

Office of History and Archaeology: Cultural Resources Report Coversheet

(Must Accompany All Compliance Reports Submitted to OHA/SHPO)



Office of History and Archaeology
 Division of Parks & Outdoor Recreation
 Alaska Department of Natural Resources
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<http://www.dnr.state.ak.us/parks/oha/index.htm>

Was this survey/investigation (Check one): Negative Positive

Negative = no cultural resource sites were discovered or reported on.
 Positive = new sites were discovered or known sites were visited and reported.

*Note: Alaska Heritage Resources Survey (AHRs) numbers are **required** for reported cultural resource sites, including buildings. (Assigning an AHRs number is critical for record keeping and does not indicate whether the site has been evaluated for its historic significance. AHRs numbers can be obtained by contacting Joan Dale at 907-269-8718).*

Project/Report Information:

- Report Title: Permitting an excavation of the McDonald Creek site (FAI-02043)
- Report Author(s): Julie Esdale
- Report Date: January 10, 2014
- Submitting Organization/Agency: United States Army Garrison Fort Wainwright (USAG FWA)
- Project Name and Project Number: Permitting an excavation of the McDonald Creek site (FAI-02043)
- Principal Investigator (PI) name: Ted Goebel

Geographic Information (attach an extra sheet or cite report page numbers if necessary)

- USGS 1:250,000 Quadrangle(s) Fairbanks
- USGS 1:63,360 Mapsheet(s) B-1
- Meridian/Township / Range / Section (MTRS) location: (all affected sections)
 Format example: "F021N018E|13-14" F006S003E19
- Verbal description of survey area
 (for example: "123 Acme Street," "confluence of Fish and Moose creeks," "Milepost 9-16 of the Smithville Highway")
Blair Lakes Area, Tanana Flats Training Area, Fort Wainwright

- Does this report contain boundary coordinates for the survey area? Yes No Page #(s) _____
- Does this report contain boundary coordinates for reported sites? Yes No Page #(s) 14
- Land owner(s): US Army Garrison Fort Wainwright
- Answer one: Acres Surveyed N/A Hectares Surveyed _____

Cultural Resources Management (CRM) Information

- List AHRs numbers of all investigated or described sites – both within and outside the survey area (attach an extra page if necessary). FAI-02043
- Is the report part of a National Historic Preservation Act - Section 106 consultation? Yes No
- Is the report part of an Alaska Historic Preservation Act compliance consultation? Yes No
- Does the report's data support a submitting agency's determination of eligibility or effect? Yes No
- Was this report submitted to fulfill State Field Archaeology Permit requirements? Yes No
 Permit No.: _____



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
INSTALLATION MANAGEMENT COMMAND
DIRECTORATE OF PUBLIC WORKS
1060 GAFFNEY ROAD #4500
FORT WAINWRIGHT, ALASKA 99703-4500

JAN 29 2014

Directorate of Public Works

SUBJECT: Permitting an excavation of the McDonald Creek site (FAI-02043)

Judith E. Bittner
State Historic Preservation Officer
Office of History and Archaeology
550 West Seventh Avenue, Suite 1310
Anchorage, Alaska 99501-1365

Dear Ms. Bittner:

Texas A&M University archaeologists propose to conduct scientific excavations at the late Pleistocene McDonald Creek site (FAI-02043) located in the Tanana Flats Training Area (TFTA) of Fort Wainwright. McDonald Creek is a highly significant multi-component site with deep stratified deposits and cultural material dating to 13,900 calibrated years before present. FAI-02043 was found to be eligible for the National Register of Historic Places (National Register) in 2012. The US Army Garrison Fort Wainwright (USAG FWA) proposes to issue Texas A&M University an Archaeological Resources Protection Act (ARPA) permit to conduct the excavation.

Application of the Criteria for Adverse Effect [36 CFR 800.5(a)] indicates a finding of **Historic Properties Adversely Affected** for issuing an ARPA permit for the excavation of the McDonald Creek site. The USAG FWA requests your concurrence with this finding.

Project Setting and Environment

The proposed project is located in Fort Wainwright's training areas (Figure 1). The geology of Fairbanks, Alaska and the surrounding area is characterized by round even-topped, northeast to east trending ridges that rise above adjacent valley floors to an elevation of 450-915 meters above sea level (masl). Bedrock is primarily composed of Precambrian Birch Creek schist with few areas of igneous intrusions, granite and quartz diorite. Most of the area is covered by a thin (1-200 cm) mantle of micaceous aeolian silt (loess) derived from outwash plains south of the Tanana River (Muhs and Budahn 2006). Soils are typically well-drained brown silt loam associated with poorly drained silt loams in depressions and drainages (Natural Cooperative Soil Survey 1999).

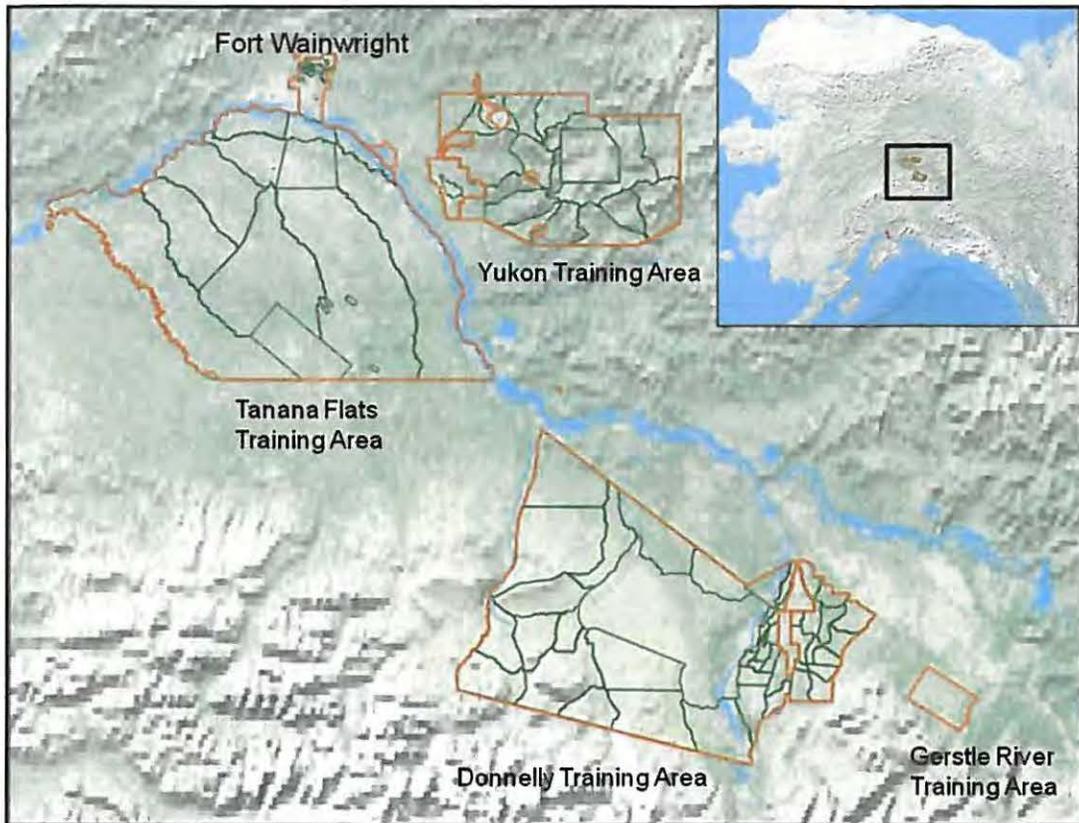


Figure 1. Location of the USAG FWA's training areas in central Alaska.

Historic Background

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 un-surveyed region with areas of high potential for yielding evidence of this activity.

Alaska has long been regarded as the gateway to the America's 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 American's.

After initial colonization, archaeologists generally divide Interior Alaska's prehistory into three broad archaeological themes: the Paleoarctic Tradition (12,000-6,000 years ago¹), 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 (Bigelow and Powers 2001), Walker Road (Bigelow and Powers 2001), Swan Point (Bigelow and Powers 2001), Mead (Bigelow and Powers 2001), and Broken Mammoth (Bigelow and Powers 2001). 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 (Bigelow and Powers 2001) 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 Anderson² (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 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 the 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

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.

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 (2) 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-scrapers forms, and burins. West later defined the Denali Complex as a regional variant of the American Paleoarctic Tradition (West 1981). Denali Complex 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 the TFTA (XMH-2043) 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

which initiated the widespread establishment of spruce forests (Potter 2008). The boreal forest in Interior Alaska was established 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 several on Army lands (e.g., XBD-277, XMH-277, XMH-283, XMH-303, XMH-309, XMH-874, XMH-950, XMH-1130, XMH-1168, XMH-1300, Robertson et al. 2004, Raymond-Yakoubian and Robertson 2005.) Several sites (XBD-270, XMH-915, XMH-925), including the excavated Banjo Lake site in DTA (XMH-874), 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 recently found in a buried context at DTA (XBD-272) (Robertson et al. 2009).

The Athabaskan Tradition includes late prehistoric and proto-historic cultures generally believed to be the ancestors of Athabaskan 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 diversification 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).

Athabaskan 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 Athabaskan 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 Fort Wainwright and Fort Greely. Salcha, Chena, Wood River, Goodpaster, and Healy Lake bands have inhabited the region since proto-historic 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 portions of what are now Fort Wainwright and Fort Greely (McKenna 1981). Several villages have been reported on or near Fort Wainwright. One village 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-335) 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 (McKenna 1981; Andrews 1975; Mishler 1986). Historical accounts document traditional settlement patterns that were focused on a widely mobile season round, with the fall caribou hunt playing a pivotal role in subsistence preparations for the winter and summer activities focused on fish camps, berry and root collecting, and 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 (McKenna 1981).

As Euro-American traders, miners, missionaries, and explorers moved into the Tanana River Valley, the traditional life ways of local Athabaskan 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 (McKenna 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 Forty mile 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 lumber, also developed to support mining 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, and 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 they 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 the summer and sleds in the winter. As commerce in the area increased, roads and trails were constructed, sometimes following earlier indigenous routes. The major overland route to tidewater 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 (However, roadhouses were located out on what are now Fort Wainwright training lands. One property was on the Bonnifield Trail in the TFTA while two roadhouses and a seasonal tent operation existed along the Donnelly-Washburn Trail in the current Donnelly Training Area). 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 helped expand transportation options for the region, connecting Fairbanks to the tidewater at 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 26 miles southeast of Fairbanks (Eielson Air Force Base). These locations began as Lend-Lease bases and cold weather testing centers, but they 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.

The Army also owns property west of Tok, Alaska called the Tok Terminal Pump Station. Six sites were discovered here by John Cook in the early 1980s. Three of these sites have been found ineligible for the National Register (TNX-6, 7, 8). The other three sites were relocated in 2012.

Status of Archaeological Resources

Archaeological research on Fort Wainwright training areas has resulted in numerous technical reports (Bacon 1979; Bacon and Holmes 1979; Dixon et al. 1980; Esdale et al. 2013, 2012a, 2013b, and 2012c; Esdale and McLaren 2013; Esdale and Robertson 2007; Espenshade 2010; Bradley et al. 1973; Gaines 2009; Gaines et al. 2010, 2010; Hedman et al. 2003; Higgs et al. 1999; Holmes 1979; 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 et al. 2013; Robertson 2010; Robertson et al. 2004, 2006, 2007, 2008, 2009; Staley 1993) and several 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 National Register, 504 sites have not been evaluated, and 84 additional sites have been determined ineligible for the National Register. Of the eligible or un-evaluated sites, 8 are historic sites and 570 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-40, 41, 42, 43, 199, and 200) (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-509), which has failed to be relocated in subsequent attempts. In 2001, the Army began partnering cultural resource 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-1603 and 1604) and one additional prehistoric site (FAI-1990) were found in these investigations. In 2011, CEMML completed survey of the entire cantonment, north and south of the Chena River, discovering one additional historic site (FAI-2117). Of the 13 archaeological sites known from the Fort Wainwright cantonment, 9 (FAI-1603 and 1604) have been determined not eligible, one has been determined eligible, and the remaining three 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-335), Clear Creek Butte (District FAI-336), and Wood River Buttes (District FAI-337) (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 106 new sites were found in 2009-2013 during survey of the Wood River Buttes, Salmon Loaf Butte, and areas north and east of Blair Lakes. In total, archaeologists have identified 161 archaeological sites in TFTA. Of these sites, 19 have been determined eligible for inclusion in the National Register, one is not eligible, and 141 have yet to be evaluated.

The road system in Yukon Training Area (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 Stuart Creek Impact Area, McMahan Trench, 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. Eleven of the sites have been determined not eligible for listing in the National Register and eleven have not been evaluated. XBD-162 will not be evaluated due to its location in a heavily used portion of Stuart Creek Impact Area.

Archaeological investigations in what is now Donnelly Training Area 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 1979). Julia Steele surveyed various locations in DTA from 1980-1983, finding four additional sites (Steele 1980, 1980, 1982, 1982, 1983, and 1983), and Georgianne Reynolds surveyed the Donnelly Dome area in 1988, locating one more site (Reynolds 1988). Investigations in DTA from 1992-2002 were 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 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 Battle Area Complex and its surface danger zone. Sites have also been discovered during surveys for road and trail maintenance. Potential expansions into DTA West, west of the Delta River, have prompted recent surveys into new areas such as Molybdenum Ridge, where 26 new sites were discovered in 2011 and 2012. Because of its remote setting, however, the archaeology of DTA 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 Center for Environmental management of Lands (CEMML) and others since the last ICRMP to survey areas in DTA West and many new archaeological sites have been recorded (Espenshade 2010).

To date, 446 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 334 sites remain to be evaluated. Historic archaeology sites are poorly represented in this region, with only three currently known to exist. The Donnelly Ridge District (XMH-388) encompasses Denali 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.

The Gerstle River and Black Rapids Training Areas (GRTA and BRTA), also managed by Fort Wainwright, have been infrequently utilized for training activities, and very few surveys or identification of archaeological sites have occurred these areas. CEMML archaeologists surveyed two small portions of GRTA in 2011-2013. Three prehistoric sites are known from this training area. Ten sites, which have not been evaluated for the National Register, have been discovered in BRTA, eight of these were found in 2012-2013. Future research is planned for both of these training areas where military activities are planned to take place in the next five years.

Description of Undertaking (36 CFR 800.11 (d) (1))

Archaeologist Ted Goebel from Texas A&M University proposes to undertake a scientific excavation of archaeological site FAI-02043 (Figure 2) located in Fort Wainwright's TFTA. He is planning a multi-year project to determine the site's horizontal dimensions and uncover Holocene and Late Pleistocene cultural material. The excavation will be phased with small test units at regular intervals

along the landform in 2014 to determine the spatial extent and artifact distribution of the site. In 2015, a more thorough excavation of high artifact concentration areas is planned. Tests will take place over a 250 x 250 m area and up to 50m² of ground will be excavated. The area of potential effect (APE) for the project is the 250 x 250 m area shown in Figure 2.

Within the APE, vegetation will be removed to allow access to the ground surface. All tests and excavations will be by hand using trowels and skim shoveling. Artifacts will be analyzed at Texas A&M University and housed at the University of Alaska Museum of the North.

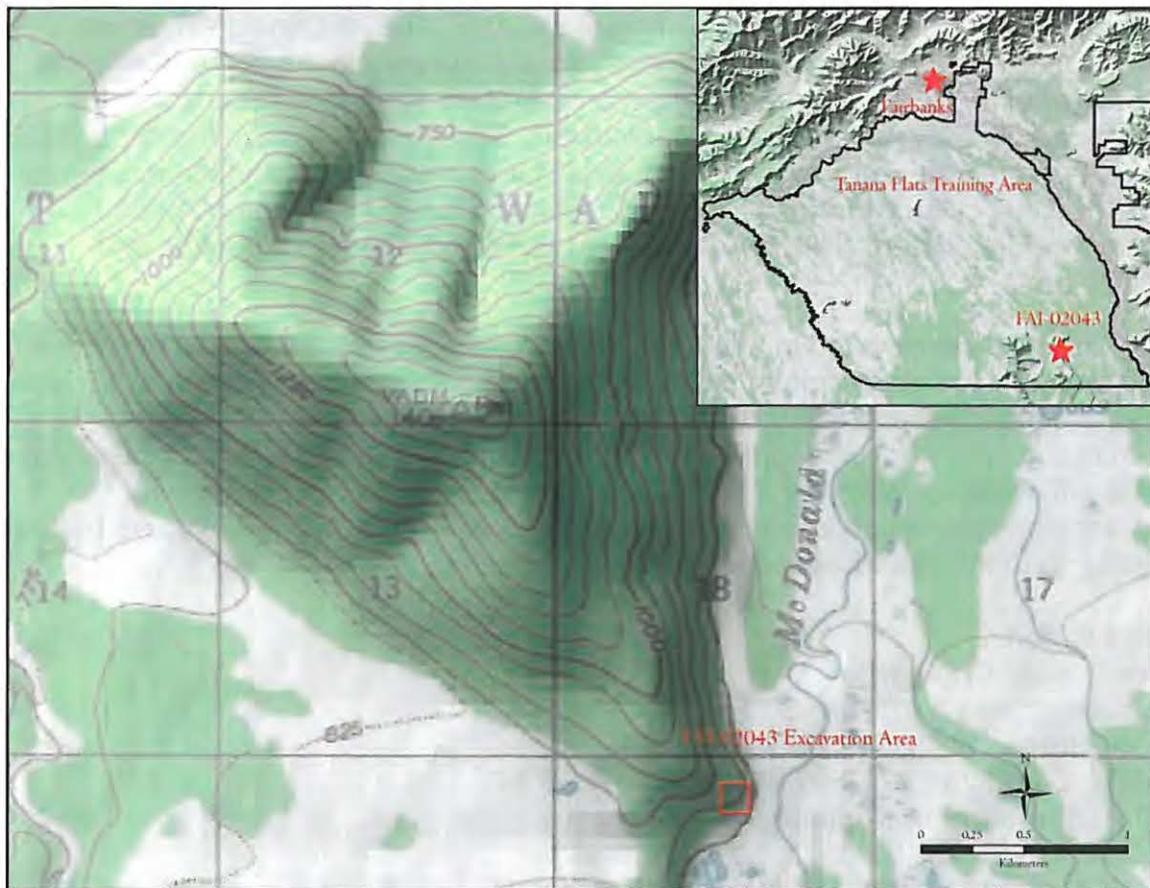


Figure 2. Location of FAI-2043 excavation area.

The McDonald Creek site has high potential for increasing our understanding of the lifeways of the first Americans. Humans began to populate North America in the late Pleistocene, likely not much earlier than 14,000 calendar years BP (Goebel et. al 2008). The earliest sites in Alaska (Swan Point and Mead; Holmes 1996) are found in the Tanana Valley between the Blair Lakes region and Delta Junction. McDonald Creek, with radiocarbon dates from charcoal associated with cultural material in the lowest component of 13,800 calibrated years before present, is among the oldest sites in Alaska. The deep stratigraphy and

association of faunal material, lithic tools, and charcoal at this site suggests a significant potential to play into research problems dealing with the Peopling of the Americas, Alaskan assemblage variability, and early landscape use patterns in the Tanana Valley. The fauna collection is rich and provides evidence for questions about hunting strategies in late Pleistocene Eastern Beringia. Because it is a multi-component site with good stratigraphic separation between occupations, analysis of the cultural materials will also help in defining culture-historical frameworks for Alaska.

Steps Taken to Identify Historic Properties (36 CFR 800.11 (d) (2))

One archaeological site is known from the APE. The McDonald Creek site was found by Ned Gaines during archaeological surveys in the TFTA during the summer of 2010. It was immediately recognized as significant because of the deep stratigraphy and multiple cultural layers. Testing at the site in the fall of the same year uncovered faunal material associated with artifacts and charcoal from the deepest cultural levels produced a calibrated radiocarbon age of 12,600 years before present. This level contained stone tool sharpening debris and bison bone.

The site was revisited in 2013 and the original excavation until was reopened for analysis. A deeper cultural level was encountered producing a date of 13,900 years before present. Charcoal from the bison bone layer was produced a radiocarbon date reconfirming the 2010 discovery. There are at least 4 separate cultural horizons within the stratified deposits at the McDonald Creek site, spanning the time period from the middle Holocene (7300 calibrated years before present) to the late Pleistocene.

FAI-02043

McDonald Creek Site



Determination of Eligibility: Eligible

FAI-02043 is a buried, intact, archaeological site located in the Blair Lakes Region of the TFTA, south of Fairbanks, AK. Three separate components produced radiocarbon dates indicating late Pleistocene and middle Holocene occupations. Charcoal was found in association with lithic debitage in both components. Mammal bone fragments, including bison, occurred in the second lowest component.

Site FAI-02043 is located at the foot of a large bedrock knoll, roughly seven kilometers east of the Blair Lakes (Figure 2). Site elevation is 260 masl. The vantage point provides a commanding view to the east of the flats below, the Tanana River valley and Flag Hill. The ecosystem is characterized as mixed needleleaf-broadleaf forest with an understory of young birch, some alder, shrubs

and forbs. This site was identified through subsurface testing. At the time of discovery, 94 flakes were recovered from four of four test pits excavated. Two of these tests also yielded unidentifiable large mammal faunal fragments. Shovel testing suggested that the site contained at least two components: one at ~0-45 cm BS, and another deeply buried in the lower loess and basal sands at 90-120 cm BS. Three of the four test pits (Figure 3), those nearest the edge of the landform, reached basal gravels at 100-130 cm BS, while one test pit (AT 50) was excavated to the depth possible with a shovel, terminating at 140 cm BS without finding the bottom of the basal sands.

To understand the significance of the site, two square meters were excavated to a depth of about 135 cm BS. A total of 14 levels were excavated, extending the excavation roughly 35 cm into the basal sands and at least 15 cm deeper than the lowest recovered artifact. Levels 1-5 of the excavation unit produced no cultural remains. Artifacts were recovered from Levels 6-13. The basal level, Level 14, was 25 cm thick and excavated into entirely sterile deposits. Figure 4 shows the location of lithics and bone in each excavation level. A total of 1106 pieces of lithic debitage and 538 faunal fragments were recovered from the excavation unit. In addition, two cobble hammerstones, and at least four enigmatic angular rocks, likely manuports, were recovered from the lower zone of cultural material. Lithic and faunal material was recovered from depths of 10-30 cm BS and 75 to 125 cm BS (Figure 4).

No diagnostic artifacts were found at the site, but stone tool making debris was found with charcoal and large mammal remains including bison. Test pit AT 50 provided a piece of charcoal associated with flaked stone roughly 2 cm above the loess/sand contact that dated to 12,800 calibrated years before present (Beta-281235), demonstrating the antiquity of the lower component. Dispersed charcoal found in association with flakes in the upper component at 22 cm BS produced a date of 7,300 (Beta-283427) revealing the presence of a middle-Holocene occupation.

In 2013, four additional units were opened to determine if there was enough cultural data for future excavations and to determine if the late Pleistocene radiocarbon dates could be reproduced (Figure 3). In addition to the cultural components already described, a lower unit containing bifacial pressure flakes and charcoal was discovered. The lowest level from the 2010 investigations provided a calibrated date of 13,500 years before present (Beta-364087) and the even deeper cultural component dated to 13,800 (Beta-364088).

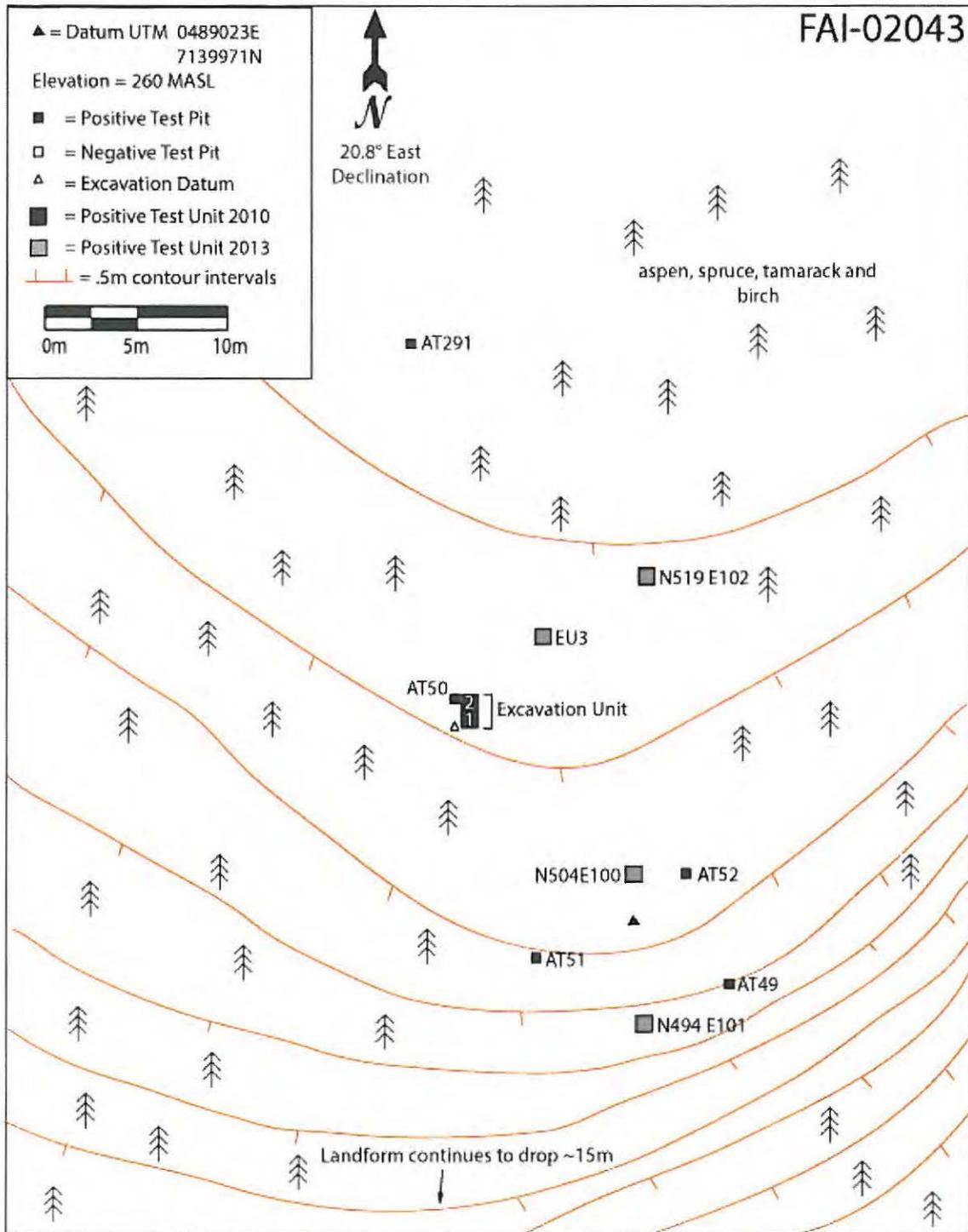


Figure 3. McDonald Creek site map with 2010 and 2013 test locations.

While the sample from FAI-02043 is limited thus far, several robust inferences are possible. The deepest cultural levels are coeval with Upward Sun River component C1, Broken Mammoth component CZ 4, the lowest Mead

components, Swan Point CZ4, and four components in the Nenana Basin (Goebel et al. 1996; Goebel and Bigelow 1996; Hoffecker 1996; Holmes 1996; Pearson 1997; Potter et al 2008; 2011). The character of the lithic and faunal assemblages from this site is most similar to Broken Mammoth CZ 4 and Upward Sun River C1 with abundant lithic debitage and few formal tools. The presence of large and small game and waterfowl is also very similar to the Upward Sun River C1 and Broken Mammoth CZ 4 faunal assemblages and provides further evidence of broad-spectrum hunting strategies in late Pleistocene Eastern Beringia. The long bone breakage patterns and associated cobbles indicate marrow extraction. The presence of waterfowl suggests an early summer to fall occupation.

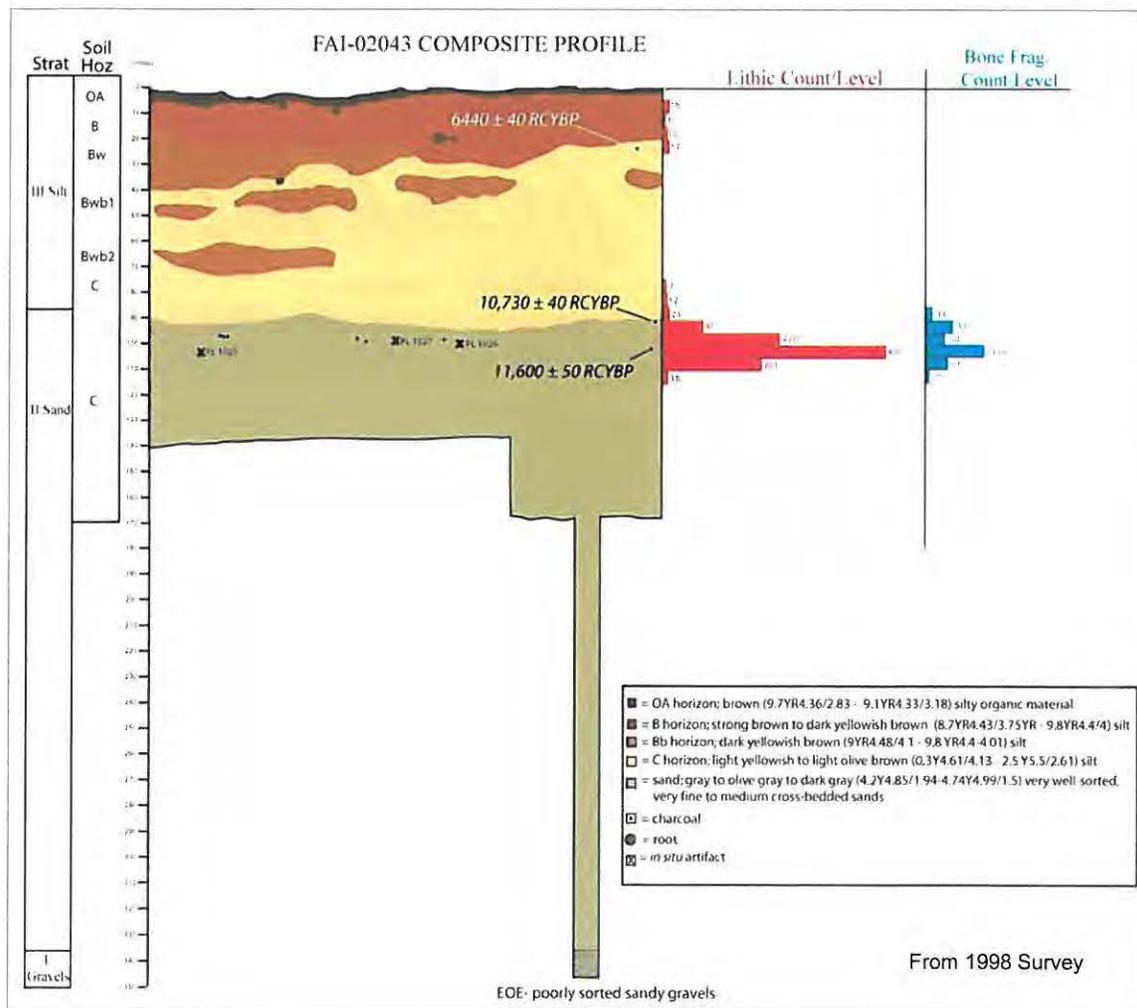


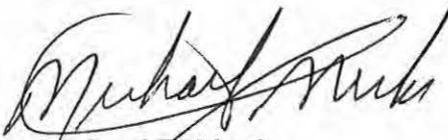
Figure 4. Composite stratigraphic profile.

Determination of Effect (36 CFR 800.11 (d) (3)) - Historic Properties Adversely Affected

After careful evaluation of the Texas A&M plan for scientific excavation at the McDonald Creek site in the TFTA, the USAG FWA finds that the issuing of the APRA permit would result in **Historic Properties Adversely Affected**.

USAG FWA recommends that mitigation for this undertaking be the data recovery itself including reports from the scientific excavation by Texas A&M University. Copies of this letter will be sent to all consulting parties (see Appendix 1) and notification of this undertaking will be sent to the Advisory Council on Historic Preservation. If you have any questions or require additional information, please contact Julie Esdale, USAG FWA Archaeologist at (907) 361-9405 or at julie.a.esdale.ctr@mail.mil.

Sincerely,



Michael T. Meeks
Director, Directorate of Public Works

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Appendix 1: Consulting Parties

Federally Recognized Tribes:

Nenana Native Association
PO Box 356
Nenana, AK 99760-0356

Native Village of Tetlin
PO Box 797
Tok, AK 99780

Native Village of Tanacross
PO Box 76009
Tanacross, AK 99776

Northway Village
PO Box 516
Northway, AK 99764

Healy Lake Village
PO Box 73158
Fairbanks, AK 99707

Village of Dot Lake
PO Box 2279
Dot Lake, AK 99737

Interested Agencies:

Tanana-Yukon Historical Society
PO Box 71336
Fairbanks, AK 99707-1336

Bureau of Land Management
1150 University Avenue
Fairbanks, AK 99709-3899

Fairbanks North Star Borough
Historic Preservation Commission
PO Box 71267
Fairbanks, AK 99707-1267

Tanana Chiefs Conference, Inc.
Cultural Resources Department
122 First Avenue, Suite 600

Fairbanks, AK 99701-4897

Cook Consulting
PO BOX 72511
Fairbanks, AK 99707

University of Alaska (Museum)
PO BOX 756960
Fairbanks, AK 99775

University of Alaska (Anthropology)
PO BOX 757720
Fairbanks, AK 99775

National Park Service (Fairbanks)
4175 Geist Road
Fairbanks, AK 99709

National Park Service (Alaska Regional)
240 West 5th Ave
Anchorage, AK 99501

