# Cultural Resources Survey and Evaluation, Fort Wainwright and Training Lands, 2013

December 2014

# Cultural Resources Survey and Evaluation, Fort Wainwright and Training Lands, 2013

By:

Julie A. Esdale, Ph.D., RPA; Kate S. Yeske; Heather D. Hardy; Whitney E. McLaren; Josh Lynch; and Laura Sample

Prepared by:

Center for Environmental Management of Military Lands
Colorado State University
Fort Collins, CO 80523-1500

Prepared for:

Gary Larsen
Conservation Branch
Directorate of Public Works
U.S. Army Garrison Fort Wainwright
Fort Wainwright, AK 99703

# Acknowledgements

This work could not have been completed without the tireless effort of our summer field crew:

Jacob Adams
Elizabeth Carroll
Briana Doering
Angela Gore
Heather Hardy
Samuel Hutchins
Josh Lynch
Haley McCaig
Whitney McLaren
Melissa Mueller
Ryan Nordstrom
Allie Pelto
Kate Yeske

The entire document was edited by Glenda Lesondak. We would also like to express our thanks to our coworkers from the Natural Resources staff at Fort Wainwright who guided helicopters, shared ATVs, trimmed vegetation, and hiked around the training lands in support of our mission.

# List of Acronyms

AAL – Arctic Aero medical Laboratory
AFB – Air Force Base
ALSIB – Alaska Siberia
AHRS – Alaska Heritage Resources Survey
BAX – Battle Area Complex
BP – Years before Present
BRTA – Black Rapids Training Area
CEMML – Center for Environmental Management of Military Lands
cm - centimeters
cmbs – centimeters below surface
CRM – Cultural Resources Manager
CRREL – Cold Regions Research and Engineering Laboratory
CRTC – Cold Regions Test Center
DOE – Determination of Eligibility
DTA – Donnelly Training Area
EIS – Environmental Impact Statement
FAI – Fairbanks
GRTA – Gerstle River Training Area
ICRMP – Integrated Cultural Resources Management Plan
JPARC – Joint Pacific Alaska Range Complex
m – meter
masl – meters above sea level
NHPA – National Historic Preservation Act
NLUR– Northern Land Use Research, Inc.
NRHP – National Register of Historic Places
RCYBP- Radio-Carbon Years Before Present
SDZ – Surface Danger Zone
SHPO – State Historic Preservation Officer
TFTA – Tanana Flats Training Area
UAMN – University of Alaska Museum of the North
USARAK – US Army Alaska
UTM – Universal Transverse Mercator
XBD – Big Delta
XMH – Mt. Hayes
YTA – Yukon Training Area

# Table of Contents

# List of Figures

# List of Tables

# Introduction

Section 110 of the National Historic Preservation Act (NHPA: 16 U.S.C. 470) states that every federal agency must establish a preservation program for the identification, evaluation, and nomination of sites to the National Register, and for protection of historic properties. Although Army Regulation 200-1 requires full compliance with federal law, most Section 110 inventories and evaluations in Army training lands take place in coordination with Section 106 reviews of project undertakings. In recent years, Fort Wainwright's Cultural Resources Manager (CRM) has begun a consultation process with Range Control at Fort Wainwright and Donnelly Training Area (DTA) to establish potential development zones based upon projected training needs. These PDZs are located in the large tracts of military managed land outside Fort Wainwright's Main Post cantonment area with no immediate undertakings, but regions that the Army plans to develop in the 2-10 year time range. Identification of PDZs has allowed the CRM to focus archaeological survey efforts, in addition to 106 projects, in the areas of Fort Wainwright's 1.6 million acres considered most critical.

The purpose of this report is twofold. First, it gives a brief summary of all Army activities that took place in 2013 that required Section 106 consultation and had previously been described in detail in individual letters to the SHPO. Second, it summarizes all survey efforts by the Army's cooperative partner, Colorado State University's Center for Environmental Management of Military Lands (CSU-CEMML), from 2002 to 2013. Third, it provides information on survey locations and archaeological site discoveries in Fort Wainwright and its training lands during 2013 that were not associated with Army undertakings and therefore not previously seen by the SHPO. And finally, it provides Determinations of eligibility for many previously discovered sites on Army lands in Alaska.

All archaeological fieldwork was conducted by CEMML employees under the direct supervision of Julie Esdale, Ph.D., an archaeologist meeting the professional standards outlined in the Secretary of the Interior's "Professional Qualifications Standards" as defined in 36 CFR §61 Appendix A. Three crews comprised of three to five archaeologists conducted the fieldwork.

This report is organized into sections by Fort Wainwright Training Areas. Each section includes information on the Section 106 activities, areas surveyed, sites discovered, and Determinations of Eligibility (DOEs) for sites located within that particular training area during the 2013 field season.

## Setting and Environment

Fort Wainwright consists of the Main Post cantonment area and associated training lands, which include three main areas: the Yukon Training Area (YTA), the Tanana Flats Training Area (TFTA), and the DTA. These are located in central Alaska, north of the Alaska Range in the Tanana River Valley (Figure 1). The post lies 120 miles south of the Arctic Circle near the cities of Fairbanks and North Pole in the Fairbanks North Star Borough. Fort Wainwright has the northern continental climate of the Alaskan Interior, characterized by short, moderate summers; long, cold winters; and little precipitation or humidity. Average monthly temperatures in Fairbanks range from -11.5° F in January to 61.5° F in July, with an average annual temperature of 26.3° F. The record low temperature is -66° F and the record high is 98° F. Average annual precipitation is 10.4", most of which falls as rain during summer and early fall. Average annual snowfall is 67", with a record high of 168" during the winter of 1970-71 (Natural Resources Branch 2002).

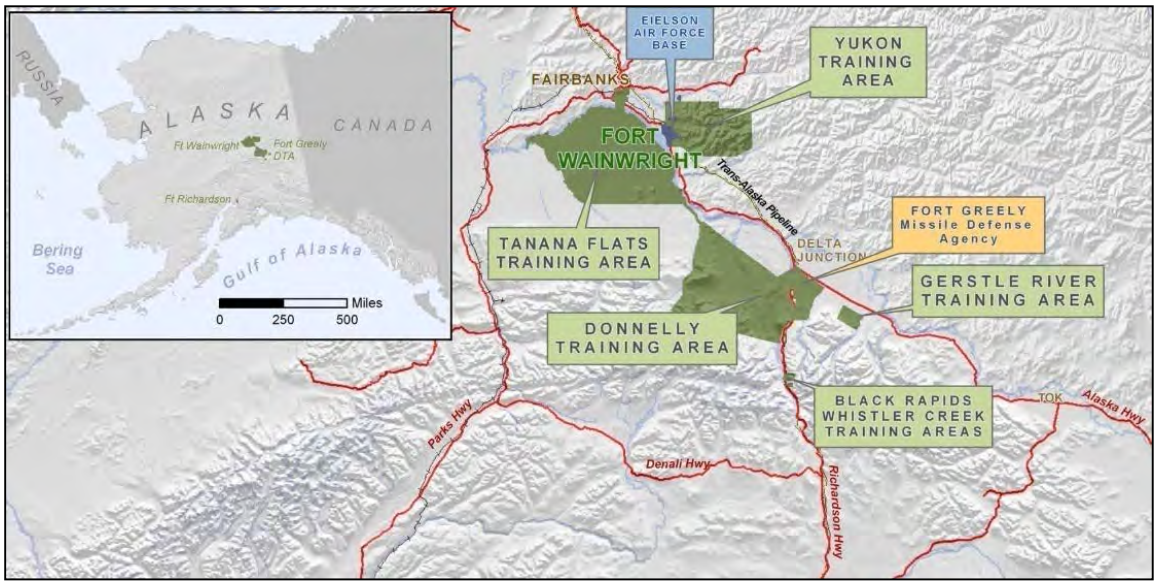


Figure 1. Fort Wainwright training lands.

## Prehistoric Context

Interior Alaska has been continuously inhabited for the last 14,000 years, and evidence of this continuum of human activity has been preserved within and around Fort Wainwright's training lands. Interior Alaska's ice-free status during the last glacial period provided a corridor connecting the Bering Land Bridge and eastern Asia to North America. This allowed small bands of nomadic peoples to colonize Alaska and the rest of the continent and began a period of habitation in Interior Alaska that has persisted through the entire Holocene, the arrival of European traders in the late 1810s, the Klondike Gold Rush of the late 19th and early 20th

centuries, and the military development of the Interior during the middle of the 20th century. Fort Wainwright's cantonment and training lands comprise a vast and still relatively unsurveyed region with areas of high potential for yielding evidence of this activity.

Alaska has long been regarded as the gateway to the Americas and has held archaeological interest as the possible location for the oldest archaeological sites in the New World. This is due to more than Alaska's proximity to Asia and ice-free condition at the end of the Pleistocene. Similarities between archaeological assemblages in Siberia and Alaska and the discovery of lanceolate projectile points in the muck deposits around Fairbanks in the early 1900s (which bore a resemblance to Clovis points of some antiquity in the American Southwest) also sparked interest in Alaska as a source area for all Native Americans.

After initial colonization, archaeologists generally divide Interior Alaska's prehistory into three broad archaeological themes: the Paleoarctic Tradition (12,000-6,000 years ago[1]), the Northern Archaic Tradition (6,000-1,000 years ago), and the Athabaskan Tradition (1,300-800 years ago) (Potter 2008). Archeological materials from these cultures are generally limited to lithic artifacts such as projectile points, cutting tools, scrapers, waste flakes from tool manufacturing, faunal remains, and hearths.

Reconstructions of paleoecological evidence suggest that the end of the Pleistocene was marked by a warming trend in Interior Alaska that may have contributed to initial colonization of the area (Bigelow and Powers 2001). Several sites in areas surrounding Army lands demonstrate that people began living in Interior Alaska 14,000 years ago. Significant sites in the Tanana Valley dating between 14,000-12,000 years ago include Healy Lake (Cook 1996), Walker Road (Goebel et al. 1996), Swan Point (Holmes et al. 1996), Mead (Holmes 2001), and Broken Mammoth (Holmes 1996). There are no sites in Alaska, however, that predate the oldest sites in the contiguous United States, nor do Alaska's oldest sites resemble the Clovis culture (Bigelow and Powers 2001). The Younger Dryas cooling event from 13,000-12,000 years ago may have led to a temporary population decline (Potter 2008) in the Interior before permanent colonization.

The Paleoarctic Tradition is a term now generally used by archaeologists to refer to the earliest settled people known from all over Alaska. It was originally defined by Anderson[2] (Anderson 1968, 1970) as the earliest microblade-using tradition in the American Arctic, with a proposed relationship to northeast Asian, late Pleistocene cultures based on similarities in these distinctive artifact types. Archaeological evidence indicates that early settlers camped on terraces, lakeshores, buttes, and bluffs. By using these locations on high ground, they could

[1] All dates are given in calendar years *before present*.
[2] Anderson called it the "American Palaeoarctic Tradition," but most researchers use the shortened version.

locate and track prey that included large mammals such as mammoth and bison. Evidence from the Upward Sun River Site, located just 5 km southeast of TFTA, for example, demonstrates that hunter-gatherers in Interior Alaska were concentrating on bison and wapiti at the end of the Pleistocene (The Upward Sun River Site is also known for one of the earliest burials in the Americas [Potter 2008; Potter et al. 2008; Potter et al. 2011]). It is likely that the treeless environment and nomadic nature of these peoples had a direct impact on the kinds of tools they fashioned. Stone, bone, antler, and ivory provided the most abundant material for manufacturing weapons and cutting tools. Artifacts typically associated with this culture include small stone microblades, microblade cores, bifacial projectile points, and unifacial scraping tools.

In Interior Alaska, this tradition historically included two cultural divisions called the Nenana and Denali complexes. The Nenana Complex was identified by Powers and Hoffecker from sites in the Nenana Valley (Powers and Hoffecker 1989). This complex began approximately 11,000 years ago with an artifact assemblage that included triangular or teardrop-shaped, bifacially worked projectile points ("Chindadn" points [Cook 1969, 1975; Holmes and Cook 1999]); large unifacial chopper-like tools; and flake tools. The Nenana Complex is defined as lacking microblades, microblade cores, and burins, and was proposed to predate the microblade-rich Denali Complex. Many Nenana Complex archaeological sites are located in the Tanana Valley, adjacent to Fort Wainwright training lands (Broken Mammoth [Holmes 1996; Yesner et al. 1999], Chugwater [Lively 1996], Donnelly Ridge [West 1967, 1996; Donnelly Ridge is located in DTA], Healy Lake [Cook 1989], Mead [Holmes 2007] and Swan Point [Holmes et al. 1996; Holmes 1998, 2007]).

The Denali Complex, dated roughly to 10,500 to 8,000 years ago, was originally defined by West (West 1967, 1975) and includes distinctive wedge-shaped microblade cores, core tablets and their derivative microblades, large blades, biconvex bifacial knives, certain end-scraper forms, and burins. West later defined the Denali Complex as a regional variant of the American Paleoarctic Tradition (West 1981). Denali sites in the vicinity of Fort Wainwright's training lands include Mt. Hayes (West 1996), Swan Point (Holmes et al. 1996; Holmes 1998, 2007), and Gerstle River (Potter 2001). At least one site in TFTA (FAI-02043) has also been dated to this period.

The relationship between the proposed Nenana and Denali complexes is as of yet unresolved. As discussed above, some researchers view the Nenana Complex as a bifacial industry that predates the microblade-based Denali Complex. However, current research at sites such as Swan Point and Broken Mammoth indicates that microblades and burins were used by the earliest known cultures in Interior Alaska, with a later co-occurrence with Chindadn points—the defining artifact type of the Nenana Complex. Although some archaeologists still believe that

there is a cultural distinction between the Nenana and Denali complexes (e.g., Dumond 2001), the general understanding from Interior Alaskan archaeologists is that there is a behavioral explanation for the presence or absence of microblades in different assemblages (Holmes 2001; Potter 2008; Yesner and Pearson 2002). Moreover, both Nenana and Denali technology persist in central Alaska throughout the Holocene (Bever 2006).

Site density declined in the areas around Fort Wainwright in the early Holocene, suggesting a slight depopulation during a period of climate change that initiated the widespread establishment of spruce forests (Potter 2008). The boreal forest in Interior Alaska was established by 8,000 years ago (Bigelow and Powers 2001). Sites from this time period are less well publicized than the older sites, but include Houdini Creek (circa 8,600 years old), Hurricane Bluff (c. 9,800 years old), Lucky Strike (c. 8,500 years old), Gerstle River (c. 10,000 years old), and the Campus Site (c. 7,700 years old) (Pearson and Powers 2001; Potter et al. 2007; Potter 2008). Bison, wapiti, and birds were the most important subsistence game during this period (Potter 2007, 2008).

Site density increased again after about 6,000 years ago in Interior Alaska (Potter 2008). This population increase coincides roughly with the Northern Archaic Tradition and the appearance of side-notched projectile points. Anderson originally defined the Northern Archaic Tradition to specifically address notched point-bearing stratigraphic horizons that did not contain microblades at the Onion Portage site in northern Alaska (Anderson 1968). Alaskan notched points were generally similar to Archaic-age dart points in the contiguous United States. Time has shown middle Holocene assemblages in Alaska to be quite diverse, however, and it is questionable whether this trait is related to southern forms or if it is a reliable indicator of cultural affiliation (Clark 1992; Cook and Gillespie 1986). Artifact assemblages associated with this culture can vary but generally contain myriad tools ranging from bifacial knives and microblades to end scrapers and side-notched points. Middle Holocene hunter-gatherers had a subsistence economy focused on seasonally abundant game including caribou, fish, and moose (Potter 2008). Notched point assemblages occur in many sites in Interior Alaska, including over one dozen on Army lands (XBD-00277, XMH-00277, XMH-00283, XMH-00303, XMH-00309, XMH-00874, XMH-00950, XMH-01130, XMH-01168, XMH-01300.) Several sites (XBD-00270, XMH-00915, XMH-00925), including the excavated Banjo Lake site in DTA (XMH-00874), have also produced middle Holocene dates from hearth charcoal. The 6,300-6,700-year-old dates from Banjo Lake were also associated with a microblade component (Robertson et al. 2008).

Utilization of microblade and burin-based industries appears to continue through the middle and late Holocene in Interior Alaska (Esdale 2008; Potter 2004). By the late Holocene, archaeologists see a shift from seasonal large mammal hunting with a nomadic lifestyle to a focus on seasonally over-abundant resources, use of storage, and more permanent settlements

(Potter 2008b). Artifact assemblages do not drastically change until the last millennium of the Holocene when microblades disappear from the archaeological record (Potter 2008).

Linguistic evidence suggests that the Athabaskan culture may have appeared in the Tanana Valley as early as 2,500 years ago. Through ethnography, oral history, and a broad array of cultural items, much has been learned about Athabaskan culture and history in the region. Artifacts associated with the Athabaskan culture are exceptionally diverse and include bone and antler projectile points, fishhooks, beads, buttons, birch bark trays, and bone gaming pieces. In the Upper Tanana region, copper was available and used in addition to the traditional material types to manufacture tools such as knives, projectile points, awls, ornaments, and axes (Clark 1981). A late prehistoric Athabaskan occupation is recognized at several sites in and around Fort Wainwright's training lands (Andrews 1975; Andrews 1987; Cook 1989; Mishler 1986; Sheppard et al. 1991; Shinkwin 1979; Yarborough 1978). Of particular interest in this regard is a copper projectile point found in a buried context at DTA (XBD-00272) (Robertson et al. 2009).

The Athabaskan Tradition includes late prehistoric and proto-historic cultures generally believed to be the ancestors of Athabascan tribes who currently inhabit Interior Alaska. Excavated Athabaskan sites are rare, but the limited body of evidence allows for several generalizations. Raw material usage was reorganized in the Athabaskan Tradition, which de-emphasized stone tool-making and increased the emphasis on the manufacture of items from native copper and organic materials (Dixon 1985). Assemblages include ground and pecked stone artifacts and an increased use of expedient tools. There was a broadening and diversifying of the resource base at this time to include small mammal and freshwater marine animals such as fish and mollusks (McFadyen Clark 1981; McFadyen Clark 1996; Ream 1986; Sheppard et al. 1991; Shinkwin 1979). Athabaskan sites tend to occur in resource-rich areas near lakes, streams and rivers and are generally characterized by large house pit and cache pit features. Proto-historic Athabaskan assemblages include Euro-American trade goods such as glass beads and iron implements. Sites of this time period reflect an increased reliance on outside trade and include log cabins co-occurring with traditional house pits, as well as a change in site location to maximize trading opportunities (Andrews 1975; Andrews 1977; Andrews 1987; McFadyen Clark 1981; VanStone and Goddard 1981).

Athabascan settlement patterns depended greatly on the availability of subsistence resources, and Interior bands lived a nomadic lifestyle. They often traversed vast areas to support themselves and spent considerable time engaged in subsistence activities. It was often necessary for bands to divide into smaller groups to find game, and preserved fish were used as a staple of the diet in addition to fresh game (Andrews 1975).

Four Athabascan linguistic and geographic groups have inhabited the Tanana Valley: the Upper Tanana, Tanacross, Tanana and Koyukon. Each group is further distinguished according to geographic location. Bands of the Tanana and Tanacross groups are historically associated with the geographic area that embodies Forts Wainwright and Greely. Salcha, Chena, Wood River, Goodpaster, and Healy Lake bands have inhabited the region since protohistoric times and possibly even prehistoric times (Andrews 1975). Use of the region varied from one band to the next. The Salcha, Chena, Goodpaster, and Wood River bands of the Tanana Athabascans and the Healy Lake band of the Tanacross Athabascans used certain parts of what are now Forts Wainwright and Greely (McKennan 1981). Several villages have been reported on or near Fort Wainwright. One occupied by the Wood River band is said to have been located in the southern part of Fort Wainwright but has not been found (Dixon 1980; Reynolds 1986). The Blair Lakes Archaeological District (FAI-00335) on Fort Wainwright may relate to the prehistory of the Athabaskan Tradition. Euro-American historic archaeological sites are also present (Gamza 1995; Phillips 1984).

## Historic Context

With the beginning of Euro-American contact in Interior Alaska in the early 19th century, trade influences and influxes of new populations began to change life in the region. Land use patterns shifted from traditional indigenous uses to activities based on Euro-American economic and political systems. Fort Wainwright's training lands fall within an area occupied at the time of Euro-American contact by Lower-Middle Tanana Athabascans, including bands described generally as the Salcha, Big Delta-Goodpaster, Wood River, and Chena bands (McKennan 1981; Andrews 1975; Mishler 1986). Historical accounts document traditional settlement patterns that were focused on a widely mobile seasonal round, with the fall caribou hunt playing a pivotal role in subsistence preparations for the winter and summer activities focused at fish camps, berry and root collecting, and in sheep hunting. These activities were frequently communal, with several local bands connected by common interest, geography, and intermarriage. Despite anthropological attempts to define boundaries for the peoples living in the lower Tanana River Valley, natural terrain served as the only definable boundary to settlement patterns (McKennan 1981).

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

Russian fur traders began settling Interior Alaska starting in the 1810s, establishing a post at Nulato on the Yukon River and one at Taral on the Copper River. British traders established Fort Yukon in 1847. Trade goods from these posts may have passed to Tanana Athabascans and Upper Tanana Athabascans through intra-Native trade networks. Direct contact between Tanana Athabascans and white traders increased after the 1860s. With the U.S. purchase of Alaska in 1867, control of trading stations and the fur trade passed to Americans. Through the 1880s, American traders established several additional posts on the Yukon and Tanana rivers, including locations at Nuklukayet (modern-day Tanana), Belle Isle (modern-day Eagle), and Fort Yukon.

Trade goods introduced by Euro-American settlers influenced the Native lifestyle. Clothing, staples, tools, and other necessities could be obtained through trade. Guns allowed hunters to obtain game with greater efficiency. Gradually, Athabascan Native groups began to alter their traditional nomadic patterns in favor of more permanent settlements. However, while significant, this contact would not have as dramatic an impact on the region as the discovery of gold in the Interior during the last decades of the 19th century. The towns established by Euro-American settlers at the turn of the 20th century, in response to the Klondike Gold Rush and the eventual military development of the region, would rapidly and permanently change the demography and economy of Interior Alaska.

Gold strikes in the Fortymile River region, Birch Creek area, and the Canadian Klondike began drawing miners and prospectors north in the 1880s and 1890s. In response to this gold rush, E.T. Barnette established a trading post on the Chena River in 1901. The following year, prospector Felix Pedro discovered gold nearby, and a new gold rush soon led to the founding of Fairbanks at the site of Barnette's original trading post. Most mining activities in the region occurred on creeks north of Fairbanks, with the town serving as a supply center. Agricultural and other commercial activities, such as logging, also developed to support mining activities in the Fairbanks area. Homesteads existed on parts of what is today the main post of Fort Wainwright as early as 1904.

In 1898, the discovery of gold in the Tanana uplands began a rush of Euro-American settlement into the Tanana River Valley. As the economic importance of the Tanana Valley increased, the need for reliable transportation routes and communication systems rose in tandem. Existing trails, such as the Bonnifield, Donnelly-Washburn, and Valdez-Fairbanks trails, saw increased use and development in the first decade of the 20th century. This increase in activity also resulted in the establishment of several roadhouses and posts. In 1906, Congressional appropriations led to improvement of the Valdez-Fairbanks Trail, crossing the Alaska Range south of Delta Junction, following the Tanana River to Fairbanks. Completion of the Alaska

Railroad in 1923 was followed two decades later by construction of the Alaska Highway in 1942, firmly tying the Alaskan Interior to the outside.

As Fairbanks grew in the first decade of the 20th century, several agricultural homesteads were developed on lands now encompassed by sections of the Fort Wainwright cantonment. These homesteads provided Fairbanks with a variety of agricultural products and wood for fuel but were subsumed when lands were withdrawn for the creation of Ladd Field, which later became Fort Wainwright (Price 2002).

Riverboats were the primary means of getting people and supplies into the Interior at the turn of the 20th century. The Fairbanks town site was located at the upper limit of navigation for stern-wheeler riverboats on the Chena River. Upriver from that point, residents navigated the river using shallow-draft boats in summer and sleds in winter. As commerce in the area increased, roads and trails were constructed, sometimes following earlier indigenous routes. The major overland route to the coast was the Valdez-Fairbanks Trail, which began as a military trail from Valdez to Eagle in 1899.

Transportation and communication networks, including the Alaska Railroad, were developed to serve new settlements in Interior Alaska. A branch of the railroad route was extended to Fairbanks in 1904. Roadhouses along the route catered to travelers. Some were located on what are now Fort Wainwright training lands. One property was on the Bonnifield Trail in TFTA, and two roadhouses and a seasonal tent operation existed along the Donnelly-Washburn Trail in the current DTA. Secondary routes connected Fairbanks to the surrounding mining districts.

By 1910, most of the easily accessible placer gold deposits were exhausted, and capital-intensive technologies became necessary to extract remaining deposits. These methods were not possible with the existing transportation infrastructure. The completion of the Alaska Railroad in 1923 expanded transportation options for the region, connecting Fairbanks to Seward and making large-scale dredging operations economically feasible. Aviation also became a key component of Interior transportation, beginning in earnest in the 1920s. However, it was not until 1931 that Weeks Field, originally constructed in 1923, was officially dedicated as an airfield. Industrialized corporate activity became the hallmark of the region's mining in the remaining years before World War II.

Development in the Alaskan Interior increased dramatically with the advent of World War II and subsequent military build-up in Alaska. Of particular significance was the development of airfields near Delta Junction (Fort Greely), Fairbanks (Ladd Field, later Fort Wainwright), and North Pole (Eielson Air Force Base). These locations began as Lend-Lease bases and cold

weather testing centers, but soon expanded with the increased need for military support during World War II and later during the Cold War.

Full historic contexts of early mining, transportation, and homesteads on Fort Wainwright have been completed. These studies have determined that there are no properties eligible for the National Register under these contexts. Several village sites associated with the early contact period have been reported near Fort Wainwright. One was reported near Wood River Buttes, two just northwest of the installation's boundary and one near Fairbanks (Reynolds 1986). None have been reported or located on the Main Post.

## Ladd Field National Historic Landmark

In 1935, Ladd Field was authorized as a small cold weather testing station that was envisioned by General H. H. Arnold. Construction began in 1939, and, by 1940, Ladd Field was operational.

Cold weather testing at Ladd Field helped to improve the aircraft and equipment used by front-line aircrews. The Cold Weather Test Detachment's experimental tests contributed to the development of aircraft design, ground procedures and personnel equipment with stateside research agencies and manufacturers. After the start of World War II, Ladd Field also served as the transfer point for the Alaska Siberia (ALSIB) Lend-Lease aid to the Soviet Union. From 1942 to the end of the war in 1945, Ladd Field saw 7,926 aircraft and associated cargo change hands. Though it was controversial, the Lend-Lease aid to the Soviet Union played some part in the eventual defeat of Nazi Germany. Ladd Field also served as an air depot for the repair and supply of aircraft under the Air Transport Command, processing thousands of passengers as well as tons of cargo and mail.

In 1984, Ladd Field was listed on the National Register of Historic Places. Ladd Field was listed as significant for three main themes: (1) cold weather testing; (2) aircraft repair, supply depot and air transfer hub; and (3) as the transfer point for aircraft and cargo transiting the ALSIB route to the Soviet Union.

*Ladd Air Force Base Cold War Historic District*

In 1947, the Air Force became a separate service, and Ladd Field became known as Ladd Air Force Base (AFB). Missions flown out of Ladd AFB played a significant role in the early years of the Cold War confrontation with the Soviet Union. Early in the Cold War, military planners decided on a heartland concept for Alaskan defense, concentrating on bases near Anchorage and Fairbanks as the strategic anchor points. Ladd AFB became the Northern Sector Headquarters for the Alaskan Air Command, and its foremost missions during the Cold War were air defense, strategic reconnaissance and arctic research.

Ladd AFB's air defense mission was part of the plan to deter the Soviet Union from taking Alaskan territory and using it as a base from which to threaten the continental United States. Ladd AFB hosted tactical fighter intercept squadrons and combat alert cells. An Air Defense Command Center located on Ladd AFB was responsible for directing air battles in Alaska's northern sector. It also provided support to segments of the Distant Early Warning Line. In the earliest years of the Cold War, Ladd AFB hosted some of the first long-range strategic aerial reconnaissance units.

Ladd AFB was also the scene of significant Cold War arctic research. The cold weather equipment testing, begun during World War II, continued through the Cold War and expanded to include the Arctic Aeromedical Laboratory (AAL). The AAL studied human adaptation to arctic and sub-arctic climates with an eye toward military applications.

In 2001, the Ladd AFB Cold War Historic District was determined eligible for the National Register of Historic Places. It was determined to be significant for its role in the early Cold War missions of the 46th/72nd Air Reconnaissance unit and for the fighter intercept squadrons stationed here.

## Fort Wainwright

In 1960, Ladd AFB was transferred to the Army and was renamed Fort Jonathan Wainwright on January 1, 1961. In Alaska, Cold War missions were predominately under the command of the Air Force, with the Army providing ground force defense and logistical supply. The Army also carried out cold weather training tactics and cold weather equipment testing. The onset of the Vietnam War and its high costs drained the Army's resources; troops at Wainwright were reassigned or deployed, causing a significant decrease in the post's population. In 1986, the mission of the post changed once again with the assignment of the 6th Light Infantry Division to Fort Wainwright. Since 1986, Fort Wainwright's mission has been to support worldwide deployment.

## Status of Archaeological Resources

Archaeological research on Fort Wainwright training areas has resulted in numerous technical reports (Bacon 1979; Bacon and Holmes 1980; Dixon et al. 1980; Esdale and Robertson 2007; Esdale et al. 2012a, 2012b, 2012c, 2013a, 2013b, 2014; Espenshade 2010; Bradley et al. 1973; Gaines 2009; Gaines et al. 2010, 2010; Hedman et al. 2003; Higgs et al. 1999; Holmes 1979a, 1979b; Johnson and Bozarth 2008; Marshal 2007; Potter 2005; Potter et al. 2000; Rabich and Reger 1978; Raymond-Yakoubian 2006; Raymond-Yakoubian and Robertson 2005; Robertson 2009, 2010; Robertson et al. 2004, 2006, 2007, 2008, 2009; Staley 1993) and scientific papers (Holmes and Anderson 1986; West 1967, 1975).

Fort Wainwright and its training lands contain 662 known archaeological sites and 4 archaeological districts. Seventy-four sites are eligible for the National Register, 503 sites have not been evaluated, and 85 additional sites have been determined ineligible for the National Register. Of the eligible or un-evaluated sites, 8 are historic sites and 569 are prehistoric sites.

Archaeological surveys of the Fort Wainwright Main Post area began in 1979. Jim Dixon surveyed the north side of the Chena River and Birch Hill area, discovering and relocating several prehistoric archaeological sites (FAI-00040, 00041, 00042, 00043, 00199, and 00200) (Dixon et al. 1980). Surveys of the Main Post building areas continued in the 1980s by Julia Steele (Steele 1992, 1983) and Georgeanne Reynolds (Reynolds 1983, 1985). No sites were found in these previously disturbed areas. John Cook surveyed the River Road pond in 1996 and found one site (FAI-50009), which has failed to be relocated in subsequent attempts. In 2001, the Army began partnering cultural resources surveys and evaluations with Colorado State University's Center for Environmental Management of Military Lands (CEMML). Surveys by several different principal investigators have targeted areas of construction undertakings. Two historic sites (FAI-01603 and 01604) and one additional prehistoric site (FAI-01990) were found in these investigations. In 2011 and 2012, CEMML completed survey of the entire cantonment, north and south of the Chena River, discovering three additional historic sites (FAI-02117, FAI-02197, and FAI-02198). Of the 13 archaeological sites known from the Fort Wainwright cantonment, ten have been determined not eligible, one has been determined eligible (FAI-00040) and the two remaining sites have not yet been evaluated.

Archaeological sites were first identified in the TFTA in 1973 by Zorro Bradley and others who conducted a survey in the Blair Lakes area (Bradley et al. 1973). James Dixon continued surveys for archaeological district designations in the regions of Blair Lakes (District FAI-00335), Clear Creek Butte (District FAI-00336), and Wood River Buttes (District FAI-00337) (Dixon et al. 1980). In 1993, proposed work in the Clear Creek Butte area prompted a contract to relocate several archaeological sites (Staley 1993.) These three districts have been revisited by CEMML archaeologists a few times over the last decade, and, notably, 92 new sites were found in 2009-2010 during survey of the Wood River Buttes, Salmon Loaf, and north and east of Blair Lakes. Recent surveys have focused on the Blair Lakes region which has a long history of use dating from late glacial times to the more recent homesteading period and has also been a significant region for military training. This area hosts the second oldest archaeological site in all of Alaska, the McDonald Creek site (FAI-02043), with stone tool debris dating to 13,600 years ago. In total, archaeologists have identified 160 archaeological sites in TFTA. Of these sites, 19 have been determined eligible for inclusion in the National Register and 141 remain to be evaluated for eligibility.

The road system in the YTA was the first of many areas to be investigated. Charles Holmes discovered eight sites in a 1978 road survey (Holmes 1979). John Cook conducted a Determination of Eligibility (DOE) evaluation on one of these sites in 1979 (Cook 1979.) Michael Kunz surveyed the Stuart Creek area in 1992 but discovered no archaeological sites, and Northern Land Use Research's 1999 survey of Stuart Creek and the YTA road system uncovered one historic site (Higgs et al. 1999). CEMML archaeologists have been surveying portions of YTA in conjunction with construction projects on an annual basis since 2001. Currently, North Beaver Creek, Skyline, Johnson, Quarry, Brigadier, and Manchu roads in YTA are almost entirely surveyed, as is the area east of Skyline Road outside of the Stuart Creek Impact Area, McMahon Trench, the Manchu Range, and the majority of Training Areas 307 and 310, north and south of Manchu and Quarry roads. Twenty-two archaeological sites have been identified in YTA. Twelve of the sites have been determined not eligible for listing in the National Register and ten have not been evaluated. XBD-00162 will not be evaluated due to its location in a heavily used portion of the Stuart Creek Impact Area.

Archaeological investigations in what is now the DTA began in the 1960s, when Frederick West was searching for sites related to the first Americans (West 1967). He excavated the Donnelly Ridge site (XMH-5) in 1964 and found an assemblage containing microblade core technology similar to early Holocene Denali Complex sites. Several surveys of Fort Greely and adjacent training lands in the late 1970s documented 64 new sites (Rabich and Reger 1977; Bacon 1979; Holmes 1979; Bacon and Holmes 1980). Julia Steele surveyed various locations in DTA from 1980-1983, finding four additional new sites (Steele 1980a, 1980b, 1982a, 1982b, 1983a, 1983b), and Georgianne Reynolds surveyed the Donnelly Dome area in 1988, locating one more site (Reynolds 1988). Investigations in DTA from 1992-2002 were made by D. Staley (Staley 1993), T. Gamza (Gamza 1995), A. Higgs (Higgs et al. 1999), and D. Odess (Odess 2002). Sixteen new sites were found during this decade of fieldwork, and attempts were made to relocate old sites.

Concentrated efforts to expand survey coverage of DTA East began with CEMML archaeologists in 2002. Over 200 new sites were located in the Texas Range, Donnelly Drop Zone, and Eddy Drop Zone in the first half of the decade. In 2007, one site was found in the northernmost portion of DTA West by Ben Potter and others during survey for the Alaska Railroad Northern Rail Extension Project (Potter et al. 2007). In recent years, CEMML research aimed to evaluate many known archaeological sites in DTA for inclusion in the National Register in conjunction with use of the BAX and its SDZ. Sites have also been discovered during surveys for road and trail maintenance. Potential expansions into DTA West, west of the Delta River, prompted 2011 and 2012 surveys into new areas such as Molybdenum Ridge, where 21 new sites were discovered in 2011. Because of its remote setting, however, the archaeology of Donnelly West

is still poorly understood and represents a gap in USAG FWA's inventory of cultural properties. The Cold Regions Test Center (CRTC) has also contracted with CEMML and others since the last Integrated Cultural Resources Management Plan (ICRMP) to survey areas in DTA West, east of the Little Delta River, and many new archaeological sites have been recorded (Espenshade 2010).

To date, 447 archaeological sites have been identified within DTA. Fifty-four sites have been found to be eligible for the National Register, and 58 were found not eligible. An additional 335 sites remain to be evaluated. Historic archaeology sites are poorly represented in this region, with only four currently known to exist. The Donnelly Ridge District (XMH-00388) encompasses Denali Complex sites, identified by Frederick West, south and west of Donnelly Dome. Future archaeological studies in DTA will concentrate on completing survey of 100% of the land in DTA East, conducting DOEs on archaeological sites in high traffic areas, and exploring parts of DTA West that are opening up for expansion of military training activities.

Despite its incomplete nature, the archaeological record known from DTA represents all of the currently recognized prehistoric cultures of the Alaskan Interior. Of significance is the role played by sites located on DTA in the definition of the Denali Complex of the American Paleoarctic Tradition (Anderson 1970; West 1967, 1981). The oldest date for human habitation at DTA is roughly 10,100 years at site XBD-00167 (Higgs et al. 1999); however, undisturbed stratigraphic deposits that are 12,800-12,930 years old indicate the potential for intact archaeological occupations of this age. Sites yielding Northern Archaic side-notched points are common (Robertson et al. 2004, 2005; Raymond-Yakoubian and Robertson 2005). At DTA, site XMH-00874 yielded an AMS date of 5720 ± 50 BP from hearth charcoal associated with a microblade component (Robertson et al. 2008). A late prehistoric Athabaskan occupation is recognized at several sites (e.g., Andrews 1975, 1987; Cook 1989; Mishler 1986; Sheppard et al. 1991; Shinkwin 1979; Yarborough 1978). Of particular interest in this regard is a copper projectile point found in a buried context at DTA at site XBD-00272 (Robertson et al. 2009). Euro-American historic archaeological sites are also present (Gamza 1995; Phillips 1984).

Survey efforts increased in 2013 in the Black Rapids Training Area (BRTA) in advance of military installation of a high-angle marksmanship range. Ten sites, eight of which were discovered during CEMML surveys in 2013, are known from this rocky landscape. None of the sites have yet been evaluated for the NRHP, but all are small surface lithic scatters and isolated points as there is very little deposition in most of the mountainous training area. Plans for the 2014 field season include surveying the remainder of the 2700 acres training area.

The Gerstle River Training Area (GRTA), Tok Terminal Pump Station, and Haines Terminal, also managed by Fort Wainwright, have been infrequently utilized for training activities, and very few surveys or identification of archaeological sites have occurred in these areas. CEMML archaeologists surveyed small portions of GRTA in 2011 through 2013. Three prehistoric sites (XMH-01359, XMH-01494, and XMH-01509) are known from this training area. One site, XMH-01494 was determined ineligible in 2013 (Esdale et al. 2013b). Six sites were discovered at Tok Terminal by John Cook in the early 1980s. Three of these sites have been found ineligible for the NRHP (TNX-00006, 00007, 0008). The other three sites were relocated in 2012. DOEs for these sites have not been completed. One ineligible historic site is known from Haines Terminal (SKG-00043) but no surveys have been completed in this area since 2001.

# 2013 Cantonment Fieldwork

## Cantonment Section 106 Activities

A 100% survey of Fort Wainwright's cantonment was completed in 2012. During 2013, no projects took place in areas that would impact archaeological sites and all activities were covered under Fort Wainwright's Operation and Management Programmatic Agreement with the SHPO (see Thomas 2014).

## Cantonment Surveys

No archaeological surveys took place on the cantonment in 2013. FWA-owned Cold Regions Research and Engineering Laboratory (CRREL) property northwest of the cantonment, however, was examined by pedestrian surveys for archaeological resources during the 2013 field season (Figure 2). No archaeological sites were discovered.

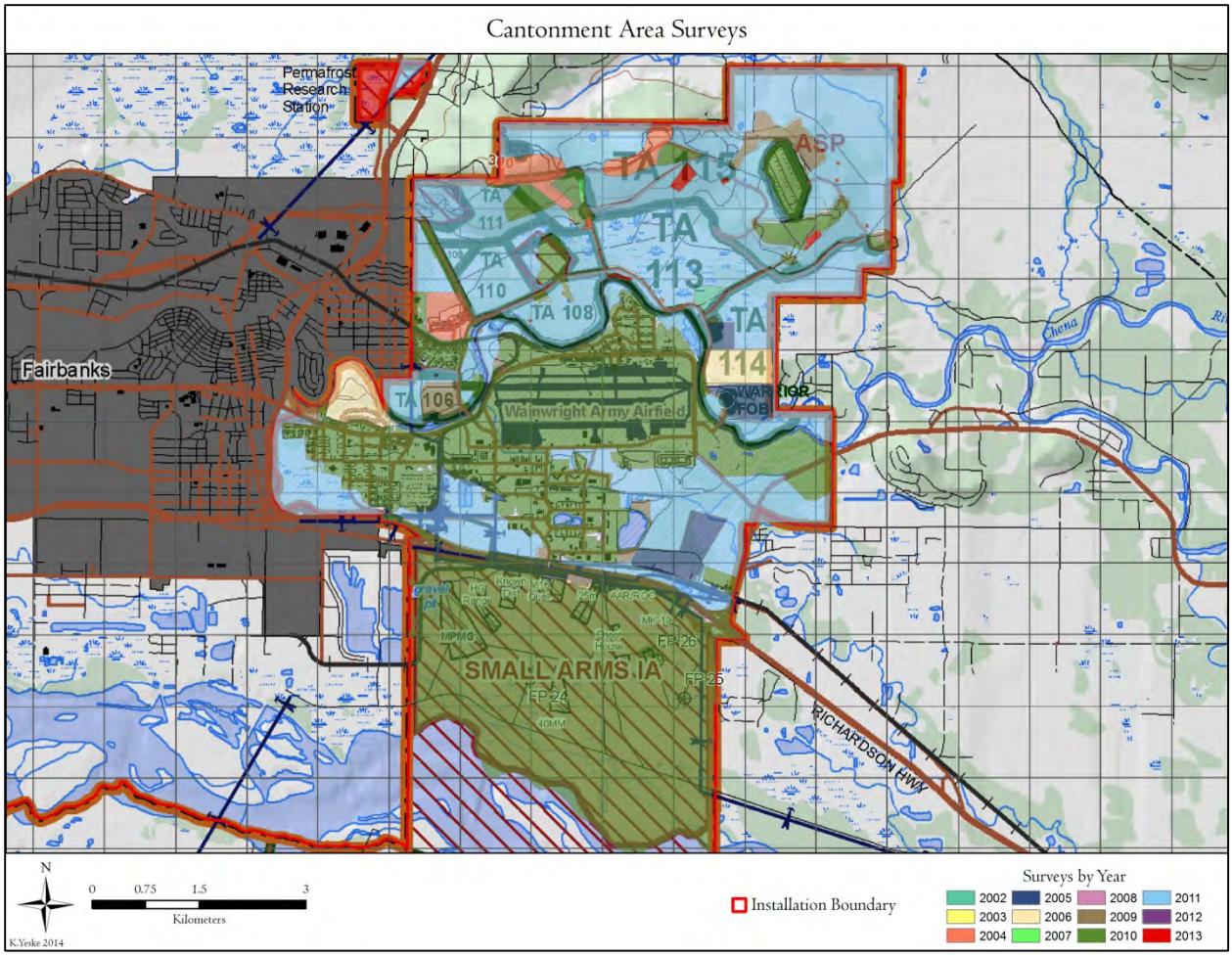


Figure 2. All surveys in the cantonment by year. The red areas were surveyed in 2013.

## Cantonment New Sites

No new archaeological sites were discovered on the cantonment or in adjacent areas in 2013.

## Cantonment DOEs

Fort Wainwright archaeologists have begun a program to evaluate archaeological sites in the most frequently used parts of training areas for the NHRP. Only two sites in the cantonment have not previously been evaluated: FAI-00199 and FAI-00200 (Figure 3). Both of these sites were discovered in 1979 by Jim Dixon and others (Dixon et al. 1980). Attempts to locate the sites occurred 2006, 2009, 2011, and 2013. Neither of the sites was ever relocated.

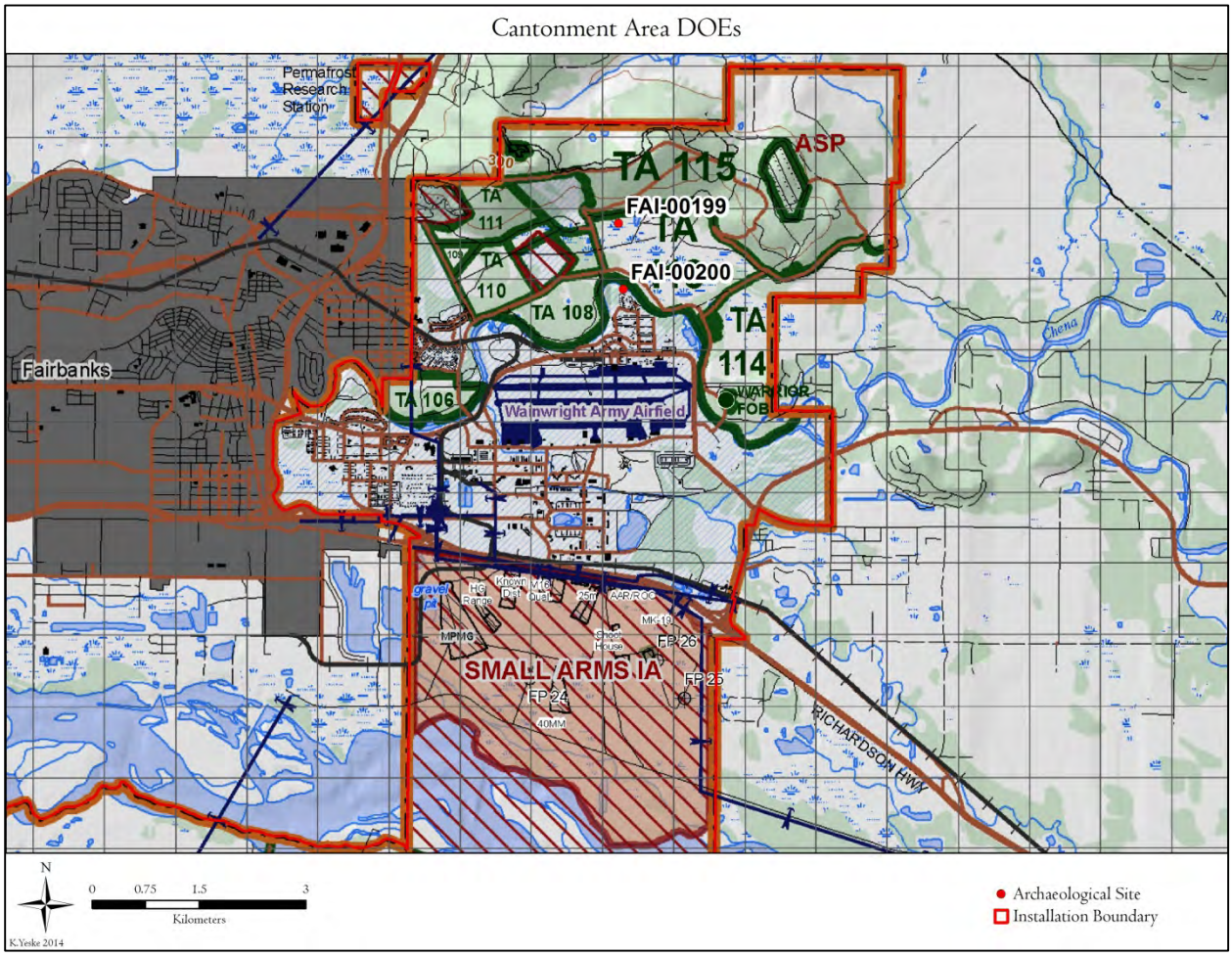


Figure 3. Cantonment 2013 DOE sites.

**FAI-00199**
**Latitude:** [redacted]
**Longitude:** [redacted]
**UTM:** [redacted]
**Determination of Eligibility:** Not eligible (not relocated)

FAI-00199 was discovered by military personnel in 1979 and recorded by Dixon et al. (1980). Two chert flakes and a chert side-notched point were found in a gully below a small ridge east of the Birch Hill ski area. No other artifacts were found during a survey of the ridge by Dixon at that time. The artifacts were accessioned under UA79-137 and housed at University of Alaska Museum of the North (UAMN). At least three other attempts to relocate the site took place from 2006 to 2013. On 8 October 2006, a CEMML crew searched the area around the coordinates which happened to be in a swampy location at the base of a ridge (Figure 4). The top of the ridge was also examined but no other artifacts were found. On 5 October 2011, the swampy area was again examined, and CEMML crews recorded that part of the ridge above the swamp was disturbed by a road. On 13 June 2013 the western portion of the top of the ridge was examined again, and on 17 June 2013 surveys covered the eastern portion of the small ridge. Nine shovel tests were excavated (Figure 5). No artifacts were discovered.

Although the ridge itself does not appear to have been completely destroyed by human activities, it is possible that the site was already eroded upon its discovery in 1979. Because FAI-00199 was not relocated in repeated efforts, we find that the site is not eligible for the NRHP.

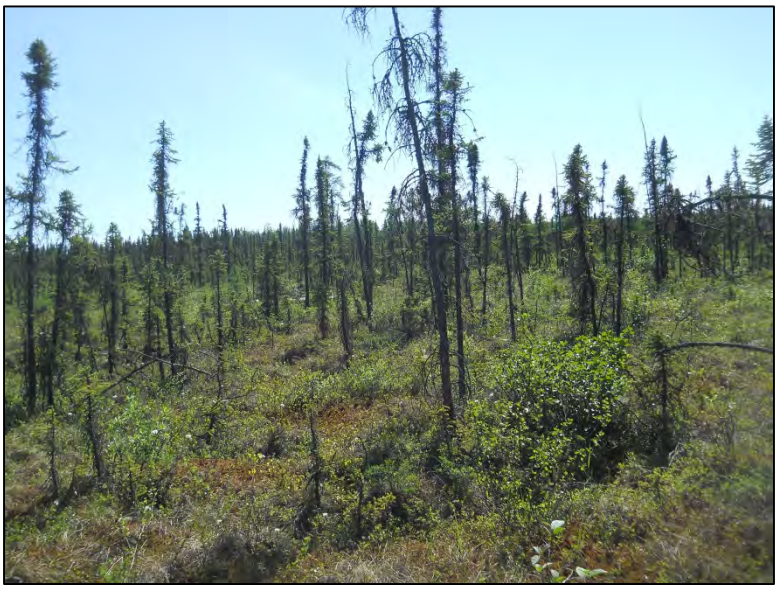

Figure 4. FAI-00199 swampy area at original site coordinates.

Figure 5. FAI-00199 test pit location on ridge above swampy area.

**FAI-00200**
**Latitude:** [redacted]
**Longitude:** [redacted]
**UTM:** [redacted]
**Determination of Eligibility:** Not eligible (not relocated)

FAI-00200 is represented by a notched point that was found eroding out of a river bank on the northern cut bank of the Chena River, north of Fort Wainwright's main post. Dixon et al. (1980) recorded the site based off of a location given by the person that found the point, but they did not examine that location. The point was found eroding from buried context, 2m above the river. It is housed at UAMN under accession UA79-138.

The AHRS card for the site states that the area around the site coordinates was intensively tested in 2009. CEMML records were carefully examined for that time and reference to survey along the north shore of the river in the location of FAI-00200 was found in field notes from 23 June 2009. The nature and the amount of testing is unclear, but photos of test units along the cut bank were found (Figure 6). No further evidence of an archaeology site was uncovered.

In 2013, attempts to relocate the site were unsuccessful. The bluff edge has likely undergone erosion since Dixon's 1979 survey. Figure 7 shows the low terrace adjacent to the Chena River today. It has young vegetation indicating a dynamic environment with recent erosion and flooding events.

Because FAI-00200 has not been rediscovered after exhaustive searching, it has been found not eligible for the NRHP.

Figure 6. Edge of river bank from 2009 site relocation effort.

Figure 7. North bank Chena River terrace.

# 2013 Tanana Flats Training Area Fieldwork

## TFTA Section 106 Activities

There were no Section 106 undertakings in the TFTA in 2013.

## TFTA Surveys

Surveys in the TFTA in 2013 were in support of the Joint Pacific Alaska Range Complex (JPARC) environmental impact statement (EIS). One of the programmatic actions (not definitive actions) in the EIS is to build an access road into the Blair Lakes impact area (Figure 8).

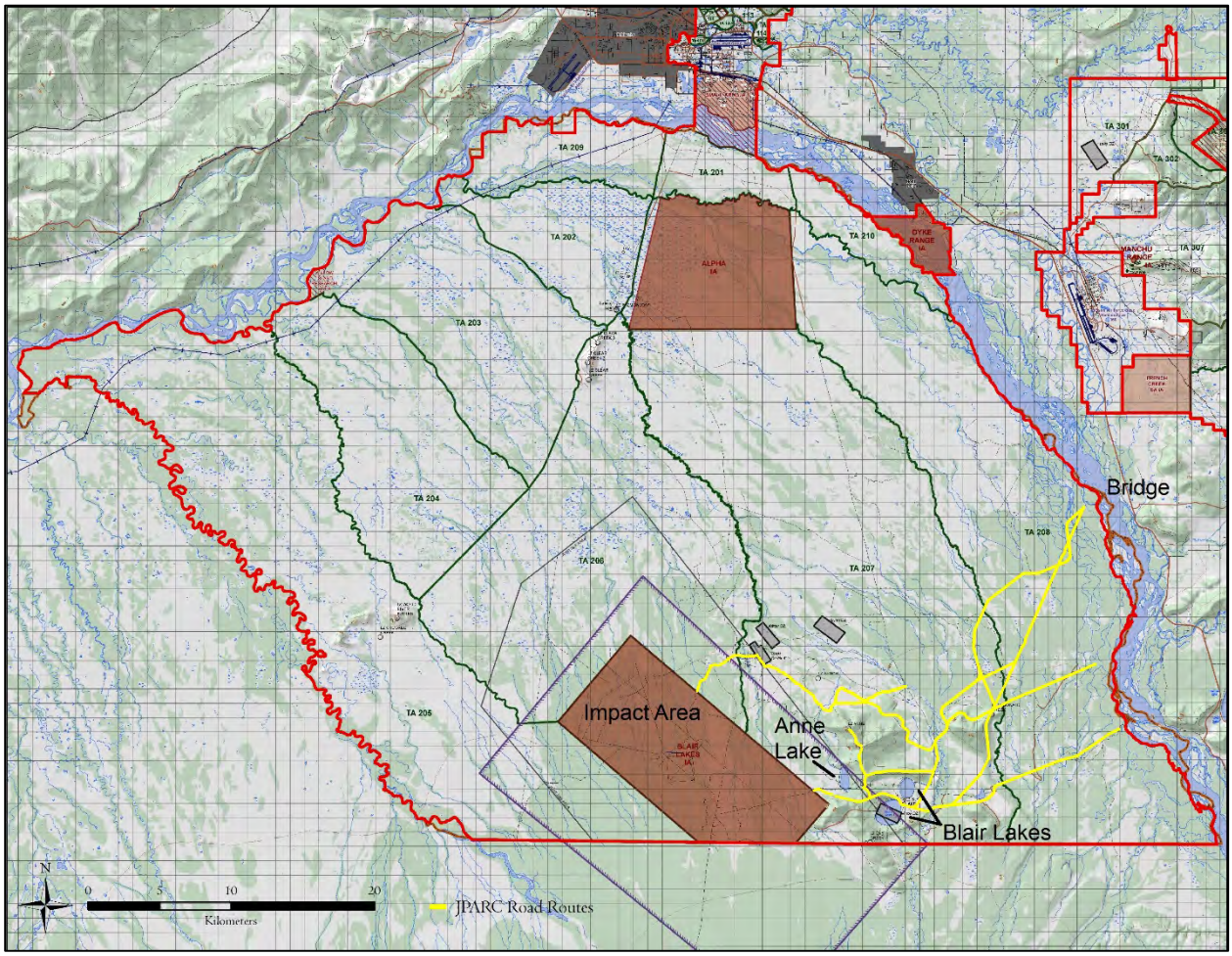


Figure 8. Proposed JPARC access road routes.

Several archaeological sites are known from the Blair Lakes region, and one archaeological district has been defined. Although a road route has not yet been funded or even chosen, preliminary surveys of possible routes took place to obtain baseline data on the cultural resources in the area. In 2009 and 2010, CEMML archaeologist Edmund Gaines conducted

surveys in the southern portion of the Tanana Flats (Esdale et al. 2012c, Gaines et al. 2010). Surveys around Anne Lake, the Blair Lakes, and the vegetated terrace edge to the north and east relocated 10 of 14 sites first identified by Dixon et al. in 1980 and recovered 44 new archaeological sites.

Surveys in 2013 focused specifically on the proposed road routes in the JPARC EIS. Over 3,629 acres of land were surveyed for archaeological sites by CEMML crews under the direction of Julie Esdale, Ph.D., RPA. All highlighted areas in Figure 9 were covered by pedestrian transects except for the long linear features northeast of Blair Lakes. These were surveyed by helicopter as they were all in wetland terrain. Sixteen new sites were found in this survey, and one site was relocated.

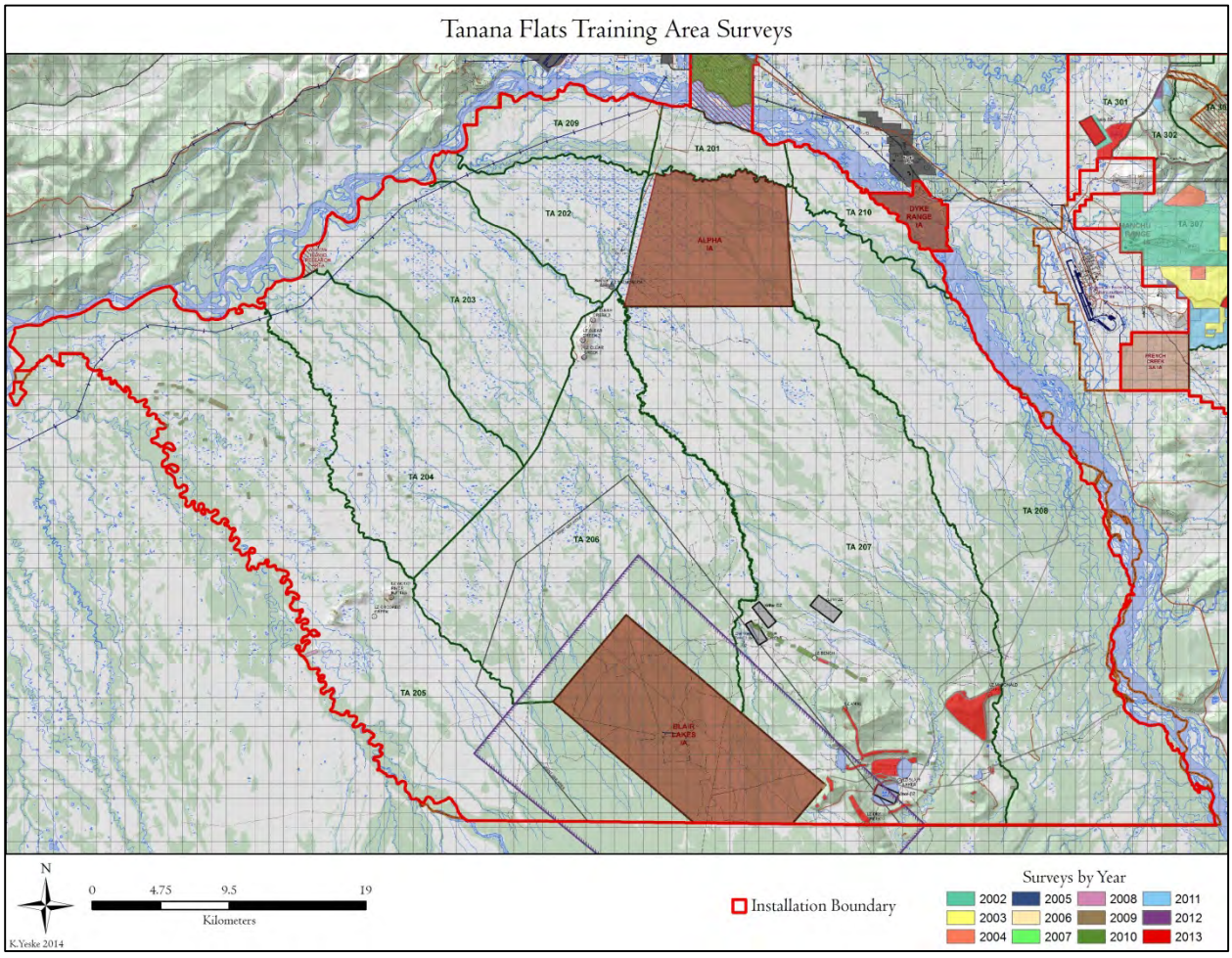


Figure 9. All surveys in TFTA by year. The red areas were survey in 2013.

## TFTA New Sites

Sixteen new sites were discovered and one site was relocated in the TFTA in 2013. These sites are located in the hills and terraces surrounding the Blair Lakes area (Figure 10).

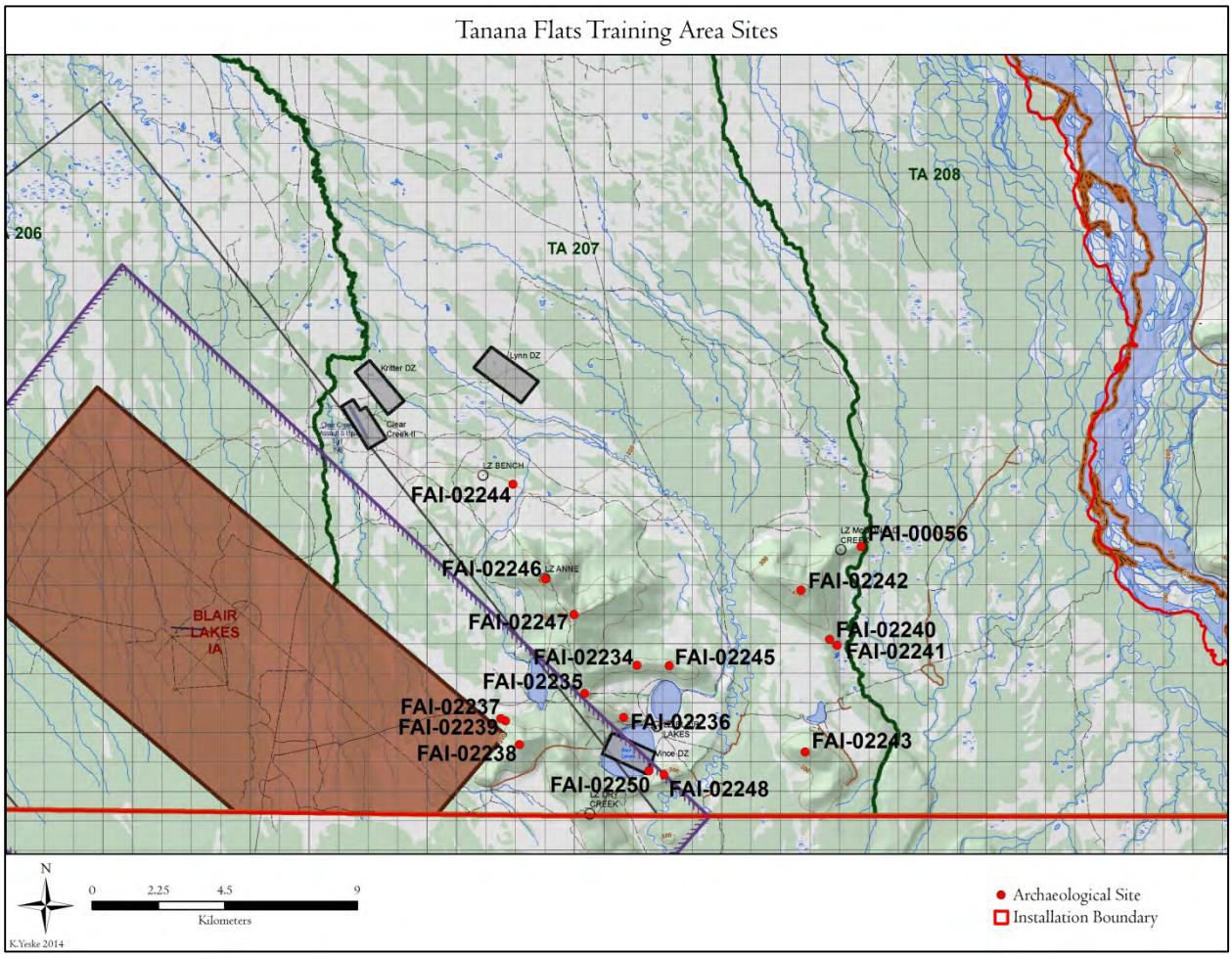


Figure 10. Sites discovered and relocated in TFTA in 2013.

**FAI-00056**
**Latitude:** [redacted]
**Longitude:** [redacted]
**UTM:** [redacted]
**Determination of Eligibility:** Not evaluated

FAI-00056 is located on a large eastern toe of a hill located 58 km south of Fairbanks and 8 km east of Blair Lakes (Figure 10). The site is not accessible by road and was originally discovered during a 1979 survey by Dixon et al. (1980). Six test pits were excavated and a single chert pressure flake was found. A CEMML crew relocated the site on the same bluff, slightly higher

than the coordinates from 1979, and new coordinates for the site are given above, with an elevation of 309 masl. Shovel testing from the high point on the bluff towards the south at approximately 50 m intervals extended the site to an area approximately 75 m wide and 300 m long along the bluff edge (Figure 11). The site slope varies as it gradually descends to the south and east. The Tanana Flats and Alaska Range are visible in the open eastern viewshed (Figure 12). McDonald Creek at the base of the bluff is the closest water source, 50 m to the east.

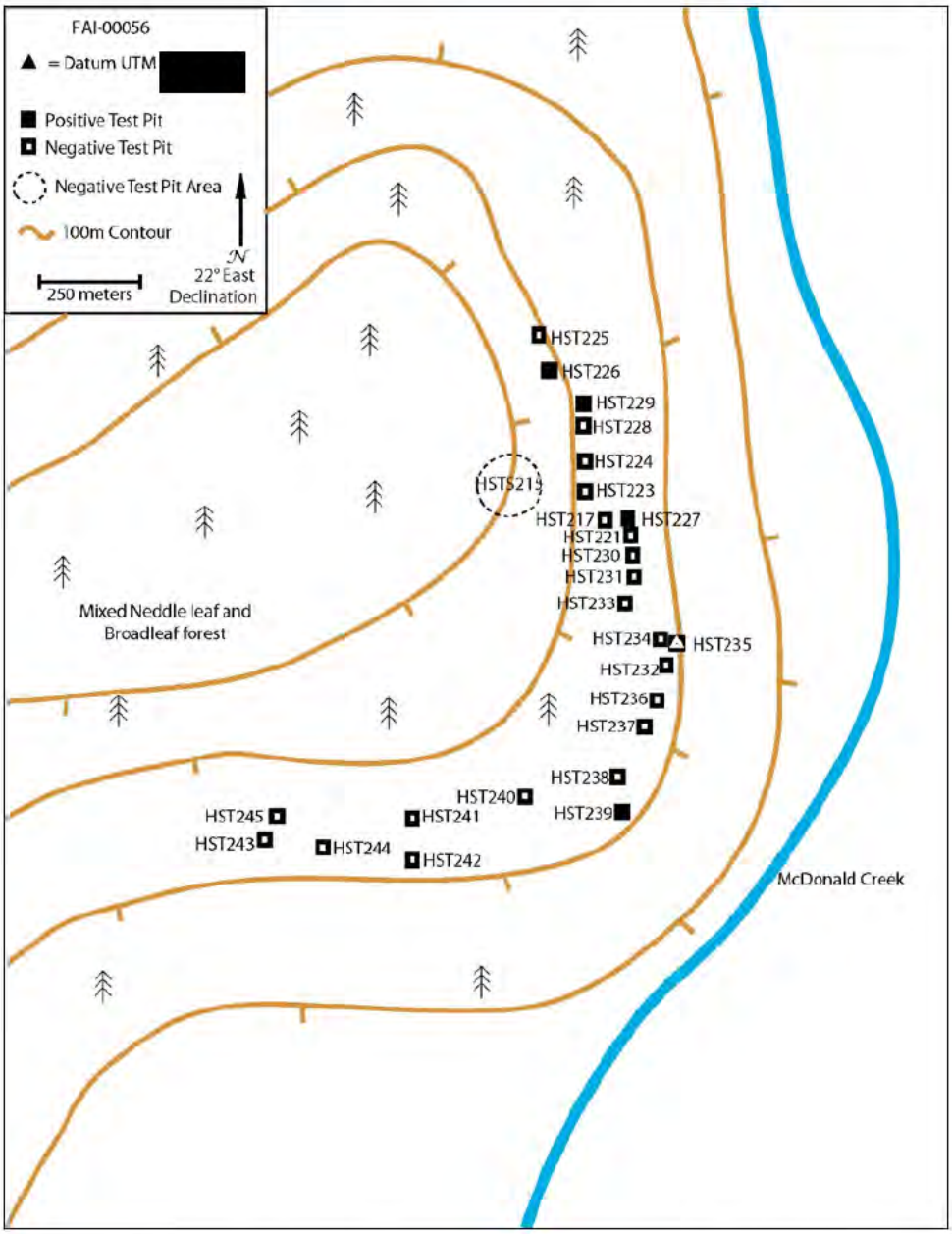


Figure 11. FAI-00056 site map with test pit locations.

Figure 12. View from site of the Tanana Flats.

The upland moist mixed forest ecosystem is represented by spruce, aspen, willow, moss, fireweed, high bush cranberry, rose, grasses, lupine, *Artemisia*, and bearberry. Surface visibility is zero, except in scattered locations close to the southeastern bluff edge where there is 10% exposure. There are many large uprooted trees, presumably from natural causes. No other disturbances were noted.

Artifacts discovered in five positive shovel tests included a large rhyolite lanceolate biface, 12 chert flakes, five rhyolite flakes, three bone fragments, a possible piece of fire cracked rock, and charcoal (Table 1). No artifacts were found on the surface. The rhyolite biface is a projectile point preform (Figure 13). Hinge fractures on one surface suggests that the biface may have been discarded during manufacture.

Soil deposition on the site ranges from 73 cm to greater than one meter. Silt deposits terminate at degrading bedrock. Artifacts were recovered from two main horizons approximately 40 and 60 cm below surface (cmbs) (Figure 14, Figure 15).

Table 1. FAI-00056 2013 accession log.

| Accession Number | Artifact | Provenience | Depth (cmbs) | Material Type | Lot Count |
|---|---|---|---|---|---|
| UA2013-074-01 | Flake lot | HST-227 | 0-90 | Chert | 1 |
| UA2013-074-02 | Flake lot | HST-226 | 30-45 | Chert | 3 |
| UA2013-074-03 | Flake lot | HST-226 | 55-65 | Chert | 2 |
| UA2013-074-04 | Fire cracked rock | HST-226 | 55-65 | Basalt | 1 |
| UA2013-074-05 | Flake lot | HST-229 | 35-45 | Chert | 1 |
| UA2013-074-06 | Bone | HST-229 | 45-55 | Bone | 1 |
| UA2013-074-07 | Flake lot | HST-229 | 55-65 | Chert | 3 |
| UA2013-074-08 | Flake lot | HST-229 | 75-85 | Chert | 1 |
| UA2013-074-09 | Biface | HST-235 | 40-50 | Rhyolite | 1 |
| UA2013-074-10 | Charcoal | HST-235 | 40-55 | Charcoal | 5 |
| UA2013-074-11 | Burned bone | HST-235 | 40-55 | Bone | 2 |
| UA2013-074-12 | Flake lot | HST-239 | 10-20 | Rhyolite | 4 |
| UA2013-074-13 | Flake lot | HST-239 | 20-30 | Chert | 1 |


Figure 13. Rhyolite projectile point preform from FAI-00056.

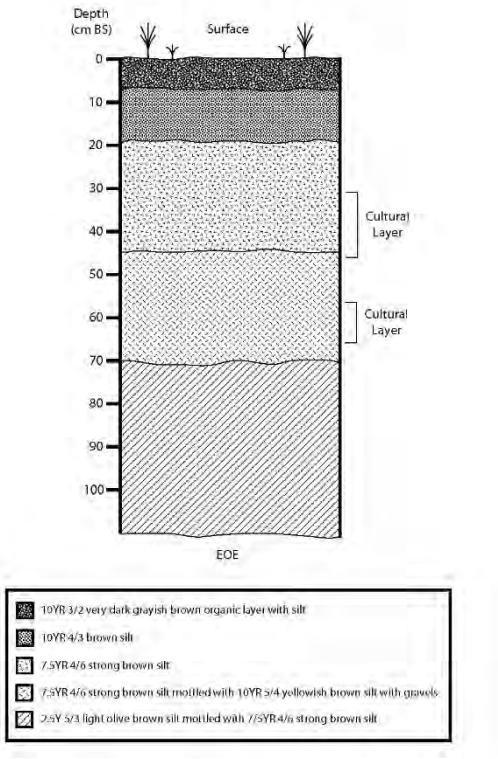


Figure 14. FAI-00056 generalized stratigraphic profile.

Figure 15. FAI-00056 test pit.

**FAI-02234**
**Latitude:** [redacted]
**Longitude:** [redacted]
**UTM:** [redacted]
**Determination of Eligibility:** Not evaluated

FAI-02234 is located on a small knoll near the center of an east-west trending ridgeline approximately 1 km northwest of Blair Lake North in the TFTA, 53 km south of Fairbanks (Figure 10, Figure 17). The site is not accessible by road and the viewshed is completely blocked by birch and aspen (Figure 16). Low scrub and sphagnum moss ground cover and decomposing birch prohibits all surface visibility. A survey marker on a tree marks the site, 12 m north of the datum.

Four shovel test pits were excavated to glacial outwash. One test pit had one light gray chert burin spall in the upper 20 cmbs (UA2013-056-1).

Aeolian silts overly Birch Creek schist bedrock in this area. Text pits contain silt below a thin (2 cm) root mat to approximately 40 cmbs. Decomposing schist bedrock is mixed with silts in the profile from frost heave to about 50 cmbs. Only the modern soil is evident in excavated tests (Figure 18, Figure 19).

Figure 16. FAI-02234 site overview.

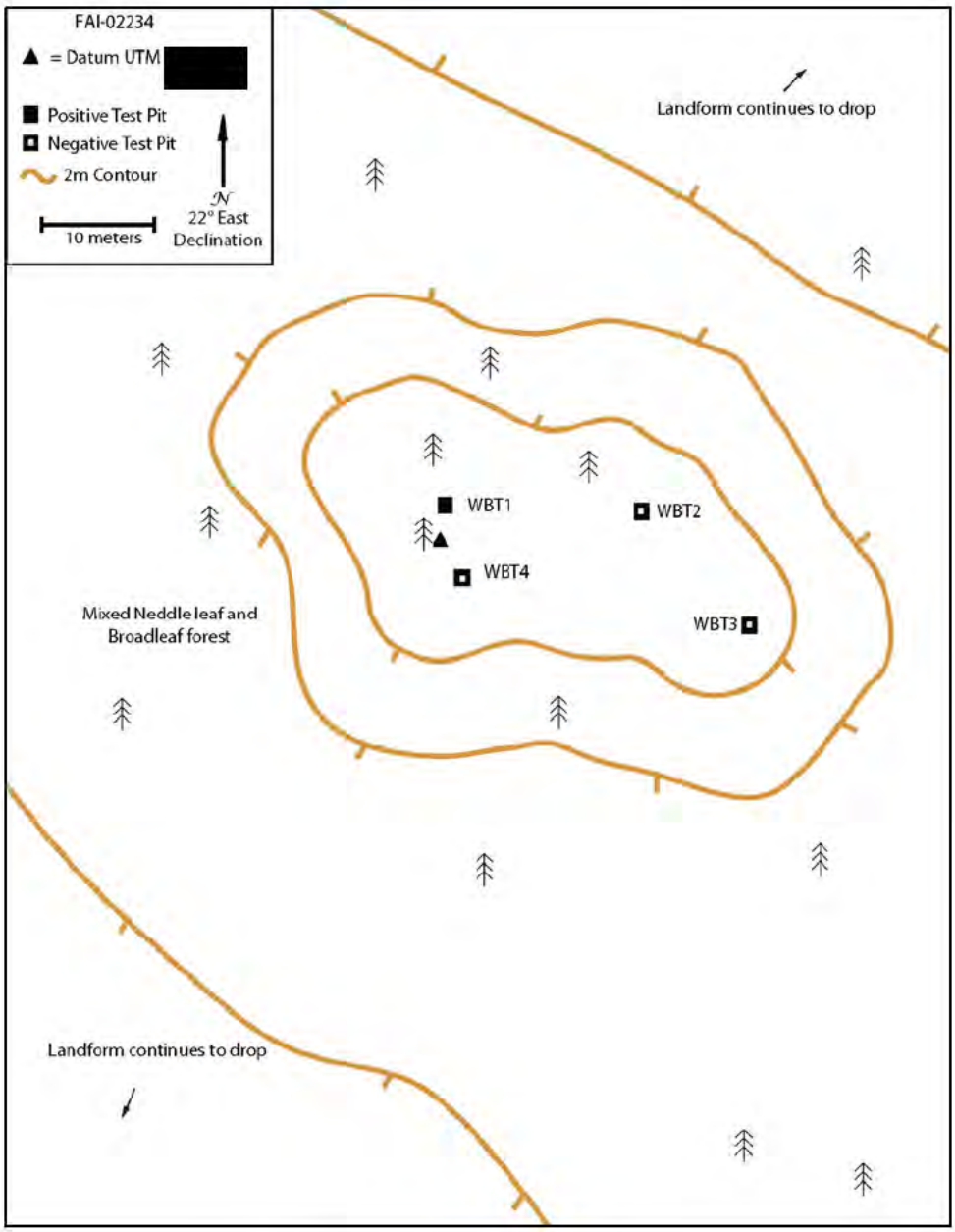


Figure 17. FAI-02234 site map.

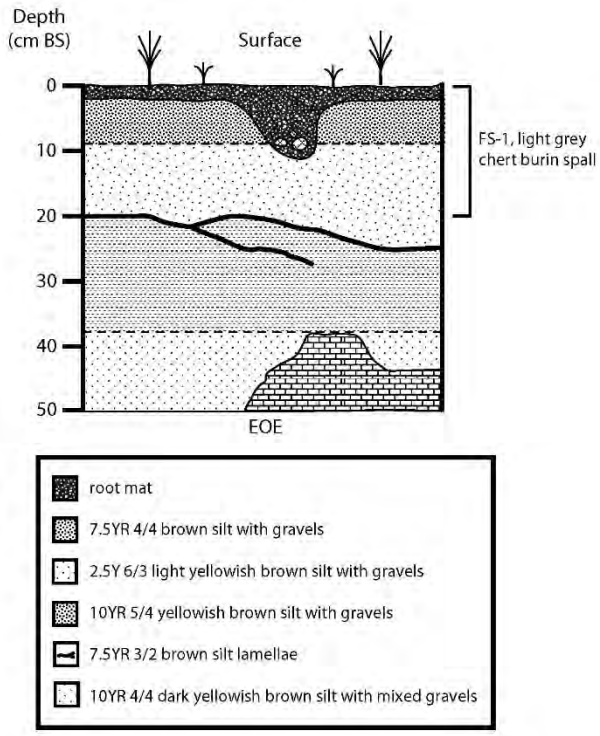


Figure 18. FAI-02234 stratigraphic profile.

Figure 19. FAI-02234 test pit.

**FAI-02235**
**Latitude:** [redacted]
**Longitude:** [redacted]
**UTM:** [redacted]
**Determination of Eligibility:** Not evaluated

FAI-02235 is located on a small knoll on a north-south trending ridge, 2 km west of Blair Lake North and 1 km east of Anne Lake, approximately 53 km south of Fairbanks (Figure 10, Figure 20). The area is closely vegetated with mixed broadleaf vegetation, obscuring visible landmarks (Figure 21). An ATV trail runs through the site, however no disturbances aside from natural weathering processes were observed related to the trail's presence.

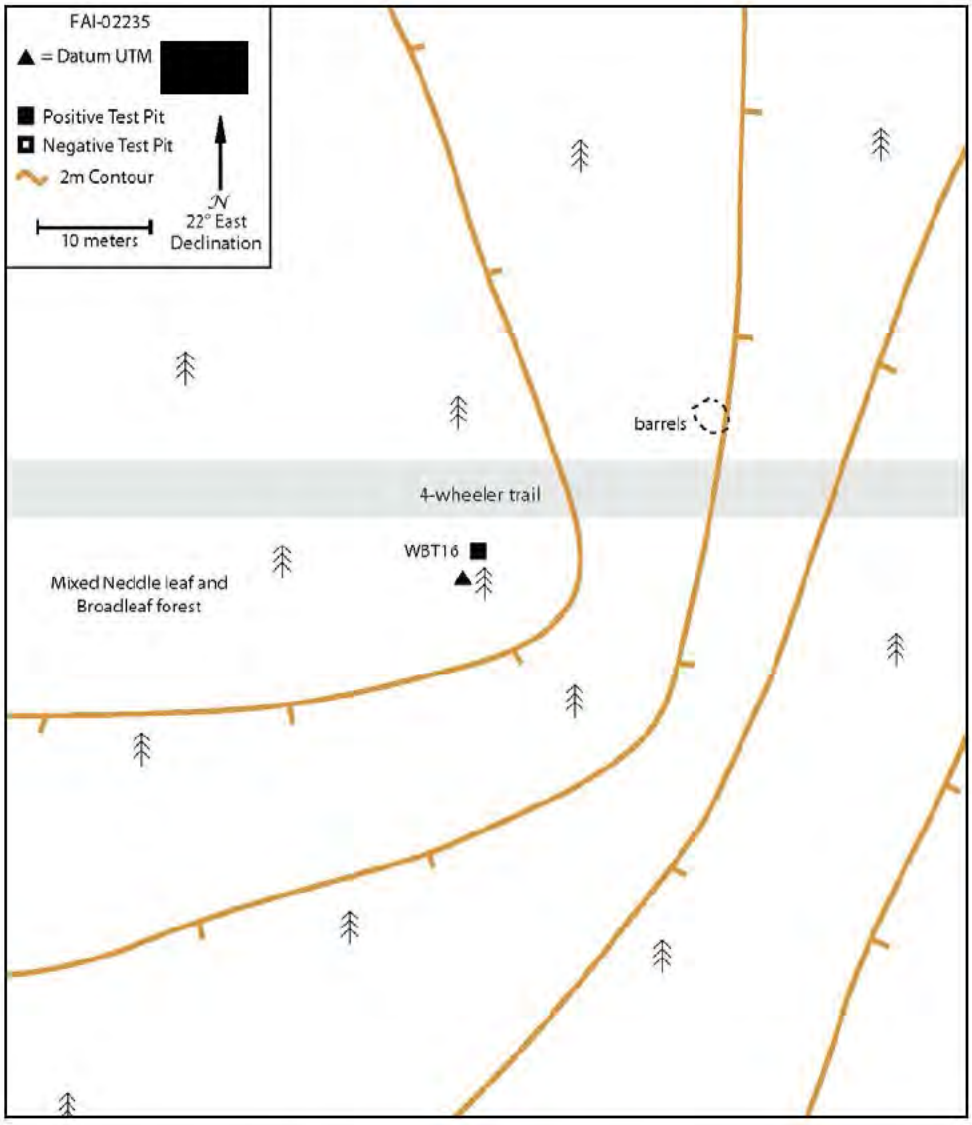


Figure 20. FAI-02235 site map.

No artifacts were found on the surface of the site. One test pit was excavated to 25 cmbs where glacial outwash was encountered (Figure 22, Figure 23). The stratigraphy of this site consists of a well-developed series of loess deposits with an ash layer lying directly below the upper organic zone and above the archaeological material. This test pit yielded a total of 56 flakes of various cherts, two of which were found in situ in the cultural zone (approximately 10 to 20 cmbs) (UA2014-057-1) (Figure 24).

Figure 21. FAI-02235 site overview.

Figure 22. FAI-02235 test pit.

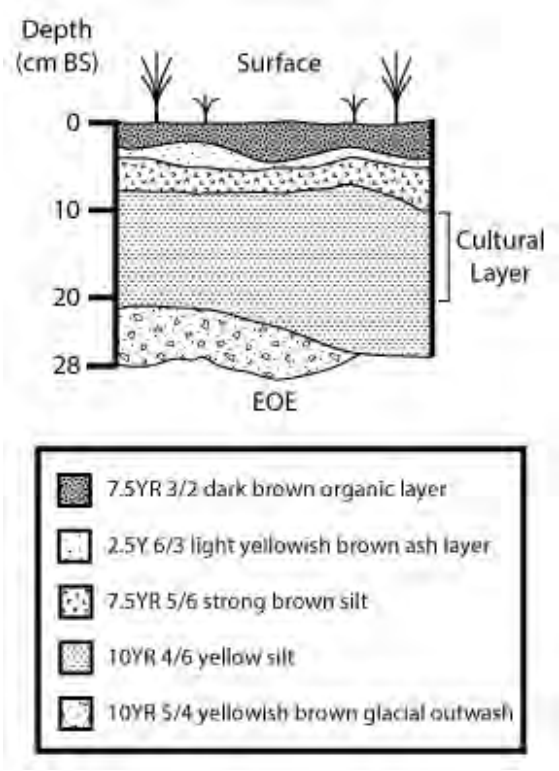


Figure 23. FAI-02235 stratigraphic profile.

Figure 24. FAI-02235 artifacts in stratigraphy.

**FAI-02236**
**Latitude:** [redacted]
**Longitude:** [redacted]
**UTM:** [redacted]
**Determination of Eligibility:** Not evaluated

FAI-02236 is situated on a small rise along the ridgeline north of Blair Lake South, 53 km south of Fairbanks (Figure 10). An ATV trail runs east-west along the site leading to Blair Lake North, 1.5 km to the east. Blair Lake South is just 500 m to the south of the site (Figure 25). Surface exposure is poor at the site as it is covered with dense leaf litter. Trees include birch and willow. Low scrub vegetation covers the leaf mat (Figure 26).

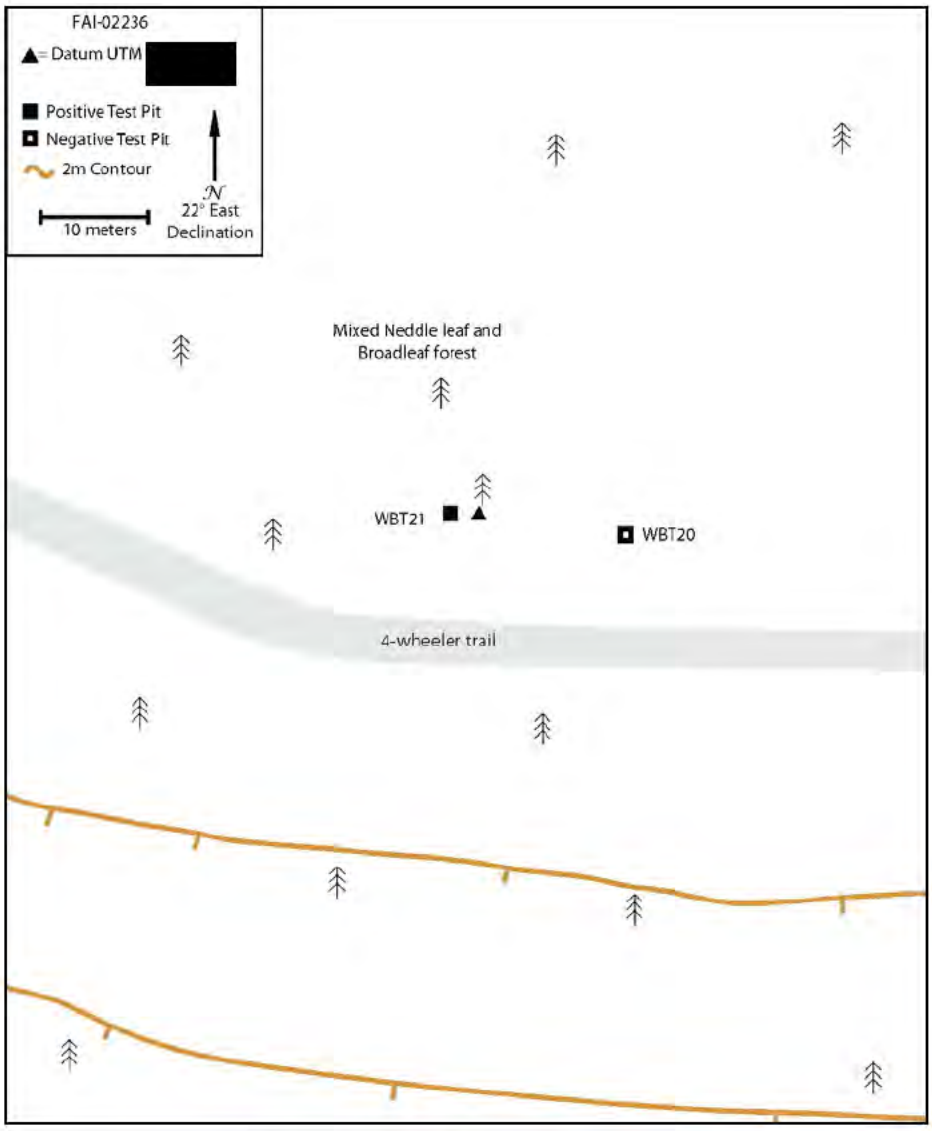


Figure 25. FAI-02236 site map.

Twelve flakes were found in one of two excavated test pits (UA2013-058-1). Artifacts were found directly beneath the root mat, 6-16 cmbs. Sediments at this site are made up of well sorted aeolian silts over ancient glacial outwash deposits at approximately 58 cmbs (Figure 27). The modern soil and up to two weak palaeosols are evident (Figure 27, Figure 28).

Figure 26. FAI-02236 site overview.

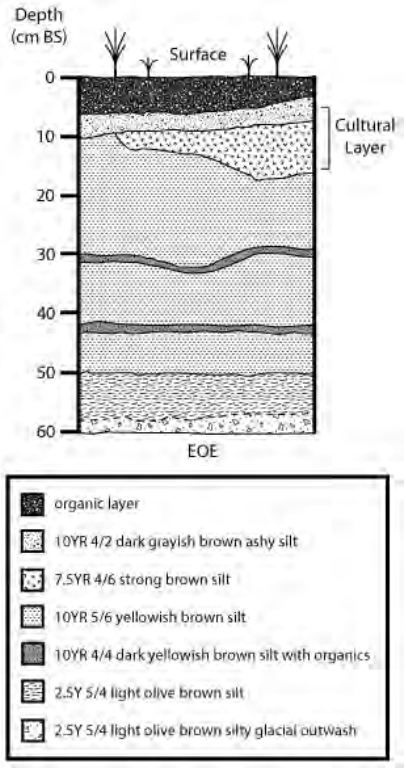


Figure 27. FAI-02236 stratigraphic profile.

Figure 28. FAI-02236 test pit.

**FAI-02237**
**Latitude:** [redacted]
**Longitude:** [redacted]
**UTM:** [redacted]
**Determination of Eligibility:** Not evaluated

FAI-02237 is located on a bench-like area on the southwest arm of the Blair Lakes ridge system, 53 km south of Fairbanks (Figure 10). Anne Lake is 1.3 km to northeast and the southern Blair Lake is 3.5 km to the east. One test pit was excavated in this portion of the landform and it contained two flakes (Figure 29).

Vegetation across the site is thick aspen and birch, with deadfall, decomposing leaves, and evidence of a forest fire impeding surface exposure and inhibiting a view of the surrounding area. Other low scrub including high bush cranberry, rosebush, fireweed, moss, and lichen cover the ground (Figure 30).

One test pit yielded two dark gray chert flakes at 20-30 cmbs (UA2013-059-1). No surface artifacts were found, and no other test pits were dug. Beneath a 2 cm root mat, mottled silts cover glacial gravels at a depth of about 50 cmbs (Figure 31, Figure 32). Artifacts were located beneath the bottom of the B horizon (23 cmbs) to the base of gleyed and mottled sediments (35 cmbs).

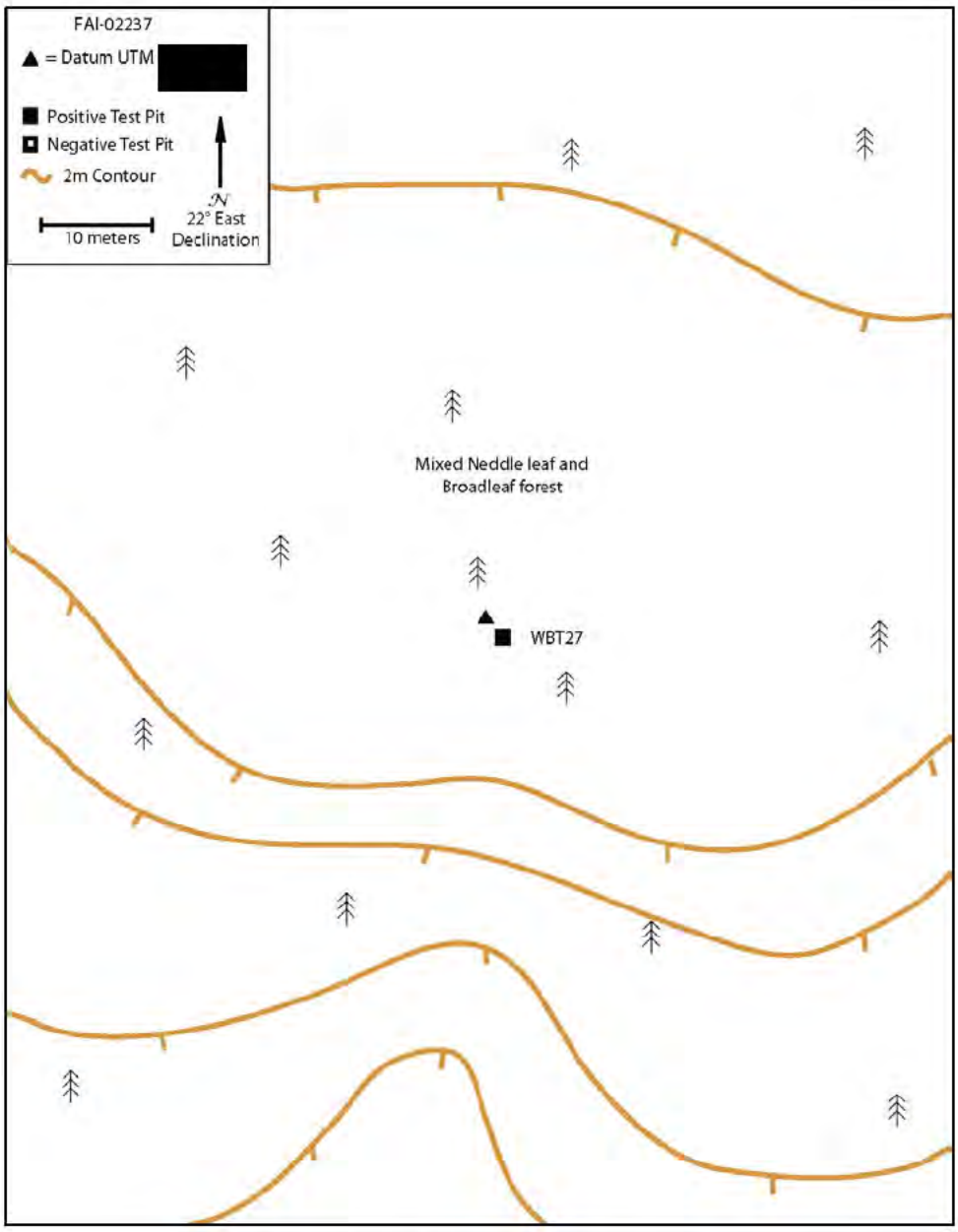


Figure 29. FAI-02237 site map.

Figure 30. FAI-02237 site overview.

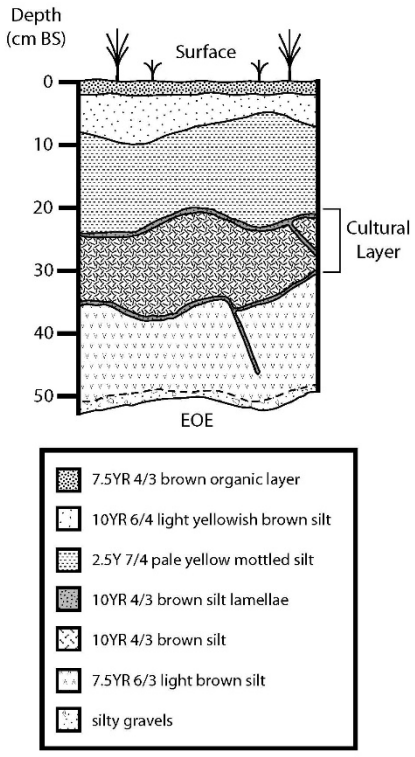


Figure 31. FAI-02237 stratigraphic profile.

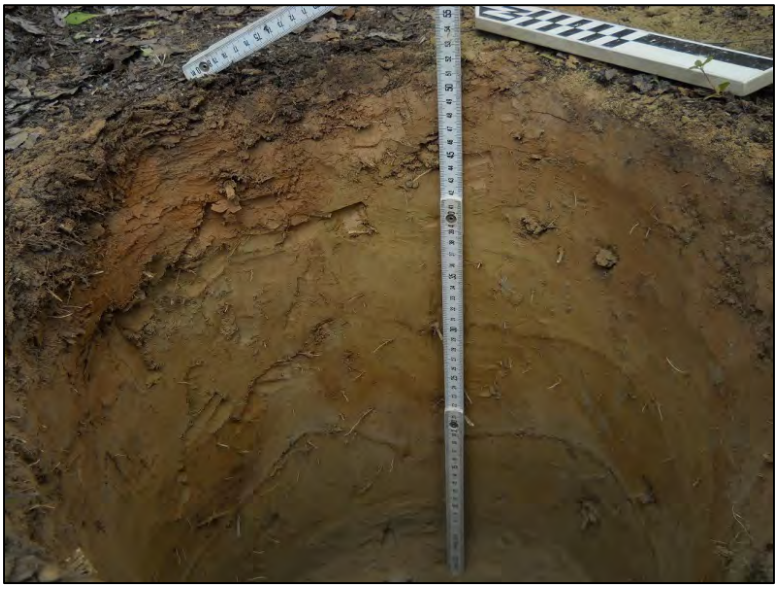

Figure 32. FAI-02237 test pit.

**FAI-02238**
**Latitude:** [redacted]
**Longitude:** [redacted]
**UTM:** [redacted]
**Determination of Eligibility:** Not evaluated

FAI-02238 is located on the southwest peak of the Blair Lakes ridgeline, 53 km south of Fairbanks (Figure 10). Anne Lake is 1.5 km to the northeast. An old landing zone exists just north of the site (Figure 33).

Due to thick aspen, fireweed, moss, decomposing leaves, lichen, and other various low scrub, there is very little surface visibility or surrounding view (Figure 34). Fire damage from the 1980s is evident in deadfall and within the root mat.

Two shovel test pits were excavated in this area. One test pit was positive and yielded a single rhyolite flake from 0-10 cmbs (UA2013-060-1). No artifacts were found on the surface. The shovel test reached only 20 cm in depth and was terminated at glacial outwash deposits (Figure 35, Figure 36). The organic horizon was 2 cm thick and underlain by 1 cm thick ash layer. Mixed silt and outwash gravels made up the rest of the deposit. The flake was found in the B horizon, approximately 6-8 cmbs.

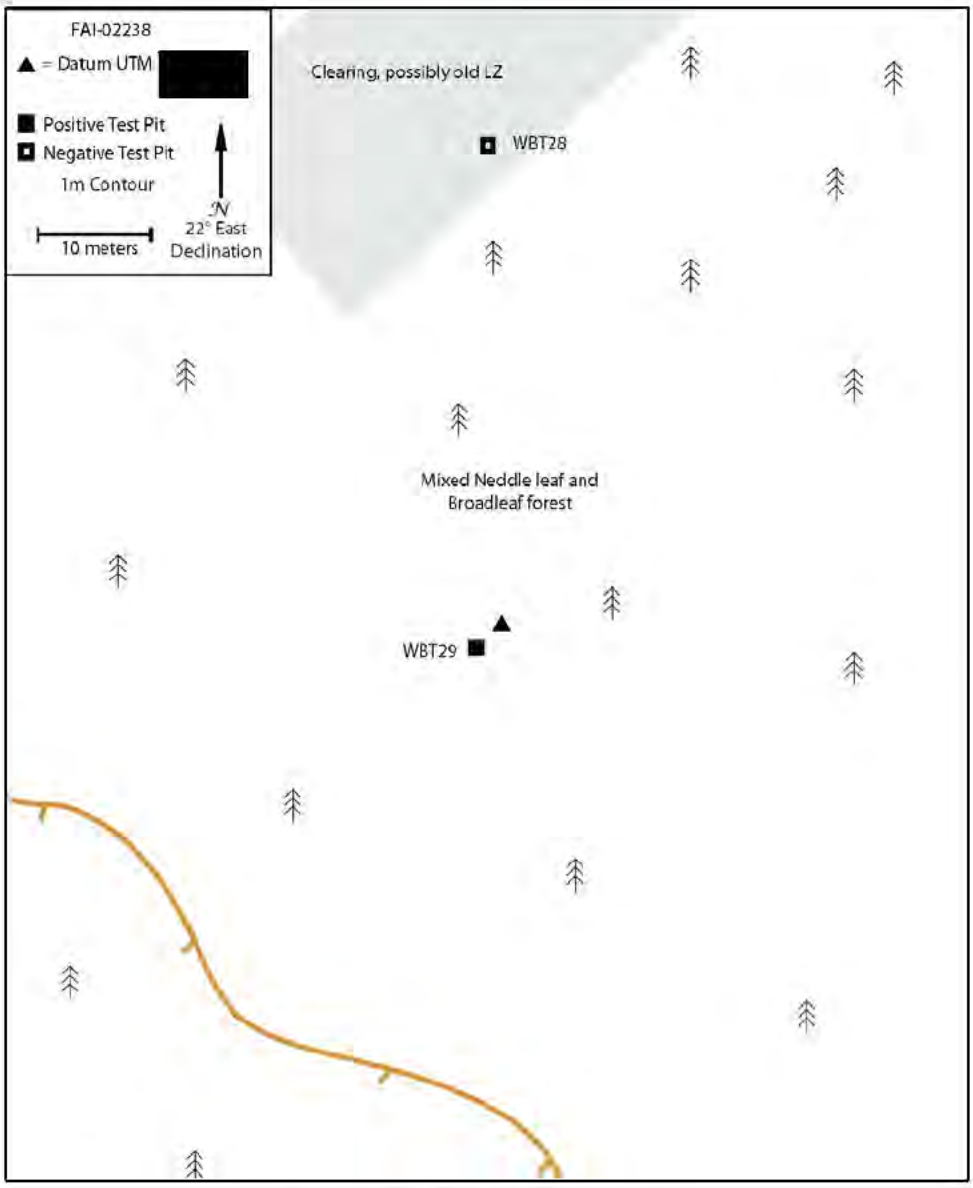


Figure 33. FAI-02238 site map.

Figure 34. FAI-02238 site overview.

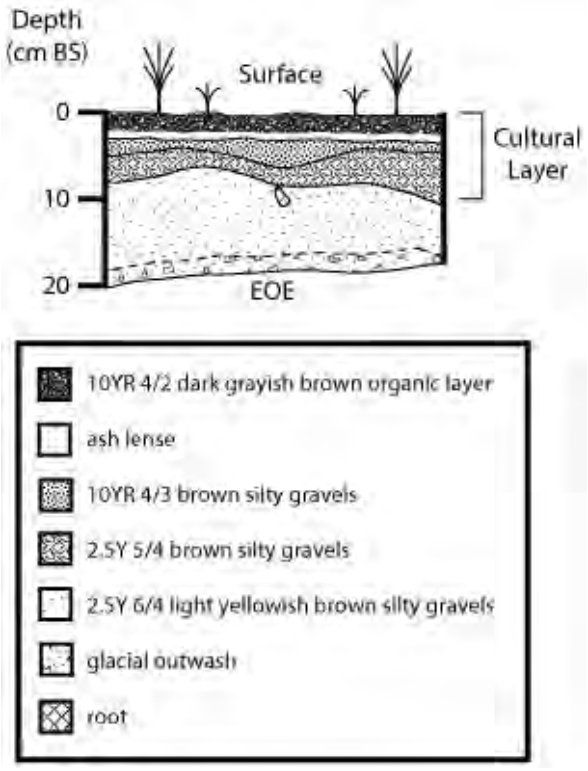


Figure 35. FAI-02238 stratigraphic profile.

Figure 36. FAI-02238 test pit.

**FAI-02239**
**Latitude:** [redacted]
**Longitude:** [redacted]
**UTM:** [redacted]
**Determination of Eligibility:** Not evaluated

FAI-02239 is located on the southwest arm of the Blair Lakes ridgeline, 53 km south of Fairbanks (Figure 10). A slight rise along the ridgeline has partially buried boulders, and a flake was found in a test pit in this area (Figure 37). Anne Lake is found approximately 1.4 km southwest of the site.

Because of thick vegetation consisting of aspen, birch, fireweed, grasses, decomposing leaves, moss, and lichen, as well as various other small scrub, the site has no surface visibility and no views of the surrounding area (Figure 38). There is evidence of site disturbance from a 1980s forest fire.

One light gray chert flake (UA2013-061-1) was found shallowly buried in the B horizon of the single test pit excavated. Glacial outwash gravels are shallow in this location, and the excavation ended at a depth of 17 cmbs (Figure 39, Figure 40). Silts underlie a 2 cm thick root mat. Weak modern soil development was noted.

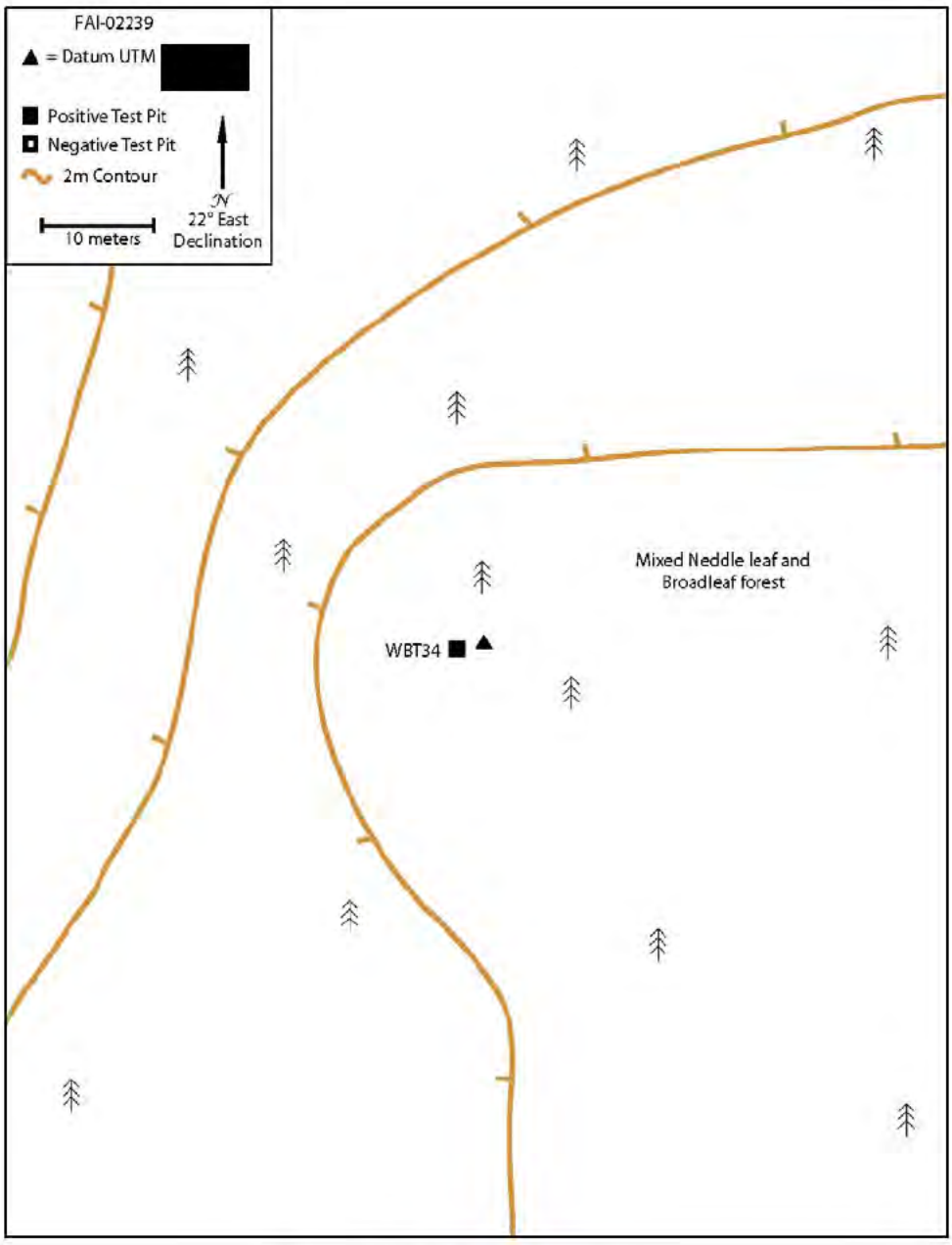


Figure 37. FAI-02239 site map.

Figure 38. FAI-02239 site overview.

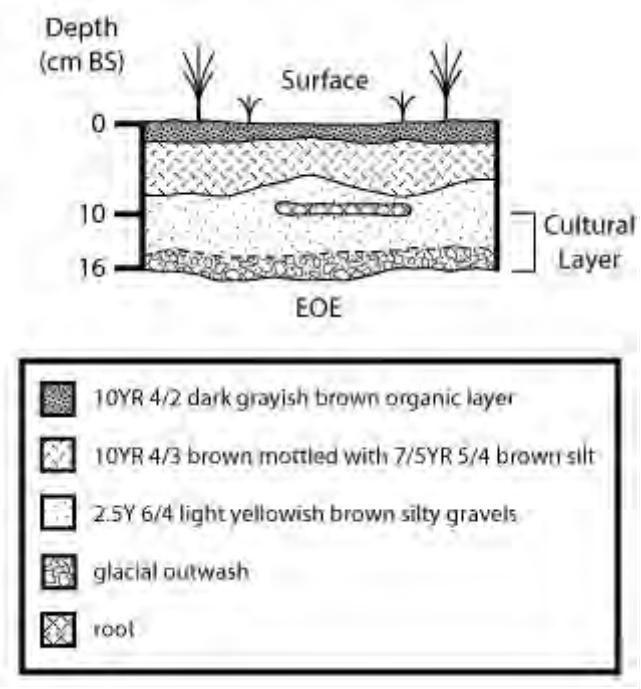


Figure 39. FAI-02239 stratigraphic profile.

Figure 40. FAI-02239 test pit.

**FAI-02240**
**Latitude:** [redacted]
**Longitude:** [redacted]
**UTM:** [redacted]
**Determination of Eligibility:** Not evaluated

FAI-02240 is situated on the south side of the steep hill northeast of Blair Lakes, 53 km south of Fairbanks (Figure 10). Flakes were found in a single test pit at this location, 250 m west of McDonald Creek and 100 m west of FAI-02043 (Figure 41). The slope at the southern edge of the site drops down to the Tanana Flats. In addition to the expansive view of the flats to the south, the Blair Lakes ridgeline is also within sight to the west. An active helicopter landing zone is located 200 m to the north.

There is possible erosion taking place at the site from wind and rain. Vegetation consists of rosebush, spruce, aspen, bearberries, service berries, and pumpkin berries (Figure 42). The closest water source is McDonald Creek 250 m to the east.

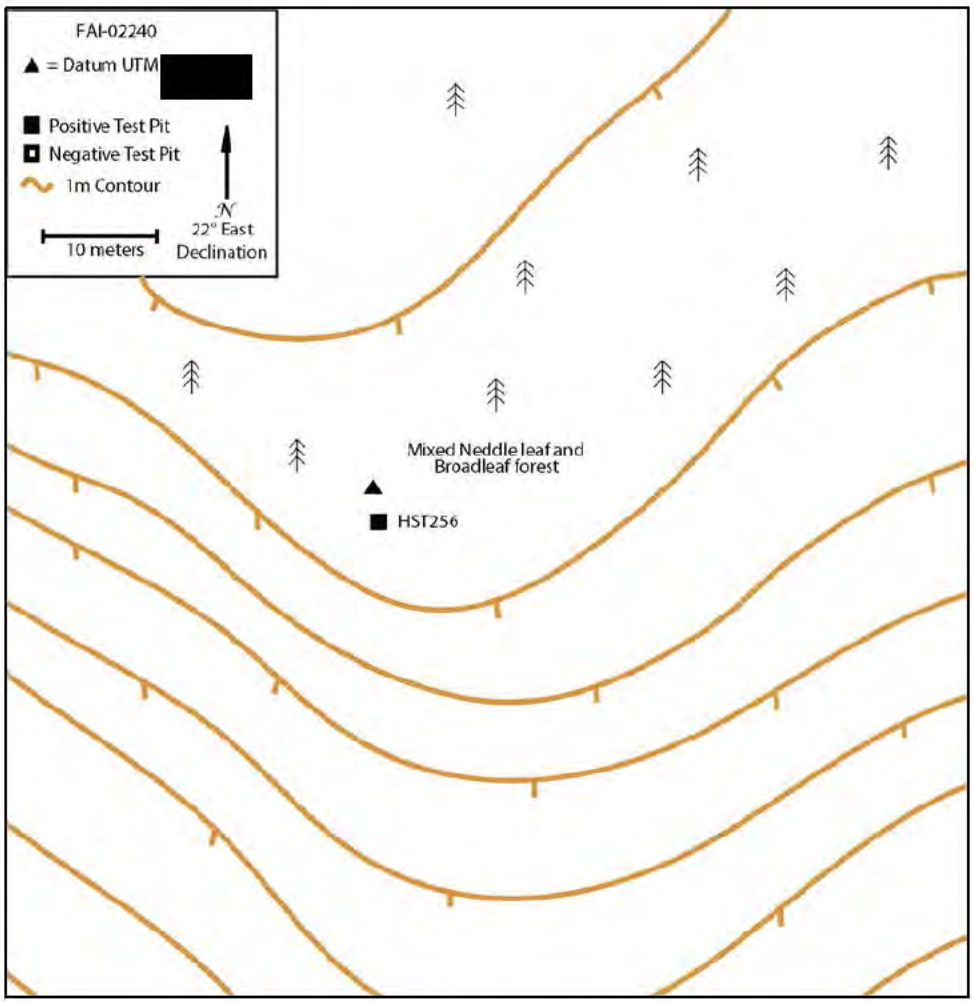


Figure 41. FAI-02240 site map.

One test pit was excavated and it yielded four chert flakes and two obsidian flakes from 0-35 cmbs (UA2013-064-1 and 2). No surface artifacts were found and no other test pits were dug.

Deep, stratified sediments exist in this location. The test pit was excavated to the extent of a shovel at 130 cm, where deposits shift from aeolian silt to aeolian sand (130 cmbs) (Figure 43, Figure 44). Although flakes were only found in the upper deposits at this site, data from nearby FAI-02043 demonstrates late Pleistocene cultural levels in the deep sand deposits. This test pit may not have reached deep enough to encounter all archaeological materials.

A profile of the test pit demonstrates a 6 cm A horizon followed by a 14 cm thick B horizon. All artifacts were found within the B horizon. Soil development weakens down through the profile and no palaeosols are evident.

Figure 42. FAI-02240 site overview.

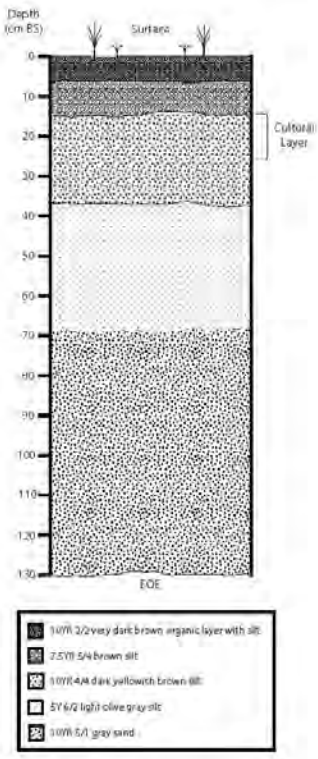


Figure 43. FAI-02240 stratigraphic profile.

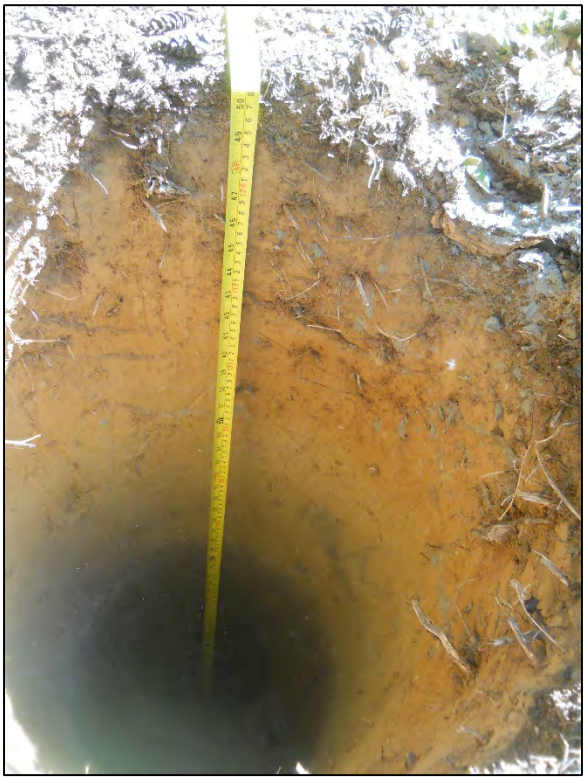

Figure 44. FAI-02240 test pit.

**FAI-02241**
**Latitude:** [redacted]
**Longitude:** [redacted]
**UTM:** [redacted]
**Determination of Eligibility:** Not evaluated

FAI-02241 is situated on the south side of the steep hill northeast of Blair Lakes, 53 km south of Fairbanks (Figure 10). A flake was found in a single test pit 400 m northwest of FAI-02240 (Figure 45). The site lies in an enclosed area, heavily vegetated by aspen and spruce. An active helicopter landing zone is 150 m to the east.

Wind and rain erosion is evident at the site. Vegetation in the area includes aspen, spruce, fireweed, rosebushes, berries, and moss (Figure 46).

One red chert flake was collected at 15-45 cmbs from a single test pit (UA2013-065-1). No other test pits were dug, and no surface artifacts were found. The test pit was excavated to 91 cmbs and was terminated when glacial outwash gravels were uncovered (Figure 47, Figure 48).

The profile was composed by a 5 cm thick root mat (O horizon) overlying massive silts. The B horizon reached to 30 cmbs. The flake was found in the B or upper C horizon. Silts from 67

cmbs to bedrock are dark grayish brown and show no signs of oxidation. No palaeosols were discovered.

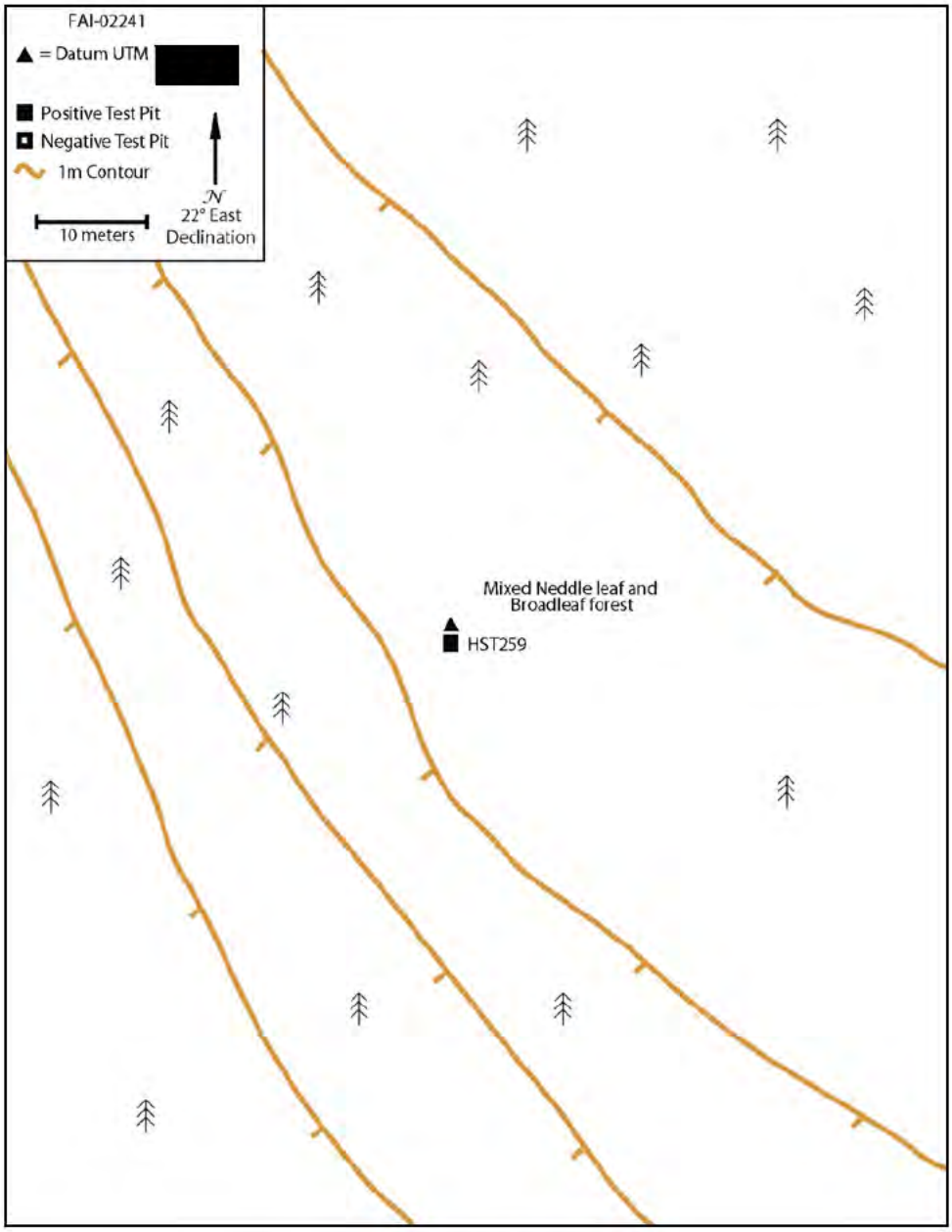


Figure 45. FAI-02241 site map.

Figure 46. FAI-02241 site overview.

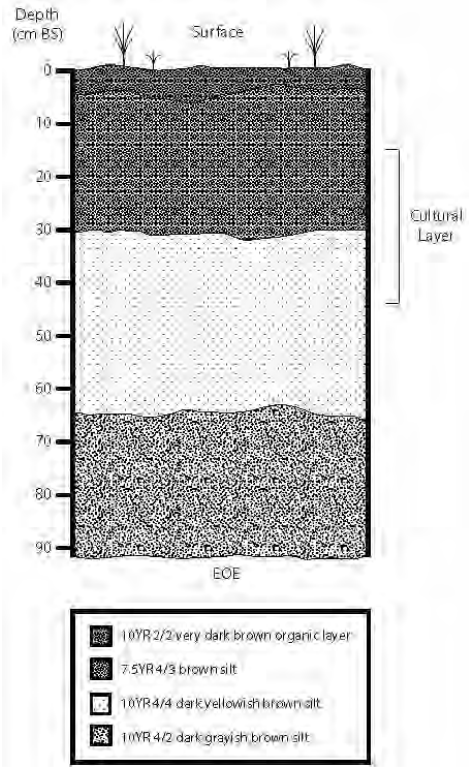


Figure 47. FAI-02241stratigraphic profile.

Figure 48. FAI-02241 test pit.

**FAI-02242**
**Latitude:** [redacted]
**Longitude:** [redacted]
**UTM:** [redacted]
**Determination of Eligibility:** Not evaluated

FAI-02242 is located on the summit of the southeast end of a high hill west of McDonald Creek, 52 km southeast of Fairbanks (Figure 10). The site is 2 km northwest of FAI-02043, FAI-02240, and FAI-02241 and 2.5 km southwest of FAI-00056. Two geodetic survey markers are located within 8 m of the site datum (Figure 49).

Site area vegetation includes spruce, aspen, birch, rosebush, fireweed, and *Delphinium* (Figure 50). Alder at the site may indicate previous ground disturbance, possibly from the time the survey markers were installed.

Eleven shovel test pits were excavated across this area of the landform. One positive test pit (KST-12) yielded a rhyolite flake between 10-30 cmbs (UA2013-066-01). No other artifacts were found on the surface or in subsurface investigations.

Aeolian deposits overlie glacial outwash gravels at a depth of 80 cmbs in this area. The organic horizon reached from the surface to 9 cmbs. The base of the A horizon is 18 cmbs, and the B horizon ends at 29 cmbs (Figure 51, Figure 52). Palaeosols could not be discerned, but changes in silt color and texture were noted at 48 cmbs.

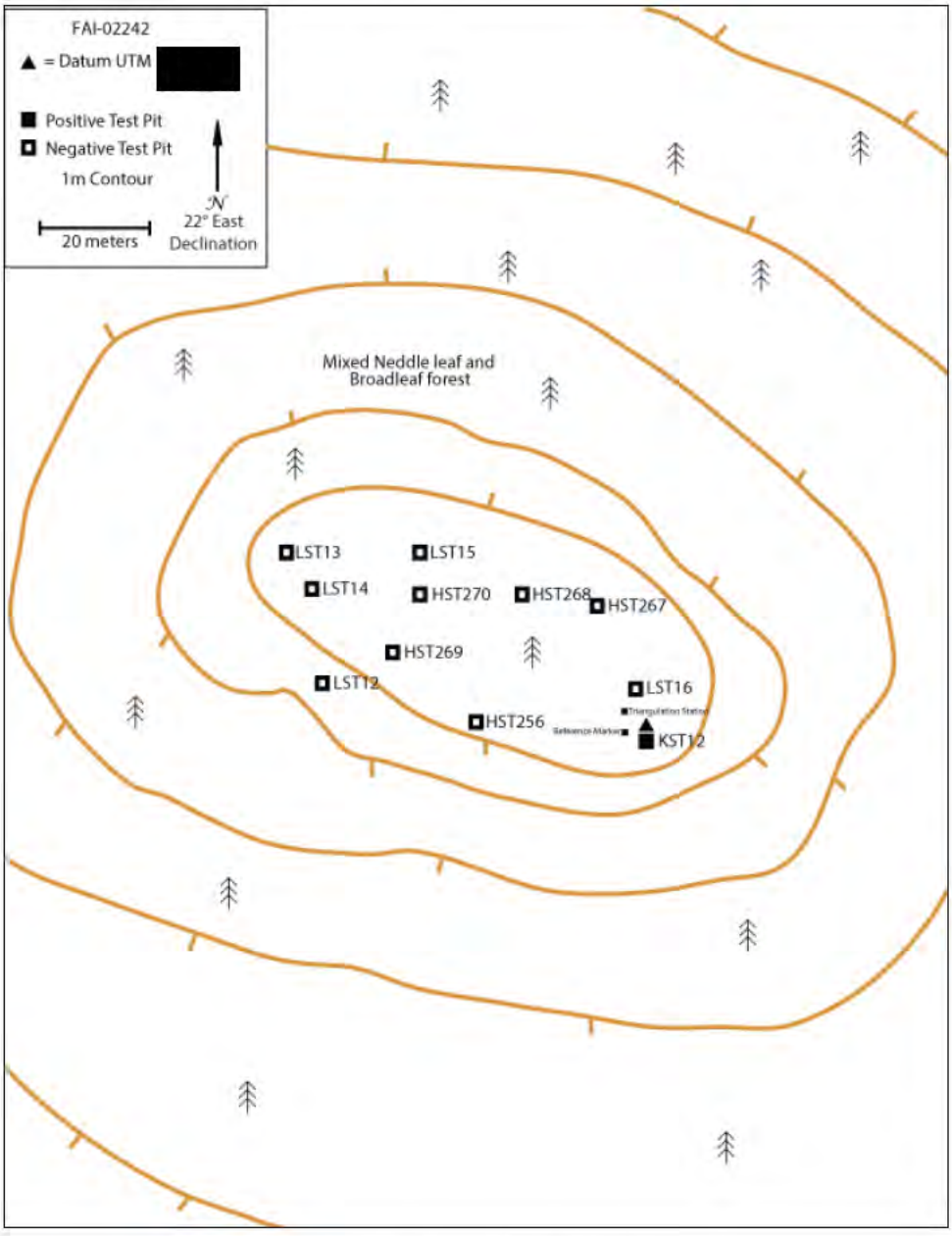


Figure 49. FAI-02242 site map.

Figure 50. FAI-02242 site overview.

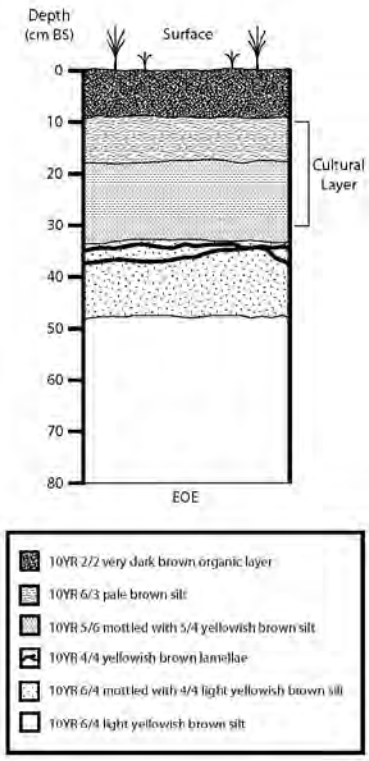


Figure 51. FAI-02242 stratigraphic profile.

Figure 52. FAI-02242 test pit.

**FAI-02243**
**Latitude:** [redacted]
**Longitude:** [redacted]
**UTM:** [redacted]
**Determination of Eligibility:** Not evaluated

XMH-02243 is located on a low bedrock ridge east of the Blair Lakes in the TFTA, 57 km southeast of Fairbanks (Figure 10). The site is situated on a 2 m ridge on the northwest end of a landform 1 km south of a small lake. The ridge top slopes steeply to the southwest, into the flats, and slopes 2 m down to the northeast to the wider landform plateau (Figure 53). The Alaska Range is visible to the south, but the remaining viewshed is blocked by vegetation.

The site has mixed upland rocky dry meadow and low scrub ecosystems. Vegetation consists largely of lichen with sparse rose, spruce, high bush cranberry, low bush cranberry, birch, and willow (Figure 54). Surface exposure is 10% under the moss, lichen, and low scrub cover. A recent fire ring directly southwest of datum is the only disturbance noted.

Two chert flakes and one of quartz-like material were found from 0-4 cmbs in a shovel test during survey (UA2-13-067-001). No other artifacts were found on the surface, and no additional shovel tests were excavated.

Stratigraphy at the site consisted of a thin organic horizon (0-4 cmbs) above a silt layer (4-6 cmbs). The shovel test was terminated below this layer at silty glacial outwash gravels (Figure 55, Figure 56).

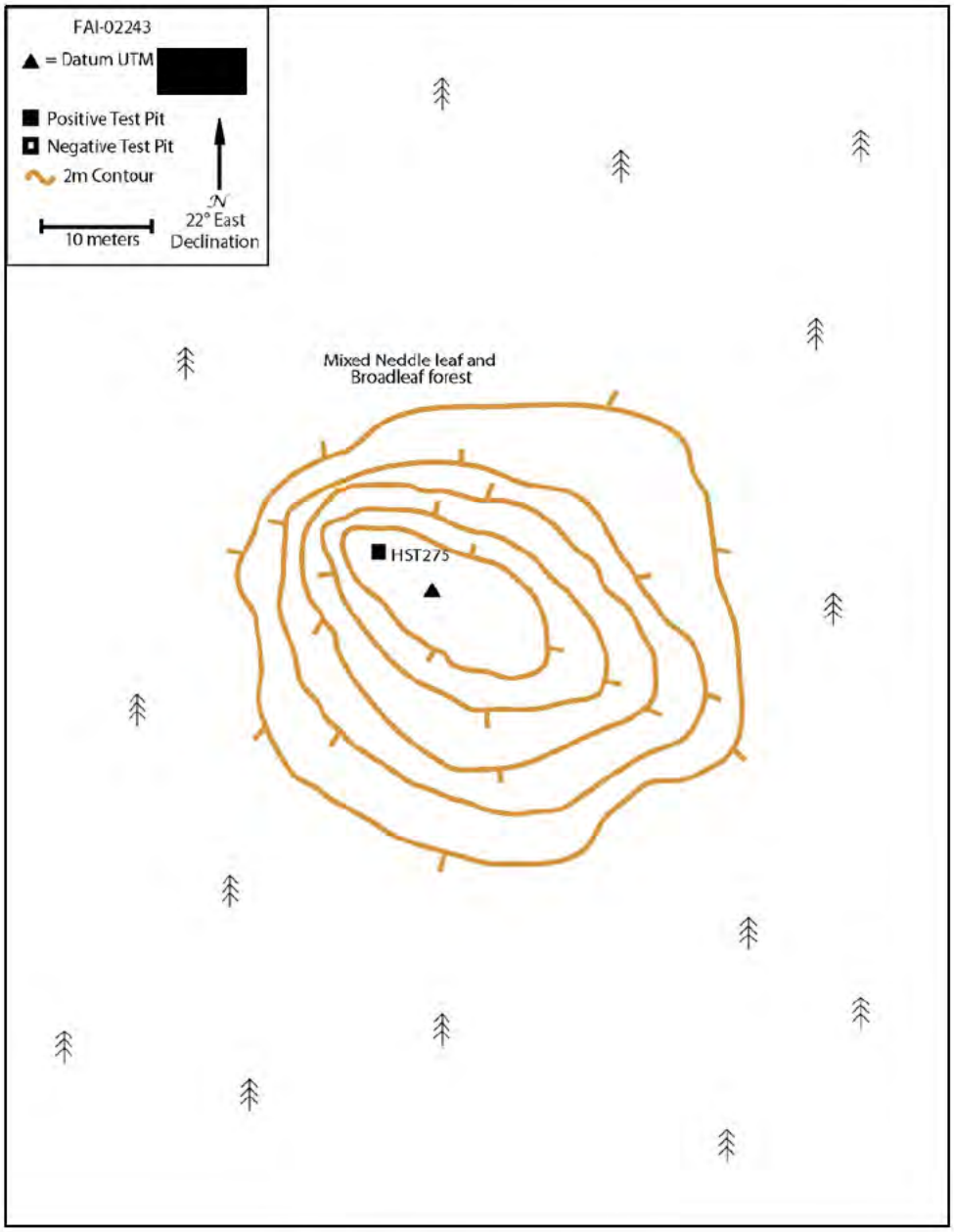


Figure 53. FAI-02243 site map.

Figure 54. FAI-02243 site overview.

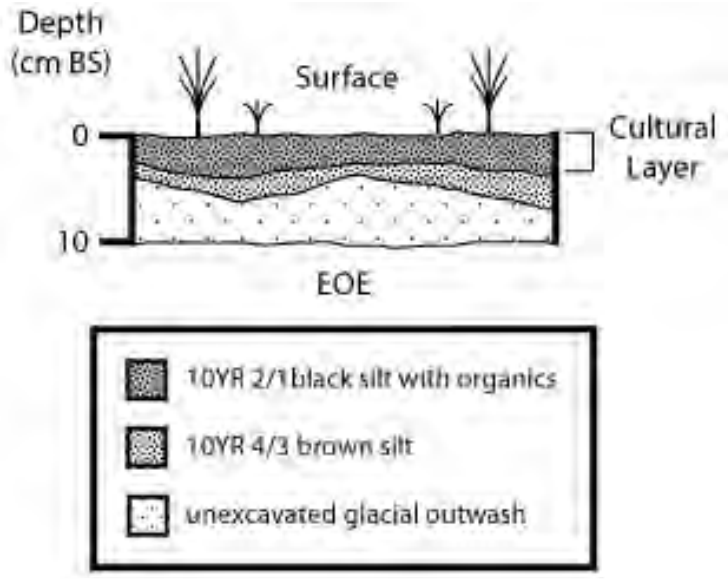


Figure 55. FAI-02243 stratigraphic profile.

Figure 56. FAI-02243 test pit.

**FAI-02244**
**Latitude:** [redacted]
**Longitude:** [redacted]
**UTM:** [redacted]
**Determination of Eligibility:** Not evaluated

FAI-02244 is located on a terrace edge 2 km south of Dry Creek in the TFTA, 45.5 km southeast of Fairbanks (Figure 10, Figure 57). The terrace edge is eight meters above the Tanana Flats low lying terrain to the north and runs northwest-southeast for over 10 km. At least 20 archaeological sites are located along the terrace. FAI-02051 is located closest to this site, approximately 150 m to the southeast. The modern viewshed is blocked by vegetation.

The upland moist mixed forest ecosystem is characterized by lichen, moss, lingonberry, spruce, birch, aspen, willow, service berry, Labrador tea, fireweed, roses, horsetail, and high bush cranberry (Figure 58). No disturbances were noted.

A single gray chert flake was found from 20-70 cmbs in a shovel test during survey (UA2013-068-001). A second shovel test was negative. Site stratigraphy consists of an organic layer from 0-6 cmbs, followed by a brown silt stratum from 6-16 cmbs, and mixed silt deposits from 16-118 cmbs, at which point the shovel test was terminated (Figure 59, Figure 60).

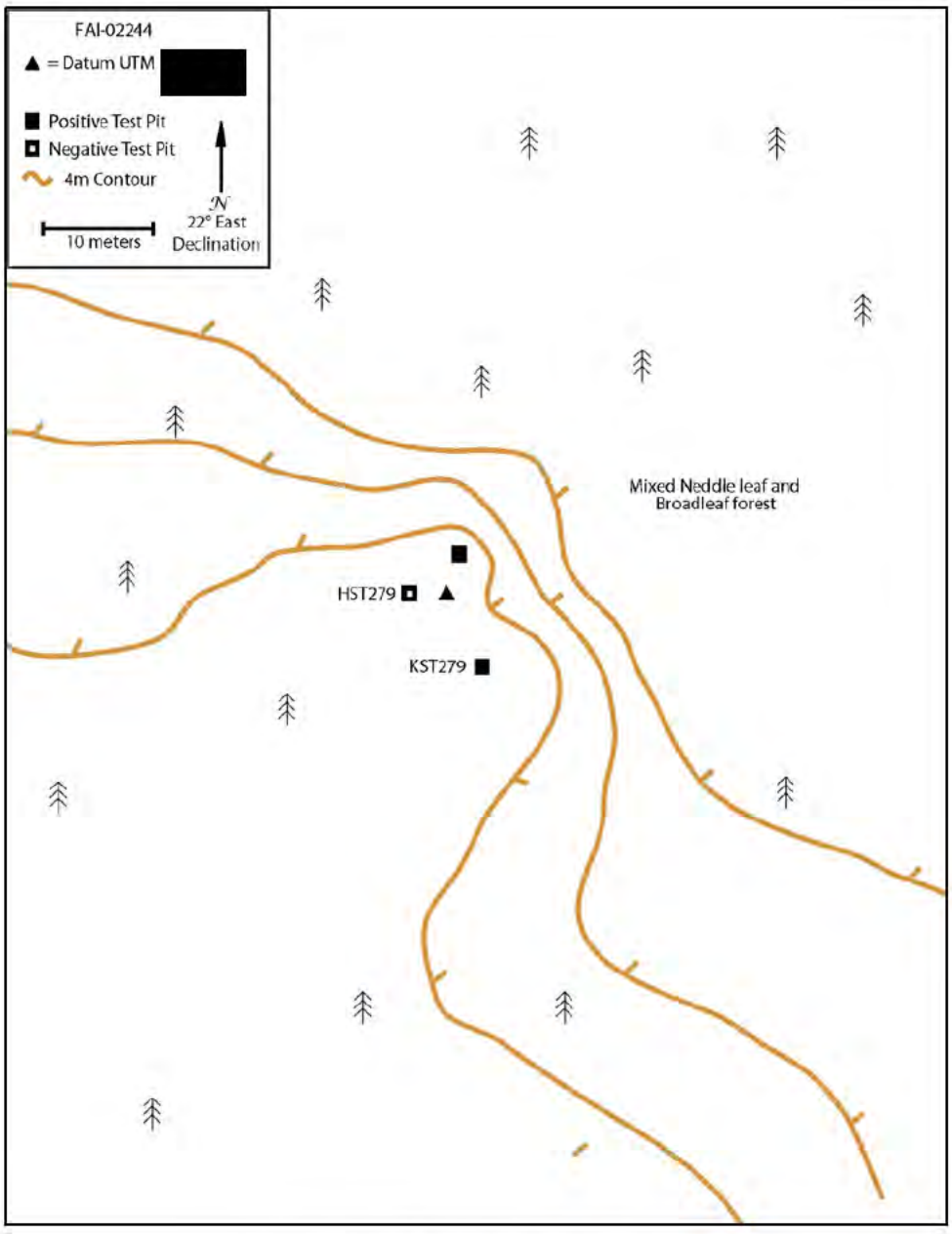


Figure 57. FAI-02244 site map.

Figure 58. FAI-02244 site overview.

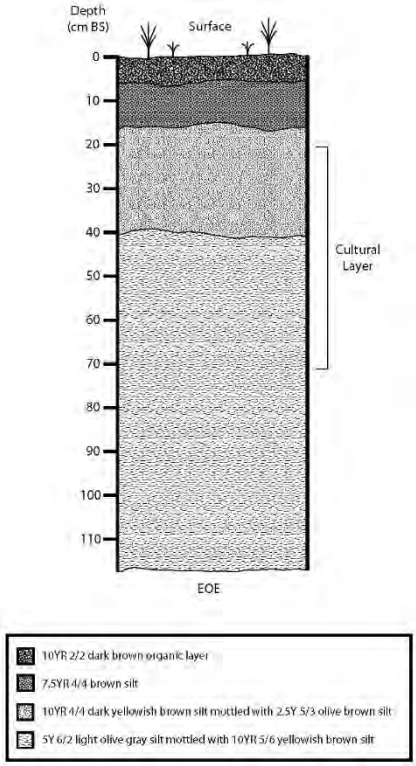


Figure 59. FAI-02244 stratigraphic profile.

Figure 60. FAI-02244 test pit.

**FAI-02245**
**Latitude:** [redacted]
**Longitude:** [redacted]
**UTM:** [redacted]
**Determination of Eligibility:** Not evaluated

FAI-02245 is located on a ridge a 600 m north of Blair Lake North, 53 km southeast of Fairbanks (Figure 10, Figure 61). The ridge trends east-west and slopes gently (2°) in the area of the shovel tests. The eastern edge of the site drops off steeply.

Dense vegetation covers the site, preventing views of surrounding terrain (Figure 62). Vegetation consists of large old spruce, birch, aspen, rosebush, high bush cranberry, moss, lichen, bearberry, and fireweed.

Three shovel tests were excavated at the crest of the landform. The only positive shovel test contained a beige rhyolite flake (UA2013-069-001).

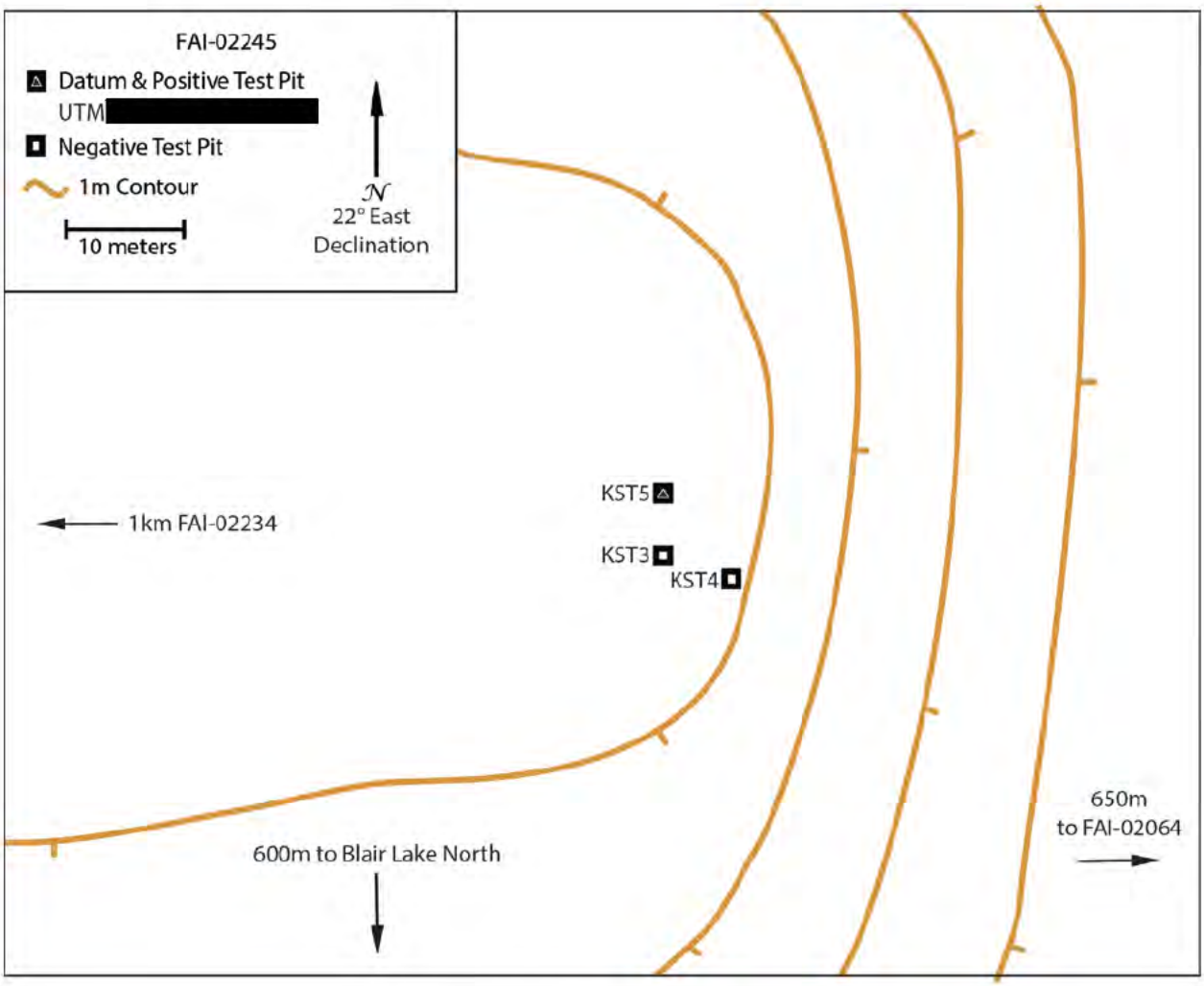


Figure 61. FAI-02245 site map.

The positive shovel test (KST5) reached a depth of 45 cmbs (Figure 63, Figure 64). The stratigraphy consists of a 6 cm thick root mat overlying a 6 cm thick weak A horizon composed of silt grains. The silty B soil horizon reaches 28 cmbs. The flake was found in the B horizon. Unaltered parent silt was found below the B horizon to a depth of 45 cm where outwash gravel deposits were encountered.

Figure 62. FAI-02245 site overview.

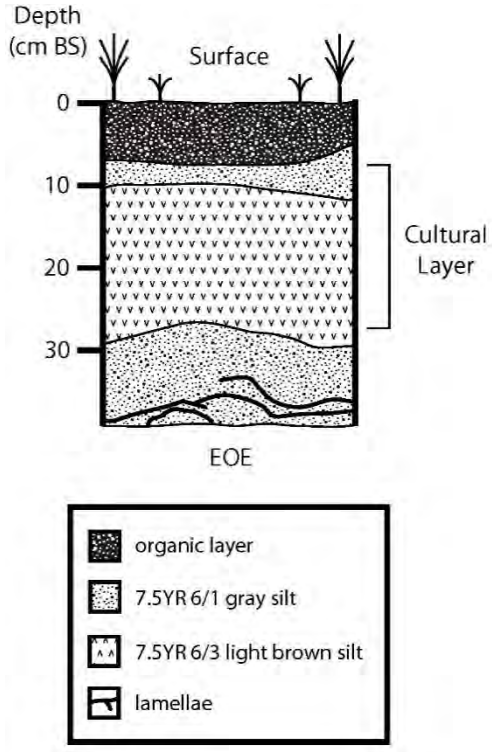


Figure 63. FAI-02245 stratigraphic profile.

Figure 64. FAI-02245 test pit.

**FAI-02246**
**Latitude:** [redacted]
**Longitude:** [redacted]
**UTM:** [redacted]
**Determination of Eligibility:** Not evaluated

FAI-02246 is located on the high point of a ridge system north of Blair Lakes, 49 km southeast of Fairbanks (Figure 10, Figure 65). The site is in the middle of an active helicopter landing zone on the high point of the northwestern-most branch of the Blair Lakes ridge system. The ridge slopes slightly toward the northwest. A small lake 1 km to the southwest is the closest water source.

Views of the surrounding terrain are impeded by forest vegetation. The local ecosystem is an upland moist broadleaf forest represented by birch, alder, aspen, and high bush cranberry (Figure 66). Exposed silts and bedrock create 3% overall surface visibility in the clearing. The landing zone was previously bulldozed, leaving push piles around the clearing perimeter. The clearing was recently brush-cut, and the vegetation in the clearing is composed of alder, birch, spruce, willow, fireweed, bunchberry, grasses, lingonberry, and moss.