



DEPARTMENT OF THE ARMY

ALASKA DISTRICT, CORPS OF ENGINEERS

P.O. BOX 7002

ANCHORAGE, ALASKA 99510

REPLY TO
ATTENTION OF:

NPAEN-US

Mr. Curtis McVee
Bureau of Land Management
555 Cordova
Anchorage, Alaska 99501

19 DEC 1978

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BUREAU OF LAND
MANAGEMENT
MAIL ROOM

Dear Mr. McVee:

I am forwarding a copy of the report "Archeology in the Upper Susitna River Basin" for your review and comment. The report is based upon archeological investigations conducted by Alaskarctic, Fairbanks, Alaska, in conjunction with geological explorations that were being conducted by the Corps of Engineers in the Watana Canyon and Devil Canyon areas along the upper Susitna River during this past summer. These investigations were site specific and conducted prior to start of any work which would result in disturbance to the tundra surface. The schedule was designed so that each proposed drilling or materials sampling site would be checked for anything of archeological value and cleared prior to the start of actual work. If anything of significance was encountered then our exploration plans were modified to avoid that particular locale. Future geological explorations will follow the same format.

It is hoped that the information presented in this report will be useful in the development of a meaningful data base of archeological information on the Susitna River basin. Several prehistoric sites were encountered and marked as a result of this investigation. These sites have been marked and will remain untouched until their significance is properly determined.

Again, your comments on this report would be appreciated. Should we not hear from you by 12 January 79 we will conclude that you are in full agreement on this. Any questions should be directed to Major Allan Wylie, Susitna Project Manager, telephone 752-2207.

Sincerely yours,

George R. Robertson
GEORGE R. ROBERTSON
Colonel, Corps of Engineers
District Engineer

1 Incl (dupe)
As stated

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ALASKARCTIC

CONSULTANT ARCHEOLOGISTS • CULTURAL RESOURCE SPECIALISTS

P. O. BOX 397
FAIRBANKS, ALASKA 99707

(907) 452-7889

November 29, 1978

Mr. Jay K. Soper
Chief, Engineering Division
Alaska District, Corps of
Engineers
P.O. Box 7002
Anchorage, Alaska 99510

Reference: Contract DACW85-78-C-0034

Dear Mr. Soper:

Enclosed is an oversized original of a map which is a part of the final report completed under the above referenced contract. The text of the report is being forwarded under separate cover.

Sincerely,

Glenn Bacon

Incl 12

EN-US



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November 29, 1978

Mr. Jay K. Soper
Chief, Engineering Division
Alaska District, Corps of
Engineers
P.O. Box 7002
Anchorage, Alaska 99510

Reference: Contract DACW85-78-C-0034


Dear Mr. Soper;

Enclosed are five bound copies and one loose, camera ready copy, of our report entitled "Archeology Near The Watana Damsite In The Upper Susitna River Basin". The original of an oversize map is being sent under separate cover. These copies of our final report under Contract DACW85-78-C-0034 have incorporated changes made, to our draft report, in response to your comments made by letter dated 17 November 1978.

Specifically, we made the following changes to the draft report.

1. We incorporated your suggested rewording of the first paragraph, second sentence, on page 1.
2. We incorporated your suggested rewording of the third paragraph on page 2.
3. We deleted a portion from the first sentence of the first paragraph on page 3.
4. We corrected typographical error on page 18.
5. We removed our recommendations from the body of the report and made them a part of the letter of transmittal.

Sincerely,


Glenn Bacon



ALASKARCTIC

CONSULTANT ARCHEOLOGISTS • CULTURAL RESOURCE SPECIALISTS

P. O. BOX 397
FAIRBANKS, ALASKA 99707

(907) 452-7889

November 24, 1978

George R. Robertson
Colonel, Corps of Engineers
Alaska District, Corps of
Engineers
P.O. Box 7002
Anchorage, Alaska 99510

Reference: Contract DACW85-78-C-0034; Archeological
Survey of a Portion of the Watana Dam Site Project
Area

Dear Colonel Robertson;

It is with great pleasure that we present this final report on our 1978 survey of a portion of the Watana dams site project area. Our findings are that contemplated construction of a camp pad and associated airstrip will not present a threat to significant cultural resources. Specific areas surveyed and found to be clear of significant archeological and historic sites are shown on a map included in a map pocket at the end of this report.

Although no archeological sites were discovered during this survey, such sites are known to exist in the area and we appreciate the opportunity to search for others. With respect to future activity in the Watana project area, it will be necessary to plan an appropriate level of archeology. This archeology will have two general objectives. One will be to insure that no part of the feasibility study program will jeopardize significant cultural resources. A second objective will be an aspect of the feasibility study, and it will probably focus on the need for a sample survey of the entire impact area.

We hope that future archeologists will enjoy the same comfortable working relationship we enjoyed this summer with Corps personnel.

Sincerely,


Glenn Bacon

ARCHEOLOGY
NEAR THE
WATANA DAMSITE
IN THE
UPPER SUSITNA RIVER BASIN

A

Report

Prepared by

Glenn Bacon
Archeologist

for

The Alaska District,
Corps of Engineers

November 1978

under

Contract DACW85-78-C-0034

BLM Reference Number AG-AK 910-297

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INTRODUCTION

It is with great interest that archeologists have followed recent events in Alaska which have led to the proposed construction of hydro-electric facilities along the Susitna River. This undertaking potentially threatens archeological and historical sites presumed to be within the impact area.

The Alaska District, Corps of Engineers, recognized the need for additional cultural resource information early on. Consequently, a contractual agreement was signed between the Corps and the Office of History and Archaeology, Alaska Division of Parks. The result was a literature based study designed to predict those areas of highest archeological potential within the potential construction zone, which at the time included a four dam system (Alaska Division of Parks 1975).

Since the State archeological study, plan revisions have reduced the number of dams under consideration to two, namely the Devil Canyon and Watana dams. Additional geologic studies were desired for these two damsites.

Since some of the planned geologic studies included rock drilling machinery and necessitated other ground surface altering activities, the Corps of Engineers recognized the

need for additional archeological evaluations based on on-the-ground observations.

Specifically, the Corps required archeological clearance of specific sites within the project areas. These specific sites were defined and formed the basis for a Scope of Work in a contract ultimately awarded to Alaskarctic (Contract No. DACW85-78-C-0017). Archeological clearance work began in the spring of 1978 and was concluded in the autumn of the same year.

Late in the summer we learned of a volume published by the Alaska District, Corps of Engineers for the Alaska Power Authority entitled Plan of Study for Susitna Hydropower Feasibility Analysis (June 1978). Contingent upon funding, the plan outlines a series of analyses and logistic preparations necessary to initiate feasibility studies appropriate for Susitna hydro-electric development.

It was determined that an airstrip and camp would need to be constructed prior to breakup in the spring of 1979. Much of the area for the airstrip and camp were not subject to the archeological survey performed earlier in 1978. We recommended that an additional survey be conducted to cover those unsurveyed areas in which pre-breakup construction was contemplated for 1979.

A contract was awarded to Alaskarctic to conduct the additional survey. As finally determined the survey would include (1) a proposed airstrip, (2) a proposed camp pad location, (3) two proposed material sites, and (4) an access road connecting all four areas.

Immediately upon learning of the contract award, two Alaskarctic archeologists left for the field. The archeological survey was conducted between 21 September and 25 September 1978. Archeologists assigned to the project were Glenn Bacon, lead archeologist for Alaskarctic, and Assistant Archeologist Lloyd "Joe" Jones. This is a report on the survey.

THE SETTING

The Watana damsite lies 62 miles northeast of the community of Talkeetna and is located at approximately latitude 62° 49' 37" N and longitude 148° 32' 30" W. The damsite, on the Susitna River, is in an uplands region characterized by glacier formed topography. Kettle lakes and kame knolls are numerous. The Susitna River, itself, shoulders through steep rock walled gorges as it hurries to the gulf coast. The silt-laden Susitna is joined by dozens of clearwater tributaries which themselves have cut deep V-shaped valleys into the soft glacial till of the region.

Vegetation at the damsite ranges from spruce dominated taiga boreal forest in the lower elevations to alpine shrub-tundra beginning at about 2500 feet in elevation. This range in vegetation supports diverse faunal resources including moose, caribou, brown and black bears as well as a number of smaller mammals such as wolves and muskrats.

Anadromous fish resources are limited to the river below Devil Canyon, but many of the region's trout and greyling populate the streams and lakes above the canyon. Lakes and ponds also experience seasonal inflights of migratory waterfowl.

Climate for the Upper Susitna Basin could be considered continental, but it is greatly tempered by moderating influences from the Pacific Gulf coast of Alaska.

SUMMARY OF REGIONAL PREHISTORY

One interpretive scheme characterizes the archeology of central Alaska in terms of five major periods: (1) an early Tundra Period, ending circa 8000 BP; (2) an Early Taiga Period, circa 8000 to 4500 BP; (3) a Late Taiga Period, circa 4500 years ago to approximately AD 500; (4) an Athapaskan Period, from approximately AD 500 to about AD 1900; and (5) a Recent Period from about AD 1900 to the present time.

The Tundra Period in Alaska is still poorly understood, but it likely represents a time of early postglacial adaptations. A changeover from steppe (grassland) to shrub tundra must have had dramatic consequences for early man's faunal food resources. Precious few archeological sites are known from this early period in Alaska.

Direct evidence of the people of the Tundra Period comes from three locales in interior Alaska. One of the locales referred to is the Tangle Lakes region of the Alaska Range where Frederick Hadleigh-West has defined an early complex on the basis of evidence from several small archeological sites (1967; 1974; 1975). West has argued that the locations of many of these archeological sites suggest a primary dependence upon caribou for the people who

occupied them. Many of the sites are located on the shores of lakes which are in turn located in the vicinity of one of interior Alaska's major caribou herds (Nelchina). In more recent times caribou were often hunted by chasing them into the water where they were more easily killed. The Healy Lake Village site (Cook 1968; Cook & McKennan 1970) contained tools which possibly date back 11000 years. These tools exhibit similarities to tools from the recently discovered Dry Creek site near Healy, Alaska. The Dry Creek site also dates in excess of 10000 years ago (Holmes 1974). The tools from all three of these areas are reminiscent of tools found in Siberia and dated to an equivalent age (see Chard 1974).

Forests began postglacial invasion of eastern interior Alaska perhaps as early as 10000 years ago; and by 6000 years ago spruce was present at the Onion Portage site in western interior Alaska (Anderson 1971). During this period a series of boreal adaptations were evident across northern North America. Many of these adaptations were expressed in technologies which were characterized, in part, by side-notched projectile points.

Presently available evidence indicates that, with the postglacial warming trend, forests replaced the earlier shrub-tundra in central Alaska by about 8000 years ago

(Ager 1974; Matthews 1974; Schweger n.d.). Scanty archeological data from this period suggest that for the next 4000 years a series of forest adapted archaic cultures inhabited central Alaska (Anderson 1968; MacNeish 1964). These people probably lived on caribou, moose and fish since these food resources would have been the most abundant.

As the effects of the thermal maximum began to diminish, interior Alaska likely felt the slight retreat of forest margins. More importantly, conditions for the slight expansion of shrub-tundra might have improved. This is a particularly important point when considering the Upper Susitna River Basin since much of the region is presently near treeline.

The Late Taiga Period saw the development of Arctic Small Tool on the western coasts of Alaska. During middle Arctic Small Tool times, Boreal Choris continued to be widespread as indicated by the existence of the later (?) Kayuk and Nimiuktuk sites as well as assemblages similar to that found at the Gallagher Flint Station (north of the Brooks Range). Data are limited for central Alaska, but the Healy Lake and Minchumina (Holmes 1972) and other sites indicate that the late Denali Tradition technology were also widespread (see Bacon 1977).

The Late Taiga Period terminated coincident with a surge of influence to Alaska from the region of the Bering Sea. Western Thule appears as suddenly on the Alaska mainland as did Arctic Small Tool earlier. The appearance of Western Thule, at roughly AD 500, is remarkedly near in time to the appearance of the Itkillik intrusion in the Onion Portage sequence (Anderson 1970) and also to the finale of the Denali Tradition, which after a brief hiatus was replaced by a technology similar in many respects to that of the early historic Alaskan Athapaskan. Occuring as these events did, near in time to both the Viking expansion in the North Atlantic and the Polynesian expansion throughout the Pacific, they suggest the possibility of global climatic change.

The earliest evidence of Athapaskan occupation of interior Alaska dates several centuries ago to just prior to about AD 500. The relationship between these early Athapaskans and the people known to have occupied central Alaska at an even earlier time is poorly understood (Cook 1975). The data are inconclusive as to whether Athapaskan culture originated in central Alaska (Cook 1968) or elsewhere -- perhaps to the east and south (Bacon 1977). Whatever the case, by AD 500 Athapaskan people occupied interior Alaska and utilized a subsistence strategy similar to that hypothesized for the earlier Taiga periods.

The 1978 archeology in the Upper Susitna River Basin revealed the presence of four prehistoric sites in the Watana damsite area. All four of these archeological sites appear to date from middle to early Holocene times. (The Holocene is that period following the last ice age, approximately the last 10000 years.) These data are, however, far less than are required to construct a meaningful prehistoric cultural chronology for the Upper Susitna Basin.

RESEARCH DESIGN

It is assumed, on the basis of previous studies (eg. Boas 1964; Helm 1969; McKennan 1969; Spencer 1959; Watanabe 1968) that for northern hunting/fishing groups there is a clear correlation between areas of high biomass concentration and settlement locales. These locales are patterned (Campbell 1968; Helm 1965; many others) and, due to a paucity of floral resources in central Alaska, settlement patterns can be expected to reflect shifting availability of faunal resources. Thus, it can generally be stated that regions of high present and/or past biomass concentration will be regions of high archeological probability. We will consider that regions which exhibit the characteristic elements of ethnographically observed exploitative patterns will also exhibit the characteristic elements of Holocene exploitative patterns in general. We also must consider evidence of environmental shifts during Holocene times with the awareness that these shifts might be reflected in changed settlement patterns.

Thus the archeological research was conducted within the general framework of culture ecology advanced by Julian Steward (1955) and Leslie White (1949), who recognized culture as man's extrasomatic means of adaptation. We expect that man's adaptation to a changing environment will be patterned and therefore, within limits, predictable.

FIELD PLAN

The field plan was designed to accomplish the goals outlined in the Scope of Work. Specifically there was a need to identify, and thereby offer a measure of protection to, those cultural resources potentially threatened by Corps directed exploration activities.

The on-the-ground archeological survey focused on an area south of Tsusena Butte and bordered on the west by Tsusena Creek, to the east by Deadman Creek, and on the south by the Susitna River. Five specific areas were slated for examination. These were: (1) a proposed material site near the west bank of Deadman Creek, (2) an adjacent proposed airstrip, (3) a proposed camp location, (4) a proposed material site near the east bank of Tsusena Creek, and (5) an access road alignment connecting the other four areas.

The areas surveyed were traversed on foot. Natural exposures, such as blowouts and erosion cuts were inspected for evidence of prior human activity. Additional small "test" excavations were conducted as necessary to provide more complete coverage. These excavations were accomplished with the use of shovels and hand trowels. All test excavations were backfilled after inspection. They were not mapped.

METHODOLOGY

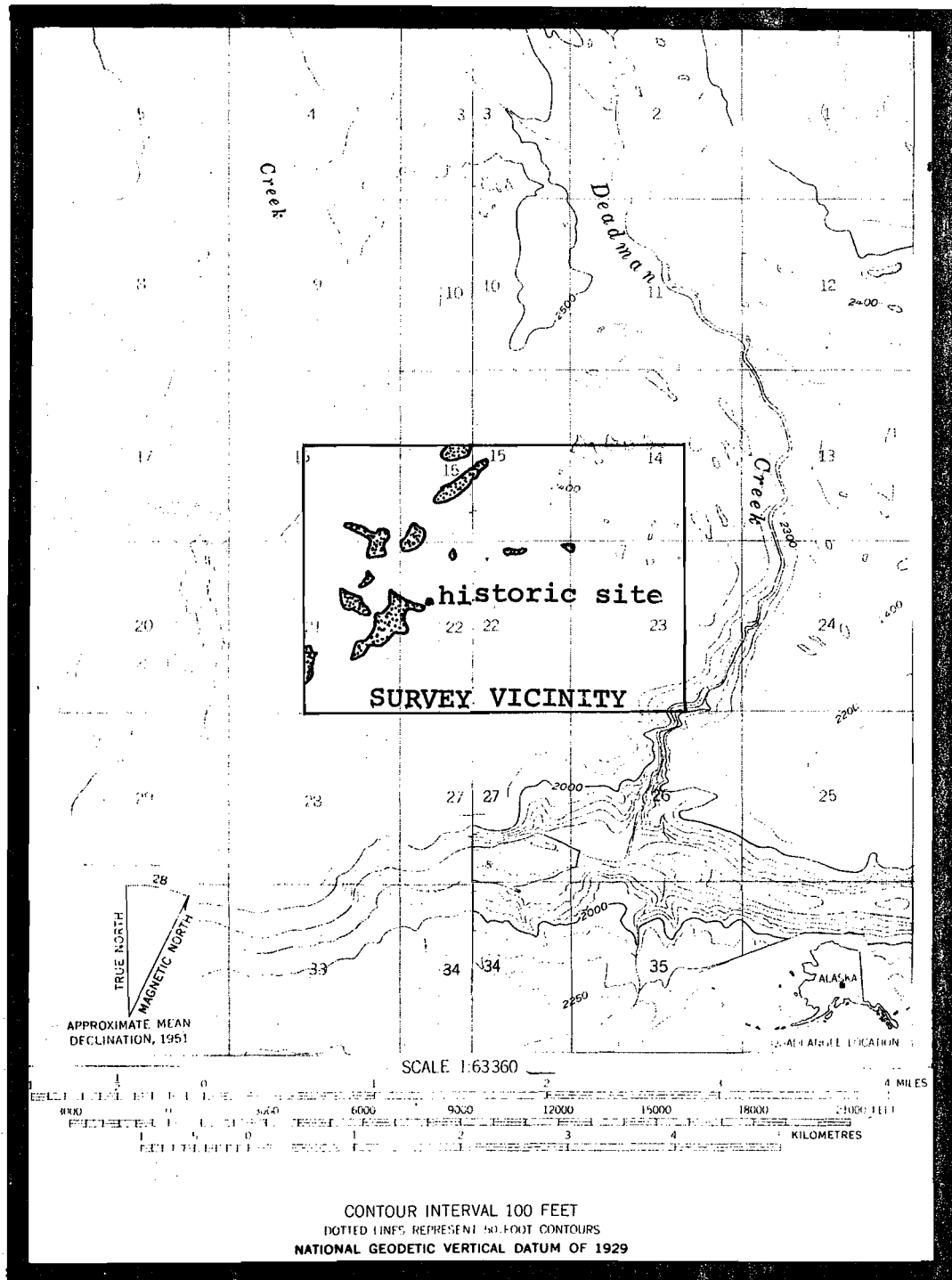
Project methodology was an extension of that developed for prior archeological survey of the Watana damsite area under contract DACW85-78-C-0017 with the Alameda District, Corps of Engineers. At the time of the archeological survey discussed in this report, a literature, map and aerial photograph analysis of the project area had already been completed and augmented by an on-the-ground survey of portions of the Watana project area.

This aspect of the Watana survey continued to consist of on-the-ground examinations of selected portions of the Watana project area. Surficial features were interpreted, as conditions allowed, for clues to aid in the location of cultural resources. Occasionally, with the aid of shovel and trowel testing, sub-surface deposits were exposed. These man-made exposures augmented the relatively small number of naturally occurring exposures and helped to piece together a small part of the area geologic history.

SURVEY RESULTS

Only one site was discovered during our survey. This site is a very recent historic site and likely does not predate 1948. This date was stamped on the base of what appeared to be an alcohol beverage bottle. An assortment of other empty bottles and cans, along with the remnants of a tent frame, suggest that this historic site was formerly a base camp. Its location at the end of the largest local lake suggests that the camp might have originally been established by floatplane.

We measured this historic site against criteria listed under Appendix C, 36 CFR 800, Procedures for the Protection of Cultural Properties (Federal Register, vol. 39, no. 34, February 19, 1974). On the basis of this evaluation, we concluded that the discovered historic site is not eligible for inclusion in the National Register of Historic Places.



SURVEY VICINITY MAP: For detailed map of areas covered during the archeological survey, see the map pocket at the end of this report.

EVALUATION OF THE ARCHEOLOGICAL SURVEY

The Watana damsite portion of the Upper Susitna River Basin is a difficult area in which to conduct an archeological survey. There are relatively few natural erosion exposures, and standing water caused by high level permafrost makes test pitting difficult in many areas. On the other hand, the specific nature of the goals of the survey described in this report made it a relatively easy one to complete.

Although no archeological survey is 100% reliable, we are confident that our survey detected all significant sites within the survey area. Such sites, if any, as may have gone undetected will likely be small in size and easily salvaged if discovered at a later date.

PROBABILITY OF ENCOUNTERING ADDITIONAL SITES

When it comes to archeology there is hardly anything more easily offered or less defensible than statements concerning the probability of encountering archeological sites. In the recent past this problem has received more and more attention in the professional literature.

In Alaska this problem is particularly acute because developers continue to ask the question while the archeological data base lags far behind the analogous one for the continental United States. Current professional estimates suggest that the Alaskan archeological data base may be as much as sixty or seventy years behind the rest of the country in its development.

Within Alaska, the Watana portion of the Upper Susitna Basin presents an almost impossible situation. Up until this summer we had no local data base with which to work. The four prehistoric sites located in 1978 did little to improve on the situation.

The statistical odds are that no two of the sites found in 1978 represent human activity in a single prehistoric year. We know almost nothing of the settlement patterns, part of which each of those sites reflects. Our under-

standing of these prehistoric settlement patterns relies totally on ethnographic and archeological analogy. That is, we must project from the known to the unknown.

Additional problems are introduced because little paleo-environmental data are available for the Watana project area. We know little about local geological and biological history.

We do know that the 1978 rate of site find per man-day in the field was on the high end of the experience scale. We are reasonably certain that the 1978 survey detected only a tiny part of the total range of activity sites we expect were left by prehistoric populations. This indicates to us that the site density of the project area is high. On reflection this should not be too surprising, since the Tangle Lakes Archeological District is not too far distant. The Tangle Lakes District was entered on the National Register, in part, because it is reported to exhibit one of the highest archeological site densities in North America.

KNOWN AND PROJECTED IMPACTS ON CULTURAL RESOURCES

We know that at least one archeological site has already been directly effected by 1978 exploration activities near the Watana damsite. Site TLM 016 apparently has been punctured by a Corps of Engineers benchmark.

We suspect that seismic testing must have some affect upon archeological sites nearby, but we do not yet know if it is significant. In attempting to further define the nature of projected impact, we can only offer the following observations.

All of the cultural resource sites discovered during the 1978 survey of the project area were either on or within a few centimeters of the ground surface. If this pattern holds true for the majority of the area cultural resources, then we can expect that any alteration of the ground surface could produce a detrimental impact on cultural resources.

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TSUSEMA CRK

BORROW AREA

BENCHMARK WA-16

PROPOSED ACCESS ROAD

PROPOSED CAMP LOCATION

PROPOSED AIRSTRIP

BORROW AREA

VICINITY MAP

ONE INCH = 50 FT



WATER



LIMIT OF SURVEYED AREA

PREPARED BY

GLACIARCTIC

UNDER CONTRACT

DAC485-78 C-0014



DEADMAN CRK