. 2003). This site was revisited in 2004 for this project and one biface fragment and two more flakes were located on the top of the moraine. The correct UTM coordinates for the site are:

Recommendations

This site falls outside of the area of potential effect for the proposed project. While the site does not fall within the boundaries of this project, its close proximity may expose it to secondary impacts from the road construction. To protect the site from any inadvertent damage during construction and any subsequent military training,

. The DTA archaeologist will be on site to monitor the construction for this project.

3.5 2004 Survey and New Sites

During the summer of 2004, two archaeological survey crews (each comprised of four archaeologists) employed by CEMML conducted a phase 1 pedestrian survey for one major range development project (BAX), as well as several smaller projects for the USAG-AK on lands at Fort Wainwright's DTA.

Survey and Field Methods

Standard pedestrian survey methods were employed, with parallel transects spaced at a maximum of 20m in all areas that were considered not too wet to contain cultural material. 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 subsurface shovel testing was undertaken in areas considered to have high probability for containing archaeological sites. Random subsurface shovel testing took place in areas considered to have low probability. Areas that were considered to have high probability 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 above Jarvis Creek. Shovel tests were typically 30cm in diameter and excavated into glacial till, consolidated outwash, or permafrost. All soil removed was screened through ¼in. hardware cloth.



Figure 86. Archaeologist testing the project area

Cultural Resources

2,610 acres were archaeologically surveyed on the DTA during the 2004 summer field season, and a total of 10 new archaeological sites were identified. One additional (XMH-01168) site was located on Fort Greely, Space Missile Defense Command.

The following is a description of eight of the new sites recorded in 2004. Sites XMH-01171 and XMH-01172 are described in Section 3.3 of this report.

Table 9. Archaeological Sites Located in 2004

Site #	Project	Easting	Northing	NRHP Status
XMH-01168	SMDC Gravel			Not evaluated
XMH-01169	2004 Survey			Not evaluated

XMH-01170	2004 Survey			Not evaluated
XMH-01171	12 mile crossing			Eligible
XMH-01172	12 mile crossing/BAX			Not Eligible
XMH-01173	BAX 2004 Survey			Not evaluated
XMH-01174	BAX 2004 Survey			Not evaluated
XMH-01175	BAX 2004 Survey			Not evaluated
XMH-01176	BAX 2004 Survey			Not evaluated
XMH-01177	2004 Survey			Not evaluated
XMH-01178	2004 Survey			Not evaluated

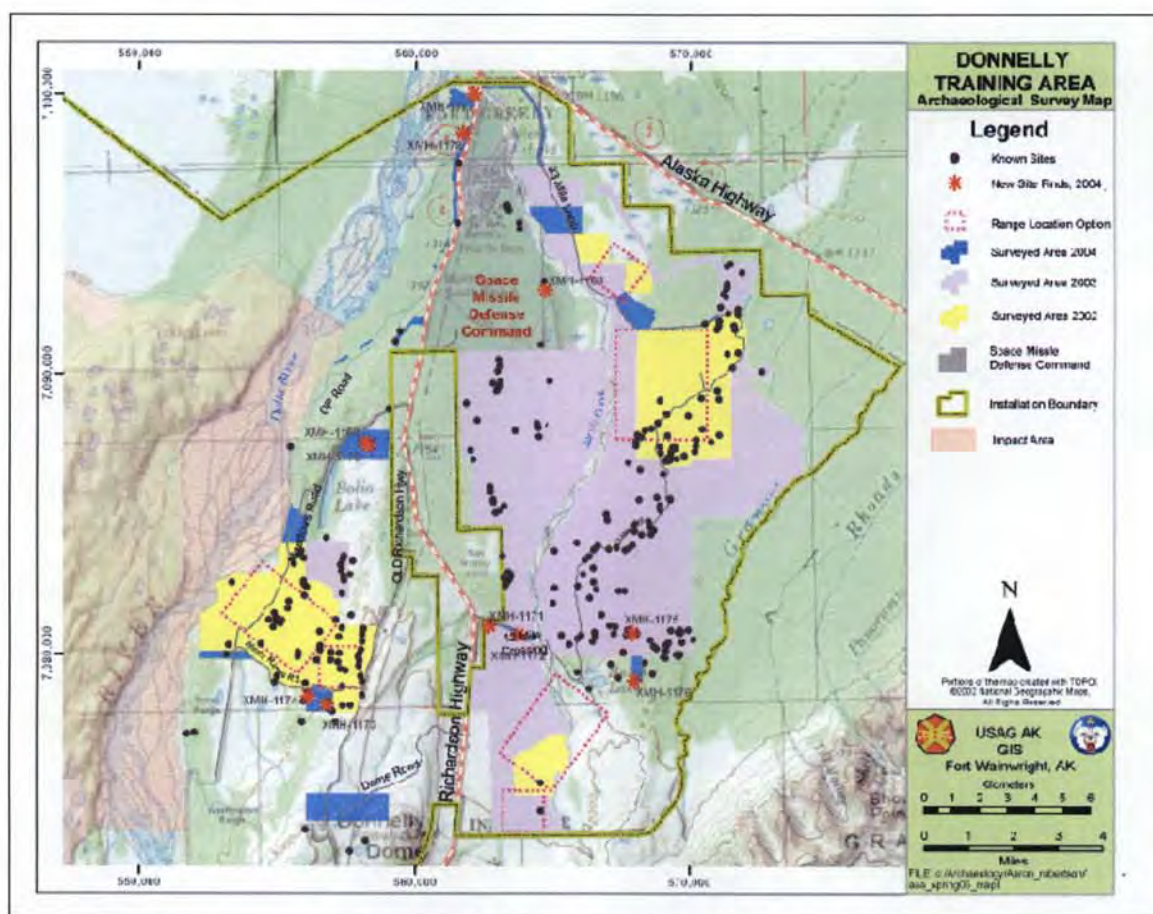


Figure 87. Area surveyed and location of newly located archaeological sites, DTA

XMH-01168

Latitude:

Longitude:

Determination: Not evaluated

Site XMH-01168 was discovered by Mark Hubbs of Teledyne Solutions, Inc. The site is located on the same narrow north/south running ridge as XMH-00871, which is 340m to the south. The site is on a knoll rising slightly above the rest of the ridge and Donnelly Dome is visible to the south. A gravel road has been cut through the western part of the ridge and the lone artifact encountered was found at the top of the cut bank made by this road. The closest water source is a small pond located 150m to the west and is located 200m to the east. There is approximately 10 percent surface visibility at the site and the surrounding area was burned in the 1999 forest fire. UTM coordinates for the site are:



Figure 88. Projectile point from site XMH-01168

Site XMH-01168 consists of one chert side notched projectile point located on the surface. The projectile point is made of dark gray chert and measures 37.9mm long, 24.3mm wide, and weighs approximately 7.2g. No other artifacts were observed. This projectile point was collected. Subsurface examinations have yet to be conducted.

Recommendations

Site XMH-01168 has been initially classified as an isolated find; however, the site could potentially contain more cultural material. This site lies outside the APE for any current projects, and therefore was not evaluated to determine eligibility for inclusion in the National Register of Historic Places. However, if further projects are proposed in the area the site should be evaluated to determine its eligibility.

XMH-01169

Latitude:

Longitude:

Determination: Not evaluated

Site XMH-01169 is located on an east/west trending ridge overlooking . There is a 180° degree viewshed from the site and the Alaska Range is visible to the southwest. The closest water source to the site is located 50m to the east/northeast. There is also a small unnamed pond located 100m to the south. Surface visibility at the site is estimated to be 50 percent. UTM coordinates for the site are:



Figure 89. General view of site XMH-01169, facing east

Site XMH-01169 consists of more than 100 flakes found on the surface. The flakes consisted of chert and quartzite. A total of three density plots were placed on the site.

No shovel tests were excavated at the site and one flake was collected to determine its material type.

Recommendations

Site XMH-01169 has been initially classified as a large lithic scatter. This site lies outside the APE for any current project and therefore was not evaluated to determine eligibility for inclusion in the National Register of Historic Places. However, if further projects are proposed in the area, the site should be evaluated to determine eligibility.

XMH-01170

Latitude:

Longitude:

Determination: Not evaluated

Site XMH-01170 is located on a northwest/southeast trending ridge. The closest water source to the site is , located 20m to the northeast and a small, unnamed pond located 50m to the southwest. The view shed at the site is 300° and the Alaska Range is visible to the west. There is an estimated 25 percent surface visibility at the site. UTM coordinates for the site are:



Figure 90. General view of site XMH-01170, facing east

Site XMH-01170 consists of one basalt uniface discovered on the surface of the site. No shovel tests were excavated at the site and no density plots were calculated. The artifact was not collected.

Recommendations

Site XMH-01170 has been initially classified as an isolated find; however, the site could potentially contain more cultural material. This site lies outside the APE for any current project, and therefore was not evaluated to determine eligibility for inclusion in the National Register of Historic Places. However, if further projects are proposed in the area, the site should be evaluated to determine its eligibility.

XMH-01173

Latitude:

Longitude:

Determination: Not evaluated

Site XMH-01173 is located on a bench just below a northwest/southeast trending ridge. The view shed is 180° and the Alaska Range is visible to the southwest. Several small, unnamed ponds are visible from the site. One is located 30m to the southwest, another is 50m to the south, a third is 60m to the north and a fourth is located 100m to the northeast. Surface visibility at the site is estimated at 90 percent. UTM coordinates



Figure 91. General view of site XMH-01173, facing east

for the site are:

Site XMH-01173 consists entirely of lithic debitage. Seven flakes of chert and rhyolite were found on the surface of the moraine. Three density plots were calculated at the site and no shovel tests were excavated at the site. No artifacts were collected.

Recommendations

Site XMH-01173 has initially been classified as a small lithic scatter that could potentially contain more cultural material. This site lies inside the boundaries of one of the three construction footprint alternatives for the proposed BAX project. It was not, however, evaluated at this time. If the site falls into the APE of the chosen firing fan alternative, the site should be evaluated to determine its eligibility for inclusion in the NRHP.

XMH-01174

Latitude:

Longitude:

Determination: Not evaluated

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



Figure 92. General view of site XMH-01174, facing south

Site XMH-01174 consists of one obsidian scraper found on the surface. The scraper is 40.66mm wide, 43.29mm long, 9.05mm thick, and weighs 18.68g. No other artifacts were located. No density plots were calculated and no shovel tests were excavated.

Recommendations

Site XMH-01174 has initially been classified as an isolated find; however, the site could potentially contain more cultural material. This site lies inside the boundaries of one of the three construction footprint alternatives for the proposed BAX project. It was not, however, evaluated at this time. If the site falls into the APE of the chosen firing fan alternative, the site should be evaluated to determine its eligibility for inclusion in the NRHP.



Figure 93. Obsidian scraper from site XMH-01174

XMH-01175

Latitude:

Longitude:

Determination: Not evaluated

Site XMH-01175 is located on a small hilltop. Site XMH-01115 is located 90m to the east on a larger ridgeline. Views from the site are obstructed to the east, but are open to the north to a large expanse of generally flat terrain. Other hills surround the site to the south and west and thus views are limited in these directions. No lakes are visible from the site, but a small (15m diameter) dry lake is located 50m to the west. The area has been burned by forest fires and there is 60-70 percent surface visibility on the hilltop. UTM coordinates for the site are:

Site XMH-01175 consists two artifacts: one gray chert biface and one light gray chert piece of shatter. The biface was found 4m to the west of the piece of shatter.

Recommendations

Site XMH-01175 has initially been classified as a small lithic scatter that could potentially contain more cultural material. This site lies inside the boundaries of one of the three firing fan alternatives for the proposed BAX project. It was not, however, evaluated at this time. If the site falls into the APE of the chosen firing fan alternative, the site should be evaluated to determine its eligibility for inclusion in the NRHP.

XMH-01176

Latitude:

Longitude:

Determination: Not evaluated

Site XMH-01176 is located on the southern end of a glacial moraine. The area of the moraine slopes to the south at approximately 3 percent. Donnelly Dome is visible to the southwest and the nearest water source is an unnamed pond 450m to the east. 1,100m to the west. Surface visibility at the site is approximately 30 percent. UTM coordinates for the site are:



Figure 94. General view of site XMH-01176, facing southwest

Site XMH-01176 consists entirely of lithic debitage. A total of six flakes were located, including one obsidian flake. No artifacts were collected and no shovel testing was conducted.

Recommendations

Site XMH-01176 has initially been classified as a small lithic scatter that could potentially contain more cultural material. This site lies inside the boundaries of one of the three firing fan alternatives for the proposed BAX project. It was not, however, evaluated at this time. If the site falls into the APE of the chosen firing fan alternative, the site should be evaluated to determine its eligibility for inclusion in the NRHP.

XMH-01177

Latitude:

Longitude:

Determination: Not evaluated

Site XMH-01177 is located on a low terrace approximately 1m above the

. The Richardson Highway is to the east and a two-track gravel road connecting to runs just south of the site. The nearest water source is . No landmarks are visible due to tree cover. UTM coordinates for the site are:



Figure 95. General view of site XMH-01177, facing south

Site XMH-01177 consists of several hundred cans, bottles and other various pieces of historic debris. No density plots were calculated at the site and no shovel test pits were excavated at the site. A *Hills Bros. Coffee* can, three beer cans, a log cabin syrup can and a whiskey bottle were collected from the site for dating purposes. Dates on these artifacts place the top layer of the midden in the late 1930s to early 1940s. Artifacts at lower levels may be older.



Figure 96. Historic artifacts from site XMH-01177

Recommendations

Site XMH-01177 has been initially classified as a large historic can dump. This site lies outside the APE for any current project and therefore was not evaluated to determine its eligibility for inclusion in the National Register of Historic Places. However, if further projects are proposed in the area the site should be evaluated to determine its eligibility.

XMH-01178

Latitude:

Longitude:

Determination: Not evaluated

Site XMH-01178 is located on a north/south trending bluff overlooking

The viewshed is estimated to be 180° and the Alaska Range can be seen to the southwest. No other landmarks are visible from the site. The nearest water source is located 30m to the west, at the bottom of the bluff. There is good ground cover at the site and thus no surface visibility. UTM coordinates for the site are:

Site XMH-01178 consists of four flakes found in the eroding bluff edge. No density plots were calculated at the site and no shovel test pits were excavated. The four flakes were collected because they were in danger of being washed away by the eroding soil.

Recommendations

Site XMH-01178 has been initially classified as a buried site. This site lies outside the APE for any current project and therefore was not evaluated to determine its eligibility for inclusion in the National Register of Historic Places. However, if further projects are proposed in the area the site should be evaluated to determine its eligibility.

3.6 Updated Site Information: Duplicate AHSR numbers, Site Locations

USAG-AK has undertaken archaeological inventories on Fort Wainwright's DTA during the summer field seasons in 2002, 2003 and 2004. As a result, more than 200 new archaeological sites have been located. However, some archaeological sites recorded in the 1960s and 1970s had poor location information and were inadvertently given new AHSR numbers. After carefully reviewing the data for the past year it has been concluded that seven archaeological sites have been assigned duplicate AHSR numbers (Table 10).

Table 10. Archaeological Sites with Duplicate AHSR Numbers, DTA

Duplicate AHSR #	Correct AHSR #	Easting	Northing	Datum	Last Visited
XMH-00882	XMH-00284				2003
XMH-00918	XMH-00279				2004
XMH-00893	XMH-00323				2002
XMH-00879	XMH-00277				2003
XMH-00885	XMH-00292				2004
XMH-00970	XMH-00016				2002
XMH-00972	XMH-00281				2002

In addition, several other archaeological sites recorded in the 1960s and 1970s were relocated during recent surveys. The location information for these six sites has now been correctly plotted and is listed in Table 11.

Table 11. Relocated Archaeological Sites, DTA

Site #	Easting	Northing	Datum	Last Visited
XMH-00273				2004
XMH-00286				2002
XMH-00287				2004
XMH-00291				2002
XMH-00293				2002
XMH-00294				2002

4.0 FORT RICHARDSON

A number of historic properties are located on or near Army lands in Alaska; many of these properties are historic structures and buildings pre-dating or associated with World War II and Cold War era Army activities (see e.g. Hollinger 2001; Shaw 2000). Previous archaeological work at Fort Richardson includes several projects since the late 1970s (Hedman et al. 2003; Reynolds 1996; Shaw 2000; Sheppard et al. 2001; Steele 1979, 1980; Veltre 1978). Of these surveys, only Hedman et al., Steele, Reynolds and Shaw reported the discovery of archaeological sites. Steele's 1980 review identified four sites, all of which contained 20th century cabins associated with early homesteading in the area (ANC-00263, ANC-00264, ANC-00265 and ANC-00268; Steele 1980). Reynolds recorded the multi-component historic site ANC-00822 near Ship Creek, in the vicinity of . Shaw reported approximately 20 sites, the majority of which comprised military related mounds, foxholes and bunkers. Shaw's work identified one prehistoric site, ANC-01175, consisting of a single lithic flake and a small lithic spall. This site is located (Shaw 2000). Shaw's and Steele's work indicate that , represent relatively high probability areas for identifying archaeological sites on Fort Richardson.

Additionally, Hedman et al. (2003) relocated an historic era fish camp site near which was used by the Eklutna Industrial (Vocational) School from 1924 to 1946 (the site was originally identified during a 1994 collaborative study conducted by Nancy Yaw Davis and the Dena'ina team; however, no locational details were recorded). In 1924, the Department of the Interior Bureau of Education built and maintained the Eklutna Industrial (Vocational) School. The fish camp site (ANC-01299) was constructed and used by the school to provide training in traditional fishing methods, while also providing fish for the school's subsistence (Yaw Davis 1994). By 1946 the buildings had been condemned and the school was permanently closed (Chandonnet 1979).

A recent floristic study of Fort Richardson was conducted by Lichvar et al. (1997), with an appendix description of the Fort's ecological setting. The following description is from *Vegetation of Fort Richardson* (Lichvar et al. 1997):

"Fort Richardson falls within the Cook Inlet Lowlands Section of the Coastal Trough Humid Taiga Province of Bailey's Ecoregions of the United States (McNab and Avers 1994). Forests in the Anchorage area closely resemble the Boreal Forest of Interior Alaska, although some understory and tree species occur that are typically found in the Coastal Spruce-Hemlock Forest. Fort Richardson's forests have been described as open, low-growing spruce and closed spruce-hardwood forests by Viereck and Little (1972), and as a lowland spruce-hardwood forest by the Joint Federal-State Land Use Planning Commission (1973). Packee (as quoted in Lichvar et al. 1997), in examining Alaska's forest vegetation zones, characterizes the region as an area where white spruce (*Picea glauca*) and Sitka spruce (*Picea sitchensis*) naturally hybridize; balsam poplar (*Populus balsamifera*) and black cottonwood (*Populus trichocarpa*) intergrade; and mountain hemlock (*Tsuga mertensiana*) may form the subalpine forest. Vegetation reflects the transitional nature of the climate between maritime and continental. This maritime climatic influence has resulted in a lower incidence of natural fire than is found in the spruce-hardwood forests of interior Alaska (Gabriel and Tande 1983).

Upland sites on Fort Richardson are dominated by paper birch (*Betula papperifera*), white spruce, and, on drier sites, quaking aspen (*Populus tremuloides*). Cottonwood and poplar are common in areas bordering principal streams. Black spruce (*Picea mariana*) is the dominant tree in wetter areas and on some well-drained sites. Most bogs are treeless or support stands of stunted black spruce. Grasses, herbs, willows (*Salix* spp.), and alders (*Alnus* spp.) dominate the vegetation in a narrow band along the Inlet and at elevations above 1,500 feet on the Chugach Mountain slopes' (Lichvar et al. 1997: appendix)."



Figure 97. Fort Richardson, Alaska, training and other lands

4.1 Small Arms Complex Fire Break Trail

The U.S. Army Garrison, Alaska (USAG-AK) has proposed to cut an approximately 1.75km-long fire break behind the small arms range complex, specifically the Record Fire Range, on Fort Richardson. The purpose of the firebreak is to help control and contain any fires that may start in the vicinity of the small arms complex. The fire break will be approximately 2m in width. The majority of the fire break will be hand cleared because of the steepness of the terrain, though a portion of the project may be hydro-axed.



Figure 98. Project area, small arms complex fire break

Cultural Resources

There are no known cultural resources located in the vicinity of the proposed small arms complex fire break.

Section 106 (NHPA) Inventory

In June 2004 the post archaeologist and a cultural resources staff member, both employed by the Center for Environmental Management of Military Lands (CEMML), Colorado State University, conducted a pedestrian reconnaissance of the proposed small arms complex fire break.

Prior to the reconnaissance, the CEMML forestry crew had flagged approximately 1/3 of the fire break route. The flagged route was surveyed to its termination, at which point the crew continued survey activities based on maps of the project area. The total project area for the fire break is approximately 9 acres of which approximately 2/3 was

surveyed, in addition to some areas outside of the project area. The un-surveyed portion of the project area consists of a flatter area along the northern portion of fire break, leading to the Zero Range. This area, along with the southwest end of the fire break, is flatter terrain with extremely dense, low vegetation, and which has been disturbed to varying degrees by previously military activities and has a very low potential for containing cultural resources. There are two "high" points along the proposed fire break. Both of these more prominent areas were pedestrian surveyed and tested. Soils in the project area were very shallow, less than 10cm in most areas, lying atop glacial till. All shovel tests were approximately 40cm x 40cm, and were screened through ¼in. hardware cloth.

Results

Pedestrian survey and subsurface testing of the proposed project area did not identify any cultural resources. Based on the information presented above, USAG-AK has determined that no historic properties will be affected by the proposed project.

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