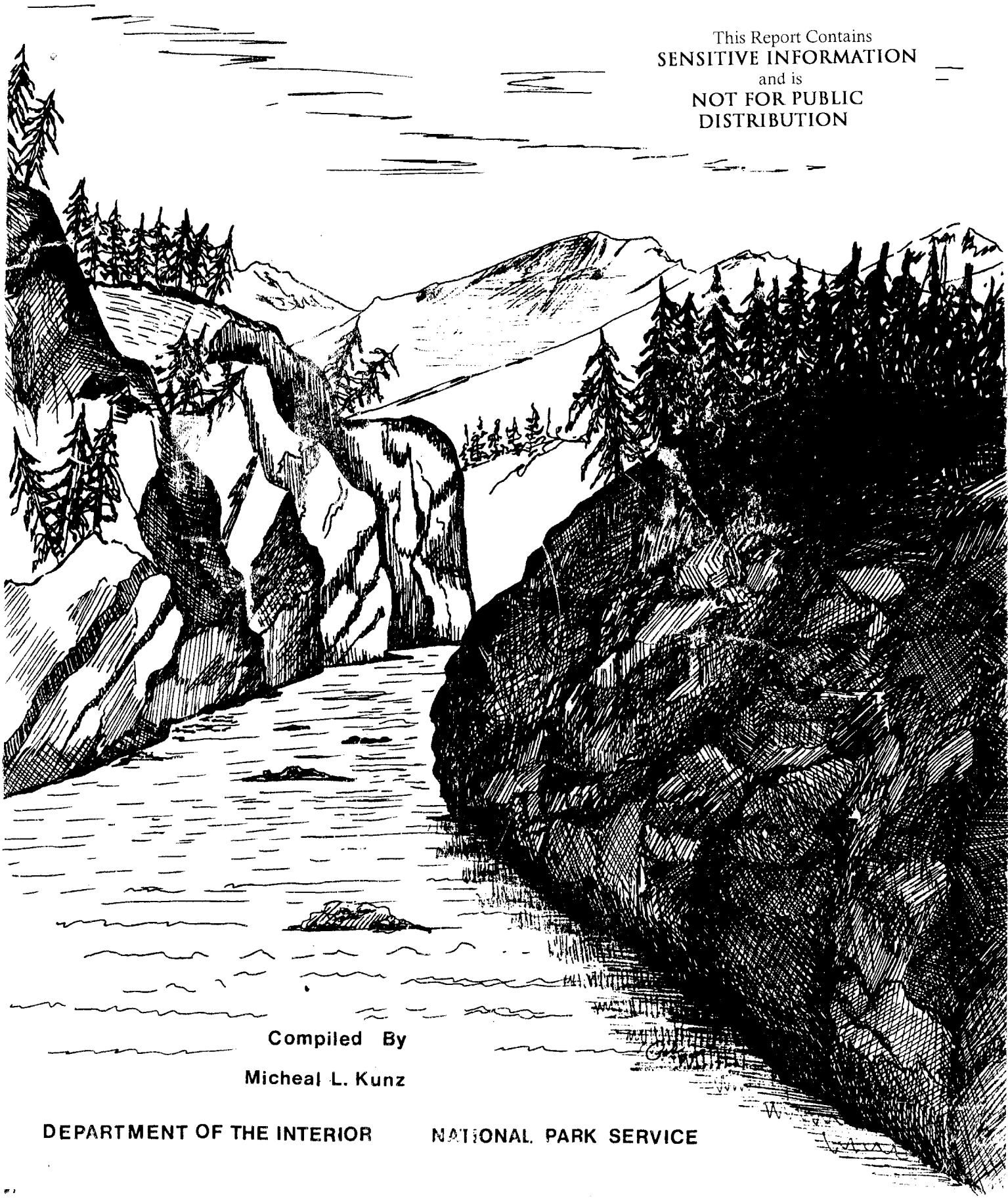
UPPER KOBUK RIVER DRAINAGE

ARCHEOLOGY

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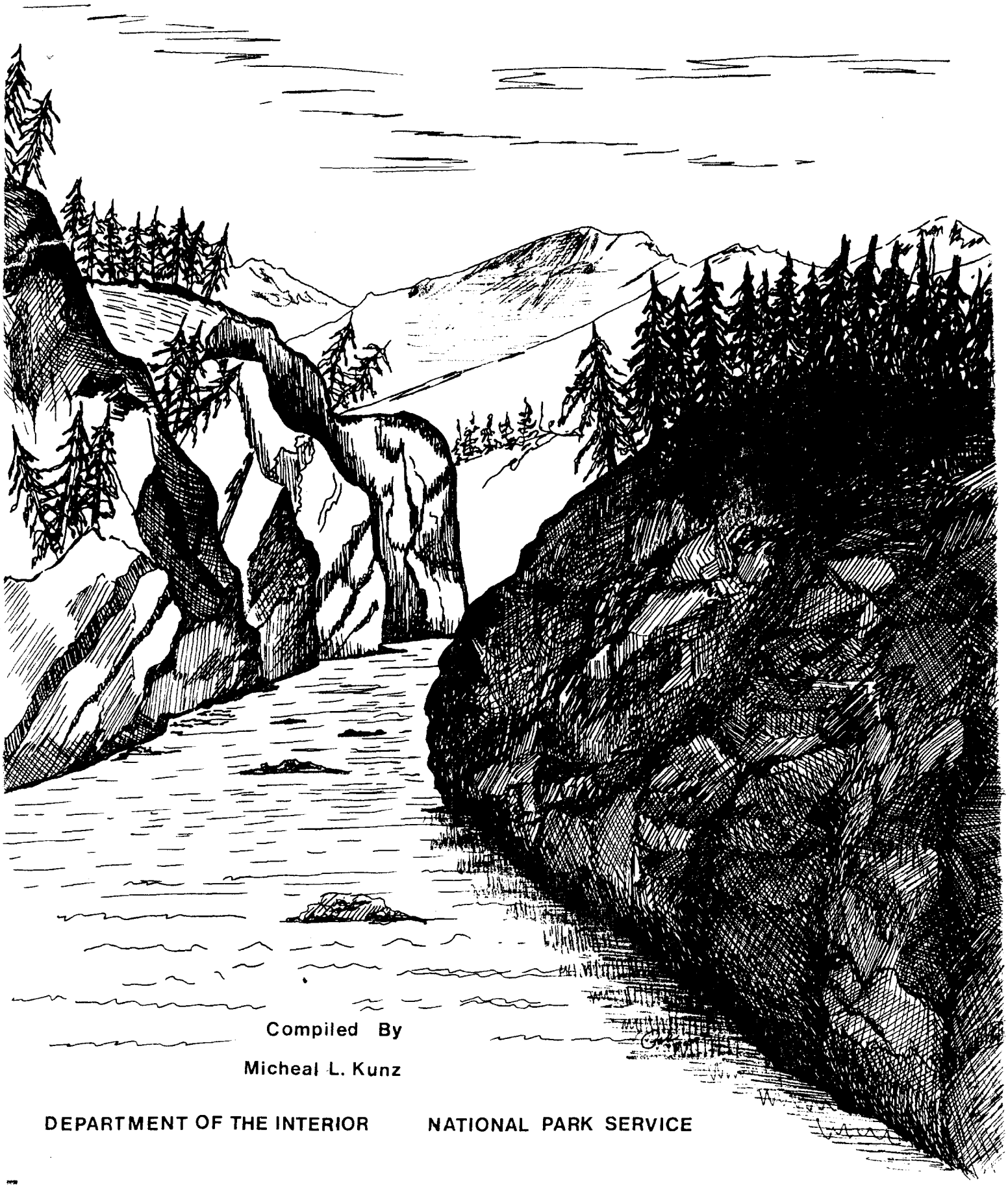


Compiled By

Micheal L. Kunz

DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

UPPER KOBUK RIVER DRAINAGE ARCHEOLOGY



Compiled By

Micheal L. Kunz

DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

The cover illustration is a rendition of an engraving in the original report of John C. Cantwell's expedition to the headwaters of the Kobuk River in 1885. In Cantwell's report, the engraving is titled, "Head of Boat Navigation, Kowak River, Alaska". This location is now known as the Lower Kobuk River Canyon.

Department of the Interior
National Park Service
Gates of the Arctic National Park and Preserve

Upper Kobuk River Drainage: Report of Phase I of A Cultural Resources Survey and Inventory in Gates of the Arctic National Park and Preserve

Compiled by:
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Mark Standley

This is not a final report. This document is a report of a portion of the data from which a comprehensive final report will be generated at the conclusion of the project. Therefore, this report has not been reviewed for conformity with National Park Service editorial standards.

May 1984

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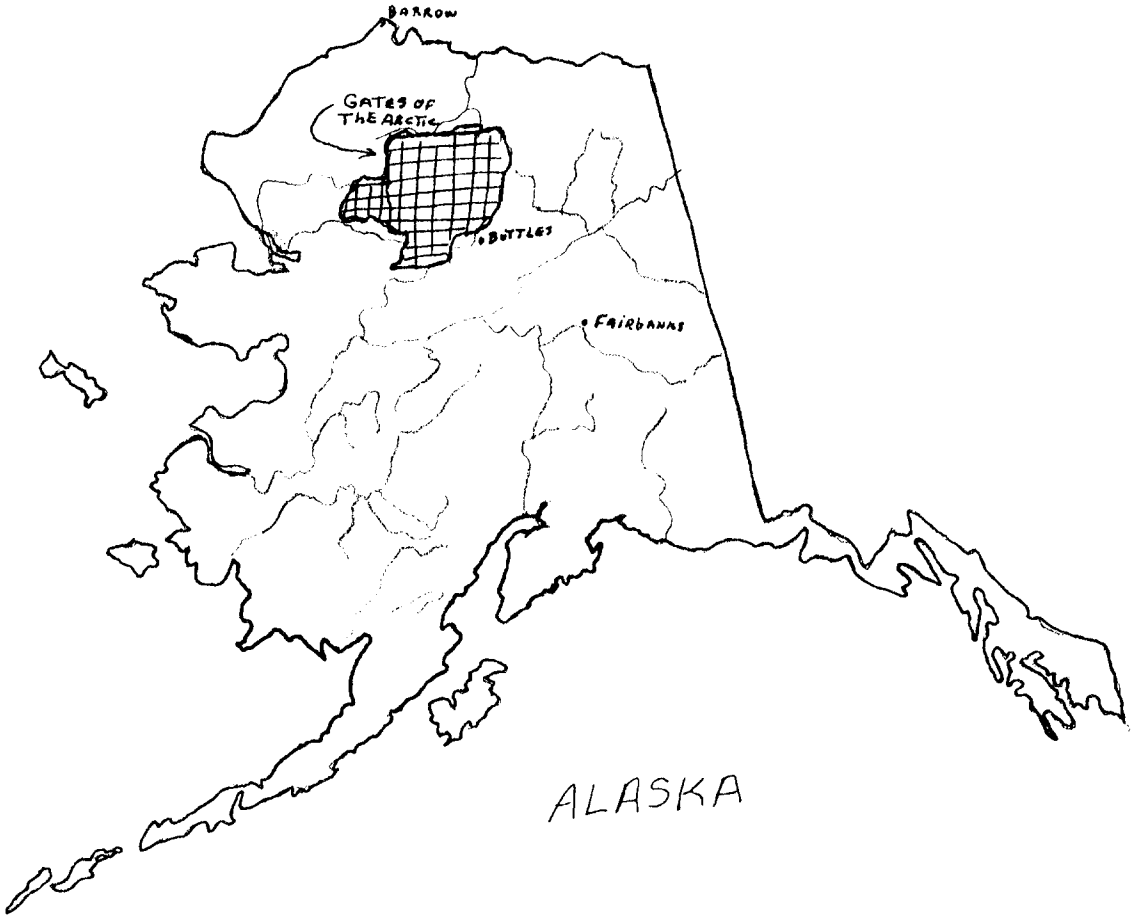
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BARROW
GATES OF THE ARCTIC
BETTLES
FAIRBANKS
ALASKA

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Preface

During the summer of 1983, Phase I of a five phase Cultural Resources Inventory in Gates of the Arctic National Park and Preserve was carried out.

The project consists of both a prehistoric (archeological) component and a historical component. The 1983, (Phase I) portion of the project was funded for archeological work only, however a fair amount of historical background data collection was undertaken and historical and recent sites were noted and recorded when they were encountered in the field.

Despite the fact that the project director was not hired until mid April of 1983, the project personnel were hired, the research design developed, supplies and equipment purchased, a plan and schedule of field operations developed, logistic and support needs defined. The crew was in the field by June 4.

The area covered by Phase I fieldwork was the Upper Kobuk River, essentially from its headwaters downstream to the Lower Canyon. This investigation also included areas adjacent to the river such as Walker Lake, Nutuvukti Lake, Selby/Narvak Lakes, and the mid-portion of the Reed River.

The filedwork was conducted by a crew of four professional archeologists which included the project director. Two of the crew members were masters level graduate students from the University of Alaska, Fairbanks. The other crew member was a PhD. level graduate student from the University of Washington, Seattle. The total amount of Alaskan archeological and remote operations experience possessed by this crew was 28 years. The project director had had 13 years of archeological experience in the Brooks Range and the North Slope. The crew's experience in Alaskan field conditions and archeology was the major contributing factor to the success of the field season.

The crew spent a total of eleven uninterupted weeks in the field working out of fly camps. These fly camps consisted of individual sleeping tents, large enough to accomodate the occupant and all the personal gear required for support for an eleven week period, and a 10' x 12' wall tent used for cooking, socializing, and storing supplies and equipment.

Camp location was changed twelve times during the course of the field season. Camp was moved by raft, helicopter, and twin engine fixed wing amphibious aircraft.

The field work was totally pedestrian in nature. All transportation, other than camp moves, was by foot. It is estimated that each crew member walked between 900-1200 miles while conducting reconnaissance during the course of the field season. Camp was moved whenever it became unprofitable to continue (in terms of distance) working out of a given location.

A total of 214 prehistoric and approximately 10 historic sites were located as a result of the 1983 fieldwork. Preliminary analysis indicates that the vast majority of the prehistoric sites are Indian (Athapaskan), although some Eskimo manifestations may be present. Most of the sites appear to be small in size and seem to reflect short-term hunting activities. Several of the larger sites indicate long-term habitation, perhaps seasonal camps. The chronologic range of these sites appears to be 7000-200 years B.P. Preliminary data from radiometric and obsidian hydration analysis suggests that the majority of occupation of selected sites occurred between 2500-1000 years ago.

Historic sites, while not as numerous as the prehistoric sites, represent a variety of interesting periods of acvitity. Several of the sites may represent early exploration by non-native people ca. 1885, (Cantwell, Stoney) while others may reflect the activities of prospectors involved in the 1898-99 Kobuk River gold rush. Other sites may represent small, short-term, hunting or trapping camps indicating activity in the last 60-80 years.

Some recent sites were also located along the Kobuk River. These sites probably reflect use of the river as a means of transportation in pursuit of various recreational activities.

There is no better way to learn about an area of remote wilderness than to live in and walk over/through it. The archeological field crew was essentially living under the same conditions and in the same manner as did the original non-native explorers 100 years ago. As a result, the field crew learned a lot about the area in terms of the environment/ natural history and probably has better on-the-ground knowledge of the area investigated than anyone else alive today.

In addition to the notes kept concerning the prehistoric finds, daily notes were kept regarding weather, animal sitings, daily camp routine, and descriptions of vegetation, soils, drainages, and other aspects of local geomorphology (1200 pages of hand written notes).

The end product of all this data gathering and analysis is a report which attempts to cast some light upon the lifestyle of past human occupants of the area, through time, and to identify the people culturally (Indian and Eskimo) and document, when possible, site density patterns, prehistoric subsistance patterns, and major land use changes over the last 8,000-10,000 years.

Methodology

A reconnaissance level survey is "...A sample oriented field inventory designed to locate and record, from surface and exposed profile indications, all cultural resource sites within a portion of a defined area in a manner which will allow an objective estimate of the nature and distribution of cultural resources in the entire defined area" (BLM, 1978).

The primary objective of this survey was to locate as many sites as

possible in the study area. Therefore, judgemental sampling or the use of an operational model of site location was the sampling strategy employed.

Archeological sites were sought in locations where past work in similar physiographic locales have shown the majority of sites to occur. Area archeological expertise and judgement are the backbone of this type of sampling strategy. Sampling of this type does not investigate the entire spectrum of landforms in a study area equally. Much more time was spent surveying in potentially good areas than in potentially poor areas. The result is that sites which occur in the potentially poor areas are less likely to be found. However, to reach areas of high archeological potential, the archeologist often has to cross areas of low archeological potential. While traversing low interest areas, the archeologist is still observing the ground, albeit in a hurried and cursory manner. In this way, areas of low archeological potential receive some coverage even if it is unplanned and uncoordinated. As a result, some of the less common types of sites were located and documented.

Given this sampling bias the information obtained from the survey should be useful from a general management and planning point of view. A general pattern of site density and distribution in the more easily traversed and hospitable portions of the study area was generated. These areas are of primary concern in terms of management and planning for the preserve as they are the locations most likely to be impacted by recreational use or road construction. Additionally, the surveyed areas should generate enough data to make some reasonable assumptions concerning land use, temporal range, and cultural affiliation of the prehistoric inhabitants of the region.

At the end of each site report is a very brief statement of site significance. This statement is made for the benefit of the land manager so that judgements concerning the necessity of mitigative action regarding an impacted archeological site can be made. <u>This statement of significance should not be considered acceptable for use in submitting nominations for the National Register of Historic Places as in no case has sufficient site data for nomination been obtained</u>.

Due to the fact that much of the study area is forested and supports relatively dense ground cover, much of the actual surveying was of an opportunistic nature. In other words, areas which are free or relatively free of vegetative cover received the majority of attention. Fortunately areas of this type, located on a wide range of geomorphological features, are not uncommon as they exist for a variety of environmental reasons.

Investigation of several geomorphological/ecological zones was the basis for stratification of the sampling universe. Zones of this type often contain criteria of varying levels of importance in relation to the number and type of site occurrence. Criteria of this type include landforms such as terraces, glacial (stagnant ice) features, drainage confluences, knolls, ridges and hills. More general criteria include local drainage conditions, elevation, exposure, view, and proximity

to potable water. Use of these criteria assumes there has been little more than general change to the geomorphology/ecological zones for the majority of the period of possible human use of the region. In general terms, this means that a locale which appears to possess the criteria of a good camping or hunting location or a good travel route today would have appeared similarly inviting to people during the last eight or nine millennia.

A site, for the purposes of this survey, was considered to be any location of past human activity which was represented by the remains of their material culture (Davis et al, 1981). Essentially this means that the location of a single flake, cairn, or tent peg was considered a site and underwent the same documentation procedures as did the larger, more complex manifestations.

Additionally, criteria had to be set up to determine the boundaries of a site, ie where a given site begins and ends. An arbitrary distance of 100 meters was chosen. In other words, if 100 meters or more of culturally sterile ground separated two surface lithic scatters, then they were considered separate sites. Less than 100 meters spearation and the lithic scatters were considered localities of the same site. This rule could be obviated if lithic scatters were less than 100 meters apart but were separated by an abrupt change in the topography such as a creek, river, gully, or glacial feature. Such a decision was judgemental on the part of the investigator.

The methodology for the actual survey work varied with local conditions. In forested areas or areas of dense ground cover, where visibility was poor, compass bearings were used to maintain direction and line. Each crew member carried air photos and/or maps applicable to the area being worked so they could easily located themselves and any sites they found. In open areas where vision was not obstructed and orientation was not a problem, more latitude (wandering) in the survey work was possible. No specific method for finding sites was employed (such as walking fixed interval, transects, etc.). The method employed varied with the terrain features and the archeologist's best judgement.

While the survey was basically a surface survey, some test pits were excavated at many sites (to determine site limits or in likely looking areas, where there was no surface indication, to determine if a site. was present). Where warranted, a test square was excavated (size of test squares were limited to 50 $cm.^2$). This was only to be done at sites which appeared to contain highly important or unique data. This type of activity was kept to a minimum.

Artifacts, unless excavated, were not collected. Formal artifacts, when encountered on surface, were photographed or drawn, measured, described in the field notes, and otherwise recorded, Artifacts were located by means of triangulation from a baseline/datum point. The datum point also served as a site location marker to which a metal I.D. tag was affixed. All sites were assigned Alaska Heritage Survey numbers and this number was placed on the metal tag. All sites were located on USGS maps and aerial photographs. Formal cataloging of artifacts and

preparation of a final report was undertaken upon returning from the field.

INTRODUCTION

THE STUDY AREA

Physiography

This survey includes approximately the upper one quarter of the westward flowing Kobuk River which drains the Schwatka Mountains of the west Central Brooks Range. The area lies between 154° and 156° west longitude and between 66° 45' and 67° 05' north latitude. All of this area lies north of the Arctic Circle. The upper Kobuk River enters the eastern edge of the survey area at an altitude of about 1000 feet and decends to about 250 feet at the western boundary. The survey area lies entirely west of the continental divide. The area is bounded on the north by the range front of the Brooks Range, as the river valley gives way to mountains over 4000 feet high. South of the Kobuk River, the area is bounded by the Lockwood, Norutak, and Helpmejack Hills, which reach altitudes of 3000 feet. Within the survey area, most of the important tributaries of the Kobuk River enter from the north. The Walker Lake outlet stream is the most important; it is nearly as large as the Kobuk itself at their point of confluence.

Fifteen miles to the west, downriver, the Reed River enters the Kobuk from its source in the glacier system of Mt. Igikpak. Below the confluence with the Reed River, the Kobuk Valley broadens and its gradient becomes more gradual. Beaver Creek, which heads at Akurekvik Pass and drains Lake Minakakosa, enters the Kobuk a short distance downstream from the Reed River. Finally, the Selby River, which drains Lake Selby and Narvak Lake, enters the Kobuk at the western edge of the survey area.

Climate

The survey area lies just on the boundary of the Interior Basin and Arctic Drainage climatic divisions as defined by the National Climatic Data Center (1982). These divisions experience quite different climates, but from scanty data from Ambler, 75 miles west of the survey area on the Kobuk River, the survey area seems more closely related to the Interior Basin Division (National Climatic Data Center, 1982). The 1982 records from Ambler show monthly temperatures closer to the Interior Basin averages than to those of the Arctic Basin division. Precipitation data for the same year at Ambler are significantly higher than those of either of the two climate divisions, reflecting a stronger maritime influence in the Kobuk drainage. The Interior Basin division experiences an average annual temperature of 23.9°F and average annual precipitation of 13.7 inches. The coldest month is January (-10.2°F), while July is the warmest (58.2°F). Average temperatures are above freezing from March through September. Temperature extremes range into the 80's and 90's in summer and may reach 50 degrees below zero in winter. Most of the precipitation falls as rain in the summer, with August the wettest month (2.55 inches [National Climatic Data Center, 1982]).

Geology: Bedrock

The Brooks Range is the northernmost extension of the Rocky Mountains. Lithologically it consists of a complex series of east-west trending belts of metamorphic, sedimentary, and igneous rocks. The sedimentary rocks of Paleozoic and Mesozoic age are folded, faulted, and locally metamorphosed. Limestone, graywacke, chert, shale, and schist are common rock types. Dark intrusive rocks of the Jurassic-Cretaceous period as well as other intrusive bodies of granite and diorite exist in the range (Black, 1969).

Most of these lithologies are found in or near the survey area, and contribute to the complex substrate that has conditioned the present physiography and surficial geology. North of the survey area, the highest peaks of this part of the Brooks Range are formed of granitic orthogneiss of Devonian age in the Mt. Igikpak and Arrigetch Peak plutons (Nelson and Grybeck, 1980).

The mountains that rise to form the northern side of the Kobuk Valley consist largely of schists and phyllites of undifferentiated Paleozoic age in the eastern part of the survey area (Nelson and Grybeck, 1980). At its Upper Canyon, the Kobuk cuts across a complex heavily faulted east-west trending belt of metamorphosed mafic volcanic rocks and phyllites of Jurassic age, and conglomerates of Cretaceous age (Patton and Miller, 1966). These units form the hills southwest of Nutuvukti Lake, and thus form the northern side of the Kobuk Valley in this vicinity. Further down valley, this same belt forms the Angayucham Mountains, bounded on the west by Narvak Lake. As it approaches its Lower Canyon, the Kobuk enters a province dominated by Cretaceous graywacke and mudstone (Patton and Miller, 1966). These rock types form the southern slopes of the Angayucham Mountains to the north and the Lockwood Hills and Norutak Hills (partially granitic and andesitic) to the south of the river.

The course of the Kobuk River in the survey area is in part structurally controlled. In the vicinity of Walker Lake, the river evidently flows in a downdropped fault block (Nelson and Grybeck, 1980), while south of Lake Selby the river's course parallels the numerous east-west trending faults mapped in the region (Patton and Miller, 1966).

Geology: Glacial

The surficial geology of the survey area is dominated by glacial deposits of Pleistocene age. Hamilton (1982) has recently revised the chronology and nomenclature of the glacial record of the south-central Brooks Range based on detailed stratigraphic work supported by radiocarbon dates. The oldest mappable glacial drift in the region is that of the Kobuk Glaciation, named by Fernald (1964; Hamilton and Porter, 1975), its distribution and age are poorly known. Drift limits of the Kobuk Glaciation extend beyond the southern edge of the survey area (Hamilton, 1982, written communication, 1984), and are not yet mapped in detail in this vicinity. The Kobuk drift typically consists of older and younger subunits thought to be respectively correlative

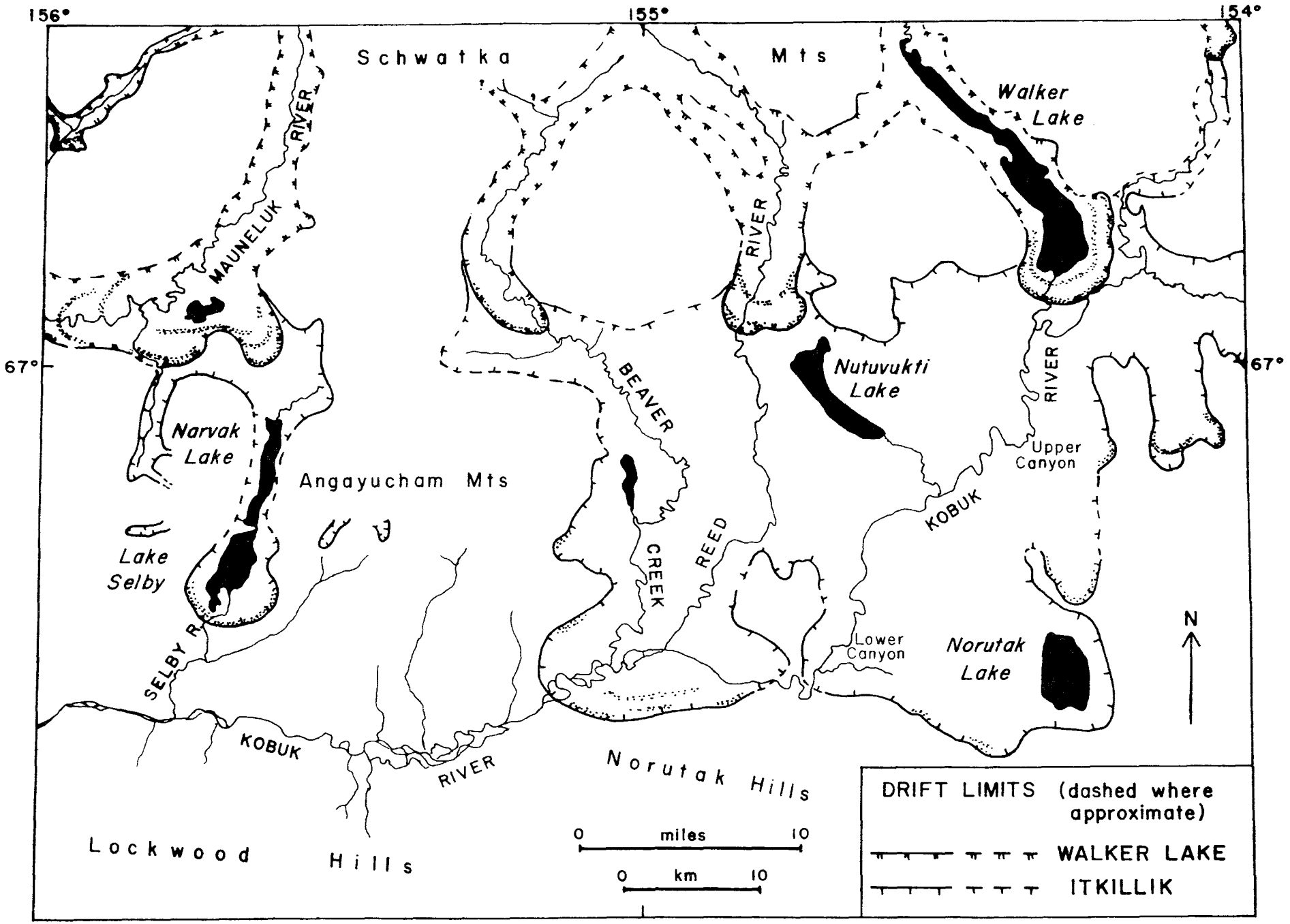


Figure 1. Glacial drift limits in the survey area. Drift of the Kobuk glaciation extends beyond the map area.

(Numerous nunataks and cirque glaciers not shown. Sources: north of 67°, T.D. Hamilton, 1981, Surficial geologic map of the Survey Pass quadrangle, Alaska, USGS Map MF-1320; south of 67°, T.D. Hamilton, written comm., 1984)

with the Sagavanirktok and Anaktuvuk glaciations of the Northern Brooks Range (Hamilton and Porter, 1975), the older of which (Anaktuvuk) is now thought to possibly be early pleistocene in age (Hamilton and Hopkins, 1982).

The Itkillik glaciation (Hamilton, 1982) formed extensive piedmont lobes in the survey area which were fed by ice streams flowing down the Walker Lake, Reed River, Beaver Creek, and Mauneluk-Selby Valleys. Two large coalescent lobes extended across the Kobuk Valley to the Norutak Hills, blocking drainage. A smaller lobe filled the Lake Selby Narvak Lake basin and formed the prominent terminal moraine complex at the south end of Lake Selby. The age of the Itkillik glaciation is beyond the range of convential radiocarbon dating (>50,000 years), but is believed to correlate with early Wisconsin glaciation (Hamilton and Hopkins, 1982).

The Walker Lake glaciation (Hamilton, 1982) is represented in the survey area by the type moraines at the south shore of Walker Lake (Fernald, 1964), and by nested moraine systems in the Reed River, Beaver Creek, and Mauneluk River Valleys. These glaciers also formed piedmont lobes that splayed out onto the lowlands at the valley mouths, but were much less extensive than those of the Itkillik glaciation, stopping just at the range front. The Walker Lake glaciation is now well dated in the South-central Brooks Range (Hamilton, 1982). A period of rapid alluviation in an outwash train traceable to the outer Walker Lake moraine at Walker Lake indicates a time of maximum ice advance between perhaps 24,500 and 22,500 years ago (Hamilton 1982: Fig. 3). Subsequent downcutting was followed by construction of a lower outwash train associated with the inner Walker Lake Morain. This moraine is not directly dated, but dated deposits downriver indicate alluviation continued until sometime after 17,700 years ago (Hamilton, 1982, Schweger, 1976). A basal radiocarbon date from Ruppert Lake, a kettle lake at the contact between the inner and outer Walker Lake moraines indicates the area was ice-free by 13,200 years ago (Brubaker et al. 1983: Table 2). Thus the Walker Lake glaciation spans a period between about 24,500 and 17,500 years ago, during which there were at least two ice advances. Holocene Glaciation has been confined to high altitude cirques that support modern glaciers north of the survey area.

These three major Pleistocene glaciations have left extensive drift sheets in the survey area, and have formed numerous topographic features that have archeolocical resources associated with them. The arcuate moraine systems of Walker Lake age at Walker Lake, and in the Reed River and Mauneluk River Valleys have archeological sites in association, as does the Itkillik age moraine at the south end of Selby Lake. These features are generally well-drained and their topography offers unique vantage points from which to survey the surrounding terrain. Erosional scaring by glacier activity has sometimes left features suitable for archeological sites, as in the conglomerate ridges between Nutuvukti Lake and the Kobuk River, and in the eroded piedmont gravels in the Kichaiakaka Creek Valley.

Elsewhere, sites are associated with well-drained alluvial terraces and with ancient beach deposits of Walker Lake and Lake Selby.

Soils

The soils of the survey area have not been mapped in any detail, only reconnaissance level information is available (Rieger et al. 1979). Due to the young age of most of the surfaces in the study area, and the cold climate and low precipitation, most of the soils are poorly developed and belong to the Inceptisol order. An important division between these soils is their internal drainage. Ice-rich permafrost is common in the area and poorly drained hydromorphic soils occur where drainage is impeded by the permafrost table. Soils typical of these conditions are Histic Pergelic Cryaquepts and Pergelic Cryaquepts on rolling upland areas with sedge tussock and dwarf heath vegetation. In very poorly drained muskegs, organic soils such as Pergelic Cryofibrists are found. Well-drained soils are found on glacial moraine systems, especially those of the Walker Lake glaciation, and on ridge tops, south facing slopes, and other similar features. Typical well-drained soils of the region are typic Cryochrepts or Dystric Cryochrepts, some displaying an albic (A_2) horizon indicative of podzolization. Where podzolization has been sufficiently intense, for example in well-drained spruce forests, typic Cryorthods may be found. However, recent soil genesis studies at Walker Lake have shown that bleached albic horizons typical of podzolization came from under lichen and dwarf heath cover in the absence of spruce trees (Ugolini et al., 1981). Where well-drained soils are either young or unstable, Entisols such as Pergelic Cryorthents, may be found.

Vegetation

The survey area is near the northern limit of the boreal forest. Treeline lies at an altitude of about 2000 feet in the study area (Ugolini et al. 1981). White spruce (Picea glauca) dominates the forest on well-drained sites on mountain slopes and along river terraces, accompanied by white birch (Betula papyrifera) and aspen (Populus tremuloides).

Black spruce (P. mariana) dominates the poorly drained areas at low altitudes, togther with white birch and aspen (Brubaker et al. 1983). Understory plants common to both white and black spruce forests include resin birch shrubs (B. glandulosa), ericaceous species such as blueberry (Vaccinium uliginosum), Labrador tea (Ledum decumbens ssp groenlandicum) and (L. decumbens ssp. palustre), crowberry (Empetrum nigrum), mountain-cranberry (V. vitis-idaea), as well as lichens (Cladonia sp. and Cetraria sp.). Alder (Alnus crispa) and willow (Salix sp) are common along stream courses and in draws above treeline. (Brubaker et al. 1983).

In addition to the forest understory plants, the apline tundra above tree-line is characterized by grasses, sedges (Carex sp), Cassiope tetragona, Artemesia arctica, Leuseleuri procumbens, Spiraea beauverdiana, and Anemone parviflors. Lowland shrub tussock tundra consists of cottongrass (Eroiphorum Vaginatum) and sedge (carex sp) tussocks with shrubs of resin birch, labrador tea, and other ericaceous plants, (Brubaker et al.,1983).

Recently a detailed study of pollen cores from lakes in the Upper Kobuk and Alatna River Valleys has provided a detailed late Pleistocene and early Holocene vegetation history applicable to the survey area (Brubaker et al. 1983). Three pollen zones, the Herb zone, Betula zone, and Alnus zone, have been identified that characterize the vegetation changes. The Herb zone at Ruppert Lake, a small kettle lake on the terminal moraine complex at Walker Lake, is found in the lowest portion of the core and ends at about 12,500 years ago. This zone shows high pollen percentages for sedges, grasses, willows, Artemisia, and several other herbaceous taxa (Brubaker et al., 1983). No exact modern analogues of this pollen zone are known. Brubaker et al. (1983) interpret this zone to represent large meadows or tussock tundra in the low lying areas near Ruppert Lake at this time. Other cores from higher lakes indicate Artemisia species were important components of mountain slope vegetation.

The Betula zone at Ruppert Lake lasts from about 12,500 to 7000 years ago. It is dominated by dwarf birch pollen. Populus balsamifera pollen shows a marked peak between 10,000 and 11,000 years ago. The authors interpret this as a response to warmer climate that allowed expansion of local cottonwood populations, probably on alluvial terraces. Explanations for the decrease in Populus pollen at 10,000 years ago include regional development of organic soils unfavorable to Populus and stabilization of flood plains in the Kobuk drainage. There is a brief peak in Picea pollen between 8,500 and 8,000 years ago, most of which is white spruce pollen. This may either indicate scattered spruce trees present in the area, or wind blown pollen from more extensive forests to the south. The Alnus zone lasts from about 7000 years ago until the present. It is characterized by a sharp rise in alder pollen that remains high until the present. Presumably this marks the establishment of Alnus shrubs in the Upper Kobuk Valley. Increases in white and black spruce pollen and birch pollen assigned to white birch between 6000 and 5000 years ago marks the establishment of the modern boreal forest in the survey area. Since this time treeline has moved slowly to its latitudinal limit in the Alatna River Valley (Brubaker et al., 1983) and to its modern altitudinal limit at Walker Lake (Reanier and Ugolini, 1983).

Based upon an extensive study of existing Beringian pollen records, and mapping of pollen percentages through time, Anderson (1982) concluded that spruce expanded westward into the Kotzebue drainage between 7000 and 5000 years ago, and reached its modern limit on the Kobuk River in late Holocene time (5000-1000 years ago). In contrast, alder evidently expanded eastward from the Kotzebue drainage (Anderson, 1982) reaching the eastern margin of the survey area by 7000 years ago (Brubaker et al., 1983). These contrasting Holocene vegetation changes have important implications for interpretation of the archeological record, but more detailed data are needed before variations within the survey area can be detected.

Fauna

A wide variety of fauna exists in the survey area ranging from frogs to grizzly bears. There is little reason to describe each species, therefore, the fauna will be presented as a list.

MAMMALS

black bear	Ursus americanus
grizzly bear	Ursus arctos
coyote	Canis latrons
wolf	Canis lupus
red fox	Vulpes vulpes
marten	Martes americana
short-tailed weasel	Mustela erminea
least weasel	Mustela nivalis
mink	Mustela vison
wolverine	Gulo gulo
river otter	Lutra canadensis
lynx	Felis lynx
moose	Alces alces
barren ground caribou	Rangifer tarandus
dall sheep	Ovis dallic
snowshoe hare	Lepus americanus
hoary marmot	Marmota caligata
Arctic ground squirrel	Spermophilus parruii
red squirrel	Tamiasciurus hudsonicus
northern flying squirrel	Glaucomys sabrinus
muskrat	Ondatra zibethicus
beaver	Castor canadensis
red backed vole	Clethrionomus rutilus
meadow mouse	Microtus species
brown lemming	Lemmus sibiricus
northern bog lemming	Synaptomys borealis
porcupine	Erethizon dorsatum
masked shrew	Sorex cinereus
Arctic shrew	Sorex arcticus
little brown bat	Myotis lucifugus

BIRDS

Arctic loon	Gavia arctica
red-throated loon	Gavia stellata
whistling swan	Olor columbianus
Canada goose	Branta canadensis
white fronted goose	Anser albifrons
snow goose	Chen caerulescens
mallard	Anas platyrhunchos
pintail	Anas acuta
green-winged teal	Anas crecca
northern shoveler	Anas clypeata
American wigeon	Anas americana
greater scaup	Authya marila
lesser scaup	Aythya affinis
bufflehead	Buchepala albeola
oldsquaw	Clangula hyemalis
harlequin duck	Histrionicus histrionicus
white-winged scoter	Melanitta deglandi

surf scoter	Melanitta perspicillata
common merganser	Mergus merganser
red-breasted merganser	Mergus serrator
rough-legged hawk	Buteo lagopus
golden eagle	Aquila chrysatos
bald eagle	Haliaeetus leucocephalus
marsh hawk	Circus cyaneus
osprey	Pandion haliaetus
gryfalcon	Falco rusticolus
peregrine falcon	Falco peregrinus
merlin	Falco columbarius
American kestrel	Falco sparverius
spruce grouse	Canachites canadensis
ruffed grouse	Bonasa umbellus
willow ptarmigan	Lagopus lagopus
rock ptarmigan	Lagopus mutus
sandhill crane	grus canadensis
semipalmated plover	Pluvialis dominica
whimbrel	Numenius phaeopus
upland sandpiper	Bartramia longicuda
lesser yellowlegs	Tringa flavipes
spotted sandpiper	Actitis macularia
northern phalarope	Phalaropus lobatus
red phalarope	Phalaropus fulicarius
common snipe	Gallinago gallinago
long-billed dowitcher	Limnodromus scolopaceus
semipalmated sandpiper	Calidris pusilla
long-toed stint	Calidris subminuta
baird's sandpiper	Calidris bairdii
pectoral sandpiper	Caldris melanotos
long-tailed jaeger	Stercorarius longicaudus
glaucous gull	Larus pyperboreus
mew gull	Larus canus
Arctic tern	Sterna paradisaea
great horned owl	Bubo virginianus
hawk owl	Surnia ulula
short-eared owl	Asio flammeus
boreal owl	Aegolius funereus
belted kingfisher	Megaceryle alcyon
common flicher	Colaptes auratus
hair woodpecker	Picoides villosus
downy woodpecker	Picordes pubescens
alder flycatcher	Empidonax alnorum
horned lark	Eremophils alpestris
bank swallow	Riparia riparia
cliff swallow	Petrochelidon pyrrhonota
gray jay	Perisoreus canadensis
common raven	Corvus corox
black-capped chickadee	Parus atricapillus
boreal chickadee	Parus hudsonicus
American robin	Turdus migratorius
varied thrush	Lxoreus naevius

hermit thrush	Catharus guttatus
gray-cheeked thrush	Catharus minimus
wheatear	Oenanthe oenanthe
Arctic warbler	Phylloscopus borealis
yellow wagtail	Motacilla flava
water pipit	Anthus spinolelta
Bohemian waxwing	Bonbycilla garrulus
northern shrike	Lanius excubitor
yellow warbler	Dendroica petechia
yellow-rumped warbler	Dendroica striata
northern waterthrush	Seiurus noveboracensis
wilson's warbler	Wilsonia pusilla
rusty blackbird	Euphagus carolinus
pine grosbeak	Pinicola enucleator
gray-crowned rosy finch	Leucosticte tephrocotis
hoary redpoll	Carduelis hornemanni
common redpoll	Carduelis flammea
savana sparrow	Passerculus sandwichensis
dark-eyed junco	Junco hyemalis
tree sparrow	Spizedla arborea
white-crowned sparrow	Zonotrichia leucophrys
golden-crowned sparrow	Zonotrichia atricapilla
fox sparrow	Passerella iliaca
Lincoln's sparrow	Melaspiza lincolnii
lapland longspur	Calcarius lapponicus
snow bunting	plectraphenax nivalis

FISH

chum salmon	Oncorhynchus kisutch
sheefish	Stenodus leucichthys
humpback whitefish	coregonus pidschian
broad whitefish	Coregonus nasus
least cisco	Coregonus sardinella
round whitefish	Prosopium cylindraceum
Arctic grayling	Thymallus arcticus
Arctic char	Salvelinus alpinus
lake trout	Salvelinus namaycush
northern pike	Esox lucius
Alaska blackfish	Dallia pectoralis
longnosed sucker	Catostomus catostomus
burbot	Lota lata

Exploration

The earliest recorded information dealing with the native peoples of the general region is found in the journals of John Cantwell and Henry Allen. In 1884, Cantwell made a complete ascent of the Kobuk River from Kotzebue to Walker Lake; a journey of government exploration. Cantwell notes the location of a native fishing village at the mouth of the Selby River. No villages were located further up the Kobuk than this. Cantwell and Stoney were probably the first and last white men to see this type of a traditional, seasonally oriented native village prior to the on-set of strong non-native cultural influences (Cantwell,1889).

In 1885, G. Stoney made an overland winter trip up the Kobuk River from Fort Cosmos to the Alatna River, then north to Chandler Lake, and back to Fort Cosmos. However, Stoney's journal was lost prior to the publication of the account of his explorations and the published document was written from memory fourteen years after the fact. As a result the information contained in the report is somewhat questionable (Stoney, 1899).

In 1885, Henry Allen conducted an exploration of the upper Koyukuk River. Allen traveled up the river about as far as the confluence of the John River. Allen's journal contains numerous notes regarding the aboriginal inhabitants of interior northern Alaska while these people were still living a life style basically uninfluenced by the modern technology of the day (Allen, 1887).

In 1901, W.C. Mendenhall conducted a USGS reconnaissance from the mouth of the Alatna River to Kotzebue via the Alatna Portage and the Kobuk River. The Kobuk River portion of his trip paralleled, in reverse, Cantwell's route of 1884. It is interesting to note the changes which had occurred in the life style of the natives along the river in the seventeen years which had elapsed between the two reconnaissances (Mendenhall, 1902).

At the same time that Mendenhall was engaged in his fieldwork, F.C. Schrader was engaged in a similar reconnaissance ascending the John River through the Brooks Range and descending the Anaktuvuk and Colville Rivers to the Arctic coast. Schrader encountered numerous native groups along his route and made many notations in his journals regarding these encounters (schrader, 1904).

In 1911, P.S. Smith, a USGS geologist, conducted a geologic reconnaissance of the Alatna and Noatak Rivers. In the published account of the expedition, Smith states that they encountered none of the native villages on the upper Noatak that McLenegan reports existed in 1885 (Smith, 1913).

During the Kobuk River Goldrush, 1898-99, more than 800 men wintered on the Kobuk River. This was the greatest influx of non-natives in the area that ever occurred and very probably was the most significant factor in changing the aboriginal way of life. An excellent account of this event can be found in the diary of Joseph Grinnell (Grinnell, 1901).

Previous Archeological and Anthropological Work

To the west of the study area, archeological work has been less intense than to the north and east. In the late 1930's and early 1940's, J.L. Giddings conducted archeological and ethnohistorical work along the upper Kobuk River. This was the first anthropological work done in the area and was responsible for the discovery of the Onion Portage site, probably the most important western Arctic archeological site yet discovered (Giddings, 1952). The significance of the Onion Portage site was later demonstrated by the work of Douglas Anderson in the mid 1960's, (Anderson, 1968). The excavation of the Onion Portage site revealed sequential occupation by different cultural groups at a single location over a period of approximately 10,000 years.

Giddings made some preliminary test excavations at Norutak Lake, which lies just to the south of the eastern portion of the study area. He reportedly recovered Denbigh Flint Complex material and located a Norton-Choris dwelling site (Campbell, 1964).

In 1968, D.W. Clark spent ten days locating and testing sites at Norutak Lake. From his report, it appears that he only surveyed and tested the northern end of the lake. Clark found seven sites, two of which were large enough or rich enough to warrant more than preliminary testing. At least one, and possibly both of the sites which Clark excavated, appear to have been disturbed (through the forces of natural agents) and the cultural sequence is unclear.

Clark feels that the smaller of the two sites, SeIg-2, has both Choris and Itkillik Complex (Anderson, 1970) associations. Clark's dating of the site, achieved through the obsidian hydration technique, would place the site age more recent than Choris but within the probable age-range for the Itkillik Complex.* Clark feels that the age of the site lies between 0 A.D. and 1000 A.D. but is unable to say whether it represents Eskimo or Indian cultures or both.

The other excavated site, SeIg-4, is in a disturbed area and Clark feels that it may be culturally mixed. The material from this site includes ceramics and microblades which were not found at the smaller sites. The potsherds are of differing styles which respectively display traits of Choris, Norton, and post-Norton ceramics. Through traits of a projectile point and microblades, Clark draws possible associations with the Denbigh Flint Complex, while at the same time stating that the end scrapers show Kobuk Woodland Eskimo or interior Alaska affinities. A range of possible dates for possible components of this site range anywhere from 8000 to 1500 years ago. Clark closes his report on SeIg-4 by saying, "The site shows strong relationships westward and northward to Eskimo-area archeology and a weaker relationship to the deeper Interior" (Indian area). Clark's work points out the Eskimo/Indian interface problem that complicates the understanding of the archeology of the region, but states little of a definitive nature.

In 1967, 1973, and 1974, E.S. Hall conducted archeological survey and testing work at Walker Lake (Walker Lake was within our survey area). During the course of Hall's survey, he located and tested a total of thirty-five sites along the shores of Walker Lake (Hall, 1974). Hall found no sites around the northern third of the lake, although it should be noted that he did not range very far from the shore. Hall feels that the absence of sites around the northern third of the lake may indicate that the primary route of entry into Walker Lake was from the south. Therefore, the southern portions of the lake were more accessible and

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*Note: The obsidian hydration dating technique, when used in the Arctic, has yielded results of varying reliability. Climatic conditions appear to cause varying hydration rates locally within a region. Therefore, without corroborating radio active carbon (carbon-14) dates, dating based solely on the obsidian hydration technique is, in many cases, suspect.

readily used. He also states that this may reflect primary-use by Athapaskan peoples approaching the lake from the south and east, although this would not rule out the potential equal-use by Kobuk Eskimos approaching from the west via the Kobuk River.

Hall notes that all sites lie on bedrock knolls or elevated, dry, glacial features at least ten feet above the present lake level. Although flat, dry areas close to the lake edge were tested the results were negative.

Hall feels that artifactual evidence indicates a majority of the sites were lookout-secondary manufacturing localities, although a few may have served as short-term habitation sites.

The lack of diagnostic artifacts from the sites makes the assignment of cultural affinities difficult. Hall feels there are some similarities with the middle layers at the Onion Portage Site (Anderson, 1968), as well as the Tuktu Site at Anaktuvuk Pass (Campbell, 1961). If this is the case, then some of the Walker Lake sites may date ca. 6000 years ago, although the majority are probably more recent.

Hall's closing statement pretty well sums up his work at Walker Lake: "The locations of the sites, their transitory nature, and the artifact inventories including the common occurrence of end scrapers and bone meal would appear to reflect the activities of small bands of hunters who occasionally visited the shores of Walker Lake in search of caribou for food and perhaps, fall skins for clothing. No definite evidence is avaliable from the known sites that resources other than caribou were utilized" (see appendix "A").

While Hall is correct in stating the general inconclusiveness of the archeological evidence, several observations can be made. The presence of side blades at one of the sites may reflect some period of habitation or use by Eskimo peoples. The presence of microblades at a fifth of the known sites may represent a minimum age of 2000 years ago for those sites. The presence of identifiable bone at several of the sites may indicate they are relatively recent in age. Therefore, the archeological evidence at Walker Lake appears to show more or less limited use through a relatively long span of time by both Eskimo and Indian peoples.

The similarities and differences between the archeological evidence from Walker Lake and Norutak Lake (the two lakes are approximately sixteen miles apart) are worthy of note. Both appear to reflect use by both Eskimo and Indian people. Both demonstrate a preference for the use of obsidian as a raw material. Both show a high percentage of end scrapers in the tool inventory. Ceramics are not present at Walker Lake, but are present at Norutak Lake. The differences may be cultural, but could easily indicate more prolonged camping at Norutak Lake than Walker Lake. However, it must be remembered that Hall's site investigation was not as intensive as Clark's. Many of the Walker Lake sites have the potential to be more than just a short-term hunting camps. The similarities between archeological material from the two lakes probably indicate use by the same cultural groups through time.

The annual cycle of activities of the aboriginal Koyukuk Indians, and the Kobuk and Nunamiut Eskimos may shed some light on aborininal use of the area.* A.M. Clark (1974) has collected a good deal of information concerning this cyclical movement, but how far back intime such annual cycles of use can be applied is debatable. According to Anderson et al (1977), the archeological material from the Onion Portage Site indicates that various groups of people used the area through time and that their annual cycles of activity differed somewhat.

To quote A. Clark, "Each (of the three groups) was a marginal culture and there were few times throughout the year when a sufficiently large surplus could be accumulated that the food quest was not paramount. Their lives were not those of settled village people, and as the seasons changed, so did their places of habitation, as well as their methods and types of hunting and fishing. But although all three hunted, fished, and gathered, there were slight differences in their annual cycles" (A. Clark, 1974).

From June through August, the Koyukuk Indians lived on the major rivers at the confluence of streams or sloughs, pursuing fishing. During this period the men left camp, off and on, for periods of a few days to hunt birds and other game. Additionally, berries, meat, and fish were collected and dried for winter use. As fall began, the people moved into the hill country, fishing the lakes, building semi-subterranean houses for winter use, and hunting caribou, sheep, bear, and samll game. About March, the Indians left their winter dwellings and moved to the spring muskrat camps nearer the main rivers. Just before break-up, the families moved to their spring fish camps on the creeks between the lakes and the rivers. By June, they were back at their summer camps.

The Kobuk Eskimos had their summer fish camps on the Kobuk River and engaged in the same basic activities as did the Koyukuk Indians. As fall approached, they moved to the low passes of the Brooks Range to hunt caribou. In late fall, they returned to the Kobuk River and built their winter houses near their summer fish camps. At the approach of spring, the Kobuk people moved away from the river to the lakes to hunt caribou and water fowl, sometimes as far east as Wild Lake. In early summer, they moved back to the Kobuk River.

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*Note: It should be noted that the area of study for the NPS Cultural Resource Survey in the Preserve (1983) appears to be marginal in terms of use by the Kobuk and Nunamiut Eskimos and the Koyukuk Indians (A. Clark, 1974; Anderson et al, 1977; Nelson et al, 1982). Therefore, seasonal cycle activity of these cultural groups can be only very generally applied to the study area. They are presented here as a regional guide only. Additionally, such seasonal movements as described herein, are those of "contact times". How far back in time such annual seasonal rounds can be applied is debateable.

The Nunamiut Eskimo, at least in late prehistoric times, maintained no permanent base of operations, generally moving with the caribou. In April and May, and in August and September, the Nunamiut hunted the major passes of the Brooks range. From October to January, they broke into small groups and hunted the caribou remaining in the mountains near the tree line (south side of the range). February and March, as well as June and July, were often periods of near famine. At these times, they hunted small game, fished and gathered berries (A. Clark, 1974).

Travel occurred for a number of reasons, of which annual movements from camp to camp, trade and visiting, were the most common. Movement from camp to camp was on a small scale and usually varied from family group to family group. Because of its small scale and diversity, this type of travel route is difficult to trace and even more difficult to recognize in an archeological context. Trade routes, on the other hand, were the major travel routes (travel for visiting usually followed these routes also) used successively by large groups and are therefore more easily traced and more easily recognizeable in an archeological context. Reasonable data regarding trade routes in the study area is available (A. Clark, 1974; Burch, 1975, 1976). While this data reflects travel in late prehistoric times and/or contact times it is probably generally valid for earlier peoples too (at least until about 4000 years ago) as travel routes from area to area within a region are largely determined by geomorphology.

A travel route passed by the northern end of Norutak Lake (D. Clark, 1974). This may indicate why sites were found only on the north end of the lake; if indeed Giddings and Clark did survey other areas of the lake. A. Clark, (1974; Fig. 5) shows this route to be one used by the Koyukuk Indians to reach the Kobuk River. She also shows another travel route used by both the Kobuk and Nunamiut Eskimos. This route (as near as I can determine), ascends to the headwaters of the Kobuk River (passing by the south end of Walker Lake), across a 4600 ft. pass, down Awlinyak Creek to the Alatna River, down the Alatna to and up the Nahtuk River to Dawn Creek, down Dawn Creek to and down Kevuk Creek to the Hunt Fork of the John River. This route could be a contributing factor for the majority of Hall's Walker Lake sites being located on the southern portion of the lake. Another probable route (one that would seem quite important), that Clark gives brief mention, is a reference from Allen(1887) in which Allen was told by an Indian on the Koyukuk that he (the Indian) had often made trips from the Alatna River to the Kobuk River via the Basnuna River (probably Helpmejack Creek [A. Clark, 1974]). This route would go east from the upper Kobuk at its confluence with Kichaiakaka Creek (about three miles east of the south end of Walker Lake), up Kichaiakaka Creek, make an approximately six mile portage to the headwaters of Helpmejack Creek, and down Helpmejack Creek to the Alatna River. This route would appear to be much more easily traversed than the Norutak Lake route and may also have contributed to the density of archeological sites at the south end of Walker Lake. This is the route that was followed by Mendenhall during his 1901 reconnaissance of the region.

THE SITES

This portion of the report consists of the site descriptions. It is organized in terms of the areas surveyed, from east to west, within the study area. A short introduction, accompanied by site location maps, precedes each group of site descriptions.

AREA #1

Kichaiakaka Creek Drainage

Camp #6 July 2-7

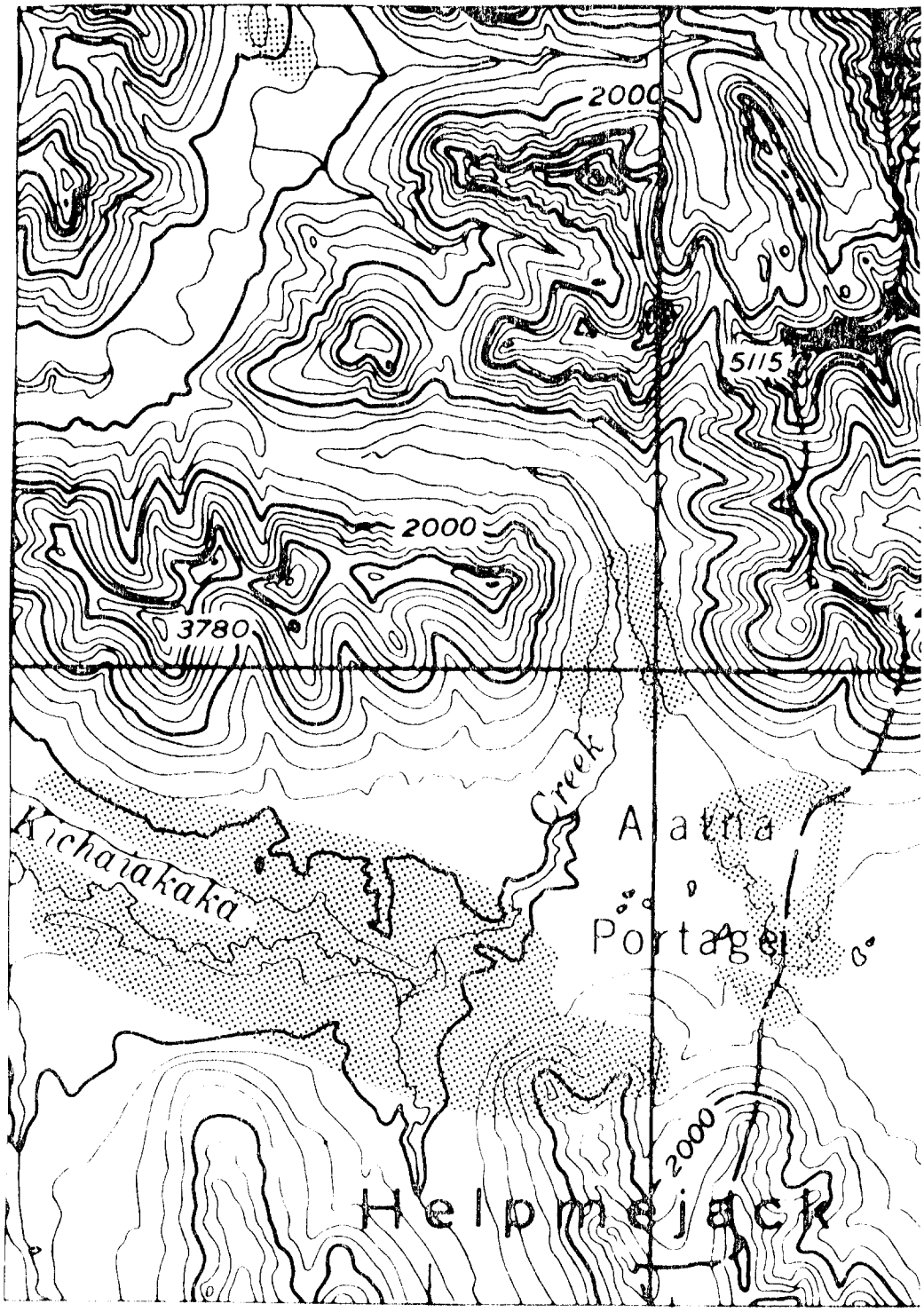
We moved our gear and supplies to the Camp #6 location via helicopter. This camp was located at the headwaters of Kichaiakaka Creek in the Helpmejack Hills roughly 8 air miles east-southeast of Walker Lake. Historic information indicates that Kichaiakaka Creek is located on, or is part of the Alatna Portage; supposedly a major travel route between the Upper Kobuk River and the Alatna/Koyukuk drainage.

We spent 6 days working out of this camp and covered approximately 8 square miles. We made use of the helicopter briefly on two occasions to set people out some distance from camp and pick them up again. We located 25 sites while working out of this camp. The area had been ravaged by wildfire ca. 100 years ago and new vegetation has established itself rather strongly. Local topography is that of a hill-bounded, one mile wide stream valley, along the margins of which are scattered numerous stagnate ice glacial features (Walker Lake Glaciation). It was on these features that the majority of the sites were located.

The type of prehistoric sites that were located in the Kichaiakaka Creek Valley were similar in nature to those found in the Camp #4 area. Most of the sites appear to be hunting oriented; the most commonly observed artifacts being scrapers and flake knives. A number of fragmentary projectile points were also observed at area sites which lends further support to the hunting campsite hypothesis. Microblades were also present at a number of the sites which may indicate that the minumum age of many of the sites is ca. 2000 years.

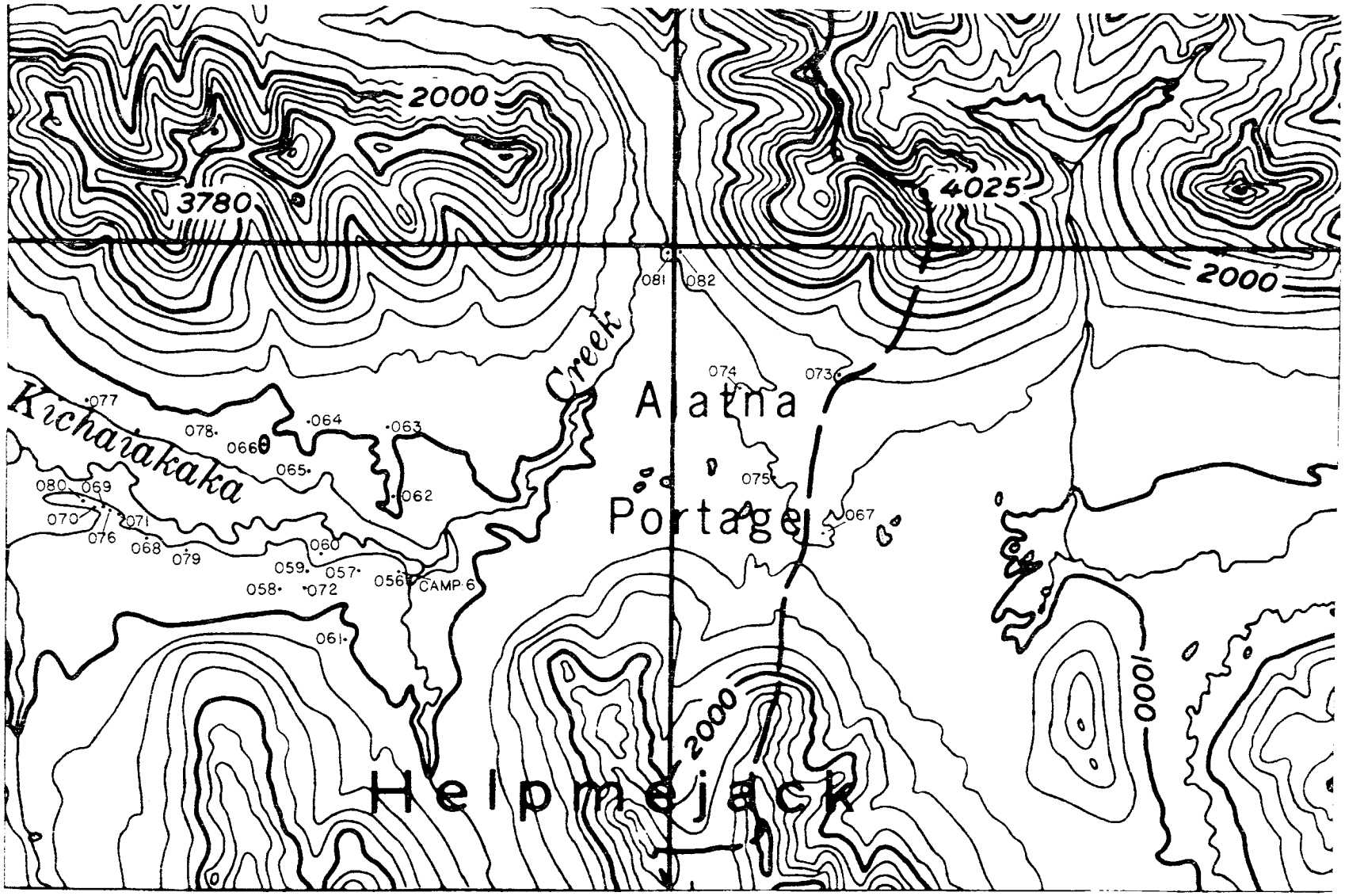
For the most part, artifact morphology tends to indicate that the sites are Indian rather than Eskimo manifestations. However, artifacts from one of these sites appears to be more typical of Eskimo than Indian cultures.

Several recent campsites were also located in this area. Remains at these sites such as cut wood poles, tin cans, and old boots indicate use within the last 50 years. One of these recent sites was located on a prehistoric site, indicating that a good camping spot 2000 years ago is still a good spot today.



six miles

AREA SURVEYED


2000
3780
4025
2000
081
082
Creek
Kichatakaka
074
073
Alatna
077
078
064
063
066
065
075
080
069
062
Portage
067
070
071
076
068
079
060
059
057
056
CAMP 6
058
072
061
2000
1000
Helpmejack
six miles

XSP-056

Site Elevation: 900 Ft.	SW¼, SE¼ Section 15 T19N, R22E	Probable Site Type; Campsite
Site Age: ca. 1350 Years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the high point at the eastern end of a glacially formed ridge 150 meters southwest of the confluence of Kichiakaka Creek and its southern fork. The ridge, elevated above the valley below by some 40 meters, offers an excellent view east toward the "Alatna Portage"; south, up the valley of the south fork, west toward the confluence of Kichiakaka Creek and the Kobuk River and beyond to the Walker Lake area, as well as north across the valley of Kichaiakaka Creek. This well drained lichen covered ridge supports scattered white spruce, poplar in stands, and dwarf birch, as well as alder. The alder is located in less well drained depressions common throughout this ice contact terrain.

Two distinct archeological loci are present: locality "A", at the extreme eastern end of the ridge, and locality "B", approximately 25 meters to the northwest. Locality "A" consists of several black chert pressure flakes in association with a concentration of calcined bone fragments of a medium sized mammal, found both on and below surface. The bone appears to be from a 1 meter^2 area, surrounded by chert flakes, which are distributed over a 3 meter^2 area. A single light gray chert flake was located eleven meters west of this concentration.

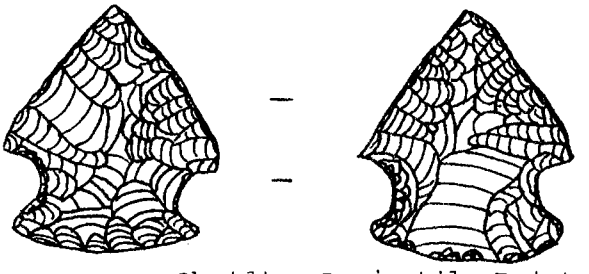
Locality "B" artifacts include an obsidian side-notched projectile point, a basal fragment of a second, seemingly identical, projectile point, and several obsidian flakes. All material was subsurface.

The projectile point was submitted for obsidian hydration analysis. The hydration rind thickness measured 1.77μ ± 0.07μ and given the locally derived rate of 2.32μ^2/1000 years, yields an approximate age of 1350 ± 107 B.P.

Stylistically the projectile point appears generally similar to examples associated with the Northern Archaic Tradition. However, the obsidian hydration date for this artifact is far too recent to allow inclusion in the Northern Archaic time frame.

Locality "A" may constitute a short term campsite represented by the calcined bone in association with the flakes of black chert. Locality "B" may represent the scene of projectile point manufacture. Contemporaneity of the two localities is not assumed, as there is no way of determining this without additional testing.

Presently there are no natural or human-induced impacts affecting the site, but should the site become endangered by future human-impacts, proper mitigation procedures should be carried out.



Obsidian Projectile Point
(Notches and Base Ground)

XSP-056 Artifact - Actual Size

XSP-057

Site Elevation: 950 Ft.	SE¼, SW¼ Section 15 T19N, R22E	Probable Site Type: Lookout
Site Age: ca. 2000 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a ridge-like glacial feature approximately 1/3 mile west of the confluence of the north and south forks of Kichaiakaka Creek. The site overlooks the creek which flows in a westerly direction 150 meters to the north. The view from the site is excellent in all directions, allowing visual coverage of the local landscape up to a distance of 4 miles.

Ground cover at the site is of two extremes, none and robust. There is a luxuriate growth of caribou lichen, moss, and low woody and herbaceous plants, which are complemented by scattered, sprawling examples of dwarf birch and willow. This low vegetation covers roughly 50% of the site. Spruce trees up to 15 cm. in diameter and 10 meters high and isolated smaller birch are scattered over this park-like portion of the site. The eastern and northern areas of the ridge are totally devoid of vegetation. This is due to active erosion on the steep eastern and northern slopes that appears to have started as the result of frost action in a well used game trail. Scattered evidence of a past wildfire is present, but it is not readily obvious, indicating an age of roughly 100 years.

The feature upon which the site lies is roughly 100 meters in length and is higher on the southern end than on the northern end. It was in the exposed mineral soil area of the southeastern 26 meters of the ridge that cultural material was originally observed. Approximately 50 waste flakes of obsidian and chert, as well as a few obsidian micro-

blade fragments were observed along the horizontal N-S axis of the ridge. The cultural material in this mineral soil exposure is strung out, down slope, for a distance of 5 meters or more. How much of the site has been lost due to this erosional activity is unknown, but it appears to be a considerable amount.

Near the south end of the feature and about 6 meters west of the up-slope edge of the erosional activity, a wedge shaped obsidian micro-blade core was found lying atop the caribou lichen. The core is not typical of wedge shaped (Campus) cores. However, it is more wedge shaped than conical, hence it is described as wedge shaped.

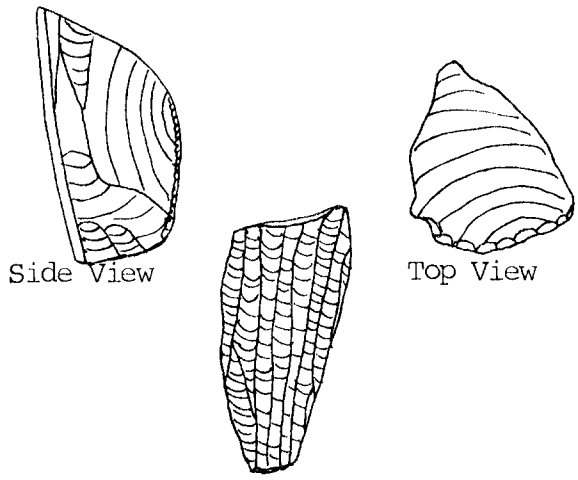
None of the obsidian microblades at the site are small enough in size to have come from the core in its present physical state. These larger microblades may be the result of on-site microblade production/ core reduction and could be products of the core at an earlier reduction state.

The area where the core was found is the flattest and widest (12 meters) portion of the feature. Three 15 cm.^{2} test pits were excavated to a depth of approximately 7 cm. (one 3 meters east, another 3 meters west and another 10 meters north of the core location). None of these test pits produced any cultural material. Another similar sized test pit was excavated roughly 85 meters to the south-southwest where two obsidian waste flakes were found on surface. This test pit was also culturally sterile.

The subsurface testing would seem to indicate that the majority of the site may have already been lost through erosion. However, this statement is made with little certainty. The physical nature of the feature upon which the site is located would suggest that the site function could be little other than a lookout.

The significance of this site lies mainly in its relationship to other sites in what is thought to be the "Alatna Portage" route. The fact that obsidian microblades are present may indicate a maximum age of ca. 2000 years for the site. This age assessment is based on locally derived obsidian hydration data. Additionally, the fact that both chert and obsidian are present may indicate that the site represents more than a single event.

Additional work at this site would probably do no more than add to the inventory of artifacts while yielding little useable data. Now that this site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.



Front View

Obsidian Microblade Core

XSP-057 Artifact - Actual Size

XSP-058

Site Elevation:
980 Ft.

Site Age:
ca. 1760 years B.P.

SE¼, SW¼
Section 16
T19N, R22E
Kateel River Meridian

Probable Site Type:
Lookout

Probably Cultural Affiliation:
Unknown

This site is located on one of the highest glacial features near the head of the Kichaiakaka Creek Valley. Three quarters of a mile to the east-northeast lies XSP-057. The confluence of the creek and the Kobuk River is 3½ miles to the west-northwest. The view from the site is excellent in all directions, Walker Lake being almost visible 7 miles to the west. The view to the south is least extensive being partially blocked by hills 1½ miles distant.

Ground cover at the site is typical of that found on the majority of the steep-sided, narrow crested, glacial features that lie along the perimeter of the valley floor. Vegetation is robust where it occurs, usually on the more gentle western and southern slopes and the flatter crests. On the steeper northern and eastern slopes, active erosion and exposed mineral soil is the general rule. Ridge tops are park-like with scattered spruce ranging up to 10 meters in height accompanied by smaller birch. Caribou lichen and moss, as well as scattered sprawling growths of dwarf birch and willow, accompanied by a sprinkling of low woody and herbaceous plants dominate the surface. Evidence of past wild-fire activity is present, albeit not obvious, indicating an age of roughly 100+ years for the burn.

The site lies at the southern end of the ridge which is the highest, widest, and most level location present. One chert and one obsidian flake were located on the surface of the exposed mineral soil along the sloping east side of the crest. Two 15 cm.^{2} test pits were excavated to a depth of 7 cm. on the level top of the ridge crest. Test pit "A", located 3 meters to the west of the surface material, yielded one obsidian and one chert flake from the top of the organic soil horizon, roughly 2 cm. below surface. Test pit "B", 6 meters to the west of test pit "A", yielded no cultural material.

The subsurface obsidian flake was submitted for hydration analysis and yielded a hydration rind thickness measurement of 2.02μ ± 0.03μ. Given the locally calibrated radiocarbon dated hydration rate of 2.32μ^2/1000 years the calculated age of 1759 ± 52 years B.P. was obtained.

Little else can be said about this site. The paucity of cultural material suggests that the site is not large, nor does it appear to have been large prior to erosional degradation. The physical location of the site would suggest that its function was a lookout or perhaps an overnight travel camp.

The significance of this site is low, its major worth being its existence in the "Alatna Portage" route and its relationship to the other sites there. The presence of both obsidian and chert at the site suggests more than a single event may be represented.

Now that this site has been recorded there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-059

Site Elevation: 940 Ft.	NW¼, SE¼ Section 16 T19N, R22E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located atop a relatively flat-topped, dome-like, glacial feature roughly ¼ mile northeast of XSP-058. The site offers an excellent view of the Kichaiakaka Creek Valley to the east, west, and north. The view to the south is obstructed by higher terrain ½ mile distant. The site is situated 250 meters south of the creek and roughly 50 meters above it.

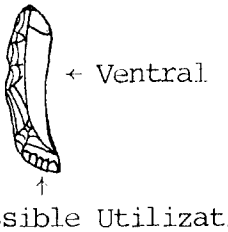
The site proper is very open. There are no trees present although spruce and birch occur on the surrounding slopes. Caribou lichen and moss, along with an occasional dwarf birch and small willow, thinly cover most of the site surface. There are scattered, small (1 meter^2) areas of exposed mineral soil present which appear to be the result of frost action.

A total of about 50 chert flakes and three chert microblade fragments of various colors were observed scattered thinly over a surface area of 25 x 15 meters. A 15 $cm.^2$ test pit was excavated in the northeast quadrant of the flake scatter. The excavation yielded 3 chert micro-blade fragments, what appears to be a primary burin spall, and 2 chert flakes. This cultural material ranged in depth from 0.5-5 cm. below surface.

Little more can be said about this site. The presence of microblades may indicate a minimum age of ca. 2000 years. It is interesting that there was no obsidian present at this site; at least none was observed. This may indicate that the site represents a single event, although the location of the site would argue against this. The fact that obsidian is absent may also indicate that the site age is greater than 2000 years as the locally generated radioactive carbon/obsidian hydration chronology indicates that obsidian use does not generally predate 2000 years B.P. in the area.

The significance of this site is relatively low, its most interesting aspect being the absence of obsidian. The major value of this site is its existence on the "Alatna Portage" route and its relationship to the other sites in the area.

Now that this site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.



Primary Burin Spall - Chert
XSP-059 Artifact - Actual Size

XSP-060

Site Elevation: 875 Ft.	NW¼, SE¼ Section 16 T19N, R22E	Probable Site Type: Unknown
Site Age: ca. 2000 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a low glacial knob approximately ½ mile west of Kichaiakaka Creek. XSP-059 lies roughly ¼ mile to the south-southwest, while the confluence of the north and south forks of Kichaiakaka Creek lie 3/4 mile to the east. The site overlooks an old meander scar of the creek which is kept marshy and willow choked by a small feeder stream. The site offers a view of only the immediate area due to obscuration by higher terrain.

The site supports a relatively robust growth of caribou lichen and scattered woody and herbaceous plants. The site area is relatively open; only three or four birch and spruce trees being present. About 85% of the site's surface is vegetated. At the northern end of the site, there are several areas of exposed mineral soil.

It was in one of these mineral soil areas that cultural material was observed. The cultural material at the site consists of a single, large obsidian microblade fragment. A 15 cm.^{2} test pit was excavated to a depth of 7 cm. adjacent to the artifact and yielded no additional cultural material.

It should be remembered that the limited amount of testing that is engaged in at any of these sites, especially sites which have robust vegetation cover, is not sufficient to make more than a general statement concerning the subsurface cultural content of the site. Such statements as are made in this report, are indicative rather than definitive. However, experience points out that, in the majority of these shallow and compact Arctic sites, surface indications accompanied by one or two adjacent test pits are more often than not, good general indicators of site size and cultural density.

The fact that an obsidian microblade fragment is present at the site may indicate an age of ca. 2000 years B.P. Other than that, little can be said.

The significance of the site is low. Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

Proximal
↓



Obsidian Microblade
Fragment

XSP-060 Artifact - Actual Size

XSP-061

Site Elevation:
1100 Ft.

SE¼, NW¼
Section 22
T19N, R22E
Kateel River Meridian

Probable Site Type:
Lookout

Site Age:
ca. 1500 years B.P./
ca. 4000 years B.P.

Probable Cultural Affiliation:
Unknown

This site is located atop the highest glacial feature in the Kichaiakaka Creek Valley. This ridge-like feature lies 3/4 of a mile south of Kichaiakaka Creek and ½ mile west of the south fork of the creek. The view from the site is truly panoramic, encompassing all terrain in all directions for a minimum distance of 5 miles.

Surface cover at the site consists of caribou lichen, moss, and some woody and herbaceous plants. Birch and spruce trees, to a height of 8 meters, are thinly scattered over the ridge, creating a park-like setting. The lichen/moss mat is broken here and there by patches of exposed mineral soil, which appear to be the result of frost action. There is some scattered evidence of wildfire activity at the site, indicating a burn occurred in the area roughly 100 years ago.

Cultural material was observed on surface at three different locations on the site. The surface indications begin roughly 18 meters north of the high point of the ridge and continue in a northerly direction along the ridge crest for a distance of 45 meters. Surface cultural material occurs along or in a game trail which bisects the 10 meter wide ridge crest.

Lithic scatter "A" is the southernmost of the three scatters and contained 1 chert and 1 obsidian flake. Scatter "B", 30 meters to the north, contained two chert flakes while scatter "C", 14 meters further north, consisted of 6 obsidian flakes.

Test pits were dug at the high point of the ridge and at the three lithic scatter locations. All test pits were 15 cm.^{2} and excavated to a depth of 10 cm. The test pit at the promontory yielded no cultural material. However, the other three test excavations did: "A", 2 chert flakes and a chert microblade fragment, "B", 1 chert flake, and "C" , 19 obsidian flakes. No cultural material was recovered from a depth greater than 4 cm. below surface.

The microblade fragment is similar in size and style to those commonly associated with wedge shape (Campus) cores. This may indicate an age in excess of 4000 years for at least one occupational event at the site. The fact that the chert and obsidian lithic detritus is located in discrete areas suggest multiple occupational events occurred at the site. Additionally, a sample of the subsurface obsidian was submitted for obsidian hydration analysis and yielded a hydration rind thickness measurement of 1.86μ ± 0.04μ. Given the locally calibrated radiocarbon dated hydration rate of 2.32μ^2/1000 years, the calculated age of 1491 ± 64 years B.P. was obtained. This tentative age applies for the scatter "C" materials only.

Subsurface testing suggests that there may be a fair amount of subsurface material scattered over the site. Surface indications suggest distinct occupation areas which may reflect use over time. This data could prove useful in attempting to establish prehistoric use patterns and a chronological sequence for the area. However, there appears to be no discernable physical or cultural stratigraphy at the site. The physical setting of the site suggests it served as a lookout. Because of these factors, the site can probably yield little more information than it already has; the possible exception being the recovery of diagnostic artifacts.

For these reasons, the site has only a moderate level of significance. Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-062

Site Elevation: 1050 Ft.	NE¼, NW¼ Section 15 T19N, R22E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the most prominent knoll along a north-south trending ridge on the north side of Kichaiakaka Creek. The ridge is about 7 miles east of Walker Lake, and provides a fine view westward of the Kichaiakaka Creek Valley and the mountains to the west of Walker Lake's south shore. The view to the east is limited to about 4 miles, by the high ground of the "Alatna Portage" that crosses the continental divide at an altitude of about 1200 feet. The particular knoll upon which this site is situated rises above the surrounding trees, providing an unobstructed 360° view. The knolls and the ridges of this vicinity

are old, dead-ice topography left by the Itkillik glaciation.

The vegetation along the ridge consists of sparse spruce and paper birch trees. The understory is the lichen dwarf heath cover so typical of well drained ground in this region. Clumps of dwarf birch are scattered throughout the area. The knoll itself is devoid of trees, and the ground cover is more sparse than within the forest.

The site was located by surface observation. Four black chert flakes, one gray chert flake, and two small obsidian flakes were found in a 1 x 3 meter area on the east flank of the knoll. A test pit, 15 cm.^{2}, excavated to a depth of 15 cm. at the top of the knoll, revealed no cultural material. The surface flakes are mostly between 1 and 4 cm. in length, probably indicating an intermediate phase of lithic reduction. The presence of three kinds of raw material within the site indicates more than a single flaking event, but the events may have been contemporaneous. The presence of obsidian may indicate an age for that event not in excess of 2000 years B.P. The site may have functioned as a lookout/flaking station because of the excellent view from the knoll.

The significance of this site is low. It lacks artifacts diagnostic of a time or cultural period. Together with the many other sites of the Kichaiakaka Creek Valley, it documents the use of the vicinity of the "Alatna Portage" in prehistoric times. The site is presently experiencing minor disturbance from natural erosion. It is unlikely to experience impact from recreational activities within the park because of its distance from Walker Lake and inaccessibility.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-063

Site Elevation: 1040 Ft.	SE¼, SW¼ Section 10 T19N, R22E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is situated on a knoll on the northern part of a north-south trending ridge that runs north of Kichaiakaka Creek. The ridge is about 7 miles to the east of Walker Lake. It provides an excellent view westward down Kichaiakaka Valley toward Walker Lake and eastward toward the low pass across the continental divide toward the Alatna River. The site is located on the knoll directly south of the most northern knoll on the ridge; about ¼ mile north of XSP-062. The knolls and ridges of this region result from the deadice topography left by the late Pleistocene Itkillik Glaciation.

Vegetation along the ridge is typical of the boreal forest near its northern limit. Spruce is the dominant tree, with lesser amounts of paper birch and clumps of dwarf birch. The understory is the lichen dwarf-heath cover typical of well drained terrain in this region. The low knoll is more sparsely vegetated than the ridge itself, with no trees, fewer dwarf birch shrubs, and a thinner lichen ground cover. Extensive erosion from frost action on the east flank of the knoll has produced an area largely devoid of vegetation.

The site was located by surface observation. It consists of a single, small, black chert flake located 3 meters south (bearing 220° magnetic) of the highest point of the ridge. No test pits were excavated at this site. The excellent view suggests the site functioned as a lookout/ flaking station.

The significance of the site is minimal. No artifacts diagnostic of time or cultural periods were present. The site serves only as further evidence of prehistoric use of the Kichiakaka Creek drainage. The extensive erosion of the eastern flank of the knoll is not presently affecting the location of the flake. Impact on the site from recreational activities is unlikely due to its remote location.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-064

Site Elevation: 1000 Ft.	NE¼, SW¼ Section 9 T19N, R22E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a broad, flat knoll that lies on a north-south trending ridge north of Kichaiakaka Creek and about 6½ miles east of Walker Lake. The ridge is about ½ mile west of the ridge on which XSP-062 and XSP-063 are located. This ridge provides an excellent view westward toward Walker Lake and the Kichaiakaka Creek Valley, and eastward toward the low pass to the Alatna River. The ridge is one of a number in the vicinity that are the result of dead ice topography from the Itkillik glaciation.

The knoll is vegetated by lichen dwarf-heath ground cover and dwarf birch shrubs. Occasional small spruce trees are present on the knoll. Ground cover is generally continuous, except for occasional bare soil exposed by frost action.

The site consists of three black chert flakes, located by surface observation on the highest point of the ridge. The three flakes are lying close together and the site tag was placed at this location. A

utilized obsidian flake is located north (bearing 340° magnetic) of the site tag at a distance of approximately 48 meters. The obsidian flake and black chert flake scatter are probably unrelated occurrences. The site may have served as a lookout/flaking station because of its excellent view. The presence of obsidian may indicate an age for that event not in excess of 2000 years B.P.

The significnace of the site is low. It contains no artifacts diagnostic of a temporal or cultural affiliation, but adds to our knowledge of the extent of prehistoric use of the Kichaiakaka Creek drainage. The area immediately around the three chert flakes is subject to continued disturbance from frost heaving. The site is not likely to be disturbed by recreational activity because of its remote location.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-065

Site Elevation: 930 Ft.	NW¼, NE¼ Section 16 T19N, R22E	Probable Site Type; Unknown
Site Age: Unknown	Kateel River Meridian	Probably Cultural Affiliation: Unknown

This site is situated atop a small knoll approximately ¼ mile north of Kichaiakaka Creek and 6½ miles east of Walker Lake. The knoll is located south and west of the ridge upon which XSP-064 is situated. The view from the site is somewhat obscured by trees, but there is fair visibility both to the east and west. The knoll is part of the dead ice topography produced by the Itkillik Glaciation.

Vegetation at the site is dominated by spruce trees with scattered paper birch trees and dwarf birch shrubs. The understory is a thin cover of lichen dwarf heath.

The site consists of a single black chert flake, 3 cm. in diameter, lying on top of the lichen mat. The flake is located near the highest part of the small knoll. It is not possible to infer site function from this single flake.

The significance of this site is low. The flake is not diagnostic of any time period or cultural affiliation. Together with the other sites in this vicinity, the site is simply further evidence of prehistoric use of the Kichaiakaka Creek drainage. The site is not subject to natural disturbance processes at present, and is unlikely to be affected by recreational activities because of its remote location.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-066

Site Elevation: 1010 Ft.	SE¼, SW¼ Section 9 T19N, R22E	Probable Site Type: Lookout
Site Age: ca. 2000/4700 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Northern Archaic

The site is located on a prominent knoll about 3/4 mile north of Kichaiakaka Creek, approximately 3 miles upstream from its confluence with the Kobuk River. The knoll affords an excellent view to the south of the Kichaiakaka Creek Valley, to the east of the ridges containing XSP-062-065 and the high ground leading to the Alatna River, as well as to the west toward the Kobuk River and the moraine complexes south of Walker Lake. The knoll is part of the dead ice topography left by the Itkillik Glaciation, as are all of those in this portion of the valley.

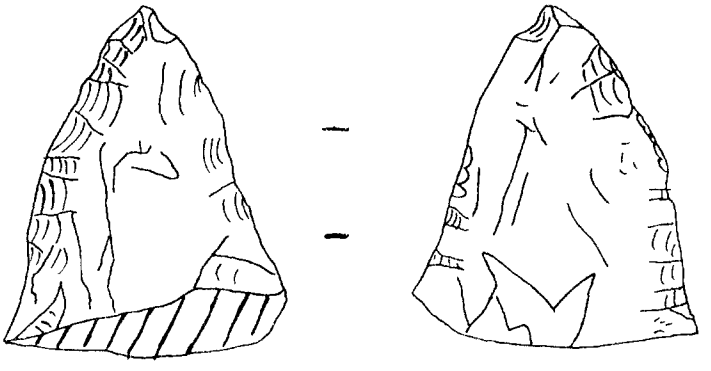
Vegetation on the knoll is relatively sparse. The spruce forest does not extend to the top of the knoll, leaving a large area of thin lichen-heath cover and scattered birch shrubs. Large areas on the knoll are essentially barren of vegetation. The absence of trees on the knoll makes the view nearly unobstructed and the patchy ground cover makes it easy to locate cultural material on the surface.

All cultural material found on this site was located by surface observation. All of the material was situated on the southern exposure, approximately 70 meters south of the highest point on the ridge. The basal portion of an expanding stem projectile point was the first artifact observed. The artifact is narrowest (1.6 cm.) about 1 cm. from the proximal end. The proximal end is 2 cm. wide and the base is 2.6 cm. wide at the fracture. A broken black chert biface, 3.5 cm. wide and 4.5 cm. long, is located about 20 meters east of the projectile point together with 6 black chert flakes. Two additional scatters of black chert flakes were observed. One, about 1 meter^2 in area, is located about 6 meters east of the site tag. The other is located about 30 meters west of the site tag at a point where a small ridge begins to slope away to the southwest. Approximately two meters southeast of the site tag are three obsidian flakes, one of which has cortex on its dorsal surface. An isolated gray chert flake was found about 2 meters west of the site tag.

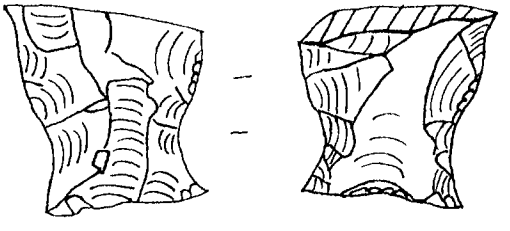
The rather wide distribution of lithic material on the knoll suggests multiple occupations of this site. The presence of obsidian at the site may indicate a maximum age of 2000 years B.P. for that occupational event. All of the cultural material found was located on the southern exposure of the ridge, oriented toward Kichaiakaka Creek, indicating possible use of the site for game observation within the creek valley. Of the artifacts observed at the site, only the projectile point is possibly diagnostic of cultural affiliation or time. It is similar to some examples from band 6 level 5 at the Onion Portage site, which are included in the Northern Archaic Tradition (Anderson, 1968). The relatively high density of cultural material on the knoll is probably a

result of the knoll's prominence along the valley site. The location is visible through the trees of the valley floor and is likely to have been as attractive as a vantage point in the past as it is today.

The significance of this site lies in the variety of lithic material within it, and the multiple occupations it implies. The projectile point base is suggestive of phase 3 materials of the Northern Archaic Tradition which are dated between 2900-2700 B.C. at Onion Portage. However, the artifact is also similar to more recent forms. Of the sites in the Kichaiakaka Valley, XSP-066 probably ranks second or third in importance, and should be protected or thoroughly investigated if threatened by development. Because of its remote location, however, the site is not presently threatened by human activity. Natural erosional processes are currently the only active disturbance affecting the site.



Biface Fragment



Projectile Point Base

XSP-066 Artifacts - Actual Size

XSP-067

Site Elevation: 1225 Ft.	NE¼, SW¼ Section 17 T23E, T19N	Probable Site Type: Unknown
Site Age: ca. 1570 Years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site occurs about mid-point in the "Alatna Portage, a suspected aboriginal travel route which connects the Kobuk and Alatna River drainages. Situated east of Kichaiakaka Creek and west of Helpmejack Creek, XSP-067 rests atop a glacial knoll approximately 12 meters above the valley floor. The top of this rounded, discrete knoll measures 15 meters east-west and 5 meters north-south. The knoll is surrounded by kettle basins of equivalent size. The knoll is part of a large moraine which constitutes the northern side of the "Portage" valley. A similar moraine forms the southern wall of the valley. A 100 meter wide corridor exists between the two glacial moraines. XSP-067 lies approximately 200 meters north of this corridor.

The view from the site is approximately 1 mile to the south and east. To the north and west the view is somewhat obscured by trees. The surrounding kettle and kame topography is well drained and supports a vegetation cover of caribou lichen, spruce, birch, and woody plants. The valley floor is poorly drained, most of the area being muskeg.

The artifact assemblage at XSP-067 is comprised of waste flakes, the majority of which were located on the surface. One medium large gray chert flake was located in the back dirt of a bear's excavation. One small flake of poor grade obsidian and one small flake of black chert were found on the surface 3.5 meters to the west of the bear activity. Two 20 cm.^{2} test pits were excavated to a depth of 8-10 cm. below surface just upslope of the surface cultural material. Test #2, upslope of the two small flakes, produced an obsidian waste flake just below the surface at the depth of roughly 3 cm. No other subsurface cultural material was found in either test pit. The only other cultural material observed at the site was a black chert flake nearly 90 meters to the south.

The subsurface obsidian flake from test #2 was submitted for hydration analysis. The hydration rind thickness measurement of 1.91μ ± 0.06μ yields an age of 1572 ± 99 years B.P. according to the locally derived radiocarbon dated calibration of 2.32μ^2/1000 years.

The level of site significance is low due to the paucity of cultural material and diagnostic artifacts. The site may be associated with travel through or hunting in the "Alatna Portage" valley.

At present, the site is subject only to slight impacts of a natural variety; the most destructive of which appears to be dirt work by the local bear population. However, based upon the amount of information the site appears to contain, little concern need be generated over its condition.

XSP-068

Site Elevation: 800 Ft.	NE¼, SW¼ Section 17 T19N, R22E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

The site is located on one of a series of glacial knolls on the south side of Kichaiakaka Creek. The knoll is about 150 meters south of the creek and 3 miles southeast of the confluence of Kichaiakaka Creek and the Kobuk River. XSP-068 is situated approximately 50 meters above the creek. Site XSP-079 is about 300 meters to the east and XSP-071 is located about 275 meters to the northwest.

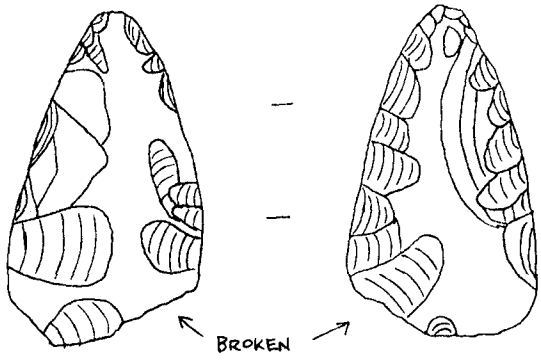
The view from the site is best to the north toward Kichaiakaka Creek. The view in this direction, as well as to the northwest and northeast is roughly ½ mile. Visibility to the south is generally obscured by robust tree growth. Vegetation at the site is sparse. The top of the knoll is mantled by only 5 cm. of soil overlying fragmented bedrock. The area surrounding this knoll supports a healthy cover of caribou lichen, birch, spruce, and woody plants. Wildfire appears to have swept across the site area roughly 100 years ago.

At the highest point of elevation at the site, two artifacts were found on surface, a gray chert flake and a black chert biface fragment located roughly 2 meters apart. The small flake was blade-like and the biface fragment (4 cm x 2.5 cm.), was a nearly complete projectile point which exhibited well controlled flaking and some edge grinding. Both artifacts appeared in frost churned areas of the site and may have been vertically and/or horizontally displaced. A 20 $cm.^2$ test pit was excavated to bedrock, 5 cm. below surface, and produced no additional cultural material.

The determination of the level of site significance is limited by the lack of cultural material as well as the site's potential to yield additional specific data. The projectile point is not complete enough to be diagnostic. The site itself should be considered as one of a series of sites along Kichaiakaka Creek whose specific function is unknown. These sites may indicate a pattern of hunting or travel along the "Alatna Portage."

The site is not presently endangered by any adverse impacts. There is a slight potential for some minor erosional disturbance. This should not be cause for concern, however, based on the site's low data yield potential.

Now that the site has been recorded, there should be little concern for its protection or the mitigation of any but human-induced impacts.



Projectile Point
XSP-068 - Artifact - Actual Size

XSP-069

Site Elevation: 850 Ft.	SW¼, NE¼ Section 18 T19N, R22E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

Situated on a knoll roughly 40 meters above Kichaiakaka Creek, XSP-069 occurs at the highest point of elevation on a mile long ridge 200 meters south of the creek. The site lies approximately 1 mile southeast of the mouth of this creek. The knoll is oval, oriented east-west, and is bisected by a well-used game trail. The view from this site is 1 mile in all directions. XSP-070 is located 60 meters southwest of XSP-069.

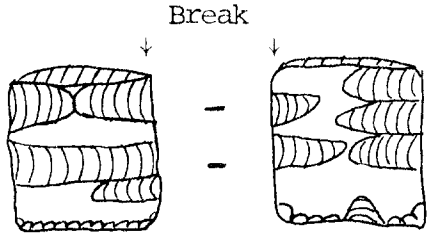
Vegetation at this site is dominated by caribou lichen and small spruce trees. Other plants in the site area include alder, woody and herbaceous plants, and grasses. The game trail appears to be used regularly and is devoid of vegetation. Wildfire activity of 100 years ago is represented here by burned and uprooted spruce trees. Impact to the site is of the natural variety and consists of game trampling, frost action and occasional wildfires.

Cultural material at the site was first identified on the surface in the game trail. Two 20 cm.^{2} test pits, excavated to a depth of 5-8 cm. below surface, produced no artifacts. The surface lithics included two obsidian (one with retouch), 1 gray chert and 1 basalt flake, as well as 1 projectile point base. The projectile base (2 cm. x 2 cm.) is made of a red/yellow chalcendony or translucent chert, and displayed colateral flaking and some edge grinding. The projectile point base appears to belong to a lanceolate form, however, the artifact is not diagnostic. The surface lithics were scattered over a 5 x 2 meter

area along the game trail.

The level of site significance is low due to the paucity of cultural material. This site can be considered, along with four other sites on this ridge, as possibly representing a pattern of land use involving either hunting or travel along this ridge in the "Alatna Portage" area. However, these sites are small and provide little substantive data about the prehistoric people of this area.

Now that this site has been recorded, there should be little concern for its protection or the mitigation of any but human-induced impacts.



Projectile Point Base

XSP-069 Artifact - Actual Size

XSP-070

Site Elevation: 850 Ft.	SW¼, NE¼ Section 18 T19N, R22E Kateel River Meridian	Probable Site Type: Unknown
Site Age: Minimum age ca. 2000 years B.P.		Probable Cultural Affiliation: Unknown

Located roughly 1 mile southeast of the mouth of Kichaiakaka Creek, this site lies on a rounded knoll 45 meters above and 200 meters south of the creek. This knoll, nearly 30 meters in diameter, is bisected by a well-used game trail. The view from the site is nearly 1 mile in all directions. XSP-080 is located 130 meters west and XSP-069 is situated 60 meters northeast of this site.

Vegetation at the site is dominated by caribou lichen and small spruce trees. A few alder, woody and herbaceous plants, and grasses are also present. The game trail is devoid of vegetation and appears to be regularly used. A large glacial erratic sits north of the game trail. A 50 cm.^{2} bear excavation is located nearly 3 meters south of the trail. Evidence of a 100 year old fire is visible at this site. Impact to the

site is low and includes game trampling, wildfire, and frost churning.

A single, isolated artifact was located on the surface at this site. A red obsidian microblade core tablet or core fragment was found in the back dirt of the bear excavation. Further investigation of the bear excavation backdirt produced no other artifacts.

A 20 cm.^{2} test pit approximately 2 meters north of the game trail, excavated to a depth of 8-10 cm., produced no cultural material. The soil here consisted of loess and fragmented bedrock.

The level of site significance is low. The site's major significance is that it is one of a group of sites which appear to be related to each other both through proximity and function. The core tablet or fragment indicates microblade production which suggests a minimum date of ca. 2000 years B.P.

Now that this site has been recorded, there should be little concern for its protection or the mitigation of any but human-induced impacts.

XSP-071

Site Elevation: 800 Ft.	SW¼, NW¼ Section 17 T19N, R22E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Athapaskan

The site lies at the eastern end of a mile long ridge approximately 1 mile southeast of the mouth of Kichaiakaka Creek. Situated roughly 30 meters above and 200 meters south of the creek, the site overlooks a small tributary creek flowing past the eastern end of the ridge. XSP-076 is located about 90 meters west of XSP-071. The view from this site is 1 mile to the north and northeast. Visibility in all other directions is restricted to about 100 meters, due to trees and terrain.

Vegetation at the site is dominated by caribou lichen and small spruce. Woody plants and some grasses are also present. The small creek flowing just east of the site is covered by a thick stand of willow. A small spruce in the middle of the site exhibits bare areas where the bark has been scraped off, due to moose/bear activity within the last year. Frost churning and solifluction are active at the break in slope. These frost churned areas are sparsely vegetated. There is evidence in the area of the site to indicate wildfire activity in the past 100 years. Impact at this site is of the natural variety, including erosion, game trampling, and occasional wildfire.

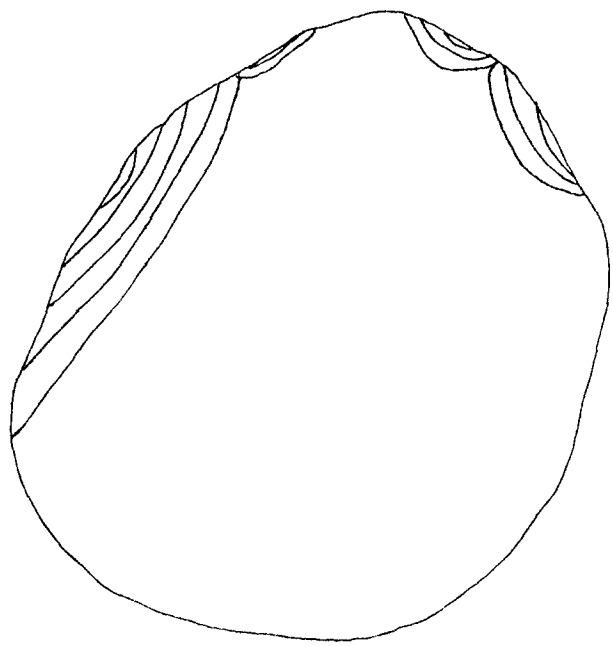
Cultural material was discovered initially on the surface of this site. Two possible boulder spall scrapers (tchi-thos) made of schist, and one gray chert flake were found in a 3 meter area on the surface.

The two schist scrapers appear to be halves of one rock and display flaking on the ventral surface. These possible artifacts occurred in erosion areas roughly 5 meters apart. A 20 cm.^{2} test pit was excavated to a depth of 5-7 cm. below surface and produced no cultural material. The test excavation indicates the soil to be comprised of loess and fragmented bedrock.

Site significance is low. The physical cultural remains suggest nothing more than the fact that someone was once there. If the schist spalls are tchi-thos, they may indicate use of the site by Indians (Athapaskans).

Being the eastern most of five sites on this ridge, XSP-071 may represent a starting or ending point for traversing this ridge, as part of travel through the "Alatna Portage". Together these five sites may represent a pattern of land use involving hunting or travel on this ridge.

Now that the site has been recorded, there need be little concern for its protection or the mitigation of any but human-induced impacts.



Schist Tchi-Tho

XSP-071 Artifact - Actual Size

XSP-072

Site Elevation: 900 Ft.	NE¼, NE¼ Section 21 T19N, R22E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located atop a prominent knoll, the middle knoll of a line of three knolls. These knolls are aligned in a northern direction toward Kaichiakaka Creek which lies approximately 800 meters to the north of the site. The knoll top is thinly covered with lichen. A small stand of dwarf birch flourishes at the highest point of the hill. Spruce do not grow on the knoll, although robust stands are present to the east and south. The view is good both up and down the creek valley.

A single black chert flake (possibly a microblade fragment) was located on the surface of an area of exposed mineral soil which occupies the northern slope of the knoll. Two 15 cm.^{2} test pits were excavated to a depth of 5 cm. below surface to the south and west of the flake, and yielded no cultural material.

XSP-059, located 150 meters north of this site, evidences a much more abundant artifact assemblage. XSP-059 may represent the more strategic of the two locations in terms of hunting, as it provides a better view of the area and extends further into the valley proper. The possibilty exists that XSP-072 is merely a loci of XSP-059. The black chert flake fragment from XSP-072 is of identical lithic material to some of the cultural material from XSP-059.

Now that this site has been recorded, there should be little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-073

Site Elevation: 1350 Ft.	NE¼, NW¼ Section 8 T19N, R23E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the relatively flat well drained western edge of the lateral moraine which hugs the southern slopes of the hills north of the "Alatna Portage". The site lies some 30 meters above the terrain to the south and west where a 2 square mile moraine system extends south across a broad valley and constitutes the drainage divide between the Alatna and the Kobuk Rivers. Below the site to the west, a stream running into Kichaiakaka Creek flows within 50 meters of the site and is presently choked with willow and alder. Vegetation on the

the site consists of scattered medium sized white spruce, occasional birch, accompanied by a healthy lichen-heath ground cover.

A single black chert flake fragment was located on the surface of a 50 cm.^{2} frost boil. The frost boil occurs at the break in slope midway between the north and south boundaries of the ridge. A 15 cm.^{2} test pit located 1 meter north of the flake was excavated to a depth of 10 cm. through a nominal silt unit overlying gravelly sand. No cultural material was observed.

The location of the site provides a good overlook situation, but the paucity of cultural remains suggests that the site was used only peripherally.

Now that this site has been recorded, there should be little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-074

Site Elevation: 1200 Ft.	SW¼, NE¼ Section 7 T19N, R23E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a rounded knoll at the northwest corner of the moraine system about 1.5 miles southeast of the emergence of Kichaiakaka Creek from the mountain front. The site sits 30 meters above a lowland containing multiple first order streams leading west to the larger Kichaiakaka Creek. This lowland is heavily vegetated with willow, alder and spruce on the northern side. The site area is roughly 10 meters^2 and is vegetated sparsely with spruce and dwarf birch. It is quite open, with good views to the northwest, west and southeast. Lichen completely covers the surface of the site.

Surface indication of cultural material consisted of 5 large, very coarse-grained gray quartzite flakes, barely visible within the lichen mat. The largest of these flakes measured 6 cm. long and 4.5 cm. wide. A decortication flake shows the smooth exterior of the stream worn cobble from which these flakes were derived.

A single 20 cm.^{2} test was dug adjacent to the 1 meter^2 concentration of surface flakes and produced numerous small black chert flakes and a few more quartzite flakes between 2-5 cm. below surface.

Two different activities or periods of activity may be represented by the two types of lithic material present at the site. The rough, coarse-grained material would probably serve well for the production of expediency-type tools or tools requiring a strong, but not so sharp or fine, edge. The ten black chert flakes may represent a resharpening

episode as all flakes are small and delicate. No diagnostic artifacts were observed. The site may have served as a lookout/flaking station.

Now that the site has been recorded, there should be little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-075

Site Elevation: 1200 Ft.	SW¼, NE¼ Section 7 T19N, R23E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the western sloping boundary of the large moraine system about midway down its north-south running margin. This moraine system constitutes the divide between the Kobuk and Alatna drainages and lies along a portion of the "Alatna Portage". The site consists of a 4 meter^2 flat bench on a west facing slope. More steeply sloping (30°) terrain occurs below the site and less steep (15°) terrain above. Spruce, birch and alder occupy the sloping terrain, yielding to willow and alder at the base of the slope, with swampy muskeg constituting the lowland area below the site. Several small lakes dot this area some 200-300 meters west of the site.

A single gray chert flake was fortuitously discovered on the steep sloping terrain just 2 meters below the 4 meter^2 flat area. The flake measures 2.5 cm. long by 3 cm. wide and does not appear to have been retouched or utilized. A single 15 cm.^{2} test pit was excavated to a depth of 10 cm. on the flat area above the location of the flake. No cultural material was recovered.

The site is well hidden amongst the spruce and birch but affords an excellent view out onto the lake area below. Three moose were observed in this area the day the site was located. The lowland area probably provides excellent browse for moose during much of the year. This, then, would be a suitable lookout point for moose hunting, and waterfowl could also have been spotted and hunted from the same location.

Now that this site has been recorded, there should be little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-076

Site Elevation: 800 Ft.	SE¼, NE¼ Section 18 T19N, R22E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a knoll approximately 200 meters south and 40 meters above Kichaiakaka Creek. The knoll extends about 20 meters north-south and 3 meters east-west. The site lies roughly 1 mile southeast of the mouth of the creek. A mile long ridge, oriented east-west, supports XSP-076, as well as XSP-071, 90 meters to the east and XSP-069, roughly 100 meters to the west. The view from this site to the north and east is 1 mile, while trees and terrain block the visibility in all other directions.

Vegetation at the site is dominated by caribou lichen and small spruce trees. Other plants in the site area include woody plants, grasses and a few deciduous trees. Fallen and charred spruce trees indicate wildfire activity at the site some time during the past 100 years. The site is set back in the trees more than the other sites located along this ridge.

The site was discovered by the location of a single, isolated flake on surface. This medium sized chert flake was broken (2 pieces) and had a potlid fracture on its ventral surface, possibly indicating damage resulting from wildfire. A 20 cm.^{2} test pit was excavated to a depth of 5-7 cm. below surface and produced no cultural material. The soil at this site is comprised of loess and fragmented bedrock.

The level of site significance is low. This site may have been associated with hunting or travel activity along this ridge and through the "Alatna Portage". The five sites on this ridge may point to a pattern of land use. By itself, however, XSP-076 reveals very little data concerning the prehistoric occupants of the site.

Now that the site has been recorded, there should be little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-077

Site Elevation: 920 Ft.	NE¼, SE¼ Section 8 T19N, R22E	Probable Site Type: Campsite/Lookout
Site Age: 920/2000 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Eskimo/unknown

The site is located on the western most of the prominent knolls along the north side of Kichaiakaka Creek. The knoll is situated about 3/4 mile north of the creek and about 1¼ miles east of the confluence of the creek with the Kobuk River. The knoll is part of the dead ice or dissected moraine topography left by the retreat of the Itkillik Glaciation. The site offers a fine view to the south of Kichaiakaka Creek Valley and to the west toward the Kobuk River and the moraine complex at the south end of Walker Lake.

Vegetation on this knoll is relatively sparse. It is surrounded by spruce forest, but only a few spruce trees extend up to the south slope of the knoll. The top of the knoll is devoid of trees. The ground cover is a thin mat of lichen dwarf heath vegetation common to the well-drained sites of the region. Vegetation is absent from an area 10 meters in diameter at the top of the knoll where active frost heaving is most intense. The ground cover is thicker and more continuous on the western half of the knoll than on the eastern half. The generally thin vegetation mat made the observation of cultural material on the surface an easy task.

This site contains a remarkable diversity of stone artifacts in comparison to others of the Kichaiakaka drainage. One of the most important artifacts. observed even before the helicopter landed, is a long, black chert, flake knife resembling those illustrated for the Norton culture from the Iyatayet site by Giddings (1964: Plate 54). It is 10.5 cm. long, 2.5 cm. wide and 0.8 cm. thick and is thus slightly larger than the largest illustrated by Giddings (8.5 cm. long). It is nicely flaked from both lateral edges on the dorsal surface, and is complete. The site tag was implaced next to the flake knife near the top of the knoll toward the west side of the frost heaved area. Because of the large number of artifacts in the site, a north-south (magnetic) baseline was laid out to the south of the site tag from which artifact locations were measured. About 6.2 meters south and 1.8 meters west of the tag is an obsidian biface 6 cm. in length. A concentration of artifacts 2 meters^2 in area is centered about 16 meters south and 5 meters east of the site tag. This concentration includes a notched obsidian blade 8.5 cm. long and 2.5 cm. wide, four obsidian scrapers, a siltstone or baslat scraper, a burin made on an obsidian flake, and an odd biface that looks, at first glance, like an end scraper, but is bifacially flaked. About 18 meters south of the tag is an obsidian knife or utilized flake with fine retouch along one edge. Another knife of dark gray chert, 8.5 cm. long with retouch along one entire edge, is located 22 meters south and 11 meters east of the tag. About 15 meters northeast of the tag was a broken obsidian cobble, apparently unused.

Because of the large artifact inventory, four test pits were excavated in the site to determine whether there was any depth to the cultural deposits. Two of these test pits 20 cm.^{2} were excavated to a depth of 20 cm. but were sterile. One test pit of similar size, 6.4 meters north and 4.7 meters east of the site tag just north of the frost heaved area, contained 3 small obsidian flakes about 0.5 cm. below the surface. Another test pit of similar size, located 16.6 meters south and 5.0 meters east of the tag, in the artifact concentration, produced only two obsidian flakes less than 2 cm. deep. The test pits revealed very poorly developed soils and a lack of any cultural stratigraphy.

A sample of obsidian from test pit "A" was submitted for hydration analysis and yielded a rind thickness measurement of 1.46μ ± 0.06μ. Given the locally calibrated radiocarbon dated rate of 2.32μ^2/1000 years, the calculated age is 918 ± 75 years B.P. This age may be seen as a tentative estimate for some of the obsidian materials present at the site.

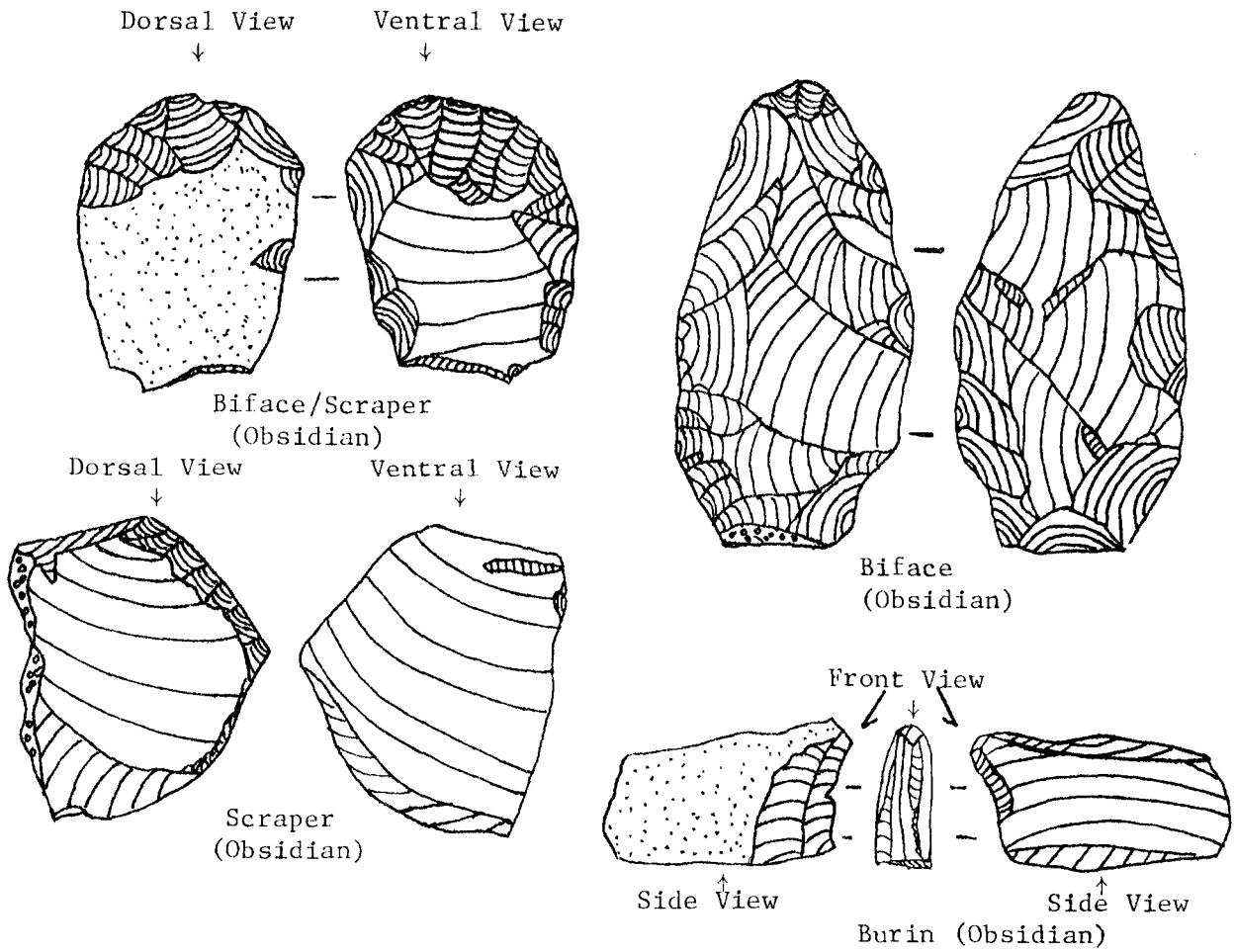
The presence of what appears to be a flake knife of the Norton culture would place the chert component of the site in the time period between about 1500 and 2300 years ago. This artifact also provides the only good evidence of Eskimo use of the Kichaiakaka drainage area. None of the other artifacts provides evidence on temporal or cultural context for the site.

The concentration of artifacts 16 meters south-southwest of the site tag suggests a hide processing activity area because of the presence of 5 scrapers, two of which appear to have been broken. The site itself probably functioned as a lookout and/or hunting camp. Of the sites on the north side of Kichaiakaka Creek, XSP-077 is seemingly the best suited for hunting. It provides a perfect view of the low, flat area just north of the creek. This area consists of low, bushy shrub tundra that is interrupted by lines of spruce trees that form stripes leading down toward the creek. The open tundra allows good visibility for game moving in the valley, while the lines of trees would provide cover for hunters. Unlike many of the lookout sites in this region, the site seems to lack the abundance of small flakes of lithic detritus that indicates tool manufacture. The reason for this absence is not clear, given the abundance of large tools.

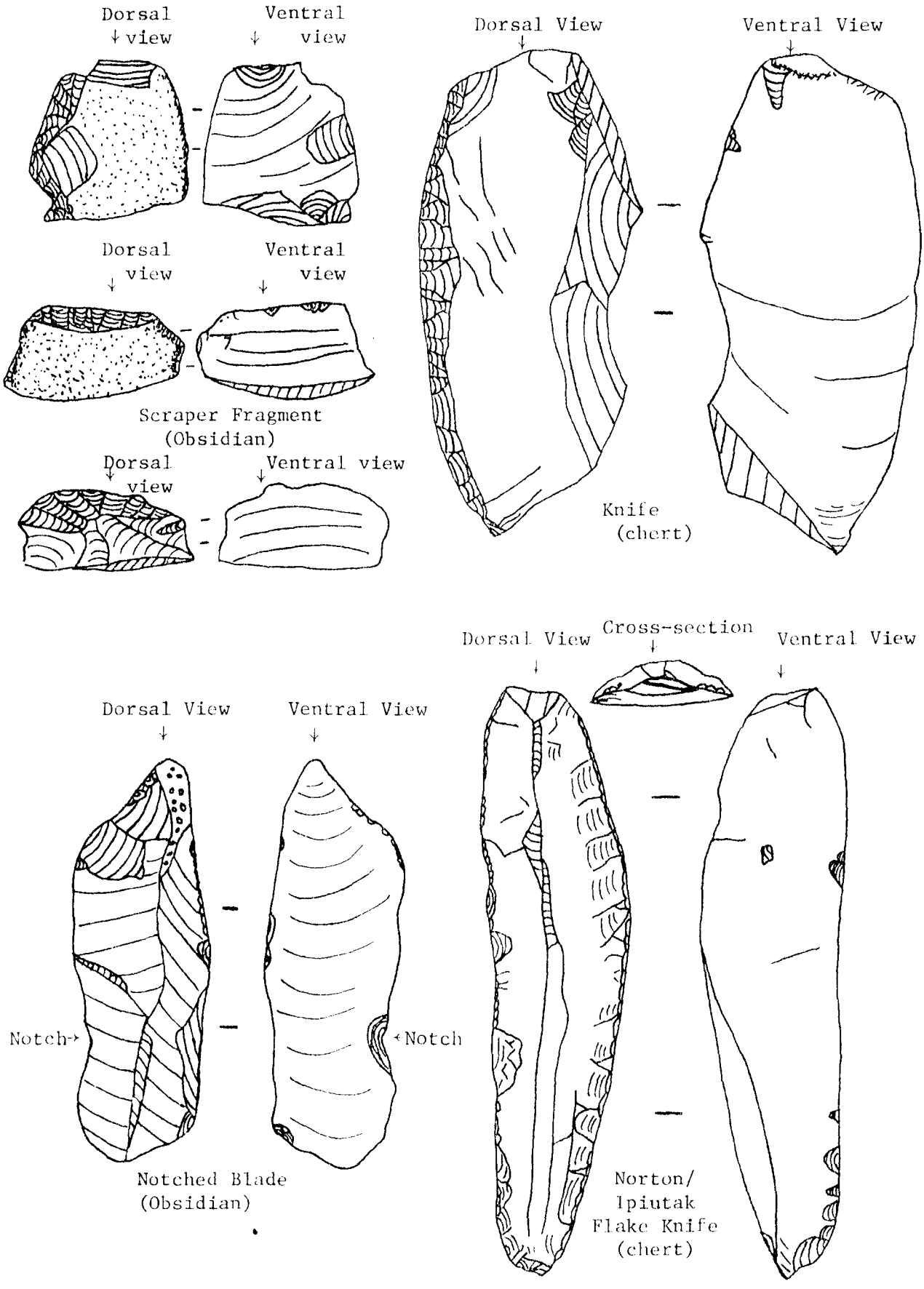
In addition to the evidence for prehistoric occupation of XSP-077, an apparently recent campfire is located at the extreme northern end of the knoll, just at the forest edge. Additionally, just next to the knoll on the northeast side, a rusted tobacco tin with the barely visible label "T & B" was found on the surface. Use of the site locale as a camping location by both modern and prehistoric persons is indicative of the location's physical attractiveness.

The moderate significance of this site lies in the presence of the flake knife which may be diagnostic of both time and cultural affiliation. This artifact provides reasonably good evidence of Eskimo use of the area perhaps two millenia ago. The site is also important because of its apparently obvious function as a lookout and/or hunting camp. Unfortunately, the lack of stratigraphy diminishes the possibility of much

additional material being present in the site. However, if future development threatens the site, it is of sufficient importance that further subsurface testing and surface collection should be undertaken. Present disturbance of the site is due to active frost heaving, but most of this activity is not occurring where artifacts are concentrated. Despite the evidence of historic use of the site, it does not appear to be threatened by recreational activities in the park. Park personnel using helicopters, however, should be cautioned about collecting remains, as they are clearly visible on the surface. Such barren knolls in this area are excellent landing areas because the surrounding forest provides limited places to land.



XSP-077 Artifacts - Actual Size



XSP-077 Artifacts - Actual Size

XSP-078

Site Elevation: 985 Ft.	NW¼, SE¼ Section 7 T19N, R22E	Probable Site Type: Lookout
Site Age: ca. 2000 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the northern half of a north-south trending ridge about 3/4 mile north of Kichaiakaka Creek and ¼ mile west of XSP-066. The ridge is about 2½ miles east of the confluence of Kichaiakaka Creek and the Kobuk River. The knoll is part of the dead ice topography left by the Itkillik Glaciation, as are all of the knolls in this part of the valley. The ridge affords a fine view of the creek valley to the south. The view to the west is of the ridges and creek valley, with the moraine complex at the south end of Walker Lake visible in the distance. To the east, the view is somewhat obscured by the higher ridge containing XSP-066.

Scattered spruce and quaking aspen line the flanks of the ridge, but the top of the ridge has few trees. The ground cover is the ubiquitous lichen-dwarf heath that is present on the well drained terrain of this region. Scattered dwarf birch shrubs are present along the ridge top. The steep eastern flank of the knoll is eroding and lacks any ground cover.

The cultural material at the site was located by surface observation. The site tag was placed just north of the northern of two low, barren knolls along the ridge top. At this location 20 black chert flakes, two gray chert flakes, and the proximal half of a black chert microblade were visible on the surface between clumps of lichen within an area of 1 x 2 meters. Forty meters south of the site tag, just southwest of the northern low knoll, was a single dark gray chert flake 3 cm. in length. Approximately 67 meters south of the site tag, just north of the southern low knoll, was a proximal half of a large gray chert blade, triangular in cross section. Close inspection of the ridge top revealed no additional cultural material.

The presence of a microblade in the site is suggestive of an age of at least 2,000 years for this part of the site. The widely separated dark gray chert flake and gray blade half are possibly unrelated to the microblade and accompanying flake scatter. Although the cultural material is too far north on the ridge for an optimum view of the creek valley, the site probably functioned as a lookout/flaking station. Good views of the valley may be had within 100 meters of the position of the cultural material.

The significance of the site lies in the presence of a microblade, the only one located on the north side of Kichaiakaka Creek. This documents the antiquity of the use of the north half of the valley, as well as further documenting the extent of the use of the valley's ridges and

knolls. Presently, natural slope erosion processes are affecting the east flank of the ridge, but the artifact locations are not immediately threatened. Impact on this site from recreational activity is unlikely because of its remote location.

Now that this site has been recorded, there should be little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-079

Site Elevation: 800 Ft.	SW¼, NE¼ Section 18 T19N, R22E	Probable Site Type: Lookout
Site Age: ca. 2000 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

The site is located on a knoll 100 meters south of Kichaiakaka Creek approximately 5½ miles above the mouth. The knoll is one in a series oriented east-west along the side of the creek. The site lies about 30 meters above the creek. XSP-068 is located approximately 300 meters above the creek.

The view from the site is best to the north and east for a distance of 1 mile. The areas south and west of this knoll are wooded and the trees do not permit good visibility. The knoll top is covered predominantly by caribou lichen. Soil atop the knoll is primarily made up of loess and fragmented bedrock. Frost action appears active on this knoll.

Cultural material found on the surface at XSP-079 include 5 light brown chert flakes, 1 dark chert flake, and 1 obsidian flake. All of these surface lithics occur within a 3 meter area on the eastern edge of the knoll top.

Two 20 $cm.^2$ test pits were excavated just upslope from the surface flakes to a depth of 10 cm. Test #1 produced 29 gray chert flakes between 0-3 cm. below surface. This material was recovered from the organic soil horizons. Range in color of the small flakes is from light to dark gray. Some of the flakes appear blade-like. Test #2 yielded 3 obsidian flakes and a light brown chert flake from 0-3 cm. below surface. The subsurface lithics in test #2 are similar to those found on the surface near this test. This suggests that the surface lithics may have been vertically displaced upward, probably by frost heaving. Some trampling by animals and wildfire, ca. 100 years ago, have also had impact at the site.

A sample of subsurface obsidian from test #2 was submitted for hydration analysis. The measured hydration rind thickness of 2.17μ ± 0.04μ yields an age of 2030 ± 75 years B.P. according to the locally derived, radiocarbon dated calibration of $2.32\mu^2/1000$ years. This date can be applied to only the obsidian component of the site. The

presence of both chert and obsidian may indicate more than one occupational event occurred at the site.

The level of site significance is low given the paucity of buried and surface material. The site should be considered with the series of sites along Kichaiakaka Creek, as possibly pointing to a pattern of land use in the "Alatana Portage" either for hunting or travel. XSP-079 may have been an overlook site possibly for watching game movement along the creek.

The potential for adverse impact at this site is low. Now that the site has been recorded, little thought need be given to protection or the mitigation of any but human-induced impacts.

XSP-080

Site Elevation: 800 Ft.	SW¼, NE¼ Section 18 T19N, R22E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

The site is located on a glacial ridge on the southern side of Kichaiakaka Creek. This ridge runs nearly 1 mile east-west and parallels the creek. The ridge is about 40 meters wide at the location of the site which lies approximately 40 meters above the creek. The site lies 2 miles above the mouth of the creek. XSP-080 sits on a 30 meter diameter knoll atop the ridge 200 meters south of the creek. A well-used game trail bisects the site knoll.

Vegetation at the site is dominated by caribou lichen and small spruce trees. A few birch trees, woody and herbaceous plants, and grasses also make up the foliage. Wildfire occurring sometime in the last 100 years has left a few burned and weathered spruce trees strewn about the site. The game trail, which cuts 2-5 cm. into the surface of the site, is devoid of vegetation, indicating heavy use.

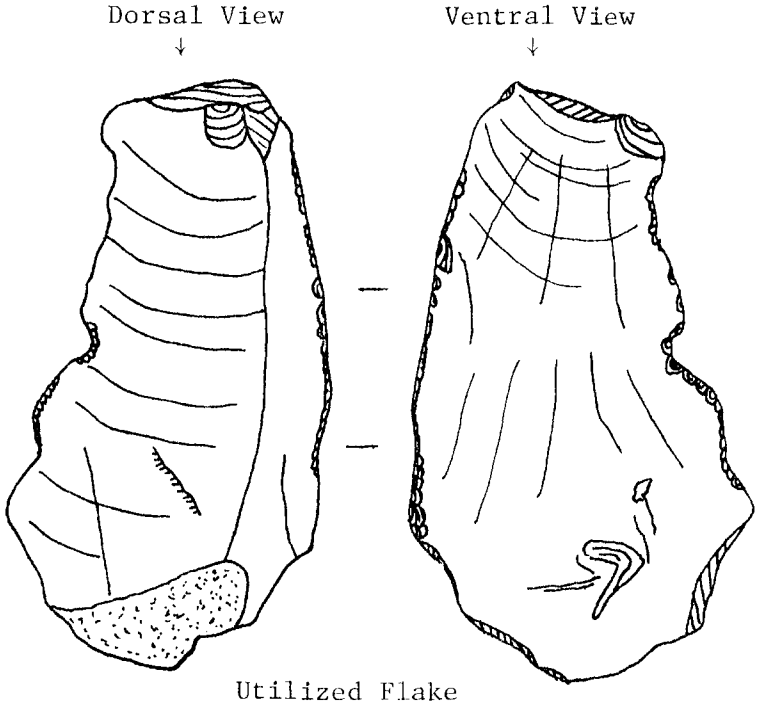
The site was found as a result of cultural material being exposed in the game trail. Six black and gray chert flakes, as well as four obsidian flakes were found on the surface of the trail. These waste flakes are small, and several chert flakes exhibited pot-lid fractures suggesting they had been subjected to extreme heat. Additional obsidian flakes and one large (3 cm. x 5 cm.) basalt flake were found on the surface approximately 4-6 meters south of the game trail. This surface detritus was scattered over an area roughly 5 meters^2.

Two 20 cm.^{2} test pits were excavated in this flake scatter to a depth of 6-8 cm. below surface. Test #1 contained no cultural material. Test #2 produced a large, gray chert flake with cortex 0-2 cm. below surface. This flake is blade-like (4 cm. x 7 cm.) and exhibits use-wear along both edges, as well as a well-prepared striking platform. Despite the lack of apparent, purposeful retouch, a spur exists on the left dorsal edge which may have been utilized as a graver. No

additional cultural material was found.

The level of site significance is low given the paucity of cultural material and the absence of diagnostic artifacts. The occurrence of both chert and obsidian may indicate that more than one occupational event has taken place at the site. The obsidian suggests a maximum age of ca. 2000 years B.P. for that occupational event. The site may be oriented to game movement along the long, narrow ridge line. Five sites were located along this ridge and together suggest a pattern of similar land use.

Potential impacts to the site are limited to the natural variety such as wildfire, animal trampling, and erosion. Some small scale erosion initiated by frost action and animal trampling was observed. However, this should cause little concern now that it has been recorded. Only human-induced impacts need be considered for mitigation.



Utilized Flake
(chert)

XSP-080 Artifact - Actual Size

XSP-081

Site Elevation: 1200 Ft.	NE¼, NE¼ Section 1 T19N, R22E	Probable Site Type: Hunting oriented
Site Age: ca. 2000 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Athapaskan

This site is located on the east side of Kichaiakaka Creek, where it emerges from the mountains, north of the "Alatna Portage". The site occupies the southwest corner of a lateral moraine, which is elevated 45 meters above the creek to the west and the lowland to the south. The site is well vegetated with spruce and birch as well as dwarf birch and a few large alder. Lichen and woody and herbaceous plants add to the ground cover. There is evidence that wildfire has passed through the area in the last 100 years. The site affords an excellent view southwest down the Kichaiakaka Valley, south across low lying brushy terrain, and southeast across the large moraine complex which constitutes the divide between the Kobuk and Alatna drainages.

Surface indications at the site consist of several flakes of gray, black and dark gray chert scattered over a 10 x 5 meter area. A tight cluster of approximately 25 multi-colored small, obsidian flakes occur on the western boundary of the surface lithic scatter. Two gray chert microblades, two gray chert microblade core fragments, and a burinated flake of dark gray chert were also part of this scatter. Fifteen meters to the east, a single gray chert flake was located in association with at least 15 medium to large (20 to 50 cm. in diameter) schist slabs. Several of these slabs appear to form patterns of alignment. All of the schist slabs are incorporated in the root mat and are partially exposed on surface. The soil below these slabs is fine grained silt and loess, containing no clasts larger than pebble sized materials, to a depth of at least 25 cm. These slabs may be manuports that may have been used to hold down the edges of a tent. In addition, a few smaller fragments of the same schist material were located. These appear similar to tchi-thos, often found in Athapaskan sites, a tool used for scraping and hide working.

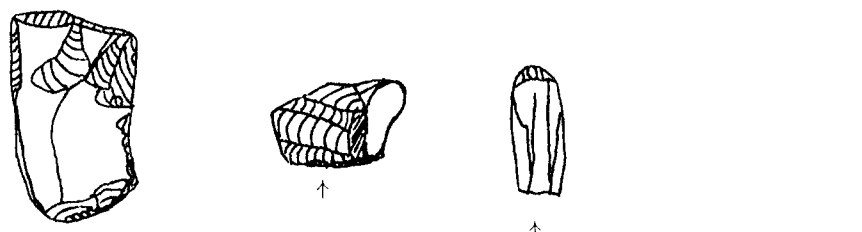
A single 20 $cm.^2$ test pit was excavated to a depth of 25 cm. through fine grained loess. No cultural material was encountered. This low level of testing, however, does not constitute the minimum necessary to evaluate the possible subsurface occurrence of artifactual materials.

This site may have been a microblade manufacturing location. Microblades suggest a minimum site age of ca. 2000 years B.P.

The discrete cluster of obsidian flakes may suggest the site was used on at least two separate occasions. Locally derived obsidian hydration data suggests obsidian was not widely used in the area prior to ca. 2000 years. B.P.

A total of seven sites are located in close proximity to one another along this moraine. This cluster of sites suggests similar site function, perhaps hunting oriented activity.

Potential impacts to the site appear to be limited to the natural variety, such as wildfire or erosion. However, this should cause little concern, as the site, now that it has been recorded, need be considered for protection or mitigative action only in the event of human-induced impacts.



XSP-081 Artifacts - Actual Size

XSP-082

Site Elevation: 1200 Ft.	NW¼, NW¼ Section 6 T19N, R22E	Probable Site Type: Camp
Site Age: ca. 1550 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

The site is situated on a 45 meter high glacial knoll approximately 200 meters east of Kichaiakaka Creek where the creek emerges from the mountains north of the "Alatna Portage". The site lies roughly 14 meters north of the southern edge of this broad knoll. XSP-081 is located on this same knoll nearly 130 meters west of this site. View from XSP-082 is best to the south down the valley and generally obscured in all other directions by trees.

Vegetation at the site includes medium sized spruce trees and caribou lichen. Wildfire activity, more evident in the "Alatna Portage", is not as apparent on the lateral moraine in the headwaters of Kichaiakaka Creek. The area below this knoll along the creek is generally brushy and poorly drained.

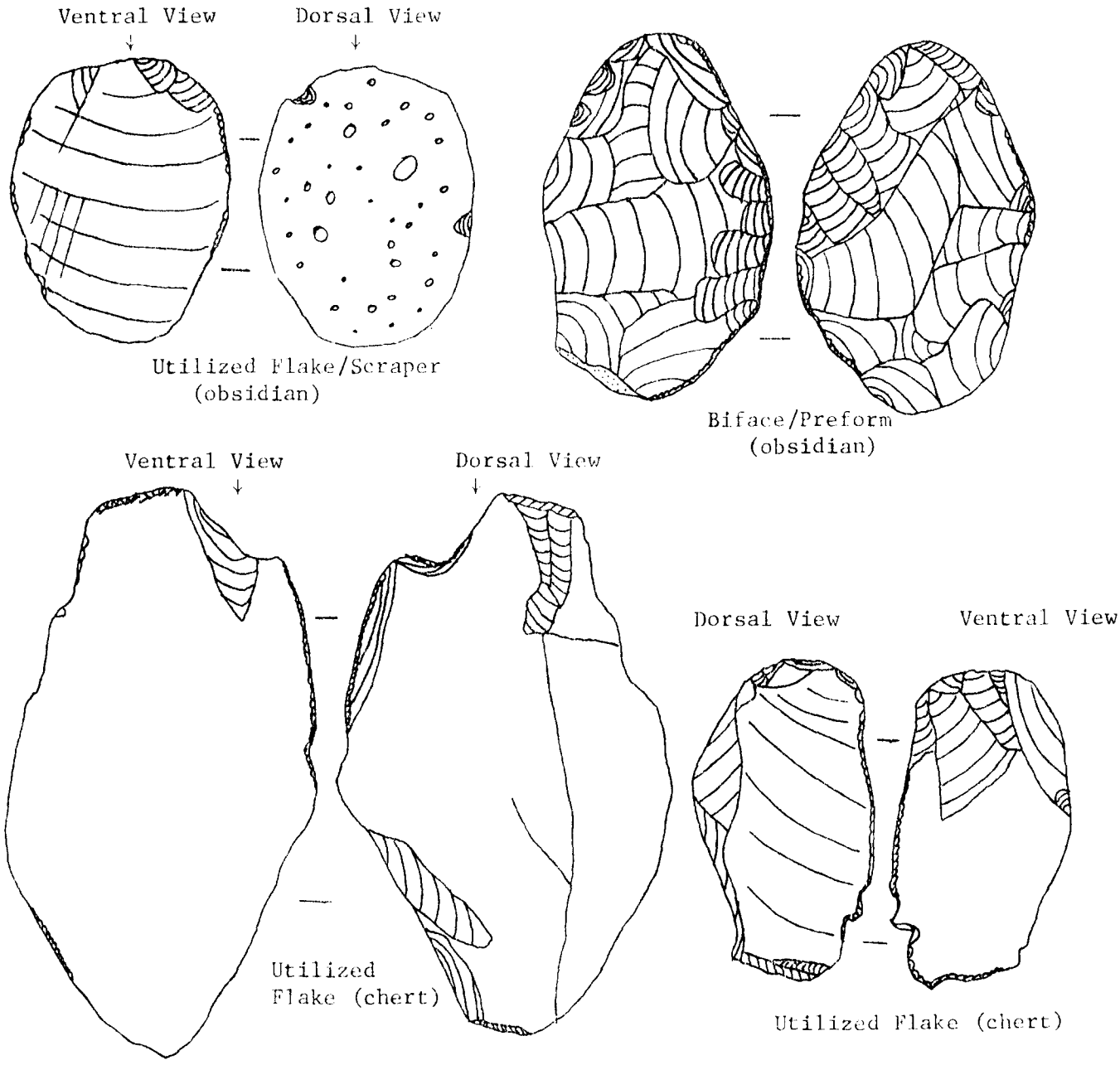
The site was first discovered as a dense cluster of surface lithics. The area of the site is limited to 2 meters^2. The site contains more than 30 large chert and obsidian flakes. The black chert and black and red obsidian are intermingled , suggesting they represent a

single event at the site.

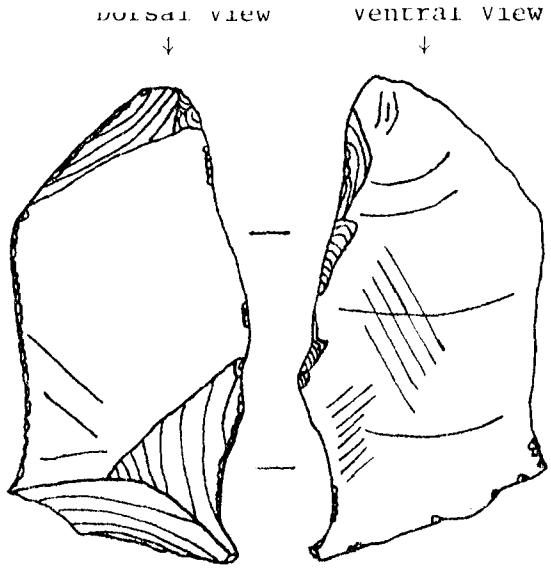
A 10 cm. x 20 cm. test pit was excavated to a depth of 10 cm. below surface, and produced at least 10 large, utilized flakes (chert and obsidian), a biface preform (obsidian), and 32 waste flakes (chert and obsidian). This material came from 0-5 cm. below surface. The soil at the site is tightly packed loess. Frost action appears to be active at the site.

The obsidian biface was submitted for hydration analysis. The hydration rind thickness measurement of 1.90μ ± 0.07μ yields an age of 1556 ± 115 years B.P., according to the locally derived radiocarbon dated calibration of $2.32\mu^2/1000$ years.

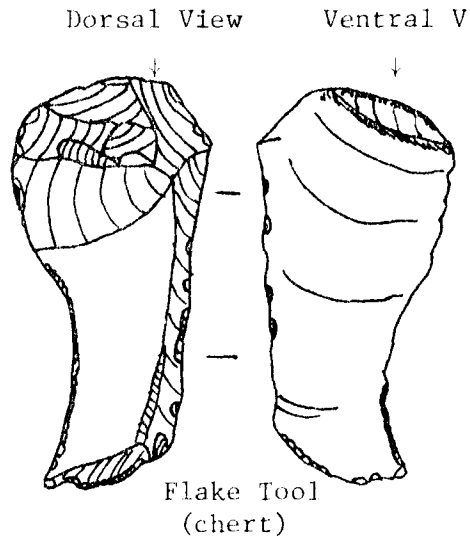
The level of site significance is medium as this site is somewhat atypical when compared with other sites in the region. Based upon the tightly clustered nature of these artifacts, it appears this site is a result of a workshop, tool cache, or perhaps an abandoned tool kit. Provenience of this detritus suggests some antiquity and that frost action may be moving material up toward the surface. The site is in no immediate danger of destruction, but should be regarded as worth protecting from any but natural impacts until further testing can be carried out.



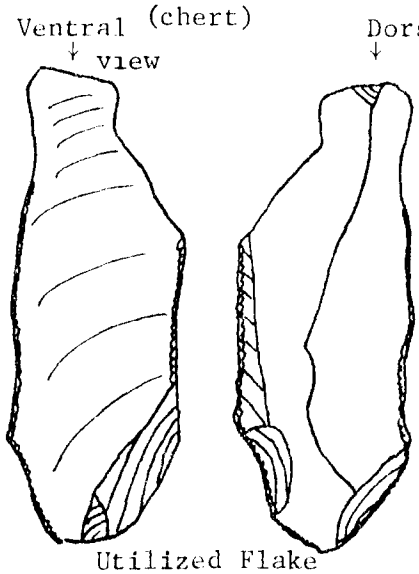
XSP-082 Artifacts - Actual Size



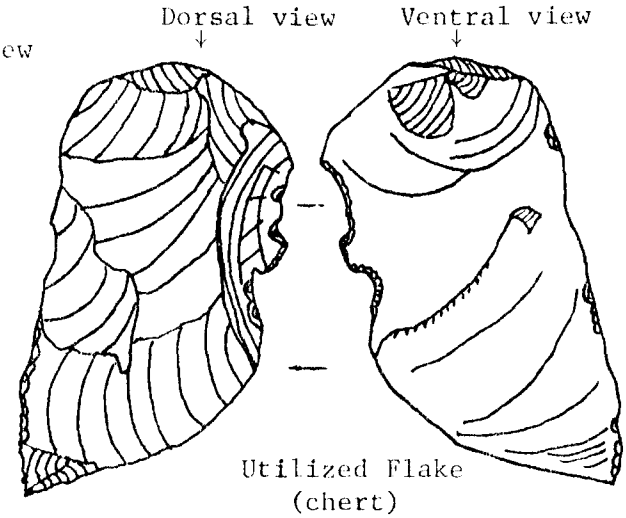
Utilized Flake
(chert)



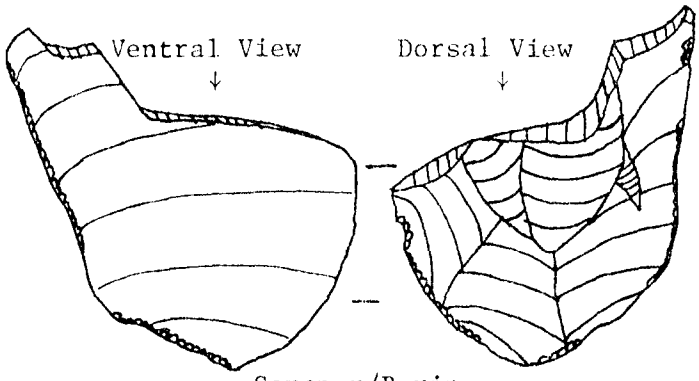
Flake Tool
(chert)



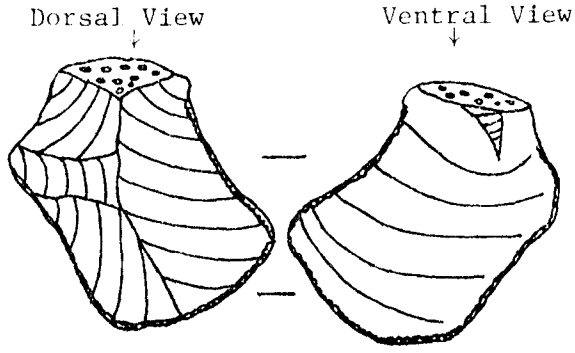
Utilized Flake
(chert)



Utilized Flake
(chert)



Scraper/Burin
(chert)



Utilized Flake/Scraper
(obsidian)

XSP-082 Artifact - Actual Size

AREA #2

Walker Lake

Camp #1 - June 4-12

We arrived at this camp via Goose from Fairbanks-Bettles-Walker Lake, and helicopter from Walker Lake to our camp location. Our camp was located approximately two miles south of Walker Lake on a high bluff overlooking the Walker Lake outlet stream.

From this camp, we spent nine days surveying the area south and east of Walker Lake; approximately 9 square miles. The majority of this area is glacial topography (terminal moraine complex Walker Lake Glaciation) which is well drained and supports a robust cover of caribou moss, scattered spruce, birch, poplar, dwarf birch, willow and alder. The area has been burned over by wildfire in the recent past (60-100 years ago) and as a result, the area is somewhat park-like. The walking is quite good as is on-the-ground visibility. Both of these factors contributed to the productivity of the surface survey technique which we employed to locate archeological sites.

A total of 15 archeological sites were located while working out of Camp #1; all but one of these sites were prehistoric. The single exception, XSP-055, is located just below the rapids on the Walker Lake outlet stream. This site may be the location of Lt. John Cantwell's 1884 camp. Several other possible historic sites were also located, but no site designations were assigned nor was a reasonable age determination possible.

No truly diagnostic artifacts were recovered from any of the prehistoric sites. The presence of microblades at several of the sites may indicate a minimum age of approximately 2000 years. None of the artifacts found at the sites do more than hint at possible cultural affilliations. A tchi-tho was located at one site and may indicate Athapaskan use of the area at sometime in the recent past. Projectile points at several sites appear to be more, morphologically, Indian than Eskimo. Only a few of the sites located demonstrate the potential to be large sites - these are all near Walker Lake. The most common formal artifact observed in the sites in this area were end scrapers. The apparent small size of most of the sites and the preponderance of end scrapers may indicate that short to moderate term hunting camps were the main focus of activity in the area.

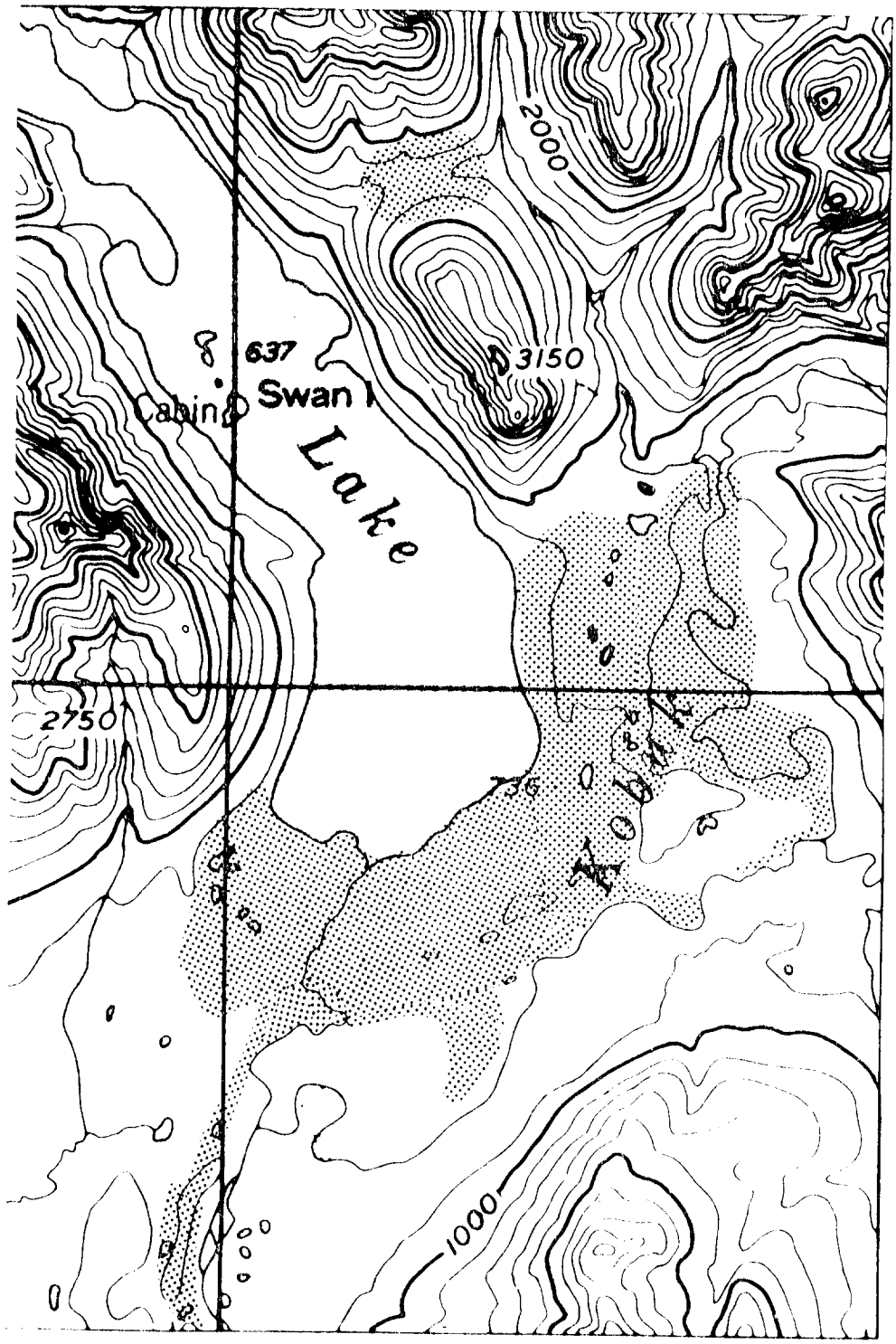
Camp #7 - July 8-12

We moved our gear and supplies to this camp location with the helicopter. This camp was located on the extreme upper Kobuk River about two miles east of the southern end of Walker Lake.

We worked out of Camp #7 for five days in a rather dispersed manner as we were able to make use of the helicopter on several occasions. We surveyed roughly 8 square miles while working out of this camp, although portions of the surveyed area were as far afield as 12 air miles.

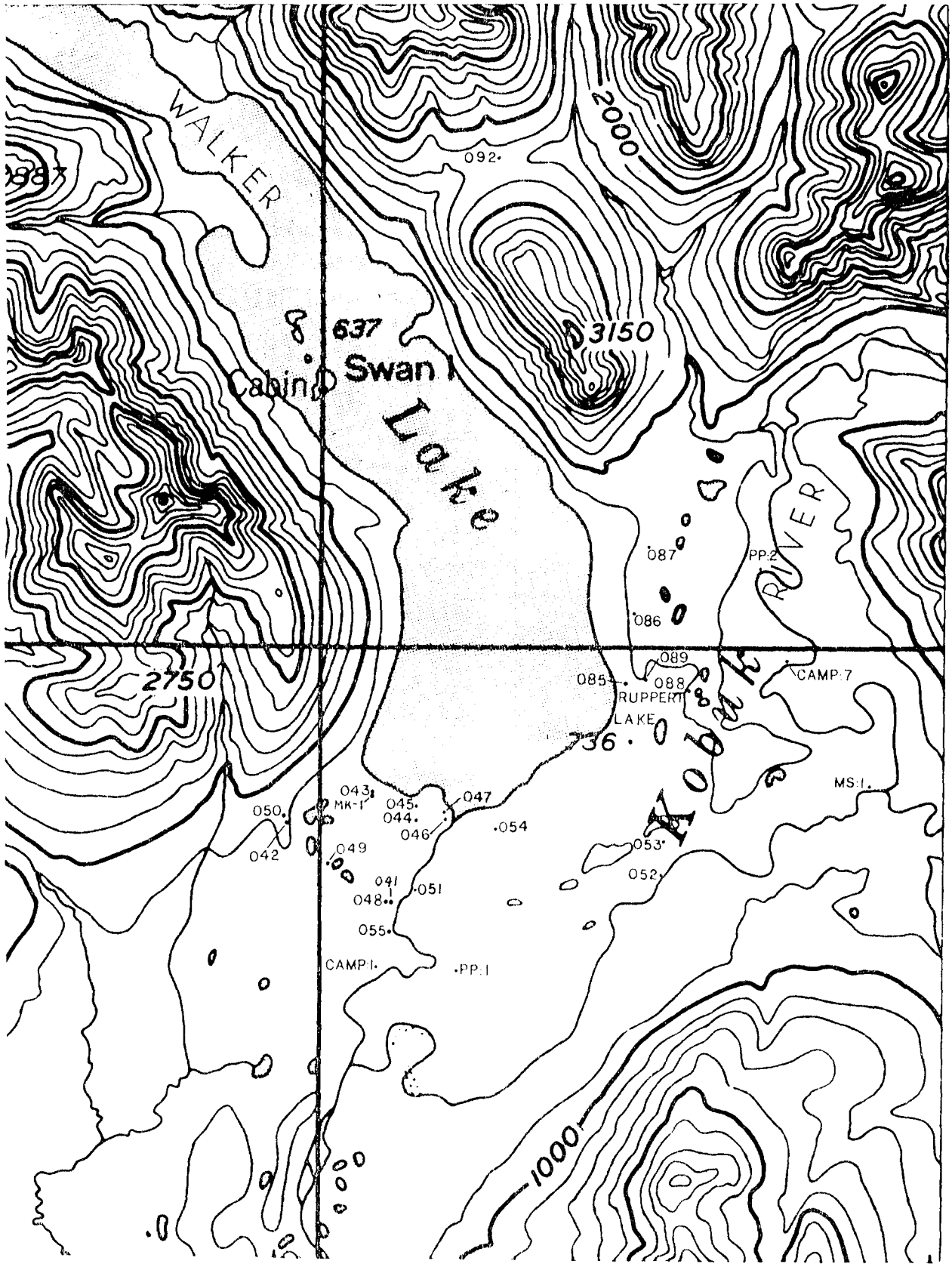
The topography of this area is basically what has been described for Kichaiakaka Creek and Walker Lake, as are the ground cover and wildfire conditions.

Nine prehistoric sites and several recent (last 50 years) campsites were found while working out of Camp #7. The prehistoric sites were similar to those located in the Kichaiakaka Creek Valley and those around the southern end of Walker Lake. For the most part, the prehistoric sites appear to be of the hunting camp variety; scrapers being the most common artifact- Microblades were also located at several sites, again indicating a minimum date for those sites of ca. 2000 years. The recent campsites appeared to be oriented toward trapping, as several steel traps were found at various locations. A large cave was found on the Upper Kobuk, approximately 250 meters above the river. Preliminary reconnaissance of this cave did not disclose the presence of any cultural material.



six miles

AREA SURVEYED


WALKER
2000
092
637
3150
Cabin
Swan
Lake
087
PP:2
086
089
085
088
RUPPERT
LAKE
CAMP:7
2750
36.0
Kobuk
RIVER
MS:1
043
MK-1
045
044
047
050
042
046
054
049
053
052
041
048
051
055
CAMP:1
PP:1
1000
six miles



six miles

XSP-055
(Cantwell/Mendenhall Campsite)

Site Elevation: 630 Ft.	SE¼, NW¼ Section 19 T19N, R21E	Probable Site Type: Exploration
Site Age: 98 B.P.	Kateel River Meridian	Probable Cultural Affiliation: Historic

This site is located on the right hand bank of the Walker Lake outlet stream at the foot of the northernmost and largest set of rapids. This area is slightly more than a mile south of the southern end of Walker Lake. At this point, the stream cuts through the morainal complex which overlies the area between the southern end of Walker Lake and the Kobuk River. The walls of the stream-cut are quite steep and heavily vegetated, ground cover consisting of caribou lichen, dwarf birch, willow, alder, poplar, spruce, and isolated birch. A major wildfire burned the area between fifty and one hundred years ago and numerous down and standing burned snags and stumps are present as well as a layer of charcoal in the organic level of the area soil profile.

The site proper is located on a flat grassy expanse at the water's edge. The site lies about a meter above the mean high water level of the stream and appears to have suffered no major damage due to annual flooding during spring breakup. The site location is the only physical feature in the general vicinity suitable for camping. This flat, grassy expanse covers roughly 25^2 meters and lies at the base of a small hill-like glacial feature. This glacial feature is encompassed by an abandoned meander of the outlet stream.

About twelve meters back from the stream edge, six axe-cut poles, averaging twelve feet in length and three inches in diameter were found. The poles were deeply sunk into the surface of the ground, 50% of their surface being covered with moss and lichen. Approximately one meter to the north of the concentration of poles, was a cluster of four wooden (tent?) pegs. The pegs were axe-sharpened and three were still in place, deeply imbedded, point first in the soil. The fourth peg was lying on (imbedded in) the surface. The pegs were partially covered by a growth of moss and lichen. One meter to the west of the pole concentration were two axe-cut pieces of spruce approximately six inches in diameter, one two feet in length and the other three feet long. These two pieces of wood may have served as rollers or may be unused pieces of firewood. All wood at the site was quite rotten and covered by moss and lichen. The only reasonably preserved wood were those portions of the pegs which remained imbedded in the ground.

Two meters east-northeast of the pegs were two large rocks, roughly .5 meters in diameter, between which lay the remains of an old fire. Burned wood remnants and chunks of charcoal were imbedded in the ground surface to the same extent as were the poles and other pieces of wood. One meter east of this hearth were three smaller rocks surrounding a more recent fire. In this second hearth were buried some scraps of aluminum/tin foil indicating a more recent origin.

Additional reconnaissance of the area disclosed the existence of two

axe-cut stumps on the hillside thirty meters west of the site. These stumps were so old and in such an advanced state of deterioration that they had fallen over. The stumps appeared to be related, in terms of diameter, to the two large diameter pieces of cut-wood at the site. A section of wood from each of the stumps was collected, as was a portion of each of the corresponding sized pieces of wood at the site.

The reason for the extreme interest in this rather meager site was that there was an excellent chance that it was the campsite of the John C. Cantwell party, who were the first white men to ascend the Kobuk River. According to Cantwell's published account of the expedition (Cantwell, 1889), he camped at this location on July 21, 1885.

Cantwell states: "During the afternoon we reached the junction of the Kowak with a stream flowing from the north, and the Indians informed me that this was the outlet of Lake Car-loog-ah-look-tah (Walker Lake). ...We entered this tributary and pushed ahead until we reached a point where the river is obstructed by rapids, and I stopped to reconnoiter. ...We camped on a level place at the foot of the rapids and hauled the boat out to get thoroughly dry while we remained in the vicinity of the lake."

Even if the physical evidence observed at the site wasn't Cantwell's, the site location is certainly the one at which his party camped.

The only other origin, as far as can be determined from the literature, for the physical remains at this location would be the Walter C. Mendenhall party who camped at this location on August 11, 1901. Mendenhall, a geologist with the USGS states: "...On the 11th of August the camp was moved up Walker Creek to the rapids about a mile below the southern end of the lake. The next day the empty canoes were taken through this barrier and almost to the upper end of the lake, which was discovered and mapped by Cantwell in 1885." (Mendenhall, 1902)

It is possible that the physical evidence at the site is the result of neither Cantwell's or Mendenhall's activities. However, the physical state of the axe cut wood at the site argues for considerable age; almost the limit of endurance for untreated and unprotected wood. Also the camping location would appeal only to someone going upstream in a boat. Overland travel into the area would make use of a more direct route over the morainal complex where the walking would be considerably less taxing.

The possibility also exists that the remains of human activity at the site could be the result of prospecting activities associated with the 1898-99 Kobuk River gold rush.

According to Joseph Grinnell (1901), approximately 800 gold seekers overwintered on the Kobuk River in 1898-99. Grinnell states that he was aware of no winter camps on the Kobuk above the mouth of the Reed River. It is doubtful, therefore, that the site on the Walker Lake outlet is associated with the Kobuk River gold hunting activities.

In an effort to pinpoint the date of the human activity at the site, the

site area was examined for living spruce trees of sufficient age which could be cored by an increment borer. No trees of sufficient age could be found near the site due to past wildfire activity. The closest group of suitable trees was located about 200 meters up stream. This grove of large spruce trees was located at the water's edge in a naturally protected spot. This protected location must have saved these trees from being consumed by past wildfire conflagration. Four of the largest trees were cored; two cores being removed from each tree. Field examination of these cores indicated that all of the subject trees exceeded 150 years in age. Therefore, these trees would have been approximately 80 years old and fairly well developed at the time of Cantwell's and/or Mendenhall's visit.

All of the wood samples collected from the site area were submitted to Peter W. Dunwiddie at the College of Forest Resources, University of Washington, for dendrochronological analysis in the hope that it would be possible to determine the exact age of the site. The following information is taken from Dunwiddie's report (1983).

> In an effort to establish whether or not this site was the Cantwell or Mendenhall camp, samples were collected from logs for dendrochronological dating. The logs had been cut by axe, and appeared to have lain on the ground for many years. Their proximity to the supposed campsite suggested they may have been cut by the Cantwell or Mendenhall parties. A section was also collected from a cut stump that was of similar size to one of the logs. Eight increment cores were taken from nearby white spruce trees to help establish a chronology of known age.
>
> In the laboratory log cross-sections were sanded to enhance ring clarity. Increment cores were glued into wooden mounts, and similarly sanded.
>
> Cross-dating, the matching of patterns of wide and narrow rings, was attempted first using the cores from the four living trees. Because they were collected from living material, the outside ring could be established as 1983, thus providing a known point of reference. The cross-dating between these cores was weak - there was little year-to-year variability in ring width. Comparisons with spruce ring-width chronologies developed by Garfinkel (1979) at Walker Lake also showed only marginal cross-dating. Non-climatic factors appear to contribute significantly to variations in the growth of these trees, thus patterns of wide and narrow rings the trees may have in common are difficult to discern. Although the cores dated to the early 1800's, the weakness of the cross-dating did not offer much promise for matching with the cross-sections of unknown age.
>
> The cross-sections exhibited somewhat more year-to-year variability in ring widths than the cores. Two showed over 200 growth rings. That one of the logs had been cut from the stump was suggested by a close match of the pieces, and confirmed by cross-dating. However, no further cross-dating could be established with certainty, I could

not confirm that all the logs had been cut at the same time, as their relationships to each other in the field suggested. I also could not cross-date the logs with each other, with the increment cores, or with the Garfinkel chronologies.

Cross-dating was originally attempted without knowledge of the year that Cantwell or Mendenhall camped in the area. When provided with the date, I assumed that an outside ring would be close to 1885, but was still unable to cross-date the samples. Therefore, I am unable to confirm that they were cut at that time.

In conclusion, the lack of year-to-year variability in growth of the trees collected in this area prevented me from dendrochronologically dating the logs in question. It is possible that less complacent living trees may be found that allow such cross-dating, but material collected so far is not promising.

As Dunwiddie's report states, the only fact regarding the site that can be demonstrated is that one of the large diameter pieces of axe cut spruce came from one of the nearby axe cut stumps. This information, however, doesn't answer any of the major questions the site has engendered.

Additional studies of the wood samples from the site show that the trees, from which the poles, pegs and logs were obtained, may have been burned prior to the date at which they were cut. In other words, a wildfire may have swept through the area, killing the trees and stopping their growth prior to the tree cutting episode. If this is the case, it would be impossible to determine the date at which the campsite was used. However, in their published accounts, neither Cantwell nor Mendenhall mention the area around Walker Lake as having been recently burned. Some evidence from the wood samples indicate that a wildfire may have passed through the area about 1881. It can be reasonably assumed that an area so recently decimated by fire would have been worthy of mention by either Cantwell or Mendenhall.

The state and condition of the physical evidence at the site suggest that it is an early historic period campsite. The site location is undoubtedly that used by Cantwell and Mendenhall. Whether or not the physical remains of the camping activities at the site were generated by the Cantwell or Mendenhall parties cannot be determined from the collected data. Additional work at the site may answer this question.

Historically speaking the significance of this site is high. It is the camp location of the first non-native person to ever investigate Walker Lake and the Upper Kobuk River area.

The location of the site is of greater importance than the cultural remains. The cultural remains may not be Cantwell's. The cultural remains are already in an advanced state of deterioration and will soon be unrecognizable. This should not be cause for concern as the physical site location cannot be endangered by anything short of a catastrophic natural event.

A search for other Cantwell campsites and activity locales in the Walker Lake area was undertaken, using as a guide Cantwell's maps, photographs and narratives, in the expedition's published account. However, for various reasons, none of these localities could be found.

Cantwell's published account of his exploration of the area is filled with inconsistancies. It appears that the only way to be able to locate with any accuracy most of his activity locales, is to obtain a copy of his original field notes. Barring this, much of what this original expedition of discovery undertook may remain a mystery.

PP-2

Site Elevation:
750 Ft.

SW¼, NW¼
Section 35
T20N, R21E
Kateel River Meridian

Probable Site Type:
Trapping/Prospecting

Site Age:
50 years B.P.

Probable Cultural Affiliation:
Recent

This site is located on the right (north) bank of the Upper Kobuk River, on the second terrace, about mid-way through the "Z" shaped bend of the Kobuk, 1-3/4 miles east of the southeast shore of Walker Lake. This broad, well-drained terrace, composed of sand, gravel and cobbles, measures 100 meters north-south and 100 meters east-west. It is sparsely covered with small to medium sized white spruce, and larger dwarf birch. Lichen is the predominant ground cover. The third terrace, located 50 meters to the west, is more heavily vegetated, especially on its east facing slope at the intersection of the two terraces.

The site is characterized by a few historic items, most likely from the early-middle 20th century (around 1930): a rusted container with a screw-on lid which was interpreted as a baking powder can by S. Hannan, a wood plank fragment with a single rusted nail without its head , and another wooden plank fragment exhibiting multiple cut marks on one face as though it served as a cutting board. The rusted can and lid were located in a 50 x 50 x 25 cm. pit which presumably served as a trash pit, now totally revegetated with lichen and dwarf birch encroaching on both sides. No back dirt pile was evident. Also a few large cobbles or boulders were located adjacent to the wood fragments, all of which were within 2 meters of the actively eroding river bank. The boulders were lying on top of the root mat and charcoal was present below the lichen, but since forest fires are frequent in the area, whether or not these boulders are part of a hearth feature is unclear. The site area encompasses nearly 12 meters (east-west) and 8 meters (north-south) with no cut trees anywhere on or around the site area. The site probably functioned as a short term campsite sometime early in the 20th century.

PP-1

Site Elevation: Approx. 600 Ft.	NW¼, NW¼ Section 20 T19N, R21E	Probable Site Type: Trapping
Site Age: 30 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Recent

This site is located on the southern boundary of the outer glacial moraine system, 1.5 miles south of Walker Lake and less than ¼ of a mile due east of the intersection of the outlet stream and a remnant of its previous channel. The land form consists of an alluvial fan deposit, derived from the gravelly sand of the moraine, which has been down cut steeply on its southern face by the outlet stream. The subsequent incision has produced this fan, measuring some 70 meters east-west across its distal portion, which abutts the remnant outlet stream channel. The site is very well drained, with medium (20 cm. diameter) and small white spruce making up the relatively open tree cover, and various grasses and low shrubs as ground cover.

About 4 meters back from, and 1 meter or so above the water's edge, near the middle of the fan's tongue, an Oneida Jump #3 type trap was found. It was attached to a small (8 cm. diameter) spruce with 35 cm. of chain and a few feet of bailing wire wrapped around and imbedded nearly 2 cm into the bark of the tree. Dead spruce wood was lying tangled beneath the tree and surrounding the trap, suggesting the use of the "cubby hole" technique of trap setting.

The only other definite signs of human activity at the site was a small (4 cm diameter) axe-cut spruce tree located 10 meters north of the trap.

In an attempt to get an estimate of the trap site's age, a wedge of the tree trunk was removed, into which the bailing wire had become incorporated. The number of growth rings which were constricted by the wire were observed. An age of less than ten years can probably be assigned to this trapping station.

MS-1

Site Elevation:	SE¼, NW¼ Section 12 T19N, R21E	Probable Site Type; Historic
Site Age: 80 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Gold Rush

The site is located 2 meters above and 3 meters north of the north bank of the Kobuk River, approximately 100 meters downstream from the mouth of Kichaiakaka Creek. The view from this site is best to the south,

east and west along the Kobuk (50+ meters) and obscured to the north by trees. The vegetation consists primarily of spruce and birch trees, grasses, and woody plants along the river terrace.

The site is characterized by what appears to be a collapsed wooden frame to a tent. Three or four spruce poles were (axe) cut on the ends and are piled together, as if they were once erect, in a T-Pee fashion. The poles are nearly 1 meter long and range in diameter from 5-10 cm. One pole appears burned on the cut end, indicative of a fire, post dating the cut. Presently grass, moss, and Arctostapholis Aplina partially cover these poles and may eventually obscure them completely.

Approximately 1 meter north of these collapsed poles sit two rounded (15 cm. diameter) cobbles, one white and one black, sitting in a north-south orientation almost 20 cm. apart. A test (10 x 20 cm.) excavated to a depth of 20 cm. just east of these cobbles, through alluvial silt, lacked subsurface cultural material.

Based upon the relative rate of decay and vegetative subsidence, the estimated age of this site is no less than 5 years and no greater than 80 years. The site may represent a temporary campsite or hearth on the Kobuk River sometime early in the 20th century.

MK-1

Site Elevation: 670 Ft.	SE¼, SE¼ Section 7 T19N, R21E	Probable Site Type: Trapping
Site Age: Modern	Kateel River Meridian	Probable Cultural Affiliation: Modern

This site is located in the shallow saddle of a morainal ridge approximately 150 meters south of XSP-043.

This site consists of two steel traps attached to pole drags. Both of the traps are #4's. One is a Blake and Lamb underspring, and the other is an Onida Victor double longspring. The traps are wired to the drags with heavy gauge wire. Neither the wire nor the traps appeared to have been exposed to the elements for any extended period of time.

This is probably the "set" location of a modern wolf trapper.

The significance of this site bears more on modern day land use than on that of the historic or prehistoric past. This site indicates that trapping is today, a viable enterprise in the area.

This site will cease to exist when the trapper removes his traps from this location.

XSP-041

Site Elevation: 735 Ft.	NE¼, NE¼ Section 18 T19N, R21E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located atop a small knob which lies on an extensive east-west trending morainal ridge. This morainal ridge attains the highest elevation of any of the glacial features in the western half of the moraine complex south of Walker Lake. This glacial feature is the only one which is sufficiently elevated so as to offer a view of Walker Lake, 1½ miles to the north, and the Kobuk River, 3 miles to the south. The view to the east and west is somewhat restricted, due to trees and hills. The view from this location prior to forestation of the area, approximately 5,500 years ago, would have been outstanding.

The site is located near the eastern end of the ridge approximately 250 meters west of the lake's outlet stream. An excellent overview of the outlet stream can be had by walking approximately 75 meters to the east of the site.

The site was located as a result of surface indication; a gray chert flake was found partially imbedded in the caribou lichen which covers about 80% of the site area. Additional ground cover consists of scattered spruce, birch, willow and various low herbaceous plants. Burned snags, stumps, and fallen trees are noticeable indicating the passage of a wildfire sometime within the last 60-120 years.

Four test pits were excavated to a depth of 12-16 cm. No cultural material was located as a result of the subsurface testing, nor was any additional surface material observed. Soil at the site is poorly developed, typically sandy and rocky as would be expected of glacial till. As is common with glacial topography of this type, the surface is well drained.

Due to the paucity of cultural material, little can be said about the site. Another single flake site, XSP-048, is located approximately 150 meters to the west. As previously mentioned, the only exceptional aspect of this site is that it lies on the most elevated geologic feature between Walker Lake and the Kobuk River. A person standing on this feature commands a view of the southern, western and eastern approaches to the lake.

Other than the fact that this site indicates the presence of human occupancy at sometime in the past, it has little significance.

The site is not presently endangered by any forces, natural or human, and no thought need be given to its preservation at this time.

XSP-042

Site Elevation: 740 Ft.	SE¼, SE¼ Section 12 T19N, R20E	Probable Site Type: Unknown
Site Age: Less than 2,000 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the south face of a hill-like glacial feature approximately ¼ mile west of the south end of Beaver Lodge Pond. Beaver Lodge Pond is a kettle lake which lies on the western edge of the moraine complex south of Walker Lake. The pond is so named because of a huge beaver lodge which completely covers a small island near the pond's eastern shore.

The view from the site is reasonably good in all directions except to the west, where a range of hills obscures the view beyond a distance of ½ mile. Walker Lake can be seen to the northeast 3/4 of a mile distant, while the Kobuk River may be glimpsed through the trees approximately 2½ miles to the south.

Vegetation at the site area is patchy, consisting of areas of caribou moss dissected by exposures of mineral soil and bedrock. Spruce, birch, poplar, willow and dwarf birch are sparsely scattered over the site as are clumps of grass. The site locale is well drained as is typical of glacial features in this region. Extremely weathered, burned snags, stumps and fallen trees are noticeable around the site area indicating the passage of a wildfire sometime within the last 60-120 years.

Culturally, the site consists of a single, moderately large (4 x 2 cm.) obsidian flake. Some cortex is present on the flake. The cortex is the flake's only feature of interest, which may indicate on-site cobble reduction. The presence of obsidian may indicate an age no greater than 2,000 years B.P. The flake was found during a surface inspection of the area, lying in a patch of exposed mineral soil.

Another site, XSP-050, which contains considerably more cultural material than XSP-042, lies 72 meters to the northwest. The possibility exists that XSP-042 may be associated with this larger site.

The significance of this site, other than the fact that it represents a locus of past human activity, is negligible. Protection of this site is not worthy of concern, except when threatened by human activity.

At present, slight degradation of the site is occurring as a result of natural erosion.

XSP-043

Site Elevation: 685 Ft.	SE¼, NW¼ Section 7 T19N, R21E	Probable Site Type: Campsite
Site Age: ca. 1159 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the first high morainal ridge south of the western quarter of Walker Lake. It lies approximately 175 meters south of the lake shore. The ridge crest is elevated roughly 25 meters above the lake level and offers an excellent view of Walker Lake to the north and east. Except for the immediate vicinity of the site, the views to the west and south are obstructed by trees and rising terrain.

The surface of the site is covered by a robust growth of caribou lichen and sparsely scattered birch, spruce, willow and clumps of dwarf birch. The trees are not large, rarely exceeding 6 meters in height and 20 cm. in trunk diameter. Evidence of past wildfire is visible, although not readily apparent at a casual glance. The site area is well drained as is common in this region.

The site was located as a result of surface observation. Isolated chert waste flakes were found widely scattered over the surface of the site. Further inspection disclosed the existance of two concentrations of chert flakes on and in the caribou lichen. The visible cultural material covered an area of approximately 40 meters^2. A small, 20 cm.^{2} test pit was excavated to a depth of roughly 7 cm. below surface adjacent to each of the surface flake concentrations. The test pits were located in relation to an east-west (magnetic) baseline extended from the site datum.

Test pit "A", located 10.2 meters south and 2.8 meters west of datum, yielded 26 chert flakes of varying shades of black and gray. The majority of this cultural material was located in the contact zone between the base of the lichen mat and the surface of the organic soil. Some flakes were excavated from the organic soil, but none at the depth greater than 4 cm. below surface. All of the flakes were relatively small, thin, and flat, possibly waste products of the final stages of tool manufacture.

Test pit "B", located 1.2 meters north and 28.3 meters east of datum, yielded 71 chert flakes of various shades of black and gray, and 18 obsidian flakes. Many of the flakes lay on the surface of the organic soil horizon just below the lichen mat. However, a number of flakes were also found in the mineral soil horizons to a depth of 7 cm. below surface. A small fragment of an obsidian tool, possibly a projectile point, was found protruding from the surface in the vicinity of this test pit.

One of the obsidian flakes from test pit "B" was submitted for hydration analysis and yielded a hydration rind thickness measurement of

1.64μ ± 0.03μ. Given the locally calibrated radiocarbon dated hydration rate of 2.32μ^2/1000 years, the calculated age of 1159 ± 42 years B.P. was obtained. This date may be applicable only to the occupational event represented by the obsidian.

The site may cover a fairly large area as the limited testing tends to show. Other than the fact that all the waste flakes observed are of a size which would indicate origins related to the final stages of tool manufacture, little else concerning the nature of the site can be definitively stated.

The significance of this site cannot be determined from the amount of data gathered. The site appears to be relatively large and therefore may contain important information regarding the life-style of its past occupants. The site should be protected from damaging impacts until further assessment work can be undertaken.

While no apparent major damage has occurred at the site, the possibility of adverse impact occurring is real. The possible impact is human rather than environmental. This site is in danger from the camping activities of park visitors. The degree to which this impact may occur is unknown.

There is a slight possibility that this site is Hall's site 74W3. Hall's location description of his site corresponds very closely to that of XSP-043. However, we could find no evidence of the three 50 cm.^{2} test pits that Hall excavated nor the numerous obsidian flakes which he states were scattered over the site (see Appendix A).

XSP-044

Site Elevation: 740 Ft.	SW¼, SW¼ Section 8 T19N, R21E	Probable Site Type: Lookout
Site Age: ca. 1556 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located atop a dome shaped glacial feature which is part of a long east-west trending morainal ridge. This oddly-shaped feature lies approximately 250 meters southeast of XSP-045 or roughly 450 meters south of Walker Lake.

Site elevation is about 30 meters above lake level and offers an excellent and unobstructed view to the north encompassing the lake and its southern approaches. The view to the east and south is reasonably good, while observation to the west is obstructed after a short distance by trees and rising terrain.

Caribou lichen is the major component of ground cover although grasses and some woody and herbaceous plants are also present. Trees and brush, although widely scattered, are present in the form of spruce, poplar, birch, dwarf birch, and willow. The trees are small, the largest less than 10 meters in height, a condition resulting from wildfire which ravaged the area 60-120 years ago. Additional evidence of wildfire in the site area may be seen in the scattered and decomposed remains of burned spruce. A few areas of exposed mineral soil are present, the result of localized erosion which appears to have been initiated by cryoturbation.

It was in one of these exposed mineral soil areas that four chert flakes was observed, on and protruding from the surface. Four meters north-northeast of the flake scatter, a 15 cm.^{2} test pit was excavated to a depth of approximately 7 cm. This test pit yielded no cultural material. A second test pit was opened 2.5 meters down slope (east) of the surface flake scatter. This second test excavation was expanded into a 50 cm.^{2} test as cultural material began to appear. Imbedded in the surface of the excavation area, but not visible before most of the vegetation was removed, was a dark gray chert blade fragment and a small (2.7 x 2.3 cm.) obsidian scraper. At a depth of 3 cm. below surface a large (4.5 x 4.0 cm.) gray chert core tablet was recovered, as well as three chert flakes. The lithic material from which the blade fragment and the core tablet are made appears to be the same. The shape of the core tablet suggests that it was struck from a large, conical microblade core, similar in style to several found in the region during the course of this survey.

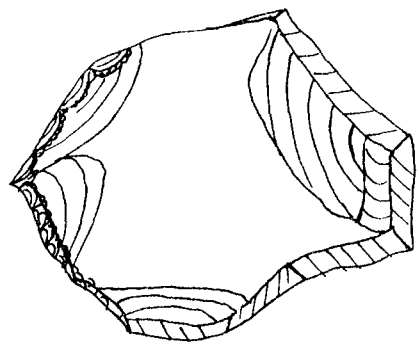
The obsidian scraper was submitted for hydration analysis and yielded a hydration rind thickness measurement of 1.90μ ± 0.05μ. Given the locally calibrated radiocarbon dated hydration rate of 2.32μ^2/1000 years the calculated age of 1556 ± 82 years B.P. was obtained. This tentative age estimate applies to the obsidian materials only, and contemporaneity of the two material types cannot be assumed for their co-occurrence in the test since the stratigraphy is minimal. The chert microblade core tablet may indicate a minimum age of ca. 2000 years B.P. for the occupational event represented by the chert artifacts.

Little else of a definitive nature can be said concerning this site. The physical location of the site and the presence of an end scraper suggests the site may have been oriented toward hunting.

In a general sense, this site appears similar to many sites that lie in the vicinity of Walker Lake. XSP-044 appears smaller in size and cultural content than many of the other "Walker Lake sites"; this is probably due to the fact that it is somewhat further removed from the lake.

The significance of this site lies in its general similarity to other sites in the area rather than any specific data it might contain. The site is far enough from the lake so as not to attract campers looking for a campsite. The site may be somewhat endangered by erosion, although such possible degradation is not cause for concern. This site

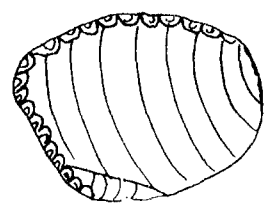
does not appear to warrant further investigation and as such need not be considered for protection or stabilization except when threatened by human-induced impacts.



Microblade Core Tablet
Top View



Side View



Obsidian Scraper

XSP-044 Artifacts - Actual Size

XSP-045

Site Elevation: 680 Ft.	NE¼, SE¼ Section 7 T19N, R21E	Probable Site Type: Campsite
Site Age: ca. 2100 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located atop an east-west trending morainal ridge approximately 200 meters south of Walker Lake and 420 meters west of the outlet. This glacial feature is approximately 50 x 80 meters in area. The surface of the ridge is relatively level and lies roughly 15 meters above lake elevation. The site offers an excellent view of the lake to the north while the view to the east and west is obscured by hills, a mile or so distant. The view to the south is blocked by higher terrain which rises at a distance of 100 meters beyond the site.

Primary surface cover at the site is caribou lichen, although some woody and herbaceous plants are present. Although the site area is

basically "open ground", there are scattered birch, poplar, and spruce present as well as dwarf birch and willow. The trees are hardly more than saplings, rarely attaining a height greater than 8 meters or a trunk diameter exceeding 10 cm. The diminutive size of the trees is directly related to wildfire which swept through the area 60-120 years ago.

The site was located as a result of surface indications. With the exception of the eastern 1/3, lithic flakes and formal artifacts are randomly scattered over the surface of the site. Lithic materials include various colors of chert as well as black, red, and clear obsidian. Surface artifacts include several obsidian microblade fragments; three end scrapers, one chert, two obsidian; one fragment of a bifacially worked obsidian tool; and a stream cobble that may have been used as a hammer stone. Also visible in the surface of the site were 8-10 depressions. None of these depressions exceeded 20 cm. in depth nor 1.5 x 2.0 meters in area.

These depressions are not believed to be cultural in origin. Based upon visual evidence in the area, it appears these depressions owe their existence to the toppling of burned trees (usually spruce). Some years after a wildfire has passed, the deteriorating root system can no longer support the burned tree trunk (snag). The weight of the trunk, perhaps aided by strong winds, rips the root system from the ground. The root system takes with it a considerable amount of soil leaving behind a depression. Eventually a berm of soil at the edge of the depression forms in the direction of the falling tree.

The location of this site engendered some concern that it might be one of the sites located by E.S. Hall during the summer of 1974. Hall shows, on maps, the location of his site 74W1 as being very nearly the same as XSP-045. However, his description of distances locates his site 50 meters to the north and over 100 meters further east. In addition, Hall states that he excavated 33, 50 $cm.^2$ test squares at the site; we could find no evidence of these test squares (see Appendix A).

While inspecting the site for evidence of Hall's test work, a small area of surface disturbance was noted. The disturbed area can be described as two poorly defined rectangular depressions roughly 50 x 75 cm. in area. These depressions appeared to be far too well vegetated to have been Hall's 9 year old test squares. In an effort to clarify the situation, the two depressions were cross-sectioned to reveal the stratigraphy. The revealed stratigraphy indicated that the depressions had had only the organic mat removed at some time in the past; a far cry from a typical archeological test square.

While testing these mysterious rectangular depressions, a large amount of cultural material was recovered from surface of a depth of 7 cm. Cultural material included numerous chert flakes of various colors, obsidian flakes, and two obsidian microblade fragments.

These excavations also revealed a stratigraphic anomaly. The soil at the site is considerably different than that found on the other glacial features in the area. An apparently water deposited sand is present in

varying degrees of coarseness at depths to 80 cm. The extreme thickness of this sand layer may have made this location more attractive to past occupants, as it would allow the construction of semi-subterranean dwellings with little expended effort. This sand cap on the glacial material is probably the result of lucustrean deposition occurring when the water in Walker Lake was at a higher level. Other glacial features at the same elevation around the lake may be similarly sand capped. Only further investigation will determine if such is the case.

Due to the unique aspects of this site, four test squares were excavated. Material excavated from the test squares included flakes of obsidian and chert, microblades of obsidian and chert, and a single chert end scraper. Three of the test squares were located in the west central portion of the site, while the other was located in the eastern one third. The distance between the western and eastern test pits is roughly 20 meters, indicating, as does the surface material, a relatively even and concentrated distribution of cultural material across the site.

Five obsidian microblades from three different test pits were submitted for hydration analysis. A range of hydration rind thickness measurements from 2.19μ ± 0.07μ to 2.36μ ± 0.05μ were obtained. Given the locally calibrated radiocarbon dated hydration rate of $2.32\mu^2/1000$ years, the age range was calculated as 2067 ± 132 to 2401 ± 101 years B.P. respectively. This 334 year time range may indicate multiple uses of the site during this time or may simply represent the amount of error inherent for this technique when dealing with roughly contemporaneous materials. The presence of chert as well as obsidian at the site may represent a number of occupational events at the location. Of additional interest is the fact that all of the obsidian microblades appear to be older than ca. 2000 years B.P. These dates lend credence to the generally held belief that microblade technology, in this region, is not a widely used technique after ca. 0 BC/AD.

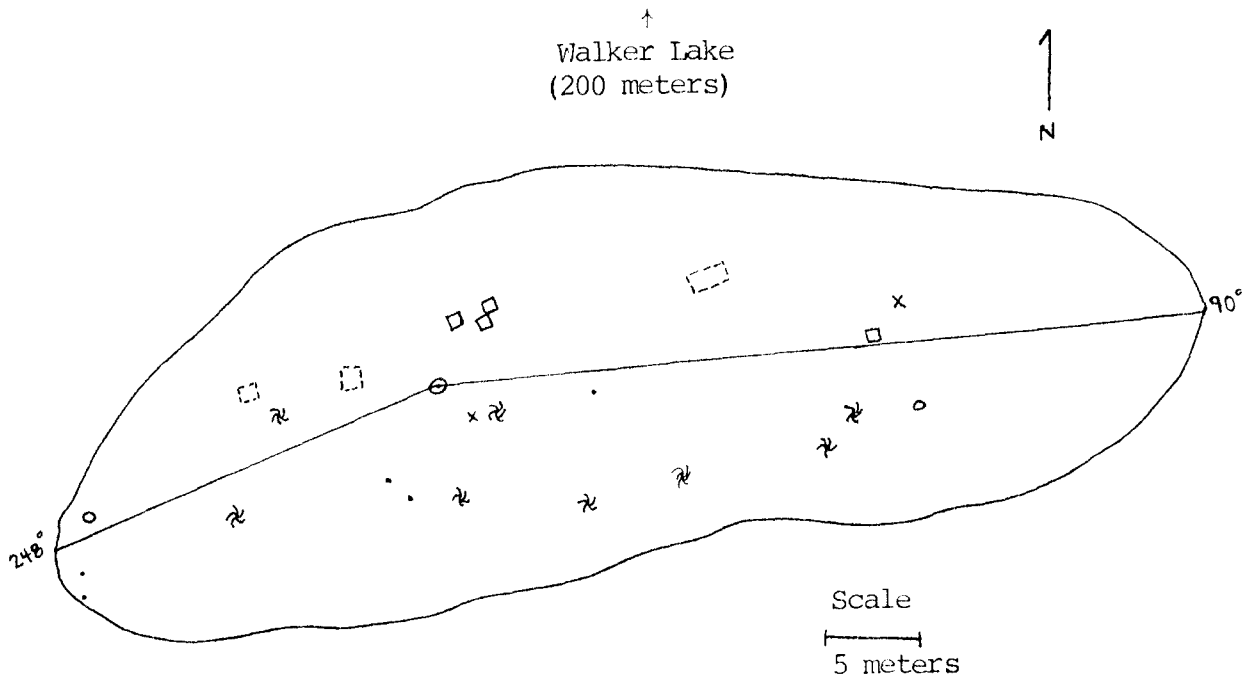
Little else concerning the site can be stated. The artifacts are not sufficiently diagnostic to allow even the most cursory cultural assessment. The type of artifacts recovered from excavation and noted on surface, indicate that the site was a hunting or hunting-oriented camp. Charcoal was recovered in association with some of the cultural material. However, the wildfire history of the area renders any cultural connotation ascribed to a relationship between charcoal and cultural lithics suspect at best.

The significance level of this site is high, both in terms of site specifics and area cultural patterns. The site is large, has an exceptionally deep soil with a well developed stratigraphy, and the density of cultural material appears high. For all these reasons, the site has the potential to yield extremely important data and lots of it. Protection of this site should be of the highest priority.

The potential for the occurrence of natural adverse impacts of the site is minimal to non-existant. Human impact, however, is of great concern.

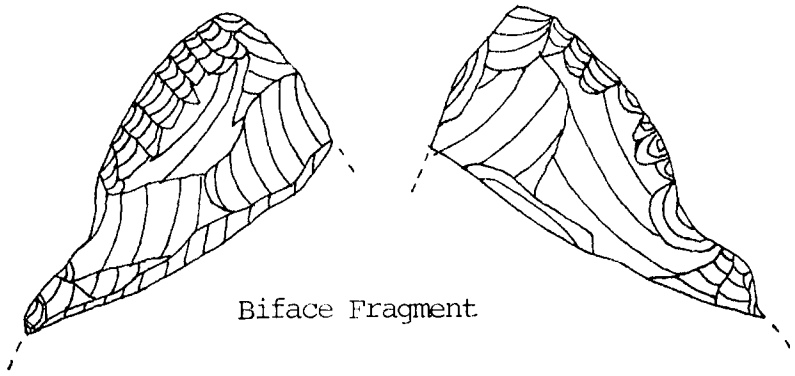
This concern can be applied to all similar localities and sites surrounding Walker Lake.

Natural features, such as the one XSP-045 is located on, are ideal camping locations. Such locations appeal as much, for the same reasons, to campers today as they did to campers 5000 years ago. Much of the cultural material, at this and the other near-shore sites around that lake, lies visible on the surface. Such conditions may lead to unauthorized collecting of artifacts and possibly to excavation. Periodic observation of the lake shore areas can be a short term stop-gap protection measure. Soon, if the data from this and other similar sites is to be safeguarded, a better mitigation plan should be devised.

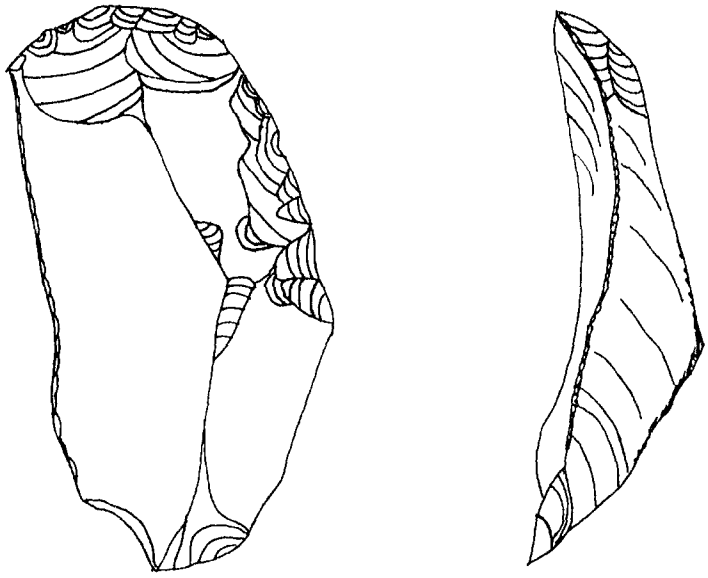


⊙ datum
□ test pit
· flake
× tool
o stone
---- depression
spruce

Site Map XSP-045



Biface Fragment



Top View Side View

Scraper

• XSP-045 Artifacts - Actual Size

XSP-046

Site Elevation: 700 Ft.	NW¼, SW¼ Section 8 T19N, R21E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located about 300 meters from the south shore of Walker Lake, and 100 meters west of the outlet stream. The site lies atop the eastern end of a small knoll, at the point of highest elevation. The location commands an excellent view of Walker Lake and the outlet stream to the north and east. To the south and west the view is obscured by trees and higher ground.

Vegetation at the site consists of a lichen/low woody and herbaceous plant cover with nearby small spruce trees. The dry lichen-covered morainal ridges at the south end of Walker Lake have widespread but subtle evidence of past wildfire.

The site was located by surface observation. Ten flakes of white, light gray, and dark gray chert, as well as clear obsidian, were located in an exposure devoid of vegetation at the top of the knoll. The flakes were found in the organic horizons of the soil profile.

The concentration of flakes was limited to an area of about 2 meter^2. No test pits were excavated at this site. The variety of lithic material indicates the site represents more than a single flaking event, and the fine view available from the site indicates its function may have been a lookout/flaking station. The presence of obsidian may indicate a date for that event not in excess of ca. 2000 years B.P. The site may be related to XSP-047, 60 meters to the north, which consists of a single clear obsidian microblade and several obsidian flakes.

The significance of this site is low. No culturally diagnostic materials were found, and its only importance lies in the diversity of raw material and its microtopographic setting. Alghough no degradation of the site is currently observable, it lies both within close proximity to Walker Lake and along the portage route to the Kobuk River that is used to bypass the outlet stream rapids. For these reasons, increased recreational use of Walker Lake may adversely impact this and other nearby sites.

The site is possibly site 74W2 of Hall (1974), although no old test pits were observed (see Appendix A).

The site warrants protection or mitigation action only as the result of human impact.

XSP-047

Site Elevation: 680 Ft.	NW½, SW¼ Section 8 T19N, R21E	Probable Site Type: Unknown
Site Age: ca. 2000 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located about 250 meters from the south shore of Walker Lake and 100 meters west of its outlet stream. XSP-046 lies about 60 meters to the south. The site is situated about 10 meters above lake level, on a flat bench that may be a remnant of a beach ridge formed by higher lake levels during deglaciation. About 14 meters north-northwest of the site are two old test pits that may be either archeological or geological.

Vegetation at this location consists of the lichen/moss cover typical of the moraine country of the south shore. Scattered small spruce trees are present, as are less abundant quaking aspen. Dwarf birch is locally abundant. Evidence of past wildfire takes the form of occasional ancient snags that are partially burned.

This site was located by surface observation. A broken microblade, 3.5 cm. long, 0.8 cm. wide and 0.25 cm. thick, was found between clumps of patchy, dry lichens. The microblade is of clear obsidian, similar to obsidian flakes found at XSP-046. A 1 cm. portion of one proximal edge of the microblade appeared to have been utilized. Six obsidian flakes were found within a distance of 1 meter south-southwest of the microblade , but these flakes are of a different, blacker, more "granular" obsidian. All of the cultural material was found on the surface of the A horizon of the soil, between patches of lichens. No test pits were excavated at this site. The function of this site is uncertain. The presence of two kinds of obsidian suggests the site may represent two separate, unrelated events, rather than one. The age of the site is uncertain, except that the presence of an obsidian microblade may indicate a maximum age of ca. 2000 years B.P.

The significance of this site is low. The microblade demonstrates it is of some antiquity, but the site is otherwise unremarkable. The site is not presently being damaged, but its close proximity to the shore of Walker Lake places it and other similarly situated sites in jeopardy as recreational use of the area increases. This site is possibly 74W2 reported by Hall (see Appendix A).

The site warrants protection or mitigation action only as the result of human impact.



Obsidian Microblade Fragment

XSP-047 Artifact
Actual Size

XSP-048

Site Elevation: 750 Ft.	NE¼, NE¼ Section 18 T19N, R21E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located along the top of the ridge formed by the younger of the two Walker Lake terminal moraines. Because of its location, the site commands a fine view to the south, out over the lower glacial terrain of the earlier glaciation. To the north, the view is limited by trees and rolling glacial topography. The site lies about 1 mile south of Walker Lake's south shore and about ¼ mile west of the outlet stream. XSP-041 lies along the same ridge crest about 150 meters to the east.

Vegetation along the ridge crest consists of the ubiquitas cladonia lichen cover so characteristic of the well-drained glacial landscape south of the lake. Scattered white and black spruce are present, as are paper birch trees. Dwarf birch and dwarf birch-paper birch hybrids are also found scattered along the ridge. Evidence of past wildfire is limited to the rare well-weathered but burned snag or stump of spruce, indicating a century or more has elapsed since the area has burned.

The site consists only of a single gray chert flake found by surface observation in a game trail along the ridge crest. Careful examination of the immediate area around the flake revealed no additional cultural material. No test pits were excavated at this site.

The significance of this site is negligible. The only disturbance process affecting the site is occasional trampling by game passing along

the ridge crest. It is sufficiently far from the shore of Walker Lake that the potential for impact by humans is low.

The site warrants protection or mitigation action only as the result of human impact.

XSP-049

Site Elevation: 730 Ft.	NW¼, NW¼ Section 18 T19N, R21E	Probable Site Type: Lookout
Site Age: ca. 2000 years B.P. or less	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located atop a ridge that runs along the west side of a small unnamed kettle lake in the moraine complex south of Walker Lake. The site is about 3/4 of a mile south of Walker Lake and about ¼ mile east of Beaver Lodge Pond, a prominent kettle lake on the western edge of the moraine complex. The ridge upon which the site is situated rises about 6 meters above the adjacent lake, providing a fine view of the lake and surrounding terrain.

The vegetation at the site is typical of the well-drained moraine complex south of Walker Lake. The ground is covered by a cladonia lichen/moss mat, disrupted in places to reveal bare mineral soil. Scattered black and white spruce trees are present, as are less-common paper birch and quaking aspen. Evidence of wildfire in the form of charred snags and stumps was not observed at this site, but such evidence is locally found in the immediate vicinity of the site.

The cultural material of the site consists of four obsidian flakes discovered by surface observation of an area bare of vegetation. Two of the flakes are large (approximately 5 cm.) and retain cortex on their dorsal surfaces. All of the obsidian seemed to be of the same color, and the site probably represents a single lithic reduction event. The presence of obsidian may indicate a site age no greater than ca. 2000 years B.P.

The significance of this site is minimal. No diagnostic artifacts are present, nor are any tools. The site indicates prehistoric use of the area away from the immediate shore of Walker Lake, but little else. Natural erosion presently affects the site at a slow rate. The site is sufficiently distant from the shore of Walker Lake that recreational use of the area is unlikely to adversely affect the site.

The site warrants protection or mitigation action only as the result of human impact.

XSP-050

Site Elevation: 770 Ft.	SE¼, SE¼ Section 12 T19N, R20E	Probable Site Type: Lookout
Site Age: Minimum ca. 2000 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located atop a low knoll situated near the southernmost part of the moraine complex west of Beaver Lodge Pond. Beaver Lodge Pond is a prominent kettle lake on the western edge of the Walker Lake moraine complex. The site is about ¼ mile west of the south shore of Beaver Lodge Pond. The knoll upon which the site is located is one of the highest of the moraine complex, and affords the site an excellent view of Walker Lake about 3/4 mile to the north and of the Kobuk River Valley to the south and east. An adjacent and possibly related site, XSP-042, consisting of a single obsidian flake, is located 72 meters to the southeast.

Vegetation in this vicinity consists of lichen/low woody and herbaceous plant ground cover and scattered spruce trees. Dwarf and shrub birch are present, as are scattered paper birch and quaking aspen trees. The vegetation mat at the site is not badly disrupted; bare ground occurs only between clumps of lichen. Weathered and burned snags and stumps of spruce trees are rare but certain evidence of past wildfire in the vicinity of the site.

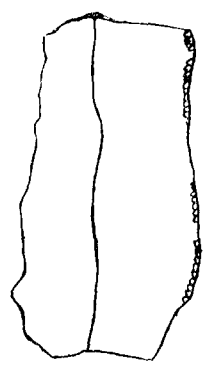
The site tag was emplaced near the top of the knoll under a small spruce tree at the point where a large blade-like flake of black chert (4.5 cm. long, 2.3 cm. wide, 0.4 cm. thick) was observed protruding from the surface of the mineral soil. A 20 $cm.^2$ test pit at this location produced two broken microblades of black chert. The artifacts were found in the organic horizons of the soil, or in the extreme upper part of the mineral soil at a depth of less than 5 cm. Additional observation of the surface of the knoll revealed a black chert biface 15 meters west of the site tag and a flake of black chert 12 meters southeast of the tag. A 15 $cm.^2$ test pit at this latter location produced two black chert flakes and one gray chert flake. A second 15 $cm.^2$ test pit produced two additional black chert flakes. All of these flakes came from within 5 cm. of the surface.

The artifact assemblage at this site consists of microblades, a biface and waste flakes. This, together with the fine view from the site, suggests its possible use as a lookout/flaking station. The wide spacing of artifacts on the surface spanning an area 30 meters in diameter suggests more than a single event produced the site. The presence of microblades in the site may indicate an age of at least 2000 years for the site.

The significance of this site cannot be determined from the small sample of cultural material observed here. All test pits produced subsurface material, indicating that much more material may be present than is obscured by vegetation or shallowly buried.

The site is interesting because its distance from Walker Lake, 3/4 mile, indicates it is not a lakeshore oriented site but relates more to upland activities. The site should be protected from damaging impacts until further assessment of its potential can be made. Fortunately, its distance from Walker Lake probably affords it protection from impact due to most recreational activities. No natural disturbance processes are currently affecting the site.

The site warrants protection or mitigation action only as the result of human impact.



Flake/ Blade

XSP-050 Artifact - Actual Size

XSP-051

Site Elevation:
700 Ft.

Site Age:
Unknown

SE¼, NE¼
Section 18
T19N, R21E
Kateel River Meridian

Probable Site Type:
Lookout

Probable Cultural Affiliation:
Unknown

This site is located on the east bank (first terrace) of the Walker Lake outlet stream approximately 1 mile south of the southern end of the lake and ¼ mile north of the outlet stream rapids. The terrace elevation of about 15 meters above the level of the outlet stream makes visibility up and down its course very good. To the east and south the terrain rises gently, covered with black spruce, dwarf birch and some willow as well as caribou moss and labrador tea in discontinuous patches.

A single black chert waste flake was found on the side of the game trail which runs parallel to the outlet stream along the terrace

edge. Also an unexpended Browning 338 Winchester Mag. rifle cartridge was found 30 meters south of the flake. No other surface material was observed. One 20 cm.^{2} test pit was dug to a depth of 10 cm. 15 meters south of the flake but did not produce cultural material.

The surface reconnaissance and the very limited testing at the site indicates a low density of cultural material which may represent a single, short term use of the site by prehistoric populations. The unexpended rifle cartridge indicates modern use of the area for hunting large mammals, most likely moose, caribou or black bear.

XSP-052

Site Elevation: 700 Ft.	SE¼, SW¼ Section 10 T19N, R21E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Athapaskan

Situated on the southern slope of a 35 meter high bluff overlooking the Kobuk River, this site lies about 25 meters above the river level. The site is roughly 1½ miles southeast of Walker Lake and 2 miles southwest of the mouth of Kichaiakaka Creek and occurs 600 ft. upstream from an island in the Kobuk River. The view from this site is unobstructed for approximately ½ mile up and down the river.

Vegetation around the site is spruce, birch and willow, as well as a variety of low herbaceous and woody plants, grasses, mosses, and lichens. The bluff where the site is located is actively eroding into the Kobuk River, and its eastern slope is unvegetated. Soil depth of XSP-052, as measured at the bluff face, is 40 cm.

Cultural materials located at the site include a boulder spall scraper (tchi-tho) and a gray chert flake. The scraper, eroding out of the bluff face, was made from a granitic rock which exhibited chipping around its margin. The waste flake was found eroding from the top of a heavily oxidized zone in the stratigraphy, approximately 18 cm. below surface. The artifacts were found 2.5 meters apart in a deflating zone of the bluff slope.

The lithic material found at this site appears to represent the presence of people using this bluff as an overlook. Game passing along the river within about ½ mile of this site would be visible. Occurring as it does on the bluff edge, in an active deflation zone, the site area may have been more extensive prior to the onset of erosion.

The tchi-tho located at this site may indicate use of the area by Indians, probably Koyukon Athapaskans. The tchi-tho is a tool associated more often with Indian groups than Eskimo. Other than this, the site, except for its apparent soil depth, has little significance, and its slow destruction due to erosion should not cause any concern.

XSP-053

Site Elevation: 850 Ft.	NW¼, SE¼ Section 10 T19N, R21E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

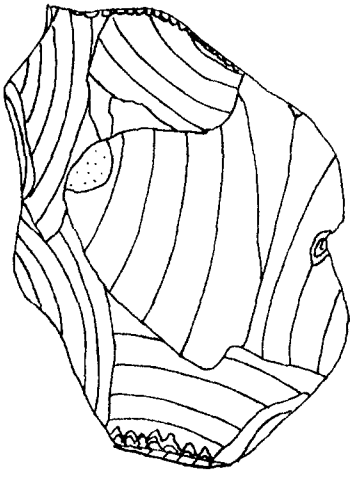
This site is located on the glacial moraine 1½ miles southeast of Walker Lake, west southwest of the mouth of Kichaiakaka Creek, and about ½ mile northwest of the Kobuk River. Occurring on the southern slope of a glacial knoll, this site was found in a partially soliflucted area about 80 meters above lake level.

Vegetation at the site consists primarily of caribou lichen, grasses, small spruce, and birch trees. The area is generally kame and kettle topography with well-drained soils occurring beneath abundant lichens and scattered trees.

A single artifact, a large green chert flake, was found partially buried on the surface at this site. This flake was probably a multi-purpose tool. The distal (stepped fracture) end was retouched along the dorsal edge, and a distinct graver spur occurs on the left distal corner. The platform, evident on the proximal end of this 6.5 cm. x 5 cm. flake, appears to have received considerable preparation. A 20 $cm.^2$ test pit was excavated to a depth of 6-8 cm. and produced no cultural material.

The site, which occupies one of the highest knolls on this moraine, may be a hunting overlook in this middle ground between Walker Lake and the Kobuk River. The Kobuk River is visible to the south. The landscape within the vicinity of the site is marked by various game trails, which seem to indicate game movement around the moraine, possibly back and forth between Walker Lake and the Kobuk River. Despite the number of discrete knolls in this area, surprisingly few of them supported sites.

The level of site significance is minimal due to the limited, undiagnostic, artifactual material. There need be little concern of over-protection of this site.



Flake Tool
XSP-053 Artifact - Actual Size

XSP-054

Site Elevation: 775 Ft.	SW¼, SE¼ Section 8 T19N, R21E	Probable Site Type: Lookout/camp
Site Age: ca. 1634 years B.P. and older	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site occupies a prominant knoll 300 meters south of the southern end of Walker Lake and 600 meters east of the outlet stream, between 50 and 75 meters above the lake level. The land form is a high point on this portion of the east-west trending inner, younger glacial moraine which today contains the body of Walker Lake. A view of the surrounding undulose ice stagnation terrain is excellent. The dominant vegetation on this well drained knoll is lichen, labrador tea, and dwarf birch, with a few white spruce in clusters.

The site has two locales, east and west, separated by a 10 meter wide draw which drains north into a gulley system leading to the lake-shore. The surface artifacts are restricted to the tops of both locales and these are separated by about 50 meters. The eastern locale, the larger in area and flatter of the two (approximately 20 meters in diameter) showed a higher density of surface and subsurface artifacts: surface: a boulder spall scraper, several obsidian waste flakes with cortex and a utilized obsidian flake, subsurface: 6 obsidian flakes, 1 gray chert. One of the obsidian flakes was submitted for hydration analysis and returned a hydration rind thickness of 1.90 ± 0.02μ and a subsequent age of 1634 ± 17 B.P., given the calibrated radiocarbon dated hydration rate.

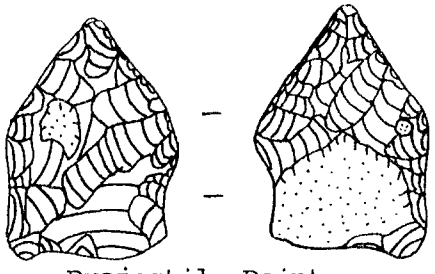
The western knoll, approximately 10 meters in diameter, showed only surface material. A single 15 cm.^{2} test was dug to a depth of 10 cm. and does not constitute adequate subsurface testing. The

surface material consisted of a small expanding stemmed dark gray chert projectile point, a small pebble core of obsidian with several flake scars, and a single obsidian flake. The projectile point has been modified on both faces by either heat or frost spalling and may have been resharpened, as the tip appears to be somewhat foreshortened in relation to the stem length and width. This projectile point is similar to some found in band 5/6 at the Onion Portage site, which are dated at ca. 4600 B.P. (Anderson, 1968b).

No features were observed at the site, although the eastern 20 cm.^{2} test (excavated to a depth of 20 cm.) showed a highly oxidized, orange-red sand beneath the surface organics (to a depth of 15 cm.) from which the obsidian and chert flakes were recovered. No charcoal or bone was observed on this test, therefore the oxidation can only be considered natural weathering. The variety of lithic material probably indicates numerous occupational events occurred at this site.

Several sites to the north and west of XSP-054 are believed to have been recorded by E. Hall during his Walker Lake survey in 1974. These consist of flake scatters, chert, obsidian and gray basalt, an isolated basalt scraper, and two black chert blade tools. These various assemblages occur in a variety of settings, none of which are as prominent as XSP-054, and therefore may represent differing activities relating to life around Walker Lake. XSP-054 is open, with a very good view of the surrounding terrain, and therefore may have served as an observation point, whereas the other sites may represent task specific localities where the need for a good aspect was not important.

No natural or human impacts are presently affecting the site, but due to its location on Walker Lake and the moderate to heavy recreational use this area receives, some measure of protection is recommended for the site.



Projectile Point
XSP-054 Artifact - Actual Size

XSP-083

Site Elevation: 900 Ft.	SW¼, NE¼ Section 4 T20N, R22E	Probable Site Type: Unknown
Site Age: ca. 2000 years B.P. or older	Kateel River Meridian	Probable Cultural Affiliation: Unknown

The site is located 10 miles due east of Walker Lake on the headwaters of the Kobuk River, near the mouth of a 5+ mile long tributary stream which enters the river from the east. Situated roughly 1 mile upstream from this unnamed creek, on the west bank of the Kobuk, this site sits on an alluvial terrace 10-12 meters above the river. XSP-083 overlooks a small feeder creek north of the site, and the Kobuk to the east.

Vegetation at the site is dominated by caribou lichen, medium-sized spruce (10-15 cm. in diameter), and alder. Some herbaceous and woody plants are associated with the evenly spaced alder shrubs. The surface of the site, where not covered by vegetation, is a matrix of tightly packed loess and stream cobbles. There are no indications of wildfire activity at this site.

The site was discovered by surface observation. A gray chert microblade was observed on surface, between two clumps of dry caribou lichen. The coloration is mottled, giving the artifact a creamy appearance. The blade had no visible signs of use wear or retouch. A 20 cm.^{2} test pit was excavated through 5 cm. of mixed loess and river gravels and produced no cultural material.

The level of site significance is low. All that can be said about the site is that it represents human presence on the upper Kobuk River, and may have a minimum age of ca. 2000 years B.P., as indicated by the presence of a microblade. The site is in no immediate danger of destruction and now that it has been recorded warrants little protection consideration.

XSP-085

Site Elevation: 695 Ft.	SE¼, NE¼ Section 4 T19N, R21E	Probable Site Type: Lookout
Site Age: ca. 1050 years B.P. and older	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site lies atop a small, isolated, linear glacial feature 75 meters east of the southeast shore of Walker Lake. XSP-089 lies approximately ¼ mile to the northeast and the Walker Lake Lodge is located 1-3/4 miles to the north. The site offers an excellent view of the southern half of the lake. The view in the other directions is blocked by rising terrain or trees a few hundred meters distant.

The surface of the site supports a robust growth of caribou lichen and moss, as well as scattered woody and herbaceous plants. Some small spruce, birch, dwarf birch, and willow are also scattered about the site.

Cultural material is scattered along the middle 40 meters of the 70 meter long glacial feature, protruding from or lying on the lichen mat. Cultural material was also observed lying on small, scattered patches of exposed mineral soil. Surface cultural material included many chert and obsidian flakes, two fragmentary scrapers (1 obsidian and 1 chert) and a single obsidian microblade fragment. One of the surfaces of the obsidian scraper, except for edge retouch, was undisturbed cortex.

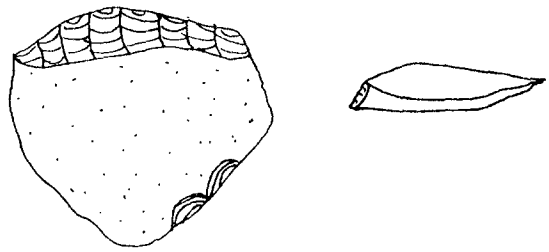
Two 20 cm.^{2} test pits were excavated to a depth of 7 cm. Test pit "A", located near the center of the ridge, adjacent to the obsidian scraper, produced no cultural material. Test pit "B", located at the northwest extreme of the surface material, yielded 25 chert and obsidian flakes 1-5 cm. below surface. A variety of colors were represented by the chert flakes.

One of the subsurface obsidian flakes was submitted for obsidian hydration analysis. The hydration rind thickness measurement of 1.56μ ± 0.04μ yields a date of 1049 ± 54 years B.P. given the locally calibrated radiocarbon dated hydration rate of 2.32μ^2/1000 years.

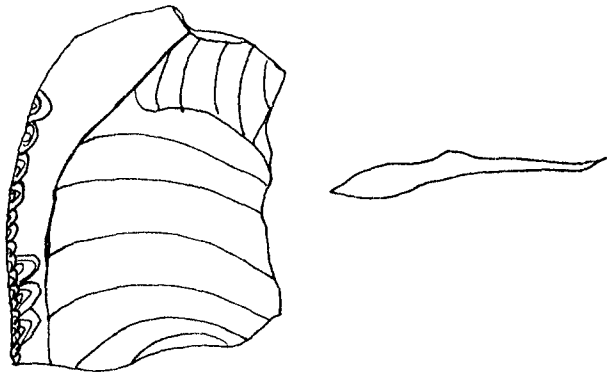
Surface and subsurface evidence at the site suggests that more than a single occupational event is represented. The presence of an obsidian microblade may indicate that one episode of occupation occurred ca. 2000 years ago. Microblade technology in this region generally does not appear to postdate ca. 2000 years. Therefore the difference in age between the hydration dated flake and the microblade may be explained by either chronologically separate events, or an anomaly in the hydration data.

The occurrence of scrapers suggests that hunting may have been the primary activity engaged in during at least one of the occupational events. Little more can be said about the site. Evidence suggests the possibility of a fair amount of subsurface material at the site. However, in terms of significance, the site is at only a moderate to low level when compared with other sites in the area around Walker Lake. Further study of this site might produce some interesting, but probably not unique, data. Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but man-induced impacts.

The site is probably far enough away from the shore of Walker Lake to escape impact by campers; impact from hikers may be a threat.



Obsidian Scraper



Chert Scraper

XSP-085 Artifacts - Actual Size

XSP-086

Site Elevation: 800 Ft.	NW¼, NW¼ Section 34 T20N, R21E	Probable Site Type Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

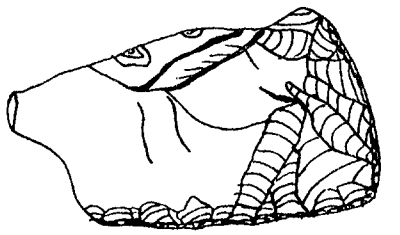
This site is located about midway along the distinct north-south trending morainal ridge 600 meters east of Walker Lake. Spruce trees are scattered across this well drained lichen covered ridge, and a game trail runs along the crest. The view of Walker Lake to the west is not particularly good.

A well-made black chert side/end scraper was observed in the game trail

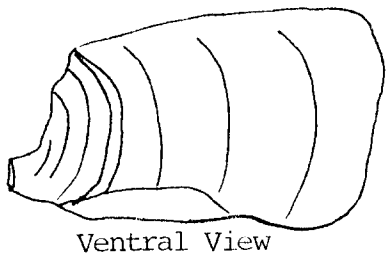
along with a 1 meter^2 concentration of black chert flakes. Chert and obsidian flakes were scattered along the trail for 30 meters, the obsidian occurring at the extreme southern end of the site, between 25 and 26 meters to the south. No subsurface testing was undertaken. The occurrence of several different lithic materials may indicate the occurrence of multiple use events. The event represented by the obsidian probably does not exceed 2000 years B.P. in age.

The association of cultural material and the game trail may suggest that this location served as a hunting station, but this cannot be substantiated given the materials observed. No cultural or temporal designation is possible for this site and the significance is low.

The use of the game trail allows animal trampling which is the only negative impact observed at the site. No protective measures for the site need be considered unless threatened by human-induced impacts.



Dorsal View



Ventral View

Side Scraper

XSP-086 Artifact - Actual Size

XSP-087

Site Elevation: 860 Ft.	SW¼, SW¼ Section 27 T20N, R21E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located atop the morainal ridge complex which lies along the southeast shore of Walker Lake. The site is located approximately half way along the ridge's length, about ½ mile from the lakeshore and one mile east of the Kobuk River. The view from the site locale is spectacular. Walker Lake can be seen in its entirety as well as the Upper Kobuk Valley to the east.

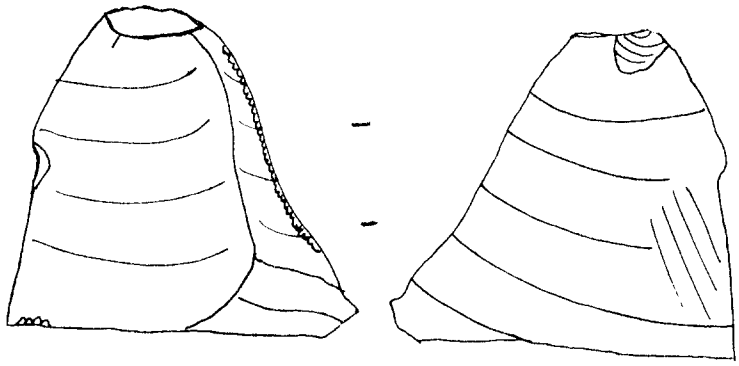
Low vegetative cover at the site consists of caribou lichen and moss as well as scattered woody and herbaceous plants. Tree cover is sparse and consists of scattered small spruce, poplar, dwarf birch and willow. A few areas of exposed mineral soil are present, primarily along the active game trail which bisects the 75 meter long site area.

It was in one of these mineral soil areas where cultural material was first observed. Chert and obsidian waste flakes and artifacts were found scattered very sporadically over the surface of the site. A white chert end scraper and a large retouched obsidian flake were located at the extreme southern end of the site. A 20 cm.^{2} test pit was excavated to a depth of 7 cm. near the artifacts and yielded no additional cultural material. A second 20 cm.^{2} test pit was excavated 35 meters to the north, adjacent to another surface lithic scatter, and produced no cultural material. These culturally sterile excavations suggest that subsurface material is not plentiful.

The diversity of lithic material at the site suggests more than a single occupational event has occurred. The presence of obsidian may indicate a maximum age of 2000 years B.P. for that occupational event. The type of cultural material present and the site location indicates the site may have been a lookout, either for hunting the lake margins or hunting along the game trail complex which crisscrosses the ridge.

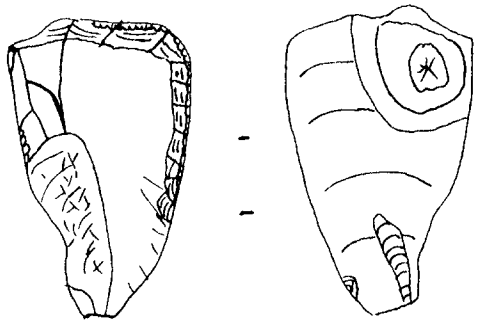
Except as XSP-087 relates to other sites in the area, it has little significance. Now that the site has been recorded there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

The site is probably far enough away from the shore of Walker Lake to escape impact by campers; impact from hikers is a possible threat.



Dorsal View Ventral View

Retouched Obsidian Flake



Dorsal View Ventral View

Chert Scraper

XSP-087 Artifacts - Actual Size

XSP-088

Site Elevation: 800 Ft.	SW¼, NE¼ Section 3 T19N, R21E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probably Cultural Affiliation: Unknown

This site is located atop a north-south trending morainal ridge northeast of Ruppert Lake. This lichen covered ridge affords a southwestern view to the southern end of Walker Lake. Spruce trees are scattered across this kettle and kame topography and three small lakes are a short distance to the east.

The site was discovered due to surface indications. Several flakes of gray, black and black-banded chert were observed within a 5 meter^2 area. A 20 cm.^{2} test pit excavated at this location revealed 130 small (<2 cm.) black chert flakes between 0-4 cm. below surface in fine-grained aeolian sandy-silt.

The site probably functioned as a lookout/chipping station. Due to the lack of diagnostic artifacts, no temporal or cultural designation can be assigned to these remains.

The level of site significance is low, but documents prehistoric activity associated with the well drained topography south of Walker Lake. No natural or human induced impacts are presently affecting the site. Should human impacts become evident, the site will warrant further investigation and protection.

XSP-089

Site Elevation: 810 Ft.	NW¼, NW¼ Section 3 T19N, R21E	Probable Site Type: Unknown
Site Age: ca. 2000 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the southern end of a long, loess capped, ridge which parallels the southeastern shore of Walker Lake. The site is ¼ mile east of the shoreline and 60 meters above lake level. The head of the Walker Lake outlet lies roughly 2 miles to the southwest. The view from the site is excellent to the west, encompassing the southern half of the lake. The view in the other directions is moderately good, being somewhat obscured to varying degrees by rising terrain and trees.

While moderately heavy stands of spruce surround the site, there are few trees on the ridge crest where the site is located. Lichen, moss, woody and herbaceous plants comprise the low ground cover. The ridge crest is bisected by a well-used game trail in which mineral soil is often exposed.

It was in one such mineral soil exposure that a single obsidian waste flake was observed. The flake exhibited some cortex. A surface inspection of the immediate area disclosed no additional cultural material. No subsurface testing was done.

Little else can be said about the site. The occurrence of obsidian may indicate a maximum age for the site of ca. 2000 years B.P.

Cortex on the flake indicates cobble reduction, which is not surprising due to the proximity of several large prehistoric campsites on the shores of Walker Lake.

The significance of this site is very low. Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-092

Site Elevation: 1650 Ft.	NE¼, SW¼ Section 8 T20N, R21E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the extreme northwest corner of the lateral moraine that forms the western end of the pass between Walker Lake and an unnamed creek draining into the Kobuk River to the east. The site is near treeline, and spruce are scattered across the pass. Lichen and low woody and herbaceous plants constitute the ground cover at the site. The view is good of the pass area and Walker Lake to the west.

Two light gray chert flakes and three small gray chert flakes occupy a 3 meter^2 area. A possibly utilized chunk of quartz was also observed. A 20 cm.^{2} test pit excavated to a depth of 7 cm. just outside the lithic scatter was sterile.

The site probably functioned as a lookout, but no cultural or temporal indicators allow further assessment of the site. The site documents use of the upland zones away from the lake and may also be part of the "winter trail" mentioned by Cantwell which was said to pass between Walker Lake and the Kobuk River (Cantwell, 1889).

The site is near an eroding bluff, but present impact is not occurring at the site itself. Recreational use of Walker Lake is quite substantial, but since the site lies almost 300 meters above lake level, few if any recreational users will traverse the site.

AREA #3

Kobuk River

Camp #2 - June 13-16

We arrived at this camp via two rafts upon which we transported all our gear and supplies. Our camp was located on a gravel bar on the Kobuk River approximately 10 river miles downstream from Camp #1.

We worked out of this camp for four days, surveying both up and downstream, working as far away from the river as 2 miles. The majority of our efforts were concentrated along a chain of hills east and north of camp and in the Upper Canyon about 3/4 mile west-southwest of camp. The area surveyed was roughly 7 square miles. Much of the area is comprised of elevated bedrock features by a robust growth of caribou moss with scattered spruce, birch, and poplar. Non-bedrock areas were wet sedge and tussock meadows and hillsides with occasional dense stands of willow and alder. The area had been burned over in the recent past (approximately the same age as the Walker Lake fire) which aided our survey work as it did in the Walker Lake area.

A total of four sites were located while working out of Camp #2; all were prehistoric. All of these sites were basically flake scatters; a single obsidian flake knife was found at one of these sites. The limited cultural remains at the sites rendered any attempt at cultural affiliations impossible.

It was rather surprising that we found so few sites in the area of the Upper Kobuk River Canyon. This area was expected to be a natural activity focus, especially in terms of river travel, however, the paucity of sites in the area seems to disprove this hypothesis. Aboriginal use of this portion of the river, at least use which is recognizable in the archological record, seems to have been quite limited.

Camp #3 - June 17-19

We arrived at this camp via our two rafts. This camp was located atop a twenty meter high bluff on the left hand bank of the Kobuk River, about ½ mile downstream of the Nutuvukti Lake outlet confluence. This camp was about ten river miles downstream from Camp #2.

We worked out of this camp for a period of three days, working both up and downstream, and as far away from the River as four miles.

Topographically, this area was a bit different than that which we had been working previously. There are low to high bluffs (10-25 meters) which lie very close to the river. The country back from the river is, in general, low rolling hills bisected intermittently by small drainages. Series of small stagnate ice glacial features are present (Itkillik Glaciation) as well as what appear to be some stabilized

sand dunes. The majority of these appear to be too far from the river to have been used as camping locations; at least as far as river travel is concerned. Ground cover is similar to that of the upriver areas except that the brush and trees are a bit more dense. This appears to be due to the fact that although this area has been burned by wildfire, the burn is considerably older than that of the Walker Lake Area. The area surveyed out of Camp #3 was roughly five square miles.

A total of two archeological sites, both prehistoric, were located while working out of Camp #3. Both of these sites were of the flake scatter type although one of the sites did contain two flake knives. However, this type of artifact is non-diagnostic and no cultural or temporal assignments could be made. Four recent (the last 10 years) campsites were found, probably the result of recreational use. Recent site remains consisted of campfire hearths, burned trash, plastic and foil food wrappers.

Camp #5 - June 28-July 1

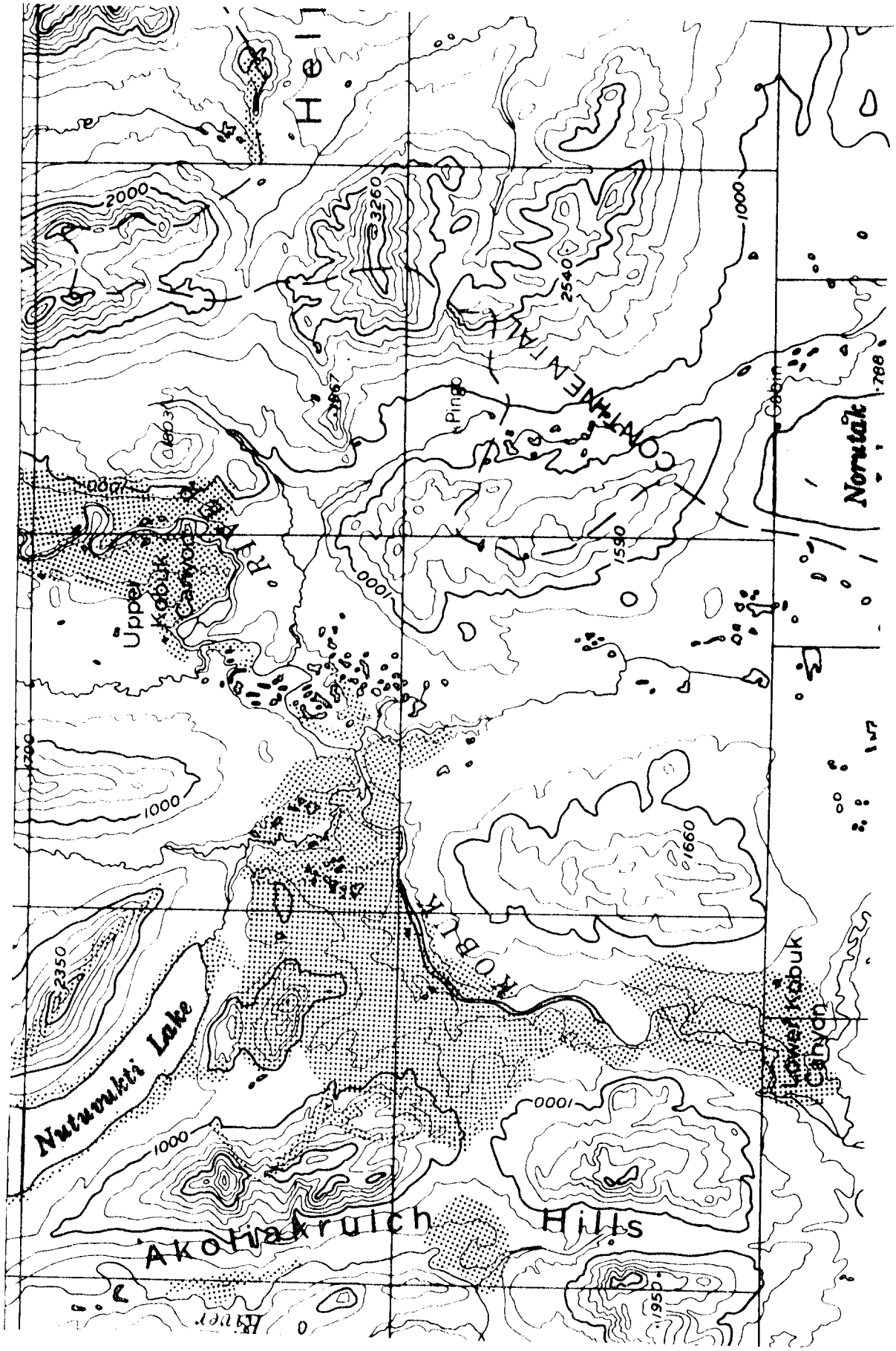
This was our last camp on the Kobuk River downstream from Walker Lake. We arrived at this camp by rafting down the Kobuk River. Camp #5 was located at the Lower Kobuk River Canyon roughly 10 river miles downstream from Camp #4. We worked out of this camp for four days covering approximately five square miles.

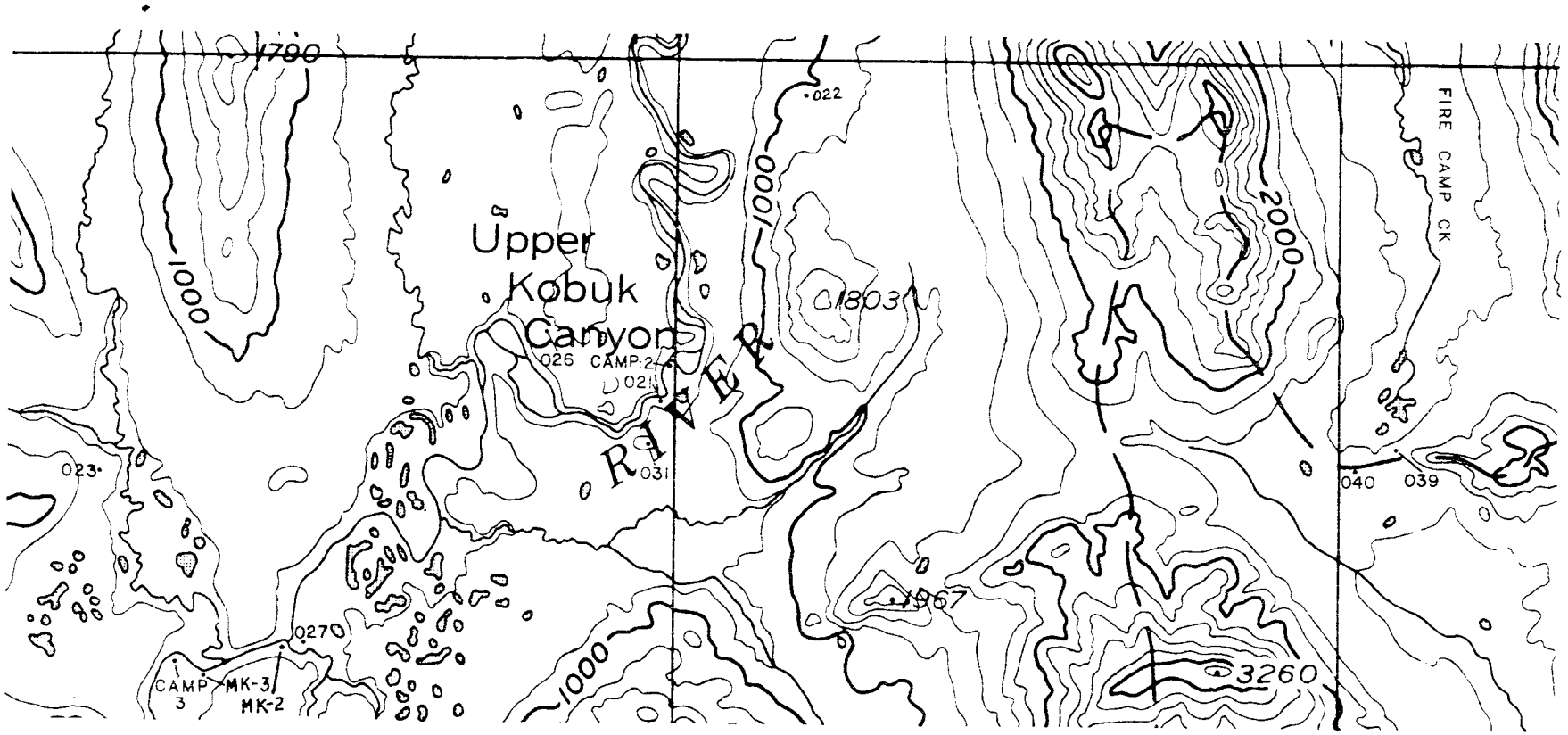
The topography of the Lower Canyon area is similar to that of the Upper Canyon. The Lower Canyon area has been burned in the recent past but is a much older burn (roughly 100 years ago) than that several miles upstream in the Camp #4 area. As a result, surface vegetation is quite robust, allowing only limited areas open to surface observation.

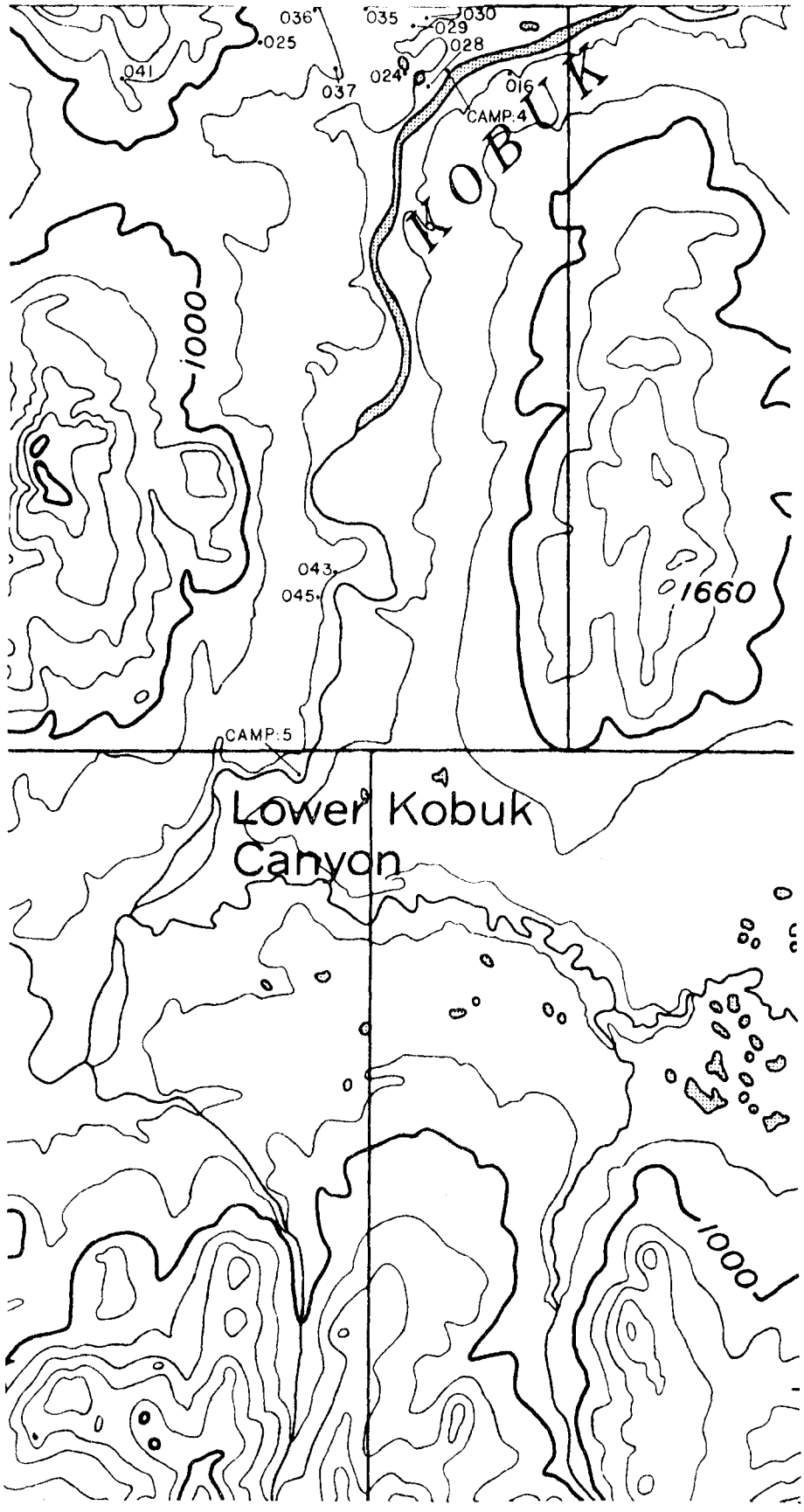
Two archeological sites were located while working out of this camp. Both sites were flake scatters located atop ridges overlooking the river. One of the sites yielded several microblade fragments. The presence of microblades may indicate that the minimum age of the site is approximately 2000 years.

As was the case at the Upper Canyon, the paucity of sites is somewhat puzzling. Historic information makes claims for this locality to be a junction of several aboriginal travel routes. However, we could fine no indication of this in the archeological record.

The area where we camped is an excellent spot which shows much evidence of recent use (last 15 years), but no evidence of use before that time. In general, the historic information we had concerning the Upper Kobuk River and its use did not prove to be very reliable when field checked.


Upper Kaguk Canyon
Pingo
Cabin
Nomtak
Nutuvukti Lake
Akoliakruich Hills
Lower Kaguk Canyon
AREA SURVEYED
six miles


1700
1000
1000
1000
2000
022
Upper
Kobuk
Canyon
026
CAMP 2
021
1803
RIVER
031
023
040
039
FIRE CAMP CK
1967
3260
0270
CAMP 3
MK-3
MK-2
six miles


036
025
041
037
035
030
029
028
024
016
CAMP 4
KOBUK
1000
043
045
1660
CAMP 5
Lower Kobuk
Canyon
1000
six miles

MK-2

Site Elevation: 660 Ft.	NW¼, SE¼ Section 33 T18N, R20E	Probable Site Type: Recreational
Site Age: Modern	Kateel River Meridian	Probable Cultural Affiliation: Modern

This is a recent campsite no more than 10 years old. The site is located on a flat topped glacial feature on the left bank of Bluff Creek (our name). The site is situated 60 meters from the confluence of the creek and the Kobuk River, and lies 25 meters above the creek level.

The ground surrounding the site is covered with caribou lichen, supports relatively few trees, and is quite level. The view is excellent in all directions except to the west.

The site consists of a campfire (hearth) area containing charred wood, and partially burned paper, aluminum foil, and plastic food wrappers. Some scattered, almost totally decomposed, toilet paper was also associated with the site. The site was located while excavating test pits along the bluff top. It was surprising that no prehistoric cultural evidence was found here.

This site indicates recent use of the area; probably people floating the river.

MK-3

Site Elevation: 640 Ft.	NE¼, SE¼ Section 32 T18N, R20E	Probable Site Type: Recreational
Site Age: Modern	Kateel River Meridian	Probable Cultural Affiliation: Modern

This is a relatively recent camping location no more than 10-15 years old. The site is located on the left bank of the Kobuk River 1/3 mile upstream of our camp #3 location. The campsite lies atop the 20 meter high river bank on the upstream side of a deep drainage gully. The view is good to the north, east, and west, but nonexistent to the south.

The site consists of a campfire (hearth) area containing charred wood as well as partially burned paper, aluminum foil, and plastic food wrappers. What appeared to be small pieces of a shredded tarp or tent were also associated with this site.

The site indicates recent use of the area; probably people floating the river.

HUG-040

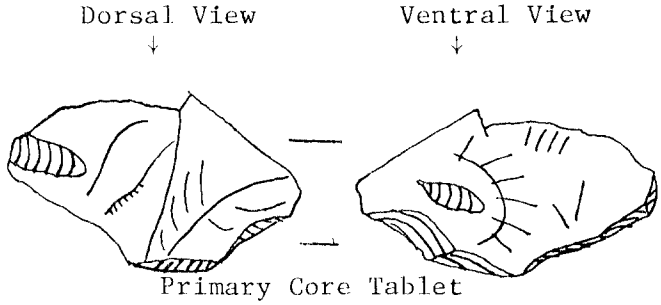
Site Elevation: 1450 Ft.	NW¼, SW¼ Section 19 T18N, R22E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the highest point of an Itkillik Age moraine constituting the drainage divide between the Hogtza River to the south and the Kobuk River to the northwest. The site lies 40 meters above and 250 meters south of the lowlying marshy, lake dotted terrain which comprises the headwaters of Fire Camp Creek, the eastern most tributary of Kichaiakaka Creek. The morainal ridge is well vegetated with large white spruce, birch, alder, lichen and heath. From this location an excellent view north, northeast and northwest is available with a more limited view to the south.

The site is a relatively broad flat area, measuring 20 meters across, sloping gently to the east, south and west and more abruptly to the north. A BLM firefighting crew, working on the west side of the ridge, had cleared a helipad on this hilltop by felling two large spruce. Intensive foot traffic on and off of the helipad had effectively removed the fragile lichen which covered the silty substrate and revealed three flakes, one of black chert, one of gray basalt and one very small flake of obsidian. The black chert flake may be a primary core tablet as it is of a scalloped appearance and exhibits four or five truncated flake scars, oriented perpendicular to the direction of force which detached it from the core. No subsurface testing was undertaken at the site. The amount of investigation carried out at the site was not sufficient to assess site extent or significance. Further survey of the area might be instructive.

The variety of lithic material suggests that more than one occupational event occurred at the site. The obsidian may indicate an age not in excess of 2000 years B.P. for the event which it represents.

Now that this site has been recorded, there should be little concern for its protection or the mitigation of any but human-induced impacts.



Primary Core Tablet
(chert)

HUG-040 Artifact - Actual Size

HUG-039

Site Elevation: 1400 Ft.	NE¼, SW¼ Section 19 T18N, R22E	Probable Site Type: Hunting
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located 100 meters southeast of a series of small lakes that are the headwaters of Fire Creek Camp. The continental divide runs east-west about 150 meters to the south of the site, where drainages south will enter the Yukon River and ultimately the Bering Sea. Those draining north will join the Kobuk and ultimately the Artic Ocean. The site is located in a clearing on the northern extreme of a glacial ridge (probably a terminal moraine) which constitutes the continental divide. The view from the site is limited in all directions due to fairly dense spruce and birch. A series of game trails cross the site, trending from southeast to northwest around the base of the steep sided 700 meter high bedrock ridge 100 meters east of the site. A relatively thin layer of lichen and heath cover the granular sand surface on this low rise.

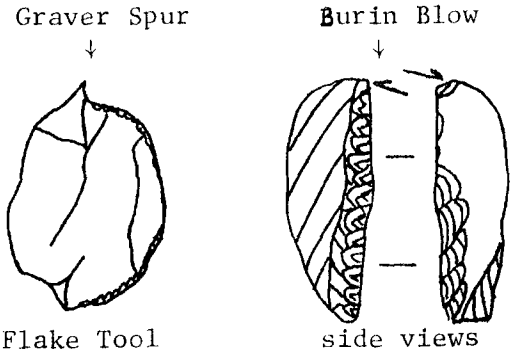
The surface expression consists of a lithic scatter of seven flakes of gray-black obsidian, one clear obsidian flake that exhibits retouch, one flake of brown chert, one flake of white chert, and one retouched and possibly burinated flake of marbled gray chert. All lithics, except the white and gray chert pieces, occurred in a 1 meter^2 cluster in a natural depression on the western side of the rise. The white and gray chert lithics occurred 2.5 meters to the south on the edge of one of the well-worn game trails.

One 20 cm.^{2} test pit was excavated to a depth of 5 cm. 2 meters northeast of the lithic scatter and failed to reveal any further cultural material.

The relatively sheltered nature of the site, in comparison with other sites further north on Kichaiakaka Creek and elsewhere, which seem to occur in more open, eleveate situations, makes this site unusual. It may be that only a limited view of a few specific locations, such as the lowlying marshy area to the northwest, or the several game trails converging toward the site from both north and south, were important. The site would most likely be an excellent location for intercepting or ambushing game moving north or south into one of the two drainage systems.

The presence of both obsidian and chert may indicate more than one occupational event occurred at the site. Obsidian use in the area does not generally appear to predate 0 A.D. This suggests that the event represented by the obsidian would be no older than ca. 2000 years B.P.

Now that this site has been recorded, there should be little concern for its protection or the mitigation of any but human-induced impacts.



Flake Tool (obsidian)

side views
Retouched/Burinated Flake (chert)

HUG-039 Artifacts - Actual Size

HUG-031

Site Elevation: 850 Ft.	SE¼, NE¼ Section 24 T18N, R20E	Probable Site Type: Quarry/lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a partially loess capped bedrock outcrop. This outcrop is the largest and most elevated in a liner series of hill-like bedrock exposures which trend east-west ¼ mile south of the Upper Kobuk River Canyon. Slightly less than ½ mile to the north, HUG-021 lies on the very lip of the canyon wall.

Site elevation is roughly 80 meters above river level although the nearby portions of the river are not visible due to the fact that they are deeply entrenched between the canyon walls. The river is visible a mile or so to the west and beyond, as is the intervening landscape. The view is equally good to the north and south while the view to the east is blocked by a ridge one mile distant.

The predominant ground cover at the site is caribou lichen accompanied by scattered willow, birch, and spruce. The trees are small, rarely exceeding 7 meters in height. This diminuative tree growth appears to be directly related to wildfire which swept through the area roughly 100 years ago. The caribou lichen cover is patchy, being broken up by limestone/chert outcrops and areas of exposed mineral soil. The mineral soil exposures are present as the result of moderate erosional

activity which appears to have been initiated by cryoturbation.

Several obsidian flakes as well as blue, brown, and gray chert flakes were located on surface scattered across several of the mineral soil exposures; an area of roughly 10^2 meters. Some of the chert flakes appear to be of the same material as the poor to medium grade chert inclusions found in the local bedrock. Two 15 cm.^{2} test pits were excavated to bedrock, 3 cm. below surface, in the vicinity of the obsidian flakes. No cultural material was recovered as a result of these excavations.

The presence of both chert and obsidian may indicate more than a single occupational event occurred at the site. The event represented by the obsidian probably does not exceed ca. 2000 years in age.

The fact that this site exists is its major point of significance. Very few sites were located in this area so the site is significant for that reason. Additionally, this site is one of the few which indicate possible quarrying of local lithic materials. The site may also have served as a hunting lookout or some other purpose associated with the landscape's local confining effect on the river.

Now that the site has been recorded, there should be little concern for its protection or the mitigation of any but human-induced impacts.

HUG-027

Site Elevation: 550 Ft.	SW¼, NE¼ Section 33 T18N, R20E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

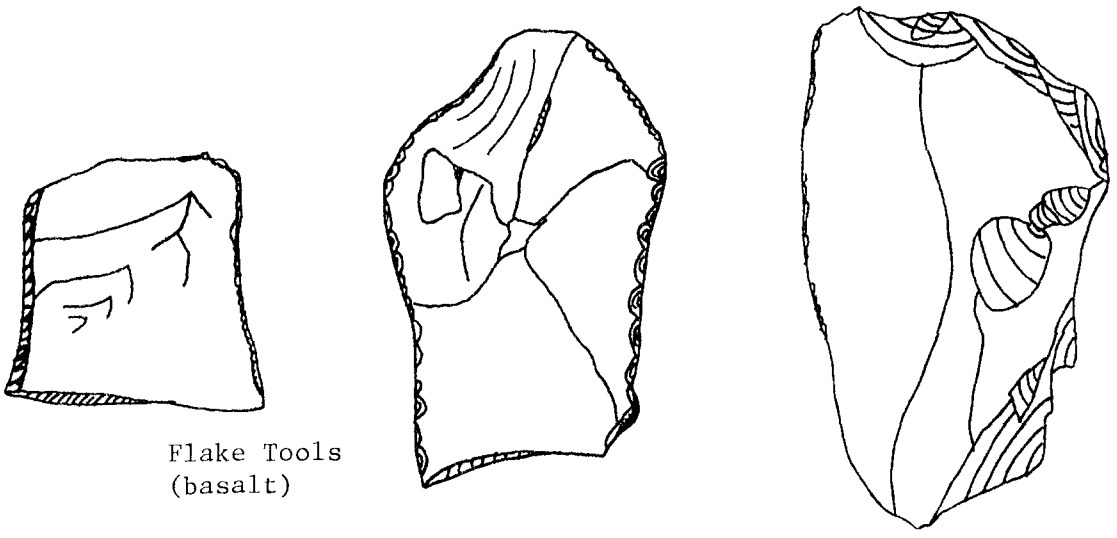
This site is located on a low northwest-southeast trending torpedo-shaped, 70 meter long terracette of the Kobuk River, 100 meters northeast of the confluence of Bluff Creek and the river. The dominant vegetation on this very well-drained rise is lichen accompanied by scattered dwarf birch and spruce. This vegetation becomes much thicker on the low sloping floodplain to the south and west of the site. The view from the site is reasonably good to the west and southwest.

The artifacts, made of gray pourous basalt, consist of a waste flake cluster of 100 or more pieces distributed over a 50 cm.^{2} area near the middle of the landform. Three large flakes, each exhibiting retouch of one or both dorsal edges, are located near the southeast end of the terracette. All observed artifacts were located on the southwest facing flank of this landform.

Since the lithic material is of one type only, and the flake cluster and utilized flakes occupy two descrete areas, it appears that the

site reflects a single occupational event.

Now that the site has been recorded, there should be little concern for its protection or the mitigation of any but human-induced impacts.



Flake Tools
(basalt)

Utilized Flake
(basalt)

HUG-027 Artifacts - Actual Size

HUG-026

Site Elevation: 650 Ft.	NE¼, SE¼ Section 14 T18N, R20E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

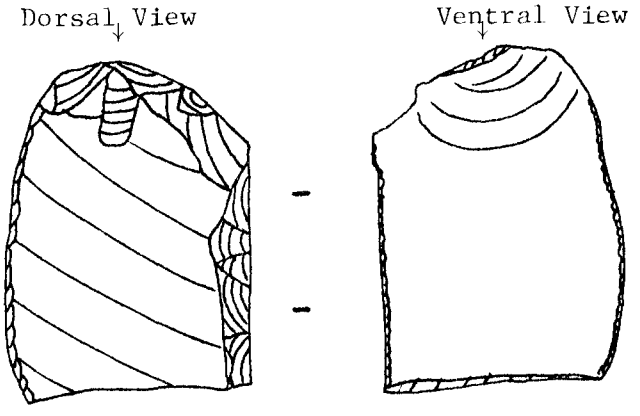
This site is located on the north side of the Kobuk River, 1 mile northwest of the upper canyon on the northwestern most of a series of bedrock outcrops. These outcrops occur between the upper canyon and some high sand cliffs nearly a mile and a half downstream. The bedrock knoll is elevated 10-12 meters above gently undulating, poorly drained, south sloping terrain and affords a good view to the east, south and west. The view to the north is restricted by rising terrain. The vegetation is quite open all around the site consisting of stunted black spruce, cotton grass tussocks, and willow and alder in the wetter areas. On-site vegetation consists of dwarf birch, spruce, and lichen, although much of the surface is exposed bedrock.

A single artifact, a portion of an obsidian flake knife, was located on the south slope of the knob lying amidst fracture bedrock. The

left dorsal edge of the tool exhibits continuous even retouch. The right dorsal edge is considerably thicker, with steep blunting flakes removed presumably for backing purposes.

Two 15 cm.^{2} tests were excavated to a depth of 10 cm., neither of which produced additional cultural material. Given that nearly 25% of the site is exposed fractured bedrock, all of which is on the south side of the outcrop where the flake knife was located and the advantageous view can be found, the site is most likely limited to a very small number of artifacts.

Now that the site has been recorded, there should be little concern for its protection or the mitigation of any but human-induced impacts.



Flake Knife Fragment
(obsidian)

HUG-026 Artifact - Actual Size

HUG-023

Site Elevation: 600 Ft.	NW¼, SW¼ Section 20 T18N, R20E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation:

This site is located along the crest of a ridge ¼ mile southwest of the confluence of the Nutuvukti Lake outlet stream, about 2 miles southeast of the southeast shore of the lake. The site is situated about 190 meters south of the highest point on the ridge, and 1 meter west of the crest of the ridge. The site location provides an excellent view of the Kobuk River Valley to the south and east. The view to the north is obscured by the ridge, but several hundred meters north along the ridge, a view of Nutuvukti Lake is obtained.

The vegetation along the ridge is sparse. A recent fire has burned the ridge, and dead snags and a few surviving spruce trees are visible. Young spruce and quaking aspen trees are recolonizing the ridge. Ground cover is very sparse and much mineral soil is exposed.

The site was discovered by surface observation. The site consists of two isolated black chert flakes lying 1 meter apart just west of the crest of the ridge. The flakes are 2-3 cm. in length and probably represent an intermediate rather than final phase of lithic reduction. Because of its location, the site probably functioned as a lookout/flaking station. Due to the lack of diagnostic artifacts, no age or cultural assignments can be made for this site.

The significance of this site is low. It demonstrates prehistoric use of the area immediately southeast of Nutuvukti Lake, but little else. Because of the large amount of exposed soil, the site suffers from surface erosion at present, and will continue to do so until the vegetation becomes reestablished. The site is sufficiently remote that potential human impact on the site is negligible.

The site warrants protection or mitigation action only as the result of human impact.

HUG-022

Site Elevation: 1200 Ft.	NE¼, SE¼ Section 6 T18N, R21E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the eastern of a pair of bedrock knolls which lie east of the Kobuk River near the north end of a long ridge. The site is situated about 200 meters above the river. The western knoll commands a fine view of the entire Kobuk Valley at this point, and Walker Lake is clearly visible to the north. This knoll is mostly exposed bedrock, and no cultural material was located on it. The eastern knoll has its view to the west of the Kobuk Valley blocked by the western knoll, but still commands a fine view northward of the Kobuk River, Walker Lake and the range front of the Brooks Range. At a closer distance, the site overlooks a small creek, entrenched in glacial drift, that drains westward to the Kobuk.

The vegetation around the bedrock knolls consists of scattered spruce trees with a patchy lichen-dwarf heath. Many small quaking aspen trees have colonized areas recently burned by wildfire.

The site was located by means of subsurface testing, as no cultural material was evident on the surface. A small 15 $cm.^2$ test pit was excavated in a patch of vegetation-covered soil in a depression between bedrock outcrops on the top of the knoll. Three small black chert flakes

were located at a depth of less than 5 cm. Since the vegetated areas on the knoll are small in areal extent, it is unlikely that much additional cultural material is present in this site. The site appears to have functioned as a lookout/flaking station.

The significance of this site is low. No artifacts diagnostic of age or cultural affiliation were recovered. The site does document prehistoric use of the uplands away from the river valley bottoms, but otherwise is unremarkable. No disturbance processes are presently impacting the site, and recreational use of the site vicinity is likely to be nil.

The site warrants protection or mitigation action only as the result of human impact.

HUG-021

Site Elevation: 590 Ft.	NE¼, NE¼ Section 24 T18N, R20E	Probable Site Type: Lookout
Site Age: ca. 960 Years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the extreme northeast corner of a knoll on the east bank of the Kobuk River that marks the upstream entrance to the upper Kobuk Canyon. The site is just a few meters back from the bluff that rises almost vertically 20 meters above the river. The location provides a fine view of the river below, the opposite point bar, and far to the north, the rolling Walker Lake moraine complex. The view to the south is presently obscured by spruce trees.

The vegetation at the site consists of spruce trees on the knoll, with paper birch less commonly found. The understory is a thick cover of dwarf heath including Vaccinium, Uliginosom, V. vitis idaea, Ledum decumbens, and Empetrum nigrom. Lichens (caldonia) are also common. Away from the river, trees become more sparse, giving way to shrub tundra.

The site was located by the use of test pits, as no artifacts were visible on the surface.

A 20 cm.^{2} test pit (test pit 2), located on the extreme northeast corner of the knoll, produced a total of 16 small obsidian flakes. The flakes came from the base of the root mat just above the mineral soil horizons. The flakes appear to represent the final stages of lithic reduction. A second test pit about 40 meters to the west on the west side of the knoll was sterile. The rather flat top of the knoll was searched carefully, but no cultural remains were observed due to the thick vegetation cover. The total extent of the site is thus uncertain. Due to its topographic setting, the site probably functioned as a lookout/flaking

station. No diagnostic artifacts were recovered and cultural affiliation of the remains are unknown.

A sample of the subsurface obsidian was submitted for hydration analysis. This analysis indicated a hydration rind thickness of 1.49μ ± 0.03μ. Based upon radioactive carbon dated obsidian from Lake Selby, 35 miles to the west, a hydration rind of this thickness indicates an age of 975 ± 39 years B.P.

The significance of the site cannot be determined from the amount of data gathered. Cultural material was recovered from only one test pit, but the bluff extends for 40 meters, and more extensive testing is necessary to make an accurate significance assessment. No disturbance processes are presently impacting the site, apart from gradual erosion of the bluff face. The potential impact on the site from human activity is probably limited to occasional visits by parties rafting on the Kobuk River, and the thick vegetation mat will adequately protect the site from such infrequent visits.

The site warrants protection or mitigation action only as the result of human impact.

HUG-043

Site Elevation: 700 Ft.	NW¼, SW¼ Section 26 T17N, R19E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a ridge just west of the Kobuk River about 2 miles north of the Lower Kobuk Canyon. Another ridge-crest site, HUG-045, lies about ½ mile to the south. This ridge offers a good view to the north of the Kobuk River and the pass northward to Nutuvukti Lake which runs along the east side of the Akoliakruich Hills. The view to the south is of the Kobuk Valley and the Norutak Hills in the distance.

The vegetation on the ridge is comprised of quaking aspen and spruce trees with an understory of lichen and dwarf heath. Dwarf birch is less common. The dominance of quaking aspen on the ridge suggests the ridge has burned in recent times, since the species seems to be a pioneer tree species in burned areas of this region.

The site was located by surface observation and lies about 150 meters south of the northern end of the ridge. Sixteen obsidian flakes were found on the surface within an area of 4 square meters. Four of the flakes were large decortification flakes. Two of these fit back together. A small 15 cm.^{2} test pit was excavated to a depth of 15 cm. to see if there was any depth to the cultural material, however, no material was recovered. Because of the small size of the flake scatter and the presence of only one kind of raw material, this site probably represents a single lithic reduction event. The presence of obsidian may indicate a site age no greater than ca. 2000 years B.P. The site probably functioned as a lookout/flaking station because of its excellent view.

The significance of this site is low. It is unlikely to contain additional cultural information beyond that evident from the surface material. It lacks artifacts diagnostic of a cultural period. The site is not presently impacted by disturbance processes, and is unlikely to suffer any impact from recreational activities. Site protection should not be a concern unless the site is adversely impacted by human activities.

HUG-045

Site Elevation: 780 Ft.	SW¼, SW¼ Section 26 T17N, R19E Kateel River Meridian	Probable Site Type: Lookout
Site Age: ca. 1160 years B.P.		Probable Cultural Affiliation: Unknown

This site occupies a unique location upon a wide spot on a hogback glacial ridge which rises 60 meters above the Kobuk River. The site is located about 1½ miles upstream from the Lower Canyon on the right hand side of the river. Originally, this glacially formed ridge was not of the hogback variety. The river has eroded away much of the ridge base, creating, through sluffing, a very narrow crest and precipitous riverward side. The site offers an excellent view of the adjacent portion of the river. To the north, the view encompasses the river valley and adjacent terrain for a distance of roughly 5 miles. The downstream view extends almost to the Lower Canyon while the view to the east and west is obscured by hills one mile distant.

Ground cover at the site consists primarily of caribou lichen and moss and a scattering of low woody and herbaceous plants. Scattered birch, spruce and poplar, ranging in size from seedling to sapling, are present as well as occassional dwarf birch and willow. Both fallen and standing burned, dead, spruce are present indicating the passage of a wildfire through the area no more recently than 40 years ago. A few small areas of exposed mineral soil are also present.

It was in one of these exposed mineral soil areas that cultural material was initially observed. The surface indications suggest that the site covers an area of approximately 9 x 4 meters. Numerous obsidian, and a lesser number of chert flakes were observed, as well as some chert and obsidian microblade fragments. Two 20 cm.^{2} test pits, located roughly 5 meters apart at opposite ends of the major lithic concentration, were excavated to a depth of 10 cm., in an attempt to determing the extent and depth of subsurface cultural material. Both test pits yielded chert and obsidian flakes and microblades to a depth of 4 cm.

Many of the obsidian flakes were relatively large and exhibited cortex, indicating that cobble reduction and probably tool manufacture were carried out at the site. Both the chert and obsidian microblades were of similar size and style and therefore may be contemporaneous, at least from a cultural standpoint.

The cultural lithics suggest that more than one event occurred at the site. The site probably served as some type of lookout, as the physical characteristics of the location would allow for little else.

Three of the obsidian microblades recovered from the test pits were submitted for obsidian hydration analysis and yielded hydration rind thickness measurements of 1.46μ ± 0.05μ, 1.58μ ± 0.09μ and 1.64μ ± 0.08μ. Given the locally calibrated radiocarbon dated hydration rate of $2.32\mu^2$/ 1000, a close grouping of dates were obtained: 919 ± 63, 1076 ± 122, and 1159 ± 113 years B.P. respectively.

These dates appear to be quite recent for a microblade industry. However, other obsidian microblades from various other sites in the area have been dated by the hydration method and several have yielded dates as recent as the dates from this site. Additionally, hydration data, associated with obsidian microblades from sites located in the survey area, indicates that generally microblade sites are in excess of 1500 years B.P. in age.

The significance of this site is moderate because of its unique location. It is, beyond reasonable doubt, a lookout site. It is also one of the few sites in the region which definitely represents a locality of cobble reduction/tool manufacture.

Additional work at the site, while interesting to contemplate, would probably yield little additional data concerning site function, age, or cultural affinity. Therefore, there should be little concern for the sites protection or the mitigation of any but human-induced impacts.

AREA #4

Kobuk River - Reed River - Nutuvukti Lake Pass/Hunting Area

While this area is along the Kobuk River, its unique geomorphological character sets it apart. Therefore, it is being treated as a separate area.

Camp #4 - June 20-27

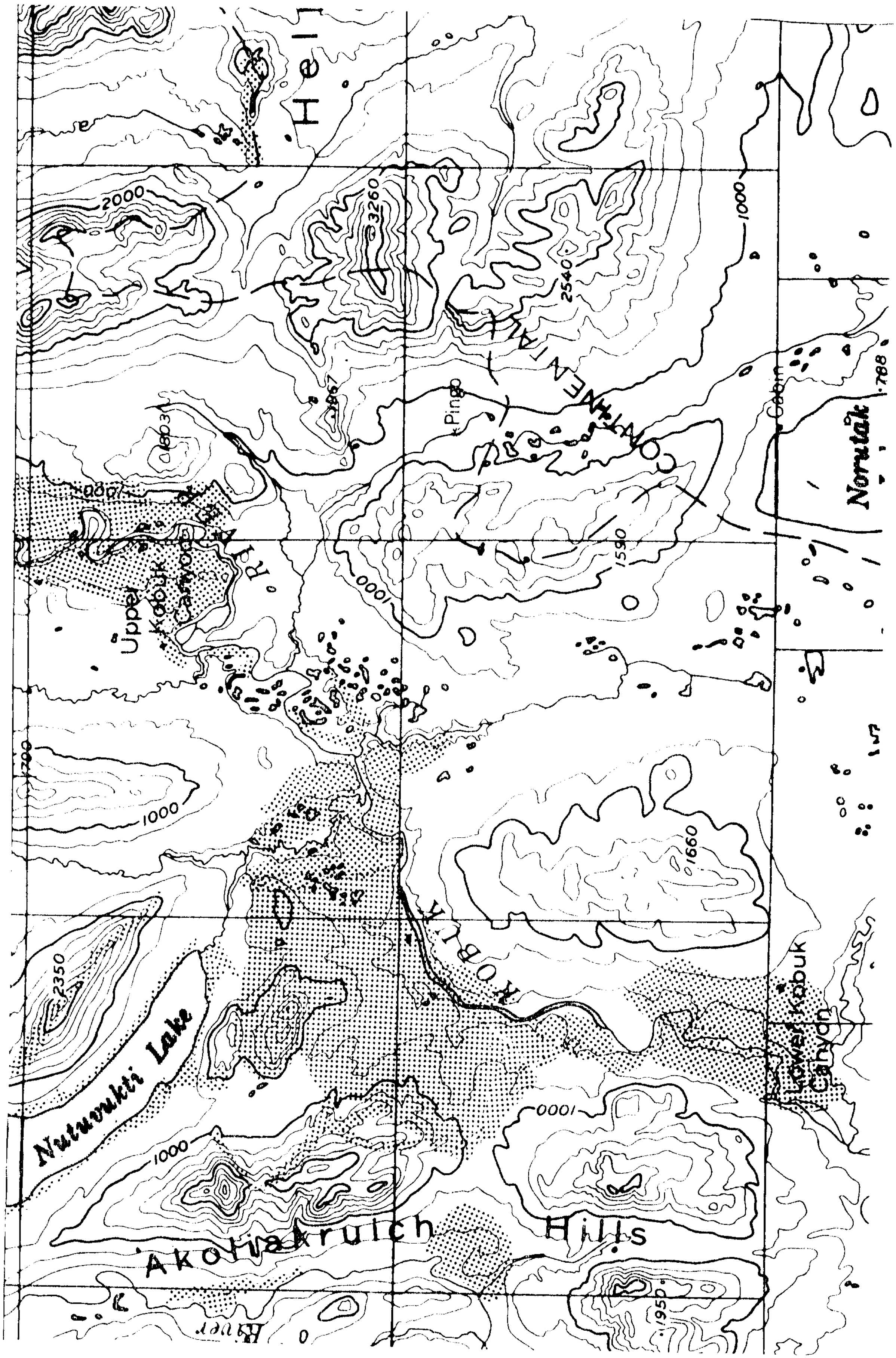
We arrived at this camp by floating our gear and supplies down river on our two rafts. Camp #4 was approximately 5 river miles downstream from Camp #3. We spent eight days working out of this camp and located 18 prehistoric sites in an area of about 13 square miles. This area encompassed the eastern portion of the Akoliakruich Hills which included two pass-like areas between the Reed River and the Kobuk River and between Nutuvukti Lake and the Kobuk River. The general topography is that of linear ranges of hills (to 900 meters) and valleys which contain bedrock outcrops and glacial features (Itkillik Glaciation). The area has been recently burned 10-30 years) and the primary ground cover is emergent moss, seedling to sapling size spruce, birch, and poplar. Low lying ground is covered by dense willow growths. There are numerous standing dead (burned) spruce snags throughout the area.

The 18 sites found in this area appear to cover a wide temporal span. The site which appears to be the oldest (HUG-037) contains artifacts (wedge-shaped microblade core and multiple faceted flake burins) which are typical of 4000-7000 year old sites in the interior portions of Alaska. More recent manifestations include a site which contained a conical microblade core (obsidian) and numerous obsidian microblades. This site is probably a minimum of 2000 years old. Another site yielded a projectile point of a size which probably predates the introduction of the bow and arrow.

Many of the sites had end scrapers present, which suggests the majority of the sites in the area are hunting/butchering localities. The location of the sites upon knolls, hills, and ridges tends to support the hunting oriented site hypothesis.

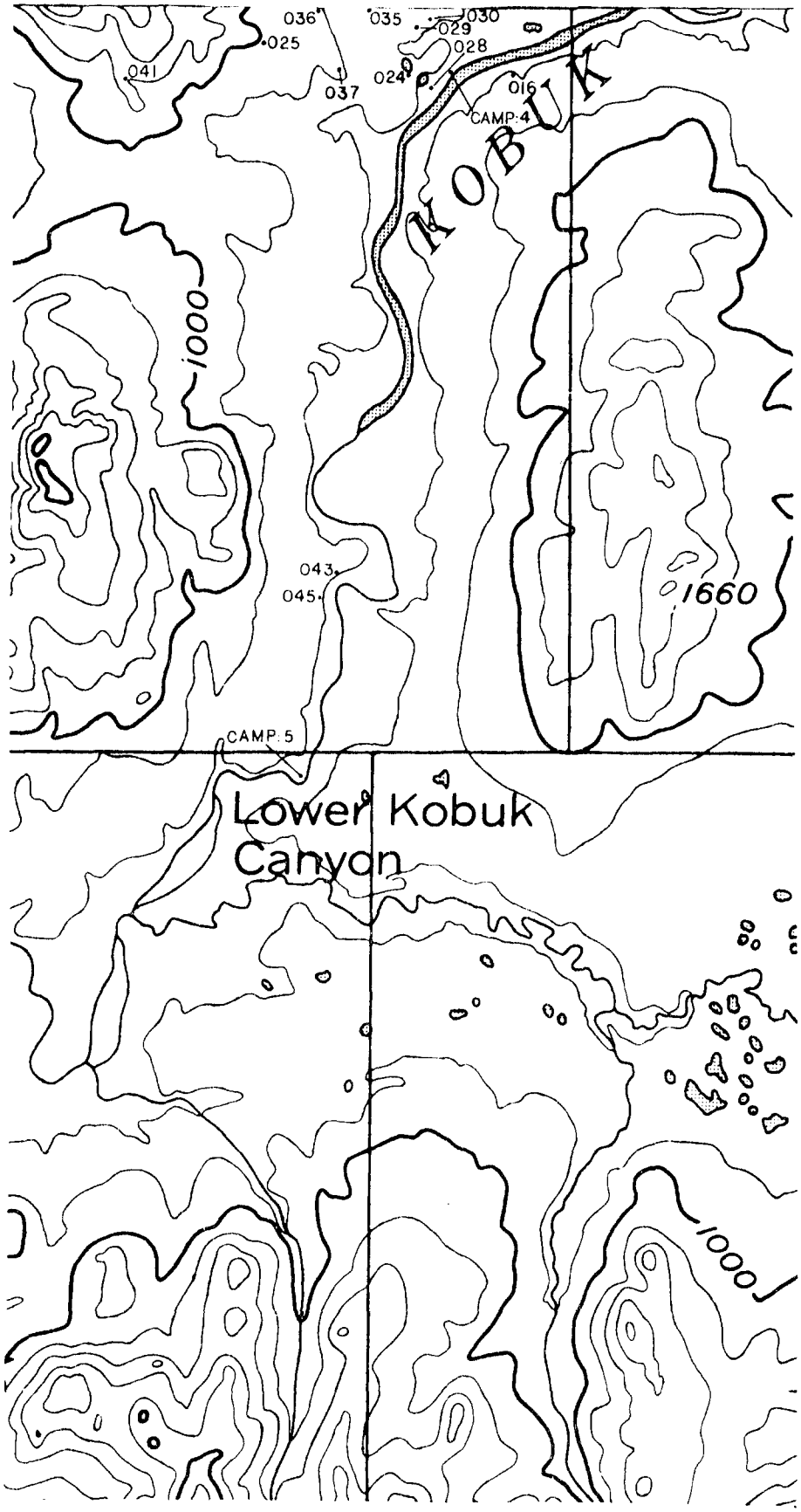
In general, the morphology of the formal artifacts appears more Indian (Athapaskan) than Eskimo, even though no truly diagnostic artifacts were found (possible exception is the wedge shaped microblade core). Lithic material used for tool manufacture appears to be evenly divided between chert and obsidian.

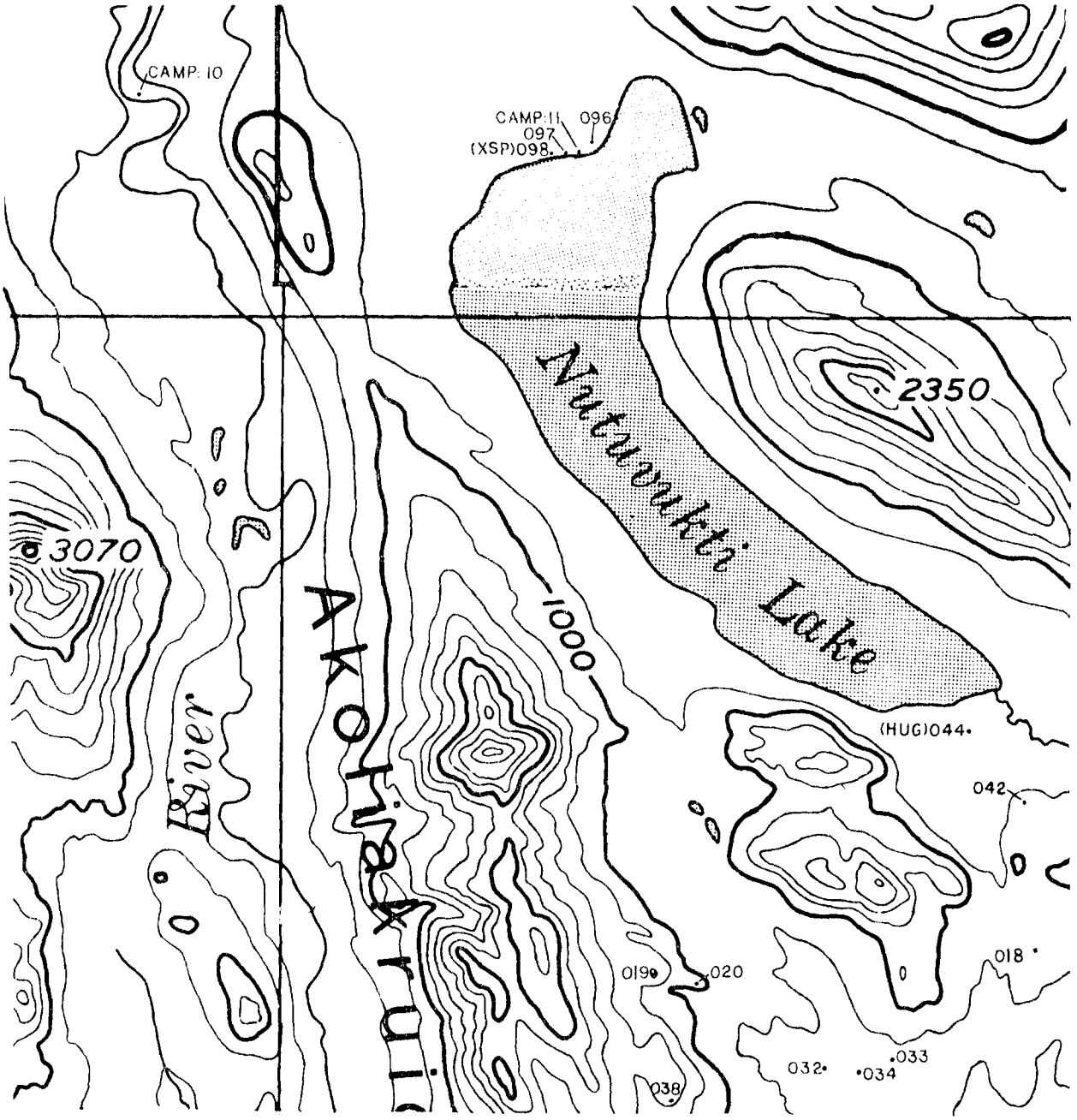
The fact that this area had been recently burned by wildfire made the application of our surface survey techniques quite productive. Ground disturbance, which occurs for a number of years after a fire has burned an area, causes much subsurface material to rise to the surface or become exposed, thus making the identification of archeological sites easier and less time consuming.



AREA SURVEYED

six miles


036
035
030
029
028
025
041
037
024
016
CAMP 4
KOBUK
1000
043
045
1660
CAMP 5
Lower Kobuk
Canyon
1000
six miles


CAMP. 10
CAMP. 11
096
097
(XSP)098.
2350
Natuvuktuk Lake
3070
1000
Akoliakruk River
(HUG)044.
042
018
019
020
032
033
034
038

six miles

HUG-016

Site Elevation: 600 Ft.	NE¼, SE¼ Section 1 T17N, R19E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site occurs on a point along a bluff edge about 100 meters south of and 30 meters above the Kobuk River. The site lies about 4½ miles due south of the outlet of Nutuvukti Lake overlooking a broad shallow stretch of the Kobuk River. The north side of this stretch of the Kobuk River has experienced recent (10-20 years age) wildfire activity which, at points downstream of HUG-016, jumped across the river to the southern side. This site is situated about 3/4 mile upstream, or northeast of the recent burn areas.

Vegetation at this site consists primarily of caribou lichen and herbaceous plants such as, Vacciniuum, small spruce, and alders, occurring in gullies which drain the bluff terrace. The terrace appears to be poorly drained. A north-facing slope leads down from the site to an alluvial terrace. This terrace lies 30 meters below the site and is also poorly drained as evidenced by areas of standing water separated by stands of willow, spruce and muskeg. Several game trails were found on the lower terrace, suggesting the site may have been utilized as an overlook.

A single medium-sized, black chert flake was found on surface at the site. A 20 cm.^{2} test pit was excavated to a depth of 8-10 cm. through the loess mantle, and revealed no subsurface cultural material. The view from the site is at least 4½ miles to the north, about 1 mile to the southwest (downstream), and about 1 mile to the northeast (upstream). The view to the south and southeast is generally obscured by spruce trees.

The significance of HUG-016 is minimal. The site indicates prehistoric use of this bluff edge, possibly as a hunting overlook. Aside from the possible use of the location, little additional cultural information can be gleaned from this site.

Now that this site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

HUG-017

Site Elevation: 800 Ft.	NE¼, SE¼ Section 15 T14N, R20E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

The site is located atop a gravel knoll on the south slope of the Norutak Hills. Two chert microblades and some chert flaking debitage were found on the surface. Because of the presence of microblades, the site is probably at least 2000 years old.

This site is outside the boundaries of the Park Preserve.

HUG-018

Site Elevation: 900 Ft.	NE¼, SE¼ Section 25 T18N, R19E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

Located 1½ miles south of Nutuvukti Lake and 2½ miles west of the Kobuk River, this site lies atop a rounded hill east of the pass. The pass connects the southern end of Nutuvukti Lake with the moraine complex on the north side of the Kobuk River. The site lies 150 meters above the Kobuk River and is located on the southeastern edge of this hill, on an isolated knoll.

The knoll, which is formed primarily by a bedrock outcrop, supports a sparse vegetation cover of spruce, alder, willow, grasses, and herbaceous and woody plants. Soil consists of a thin mantle of loess over fragmented bedrock.

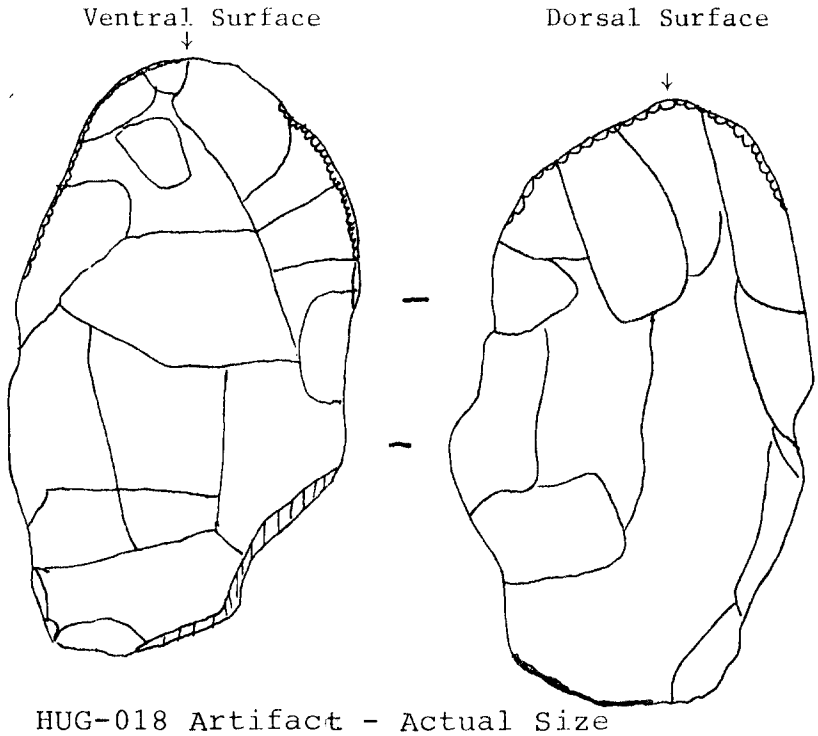
A single tool was found at this site. This artifact appears to be a scraper or knife, made of fine-grained black chert, and is bifacially worked. The majority of flake removal occurred on the ventral surface of this 8 cm. long and 4.5 cm. wide artifact. No subsurface testing was conducted due to the general lack of soil at the site.

The view from HUG-018 is panoramic, and overlooks several small lakes about 3/4 mile east and south of the site. The recent wildfire (10-20 years ago) which ravaged these glacial moraines, appeas to have extended up to the immediate vicinity of the site.

The type of artifact located at the site and the absence of additional cultural remains may indicate that the site is a hunting lookout.

The significance of this site is minimal and worthy of little consideration except to be considered as a type of site that relates to or fits into the local, functionally derived, land use pattern.

Now that this site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.



HUG-018 Artifact - Actual Size

HUG-019

Site Elevation:
1100 Ft.

Site Age:
Unknown

SE¼, SE¼
Section 28
T18N, R19E
Kateel River Meridian

Probable Site Type:
Hunting

Probable Cultural Affiliation:
Unknown

This site is located on a high, steep hill on the west side of a glaciated valley which forms a natural travel route between Nutuvukti Lake and the Kobuk River. This hill rises approximately 100 meters above the valley floor and is flanked on the south, east, and north by small creeks. The site lies approximately 2 miles southwest of the southern shore of Nutuvukti Lake and ½ mile southwest of two small valley floor lakes. The Kobuk River lies 4 miles to the northwest. The site proper occupies three bedrock knobs at the top of the hill. The cultural material lies scattered over a 7 x 11 meter area atop and between these knobs.

The view from HUG-019 is 2 miles to the north, east and south. To the west, a ridge line restricts the view to less than a mile.

The site area has been recently (10-20 years) burned over by wildfire, as evidenced by the condition of the vegetation cover. Wildfire activity enhances the view of the area. The site occupies a commanding position atop the hill and may have served as an ambush location.

The site was located as a result of surface evidence. Lithic detritus was scattered across the three hilltop knobs lying among fragmented bedrock, and burnt caribou lichen, and was partially imbedded in a very shallow loess mantle. A 20 cm.^{2} test pit was excavated to a depth of 4 cm. and yielded no additional cultural material.

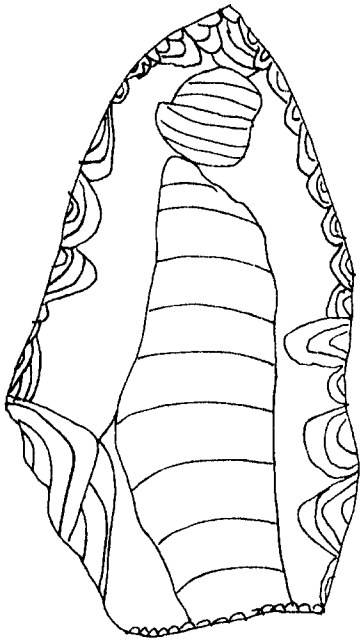
The artifacts located on surface include three scrapers, one bifacially flaked obsidian knife, and numerous flakes of obsidian and black and gray chert. The obsidian knife (8 cm. long and 4 cm. wide) exhibits (fortuitus?) basal fluting. A red chert scraper (8 cm. long x 6 cm. wide) is fragmentary (2 pieces); the fragmentation may be the result of heat fracturing. A similiar black chert scraper (6 cm. long x 4 cm. wide) also appears to have been affected by fire. A large (4 cm. x 4 cm.) obsidian flake, which may have been burinated, also exhibits flaking along one margin, and may have served as a scraper.

Based on the location and topography of this site, HUG-019 may have been a hunting/lookout locality, utilizing the bedrock outcrops as blinds from which to ambush game. The type of artifacts found at the site tend to support a hunting station hypothesis. Similar topographic conditions and site-use possibilities exist at HUG-020, which is located on a hill about 80 meters lower and 350 meters southeast of HUG-019.

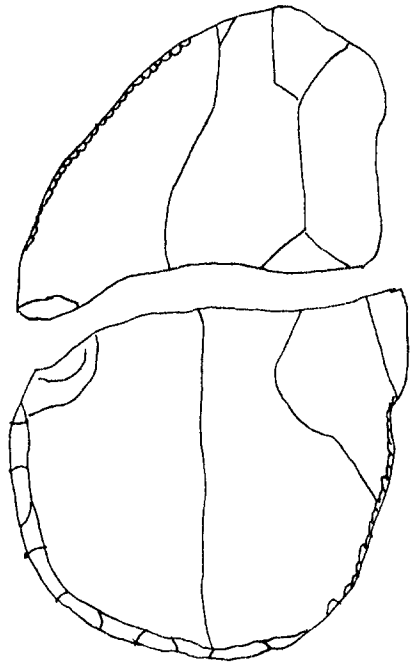
The significance of HUG-019 exists only at a general level. Its importance lies in that the information it contains allows, with reasonable surety, the site's placement within a catagory of sites in this general area and geomorphologic setting. The possibility that this site might contain significant information concerning the past inhabitants of the region is slim.

The presence of a variety of lithic materials suggests that more than a single occupational event took place at the site. Based on area obsidian hydration data, the event represented by obsidian probably occurred no more than 2000 years ago.

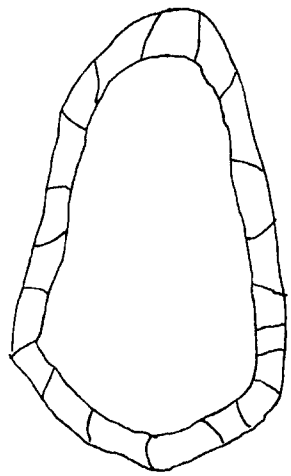
The integrity of the site is not at present endangered in any way. Now that the site has been recorded, there is little reason for concern for its protection, or the mitigation of any but human-induced impacts.



Knife
(obsidian)



Scraper
(chert)



Scraper
(chert)

HUG-019 Artifacts - Actual Size

HUG-020

Site Elevation: 850 Ft.	NW¼, NW¼ Section 34 T18N, R19E	Probable Site Type: Hunting
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located atop a hill on the west side of the glaciated valley connecting Nutuvukti Lake and the Kobuk River. This hill lies 30 meters above the valley floor, and is situated approximately 4 miles northwest of the Kobuk River and 2 miles southwest of Nutuvukti Lake. Two small valley floor lakes are located nearly ½ mile north of the site. Situated 300 meters southeast and 90 meters below HUG-019, HUG-020 occupies the bedrock outcrops which form a small knoll atop the hill; the knoll lying 3-5 meters above the gently sloping hill. Oriented roughly north-south, this elongate knoll occupies an area of approximately 12 x 30 meters.

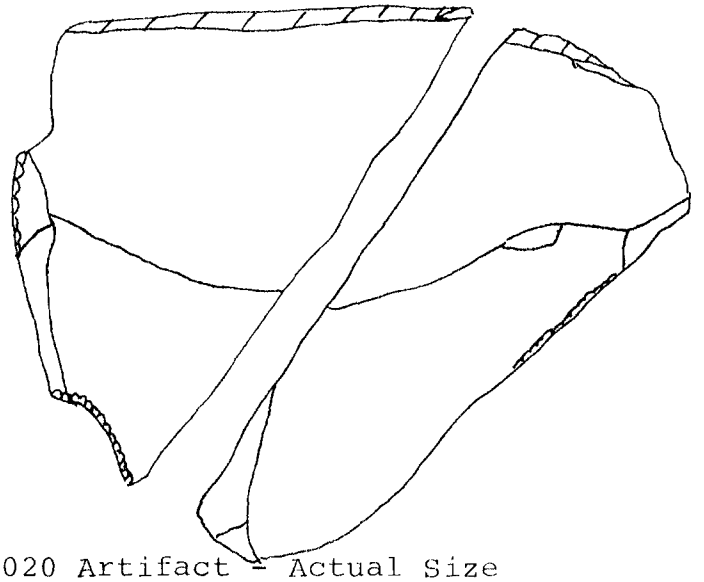
A recent fire (10-20 years ago) has scorched the site area, leaving scattered spruce snags charred and uprooted. Surface vegetation has generally been destroyed by this fire, and, from a distance, the hill appears brown and denuded. Patches of vegetation, including woody plants, grasses and aspen, are growing where the soil is able to support plant life. Typically, the soil at this site is thin. No subsurface testing was conducted at this site due to the lack of substantial soil on the fragmented bedrock outcrops. Impact at HUG-020 is low; mostly from game trampling, wildfire, and frost action.

Artifacts at the site include a gray chert tool (scraper/knife) and an obsidian blade-like flake, both found on the surface approximately 50 cm. apart. The chert tool (9 cm. x 8 cm.) is fragmented, the two halves lying 30 cm. apart. The obsidian flake (1 cm. x 1.5 cm.), which may be a rude microblade fragment, has evidence of nibbling along one margin. The chert and obsidian material appear weathered, possibly as a result of prolonged exposure on the surface and/or the effects of wildfire.

The level of significance for HUG-020 is low, due to the paucity of cultural remains. The site location is similar to HUG-019 and may indicate a pattern of land use. Both these sites appear to be hunting stations utilizing bedrock outcrops as blinds for ambush and overlooks. There is considerable evidence at this site, and HUG-019, to attest to the area's recent use by game. These sites, however, appear to be mostly surface manifestations and contain few clues to the identity of the prehistoric occupants.

The presence of both chert and obsidian at the site may indicate more than one occupational event. The obsidian may indicate a maximum age of ca. 2000 years B.P. for the event it represents.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.



HUG-020 Artifact - Actual Size

HUG-024

Site Elevation: 600 Ft.	SW¼, NE¼ Section 2 T17N, R19E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located in a nondescript tundra area approximately 40 meters southeast of a deeply entrenched kettle lake remnant. The site lies on a somewhat poorly drained area in a glacial feature complex which borders the Kobuk River. The main body of the Akoliakruich Hills lies 1½ miles to the west, while Nutuvukti Lake lies 3½ miles to the north.

Wildfire devestation at the site is as heavy as elsewhere in the area. The lichen/moss mat has been destroyed, but the wet environment has encouraged the growth of cotton grass/ tussock areas. Trees in the general site area seem to be coming back more rapidly than elsewhere in the region. In the area surrounding the site, poplars are dense and attain heights of 5-8 meters. Birch are more plentiful and larger here than in other nearby locations. The more luxuriant vegetation in the site area may reflect close proximity to the river as well as an unobstructed southern exposure. The view from the site is limited to a maximum of ¼ mile in all directions by nearby higher terrain.

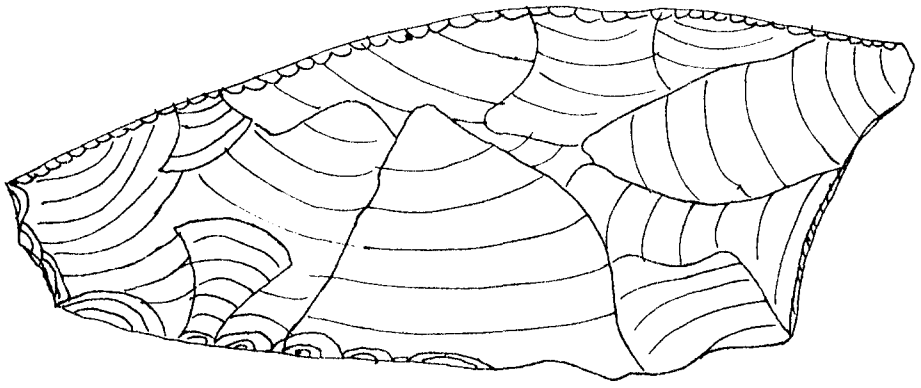
Cultural material was found on surface lying atop the vegetation mat. The cultural material consisted of a large (12 x 4.5 cm.) fragment of a lunate knife/biface and two relatively large waste flakes, all of black chert. A 15 $cm.^2$ test pit was excavated to a depth of at least 7 cm. near the artifact location, and no additional cultural material was discovered.

This site appears to be a true isolated find, as there is no readily apparent reason for such a site location. The cultural material may have been dropped by a person in transit or it could have been left behind at an overnight winter camp. In winter there is no distinction between wet and dry ground. The location is somewhat sheltered, which would be an attractive feature for a winter camp, especially if the weather were inclement.

There is little else that can be said about this site. The type of artifact suggests that associated activity would be of a hunting nature. Because this site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

An interesting point concerning the location of this site should be mentioned. This site was located by accident. It is located in an area where archeological sites are not normally thought to occur and therefore are not normally looked for. However, this site was located because to reach areas of high archeological potential, field personnel often have to cross areas of low archeological potential While traversing low interest areas, the Archeologist is still observing the ground, albeit in a very hurried and cursory manner. In this way, areas of low

archeological potential receive some coverage even if it is unplanned and uncoordinated. The door of discovery is, therefore, being left open at least a crack in these less attractive environments, so that some of the less common types of sites may be recognized and therefore included in the record.



HUG-024 Artifact - Actual Size

HUG-025

Site Elevation: 840 Ft.	SW¼, NW Section 35 T18N, R19E	Probable Site Type: Major Campsite
Site Age: ca. 1725 years B.P. and older	Kateel River Meridian	Probable Cultural Affiliation: Unknown

HUG-025 lies atop the high point of a large glacially scoured, loess capped, bedrock hill. The site is located at the head of a small stream course which bifurcates and drains the northwest portion of the hill. The main body of the Akoliakruich Hills lie less than ½ mile to the west while Nutuvukti Lake lies 3½ miles to the north, and the Kobuk River flows 1½ miles to the southeast. The view is excellent in all directions, offering excellent command of adjacent areas. The terrain observable from the site includes the pass (route) between the Kobuk River and Nutuvukti Lake, as well as the pass (route) between the Reed River and the Kobuk River.

Ground cover at this site is typical of all sites in the area. The passage of a wildfire 10-20 years ago has left the landscape with an open or park-like quality. Evidence of the fire's devestation is observable in the burned and desiccated lichen/moss mat, the exposed and scorched mineral soil and bedrock, prevalent surface charcoal and

large chunks of burned wood, and burned standing and fallen spruce trees. Vegetation is slowly returning to the site in the form of sapling-size poplar and birch,and seedling size spruce. Low woody and herbaceous plants are for the most part absent.

The promontory upon which the site lies is oriented in a north-south direction. The site encompasses an area of roughly 45 x 20 meters. Cultural material is scattered over the entire area and includes both obsidian and chert waste flakes and artifacts. Obsidian artifacts are represented by micro-blades (black, clear, and mottled red/brown material), partially exhausted baseball sized cobbles, several bi-face fragments, and a single projectile point of the mottled red/brown material. Chert artifacts are limited to micro-blades of various colors and a single small biface fragment. Obsidian accounts for at least 90% of all lithic material.

Many of the obsidian waste flakes exhibit cortex. This,along with the presence of partially used (reduced) obsidian cobbles, suggests a fair amount of on-site tool manufacturing. A cursory examination of the surface of the site indicates that at least 6 obsidian cobbles were incorporated in on-site tool manufacture. As a result of cobble reduction, a number of relatively large flakes were produced which were never used for tool production. This situation is, based on examination of other local sites, odd to say the least. At no other location in the area, or for that matter, in the region, did we find such a high level of non-utilization of usable lithic material. These people must have considered themselves "obsidian rich".

Chert waste-flakes and artifacts are few in number when compared to the obsidian. The chert microblades are considerably smaller than the obsidian examples, suggesting a different core type and possibly indicating a different occupational event.

Two 20 cm.^{2} test pits were excavated to a depth of 7 cm. near surface lithic concentrations,roughly 20 meters apart at opposite ends of the site. Neither of these test pits produced any cultural material.

One of the test pits was excavated in a depression where a burned spruce tree had recently fallen over. In the root matrix of the tree, an obsidian projectile point was discovered. Had the artifact not been uprooted when the tree toppled, it would have been located 5 cm. below surface in the root complex of a large spruce tree.

The projectile point measures 4.7 x 3.6 x .85 cm. at its maximum dimensions. The artifact is bifacially worked, and possesses a short, broad stem, and a roughly triangular blade. The tool is well made and appears to reflect a concious, although unsuccessful, attempt at parallel oblique flaking. The projectile point is basally thinned on one surface and is not edge ground.

Morphologically, this artifact appears to belong to the Northern Archaic Tradition as described by Anderson (1968b). The projectile appears to be most nearly similar to examples from band 6, levels 7-4 at the Onion

Portage Site. Anderson attributes a date of 2900-2700 BC to cultural material from that level of the site, (Anderson, 1968b). However, obsidian hydration analysis of the artifact yielded a hydration rind thickness measurement of 2.00μ ± 0.04μ. Given the locally calibrated radiocarbon dated hydration rate of $2.32\mu^2/1000$ years, the calculated age of 1724 ± 69 years B.P. was obtained.

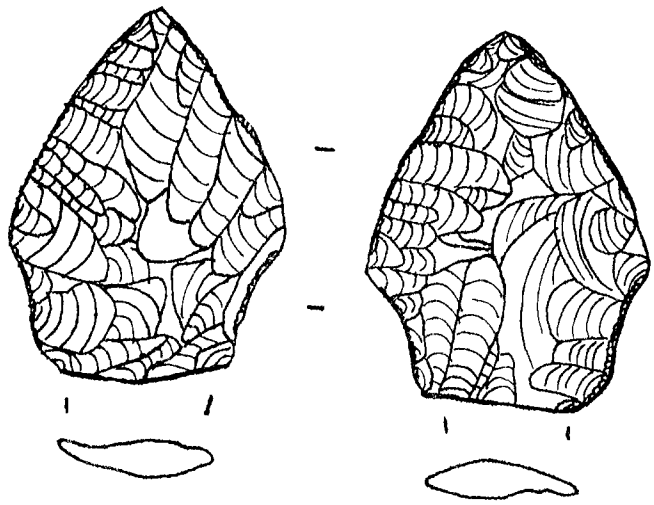
The discrepency between the expected and the actual (?) dates is problematic. However, in the case of this single artifact, the hydration date is probably more accurate than an inferred date based on morphological similarities.

This may be the only known site in the local area (with the exception of HUG-037) that indicates any degree of continuous or major use. If site occupation was of only short duration, then the level of activity must have been relatively intense. The cultural debitage at the site suggests several things:

1. The cultural material which is chert may represent a different, perhaps earlier, period of occupation than does the obsidian.
2. The amount of obsidian, as compared to the amount of chert, indicates a longer or more intense period of occupation by the obsidian users.
3. The presence of obsidian cobbles at the site suggests occupation by a group that was more than just casually passing through the area.

Lithic evidence suggests that the site may have been a base camp for a group of hunters working the local area. The presence of cobbles not only indicates a camp of some duration or importance, but also indicates direct visits to the obsidian source or trading with groups who visited the source. The closest known obsidian source, indeed the one which supplied most of the obsidian used aboriginally in Alaska north of the Yukon River, is located at Batza Tena on the Koyukuk River roughly 100 miles to the south-southeast (Clark, 1972).

The significance of this site is relatively high, both because of the information it might contain, and also because of its locally, unique nature. This site should be protected from any adverse impact, at least until further investigations can more clearly determine its importance. At present the site is not endangered by any natural or human impacts.



Projectile Point
(obsidian)

HUG-025 Artifact - Actual Size

HUG-028

Site Elevation: 550 Ft.	NE¼, SE¼ Section 2 T17N, R19E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a knoll 100 meters north of the Kobuk River. HUG-028 lies at the western end of the relatively straight east-west flowing portion of the river, about 4 miles due south of the southern end of Nutuvkti Lake. The site knoll represents a portion of the southern boundary of a broad upland, which rises to the north toward Nutuvukti Lake and the ridges separating the Kobuk from the Reed River to the west. One hundred meters due north of the site, lies a small re-vegetating kettle lake measuring today about 80 (NE-SW) by 40 meters (NW-SE). The lake has been larger in the past, as evidenced by the lush grasses now filling in the basin. The outlet drain of the lake passes 50 meters to the west of the site, thus adding to the discrete nature of this low knoll.

A recent fire, probably in the past 10-20 years, has resulted in an open setting, with the former spruce forest yielding to pioneering poplar and willow vegetation. The lichen mat has not yet rejuvenated itself, and appears as a brown brittle carpet, susceptible to the initiation of erosional activity even on low sloping topography.

The view from the site is good both up and down the river, given the lack of spruce trees, but would have been greatly reduced had the fire not occurred. The lack of vegetation and ground cover allows for much greater surface visibility.

Three artifacts were found on the relatively flat 5 meter^2 area of the knoll top. A cortex removal flake of obsidian, measuring 3.6 cm. long and 2.5 cm. wide, was located on the surface. This specimen appears to be a multipurpose tool. The left dorsal edge is evenly retouched, serving, possibly, as a cutting or scraping implement. The distal termination of the flake, originally a step or hinge fracture, has been modified by one and possibly two transverse blows resulting in burination. The left distal corner shows moderate crushing and edge wear, and the original distally fractured ventral remnant shows a high degree of polish and some slight micro-chipping. A small obsidian flake and a black chert flake were located within 1 and 2 meters, respectively, of the obsidian tool.

Three 20 cm.^{2} test pits were excavated to a depth of 10 cm. No additional cultural material was observed. The site's function is difficult to assess given the artifacts observed, but may have served as a relatively sheltered overlook of the Kobuk floodplain.

The presence of both chert and obsidian may indicate that more than a single occupational event took place at the site. The on-site occurrence of obsidian suggests a maximum age of ca. 2000 years B.P. for the event which the obsidian represents.

Now that the site has been recorded, there need be little reason for concern for its protection or the mitigation of any but human-induced impacts.

HUG-029

Site Elevation: 700 Ft.	SW¼, NE¼ Section 2 T17N, R19E	Probable Site Type: Camp/lookout
Site Age: ca. 2000 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located at the southern end of a north-south trending, mile long, flat topped, ridge of decomposing quartz and conglomerate bedrock. Little or no soil development has occurred, and the vegetation has been heavily impacted by wildfire and is only now beginning to revegetate with willow, poplar and very young spruce. Situated about one mile north of the Kobuk River and about 3 miles south of the southern shore of Nutuvukti Lake, the site affords an excellent 360° view of the surrounding lower terrain except directly to the north.

The site occupies the western edge of this relatively flat-topped ridge at the point where it slopes to the west some 2 meters before flattening out. To the west is a gorge containing a small stream which has incised itself some 20 meters into this relatively weak bedrock formation. The surface of the site consists of a thin patchy layer of dead moss, grasses, and lichen, along with skeletons of small to medium sized spruce trees. The substrate is visible through this thin organic layer where it is present. Otherwise, the

surface is exposed, consisting of decomposed bedrock and gravels.

All artifacts observed were either in exposed areas or partially hidden within the organic mat. A concentration of 10 obsidian microblades, an obsidian microblade core, and a large clear obsidian flake knife, were located on the more or less flat portion of the site, within a 5 meter^2 area. Several other microblades and flakes were found down slope from this main cluster. Further south on this slope, two large blades of obsidian, a black obsidian flake knife, and a few more microblades and flakes were located. Forty-seven meters south-southeast of datum, at the southern edge of the ridge, three small clear obsidian flakes were found.

The obsidian microblade core is neither wedge-shaped nor conical, but a combination, as the posterior aspect exhibits a bifacially worked "keel", but is not substantially thinned or tapered as is common among typical wedge-shaped cores. The striking platform has been rejuvenated by removing core tablets with force from front to back, producing a high angle platform. The core appears to be nearly expanded.

The unusually clear, 8 cm. long, 5 cm. wide, obsidian flake knife found 2 meters north of the microblade core, exhibits extensive marginal retouch and may have served as both a scraping and cutting implement. A second flake knife, located 15 meters southwest of the microblade core, exhibits marginal retouch on one edge only and measures 4 x 5 cm. One of the large blade fragments, a distal fragment measuring 4.5 x 2.5 cm., exhibits marginal retouch also.

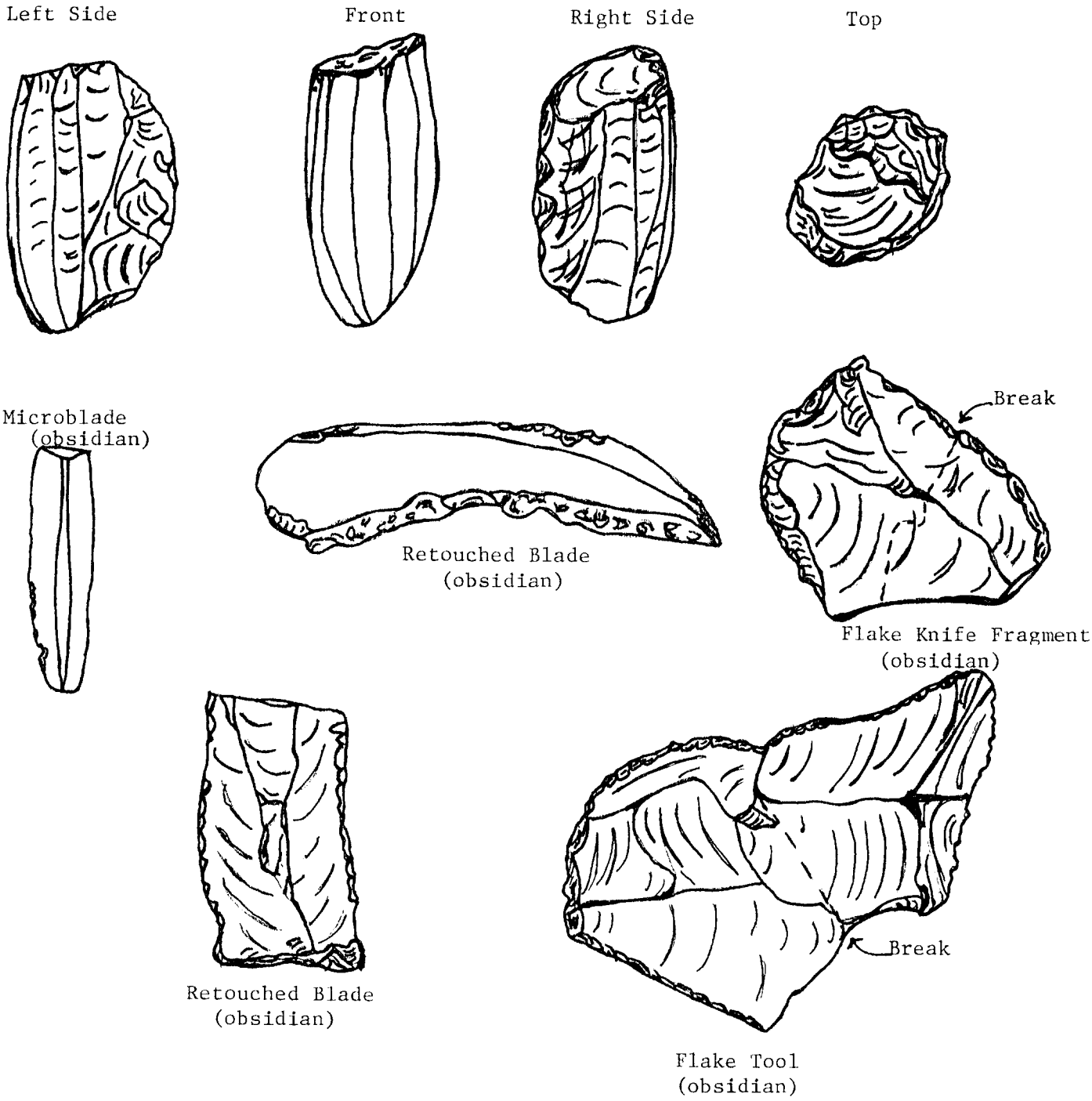
Three 15 cm.^{2} test pits were excavated to a depth of 6 cm. around the periphery of the main artifact scatter, but failed to produce any additional cultural material. The open, exposed nature of the site, a deflation situation, as well as its distance from any sediment source, probably accounts for the lack of fine grained soil at the site.

One of the site's functions appears to be tool manufacturing and maintenance of the tool kit, as evidenced by the size variation of the microblades and the nearly expended microblade core. The advantageous view of the surrounding terrain would have made this an excellent ovservation point for determining travel routes and observing game movements in the area.

All observed cultural material at the site is obsidian. This may indicate the occurrence of only a single occupational event. Microblade technology utilizing obsidian as the production medium suggests an age of ca. 2000 years B.P.

While this site is one of larger ones in the local area, there is probably little additional important information that could be obtained through continued investigation. The additional information that the site may contain, while not anticipated to be of extreme value, is valuable enough to be worthy of collection if the integrity of the site becomes threatened by either natural or human-impacts.

Microblade Core - Obsidian



HUG-029 Artifacts - Actual Size

HUG-030

Site Elevation: 700 Ft.	SW¼, NE¼ Section 2 T17N, R19E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a bedrock spur on the southeast side of a mile long north-south trending flat topped ridge. The site lies 1 mile north of the Kobuk River and 3 miles south of the southern end of Nutuvukti Lake. HUG-029 is located approximately 110 meters to the southwest on a continuation of the same landform. Little or no soil development has taken place and the vegetation, generally scattered small to medium sized spruce trees, has been heavily impacted by forest fire. The area is now revegetating with willow; the lichen/moss mat is dead and eroding.

The view from the site is excellent and is focused to the southeast, east, and northeast where several first order drainages, flowing from the hills south of Nutuvukti Lake into the Kobuk, can be seen. This generally low lying terrain is approximately 70 meters lower in elevation than the site, thus making this spot a good overlook.

A black chert flake scatter of about 100-200 pieces, 2 meters^2, was located on the narrow base of a spur. This spur slopes off gently for 3 meters and then more steeply toward the lowlands below. The flakes are characteristic of a single bifacial reduction sequence due to their similarity in material, morphology, and distribution. A scene is easily envisioned of one or two hunters preparing knives or projectile points while taking advantage of the nearly unlimited view up the Kobuk Valley.

A single 15 cm^2 test pit was excavated to a depth of 5 cm. in decomposed bedrock and gravel. No cultural material was encountered. The site is typical of a short term, single event, and offers no means of deriving any other determinations.

Now that this site has been recorded, there should be little reason for concern for its protection or the mitigation of any but human-induced impacts.

HUG-032

Site Elevation: 820 Ft.	SE¼, SE¼ Section 35 T18N, R19E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located atop a spur of partially decomposed bedrock about 1¼ miles north of camp #4 and the Kobuk River. The spur is a southern projection of a small group of hills that borders the east side of the valley between Nutuvukti Lake and the Kobuk River. HUG-029 lies 2/3 of a mile to the south, while sites HUG-034 and HUG-033 lie respectively ¼ and ½ mile to the west.

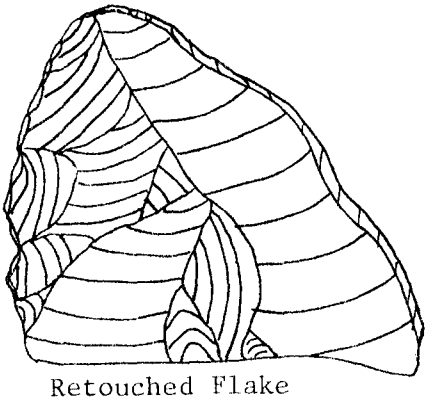
Site elevation is roughly 20 meters above most of the surrounding topography. The site offers excellent long distance views to the east, south, and west, both up and down the Kobuk Valley, for distances of up to 8 miles. To the north of the site, the terrain rises abruptly offering a view of only the nearby hills.

A wildfire burned this area sometime in the last 10-20 years and as a result there is very little surface vegetation on the site. There are a few patches of brown, brittle, hard, crusty, fried lichen and moss, a few clumps of struggling willow, and scattered, burned spruce snags. The great majority of the surface is exposed mineral soil and decomposed bedrock. The south face of the spur is slowly eroding away.

Approximately 40 gray and red chert flakes were found scattered over the southern-most 30 meters of the spur. Many of the flakes were large and chunky, probably resulting from the primary stages of tool manufacture. One large (6 x 5 cm.) flake exhibited purposeful retouch along one margin. Due to the fact that the soil, where it existed, was exceedingly shallow and the majority of it exposed, no test pits were excavated.

Little else can be said about this site. The site location and the cultural material indicate that HUG-032 may have been a hunting lookout. There is little natural impact that this site has not already suffered. There should be no concern over the site's future physical integrity except when impacted by human activity.

The significance of this site lies in its general similarity to other sites in the area rather than any specific data it might contain.



Retouched Flake
(chert)

HUG-032 Artifact - Actual Size

HUG-033

Site Elevation: 750 Ft.	NE¼, SW¼ Section 35 T18N, R19E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site lies atop a glacially scoured bedrock outcrop on the floor of the valley between Nutuvukti Lake and the Kobuk River. The valley floor is dissected by several small streams in this area and the site overlooks the confluence of two of these. The Kobuk River and camp #4 lie approximately 1½ miles to the south-southeast while HUG-034 lies ¼ mile to the east.

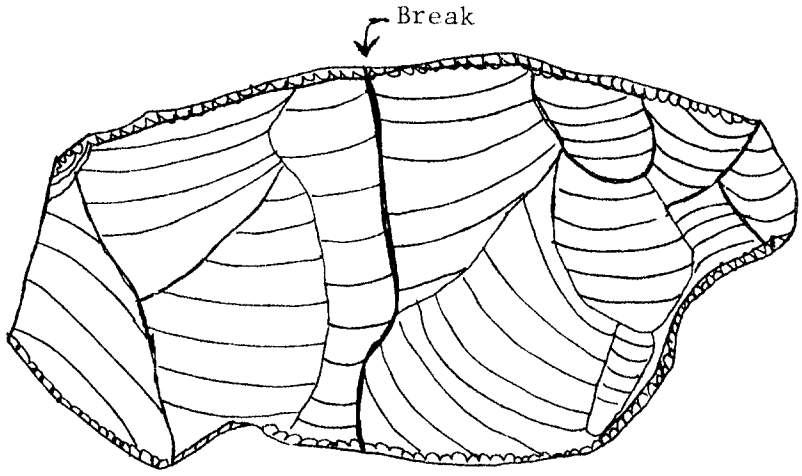
The site is elevated roughly 15 meters above the surrounding valley floor. The site offers a good view to the south and east, as far as the river, while nearby hills block the view to the west as does rising ground to the north.

The passage of wildfire 10-20 years ago, has left the vegetation in this area desicated except along the margins of the streams in the center of the valley floor. There the willow growth is almost impenetrable. The great majority of the surface of this site is exposed mineral soil and decomposed bedrock.

Cultural material was noted on surface near the geographical center of this 60 x 40 meter natural feature and consisted of a single chert flake and a broken flake knife. The flake and the knife lay within 3 meters of one another. The flake knife had been broken by either heat fracture or by being trampled on by a large animal, the two pieces lying about 3 cm. apart. The flake the knife is made on, is quite thin (5 mm.) for the size of the artiface, 10.5 x 5 cm. The knife is unifacially retouched along 90% of its margin. Because so much mineral soil was exposed at the site, no test pits were excavated.

Little else can be said about this site. The lack of flakes at the site may indicate that the knife was transported to the location in finished form. This evidence would suggest that the artifact/site represents a single event; possibly some activity associated with hunting.

Other than the fact that this site is a locus of past human activity, the site has little significance. Now that the site has been recorded, there should be little concern for its protection or the mitigation of any but human-induced impacts.



Flake Knife
(chert)

HUG-033 Artifact - Actual Size

HUG-034

Site Elevation: 735 Ft.	NW¼, SE¼ Section 35 T18N, R19E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a spur-like projection on the south end of a large glacial feature ¼ of a mile east of HUG-033. The site lies 20 meters above the confluence of two small valley floor streams. The view from the site is reasonably good, 1-2 miles, in all directions except to the east where an unobstructed view of ten miles can be enjoyed. This view encompasses the local portion of the Kobuk River.

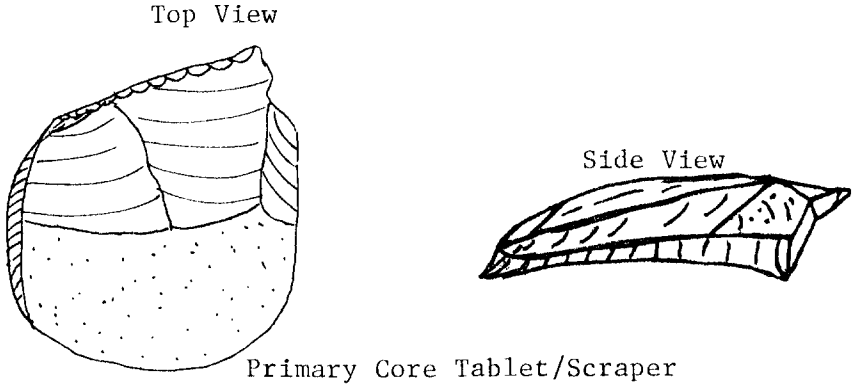
The excellent view potential exists because of the passage of a wildfire through the area 10-20 years ago. It is not possible to determine if such a view existed at the time the site was occupied. Willow growth is dense on the valley floor while the more elevated and well drained surrounding landscape supports a patchy, hard, dry, burned crust of lichen and moss. Standing and fallen burned spruce snags are common. Much of the surface is exposed mineral soil and decomposed bedrock.

Cultural material was noted on surface near the lip of this south facing spur. Cultural material consists of a single artifact which appears to be a primary core tablet of fine grained black chert. Slight retouch or crushing along one margin suggests that the 4 cm.^{2} artifact may have been used as a scraper. Most of the soil in the vicinity of the artifact was exposed, as a result no subsurface testing was initiated.

Little else can be said about this site. The lack of microblades or flakes at the site suggests that the artifact was transported to the site in its present form. This may indicate that the site represents

the occurrence of a single event, possibly a hunting associated activity. If this artifact was originally a core tablet, it may indicate a minimum age of 2000 years B.P. for the site.

The significance of this site lies in its general similarity to several other sites in the immediate area rather than any specific data it may contain. Other than the fact that this site is a locus of past human activity, the site, now that it has been recorded, has little importance and need not be considered for protection from any but human-induced impact.



Primary Core Tablet/Scraper
(chert)

HUG-034 Artifact - Actual Size

HUG-035

Site Elevation:
700 Ft.

SW¼, SE¼
Section 35
T18N, R19E
Kateel River Meridian

Probable Site Type:
Unknown

Site Age:
ca. 2300 Years B.P.

Probable Cultural Affiliation:
Unknown

This site is located on the high point of a large hill-like glacial feature approximately ½ mile south-southeast of HUG-034. The Kobuk River lies one mile distant and can be seen to the east and southwest. The view is also good to the south, but to the west and north the view is obscured by hills.

The view potential at the site has been enhanced by the passage of a wildfire through the area 10-20 years ago. Willow growth is dense in the lowlying areas surrounding the site. The surface of the site supports a patchy, hard, dry, burned crust of lichen and moss, standing and fallen burned spruce, sappling size poplar, dwarf birch, and willow. None of the burned spruce exceed 20 cm. in diameter which indicates the burn occurred prior to the establishment of climax forest conditions.

This suggests the area was recovering from the effects of an earlier wildfire when the most recent burn occurred. This may be indicative of a cyclical pattern of wildfire occurrence in the region.

Much of the site's surface is exposed mineral soil. Cultural material, 11 obsidian waste flakes, was found scattered across a 10 meter^2 area on the promontory of the hill. Two 15 cm.^{2} test pits were excavated to a depth of 7 cm. below surface. The test pits were located at opposite ends of the flake scatter. One test pit produced three obsidian flakes and the other yielded a single obsidian flake. This cultural material was recovered from the 0-3 cm. level of the test pits.

A sample of the subsurface obsidian was submitted for hydration analysis and yielded a hydration rind thickness measurement of 2.31μ ± 0.06μ. Given the locally calibrated radiocarbon dated hydration rate of 2.32μ^2/1000 years the calculated age of 2300 ± 125 years B.P. was obtained.

Little else can be said about this site. The fact that all the cultural material at the site is obsidian may indicate that the site represents a single event. This site is similar in location, size, and content to several others in the region. Most of the sites in this area appear to be small hunting oriented sites and HUG-035 is no exception.

The significance of this site lies in its general similarity to several other sites in the immediate area rather than any specific data it may contain. Because the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

HUG-036

Site Elevation: 800 Ft.	SE¼, SW¼ Section 35 T18N, R19E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the northern end of a glacially scoured hill roughly 1½ miles north of the Kobuk River. The northern end of the hill abutts steeply against a small stream course which drains the eastern slopes Akoliakruich Hills. These hills form the western wall of the valley which runs between the southwest end of Nutuvukti Lake and the Kobuk River. The view from the site promontory is excellent. To the north, a view of the entire valley can be had almost to Nutuvukti Lake. The river can easily be seen to the southeast and southwest while the view to the east covers at least two miles.

The passage of a wildfire through the area, 10 -20 years ago has left the site devoid of any large trees. The destruction, by fire, of the moss/lichen mat has left much of the surface of the site exposed mineral soil and bedrock. Standing and fallen burned spruce trees are common.

Emergent vegetation consists of sapling size poplar and birch, spruce seedlings, dwarf birch, willow, and scattered woody and herbaceous plants.

Cultural material was noted on the surface at the site. This material consisted of a single red chert flake, apparently broken as a result of wildfire (heat fracture). A 15 cm.^{2} test pit was excavated to a depth of 7 cm. near the flake location but yielded no additional cultural material.

The site is in no immediate danger of any type of adverse impact. Because this site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

The significance of this site lies in its general similarity to several other sites in the immediate area rather than any specific data it may contain.

HUG-037

Site Elevation: 650 Ft.	SW¼, SW¼ Section 35 T18N, R19E Kateel River Meridian	Probable Site Type: Camp
Site Age: ca. 7600 years B.P.		Probable Cultural Affiliation: American Paleo-Arctic Tradition

This site is located on a north-south trending ridge about ½ mile north of the Kobuk River and 3 miles south of Nutuvukti Lake. The site is situated about 45 meters south of the southernmost of the low knolls along the ridge. The south facing site has an excellent view of the Kobuk River Valley from the upper to the lower canyons. The view to the west is obscured by the Akoliakruich Hills. The bedrock of the ridge is a decomposing conglomerate of stream rounded pebbles. The exact position of the site is not characterized by any distinguishing topographic feature.

The vegetation at the site has been quite recently disturbed by wildfire. Weathered and burned snags and fallen logs are present of the ridge. Both young spruce and quaking aspen trees are recolonizing the burned area. The ground cover consists largely of a dry, brownish moss that seems to characterize all of the burned surfaces in this area. The surface of the loess soil itself is quite indurated, possibly as a result of the fire.

The site was discovered by surface observation. The surface is littered with pebbles that have weathered out of the conglomerate, making it difficult to see the cultural lithic scatter. Careful inspection of the surface revealed in excess of 100 microblades of various colors of chert and a large number of flakes. A multi-faceted burin of gray chert and

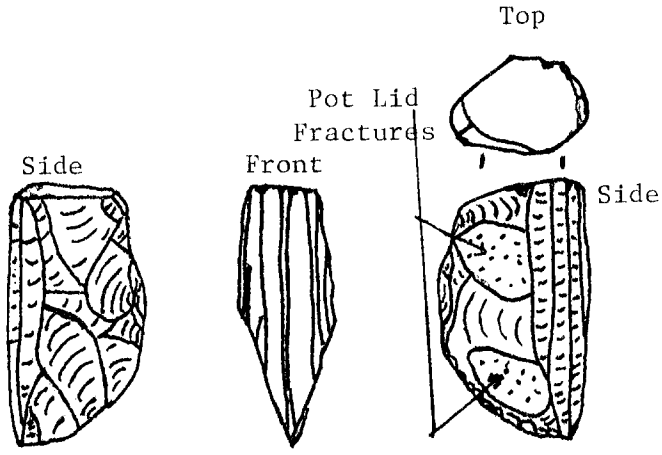
a core tablet of pink and gray mottled chert were observed on the surface. The surface scatter of material covers a roughly circular area about 7 meters in diameter. Two 15 x 20 cm. test pits excavated to a depth of 10 cm. just outside this area contained no cultural material. One 15 x 20 cm. test pit, inside the surface scatter, contained no cultural material beneath the surface, although a microblade was protruding from the surface. Another 15 x 20 cm. test pit within the surface scatter produced another multi-faceted burin, a wedge-shaped microblade core, and a number of microblades. The dark gray chert core was recovered from a depth of about 5 cm., with its upper surface near the contact between the burned vegetation mat and the underlying loess. The wedge-shaped core and the core tablet do not refit; the core tablet has much narrower blade scars (1-3 mm. wide). The core has two pot lid fractures on one lateral surface, and one large one on the opposite surface. Since it was found beneath the surface, the pot lid scars are possible evidence of past wildfire in the area at a time when the core was on the surface. Several pieces of chert presently on the surface also have pot lid fractures, perhaps a result of the most recent fire. The core is exhausted. Three major colors of chert are found in the site; black, red, and gray, with several variants of gray chert. The fire history may explain some of the color variation. No obsidian, whatsoever, was observed in the site, despite its presence in nearby sites only a few hundred meters away. The original presence of at least four microblade cores is suggested by the presence of red, black and gray chert microblades; at least two gray cores are implied by the dark gray core and the lighter pink and gray core tablet.

Despite the wide variety of chert types, the site may represent only a single occupation because of its location on the ridge. The site lies on a rather smooth ridge sloping to the south, its exact location has no unique features that set it apart from other spots along the ridge. The excellent view of the Kobuk River Valley from the site is no better than the one from 50 meters up or down slope from the site. Thus, there is no apparent geographic reason for the site to be repeatedly used. In fact, the scatter of light-colored pebbles eroded from the conglomerate makes the lithic detritus rather hard to spot, and relocating the site would be difficult.

The Campus-type wedge-shaped microblade core is diagnostic of considerable antiquity. Similar cores were found in the Kobuk and Akmak levels of the Onion Portage site, about 100 miles down river. The youngest date reported for these levels is about 5600 B.C. (Anderson 1970). The presence of two multi-faceted burins in the site is interesting. No similar artifacts occur in the Akmak levels at Onion Portage, although burins are represented there. The Akmak burins all show extensive bifacial and unifacial retouch, an attribute lacking on the two burins from HUG-037 that are made on largely unretouched flakes. Morphologically, the HUG-037 burins are interesting in that they fall into a catagory in which the difference between being a burin or being a microblade core is vague. The presence of Campus type wedge-shaped microblade cores permits HUG-037 to be assigned to the American Paleo-Arctic Tradition.

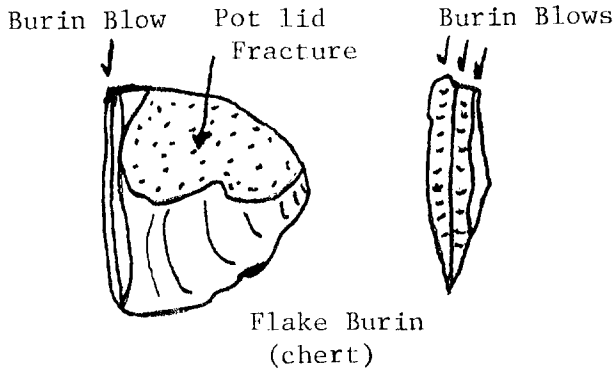
This site is of high significance. It is, with the possible exception of XSP-134, probably the oldest site encountered in this survey and one of the few assignable to a particular cultural tradition. Because of its small areal extent and the large number of microblades present, the site could contain important information on the technology of microblade manufacture in this early time period, with the possibility of core and blade refitting. Its location, 100 miles upriver from Onion Portage, documents the presence of the American Paleo-Arctic Tradition in a previously unexplored region.

At present, gradual slope erosion and frost action are the most serious disturbance processes affecting the site. A recent wildfire has burned the site area, and the absence of the normal vegetation cover will tend to accelerate these processes. Because of its remote location, recreational activity in the area is unlikely to threaten the site. In the unlikely event of human impact on the site, the site should be totally excavated.



Wedge Shaped Microblade Core

(chert)



Flake Burin

(chert)

HUG-037 Artifacts - Actual Size

HUG-038

Site Elevation: 1300 Ft.	SW¼, SW¼ Section 34 T18N, R19E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the southern slope of a knoll on a north-south trending ridge to the west and south of Nutuvukti Lake. The site is approximately 3 miles northwest of the Kobuk River and 4½ miles southwest of Nutuvukti Lake. The site lies about 300 meters north of a deep ravine which drains eastward into the large valley south of Nutuvukti Lake. The site location is above treeline and is sparsely vegetated by grasses and alpine plants that somehow manage to survive in this wind-blown and frost-churned environment.

Cultural remains at the site consist of two surface flakes of black chert. One of these two small flakes shows evidence of possible retouch or use-wear and appears fire-altered on its ventral surface. The other flake is blade-like, but shows no retouch. Recent wildfire in this area may account for fire-altering of the one flake. The two flakes appear fairly weathered, possibly indicating extended exposure on surface.

Except for its excellent view, this site gives no clue as to its function. It occurs higher and further west than any sites found in this valley and may suggest a route into or out of this area. Numerous game trails are evident on the ridge above the site. A large, weathered boulder occurs just upslope from the location of the two flakes. This boulder may have served as a hunting blind. This location provides a commanding view of the valley east and west of the site as well as sections of the ridge to the north and east.

Other than the fact that this site indicates the occurrence of past human activity, it has little significance. Now that this site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

HUG-041

Site Elevation: 1000 Ft.	NE¼, NW¼ Section 9 T17N, R19E	Probable Site Type: Lookout
Site Age: ca. 2000 years B.P. or older	Kateel River Meridian	Probable Cultural Affiliation: Unknown

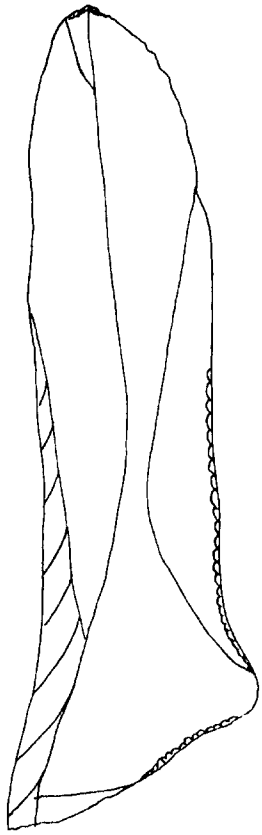
This site is located on the top of a large 30 meter high kame knoll 2 miles from the Kobuk to the east and the Reed River to the west. This location can be termed a pass through the Akoliakurich Hills which form an east-west running barrier between the two rivers. The site occupied the northwestern corner of this 60 meter^2. The knoll is sparsely vegetated with dwarf birch, poplar saplings and a very thin, discontinuous moss mat. The open nature of the site, plus its location in the pass, affords an outstanding view of 360°; north, into rolling uplands which

mostly lie above treeline; east, well up the Kobuk Valley; south, into the lower canyon area, and west down the Reed River. A small drainage flows to the north of the site
north of the base of the knoll.

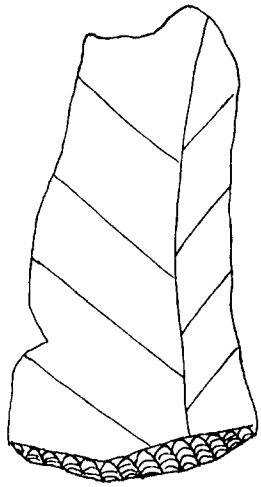
Twenty or so chert micro-blade fragments with as many or more chert waste flakes define the 8 meter^2 surface scatter. In addition to the mircoblades and flakes were two large, heavy black chert blade fragments and one large, heavy gray chert blade with marginal retouch along the right edge. A microblade core tablet of gray chert, and a beaked graver-like tool of chert were also found within this scatter. Fifteen meters to the east of the lithic scatter, lay a black chert end scraper made on a relatively wide, heavy blade.

The nature of most of the artifacts (microblade technology) suggests an age of at least 2000 years B.P. Some of the artifacts appear similar in character to artifacts of the American Palco-Arctic Tradition. The strategic location of the site, as well as the type of artifacts present, suggests its use as a hunting lookout. The limited distribution and quantity of the artifacts suggest only short term use of the site.

Now that this site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.



Blade Tool
(chert)



Blade Scraper
(chert)

HUG-041 Artifacts - Actual Size

AREA #5

The Reed River

Camp #8 - July 13-16

We moved to Camp #8 by helicopter. This camp was about 8 air miles west-southwest of Walker Lake and located on a gravel bar on the Reed River near the Walker Lake Pass. We spent four days working out of this camp and surveyed roughly six square miles.

Prior to this time, we had not left anyone in camp during the day to keep the bears away, except in isolated cases. However, bear activity had dramatically increased by this time and we left a person in camp everyday for the rest of the season.

This portion of the Reed River Valley is roughly two miles wide and is bordered by hills and mountains up to 1200 meters in elevation. There are numerous stagnant ice glacial features (Walker Lake Glaciation) and bedrock outcrops throughout the valley. These features make excellent camping locations. Surface vegetation is similar to that around Walker Lake. The area has been burned by wildfire in the recent past; the burn on this portion of the Reed River appears to be a bit older than the one around Walker Lake.

Eight prehistoric sites were located while working out of this camp. Seven of the sites were typical of what we had been finding in the region to date. One however, was from what might be termed the recent prehistoric period; no older than 2000 years ago. No artifacts were found at this site. The site consists of several alignments of fist to softball size cobbles, placed underneath a small rock overhang or shelter. It may represent the remains of a stone deadfall used for marmot trapping. Other prehistoric sites found while working out of Camp #8 yielded microblades, which may indicate a minimum age of 2000 years for those sites. Again, based on site location and artifact type, these sites appear to represent hunting activities. The morphology of artifacts from these sites give no real indication as to whether the people using the area were Indian or Eskimo.

Camp #9 - July 17-23

Once again we were dependent on the river and our raft to move camp. This time however, we had only one raft which made for quite a load; perhaps overload would be a better term.

Camp #9 was located on a gravel bar about 9 river miles downstream of Camp #8. We worked out of this camp for seven days and surveyed roughly ten square miles. The gemorphology of the area worked out of Camp #9 was identical to that of Camp #8. The only topography difference is that the valley becomes a bit wider in this area. This is in part due to activity of the Walker Lake Glaciation which created a pass or valley in this area which trends away from the main river valley to the south-southeast. This is the southern limit of the Walker Lake Glaciation.

After creating a valley or pass from the Reed River to Nutuvukti Lake, the retreating glacier blocked the valley with a terminal moraine. This area is littered with low bedrock outcrops and stagnate ice features which are common at a glacial terminus. Such features are very attractive camping locations; especially when they are near a river or lake, and have sufficient elevation to offer a good view of the local area. This area has been recently burned (10-30 years) and appears to be the same fire that burned the Camp #4 area (between the Kobuk River and Nutuvukti Lake).

We found 32 sites working out of this camp. The majority of the sites appear to be of the hunting camp variety in terms of location and artifact typology. Several of the sites were fairly large; large in a relative sense. These larger sites may indicate camps of longer duration than we had encountered, to date, elsewhere during the course of this survey.

Sites in this area are not only numerous but are also in closer proximity to one another. This greater site density may indicate that this was a favored location for hunting or that it was a junction point of several travel routes. Microblades at many of the sites may indicate a minimum age of ca. 2000 years for those sites. One site yielded large blades, microblades, and rotated microblade cores, which are quite similar to material from the Gallagher Flint Station, the oldest dated site in northern Alaska; ca. 10,500 years B.P. This does not mean the Reed River site is that old, but the possibility does exist.

This area also produced more artifacts of a "morphologically" Eskimo flavor than any area in the region we had surveyed to date. This may reflect historic information that the Kobuk Eskimo refers to the Reed River as the "Going Home River", the Reed River being a major travel route from the Upper Noatak River to the Kobuk River.

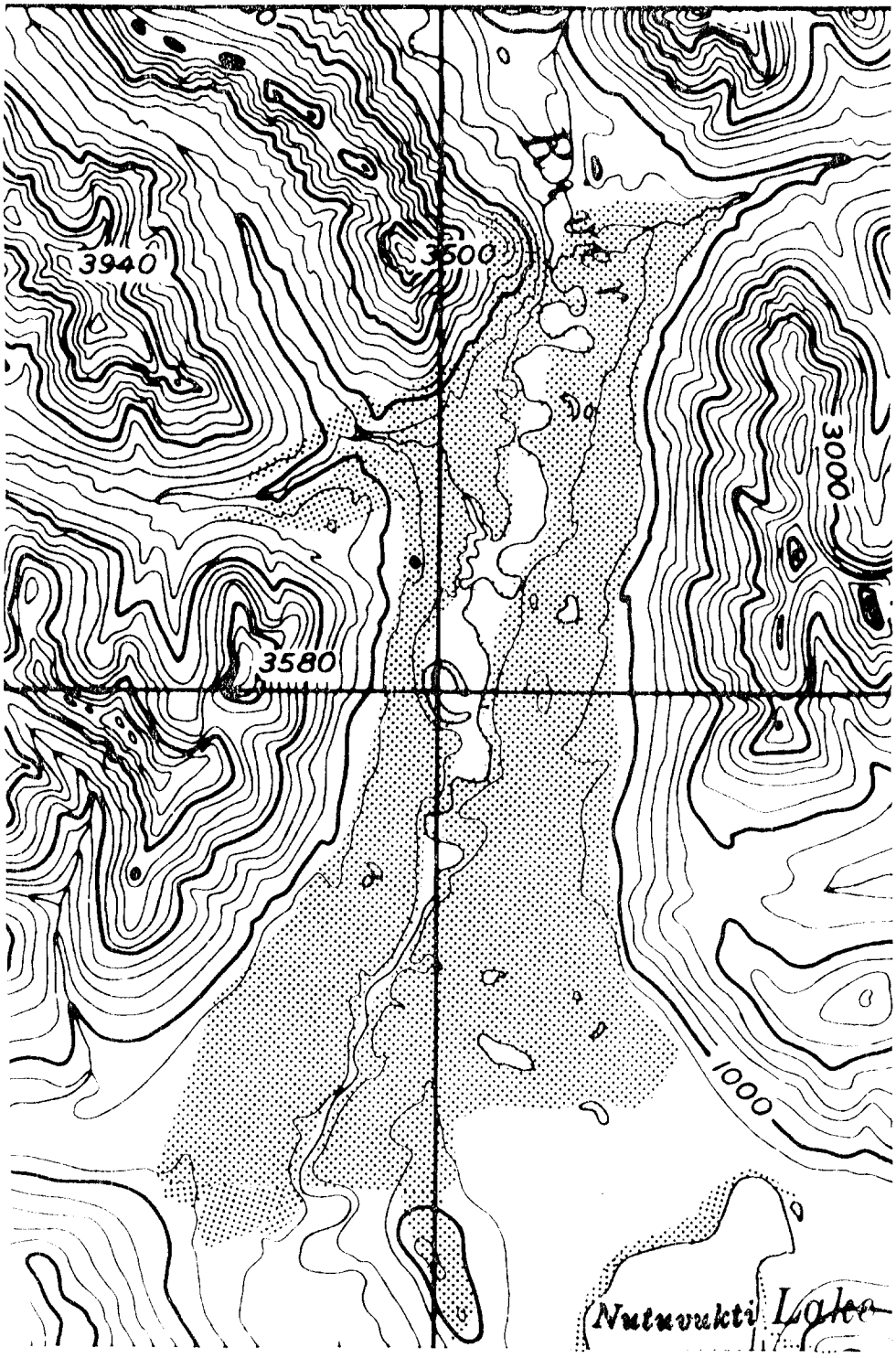
Camp #10 - July 24-26

This camp, reached via river and raft, was located on a flat, 5 meter high bank, on the left hand side of the river. The camp was located roughly 5 miles downstream from our previous camp. Camp was located on land owned by the State of Alaska, as this portion of the Reed River is located about one mile west of the Preserve boundary. We had contacted the State Historic Preservation Officer and had received a verbal statement of no objection to our operating on State Land.

We spent three days working out of this camp and located 9 prehistoric archeological sites in a surveyed area of roughly 5 square miles. The majority of our surveying was carried out in the terminal moraine complex about two miles north of the north end of Nutuvukti Lake. The sites located in this area are typical of those found along that portion of the Reed River we had previously surveyed.

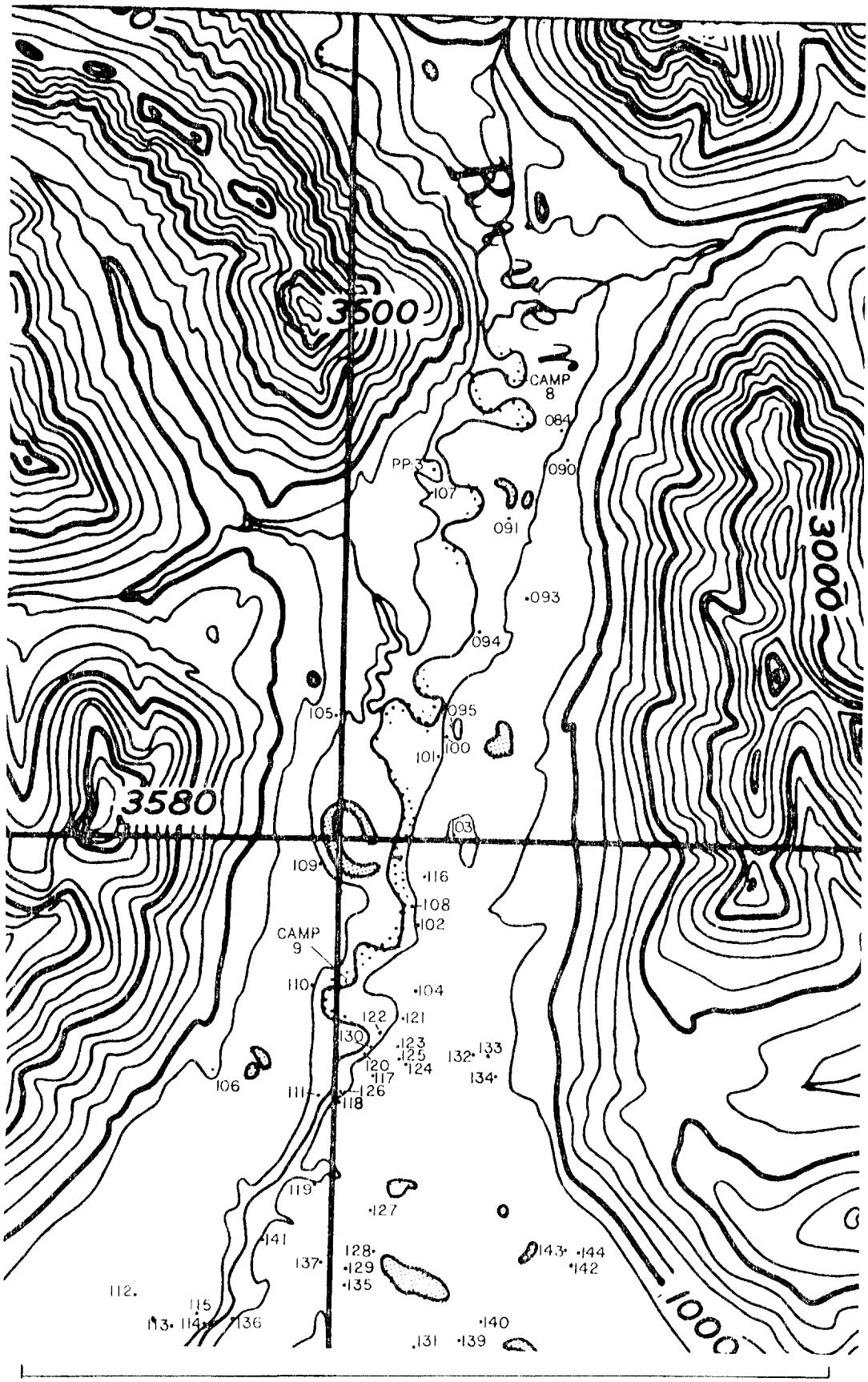
Our camp was south of the southern terminus of the Walker Lake Glaciation. As a result, there is a slight change in the topography of the area. The topography is still glacial although the result of the Itkillik Glaciation and therefore more weathered and degraded.

The portion of the Reed River that we surveyed had one of the highest site densities of any area we surveyed during the course of the 1983 field season. The general implications of this situation remain to be explained by future work in the area.



six miles

AREA SURVEYED


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CAMP 9
PP 3
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six miles

PP-3

Site Elevation: 650 Ft.	SW¼, NE½ Section 19 T20N, R19E	Probable Site Type: Historic
Site Age: ca. 100 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the west side of the Reed River 1 mile south of the confluence of an unnamed creek. This creek drains the pass between Walker Lake and the Reed River. The site lies on a 25 meter high glacially rounded, bedrock knoll which is sparsely covered with dwarf birch, stunted spruce and a very robust lichen/heath mat. An excellent 360° view of the Reed Valley and adjacent areas is afforded from the site. An inactive channel of the river lies on the western side of the bedrock knob. This old channel is infilled and has been revegetated by grasses and sedges.

Near the southern end of the knoll top, a 75 cm. fragment of a walking stick or staff was found lying partially embedded in the lichen mat. The side of the staff exposed to the surface was a weathered silver-gray while the down facing side had been stained by humic acids and was beginning to soften. The distal end shows blunting as though it had been used as a support while walking. A shallow notch was located 5 cm. above the blunted end. The wood appears to be spruce and the implement has a hand carved look to it. The proximal or hand held end was partially embedded in the lichen and rotted badly. It was not possible to determine whether the remainder of the staff lay decomposed beneath the tundra, or if this represented the entire artifact. Whatever the case may have been, the age of this artifact is probably less than 100 years old.

Other than the slow deterioration of this isolated artifact due to natural forces, the site is not endangered. When, however, the artifact is gone, the site will be gone.

The significance of this site lies primarily in the fact that it indicates use of this area as a probable route of overland travel during the recent past.

XSP-084

Site Elevation: 610 Ft.	NW¼, NE¼ Section 20 T20N, R19E	Probable Site Type:
Site Age:	Kateel River Meridian	Probable Cultural Affiliation:

This site is located atop a till and lichen capped bedrock feature approximately 250 meters east of the Reed River. Walker Lake lies roughly 9 miles to the east and Nubuvukti Lake 8 miles to the south. Situated on the high point of the feature, approximately 30 meters above the valley floor, the site offers a good view of the local area.

About 85% of the surface of the site is covered with caribou lichen and some scattered small spruce and willow. Areas of exposed bedrock occur but are not common. Soil, where present, does not usually exceed 4 cm. in depth.

Flakes of chert, obsidian, and basalt were observed sporadically scattered over an area of 4 x 9 meters. Due to the extremely shallow soil, no test pits were excavated.

The physical character and location of the site suggests it served as a lookout. The occurrence of three different types of culturally altered lithic material may indicate more than a single occupational event took place at the site. The presence of obsidian may indicate a maximum date of 2000 years B.P. for one of the occupational events.

Little else can be said concerning the site. The site's basic value lies in its association with other sites in this portion of the Reed Valley and its contribution to the overall prehistoric use pattern.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-090

Site Elevation: 920 Ft.	SW¼, NE¼ Section 20 T20N, R19E	Probable Site Type: Unknown
Site Age: ca. 100 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Historic

This site is located on a prominent, lichen covered bedrock feature ¼ mile east of the Reed River. XSP-084 is slightly less than ¼ mile east to the north and XSP-091 lies ½ mile to the southwest. The site is situated roughly 100 meters above the valley floor and offers an excellent view to the north and south. The view to the east and west is limited by the valley walls' 200 meters east, 1 mile west.

Except for large exposed pieces of bedrock, the surface of the site locale is covered by a robust growth of caribou lichen, moss, woody and herbaceous plants, small spruce trees, willow and dwarf birch. There is some evidence that a wildfire passed through the area more than 100 years ago.

On the promontory, or forming the promontory, of this feature is a free-standing piece of bedrock which is roughly 8 x 6 x 4 meters. The "chunk" of rock has several large scallop-like undulations along its base which create several small shelters. The western facing shelter is the largest. Its dimensions are 3 meters wide, 1.4 meters deep, and 0.9 meters high at the mouth. Within the confines of this shelter there is a cultural feature.

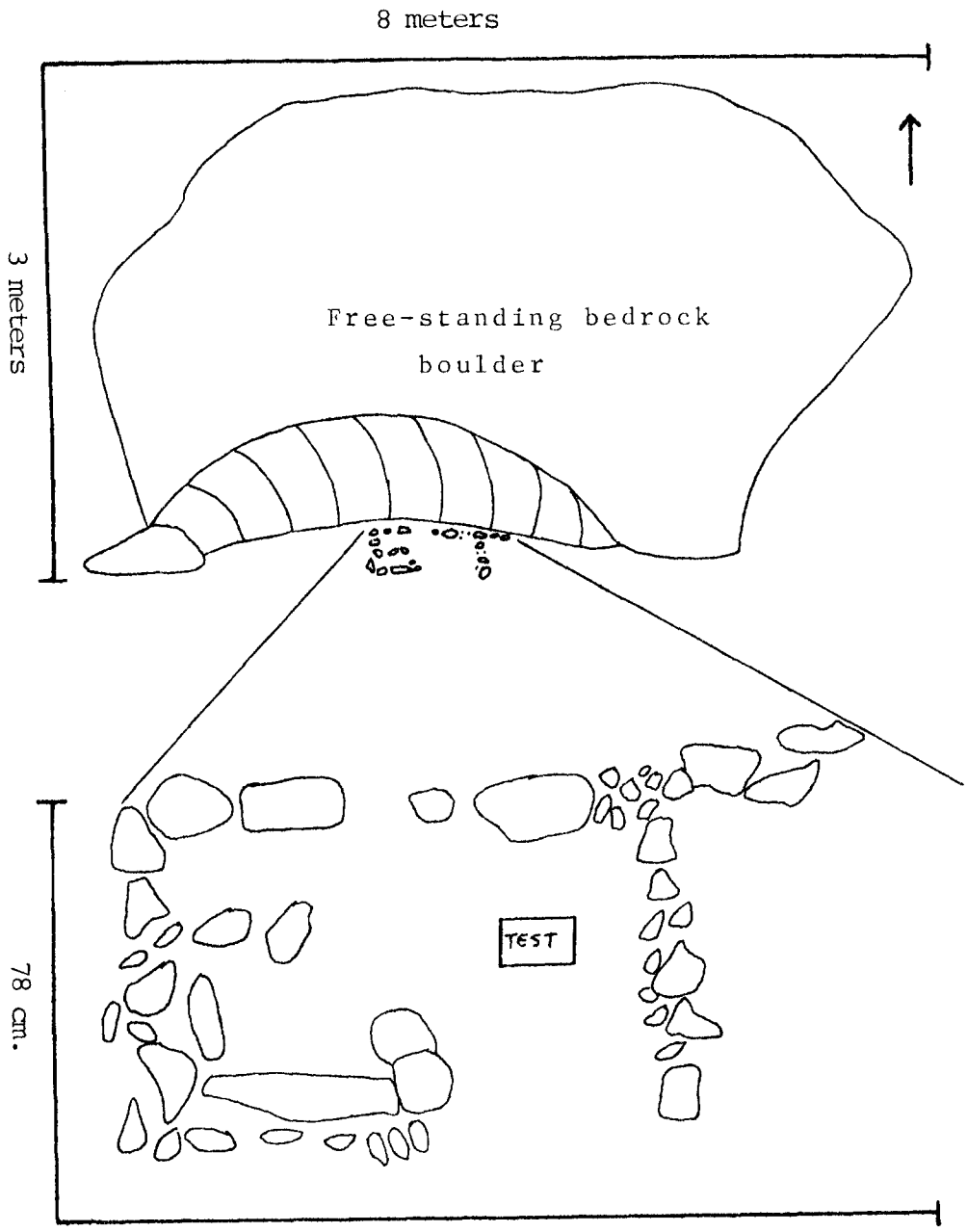
The cultural feature is composed of small rocks, only a few of which exceed 10 x 15 cm., which appear to form the initials "E.T." The letters or characters are roughly 60 x 70 cm. in size and don't appear to be very old as they are not deeply imbedded in the moss/soil matrix within the shelter area. The majority of the rocks which make up this feature are of different material than the local bedrock.

A 20 $cm.^2$ test pit was excavated to bedrock, 4-6 cm. below surface, between the two characters within the shelter. This test pit, as well as another excavated in front of the shelter, was culturally sterile.

It is difficult to imagine what these characters might be other than the initials "E.T." There is a possibility that the stones could represent a collapsed structure, such as a trapping cubby, deadfall or a hearth, but it is doubtful. Any additional statements concerning the nature of the site would be pure speculation.

The significance of this site is difficult to determine. The site is significant because of its unique character while at the same time it has low potential in terms of yielding any important data. The site also appears to fall into an age group, the last 100+ years, that is poorly represented in the area.

Little else can be said about the site. Now that it has been recorded, there is little additional information the site can yield. Therefore, there should be little concern for its protection or the mitigation of any but human-induced impacts.



XSP-090 Site Map

XSP-093

Site Elevation: 750 Ft.	NW¼, NW¼ Section 29 T20N, R19E	Probable Site Type: Lookout/camp
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site lies atop a somewhat isolated, glacially scoured, bedrock feature on the east side of the Reed River Valley. The river lies approximately ½ mile to the west, while XSP-091 lies slightly more than ½ mile to the north-northwest. The site is not located on the promontory of this hill-like feature, yet it provides a good view of the surrounding country from an elevation of 65 meters above the valley floor.

The surface of the site is about 90% vegetated by a robust growth of caribou lichen and some scattered small spruce, and dwarf birch. There are a few scattered exposures of bedrock and mineral soil present.

The site was discovered as a result of surface observation. Cultural material in the form of chert flakes, chunks, and microblade fragments were noted in the surface of a few thinly vegetated areas. The main concentration of surface material covers an area of 3 x 5 meters. Isolated flakes are found as far away as 65 meters from the main concentration.

A 15 x 20 cm. test pit was excavated to bedrock, a depth of 7-12 cm. adjacent to the southern boundary of the surface concentration. Cultural material was recovered to a depth of 9-10 cm. with the majority coming from the 0-5 cm. level.

Cultural material consisted of 62 microblade fragments of black, white, gray and banded gray/brown chert as well as 26 flakes and chunks of similarly colored chert. The microblades range in size (projected from fragments) from 45 x 9 x 2 millimeters to 23 x 3.5 x 1 millimeters which suggests on-site core reduction as does the accompanying cultural detritus. Lithic types and detritus at the site indicate the reduction of a minumum of four microblade cores, and possibly the on-site preparation of these cores from chert cobbles.

The subsurface testing indicates that the lithic density is high and that the site may contain a fair amount of subsurface cultural material. The location of the site area would normally suggest that the site served as a lookout. However, the activity locale is not on the promontory, but in a more secluded location possibly indicating a campsite. While the variety of lithic material might usually be construed to indicate that more than a single occupational event occurred at the site, such may not be the case. The homogeneous mixing of the lithic material and the similarity in style and size range among the microblade fragments suggests use of the site by a group at a single point in time.

The fact that no obsidian was located at the site may indicate an occupation age in excess of 2000 years B.P. At the same time the presence of microblades suggests a minimum date of occupation ca. 2000 years B.P.

The significance of the site is moderate. The site is somewhat unique when compared with others in the Reed River Valley. It is possible that the site is large and could contain some relatively unique or important data. However, now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts. There appears to be little chance, in this area, of any adverse actions by campers, hikers etc. at this site.

XSP-091

Site Elevation: 540 Ft.	SW¼, SW¼ Section 20 T20N, R19E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a low, glacially capped bedrock feature which lies slightly more than half a mile southwest of XSP-090. This low, sinuous, feature, in part, parallels an abandon meander of the Reed River which now flows about ¼ mile to the west. At some time in the past, the site area was the river bank. Resting only 5 meters above river level, the site doesn't offer much of a view except for the immediate area.

Ground cover, typical of this area, is a relatively robust growth of caribou lichen, spruce trees to 5 meters in height, low woody and herbaceous plants, dwarf birch, willow, poplar, and birch. Some slabs of bedrock are exposed above the lichen and moss. Some evidence of a ca. 100 year old wildfire is observable.

A game trail bisects the site locale creating areas of exposed mineral soil. It was in an exposed game trail area that two flakes of white chert were observed. Further inspection of the surface area yielded no additional cultural material.

Little else can be said about this site. Significance is low and now that it has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-094

Site Elevation: 555 Ft.	NW¼, SW¼ Section 29 T 20N, R19E	Probable Site Type:
Site Age:	Kateel River Meridian	Probable Cultural Affiliation:

This site is located on the north end of a kame terrace which lies 30 meters east and 10 meters above the Reed River. XSP-093 lies about ½ mile to the northeast, while XSP-095 lies roughly 3/4 mile to the south. The site is elevated enough above river level to offer a reasonably good view of the immediate area.

Ground cover at the site consists of a relatively robust growth of caribou lichen, spruce trees to 5 meters in height, low woody and herbaceous plants, birch, dwarf birch, willow, and poplar.

The north end of this glacial feature has been truncated leaving a steep face of exposed gravel about 3 meters high. On the upper portion of the exposed gravel fact, a single obsidian flake was observed. Further inspection of the surface area yielded no additional cultural material. Two 15 cm.^{2} test pits were excavated to a depth of 7 cm. approximately 5 meters apart and 2 meters south of the kame's cut face. These test pits produced no additional cultural material.

Little else can be said about this site. Site significance is limited to the fact that the site indicates that the location supported human use sometime in the past; probably less than 2000 years ago as indicated by the presence of obsidian. Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-095

Site Elevation: 850 Ft.	NE¼, NE¼ Section 31 T20N, R19E	Probable Site Type: Lookout/camp
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located at the southern end of a glacially scoured, bedrock ridge 30 meters east of the Reed River. The site is located roughly 3/4 of a mile south of XSP-094 and 6 miles north of Nutuvukti Lake. The south end of the ridge drops off abruptly about 20 meters south of the promontory where the site is located. Lying roughly 80 meters above the valley floor, the site offers an excellent view in all directions especially up and down the valley.

The surface of the site is about 85% covered by a robust growth of caribou lichen and some scattered small spruce, and dwarf birch. In some locations, large areas of bedrock are exposed. Frost action has occurred in a few scattered spots and the mineral soil has been exposed.

The site was discovered as a result of surface observation. Cultural material consisting of chert waste flakes, chunks, and microblade fragments were noted in three separate mineral soil exposures. These surface concentrations have been designated as localities. Surface material at locality "A" covers an area of 8 x 5 meters, locality "B" 2 x 4 meters, and locality "C" 3 x 3 meters. Localities "A" and "C" are over 40 meters apart while localities "A" and "B" are separated by 9 meters.

A 15 cm.^{2} test pit was excavated to a depth of 9 cm., at which point bedrock was encountered, 0.5 meters west of locality "A". Cultural material was recovered from surface to a depth of 7 cm. Cultural material included 5 chert flakes and 2 chert microblade fragments. Red, brown, black, and white were the colors represented. No obsidian was observed at the site.

Surface observations indicate that the site covers a relatively large area. There may be a considerable amount of subsurface material at the site but such data cannot be obtained without additional testing. The general setting and physical nature of the site would suggest that it served as a lookout and/or hunting camp. Indeed, it would be one of the best locations for such activities in this section of the Reed River Valley. The cultural remains also indicate the occurrence of several occupational events at the site.

The fact that no obsidian was located at the site may indicate an occupational use period in excess of 2000 years B.P. The presence of microblades suggests a minimum date of occupation ca. 2000 years B.P.

The significance of this site is similar to that of XSP-093; moderate to high as a result of the possiblilty of several occupational events. The site location is a distinctly visible landmark to anyone traveling the valley and although lofty in elevation, it is relatively quickly reached from the river. Data recovered from the site suggests the site is relatively large and may contain some important data. This site is one of the few in the Reed Valley that may warrant additional investigation. The site does not appear in any danger from either natural or human-induced impacts. Only human-induced impacts need be addressed.

XSP-100

Site Elevation: 790 Ft.	NE¼, NE¼ Section 31 T20N, R19E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the same bedrock feature that XSP-095 is located on, however, XSP-100 is 100 meters further south. This site lies beyond the abrupt break in slope at the south end of the feature and consequently lies about 20 meters lower than XSP-095. The view from this site is similar to that available from XSP-095 except in a northerly direction where the bulk of the landform blocks the view.

Vegetative cover at this site is the same as at XSP-095; caribou lichen, spruce, and dwarf birch. However, at XSP-100 there is much more exposed bedrock. The bedrock on the south face of the feature juts forth in large slab like projections that form broad, barren ledges.

It was on these ledges that cultural material was observed. Two surface concentrations of obsidian flakes were discovered on two ledges roughly 75 meters apart. Locality "A" is roughly 130 meters south of XSP-095 while locality "B" is 100 meters to the southwest.

Both localities are surface manifestations in the sense that there is little or no soil present. Locality "A" contained one chert microblade fragment among numerous obsidian waste flakes. Locality "B" contained only obsidian flakes. Because of the nature of the terrain and lack of soil, no test pits were excavated.

The two localities at the site appear to represent lookouts, probably associated with hunting activities. These two localities, as indicated by the chert microblade fragment, may be associated with the locale of XSP-095 in a physical, but not a cultural, sense. This general location was probably used by both the obsidian people and the chert people, but at different times. This is suggested by the lithic singularity of the two sites.

Little else can be said about XSP-100. The site's significance lies in its close physical proximity to XSP-095 as well as its lithic distinctness. The presence of obsidian suggests an age not greater than ca. 2000 years B.P. for the site.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-101

Site Elevation: 540 Ft.	NW¼, SE¼ Section 31 T20N, R19E	Probable Site Type: Camp
Site Age: ca. 1450 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the promontory of a kame or kame terrace which borders an oxbow lake on the east side of the Reed River Valley. XSP-095

is located approximately 250 meters to the north while XSP-103 lies ½ mile to the south. The kame is part of a complex of stagnant ice glacial features which closely borders the east side of the river, south, for the next mile. The site lies only about 10 meters above the oxbow, an elevation from which only the immediate surroundings can be observed. The oxbow lake was observed to contain pike as well as muskrat, beaver, and nesting ducks.

Surface cover on the site is a mat of caribou lichen and moss. A few meters to the east, moderately large spruce trees and dwarf birch are abundant. The western edge and face of the kame are devoid of any surface cover as the result of past erosional activity when the oxbow was an active meander of the river. The erosion initiated in the past still continues albeit at a much reduced rate.

The site was located as the result of surface observation. On-surface cultural material is present along and just back (east) from the precipitous break in slope as well as strung out in a down slope direction for a distance of 5 meters on the erosional face. Subsurface cultural material was recovered from two of three test pits. Test pit "A", located 2 meters east of the cut face, a 15 cm.^{2}, 8 cm. deep excavation, yielded numerous small black chert flakes and a single obsidian flake. The cultural material was recovered between 0-6 cm. below surface. Test pit "B" located 3 meters south and 3 meters east of test pit "A" yielded one flake (excavation was stopped as soon as the single flake was found). Test pit "C", located 3 meters east and 2 meters north of "A", was culturally sterile.

The amount of cultural material that has eroded out of the site and is visible on the cut face far exceeds, in volume, that which is on the surface of the undisturbed portion of the site. It appears, therefore, that much of the site has already been lost due to natural erosional forces.

This may also indicate that the site was occupied when the oxbow was an active channel of the river. The location of the site also suggests that it was a campsite rather than a hunting lookout. The homogeneity of the lithic material suggests that it was occupied only once or twice.

A sample of the subsurface obsidian recovered from the site was submitted for hydration analysis. The hydration rind thickness measurement of 1.83μ ± 0.10μ yields a tentative age of 1443 ± 158 years B.P. given the locally calibrated radiocarbon dated hydration rate of 2.32μ^2/1000 years.

The data recovered from the site suggests little more than has already been stated. The significance of this site lies in the fact that it is one of the very few located in such close proximity to the river.

Through the action of erosion, the site will eventually be lost. However, now that it has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-102

Site Elevation: 540 Ft.	NW¼, SE¼ Section 6 T19N, R19E	Probable Site Type: Camp
Site Age: ca. 1400 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This two-locality site is located on a low kame-like feature approximately 200 meters southeast of XSP-108. The Reed River lies roughly 250 meters to the west, but is not visible from the site. Due to the site's low elevation and the surrounding glacial topography, only the immediate local terrain is visible.

The site lies in a park-like setting. The low vegetation includes a robust growth of caribou lichen and some scattered woody and herbaceous plants. Spruce trees, to 10 meters in height, are scattered about as are birch, dwarf birch, and willow.

The site was located through surface observation. Scattered cultural material was found lying in a game trail which more or less runs along the crest of the kame. Cultural material includes chert and obsidian flakes, some with cortex, and several obsidian microblade fragments. This material was observed in an area roughly 2 x 8 meters. A 15 cm.^{2} test pit was excavated to a depth of 10 cm. adjacent to this concentration of cultural material. This excavation produced two obsidian flakes at a depth of 2.5 cm. below surface. This cultural concentration is designated locality "A".

Forty meters to the northwest lies locality "B". Cultural material at this locality was initially observed, on surface, in the game trail, and consisted of an obsidian microblade core fragment and, what appears to be, the lower ½ of a Denbigh burin made of dark gray chert. These two artifacts lay 0.5 meters apart. a 15 cm.^{2} test pit was excavated adjacent to the cultural material and produced 2 obsidian microblade fragments from a depth of 2 cm.

A third test pit was excavated on the promontory of the kame about mid-way between localities "A" and "B" and proved to be culturally sterile.

The presence of both chert and obsidian at the site may indicate more than a single occupational event took place. The location of the site, a natural riverside travel route, argues in favor of multiple use also. Cortex on several of the obsidian flakes indicates cobble reduction occurred at the site. Taken together, the evidence suggests the site is an overnight camp location.

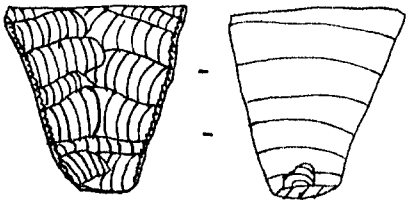
One of the subsurface microblade fragments was submitted for hydration analysis and yielded a hydration rind thickness measurement of 1.80μ ± 0.06μ. Given the locally calibrated radiocarbon dated hydration rate of 2.32μ^2/1000 years, a tentative age of 1396 ± 93 years B.P. was obtained. This age determination applies only to the obsidian materials present at the site.

The possibilty of the presence of a Denbigh burin is significant as it allows cultural identification; in this case, not only Eskimo but the earliest or beginning culture in the Eskimo Continuum (Kunz, 1977). If Denbigh (DFC) is , it would indicate an occupational event occurring between 4000-2000 years ago. Evidence of a Denbigh, or at least Eskimo, presence is further bolstered by cultural material found at XSP-108 which lies 200 meters to the northwest (see this report). The close proximity of these two sites and the similarity of their cultural material strongly indicates they are associated.

There does not appear to be any area of the site which contains a large amount of cultural material, surface or subsurface. Therefore, additional investigation at the site would probably produce little additional data. Additional work might, however, clarify the question of the presence of Denbigh people.

Site significance is moderate as the site has the potential to answer an interesting cultural identity question. The site's location is also somewhat interesting in that it is one of the few in the Reed River Valley which is located close to the river and may represent a travel camp rather than a hunting lookout.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.



Possible Base Portion
Denbigh Burin (chert)

XSP-102 Artifact - Actual Size

XSP-103

Site Elevation: 900 Ft.	NE¼, NE¼ Section 6 T19N, R19E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located atop the highest bedrock feature on the east side of this portion of the Reed River Valley. The site offers an excellent view of the valley to the north and south while the view to the east and west is obstructed by higher terrain and trees.

The surface of the site is covered with a healthy growth of caribou lichen and some scattered spruce and willow. In some areas, mineral soil has been exposed by frost action.

A single large chert flake was observed protruding from the mineral soil in a frost boil area. A 15 cm.^{2} test pit was excavated to a depth of 12 cm. adjacent to the flake and proved to be culturally sterile. Continued surface reconnaissance revealed no additional cultural material.

Little else can be said concerning this site. Its significance lies in the fact that it indicates past human presence or use of the locale. Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-104

Site Elevation: 535 Ft.	NE¼, NW¼ Section 7 T19N, R19E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located atop a low kame-like glacial feature. The site is about ½ mile east of the Reed River and slightly less than ½ mile southeast of XSP-102. Because of its low elevation and surrounding trees, the view from the site is quite limited.

The surface of the site is covered by a robust growth of caribou lichen and sporadically dense stands of spruce. A game trail bisects the kame and has exposed the mineral soil in some areas.

It was in a mineral soil exposure in a game trail that two chert flakes were observed. A 15 cm.^{2} test pit was excavated to a depth of 8 cm. adjacent to the flake location. The test pit was culturally sterile.

Little else can be said concerning this site. Its significance lies in the face that it indicates past human presence or use of the area. Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-105

Site Elevation: 600 Ft.	NW¼, SW¼ Section 31 T20N, R19E	Probable Site Type: Lookout
Site Age: ca. 1500 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a large bedrock knoll approximately 200 meters west of the Reed River and 8 miles northwest of the upper end of Nutuvukti Lake. The site occupies the northern end of this flat-topped knoll, which is situated nearly 3/4 mile downstream, lying 35 meters above river level, XSP-105 offers an unrestricted view of at least one mile in all directions except to the north where the view is blocked by a slightly higher knoll 200 meters distant. Additionally, the knoll overlooks an ox-bow lake to the east.

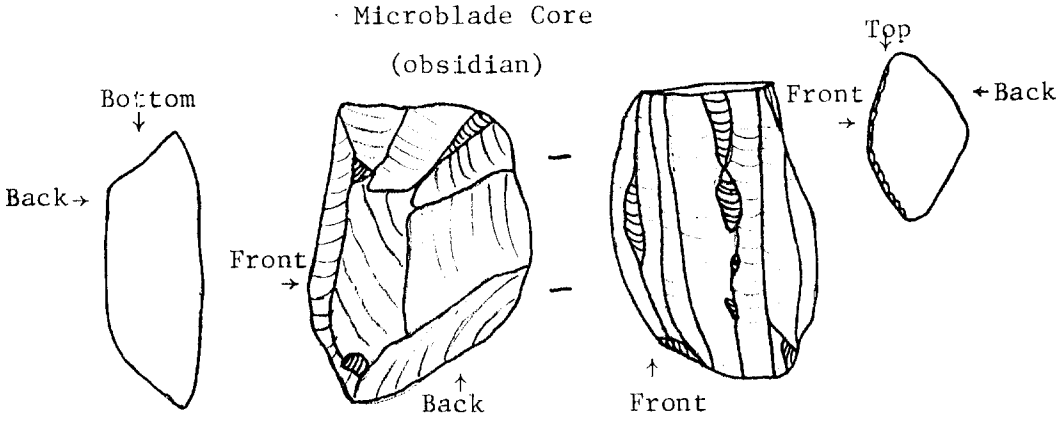
Vegetation at the site consists primarily of caribou lichen and small spruce trees. The bedrock knolls, in this region, appear to have been scoured by glaciers and as a result, little soil development has occurred. Some evidence of frost action is apparent in the slightly churned surface of the knoll. Wildfire activity has in the past affected the area around the knoll, but burn evidence is readily discernable at the site itself.

The site was discovered by the surface expression of a large bluish-gray chert flake. Subsequent surface reconnaissance yielded 3 obsidian waste flakes, 28 obsidian and 13 black chert microblade fragments, and a conical obsidian microblade core. At least 35 pieces of cultural material were located on the surface within a 2 meter diameter area.

Two 15 cm.^{2} test pits were excavated within the area of surface lithics. Test #1, excavated to a depth of 4-5 cm. below surface, produced 3 obsidian microblade fragments at 0-3 cm. depth. Test #2 produced 3 obsidian waste flakes at 0-2 cm. below surface. Total depth of sediment in Test #2 was 3-4 cm. One of the subsurface obsidian microblade fragments was submitted for hydration analysis. The hydration rind thickness measurement of 1.86μ ± 0.04μ yields a date of 1491 ± 64 years B.P. according to the locally calibrated radiocarbon dated hydration rate of 2.32μ^2/1000 years.

The site significance is difficult to determine without further testing. The site appears to be an isolated case of microblade manufacture at a game lookout location. The fact that both obsidian and chert microblades are present may indicate the occurrence of more than a single

use event at the site. If the microblade core was produced and reduced from scratch at the site location, the physical remains of the manufacturing process could yield interesting information concerning core and blade technology. For these reasons, this site should be protected for any human-induced impacts.



XSP-105 Artifact - Actual Size

XSP-106

Site Elevation: 750 Ft.	SW¼, SW¼ Section 12 T19N, R18E	Probable Site Type:
Site Age:	Kateel River Meridian	Probable Cultural Affiliation:

The site is located on a 90 meter high knoll on the west side of the Reed River Valley approximately 4 miles northwest of the north end of Nutuvukti Lake. This site is about 3/4 mile west of the Reed River and overlooks a small lake which lies about 75 meters to the east. The site occurs on the southwest side of this prominent knoll top. View from the site is panoramic.

Vegetation at the site consists mostly of caribou lichen and small spruce trees with some dwarf birch and woody plants. The surface sediments at the site appear churned by frost. Evidence of recent wildfire activity (10-30 years), more prevalent on the low-lying glacial moraine south of this knoll, is not present at the site.

The cultural detritus at XSP-106 consists of a single chert flake found on the surface in a frost-churned area. This small black/gray chert waste flake shows no sign of use or retouch. A 20 cm.^{2} test pit excavated to a depth of 8 cm. below surface, produced no cultural material.

The site significance is low, indicating only that someone was there at sometime in the past.

Because the site has been recorded, there is little reason for concern for its protection of the mitigation of any but human-induced impacts.

XSP-107

Site Elevation: 625 Ft.	NE¼, SW¼ Section 19 T20N, R19E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a bedrock ridge on the west side of the Reed River a little over a mile south of the confluence of the Reed and an unnamed creek entering the Reed Valley from the east. This creek drains the pass between Walker Lake and the Reed River. The 120 meter long ridge is steep-sided on all but the gentle southeastern slope where the vegetation is dominated by spruce. Vegetation elsewhere on the ridge consists of small to medium sized spruce and dwarf birch with scattered small to medium sized birch. Lichen and low woody and herbaceous plants cover the ground along with some cranberry and blueberry. The view is good both up and down the valley.

A 5 meter (N-S) by 2 meter (E-W) eroded area, where bedrock is very close to the surface, revealed a lithic scatter measuring 1.5 meters^2. The lithic scatter includes black chert flakes and microblades as well as a few gray chert microblades. Test #1, a 30 cm.^{2} excavation located on the NE edge of the scatter was excavated to bedrock, 10 cm. below surface, through reddish brown silt which contained fragments of quartz and schist. These rock fragments were concentrated near the surface, occurring less frequently toward the bedrock contact. Four microblade fragments, three of black chert and one of gray chert, which exhibited use retouch along one edge, a possible core tablet of dark gray chert and two small gray chert flakes were recovered from the "A" horizon at a depth of 2-3 cm. below surface. This area is locality "A".

Locality "B" is located 85 meters to the south on the highest part of the ridge encompassing an area of 3 meters across the crest by 25 meters along the length of the ridge. Locality "B" characterized by massive, rounded, bedrock outcrops. Fine grained sediment has collected in basins created through weathering of the exposed rock while a more gravelly sediment is present on the highest part of the ridge.

In an area of fine grained sediment on the south facing side of the ridge, two small flakes of black-banded chert were found. Two meters

to the west a white quartz pebble, 3.5 cm. long was located. The pebble has been split longitudinally, and may be a crude endscraper. A weak bulb of percussions is present as well as several medium sized flake scars on the edges of both the dorsal and ventral surfaces. The distal edge exhibits a steep angle produced by the meeting of the dorsal surface, which retains it its cortex, and the concave ventral surface, producing the characteristic form of an endscraper.

The two loci may represent different events or activities. The microblades at locality "A" suggest a minimum age of ca. 2000 years B.P. for that occupational event. Locus "B" is enigmatic due to limited data, and therefore difficult to assess.

Based on accumulated data, the significance of this site is low. Now that the site has been recorded, there should be little concern for its protection or the mitigation of any but human-induced impacts.

XSP-108

Site Elevation: 600 Ft.	NW¼, SE¼ Section 6 T19N, R19E	Probable Site Type: Lookout
Site Age: ca. 1060 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located 20 meters above the east (left) bank of the Reed River on a glacially formed gravel ridge. This glacial feature parallels the river for a distance of 70 meters then arcs to the east at both the northern and southern ends where the terrain is broken by small marshes draining westward into the Reed. The open vegetation consists predominantly of dwarf birch, medium sized spruce, and birch. This vegetation occupies the steep river bank as well as the relatively flat ridge line. Lichen and woody and herbaceous plants cover most of the ground surface which exhibits a number of vegetation free areas. A well traveled game trail occupies the ridge crest adjacent to a break in slope. The view is best upriver, to the northwest towards two large oxbow lakes, and to the west where the brushy floodplain grades into the upper portion of a ¼ mile long gravel bar. Below the site, the river narrows slightly to about 25 meters in width.

Several obsidian flakes and microblade fragments were scattered along 30 meters of the ridge, exposed in the game trail and down the slope some 5 meters. A few black chert flakes were also observed. An obsidian side scraper/knife made on a large blade-like flake (7.5 cm. long, 3.5 cm. wide) was located near the middle of the lithic scatter. This artifact exhibits steep pressure flaking along the right dorsal edge and less steep, but deeper pressure flaking along the right dorsal edge. The ventral surface exhibits thinning flakes across the bulb of percussion directed from the left edge. Shallow discontinuous

flaking about the remainder of the ventral surface may be the result of tool use. A fragment of black chert located on the trail 1 meter north of the obsidian tool exhibits steep flaking very similar to that of the obsidian tool and may be a fragment of a similar artifact.

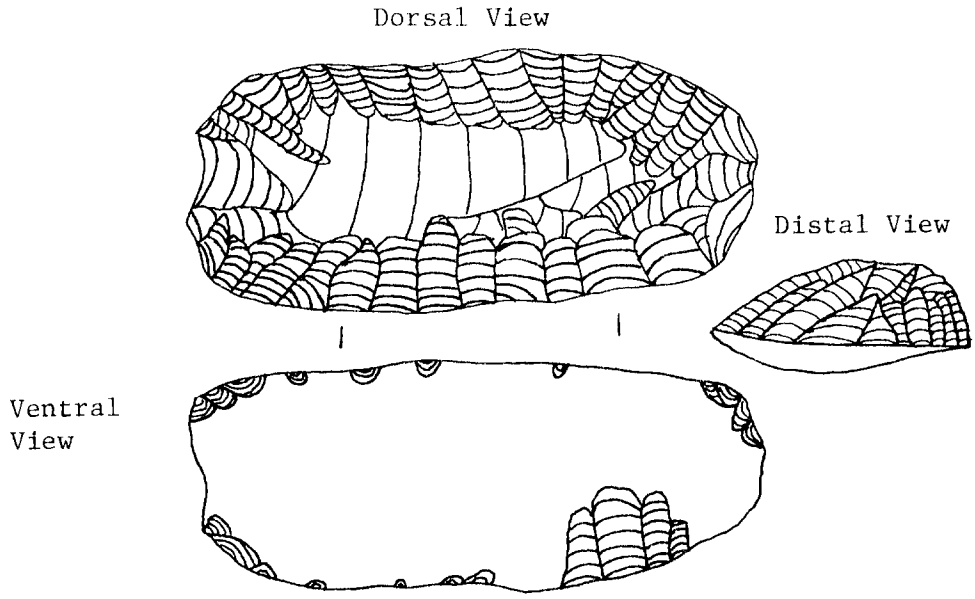
Test pit #1, a 20 cm.^{2} excavation, is located 1 meter east of the obsidian tool. This test pit was excavated to a depth of 5 cm. in gravelly sand. No additional cultural material was observed. Test pit #2, a similar size excavation, is located 5 meters down slope of the game trail and east of the obsidian tool. This test pit was excavated to a depth of 10 cm. through a robust lichen mat and yielded 2 obsidian micro-blade fragments and one obsidian flake. No lithics were found beneath the vegetation mat and the substrate was identical to that in test pit #1.

One of the obsidian microblades was submitted for hydration analysis. The results show a hydration rind thickness of 1.57μ + 0.06μ. Given the locally derived calibration of 2.32μ^2/1000 years, the material is dated at 1062 ± 81 years B.P.

Since the obsidian analyzed was not incorporated in the sandy soil but within the vegetation cover, the rate of hydration may vary from the established rate. A generally accepted date of around 2,000 years B.P. is normally assigned to archeological components containing microblades. This late date may either indicate that microblades persist for a longer period than has been generally believed, or the hydration rate is not understood when the material is not incorporated into the soil matrix.

The site may represent a short term hunting locale/chipping station. The presence of the obsidian tool may suggest some type of processing activity associated with hunting and/or butchering.

The only adverse impact affecting the site at present is the well-used game trail. This site however, is probably of low significance and any non-human impacts need not cause concern.



Scraper/Knife
(obsidian)

XSP-108 Artifact - Actual Size

XSP-109

Site Elevation: 600 Ft.	NE¼, NE¼ Section 1 T19N, R18E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located ½ mile west of the Reed River on the southeast facing slope of a low undulating rise. To the west, the uneven glacial topography rises toward the valley walls. Approximately 100 meters to the east, the glacial topography ends abruptly at the edge of an old meander scar where a large oxbow lake lies. A second less pronounced oxbow lake lies directly north of the first creating a large expanse of flood plain lying to the east and north of the site. The predominant vegetation is lichen, low dwarf birch and berry bushes. Spruce are scattered in small groves in this variably, well-drained terrain. The view is somewhat limited to the east because of the gallery forest which occupies the remnant river bank, and the uneven glacial terrain to the north and south allows only a few hundred meters of visibility. To the southeast a fairly good view of the oxbow lake can be had.

The site consists of three loci. Localities "A", located on a low rise at the southeastern end of the slope nearest the flood plain, consists of five black chert flakes exposed on the surface. These flakes were all within a 1 meter area on the northeast side of this low rise. The small size of these flakes may indicate that they resulted from the final stages of lithic tool manufacture.

Locality "B", is bisected by the game trail which skirts the eastern flank of the site, and lies approximately 35 meters north of locality "A". A single flake was found on the game trail broken into several fragments, most likely by game moving along the trail. The individual fragments were pieced together creating a flake of approximately 4 x 3 cm. No other cultural material was observed in this area.

Locality "C", lies roughly 30 meters northwest of locality "B". This locality lies at the highest elevation of the three and consists of a brown chert micro-blade fragment and a very small black chert flake. This cultural material was exposed in an erosional area just off the top of the rise where the slope is fairly steep. A 20 cm.^{2} test pit was excavated 1 meter up slope of the lithic remains. The test pit was excavated to a depth of 5 cm. below surface yielding no additional cultural material.

The minimal amount of cultural material observed makes assessment of this site difficult. It is suspected that the three loci reflect seperate events. However, all activity at the site may be related to the proximity of the oxbow lake as well as the game trail. These two features may have offered good hunting potential during certain seasons of the year.

There is little chance that this site contains any specifically significant information. The real significance of this site lies in the fact that its discovery adds to the data base for this catagory of sites in the region. The presence of a microblade fragment may indicate a minimum date of ca. 2000 years for locality "C".

Some minor erosion is occurring at the site. However, this erosion is not of a magnitude worthy of concern. Now that this site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-110

Site Elevation: 675 Ft.	SE¼, SE¼ Section 1 T19N, R18E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a bedrock knoll 35 meters above and 100 meters northwest of the Reed River. Due east of the site is a large gravel

occupying the right bank of the river. Approximately one mile to the north are two large oxbow lakes. A small pond, possibly a slough remnant of the river, is located 100 meters to the northeast of the site. The vegetation is predominantly spruce and dwarf birch accompanied by a robust growth of lichen and woody and herbaceous plants. The view from the site is excellent both up and down the Reed Valley. The terrain immediately below the site is also readily visible.

No surface indications of cultural material were present at the site. The site was located by excavating a 20 cm.^{2} test pit 2 meters back from the knoll edge. Six gray chert flakes were recovered from the test pit at 2-4 cm. below surface. The soil below the cultural material consisted of a sandy matrix containing platey schist fragments as well as quartz pebbles. At a depth of 13 cm. below surface schist bedrock was encountered. A second 20 cm.^{2} test, 5 meters south of the first, produced no additional cultural material.

The gray chert flakes from test #1 are generally small and appear to represent detritus generated by the final stages of lithic tool manufacture. Very little can be said about the site's function, other than its excellent overlook location.

The significance of this site, other than the fact that it represents a locus of past human activity, is negligible Protection of this site is worthy of little concern unless impacts are human-induced.

At present no natural or human forces appear to be endangering the site's integrity.

XSP-111

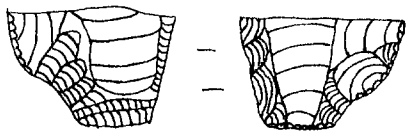
Site Elevation: 600 Ft.	NE¼, NE¼ Section 13 T19N, R18E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site lies on the right hand bank of the Reed River on the eastern end of a glacial ridge. The site is situated 30 meters above and 50 meters west of the river roughly 3 miles northwest of the upper end of Nutuvukti Lake. To the east of the site, a view of the river is offered for approximately 3/4 mile upstream and 100 meters downstream. In all other directions, the view is roughly 500 meters over kame and kettle topography.

The vegetation at the site is predominantly caribou lichen, small-medium spruce trees, and dwarf birch. Other woody and herbaceous plants, including ledum, vaccinium, and empetrum occur at the site. A 4 meter^2 area at the site is devoid of vegetation, apparently a result of frost action, in the shallow soil. It was in this area that most of the cultural material was found. There is no discernible evidence of recent wildfire activity at this site.

The site was first discovered by surface lithics occurring within a 5 meter^2 area. The base fragment of a stemmed projectile point (obsidian), 1 small obsidian waste flake, and 3 small chert waste flakes (white, gray, and black) were found on surface. A 20 cm.^{2} test pit excavated to a depth of nearly 20 cm through loess (0-8 cm.) and a gravelly matrix (9-20cm.) produced no cultural debris. The projectile point fragment (2 cm. wide x 1.5 cm. long) exhibits some evidence of basal thinning.

Site significance is low-medium. The fact that the projectile point is made of obsidian may indicate a maximum age of ca. 2000 years B.P. The apparent small size of the site argues against more than one or two use events. The site may have been used as a hunting overlook or travel stop. Because of its apparent small size and due to the face that it has now been recorded, there is reason for no more than minimal concern for the site's protection or the mitigation of any but human-induced impacts.



Projectile Point Base
(obsidian)

XSP-111 Artifact - Actual Size

XSP-112

Site Elevation: 650 Ft.	SE¼, NW¼ Section 23 T19N, R18E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Eskimo

The site occurs on a glacial moraine almost 1 mile west of the Reed River and roughly 3 miles west northwest of the upper end of Nutuvukti Lake. Situated on a 30 meter high knoll on the western side of this terminal moraine, the site overlooks a small lake 100 meters to the southwest and broad, low-lying terrain to the south. Visibility in all directions is 1+ mile.

Being part of a recent (10-30 years) wildfire burn area, the vegetation at the site is sparse. Numerous burnt and uprooted spruce snags litter

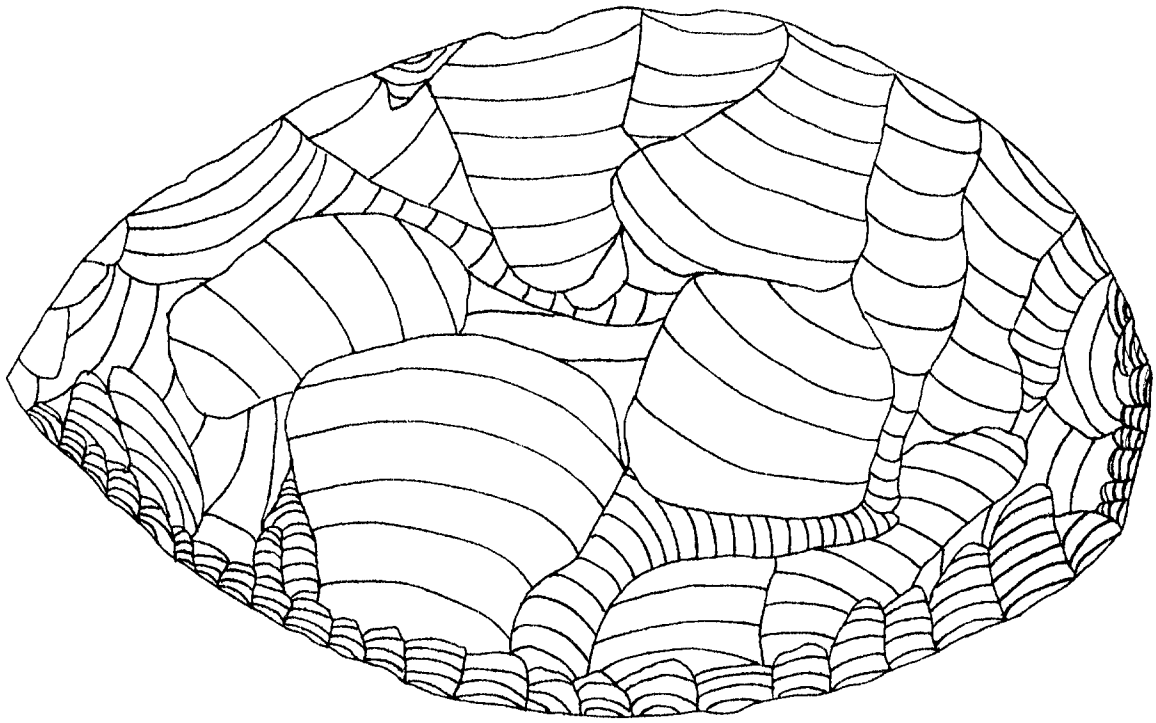
the area and most of the caribou lichen is burned and desiccated. In the area around the knoll top the ground is generally devoid of plant life on the tightly packed loess and gravel surface. Frost action and game trampling appear to have caused soil movement at the site.

The site was discovered through surface observation. Two obsidian microblade fragments were found roughly 4 meters apart on the knoll top. The microblade fragments are 2-4 cm. long and 1.5 cm. wide. A 20 cm.^{2} test pit located between the surface finds was excavated to a depth of 5-8 cm. and yielded no cultural material.

A large biface (15 cm. x 9.5 cm.) was found approximately 45 meters west of the microblades in a small swale. This lavender chert tool was partially exposed on the surface. A 20 cm.^{2} test pit, excavated to a depth of 6-8 cm. near the biface, produced no other cultural material. A portion of the oval biface lay between 0-2 cm. below surface. The artifact displays large reduction flake scars across both faces and smaller flake removal along the margins. The right dorsal margin has a more even cutting edge, which suggests the possibility that this tool was used as an ulu.

Site significance, following recordation, is low. The site may represent two components based on spatial differences between the locations of the biface and microblades as well as lithic differences. The site may well have functioned as an occasionally used overlook viewing the low-lying area south or the moraine to the north. The presence of an ulu suggests Eskimo use of the area. The presence of microblades at the site suggests a minimum age of ca.2000 years B.P. for at least one of the occupational events.

Due to the apparent small size and surface nature of the site and because the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.



Ulu
(chert)
XSP-112 Artifact - Actual Size

XSP-113

Site Elevation: 625 Ft.	NW¼, SE¼ Section 23 T19N, R18E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site lies 2.5 miles west of the northern end of Nutuvukti Lake and roughly 200 meters west of the Reed River. Situated on the southern edge of a terminal moraine, which stretches across the Reed River Valley, the site is located atop a 20 meter high knoll. From this knoll, the Reed is visible to the southwest. The site overlooks kame and kettle terrain to the north and a low-lying area to the south. The view from this knoll is 1+ mile in all directions.

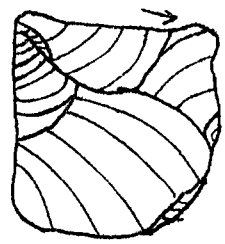
Vegetation at the site is sparse. Recent (10-30 years) wildfire activity has left the caribou lichen burned and desiccated, spruce trees charred and uprooted, and the area generally devoid of plant life. Some dwarf birch and herbaceous plants are present apparently as part of the early stages of plant regrowth after fire. Some frost action and game trampling has also occurred at the site.

Surface lithics led to the discovery of this site. More than 20 small chert (black & gray) waste flakes and microblade fragments, 1 obsidian waste flake, 1 gray chert burinated flake, and 1 black chert flake scraper/knife were spread over a 3 meter diameter area. The scraper

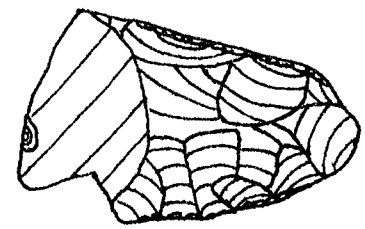
(2.5 cm. x 4.5 cm.) shows some use-wear and exhibits a pot-lid fracture as do several of the waste flakes. The pot-lid fracture may indicate exposure to heat (wildfire). Several of the surface flakes also have lichen growing on their surface indicating that they have been above ground for a considerable period of time.

A 10 $cm.^2$ test pit excavated to a depth of 10 cm. produced 4 pieces of cultural material. One nearly complete microblade (2 pieces), a microblade fragment, and a blade-like flake, all of black chert, were found between 0-10 cm. below surface. This cultural material is similar to the surface lithics suggesting there has been vertical movement at this site. The soil matrix consisted of tightly packed loess and gravels.

Site significance does not appear to be high. On the basis of location and cultural material, this site may have functioned as an overlook and/or flaking station. The southern edge of the terminal moraine may have also served as a convenient travel route across the Reed Valley. The presence of two types of lithic material may indicate more than a single occupational event occurred at the site. The presence of obsidian suggests a maximum date of ca.2000 years B.P. for the event represented by the obsidian. The chert microblades may indicate a minimum date of ca. 2000 years B.P. for the occupational event represented by those artifacts.



Burinated Flake
(chert)



Flake Scraper/Knife
(chert)

XSP-113 Artifacts - Actual Size

XSP-114

Site Elevation: 600 Ft.	NE¼, SE¼ Section 23 T19N, R18E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

The site lies approximately 25 meters west of the Reed River and roughly 2.5 miles west of the northern end of Nutuvukti Lake. Situated 35 meters above river level, the site occupies a series of glacial knolls which run parallel to the river channel. These knolls are nearly 8 meters in diameter and overlook the river for several hundred meters up and downstream. The view from XSP-114 is generally panoramic for a distance of 1+ mile.

Vegetation at the site has been heavily influenced by recent (10-30 years) wildfire activity. The knoll is covered with dwarf birch, woody and herbaceous plants, and burnt spruce snags. Many of the spruce trees are charred and uprooted. Caribou lichen, which was the dominant surface cover at one time, is a burned and lifeless crust. Frost action has churned the surface somewhat and some game trampling is also apparent.

The site was located through surface observation of cultural material. A large flake of black chert and an obsidian flake were located approximately 3 meters apart. Neither of these flakes show retouch or use-wear. The obsidian flake was partially buried in the tightly packed loess. A 10 cm.^{2} test pit was excavated through loess and gravel to a depth of 8-10 cm. and produced no cultural material.

Site significance is as low as a snake's belly in a wagon rut in Death Valley.

The presence of both obsidian and chert may indicate the occurrence of more than one occupational event at the site. The obsidian also suggest a maximum age of 2000 years B.P. for the occupational event which it represents.

The site appears in no danger of impact and now that it has been recorded, warrants no further protection consideration other than from human-induced impacts.

XSP-115

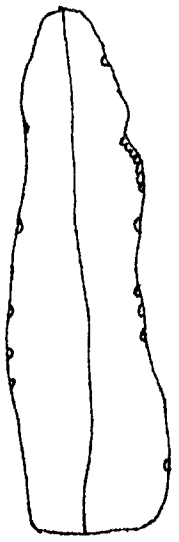
Site Elevation: 625 Ft.	NE¼, SE¼ Section 23 T19N, R18R	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unkown

This site occurs on a knoll-like glacial feature approximately 150 meters west of the Reed River and nearly 2.5 miles west of the northern end of Nutuvukti Lake. The knoll lies roughly 40 meters above the river. XSP-114 is located 120 meters east of this site and XSP-113 is located 120 meters southwest. Both sites are visible from XSP-115. The view from the site is 1+ mile to the west, east, and north and roughly 150 meters to the south.

Vegetation at this site has been heavily affected by a recent (10-60 years) wildfire. The burn area is presently supporting dwarf birch, poplar, and woody and herbaceous plants, such as Ledum and Epilobeum. The ground is sparsely covered by xeric moss and lichen, which now appears as a hard brown crust. Burnt spruce snags also litter the area of the site. Some frost action and game trampling is evident.

The site was discovered through surface indications. Two pieces of cultural material located approximately 40 meters apart comprise the lithic inventory. A blade of gray chert and an obsidian flake occurred on two knolls separated by a small swale. The large blade (7 cm. x 2 cm.) shows evidence of use wear along its right dorsal margin. A 10 $cm.^2$ test pit, excavated to a depth of 8 cm., 3 meters uphill from the blade produced no cultural material.

Site significance is low. The blade and obsidian flake may be unrelated based on physical separation and lithic difference. The presence of obsidian suggests a maximum age of ca. 2000 years B.P. for the occupational event it represents. The site may have functioned as a hunting overlook or travel stop. The walking is excellent along this moraine complex and sites in this area may reflect travel as well as hunting behavior of prehistoric people. The site appears in little danger of impact and warrants no further protection considerations with the exception of man-induced problems.



Utilized Blade
(chert)

XSP-115 Artifact - Actual Size

XSP-116

Site Elevation: 700 Ft.	SW¼, NE¼ Section 6 T19N, R19E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located ¼ of a mile east of the Reed River on the southeast corner of a glacially rounded bedrock (schist) ridge. The relatively flat-topped ridge measures 85 meters (N-S) by 65 meters (E-W) and is steep sided, rising above the surrounding (poorly drained) terrain some 25 meters. The vegetation on the site consists of small to medium sized spruce, dwarf birch and some poplar. Lichen and woody and herbaceous plants cover the ground except where erosion is active along the edges of the ridge. The view from the site is good to the east toward the uplands, southeast toward a marshy drain, and south toward Nutuvukti Lake. Nutuvukti Lake is not visible from this location as the moraine north of the lake obscures it.

The site was discovered through surface indications consisting of a single black chert blade/microblade (distal) fragment, measuring 4 cm. long by 1.6 cm. wide. This was exposed in an erosional area 3 meters from the eastern edge and 6 meters from the southern edge of the bluff. a 20 cm.^{2} test pit 65 cm. to the east of the blade/microblade was excavated through brown silt and shattered bedrock fragments to bedrock located 8 cm. below surface. No cultural material was recovered. A second 20 cm.^{2} test pit 2 meters to the northwest of the blade/microblade fragment, was excavated to a depth of 10 cm. below surface before

encountering bedrock. Again, no cultural material was observed.

The site appears to contain very little cultural material. The significance of the site is only that it demonstrates that the location was utilized in the past by the aboriginal inhabitants of the area. If the artifact is a microblade, it may indicate a minimum age of 2000 years B.P. The site is actively eroding along the bluff edge and it is probable that some cultural material has already been lost. Maintaining the physical integrity of this site should be of little concern. Now that the site has been recorded, only human-induced impacts need be mitigated.

No evidence of wildfire is present at the site on surface or in the soil profile. (The site tag was attached to a spruce tree near the eastern edge of the bluff 12 ft. northeast of the blade/microblade fragment. The shallow depth of bedrock prohibited using the typical datum spike.)

XSP-117

Site Elevation: 600 Ft.	SW¼, SW¼ Section 17 T19N, R19E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a river terrace 250 meters east of the Reed River and approximately 3 miles north-northwest of Nutuvukti Lake. To the west of the site the terrain drops down to the river in a series of stepped terraces. To the east of the site, the terrain is characterized by a number of kame knolls of varying elevations. Gently undulating terrain occurs to the north and south.

The vegetation on the site consists of dwarf birch and a few small spruce which are coming back after having been heavily impacted by wildfire some 10-30 years ago. The lichen mat has not yet rejuvenated itself. Grasses and shrubs make up the majority of the sparse ground cover at the site. The view from the site is best toward the river and the lowlying terrain to the west where a channel remnant of the Reed passes within about 100 meters of the site.

The site, a 5 meter^2 lithic scatter, was discovered through surface reconnaissance, approximately 5 meters from the southern and western edges of the terrace. An estimated 50-60 flakes of chert (light to dark gray, white, blue and pink) occupied this area; the most elevated part of the terrace. A few more chert flakes and one obsidian flake were located approximately 10 meters to the east of the main scatter. The flakes are very thin for their size (2-4 cm. across) and may be detritus representing the final stages of lithic tool manufacture.

Two 20 cm.^{2} test pits were excavated to a depth of 5 cm. below surface. Test #1, located on the southern boundary of the scatter, was excavated in gravely sand revealing no subsurface cultural material. Test #2, located at the northern end of the scatter, also failed to reveal subsurface cultural material.

The significance of the site, in terms of the specific data it may contain, is negligible on the general level, however the site is similar in content, and location to the river, as several other sites along this portion of the Reed. Taken by itself, this site would not yield significant, cultural information. However, taken as a whole this portion of the Reed holds promise for providing information pertaining to prehistoric land use and population movements up and down the river.

The presence of both chert and obsidian may indicate that more than a single occupational event has taken place at the site. The obsidian suggests a maximum date of ca. 2000 years B.P. for the occupational event which it represents.

Now that the site has been recorded, there should be little concern over the protection of the site with the exception of human-induced impacts.

XSP-118

Site Elevation: 600 Ft.	NE¼, NE¼ Section 13 T19N, R19E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site lies on the east bank of the Reed River approximately 3.5 miles northwest of Nutuvukti Lake. The site is situated 25 meters above the river at the intersection of a terrace/ridge system (glacial topography of kettles-kames-eskers). This glacial morphology converges on the river from both east and west constricting the channel, forcing the river to become deeply incised. As a result the river flows in a straight line for at least a mile, a unique occurrence as the stream is typical of meandering arctic rivers.

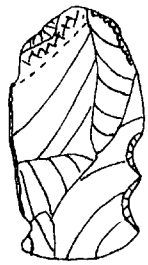
The surface of the site covers an area of approximately 7 meters^2. The surface of the site is somewhat uneven and sparsely covered by dwarf birch. Burned spruce trees are common on this side of the river, the result of a wildfire probably dating between 10-30 years ago. A green belt of live spruce covers the steep cut bank along this portion of the Reed. The lichen mat at the site has not yet rejuvinated itself after being burned, but remains a brown patchwork covering the gravelly, sandy soil of the ridge. The view from the site is excellent both up

and down the Reed, as well as to the west and the southeast toward Nutuvukti Lake.

This two locality site was discovered by surface reconnaissance. Locality "A" consists of three small flakes of black chert and a larger flake of gray chert. The gray chert flake exhibits some type of wear along its edges. Two notches on the right distal edge and one notch on the left distal edge suggest that the flake may have been utilized as a spokeshave type tool. Some 25 meters to the north of locality "A", 4 gray chert flakes were located on a lower bench of the ridge and constitute locality "B". The view from Locality "B" is less extensive than at locality "A" and best toward the north and west. The flakes appear to be of the same material as the notched flake of locality "A", but are smaller and appear to be trimming flakes.

The western edge of the site is actively eroding due to downcutting by the Reed River. The site is of relatively low significance and probably does not contain important information of itself. However, of the greater Reed River area, the site is important as another indicator of the prehistoric use of this region.

Now that the site has been recorded, there need be little concern for its protection or the mitigation of any but human-induced impacts.



Notched/utilized flake
(chert)

XSP-118 Artifact - Actual Size

XSP-119

Site Elevation: 750 Ft.	NE¼, SE¼ Section 13 T19N, R18E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a bedrock (schist) ridge 250 meters east of the Reed River approximately 3 miles northwest of Nutuvukti Lake. The ridge rises 50 meters above the surrounding terrain to the north and west and somewhat less to the east and south. The site occupies the most elevated portion of the ridge which drops steeply to the northeast, north and northwest. The uneven, knobby bedrock terrain to the south slopes more gradually. The vegetation has been heavily impacted from a 10-30 year old forest fire leaving only skeletons of medium-sized spruce trees. Now dwarf birch and willow make up the dominant vegetation, while the lichen/moss mat has not yet rejuvenated itself. Erosion is successfully removing the thin silt mantle which covers portions of this ridge, thus impacting the intergrity of the cultural deposits.

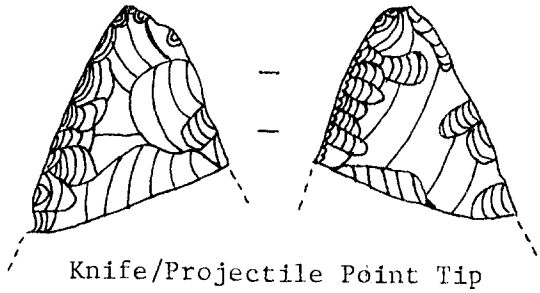
An excellent 360° view is afforded from this two loci site. To the south Nutuvukti Lake and its surrounding terrain is visible. To the east lies lowlying, lake-dotted terrain, to the north, the undulating glacial topography of the Reed Valley, and west across the Reed lies more glacial topography.

Locality "B", discovered by surface reconnaissance, is located on a small, 5 meter^2, subrectangular bedrock knob. Twenty-five meters to the north lies locality "A" which is located on the highest, northern most portion of the ridge. Locality "B" artifacts consist of two black chert flakes and one obsidian flake, all are small waste flakes.

Locality "A" measuring at least 10 meters^2 consists of a surface scatter of 20-25 waste flakes of chert biface (knife or projectile), and a large (7.5 cm. x 4.5 cm.) relatively thin, chert flake. This flake exhibits retouch along both edges as well as slight polish on the right distal tip.

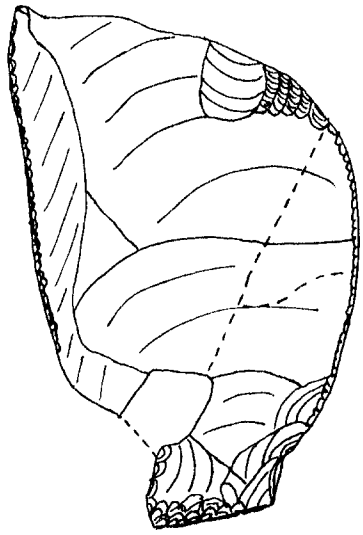
The presence of both obsidian and chert may indicate more than a single occupational event at the site. The obsidian microblades may indicate a maxiumum site age of ca. 2000 years B.P.

The site function may relate to the excellent view available from the ridge top, i.e. an overlook situation, but its significance is difficult to assess. Due to the lack of sediment and consequent lack of stratigraphic integrity, this site holds little potential for additional information other than the fact that it adds to the general pool of archeological sites in the Reed Valley. These sites, taken as a whole, however, indicate that prehistoric populations utilized several kinds of land forms during their passages through this area. Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.



Knife/Projectile Point Tip

(Chert)



Flake Scraper/Knife

(chert)

XSP-119 Artifacts - Actual Size

XSP-120

Site Elevation:
600 Ft.

Site Age:
ca. 1750 Years B.P.

NW¼, SW¼
Section 7
T19N, R19E
Kateel River Meridian

Probable Site Type:
Unknown

Probable Cultural Affiliation:
Unknown

This site is located on a terrace 110 meters east and 10-15 meters above the Reed River approximately 3 miles northwest of Nutuvukti Lake. To the west of the site, 5 meters distant, the terrain drops to the low lying floodplain of the river. To the north and south lies gently undulating glacial topography with river terraces present along the western flank.

To the east the terrain rises to a series of kame knolls before dropping again into the poorly drained terrain beyond.

The site area, 75-80 meters in length, is variably vegetated with immature poplar and willow, some dwarf birch and young spruce. A recent wildfire (10-30 years old) is responsible for the jumbled character of the vegetation and the, now dead, medium sized spruce remain as partially or completely fallen skeletons. The typically white, spongy lichen mat has been rendered brown and brittle by the fire, and does not appear to have initiated a comeback.

This three loci site was discovered during a surface reconnaissance. Locality "A", the northernmost locality consists of a 5 meter square lithic scatter composed of 20 to 30 black chert and obsidian flakes. One chert and two obsidian flakes exhibited use retouch. Two obsidian microblade fragments were also observed. A 20 cm.^{2} test pit was excavated 5 cm. into sandy gravel with no subsurface cultural material being encountered.

Locality "B", located 35 meters south of locality "A", on the highest portion of the terrace consists of 3 large (3-5 cm. diameter) obsidian flakes, 1 orange and blacked mottled obsidian microblade, 1 dark obsidian microblade, and a block flake of gray chert. This scatter is more concentrated than that at locality "A". No subsurface testing was employed at this locality.

Locality "C", located 30 meters south of locality "B" on a gradually south sloping extension or spur of the terrace, exhibited a concentration of 30-40 light to dark gray chert and obsidian microblades within a 3 meter^2 area. A large, relatively thick decortication flake of obsidian measuring 6.5 x 3.5 cm. shows steep continuous secondary flaking along one edge, suggesting its use as a side scraper or knife. A 20 cm.^{2} test was excavated on the northern limit of the scatter to a depth of 10 cm. Five dark gray chert and five obsidian microblade fragments were recovered from 0-6 cm. below surface. The majority of the microblades were recovered from the A soil horizon.

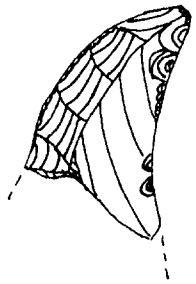
One of the obsidian microblades was submitted for hydration analysis. A rind thickness measurement of 2.01μ ± 0.04μ was obtained. When calculated according to the locally calibrated radiocarbon dated hydration rate of 2.32μ^2/1000 years, a date of 1741 ± 69 years B.P. is obtained. This date can be applied only to the occupational event represented by the obsidian found at locality "C".

The cultural items on each loci are relatively similar in lithic material and artifact type, but whether or not they are related temporally or culturally is not known. Additional testing at XSP-120 might yield additional data, however, the effort might not be justified by the data yield.

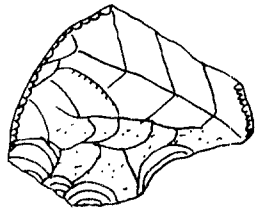
There is presently no active natural impact other than wildfire threatening the site. As this site may have yielded much of its pertinent information, no mitigation plan concerning its physical integrity is necessary at this

time. If the site is, in the future, endangered by human impact, then additional investigation should be carried out.

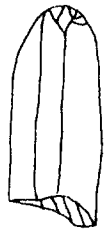
The site's significance in terms of yielding important information concerning the prehistory of the region is probably low to moderate. The real significance of the site is that it is one of some fourteen sites along the eastern side of the Reed River which exhibit similarities as to location relative to the river, and artifact assemblages; both raw material types and artifact forms. This pattern may reflect either closely related or identical cultural groups that may have been using the Reed Valley as a travel route to and from the mountains and/or the Noatak River.



Utilized Flake
(chert)

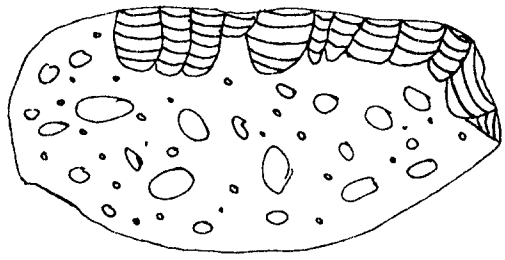


Utilized Flake
(obsidian)



Microblade Fragment
(obsidian)

Cortex →



Scraper (obsidian)

XSP-120 Artifacts - Actual Size

XSP-121

Site Elevation: 700 Ft.	NE¼, NW¼ Section 7 T19N, R19E	Probable Site Type: Camp/lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Eskimo (?)

This site is located on a glacially scoured, hill-like feature approximately ¼ mile south-southwest of XSP-104. The site lies roughly 300 meters east of the Reed River and about 30 meters higher. The site is located on the northeast side of the hill and offers an excellent view of the surrounding area except toward the south where nearby higher terrain blocks the view.

The site is located about 400 meters into a recent wildfire burn area. This wildfire appears to be associated with the burn in the Nutuvukti Lake area. Willow growth is dense in the low-lying areas surrounding the site. The surface of the site supports a hard, patchy, dry, burned crust of lichen and moss, standing and fallen burned spruce, a few sappling size poplar, dwarf birch and willow. Large glacial erratics are scattered about the area. Few of the burned spruce exceed 15 cm. in diameter which suggests the burn occurred prior to the establishment of climax forest conditions. This indicates the area may have been recovering from the effects of an earlier wildfire when the most recent burn occurred.

A ridge-like projection extends toward the southwest from the main body of the hill and it is there that the site is located. Chert flakes were very thinly strung out along the ridge crest for a distance of 60 meters. A relatively meager surface flake concentration is located on the promontory of the ridge. A 15 cm.^{2} test pit (test pit "B") excavated to a depth of 8 cm. produced 15 chert flakes between 1-5 cm. below surface. Approximately 5 meters to the southwest, a large, broken, flake knife/scraper was found protruding from the surface. Test pit "A" a 15 cm.^{2}, 8 cm. deep excavation adjacent to the artifact, proved to be culturally sterile.

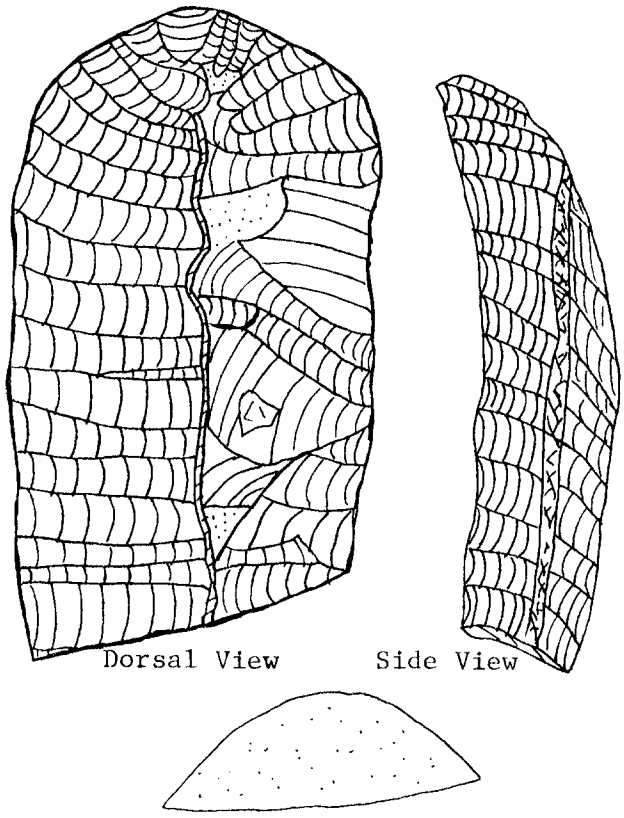
The artifact is highly reminiscent of flake knives common in the Denbigh, and Norton cultural assembledges. While artifacts of this type are not strongly diagnostic, it may indicate occupation by Eskimos sometime between 4000-1500 years ago.

There were many "likely" locations on this site that were not tested, therefore, it is difficult to estimate site size or significance. The possibility of obtaining cultural identification for at least one occupational event at the site adds to the sites potential significance. Considering this, site significance is on the low side of moderate.

The site may have served as a hunting lookout or a campsite. It is difficult to say what the locale might be like in an unburned condition in regard to view, assessability, etc. The site is not in danger from

any natural forces. Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

Flake Knife Fragment



XSP-121 Artifact - Actual Size

XSP-122

Site Elevation: 640 Ft.	SW¼, NW¼ Section 7 T19N, R19E	Probable Site Type: Camp
Site Age Unknown	Kateel River Meridian	Proabale Cultural Affiliation: Unknown

This site is located on the high point of a low morainal ridge or kame terrace roughly 300 meters southwest of XSP-121. This site is about 40 meters east of the Reed River, although easy access to the river

is blocked by a low swanpy area and a small stream. The view from the site is only locally good due to the locale's low elevation and heavy stands of spruce trees near the river. A drainage cut bisects the kame about 30 meters south of site datum.

Willow growth is dense in the low lying areas to the west of the site. The surface of the site is thinly covered by a burned crust of moss and caribou lichen, dwarf birch, and standing and fallen burned spruce. Few of the burned spruce exceed 15 cm. in diameter or 6 meters in height. There are a few moderately sized spruce that are quite healthy, that somehow escaped the ravages of the recent wildfire. Some areas of mineral soil are exposed near the break in slope along the western margin of the kame.

Cultural material was observed thinly scattered along an area 8 x 18 meters along the crest of the kame. Cultural material consists of gray and red chert flakes, some quite large, obsidian flakes and microblade fragments and several complete obsidian microblades, and what may be the lower ½ of an obsidian Denbigh burin.

Three 15 $cm.^2$ test pits were excavated to a depth of 12 cm. at various locations on the site. The two test pits excavated adjacent to the microblades and the possible burin fragment both proved to be sterile. The test pit excavated near the chert flakes yielded an additional 5 red and gray chert flakes. The test pit near the possible burin was excavated to a depth of 50 cm. in sandy soil before rocks and gravel were encountered. This is one of the few sites in the region where this depth and type of soil have been found. Soil deposition such as this would allow for the construction of semi-subterranean houses, although, no evidence for such activity was observed at the site.

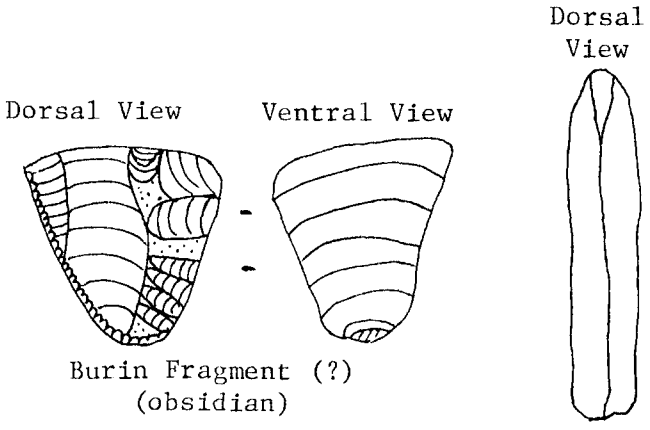
The possible burin fragment is almost identical in size, shape and retouch to the one found at XSP-102, 3/4 of a mile to the north. The obsidian microblades are approximately 47 x 1 x ? mm. and are not unlike those commonly found in Denbigh sites, although, they cannot be considered diagnostic.

The presence of both chert and obsidian at the site suggests the occurrence of more than one occupational event. If one of the occupations was Denbigh, it would indicate use of the locale between ca. 4000-2000 years ago by Eskimo Continuum people.

The limited subsurface testing at the site did not reveal the presence of much cultural material. However, most of the site remains untested.

Site significance is moderate as the site has the potential to answer several interesting questions. Additionally, this site is one of several similar sites scattered along this glacial feature for a distance of 3/4 of a mile. The site's location is interesting in that it is more likely to be a travel or short term base camp than a hunting lookout.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.



XSP-122 Artifacts - Actual Size

XSP-123

Site Elevation:
700 Ft.

Site Age:
Unknown

NE¼, NW¼
Section 7
T19N, R19E
Kateel River Meridian

Probable Site Type:
Lookout

Probable Cultural Affiliation:
Unknown

The site is located atop a high somewhat conical hill of bedrock which is capped by loess, till, and several glacial erratics. The site lies roughly 150 meters east of XSP-122 and 200 meters east of the Reed River. The site offers an excellent view of the Reed River Valley in all directions except the southeast where higher terrain blocks the view.

There are large exposures of bedrock and mineral soil on the hillcrest. Where organic soil is present, the burned lichen/moss crust prevails. Unlike most hills in the area, a robust growth of willow and dwarf birch is present making surface surveying rather difficult.

At two locations on the hilltop, cultural material was found lying on surface. Two chert flakes were located at the geographical center of the hilltop on the high point, and 8 meters to the northeast, a large obsidian flake was located. No test pits were dug due to lack of soil.

The physical character and location of the site suggests that it served

as a lookout. The occurrence of two types of culturally altered lithic material may indicate that more than a single occupational event took place. The presence of obsidian may indicate a maximum date of ca. 2000 years for one of the occupational events.

Little else can be said about the site. The site's basic value lies in its association with other sites in this portion of the Reed Valley and its contribution to the overall prehistoric use pattern.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-124

Site Elevation: 650 Ft.	NW¼, SW¼ Section 7 T19N, R19E	Probable Site Type: Camp/lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

The site is located on the promontory of a small bedrock knob slightly less than ¼ mile south-southeast of XSP-123. The Reed River lies ½ mile to the west and XSP-125 is 175 meters distant in the same direction. The site rises 15 meters above several square miles of open low ground dotted with small ponds and streams that may have been a lake in recent post glacial times. Beaver, muskrat, moose and waterfowl are commonly observed in this low area. The site offers an excellent view of the low area which lies to the east and southeast. The view to the north is also excellent while the view to the west is obscured by nearby higher terrain.

Vegetation at the site consists of a burned crust of lichen and moss as well as some scattered dwarf birch and willow. Standing and fallen, burned, dead spruce are also scattered over the site. Only about 65% of the surface of the site is vegetated, the rest being exposed mineral soil or bedrock.

The surface of the site is littered with chert flakes, chunks, and microblade fragments. A large, 7.5 x 3.0 cm., flake knife was observed imbedded in the surface. All lithic material observed at the site was black, gray, and purplish brown chert. Some of the larger pieces exhibited evidence of heat fracture, pot lid spalls, probably the result of recent or past wildfire.

The lithic surface scatter is fairly extensive, an area of roughly 15^2 meters. Three test pits were excavated where soil conditions permitted. Test pit "A", a 15 $cm.^2$ excavation in the southwest quadrant of the site, yielded over 60 flakes as well as 65 microblade fragments, and two primary burin spalls all of black or gray chert. The cultural material was recovered from 0.5-12 cm. below surface. The test pit was excavated

to bedrock which was encountered at a depth of 15 cm. Test pit "B", of similar size, was located 2 meters to the northeast. Excavated to bedrock, a depth of 2.5 cm, this subsurface test yielded no cultural material. Test pit "C", located adjacent to the flake knife and 5 meters northeast of test pit "A", yielded several waste flakes and microblade fragments of gray and black chert from depths between 1-4 cm. Bedrock at this location was encountered at a depth of 10 cm.

None of the cultural material at the site is of a diagnostic nature. The microblades at site appear similar in style to those recovered at XSP-093, and XSP-095 located roughly three miles up river. It is interesting to note that at none of these sites was obsidian present. The microblades at XSP-124 display a wide range of size which suggests on-site reduction and possible preparation of microblade cores.

The site appears to be larger than many in the area and seems to contain a large amount of subsurface material at, for this region, considerable depth. This, coupled with the sites location - looking out over a large lowland area - suggests that the site may have served as a base camp for hunting activities as well as a lookout.

This site is one of the few in the Reed River Valley which appears to have good potential for recovering additional worthwhile data. The homogeneity of the lithics is uncommon for this area and may indicate a single occupational event or continued use by the same cultural group. The fact that no obsidian is present may indicate an age in excess of 2000 years B.P. The presence of chert microblades adds support to a date of occupation greater than 2000 years ago.

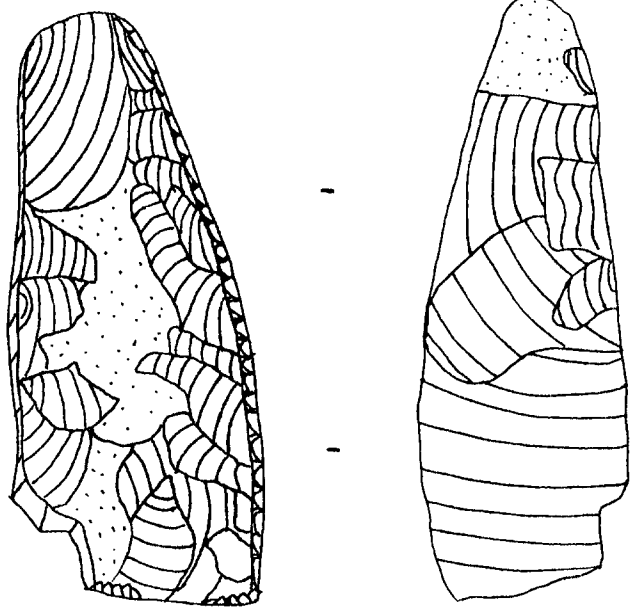
The significance of this site is moderate to high based on its data yield potential and its character. Additional work at this site would probably be worthwhile from an academic point of view. The site faces little danger from natural forces and now that it has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.



Primary Burin Spall (chert)

Dorsal View

Ventral View



Flake Knife
(chert)

XSP-124 Artifact - Actual Size

XSP-125

Site Elevation: 760 Ft.	NW¼, SW¼ Section 7 T19N, R19N	Probable Site Type: Lookout
Site Age: ca. 2130 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located atop a high glacially altered bedrock ridge 175 meters west of XSP-124. The Reed River lies approximately 400 meters to the west and XSP-123 lies roughly 200 meters to the north. The site offers an excellent view up and down the Reed Valley as well as the low area to the east and southeast.

The promontory of the ridge, upon which the site lies, is about 25% exposed bedrock and mineral soil. Surface cover, where present,

consists of burned lichen and moss, scattered dwarf birch and willow and a few standing and fallen burned spruce.

Cultural material lies thinly scattered about the surface in an area roughly 12 x 24 meters and consists of chert and obsidian flakes, and microblade fragments, a small fragment of a bifacially worked obsidian tool, and a chert microblade core or core tablet fragment.

A 15 cm.^{2} test pit was excavated to a depth of 10 cm. at the central eastern margin of the surface lithic scatter. Cultural material was recovered from a depth between 1-4 cm. and consisted of a few chert flakes and several chert and obsidian microblade fragments. The variety of chert and the style of the chert microblade fragments are identical to those found at XSP-124.

The presence of both chert and obsidian at the site suggests more than a single occupational event may have taken place. The similarity of the chert microblade fragments from this site and XSP-124, only 175 meters to the east strongly argues for association between the two sites.

One of the subsurface obsidian microblade fragments was submitted for hydration analysis which returned a measurement of 2.22μ ± 0.06μ. Based upon radioactive carbon dated obsidian from Lake Selby, 25 miles to the west, a hydration rind of this thickness indicates an age of 2124 ± 115 years B.P. This age can be assigned only to the obsidian component of the site which may represent an occupation more recent than that represented by the chert microblades.

There does not appear to be any area of the site which contains a concentration of surface or subsurface cultural material. Therefore, additional investigation at the site would probably produce little useful data. The location of the site suggests that it is a lookout probably associated with hunting activities. The site's probable association with XSP-124 also adds credence to such a possibility.

Site significance is somewhat low due to the apparent lack of subsurface material. Data concerning use of the area could more easily be obtained from XSP-124.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-126

Site Elevation: 600 Ft.	SE¼, SE¼ Section 12 T19N, R18E	Probable Site Type: Unknown
Site Age: ca. 1560 Years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located 20 meters east and 10 meters above the Reed River and approximately 3 miles northwest of Nutuvukti Lake. The site occupies the southwestern end of a 250 meter long northeast-southwest trending river terrace at the point where the river's 5½ mile meandering course ends abruptly. At this location, the glacial deposits present on both sides of the river converge (from a 1/2 to 3/4 of a mile wide flood plain) to form a straight narrow channel, 100 meters across, which flows arrow straight for a mile to the southwest. The surface of the site is relatively flat and open with dwarf birch as the predominant vegetation. Prior to the recent wildfire, medium-sized spruce trees were scattered over the terrace. All but a few are now snags, some of which have fallen. The wildfire responsible for this and other vegetational impacts in this area is probably 10-30 years old. The lichen mat has suffered severe damage as well, and much exposed mineral soil is present. The view is best to the north, up the river and west toward an area of unburned glacial topography.

The site was discovered during a surface reconnaissance of the area. A cluster of 10 fine grained dark gray chert flakes, (1-3 cm. in diameter) were located 5 meters back from the west facing terrace edge. Five meters to the north, a white chert flake and an obsidian flake were observed. Two meters further to the north, 10-15 obsidian flakes were found associated with a downed spruce tree, appearing as though they had been thrown to the north upon impact of the tree trunk with the ground. A 20 $cm.^2$ test pit was excavated 1 meter west of the white chert flake location. A primary spall of obsidian probably from a burin, was recovered from 1-2 cm. below surface. The spall measures 3 cm. long and 0.7 cm. wide. The dorsal surface exhibits a ridge created by removing several small flakes perpendicular to the direction of force that produced the spall.

This artifact was submitted for obsidian hydration analysis. A rind thickness measurement of 1.90μ ± 0.03μ was obtained. When calculated using the locally derived hydration rate of $2.32\mu^2$/1000 years, a date of 1556 ± 49 years B.P. is acquired. No other cultural material was observed. None of the flakes including the possible burin spall exhibit use wear.

The presence of both chert and obsidian on the site as well as several seemingly discrete activity locales suggest that more than a single occupational event has taken place.

The significance of this site is low in terms of the amount of potential cultural information that it may yield. The site is in no danger of adverse natural impact and need not be considered for protective measures unless human-induced impacts occur.

XSP-127

Site Elevation: 675 Ft.	NW¼, SW¼ Section 18 T19N, R19E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located 3/4 of a mile east of the Reed River and 2½ miles north of Nutuvukti Lake on a glacially rounded bedrock ridge. The site occupies the northwestern end (highest point) of this ridge. The ridge extends to the southeast some 250 meters before dropping off to lowlying, poorly drained ice stagnation terrain. The ridge is steep sided especially on its northern and western perimeters rising 25 meters above the relatively flat terrain below. A lake, about one hectare in area, is located 300 meters northeast of the site and is in full view, as is most of the surrounding terrain.

The site area, approximately 10 meters^2, almost totally lacks vegetation due to a fairly recent (10-30 year old) wildfire that destroyed the spruce and lichen which formerly grew here. Now scrub willow and dwarf birch are sparsely scattered over the site. Fractured bedrock covers most of the surface of the site.

The site was discovered as the result of surface reconnassiance and consists of about 50 small obsidian flakes lying in a cluster measuring 2 meters across. A few flakes had been washed downslope to the south of the main cluster and appeared in small soil accumulations formed during episodes of erosion. A single small light gray fine grained chert flake was located one meter west of the cluster. All of the obsidian flakes are less than 2 cm. in diameter and probably represent a single chipping event. The presence of both obsidian and chert may indicate that more than a single occupational event occurred. The presence of obsidian may also indicate a maximum age of 2000 years B.P. for that event.

The site is of low significance as any temporal or cultural assessment is impossible due to the nature of the materials present. The physical integrity of the cultural deposits is deteriorating as the result of natural impacts. This should cause little concern as further investigation or stablization measures at the site would not be worthwhile, except if the site were threatened by human-impact.

XSP-128

Site Elevation: 625 Ft.	NW¼, NW¼ Section 19 T19N, R19E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located 3/4 of a mile east of the Reed River and 2¼ miles northwest of Nutuvukti Lake. The site occupies a 40 meter long boat shaped glacial knoll which is oriented due north and rises 10 meters above flat, poorly drained terrain associated with a ½ mile long east-west trending lake. The outlet stream of the lake flows west and passes within 15 meters of the northern end of the site. Two currently maintained beaver dams and one active lodge are located down stream from the site creating a broad, ponded, outlet.

The well-drained gravel knoll is sparsely vegetated with small spruce, dwarf birch and woody plants. A weak lichen growth covers most of the surface except where frost action has created exposed patches of pea gravel and sand. The view is excellent to the east down the length of the lake and also includes adjacent areas to the north and south.

The site was discovered during surface reconnaissance when several light gray patinated basalt flakes were seen either protruding through or lying on top of the lichen mat. Further surface survey revealed two flakes of greenish chert, three flakes of black basalt, a flake of obsidian and a fragment of a black chert end scraper. This material is distributed evenly along the western side of the knoll crest. A 20 cm.^{2} test pit was excavated near the mid-point of the knoll crest through 3 cm. of silt and schist fragments. No cultural material was observed.

The site may be associated with activity relating to the lake and/or outlet stream, but temporal or cultural assessment of the site is impossible to determine due to the lack of diagnostic artifacts. The presence of several types of lithic material may indicate that more than a single occupational event occurred at the site. The obsidian suggests a maximum age of ca. 2000 years B.P. for the occupational event represented by the obsidian.

There is no dangerous impact potential at the site and it is doubtful that human impact will be a problem here. Site significance is low. Little, if any, information could be gained by returning to the site. Strategies for the protection of this site need be considered only if impact is induced by human activity.



End Scraper Fragment (Chert)

XSP-128 Artifact - Actual size

XSP-129

Site Elevation: 775 Ft.	NE¼, NE¼ Section 24 T19N, R18E	Probable Site Type: Lookout
Site Age: ca. 470 Years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located atop a high bedrock hill 3/4 of a mile east of the Reed River and 2¼ miles northwest of Nutuvukti Lake. The hilltop is broad, measuring almost 250 meters by 150 meters, and rises above the surrounding terrain approximately 40 meters. The site occupies the eastern and highest part of the hill and is characterized by bedrock outcrops and a generally uneven surface. A wildfire, approximately 10-30 years old, markedly changed the vegetation from a predominantly spruce covered area to a chaotic vegetative jumble characterized by young poplar and willow which dominate the central portion of the hilltop. Vegetation density tapers off towards the edges of the hilltop giving way to a more open setting. This affords an excellent view to the south across a large arcuate moraine system and beyond to Nutuvukti Lake. To the east, a vast lowland dominated by a ½ mile long lake is in plain view. To the north, the Reed River, with its numerous meanders and gravel bars, can be seen nested amidst undulating glacial topography.

The site consists of three isolated surface scatters and one isolated flake all located on elevated outcrops near the eastern edge of the hill. The western most locality, consisting of a single black chert flake, is located on the northern edge of the hill overlooking the outlet stream of the lake. One hundred meters to the east of this locality is the main portion of the site where two bedrock knobs, 25 meters apart, constitute the northeast corner of the hill. The northern lithic scatter consists of several small flakes of various kinds of chert (dark gray, purple-banded and black) a few small flakes of obsidian, a heat fractured gray chert side scraper fragment and a large light gray chert flake. A 20 cm.^{2} test pit was excavated to a depth of 5 cm. below surface through organic silt. Two obsidian microblade fragments along with two obsidian and five chert flakes were recovered. On the second knob, a gray patinated basalt flake knife/flesher was found partially embedded in the burnt lichen mat. Both lateral edges, measuring 4 cm. on a side, showed dorsal retouch and grinding presumably to facilitate use of the distal end which exhibits flat flaking across its ventral surface which is 6 cm. width. Two black chert flakes were also found on the surface here.

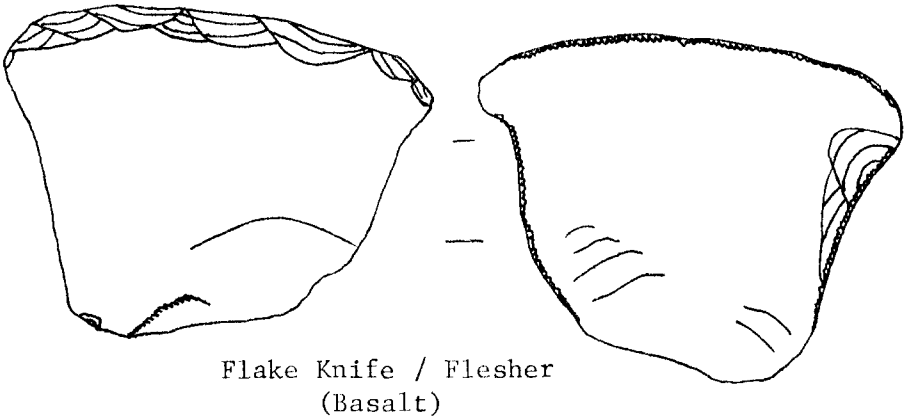
Fifty meters southeast of these two localities, four black chert flakes were found on the surface of a small bump. A 15 cm.^{2} test was excavated to a depth of 8 cm. and a single black chert flake was recovered from between 0-1 cm. below surface

The presence of numerous activity localities and a variety of lithic material suggests that more than one occupational event occurred at the site.

These four site loci are additional evidence that elevated land forms, affording good panoramic views of surrounding terrain, were often used during prehistoric times. In this case, the hilltop was probably an excellent staging area, and provided the opportunity to monitor a very extensive amount of territory.

One of the obsidian microblades was submitted for hydration analysis. The hydration rind thickness on this artifact measured 1.04μ ± 0.05μ and yields a date of 466 ± 45 years B.P. when calculated using the locally derived hydration rate of $2.32\mu^2/1000$ years. This date is extremely recent to be associated with microblade technology. The date may indicate very recent application of this technology, but such a case is extremely doubtful. It is more probable that this recent date is the result of a hydration anomaly or an incorrect measurement of the hydration rind thickness.

Since the site has been heavily impacted by wildfire and there does not appear to be an abundance of cultural material, diagnostic or otherwise, the significance of the site in terms of yielding important archeological information is low. Further archeological investigations are probably not warranted here, nor is there a need to consider protection strategies unless the site is threatened by human activity.



Flake Knife / Flesher
(Basalt)

XSP-129 Artifact - Actual Size

XSP-130

Site Elevation: 625 Ft.	SE¼, NW¼ Section 7 T19N, R19E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a terrace remnant 85 meters east and 10 meters above the Reed River nearly 4 miles northwest of Nutuvukti Lake. The course of the river is in plain view both up stream, as a meander approaches the site, and down stream as the channel curves back to the west. The relatively open vegetation at the site consists of young and mature poplar which are thickest to the south of the site. Before the wildfire, which swept this area some 10-30 years ago, the vegetation would have been a spruce-dwarf birch community with lichen, labrador tea and other woody and herbaceous plants covering the ground. Today the spruce are burned snags, and the lichen cover is a dry brown crust, while the dwarf birch seems to be returning.

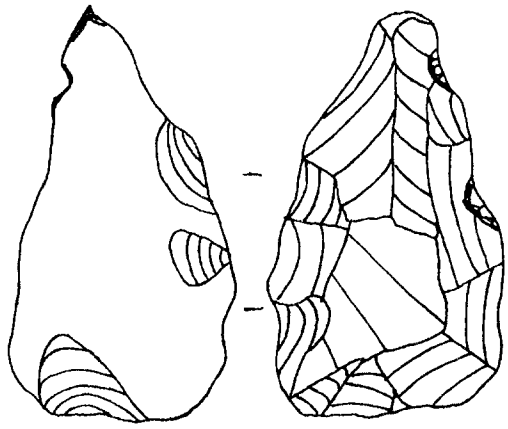
The impacted ground cover allows more extensive visual inspection of the surface of several sites in this area including XSP-130 which was located during surface reconnaissance. A fine grained basalt, gray-patinated, bifacially worked tool (scraper?) was discovered partially embedded in the brown, brittle moss. Several flakes of this same material were located within 2 meters of the tool as well as a few obsidian flakes. The working edge of an obsidian endscraper and a large circular decortication flake of obsidian with marginal use wear round out the surface materials.

A 15 cm.^{2} test pit was excavated through granular sand to a depth of 10 cm. below surface and a single flake of gray basalt was recovered from 1-2 cm. below surface.

The presence of a variety of lithic material may indicate that more than one occupational event occurred at the site. The obsidian may indicate a maximum age of 2000 years B.P. for the occupational event it represents.

The lack of diagnostic artifacts inhibits assigning temporal or cultural placement of this site. The artifacts suggest hunting related activity and the position of the site in relation to the river may be significant. Overall, the small surface scatter does not register high on the scale of culturally significant sites but simply adds to the data base concerning sites of this type along this portion of the Reed River.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.



Scraper (?)
(Basalt)

XSP-130 Artifact - Actual Size

XSP-131

Site Elevation:
675 Ft.

Site Age:
ca. 1420 years B.P.

SW¼, SE¼
Section 19
T19N, R19E
Kateel River Meridian

Probable Site Type:
Lookout

Probable Cultural Affiliation:
Unknown

This site is located on the southern flank of the arcuate moraine system that lies between 1 to 2 miles north of Nutuvukti Lake. The terrain, typical of terminal moraines dating to the Walker Lake glaciation, is chaotic with ridges, knolls and kettles occurring frequently. The site knoll occurs as an elevated conical southern end point of a sinuous glacial ridge which runs roughly northwest to southeast. This ridge indicates the glacial limit for the western half of the moraine system east of the Reed River.

A recent wildfire, roughly 10-30 years old, swept through this area leaving spruce snags and a burned, brown, brittle lichen remnant as ground cover. Dwarf birch now predominates at the site knoll and surrounding areas creating an open setting. The view, in turn, is excellent for 360°, with the broad lowland between the moraine and Nutuvukti Lake the most likely focus of attention.

Since the lichen mat has been altered by fire, the surface of the site is more easily surveyed, and it was by this method the site was discovered. A concentration of 20-25 obsidian microblades was located on the southwest sloping portion of the knoll near a saddle. Also present, slightly uphill from this cluster, was a brown chert microblade core fragment or core tablet fragment. A gray chert microblade fragment was located on the western end of the knoll top 7 meters northeast of the

microblade cluster. A utilized obsidian flake and a gray chert flake were located near the middle of the knoll top, 12 meters southeast of the main lithic cluster.

Test #1, a 20 cm.^{2} excavation was dug on the knoll top through 5 cm. of windblown silt. Sandy gravels were encountered below this depth. No cultural material was recovered. A second 20 cm.^{2} test was excavated a few meters northeast of the microblade cluster and 6 obsidian microbalde fragments, one obsidian and one small gray chert flake were recovered from 1-3 cm. below surface. The largest of these microblades (possibly a rejuvination flake) may have been utilized, as the right and left proximal edges appear ground (dulled). The distal portion of this blade is missing, but the right edge/corner at the hinge fracture exhibits use wear on both dorsal and ventral surfaces.

One of the obsidian microblades was submitted for hydration analysis. The rind thickness was measured to 1.81μ ± 0.06μ. This measurement yields a hydration date of 1412 ± 94 years B.P. using the local calibration of 2.32μ^2/1000 years. This tentative age applies only to the obsidian materials present, and may not be applicable to all of this material at the site. The fact that both chert and obsidian are present at the site may indicate the occurrence of more than one occupational event.

The site may have been a hunting overlook. The site is of low significance in terms of specific information yield, but is not without its interesting aspects. The site does not appear to be in danger of natural or human impacts. Any impacts occurring at the site need not be cause for concern unless they are of human origin.

XSP-132

Site Elevation: 750 Ft.	NE¼, SW¼ Section 8 T19N, R19E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located atop a large, glacially rounded, bedrock hill near the eastern wall of the Reed River Valley. The site is one mile due east of the river and slightly more than ½ mile east of XSP-124. Situated on the high point of the hill, 60 meters above the valley floor, the site overlooks a low, wet area to the west and offers an excellent view in all directions except to the north.

The surface of the site is sporadically covered by a burned crust of caribou lichen and moss, scattered dwarf birch and willow, and cobble-boulder size glacial till. Standing and fallen burned spruce of small size are scattered about the site.

In the northwest quadrant of the hilltop about a dozen obsidian flakes and chunks (one red-brown the rest black) were observed scattered over

an area of roughly 2 x 5 meters. Some of the obsidian exhibited cortex which suggests on site cobble reduction. Roughly 24 meters to the northeast, a single obsidian microblade fragment was observed.

A 15 cm.^{2} test pit was excavated to a depth of 8 cm. below surface amid the scattered surface flakes. No cultural material was recovered from this test excavation.

The location and character of the site suggest that it was a hunting lookout. The presence of obsidian may indicate a maximum age of ca. 2000 years B.P.

Little else can be said concerning the site. The site's basic value lies in its association with other sites in this portion of the Reed Valley and its contribution to the overall prehistoric use pattern of the area.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-133

Site Elevation: 840 Ft.	NE¼, SW¼ Section 8 T19N, R19E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located atop a large, glacially sculpted, hill-like bedrock feature approximately, 175 meters east of XSP-132. The Reed River is slightly more than a mile to the west and Nutuvukti Lake lies 3 miles to the south-southeast. Situated on the promontory of the hill, some 70-80 meters above the valley floor, the site overlooks a low wet area to the west and offers an excellent view in all directions except to the north.

The surface of the site is covered by a burned crust of moss and caribou lichen, scattered seedling size spruce, dwarf birch, willow, and cobbles and boulders of glacial origin. Standing and fallen burned spruce of small size are scattered about the site.

Cultural material at the site consists of a single chert flake observed on surface. No subsurface testing was carried out. The location and character of the site suggest that it was a hunting lookout, probably rarely used.

Little else can be said about the site. The site's only value lies in its association with other sites in this area of the Reed Valley and its contribution to the overall prehistoric use pattern of the area.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-134

Site Elevation: 950 Ft.	NE¼, SW¼ Section 8 T19N, R19E	Probable Site Type: Camp/lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located atop the most elevated feature in this portion of the Reed River Valley. The feature appears hill-like when viewed from the north, south or west. In actuality, however, the hill is a bedrock outcrop which juts to the west from the eastern valley wall. XSP-133 lies 200 meters to the west, the Reed River is roughly a mile to the west, and Nutuvukti Lake three miles to the south. The view from the site is truly panoramic except to the east. Nutuvukti Lake is visible to the south.

Much of the surface of the site is disturbed as a result of wildfire. There are areas of exposed mineral soil where frost action has churned the burned lichen/moss mat. Mineral soil is also exposed as the result of burned spruce trees falling over. Dwarf birch, willow, poplar and seedling size spruce are scattered thinly over the site.

Numerous large chert flakes and blades were found scattered over the surface of a 19 x 24 meter area on the promontory of the hill. Another smaller flake concentration lies 42 meters to the southwest.

Three 15 cm.^{2} test pits were excavated within the larger cultural concentration. Test pit "A" lies in the northwest quadrant of the surface scatter and yielded several microblade fragments, four large blades, two microblade cores and several large flakes. This material was recovered between 1-7 cm. below surface. The microblade cores, both chert, one black, one gray, are blocky in form and have been rotated. Both cores are approximately 4.0 x 2.5 x 3.0 cm. and appear to be exhausted. The recovered microblades appear to have come from the black chert core. The four complete blades average 10 x 2 x 1 cm. in size and are of the same material as the black core. Some of the flakes and blades exhibit cortex indicating on-site cobble reduction.

Test pit "B", 3 meters northeast of "A" was 15 cm.^{2} and excavated to a depth of 4 cm. Large blade fragments and flakes were recovered from 0.5-3 cm. below surface. All cultural material was black chert, some exhibiting cortex.

Test pit "C" was excavated to a depth of 8 cm. in the geographical center of the flake concentration and produced no cultural material. Test pits "A" and "B" were excavated in areas where surface material was present while test pit "C" was excavated in an area where there was no nearby surface material. The only type of lithic material observed or recovered at the site was chert. The only tool observed on surface was a fragment of a large blade that had been unifacially retouched.

The large blades and rotated microblade cores from this site are very similar to those recovered from the Gallagher Flint Station (Dixon 1970, 1971). This is not to imply that XSP-134 should be considered to be of the age attributed to the Gallagher Flint Station, locality #1, but rather that a similar activity, core reduction, was being engaged in.

The location of the site suggests that it served as a lookout and possibly a campsite as well. The size of the large flakes indicate that the cobbles from which these blades and cores were derived had to exceed 16 cm.^{2} in size. Cobbles of this size seem rather large to have been carried around by people while hunting or traveling. Therefore, it is suggested that there is a lithic source nearby or that chert cobbles are present in the glacial till which blankets the site. The nature of this survey did not allow time to investigate such questions except at the most cursory level.

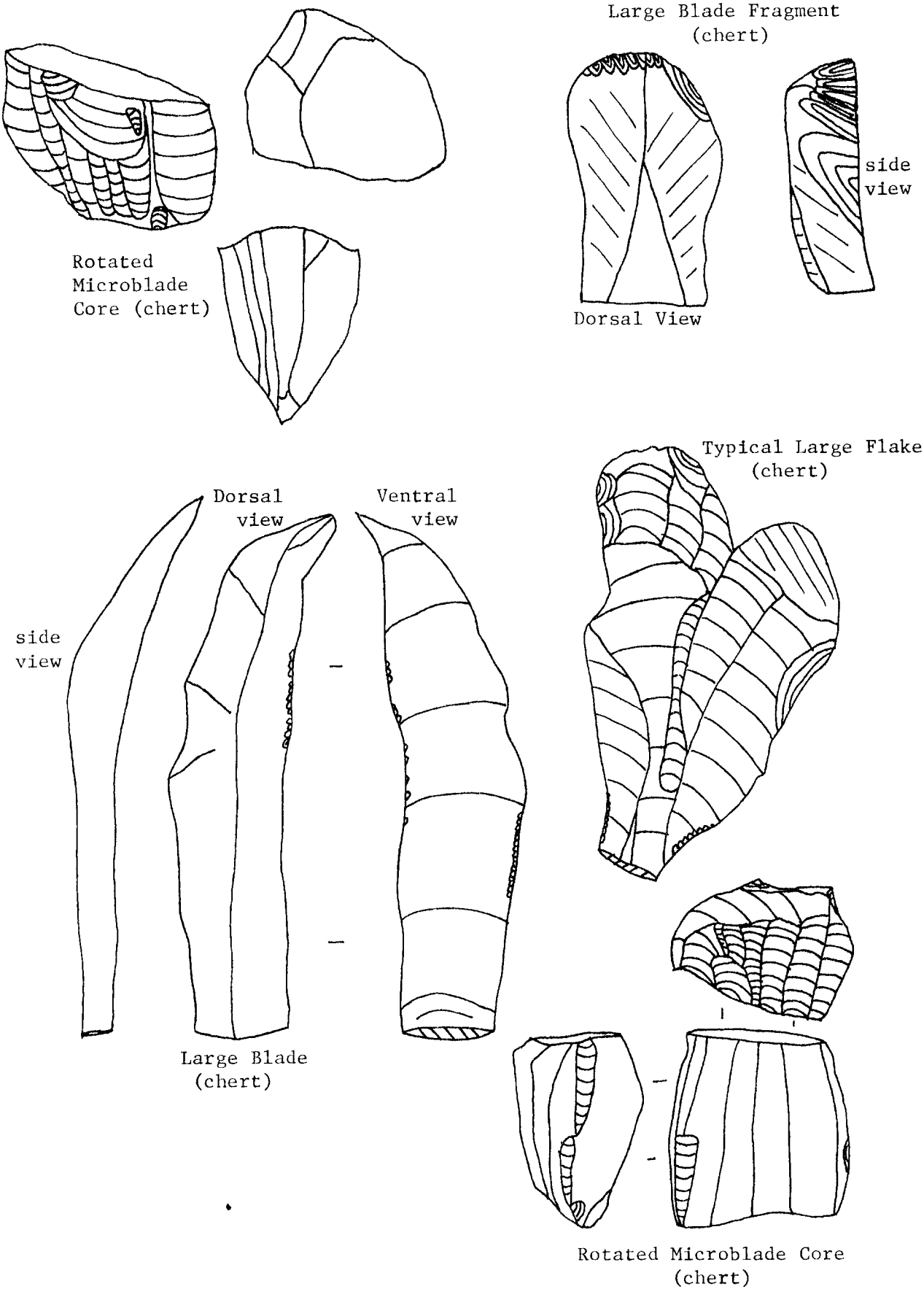
There appears to be scattered pockets of subsurface cultural material in the northeast quadrant of the site. However, the soil is quite disturbed over much of the site and it appears that much of the cultural material is no longer in its original depositional position.

Cultural material at the site appears very homogenous in nature and may reflect a single occupation or few occupations by the same group. The absence of obsidian may indicate, along with the presence of microblades, a site age in excess of 2000 years B.P.

The site is far enough from the river and difficult enough to reach, being surrounded on several sides by swampy lowlands, that there is little danger from human impacts. Natural impacts could disturb the site little more than has already occurred.

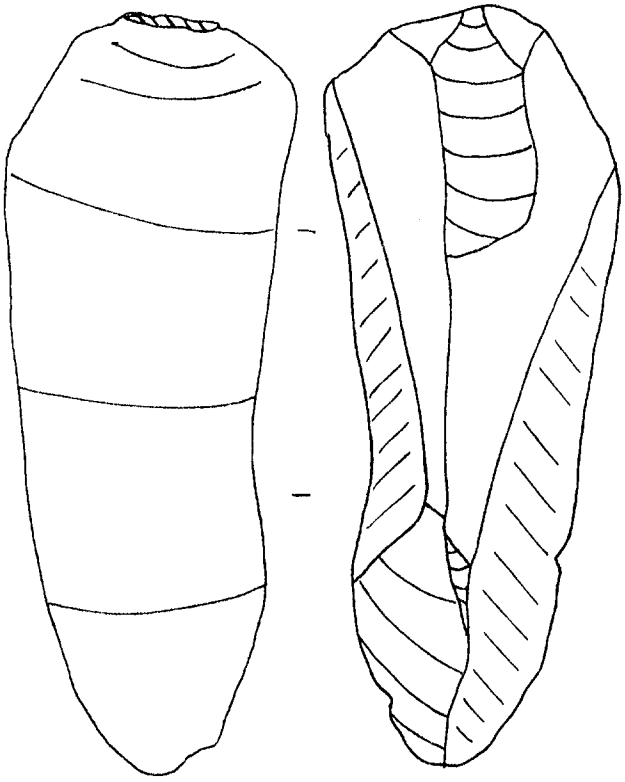
The significance level of this site is high for a variety of reasons. The site is unique in the region in terms of its cultural material and the activity this material represents. The morphological similarities between the cultural material of XSP-134 and the Gallagher Flint Station is interesting to say the least. Additional work at the site could add important data toward understanding the occupational chronology of this area and how it might be associated with vegetational and/or climatic changes or variations.

Now that the site has been recorded, there seems little reason for concern for its protection except if endangered by human impact.

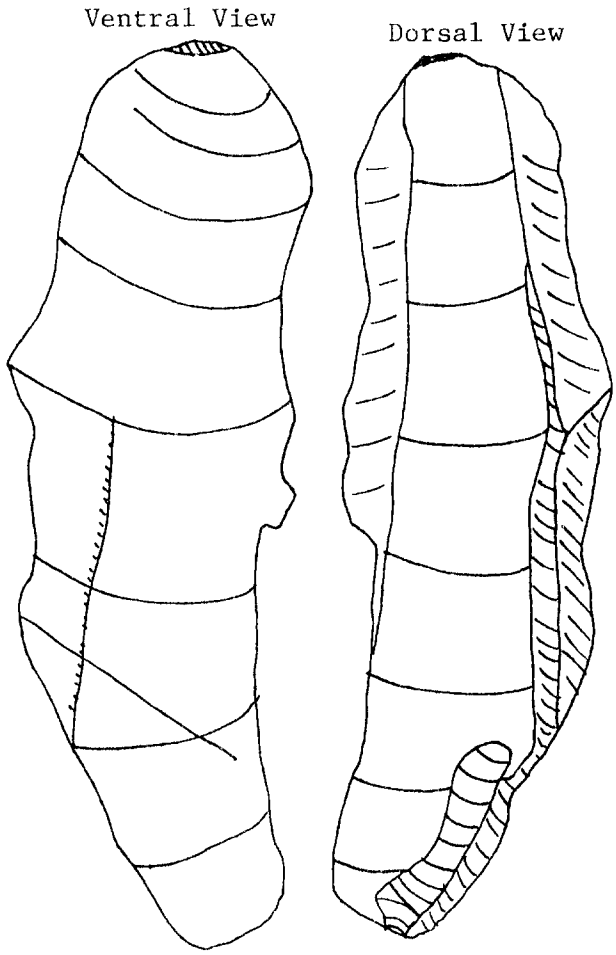


XSP-134 Artifacts - Actual Size

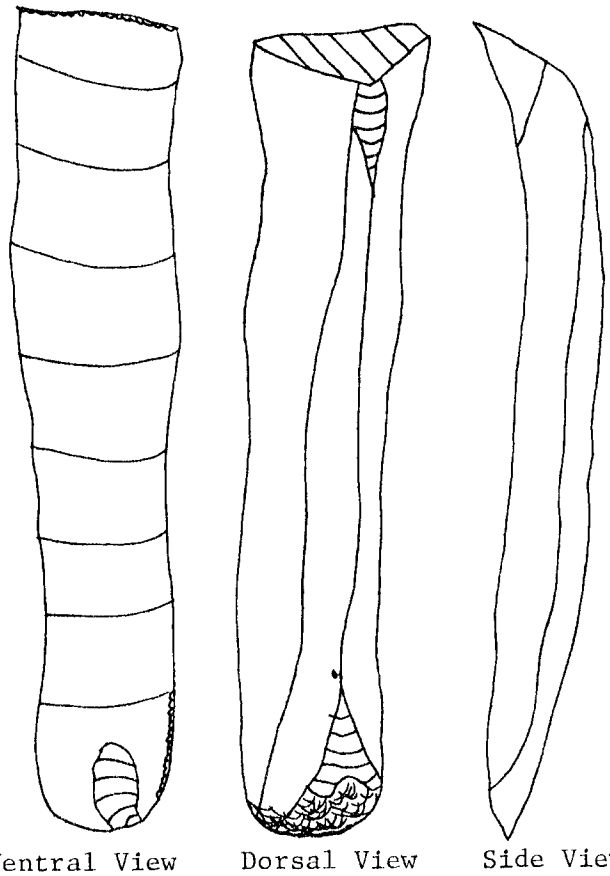
Large Blades (Chert)



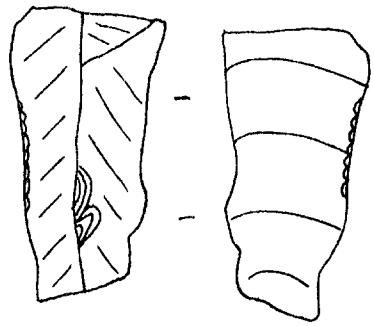
Ventral View Dorsal View



Ventral View Dorsal View



Ventral View Dorsal View Side View



Dorsal View Ventral View

Blade Fragment (chert)

XSP-134 Artifacts - Actual Size

XSP-135

Site Elevation: 700 Ft.	NE¼, NE¼ Section 24 T19N, R18E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the northern side of a large arcuate moraine system 3/4 of a mile east of the Reed River and 2¼ miles northwest of Nutuvukti Lake. The site is surrounded on three sides by elevated glacial knolls and faces east where the terrain drops over a series of lower ridges and knolls. The lake basin to the east, occupied today by a ½ mile long lake, would appear to be the natural focus of view from this locality.

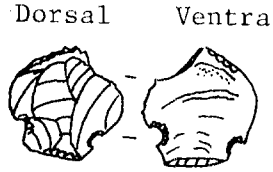
The vegetation on the site is quite open with dwarf birch and scrub willow revegetating after a fairly recent wildfire that destroyed the sparse spruce cover some 10-30 years ago. The lichen mat has not yet regenerated itself, but labrador tea and other woody and herbaceous plants are beginning to become established.

The site consists of a 1 meter^2 surface scatter of four small black and gray chert flakes. One of the black chert flakes exhibited opposing notches on the left and right proximal edges. The remainder of the generally circular edge showed signs of utilization, heaviest along the distal portion.

A 20 cm.^{2} test pit was excavated 1 meter west of the scatter. One gray and two black chert waste flakes were recovered, in coarse sand, 1-2 cm. below surface.

The non-diagnostic nature of the lithic materials at XSP-135 prevents a cultural or temporal assignment. The small quantity of materials, at least on the surface, may indicate short term use of the site. The significance of the site is low in terms of potential archeological data and no impacts, other than wildfire, should affect this locality.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.



Notched Flakes (chert)

XSP-135 Artifact - Actual Size

XSP-136

Site Elevation: 640 Ft.	SW¼, SW¼ Section 24 T19N, R19E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a low glacial feature on the east bank of the Reed River where the river cuts through a Walker Lake glaciation terminal moraine. Nutuvukti Lake lies 2½ miles to the east. Lying 12 meters above the river, the site offers a good view of the local area, especially up river.

Roughly 85% of the surface of the site is vegetated. Ground cover consists of a burned crust of caribou lichen and moss, a few scattered woody and herbaceous plants, dwarf birch and willow and small standing, dead (burned) spruce trees.

In a small area of exposed mineral soil, two black chert flakes were observed. A 15 cm.^{2} test pit was excavated to a depth of 8 cm. and produced a single, small black chert flake. The cultural material was recovered at a depth of 1.5 cm. below surface.

The location of the site and the paucity of cultural material suggests that the site was probably a once used, very briefly occupied, lookout or travel camp.

Little else can be said about this site. The site's basic value lies in its association with other sites in this portion of the Reed River Valley and its contribution to the overall prehistoric use pattern.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

XSP-137

Site Elevation: 760 Ft.	NW¼, NW¼ Section 19 T19N, R19E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located ½ mile east of the Reed River on a large hill-like glacial feature that is part of the terminal moraine complex which crosses the Reed Valley 1½ miles north of Nutuvukti Lake. XSP-129 lies 130 meters to the east while XSP-136 lies 3/4 mile to the south-southwest. The site offers an excellent view to the west and north while the view to the south and east is obscured by nearby higher terraine.

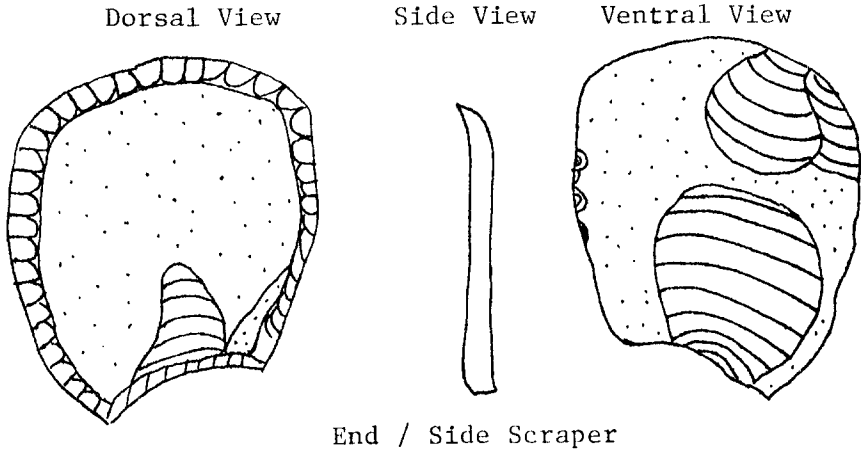
Much of the surface of the site is disturbed as the result of recent wildfire activity. There are large areas of exposed mineral soil where frost action has churned the burned lichen/moss mat. Low woody and herbaceous plants, dwarf birch, willow, poplar, seedling sized spruce and standing and fallen burned spruce are scattered over the site. Glacially deposited cobbles and small boulders are also scattered about.

Cultural material was observed on surface, in a frost boil, and consisted of a single black chert flake and a gray chert end/side scraper. No other cultural material was observed and no test pits were excavated.

The physical location and character of the site as well as the artifact suggests it served as a hunting lookout. The paucity of cultural material may indicate the site was only briefly occupied.

Little else can be said concerning the site. The site's basic value lies in its association with other similar sites located on this morainal complex. As a group, these sites seem to indicate that the area was used primarily as a hunting area.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.



End / Side Scraper

(chert)

XSP-137 Artifact - Actual Size

XSP-138

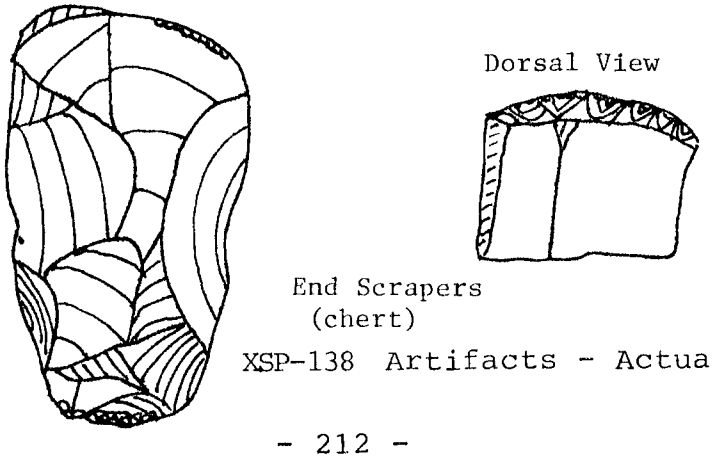
Site Elevation: 750 Ft.	NW¼, NE¼ Section 27 T19N, R18E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a glacial knoll 1 mile west of the Reed River and 4 miles northwest of the northern end of Nutuvukti Lake. The knoll is part of an esker running north from the site to a pass between the Reed River and Beaver Creek. The site lies nearly 40 meters above this pass as does a small, beaver-dammed, creek which flows east to the river. The view from the site is 1+ mile east, north, and south into the Reed Valley and west into the Beaver Creek Pass.

Vegetation at this site has been heavily affected by recent (10-30 years) wildfire activity. Dwarf birch and some woody plants are growing among the charred spruce snags and burned caribou lichen. The knoll top exhibits some areas of exposed mineral soil where frost action and some game trampling have taken place.

Surface lithics were the first indication of the presence of this site. A black chert scraper and a gray chert scraper were located approximately 4 meters apart. Both tools showed evidence of nibbling on the ends suggestive of usewear. The gray chert scraper was snapped, and like the other scraper, showed no evidence of pot lid fractures. A 10 cm.^{2} test pit was excavated to a depth of 10 cm. and produced no cultural material.

The site is of low significance. Its location and artifacts suggests hunting in the area of the pass from the Reed into Beaver Creek. Like other sites in the area, XSP-138 reveals little about the identity of its prehistoric occupants, but may point to a pattern of land use which included these glacial moraines as hunting lookouts or butchering stations. In either case, summer travel along the moraines in this area is much less energy consuming than along creeks and low-lying bogs. Now that it has been recorded, the site warrants no further protection considerations other than in response to human-induced. impacts.



XSP-138 Artifacts - Actual Size

XSP-139

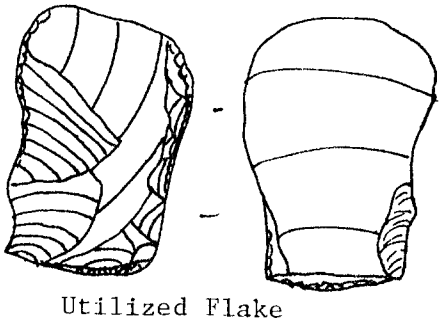
Site Elevation: 700 Ft.	NW¼, SW¼ Section 20 T19N, R19E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located nearly 40 meters east of a spillway in the terminal moraine 2 miles north of the northern end of Nutuvukti Lake. The site occurs on a 20 meter high glacial knoll and overlooks the spillway. The view in all directions is roughly 500 meters.

Vegetation at the site consists primarily of dwarf birch, woody and herbaceous plants, and grasses. A recent wildfire (10-30 years) burned over this morainal complex and left numerous spruce trees charred and uprooted and the once luxuriant caribou lichen burned and dead. Frost action is also evident on this knoll.

The site was discovered through surface observation. A single obsidian flake was located on the southern slope of the knoll. The flake shows evidence of usewear along both margins and some crushing on the proximal end. A 20 cm.^{2} test pit was excavated to a depth of 5 cm. and produced no cultural material.

Site significance is low. The site may be oriented toward hunting along this spillway and the kame and kettle topography in the area. The limited cultural material, however, tells little about the past occupants of this site except that the obsidian may indicate a maximum age of 2000 years B.P. The site, now recorded, warrants protection consideration only from human-induced impacts.



Utilized Flake
(chert)

XSP-139 Artifact - Actual Size

XSP-140

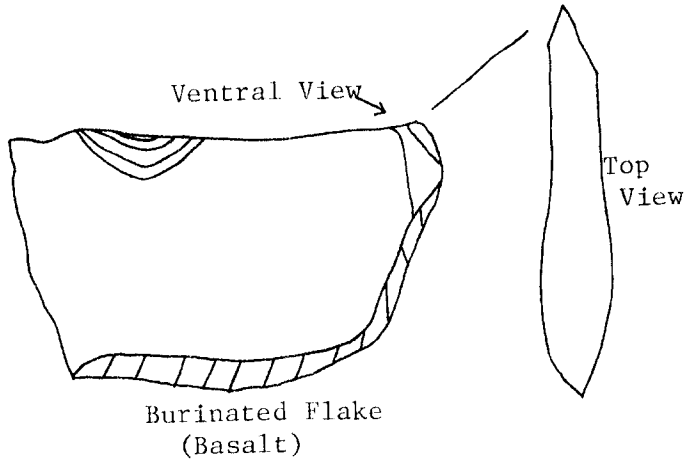
Site Elevation: 700 Ft.	NW¼, SW¼ Section 20 T19N, R19E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site occurs almost 2 miles northwest of the northern end of Nutuvukti Lake on a terminal moraine 1.5 miles east of the Reed River. The site is situated on a 20 meter high glacial knoll roughly 150 meters east of a spillway which breeches the moraine. The surface of XSP-140, which lies 140 meters northeast of XSP-139, is littered with glacial erractics. View is limited, ½ mile to the south, west and east and 150+ meters to the north. A small lake is visible to the northwest approximately 650 meters from the site.

Vegetation on the moraine has been heavily affected by recent (10-30 years) wildfire activity. Presently dwarf birch and small spruce dominate the area of uprooted and charred spruce trees and burned caribou lichen. Some frost action has disturbed the surface of this site.

The site was located through surface observation. The cultural material was clustered within a 3 meter^2 area. This material included a large basalt flake which may have been burinated, 3 small obsidian flakes, and 1 small gray basalt flake. The two basalt flakes appeared to be of different material and no retouch, other than the possible burin blow, was noted. A 10 cm.^{2} test pit excavated to a depth of 8 cm. was sterile.

Site significance is low. The site may have functioned as a hunting overlook/flaking station with people taking advantage of resources on the moraine or traveling along the spillway. The amount of cultural detritus is small, however, it suggests the site may represent more than a single event. The presence of obsidian may indicate a maximum age of 2000 years B.P. for the occupational event represented by the obsidian. The site, now that it has been recorded, warrants protection only from human impacts.



XSP-140 Artifact - Actual Size

XSP-141

Site Elevation: 600 Ft.	SE¼, SW¼ Section 13 T19N, R18E	Probable Site Type: Unknown
Site Age: ca. 1300 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a terrace 100 meters east and 15 meters above the Reed River nearly 3 miles northwest of Nutuvukti Lake. To the east of the site, the terrain rises over two slightly more elevated terraces and to the west of the site the terrace sequence continues briefly before reaching the river. The view is best to the northwest across a low-lying floodplain, and southwest down the course of the river.

Dwarf birch dominate the site's vegetation cover and a number of small spruce trees are also present. Evidence of a recent wildfire is present but not as pronounced as elsewhere in the area.

The site consists of a 2 x 3 meter surface cluster of 20-25 obsidian microblades of varying colors as well as a few gray and black chert microblades. Two relatively large, mottled red obsidian microblades exhibited marginal use retouch along one or both edges. The distal portion of a black obsidian blade, relatively thick and wide, exhibits steep marginal retouch creating a "beak-like" tool. Twenty-five meters to the south of the microblade cluster two relatively thick gray chert flakes were found on the surface.

A 15 cm.^{2} test pit was excavated on the eastern side of the cluster and three small obsidian flakes were recovered from 1-2 cm. below surface. One of the obsidian flakes was submitted for obsidian hydration analysis. A hydration rind thickness of 1.73μ ± 0.04μ was obtained. This measurement yields a date of 1290 ± 60 B.P. when calculated according to the locally derived rate of 2.32μ^2/1000 years. This date is at the extreme recent end of the microblade technology temporal span. It is possible that the obsidian flake, from which this date was derived, represents an occupational event not related to the production of the obsidian microblades. However, such a case is highly doubtful. By the same token, the variety of lithic material found at the site suggests the occurrence of a number of temporally distinct use episodes.

The significance of the site as far as yielding important archeological information is low. However, in terms of the Reed River Valley, this site fits into a pattern along with several other sites in terms of location, artifact types and amount of cultural material observed which may indicate a pattern of prehistoric land use.

No adverse impact, natural or otherwise, was observed acting on the site. Now that the site has been recorded, there need be little concern for its protection or the mitigation of any but human-induced impacts.

XSP-142

Site Elevation: 750 Ft.	NW¼, NE¼ Section 20 T19N, R19E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

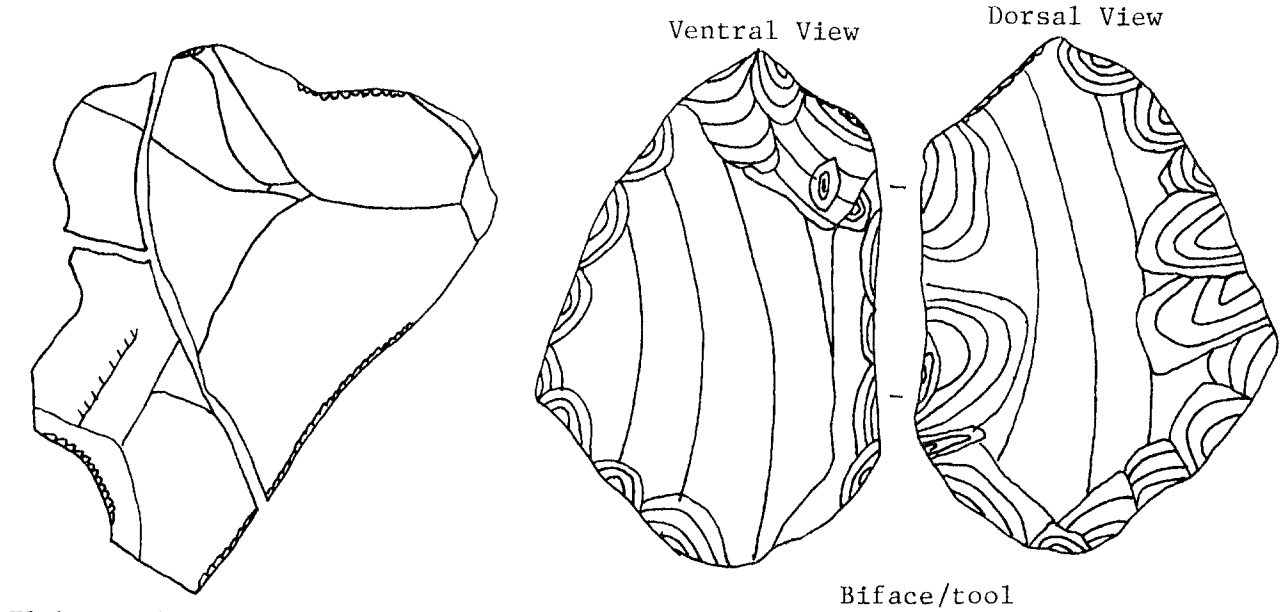
This site is located high on the eastern end of an arcuate moraine that extends 3½ miles across the Reed River Valley 2 miles north of Nutuvukti Lake. The site occupies an elevated portion of the relatively narrow ridge which forms the southern perimeter of the moraine. To the north and west of the site, the morainal terrain is chaotic where discontinuous ridges are punctuated by depressions that infrequently contain standing water. To the east, the valley walls rise to 700 meters and to the south, well drained morainal topography ends abruptly and low, poorly drained terrain extends to the north end of Nutuvukti Lake.

The vegetation is characterized by young, bushy poplar and dwarf birch. Prior to the wildfire that occurred in this area 10-30 years ago, scattered small to medium sized spruce trees would have been more characteristic. The dominance of poplar is related to the early stages of tree succession following a fire. The view from the site is excellent both toward Nutuvukti Lake and north up the Reed Valley.

Five dark gray chert flakes were found on the surface in a 2 meter^2 area. These flakes were small to medium sized, 2-4 cm. long. A 20 cm.^{2} test pit was excavated 6 cm. into fine grained silt which contained some gravels. Two large pieces of dark gray chert were recovered. One was a fragment of a flake tool as indicated by the flaking along the right dorsal edge of the relatively thick flake. The other is a bifacially flaked implement with a steeply bevelled distal portion. This piece is unusually polished over its entire surface and the possibility that this polish is non-cultural cannot be eliminated. If the polish was caused by ventifaction (wind polish), the age of this artifact could be quite old. If the polish was culturally induced the reason for it is unknown.

The limited amount of material and spatial extent of this homogeneous cluster may indicate a single event. This site is typical of a number in the region, small, isolated activity localities probably associated with hunting. Little significance can be attached to the site, and the present impacts appear to be limited to the possibility of wildfire.

Now that the site has been recorded, there is little reason to consider protection strategies except in the event of human-induced impact.



XSP-142 Artifact - Actual Size

XSP-143

Site Elevation:
750 Ft.

Site Age:
Unknown

NW¼, NE¼
Section 20
T19N, R19E
Kateel River Meridian

Probable Site Type:
Lookout

Probable Cultural Affiliation:
Unknown

This site is located on the eastern end of the 3½ mile long moraine spanning the Reed River Valley between 1 and 2 miles north of Nutuvukti Lake. The chaotic morainal topography is characterized by narrow undulating ridges offset by bowl-shaped depressions. The site occupies an isolated knob measuring 5 meters across at the top which forms the highest point on a more general north-south oriented ridge.

The vegetation on the site is mostly young, bushy poplar and dwarf birch. Formerly, small to medium sized spruce grew over this well drained terrain, but were left skeletons after a wildfire moved through the area 10 to 30 years ago. Blueberries are abundant along with other low herbaceous and woody plants. The view from the site is excellent to the west, northwest and north.

Two dark gray chert flakes and one obsidian flake were located on the surface exposed in patches of mineral soil. A 20 cm.^{2} test pit was excavated through 5 cm. of fine-grained silt mixed with gravels but no cultural material was encountered.

Little can be discerned from this small site other than it may be a small chipping station associated with hunting activities. The occurrence of several types of lithic material may indicate more than a single occupational event took place. The presence of obsidian suggests a maximum date of ca. 2000 years B.P. for the use episode it represents. The significance, now that the site has been recorded, is low and merely adds another name to the list of these types of sites in this portion of the Reed Valley. Even though the impact from wildlife appears to be extensive here, no action toward protecting or mitigating these natural impacts need be considered. Mitigating procedures need be considered only in the event of human-induced impacts.

XSP-144

Site Elevation: 750 Ft.	NW¼, NE¼ Section 20 T19N, R19E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cutlural Affiliation: Unknown

This site is located on the extreme eastern end of the arcuate moraine north of Nutuvukti Lake. The terrain in this area is chaotic where discontinuous ridges are punctuated by depressions. Two other archeological sites are located in this same area (142, 143) each occupying discretely elevated portions of the moraine complex, as does XSP-144.

The vegetation is such that an open effect is created with dwarf birch and young poplar being dominant. Blueberries are abundant as well as other woody and herbaceous plants. Snags of small to medium sized spruce trees scattered across the moraine are the visible remnants of a wildfire which passed through the area 10-30 years ago.

The view from the site is good, both to the north up the Reed Valley and south toward Nutuvukti. The steep sided valley wall, 200 meters to the east, rises to an elevation of 700 meters. The intersection of the moraine and the valley wall forms a 40 meter deep canyon southeast of the site.

One obsidian and one black chert flake were located on the surface 3.5 meters apart. Between the two flakes, a 20 cm.^{2} test pit was excavated through a few centimeters of gravelly silt, but no cultural material was encountered.

The meager remains here prevent either temporal or cultural placement. Therefore, little significance can be attached to the site. The presence of two types of lithic material suggests that more than one occupational event may have occurred at the site. The obsidian may indicate a maximum age of ca. 2000 years B.P. for the occupational event it represents.

Now that this site has been recorded, there should be little concern for its protection or the mitigation of any but human-induced impacts.

HUG-103

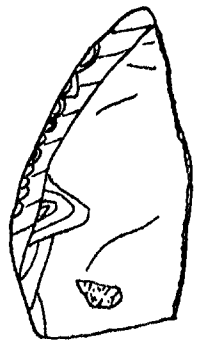
Site Elevation: 550 Ft.	NW¼, SE¼ Section 6 T17N, R19E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a sinuous glacial kame knoll 250 meters east and 50 meters above a hair pin bend of the Reed River 1½ miles west of the Kobuk/Reed River Pass. To the east of the site, the terrain rises along the flanks of the Akoliakruich Hills and to the south this same set of hills directs the course of the Reed to the west before its confluence with the Kobuk six miles downstream.

A wildfire moved through the area between 10-30 years ago leaving the small to medium sized spruce trees as snags and the normally soft white lichen ground cover a brittle brown crust. Exposed gravely sand is prevelant over most of the site. Only small dwarf birch and willow are now growing on or near the site. The diminutive vegetation allows an excellent view both up and down the valley as well as to the south-east toward the pass.

The glacial feature, upon which the site lies, measures 80 meters N-S by a few meters E-W. Near the middle of the feature, two black chert flakes were located on the surface. The larger of the two (4.5 cm x 2.5 cm.) flakes exhibited retouch along its right margin and apparent backing along the opposing left margin. Subsurface testing was deemed unnecessary as there was little or no mineral soil present and the surface of the site was almost totally exposed.

The significance of the site is low and offers very little in the way of archeological data. The natural impact on the site has been recorded, there should be little concern for its protection or the mitigation of any but human-induced impacts.



Retouched Flake (chert)

HUG-103 Artifacts - Actual Size

HUG-104

Site Elevation: 475 Ft.	NE¼, SE¼ Section 12 T17N, R18E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a terrace 60 meters south and 5 meters above the Reed River at its confluence with a northward flowing stream that originates in the southern Akoliakruich Hills. The terrain rises on all sides of the site so that the view is focused down valley to the west following the course of the Reed.

A wildfire moved through the area 10-30 years ago and destroyed the spruce and birch that once grew here. Now poplar and willow are the dominant trees. The lichen mat is a brown brittle crust instead of its normal soft white character. Uprooted spruce have initiated surface erosion.

Three flakes of chert (gray, black and blue) were located in two such erosional zones at the site. Two 20 cm.^{2} test pits located 5 meters apart were excavated to a depth of 10 cm. through coarse grained sand and pea gravel. No cultural material was encountered in either test pit.

The site does not appear to contain significant data. Cultural or temporal assessment is not possible due to the paucity of cultural materials. The present impact, erosion, should not be of concern as the physical integrity of this site, now that it has been recorded, is of little concern unless impacted by human activity.

AREA #6

Nutuvukti Lake

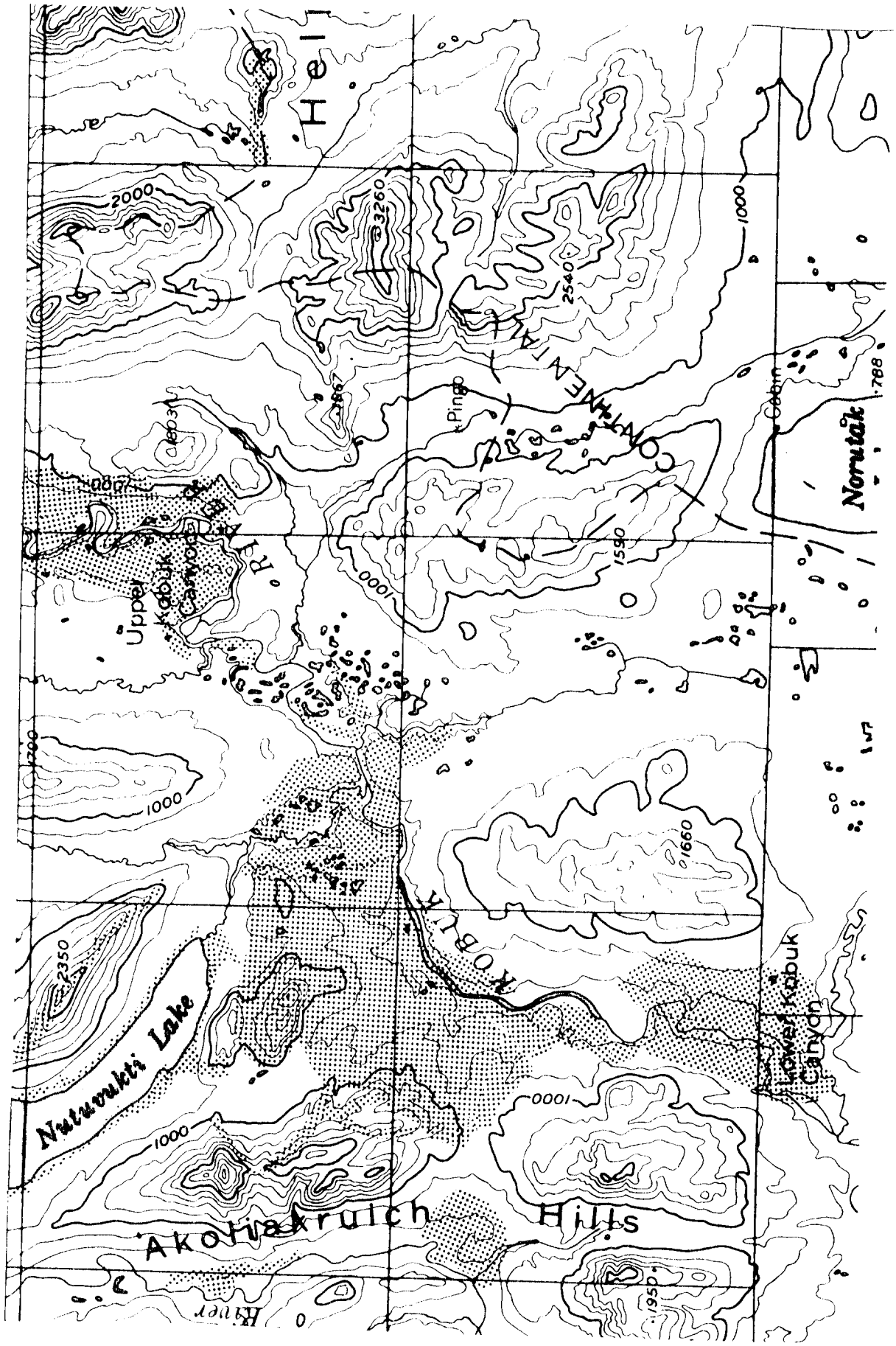
Camp #11 - July 27-August 1

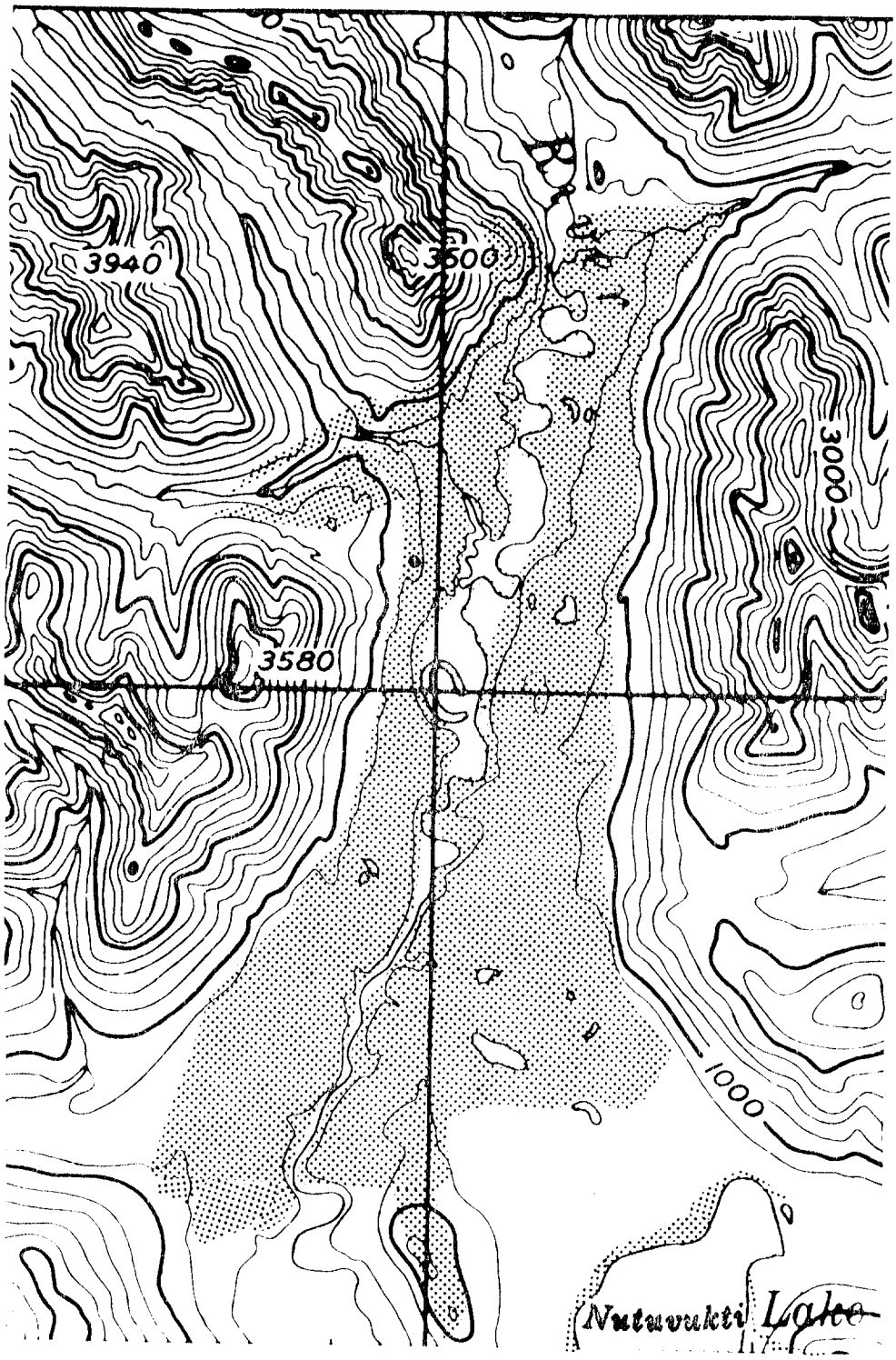
This camp was located on a glacial feature on the north shore of Nutuvukti Lake and is approximately 4 air miles east of the Reed River. We arrived at this camp via helicopter. We spent six days working out of this camp surveying the area bordering the lake. The shoreline of the lake is roughly 20 miles. To cover this area, we employed a raft and an outboard motor, without which we could not have covered a quarter of the area.

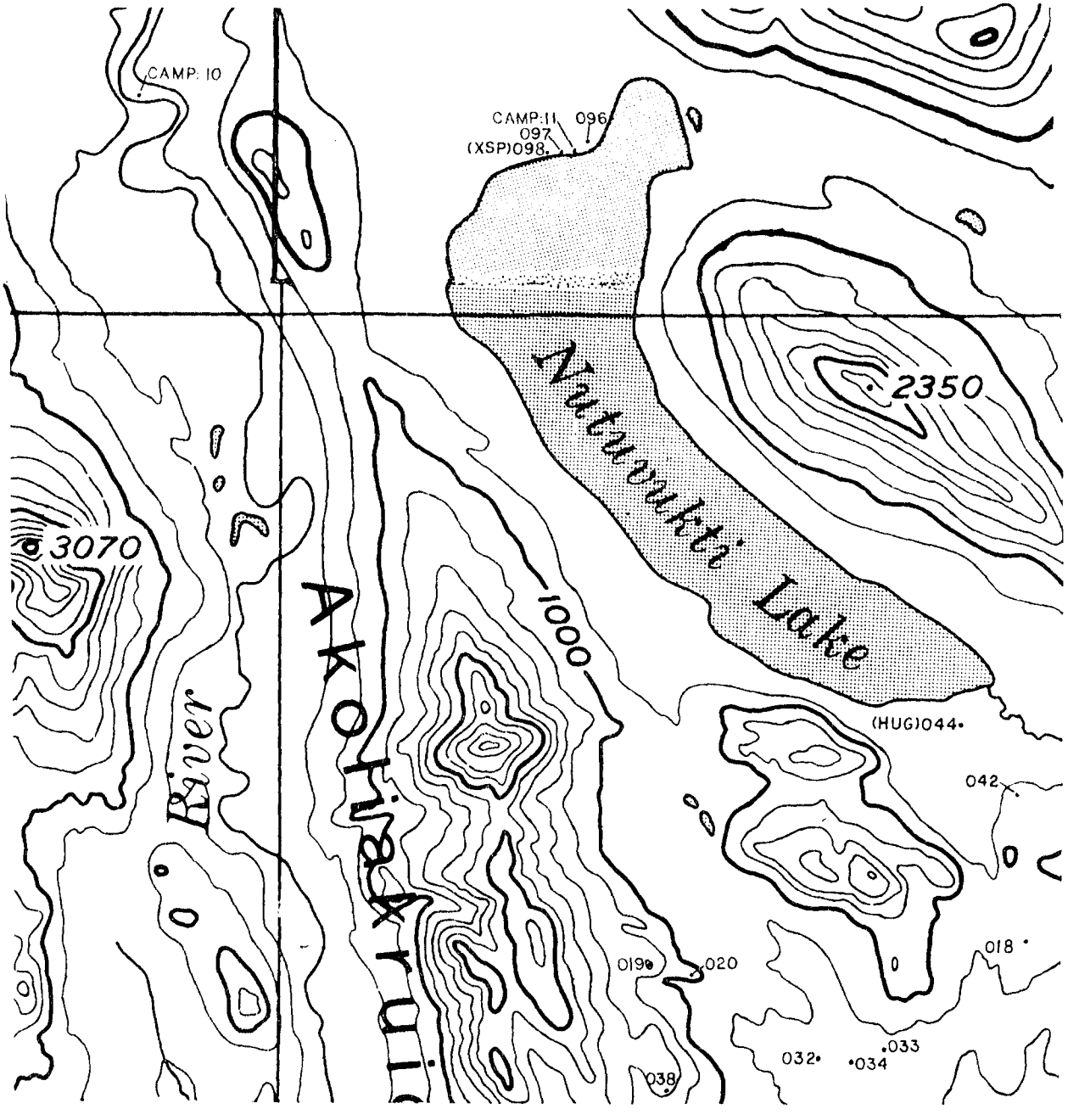
Nutuvukti Lake is bounded by hills on the east and west which reach elevations of 700 meters. Itkillik Glacial topography is present at the north and south end of the lake. The area around the lake has been burned in the recent past, but the burn is considerably older (approximately 100 years) than those to the north and south. As a result, the area around the lake is in many places rather densely vegetated. The margins of the lake are for the most part wet, and support robust growths of cotton grass tussocks and willows. Only at the north and south ends of the lake area are there attractive camping locales. It was in these two areas that the only prehistoric sites, a total of five, were found. All of these sites were small, with the exception of one at the north end of the lake, which seems to be fairly extensive in size. In terms of age, tool types, site morphology, and possible cultural affiliation, the Nutuvukti Lake sites are typical of the majority of sites located in this region.

We had expected to find a high site density situation at Nutuvukti Lake based on the high site density areas directly to the south of (Camp #4 area) and north (Reed River area) of the lake. As can be seen, this was not the case, and probably reflects Nutuvukti Lake's poor geomorphological setting.

Several recent campsites were also located around the lakeshore. One, which is on the locale of the largest prehistoric site on the lake, has been used repeatedly over the last 30 years. Another is the remains of a sod house built by some "back to the land" people about 8 years ago. The only other recent site appears to be a trapping camp which is at least 30 years old.


Upper Kobuk
Pingo
Nomtak
Nutuvukti Lake
Akoliakruich Hills
Lower Kobuk Canyon
AREA SURVEYED
six miles


3940
3500
3000
3580
1000
Nutuvukti Lake
six miles
AREA SURVEYED


CAMP: 10
CAMP:11
096
097
(XSP)098
2350
3070
Naturuktu Lake
1000
Akohiarui River
(HUG)044
042
018
019
020
032
033
034
038
six miles

XSP-096

Site Elevation: 720 Ft.	NE¼, SW¼ Section 28 T19N, R19E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

The site is situated on a low bench that lies on the southeastern end of a low ridge located at the north end of Nutuvukti Lake. The bench is about 100 meters north of the point that projects into the lake from the northwest, forming the west side of the "embayment" at the northernmost end of the lake. The bench rises about 2 meters above the gently sloping terrain that leads to the lakeshore. The site offers a good view of the lake to the south and east. The view northward is obscured by trees and the higher ground of the ridge.

The vegetation is characterized by scattered spruce trees and a ground cover of lichen dwarf-heath vegetation. Occasionally paper birch and alder are present. Large tracts, north of the lake, are very poorly drained with scattered, stunted black spruce on the few drier nummocks. This ridge is one of the few well-drained areas at the north end of the lake.

The site was found by surface observation. A black chert flake, 3.5 cm. in length with unifacial retouch along one edge, was found in a small barren patch of mineral soil beneath a spruce tree. The artifact is less than a meter from the edge of the bench. No other cultural material was observed. Because of its location, the site probably functioned as a lookout, but it may also simply represent the accidental loss of an artifact during travel.

The significance of the site is minimal. It documents prehistoric use of the north shore of Nutuvukti Lkae, but lacks artifacts diagnostic of any time period or cultural affiliation. The site is threatened by continued erosion of the face of the low bench it sits on, but is otherwise not threatened at present. Recreational use of Nutuvukti Lake is low, and thus impact from human activity is unlikely. Now that the site has been recorded, protection or mitigative action need be considered only in the case of human impact.

XSP-097

Site Elevation: 610 Ft.	SE¼, SW¼ Section 28 T19N, R19E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation:

This site is located on the northern bench of Nutuvukti Lake approximately 50 meters west of camp #11. The beach is gravel and fine sand below a low sod bluff which constitutes the lake's edge. The vegetation to the north of this location is mixed birch and black spruce, with thick understory of blueberry, dwarf birch and lichen, as well as other low woody

and herbaceous plants. The view from the site is good onto the lake, and east and west along the northern shore of the lake.

A single brown granular chert biface fragment was observed in the swash zone during surface reconnaissance of the shore area. The biface fragment measures 5.7 cm. long by 5.5 cm. wide by 1.4 cm. thick and appears to be a medial section. The irregular terminations on both ends precludes defining its original shape. Additional survey along the beach and back up on the sod bluff revealed no further cultural material.

This is believed to be an isolated find possibly associated with the nearby site, XSP-098, 100 meters to the west. Its significance is minimal but contributes to the data, suggesting that the northern end of Nutuvukti Lake has been the focus of most of the activity in and around the lake.

Since the artifact was found in the swash zone of the lake, which is under continual impact, it was collected and curated along with the other materials from the survey. Recreational/subsistance activity in the area is probably minimal and the only impact endangering the site today is lacustrine erosion. No protective measures need be considered for the site at this time.

XSP-098

Site Elevation:
705 Ft.

Site Age:
Unknown

SE¼, SW¼
Section 28
T19N, R19E
Kateel River Meridian

Probable Site Type:
Camp

Probable Cultural Affiliation:
Unknown

This site is located on a beach ridge about 70 meters back from the northern shore of Nutuvukti Lake, about midway along the northern shore. The east end of the ridge is truncated by a small stream that drains part of the poorly drained wet lowlands north of the lake. The ridge is oriented east-west (70° magnetic). The portion of the ridge encompassing the archeological site is about 100 meters long and about 40 meters wide. The beach ridge was formed during a higher stand of the lake at some time in the past, and other remnants of it can be traced along the northshore.

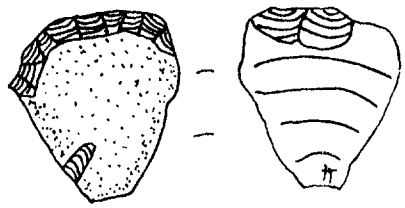
The vegetation on the beach ridge consists of an open mat of lichen with only a few mature spruce trees. There is a notable scarcity of the dwarf heath species, commonly a part of this assemblage, probably owing to the dryness of the ridge, resulting from the well-drained, coarse textured character.

There are, however, numerous small spruce trees and seedlings growing on the ridge, suggesting a change to a more forested character is underway. The swales on either side of the ridge are occupied by dense dwarf birch vegetation.

The site was located by surface observation; a concentration of black chert flakes was first observed. Since the site is probably on a native allotment, no site tag was placed on the site. In the absence of a site tag, artifact locations were measured from a prominent axe-cut spruce stump approximately in the middle of the open area. The black chert flake concentration, 1 meter^2 in area, is centered 5.9 meters bearing 143° from the stump (all bearings magnetic). A light gray chert flake lies 7.7 meters 65° from the stump. Two obsidian flakes were found, one is located 9.0 meters, 260° and the other 45 meters, 70° from the datum stump. A concentration of gray chert and obsidian flakes is situated 28 meters bearing 260° from the datum. Two obsidian scrapers were found at the site. One, 2.5 cm. long, was found in a game trail on the northern part of the ridge, 11.6 meters bearing 18° from datum. The other larger scraper, 3.5 cm. long, was situated on the south side of the ridge, 12.7 meters, bearing 260° from datum. Field examination of the working edges of the two scrapers with a 21X microscope revealed heavy use wear on the lateral corners, but little or none in the center of the working edge. This suggests the center portions of the working edges had been re-sharpened after heavy use, and the scrapers had been discarded or misplaced shortly thereafter.

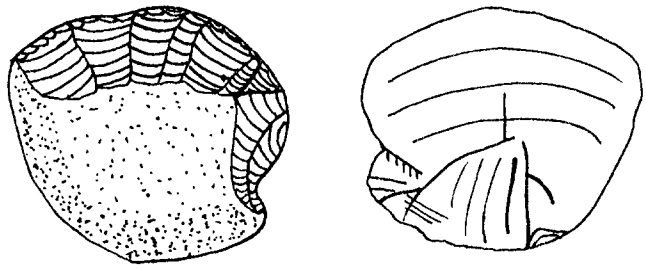
This site is the most extensive of any found at Nutuvukti Lake. The presence of scrapers probably indicates hide processing at this locality, while the numerous flakes of lithic detritus point to lithic reduction activities. The variety of lithic material at the site suggests multiple occupations have occurred at the site. The obsidian may indicate a maximum age of ca. 2000 years B.P. for the occupational event it represents. Despite these attributes, the site must be credited with only moderate significance overall, because of the lack of artifacts diagnostic of either a time period or of cultural affiliation. The site is not presently threatened by natural disturbance processes. In the recent past, the ridge has been the base camp for geological field crews, and a substantial amount of refuse remains: 7 rusted 55 gallon barrels are located a few meters from the datum tree stump, and some trash pits and additional barrels are located about 40 meters to the west. Some pits associated with the camp have disturbed the surface artifacts. Since the site is located on a native allotment, it would be wise to suggest to the owner that further testing and collection of the surface artifacts be done prior to any substantial development on the parcel.

Dorsal View Ventral View



End Scraper (obsidian)

Dorsal View Ventral View



Scraper (obsidian)

XSP-098 Artifacts - Actual Size

MK-4

Site Elevation: 630 Ft.	NE¼, SE¼ Section 4 T18N, R19N	Probable Site Type: Hunting/trapping
Site Age: ca. 30 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Recent

This historic site is located atop a small elevated piece of ground on the eastern shore of Nutuvukti Lake. The site lies on the central portion of the eastern lakeshore and while not well drained, is better drained than the surrounding area. A stream empties into the lake about 20 meters south of the site. A broad gravel and cobble bench lies to the west and north of the site.

The site area is heavily vegetated, supporting a robust growth of lichen, moss, low woody and herbaceous plants, willow, and relatively large spruce. Because of the trees, the view from the site is very limited except toward the lake.

The site consists of ax cut spruce trees, cut spruce poles lying on the ground, numerous rusty cans imbedded in the moss and lichen, several pieces of rusted-out stove pipe, and a rusted-out sheet metal stove which is over a stump. One of the rusted cans was still readable, HILLS BROS. COFFEE, RED CAN TYPE, the most recent patent was 1936.

The evidence suggests that this was a hunting or trapping camp which is at least 30 years old. Beaver are present in the nearby stream which may be the reason for the camp.

HUG-042

Site Elevation: 950 Ft.	NE¼, SW¼ Section 24 T18N, R19E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

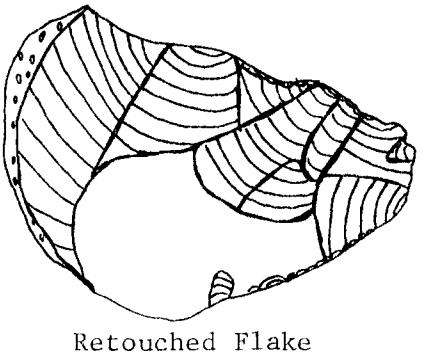
This site is located 1 mile southeast of the head of the Nutuvukti Lake outlet on a hill nearly 30 meters above the lake. Situated on a kame terrace (50 meters x 5 meters), the site provides a good view of the southern end of Nutuvukti Lake and the first 1 mile of the outlet stream. The site also provides a good view of the local terrain.

Vegetation at the site has been affected by a recent wildfire which passed throuth the area 10-20 years ago. Uprooted and charred spruce trees litter the bedrock knolls. Presently small spruce trees are growing amid caribou lichen, woody plants, aspen and alder. A game trail traverses the site, and animal activity, combined with frost action, has kept the surface of the kame sparsely vegetated along its lateral mid-line.

The site was located through surface evidence. A single obsidian flake was located on the southern half of the kame's eastern slope. This large flake (6 cm. x 4 cm.) shows evidence of use along both margins, and numerous flake scars on one surface. Cortex is present on the proximal end of this flake, indicating cobble reduction may have taken place at the site. A 10 cm.^{2} test pit was excavated to a depth of 5 cm. in the middle of the kame and yielded no cultural material.

Site significnace is low. Based on the single artifact, little can be said. The site may have served as a hunting locale and/or overlook. The presence of obsidian suggests a site age no greater than ca. 2000 B.P.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.



Retouched Flake
(obsidian)

XSP-042 Artifact - Actual Size

HUG-044

Site Elevation: 650 Ft.	SW¼, SE¼ Section 13 T18N, R19E	Probable Site Type: Unknown
Site Age: No older than ca. 2000 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the southern end of Nutuvukti Lake approximately 250 meters southwest of the head of the outlet stream. Situated on the eastern end of a glacial knoll, the site occurs nearly 130 meters south of the present lakeshore. A small creek flows northeast, roughly 5 meters east of the site. The view from the site includes the creek and low-lying terrain between the site and the lake outlet.

Vegetation at the site consists of caribou lichen, spruce, woody and herbaceous plants, and dwarf birch. The banks of the small creek adjacent to the knoll are thickly vegetated by willow and alder. Wildfire activity is not as apparent here as at HUG-042.

The site was found through surface indications. A single piece of obsidian was found approximately 4 meters from the eastern edge of the knoll. This medium sized flake exhibits cortex and flake scars, but shows no sign of use. No other cultural lithics were found at the site.

A 10 cm.^{2} test pit was excavated to a depth of 10 cm. and produced no cultural material. At a depth of 6 cm. below surface, there appeared to be a thin layer of charcoal and ash. It would be impossible to determine if the origin of the fire was cultural without additional testing.

The presence of cortex on the obsidian flake suggests that cobble reduction may have occurred at the site. Additionally, the presence of obsidian suggests a site age no greater than ca. 2000 years B.P. Site significance is low. Now that the site has been recorded, there should be little concern for its protection or the mitigation of any but human-induced impacts.

AREA #7

Lake Selby/Narvak Lake

Camp #12 - August 2-18

We arrived at this camp via twin engine amphibious airplane. Camp #12 was located on a high lakeshore glacial feature on the northwest corner of Lake Selby, which is roughly 30 air miles west of Nutuvukti Lake. Nutuvukti Lake.

We worked out of this camp for 17 days, surveying the area around Lake Selby and Narvak Lake. We surveyed these lakes using the same logistic technique, raft and outboard motor, that we had employed at Nutuvukti Lake. We also had the use of a helicopter for 1.5 days which allowed us to survey the Walker Lake Glaciation terminal moraine complex north of Narvak Lake, the Itkillik Glaciation terminal moraine south of Selby Lake, a small additional portion of the Reed River, and quick aerial reconnaissance and ground check of Lake Minakokosa. Selby and Narvak Lakes have a combined shoreline of approximately 35 miles; all of this area was surveyed. We ranged as far away from the lakeshore as 1.5 miles. A total of 81 prehistoric archeological sites were located working out of this camp.

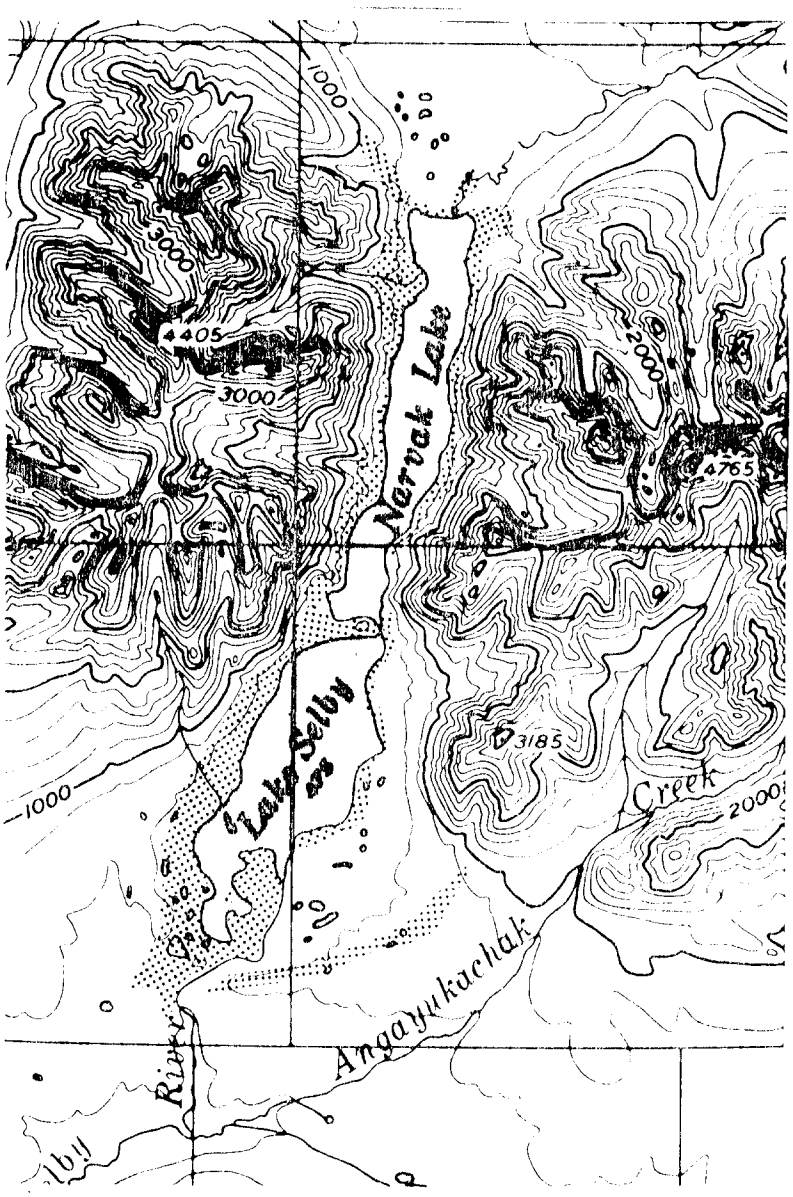
The geomorphology of Lake Selby and Narvak Lake is somewhat different. Lake Selby, with the exception of the extreme northern end, is surrounded by low rolling country, over which are scattered numerous stagnate ice glacial features of Itkillik age; this is particularly true of the southern end of the lake. These glacial features offer excellent camping locations in close proximity to the lake, and most of them afford an excellent view of the local area. Narvak Lake is bounded by mountains of over 1400 meters which descend steeply to the lake's edge. Most of the prominant lake edge features are glacially capped, bedrock outcrops. There are fewer good camping locations around Narvak Lake than Lake Selby.

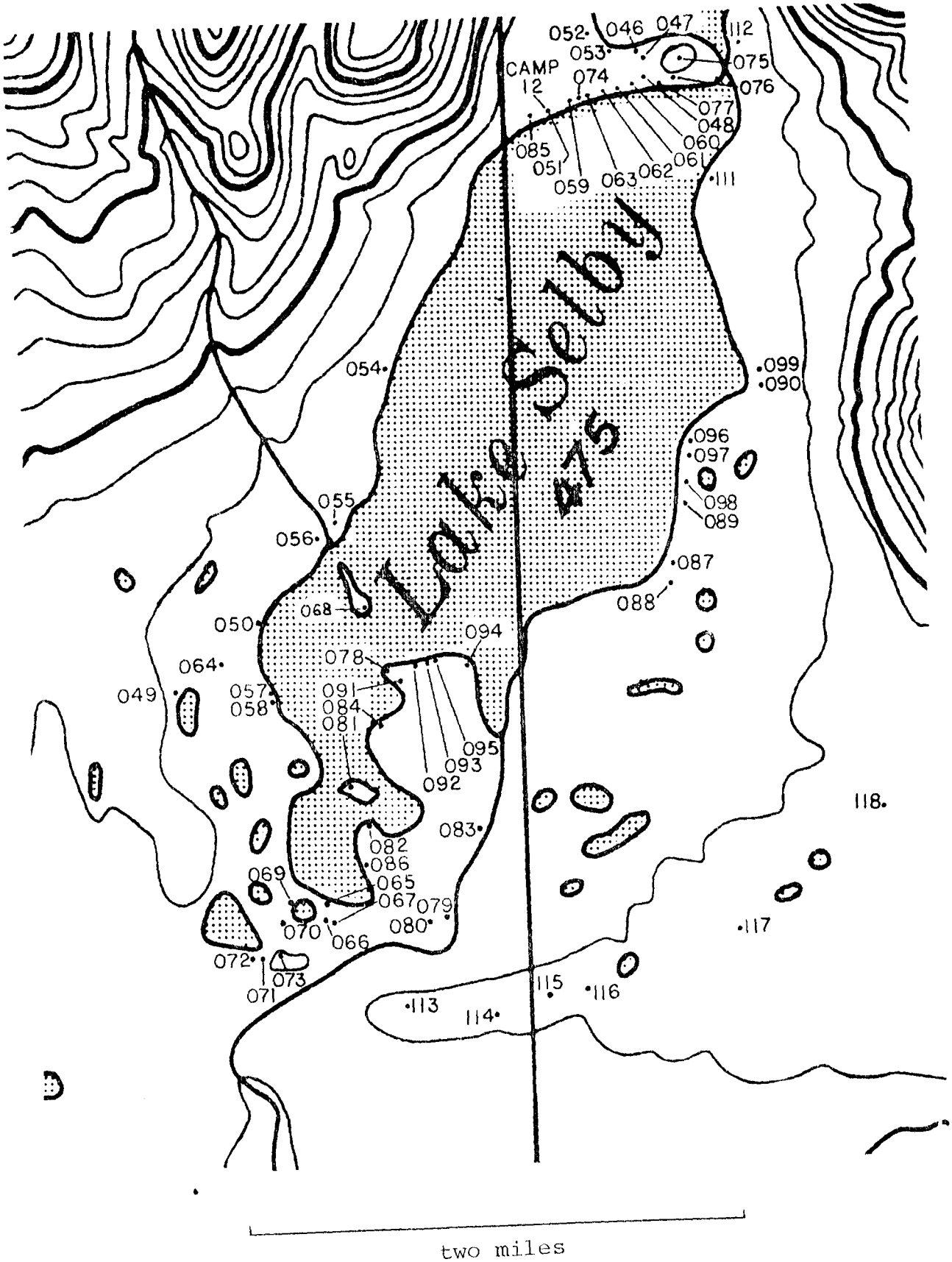
The area around both lakes has been burned in the recent past, however, the burn around Selby Lake appears to be a bit more recent than that at Narvak Lake. Both fires appear to be in the 100 year plus range, as demonstrated by vegetation density.

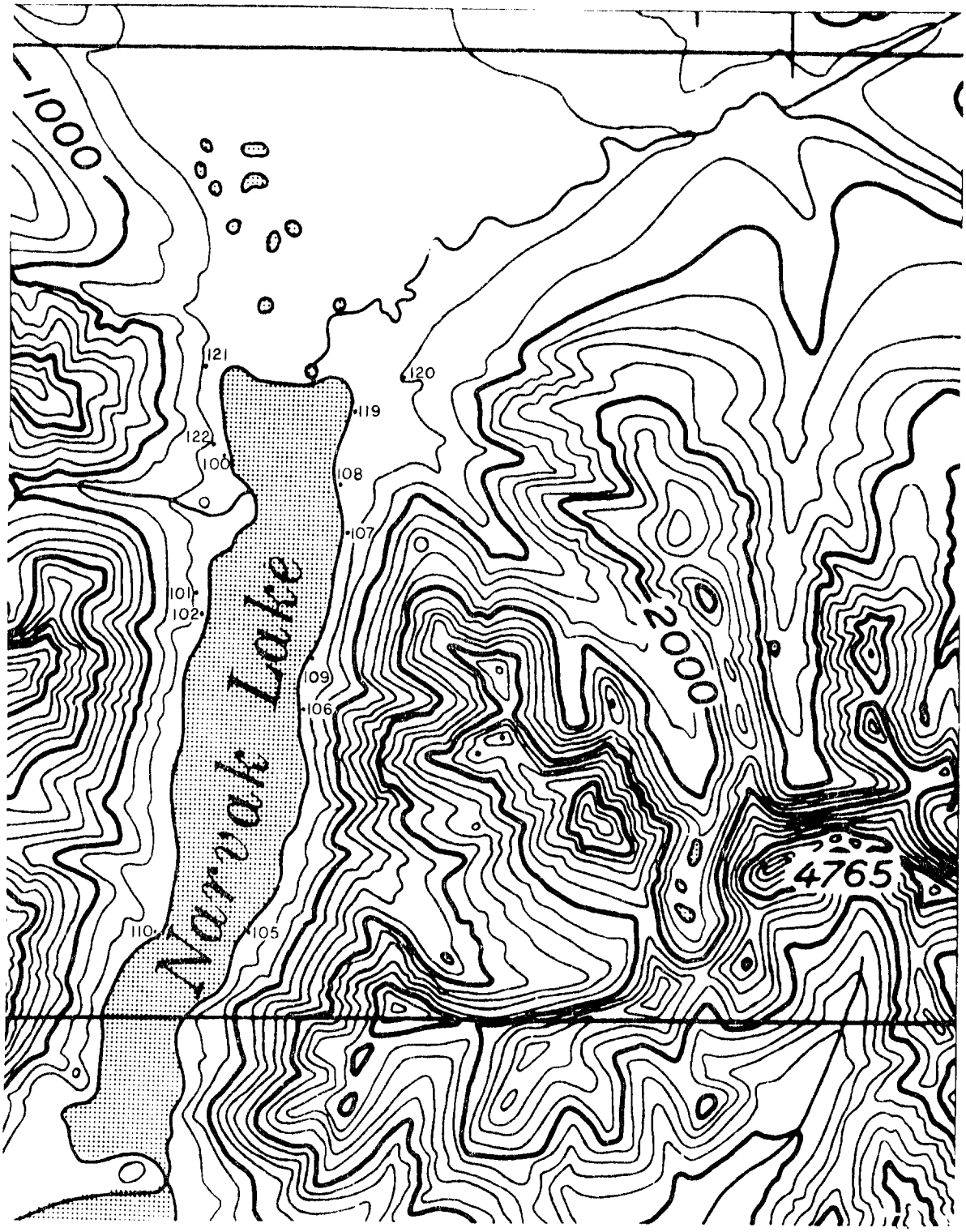
The prehistoric archeologic sites located around the two lakes appear to cover a fairly wide temporal range, roughly 7000-200 years before present. We encountered some sites of a type which we had not noted previously. One site appears to be a late prehistoric Eskimo semi-subterranean house with associated cache pits. Another site yielded projectile points of a distinctive type we had not previously found. These artifacts may represent the Norton or Ipiutak (Eskimo) culture.

Several of the sites located around Selby Lake may be more than simple hunting camps, as indicated by their apparent large size- However, only additional work at these sites can produce the necessary data for such a determination.

For the most part, exceptions noted, the sites in the Selby/Narvak Lake area are similar to the majority of sites located during this survey in adjacent areas. On August 18, we completed our field work and returned to Bettles and then to Fairbanks.


1000
3000
4405
3000
Nervak Lake
2000
4765
Lake Selby
3185
1000
Creek
2000
Angayukachak
Riv
six miles
AREA SURVEYED


CAMP 12
052
046
047
112
053
075
074
076
077
048
060
061
085
051
059
063
062
111
054
099
090
096
097
098
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093
092
083
118
082
086
069
065
067
079
070
066
080
117
072
073
071
115
116
113
114
two miles


1000
2000
121
120
119
122
100
108
107
101
102
109
106
110
105
Mount Luke
4765

two miles

HUG-046

Site Elevation: 500 Ft.	SW¼, SE¼ Section 6 T17N, R15E	Probable Site Type: Camp
Site Age: ca. 1660 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

The site is located on the northern side of the peninsula that separates Lake Selby and Narvak Lake. The site occurs on a terrace edge about mid-point on the peninsula approximately 15 meters above Norvak Lake and 30 meters south of its present shoreline. HUG-046 is situated nearly 50 meters west of the rock outcrop which is the point of highest relief on the peninsula. The view from the site is 100+ meters north, east, and west along the peninsula's northern edge.

The flat terrace upon which the site lies is heavily vegetated and poorly drained. The vegetation is dominated by caribou lichen, woody plants, and small spruce trees. Some birch trees, grasses, and herbaceous plants are also present. In the area south of the terrace edge, there exist 8-10 rounded depressions (roughly 2 meters in diameter), which may be the result of frost action in this generally hummocky zone. A 20 cm.^{2} test pit was excavated to a depth of 10 cm. in one of these depressions and produced nothing cultural. It appears a good deal of ponding of surface water occurs in these depressions. No game trampling or recent wildfire activity is apparent at this site.

This site was initially found through subsurface testing. Five 20 cm.^{2} test pits were excavated to a depth of 30cm. Test #1 produced 3 small obsidian waste flakes at a depth of 0-10 cm. below surface. Test #2 produced 2 gray chert blade-like flakes, 1 gray chert waste flake, 2 tiny obsidian flakes and 1 obsidian blade-like flake all from a depth of 0-8 cm. Tests #3 and #5 were sterile. Test #4 produced 2 whitish chert and 2 black chert flakes (all small) and 1 tiny obsidian flake from a depth of 0-8 cm. The test pits were placed along the terrace edge and were roughly 10 meters apart.

The stratigraphy in Test #4 was drawn and photographed as it appeared to be representative of the site's soil structure. The 0 horizon was generally lightly packed and ranged from 0-2 cm. in thickness. At 2-4 cm. below surface, the A horizon extended down 2-4 cm. and was not clearly distinct from the upper unit. Between 4-8 cm. the A_1 and A_2 horizon were fairly mottled, loamy, and contained flecks of charcoal. These two horizons had a mixed black and ashy appearance suggestive of a wildfire origin. It appeared that all the cultural material came from these upper units. The B horizon was a dark chocolate brown mixed sand and loess interspersed with lighter brown pockets of sand. This unit was located between 8-22 cm. below surface. The C horizon began at a depth of approximately 22 cm., and went to the limit of excavation at 30 cm. below surface. The subsurface material is predominately loess.

Further investigation of the heavily vegetated surface, nearly 4 meters northeast of test #4, produced 3 obsidian flakes. These 3 medium-sized flakes showed evidence of use wear. The flakes were larger than the subsurface material. Together, the surface and material suggests the site occupies an area of at least 22 meters x 4 meters along the terrace edge.

An example of the subsurface obsidian was submitted for hydration analysis. This analysis determined the hydration rind thickness to be 1.96μ ± 0.06μ. Using the locally derived (radiocarbon dated obsidian) rate of $2.32\mu^2$/ 1000 years, the indicated age of the obsidian is 1656 ± 101 years B.P.

More than one occupational event may be, and very probably is, represented by this site. Differences in lithic material and the area over which the lithic material was found, as well as the site location and number of nearby sites, suggest multiple site use events. Data suggests that at least one of these periods of use occurred roughly 1700 years ago.

Site significance is moderately high if only because a fair amount of important data may be contained in the site. The cultural material suggests the site functioned, at the least, as a base camp for hunting operations in the area around the lakes. The depressions at the site require further testing. If the depressions are cultural in origin, they would indicate long term occupation of the site; perhaps overwintering. Additionally, there are another 15 sites in close proximity to HUG-046 (the highest site density of anywhere on the lakes) which indicates the attractiveness of the general locale. The area currently experiences visitor use and it is suggested that these sites be further documented to mitigate future impact by humans. The site appears in no danger of natural impact.

HUG-047

Site Elevation: 530 Ft.	SW¼, SE¼ Section 6 T17N, R15E	Probable Site Type: Lookout
Site Age: ca. 860 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a 10 meter high bedrock outcrop in the middle of the peninsula that separates Lake Selby and Narvak Lake. This outcrop is on the western side of a large rounded hill, which makes up the tip of the peninsula. The site is roughly equidistant (200 meters) from either lake, and overlooks the flat terrace on the peninsula to the west. Elevation of the site above the lakes is approximately 40 meters.

The slopes of this hill are largely boulder rubble covered by a loose mat of caribou lichen. At the site itself, the vegetation consists primarily of lichens, small spruce trees, and dwarf birch. The site

overlooks low-lying, poorly drained tussocks, spagnum moss, and small spruce. No recent fire or animal activity is evident at this site, however, the small pockets of loess on the outcrop appeared somewhat churned by frost action.

The site was discovered through surface observation of a single black chert flake. A 15 cm.^{2} test pit was excavated to a depth of 8 cm. and produced 28 obsidian and 30 black chert flakes as well as a stemmed projectile point base from 0-5 cm. below surface. The obsidian projectile fragment is missing one lateral margin of its base. The break is an odd one and may have been caused by an inclusion in the obsidian located in the basal portion of the artifact. The stem of the projectile is edge and base ground. Unfortunately there is not enough of the artifact present to allow stylistic identification.

The projectile point base and an obsidian flake were submitted for hydration analysis. A hydration rind of 1.41μ was measured on the projectile base while rind thickness on the waste flakes measured 1.40μ. Using the locally derived (radiocarbon dated obsidian) rate of 2.32μ^2/1000 years, the indicated age of the site, at least the occupational event the obsidian represents, is about 857 ± 49 years B.P.

The site may have functioned as a hunting overlook and/or tool manufacturing location, taking advantage of the good view of the lakes and peninsula.

Site significance is relatively low. Apart from the possibility of finding a diagnostic artifact at the site, further work would probably yield little additional new data. The site is in no apparent danger of natural impact and, now recorded, warrants no protection considerations unless impacted by human activity.

HUG-048

Site Elevation: 530 Ft.	NW¼, NE¼ Section 7 T17N, R15E	Probable Site Type: Lookout
Site Age: ca. 1130 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on an isolated bedrock knoll on the southern half of the peninsula which separates Narvak Lake and Lake Selby. HUG-048 consists of two locales approximately 40 meters apart on the southern and eastern sides of this knoll. The knoll is nearly 150 meters southwest of a large hill, which is the point of highest relief on the peninsula. The site is approximately 40 meters north of, and 30 meters in elevation above Lake Selby. The view from this site is 100+ meters in all directions.

Vegetation at the site is sparse and consists primarily of caribou lichen and dwarf birch. Both site locales are thinnly mantled by loess,

and vegetation occurs primarily as a thin mat over the bedrock outcrops. Some frost action is apparent at both locales in pockets of shallow loess.

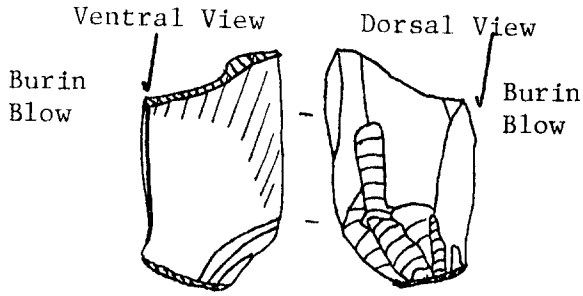
Locality "A" is situated on an isolated oval outcrop roughly 15 meters south of the larger bedrock knoll. The top of this outcrop is approximately 15 x 25 meters in size and 3 meters lower in elevation than the knoll. This locality was found initially through surface observation of 50+ chert and obsidian flakes and microblade fragments. A 15 cm.^{2} test pit, excavated to a depth of 4 cm., produced a possible clear obsidian burin on a blade, and 4 obsidian and 2 chert waste flakes (0-4 cm. below surface). One of the obsidian flakes was submitted for hydration analysis. The hydration rind thickness measurement of 1.62μ ± 0.07μ yields a date of 1131 ± 98 years B.P., given the locally calibrated radiocarbon dated hydration rate of 2.32μ^2/1000 years. This date appears to be late for microblade technology, but more and more hydration data collected from this area have begun to indicate that the 2000 year minumum date for microblade technology may not be valid for this region. The possibility does exist, however, that the measurement or amount of hydration does not accurately reflect the age of the microblade component.

Locality "B" occurs on an elongate bedrock outcrop nearly 40 meters northeast of locality "A". This locale was found by subsurface testing. A 20 cm.^{2} test pit excavated to a depth of 5 cm. through the thin loess cap produced 4 obsidian and 5 chert waste flakes (0-5 cm below surface).

The presence of both chert and obsidian at both localities may indicate more than one occupational event occurred at the site. The presence of chert microblades suggests a minimum date of ca. 2000 years B.P. for one of the occupational periods.

Site significance is a qualified low as the presence of the obsidian burin-on-a-blade gives the site a unique aspect. It appears both locales are oriented toward the north shore of Lake Selby and represent hunting overlooks and/or flaking stations.

The two locales are fairly discrete and appear, on the basis of spatial difference, to represent separate events. The site consists primarily of small flaking detritus and is in no apparent danger of impact. Now recorded, the site warrants no protection considerations unless the impact is human-induced.



Burin - on - Blade
(obsidian)

HUG-048 Artifact - Actual Size

HUG-049

Site Elevation:
620 Ft.

NW¼, SE¼
Section 23
T17N, R14E
Kateel River Meridian

Probable Site Type:
Unknown

Site Age:
Unknown

Probable Cultural Affiliation:
Unknown

This site is located on a conspicuous glacial feature at the southwestern end of Lake Selby. The site is ½ mile west of the lake shore and the same distance west of HUG-057 and HUG-091. This site is the farthest to the west of any of the sites in the area. The view from the site is excellent to the east, north, and south. To the west the view is blocked by higher terrain.

The surface of the site is covered by a robust growth of caribou lichen, moss, scattered dwarf birch, and some moderately large spruce and birch. There is some evidence of a past wildfire which appears to be in excess of 100 years in age.

A single black chert flake was observed on surface. Five 15 cm.^{2} test pits were excavated at various locations around the site but no additional cultural material was found. The paucity of cultural material is somewhat surprising as the location appears to be ideal for a lookout/campsite of repeated use.

Little else can be said about the site. The site's basic value lies in its association with other sites around Lake Selby and its contribution to the overall prehistoric use pattern of the area.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

HUG-050

Site Elevation: 477 Ft.	NW¼, NW¼ Section 24 T17N, R14E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is an isolated find on the shore of Lake Selby which by definition qualifies as a site. The site consists of a chert end scraper found lying on the cobbles that comprise the wave wash area of the beach. It is assumed that the scraper eroded out of the vegetation and soil at the edge of the beach.

The site is located ¼ mile north of HUG-057 and 1/3 mile southwest of HUG-056 and lies on the shore of the western most embayment on the southern portion of the lake.

While there is no indication of a site at the edge of the beach, there is an old beach terrace 8-10 meters west of the water's edge. A site could easily be located on this old terrace, however, the area is so heavily vegetated it would require considerable sub-surface testing to determine if a site was present. Little else can be said regarding this site.

HUG-051

Site Elevation: 520 Ft.	NE¼, NW¼ Section 7 T17N, R15E	Probable Site Type: Camp
Site Age: ca. 2050 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

The site is located at the northwest corner of Lake Selby on the western end of the peninsula that separates this lake from Narvak Lake. Situated on the southwestern bank of a small creek flowing southeast into Lake Selby, the site lies nearly 15 meters above the lake and from 15-30 meters northwest of the lakeshore. The site occupies the area used as our campsite during this survey. The view from the site is good to the north and east along the small creek. The view also includes the adjacent portion of the lake and lakeshore. HUG-059 occurs nearly 50 meters north across the creek from this site and HUG-085 is located approximately 200 meters to the south.

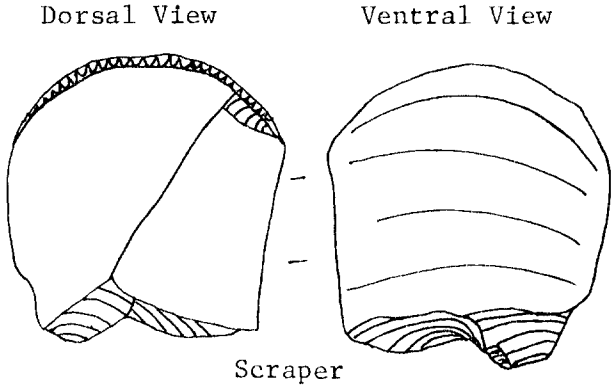
The vegetation at the site consists primarily of caribou lichen, dwarf birch, spruce, birch trees, and woody plants, including abundant blueberry bushes. The rounded knolls of the terrace are covered by the lichen, while spruce and birch are interspersed throughout the area.

Willow, alder, and dwarf birch occur in the poorly drained creek bottom and along the lakeshore. The slopes of the terrace appear fairly stable, yet some frost action, downslope movement, and game trampling is evident.

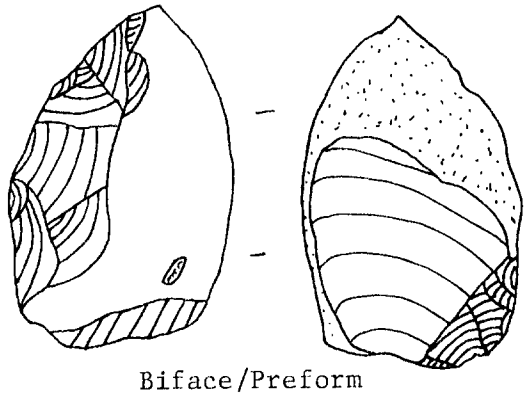
The site was discovered through surface reconnaissance. At least two localities were identified at this site, consisting of a variety of surface and subsurface lithics. At locality "A", surface indications included one black chert waste flake and one obsidian waste flake. Locality "B", located nearly 50 meters northwest of locality "A", contained at least two small obsidian waste flakes, four medium sized black chert flakes, and one gray chert scraper.

Three test pits excavated to a depth of 10-15 cm. produced a variety of lithics. Test #1, at locality "A" (40 $cm.^2$), produced 1 obsidian, 4 red/brown chert, 7 black chert, and 2 mottled chert waste flakes at a depth of 0-6 cm. below surface in loess overlying gravel. Test #3 (15 $cm.^2$), also at locality "A" and nearly 15 meters southwest of test #1, produced 5 obsidian and 17 black chert waste flakes between 0-4 cm. depth. Additionally at locality "A", a black chert waste flake and an obsidian point preform with extensive chipping along the right ventral edge were literally kicked up from the surface duff inside our cook tent. The cook tent was located almost halfway between test #1 and test #3. At locality "B", test #2 (15 $cm.^2$) produced 2 small bone fragments, 10 cherty waste flakes, and 1 obsidian flake which was measured for hydration rind thickness. The hydration rind of this flake was measured at 2.18μ $\pm$ 0.05μ. Based on the locally derived, radiocarbon-determined rate of 2.32μ^2/1000 years, the age of this flake is 2048 $\pm$ 94 years B.P.

Site significance is medium. The site may have functioned as an often used camp or hunting station utilizing resources along the small creek and lakeshore. Several anomalous terrain and surface features, similar to the pit discovered across the creek at HUG-059, exist at this site. Whether these are natural or cultural was not determined by this reconnaissance. It is believed that a good possibility of buried organics and other cultural material exist at this site. Recreational use of this area is high and the site is in some danger of impact. Further testing and documentation of the site is recommended.



Scraper
(chert)



Biface/Preform
(obsidian)

HUG-051 Artifacts - Actual Size

HUG-052

Site Elevation:
600 Ft.

Site Age:
ca. 7000 years B.P.

SE¼, SW¼
Section 6
T17N, R15E
Kateel River Meridian

Probable Site Type:
Lookout

Probable Cultural Affiliation:
Unknown

This site is located on a north-south trending, glacially scoured, bedrock knob at the southwest end of Narvak Lake. The site lies approximately 100 meters west of and 30 meters above the lake. This landform, measuring 15 x 5 meters, is the highest point in the general vicinity and affords an excellent view south toward Selby Lake, east down the 3/4 mile long peninsula dividing the two lakes, and north along the western shore of Narvak Lake. Spruce are abundant in the surrounding terrain but only one medium-large spruce occupies the site at its northern end. Some

dwarf birch is also present along with a robust lichen/herbaceous/woody plant ground cover.

An exposure of mineral soil along the eastern edge of the knob contained several small flakes of dark gray, blue, light gray and black chert distributed over a 1.5 meter^2 area. The flakes appear to represent the final stages of lithic reduction including pressure flaking. A 20 cm.^{2} test pit 1.5 cm. west, was excavated through 10 cm. of fine grained silt. Eleven small flakes of variously colored chert and a single obsidian flake were encountered below the A horizon in the upper part of the silt deposit, 2-3 cm. below surface. The obsidian flake was submitted for hydration analysis. The analysis determined a hydration rind thickness measurement of 1.27μ ± 0.07μ. This amount of hydration converts into an age of 695 ± 76 years B.P. when calculated using the locally derived calibration equation of 2.32μ^2/1000 years.

The presence of more than one type of lithic material may indicate more than a single occupational event occurred at the site. The site appears typical of a hunting lookout which may have been used infrequently. The lack of diagnostic artifacts makes cultural assessment of the site impossible. The significance level of the site is low and the natural erosion occurring there does not warrant concern. Only human-induced impacts need be mitigated.

HUG-053

Site Elevation: 550 Ft.	SE¼, SW¼ Section 6 T17N, R15E	Probable Site Type: Unknown
Site Age: ca. 320/700 Years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located 25 meters above and 40 meters south of the southern shore of Narvak Lake. The base of the peninsula dividing Lake Selby from Narvak is located 100 meters to the west. The peninsula extends to the east another 800 meters. The site occupies a fairly discrete portion of the northern edge of this peninsula.

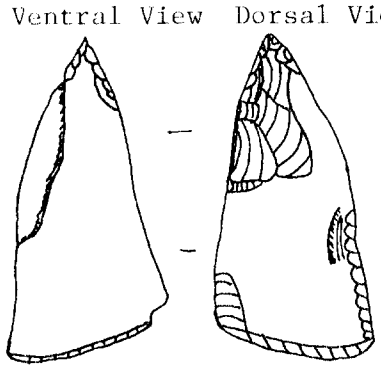
The vegetation at the site is characterized by spruce, birch and dwarf birch, with a robust lichen-heath ground cover. Further to the east, this yields to an open, cotton grass glade with black spruce and infrequent birch. The view is limited to the southern end of the lake.

The site was discovered during surface reconnaissance resulting from a 35 cm.^{2} animal excavation (bear?) which had exposed three flakes of chert, one of which had been shaped into a pointed tool. This tool showed a moderate number of shaping flakes around the tip on both the dorsal and ventral surfaces. The tip exhibited a smooth, dull point possibly resulting from use as an engraving tool or perforator.

The southern wall of the animal excavation was faced off to observe the stratigraphy. Three obsidian and 14 black chert flakes were recovered from the contact of the organic/A horizon 2-3 cm. below surface. A thin layer of silt 3-4 cm. thick was present above sandy gravels. A 15 cm.^{2} test pit was excavated 2 meters to the east and an obsidian flake was recovered from 1-2 cm. below surface in the organic/A horizon contact. Test 3 and 4 located downslope 5 and 15 meters, respectively, produced no cultural material. The artifact distribution appears to be limited to the break-in-slope area probably encompassing 2 meters^2. However, this limited amount of testing is not adequate to determine the extent of the site.

Two samples of the subsurface obsidian were submitted for obsidian hydration analysis and returned hydration rind thicknesses of 0.86μ ± 0.06μ and 1.27μ ± 0.05μ. By using the calibration derived for the Selby/Narvak vicinity, made possible by two obsidian flakes from a firmly radiocarbon dated context, a tentative estimate of the sites age falls between 319 ± 44 and 695 ± 54 years B.P. respectively. The differences in age may reflect temporally discrete occupational events. The lack of diagnostic artifacts, however, prevents any cultural assignment.

The only impact occurring at the site is that related to the animal excavation that originally exposed the subsurface archeological materials. The significance of the site may be low, but further investigation might yield diagnostic materials which would allow a tentative cultural assignment to this site. As such, the site should be afforded reasonable consideration for protection from all but natural impacts.



Graver/ Perforator
(chert)

XSP-053 Artifact - Actual Size

HUG-054

Site Elevation: 500 Ft.	NE¼, NW¼ Section 13 T17N, R14E	Probable Site Type: Lookout
Site Age: ca. 580 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the southern two of three knolls on the western side of Lake Selby about midway between the large island and the peninsula that divides Lake Selby and Narvak Lake. The knolls are about 50 meters from the lakeshore and rise about 8 meters above the lake. They are probably kames or remnants of a recessional lateral moraine of the Itkillik glaciation, the most recent glaciation to reach Selby Lake. The knolls provide a fine view of the lake and the shore to the north and south for ½ mile in either direction, although trees partially obscure the view.

Surrounded by boreal forest, the knolls themeselves are largely open with only a few spruce and birch trees. The ground cover is a mat of liched and sparse ericaceous shrubs. A solitary paper birch tree grows on the northwest corner of the middle knoll, while a spruce and a birch tree grow on the southern knoll.

On the middle knoll, a chert and an obsidian flake were found in the backdirt of what appeared to be an old archeological or geological test pit. A 15 cm.^{2} test pit located 4 meters south of the old pit was excavated to a depth of 15 cm. and proved sterile. No other material was found on the middle knoll. The southern knoll has considerably more material. The site tag was placed about 1 meter north of the single large spruce tree that grows on the northern part of the knoll. Two obsidian flakes are located just west of the tag, and a gray chert flake is located just east of the tree. About 8 meters south of the site tag is another obsidian flake, and 7 meters southeast of the tag is a black chert flake. A concentration of chert flakes was observed on the extreme north end of this knoll, near a game trail that leads to the middle knoll. A test pit, 15 cm.^{2}, produced a large number of chert flakes and two obsidian flakes. The test pit was excavated to a depth of about 10 cm., and flakes were found to this depth, though most were in the upper 5 cm.

A sample of the subsurface obsidian was submitted for hydration analysis and yielded a rind thickness measurement of 1.16μ ± 0.06μ. Given the locally calibrated radiocarbon dated rate of 2.32μ^2/1000 years, the calculated age for the sample is 580 ± 60 years B.P.

This site is located on one of the few suitable dry locations on this portion of the lakeshore. For this reason, the prehistoric use of this area has been focused on this locality. The several kinds of raw material, and their spatial distribution on the knolls, suggests multiple, independent occupations of the site. Because of its view, the site probably functioned as a lookout/flaking station, although the view is mostly of the lake itself. Because of the absence of artifacts

diagnostic of culture, the significance of the site must be considered low. However, it does document prehistoric use of the portion of the western shore of Lake Selby. At present, the lower slope of the southern knoll is undergoing erosion due to frost activity, but this activity does not currently affect the areas where cultural material was found. Disturbance due to recreational use of the lake is quite possible since the knolls are close to the lakeshore and easily visible from the water. If human impacts in this area become a problem, the site should be further tested and surface collected.

HUG-055

Site Elevation:
525 Ft.

Site Age:
Unknown

NW¼, NW¼
Section 24
T17N, R14E
Kateel River Meridian

Probable Site Type:
Unknown

Probable Cultural Affiliation:
Unknown

This site is located on a small knoll about 90 meters west of the western shore of Lake Selby and 45 meters north of a small creek draining eastward. The creek enters the lake northwest of the northern most of the islands in the southern reaches of the lake. This is a lichen covered knoll with birch trees scattered over the surrounding terrain and does not offer an extensive view.

No cultural material was observed on the surface. A 20 cm.^{2} test pit excavated to a depth of 7 cm. below surface revealed abundant subsurface charcoal (wildfire?) and a few very small (pressure) flakes of obsidian. The small size of the knoll precluded further testing.

No temporal or cultural assessment of this site is possible due to the lack of diagnostic artifacts. The flakes were of such a small size as to preclude inclusion in the obsidian hydration analysis sample, however, hydration data for the area suggests the site age would not exceed 2000 years B.P.

The site is of minimal significance and does not warrant further investigation. No natural or human-induced impacts are presently acting on the site. Only human-induced impacts need be considered for mitigation.

HUG-056

Site Elevation:
550 Ft.

Site Age:
ca. 1450 Years B.P.

SW¼, SW¼
Section 13
T17N, R14E
Kateel River Meridian

Probable Site Type:
Lookout

Probable Cultural Affiliation:
Unknown

This site is located on the southern end of a long sinuous morainal ridge 150 meters northwest of the southwestern shore of Lake Selby. The larger of the two islands at the southern end of the lake is approximately 400 meters to the southeast of the site. The ridge is lichen covered with a moderate number of low, woody and herbaceous plants composing the ground cover. Birch trees partially obscure the view of the lake to the east.

No surfacial material was immediately apparent at the site. A 20 cm.^{2} test pit, excavated to a depth of 7 cm., revealed 1 black chert and 4 obsidian flakes. Thirty-five meters to the west, a single obsidian flake was observed.

Two samples of obsidian were submitted for hydration analysis and yielded rind thickness measurements of 1.86μ ± 0.07μ and 1.76μ ± 0.08μ. Given the locally calibrated radiocarbon dated hydration rate of 2.32μ^2/1000 years, the respective calculated ages are 1491 ± 112 and 1335 ± 121 years B.P. The standard deviation measurement on these two samples indicates, statistically, the calculated ages are not significantly different. The presence of both chert and obsidian at the site may indicate more than one occupational event occurred at the location.

The function of the site is not clearly understood, but may have been a lookout situation. The significance of the site is minimal and further investigation is probably not warranted here unless human-induced impacts are recognized.

HUG-057

Site Elevation: 485 Ft.	SE¼, SE¼ Section 23 T17N, R14E Kateel River Meridian	Probable Site Type: Unknown
Site Age: ca. 1080 years B.P.		Probable Cultural Affiliation: Unknown

This site is located on a low knoll on the western shore of Lake Selby at the mouth of the shallow embayment at the southern end of the lake. An abandoned beaver lodge is located just north of the site and is visible on the beach from the lake. The view to the east is good toward the southern end of the lake.

No surface material was observed on the site. A 20 cm.^{2} test revealed 2 obsidian flakes, 1 gray and 7 black chert flakes from 2-3 cm. below surface.

Two samples of obsidian were submitted for hydration analysis and yielded rind thickness measurements of 1.58μ ± 0.05μ and 1.59μ ± 0.07μ. Given the locally calibrated radiocarbon dated hydration rate of 2.32μ^2/1000 years, the respective dates are calculated as 1076 ± 68 and 1090 ± 96 years B.P. These dates are not significantly different.

The function of the site is not known. The significance is probably low. No natural impacts are presently affecting the site. A recent recreational campsite is located on the knoll, but extent of impact is minimal. Only human-induced impacts at the site need be considered for mitigation.

HUG-058

Site Elevation: 487 Ft.	SE¼, SE¼ Section 23 T17N, R14E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a low glacial feature on the southwestern shore of Lake Selby. This feature slopes downward almost to the waters edge; the site lying roughly 15 meters west of the lakeshore. HUG-057 lies only 35 meters to the north while HUG-069 lies slightly less than a mile to the south. The site lies 4 meters above lake level and as a result offers only a local view.

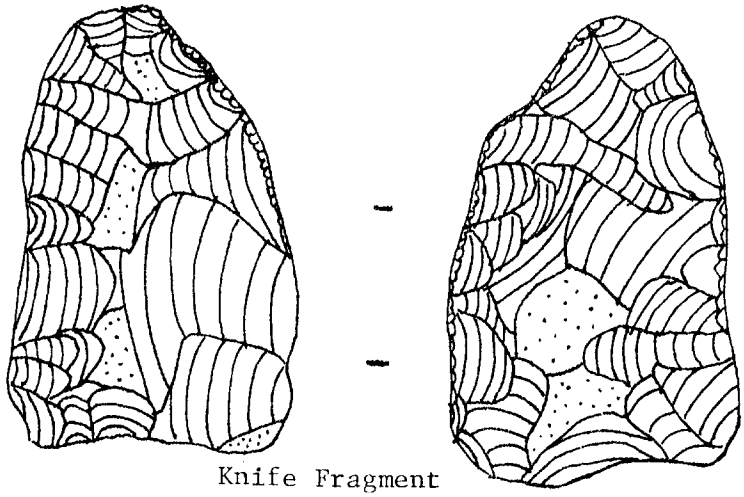
Ground cover at the site consists of a relatively robust growth of lichen, moss, and woody and herbaceous plants. Large birch and spruce, to 20 meters in height are common. On the crest of the glacial feature is a game trail where there are some small areas of exposed mineral soil.

It was on one of these small mineral soil exposures that a few scattered chert and obsidian flakes, and a large fragment of a chert biface were observed. Two 15 cm.^{2} test pits, one 4 meters west and another 4 meters south of the flake concentration, were excavated to a depth of 6 cm. and produced no additional cultural material. The biface fragment appears to be a portion of a knife.

The fact that both chert and obsidian are present at the site may indicate at least two separate occupational events. Additionally, the obsidian may indicate an age not greater than ca. 2000 years B.P. for at least one of the occupational events. The site may have been a very briefly occupied campsite.

Little else can be said about the site. The site's basic value lies in its association with other sites on Lake Selby and its contribution to the overall prehistoric use pattern of the area.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.



Knife Fragment
(chert)

HUG-058 Artifact - Actual Size

HUG-059

Site Elevation:
525 Ft.

SW¼, NW¼
Section 7
T17N, R15E
Kateel River Meridian

Probable Site Type:
Camp (house/cache pit)

Site Age:
ca. 1760-2600 years
B.P. (two occupations)

Probable Cultural Affiliation:
Unknown

This site is located at the northwest corner of Lake Selby at the western end of the 3/4 mile long east-west orientated peninsula that divides Selby and Narvak Lakes. The site is situated on a south-facing 10 meter high bluff. It is bounded on the west by a 50 meter wide, willow-choked, drain which enters the lake 35 meters southwest of the site, and on the east by an incised gulley (a common occurrence) along the bluff line to the east. The view from the site is good across the drain to the west toward steep-sided mountains, and south onto Lake Selby. The vegetation on the site is open and consists of scattered white spruce, birch and dwarf birch with a healthy ground cover of lichen, blueberries, and cranberries, as well as labrador tea and other heaths. To the north of the site, the vegetation thickens due to more poorly drained conditions.

The site was discovered during surface reconnaissance and consists of a depression feature located adjacent to the western slope of the bluff. The feature is subrectangular and symmetrical in shape with a 1 meter wide berm projecting ten to fifteen centimeters above ground level around the perimeter. The long axis, measuring nearly 6 meters on the outside, is oriented slightly east of north, and the width,

measured on the outside is nearly 4 meters. The interior dimensions, representing the depression, measure 4 x 1.9 meters. The center of the depression is 25 cm. below than the berm and resembles a trough in shape.

The feature is completely covered with lichen growth and within the depression is a dense growth of labrador tea, indicating the different drainage characteristics inside as opposed to outside the depression; in other words moisture is directed into the depression.

A second smaller depression is located 2 meters to the east of the main depression, which is suspected of being an associated feature. Also, weveral flakes of obsidian (two of which exhibit use) and two chert flakes were scattered along the southern and western slopes of the bluff. (Figure #1).

TESTING:

A 30 cm.^{2} test pit was excavated in the center of the interior trough of the depression, about 1 meter north of the southern limit of the trough. The vegetation mat was well developed, measuring almost 10 cm. in thickness and overlying a 3-4 cm. thick zone of slightly decomposed organic material derived from surface organics and wood fragments. Below this zone, a very dense concentration of charcoal, ash and organically rich (greasy) silt was encountered. This appeared to extend to about 30 cm. below the surface of the interior of the depression (all below surface measurements taken from inside depression, 20-25 cm. below true surface). Two large samples of charcoal were collected from 10-20 and 20-30 cm. below surface, and one large sample of the ash/greasy silt matrix was also collected from 10-20 cm. below surface coming from the eastern half of the test.

This 30 cm.^{2} test pit was then extended to the east and west in order to cross-section the feature. This 2.8 x 0.30 meter trench cut into both the eastern and western berms revealing: 1) a superimposed sandy/gravel stratigraphy overlying the original silt over gravel soil profile in the eastern end of the trench and 2) a cross cutting relationship where the sides of the feature, now obviously a deep, steep-sided pit, truncate the natural flat lying contact of the silt and gravel (Figure #2).

Two small obsidian flakes were recovered from the charcoal concentration in the center of the depression, during the process of extending the trench. One flake was recovered from the eastern edge of the concentration 20 cm. below surface. The other was recovered from the deeper central portion of the charcoal at 35 cm. below surface. Both flakes are of the same size and flaking technique. They both measure a little over 1 cm. in diameter.

A very small amount of bone was recovered from the gravelly-sand feature-fill, 45 cm. below surface. No bone fragment was much larger than a matchhead, and all appeared heavily weathered and rounded. The bone material exhibited an oxidized exterior (orange colored) which most likely is a product of iron and other oxidizing agents present in the sediments.

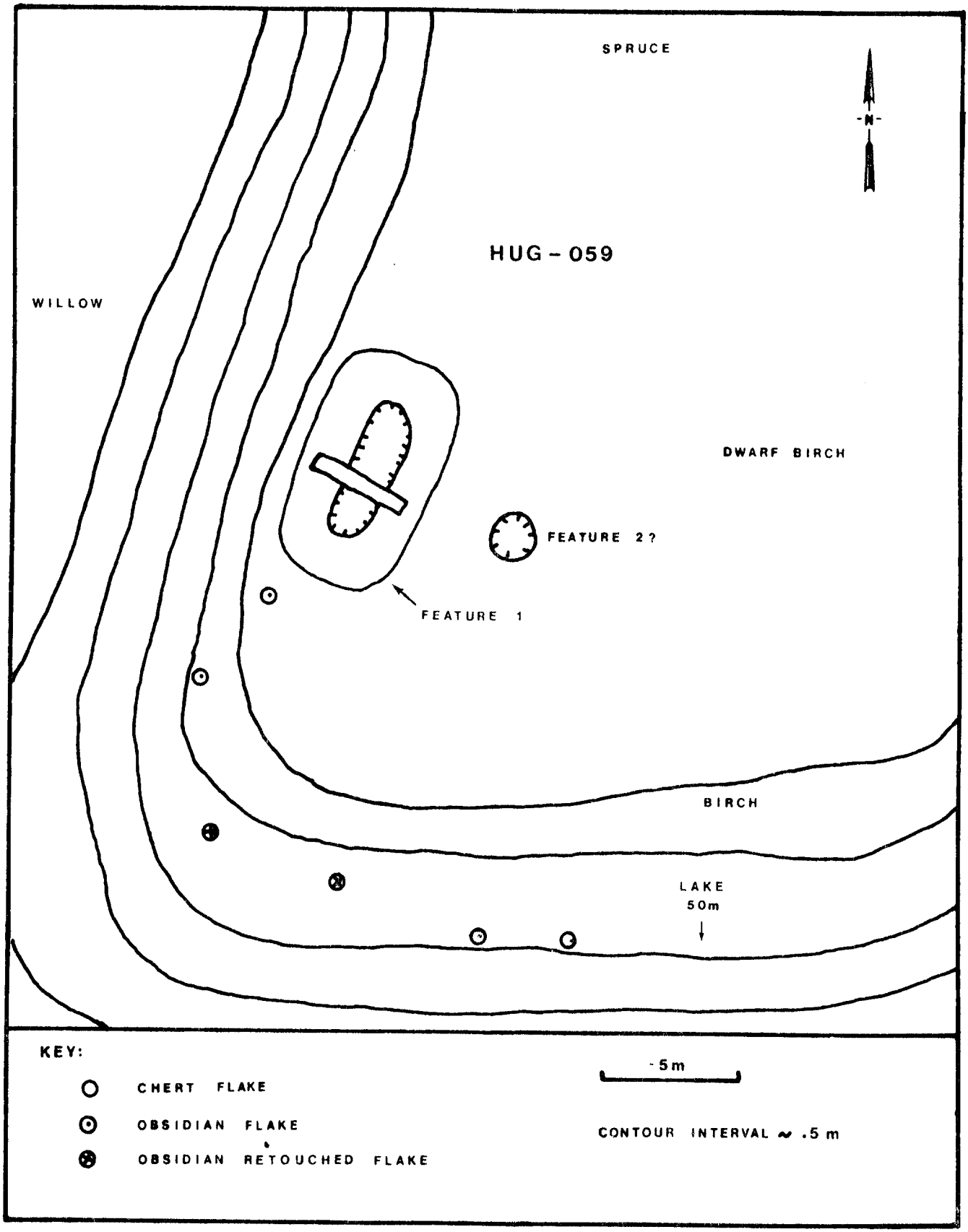


Figure #1 - Schematic Site Map of HUG-059

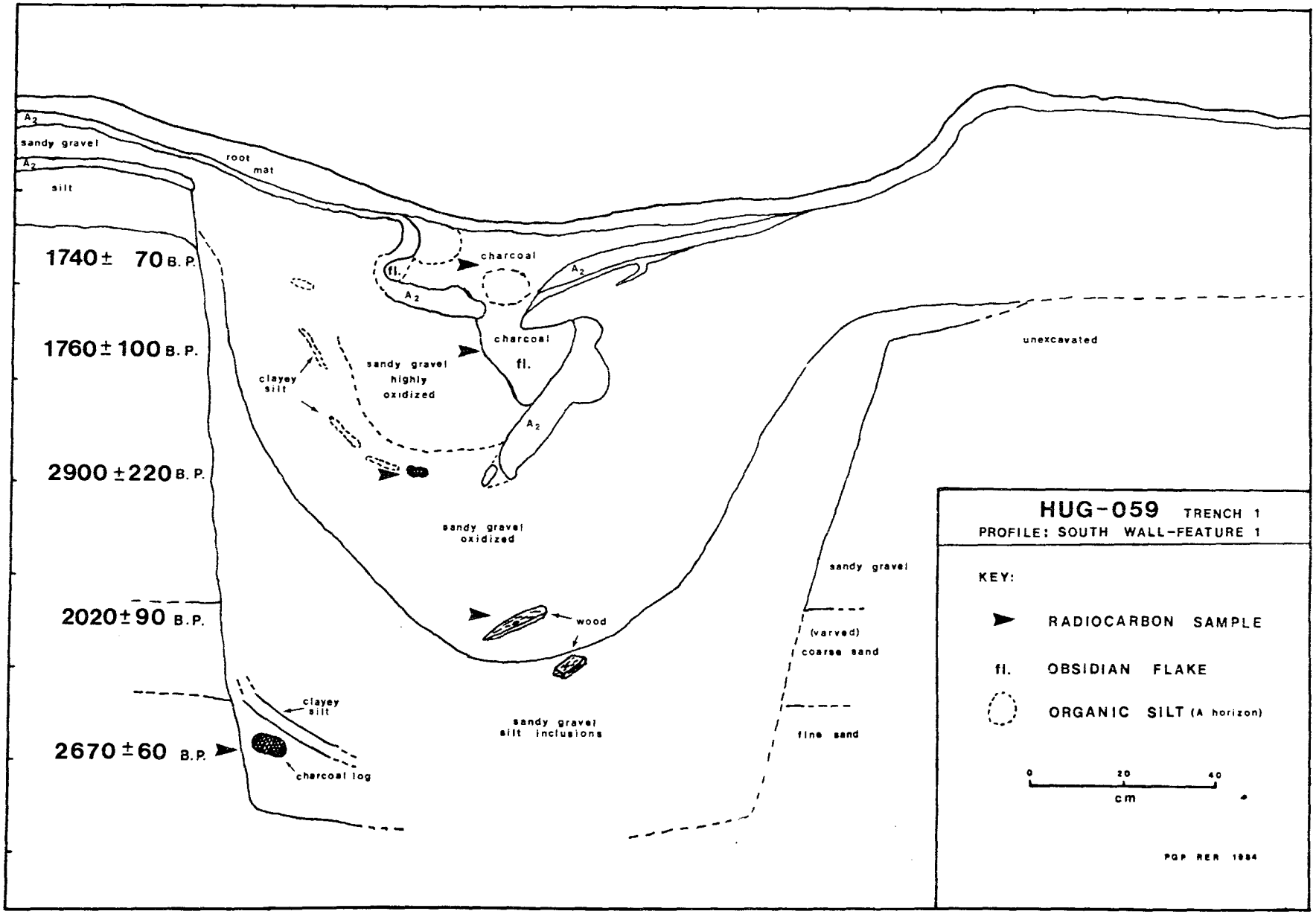


Figure #2 - Measured Section Feature 1

Figure #2 shows the inverted bell-shaped stratigraphy of this unusually steep-sided, deeply excavated pit. Several layers of gravelly sand feature-fill are accented with discontinuous lenses of compact, very fine-grained, gray silt, with granular sand occurring through the vertical sequence. These gravels appear highly oxidized (very dark brown to black) below the interior (trough) of the depression, as opposed to the olive-brown coloration of the undisturbed gravels observed on the side walls. Charcoal was recovered from two discrete contacts of the gravelly-sand, where gray silt lenses were discontinuous, ranging in thickness from 2-5 cm. at 50-55 cm. below surface, and 120 cm. below surface. The later charcoal sample (an intact charcoal log measuring 10 cm. long and 5 cm. wide) was located adjacent to the eastern wall of the pit, where fine sands occur below coarse sand and the glacial gravels. The sand deposit was truncated vertically by gravelly sand feature-fill and at a depth of 150 cm. leveled off creating a bench of fine sand. The same truncation of the sand unit was observed on the western wall of the pit at about the same level.

Two unburned wood fragments measuring between 20-25 cm. in length were recovered from the central portion of the depression, at 80 and 95 cm. below surface. These wood fragments were in association with discontinuous gray silt units.

DATING:

SAMPLE #	Material/Provenience	C^{14} years B.P.
1. Beta - 7549	Charcoal, upper concentration 10-20 cm. below surface	1740 ± 70
2. Beta - 7548	Charcoal, upper concentration 20-30 cm. below surface	1760 ± 100
3. Beta - 7547	Charcoal, 50-55 cm. below surface (very small sample)	2900 ± 220
4. Beta - 7546	Wood, 75-80 cm. below surface	2020 ± 90
5. Beta - 7545	Charcoal, 120-125 cm. below surface	2670 ± 60

Table 1 shows the radio carbon age determinations on five samples of organic material recovered from distinct levels from within the depression feature. Samples 1 and 2 are not statistically different and when averaged yield a date of 1750 ± 85 years B.P.

Sample 3 is problematic as its relatively early age does not fit with the apparent sequence from bottom to top (oldest to youngest). The size of the sample, 0.2 grams of carbon after pretreatment, an extremely small amount, may be the cause for the seemingly anomalous date.

The C_{14} ages of samples 4 and 5 are in relative order with respect to their stratagraphic positions, as well as their relative position to samples 1 and 2.

The reason for the apparent time-transgressive progression upward through the stratigraphy of the feature is not well understood. One explanation may be that these dates represent more than a single use of this feature, and possibly as many as three, representing samples 5, 4, and 1 and 2 combined.

An interesting aspect of the samples, excluding 1 and 2 is that all occurred within, or in very close association to, the discontinuous gray clay-silt deposits which occur throughout the gravelly-sand feature-fill. The significance of this face is not apparent.

The soil profile, cut through the elliptical berm that outlines the feature, revealed two episodes of soil formation. The upper soil is weakly podzolized, showing a thin, bleached A_2 horizon immediately beneath the vegetation mat and a weakly developed B_2 horizon beneath this extending to a depth of about 15 cm. The lower, buried soil has a moderately well developed A_2 horizon that overlies a buried B_2 horizon. This lower B_2 horizon is much better developed than the B_2 horizon of the upper soil. In areal extent, the upper soil seems confined to the raised berm that delineates the depression, and this suggests that this younger soil has developed in the "backdirt" that resulted from aboriginal excavation of the pit. As one moves away from the perimeter of the feature, the lower soil grades into the modern surface soil and the upper soil disappears. Through the use of soil chemical analysis, we sought to evaluate the degree of soil development in the two soils and to compare them to other podzolized soils of the region.

Podzolization is an important soil-forming process on well-drained parent materials in northern Alaska (Ugolini, Zachara, and Reanier, 1982). Although it is most strongly expressed within the boreal forest, poszolization is still an important process beyond treeline in shrub-tundra environments (Ugolini, Reanier, Rau, and Hedges, 1981). In this process, soluble organic acids originating in the vegetation mat form complexes with iron, aluminum, and other metals in the surface of the soil. These organo-metallic complexes are mobile and move down in the soil profile until they become arrested in the B horizon. The result is an upper soil horizon, the A_2 horizon, that is depleted in iron and aluminum, and a lower B horizon that is enriched in these metals. Morphologically, the A_2 horizon has a whitish "bleached" look, while the B horizon is usually a reddish brown color as a result of the accumulation of iron and organic material. Quantitative assessment of the degree of soil development in the HUG-059 soils was made by measuring concentrations of these accumulation products in the soil profile.

Organic carbon was determined by the modified Walkey-Black method reported by Allison et al. (1965). Iron and aluminum were extracted with sodium pyrophosphate (McKeague 1967) and with sodium dithionite (Jackson 1969). Iron and aluminum concentrations in these extracts were determined on a Jarrel-Ash inductively coupled argon plasma spectrometer. Sodium pyrophosphate extracts only the metals that are organically bound, while sodium dithionite extracts all forms of free iron and aluminum.

Examination of the distribution of organic carbon and iron in the profile reveals that carbon uniformly decreases with increasing depth (Figure #3). The low amount of carbon in the buried B horizon (B_2b) relative to the upper B_2 horizon may indicate in situa oxidation of the carbon in the buried B_2 horizon since it was buried by pit excavation. In contrast, the distribution of iron in the profile shows the relatively greater development of the buried soil. Sodium dithionite extractable iron (Fe-d), or total free iron, shows a peak value of 2.5% in the buried B_2 horizon. This value is comparable to those in other Holocene-age soils in the southern Brooks Range (Ugolini, Reanier, Rau, and Hedges, 1981). The B_2 horizon of the upper soil has about half this amount, indicating its younger age. Interestingly, the A_2b horizon of the lower soil, which lies in between the two B horizons, has nearly 1% free iron. This probably indicates that it is beginning to function as a B horizon of the upper soil; it is beginning to accumulate iron and aluminum leached into it from above. This explanation is supported by the sodium pyrophosphate extractable iron (Fe-p) values, the organically bound form, that show as much organically complexed iron in the lower B_2b horizon as is in the upper B_2 horizon. This shows that mobile organo-metallic complexes do penetrate to the lower B horizon, and can account for the increased Fe-d value in the A_2b horizon relative to the A_2 horizon of the upper soil.

The radiocarbon dates discussed above indicate that prehistoric use of this feature ceased about 1700 years ago. The degree of development seen in the upper soil seems consistent with a 1700 year period of soil development. Weakly bleached A_2 horizons can develop rather rapidly; at Walker Lake some 40 miles to the east, a weak A_2 horizon was present under a solitary white spruce tree only 80 years old (Reanier and Ugolini 1983). It is likely that the upper soil at HUG-059 represents a soil developed in the spoil produced by prehistoric excavation of the pit-like feature. The degree of soil development is evidence of the stability of the surface and the lack of disturbance since abandonment of the site.

Within the pit fill deposit were pockets of carbonaceous, midden-like material that contained recognizable fragments of leaves and twigs. One of these, which was radiocarbon dated to 1740 ± 70 B.P., was selected for chemical analysis to see if its contents could shed light on the function of the feature. Since the sample contained recognizable vegetation fragments, a control sample from the modern vegetation mat (A_1 horizon) was selected for comparison. Three midden samples and one control were analyzed. Samples were digested in a 1:1 solution of nitric and perchloric acid in a Technicon block digester. Aliquots of these digests were analyzed with a Jarrell-Ash inductively coupled argon plasma spectrometer for the following elements: calcium, sodium, magnesium, iron, silicon, aluminum, phosphorus, zinc, manganese, boron, copper, vanadium, nickel, barium, arsenic, and mercury. Figure #4 shows the results of these analyses; the three midden samples have been averaged. Percentages of the elements ranged from just over 1% for aluminum in the midden samples to only 5 ten-thousandths of a percent for copper in the A_1 horizon. Many of the elements were present in only trace amounts; only those with values $\geq$0.01% will be discussed further.

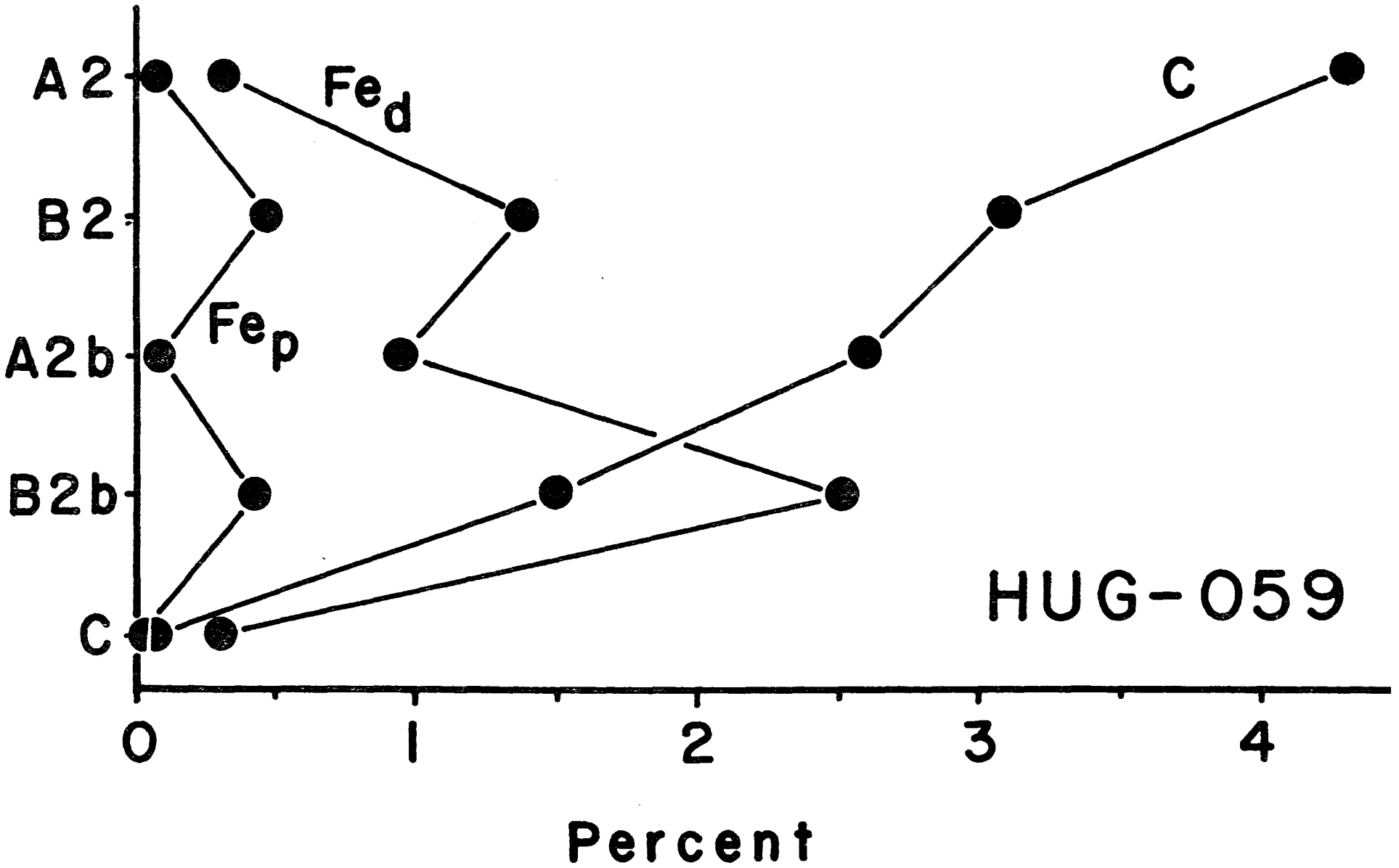


Figure #3 - Percent diagram of organically boundiron (Fep), total free iron (Fe_d), and organic carbon (C) for the soil profile of Feature 1.

HUG-059

WEIGHT PERCENT

	Midden	A1 Horizon
Ca	0.2892	0.2981
Na	0.4000	0.5168
Mg	0.0749	0.0297
Fe	0.7197	0.4109
Si	0.0022	0.0020
Al	1.0267	0.4646
P	0.0405	0.0826
Zn	0.0017	0.0031
Mn	0.0041	0.0008
B	0.0013	0.0023
Cu	0.0041	0.0005
V	0.0033	0.0010
Ni	0.0020	0.0031
Ba	0.0261	0.0276
As	0.0103	0.0049
Hg	0.0282	0.0152

Figure #4 - Plasma Spectrometer Analysis Results

Figure #5 shows the data from Figure #4 re-scaled to make comparisons more clear. For each element the larger value, either from the midden (bar on left) or from the A_1 horizon (bar on right) was arbitrarily scaled to unity, and the lesser value was plotted as a fraction of the larger. Because of the exploratory nature of these analyses, it is difficult to make any firm conclusions concerning site function. Since a small fragment of bone was found elsewhere in this feature, we thought we might see enrichment of Ca and P in the midden relative to the control sample. However, Figure #5 clearly shows that Ca is nearly equal in concentration in the two deposits, and the midden samples are depleted in P rather than enriched as expected. Midden samples, however, are enriched in Mg, Fe, Al , As, and Hg. These kinds of elements are those that might be accumulated in a B horizon of a soil. Possibly the midden samples derived their mineral fraction from a B horizon disrupted during prehistoric excavation of the pit. Although these analyses do not clearly indicate the function of the site, these kinds of analyses, coupled with others such as plant macrofossil identification, could eventually help elucidate the prehistoric function of the unusual feature encountered at HUG-059.

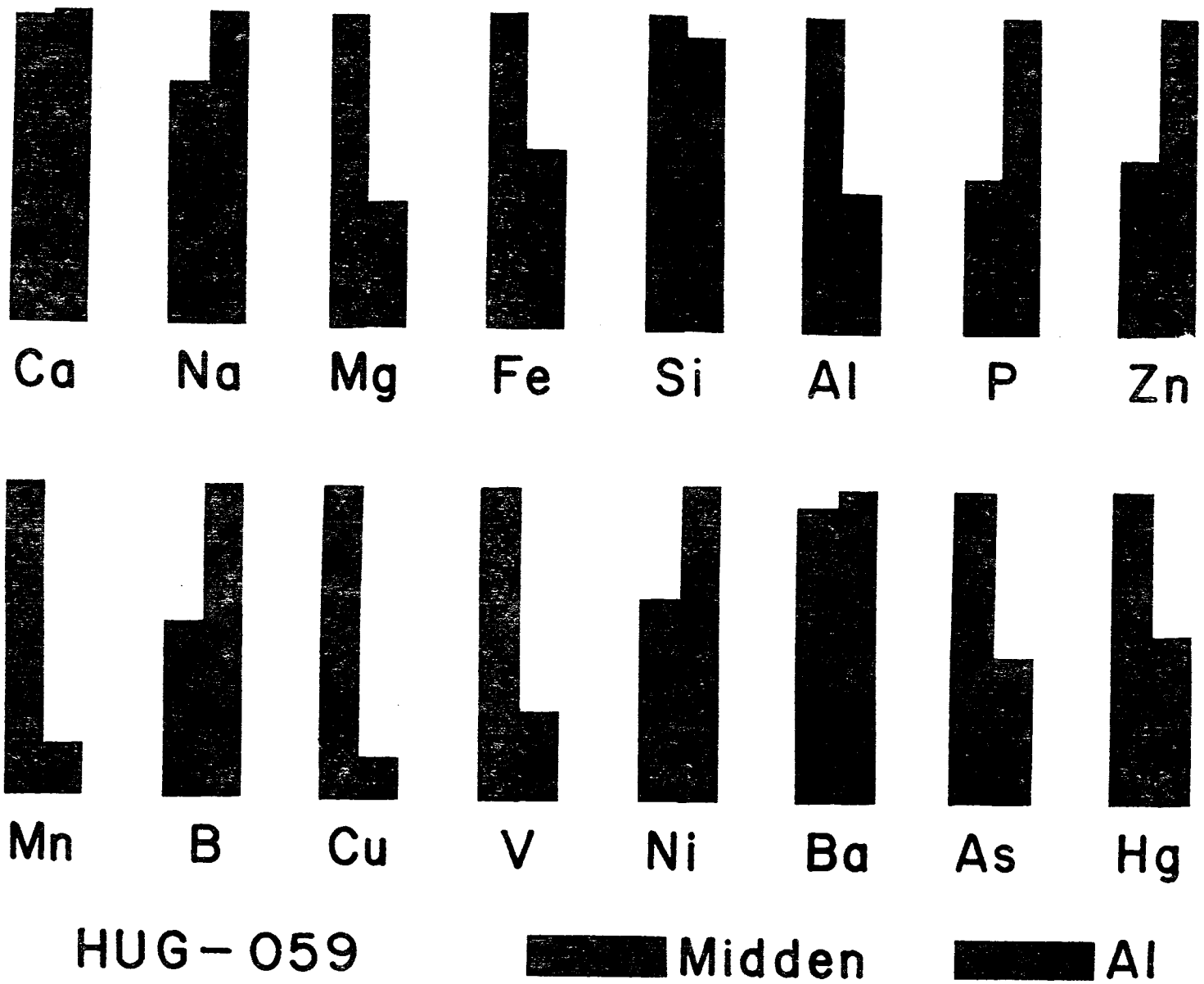


Figure #5 - Data from Figure #4 rescaled for comparison

Possible Correlates - Conclusion

Unfortunately, the amount of testing here was not sufficient to delineate the function of the feature. Two possibilities are readily apparent. The large size suggests a house, but the depth and lack of cultural material within the depression probably does not fit with this possibility. A large, deep cache pit is a second obvious possibility. Clark (1974) located, but did not excavate two similarly shaped, somewhat smaller features near the northern end of Norutak Lake nearly 40 miles to the east. Clark also mentions some "deep boat-shaped cache pits" that he later found in the Koyukuk drainage. These might possibly be the cache pits found at Hahanudan Lake by Clark (1977), but this is not certain.

At the southern end of Lake Selby, at site HUG-091, 12 rounded depressions were located on an arcuate ridge. One of these was tested and the stratigraphy and contents were fairly comparable to that found at HUG-059. The majority of the feature fill was gravelly-sand, but a distinct band of fine grained gray silt was present. This appeared to follow the contour of the pit. In association with this silt band was charcoal, traces of bone and a flake of chert. Since these depressions are numerous and smaller in diameter than the HUG-059 example they were classified as cache pits, but this is not a firm conclusion. The age of the feature of HUG-059 and the fairly exposed aspect of the site might mean that any formal remains that may have once been present are now almost completely removed from the record by decomposition. If this is the case then the feature would probably be one of the largest cache pits on record.

The site is one of the more significant finds of the survey. The potential is good for yielding significant archeological information. Further testing at the site would be fairly easy as access is not a problem.

The site is not in danger from natural impacts. Since this area receives a moderate amount of recreational use, protection of the site from unauthorized disturbance may be warranted.

HUG-060

Site Elevation: 500 Ft.	NW¼, NE¼ Section 7 T17N, R15E	Probable Site Type: Camp
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the south side of the peninsula that separates Lake Selby and Narvak Lake. Situated along the southern slope of a 20 meter high terrace which overlooks the northern shoreline of Lake Selby, the site consists of four separate localities all of which occur approximately 10-15 meters above and 10 meters north of Lake

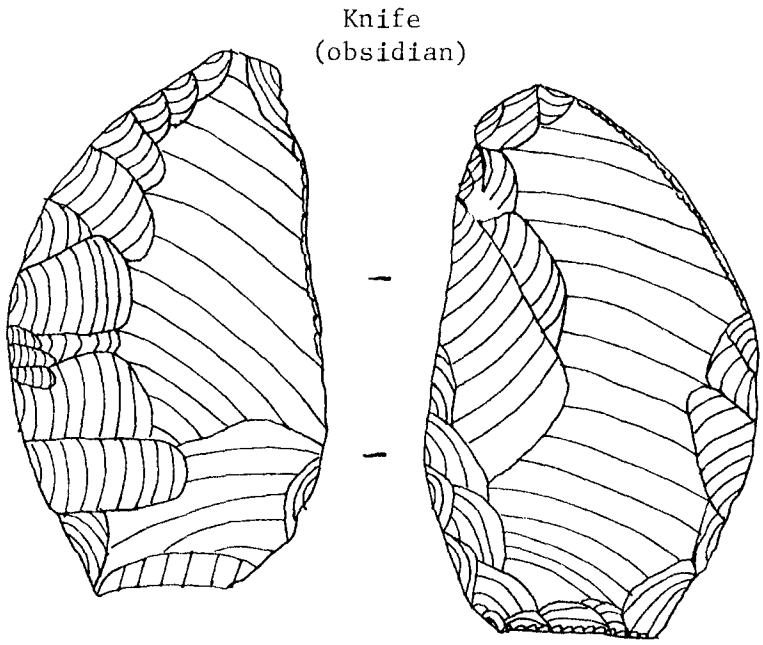
Selby. The view from the site is best onto the lake to the south, and along the shoreline, but is obscured to the north by trees. HUG-061 is located 80 meters west and HUG-048 is 120 meters east of this site.

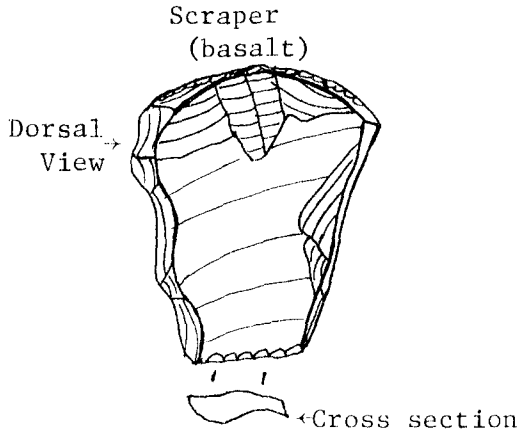
The vegetation at the site consists primarily of caribou lichen, dwarf birch, Vaccinium, and spruce. The latter three occur on the terrace, while the lichen is located mostly on the slope. Spruce and alder line the lakeshore at the base of the terrace. Several small gullies drain the terrace. A game trail traverses the terrace in an east-west direction north of the site.

The site was discovered through surface reconnaissance. A total of four localities were found over an area of approximately 95 meters. Going from east to west: locality "A" contained a single large gray chert flake; locality "B" contained a basalt scraper, which may be a reworked core tablet, and 20+ obsidian and chert waste flakes and micro-blade fragments; locality "C" revealed a complete obsidian knife/ scraper; locality "D" produced several black chert flakes and blade-like flakes. On the level ground above locality "B" a single 15 cm.^{2} test pit was excavated to a depth of 10 cm. below surface. This test produced no cultural material.

Site significance is low. The site may have functioned as a hunting station or butchering area associated with a camp. The location appears well suited for taking advantage of game resources along the lakeshore and the gullies that drain this terrace.

The physical organization of the site and the variety of lithic material suggest more than one occupational event occurred here. The presence of obsidian may indicate a maximum age of 2000 years B.P. for the event the obsidian represents. The obsidian knife scraper is similar to one found at HUG-075 some 200-250 meters away on the hilltop of this peninsula. Human use of this peninsula is at present frequent and this site is in some danger of impact. Further testing, documentation, and surface collecting of the site is recommended if it is threatened by human activities.





HUG-060 Artifact - Actual Size

HUG-061

Site Elevation: 500 Ft.	NW¼, NE¼ Section 7 T17N, R15E	Probable Site Type: Camp
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site lies on the south side of the peninsula that separates Lake Selby from Narvak Lake. Situated on the south slope of a 20 meter high terrace, the site is approximately 15 meters north and 15 meters above lake level. The site overlooks the lake's northern shoreline for nearly 40 meters to the east and west. The view in other directions is obscured by trees, but a good view onto the lake to the south is available. HUG-060 is 80 meters to the east and HUG-062 is 100 meters to the west.

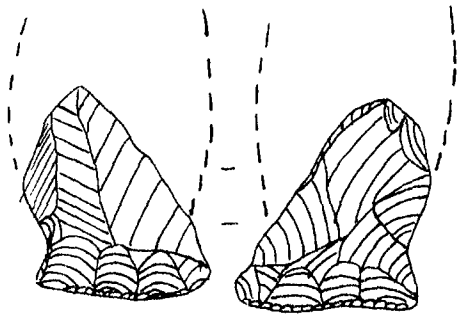
The vegetation at the site consists primarily of caribou lichen, birch, spruce and alder. The caribou lichen and spruce occur on the slope, while the alder and birch are located primarily at the base of the terrace and along the lakeshore. Some game trampling is evident at the site and a game trail, which parallels the shoreline, is located back from the terrace edge approximately 10-15 meters north of the site. Situated on a slope, soil at the site is experiencing some downslope movement.

The site was discovered through surface reconnaissance. A teardrop shaped cluster of obsidian and chert waste flakes, blade-like flakes, and microblade fragments were found covering an area approximately 5 x 2 meters. Most of the 30+ pieces are obsidian blade-like flakes and microblade fragments. Two obsidian projectile point bases were also found in this cluster. The two fragments are notched and show evidence of basal grinding. Above this cluster, a 15 cm.^{2} test pit was excavated to a depth of 5 cm. but did not reveal subsurface cultural material.

Site significance appears low. The site may represent a campsite, as evidenced by the discarded projectile point bases. The notched projectile point bases may indicate an association with the Northern Archaic Tradition. However, based on lithic material, such an association is doubtful.

Human traffic in this area is common and the site, as well as others on this peninsula, may experience impact. If threatened by human impact, the site deserves further testing, documentation, and possibly mitigative action.

The presence of both obsidian and chert suggests that multiple occupational events occurred at the site. The obsidian may further indicate a maximum age of ca. 2000 years B.P. for the occupational event the obsidian represents.



Projectile Point Base
(obsidian)



Projectile Point Base
(obsidian)

XSP-061 Artifacts - Actual Size

HUG-062

Site Elevation: 500 Ft.	NW¼, NE¼ Section 7 T17N, R15E	Probable Site Type: Camp
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

The site is located on the southern side of the broad, flat peninsula that separates Lake Selby from Narvak Lake. The site sits on the slope of a 20 meter high terrace approximately 5 meters north of the lake shore. The view from this terrace is oriented along the shoreline (75 meters) and to some extent north (30 meters) across the peninsula, where not obstructed by trees, and south onto Lake Selby. HUG-061 is located 100 meters east and HUG-063 is located 95 meters to the west of this site.

The vegetation at the site consists primarily of caribou lichen, small spruce, birch, and alder. The lakeshore and terrace base are lined by the alder and birch, whereas the caribou lichen occurs mainly on the slope and on the terrace edge. A well used game trail runs east-west almost 10 meters north of this site along the terrace. Several small gullies drain to the south incising the terrace and one 4-5 meter wide gully bissects the site.

The site was found through surface reconnaissance. Two localities exist approximately 10 meters apart on opposite sides of the gully. On the eastern side, locality "A" consists of a single chert waste flake. At locality "B", west of the gully, there are at least 6 waste flakes of gray and black chert and obsidian. One of these flakes exhibits use

wear along one edge. All surface lithics were found on the slope.

Three 15 cm.^{2} tests were excavated to a depth of 6-8 cm. below surface through thin loess overlying gravels. Test #1, at locality "A", produced two small black chert waste flakes at 0-6 cm. depth. Test #3, at locality "A", proved sterile. Test #2, at locality "B", yielded 2 black chert, 1 gray chert, and 1 pinkish-gray chert waste flakes at a depth of 0-6 cm. below surface. All three tests were put in up-slope from the surface flake scatters.

Both the physical layout of the site and the variety of lithic material suggest that several occupational events have occurred at this location. The obsidian may indicate a maxiumu age of ca. 2000 years B.P. for the event which it represents.

Of itself, the site has a low significance level. However, when viewed as part of the extremely heavy concentration of sites on the peninsula, the significance rises.

The site may have served as a hunting station or camp, taking advantage of the resources along the northern shore of Lake Selby.

Human traffic is presently high in this peninsula area and the site may be adversely impacted. Further recording of this site and others in this area is recommended if threatened by non-natural impacts.

HUG-063 → XSP-063

Site Elevation: 525 Ft.	NE¼, NW¼ Section 7 T17N, R15E	Probable Site Type: Camp
Site Age: ca. 900 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the southern side of the peninsula which separates Lake Selby from Narvak Lake. Situated approximately 20 meters above Lake Selby, the site lies 25 meters north of the lake's shoreline. The view from the site, which occurs on opposite sides of a gully, is predominantly south, east, and southwest along the shoreline. The view in other directions is obscured by trees. HUG-074 is 95 meters west and HUG-062 is 95 meters east of this site.

The vegetation at the site consists primarily of caribou lichen, spruce and birch trees. Alder lines the shore of the lake in this area. A gully, draining south into Selby Lake, bissects the site. A game trail is located along the terrace edge running in an east-west direction.

The site was found through surface reconnaissance. Two locales were found on either side of this gully. At locality "A", on the gully's western side, an obsidian scraper, a gray chert microblade fragment

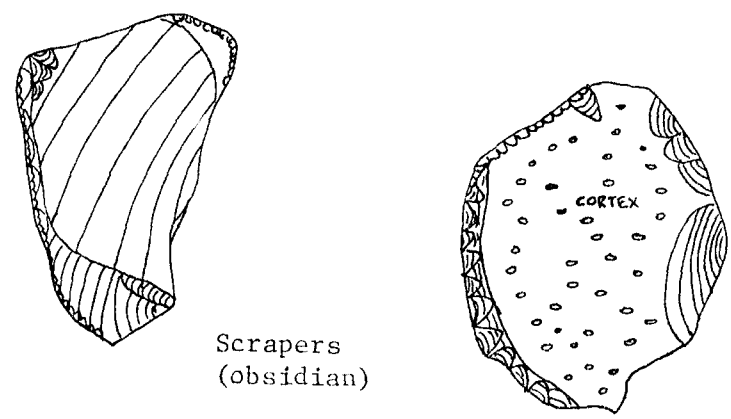
and several obsidian blade-like flakes were located. On the opposite side of the gully, nearly 10 meters to the east is locality "B". Surface lithics discovered here included an obsidian scraper exhibiting cobble cortex and one obsidian waste flake. The scrapers at both localities showed evidence of use-wear along one margin.

On the level ground, north of these lithic scatters, two 15 cm.^{2} test pits were excavated to a depth of 8 cm. below surface. At locality "A", the subsurface test produced 5 chert and 2 obsidian waste flakes at a depth of 0-5 cm. below surface. The test at locality "B" produced no subsurface cultural material. The soil matrix in both tests consisted of loess overlying gravels.

A sample of subsurface obsidian was submitted for hydration analysis. The hydration rind thickness measurement of 1.44μ ± 0.09μ yields a date of 894 ± 112 years B.P. according to the locally derived radiocarbon dated calibration of 2.32μ^2/1000 years. This date is applicable only to the obsidian component at the site. The chert artifacts may represent a separate, older occupational event.

Site significance is low. However, when viewed as part of the site complex along the peninsula, the site's importance increases. The site may have functioned as a camp or hunting station. The location of the site on the slope and at the base of the terrace has caused the surface lithics to move in a downslope direction.

A fair amount of recreational activity presently occurs on the peninsula, and the site, although recorded, may be in danger of impact. Further documentation of the sites on this peninsula is recommended, especially if threatened by human activity.



Scrapers (obsidian)

HUG-063 Artifacts - Actual Size

HUG-064

Site Elevation: 575 Ft.	SE¼, NE¼ Section 23 T17N, R14E	Probable Site Type: Lookout
Site Age: ca. 2100 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a rather isolated hill-like glacial feature slightly less than ¼ mile west of the western most bay of Lake Selby. The site is located roughly ¼ mile southwest of HUG-050 and ¼ mile northwest of HUG-057. The site lies roughly 30 meters above lake level and offers a good view of the southern portion of the lake and the adjacent country.

The surface of the site supports a robust growth of caribou lichen and moss as well as a scattering of birch trees.

There were no surface indications that a site was present. The site was located as the result of subsurface testing. A single 15 cm.^{2} test pit was excavated and produced more than a dozen very small flakes of various colored chert and a single obsidian flake. The cultural material was recovered between 2-5 cm. below surface, the majority coming from the contact zone between the organic and mineral soil horizons.

The variety of cultural material may indicate more than a single occupational event took place at the site. A sample of the obsidian was submitted for hydration analysis and returned a measurement of 2.20μ ± 0.04μ. Based upon radioactive carbon dated obsidian from the local area, a hydration rind of this thickness indicates the age of the obsidian flake is 2086 ± 76 years B.P. This age can be assigned only to the obsidian at the site which may represent an occupation more recent than that represented by the chert. However, it is suspected that in this case, the chert and obsidian are contemporaneous.

The significance of this site is unknown. Additional subsurface testing would have to be undertaken before a determination of significance could be made.

The physical character and location suggest the site served as a look-out and/or campsite. Little else can be about the site. At this level of investigation, the site's basic value lies in its association with other sites around Lake Selby and its contribution to the overall prehistoric use pattern of the area.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

HUG-065

Site Elevation: 500 Ft.	NE¼, SE¼ Section 26 T17N, R14E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located 35 meters south of the extreme southern end of Lake Selby on a game trail. The view of the lake is obscured by trees.

A large black chert microblade (3.5 cm. x 1.1 cm. x 0.3 cm.), a black chert and a gray chert flake, and the proximal half of a banded obsidian flake were found on the surface of the game trail. Two meters southeast of this cluster, a 20 $cm.^2$ test pit was excavated to a depth of 5 cm. At the contact of the organic and mineral horizons, 1 red chert, 2 gray chert and 3 black chert flakes were recovered.

A minimum age for the site is in the range of 2,000 years as this is a generally accepted minimum age for microblade technology in this area of Alaska. The presence of both obsidian and chert may indicate more than a single occupational event occurred at the site.

The use of the game trail as an ambush or campsite location are two possibilities for a functional interpretation of the site. The significance is low. No impacts are presently affecting the site and only those which are human-induced need be considered for mitigation.

HUG-066

Site Elevation: 535 Ft.	SW¼, SW¼ Section 25 T17N, R14E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a hill-like glacial feature at the extreme southern end of Lake Selby. A small embayment lies several hundred meters to the east and a small pond is located several hundred meters to the west. Additionally, HUG-067 lies 130 meters to the east while HUG-065 lies some 200 meters to the northwest. The site lies 50 meters south of the lakeshore and 20 meters above lake level, offering a good view of the country surrounding the southern portion of the lake. The view to the south is blocked by a nearby higher ridge.

Approximately 90% of the surface of the site is vegetated by a robust growth of caribou lichen and moss, as well as scattered woody and herbaceous plants. Small to moderately large birch trees are also scattered about the site.

A single, large obsidian flake was found protruding from the face of a small solifluction lobe. A 15 cm.^{2} test pit adjacent to and upslope from the flake was excavated to a depth of 7 cm. and produced no additional cultural material. Another similar size test pit excavated 7 meters to the north was also culturally sterile.

The physical character and location of the site suggests it may have served as a lookout. The site is quite possibly associated with a larger site, HUG-067, located on the same glacial feature 130 meters to the east. The presence of obsidian may indicate that the site is no older than ca. 2000 years B.P.

Little else can be said concerning the site. The site's basic value lies in its probable association with HUG-067, and that site's contribution to the overall prehistoric use pattern of the area around Lake Selby.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

HUG-067

Site Elevation: 530 Ft.	SW¼, SW¼ Section 25 T17N, R14E	Probable Site Type: Lookout
Site Age: ca. 2220 Years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on an east-west trending morainal ridge 200 meters south and 20 meters above Lake Selby. A small inlet at the extreme south end of the lake is in clear view, as well as the southern end of the lake.

A single flake of obsidian was found on the surface. Removal of on surface birch leaves revealed two more obsidian flakes, one with cortex, and a small gray chert flake. A 20 cm.^{2} test pit located 1.5 meters southwest of the surface find produced 1 large and 1 small obsidian and 1 large and 1 small gray chert flake from 2-3 cm. below surface.

A sample of obsidian from this test pit was submitted for hydration analysis and yielded a rind thickness measurement of 2.27μ ± 0.05μ. Given the locally calibrated radiocarbon dated rate of 2.32μ^2/1000 years, this measurement converts to an age of 2221 ± 98 years B.P. for the obsidian component of the site. The different types of lithic material may indicate more than a single event occurred at the site. The presence of cortex on some of the obsidian may indicate on-site cobble reduction was taking place.

The site may have functioned as a lookout. The significance of the site appears to be low. No natural or human-induced impacts are presently affecting the site. If human-induced impacts are recognized in the future, measures for mitigating these impacts should be considered.

HUG-068

Site Elevation: 488 Ft.	SE¼, NW¼ Section 24 T17N, R14E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the southeastern end of the northern most island in Lake Selby. A low ridge-like glacial feature runs along the center of the island on the long axis. This feature is broadest at the southeastern end. The site lies on a terrace about 20 meters from the shore and is elevated about 4 meters above lake level. The site offers a good view of the area surrounding the lake to the east, north, and west.

The island shows no indication of having been burned over by wildfire in the recent past, and the vegetation is more dense than that in the area surrounding the lake. Considerable underbrush as well as lush and robust growths of lichen, moss, and large spruce and birch are present.

A single black chert flake was found on the surface of the sloping face of the terrace, one of the few areas of exposed mineral soil. Two 20 cm.^{2} test pits were excavated to a depth of 12 cm. adjacent to the flake, and 1 meter to the west and the other ½ meter to the east. Although neither of the test excavations yielded any cultural material, there is a strong possibility that subsurface cultural material may be present. This possibility is suggested by the physical location and character of the site as well as by the manteling effects of the lush vegetation which makes assessment at the reconnaissance level of investigation difficult.

Use of the island might indicate the prehistoric use of boats on the lake if the island was utilized during the open water months. Boat construction suggests more than casual occupation of the area.

Little else can be said about the site. The site's basic value lies in its association with other sites in the Lake Selby area and its contribution to the overall prehistoric land use pattern.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

HUG-069

Site Elevation: 505 Ft.	SE¼, SE¼ Section 26 T17N, R14E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a small hill-like glacial feature at the extreme southern end of Lake Selby. The site lies 60 meters south of the lakeshore and 20 meters west of a small pond. HUG-070 is located roughly 300 meters south of this site. The site elevation is 10 meters above lake level and as a result, the view encompasses only the local area.

Roughly 90% of the surface of the site is vegetated by a robust growth of lichen, moss, and some scattered birch and spruce. A few small areas of exposed mineral soil are present on the hill crest.

Two flakes, one chert and one of obsidian, were observed on surface in two of the mineral soil exposures. Two 20 cm.^{2} test pits were excavated to a depth of 12 cm., one adjacent to the obsidian flake and another 6 meters to the north. Both tests proved to be culturally sterile.

The presence of both obsidian and chert at the site may indicate more than one occupational event took place at the location. The occurrence of obsidian may indicate a maximum age of ca. 2000 years B.P. for one of the possible occupations.

The physical character and location of the site suggests that it served as a lookout, as the usuable surface area is less than 1.52 meters.

Little else can be said concerning the site. Site significance is low, its basic value being its association with other sites in the Lake Selby area and its contribution to the overall prehistoric land use pattern.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

HUG-070

Site Elevation: 580 Ft.	SE¼, SE¼ Section 26 T17N, R14E Kateel River Meridian	Probable Site Type: Lookout
Site Age: ca. 425 years B.P.		Probable Cultural Affiliation: Unknown

This site is located atop a ridge-like glacial feature 160 meters south of the southern shore of Lake Selby. This ridge is part of a complex which extends in an east-west direction between Lake Selby's southern shore and the upper portion of the Selby River. The site lies 35 meters above the level of the lake and offers an excellent view of the area surrounding Lake Selby.

Ground cover at the site consists of a robust growth of caribou lichen, moss, and scattered birch trees. No cultural material was evident on surface. The site was discovered as the result of excavating a 20 cm.^{2} test pit. The test pit was excavated to a depth of 12 cm. below surface.

An obsidian flake and a chert microblade fragment were recovered from a depth of 3 cm. in the contact zone between the organic and mineral soil horizons.

Investigation of the site area revealed the existance of an old, 20-30 years, archeological test excavation at the western end of the ridge. This may be the result of fieldwork by Louis Giddings in the late 1940's or 1950's.

The subsurface obsidian from the site was submitted for hydration analysis, which revealed a hydration rind thickness of 0.99μ. Locally generated radioactive carbon calibration of hydration rind thickness suggests a date of 422 ± 34 B.P. using an exponential rate of $2.32\mu^2/1000$ years. The date appears to be far too recent to be associated with the microblade fragment which probably represents an earlier occupation. The microblade fragment suggests a date no more recent than 2000 years B.P. for the occupational event represented by that artifact.

The physical location and character of the site suggests it served as a lookout and that it may be associated with several nearby sites.

Little else can be said concerning this site. The site's basic value lies in its association with other sites in the Lake Selby area, and its contribution to the overall prehistoric land use pattern.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

HUG-071

Site Elevation: 550 Ft.	SW¼, SE¼ Section 26 T17N, R14E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located near the western end of the southern-most ridge-like glacial feature which is part of the glacial complex lying between the south end of Lake Selby and the Selby River. A large pond lies 150 meters to the west while HUG-072 lies 105 meters west. The site offers a good view of the Selby River and the Kobuk Valley to the south and west as well as a view of the nearby pond. Lake Selby, less than ¼ mile distant, is not visible, as the view to the east and north is quite restricted.

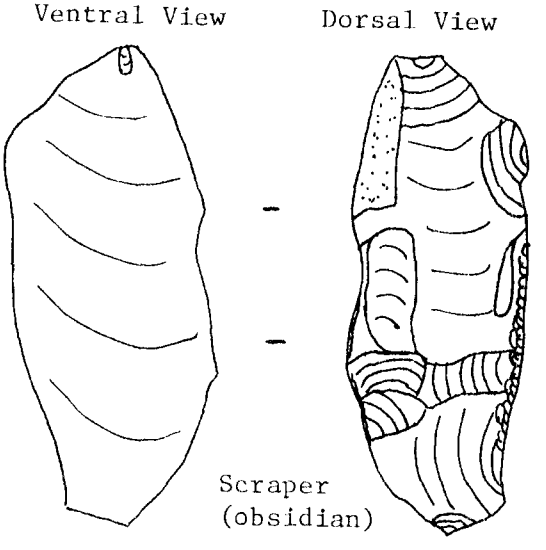
Ground cover consists of a robust growth of caribou lichen and moss as well as scattered spruce and birch to 10 meters in height. Frost action has exposed the mineral soil in some areas of the site.

A large obsidian flake, which appears to have been used as a scraper, and a chert flake were located protruding from the mineral soil in two areas of frost disturbed ground. Approximately 12 meters separated

the two pieces of cultural material. A 20 cm.^{2} test pit was excavated to a depth of 10 cm. adjacent to the obsidian scraper and produced no additional cultural material. Twelve meters to the east, a second test pit of similar size was excavated on the geographical high point of the site area. This test excavation was also culturally sterile. The presence of both chert and obsidian at the site may indicate more than a single occupational event. The obsidian suggests an age for one of the possible occupational episodes of not more than ca. 2000 years B.P.

The physical character and location of the site suggests it may have served as a lookout. Little else can be said concerning the site. Site significance is low, its basic value being its association with other sites in the Lake Selby area, and more specifically those on the ridge complex, and its contribution to the overall area prehistoric land use pattern.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.



HUG-071 Artifact - Actual Size

HUG-072

Site Elevation:
510 Ft.

SW¼, SE¼
Section 26
T17N, R14E
Kateel River Meridian

Probable Site Type:
Lookout

Site Age:
Unknown

Probable Cultural Affiliation:
Unknown

This site is located on the extreme western end of the ridge upon which HUG-071 (105 meters to the east) and HUG-073 (250 meters to the east) are also located. As previously described, this ridge is part of a

complex of glacial features which lies between the south end of Lake Selby and the Selby River. HUG-072 is at the low end of the ridge and the view is restricted to the local area, mainly the ground surrounding the large pond at the western end of the ridge.

Much of the surface of the site is exposed mineral soil. These exposures have resulted from frost action and game trail use. Vegetation cover, where it exists, consists of lichen, moss and a few scattered birch and spruce. The useable surface of the site is small in area, consisting of several small knobs.

A small obsidian flake was found exposed in the game trail which bisects the site. Two 20 cm.^{2} test pits were excavated to a depth of 10 cm. on the two site promontories, one 5 meters west of the flake location and the other 16 meters to the north-northwest. Both test excavations proved to be culturally sterile. The presence of obsidian at the site suggests an age not greater than ca. 2000 years B.P.

The physical location and character of the site strongly suggests it could have served as little else but a lookout. Little else can be said about the site. Site significance is low, its basic value being its association with other sites in the Lake Selby area, and more specifically those on the ridge complex, and its contribution to the overall area prehistoric land use pattern.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

HUG-073

Site Elevation:
550 Ft.

SE¼, SE¼
Section 26
T17N, R14E
Kateel River Meridian

Probable Site Type:
Lookout/camp

Site Age:
ca. 900/1400 years B.P.

Probable Cultural Affiliation:
Unknown

This site is located atop an east-west trending morainal ridge between the southern end of Lake Selby and the south-westward flowing section of its outlet, the Selby River. This is the highest point amongst the several ridges in this area, rising 30 meters above the river level. A lower and smaller ridge lies between the site and the river. The site provides a view southward of the Selby River, and toward the Kobuk Valley, although today the view is somewhat obscured by trees.

The site was discovered during surface reconnaissance. A large black chert blade-like flake (4 cm. x 2.5 cm.) was found protruding from the ground. Subsequent surface survey along the game trail, which occupies the ridge, revealed a scatter of chert and obsidian flakes and micro-blade fragments for at least 70 meters along the ridge. All microblades are made from gray, black or red chert. Test pit #1, located 2 meters south

of a concentration of surface lithics (1 obsidian, 1 gray chert flake, 2 proximal and 1 medial black chert microblade fragment , and 1 large gray chert microblade fragment), contained 1 large and 1 small obsidian flake, 3 gray chert flakes, 5 black chert flakes, 4 medial microblade fragments (2 gray, 1 black, 1 red), 3 proximal black chert microblade fragments and 2 distal microblade fragments (1 black and 1 gray) all chert. This material was recovered from 0-5 cm. below surface in sandy-silt.

Both obsidian flakes from test 1 were submitted for hydration analysis. Given the locally calibrated radiocarbon dated rate of 2.32μ^2/1000 years, and the two rind thicknesses of 1.81μ ± 0.05μ and 1.44μ ± 0.03μ, the dates of 1412 ± 78 years B.P. and 894 ± 37 years B.P. are respectively calculated. According to these dates, over 500 years time is represented within this single test. These results either show differing rates of hydration for synchronously produced materials, or temporally separated events that have become mixed due to the shallow stratigraphy.

The site's location atop this ridge suggests its use as a lookout site but there is also a good chance that it served as a short term campsite as well. Of all the sites located in the area of the moraine complex south of the lake, this one may warrant further investigation.

Presently no impact, either natural or human-induced, is affecting the site's integrity. If human-induced impacts are brought to light in the future, measures for the site's protection should be considered.

HUG-074

Site Elevation: 500 Ft.	NE¼, NW¼ Section 7 T17N, R15E	Probable Site Type: Camp
Site Age: ca. 1275 Years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

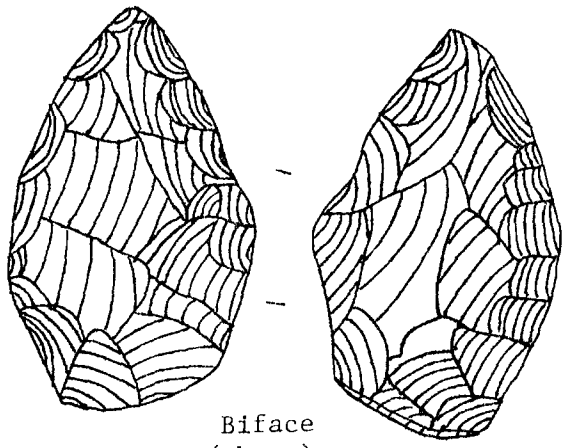
The site is located on the southern side of the peninsula which separates Lake Selby and Narvak Lake. Situated on a 10 meter high terrace, the site sits approximately 35 meters north of the Lake Selby shoreline. The view from this site is best toward the south along the shoreline and east-west along the terrace edge. View to the north, onto the peninsula, is obscured by trees. HUG-059 and HUG-063 are located 85 meters to the west and 95 meters to the east of this site.

Vegetation at the site consists primarily of caribou lichen along the terrace edge, spruce and birch on the terrace, and dwarf birch and alder below the terrace along the lakeshore. There is no evidence of recent wildfire activity on this peninsula. Some frost action and downslope movement appear to be acting upon the surface lithics at the site. A game or human trail runs along this terrace edge.

The site was discovered by surface reconnaissance at the terrace edge. Along a 30 meter stretch at the break in slope, 5 obsidian flakes, 1 black chert flake, 1 gray chert flake, 1 gray chert blade fragment, and 1 coarse-grained black chert biface were found on the surface. The flakes are small. The blade-fragment (4 cm. x 2.5cm.) shows slight retouch on its right dorsal margin. The biface (5 cm. x 3 cm.) is nearly complete and exhibits flaking along both margins.

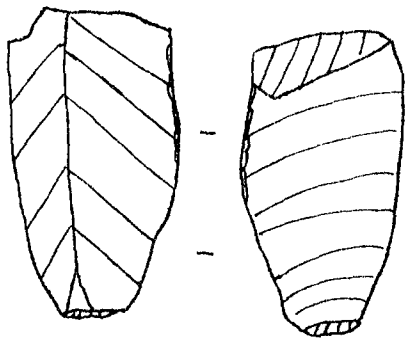
Two 15 cm.^{2} test pits were excavated to a depth of 8 cm. below surface. Test #1 was located at the terrace edge above the blade fragment and biface, and produced 5 gray chert, 2 black chert, and 1 small obsidian waste flake between 0-6 cm. below surface. Test #2 was also located on the terrace edge 15 meters west of test #1 above a scatter of 4 obsidian flakes. Test #2 produced 3 small obsidian waste flakes at 0-4 cm. below surface. One obsidian flake from each test pit was submitted for hydration analysis. Both flakes returned a hydration rind thickness measurement of 1.72μ. Based on a locally derived radiocarbon determined rate of 2.32μ^2/1000 years, the indicated age of these flakes is 1275 ± 104 years B.P. Both tests revealed a soil matrix of loess over gravels.

Site significance is medium. The site may have functioned as a camp or hunting station utilizing resources on the northern end of Lake Selby. Based upon the diversity of material type and its area, it appears that several events are represented at this site. Since both test pits above on-slope lithics produced cultural material, it appears that the site is being slowly moved downslope. This movement, however, appears slow and randomly incremental. Human use of this area is fairly high and this site may be in danger of unauthorized collection. Therefore, further testing of the site and collection of surface material is recommended before serious impacts can occur.



Biface
(chert)

Dorsal View Ventral View



Blade Fragment
(chert)

HUG-074 Artifacts - Actual Size

HUG-075

Site Elevation: 875 Ft.	SE¼, SE¼ Section 6 T17N, R15E	Probable Site Type: Lookout
Site Age: ca. 820 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site occurs on the hilltop at the eastern end of the peninsula which separates Lake Selby and Narvak Lake. This rounded hill is the dominant landform on this peninsula and stands nearly 100 meters in elevation above the lakes. From this site, the point of connection between the two lakes is not visible, although the view in all other directions is 5+ miles.

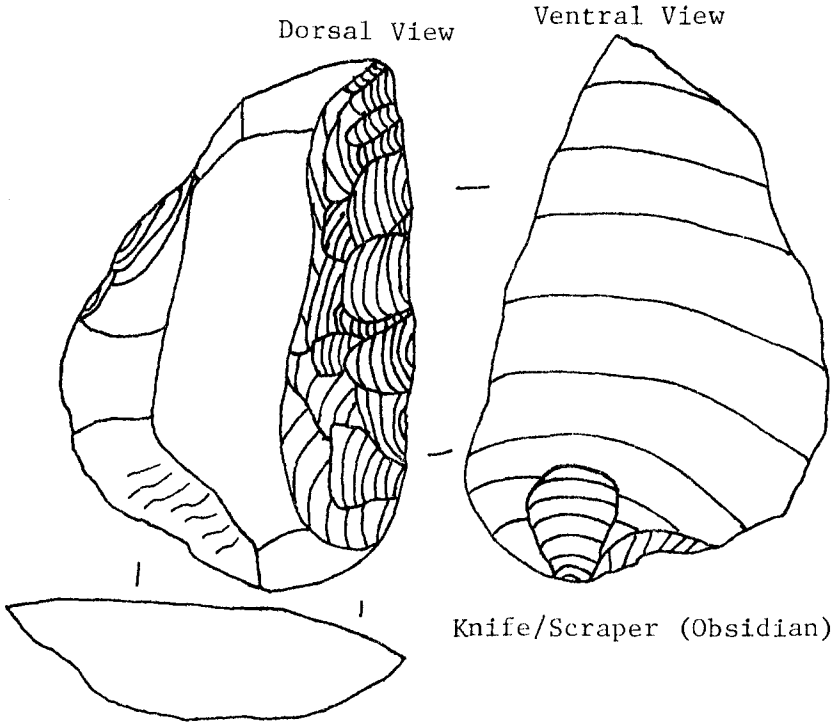
Vegetation at the site consists primarily of caribou lichen, birch, and

woody plants. The slopes of the hill are made up of large fragmented bedrock chunks which are thinly mantled by lichen and spruce. The area atop the hill is flat and experiences wind and frost action. Several U.S.G.S. survey markers, a recent fire pit, cut spruce trees, and shards of iron were found on this hilltop and represent recent activity.

The site was discovered by surface observation of a partially buried obsidian knife/scraper and a black chert waste flake. These two surface pieces were located on the south and north ends of the hilltop about 15 meters apart. The small chert waste flake showed no sign of use or retouch. The obsidian knife/scraper (7 cm. x 5 cm.) shows use wear along its left dorsal edge and is polished on most of the dorsal surface, possibly the result of use.

A 15 $cm.^2$ test pit, excavated under the partially buried knife/scraper to a depth of 8 cm., produced a cortical obsidian waste flake at a depth of 0-5 cm. This flake was submitted for hydration analysis and revealed a hydration rind thickness of 1.38 ± 0.05μ. Based upon a locally derived, radiocarbon determined hydration rate of $2.32\mu^2$/1000 years, the indicated age of this flake is 821 ± 59 years B.P. This flake appears to be of the same obsidian type as the knife/scraper. Two more 15 $cm.^2$ test pits were excavated to a depth of 5-8 cm. in the loess mantle on this bedrock hill and produced no cultural material.

Site significance is low. The site may have functioned as a hunting overlook, taking advantage of the view of the adjacent lakeshores and peninsula. The two lithic types appear to represent separate events based on material type and spatial distance. Recent activities at the hilltop have generated a variety of debris and elevation markers. The site appears to undergo frequent human use and its integrity may already have been impacted. The site should be considered for additional testing or excavation to mitigate further impact.



HUG-075 Artifacts - Actual Size

HUG-076

Site Elevation: 600 Ft.	NW¼, NE¼ Section 7 T17N, R14E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

Located on the peninsula that separates Lake Selby and Narvak Lake, this site occurs on the southern slope of a high hill. This hill is situated at the eastern end of the peninsula and consists primarily of fragmented bedrock boulders. The site, 50 meters above lake elevation, sits atop an outcrop which overlooks the northern end of Selby Lake, 50 meters distant. The view from this outcrop is 300+ meters to the east and west along the shoreline.

Vegetation at the site consists primarily of caribou lichen and birch trees. The southern slope of this hill is predominantly boulder skree, which has been covered by vegetation where soils have accumulated. Slope angle appears to be approximately 30° and some solifluction lobes are evident.

The site was discovered by subsurface testing. A random test pit (15 cm.^{2})

excavated to a depth of 8 cm. produced a single black chert microblade fragment between 0-4 cm. below surface. The soil matrix is loess overlying bedrock with little apparent soil development.

Site significance is a qualified low. The site may have functioned as an overlook for the upper end of Selby Lake. The age, based on the presence of a microblade technology, may be at least 2000 years. Further testing, however, could better establish the site size. Occurring as it does on a slope, the site will probably undergo some further downslope movement. Now recorded, the site warrants no further protection consideration except from human impact in this frequently used area of Selby Lake.

HUG-077

Site Elevation: 480 Ft.	NW¼, NE¼ Section 7 T17N, R14E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

The site sits on the northern shore of Lake Selby, where a berm of gravels has been cut by wave action removing most of the vegetation. The berm is about 2 meters above the lake and appears to erode out into the swash zone of the lakeshore. The view from this site is almost 30 meters east and 200+ meters west along the shoreline, but obstructed to the north by trees and the hill which sits on the tip of the peninsula. HUG-076 is located almost 90 meters northeast and HUG-048 is situated approximately 130 meters west of this site.

This beach site is devoid of vegetation except on the top of the berm and on a 2 meter high terrace behind the site. Here a healthy stand of spruce, lichen, and birch occur. Alder and dwarf birch are predominant along the lakeshore. The lakeshore is a gradual sloping beach made up of gravels, which terminates in an undercut berm apparently affected by the fluctuating water levels of the lake.

The site was discovered through surface reconnaissance. Two medium sized flakes of obsidian were found in the beach gravels of the lakeshore, approximately midway between the crest of the berm and the lake. Found nearly 2 meters apart, these flakes were smooth and polished apparently from wave action. In a 4-5 meter area between berm and water level, a 1.5 meter long wooden stave sharpened on one end appears to have been used as a stake for an airplane or boat mooring. A 15 $cm.^2$ test pit excavated to a depth of 4-5 cm. below surface on the top of the berm proved sterile.

The site has low significance. Based upon its location at the lakeshore, the site has been subjected to wave action which apparently has polished the obsidian flakes and may have floated the wooden stave to

this spot. The site may have been focused more on the small berm above the lakeshore and may represent a camp spot or hunting station. The lithics, however, are so worn as to mask their previous usage. Although this site falls in a common hiking area along the north shore of Lake Selby, it is in little danger of further impact. Now recorded, the site warrants no consideration for further testing as it may yield little additional data.

HUG-078

Site Elevation: 500 Ft.	NE¼, SW¼ Section 24 T17N, R14E	Probable Site Type: Camp
Site Age: ca. 950 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the western end of the northern peninsula which extends into a shallow southern embayment of Lake Selby. This western part of the peninsula is divided into two distinct landforms. The south facing side from the tip eastward 100 meters is a low relic beach, approximately 20 meters wide (N-S). North and further east of the site, the terrain takes on an elevated, undulating character, typical of chaotic glacial terrain.

Mature birch, alder and willow grow along the modern shoreline as well as further inland on the elevated terrain. Spruce is abundant to the north and east of the site. The site proper is open, with dwarf birch, lichen, labradore tea and other low herbaceous and woody plants characterizing the vegetation over the majority of the site. No evidence of a recent wildfire was observed near the site.

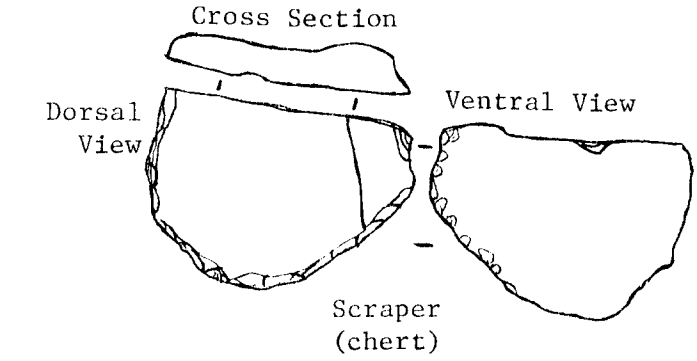
This location was recently (1968) used as a T & M (Trade and Manufacture) site. Refuse is abundant: 30-50 5 gallon avgas cans are scattered along both the northern and southern shorelines. A dozen or more wooden boxes (avgas boxes), numerous beer cans, and a trash pile complete the refuse inventory. The camp itself was located on the beach remnant where a rectangular vegetation anomaly may indicate the past location of a tent site. The ground cover is much less developed here and consists of thin lichen cover with fairly good visibility of the underlying coarse sand.

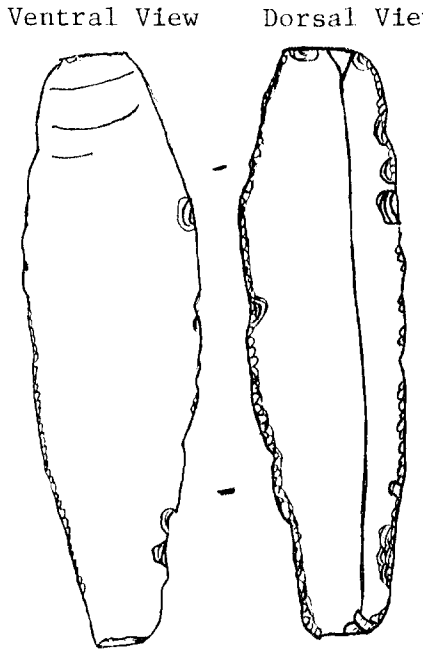
The prehistoric component(s?) was discovered during surface reconnaissance of the northwest facing beach. A black chert blade (complete) measuring 7.5 x 2.3 cm., was found amidst gravels of the modern swash zone. The surface of the artifact appears to be only slightly water worn. Both edges exhibit continuous, fairly even and somewhat steep use retouch. This artifact could certainly have functioned as a knife. No other surface indications were encountered along the beach and none were observed on the slightly elevated clearing just north of the beach remnant or on the surface of this area.

Subsurface testing was the necessary method of reconnaissance inland from the beach, as the ground cover was dense. Six 20 cm.^{2} test pits were excavated 5 meters apart on an east-west line. Subsurface testing was initiated on the slightly elevated lichen covered area north of the beach remnant. Test #1 revealed a 5 cm. thick organic mat overlying a well developed A horizon that contained charcoal and what appeared to be wood ash. An end scraper fragment (medio-distal portion) of fine grained gray chert and a flake of same, were recovered from this horizon, 6 cm. below surface. The underlying soil was fine grained, dark brown silt, mixed with gravels. Test #2 was excavated 10 meters east of test #1. Three pieces of fine grained gray chert, each exhibiting evidence of heat-fracture, were recovered from the A horizon 4-6 cm. below surface. Test 3, located 10 meters west of test #1, on the berm of the northwest facing shore, did not yield any cultural material. Test #4, located on the beach remnant south of tests 1-3, also failed to reveal any cultural material. Test #5, located 10 meters southeast of test #2, on the northern edge of the beach remnant produced an obsidian burin spall, a small obsidian flake, two small gray chert flakes and one minute gray chert microblade fragment at a depth of 3-4 cm. below surface. Test #6, located 2 meters north and equidistant from tests #1 and #2, produced a dark gray chert microblade, a probable burin spall of the same material, five flakes of same and one flake of very fine grained gray chert. One of the dark chert flakes exhibits heat-fracturing over most of its surface. This material occurred within the lower organic mat to the contact of the A horizon, 3-5 cm. below surface.

A sample of obsidian was submitted for obsidian hydration analysis. The hydration rate of 2.32μ^2/1000 years has been tentatively established for the Selby-Narvak Lakes area through the use of associated carbon 14 data. A hydration rind of 1.48μ ± 0.04μ was measured, which according to the local calibration yields a date of 944 ± 51 years B.P. This date may pertain only to the obsidian that was dated, as the nature of the archeological relationship between the chert and obsidian may not represent a single component. The date of 944 years B.P. appears to be somewhat young given the presence of microblade technology which, in northern Alaska, generally date to ca. 2000 years B.P. or older. Further investigation of HUG-078 may be warranted in order to address this question.

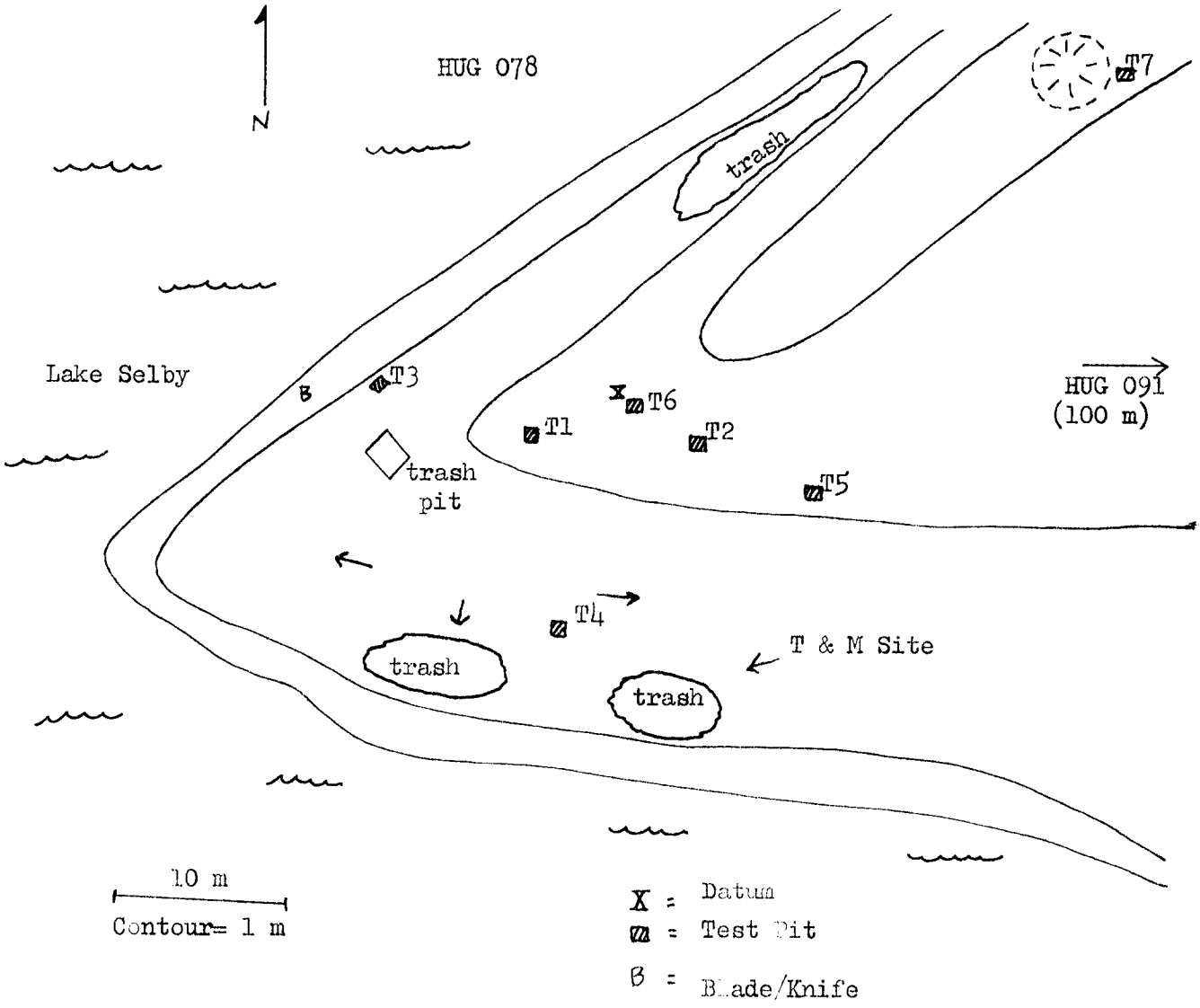
Site significance is high and the site has a high potential for yielding meaningful cultural information. The spatial extent of the site, determined by only limited testing (25-30 meters E-W), suggests a relatively extensive occupation. The site is not presently in danger from any natural impacts. This site should receive protection from any type of impact which threatens the site's integrity until such time as additional study can be undertaken. The possibility of human impact is high.





Blade / Knife (chert)

HUG-078 Artifacts - Actual Size



HUG-078 SITE MAP

HUG-079

Site Elevation: 525 Ft.	SW¼, SE¼ Section 25 T17N, R14E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located atop the truncated eastern end of an east-west trending morainal ridge. The Selby River passes within 40-50 meters to the east of the site before turning abruptly to the west. This location, 20 meters above the river level, affords a fine view north and east of the Selby River and the morainal ridges opposite. The site is vegetated with lichen and low woody and herbaceous plants.

Three black chert flakes were found in an active frost heave area during surface reconnaissance. Four meters north, a single flake of poor quality granular material was found. Two 20 cm.^{2} test pits were excavated to a depth of 6-8 cm. with negative results.

The site most likely functioned as an overlook site, but this assumption is based solely on the site's location. Since no diagnostic artifacts were observed, no cultural or temporal designation can be given to the site.

The site appears to be of minimal significance. For this reason only human-induced impacts need to be addressed if recognized.

HUG-080

Site Elevation: 550 Ft.	SE¼, SW¼ Section 25 T17N, R14E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a prominent lichen-covered knoll 150 meters north of the Selby River at the point where the river bends sharply to the west approximately one mile south of its exit from Lake Selby. The knoll rises 25 meters above the river and commands a 360° view of the moraines to the south, the ridges to the east and west, and the lake basin to the north.

A single small gray chert flake was located in a very small unvegetated patch of ground on the top of the knoll. No other surface material was observed. Three 20 cm.^{2} test pits were excavated to a depth of 5-10 cm. No subsurface material was recovered.

The site is an ideal lookout/observation point. The lack of diagnostic artifacts however, precludes a functional cultural, or temporal designa-

tion for the site.

The site is not in danger from natural or human-induced factors. Now that the site is recorded, little reason exists to protect it from any but human-induced impacts.

HUG-081

Site Elevation: 495 Ft.	SE¼, NW¼ Section 25 T17N, R14E	Probable Site Type: House/cache pit
Site Age: ca. 130/865 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the western end of the southern most island in Lake Selby. A low ridge-like glacial feature runs along the center of the island on the long axis. At the western end of this feature are two broad terraces which descend step-like toward lake level. The view from the site is local due to the presence of some fairly large trees.

The island displays no indication of having been burned over by wildfire in the recent past and the vegetation is more dense than in the areas surrounding the lake. Ground cover consists of a very robust growth of lichen and low woody and herbaceous plants, the most common and abundant being the low bush cranberry. Moderately large spruce and birch trees are also present.

The site consists of a number of cultural features on both the upper and lower terraces. On the highest portion of the upper terrace is what appears to be a semisubterranean house depression. Also present on the upper terrace are two cache pits. Cache pit "A" lies one meter to the south of the house depression while cache pit "B" lies 3.5 meters to the southwest of the house. On the lower terrace are three more cache pits; "C", "D", and "E". These three cache pits are in a crescentic cluster, roughly four meters apart, and thirty meters west of the house depression. The cache pits are all roughly one meter in diameter. The depths of their depressed centers range from twenty cm. to fifty cm. below their rim levels. The house depression is roughly oval and approximately 2 x 3 meters in size. The depression measures twenty cm. below the surrounding surface. The house is located 48 meters west of the lakeshore.

A 25 x 10 cm. test pit, located slightly east of center, was excavated to a depth of forty cm. below surface within the house depression. A brownish sod/moss mat extended from the surface to ten cm. below surface and contained no cultural material. From 10-23 cm. below surface, a cultural midden level was present. At 23-28 cm. below surface, what appeared to be a buried A-1 horizon was noted. This was followed by a buried A-2 horizon between 28-31 cm. below surface. Between 31-37 cm.

below surface a buried B horizon was encountered. No obvious roof material or structural member remains were encountered during excavation of the test pit. This may indicate that structure was tent like or that the test excavation missed any structural remains that were present.

The depression does not appear typical of semisubterranean houses as no excavation into the mineral soil by the prehistoric occupants is apparent. The vegetation may, along with some organic soil, have been scraped aside to create a shallow depression, and then a pole framework covered by hides erected above the depression. The low berm surrounding the depression appears to be totally organic in nature (no mineral soil) and may represent the organic soil/vegetation mat which was removed from the living area and stacked around the base of the structure. Some of the depression's depth may be the result of use, i.e. living activities much like those we have observed in our own camp cook tents. Constant use, foot traffic, in our camp cook tent, breaks down surface cover and dispurses the organic mat components and soil away from the high use activity areas and toward the edges of the tent. After three weeks use at Lake Selby, when we took the cook tent down, we noted there was a central depression with an automatically built organic berm about where the tent walls had been. Although purely supposition, similar depression and berm creating activity might partially account for the depression formation at HUG-081.

The midden/soil matrix was an organically rich, grayish black, loamy soil; the grayish cast probably the result of fine charcoal. The midden material consisted of charcoal smears and small chunks, fish vertabra and scales, small mammal bones (mice, voles), the proximal portions of the femur and tibia of a rabbit sized animal (both burned) a beaver incisor, fire cracked rock, and 20-30 small flakes of gray and red chert and a single flake of obsidian.

A test pit was excavated in cache pit "B" and produced numerous caribou bones including thorasic vertabra, ribs and a mandible. Additional faunal material was present but excavation was halted as soon as the bones were encountered, at a depth of approximately 15 cm. below surface. In addition to the bones, strips and scroll-like rolls of birch bark were also encountered. This material may have been used as a covering or lining in the cache pit.

Charcoal from the midden material was submitted for radioactive carbon dating and returned a date indistinguishable from that of modern material or no older than 130 years B.P. (Beta-7550). Obsidian recovered from the midden material was submitted for hydration analysis which determined rind thickness to be 1.42μ. This thickness calabrated by locally recovered obsidian dated by radioactive carbon, indicated an age of 865 B.P. for the site, or at least for the obsidian.

The reason for the discrepancy between the dates is not known. A control or soil test pit was excavated 3.5 meters north of the house depression. This test pit showed no evidence of a cultural deposit nor of the presence of wildfire charcoal in the soil profile. Therefore, it is difficult to think the radioactive carbon sample was contaminated by

modern or recently formed charcoal. The obsidian flake from which the hydration data was gathered was minuscule and therefore may have been difficult to analyze or may have given an aberant result. The possibility does exist that both dates are credible and that they represent different occupational events. However, such is probably not the case.

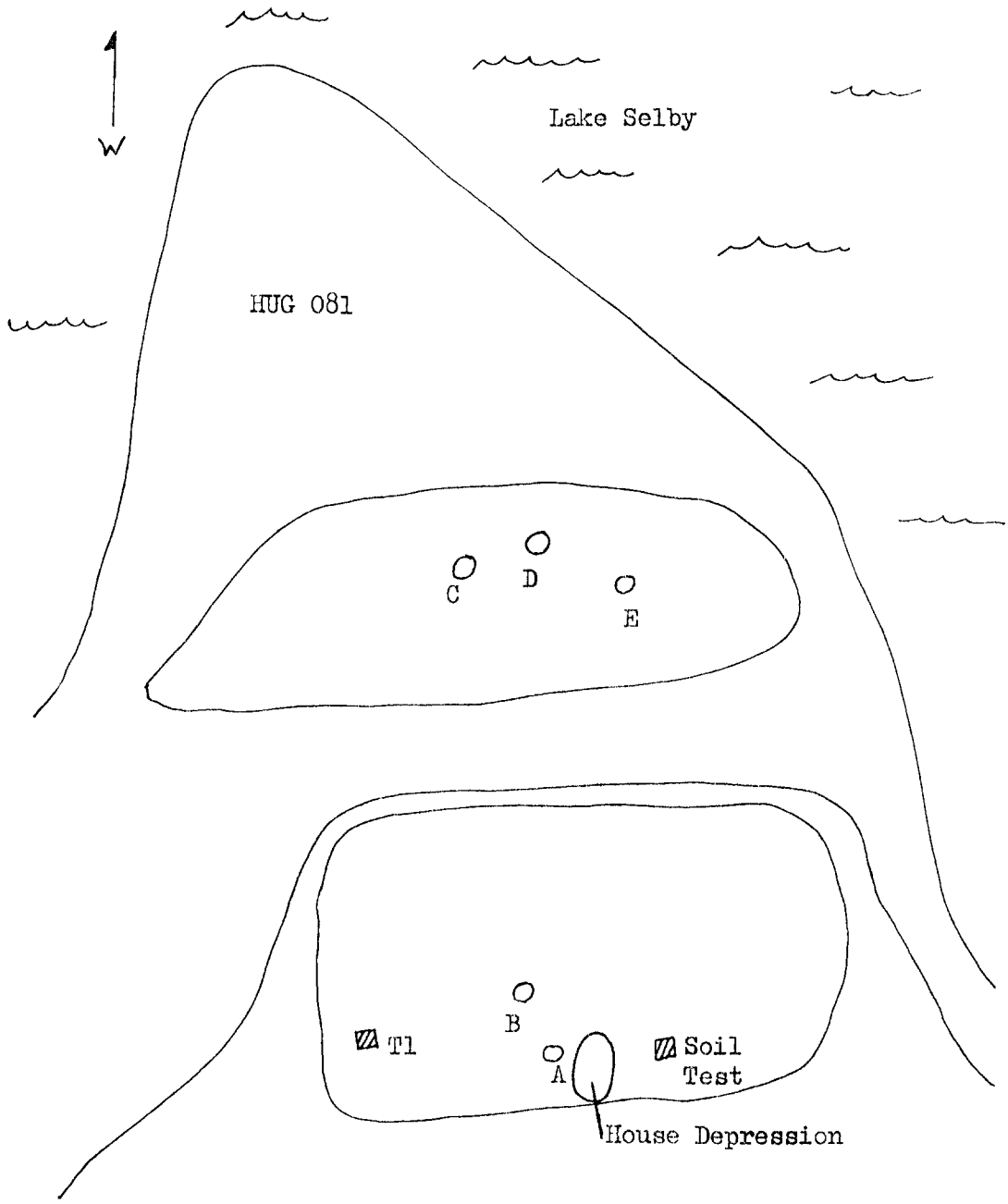
Another puzzle presents itself when considering the faunal material at the site. Material from within the house depression showed evidence of the use of fish and terrestial and aquatic mammals of moderate size. However, there were no large mammal bones recovered from the test pit in the house depression. Yet the tested cache pit proved to be filled with caribou bone. Even the limited amount of testing that was done at the site would seem to reasonably suggest different periods of occupation may be represented.

Evidence at the site indicates that the prehistoric occupants were making use of a wide spectrum of food resources. The presence of fish remains could indicate use at anytime of the year. Beaver remains suggest occupation of the site during the open water months. The caribou remains were those of a mature adult and probably indicate use of the locale during the spring or fall. Other possibilities include a camp where only women and children were present, thus the small animal and fish remains. Such remains could also indicate occupation at a season when food resources were slim. The abundant caribou remains in the cache pit suggest that the meat in that cache was never retrieved. The possibilities for speculation are endless.

There is an excellent possibility that additional house depressions and cache pits exist in the site area or on other parts of the island. Only additional investigation at the site can determine this, and it is recommended that such investigations be undertaken when feasible. At present the site does not appear to be in danger of impact by either natural or human agents.

Site significance is high as the site probably contains much information relative to late prehistoric and/or intermediate period (as defined by Irving, 1964) use of the area. Historic and ethnohistoric accounts indicate the existance of a large village at the confluence of the Selby and Kobuk Rivers that was inhabited as recently as 1898 (Grinnel, 1901; Cantwell, 1889; Giddings, 1952; Stoney, 1899). There is an excellent possibility that HUG-081 is associated with some period of occupation at this village site which lies slightly less than 6 miles to the south-southwest. Another site similar to HUG-081 is reported by Giddings (1952) on a large lake on the upper Mauneluk River. This lake is probably Avaraart Lake which lies roughly 8 miles to the north-northwest of HUG-081. It is reasonable to believe that these two sites may also be related.

The field data gathered at HUG-081 combined with other information available in the literature suggests that the site could play an important role in understanding human land and resource use in the area during the intermediate or late prehistoric times. The site should be protected from human impacts.



HUG-081 Site Map

HUG-082

Site Elevation: 500 Ft.	NE¼, SW¼ Section 25 T17N, R14E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a bluff-like portion of a linear glacial feature at the south end of Lake Selby. The site lies 100 meters south of "House Depression Island" and is separated from the island by a narrow, but relatively deep channel. HUG-086 lies roughly 200 meters to the south on the same glacial feature complex. Although the site lies 12 meters above lake level and is only 20 meters from the shore, only the extreme southern portion of the lake is visible from the site. However, the view to the east, west and south is reasonably good.

The surface of the site is covered by a robust growth of caribou lichen and moss, as well as scattered woody and herbaceous plants. Scattered dwarf birch are present, as are small birch, to 5 meters in height, and spruce, to 7 meters in height.

The site was located as the result of test excavations. Three 15 cm.^{2} test pits were excavated to a depth of 12 cm. below surface. Test pit #1 was excavated on the northernmost promontory of the bluff and yielded a single black chert flake at a depth of 4 cm. below surface. Test pit #2, located 5.5 meters to the west of test pit #1 and test pit #3, and 21 meters to the southeast of test pit #1, produced no additional cultural material.

Little else can be said concerning the site except that the robust ground cover makes subsurface testing the only practical means of site investigation. The possibility of the presence of additional subsurface cultural material is high. The physical location and character of the site suggests the location could have been used as either or both a campsite or lookout.

Site significance is low. The site's basic value lies in its association with other sites in the Lake Selby area and its contribution to the overall prehistoric land use pattern of the area.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

HUG-083

Site Elevation: 525 Ft.	SE¼, NE¼ Section 25 T17N, R14E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the edge of a steep bluff face at the east end of an east-west trending glacial feature. The site lies 20 meters east of the Selby River slightly less than ½ mile south of the river's head. HUG-082 lies ½ mile due west. The bluff face is steep, possibly due to errosional action by the river. The site overlooks the Selby River and offers a good view of the country to the east and southeast.

The surface of the site is covered by a thin mat of caribou lichen and moss. Some scattered birch, spruce, and dwarf birch are also present. Roughly 50% of the bluff face is exposed mineral soil.

A single flake of gray chert was observed on the surface of the lichen mat. A 15 cm.^{2} test pit was excavated to a depth of 8 cm. 0.2 meters south of the flake location and produced no additional cultural material.

The physical character and location of the site suggests that it served as a lookout. The single most interesting aspect of the site is the glacial feature upon which the site is located. This feature extends from a deep bay on the southeastern shore of Lake Selby to the edge of the Selby River. This glacial feature would provide an excellent pedestrian highway across the rather low, wet, topography between the lake and the river.

Little else can be said about the site. The site's basic value lies in its association with other sites in the Lake Selby area and its contribution to the overall prehistoric land use pattern.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

HUG-084

Site Elevation: 495 Ft.	SE¼, SW¼ Section 24 T17N, R14E	Probable Site Type: Camp
Site Age: ca. 700-800 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This three locality site is located on the southeastern shore of Lake Selby. The site is ¼ mile south of HUG-091 and slightly less than ½ mile north of HUG-082. Located on the truncated edge of a stagnant ice glacial feature, the site lies 6 meters above and 10 meters east of the lakeshore and offers a good local view of the southern and western portions of the lake and the surrounding area.

Surface cover on the three localities consists of a moderately thick mat of caribou lichen and moss as well as some scattered woody and herbaceous plants. Dwarf birch, willow, birch and spruce are also thinly scattered about the site. The three localities are separated by areas of lower ground, 1-2 meters lower, which support dense growths of willow, alder and dwarf birch. This vegetation is so thick

in some areas as to be almost impenetrable.

The three localities are scattered along the lakeshore edge of the feature for a distance of 90 meters. Locality #1 is the southernmost locality. Seventy meters to the north lies locality #2, and 19 meters beyond that lies locality #3. These localities occur on relatively flat, open areas which are roughly 10^2 meters in area. Localities #2 and #3 were found as the result of observing cultural material on surface while locality #1 was located through subsurface testing.

One half of an egg-size obsidian cobble was found on the surface of the lichen mat at locality #3. A 15 cm.^{2} test pit was excavated to a depth of 7 cm. 0.02 meters west of the cobble location and produced a dozen small obsidian flakes. The flakes were recovered from the root mat roughly 2 cm. below surface.

In a small area of exposed mineral soil at locality #2, two chert flakes were observed on surface. A 15 cm.^{2} test pit was excavated to a depth of 15 cm. below surface, four meters north of the surface flakes. This test pit yielded numerous small flakes and chunks of white, gray, brown and black chert as well as some flakes of obsidian. Three pieces of a lancolate chert projectile point (the pieces fit together) were also recovered from the test pit. This cultural material was recovered from a dark, organic, charcoal stained, soil matrix which contained numerous small bone fragments. Much of the bone appeared to have been burned, as did some of the lithic material. The projectile point appeared to have fractured due to intense heat, and several of the chert chunks exhibited pot lid fractures, usually indicative of subjection to extreme heat. Cultural material was recovered from just below the root mat, 2 cm. below surface, to a depth of 15 cm. below surface. The great majority of the cultural material was recovered between 2-10 cm. below surface.

A second test pit, of the same size and depth, was excavated ½ meter to the north and yielded only three chert flakes. This excavation confirmed the fact that the first test pit had been excavated in a culturally disturbed area, as the stratigraphy in the second test pit was quite different from that of the first. The data suggests that the original test pit was excavated in a hearth or near a hearth area.

Locality #1 was located through the excavation of a 15 cm.^{2} test pit excavated to a depth of 7 cm. This excavation yielded a single gray chert flake and a few small bone fragments at a depth of 2 cm. below surface. Some charcoal was encountered in the root mat case in all of the other test pits. This charcoal is attributed to wildfire rather than cultural activity.

A bone sample from the hearth area was submitted for radioactive carbon dating but proved to have insufficient carbon for analysis.

Four samples of subsurface obsidian were submitted for hydration analysis. Three of the samples were from locality #2 and one from locality #3. Hydration rind thicknesses for the locality #2 samples were 0.96μ, 1.20μ, and 1.38μ. Rind thickness for the locality #3

sample is 1.26μ. Hydration rind values calibrated by locally obtained radioactive carbon dated obsidian suggest ages of 397 ± 58 B.P., 621 ± 83 B.P., and 820 ± 59 B.P. for the locality #2 samples and a date of 684 ± 76 B.P. for the locality #3 sample. Using the standard deviation of the hydration measurements to best advantage, a clustering of three dates is recognized 761, 760 and 704 B.P. The first two dates are from locality #2, the third date from locality #3. The remaining date, which is about 300 years younger than the others, may be the result of heat affect (dehydration) on the obsidian sample or represent a more recent occupation of the site. The clustering of the dates indicates that the site was probably occupied between 700-800 years ago.

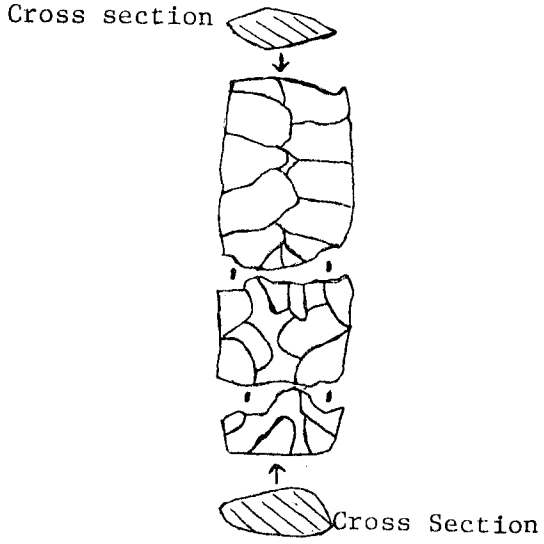
Faunal material from test pit #1, locality #2, contained numerous fragments of small and large mammal bones. As previously mentioned, many of these bone fragments were burned. Several of these fragments were identifiable, in a general way, as portions of a long bone from large and medium sized animals. Two specimens were specifically identified as a beaver medipodial and caribou phalange.

This evidence suggests that the site occupants were making use of a wide spectrum of food resources. The presence of beaver remains in the faunal assemblage may indicate site occupation during the open water months. The caribou remains could indicate site occupation during the spring or fall.

The apparent date of occupation for this site is in the same range as the date of occupation for HUG-081, as determined by obsidian hydration. The faunal material from both sites is also similar. Although comparative data of this type is only available for two sites in the Lake Selby area, it may be indicative of area resource use and reflect a time period when such a use pattern was prevalent.

An additional intersite association may lie in the similarity between the fragmented projectile point from this site and a complete specimen from HUG-091, ¼ mile to the north. The two projectile points are virtually identical. This association may also include HUG-078 (see this report). Such intersite associations may indicate a specific type of use associated with the southern end of Lake Selby (an area of generally shallow water, numerous bays, peninsulas, points, ponds, and lake side glacial features) as well as the proximity of a river. This local geomorphology is in sharp contrast to that of the northern two thirds of the lake and Narvak Lake further to the north.

The time period apparently represented by HUG-084 is one generally considered to be unclear in terms of cultural development and use over a large geographical section of northern Alaska. HUG-084 may contain valuable information regarding the understanding of this time period in prehistory. Because of this, the significance of the site is relatively high. The investigations at the site indicate that a substantial amount of subsurface material may be present. There is no indication that the site area is presently threatened by either human or nautral impacts. The site should be protected from human impact.



Fragmented Project (chert)

HUG-084 Artifact - Actual Size

HUG-085

Site Elevation: 520 Ft.	NW¼, NW¼ Section 7 T17N, R14E	Probable Site Type: Camp
Site Age: ca. 1150 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the northwest corner of Lake Selby. Situated on a 30 meter high terrace approximately 40 meters northwest of the shoreline, the site extends over a 40 meter area along the terrace edge. The site overlooks a low-lying area to the south (50-150 meters), and the lakeshore to the east and southeast. The view in all other directions is obscured by trees. HUG-051 is located approximately 200 meters north of this site.

Vegetation at the site consists primarily of caribou lichen, spruce trees, and birch. The area along the terrace edge and slope are devoid of trees and covered by grass and lichens. Some frost action and downslope movement is evident in this area. The terrace is well-drained and the soil here is comprised of loess overlying glacial gravels.

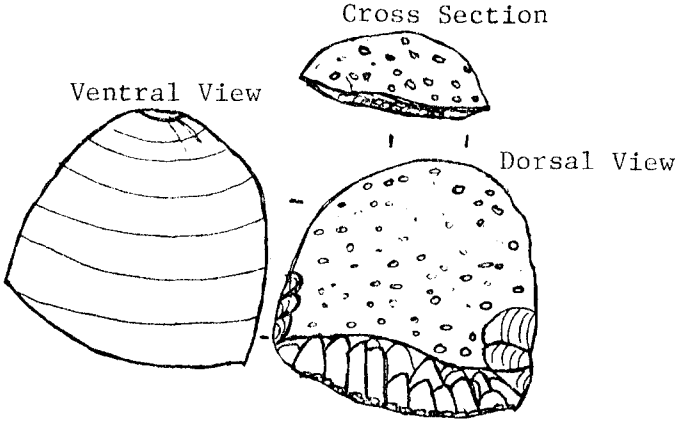
The site was discovered through surface reconnaissance. Two localities were found along the terrace edge approximately 40 meters apart. At locality "A", two obsidian scrapers were located 9 meters apart. These scrapers were rounded, had cortex on the dorsal surface, and were approximately 3 cm. and 1.5 cm. in diameter. In addition to the scrapers, several small waste flakes of obsidian and 2 black chert flakes were found on the surface. At locality "B" approximately 15 tiny obsidian and

black chert waste flakes were found along slope.

A total of three 20 cm.^{2} test pits were excavated to a depth of 6-8 cm. below surface. Two tests in locality "A" were put in upslope from the obsidian scrapers. In test #1, another obsidian scraper was found 1-3 cm. below surface as well as 1 obsidian and 1 gray chert waste flake. Test #2 produced 2 obsidian and 2 black chert flakes at 1-3 cm. below surface. Test #3, which was put in at locality "B", produced 2 obsidian, 1 black chert, and 2 gray chert waste flakes recovered between 4-6 cm. below surface. The soil matrix of these pits consisted of a thin mantle of loess over glacial gravels.

Obsidian hydration analysis was done on the scraper in test #1 at locality "A" and on a flake from test #1 at locality "B". The hydration rind of the flake was measured at 1.61μ ± 0.06μ. Based on the locally derived radiocarbon determined hydration rate of 2.32μ^2/1000 years the indicated age of this flake is 1117 ± 83 years B.P. The hydration rind of the obsidian scraper was measured at 1.64 ± 0.07μ, indicating an age of 1157 ± 90 years B.P.

Site significance is medium. The site may have functioned as a camp or hunting overlook taking advantage of food resources along this edge of Lake Selby. Despite the distance involved in the two locales, it is difficult to ascribe them to separate events based on the similarity in hydration rind thickness of the obsidian. However, the chert may represent an occupational event different than that represented by the obsidian. Human use of this end of Lake Selby is common and the site deserves additional investigation. Mitigation should be undertaken if this site is impacted by human activity.



Scraper (obsidian)

HUG-085 Artifact - Actual Size

HUG-086

Site Elevation: 500 Ft.	NW¼, SW¼ Section 25 T17N, R14# Kateel River Meridian	Probable Site Type: Unknown
Site Age: Unknown		Probable Cultural Affiliation: Unknown

This site is located atop a lichen covered knoll on the east side of the shallow embayment at the extreme southern end of Lake Selby. The knoll is one of several that surround a small depression (meltout feature?) and lies on the southwest side of the depression. Situated 50 meters from the lakeshore and elevated 7 meters above the lake, this knoll is vegetated by paper birch on its lower boundaries and in the lowlying areas between these knolls. The view of the lake and the surrounding terrain is somewhat obscured by these birch.

This site was discovered during a surface reconnaissance. A single gray chert microblade fragment, medial section, was found on the surface. Two 20 cm.^{2} test pits excavated to a depth of 6-8 cm. failed to produce subsurface cultural materials. These tests were spaced 2 meters on either side of the microblade fragment. Fifty-five meters to the north on the next ridge, a fire shattered flake of gray chert was found on the surface. A third 20 cm.^{2} test pit at this location was also sterile.

The site function is unknown, as is the cultural affiliation. A tentative estimate of 2,000 years or more may be given on the basis of the microblade fragment, since this is a generally accepted minimum age for microblade technology in this area of Alaska.

No natural or human-induced impacts are presently affecting the site. Due to its minimal significance, no measures for protecting this location need be considered for any but human-induced impacts.

HUG-087

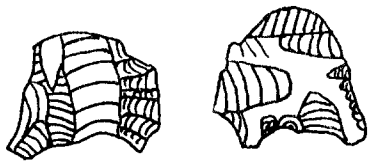
Site Elevation: 500 Ft.	NW¼, NE¼ Section 19 T17N, R15E Kateel River Meridian	Probable Site Type: Unknown
Site Age: Unknown		Probable Cultural Affiliation: Unknown

HUG-087 is located on a small knoll about 70 meters inland from and 5-6 meters abpve the southeastern shore of Lake Selby. Three small lakes are located some 300-500 meters east-southeast of the site, amidst rolling tundra. The westward flowing outlet of the largest lake passes within 70 meters of the site. This unvegetated rise affords an excellent view of the lake and shoreline as well as a reasonably good view of the surrounding terrain.

On-going frost action has exposed the gravel/mineral soil, providing for an easy visual discovery of the site. The basal portion of an obsidian projectile point, an obsidian end scraper and 2 obsidian flakes were found within a 20 meter area on the knoll top. The point base exhibits a concave base with lateral ears and basal thinning on one face. Length of the specimen is 2 cm., and a hinge fracture is present along its distal portion. The endscraper exhibits cortex and steep flaking along its distal/dorsal surface. On a smaller knoll, forty-six meters south-southeast of this cultural material, 1 black chert flake and 2 gray chert flakes were found beneath a white spruce. The presence of both obsidian and chert materials may suggest more than a single occupational event occurred at the site.

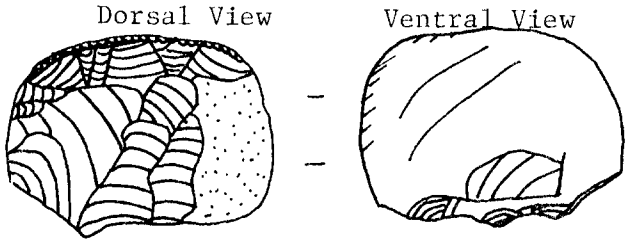
The cultural materials suggest a hunting focus at the site. The point base is not particularly diagnostic of any temporal or cultural group and therefore no such designation for the site is possible. However, the presence of obsidian may indicate a maximum age of 2000 years B.P. for the event represented by the obsidian.

The extent of frost action and subsequent erosion is extensive here, but no measures for protecting the site are necessary as most of the readily available archeological information has already been gathered. This information indicates a minimally significant cultural manifestation. Mitigation actions need be considered only for human-induced impacts.



Projectile Point Base

(obsidian)



Scraper (obsidian)

HUG-087 ARTIFACTS - ACTUAL SIZE

HUG-088

Site Elevation: 500 Ft.	SW¼, NE¼ Section 19 T17N, R15E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the eastern shore of Lake Selby approximately 1.5 miles northeast of the lake's outlet. Situated on the south side of a small creek draining west into the lake, the site lies nearly 75 meters back from the present shoreline. HUG-088 lies on a slight knoll 25 meters south of the creek. The view from this knoll is 100+ meters in all directions. HUG-087 lies north of this creek on a knoll roughly 120 meters distant.

Vegetation at the site consists of caribou lichen and a few small spruce trees. Thick willow stands follow the lower portion of the creek near the lake. The area around the creek and knolls is predominately tundra providing good visibility for 500+ meters over this gently rolling terrain. The ground surface at the site has been slightly churned by frost action and wind.

The site was initially located through surface observation of a small cluster of black chert waste flakes. The flake cluster was not larger than 2 meter^2. The small flakes showed no sign of use or retouch. A 15 cm.^{2} test pit was excavated to a depth of 5 cm. and produced a single black chert waste flake between 0-3 cm. below surface. The soil here was shallow loess overlying gravels.

Site significance is low. The site may have functioned as a hunting overlook or flaking station, taking advantage of resources around the creek and lakeshore. The paucity of cultural material does not reveal much about the site's prehistoric occupants. However, the homogeneity of the lithic material suggests only a single occupational event occurred at this location. The site, now recorded, warrants no further protection considerations except if threatened by human impact.

HUG-089

Site Elevation: 480 Ft.	NE¼, NE¼ Section 19 T17N, R15E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the eastern shore of Lake Selby at about mid-point on the lake. Situated on the south side of a small creek which drains west into the lake, the site lies approximately 35 meters east of the present shoreline. HUG-089 sits in a low-lying area less than

1 meter in elevation above the lake. View from this site is 400 meters north and south along the shoreline and 200 meters east up the small creek. HUG-098 is located on the north side of this creek approximately 75 meters from this site.

Vegetation at the site consists primarily of small spruce, grasses, and woody plants. This low-lying area is poorly drained and has been recently inundated by water, either from higher lake levels or from flooding by the creek at break-up. Ground cover has been greatly reduced as a result of this water activity.

The site was discovered through surface observation of a single obsidian flake. This medium sized flake was polished and worn apparently as a result of water action. All characteristics of use-wear or retouch, if they existed, have been obliterated. A 15 cm.^{2} test pit, excavated to a depth of 5 cm., proved sterile. The soil here was extremely shallow (0-2 cm.) loess over gravels.

Site significance is low. The site may have functioned as a camp or hunting spot utilizing resources along the lakeshore. The site appears to have undergone numerous inundations during the past which have physically altered the site. The site reveals little about the prehistoric occupants, but together with the other seven sites on the adjacent shoreline is part of the local pattern of prehistoric land use. The presence of obsidian suggests that site age does not exceed ca. 2000 years B.P. Both the lake and tundra area east of the lake are accessible to these sites. HUG-089, now recorded, warrants no further protection consideration except from human impact.

HUG-090

Site Elevation: 500 Ft.	SW¼, NW¼ Section 17 T17N, R15E	Probable Site Type: Unknown
Site Age: ca. 1190 Years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is situated on the highest of a series of low knolls 100 meters east of a cove on the eastern shore of Lake Selby 1-3/8 miles south of the Selby/Narvak constriction. The predominant vegetation on the site is birch, with black spruce growing in the more poorly drained areas to the north and northwest. Lichen covers the well drained ground while a robust growth of willow and low woody and herbaceous plants covers the less well-drained terrain towards the cove to the west. The view from the site is best to the west but also good to the southeast across the broad, rolling tundra plain to the southeast of Lake Selby.

A single small obsidian flake was discovered on the surface of the mineral soil in a small frost boil. A 20 cm.^{2} test pit was excavated 2 meters west of the flake and a pressure flake of obsidian and a small

white chert fragment were recovered from 2-3 cm. below surface. The presence of both chert and obsidian may indicate that more than one occupational episode occurred at the site.

The obsidian flake was submitted for hydration analysis. The hydration rind measurement of 1.66μ ± 0.03μ yields a date of 1187 ± 43 years B.P. according to the locally calibrated rate of $2.32\mu^2/1000$ years. This date can be applied only to the occupational event represented by the obsidian.

The limited amount of material observed here suggests a low density site at which no cultural assessment is possible.

The significance of the site is consequently low and no impact, natural or human-induced, is threatening the site. Because the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

HUG-091

Site Elevation: 550 Ft.	SE¼, SW¼ Section 24 T17N, R14E	Probable Site Type: Camp
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

Located on the northern peninsula at the south end of Lake Selby, this site lies on an arcuate ridge 200 meters east of HUG-078. The ridge rises 25 meters above the narrow shoreline of a cove and runs 30 meters from west to east. The ridge then bends at almost a 90° angle to the north and extends another 20 meters. The top of the ridge is between 4 and 8 meters wide and is punctuated on its northern side by a 5 meter deep depression 20 x 25 meters, possibly formed by the melting of a block of glacial ice.

The vegetation on the site ridge is open, and composed of medium sized birch and spruce. Lichen covers the ground, and woody and herbaceous plants grow sporadically on top, and more continuously on the inward slope of the meltout depression. On the south facing slope toward the cove, birch and poplar are abundant, obscuring the view of the lake. The view from the site is best toward the lower terrain to the east, where birch and dwarf birch grow sporadically on the uneven, lichen covered surface.

The site was discovered just to the west of the arcuate ridge, on an adjacent knoll top during subsurface testing. This 20 $cm.^2$ test pit produced a single gray chert (pressure) flake 6-8 cm. below surface. Further surface reconnaissance to the east of test #1, along the arcuate ridge, resulted in locating 12 circular depressions strung

along the ridge crest. Tests #2 and 3 were excavated adjacent to two of these depressions, in order to see if materials excavated from the depression overlay an intact (buried) soil profile. In both 20 cm.^{2} tests, 6-8 cm. of oxidized B horizon gravels overlay a buried A_2 horizon (silt), indicating the excavated nature of these two depressions. The depressions vary in their expression (depth, width) in a directional sense from west to east. The western ones appear less well-defined, possibly older, while the ones to the east and north are more recognizable, possibly younger. The size range of the features is approximately 1.5-3 meters across and 20-50 cm. deep.

The western most and the northern most features were investigated, as these may have represented the oldest and the youngest of the features and therefore if datable organic material were recovered, a tentative time range for the site could be established. The western most pit 1.5 meters diameter showed a large basin shape filled with gravel. The fairly steep walls of the pit were lined with silt. The feature contained one chert flake, one very small bone fragment, and a small charcoal sample which was collected for dating purposes. The small size of the test, 30 x 70 cm., prevented excavation any deeper than about 100 cm., but the pit appeared to continue beyond a meter in depth.

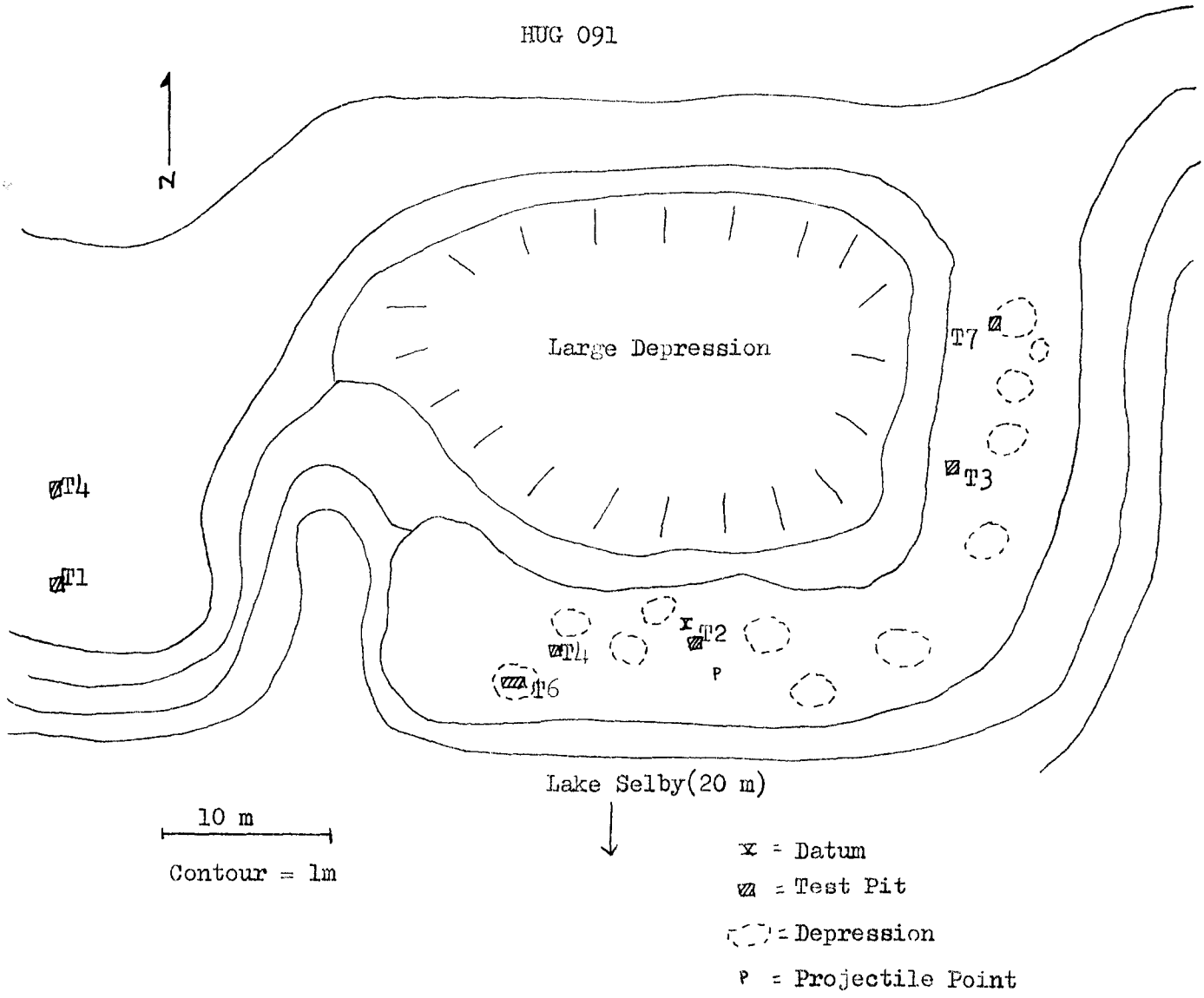
At the opposite end of the ridge, the northeastern most feature (consisting of a 1 meter diameter, shallow depression, with a 50 x 75 x 20 cm. gravel/sand mound in the center) was tested. Just enough of the feature was excavated to recover charcoal for dating purposes. A band of charcoal overlying leached silt formed a shallow basin below the gravelly-sand mound. Enough charcoal was collected from this part of the feature so that further disturbance was not necessary.

A dark gray basalt biface (projectile point?) was found on the surface, imbedded in the lichen near the bend in the ridge. This specimen has a lanceolate shape, with a narrow, flat base. It is relatively thick in cross section and exhibits step and hinge fractures along its midline, the result of numerous unsuccessful attempts by the stone worker to thin the specimen. Fragments of a similar projectile point were recovered from a hearth, at HUG-084, located ¼ mile to the south.

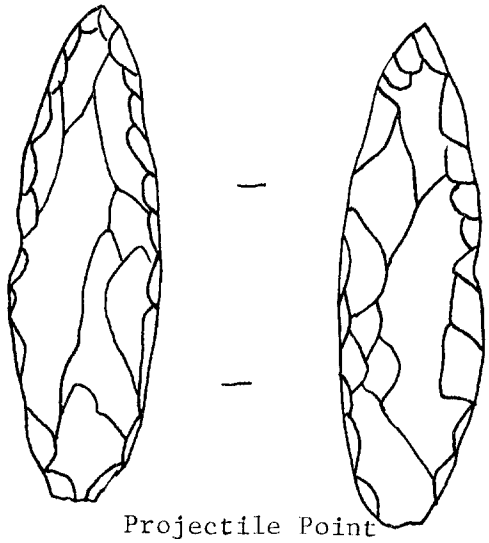
The superficial amount of testing done here prevents a difinitive answer as to the function of the depressions; cache pits are the most likely possibility.

This site is quite significant as it is apparent that a fairly major investment of time and energy took place there. The proximity of HUG-078, 200 meters to the west, may indicate some association.

No impact, natural or human-induced, is endangering the site at present. However, if in the future, the site becomes endangered, mitigation procedures should be implemented.



HUG-091 Site Map



Projectile Point
(basalt)

HUG-091 Artifact - Actual Size

HUG-092

Site Elevation:
500 Ft.

Site Age:
ca. 1520 Years B.P.

NW¼, SE¼
Section 24
T17N, R14E
Kateel River Meridian

Probable Site Type:
Camp

Probable Cultural Affiliation:
Unknown

This site is located along the northern edge of Lake Selby's southern shore approximately 500 meters west of the lake's outlet. An elongate island is situated nearly 500 meters to the northwest and is visible from this site. HUG-092 lies on a 20 meter high terrace edge, which overlooks the lakeshore 20-25 meters to the north and northwest. HUG-093 sits about 100 meters east of the site, while HUG-091 lies 150+ meters to the southwest. The view from the site is best along the shoreline.

Vegetation at the site is dominated by caribou lichen, spruce and dwarf birch. Other plants include birch trees, herbaceous, and woody plants. Frost action at this site appears to be on-going, giving some areas of the surface a partially churned appearance. For the most part, however, the terrace is covered by a thick vegetation mat and little exposed ground exists.

The site was initially found by subsurface testing. Test #1, a 15 cm.^{2} test pit excavated to a depth of 15 cm, produced a blade-like obsidian flake at a depth between 0-6 cm. The soil matrix here was predominantly loess overlying glacial gravels.

Another 15 cm.^{2} test pit, test #2, located 15 meters southwest of test #1 was excavated to a depth of 30 cm. It produced a projectile point base fragment of black chert (1 cm. x 1 cm.), 7 gray chert, 1 dark gray chert, 1 black chert, and 2 obsidian waste flakes. This cultural detritus was recovered from a depth between 0-8 cm. below surface. Both of these obsidian flakes were submitted for hydration analysis. Hydration rinds of 1.88μ ± 0.04 and 1.88 ± 0.05 were measured on these flakes. Using the locally derived (radiocarbon dated obsidian) rate of 2.32μ^2/1000 years, the average age of these flakes is 1523 ± 73 years B.P. The basal fragment of the projectile point is too small to be in any way diagnostic except to indicate that edge grinding had occurred.

A third 15 cm.^{2} test pit was excavated to a depth of 30 cm. and located 27 meters southwest of test #2 on the terrace edge. This test yielded 4 gray chert waste flakes between 0-8 cm. below surface. The soil matrix here was loamy silt to a depth of approximately 15 cm. and mixed gravels and silt from 16-30 cm. below surface.

A number of other test pits were put in along this terrace edge and on a lower bench toward the lakeshore. These other tests proved sterile. No surface expressions was found of this site which appears to occupy an area of roughly 40 x 5 meters wide on the terrace's edge.

Site significance is moderate. The site may have served as a base camp for hunting activities in the area. The size location, and cultural debitage at the site suggests the site was used more than once. Site density in the area is high and it suggests a fair amount of prehistoric activity at this location. More testing to obtain datable organics, diagnostic artifacts and a better group of the stratigraphy is desirable at this site. The site is in no apparent danger from natural impact. The site could be impacted, as could others in this location, by visitor activity. The site is a good camping location and the presence of modern campsites in the area indicate that the locale has been recently used as such. Human impact at the site is a real possibility, although probably not a devestating one. Occasional observation of the area, given the current level of visitor use, should be sufficient, short term, protective action.

HUG-093

Site Elevation: 525 Ft.	NW¼, SE¼ Section 24 T17N, R14E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a slight projection of the southern shore of Lake Selby about midway between the outlet stream to the east, and the tip of the peninsula to the west. The site lies 15 meters above lake level at the break-in-slope of this east-west trending shoreline.

The site is heavily vegetated with patchy dwarf birch and a very thick ground cover of lichen and low woody and herbaceous plants. Birch and spruce are abundant and surround the site. The view is good toward the lake to the north, but restricted in all other directions due to the abundant tree cover.

The site was discovered during subsurface testing. A 20 cm.^{2} test pit was excavated to a depth of 15 cm. through a thick organic unit (4 cm.), a pronounced A horizon (1.5 cm.), and a light to dark brown silty loam. Two chert flakes were recovered from the silty loam just below the A horizon, 6 cm. below surface. Both flakes are small, measuring 1-2 cm. in length. Test 2 and 3, located 5 meters east and west of test #1, did not produce cultural material.

The site is not in the most ideal location and on the basis of subsurface testing does not appear to be very large. The significance of this site, therefore, appears to be low. No impacts are presently threatening the site and no concern as to future natural disturbance is warranted. Mitigative action need be considered only if the site is threatened by human activity.

HUG-094

Site Elevation: 500 Ft.	NE¼, SE¼ Section 24 T17N, R14E	Probable Site Type: Unknown
Site Age: ca. 1560 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the southern shore of Lake Selby on the west bank at the head of the lake's outlet. HUG-094 occupies a "corner" where the lakeshore turns from its east-west direction to the south at the beginning of the lake's outlet. Situated approximately 10 meters above the lake, the site sits on a terrace nearly 30 meters back from the present lakeshore. The view from the site is 500+ meters to the north, east and southeast over the shallow waters of the outlet, and encompasses the opposite shore. HUG-095 occurs roughly 300 meters to the west of this site.

Vegetation at the site consists primarily of caribou lichen, birch, and spruce trees. These plants exist along the edge of a terrace otherwise covered by tundra. A bench between this terrace and the lake is poorly drained and contains mostly grasses and sedges with a few spruce trees adjacent to the shoreline. Frost action at the terrace edge has left some mineral soil exposed and created a few solifluction lobes.

The site was discovered through surface observation. A small chert waste flake was found on the northern slope of the terrace. A 15 cm.^{2}

test pit, excavated (4 meters southwest of this flake on the terrace edge) to a depth of 10 cm., produced 3 obsidian waste flakes from 0-5 cm. below surface. Four more test pits of the same size and excavated to the same depth along the terrace proved sterile.

A sample of the subsurface obsidian was submitted for hydration analysis. The hydration rind measure of 1.90μ ± 0.04μ yields a date of 1556 ± 49 years B.P. given the locally calibrated radiocarbon dated hydration rate of $2.32\mu^2$/1000 years.

HUG-095

Site Elevation:
500 Ft.

NW¼, SE¼
Section 24
T17N, R14E
Kateel River Meridian

Probable Site Type:
Camp

Site Age:
ca. 1900 years B.P.

Probable Cultural Affiliation:
Unknown

The site is located on Lake Selby's southern shore approximately 300 meters west of the lake's outlet. Situated on a terrace nearly 10 meters south of the shoreline, the site lies 5-7 meters above the lake. The view from the site is somewhat limited due to trees to the west. But to the south and east the view extends 150+ meters over tundra. HUG-093 lies almost 100 meters to the west of HUG-094.

Vegetation at the site is dominated by caribou lichen, spruce, and birch trees. South of the terrace edge upon which the sites rests, the area is poorly drained and consists mostly of tundra and a few scattered spruce. The lake outlet is not in view from the site due to invervening high ground. The bank along the lakeshore is steep and vegetated, however, some exposed ground exists at the break in slope.

The site was initially discovered through observation of surface lithics in the exposed ground at the break in slope. A scatter of about a dozen black chert and obsidian waste flakes and microblade fragments were spread over a 2 meter^2 area. Test pit #2 (15 cm.^{2}) was excavated to a depth of 8 cm. on the terrace 1 meter above the lithic scatter, and produced 9 small obsidian flakes, 4 black chert flakes, and 1 gray rhyolite flake. This material came from 0-4 cm. below surface. The soil matrix in this test consisted of loess overlying gravels.

Test #1 (15 cm.^{2}) excavated to a depth of 8 cm. below surface was located approximately 10 meters west of test #1. This test produced 3 small obsidian flakes at a depth of 0-4 cm. below surface. Test #3 (15 cm.^{2}) located 22 meters west of test #1 along the terrace edge excavated to a depth of 10 cm. below surface proved sterile. A sample of the subsurface obsidian was submitted for hydration analysis. The hydration rind measurement of 2.10μ ± 0.05μ yields a date of 1900 ± 90 years B.P. when calculated according to the locally calibrated radiocarbon dated hydration rate of $2.32\mu^2$/1000 years.

Site significance is low to moderate in terms of its association with other sites in the area. The site appears to occupy an area at least 10 x 3 meters along the terrace. Although the site may have functioned as a flaking station and/or hunting locale, the setting is also suggestive of a camp. The fact that both chert and obsidian was recovered from the site suggests that more than one occupational event has taken place. A total of six sites occur within the local area suggesting frequent use of this portion of Lake Selby west of the outlet. The shallow waters here are conducive to animal crossings, which may have been a partial focus of these sites. HUG-095, however, due to its shallow stratigraphy, may not have the potential that other sites (such as HUG-091 or HUG-092) have for futher testing. The site appears in no danger of natural impact and, now recorded, warrants no protection other than from human impact. Human impact is a distinct possibility in this location.

HUG-096

Site Elevation: 500 Ft.	NE¼, SE¼ Section 18 T17N, R15E	Probable Site Type: Camp
Site Age: ca. 1370/1640 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a low lozenge-shaped knoll on the east side of Lake Selby approximately 1-3/4 miles south of the Selby/Narvak constriction. The site knoll measures 40 meters (N-S) by 10 meters (E-W), is approximately 40 meters east, 10 meters above the lake shore.

The vegetation on the site is relatively sparse, consisting of patches of dwarf birch in more poorly drained portions of the middle of the knoll. A few small birch and spruce also grow on the west of the site. Both the northern and southern end, as well as the western side of the knoll exhibit exposed gravel and mineral soil where vegetation has been impacted by frost action and erosion. Spruce, willow and alder grow along the lakeshore where sphagnum moss and several kinds of woody and herbaceous plants are also found. To the south and east of the site, the broad plain bordering the southeastern portion of the lake is a poorly drained cottongrass tussock, tundra which is broken up by an occasional spruce. The view from the site is outstanding in all directions especially to the southeast, south, west and northwest.

The site was discovered during a surface reconnaissance. At the northern end of the knoll, a 10 meter^2 lithic scatter composed of numerous flakes of obsidian, as well as a few flakes of gray patinated rhyolite or basalt, were located in the exposed gravel/mineral soil. Three end scrapers, two of obsidian and one of black chert were also part of this cultural scatter.

At the southern end of the knoll, a second scatter consisting of obsidian, chert and basalt flakes were located in a discontinuous erosional zone.

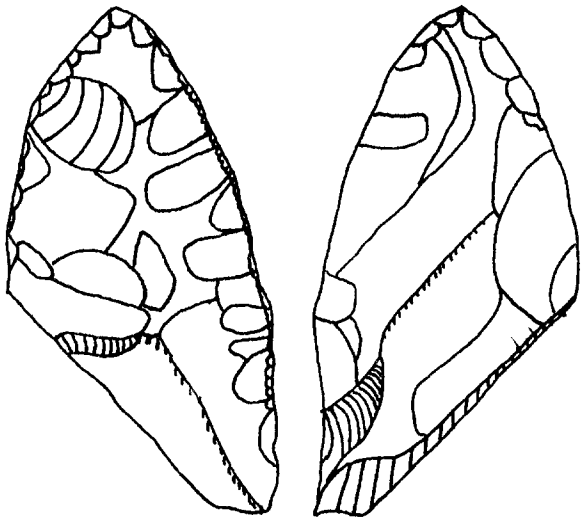
An obsidian end scraper and the medio-distal portion of a biface (knife) were also part of this scatter. The area between the two scatters revealed a few flakes of chert, obsidian and rhyolite.

A 20 cm.^{2} test pit was excavated at either end of the knoll. The northern test pit (#2) produced two small obsidian flakes from 1-3 cm. below surface in sandy silt. The southern test pit (#1) produced two flakes of dark brown, coarse grained chert and what may be the mid-section of an end scraper or unifical knife, from 1-3 cm. below surface in sandy silt.

Two samples of obsidian from test #2 were submitted for hydration analysis. The hydration rind thicknesses of 1.95 ± 0.04μ and 1.78μ ± 0.04μ yield respective dates of 1639 ± 67 and 1366 ± 61 years B.P. using the calibration established for this region (2.32μ^2/ 1000 years). It is difficult, without stratigraphic control, to assess what materials on site can be assigned to this temporal range. Flakes of obsidian occur across the entire knoll, as do obsidian artifacts. It may be safe to say that these dates indicate the age of most of the obsidian including the end scrapers. The non-obsidian artifacts (three chert end scrapers and a biface/knife fragment) remain undated, but the general character and distribution of these artifacts seems to indicate homogeneity with the obsidian artifacts.

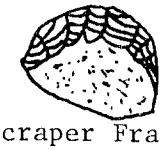
The artifacts, as well as the location of the site, indicate that it may have been a hunting camp. This is one of the few level, well-drained areas along the northeastern shore of Lake Selby. The site is of moderate significance and may have already provided much of its potential information. Further subsurface testing may result in recovery of diagnostic artifacts and datable organics which would be of benefit to the local and regional prehistoric data base.

The amount of natural impact (frost action-erosion) acting on the site is moderate. The only possible adverse impact to the site that needs to be considered is that of the human-induced variety, from which the site should be protected. It is possible that park visitors could impact this and other readily visible sites along this portion of the lakeshore. For this reason, it is recommended that additional testing be carried out at the site to the extent that a better idea of the site's potential could be realized. This recommendation is offered in the spirit that if such work can be undertaken at a minimal expense of time and cost, it should be done. If such work cannot be done, probably no great data loss will result.

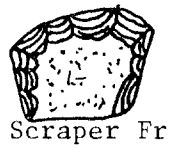


Knife/Biface Fragment
(chert)

Dorsal View

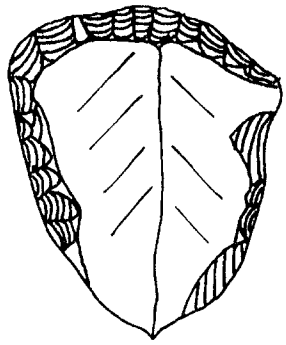


Scraper Fragment
(chert)



Scraper Fragment
(obsidian)

Dorsal View



Scraper (chert)

XSP-096 Artifacts - Actual Size

HUG-097

Site Elevation: 500 Ft.	NE¼, SE¼ Section 18 T17N, R15E Kateel River Meridian	Probable Site Type: Camp
Site Age: ca. 475 Years B.P./ older		Probable Cultural Affiliation: Eskimo/other

This site is located on a low linear rise on the east side of Lake Selby approximately 1-3/4 miles south of the Selby/Narvak constriction. This linear landform measures 70 meters (N-S) by 10 meters (E-W) and is 10 meters above and 20 meters east of the lakeshore. The site lies amidst a cotton-grass-tundra/spruce-birch community. The vegetation on the site is dominated by dwarf birch growing in patches, with a thin discontinuous ground cover of low woody and herbaceous plants. The surface of the site is 75% exposed gravel as the result of frost action and subsequent erosion.

The view from the site is excellent in all directions. To the northeast, east and southeast lies a broad tundra plain affording a view of at least ¼ of a mile. The view to the south, west and northwest

is unlimited, including the lake and surrounding terrain.

Abundant surface cultural material exposed in the erosional zones led to the discovery of locality "A" of the site. The northern end of the site consisted of 10-15 obsidian flakes exposed in a 3-4 meter diameter erosional zone. A few meters to the south lies a larger 5 meter diameter erosional zone containing two end scraper fragments (black chert and obsidian), two roughly pentagonal (kite-shaped) projectile points (dark gray chert and obsidian), a dark gray chert microblade, and over 30 flakes of obsidian and chert, ranging in size from 4 cm. long to flakes less than 1 cm. in length. A few meters to the south on the southern end of the landform where erosion is less extensive, the base of a black chert stemmed projectile point and a few more flakes of chert and obsidian were found.

The dark gray chert projectile point is well made and complete, measuring 3.5 cm. by 2 cm. by 0.6 cm., and exhibited moderate grinding along the basal edges. The obsidian projectile point is the basal portion, up to the mid-section, terminating in a transverse snap fracture. The edges were heavily ground. The black chert stemmed projectile point base was also moderately ground.

A second locality, "B", is located 15 meters to the west adjacent to the lakeshore on an old beach bern. This locality consists of two obsidian flakes on the surface of a small (50 cm. diameter) frost heave. A 20 cm.^{2} test pit was excavated to a depth of 10 cm. below surface. A unit of highly oxidized medium grained sandy loam, 3-4 cm. thick, overlay a band of charcoal 2-3 cm. thick. In association with the charcoal unit, an angular fragment of obsidian was recovered from 6 cm. below surface. The charcoal may represent a cultural feature, but due to the small test pit size, this could not be definitely ascertained.

Testing at locality "A" consisted of one 20 cm.^{2} test pit at the extreme northern end of the site and one at the southern end just south of the larger frost boil/erosion area. The northern test pit was sterile. The southern test pit revealed a moderate amount of burned bone between 3 and 8 cm. below surface, and a single black chert flake. Some of the bone retains identifiable attributes and appears to be from a small ungulate. A third phalange and the articular (proximal) end of a first or second phalange are present. If this bone represents a young caribou it may indicate that the site was occupied in the spring or early summer.

The obsidian fragment from test 1, locality "B", was submitted for obsidian hydration analysis. The hydration rind thickness of 1.05μ ± 0.07μ calibrated to the local hydration rate of 2.32μ^2/1000 years yields a date of 475 ± 63 years B.P. Whether this locality is temporally and culturally equivalent to locality "A" cannot be ascertained with the presently recovered data.

The pentagonal projectile points recorded from locality "A" are very similar to those found in sites of the Norton culture (Giddings, 1964). Similar projectile points are also found in sites attributed to the Kavik Culture (Campbell, 1968; Derry, 1970; Wilson , 1978). Giddings (1952) also reports similar projectile points from Ekseavik which he

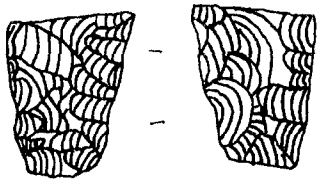
dates ca. 500 B.P. However, based on certain technological attributes such as, edge grinding and generally high quality workmanship, it is believed the HUG-097 project points are more likely to be Norton than Kavik. The locally derived hydration date applied to the obsidian from locality "B" may or may not be representative of locality "A". The date itself falls outside the extreme recent end of Norton/Ipiutak temporal range and at the extreme early end of the Kavik range and therefore does little to clarify the situation. Based on morphology and technological attributes alone, cultural affiliation for at least one occupational event at the site is weighted in favor of people of the Norton Culture (Eskimo).

The other projectile point recorded at the site (locality "A") is a short, wide stemmed variety of a type regularly found in Norton assemblages. Unfortunately, it is of little diagnostic value, as similar examples are commonly found in many non-Norton sites.

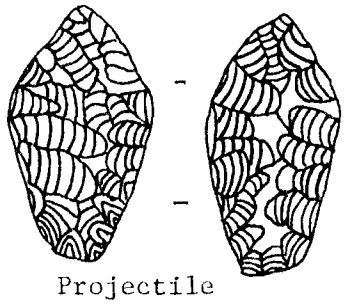
The microblades offer yet another possible occupational event at the site as well as a minimum date of ca. 2000 years B.P.

The extensive natural impact on the site lowers to a degree the significance level, since stratigraphic control for much of the cultural material has probably been lost. Never the less, the site appears to represent several occupational events by different cultural groups. One occupation may have occurred during the spring or early summer, adding a significant detail of data on the seasonality of resource use for this region.

This site has yielded information and raised questions. Much of the site has little physical integrity, due to natural erosion. However, until further investigations can be carried out at the site, the site's potential will remain unknown. It is recommended that additional testing be carried out at this site before much more of the site is damaged. However, the amount of data that the site may contain does not appear to be of a high enough order to actively protect it from, or mitigate any impacts other than those which are human-induced.

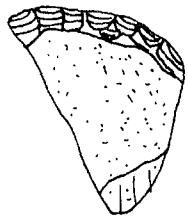


Projectile Point Base
(obsidian)



Projectile
Point Base
(chert)

Dorsal View



Scraper Fragment (obsidian)

HUG-097 Artifacts - Actual Size

HUG-098

Site Elevation: 500 Ft.	SE¼, SE¼ Section 18 T17N, R15E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a low knoll 50 meters east and 10 meters above Lake Selby, approximately 2 miles south of the Selby/Narvak constriction. This 20 meter diameter rise is 50 meters north of a second order stream which flows westward from the highlands, east of Lake Selby, entering the lake 65 meters to the southwest.

The east side of the lake is characterized by cotton grass tundra abruptly ends at the lakeshore and then spruce and birch predominate. The vegetation on the site consists of dwarf birch, birch and small spruce, none of which are abundant. Fifty percent of the ground cover is discontinuous lichen and low woody and herbaceous plants. The other 50% of the surface is exposed gravel.

The view from the site is good in all directions. To the north, east and south, the broad tundra plain is in clear view for several hundred meters. The view onto the lake and the surrounding terrain is excellent.

Ten to fifteen flakes of black chert and obsidian were located on the surface of the site in erosionally exposed areas. Most of the flakes are small, with one exception, a black chert flake measuring 5 cm. in diameter. None of the flakes appear to be utilized.

Two 20 cm.^{2} test pits were excavated to a depth of 5-7 cm. with negative results. This may indicate a low density cultural manifestation, and therefore a low significance level. The presence of both chert and obsidian at the site may indicate more than a single occupational event. Additionally the obsidian suggests that the event it represents does not exceed 2000 years B.P. in age.

Because this site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

HUG-099

Site Elevation: 500 Ft.	SW¼, NW¼ Section 17 T17N, R15E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is situated atop a low but discrete rise 75 meters east of Lake Selby approximately 1-3/8 miles south of the Selby/Narvak constric-

tion. The terrain in this area is gently sloping westward so that the drainages are focused into the cove, constituting this section of the shore of the lake. The site is approximately 30 meters (N-S) by 8-10 meters (E-W) and is characterized by the extensive frost-boiling that has taken place there. Three discrete frost churned areas, the largest measuring 8 meters in diameter, are separated by stands of black spruce and dwarf birch. The northern most frost boil (5 meters^2) is separated from the large, middle one by a few meters of cotton grass tundra which is common to the northeast and east of the site. Black spruce is common to the northwest and southeast of the site.

The view is best to the west towards the cove, but only fair to good to the south, southeast, northeast and north. The eastern valley wall is approximately ½ mile distant.

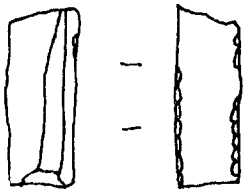
The frost heaved character of the site facilitated discovery of the cultural material on the surface. From south to north, the materials are as follows: a dark gray chert microblade with use retouch on both ventral edges, two fragments of an obsidian side scraper, a thick gray chert flake with extensive platform preparation (possible core tablet), several flakes of obsidian and chert, a black and a gray chert microblade, and one gray chert flake.

Two 20 cm.^{2} test pits were excavated to a depth of 5-7 cm. at either end of the site but failed to reveal subsurface cultural material.

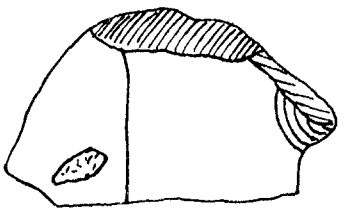
This amount and variety of cultural material dispersed over an area of some 30 meters would appear to represent more than a single event. An approximate date, for at least one episode at the site, could be ca. 2000 years B.P. due to the presence of microblades.

The heavily impacted nature of the site due to frost activity makes protection or further investigation of the site of low priority. The significance of the site is low, but increases the overall data base for sites on the perimeter of Lake Selby.

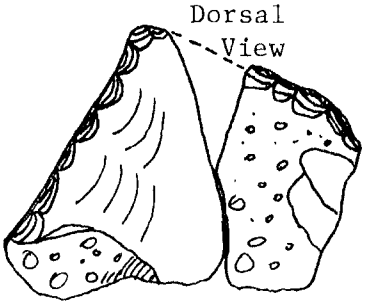
Now that the site has been recorded, there need be little concern for its protection or the mitigation of any but human-induced impacts.



Utilized Microblade Fragment



Flake/core tablet (chert)



Scraper Fragments (obsidian)

HUG-099 Artifacts - Actual Size

HUG-100

Site Elevation: 525 Ft.	NE¼, SW¼ Section 17 T18N, R15E	Probable Site Type: Camp
Site Age: ca. 2100 Years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a bedrock ridge abutting the northwestern shore of Narvak Lake. A major tributary flowing east from the 1400 meter high peaks, 2½ miles west of the lake, has built a sizeable delta, the northern reaches of which are adjacent to the site ridge on the south. One quarter of a mile north of the site is the northern shore of the lake where lowland marsh-bog terrain predominates. The lake occupies a steep-sided valley in the Angayucham (Old Man) mountains where level or semi-level ground is a rare occurrence. The site ridge slopes slightly towards the lake. Changes in elevation are marked by abrupt terrace steps of 2-15 meters.

The vegetation is characterized by a robust lichen mat with labrador tea and other woody and herbaceous plants growing in discrete patches. Spruce and birch are abundant to the south and west of the site, but

are less common on the site proper, providing an open view to the north, east, and southeast.

Frost action at the site is limited to a few small (50 cm.^{2}) areas of exposed mineral soil. Along the southern edge of the bedrock ridge an abrupt drop of 3-5 meters occurs, and mineral soil is also exposed there.

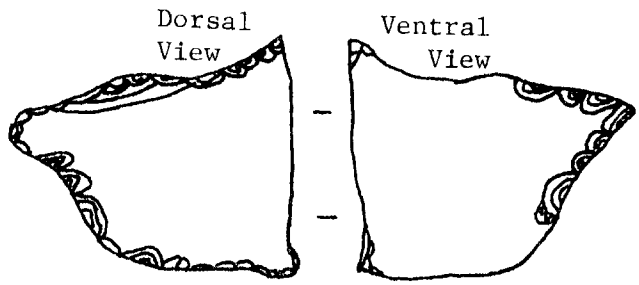
In one of these areas on the extreme southeast portion of the ridge, a black chert multipurpose tool was located. The proximal (bulbar) portion has been bifacially worked into a relatively thick point. The opposing distal corners have received slight reworking so that the implement possesses three working tips, perhaps gravers or perforators. All three points appear to have been heavily utilized as they exhibit dulling and slight polish. Two meters north of this tool, a gray chert flake was located on the underside of an upturned piece of lichen mat. Adjacent to this flake, a 15 cm.^{2} test pit was excavated to a depth of 10 cm. below surface through silt and fragments of bedrock. Between 0.5-10 cm. below surface, flakes of black and gray chert were found. A sizeable piece of obsidian, with cortex, was also recovered. Amidst the debitage, a moderate amount of burned mammal bones were encountered. This test suggests that cultural material is abundant at the site.

Ten meters to the west, on the next highest level of the ridge, several more flakes of chert and rhyolite were exposed in frost heaved mineral soil.

The site appears to cover an area of at least 10-15 meters (E-W) by at least 5 meters (N-S) and may be somewhat larger. The abundance of cultural material observed during a short period of reconnaissance in a robust lichen growth area may indicate the presence of a more intensively utilized site than has been the rule for this area in general. The site may represent a hunting campsite and the possibility exists that sheep hunting may have been undertaken from this spot as mountains with suitable sheep habitat surround the lake. The site location suggests its continued occasional use through time. The presence of both chert and obsidian at the site may bolster that suggestion.

The obsidian fragment was submitted for obsidian hydration analysis. The hydration rind measured 2.21μ ± 0.06μ and given the local calibration of 2.32μ^2/1000 years, the tentative date was calculated as 2105 ± 114 years B.P. The fact that the obsidian exhibited cortex may indicate cobble reduction was being carried out at the site.

This site is of medium significance due to its location and apparent dense and relatively deeply buried cultural material. At present the site does not appear to be in danger from any type of impact. Only impacts of a human-induced nature need to be addressed.



Multi-purpose Tool

(chert)

HUG-100 Artifact - Actual Size

HUG-101

Site Elevation:
650 Ft.

Site Age:
Unknown

SW¼, NW¼
Section 20
T18N, R15E
Kateel River Meridian

Probable Site Type:
Unknown

Probable Cultural Affiliation:
Unknown

This site lies atop a glacially rounded bedrock ridge 100 meters west and 60 meters above Narvak Lake. The northern end of the lake, a low marshy area, is 1¼ miles to the north. The lake is bounded on either side by steep-sided valley walls climbing to 1400 meter mountain peaks. The site ridge is part of a larger landscape characterized by bedrock outcrops and uneven topography which becomes progressively more elevated to the west. To the south this terrain extends for another 200 meters before ending abruptly at an intersection of steeper valley walls. The landscape bordering the northwestern quadrant of Narvak Lake is notably broader in an east-west direction than most of the adjacent terrain, affording somewhat easier travel conditions. This topography change is accented by a relatively large delta, forming 300 meters north of the site, where a major tributory enters the lake from the west.

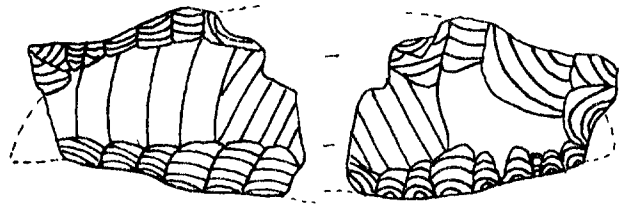
Moss, crowberry, alder, birch and spruce make up the sparse vegetation cover at the site. Vegetation concentrations occur most commonly in soil rich pockets between outcrops. Seventy-five percent of the 20 x 3 meter area of the ridge surface is exposed bedrock or mineral soil.

A small black chert flake was found on a mineral soil exposure on the northwestern flank of the ridge. Further surface reconnaissance resulted in locating the basal portion of a gray-brown, banded, chert projectile point and a gray chert flake within 2.5 meters (east) of the original surface find. The projectile point exhibits an impact fracture near the mid-section of the point and a heat spalled area near the base. The projectile may be termed an expanding stemmed type with a slightly concave base. Edge grinding is absent.

Comparative data from the region includes the Onion Portage material from Band 6/levels 4 and 5. These notched points of Phase III of the Palisades II complex of the Northern Archaic Tradition exhibit shallow notching with a slight to moderate basal concavity. No data is available regarding grinding of the basal portions of the points. The possible association may suggest a date of nearly 5000 years B.P. as the Onion Portage level, which produces similar projectile points, is dated between 2900-2700 B.C.

The isolated nature of this material and the lack of testing at the site makes cultural assessment difficult. Hunting may be the implied site activity not only because of the presence of the projectile point, but also because of the impact fracture at the artifact's midsection. The lack of obsidian at this site may indicate site use prior to 2000 years B.P. although such a statement is pure supposition.

The significance of this site is low, its major worth being its relationship to other sites in the area. Because of its physical nature, the site is almost impervious to further harm and none other than man-induced impacts need be addressed.



Projectile Point Base
(chert)

HUG-101 Artifact - Actual Size

HUG-102

Site Elevation: 625 Ft.	NW¼, SW¼ Section 20 T18N, R15E	Probable Site Type: Lookout
Site Age: ca. 1725 Years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site lies atop a bedrock promontory 50 meters above the western shore of Narvak Lake 1½ miles south of its northern shore. The lake is flanked on the east and west by the steep-sided valley walls of the Angayucham (Old Man) Mountains so that areas of level or semi-level ground are rare and discontinuous. The vicinity of the site is characterized by exposed bedrock ridges rising in step-like fashion

to the west and northwest. To the south (100 meters), the exposed bedrock-stepped terrain ends abruptly and the steep mountain side rises from the lake to an elevation of 1400 meters within 1½ miles. The eastern boundary of the site is a shear drop to the lake and the western boundary is a marshy area choked with willow.

A robust lichen ground cover as well as spruce, birch, and a few alder characterize the vegetation on the site. The southeast border of the site at the edge of the cliff is thick with alder and a few birch. The remainder of the site is fairly open with large spruce trees on the ridge top.

The view from the highest point on the site is outstanding as the entire 5 mile length of Narvak Lake is visible. The uneven terrain to the north, northwest, west and southwest is also in clear view.

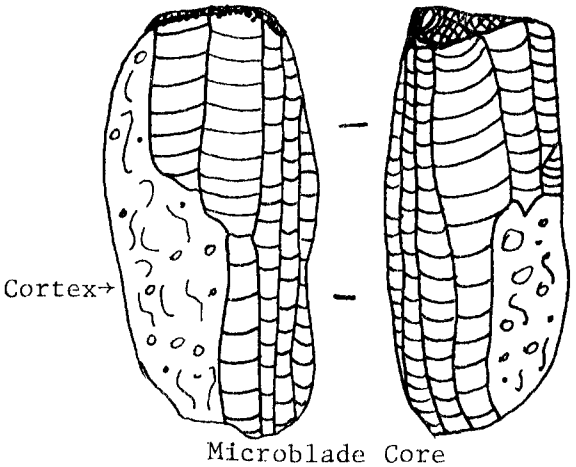
A cylindrical obsidian microblade core, retaining extensive cobble cortex on its posterior surface, was found near the base of the eastern slope of the high knob which dominates the site area. The artifact was lying partially embedded in the lichen mat and may, therefore, be in a secondary context; perhaps having moved down-slope from the hilltop to the west. Adjacent to the core, a micro-blade and flake of obsidian were found. The knoll top supports a less well developed lichen growth than the adjacent slopes and lower bench, 15-20 meters to the east, and affords a better view of the ground surface. Flakes of obsidian and black chert were observed at the northern end of the knob. A 20 cm.^{2} test pit was excavated 15 meters to the south of these flakes on the southern end of the knob. A gray chert flake was recovered 3-4 cm. below surface from a silt-fractured bedrock horizon. A second 20 cm.^{2} test pit was excavated on the lower bench 30 meters to the east. Here a highly oxidized silt unit contained an obsidian flake 2-3 cm. below surface. Cultural material seems to be distributed over an area roughly 40 meter^2. The abundance of material however appears to be low.

The obsidian flake from test #2 was submitted for obsidian hydration analysis. The hydration rind thickness of 2.00μ ± 0.05, when plotted on the locally generated scale of 2.32μ^2/1000 years yields a date of 1724 ± 86 years B.P. The presence of a microblade component at the site, one possibly indicative of a late phase of this tool technology, fits well with this date.

The location of this site at the southern end of the exposed bedrock terrain, a natural topographic bottleneck, may indicate a good hunting/observation location where game movements could be monitored and where ambush was possible, due to the uneven character of the terrain. This is, however, supposition without additional corroborating data. The presence of both chert and obsidian at the site may indicate the occurrence of more than one occupational event.

The significance of this is moderately low based on this preliminary investigation. No natural or human-induced impacts are presently

active at the site. Should the site become threatened in the future from human-induced impacts, some measure of mitigation should be considered.



Microblade Core
(obsidian)

HUG-102 Artifact - Actual Size

HUG-105

Site Elevation: 550 Ft.	NW¼, SE¼ Section 32 T18N, R15E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation:

This site occupies the top of a rounded bedrock promontory on the eastern shore of Narvak Lake 1½ miles north of the Selby/Narvak constriction. This feature rises 20 meters above lake level and affords an excellent view both up and down the lake. The top of the knob is open with small birch trees and some dwarf birch growing in areas of greater soil deposition. The highest point on the knob measures 3 x 5 meters and exhibits continuous lichen cover, however, in a few areas mineral soil accumulations are lichen free.

Flakes of black and gray chert, obsidian and rhyolite occur both on the surface of the lichen and within these soil accumulation zones. One possible gray chert microblade fragment is also present. A 20 cm.^{2} test pit was excavated to a depth of 5 cm. below surface through sandy-silt. The test pit was located on a lower bench of the knob 4 meters northwest of the lithic scatter. No cultural material was encountered.

The site appears to be restricted to the high point of the promontory and the flaking debris is indicative of the final stages of lithic tool production. With the exception of the possible microblade, no diagnostic artifacts were observed at the site , so that temporal assess-

ment is basically supposition and cultural assessment is impossible. The presence of a microblade(?) may indicate a minimum site age of ca. 2000 years. The fact that both chert and obsidian are present may indicate more than a single occupational event at the site locale. Multiple use events would be expected as this site would be an excellent lookout location.

No natural or human-induced impacts are presently threatening the site. Now that it has been recorded, there is little need for concern about the site's physical integrity. The site's significance is its similarity and association with other sites on Narvak Lake. Only human-induced impacts need be considered for mitigation.

HUG-106

Site Elevation: 550 Ft.	NE¼, NE¼ Section 29 T18N, R15E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a spruce covered bedrock promontory on the eastern shore of Narvak Lake 2 miles south of the north end of the lake. The thickly vegetated ridge rises 35 meters above lake level and affords an excellent view both up and down the lake. The western face of the outcrop is nearly vertical while the eastern portion rises steeply, ultimately becoming incorporated with the steep valley wall.

Three game trails traverse the site in a north-south direction, parallelling the shoreline. The trail closest to the bluff edge is responsible for revealing a gray chert flake and a brown speckled jasper flake. A 15 cm.^{2} test pit, located adjacent to the flakes, was excavated to a depth of 6 cm. below surface before encountering bedrock. No subsurface cultural material was observed. A second 15 cm.^{2} test pit, located to the west on a higher level of the ridge, was excavated to a depth of 10 cm. before encountering bedrock. No cultural material was observed. Both test pits were excavated through a sandy-silt matrix with fractured bedrock inclusions.

The pausity of cultural material prevents cultural or temporal assessment. One interesting aspect of the site is the presence of the jasper material. No such material had yet been seen during the 1983 survey, making this type of material quite rare.

Site significance is low except to demonstrate use of the area. The site is not in danger of impact and natural impacts should not warrant concern. However, human-induced impacts should receive mitigation consideration.

HUG-107

Site Elevation: 540 Ft.	NW¼, NW¼ Section 21 T18N, R15E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a lichen covered bedrock rise on the eastern shore of Narvak Lake roughly one mile south of its northern end. This bedrock outcrop marks the northern most point where the steep valley walls directly abut the eastern shore. To the north, the mountains are further removed to the east, and a second order stream has built a large delta at the lake's northeast end. This relatively broad lowland connects with the much more extensive lowland at the northern end of the lake so that the site is located at the constriction of the lowland created by the lake-shore and the initial steep portion of the valley.

The majority of the site is open, with medium sized spruce and birch growing along the lake-side periphery of the outcrop and on the upslope side of the rise. Dwarf birch is also present especially on the northern portion of the outcrop. Caribou lichen and low, woody and herbaceous plants cover the ground. Only one instance of bare mineral soil was observed, this being at the southern most point of the outcrop. The view from the site is best onto the lake. Vegetation to the north, south, and east obscures the view in thest directions. A well defined game trail traverses the site in an arcuate north-south direction.

Due to the robust ground cover, subsurface reconnaissance testing was responsible for the discovery of this site. The first 20 cm.^{2} test pit, located near the middle of the outcrop, was successful in locating a subsurface component. Below the organic/A horizon contact, a well developed A_2 horizon (3-5 cm. below surface) contained numerous flakes of black chert (25) and obsidian (4) ranging in size from 3 cm. to less than 1 cm. in length. An edge fragment of a dark gray banded chert tool (1.2 cm. long) was part of this collection.

The fine sand and silt matrix also contained an abundance of charcoal within this A_2 horizon. Bedrock was encountered at 10 cm. below surface or less.

Test 2,3, and 5 (located along an east-west line, 10 meters apart, on the gently sloping northern portion of the rise did not produce cultural material. Test #4 (located 8 meters south of test #1 on the southern end of the outcrop) produced one brown chert flake, one gray basalt flake and one obsidian flake; these were found just below the lichen mat, 1-3 cm. below surface. The profile was much shallower than test #1, as bedrock was only 5 cm. below surface.

The estimated size of the subsurface component, based on testing, is at least 8 meters north-south and no more than 3-4 meters east-west.

An obsidian flake from test #1 was submitted for obsidian hydration analysis. The hydration rind measure of 2.16μ ± 0.07μ yields a date of 2011 ± 130 years B.P. when calibrated to the local rate of $2.32\mu^2$/ 1000 years. A second flake of obsidian, from test pit #4, was submitted for hydration analysis. A hydration rind measurement of 1.90μ ± 0.08 was obtained yielding a date of 1556 ± 131 B.P. The age difference between the two samples is around 450 years and may indicate separate events. The lack of diagnostic artifacts prevents a cultural assignment for these materials.

The location of the site along a game trail where the topography is naturally constricted may offer evidence for a good hunting camp location. The presence of both obsidian and chert at the site, as well as its location may indicate the occurrence of multiple occupational events.

The significance of the site cannot be assessed completely at this time, but is most likely relatively low. Further testing at this and other similarly dated sites could probably afford a more concise picture of prehistoric use of these lakes.

No natural or human-induced impacts were observed on the site, but should the site become threatened by human-induced impacts, mitigation procedures should be implemented.

HUG-108

Site Elevation: 575 Ft.	NW¼, NW¼ Section 21 T18N, R15E	Probable Site Type: Lookout
Site Age: ca. 600/800 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the eastern shore of Narvak Lake approximately 1 mile from its northern end. The site occurs on a bedrock ridge nearly 30 meters above the lake and 75 meters back from the lakeshore. The view from this site is 1+ mile south and 150 meters north along the lakeshore. HUG-107 lies almost 250 meters south of this site.

Vegetation at this site consists of caribou lichen, dwarf birch, and spruce. The lichen/moss mat on the ridge is thick and adheres loosely to the ground surface. There was no discernable evidence of frost action or wildfire activity at this site.

The site was discovered through subsurface testing. As little exposed ground surface exists at the site, a total of 5 (10 cm.^{2}) test pits were excavated. Test #1 was excavated to a depth of 8 cm. and produced a brown obsidian waste flake. This small flake was submitted for hydration analysis, which indicated a rind thickness of 1.18μ ± 0.07μ. Based upon a radiocarbon determined hydration rate of $2.32\mu^2$/1000 years, this flake has been dated at 600 ± 71 years B.P. Test #2, excavated to

a depth of 8 cm., produced 2 obsidian, 3 basalt, 2 gray chert, and 19 black chert waste flakes. This material came from 4-7 cm. below surface at the A/A_2 contact (slight amounts of charcoal were noted in the A_2 horizon, but not collected). These two tests were located approximately 5 meters apart on the east-west oriented ridge. Three other tests of equal size and depth on this ridge proved sterile. One of the obsidian flakes from test #2 was also submitted for hydration analysis. The rind thickness measurement of 1.37μ ± 0.04μ yields a date of 809 ± 47 B.P. The two hundred year gap between the two samples may indicate separate events, or minor variations in the hydration rate.

At a distance of almost 40 meters east of test #1, a sixth test (10 $cm.^2$) was excavated to a depth of 6 cm. This test produced a small brown chert waste flake between 0-4 cm. below surface. The soil here consisted of a shallow layer of loess overlying bedrock.

The presence of both chert and obsidian may indicate more than a single occupational event at the site.

Soil significance is low. The site may have functioned as a hunting overlook/flaking station taking advantage of game trails along the lakeshore or on the ridge. Because of the lack of surface material over a large area, this site may deserve further testing to determine its extent. The site appears in no danger from natural disturbances and now recorded, warrants no further protection consideration except from human impact.

HUG-109

Site Elevation: 515 Ft.	NE¼, SE¼ Section 20 T13N, R15E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on a bedrock knoll 10 meters above the eastern shore of Narvak Lake 1½ miles south of its northern limit. Between 50 and 250 meters south of the site, a fairly well developed alluvial fan deposit extends into the lake. To the north, the terrain is in slope for about a mile until a broader, more well-developed alluvial fan deposit is encountered. The vegetation on the knoll top is limited to a thin lichen mat. The view is excellent encompassing the entire length of the lake. A game trail parallels the lakeshore to the east of the site.

The knoll top measures 8 x 10 meters. Between clumps of lichen, 5 obsidian flakes were visible. The flakes were all of diminutive size. A 20 $cm.^2$ test pit was excavated to a depth of 6 cm. below surface. Below the lichen mat, a dense concentration of charcoal containing 1 white chert, 6 black chert and 43 obsidian flakes were encountered, all <2 cm. in diameter.

This site most likely functioned as a flaking station/overlook with the lake and the game trail as important views. No temporal or cultural designation is possible for this site and the only significance the site exhibits is that it illustrates the use of promontories along the eastern shore of Narvak Lake by prehistoric people.

The presence of both chert and obsidian may indicate that more than a single occupational event occurred at the site. A date, not in excess, of 2000 years B.P. is suggested for the occupational event represented by the obsidian.

The site is not in danger of natural or human induced impacts. Should human-induced impacts be reported or planned, proper procedures should be followed for the site's protection.

HUG-110

Site Elevation: 540 Ft.	SE¼, NE¼ Section 31 T18N, R15E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the eastern end of a flat area 20 meters above the western shore of Narvak Lake, approximately 1½ miles northwest of the Selby/Narvak constriction. The site lies to the west of a point that projects from the lake's western shore. The dense vegetation is composed of spruce, birch, lichen, and low woody and herbaceous plants. The view is excellent to the south, toward the peninsula dividing the two lakes, and east across Narvak Lake.

The dense vegetation prevented visual discovery of any surface cultural materials. A 20 cm.^{2} test pit was excavated to a depth of 8 cm. at the break in slope of the flat area and the ridge that extends down to the shore. A single black chert flake was recovered from the base of the organic horizons. Another test pit, 1 meter to the west, was sterile.

The function of the site is not known, but certainly the aborigine who occupied the site appreciated a good view as much as the next guy or gal. There is currently no impact affecting the site. Now that the site has been recorded, there is little reason for concern for its protection unless impacted by human activity.

HUG-111

Site Elevation: 485 Ft.	SW¼, NW¼ Section 8 T17N, R15E	Probable Site Type: Unknown
Site Age: ca. 3000 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

The site is situated on the eastern side of Lake Selby approximately ½ mile south of the point of the peninsula which separates Lake Selby and Narvak Lake. Located nearly 30 meters back from the shoreline, this site occurs on a slight knoll 2 meters above lake level. A small creek flows just 30 meters north of the site. The view from HUG-111 is generally limited to about 50 meters due to thick stands of trees.

Vegetation at the site consists primarily of caribou lichen, dwarf birch, and spruce trees. The area around the knolls is poorly drained and covered by thick undergrowth. The knolls, which rise 1-2 meters above the brushy area, are fairly well drained. The caribou lichen mat on the knoll is thick and adheres loosely to the ground surface.

The site was discovered through subsurface testing. A 15 cm.^{2} test pit was excavated to a depth of 8 cm. below surface and produced 2 obsidian and 1 black chert waste flakes. The black chert flake had a blade-like appearance. One of the obsidian flakes was submitted for hydration analysis and returned a hydration rind measurement of 0.83μ. Based upon a locally derived (radiocarbon dated obsidian) hydration rate of 2.32μ^2/1000 years, the indicated age of the occupational event represented by the obsidian was 2977 ± 57 years B.P. Four other test pits of the same size and depth, located 10 meters away along the cardinal points of the compass, proved sterile.

Site significance is low. The site may represent a camp or hunting locale utilizing resources along the lake's eastern shoreline. The knolls, being better drained and somewhat elevated, would provide good camping locations in this area. The site does not appear to be extensive, however, the presence of both chert and obsidian may indicate more than a single occupational event. The site, however, appears in no danger of disturbance and, now recorded, warrants protection only from human impact.

HUG-112

Site Elevation: 500 Ft.	NW¼, SW¼ Section 5 T17N, R15E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located at the extreme southeast corner of Narvak Lake approximately 200 meters north of the Narvak/Selby constriction.

The area vegetation is composed of black spruce in the low, poorly drained areas surrounding the site, and lichen dwarf heath on the flat rise upslope from the site. The view is limited to the southeastern portion of Narvak Lake and the adjacent areas.

The site was discovered during surface reconnaissance along the game trail which skirts the gentle slope of the lakeshore. A black chert endscraper, a retouched obsidian flake, and a few chert waste flakes were found eroding out of the game trail. Two 20 cm.^{2} test pits were excavated to 10 cm. below surface. Test #1, 2 meters upslope of the game trail on the edge of the flat area, failed to produce subsurface cultural materials. A second test, located just upslope from the game trail, produced two black chert flakes. The dimensions of the site appear to be limited to a 5 meter length of the game trail. The site may extend to the open flat area to the east, however, no surface indications were observed in this area due to the robust ground cover.

The presence of both chert and obsidian materials at the site may indicate more than one occupational event is represented here, but the significance of the site appears to be minimal.

The only impact affecting the site at present is natural downslope erosion and trampling along the game trail. No measures of protection from these natural processes is warranted. However, recreational use of this area is relatively high and further testing of the site might be warranted to assess more fully its cultural significance prior to impact by recreationists.

HUG-113

Site Elevation: 625 Ft.	SE¼, NW¼ Section 36 T17N, R14E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the western end of an Itkillik age terminal moraine approximately ½ mile south of Lake Selby. The Selby River lies 1/3 of a mile to the west and the extreme southern end of Lake Selby lies ½ mile to the north. The view from the site is excellent to the north, west and east, however, trees and higher ground block the view to the south. To the north, all of Lake Selby and the southern protion of Narvak Lake are visible, as is the surrounding country.

Ground cover at the site is typical of a recently burned area. Surface cover is a hard, dry crust of burned lichen and moss. Standing and fallen burned spruce are present as are seedling size spruce, sapling size birch and poplar, and dwarf birch and willow. Much of the ground surface has been disturbed by frost action. A wildfire passed through

this area between 20-30 years ago. It appears that the Selby River contained the fire and kept it from burning the area around Lake Selby.

In an area of disturbed ground, a dozen black chert flakes were observed on and protruding from the surface. These flakes were scattered over a 2 meter^2 area and were of various sizes. No test pits were excavated.

The homogeneity of the lithic material suggests that the site represents a single occupational event. The site's basic value lies in its association with other sites in the Lake Selby area and more specifically sites along the five mile length of the moraine.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

HUG-114

Site Elevation: 640 Ft.	NE¼, NE¼ Section 36 T17N, R14E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the Itkillik age terminal moraine south of Lake Selby. The site lies 1/3 mile east of HUG-113. The view to the north is restricted by higher ground and trees. The view in all other directions, especially to the south, is excellent.

Ground cover at the site consists of a hard dry crust of burned lichen, and moss. Standing and fallen burned spruce are present as are seedling size spruce, sapling size birch and poplar, and dwarf birch and willow. Much of the surface has been disturbed by frost action.

In an area of exposed mineral soil, two chert flakes were observed protruding from the surface. No test pits were excavated.

The number of flakes and the homogeneity of the lithic material suggests that the site represents a single occupational event. The site's physical location and character suggests that it served as a lookout.

Little else can be said about the site. The site's basic value lies in its association with other sites in the Lake Selby area and more specifically sites along the five mile length of the moraine. Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.

HUG-115

Site Elevation: 600 Ft.	NE¼, NW¼ Section 31 T17N, R15E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

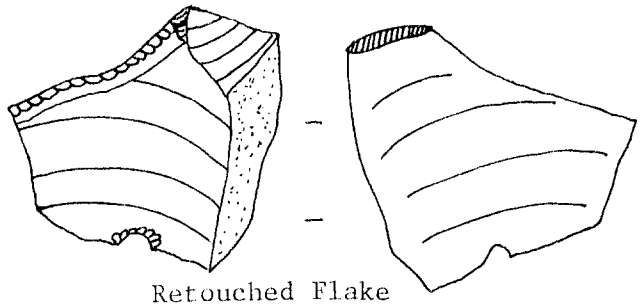
This site lies atop the crest of the Itkillik age terminal moraine south of Lake Selby. The view is best to the north where the entire lake is visible and to the south where at least 8 miles of rolling wet tundra are visible, although an entire 360° view of surroundings is afforded. The ridge has been recently burned leaving the surface of the site fairly well exposed.

The site was discovered during surface reconnaissance. A stone cairn made up of several stones was located at the highest point of the ridge. Thirty-five meters west of this, an obsidian decortification flake was located. One hundred thirty-five meters west of the cairn, a retouched obsidian flake was located on a small bump a few meters to the north of the ridge. The stone cairn appears ancient. A 20 cm.^{2} test pit, excavated next to the cairn, failed to produce subsurface cultural material.

Because of its isolated nature, the cairn is probably a trail or location marker rather than an inuksuk. The presence of obsidian suggests an age not in excess of ca. 2000 years B.P. for the event represented by the obsidian. The stone cairn and the obsidian are not necessarily associated.

The site most likely served as a hunting lookout. The function of the cairn is not known. The site significance is low and the only impacts affecting the site are natural.

Now that the site has been recorded, there is little reason for concern for its protection or the mitigation of any but human-induced impacts.



Retouched Flake
(obsidian)

HUG-115 Artifact - Actual Size

HUG-116

Site Elevation: 625 Ft.	NW¼, NE¼ Section 31 T17N, R15E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located atop the crest of the Itkillik age terminal moraine south of Lake Selby. An excellent 360° view is afforded here as the result of a recent wildfire. Much of the surface of the site is bare mineral soil and gravels.

The site was discovered during surface reconnaissance. A single gray chert flake was found lying on the high point of the knoll. A 20 cm.^{2} test pit was excavated to a depth of 10 cm. with negative results.

No temporal, cultural or functional determinations can be made for this site, except that the moraine crest probably provided good hunting overlook locations, of which this may be one.

The natural impact (frost action, erosion) is fairly extensive but is not endangering the site. Now that the site has been recorded, protection or mitigation need be considered only in relation to human impacts.

HUG-117

Site Elevation: 650 Ft.	SW¼, SW¼ Section 29 T17N, R15E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the crest of the Itkillik age terminal moraine south of Lake Selby. A fine 360° view can be had from this site. Much of the ground surface is barren due to a recent wildfire. A game trail occupies the crest-line of the ridge.

A single black chert flake was found 1 meter south of the game trail. No other surface material was encountered. No subsurface testing was necessary due to the exposed mineral soil.

The site is of very low significance and the natural impacts acting presently on the site should not warrant concern. Now that the site has been recorded, protection or mitigation need be considered only in relation to human impact.

HUG-118

Site Elevation: 650 Ft.	SW¼, NE¼ Section 29 T17N, R15E	Probable Site Type: Inuksuk
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located atop the eastern end of the Itkillik age terminal moraine south of Lake Selby. The view from this site is potentially excellent to the north, west and south but it somewhat obscured by poplar trees. These trees may indicate revegetation after a wildfire event that took place 20-30 years ago. A game trail occupies the ridge crest.

This site was discovered during surface reconnaissance. A banded obsidian flake was found lying in the game trail. One meter south of this location was a cairn comprised of 4 stones. Nine meters northeast of the flake, three stones forming another cairn were noted. At 10 and 17 meters south of the flake, a third and fourth set of 3 stone cairns were observed. This was the extent of the cultural material at the site. The cairns may represent a hunting technology involving the use of caribou fences or inuksuk.

Widely documented use of this type of hunting technique has been recorded for northern Alaska and both Indian and Eskimo groups are known to have utilized the technique. For this reason, no firm cultural or temporal assignation can be given to these features. The presence of obsidian suggests a date not in excess of ca. 2000 years B.P. for the event it represents. It is unclear, however, if the obsidian and the cairns are temporally associated.

The site is in no danger of either natural or human-induced impacts. Now that this site has been recorded, there need be little concern for its protection or the mitigation of any but human-induced impacts.

HUG-119

Site Elevation: 500 Ft.	SW¼, NW¼ Section 6 T18N, R15E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located on the eastern shore of Narvak Lake, 200 meters south of its northern limit. This portion of the shoreline is marked by a low cliff or beach ridge rising 3 meters above the lake level and extending for several hundred meters along this north-south oriented strip of lakeshore. The vegetation at the site is composed of fairly dense black spruce with a robust lichen ground cover as well as various low woody

and rises 50 meters above the surrounding, poorly drained terrain.

The vegetation is characterized by a relatively thin lichen/woody and herbaceous plant ground cover, and small to medium size birch, and larger spruce scattered over the well drained ridge. The bedrock outcrops in a few places along the ridge crest, and is generally more elevated and lacking ground cover or vegetation.

The view is excellent over 270°. Only to the east, where the ridge rises towards the mountains north of Fritts Mountain, does the view become obscured due to tree cover. To the west and northwest, the broad lowland north of Narvak is clearly visible. To the southwest and south, Narvak Lake is visible except for its extreme southern end.

No surface indications of cultural material were observed, therefore, subsurface testing was undertaken. Test #1, a 20 cm.^{2} test pit, located near the western end of the ridge, produced a brown chert flake and a small fragment of obsidian. This material was recovered from the A horizon 0-3 cm. below surface. During the excavation of this test, a black chert flake was observed on surface 25 cm. distant. Test #2, also 20 cm.^{2}, was excavated 15 meters to the east, adjacent to the game trail which runs along the crest, and produced 2 very small obsidian flakes and one very small black chert flake (0.5 cm.). This material was recovered from 4-5 cm. below surface. Ten meters north and 10 meters further east, two other test pits were excavated to a depth of 5+ cm. encountering cultural material.

One of the small obsidian flakes from test #2 was submitted for hydration analysis. The hydration rind measured 1.80μ ± 0.08μ yielding a date of 1397 ± 124 years B.P. This date is applicable only to the materials from test #2, but since obsidian and chert are associated at both locations, the possibility exists that these materials are coeval.

The site dimensions appear to be limited to the western 15 meters of the ridge top. The fairly sparse remains encountered here may indicate short term use of the ridge crest as an overlook or lookout site related to hunting activities around the northern end of the lake.

No natural or human-induced impacts presently threaten the site. If future human-induced impacts are planned or reported, mitigation of such impacts should be addressed.

HUG-121

Site Elevation: 650 Ft.	NW¼, NW¼ Section 17 T18N, R14E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

The site is situated at the northwest corner of Narvak Lake on a high ridge overlooking the upper end of the lake. The site sits almost 60 meters above the lake and approximately 150 meters northwest of the lakeshore. The ridge consists primarily of fragmented bedrock and runs roughly northwest-southeast down to the lakeshore. The view from the site includes the entire north end of Narvak Lake and up to ½ mile along the northwest shoreline where vision is not obscured by trees.

Vegetation at the site consists primarily of caribou lichen, birch, and spruce trees. The site has a good view of a small creek and a poorly drained area to the north of the lake. Frost action is evident atop the ridge and the surface is partially exposed atop larger bedrock outcrops.

The site was discovered through surface reconnaissance. Two black chert and two obsidian waste flakes were found on the surface. The flakes were located approximately 25 meters apart with the chert occurring downhill from the obsidian. A total of 5 test pits (15 cm.^{2}) excavated through the loess to an average depth of 10 cm. produced no cultural material. The two lithic types may represent separate occupations. The obsidian suggests an age no greater than 2000 years B.P. for the event it represents.

Site significance is low. The site may have been used as a hunting overlook for the upper end of Narvak Lake. The site appears in no danger from natural impact and now recorded, warrants no further protection consideration except from human impact.

HUG-122

Site Elevation: 600 Ft.	SE¼, NW¼ Section 17 T18N, R15E	Probable Site Type: Lookout
Site Age: ca. 1900 years B.P.	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site occupies a bedrock knob (outcrop) on a fairly steep sloping ridge 150 meters west, 60 meters above, and 700 meters south of Narvak Lake's northern shore. The rectangular shaped knob measures 12 x 8 meters and is relatively flat with near vertical walls on the north, west, and south sides. The eastern side is less abrupt, and has a slope similar to the larger ridge of which it is a part.

Spindly black spruce, young birch and poplar are the major vegetation on the site with a robust lichen/moss ground cover. The view is impressive both north and south with the entire lake in plain view.

At the northern edge of the outcrop a small accumulation of eroded silt contained a single obsidian flake exposed on the surface. Fifty cm. south of this location, test #1, a 20 cm.^{2} test pit, was excavated to a depth of 10 cm. below surface into a V-shaped crack in the bedrock where soil accumulation had occurred. Eight small obsidian and three dark

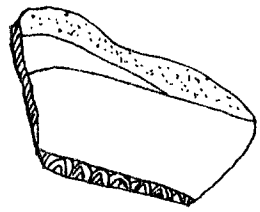
gray chert flakes were recovered from 2-5 cm. below surface. A dark gray chert blade fragment, broken either by frost or heat, exhibited steep retouch along the remaining edge. Two of the dark gray chert flakes may be derived from this blade fragment as they appear to be frost or heat fractured as well. Also recovered was a large (7.0 x 5.3 cm.) obsidian flake the coloration of which was clear, black streaked, and red. This flake exhibited a small amount of cortex and some utilization along its right edge. The flake is interesting as it exhibits the range of coloration of most obsidian found in this geographic area.

A second 20 cm.^{2} test pit was excavated six meters to the south of test #1. In the silty duff unit 1-3 cm. below surface, 5 small obsidian flakes were recovered. The flakes may represent the final stages of tool production.

The large obsidian flake recovered from test #1 was submitted for obsidian hydration analysis. The hydration rind thickness of 2.10μ ± 0.07μ yields a date of 1901 ± 126 years B.P. given the locally calibrated hydration rate of 2.32μ^2/1000 years. This tentative date appears to be nearly equivalent to the obsidian hydration date derived from a flake at HUG-100 (2.21μ ± 0.06/2105 ± 114 years B.P.) which is located at the base of this ridge only 100 meters to the east. Statistically these two dates would probably not differ significantly. If these two sites are related, i.e. if HUG-122 is simply an additional loci of HUG-100, the internal structure of this dating method would gain credence.

The presence of both chert and obsidian may indicate more than a single occupational event.

At present there are no natural or man-induced impacts threatening the site. If in the future man-induced impacts are observed or planned, the site should be protected or slated for further investigation.



Tool Fragment

(chert)

HUG-122 Artifact - Actual Size

XSP-099

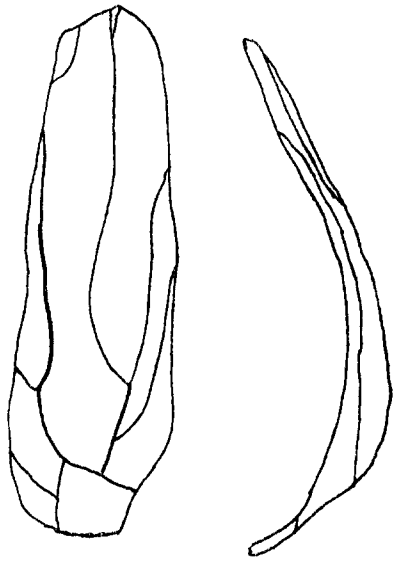
Site Elevation: 700 Ft.	SE¼, SE¼ Section 20 T19N, R15E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located in a one mile wide valley, 4 miles north of Narvak Lake and 2 miles southeast of Avaraat Lake. Situated on the northeastern side of a Walker Lake age terminal moraine complex which extends across the valley, the site lies on an oval knoll approximately 50 meters in diameter. A small kettle lake is in view just 100 meters to the southeast and 10 meters lower in elevation than the site. View to the north is 3+ miles, while the view south and west along the moraine is roughly 100-300 meters depending on tree coverage. XSP-145 is located 500 meters southwest of XSP-099.

Vegetation at the site consists of caribou lichen, small spruce trees, and dwarf birch. The vegetation cover is generally sparse on this morainal surface, hence a good deal of the ground surface is visible. Frost action appears to have churned the surface and game trampling is evident.

The site was discovered through surface observation of a large black chert blade. Subsequent surface reconnaissance produced a small cluster, less than 1 meter^2, of black chert waste flakes located approximately 20 meters northwest of the blade. The blade is complete, and is highly reminiscient of the material found at XSP-134 on the Reed River 25 miles to the northeast. If this artifact represents a microblade technology, this blade probably has a minimal date of 2000 years B.P. The small black chert flakes (less than 5) were of a different type chert than the blade and may represent a separate occupation of this knoll. A 15 cm.^{2} test pit, excavated to a depth of 5 cm., produced no cultural material in the shallow loess and glacial gravels.

Site significance is low, being a surface find from which only limited data can be obtained. The site may have functioned as a hunting or travel camp on this moraine, which provides the only reasonable transportation route between Avaraat Lake/Mauneluk River and the Narvak/Selby Lake region. This site lies outside the boundaries of the Park/Preserve.



Blade
(chert)

XSP-099 Artifact - Actual Size

XSP-145

Site Elevation:
675 Ft.

Site Age:
Unknown

NW¼, NW¼
Section 28
T19N, R14E
Kateel River Meridian

Probable Site Type:
Unknown

Probable Cultural Affiliation:
Unknown

The site is located on the northern edge of a Walker Lake age terminal moraine complex in a small glaciated valley roughly mid-way between Narvak Lake and Avaraart Lake. The site lies on an elongate knoll approximately ½ mile west of two kettle lakes which lie on the eastern edge of this valley. The view from the site is 3+ miles to the north over low-lying terrain and several lakes. The visibility in all other directions over the kame and kettle terrain is limited to roughly 75 meters due to trees. XSP-099 is located 500 meters to the northeast.

Vegetation at the site consists primarily of caribou lichen, small spruce, and dwarf birch. The ground surface is sparsely vegetated and shows evidence of frost action and game trampling. Several large glacial erratics occur in the vicinity of this site.

The site was found through observation of a single flake located on the surface. This small gray chert flake showed no sign of use or retouch. A 15 cm.^{2} test pit, excavated to a depth of 5 cm. through mixed loess and gravels, proved sterile.

Site significance is low. The site may have been a travel camp/hunting overlook, taking advantage of game movement on the moraine or overlooking the small lakes and low-lying terrain to the north. The single flake does not reveal much about its prehistoric creators. This site lies outside the boundaries of the Park/Preserve.

XSP-146

Site Elevation: 575 Ft.	NE¼, SW¼ Section 32 T19N, R15E	Probable Site Type: Unknown
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation: Unknown

This site is located approximately mid-way between Narvak and Avaraart Lakes on a Walker Lake age terminal moraine. The site occupies an L-shaped knoll approximately 30 meters east of a kettle lake, which the site overlooks. In addition to this lake, the site overlooks a boggy area to the north and west around the margins of the lake. The view in other directions is limited by trees to less than 30 meters.

Vegetation at the site consists primarily of spruce, birch, and aspen trees. The ground surface supports some woody plants but is dominated by caribou lichen. Some frost action is evident on the surface of this knoll.

This site was discovered through surface reconnaissance. Three small gray chert waste flakes and one large basalt flake were found on the surface approximately 5 meters apart. No use or retouch was observed on this large flake. A 15 cm.^{2} test pit, excavated to a depth of 8 cm., proved sterile. The soil is typically glacial being composed of loess and gravel.

An oval pit was observed at this site 8 meters north of the basalt flake. The pit measured roughly 1 x 2 meters and appears cultural because of the non-random pattern of cobble displacement around the periphery of the edge. The back-dirt from this depression was vegetated and the pit was partially filled with leaves; the sides showed little sign of slumping. Estimated age of this unknown feature is less than 35 years and may be the result of petroleum or mineral exploration activities.

Site significance is low. The site may have functioned as a hunting station and/or camping site taking advantage of the habitat around the lakes and moraine. Based on the spatial location and differences in material type, it is suggested that the site represents separate occupational events. This site lies outside the boundaries of the Park/Preserve.

XSP-151

Site Elevation: 510 Ft.	SE¼, SE¼ Section 13 T19N, R14E	Probable Site Type: Lookout
Site Age: Unknown	Kateel River Meridian	Probable Cultural Affiliation:

This site is located on a terrace on a large bedrock outcrop complex about four miles north of Narvak Lake. The eastern shore of Avaraart Lake lies less than ¼ mile to the west and the Mauneluk River lies 2½ miles to the northwest. The view from the site is excellent in all directions except to the east where higher ground invervenes.

Much of the site is exposed bedrock or bedrock capped by a lichen/moss mat with little or no soil present. Evidence of wildfire is present, but indicates the fire occurred ca. 100 years ago. Poplar and birch, to 10 meters in height, are common and grow rather thickly in some areas.

The obsidian flakes were observed on the surface of a very shallow mineral soil exposure. No test pits were excavated as the soil, where present, did not exceed 2-3 cm.

Little else can be said about this site other than its location and physical character suggests that it served as a lookout. The homogeniety and paucity of the cultural material indicate the site probably represents a single occupational event. The presence of obsidian at the site suggests an age not in excess of ca. 2000 years B.P.

The area this site is located in is not within the boundary of the Park/Preserve. This area was investigated, briefly, to see if the area north of Narvak Lake showed any evidence of having been as heavily used as the lake areas to the south. The area investigated is the terminal moraine complex of the Walker Lake glaciation and physically is much the same as the area south of Walker Lake. Our cursory investigations in this area located only 4 sites. The area does not appear to have been heavily used by prehistoric peoples; at least such is suggested by the physical evidence. However, the distance between Narvak/Selby and Avaraart Lakes is minimal and the area could have been exploited from any of the lakes with little physical evidence remaining to indicate such use.

Obsidian Hydration Chronology

Due to a fortuitous circumstance, it was possible to begin to establish an obsidian hydration chronology for the Phase I study area.

While working the Lake Selby area, a unique appearing cultural feature was observed at site HUG-059 (see this report). In an effort to determine what the feature might be, a trench was excavated across it so that a cross sectional profile could be studied. During the excavation, five samples of dateable organics were recovered from various levels of the feature. Upon returning from the field, the samples were prepared for laboratory analysis. Examination of two of the charcoal samples revealed the presence of obsidian flakes in the charcoal matrix. This situation allowed a basic chronology to be developed.

The two uppermost charcoal samples contained the obsidian flakes. Sample #1 (Beta-7549) was recovered from between 10-20 cm. below surface and returned a carbon 14 date of 1740 ± 70 years B.P. The obsidian flake associated with this carbon sample was submitted for hydration analysis and exhibited a hydration rind thickness of 2.05μ ± 0.08μ. The second charcoal sample (Beta-7548) was recovered between 20-30 cm. below surface and produced a carbon 14 date of 1760 ± 100 years B.P. The obsidian flake associated with this charcoal was submitted for hydration analysis and exhibited a hydration rind thickness of 2.02μ ± 0.08μ. Both of the radioactive carbon dates and both the hydration rind thicknesses are statistically the same.

This data allowed the generation of a locally derived time/hydration rind thickness ratio of $2.32\mu^2$/1000 years, an exponential rate, or 1.00μm/860 years which is a linear rate.

The rate at which hydration occurs in a piece of obsidian is dependent upon a number of variables. Chief among these is the physical and chemical make up of the obsidian, temperature and temperature fluctuations to which the obsidian is subjected in the site matrix, and the amount of hydration which takes place. Control or knowledge of all but the last of these hydration rate factors was impossible to determine. However, it is known that as a piece of obsidian hydrates and the hydration rind thickens, the rate of hydration decreases (Friedman and Trembour, 1983). The exponential formula for hydration rate accounts for this factor and therefore was used to generate the dates found in this report.

The hydration rate generated by this data appears to be relatively high for Alaska. However, the hydration rate suggested by Mohlab, who did the hydration measurements, is $0.56\mu^2$/1000 which appears to be far to low as dates approaching 10,000 years B.P. are generated by that rate. Because of the extremely close relationship between carbon 14 dates and the hydration rind thickness from HUG-059, it is believed that the rate of $2.32\mu^2$/1000 years is the more reliable.

The second factor of concern was the physical and chemical make-up of the obsidian. Obsidian from different sources may hydrate at different

rates. Therefore, the time/hydration equation for obsidian from source "A" probably won't be applicable to obsidian from source "B". Some obsidians have obvious visual signatures which are easily observable and some require spectorgraphic analysis to determine these differences.

In Alaska, primarily through the work of John Cook, several obsidian sources have been recognized. By far the most important, at least in terms of Interior and Northern Alaska, is the Batza Tena obsidian source near the village of Hughes on the Koykuk River. Cook's research has shown that the great majority of obsidian found in archeological sites in Northern Interior and Northern Alaska comes from the Batza Tena source (Cook, 1983).

Batza Tena is located approximately 85 air miles south-southeast of the Phase I study area. Therefore, it seems reasonable to assume that the vast majority, if not all, of obsidian in the study area comes from the Batza Tena source. Evidence in support of this supposition may be found in the large numbers of obsidian cobble fragments found at sites in the area, along with the large number of obsidian flakes which exhibit cortex. It appears that cobble reduction was common in the area possibly reflecting the ease of obtaining the material from a nearby source. Additionally, the size of the pieces of unused obsidian found at a number of the area sites suggests that these people were "obsidian rich" and felt no real need to make the best economic use of this material because it was so easily accessible.

As previously mentioned, temperature has a very marked effect upon the rate at which obsidian hydrates. Annual temperature data for the Phase I study area is non-existant. Temperature data from localities 100 miles or more distant is avaliable, but such information is not representative of the study area. In this region of Alaska, climatic conditions vary rather widely over relatively small distances due to the effects of local elevation, geomorphology, and vegetation. A range of 100 miles is, in most cases, to great for a general application of temperature or climatic data. On a smaller areal scale, however, such general applications can be reasonably made.

The obsidian hydration data, upon which this tentative chronology is based, was obtained in the Lake Selby area. Lake Selby is at the western extreme of the study area. Walker Lake is at the eastern boundary of the study area roughly 45 miles east and 18 miles north of Lake Selby. The difference in elevation between the two lakes is 162 ft. Geomorphologically, the areas are the same. For these reasons, it is believed that the obsidian hydration data are applicable throughout the study area.

After working in the study area for a short time, it became apparent that the region is cyclically burned over by wildfire. Such events could drastically alter the reliability of obsidian hydration data. Through laboratory experiments, Friedman and Trembour (1983) have demonstrated that temperatures below 540°C can cause obsidian to dehydrate. This, in essence, causes the obsidian to return to the zero point in terms of hydration. As a result subsequent hydration would date or occur only

from the dehydration event which would bear no relation to the event that originally placed the obsidian in a cultural context. Above temperatures of 540°C Friedman and Trembour state that the surface of the obsidian crazes thus providing a visual clue to a dehydration event. However, as previously mentioned, obsidian does dehydrate at temperatures below 540°C so a visual signature will not always be present. Friedman and Trembour do not discuss at what minimum temperature dehydration can occur or the length of time required for dehydration to occur at various temperatures. Even though this data is limited, it must be taken into consideration especially in an area that is known to "burn-over" periodically.

In order to establish some limited control over the obsidian to be analyzed, only subsurface obsidian was used. The data obtained from 81 samples analyzed did not suggest any effect from wildfire. This was assumed from the wide range of hydration rind thicknesses exhibited from a discrete area surrounding Lake Selby. Hydration rind thicknesses from the 30 obsidian samples from the Lake Selby area ranged from a minimum of 0.83μ to a maximum of 2.21μ. Additionally, there was no grouping or clustering as might be expected from an event such as a wildfire. Unfortunately no collection was made of surface obsidian at these sites and, therefore, no surface/subsurface comparisons can be made. However, the available data suggests that wildfire has had no measureable effect upon subsurface obsidian.

Based upon the obsidian hydration chronology which was developed for the Phase I study area some interesting and intreging information is presented.

In this region of Alaska, there has been little evidence that microblade technology persisted as a widely practiced tool production method much beyond ca. 2000 years B.P. At site XSP-045, located at the south end of Walker Lake (see this report), five obsidian microblades, from several different test pits, returned hydration dates ranging from 2401 ± 102 years B.P. to 2067 ± 132 years B.P. Using the standard deviation to best advantage, four of the five microblade dates overlap creating a nice cluster. This range of dates fits nicely within the bounds of the generally accepted temporal range of microblade technology. At site HUG-045 (see this report) located along the Kobuk River slightly more than one mile above the Lower Canyon, three obsidian microblades returned dates ranging from 1159 ± 113 years B.P. to 919 ± 63 years B.P. Using the standard deviation to best advantage, two of the three dates overlap. These dates suggest that microblade technology in this region of Alaska may have been a viable tool production method later than previously believed. This belief is further supported by data from eight additional sites on the mid-portion of the Reed River. One obsidian microblade from each of the eight sites was dated producing a range of dates between 2124 ± 115 years B.P. and 466 ± 45 years B.P. Four of the dates clustered about 1500 B.P., one date fell within the XSP-045 range, (ca. 2000 years B.P.) another fell within the HUG-045 range (ca. 1000 years B.P.), one fell just slightly short of the XSP-045 range, and the remaining one is far enough out of any range to be considered an anomally. This data suggests that microblade technology was practiced until ca. 1000 years ago. Additionally, the data indicates

that while microblade technology in the area did persist until ca. 1000 years ago, in the area, its employment as a major technological component of tool manufacture began a rapid decline after 1500 years B.P.

Another interesting piece of data generated by the obsidian hydration analysis is that there seems to be no evidence for the use of obsidian in the area prior to ca. 2500 years B.P. This is somewhat odd to say the least. At Norutak Lake, 16 miles south of the study area, Clark (1974) recovered a large amount of obsidian from two sites. From a deeply buried deposit (21-83 cm. below surface) he recovered a piece of obsidian that exhibited a hydration rind thickness of 3.85μ which is far in excess of any found in the study area. However, from the shallower (0-10 cm. below surface) deposits hydration measurements of five obsidian artifacts ranged from 1.18μ to 1.54μ; measurements not unlike those obtained in the Phase I study area from material recovered at similar depths. Additionally, hydration measurements on five obsidian microblades from Norutak Lake range from 1.75μ - 2.54μ almost the exact hydration range represented by the examples from the Phase I study area.

At this time there seems to be only three plausable reasons for the indicated recent use of obsidian: 1) For some unknown reason it just was not being used. Typologically speaking, no diagnostic or semi-diagnostic artifacts were found during the course of the 1983 field-work that indicated obsidian was in wide use in the area prior to 2500 years ago. A number of sites were located that are believed to pre-date 2500 B.P. based on artifact morphology, but none of these sites contained obsidian. 2) The Chronology that we have established is not correct. In other words, the rate of hydration that was determined by the carbon 14 dates, 2.32μ^2/1000 years, is too high. 3) A major wild-fire swept through the entire area roughly 2500 years ago and turned the hydration clock back to zero on all surface and shallowly, 0-10 cm. below surface, buried obsidian. This may be reflected by the presence of deeply buried obsidian at Norutak Lake, exhibiting hydration rind thicknesses up to 3.85μ. Of the three scenarios #1 and #2 seem most plausable.

The obsidian hydration chronology, when applied to the various areas that were surveyed, indicates use through time. In the Lake Selby/ Narvak Lake area, habitation occurred over a time span of approximately 2100-300 years B.P. Along the Reed River the obsidian hydration chronology indicates occupation occurred between 2100-460 years B.P. In the area around Walker Lake, the hydration dates indicate habitation occurred between 2400-1000 years B.P. Along Kichaiakaka Creek (Alatna Portage) the obsidian data indicates occupation occurred between 2000-900 years ago.

There does not appear to be any clustering of dates nor any break in the range of dates (N=81) between 2400 years B.P. (2.36μ) and 300 years B.P. (0.83μ). The range of dates and hydration rind thicknesses breakdown arbitrarily, as follows: 16% (N=13) of the dates fall between 2500-2000 years B.P. (2.36μ-2.16μ), 23% (N=19) of the dates fall between 2000-1500 years B.P. (2.10μ - 1.88μ), 30% (N=25) of the dates fall between 1500-1000 years B.P. (1.86μ - 1.56μ), 22% (N=18) of the dates fall between 1000-500 years B.P. (1.49μ - 1.16μ), 7% (N=6) of the dates fall between 500-300 years B.P. (1.05-0.83).

This data suggests that the use of obsidian was greatest and/or that the area population was most dense between 1500 and 1000 years ago. From 2500-1500 years ago and between 1000 and 500 years ago, obsidian use and/or population density appears to have been relatively constant. After 500 years B.P., the use of obsidian by the area inhabitants or the population density, appears to drop off rather sharply.

This does not mean that occupation of the region was not occurring prior to 2400 B.P. The 2400-300 year B.P. time range is that which is reflected through the use of obsidian. Sites reflecting earlier occupations are present in the region. The temporal position of these earlier sites is based upon artifact typology/morphology.

It should be realized that the chronology developed as a result of the 1983 field work is tentative at best. So tentative in fact that it may be stretching the point to even call it a chronology. It is, however, useful. Even if the locally calibrated hydration rate of $2.32\mu^2/1000$ years is incorrect, the hydration rind thicknesses are indicative of the occurrence of cultural events through time regardless of the hydration rate assigned to them.

OBSIDIAN HYDRATION DATA

SITE	HYDRATION RIND THICKNESS	DATE LINEAR RATE 1.00μm/860 years	DATE EXPONENTIAL RATE $2.32\mu^2$/1000 yrs.	SAMPLE TYPE
XSP-045	2.36μ ± 0.05μ	2029 ± 43 B.P.	2401 ± 101 B.P.	microblade
XSP-045	2.31μ ± 0.06μ	1987 ± 69 B.P.	2300 ± 159 B.P.	microblade
XSP-045	2.29μ ± 0.05μ	1969 ± 43 B.P.	2260 ± 98 B.P.	microblade
HUG-067	2.27μ ± 0.05μ	1952 ± 43 B.P.	2221 ± 98 B.P.	flake
XSP-045	2.23μ ± 0.08μ	1918 ± 69 B.P.	2143 ± 154 B.P.	microblade
XSP-125	2.22μ ± 0.06μ	1909 ± 52 B.P.	2124 ± 115 B.P.	microblade
HUG-100	2.21μ ± 0.06μ	1900 ± 52 B.P.	2105 ± 114 B.P.	flake
HUG-064	2.20μ ± 0.04μ	1892 ± 35 B.P.	2086 ± 76 B.P.	flake
XSP-045	2.19μ ± 0.07μ	1883 ± 60 B.P.	2067 ± 132 B.P.	microblade
HUG-051	2.18μ ± 0.05μ	1874 ± 43 B.P.	2048 ± 94 B.P.	flake
XSP-079	2.17μ ± 0.04μ	1886 ± 35 B.P.	2030 ± 75 B.P.	flake
HUG-107	2.16μ ± 0.07μ	1857 ± 60 B.P.	2011 ± 130 B.P.	flake
HUG-122	2.10μ ± 0.07μ	1806 ± 60 B.P.	1901 ± 126 B.P.	flake
HUG-095	2.10μ ± 0.05μ	1806 ± 43 B.P.	1900 ± 90 B.P.	flake
HUG-059	2.05μ ± 0.08μ	1763 ± 69 B.P.	1811 ± 141 B.P.	flake
HUG-059	2.02μ ± 0.08μ	1737 ± 69 B.P.	1759 ± 139 B.P.	flake
XSP-058	2.02μ ± 0.03μ	1737 ± 26 B.P.	1759 ± 52 B.P.	flake
XSP-120	2.01μ ± 0.04μ	1729 ± 35 B.P.	1741 ± 69 B.P.	microblade

SITE	HYDRATION RIND THICKNESS	DATE LINEAR RATE 1.00μm/860 years	DATE EXPONENTIAL RATE $2.32\mu^2$/1000 years	SAMPLE TYPE
HUG-096	1.78μ ± 0.04μ	1531 ± 35 B.P.	1366 ± 61 B.P.	flake
HUG-056	1.76μ ± 0.08μ	1513 ± 69 B.P.	1335 ± 121 B.P.	flake
XSP-141	1.73μ ± 0.04μ	1488 ± 35 B.P.	1290 ± 60 B.P.	flake
HUG-074	1.72μ ± 0.06μ	1479 ± 52 B.P.	1275 ± 89 B.P.	flake
HUG-074	1.72μ ± 0.07μ	1479 ± 60 B.P.	1275 ± 104 B.P.	flake
HUG-090	1.66μ ± 0.03μ	1428 ± 26 B.P.	1187 ± 43 B.P.	flake
HUG-085	1.64μ ± 0.07μ	1410 ± 60 B.P.	1159 ± 99 B.P.	scraper
HUG-045	1.64μ ± 0.08μ	1410 ± 69 B.P.	1159 ± 113 B.P.	microblade
XSP-043	1.64μ ± 0.03μ	1410 ± 26 B.P.	1159 ± 42 B.P.	flake
HUG-048	1.62μ ± 0.07μ	1393 ± 60 B.P.	1131 ± 98 B.P.	flake
HUG-085	1.61μ ± 0.06μ	1384 ± 52 B.P.	1117 ± 83 B.P.	flake
HUG-057	1.59μ ± 0.07μ	1367 ± 60 B.P.	1090 ± 96 B.P.	flake
HUG-045	1.58μ ± 0.09μ	1359 ± 77 B.P.	1076 ± 122 B.P.	microblade
HUG-057	1.58μ ± 0.05μ	1359 ± 43 B.P.	1076 ± 68 B.P.	flake
XSP-108	1.57μ ± 0.06μ	1350 ± 52 B.P.	1062 ± 81 B.P.	microblade
XSP-085	1.56μ ± 0.04μ	1342 ± 35 B.P.	1049 ± 54 B.P.	flake
HUG-021	1.49μ ± 0.03μ	1281 ± 26 B.P.	957 ± 39 B.P.	flake
HUG-078	1.48μ ± 0.04μ	1272 ± 35 B.P.	944 ± 51 B.P.	burin spall
HUG-045	1.46μ ± 0.05μ	1255 ± 43 B.P.	919 ± 63 B.P.	microblade
XSP-077	1.46μ ± 0.06μ	1255 ± 52 B.P.	919 ± 75 B.P.	flake
HUG-073	1.44μ ± 0.03μ	1238 ± 26 B.P.	894 ± 37 B.P.	flake

SITE	HYDRATION RIND THICKNESS	DATE LINEAR RATE 1.00μm/860 years	DATE EXPONENTIAL RATE $2.32\mu^2$/1000 years	SAMPLE TYPE
HUG-063	1.44μ ± 0.09μ	1238 ± 77 B.P.	894 ± 112 B.P.	flake
HUG-081	1.44μ ± 0.07μ	1221 ± 60 B.P.	869 ± 86 B.P.	flake
HUG-047	1.41μ ± 0.04μ	1212 ± 35 B.P.	857 ± 49 B.P.	projectile point
HUG-047	1.40μ ± 0.04μ	1204 ± 35 B.P.	845 ± 48 B.P.	flake
HUG-075	1.38μ ± 0.05μ	1186 ± 43 B.P.	821 ± 59 B.P.	flake
HUG-084	1.38μ ± 0.05μ	1186 ± 43 B.P.	821 ± 59 B.P.	flake
HUG-108	1.37μ ± 0.04μ	1178 ± 35 B.P.	809 ± 47 B.P.	flake
HUG-053	1.27μ ± 0.05μ	1092 ± 43 B.P.	695 ± 54 B.P.	flake
HUG-052	1.27μ ± 0.07μ	1092 ± 60 B.P.	695 ± 76 B.P.	flake
HUG-084	1.26μ ± 0.07μ	1083 ± 60 B.P.	684 ± 76 B.P.	flake
HUG-084	1.20μ ± 0.08μ	1032 ± 69 B.P.	621 ± 83 B.P.	flake
HUG-108	1.18μ ± 0.07μ	1014 ± 60 B.P.	600 ± 71 B.P.	flake
HUG-054	1.16μ ± 0.06μ	997 ± 52 B.P.	580 ± 60 B.P.	flake
HUG-097	1.05μ ± 0.07μ	903 ± 60 B.P.	475 ± 63 B.P.	flake
XSP-129	1.04μ ± 0.05μ	894 ± 43 B.P.	466 ± 45 B.P.	microblade
HUG-070	0.99μ ± 0.04μ	851 ± 35 B.P.	422 ± 34 B.P.	flake
HUG-084	0.96μ ± 0.07μ	825 ± 60 B.P.	397 ± 58 B.P.	flake
HUG-053	0.86μ ± 0.06μ	739 ± 52 B.P.	319 ± 44 B.P.	flake
HUG-111	0.83μ ± 0.07μ	713 ± 60 B.P.	297 ± 50 B.P.	flake

SITE	HYDRATION RIND THICKNESS	DATE LINEAR RATE 1.00μm/860 years	DATE EXPONENTIAL RATE $2.32\mu^2$/1000 yrs.	SAMPLE TYPE
HUG-102	2.00μ ± 0.05μ	1720 ± 43 B.P.	1724 ± 86 B.P.	flake
HUG-025	2.00μ ± 0.04μ	1720 ± 35 B.P.	1724 ± 69 B.P.	projectile point
HUG-046	1.96μ ± 0.06μ	1685 ± 52 B.P.	1656 ± 101 B.P.	flake
HUG-096	1.95μ ± 0.04μ	1677 ± 35 B.P.	1639 ± 67 B.P.	flake
XSP-067	1.91μ ± 0.06μ	1642 ± 52 B.P.	1572 ± 99 B.P.	flake
XSP-054	1.90μ ± 0.02μ	1634 ± 17 B.P.	1556 ± 33 B.P.	flake
XSP-082	1.90μ ± 0.07μ	1634 ± 60 B.P.	1556 ± 115 B.P.	biface/preform
XSP-126	1.90μ ± 0.03μ	1634 ± 26 B.P.	1556 ± 49 B.P.	primary spall/microblade
HUG-094	1.90μ ± 0.04μ	1634 ± 35 B.P.	1556 ± 65 B.P.	flake
HUG-107	1.90μ ± 0.08μ	1634 ± 69 B.P.	1556 ± 131 B.P.	flake
XSP-044	1.90μ ± 0.05μ	1634 ± 43 B.P.	1556 ± 82 B.P.	scraper
HUG-092	1.88μ ± 0.04μ	1616 ± 35 B.P.	1523 ± 65 B.P.	flake
HUG-092	1.88μ ± 0.04μ	1616 ± 35 B.P.	1523 ± 65 B.P.	flake
XSP-105	1.86μ ± 0.05μ	1599 ± 35 B.P.	1491 ± 64 B.P.	microblade
XSP-061	1.86μ ± 0.05μ	1599 ± 35 B.P.	1491 ± 64 B.P.	flake
HUG-056	1.86μ ± 0.07μ	1599 ± 60 B.P.	1491 ± 112 B.P.	flake
XSP-101	1.83μ ± 0.01μ	1574 ± 86 B.P.	1443 ± 158 B.P.	flake
HUG-073	1.81μ ± 0.05μ	1556 ± 43 B.P.	1412 ± 78 B.P.	flake
XSP-131	1.81μ ± 0.06μ	1556 ± 52 B.P.	1412 ± 94 B.P.	microblade
XSP-102	1.80μ ± 0.06μ	1548 ± 52 B.P.	1396 ± 93 B.P.	microblade
HUG-120	1.80μ ± 0.08μ	1548 ± 69 B.P.	1397 ± 124 B.P.	flake

SUMMARY/CONCLUSIONS

In the Research Design for Phase I of this project, a number of regional and/or areal research problems (problem domains) were presented. These problems or research concerns were addressed by the fieldwork to the degree or level of intensity possible through reconnaissance level survey methodology.

In the following pages, these research concerns will be briefly stated. The degree to which these concerns were addressed by the fieldwork will be explained. The data relating to these research concerns, obtained as a result of the fieldwork, will be presented, as will the implications suggested by, or the conclusion drawn from, the data.

1. In the local/regional area, were there preferences, by prehistoric peoples, for site location based upon the local geomorphology?

The data suggests that the answer to this question is an unqualified "yes". This is hardly surprising, as any archeologist who has worked in glaciated areas of Northern Interior and Northern Alaska has realized that such is the case after a single season of fieldwork.

Due to the nearness of the ground surface to the upper limit of the permafrost (permanently frozen soil) in most of this region of Alaska, most of the surface of the ground is poorly drained (see soils description, this report). The inability of much of the surface water to drain efficiently results in the formation of numerous shallow ponds, swamp-bog-muskeg areas, and wet sedge/cotton grass meadows. These topographical/micro-environmental features cover much of the land's surfaces where slope gradiants are not somewhat steep and/or where bedrock is not at or near surface. Therefore, areas of dry or stable ground are, for the most part, limited to steep and often rocky mountain or hillsides or stagnant ice (depositional) glacial features. Mountains and hillsides, usually, do not offer good camping locales, although, such locations are used, to some extent, as hunting lookouts. On the other hand, glacial features, especially those of depositional origin such as kames, kame terraces, and eskers, offer excellent camping and/or operational base locales. Terminal moraine, and to a lesser degree, lateral moraine complexes also offer excellent camping locales. However, these features occur less frequently and are often not as strategically located as are the smaller and more numerous valley-floor stagnant ice glacial features.

Due to their internal physical structure (gravel, sand, cobbles, and boulders mantled by a thin layer [10-25 cm.] of well developed soil) glacial features are well drained and therefore, relatively dry. These features, due to the conditions necessary for their formation, are usually scattered about the valley floor, and become less common near the valley walls as the slope gradient increases.

Morphologically, the kames usually resemble gently rounded hillocks rising from five to twenty meters above the surrounding landscape. Kame terraces usually occur closer to the valley walls than do the kames. Morphologically, kame terraces are linear in orientation, usually paralleling the valley walls. They are somewhat undulating in surface character, and because they

often occur at the higher valley edge altitudes, lie fifty to seventy meters above the valley floor. Eskers are usually serpentine in physical character, less common than are kames and kame terraces, and when present often occur in close proximity to the active floodplain of the valley floor. In some cases, an esker may be a determining factor in the orientation of the valley floor stream channel. Eskers rarely attain elevations in excess of ten meters above the valley floor. Distinctive lateral moraines are uncommon due to the nature of the montane glaciations and the geomorphology in this region. Terminal moraine complexes occur at or near valley mouths, and in most cases traverse the width of the valley. Terminal moraine complexes appear as a chaotic jumble of hills and ridges, which may attain elevations up to 100 meters above the valley floor. Terminal moraines often have a damming effect on valley streams, and as a result are commonly associated with extant lakes or older semi-drained lake basins, which are presently pond-dotted, wet lowlands.

The preceding discription of the regional glacial topography is generalized. Specific areas may vary significantly depending upon the age of the glacial activity, local bedrock structures, and valley width. Regardless of local variations, glacial features would appear to be the most likely loci for pre-historic human activity to take place, as they, more than other land forms, exhibit the necessary criteria for good camping locales.

Our investigations during the 1933 field season revealed that the vast majority, upwards of 90%, of the prehistoric sites which we discovered were located on stagnant ice glacial features or glacially altered bedrock features. The reasons for the extensive use of glacial features for almost any type of prehistoric cultural activity should be obvious. These features offer a firm, dry camping locale which is elevated enough above the surrounding local landscape to offer a view potential and be slightly more mosquito free. In the spring these features usually become snowfree and dry before the surrounding lower ground.

The fact that these features occur on or near the valley floor where the majority of the subsistence resources are located, lends yet another aspect to their attractiveness.

In terms of site location, in most cases, irrespective of size, the 1983 fieldwork strongly suggests that the vast majority of prehistoric sites in this region of Arctic Alaska will occur on glacial features. The strength of association between glacial features and human exploitation is strong enough to be reliably predictable.

The exception to this near-axiom is the location of special use sites such as fish camps, winter camps, or quarry sites.

Artifactual remains on glacial feature sites generally indicate hunting as the activity engaged in. It is inferred therefore, that the majority of glacial feature sites were occupied during the spring, summer, and fall, as these locations are in most cases too exposed for prolonged winter occupation.

In summation, evidence suggests that any river valley or lakeshore where glacial features are present will contain a ratio of archeological sites to glacial features at an order of about 0.8:1.0.

2. Is seasonal occupation reflected in site location?

At the level of data collection of a reconnaissance survey, this is a difficult question to answer except in very general terms.

As previously mentioned, most "glacial feature sites" were probably occupied during the spring, summer, or fall. However, without associated faunal material or other data, the specific season of occupation is impossible to determine. Additionally, sites which include, or are associated with, Inuksuk are assumed to be caribou hunting locales. Mass caribou movements, through this region of Alaska, occur in the spring and fall and therefore, would suggest site occupation during either or both of those seasons. During the 1983 field season, we located only one such site (HUG-118), and at this site it is problematical whether the stone cairns are actually Inuksuk. This data suggests that the Inuksuk method of hunting caribou was not widely practiced in the northern limits of the boreal forest.

Seasonality of site occupation is more clearly represented by sites containing semisubterranean house remains and cache pits. Such sites are usually located on the shores or islands of large lakes. This type of site usually reflects winter occupation, unless it is also associated with Inuksuk, in which case the site could reflect spring or fall occupation as well.

At least three such sites (HUG-059, 084 and 078/091) were located during the course of the 1983 fieldwork; all at Lake Selby. Archeological data from north of the study area indicates that these types of sites are relatively common and usually do not exceed ca. 4000 years B.P. in age (Hall, 1970, 1974, 1982; Shields et al, 1981; Gerlach, 1982). However, such sites do not appear to be as common in the Phase I study area. The survey work investigated, to some degree, the shores of five large lakes, Walker, Nutuvukti, Miakokosa, Selby and Narvak. Only one of these lakes, Selby, exhibited evidence of this type of site. This may indicate that the Phase I study area was not a region in which prehistoric peoples commonly over-wintered or that their methods (site types and locations) of over-wintering in this area are not easily recognizable or understood. Additional data gathering, at a level more comprehensive than that of the 1983 work, should be able to provide more revealing insights concerning the association between seasonal occupation and site location in the region.

3. Are there varying levels of population density through time in the area?

This can be determined only on the most general level by a reconnaissance survey unless circumstances fortuitously favor the investigators.

Some artifacts are diagnostic of a temporal span. In a reconnaissance

level survey, if such diagnostic artifacts do not appear on the surface of an archeological site or are not fortuitously excavated in a test pit, little temporal information can be obtained. Additionally, if all sites that are located do not exhibit temporally diagnostic artifacts, population densities through time can be little more than guessed at.

However, the data collected as a result of the 1983 fieldwork does allow some general comments concerning population density through time.

The obsidian hydration chronology, which was developed for the study area, does shed some light on prehistoric population levels over the last 2500 years. This has been fully discussed in the Obsidian Hydration Chronology chapter of this report and need not be dealt with here.

The data collected for the study area suggests the region has been used by humans for the last 10,000 years. Due to the fact that the boreal forest, which now covers the area, was not established until roughly 5500 years B.P. (see introductory chapter), it is suggested that the region was exploited quite differently by human populations in the time period between 10,000-5500 B.P. than it was after 5500 B.P. Information concerning such differences is difficult to obtain from lithic artifacts. The tundra versus boreal forest environment very possibly affected human population levels in the region.

All data regarding human population levels in the study area prior to 2500 B.P. is based on artifact typology. Based on the observed diagnostic artifacts at the 214 sites which were located, the following, very general, statements can be made: there is little evidence for high levels of use or population density prior to ca. 4000 years ago. This, however, is not uncommon when compared to other areas of Arctic Alaska. Use of the area appears to begin to increase about ca. 4000 B.P. and continues to increase until roughly 1000 B.P. After 1000 B.P., population or use levels appear to decline. Again, it must be pointed out that these conclusions, or inferences, are based upon a very meager and poorly understood data base.

During the course of the fieldwork, a single natural function of the regional environment became quite obvious. Observations, both surface and subsurface, indicate that the region is cyclically burned over by wildfire approximately every 150-250 years. This statement is not meant to suggest that the entire region is devestated by wildfire in a single event, rather than various portions are "burned over" periodically so that over a 150-250 year span, the entire area is altered by fire.

During the course of the fieldwork, "burn" areas were encountered that ranged in age from 10 years to over 100 years. These age determinations were based on observable surface indications. In a few areas, no surficial evidence of wildfire was noted. However, test excavations in these areas revealed that bands of charcoal existed in the soil profile, usually in the organic soil horizons. This data was interpreted to indicate that the area had been burned, but that the responsible wildfire event was in excess of 150 years in age.

In areas where no visible (surface) evidence of wildfire existed, vegetation conditions were approaching that of a climax forest. This condition was represented by large spruce, birch, and poplar of trunk diameters exceeding 60 cm. and heights up to 30 meters. Dense brush (alder, willow, and dwarf birch) often accompanied the large trees on hillsides and poorly drained areas. Vegetation such as this was quite difficult to travel through and in some localities was almost impenetrable. Additionally, visibility in these areas was so limited as to be non-existent.

Areas when vegetated to this degree, in Arctic Alaska, are not easily exploitable. Travel and game procurement, as well as the abundance of game, are adversely affected by conditions of heavy, near-climax, vegetation. Such observations, over the course of the 1983 field season, suggest that there may be a definite link between human exploitation (increased areal population density) of an area and the occurrence of wildfire. Recently burned (10-40 years) areas allow for much greater ease of travel and better visibility (which allows more efficient game procurement). While the plant species diversification and population percentage changes that follow a wildfire, cause an increase in area subsistance type fauna.

It is hypothisized, therefore, that human population density in the region, post ca. 5500 years B.P., is directly linked to wildfire episodes. Additional in-depth work will have to be done before it can be determined if this hypothisis is testable, let alone whether it can be proved or disproved.

4. The Phase I study area is generally recognized to lie on the boundary between Indian and Eskimo territories. Due to the fact that both cultural groups exploited the area, is it possible to distinguish between Indian and Eskimo sites and as a result determine which group (if one) was the basic user of the region?

The fieldwork in the Phase I study area is somewhat inconclusive in regard to this research question. Most of the artifacts observed at the various sites were not of a diagnostic nature and therefore, cultural assignment was difficult. However, in an overall sense, a cultural "flavor" was detected in various areas.

The Kichaiakaka Creek drainage appeared to contain only one site at which the surface artifacts appeared, morphologically, to be Eskimo. Therefore, at a general level, this portion of the study area appears to have been more heavily utilized by Indians than Eskimos.

In the Walker Lake area, the same flavor prevailed. The same was true for the Kobuk River as far downriver as the Lower Canyon. The suite of archeological sites at Nutuvukti Lake was so small that not even a general level determination could be made. The Reed River, not surprisingly, revealed a number of sites along its course between the Walker Lake pass and the Walker Lake Glaciation terminal moraine which appeared in a general way to be Eskimo. However, even in the valley of the Reed River, one cultural group could not be determined to be dominate over the other. Of all the areas surveyed in this region, the Lake Selby locale is the only

one which definitely, from a typological standpoint, demonstrated exploitation by Eskimos. Even so, there is no indication that the Lake Selby area was more heavily utilized by Eskimos than Indians.

From this somewhat unclear data, a rather inductively reasoned picture is developed. It is simply this: The sites located furthest to the west, ie. west of the Reed River, show more evidence of use of the area by Eskimos, while to the east, the sites appear to indicate major use of the area by Indians. Without additional detailed investigation in the area, this picture will remain unclear. The possibility does exist, however, that this surficial work is indicative of the cultural mixing that would be expected along the boundary of two culture areas.

5. The most direct route between the Kobuk and Koyukuk River drainages appears to be what is termed the "Alatna Portage". The eastern portion of this route, the Kichaiakaka Creek Valley, will be examined to see if there is archeological evidence to support this theory.

The Kichaiakaka Creek Valley is oriented east-west and is approximately five miles in length. Other than the fact that it is one of the few east-west trending valleys in the region, there is little else to distinguish it from other small stream valleys in the area. A total of 25 archeological sites were located in this valley. The majority of the sites appear to be small and the artifactual remains on them indicate short-term campsites oriented toward hunting or traveling. Most of the sites occur on linear glacial features which parallel the stream course. That these features afford excellent walking, is evidenced by a network of active game trails which extend the length of the valley.

Other similar sized valleys (Firecamp Creek, Bluff Creek, Nutuvukti Creek, Selby River), which were investigated during the course of the 1983 field season, exhibited nowhere near the site density that was found on Kichaiakaka Creek.

This data suggests that the Kichaiakaka Creek Valley was either used frequently as an aboriginal travel route or was a good hunting area. Until the remainder of the route to the east (a low, six mile wide divide and the Helpmejack Creek Valley) is investigated, it will be difficult to ascertain if the "Alatna Portage" was a major aboriginal travel route.

While other area travel routes, between the Kobuk and Koyukuk drainages, are mentioned or suggested in the literature (Cantwell, 1889; Stoney 1899; A. Clark, 1974), none seems as well suited for year-round travel as does the Kichaiakaka Creek/Helpmejack Creek route. Mendenhall made use of this route in 1901 (Mendenhall, 1902) when traveling from the Koyukuk River to the Kobuk River. Grinnell (1901) mentions prospectors using this route (determined through his description) during the 1898-99 Kobuk River Gold Rush to move from the Kobuk River to the Koyukuk district.

These early non-native visitors to a region which was unknown to them and unmapped at the time, could have only obtained travel route information from native informants. This suggests that the "Alatna Portage" route was well known and presumably often used by the regional native inhabitants.

6. Is past regional subsistence potential, through time, indicated by site density?

Data regarding this question is difficult to obtain from a reconnaissance level survey. However, some general observations can be enumerated as a result of the 1983 fieldwork.

The density of prehistoric sites in any environment will almost always be linked to the area subsistence potential. Therefore, a basic correlate might be stated thusly: if area subsistence resource potential is high (all other factors being equal) the area should exhibit high site density or a number of large, often used sites. If area subsistence resources fluctuate through time, then this fact should be reflected in the archeological record by temporal fluctions in site size, use, or density.

Little information regarding site age, prior to 2500 B.P., was obtained during the course of the fieldwork. Therefore, information regarding regional subsistance potential through time is speculative at best. This circumstance, coupled with the fact that a relatively major environmental change (the establishment of the boreal forest) occurred over much of the area ca. 5500 years ago, creates problems in establishing a clear picture of the ebb and flow of subsistence resources.

While sites assumed to be older than ca. 4000 years B.P. are numerically in the minority, due to the limited data, this cannot be accepted as criteria for low subsistance potential. However, in contrast, the site density maximum, which obsidian hydration data indicates occurred between 1500-1000 years ago may, in fact, indicates the upper limit of subsistence resources for the area.

Although it is difficult to chart subsistence fluctuations through time in the region, the data base may more readily allow a seasonal comparison.

Such inferences are based upon site type and suggest the following: 1) There was virtually no evidence of Inuksuk or caribou fences in the surveyed area. This may indicate that caribou were not a major subsistence resource in the area. However, this may also reflect the fact that for the last 5500 years, the environment has been that of the boreal forest and that frequent wildfire may have obliterated most of the caribou fence evidence. 2) As previously mentioned, the vast majority of the archeological sites are located on somewhat exposed glacial features. Such site locales are, in most cases, not suitable for typical winter habitation. This may indicate that, in general, the region possessed a low winter subsistence potential. This is additionally reflected in the low incidence of typical or traditional "overwintering" sites on the large lakes within the region.

In general agreement with this circumstance is that the collected data indicates the presence of only a low number, proportionally, of large sites (major or long term habitation sites) in the region. While conversely, there is a high number of small, short-term, hunting oriented

sites. This data suggests that the region was most heavily used as a hunting area during the spring, summer, and fall. Summer fish camps may have existed, although historic and ethnohistoric data indicate that no major fish camps existed above the confluence of the Selby and Kobuk Rivers.

In summation, the data collected during the 1983 field season suggests that resource potential, probably moose, sheep, and fish, was reasonably good during the spring, summer, and fall, but during the winter subsistance resources were low. Therefore, the prehistoric population densities were highest during the warmer months.

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APPENDIX A

Edwin S. Hall, Jr.

Walker Lake - 1974

Recent investigations in the forested zone of central and northern Alaska have demonstrated the archeological potential of the shores of large lakes which served as loci for hunting activities of Athapaskan-speaking peoples in historic times and for other peoples, presumably ancestral Athapaskan in some cases and Eskimo in others, in the more distant past. Excavations at Healy Lake in the Tanana Valley, have revealed a long developmental sequence leading to the modern Healy Lake Athapaskan band (Cook and McKennan 1970a, 1970b; McKennan and Cook 1970). A recent survey of the north and east shores of Old John Lake, near Arctic Village in northeast Alaska, resulted in the location of numerous archeological sites dating from 4-5000 years ago (Hall and McKennan 1973). Material has been found at Hahanudan Lake that may relate to an early Eskimo intrusion into the forested lower Koyukuk River (Clark, n.d.).

Walker Lake, at the headwaters of the Kobuk River in northwest Alaska, appeared to be another likely candidate for archeological investigation. This 18 mile long and up to 3 mile wide clear lake lies at an elevation of 600 feet nestled in steep spruce-covered mountains. Historically, according to ethnographic evidence, the extreme upper course of the Kobuk River and Walker Lake itself lay within Koyukon Athapaskan territory, while Eskimos lived along the lower river, but throughout the past several 1,000's of years, and probably in historic times as well, Walker Lake was in a boundry zone, utilized by both Athapaskans and Eskimos. Kutchin Athapaskans may also have lived along the lake's shores in late prehistoric and early historic times (Hall 1969).

I spent several hours at Walker Lake in 1967 and discovered two archeological sites, one of which contained apparently early material (Hall, in press). Another two days were spent at the lake in July 1973, during which time I briefly tested six sites, all of which also appear relatively early (Hall 1974). The two surveys covered only one small section of the lake's west shore; survey of the remaining lakeshore was completed in the summer of 1974.

It was hoped that location and excavation of archeological sites at Walker Lake and analysis of the recovered cultural material would provide data to attack a number of problems:

1. As yet little is known about the development of the historic Kutchin or Kuyokon Athapaskans. The only known Kutchin site with a long developmental sequence (A.D. 300 to historic times) is Klo-Kut, located on the Porcupine River in Canada (Morlan 1973). Though a considerable number of sites have been discovered in the traditional territory of the Koyukon, few relate to the past 2,000 years (Clark n.d.).

Location of identifiable prehistoric Athapaskan sites (see 3, below) would allow a greater understanding of the prehistoric development of Athapaskans in general, if not specifically the Kutchin and Koyukon.

2. I have suggested (Hall 1969), on the basis of archaeological and ethnological work among the inland Eskimos to the north and east of Walker Lake, that hostile Eskimo/Kutchin relationships forced movement of some Kutchin groups during the historic period. According to historical legend one group of Kutchin, probably the Dihai, originally inhabited the area around Walker Lake but were driven east, ultimately to the East Fork of the Chandlar in northeastern Alaska, because of pressure from adjacent Eskimo groups. Similar movements and fluctuations in the Eskimo/Indian boundry may have occurred earlier in time as the ecological boundaries, ecological adaptations and relative strengths of the two cultural groups shifted; analysis of archaeological sites around Walker Lake coupled with a knowledge of inland Eskimo culture history might elucidate this phenomenon.

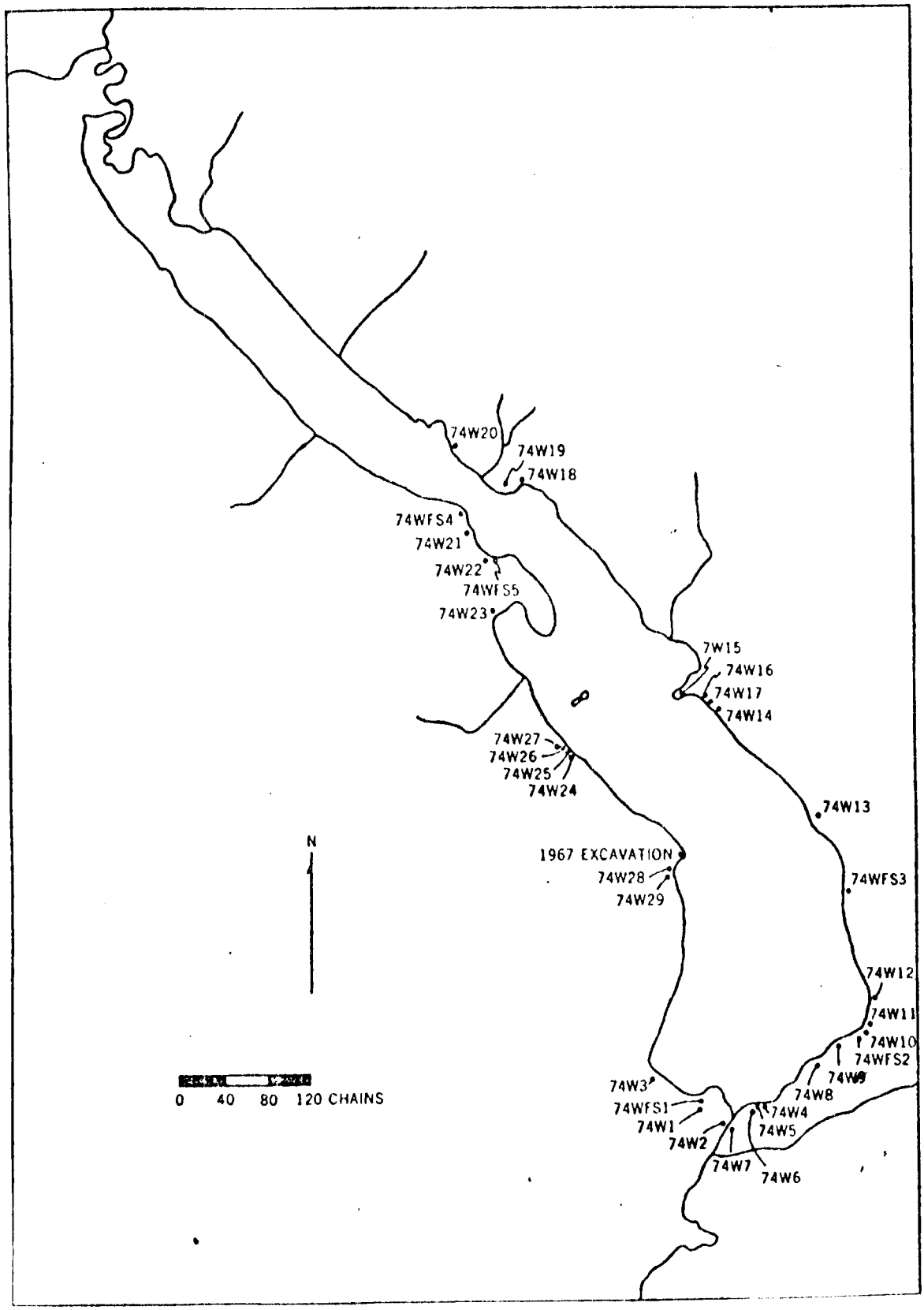
3. A number of ethnologists and archaeologists who have worked in the Eskimo/Athapaskan field feel that inland Eskimo and Kutchin or Koyukon material culture during the late prehistoric/early historic period may have differed little, because of cultural interaction and exploitation of the same environmental possibilities. If this is true, then problems of the nature outlined above will be difficult to resolve. Examination of material from archaeological sites around Walker Lake might enable us to distinguish archaeologically between Athpaskan and Eskimo material culture.

4. We do know that earlier cultures are represented at Walker Lake but the evidence available prior to 1974 suggested no exact correlations with material from other Arctic sites. Survey and further excavation therefore promised to add to our knowledge of earlier Arctic cultures.

Unfortunately, as will be seen, though the material recovered during the summer of 1974 is of considerable interest, little progress was made toward answering the above problems.

The Survey: Walker Lake

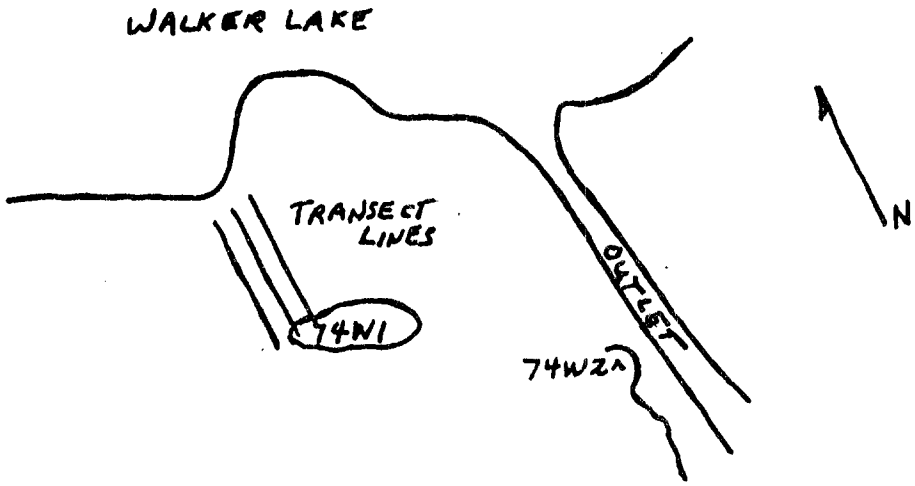
The 19 days between 25 July and 12 August were devoted to a survey of the knolls, glacial features and old beach strands immediately adjacent to the shores of Walker Lake. We landed on a sandy beach to the west of the lake's outlet and spent five days, two of which consisted of contemplating the rain through the tent door, walking through the extensive caribou moss-covered flats and low knolls along the SW shore of the lake. During the succeeding days we rowed in out 4-man rubber boat eastward around the lake's shore, pausing to examine locations with archaeological potential. By the time our plane returned, we had circumnavigated the lake and checked, more or less thoroughly, all of the likely spots within easy reach of the shore (Fig. 4).


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1967 EXCAVATION
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74W29
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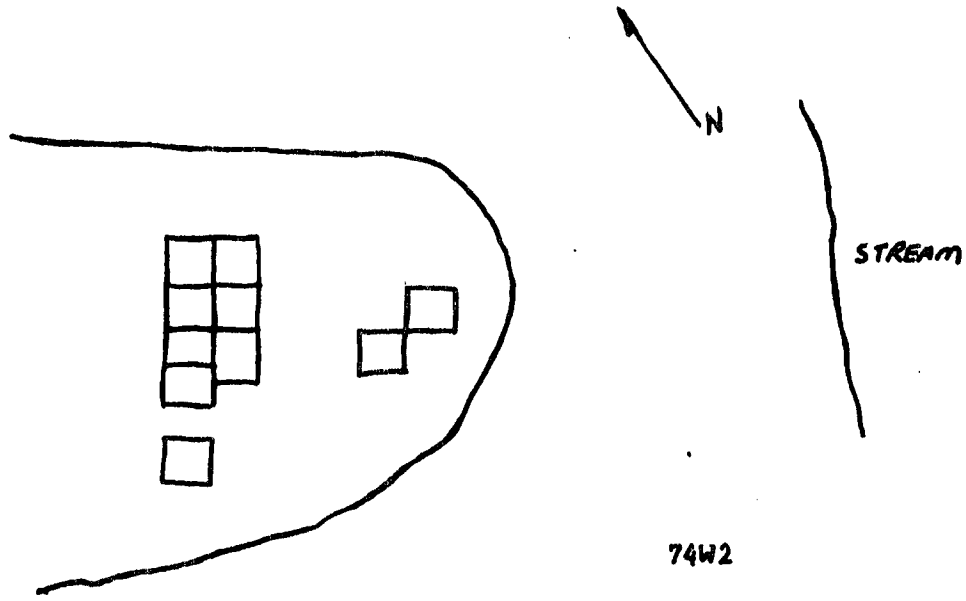
In contrast to the solitude of the Kogururok drainage, we found Walker Lake to be a mecca for travelers in the summer of 1974. Walker Lake is one of the great beauty spots of the Brooks Range, as its inclusion in the proposed Gates of the Arctic National Park attests. Several different parties camped along the lakeshore during the time we were there. Air traffic was heavy; the fewest planes we saw or heard in one day was three, the most eleven. Though most of the sites we located were small and unproductive of spectacular artifacts, the possibilities of site destruction associated with increasing utilization of Walker Lake as a camping area must be considered.

The Sites: Walker Lake

74W1. Location: Low knoll 300 m. W of Walker Lkae outlet stream, 150m. S of lakeshore. Local topography: 20M. high knoll measuring approximately 65m. E-W by 15-20m. N-S. Ground cover: Caribou moss, scattered spruce, willow and birch. Area excavated: 33 50 cm.^{2} squares. Matrix: Cultural material at base of vegetation. Cultural material: 1 black end scraper with cortex along one lateral margin and moderate retouch along the other, bulb broken away, no retouch on either surface, moderate edge wear; 1 obsidian end scraper with slight retouch along both lateral edges, no retouch on bulb, chipped across entire dorsal surface, no edge wear; 1 well-made biface fragment, probably originally leaf-shaped, measuring 69.2mm. (B) x 40.4 x 14.9; 1 obsidian microblade with slight retouch along 1 curving margin; spalls. Comments: A series of transect lines, were set across the flat to the N of 74W1 for the purposes of conducting a random sample test for archaeological remains. As the results were primarily negative, at least partly because of the little time we had to devote to the project, the results are not described in detail here. The cultural material we did uncover is described later in this report. 74W1 itself, as well as the flat below it, might repay further testing.



74W2. Location: Northern-most bluff on W side of Walker Lake outlet stream. Local topography: Crest of small bluff 20m. above outlet stream. Ground cover: Caribou moss, willow and birch. Area excavated: 9 50 cm.^{2} squares and 1 40 cm.^{2} square. Matrix: Cultural material in and at bast of sod. Cultural material: 1 black end scraper with slight retouch along lateral edges, no retouch on dorsal or ventral surfaces, slight ridge on dorsal surface, no obvious wear; 1 black microblade with no obvious wear; 1 obsidian side blade (?) fragment, with 1 margin slightly and 1 moderately convex, now measuring 18.3mm. (B) x 13.3 x 3.3; 1 gray side blade fragment, probably originally triangular, retouched only along the margins and now measuring 19.1mm. (B) x 15.3 x 3.1; 1 gray silty "sandstone" tip of a relatively large thin (6.0mm. at break) biface, probably originally ovate in shape; 1 obsidian biface with wide flat flaking across both surfaces measuring 39.5mm. x 40.5 x 8.0; 1 crude obsidian biface fragment; 1 black biface, probably a projectile point but too fragmented to be certain; 1 thick obsidian flake, with cortex across part of the dorsal surface and steep moderate retouch along 1 margin; spalls. Comments: 74W2 may be an occupation site. Additional testing might prove profitable.



74W3. Location: 50m. high knoll 300m. E of the SW corner of the lake and 200m. S from the shore. Local topography: Broad knoll crest. Ground cover: Caribou moss, spruce, cottonwood, willow and birch. Area excavated: 3 50 cm.^{2} squares. Matrix: Spalls in organic soil beneath moss to a depth of approximately 5 cm. Cultural material: 1 obsidian flake with moderate retouch along 1 margin; spalls. Comments: This site, with an extremely heavy concentration of obsidian spalls, appears to be a secondary manufacturing locus; further testing might be interesting.

74W4. Location: Ridge top 400m. E of Walker Lkae outlet and 50m. S of lakeshore. Local topography: Flat area 12 m. from ridge edge and 25m. above lake. Ground cover: Caribou moss, willow and birch. Area excavated: 3 50 cm.^{2} squares; one contained only 2 spalls which were not collected. Matrix: Cultural material at base of sod. Cultural material: 1 obsidian end scraper with no retouch along lateral edges, some cortex on dorsal surface as well as 2 slight parallel ridges running perpendicular to the working edge, bulb on ventral surface slightly retouched, no obvious wear; 1 obsidian cortex flake with moderate wide retouch along 1 margin; spalls.

74W5. Location: Ridge top 300m. E of outlet and ca. 50 m. S of lakeshore. Local topography: Flat ridge top ca. 25m. above lake. Ground cover: Caribou moss, willow and birch. Area excavated: 3 50 cm.^{2} squares (samples combined). Matrix: Cultural material found from scd base to ca. 10 cm. in red sand. Cultural material: spalls; bone.

74W6. Location: Open terrace 300m. E of outlet and ca. 125m. S of lakeshore, 75m. S of 74W5. Local topography: Top of ridge ca. 45m. above lake. Ground cover: Caribou moss, willow and birch. Area excavated: 1 50 cm.^{2} square and various small tests. Matrix: Cultural material at base of sod. Cultural material: 1 obisdian end scraper with no retouch along lateral margins, cortex on dorsal surface, no flaking on ventral surface, no obvious wear; 1 obsidian flake with moderate retouch along 2 margins; spalls.

74W7. Location: Immediately E of outlet stream 130m. from lakeshore. Local topography: Flat ridge top ca. 60m. above lake. Ground cover: Caribou moss, willows and birch. Area excavated: 2 50 cm.^{2} squares. Matrix: Cultural material at sod base. Cultural material: 1 black microblade with no obvious retouch; 1 obsidian flake with slight retouch along 1 margin; spalls.

74W8. Location: Ridge top 900m. E of outlet, 100m. S of lakeshore. Local topography: Ridge top 30m. above lake. Ground cover: Caribou moss, willows and birch. Area excavated: 4 50 cm.^{2} squares and numerous small tests. Matrix: Cultural material found from sod base to depth of 15cm. in yellow and red sand. Cultural material: 1 large biface (knife?) of fine-grained gray stone, leaf-shaped, relatively crude chipping across both faces, measuring 155.0mm. x 57.6 x 13.5; 1 gray biface fragment; 3 obsidian cortex flakes with slight to moderate retouch on dorsal face along margin; 1 obsidian cortex flake with moderate retouch along 1 curving margin; 1 large roughly triangular obsidian flake with moderate retouch on 2 margins; 1 small obsidian flake with slight retouch along 1 margin; spalls; bone.

74W9. Location: Knoll ca. 1500m. E of outlet, 600m. W from SE corner of lake, 200m. S of shore. Local topography: Open flat area on knoll. Ground cover: Caribou moss, willow and birch. Area excavated: 2 50cm.^{2} squares. Matrix: Cultural material at base of sod. Cultural material: 1 obsidian biface fragment, well retouched across 1 face and along the margins on obverse side; 1 crudely chipped biface fragment; 5 obsidian and 1 gray microblade with no obvious retouch; 1 flake with unifacial and marginal retouch; spalls.

75W10. Location: E portion of 70m. high knoll at SE corner of lake, ca 150m. from lakeshore. Local topography: Narrow, flat sinuous ridge top. Ground cover: Caribou moss, willow and birch. Area excavated: 1 50cm.^{2} square, small tests, surface. Matrix: Cultural material on surface and at sod base. Cultural material: 1 square black end scraper retouched along the lateral edges, irregularly chipped on dorsal surface, no chipping on ventral surface, no obvious wear; 1 gray biface fragment; spalls.

74W11. Location: N bank of stream at SE corner of lake, ca. 80m. from lakeshore and 20m. above lake. Local topography: Right on bank edge ca. 10m. above stream. Ground cover: Caribou moss, spruce and birch. Area excavated: Small tests. Matrix: Biface found under moss. Cultural material: 2 depressions, probably cache pits, measuring 2m. in diameter and 70cm. in depth, roughly circular, tests negative; another small depression was found 2m. to the west; 15m. away we found 1 obsidian biface, tip section (?), fairly regular flaking across entire face, slight ridge on 1 face, measuring 40.0mm. (B) x 20.7 x 10.1. Comments: I assume these features are cache pits.

74W12. Location: S end of knoll, E shore of lake, 200m. NE of stream in SE corner of lake, 150m. from lakeshore and 40m. above lake. Local topography: Small flat crest of isolated knoll. Ground cover: Caribou moss, willows. Area excavated: 13 adjacent 50cm.^{2} squares. Matrix: Cultural material found at base of sod. Cultural material: 1 end scraper made on an irregular gray flake, dorsal surface irregularly chipped, no retouch on ventral surface or along lateral margins, slight wear; 1 obsidian end scraper, more or less rectangular, cortex on dorsal surface, no retouch on ventral surface or lateral margins, slight wear; 1 obsidian end scraper, trapazoidal, some cortex on dorsal surface, bulb thinned by retouch, no retouch along lateral margins, no wear; 1 obsidian end scraper made on an irregular flake, some cortex on dorsal surface, bulb not trimmed, no retouch along lateral margins, irregular scraping edge, slight wear; 1 black end scraper, triangular, no retouch along lateral margins, no retouch on dorsal or ventral surfaces, 1 corner of working edge broken off and then retouched, slight to moderate edge wear; 3 blades, 1 black and 2 gray, 2 with 1 arris and 1 with two, 1 complete, 1 proximal and 1 medial, complete blade with moderate retouch along proximal half of one lateral margin, medial specimen has burin spall removed from 1 edge, mean length 71.86mm. (range 43.8-115.3), mean width 25.83mm. (range 14.7-43.0), mean thickness 6.93mm. (range 3.1-11.1), T/W 26.3 (range 21.0-33.0); 145 obsidian microblades, 141 gray microblades and 19 white microblades, some with retouch; spalls. Comments: The microblades were concentrated in two 50 cm.^{2} squares sharing 1 common corner. The extremely fragmentary nature of the microblade sample, the pattern of breakage and the concentrations suggest large numbers of microblades were manufactured at this location which were not, for whatever reason, subsequently utilized. The breakage and the observed retouch may be a function of post-deposition events, such as animal movement over the site surface.

74W13. Location: On high knoll just above cabin on E shore of lake,

miles S of prominent point on E shore. Local topography: Crest of bedrock knoll. Ground cover: Caribou moss, spruce, cottonwood and willow. Area excavated: 2 50cm.^{2} squares, scattered tests and surface. Matrix: Cultural material on surface and at base of sod. Cultural material: Spalls.

74W14. Location: Low knoll ca. 300m. S of prominent point on E shore of lake. Local topography: Rounded crest of small knoll set in heavy spruce; obvious soil movement on knoll surface. Ground cover: Heavy caribou moss, willow. Area excavated: 2 small test areas. Matrix: Cultural material in and at base of moss. Cultural material: 1 red end scraper made on an irregular flake, retouch along 1 lateral edge, ridge in center of dorsal face perpendicular to working edge, no retouch on dorsal or ventral surface, no obvious wear; 30 black microblades, none with obvious wear; spalls.

74W15. Location: On highest point of peninsula one-third of the way N up the E shore from the SE corner of the lake. Local topography: Bedrock knoll ca. 20m. above water. Ground cover: Caribou moss, dwarf birch. Area excavated: 7 50 cm.^{2} squares. Matrix: Cultural material at base of sod and in organic soil to bedrock, usually less than 5cm. Cultural material: 1 relatively crudely chipped black biface fragment with a rounded base measuring 16.5mm. (B) x 22.1 x 6.4; 1 cream-colored medial blade fragment with 1 arris and slight retouch along 1 margin measuring 10.3mm. x 17.4 x 3.0; 1 gray microblade; spalls.

74W16. Location: Ridge 150m. S of junction of prominent peninsula on E shore of lake and lakeshore itself and 50m. from shore. Local topography: Narrow ridge with prominent game trail 40m. above lake. Ground cover: Caribou moss, spruce, willow, birch. Area excavated: 1 50cm.^{2} square. Matrix: Cultural material at sod base, working out of game trail. Cultural material: 1 large black flake with crude moderate retouch along 2 opposing margins.

74W17. Location: Ridge 200m. S of junction of prominent peninsula on E shore of lake and lakeshore itself, 50m. S of 74W15, 50m. from shore. General location: Narrow ridge with prominent game trail 45m. above lake. Ground cover: Caribou moss, spruce, willow, birch. Area excavated: 2 50 cm.^{2} squares. Matrix: Cultural material at sod base. Cultural material: Spalls.

74W18. Location: Ridge 200m. E of point two-thirds of the way N down the E shore, 40m. from shore. Local topography: Narrow ridge crest 15m. above lake, in heavy timber. Ground cover: Caribou moss, willow. Area excavated: 5 50cm.^{2} squares. Matrix: Cultural material at base of sod. Cultural material: 1 black end scraper fragment with the proximal end broken away, moderate retouch along 1 lateral margin, none along the other but the lateral margin there joins the working face to form a rounded "ear", no ventral retouch, slight ridge on dorsal surface, slight wear; 1 black end scraper, elongated oval in outline, slight retouch along margins, irregularly flaked across dorsal face, bulb thinned by removal of one flake, pot-lidded, moderate to heavy wear; 1 black end scraper, elongated trapazoid in outline, proximal end broken

away, slight retouch along both lateral margins, chipped over entire dorsal surface which comes to a gentle crest, no chipping on ventral surface, slight wear; 1 gray end scraper in the form of an irregular rectangle, slight retouch on 1 lateral margin, irregular dorsal surface, no retouch on ventral surface, no wear; 1 gray end scraper with 1 proximal corner broken off (does not obscure measurements), moderate retouch on remaining lateral margin, no retouch on either surface, slight ridge down dorsal surface, no wear; 1 gray biface fragment with flaring sides and fine retouch; 3 black flakes with moderate retouch along 1 lateral margin; 1 black and 1 gray flake with slight retouch along 1 lateral margin; spall. Comments: The artifacts described were collected by a State of Alaska, Geological Survey party and donated to the University of Alaska; the site map accompanying the collection indicates it was recovered from 74W18. The Geological Survey collection included no spalls from this site; we recovered spalls but no artifacts.

74W19. Location: Knoll between large creek and small spring-fed creek on point two-thirds of the way N down the E shore of the lake, in heave spruce. Local topography: Small knoll 2m. above large, flat dry terrace. Ground cover: Caribou moss, spruce, willow. Area excavated: 2 50cm.^{2} squares. Matrix: Cultural material on surface and at sod base. Cultural material: 1 black end scraper with the proximal end broken away, slight retouch along 1 lateral matgin, no chipping on ventral or dorsal surface, slight ridge on dorsal surface near 1 margin, no wear; 1 distal end of a black end scraper, no chipping on either surface, slight ridge on dorsal surface, no wear; 1 black end scraper, more or less square, bulb broken away, moderate retouch along lateral edges, chipped across dorsal surface but not ventral, no wear; 3 "boulder chips" of sandstone-like material with slight retouch along margins in some places; 1 black and 1 gray microblade with no obvious wear; 2 gray bifacially worked fragments; 6 gray flakes with slight to moderate retouch along 1 margin; 6 black flakes with slight to moderate retouch along 1 margin; spalls. Comments: This site was also rather extensively collected by the State of Alaska, Geological Survey; we made 2 small tests and picked up a few specimens from the surface.

74W20. Location: Terrace 50m. from shore, 300m. N of SW tip of point two-thirds of the way N down the E shore of the lake. Local topography: 4m. high, small, flat terrace. Ground cover: Caribou moss, spruce, willow. Area excavated: Various small tests. Matrix: Cultural material at sod base. Cultural material: Spalls

74W21. Location: Low outcrop 50m. from W shore of lake, 2km. N of prominent point half-way down W shore. Local topography: Small bedrock knoll 10m. above water. Ground cover: Caribou moss. Area excavated: 5 50cm.^{2} squares. Matrix: Cultural material at base of sod. Cultural material: 1 black end scraper with heavy retouch along both lateral edges, bulb slightly trimmed by retouch, no retouch on dorsal surface, ridge down middle of dorsal surface, slight wear; 1 end blade base with flakes removed parallel to and clear across base on 1 side and vertical to base on other, 10.6m. (B) x 18.6 x 3.2; spalls.

74W22. Location: Just N of 5m. deep gully on N end of 250m. long, 25m. high ridge 50m. from shore, just N of beginning of most prominent point on W shore of lake. Local topography: Small level area in sloping hillside along gully edge. Ground cover: Caribou moss, spruce, birch. Area excavated: Samll test. Matrix: Cultural material at base of sod. Cultural material: 1 gray flake with moderate retouch along 2 margins; 1 black flake with slight retouch along 2 margins; spalls.

74W23. Location: Just SE of cabin in NW corner of bay formed by prominent point on W shore of lake. Local topography: Gently rounded crest of knoll 10m. above shore. Ground cover: Caribou moss, spruce, willow. Area excavated: 60 x 50cm. square. Matrix: Larger spalls and artifacts found in 20cm. wide depression running down middle of square (drainage crack); all large spalls and artifacts at base of organic layer or just in gray sand underneath except for 2 large chert spalls and 1 obsidian cortex spall which were ca. 7cm. down in the gray sand in loose association with charcoal staining; many gray and black spalls to 15-20 cm. in fine gray sand but above yellow-brown coarser sand which formed the substratum. Cultural material: 1 gray end scraper, rectangular, very thick, slight retouch along lateral margins, bulb broken away, dorsal surface not retouched, slight wear; 1 end scraper of yellowish obsidian, rectangular, no retouch along lateral margins, bulb not thinned, dorsal surface cortex, working edge resharpened and not worn; 1 large (68.0cm. long) oval obsidian cortex flake with retouch in 2 places along margins; 1 black, thick, squarish flake with relatively crude heavy retouch along 2 long opposing margins, side scraper (?); 2 large black flakes with slight retouch along 1 margin; 1 large obsidian flake with slight retouch along 1 margin; spalls.

74W24. Location: Ridge 1¼km. S of Swan Island on W shore of lake. Local topography: Crest of ridge 25m. above shore and 100m. N of small stream. Ground cover: Caribou moss, spruce, willow. Area excavated: 3 50 cm.^{2} squares. Matrix: Cultural material in and at base of sod. Cultural material: 1 gray end scraper, heavy retouch along 1 lateral margin, slight along the other, no chipping on ventral surface, ridge down midline of dorsal surface, crudely chipped working face, no wear; 1 gray flake with moderate retouch along 2 margins; spalls.

74W25. Location: Ridge 1¼km. S of Swan Island on W shore of lake. Local topography: Crest of ridge 25m. above shore and 30m. N of 74W24. Ground cover: Caribou moss, spruce, willow. Area excavated: 2 50cm.^{2} squares. Matrix: Cultural material in and at base of sod. Cultural material: Spalls.

74W26. Location: Ridge 1¼km. S of Swan Island on W shore of lake. Local topography: Crest of ridge 25m. above shore and 20m. N. of 74W25. Ground cover: Caribou moss, spruce, willow. Area excavated: 1 50cm.^{2} square. Matrix: Cultural material in and at base of sod. Cultural material: Spalls; bone.

74W27. Location: Ridge 1¼km. S of Swan Island on W shore of lake. Local topography: Crest of ridge 25m. above shore and 10m. NW of 74W26. Ground cover: Caribou moss, spruce, willow. Area excavated: 13 adjacent 50cm.^{2} squares. Matrix: Cultural material in organic soil at sod base. Cultural material: 1 black end scraper, probably triangular but 1 side broken off, moderate retouch along other lateral margin, no flaking on dorsal or ventral surface, moderate edge wear; 1 obsidian end scraper, triangular, slight retouch along both lateral margins, cortex on dorsal surface, bulb removed by single flake, slight wear; 1 obsidian end scraper, rectangular, slight retouch on ventral side of lateral margins, bifacial trimming in bulb area, ridge down 1 side of dorsal face, no wear; 1 obsidian end scraper, triangular, no retouch along lateral margins, cortex on dorsal surface and a ridge running from working edge to apex, no retouch on ventral surface, slight wear; 1 black end scraper, triangular, broad retouch along lateral margins, no flaking on dorsal surface, 1 flake removed from bulb, slight wear; 1 black end scraper, rectangular bulb may be broken off, no retouch along lateral margins, slight flaking on flat dorsal surface, none on ventral, no wear; 1 relatively well-made black biface, 68.3mm. x 39.4 x 9.5; 2 small black biface fragments, 1 with edges severely blunted; 1 bifacially worked flake, plano-convex, only slightly retouched on flatter face but well flaked from lateral margins up over other face, now triangular with a rounded point and broken at the other end, 33.9mm. (B) x 27.3 x 7.8; 1 black knife or projectile point, rounded base, sides expand upwards for two-thirds of the length and then curve to top, broadly retouched on lower two-thirds and much more carefully on upper portion, edges heavily ground on lower two-thirds of point, 57.5mm. x 12.2 (at base) x 23.8 (at shoulder) x 8.8, edge angles are 20° and 15° from vertical, tip angle is 75°; 1 well-made black biface fragment, knife (?), well-worked on both faces, now 42.4mm. x 34.4 x 8.2; 1 black biface fragment with rounded base, now 22.1mm. (B) x 18.2 x 7.5; 1 black thin oval flake with evenly trimmed slightly retouched lateral margins; 1 large heavy black flake with extensive retouch along 1 long side, side scraper (?); 1 relatively thick black flake with moderate retouch along 1 margin; 2 fairly large obsidian flakes with slight retouch along 1 margin; 1 obsidian cortex flake with slight retouch along 1 margin; 1 obsidian flake with moderate retouch along 1 margin; 2 black flakes with bifacial retouch along 1 margin; 1 black flake with moderate retouch along 1 margin; 1 black flake with moderately heavy retouch along 1 lateral margin; spalls; bone. Comments: Further testing might be profitable.

74W28. Location: Ridge 150m. W of prominent point on W shore of lake 4km. N of SW corner of lake. Local topography: Flat ridge top 10m. W of small stream and 20m. above shore. Ground cover: Caribou moss, spruce, birch, willow. Area excavated: 1 50cm.^{2} square. Matrix: Spalls in lower sod and upper portion of brown organic soil; bone meal deeper (ca. 5cm.) in yellow-brown mineral soil. Cultural material: Spalls; bone

74W29. Location: Ridge 150m. W of prominent point on W shore of lake 4km. N of SW corner of lake. General topography: Flat ridge top ca. 25m. W of small stream and 20m. above shore; 20m. SW of 74W28. Ground cover: Caribou moss, spruce, birch, willow. Area excavated: 1 50cm.^{2} square. Matrix: Spalls at sod base and in upper level of brown organic soil. Cultural material: Spalls.

1967 Excavation. Location: Prominent point on W shore of lake 4km. N of SW corner of lake. Local topography: Small flat summit of bedrock point. Ground cover: Caribou moss, willow, dwarf birch. Area excavated: 5 50cm.^{2} squares. Matrix: Cultural material found from sod base to ca. 10cm. in mineral soil. Cultural material: 1 black end scraper, square but bulb broken off, slightly retouched along lateral margins, no retouch on dorsal or ventral surfaces, no wear: 1 black end scraper, square zoidal, no retouch along lateral margins, cortex on dorsal surface, one flake removed from bulb, no wear; 1 obsidian side scraper (?), oval in outline, twisted in lateral plane, moderate to heavy retouch along 1 entire lateral margin (47.2mm.) and along a shorter portion (20.1mm.) of opposing margin, average edge angle of 58°, possible slight edge wear; 3 obsidian microblades; 1 gray biface base fragment with rounded bottom, relatively well flaked, 17.4mm. (B) x 20.7 x 4.3, base angles are 18° and 16° from vertical; 1 biface fragment of silty brown stone; 1 thin biface fragment with straight sides made from silty brown stone; 1 cortex obsidian flake with moderate retouch along 1 lateral margin; spalls; bone. Comments: This site was tested in 1967 (Hall, in press) and 1973 (Hall 1974); further testing would probably prove unprofitable.

74WFS1. Location: 50m. N of 74W1; situation similar. Area excavated: 2 50cm.^{2} squares. Cultural material: Spalls.

74WFS2. Location: W end of ridge containing 74W10; situation similar. Area excavated: Spalls found scattered along entire ridge surface. Cultural material: Spalls.

74WFS3. Location: High knoll in small knoll system halfway between SE corner of lake and prominent point one-third of the way N up the E shore. Local topography: Material found on highest knoll, 30m. above lake and on slightly lower knoll crest 50m. N. Ground cover: Caribou moss, cottonwood, willow. Area excavated: Small tests. Matrix: Cultural material at sod base. Cultural material: Spalls.

74WSF4. Location: Relatively high knoll on W side of lake, opposite the major point two-thirds of the way N down the E shore. Local topography: Flat bench on knoll crest about 80m. above water and bench immediately E and 4m. lower. Ground cover: Caribou moss, willow. Area excavated: Small tests. Matrix: Cultural material at sod base. Cultural material: Spalls.

74WFS5. Location: Center of 250m. long ridge 50m. from lakeshore, just N of beginning of most prominent point on W shore of lake; setting similar to 74W22. Area excavated: Small test. Cultural material: Spalls.

20m. N of 74W1. Cultural material: 1 obsidian biface fragment now measuring 37.4mm. (B) x 20.8 x 7.3.

Transect N of 74W1. Cultural material: Spalls found at 2 locations.

40m. N of 74W1. Area excavated: 20 40cm.^{2} squares. Cultural material: Spalls.

W of 74W4. Cultural material: 1 large silty sandstone flake with extensive retouch along 2 long lateral margins, scraper (?).

30m. W of 74W6. Cultural material: 1 obsidian end scraper with moderate retouch along the lateral margins, cortex on dorsal surface, 1 flake removed from bulb, no wear; 1 obsidian flake with slight retouch along 1 lateral margin; 1 black flake with slight retouch along 1 lateral margin; spalls.

15m. N of 74W14. Cultural material: 1 black end scraper, trapazoidal, slight retouch along lateral margins, slight ridge on dorsal surface, no retouch on ventral surface, slight to moderate wear.

The Walker Lake Survey: Comments

In terms of the objectives outlined at the beginning of this section, our 1974 work in the Walker Lake area was disappointing; an analysis of the sites and associated cultural material offers little help towards solving the problems which promoted the survey. However, a consideration of the location and nature of the sites combined with a comparision of the recovered artifacts with other collections from Northern Alaska will provide a better understanding of the utilization of the Walker Lake region by prehistoric peoples. Such a study will be undertaken in the near future; for the present I will merely note some of the more interesting aspects of the Walker Lake discoveries.

Site location. All of the sites discovered during the survey lay on bedrock knolls or raised dry glacial features which provide view points over the lake and the surrounding countryside. All sites were also 10 meters or more above the modern lake level; flat dry areas closer to the lake's surface were tested to no avail. A consideration of the cultural material recovered from the sites suggests most were conbination lookout-secondary manufacturing localities; though 74W2, 74W27, the 1967 excavation and possibly 74W1 probably also served as brief occupation sites. The complete absence of sites along the northern third of the lake's shore, despite the presence of topographical features similar to those producing evidence of human activity farther south suggests the primary route of entry into the Walker Lake valley was from the south and that hunters operating along the lake's shores confined their activities (or at least the evidence thereof) to the more readily accessible portions of the valley. This is not surprising as access to Walker Lake from the north would be difficult given the rugged nature of the terrain there. Additionally, if the cultural boundaries probably pertaining during at least part of the late prehistoric period were operational earlier, the primary utilization of the Walker Lake valley may have been by Athapaskan peoples approaching from the south and east.

Cultural Relationships: The paucity of really diagnostic artifacts confounds any definite assignment of cultural affinities to the Walker Lake material. The artifacts recovered from the 1967 excavation in that year and in 1973 suggested affiliation with the middle layers at Onion Portage on the Kobuk (Anderson 1968) and the Tuktu site at Anaktuvuk Pass (Campbell 1961) and thus a probable dating of around 6000 years ago. There seems little reason to change my interpretation of this site on the basis of the new small sample and, further, I suspect that many of the other sites discovered during the 1974 survey relate to this time level. Others, including 74W27, may not. A comparison of the coefficients of variation of the quantative attributes of the microblades from 74W12 and 74W14 (Table 2) hints at distant relationships with collections from Old John Lake in northeastern Alaska (Hall and McKennan 1973: 25). Unfortunately, until a more definitive comparative study is undertaken little more can be said.

Reconstruction of Activities Represented by Sites. As noted above, few of the Walker Lake sites seem to be the product of an extended occupation by early peoples. The locations of the sites, their transitory nature and the artifact inventories including the common occurrence of end scrapers and bone meal would appear to reflect the activities of small bands of hunters who occasionally visited the shores of Walker Lake in search of caribou for food and, perhaps, fall skins for clothing. No definite evidence is available from the known sites that resources other than caribou were utilized.

Comparison with Old John Lake Sites. Interesting similarities are immediately apparent when one compares the Walker Lake sites and cultural material with discoveries made in 1972 along the shores of Old John Lake, located 250 miles to the east near Arctic Village (Hall and McKennan 1973). The sites at Old John Lake were also situated on dry knolls and ridges some distance above the lake level. Most were small, suggestive of brief occupation, and contained only spalls or, at most, microblades, end scrapers and/or bone meal; a very few were productive of other artifact forms. Obsidian was not an uncommon raw material, though not as important as in the Walker Lake sites which lie much closer to the only known obsidian source in northern Alaska (Clark 1972).

Both Walker Lake and Old John Lake lie in similar environmental settings, being large lakes nestled in the mountains on the southern flanks of the Brooks Range near treeline. Both also lie within the historic Athapaskan/Eskimo interface zone. Thus one could argue that the congruities in sites and associated cultural material may be a product of exploitation of a similar environmental setting or, more probably, that both areas were occupied at approximately the same time by very similar peoples with similar cultural inventories for the same reasons. However, it could also be argued with equal facility that the similarities are the result of the employment of identical survey strategies by the same individual. Though I feel both surveys investigated other likely site settings, this possibility should be kept in mind when drawing conclusions from Walker Lake or Old John Lake studies.

Future Fieldwork in the Walker Lake Area. I feel our survey along the immediate shores of Walker Lake was relatively comprehensive, though additional work would undoubtedly disclose a few more small sites. Future survey might be considered along the outlet stream and in the knoll system to the south of the lake. Additional efforts also be made to locate sites along the lakeshore in local settings other than the dry knolls which produced all of the sites we found, though I am not convinced such sites exist. Further testing of 74W1, 74W2 and 74W27 might be useful. But in general, I feel little more information on the prehistory of the Walker Lake area will be forthcoming from archaeological work in the immediate vicinity of the lake.

Site Destruction. Few of the archaeological sites at Walker Lake had been disturbed by unauthorized excavation. A few unfilled, deep, irregular pits, probably associated with soil studies, grace the flats along the south shore of the lake, but there is no indication that archaeological deposits were disturbed. 74W18 and 74W19 were extensively collected by a party from the State of Alaska Geological Survey. At 74W18 cultural material apparently was only removed from the surface, but at 74W19 a considerable amount of excavation took place. While the concern of the Geological Survey that readily visible archaeological specimens (at 74W19 trails worn through the Survey camp area exposed cultural material) might be lost is appreciated and their contribution of the material they collected to the University of Alaska Museum is laudable, it is unfortunate that they excavated in previously undisturbed areas and thus destroyed part of the archaeological potential of the site.

Given the ephemeral nature of most Walker Lake sites and the relatively pedrestrian quality of the cultural material, unauthorized excavation in the future may not be a serious problem. However, the ground cover on the knolls around Walker Lake is so fragile that disturbing the sod fro any purpose will cause long-term damage to the surface. For this reason, as well as to protect archaeological remains, antiquity laws should be firmly enforced here as well as elsewhere in Alaska.

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