

Archeological Excavations At 49-GUL-79 On Paxson Lake, Alaska

Ronald Cox
Carol Hultquist
Becky Loudat
James Maniery

Bureau of Land Management —
Anchorage District Office, Alaska



F
912
.P39
A7
1976

Resources Development Internship Program
Western Interstate Commission for Higher Education

This report has been catalogued by the WICHE Library as follows:

Archeological excavations at 49-gul-79 on Paxson Lake, Alaska
1976 / by Ronald J. Cox...et al. ; edited by John L. Beck. --
Boulder, CO : Western Interstate Commission for Higher Education,
1978.

29p.

1. Archeology. 2. Excavations (Archeology) - Alaska.
I. Cox, Ronald J. II. Beck, John L. III. Western Interstate
Commission for Higher Education. Resources Development Internship
Program.

[illegible]

The ideas
They do no
WICHE staf

It are those of the author.
the WICHE Commissioners or

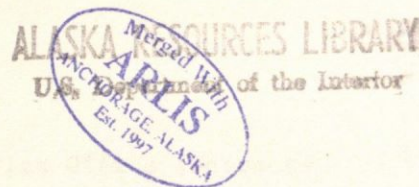
The Resource has been financed during 1977 by grants from the National Endowment for the Humanities, the Washington State Office of Community Development CETA Program, the Colorado Department of Labor and Employment; and by more than one hundred and fifty community agencies throughout the West.

WICHE is an Equal Opportunity Employer.

ARLIS
Alaska Resources
Library & Information Services
Anchorage, AK

This
Mana
was
for

APR 13 1981



F
912
P39
A7
1976

ARCHEOLOGICAL EXCAVATIONS AT 49-GUL-79 ON
PAXSON LAKE, ALASKA - 1976

by

Ronald J. Cox
Carol M. Hultquist
Becky M. Loudat
James G. Maniery
- WICHE Interns -

Edited by

John L. Beck
Staff Archeologist
Anchorage District Office
Bureau of Land Management

This project was funded by the Recreation Program of the Bureau of Land Management, Anchorage District Office, Anchorage, Alaska. The project was carried out under contract with the Western Interstate Commission for Higher Education (WICHE), Boulder, Colorado.

ARLIS
Alaska Resources Library & Information Services
Library Building, Suite 111
3211 Providence Drive
Anchorage, AK 99508-4614

ABSTRACT

In 1976 the Bureau of Land Management Anchorage District Office contract-
ed for four archeology student interns through the Western Interstate
Commission for Higher Education (WICHE) to conduct moderate to intensive
test excavations at archeological site 49-GUL-79 on Paxson Lake, Alaska.
Student interns selected through the WICHE Resources Development Internship
Program to conduct the excavations worked under general supervision of
BLM project archeologist Henry S. Keesling, with overall direction of
the project by BLM staff archeologist, John L. Beck.

The archeological site 49-GUL-79 was found in the vicinity of a proposed
BLM campground facility in 1975 when BLM archeologist, Charles E. Holmes
conducted a survey of the project area. Although construction of the
campground facility will have no direct effect on the archeological
resources identified, influx of the recreating public may, over a period
of time, adversely affect the archeological remains. Testing was under-
taken at the site in 1976 to determine the nature and extent of the
archeological components in the project area so that potential effects
on the site can be evaluated according to the nature of the archeolog-
ical values present.

The archeological site consists of two small occupation sites on the
east margin of Paxson Lake, both of which were tested to a limited
extent in 1975. Excavations were conducted on two probable house pit
depressions at the sites in 1976. One half of each depression was
excavated to determine the nature of structural remains present and the
probable age and construction of the dwelling. Two smaller depressions
near one house pit were also excavated and an associated midden deposit
was tested to help determine the nature of activities carried on at the
site in the past. Another location in the project area, where a cobble
feature was found, was also tested but yielded no cultural material.
Approximately 45 square meters of surface area were excavated, probably
representing about 10% of the total area of the two sites. Detailed and
accurate records were made for all archeological components encountered
in the excavations to aid in interpretation and evaluation of the site.
At the end of the project, all excavated areas were restored as nearly
as possible to their original condition.

Observations on the features investigated and the materials recovered
are compared to other archeological work which has been done in the
Copper River Basin. The findings at Paxson Lake are also placed in
perspective with the ethnographic and environmental backgrounds of the
area to help in assessing the nature of the archeological values at the
site and their significance for our understanding of the past.

CONTENTS

	Page
ABSTRACT	iii
INTRODUCTION	1
PROJECT OBJECTIVES	3
PROJECT AREA DESCRIPTION	
Environmental Setting	4
Historical Background	8
SITE DESCRIPTION AND EXCAVATION PROCEDURES	14
EXCAVATION RESULTS	
Area 1	16
Area 2	21
Area 3	23
CONCLUSIONS AND RECOMMENDATIONS	24
ACKNOWLEDGEMENTS	27
BIBLIOGRAPHY	28
ILLUSTRATIONS	
Maps	
1. Archeological Sites in the Copper River Basin	5
2. Contour Map of the Project Area	15
Figures	
1. Area 1, Unit Layout	30
2. Area 3, Unit Layout	32
3. Area 1, House Pit 1 Floor Plan	34
4. Area 1, House Pit 1 West Wall	36
5. Area 1, House Pit 1 North Wall	38
6. Area 1, Feature 1 Layer Diagram	40
7. Area 1, Feature 2 Unit Plan	41
8. Profile, East Wall Unit D, Area 1	42
9. Profile, South Wall Unit F, Area 1	43
10. Profile, West Wall Unit G, Area 1	44
11. Area 2, House Pit 1 Floor Plan	45
12. Area 2, House Pit 1 West Wall	47
Plates	
1. Aerial Photo of Project Location	49
2. Looking North from Area 1 to Area 2	49
3. House Pit 1, Area 1 with Earlier Test Units	50
4. House Pit 1, Area 1 Showing Bone and Cobbles	50
5. House Pit 1, Area 1 Showing Ash Lenses	51
6. House Pit 1, Area 1 Showing Fleshing Tool	51
7. House Pit 1, Area 1 Showing Excavation Profile	52
8. House Pit 1, Area 1 Profile with Bone Layer	52
9. House Pit 1, Area 1 Profile Showing Bone and Moss Layers	53
10. House Pit 1, Area 1 Showing Bone Concentration	53
11. House Pit 1, Area 1 with Bone Concentration Exposed	54
12. House Pit 1, Area 1 with Bone Layer Removed	54
13. House Pit 1, Area 1 Showing Moss Layer	55
14. House Pit 1, Area 1 Showing Profiles	55
15. Feature 1, Area 1 Showing Vegetation	56

16.	Feature 1, Area 1 Showing Bone and Hammerstone	56
17.	Feature 2, Area 1 Showing Trough-Shaped Depression	57
18.	Feature 2, Area 1 Showing Bone Underlying Organic Mat	57
19.	Feature 2, Area 1 Showing Decaying Wood and Cobbles	58
20.	Unit D, Area 1 Showing Broken Bone	58
21.	Unit D, Area 1 Sidewall Showing Profile Exposed	59
22.	House Pit 1, Area 2 with Fire Area Exposed	59
23.	House Pit 1, Area 2 Showing Antler and Wood Exposed	60
24.	House Pit 1, Area 2 Showing Wooden Structural Remains	60
25.	House Pit 1, Area 2 Structural Remains	61
26.	House Pit 1, Area 2 Excavation Near Completion	61
27.	House Pit 1, Area 2 Excavation Sidewall	62
28.	Unit A, Area 3 Showing Cobble Feature Exposed	62

← 11 x 17 →

A4
LETTER

← LETTER →

A5
HALF LETTER

INTRODUCTION

Archeological excavations were undertaken by the Bureau of Land Management, Anchorage District Office at archeological site 49-GUL-79 near Paxson, Alaska in the summer of 1976 through a contract with the Western Interstate Commission for Higher Education (WICHE) to provide moderate to intensive testing of archeological features located in the Paxson Lake Campground II project area.

The WICHE Resources Development Internship Program is a relatively new concept in multi-level program coordination which can greatly improve functional efficiency and reduce program costs. It offers unique opportunities for university students in professional disciplines to gather important data needed for resource programs of sponsoring agencies. At the same time students gain valuable work experience and see how natural resource agencies operate. The sponsoring agency, the university, and the students all gain through the program.

The authors of this report were selected through the WICHE Resources Development Internship Program to conduct the excavations and report their findings on the nature and extent of archeological remains in the project area with recommendations for preservation of the archeological resources. Nine weeks of the twelve-week project were spent in the field from June 22 to August 20 with general field direction by project archeologist, Henry S. Keesling and overall project direction by John L. Beck, BLM staff archeologist at Anchorage District Office.

The history of BLM's involvement in the campground project spans almost 20 years. Designed to bolster inadequate public campground facilities along the Richardson Highway and the Denali Highway which extends westward from Paxson, the recreation site planning began as early as 1958 with final site selection in 1970. Although comments on the proposed project from the State Historic Preservation Officer, Alaska Division of Parks, in 1975 indicated that no archeological resources were known in the project area, an archeological survey was made of the project area in advance of construction. Survey of the area by the Bureau of Land Management Anchorage District Office staff archeologist revealed two historic aboriginal occupation sites within the project area. Initial testing of two probable house depressions indicated that the archeological deposits at the small sites might contain a wealth of well-preserved organic material such as bone and wood remains (Holmes 1975).

Although construction of the campground facilities would not directly disturb the archeological remains, it was felt that public use of the completed facility might in time have an adverse effect on the archeological values. More thorough testing of the site was therefore undertaken by the BLM in 1976 to determine the nature and extent of the archeological remains so that any factors which may affect the site can be evaluated relative to the archeological values present.

In 1976 the site was nominated to the National Register of Historic Places based on preliminary indications that it could produce valuable information about Native occupants of the area in the early historic period. The National Register lists districts, sites, structures and objects which are significant to the past of the nation and the states. It grew out of the National Historic Preservation Act of 1966 which authorizes the Secretary of Interior to maintain the list in order to prevent inadvertent loss of important historic and prehistoric resources by Federally initiated or permitted undertakings.

PROJECT OBJECTIVES

After initial evaluation of the archeological remains based on his testing in 1975, Holmes felt that potential impact from campground use warranted further excavation at the site. Though any direct effect on the archeological site by campground construction could be avoided, he felt that public use of the facility would eventually have an adverse effect on the archeological values. Camping is inevitably accompanied by modification of the substrate such as compaction by foot traffic and destruction of vegetation, digging holes or leveling the ground, and other forms of surface and subsurface disturbance. Though archeological materials are often deeply buried and appear to suffer little from the foot traffic or other surface activities, these factors may in time degrade the archeological values in an area considerably.

In many cases extremely fragile archeological materials lie on the surface or just beneath the surface vegetation, often retaining much of the pattern of their original placement. Bone, wood, bark, and other perishable or fragile remains left from human activities in the past may occur in this manner. Since they are often not preserved at all in archeological sites of any age, their presence greatly increases the potential for a site to yield new and detailed information about life in the past. But when these fragile components lie near the surface, almost any activities on that surface will soon destroy them.

Because the effect of camping activities on archeological resources may range from imminent destruction to gradual deterioration over a long period of time depending upon the nature of the archeological resources present, the Bureau of Land Management felt that more needed to be known about the nature and extent of the archeological resources present in the Paxson Lake campground project area before a full evaluation of the effect could be made. Since preservation of the archeological resources in situ may be preferable to their protection through excavation, additional information would make it possible to evaluate any factors which might affect the archeological values because of their particular nature and to undertake measures necessary for their preservation.

Moderate to intensive testing was undertaken at the site by the authors in the 1976 field season. Excavations were conducted to test the nature of remains in the aboriginal features and surrounding deposits. Test units were excavated in several areas to determine the extent of archeological remains in the project area, and at the two house sites. Although artifacts and other cultural material recovered have not been fully analyzed for this report, a general description of the findings is presented along with background information on the environment and the history of the area needed to place the findings in perspective.

PROJECT AREA DESCRIPTION

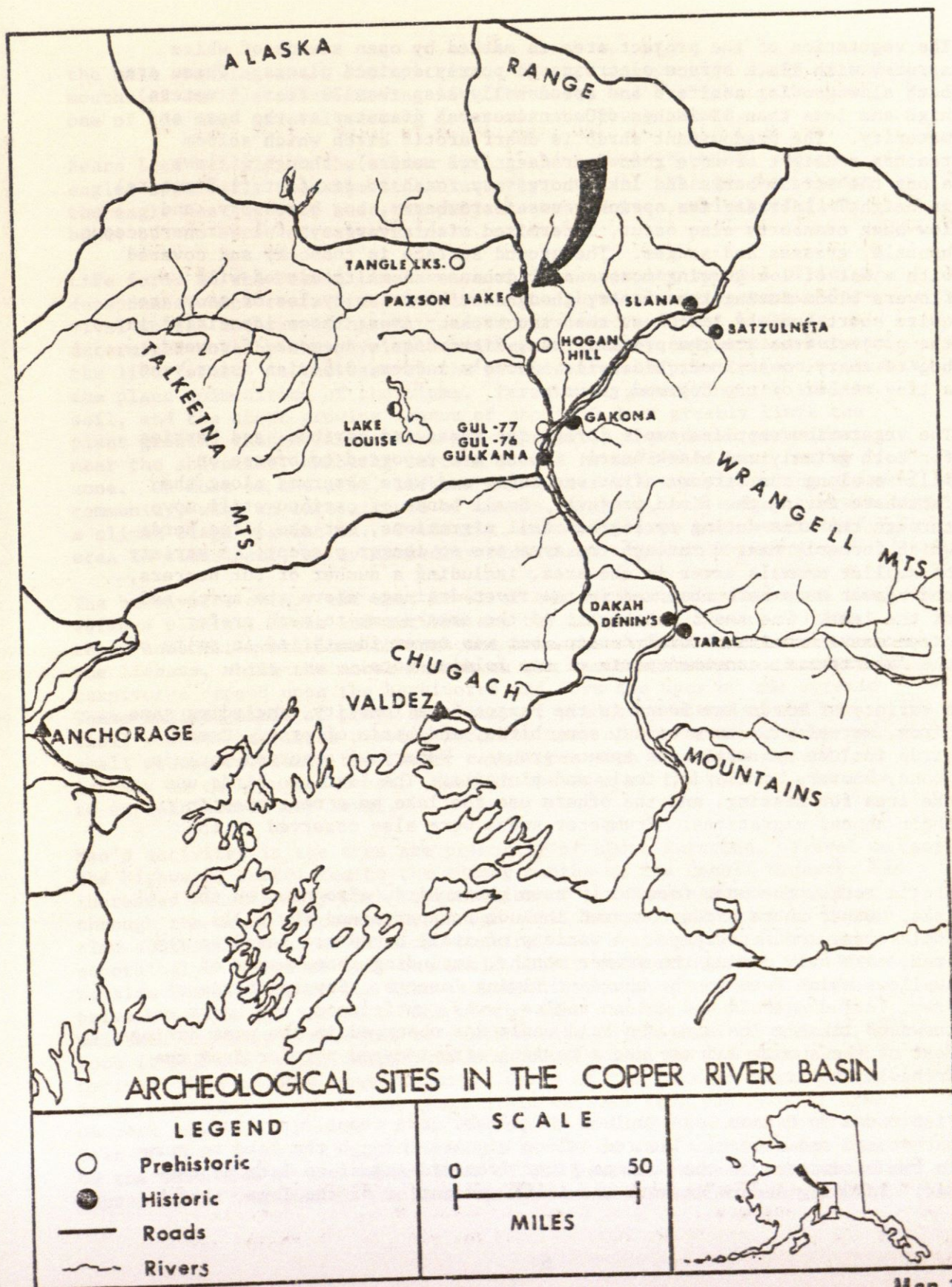
Environmental Setting

The Paxson Lake archeological site (49-GUL-79) is located just south of the Alaska Range in the northern edge of the Copper River Basin (Map 1). The site overlooks Paxson Lake and rolling foothills to the west, with high, snow-covered peaks of the Alaska Range visible to the north on clear days. The highest mountain peak in the vicinity, Paxson Mountain, has an elevation of 5200 feet and stands out northwest of the clear blue lake. The main fork of the Gulkana River enters the lake at its north end approximately 3 1/2 miles (5 kilometers) south of Paxson where the Denali Highway heads westward. Though the lake is generally only about 1/2 mile (.8 kilometers) in width, it extends south and southwest approximately 10 miles (16 kilometers) and clearly dominates the landscape. The project area has high scenic qualities which enhance its attractiveness for public recreation.

Thrust up sometime during the Jurassic period, the Alaska Range was extensively faulted and glaciated in following periods. During the last major glaciation in the Pleistocene Epoch, a large proglacial lake of more than 2000 square miles was formed in the Copper River Basin when ice dammed the Copper River at its exit in the coast range. By about 12,000 years ago the ice retreated, the lake drained, and the rivers draining the Alaska Range entrenched to about their present levels. Paxson Lake was formed on the Gulkana River by morainal deposits which partially dammed the glacial valley. The original height of the lake is not known, but alluvium and lake bed deposits underlie the project area, indicating that the lake was at one time higher than its present level at 2553 feet elevation. Little change has occurred in the area in recent times, though a shallow soil deposit has formed on most of the older surfaces.

The archeological site is located near the eastern shoreline of Paxson Lake, one house site being near the end of a projecting spit where wave action and ice have pushed up sand and gravel in times past. The other house site is located on a low knoll just above the lakeshore and overlooks two lower eminences to the south with two small streams intervening (see Plate 1). Vegetation is varied across the site area, with little in the way of distinct vegetation boundaries except where a small grassy clearing marks the house site on the knoll top.

The climate in the vicinity of Paxson Lake is characterized by pronounced daily and yearly temperature variations and has a mean annual temperature of around 25°F. Winter is the longest season of the year, lasting from around late October to early May with snowfall in amounts from 10 to 22 inches (25 to 55 centimeters) occurring in that period. A total of about 25 to 30 inches (60 to 75 centimeters) of snow falls annually. Midwinter temperatures of -50°F to -60°F have been recorded in the area, and strong winds are characteristic. Brief autumn and spring seasons separate winters and summers, with summers lasting from June to early September. Summer daytime temperatures are commonly in the 70's (°F), though cooler days are common, with cloudy skies, wind, and rain.



The vegetation of the project area is marked by open stands of white spruce, with black spruce occurring in poorly drained places. These are both slow growing conifers and are usually less than 20 feet (6 meters) high and less than 12 inches (30 centimeters) diameter at the base at maturity. The predominant shrub is dwarf arctic birch which seldom reaches a height of more than four feet (1.2 meters), though willows along the stream banks and lake shores may reach to six feet (1.8 meters) in height. Labrador tea, prickly rose, crowberry, bog blueberry, and low-bush cranberry also occur, intermixed with a variety of lower herbaceous annuals, grasses and sedges. The ground surface is tussocky and covered with a mat of low growing mosses and lichens. A multitude of wild flowers bloom during the summer, though the blooming cycles of many are quite short and may last less than two weeks. Among those identified in the project area are the prickly rose, Richardson's anemone, fireweed, bog rosemary, monkshood, bluebells, Jacob's ladder, Siberian aster, and a tiny member of the dogwood genus.

The vegetation supplies ample forage for moose and caribou, and berries for both grizzly and black bears. Moose are reported to browse on willows along the streams after snowfall, and were observed along the lakeshore during the field project. Small bands of caribou still move through the area during spring and fall migrations, but the large herds which formerly ranged through the area are no longer present. A variety of smaller mammals occur in the area, including a number of fur bearers, and beaver dams were observed in the river drainage above the north end of the lake. One small inhabitant of the area seems to much prefer green canvas to its natural forage, but was never identified in spite of the fact that it consumed parts of two folding cots.

A variety of birds are found in the Paxson Lake locality, including game birds, waterfowl, shore birds, song birds, and birds of prey. Game birds include ptarmigan and spruce grouse. Waterfowl observed include loons, scoters, mallards, teal, and pintails. The last two birds use the area for nesting, and the others use the lake as a rest stop in their annual migrations. Trumpeter swans were also observed in the area.

Arctic terns, the most frequently seen shore bird, also nest on the lake. Other shore birds observed include Bonaparte and mew gulls, phalaropes, and sandpipers. A variety of small birds are found in the area, most only during the summer months, including three kinds of swallows which feed on the abundant flying insects. Several birds of prey, including bald and golden eagles, owls, gyrfalcons, and hawks are known to inhabit the area. A bald eagle was observed in the area during most of the summer and may use a nesting site located not far from the archeological site.

Fish found in Paxson Lake include whitefish, lake trout, grayling, burbot and red salmon. The red salmon migrate through the lake to spawn in the headwaters of the Gulkana River from mid-August to late September. Spawning occurs at both the inlet and outlet of the lake, though

the main spawning areas lie upstream. The red salmon also spawn at the mouths of small streams flowing into the lake, and the lake serves as one of the main natural rearing areas for the young salmon.

Bears feed heavily on the salmon during the spawning period, and the eagles apparently feed almost exclusively on fish. The ground beneath the eagle nesting site near the project area shows a variety of fish bone, but no bones of other animals.

Life forms in the Paxson Lake area comprise a complex pyramid of interdependence which rests precariously on the physical environment. Survival in the moderately harsh transitional tundra forest biome is determined more by the physical environment than by competition between the life forms. At the base of the pyramid are the primary food producers, the plant communities of the biome. Permafrost underlying the shallow soil, and the short growing season of about 80 days greatly limit the plant growth, though Paxson Lake has apparently thawed the permafrost near the shoreline, enabling certain plants to thrive in that narrow zone. On most of the area, lichens and mosses are the pioneering plant community, with an intermixture of shrubs, grasses, and sedges representing a climax tundra vegetation. Evidently, numerous fires have swept the area in times past, as evidenced by old stumps which show charring.

The herbivores occupy the next level of the pyramid, subsisting on the various plants. Moose and caribou are the largest of these. During their seasonal migrations through the area the caribou feed mainly on the lichens, while the moose browse on the various shrubs. A variety of carnivores depend upon the herbivores and form the apex of the pyramid. These include birds of prey, a variety of predatory mammals, and man. Small rodents and hares provide food for many of the birds of prey and small predators, while the larger carnivores such as wolves depend largely on caribou and moose. Man, at the apex of the pyramid, is able to exploit almost any level.

Man's activities in the area are primarily of short duration. Travel on the highways, restricted to the summer months on the Denali Highway, has increased considerably with construction of the Trans-Alaska Pipeline through the area. Recreation, though still limited primarily to summer-time activities such as fishing, hunting, and boating, has increased accordingly. There is only one small public recreation site, the BLM Wayside Campground, on the lake at present, though a number of small private cabins dot the east side of the lake and its exit. Huffman's maintain the only commercial recreation site on the lake at present, and both it and the public campground are heavily used in the peak summer period. Many campers boat to remote parts of the lakeshore and set up camps. As many as five such camps could be seen from the project area on peak weekends. Access to the lakeshore is limited almost entirely to boat or foot travel, though tracks of an ATV or snow machine were seen on the west side of the lake. Most of the present recreation activities appear to be confined to the lake surface or its immediate shoreline.

The Bureau of Land Management manages all of the lake perimeter within 1/2 mile of the shoreline except for the few privately owned parcels of land. A public land withdrawal in 1945 set aside this perimeter for classification for recreation purposes, but land in the withdrawal is presently closed to private acquisition. Man's future use of the lake area will probably be increasingly oriented toward outdoor recreation.

Historical Background

Vanstone (1955) summarizes the earliest historical accounts of the Copper River area, which date from Russian explorations to locate reported copper deposits in the interior. A Russian-American Company expedition led by Kleinovskii in 1819 succeeded in ascending the Copper River, possibly as far as its confluence with the Gulkana River. He established a trading post near the mouth of the Chitina River which apparently operated for a number of years. Another post located at Nuchek on Hinchinbrook Island in Prince William Sound carried on some trade with Natives from the interior Copper River up to the American period. Other traders entered the area in the American period, but Allen's expedition in 1885 was the only group to penetrate the interior to any extent. He and a party of four men made their way 300 miles up the Copper River, then across the Alaska Range to the Tanana River drainage, ending up eventually at St. Michael. They gave excellent descriptions of Ahtna houses in use and of Native people they encountered.

Abercrombie led successful expeditions into the Copper River Basin in 1898 and 1899, but his interest was in establishing a route through Alaska to the Klondike gold mining area discovered in 1897. In the rush to the gold fields in 1898 over 3,000 men supposedly entered the basin over the Valdez Glacier, and some made their way up the Copper River and thence overland to the Klondike. This marked the opening up of the Copper River Basin.

Established access to the Paxson area dates from construction of the Fairbanks-Valdez military road around 1906. The trail took off from the Valdez-Eagle "Trans-Alaska Military Road" at Gulkana to facilitate overland winter transportation to Fairbanks, which had by then become the center for mining activity in interior Alaska. The trail was improved to a wagon road by 1917 and was passable for both horse and dog drawn sleds in winter months. By 1923, the trail was improved for automobile travel and was later surfaced with pavement in the 1950's. From the earliest period, roadhouses were located along the trail at intervals approximating one day's travel by dog sled. These represented the first permanent outposts of civilization in the area. Two of the original roadhouses still operate in the vicinity. The Paxson Lodge, at mile 185 on the Richardson Highway, has a modern multistory building, but the Sourdough Roadhouse at mile 147 still operates in the original log building.

According to Dr. L.L. Huffman (1976), a lakeshore resident who first came to Paxson around 1927, an Indian fishing camp was at that time located near the north end of Paxson Lake. Workman (1971) reports that a village existed at one time in the vicinity of Paxson Lodge. His inspection of the area revealed little except a disfigured square or rectangular depression which may be a house pit, and another possible house depression now grown over by brush. These camp sites were undoubtedly occupied by Ahtna (Atna, Ahtena, Atena) Indians, one group of the northern Athapaskans who inhabit the Alaskan interior, as most of the Copper River Basin was included in the territory of this group at the time of Euro-American contact (Vanstone, 1974:20). Only limited ethnographic information is available for the Ahtna that is specific to the Paxson Lake area. Unpublished notes by de Laguna (n.d.:34) state that Paxson Lake (or Gulkana Lake) was called "tax'ats' BEnE'" by the Ahtna, meaning clear water or cold water lake. The Wudjicyu clan reportedly gave it to the north half of the Naltsina clan at a potlatch about five generations ago. An elderly informant at Chistochina, born in 1886, said that there were many villages (probably one to three houses in size) and winter houses at the lake in the time of his boyhood, and that skin boats were used in killing caribou as they swam across the lake. A trail supposedly connected Paxson Lake with the Tangle Lakes and Dickey Lake to the west, and with all the river drainages. Castner, attached to the Abercrombie expedition of 1898, reported Copper River Indians hunting caribou as far interior as the Delta River. He also reported seeing many trails which he thought indicated that the pass through the Alaska Range had been used by the Natives for many years.

Most ethnographic information available for the Ahtna refers to the Copper River proper. This information, which is scattered through historic accounts and unpublished informant interviews, has been summarized by West and Workman (1970:17-50).

Villages of one to three permanent semisubterranean winter type houses were located along the Upper Copper River and its tributaries, though it is doubtful if the Ahtna ever numbered much over 500 people. They scheduled their subsistence activities according to the seasonal availability of food resources and had territories that stretched far into the surrounding hills. In the spring and summer the Ahtna concentrated on salmon fishing, and quantities of the fish were air-dried and stored for winter use. Some stayed on the river until their stored fish supply was exhausted, usually around February, and then moved up into the headwaters, foothills and mountains to hunt and trap. Others left the river in the fall to exploit outlying areas, still depending in large part on their stored fish preserves for survival. The seasonally abundant salmon was clearly the primary source of food. Large and small animals taken included caribou, moose, rabbits, and other small game and birds. Seasonally available fruit, such as berries and "Temba," edible roots, and the inner bark of trees supplemented their diet. Travel was probably largely on foot, usually along the river and stream valleys, or on the frozen waterways in winter. Boats and rafts were sometimes used for

transportation on open water, and sleds (pulled by people), snowshoes, and packdogs were also utilized.

The material culture of the Ahtna included the well-built, semisubterranean winter house of poles and bark or moss, usually with an adjoining steam bath room. A double lean-to, a rectangular structure open at both ends, was built for temporary quarters. Small hide tents may also have been used for temporary shelter, and temporary bark and brush steam baths are also reported. Cache pits were constructed for storing dried fish, but may also have stored roots, berries, and meat or bones. Other structures included fishing platforms and weirs constructed on rivers and streams, caribou and moose fences constructed of trees and brush, and presumably fish-drying racks of poles as are commonly used in interior Alaska.

Little information is available on the smaller items of Ahtna material culture, though fish nets and traps, and fish spears or harpoons are mentioned for fishing activities, and fences, snares and the bow with arrows having copper points were used in securing game for food. Birch bark baskets and platters were used for containers, as pottery was not made. Canoes were also made of birch bark, though log rafts and skin boats were more commonly used for water travel. Snow shoes and sleds were also made.

Near the end of the 1800's, the Ahtna were obtaining Euro-American goods such as guns, ammunition, beads, kettles, etc. in trade for furs. Even in earlier times, the Ahtna controlled much of the native copper supply, and trade and other forms of contact occurred with virtually all neighboring groups. Much of the trade between the coast and the interior probably filtered through the Ahtna in both historic and prehistoric times.

Information on the Ahtna is pitifully scant considering they were one of the most influential groups in the Alaskan interior and were respected and feared by neighboring Eskimo and Indian groups. Very few details were recorded of their material culture, indeed, of their lifeway in general. For the most part this information can now be obtained only from the archeological record which remains.

Archeological research in the Copper River Basin has hardly begun this task. In 1936 and 1937 Froelich Rainey conducted a rapid archeological survey in the Copper River region (Rainey 1939), but the sites were located from information obtained from Natives in the region and he was unable to spend time actively searching out older archeological sites. He carried out limited excavations at a prehistoric site near Gulkana, at two historic sites near Gakona, at an early historic site near Slana, and at a site near Batzulneta (see Map 1).

Rainey excavated two house depressions at the Gulkana site and, although no trade items were found, "tci-thos" and a barbed bone point were recovered. The central fire pits contained some identifiable bone, and

some bone debris and ash were scattered over the house floors. No structural remains of the houses were found. A single historic house depression excavated at one Gakona site contained an iron knife blade, and bone refuse and ash in the central fire pit. A large number of storage pits near another recent village site at Gakona were excavated and contained charred wood, poles, and birch bark remains, though little structural information appears to have been derived from these remains. Excavations in house depressions at the site near Slana apparently produced no structural remains, though enough evidence was preserved to indicate that the houses were the Native type bark houses built before the advent of notched log dwellings. Spruce needles and wood chips were also preserved in the midden refuse near the houses. Bone and wooden points or awls, glass trade beads, a bone comb, tci-thos, and beaver teeth were found along with bone debris and ash in the midden deposits. At Batzulneta, test pits and trenches were excavated in an area where thirty storage pits were found, but yielded only scattered pieces of charcoal. Another site in the area had a number of house depressions and associated middens which contained a large number of glass beads, but apparently was not excavated. These sites were all located relatively near the Copper River or its headwaters, usually on small clear-water streams, and produced little information beyond what was known from historic accounts.

In 1953, William Irving conducted a survey in the western part of the Ahntna area around Lake Susitna, Tyone Lake and Tyone River, and Lake Louise (Irving 1957). He identified eleven sites in the area, two of which had notched log structures and contained trade materials, including a copper pot, glass beads, and items of tin and iron. Five of the sites had remains of semisubterranean houses. Of the 22 depressions identified, several were tested but apparently produced no evidence of structural remains. Cultural remains recovered in these test excavations were scant, though one site contained abundant fish bones and another had an accumulation of caribou antlers lying near one of the house depressions. Artifacts found included waste flakes, tci-thos, an end scraper, a flat grinding stone, a hammerstone, a notched pebble, a spatulate bone implement, and a badly weathered antler implement. Rectangular storage pits were also present at most of these sites that had dwelling depressions. Two earlier sites were also found, one of which had 32 implements exposed on the surface, including a small flat piece of native copper. Pieces of bone and charcoal were also found on this site, though no house depressions were noted. The other site yielded only a single prismatic flake and also had no house depressions.

In 1954, James Vanstone conducted excavations at Taral, a historic village near the mouth of the Chitina River (Vanstone 1955). In addition to several small log cabins, which he assumes were built by gold rushers wintering at the village in 1898 or 1899, eight house depressions were identified at the village. Though one was excavated and three others tested, no cultural material or structural remains were found. Six test trenches of varying sizes across the site did, however, yield a few

artifacts in the upper level, all apparently from the post-contact period. Items of native manufacture included a bone tube, tci-thos, a barbed antler point, several pieces of cut birch bark and an iron knife blade. Trade goods included glass beads, square-cut-iron nails, clay pipe bowls, fragments of dishes and cups, cartridge cases, pieces of cast iron stove, and a U.S. 1878 quarter. Another small village site was found approximately 1/4 mile (.4 kilometers) above the mouth of Taral Creek, but excavations in one of several house pits on the site produced only very recent items such as beads, cartridge cases, and broken glass. No structural remains of the house were found.

In 1973, two house pits at an early historic site (Dakah de'nin's Village) on the Copper River south of Chitina (see Map 1) were excavated by Shinkwin (1974). A preliminary report by her indicates that much structural information was obtained on both houses in addition to a comparatively large collection of artifacts. Wood slabs, poles and posts, as well as grass remains found in the burned dwellings suggest that two types of houses were built by the Ahtna. One is the type described by Allen in 1885, and the other is a smaller, moss-covered house overlain by blocks of turf. Features such as firepits lined with stone slabs and similar boxes for steam bath rocks were also found in the houses. Though the structural details correspond closely to the historic descriptions, much new information on Ahtna houses was gained even though much of the structural component was missing. Artifacts recovered also added considerably to existing information on Ahtna material culture, including coastal trade items of ivory and slate, plus a number of marine shell artifacts. Perishable objects recovered included two items of birch bark and one of wood, as well as a number of bone artifacts. A quantity of copper artifacts were also recovered, as were historic trade items of iron and brass and a number of glass beads.

In 1974, Gerald Clark conducted excavations at a number of sites along the southernmost portion of the Trans-Alaska Pipeline Corridor (Clark 1974). Most were test excavations of limited size, though two house pits and three cache pits were excavated at a site (49-GUL-76) near the confluence of the Gulkana with the Copper River (see Map 1). The two house pits yielded a wealth of structural remains, though the superstructure of one had been destroyed when it burned. Floor planking split from small poles was found in both rooms of the burned dwelling. Portions of a bark container, part of a woven bark item, and fragments of five wood vessels were also found. A grooved hammerstone or maul and remains of dried fish were also found in the house pit, though little in the way of faunal remains were found and no fire hearths were present.

The unburned dwelling excavated produced more architectural details, though only one room of the two-room dwelling was excavated. Planks made of split poles and bark that had composed the superstructure indicated that both rooms had a single plank roof, oriented lengthwise, and walls of thin vertical planks, possibly with horizontal members interwoven. No evidence was found of a sod or earth covering on the roof or walls.

Several layers of flooring, consisting of planking, bark, and spruce boughs, were encountered, though none with fire hearths. Lack of fire hearths and sod or dirt covering indicates that the structure was probably a summer dwelling. A hammerstone and two bark baskets were the only artifacts recovered, and almost no faunal remains were present.

The three cache pits excavated at the site produced little in the way of structural remains, except for plank flooring. A needle sharpener was the only artifact recovered from the pits, though three fire hearths near one of the pits produced both mammal and fish bone, waste flakes, two bone awl fragments, a copper awl, a cobble spall tool, a core, a chipped stone scraper and a chipped stone knife. Because of the lack of Euro-American trade items, the site is considered to represent a fully prehistoric occupation.

William Workman (1976) excavated at another late prehistoric Ahtna site (49-GUL-77) near Gulkana in 1975 (see Map 1). The site has over 50 storage pit depressions located along a gravel ridge approximately 3/4 mile (1.2 kilometers) long. Five pits were totally excavated and seven others were tested at the site which was to be utilized as a gravel source for pipeline construction. In addition, approximately 172 square meters of a campsite area were excavated, and other localities of the site were tested. Only one house pit was identified on the site, but that feature was not excavated. About 20 additional pits were found when the area was stripped of soil preparatory to gravel removal, as were 20 additional widely scattered fire hearths.

The storage pits excavated had structural elements preserved to varying degrees. Most had wooden timbers on their bottoms, some with additional bark lining. One had criss-crossed poles on the bottom, one had two floor levels, and one a central support post. Many had remnants of collapsed sidewall timbers, and two had remains of covers made of small poles lying alongside the pits. Most yielded no artifacts, though three burned birchbark baskets were found in one. Seven others yielded only 12 artifacts and a small quantity of fish and mammal bone.

The bulk of the 359 artifacts recovered came from the small campsite area, which also produced 9-10 fire hearths and post holes associated with a large fire hearth that seem to indicate a lean-to type structure. About half of the 281 identifiable animal bones recovered also came from this campsite area. A possible steam bath and remains of a human cremation were found elsewhere on the site, and an abundance of fire cracked stone was associated with the numerous fire hearths.

Artifacts included 74 items of native copper, 57 of bone, antler or horn, 184 of fine grained chipped stone material, 44 of coarse grained stone, and four of wood or birch bark. Fragments of sheep horn and marine shells were also found. No historic trade items were found, and the campsite appears to represent a late winter/early spring occupation some 200-400 years ago, ± 100 years.

Archeology in the Copper River Basin has largely been confined to historic and prehistoric sites on the Copper River and its major tributaries. Many details of the ethnographic record remain to be filled in by archeological work, and most of the prehistoric period remains undocumented. Preservation, at even the later sites investigated, appears to be dependent upon the vagaries of chance, though much new information on dwellings and material culture in general has been gained wherever perishable components were preserved. Discrepancies between the ethnographic data and the archeological record have arisen and will be clarified only through additional archeological research.

SITE DESCRIPTION AND EXCAVATION PROCEDURES

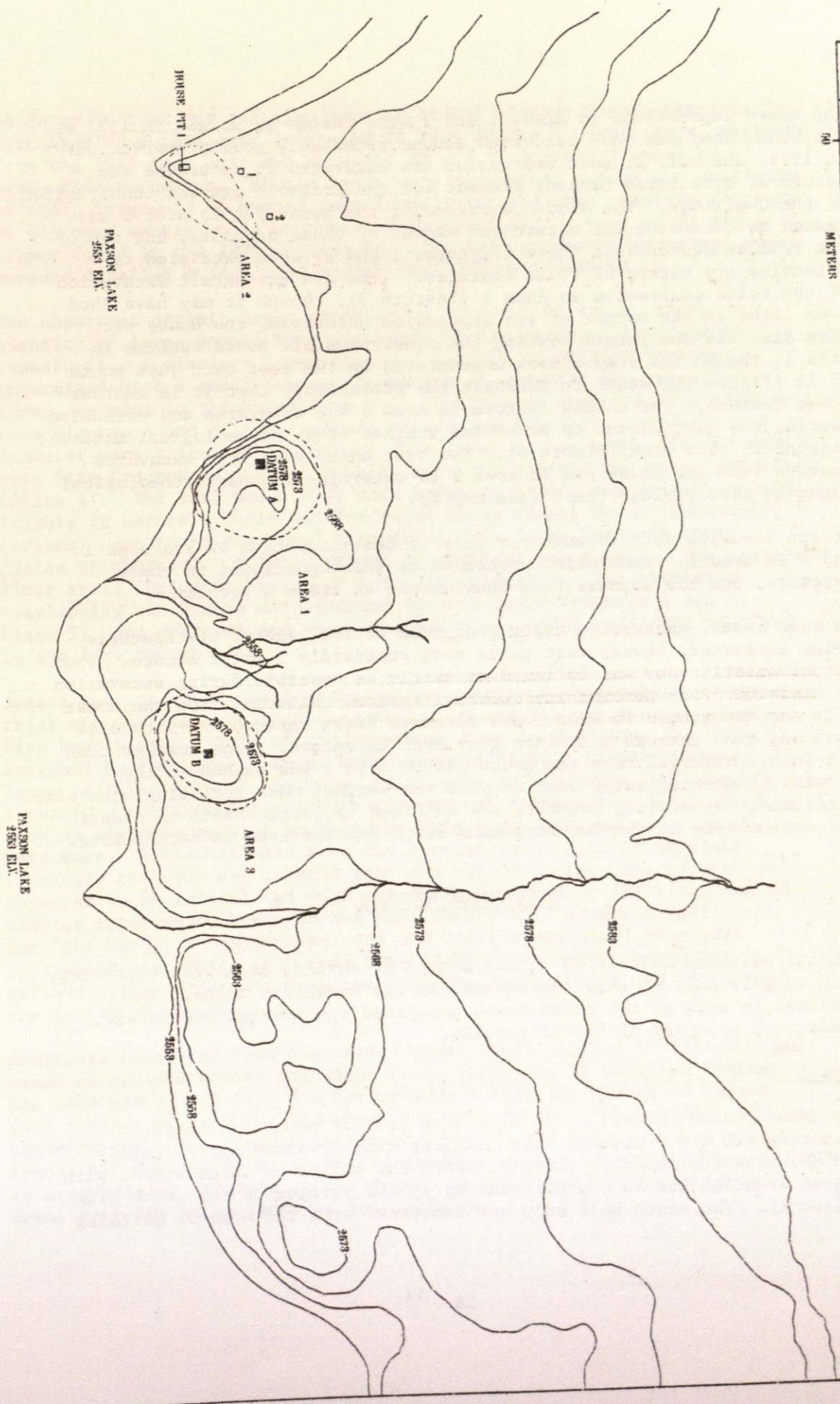
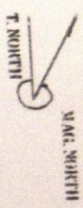
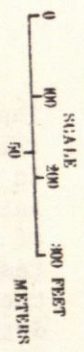
The archeological site 49-GUL-79 consists of two house sites on the eastern margin of Paxson Lake (see Map 2). One house site (Area 1) is located at the top of a low knoll which rises approximately 20 feet (6 meters) above the lake surface. The knoll provides an unobstructed view of much of the lower lake and surrounding shorelines and is well drained. The eminence also catches local breezes, which help provide some relief in summer from the abundant mosquitos. The knoll top is marked by a prominent grassy clearing bordered by three white spruce on its south edge (see Plate 1). Vegetation surrounding the clearing is dominated by dwarf birch shrubs three to four feet (1 meter) in height with smaller shrubs such as labrador tea and low bush cranberries and a ground cover of lichens and mosses.

A prominent house depression is located on the south-east side of the clearing and three additional smaller depressions were identified outside the clearing. The outline of another possible house was noted on the north-west side of the clearing, but is considerably shallower than the other house depressions (Figure 1).

The other house site (Area 2) is located just to the north across a shallow cove (see Map 2). A house was apparently located in a "U" shaped depression there near the end of a prominent point of land which rises only about five feet (1.5 meters) above the lake surface. The "U" shaped depression appears to have been formed by ice pushing up beach material as a result of inshore expansion. Vegetation on the house site is largely grass, with pioneering plants such as willows near the active beach, and dwarf birch grading into a poorly drained black spruce muskeg farther from the shoreline (see Plate 1).

A cobble feature was found on the knoll (Area 3) south of Area 1. This knoll also rises approximately 20 feet (6 meters) above the lake, and would appear to have been a better house site than the others, since it is near a sizeable stand of spruce trees, and small clearwater streams which run all summer border the knoll on both sides. Willows dominate the drainage margins, grading into upland spruce forest.

49-GUL-79
 CONTOUR MAP
 AREAS 1, 2 AND 3



The house depressions in Areas 1 and 2 were tested by Holmes in 1975 and the bone, wood and bark recovered showed remarkably good preservation. In 1976, one half of each depression was excavated to determine the nature of structural remains present and the probable age and construction of the dwellings. The midden surrounding the house pit in Area 1 was tested to determine the nature and extent of those deposits, and two of the smaller depressions there (Features 1 and 2) were excavated to determine the nature of those features. Time did not permit excavation of the third depression in Area 1 (Feature 3), though it may have shed some light on the nature of the depression underlying the house pit. Time also did not permit testing the other possible house outline in Area 1, though the deep midden encountered in the test unit just south of it (Figure 1), seems to increase the probability that it is another house feature. The cobble feature in Area 3 was excavated and extensive testing was carried out to determine whether other archeological material existed in that area (Figure 3). Two test units were also excavated inshore from the house pit in Area 2 to determine whether archeological deposits were present there (see Map 2).

Frozen deposits were encountered only in the excavation of Features 1 and 2 in Area 1. Excavation proceeded as thawing allowed in these deposits, but the wetness from thawing was at times a problem.

In most cases, excavation units conformed to the size of the features being excavated, though test units were standardly 1 meter square. The actual stratigraphy was followed as nearly as possible during excavation to minimize cross cutting any cultural layers. Material from the house pits and the midden in Area 1 was screened first through 1/8-inch size mesh and then through 1/16-inch size mesh to recover items smaller than 1/8-inch. Material from the house pit in Area 2 was washed in the screens by pouring water over it when wet weather made screening otherwise difficult. Otherwise, backdirt was confined to large sheets of plastic for convenience in the two screening steps and for ease in backfilling.

EXCAVATION RESULTS

A total of approximately 45 square meters of surface area were excavated, with roughly half of this represented by the house pit units. The findings in each of the three areas excavated are treated separately, since each produced different results.

Area 1

The house feature excavated in Area 1 is roughly square in shape, measuring 4.5 x 4.7 meters, with the long axis oriented approximately 320°MN. The feature dips steeply toward the center on three sides, with a more even incline to the surrounding ground surface on the south side (Plate 3). The south half only was excavated with the hope of defining

an entry at that end and also because it had already been substantially disturbed by a test unit excavated in 1975 (Plate 5). Initially, backdirt from the 1975 test unit was screened to see if screening would be a productive technique. Eleven beads were recovered, though the multitude of small fragments of burned bone found indicated that complete recovery of all bone debris would probably be impractical. A very small piece of copper found in the 1975 testing had also indicated that screening might produce detailed evidence of copper tool making processes.

The uppermost organic layer produced no cultural material, though a quantity of large mammal bone (probably mostly caribou) lay directly beneath it. A distinct layer composed largely of organic residues intermixed with a small amount of pea gravel underlay the vegetation layer, varying in thickness from 5-15 centimeters over the area excavated (see Figures 4 and 5). Occasional stream cobbles 5-10 centimeters in diameter were scattered throughout this layer in the house pit and many were fire fractured. Larger cobbles occurred outside the house pit area (Plate 4). The soil was a very dark brown in color, and compact though friable in nature. Whole and fractured large mammal bones (presumably caribou) were found scattered throughout this layer, as were small pieces of charcoal. A large amount of charcoal was noted in the southeast floor area, including pieces of pole-size diameter. Two partially overlapping ash lenses were exposed in this layer (Figures 3 and 5; Plate 5), and charcoal and small fragments of burned bone were abundant in the fire hearth area.

Toward the center of the depression the scattered mammal bone became a thick and distinctive layer (see Plates 10 and 11) which underlay the fire hearth area. Some of the uppermost bone in the layer had been scorched by the fires. Thus, what appeared to be a single cultural layer near the edge of the house pit, seems to represent two somewhat separate occupation intervals in the central depression. Wood chips, such as might be made by an iron chopping tool, were abundant in the bone mass. A flesher made from the metatarsus of a large ungulate (probably caribou) was located near the bottom of the bone deposit and appeared to be articulated with the distal portion of the tibia and the smaller intervening bones of the hock (Plate 6). A cobble spall tool (or "tci-tho"), a hammerstone, and six glass trade beads were also apparently associated with this bone layer. The basal portion of a caribou antler which had been cut from the outer antler was found near the bottom of the bone layer.

Artifacts recovered from the entire upper level include 117 glass trade beads of various colors and sizes (none faceted), 16 obsidian flakes, one bone pin or awl tip, one barbed bone point, two pieces of copper (one a piece of factory-made sheet copper), three cobble spalls, and two hammerstones. A curious fragment of gray colored porcelain was also found, but appears to be of modern manufacture and is probably intrusive. An overwhelming majority of the artifacts came from the house floor area, very few being found on its perimeter.

Under the organic layer an irregular layer of fine gravel and sand was encountered (Plate 11). The layer ranged from 0.5 centimeters in thickness near the central depression in the house pit, to 15 centimeters in thickness near the outer wall areas (see Figure 5), and was not continuous across the unit. Nothing of cultural origin was associable with the gravel layer.

Beneath the gravel a layer of dark brown compacted moss occurred over much of the unit area (Plates 7 and 8), but was much thicker in the central depression (Plates 12 and 13). This layer is further divided by a thin layer of gravel (2 centimeters thick) near the center of the house pit and also splits near the edge of the central depression, the lower layer dipping steeply downward into the basal gravel where it becomes indistinct (Figures 4 and 5; Plate 9). Two possible end-scrappers, a hammerstone, five obsidian flakes, and 11 glass trade beads came from the moss layer near the edges of the house pit, though no cultural material beside charcoal fragments, rotted wood and mammal bone fragments were associated with this layer in the central depression. Two glass trade beads also came from the gravel layer in the central depression, but since the beads show such a sharply descending frequency gradient with depth, it is likely they all derive from the upper cultural layer.

The house pit feature in Area 1 appears to be the product of two different use modes. Though no structural elements or post holes were found, the upper level appears to have been a dwelling, probably semi-subterranean in form, but possibly a canvas or hide tent since the amount of fill over the apparent living floor was not great. The deep, sloping-sided pit underlying the dwelling floor seems likely to have been a cache pit, perhaps originally similar to the pits of Features 1 and 3. Feature 3 is more comparable in size and depth, but unfortunately could not be tested in the time available. It is also conceivable, however, that the deep central depression is the product of subsidence from thawing in a deep ice layer. Clark (1974:56-57; Figure 27) suggests this explanation for apparent subsidence in floors of a storage pit excavated at 49-GUL-76, though that feature shows considerably less dip than does the central depression of the house pit excavated in Area 1. Also, only one pole-sized wood element was noted in the deeper moss layer (Figures 4 and 5), and no artifacts were associable with the moss layer in the central depression area.

Stratigraphy suggests that the feature was originally a fairly large pit excavated into underlying gravel and that the material removed was piled to the sides of the pit (Plate 14). Bone refuse widely scattered over the site, and apparently representing caribou remains predominantly, indicates that caribou hunting was a major activity of the aboriginal occupants. Some bone was found in the deepest moss layer of the central depression, suggesting its use as a cache pit for the game. Caribou are usually abundantly available during migrations through an area, and subsurface storage pits in which to store harvest excesses would increase the usefulness of this periodic food resource. Moss may have been used

to line and cover the pit because of its excellent insulative and moisture absorbing qualities. The concentrated bone deposit appears to represent refuse, or possibly a cache of bone which was never utilized. Gravel over the bone deposit indicates enlargement of the pit at its edges for the dwelling, which was apparently superposed on the cache pit at a later date. This occupation is well represented by the artifacts in the dwelling floor and by the centrally located fire hearth.

Feature 1 was visible on the surface northwest of the house pit (Figure 1) as a shallow depression, but had been heavily overgrown by dwarf birch (Plate 15). The visible depression was approximately 10 centimeters in depth and 30 x 50 centimeters in diameter. After removal of the overlying moss and decayed vegetation, the pit margin was defined by irregular layers of moss and gravel (Figure 6). The cultural layer below the vegetation mat contained charcoal and a quantity of broken mammal bone (Plate 16). Artifacts from this level included a hammerstone and a cut piece of caribou antler (possibly a net guage). The underlying layer of ash and burned soil was followed by a layer of bone which included small mammal and bird bone, as well as both whole and broken bones of larger mammals (probably caribou). One glass trade bead was associated with this layer.

A thin layer of ash occurred next over a layer of compact moss which contained no cultural material and was similar to moss outlining the pit wall. The layer of bark and wood beneath the moss consisted largely of spruce cones and twigs and birch bark and twigs. A few fragments of large mammal bone and a small flesher made of antler were found in this layer. No cultural material was found in the moss layer at the bottom of the pit.

The final dimensions of Feature 1 were 90 x 123 centimeters with a depth of 52 centimeters. The feature was probably originally a small cache pit, later used as an outside fire pit and then abandoned. The fill in the pit was still frozen when it was excavated the first week of July, and the pit might have served excellently as a cold storage cache for meat in spite of its relatively shallow depth.

A second depression was identified north of the clearing in the surrounding dwarf birch thicket (Figure 1). This depression, Feature 2, was visible as a shallow elongate depression approximately 2.5 meters long and .5 meters wide. A number of rotted logs 12 to 15 centimeters in diameter and aligned with the long axis of the depression were found underlying the upper vegetative mat. Below the logs, a trough-shaped depression was defined by a loose gravelly soil, contrasting with the surrounding compacted organic deposits. Broken mammal bone and stream cobbles were scattered around its periphery (Plate 17). Some of the logs dipped downward into the west end of the trough and one appeared to be the base of a vertical post supported by cobbles (Plate 18). Many of the logs appeared to extend beyond the area excavated.

The gravelly soil marking the trough area proved to overlie two rotted logs approximately 25 centimeters in diameter (Plate 19) and two smaller logs extending into the trough from the west end of the excavation. Rounded cobbles and gravel were also found in the trough, and undisturbed gravel underlay the rotting wood.

A concentration of ash which appears to represent a fire hearth was defined in the cultural level at the east end of the trough and extended beyond the area excavated (Figure 7). Quantities of scattered ash and charcoal surrounded much of the trough, as did a considerable quantity of whole and broken mammal bone. Four glass trade beads were found in the cultural level surrounding the trough-like feature.

Because of time limitations, the area excavated at Feature 2 unfortunately could not be expanded to include a larger area, though it appears to represent a part of some larger cultural feature not confined to the trough shaped depression. The pole size logs encountered just below the surface and the vertical post may represent the superstructure of an above ground lean-to type dwelling. The compacted organic layer surrounding the trough seems to indicate a floor, or well used activity area, and the fire hearth and scattered bone also suggest a larger activity pattern. The function of the trough-shaped pit remains somewhat of a mystery, the only cultural material associated with it being an iron knife blade of native manufacture found in the gravelly fill. The trough-shaped pit had a final size of 145 x 58 centimeters with a depth of 70 centimeters, and most of the gravel from it had been thrown to the north side of the pit where it overlay the scattered bone debris. The bone overlay a compact moss layer in which were found glass trade beads. This moss layer appears to correspond to the cultural layers identified in other locations at Area 1. Deposits surrounding the trough were not excavated to the gravel base, so a complete stratigraphic profile was not obtained.

Test units excavated in Area 1 (Figure 6) showed a generally shallow but undisturbed cultural deposit (Figures 8-10). Unit G showed a thicker cultural layer, possibly representing midden from the assumed second housepit. Gravel was found underlying the cultural layer in Units D and F, and overlying a compacted non-cultural moss layer as in the house pit (Plate 21). In Unit G a layer of sandy loam separates the cultural layer from the underlying layer of compacted moss. A thin layer of ash between the moss and loam layers does not appear to be of cultural origin. Artifacts from the test units included eight glass trade beads and an iron knife blade of native manufacture. Other cultural material included seven fish bones (six vertebrae) from Unit G, as well as bird bone. Charcoal was mixed throughout most of the cultural deposits in the test units, as were broken fragments of large mammal bone (Plate 20), some heavily burned and broken into small pieces.

The midden in Area 1 is generally shallow, but shows up as a nearly continuous deposit over the house site area. Though the midden has no major subdivisions and appears to represent the accumulation of relatively

coeval occupations, many minor stratigraphic variations are defineable which indicate that the site had multiple occupations and the midden may be the accumulated product of a fairly extended period of use.

Cultural features in Area 1 are also relatively well preserved, though many perishable elements are missing, or not entirely preserved. Details of the house feature indicate multiple occupations, perhaps of a yearly separation, and may also represent two different uses of the area in two separate periods of time.

Bone is scattered over the entire knoll just below the surface vegetation mat, and in some areas projects through to the surface. Several broken pieces of large mammal bone were also found along the lakeshore below Area 1, indicating that activities probably ranged over the immediate surroundings.

Area 2

One half of the house feature identified in Area 2 was excavated and two outlying test units were excavated to determine whether additional cultural deposits exist in that area (see Map 2). The house feature is located in a natural furrow near the tip of a low point of land (Plates 1 and 2). The house depression measures approximately 3 x 5 meters as irregularly outlined by high beach ridges which surround it on three sides. The 4 x 2.65 meter area excavated on the east half of the house depression produced evidence of three floors or occupation levels (Figure 12).

A surface layer of grassy sod and decayed plant remains and gravel overlay the first occupation layer. Removal of this layer revealed a large central fire hearth and decomposed remains of a wood superstructure (Figure 11). Cultural material from the organic deposits overlying floor one included scattered bone and charcoal, as well as unburned wood fragments. Artifacts found consisted of two pieces of glazed pottery of Euro-American manufacture, a small piece of iron, five glass beads, a pebble incised with parallel opposing scratches, and a boulder spall tool. The large central fire hearth was distinguishable by ash and partly burned wood and charcoal intermixed with the organic material (Plate 22).

The lower level of the overlying organic layer was considerably more gravelly over much of the excavation and contained more intermixed cultural material, such as bone (Plate 23), charcoal, and wood. Artifacts were also more numerous, including 12 glass trade beads, three pieces of the glazed pottery bowl, five chert flakes and a cobble spall tool. Remains of the superstructure lay in this level (Plates 24 and 25), consisting of small logs 10-15 centimeters in diameter in a fairly decomposed state. A piece of birch bark found with these logs had seven glass beads adhering to it. Other small pieces of rotted wood were found throughout this level, and may also have represented remnants of the superstructure. No post holes were identified for vertical supports of a structure.

The first house floor encountered consisted of a dark compact layer containing much charcoal and fire fractured rock and showed a distinct boundary near the beach ridge. A larger amount of burned bone was present in this layer and the central fire hearth was clearly defined. Artifacts associated with the house floor included 74 glass trade beads (one fractured), one piece of the glazed pottery bowl, one piece of iron, a piece of birch bark with awl perforations, a chalcedony flake, and a cobble spall tool. The fire hearth contained a large amount of ash and charcoal, including carbonized spruce needles, and a large number of small pieces of heavily burned bone. Artifacts associated with the hearth area included 37 glass grade beads (some of which had been partially melted) and 18 pieces of the glazed pottery bowl.

Beneath the first house floor was a layer of sandy gravel which contained a few charcoal fragments and a small amount of broken bone. Few artifacts were found in this layer, totaling only three glass trade beads and two flakes.

The second house floor or occupation level, was a compact dark brown layer with a peaty texture. Near the center of the depression this layer was much thicker and was indistinguishable from what proved to be a third floor layer below (Figure 12). Fire fractured rock and broken bone were abundant in this level, and a large boulder was found near the south-west corner of the excavation, extending into the gravel below the floor level (Plate 26). Artifacts from this level included 24 glass trade beads, four fragments of the glazed pottery bowl, a piece of iron, an obsidian scraper, 21 flakes, three cobble spall tools, and three cobbles showing use as hammerstones.

A sandy gravel layer separated the second and third floors over part of the house depression. No cultural material was associable with this layer. Where it occurred, the third floor layer appeared below it as a compact black layer with patches of charcoal throughout. A few pieces of broken bone were recovered from this floor level, and a scattering of rock, some fire fractured, was found over the south part of the excavation along with a quantity of charcoal. Three flakes were the only artifactual material found in this layer.

A thin layer of compact organic material underlay gravel below the third floor in parts of the excavation, and near the northwest portion of the unit was a thin layer of charcoal (Plate 27). Only one flake was recovered from this basement layer, and was probably intrusive, since no other cultural material was noted.

Most of the cultural material recovered in the house pit came from the central part of the depression, with very little associated with the outer wall area. Pieces of a glazed pottery bowl of Euro-American manufacture were found in both the first and second floor levels, though the four fragments from the second floor may have been intrusive, or the result of ineffectual stratigraphic control. Both levels had a large

number of glass trade beads associated with them, as well as pieces of iron, so it is likely that both date from the historic period. The limited amount of material from the third floor level makes it difficult to assign that occupation to any period of time.

Structural remains found in the excavation tell little about the type of dwelling represented. The structure does not appear to have burned, but partly burned logs in the uppermost level of the central fire hearth may indicate that some of the structural elements were used for firewood sometime after the structure was abandoned.

No midden accumulation was present around the house site in Area 2, possibly due in part to the active nature of the beach and beach ridges. A water-worn chipped stone projectile point or punch was found on the outer wall of the beach ridge near the house depression. Several flakes and an unusual chipped stone artifact shaped somewhat like a truncated triangle were also found on the beach within the limits of the dashed line in Map 2. These were only slightly beach-worn and appeared to have been washed out of the upper beach gravel.

To test whether older archeological deposits were present on the point, two one-meter-square test units were excavated inshore from the beach. No cultural material was found, though it is possible that the area was used occasionally by prehistoric inhabitants of the area in the more remote past.

Area 3

A stream cobble feature found in Area 3 shows that the project area had been subject to incidental use by aboriginal inhabitants. This feature was exposed (Plate 28) and additional test units were excavated in Area 3 to determine whether other archeological remains were present (Figure 2). Though many of the cobbles in the feature were fire cracked, and scattered bits of charcoal were present, the cobbles showed no significant pattern and no artifactual material was found in the excavations.

CONCLUSIONS AND RECOMMENDATIONS

Two localities in the project area have well defined archeological features in the form of house depressions. Area 1 also has other features present, two of which appear to be cache pit depressions. Another trough-shaped depression in Area 1 may relate to some larger cultural feature, possibly a dwelling or an outside activity area. Area 1 also has a shallow though potentially significant midden accumulation surrounding the house site. The midden extends over the entire knoll as evidenced by broken bone lying just beneath the vegetative mat, and even extends down to the lakeshore where several fragments of broken bone were found.

Use of the house sites clearly date from the historic period as indicated by the numerous historic trade items they contain, but both appear to have deeper components which may be protohistoric. The historic occupation of Area 1 may have been slightly earlier than that of Area 2, since many more artifacts of Native manufacture were found in Area 1. Both sites appear to be roughly contemporaneous, however, and have quite similar artifact assemblages.

The artifacts recovered are comparable to those found at other historic sites in the Copper River Basin. The iron artifacts of Native manufacture found at 49-GUL-79 indicate that aboriginal techniques for working native copper were applied to iron when it became available in the Ahtna area. A piece of factory-made sheet copper found at the site also indicates that this metal was probably used in the same way as native copper after it became available to the Ahtna. Two of the historic Ahtna sites that have been investigated in the past show similar artifacts resulting from Ahtna acculturation and use of Euro-American trade material (Rainey 1939:360; Vanstone 1955:122).

The quantity of large animal bone recovered at the site is unusual and indicates that the house sites were probably seasonal hunting camps. Very little archeological work has been done at sites of this type in the Ahtna area. Previous work has been concentrated along the major drainages at more permanent villages where fishing was the main subsistence activity. Little attention has been given to testing the ethnographic model of Ahtna subsistence cycles, especially aspects of seasonal hunting in areas outlying the major drainages.

Structural elements of the houses are poorly preserved at the site and may not yield significant information on Ahtna house construction. It is interesting, however, that neither of the house pit features show the usual rectangular house pit form with attached steam bath usually found in the Ahtna area. Possibly a temporary, above-ground steam bath set apart from the house was used at this site. Bark and brush enclosures for temporary steam baths as well as small tents of hide or drill are described in historical accounts of the Ahtna (West and Workman 1970:44).

The house depressions appear to be substantially smaller than those excavated in the Ahtna area by other investigators. Historic accounts also indicate larger house sizes. Both habitations tested made use of

existing depressions, however, and may not be representative of the usual house form. Preservation of the superstructures was too limited to permit more detailed comparisons.

Superposition of the historic house on what appears to be an earlier cache pit suggests that aboriginal use of the area may have changed in historic times. Aboriginal technology undoubtedly limited the Ahtna's capability to remain in this area throughout the winter. When aboriginal tools for hunting and securing firewood were replaced by more efficient Euro-American tools and materials, the capability of the Ahtna to secure food and fuel under severe winter conditions would have been greatly increased.

Several axe-cut spruce tree stumps were noted in the project area not far from the house sites. These may date from the occupation of the house sites, as no other settlements are near, and stumps have been known to remain standing for over sixty years in interior Alaska. Two of these stumps were collected for possible use in tree-ring dating. Unfortunately, none of the logs found in the excavations was well-enough preserved to be of any value for dendrochronology.

The other area (Area 3) tested during the project shows only an isolated cobble feature of unknown age, possibly a fire hearth. Chipped stone artifacts, notably a well made truncated triangular chipped stone artifact, found on the beach in Area 1 indicate that the area may have had incidental use by earlier prehistoric people.

In summary, the archeological site 49-GUL-79 appears to be important for several reasons:

1. The site appears to represent an early historic Ahtna hunting camp and abundant and well preserved animal bone at the site is uncommon and has the potential to yield important new information on Ahtna subsistence practices.
2. The site may also have components of the protohistoric period, thus representing an undocumented period in which Ahtna Native culture changed profoundly.
3. The artifact assemblage includes items of Native manufacture which show a level of acculturation not commonly found in other archeological investigations in the Copper River Basin.
4. Structures tested at the site are atypical of other Ahtna dwellings and may represent a form or function hitherto unknown.
5. Archeological sites of this type and period are almost unknown in the area represented.

The archeological site 49-GUL-79 is clearly of great significance to Alaskan culture history and also has the potential to contribute information important to understanding changes which occurred in American subarctic groups after Euro-American contact. A fully integrated interpretation of the site will be made at a later date after analyses of the

materials recovered are completed. Perhaps these analyses will shed more light on the nature of the site and the features investigated during this project. The undisturbed nature of the archeological deposits and features at the site is a major positive attribute, and this integrity should be preserved by the BLM in its management of the campground facility.

Though campground construction will not affect the site to any extent, one foot trail is proposed which crosses the knoll in Area 1. This trail should be rerouted around the knoll to direct foot traffic past the archeological area. The trail could be rerouted to the east of the knoll or along the beach west of the site. As the knoll which marks Area 1 is a prominent feature in the local landscape and both house site areas are inviting camping spots, there may be other effects from public use after the campground opens. If camping in the facility is restricted to designated camping pads this will help eliminate surface disturbance from camping activity on the archeological areas. Foot traffic will probably follow established trails, but heavy foot traffic in Area 1 and 2 would rapidly degrade the archeological resources present, since the archeological deposit is shallow and many components such as wood and bone are extremely fragile. Site areas should be protected from any kind of camping activity or concentrated visitor use.

Close monitoring of the campground will be necessary to insure that the archeological site is not damaged by visitor use. In the event that public use of the facility threatens the archeological resources, it may be necessary to excavate Areas 1 and 2 completely to protect the archeological values. The archeological site should be examined by the BLM staff archeologist at least yearly after the campground opens to evaluate its condition and also to identify effects stemming from visitor use which may impact any other archeological features located around the lake. BLM lands on the entire lakeshore should be examined for archeological resources at the earliest possible time in order to track the effects that increased recreation on the lake might have on other features in the vicinity.

Interpretative information on aboriginal use of the area should be incorporated into the visitor information program for the Paxson Lake recreation site. Specific archeological site locations should not be given, though a general statement on laws protecting archeological resources should be included.

The recreation potential of Paxson Lake is clearly one of its greatest resources at the present time, but archeological resources in the area may span a period of hundreds or thousands of years. The long record of Native culture history can only be approached through the scanty archeological remains which have been preserved, yet it can provide invaluable time depth for evaluating the increasingly rapid but long term commitments of natural resources which face us today.

ACKNOWLEDGEMENTS

As with any archeological field project, anywhere, there are people that appear from nowhere to help, or provide some amenities of civilization, then disappear again. The nature of the project at Paxson Lake made these people and their help an invaluable part of the nine-week field project.

The field crew wishes to thank BLM staff Larry Kajdan, Bill King, Herb Brasseur, and Alaska Department of Fish and Game field personnel Mark Chihuly, Craig Gardner and Frank Bird. Also to be thanked are William B. Workman and Charles E. Holmes, for sharing their time and knowledge of this project. Final thanks go to Ty Dilliplane, Alaska State Parks, for comments on the trade pottery and electrolysis of some metal objects recovered in the excavation.

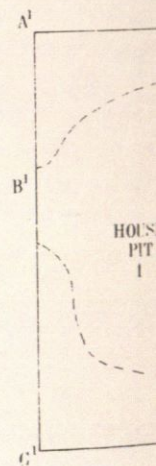
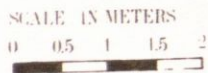
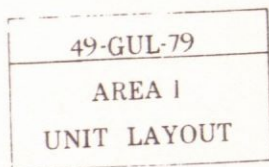
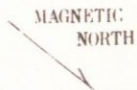
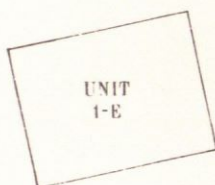
BIBLIOGRAPHY

- Clark, Gerald H.
1974 Archeological Survey and Excavations Along the Southernmost
Portion of the Trans-Alaska Pipeline System, 1974.
Unpublished report. 84 pp., plates. Omaha.
- de Laguna, Frederica
n.d. Ahtna Territory from Childs and Miles Glaciers to Chitna
Rivers. Unpublished notes. 41 pp., maps. Bryn Mawr
College, Bryn Mawr.
- Holmes, Charles E.
1975 Archeological Report: Preliminary Survey of the Proposed
BLM Campground Project at Paxson Lake. Unpublished
report. 6 pp., plates, maps. BLM, Anchorage.
- Huffman, L.L.
1976 Personal Communication.
- Irving, William N.
1957 An Archeological Survey of the Suisitna Valley. Anthropo-
logical Papers, University of Alaska, 6(1):37-52. University
of Alaska, College.
- Rainey, Froelich G.
1939 Archeology in Central Alaska. Anthropological Papers,
American Museum of Natural History, 36(4):351-405. New
York.
- Shinkwin, Anne D.
1974 Dakah De'nin's Village: An Early Historic Ahtna Site.
Arctic Anthropology, XI (Supplement): 54-64. University
of Wisconsin, Madison.
- Vanstone, James W.
1955 Exploring the Copper River Country. Pacific Northwest
Quarterly 46(4):115-123.
- 1974 Athapaskan Adaptations: Hunters and Fishermen of the
Subarctic Forests. Aldine, Chicago. 145 pp.
- West, Frederick H. and William B. Workman
1970 A Preliminary Archeological Evaluation of the Southern
Part of the Route of the Proposed Trans-Alaska Pipeline
System: Valdez to Hogan's Hill. Unpublished report. 72
pp., maps. Alaska Methodist University, Anchorage.

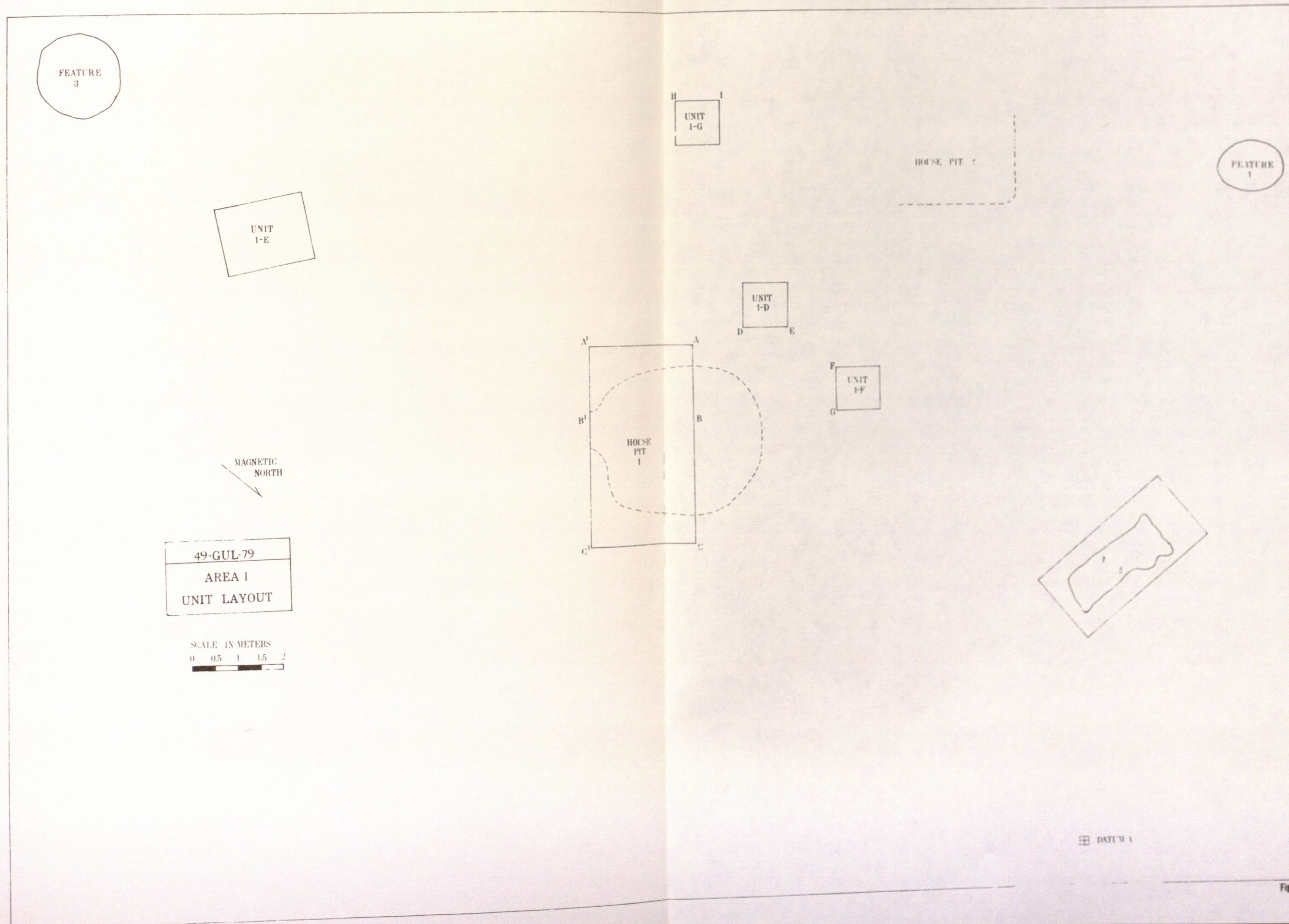
Workman, William B.

1971 Preliminary Report on 1971 Archeological Survey Work in the Middle Copper River Country, Alaska. Unpublished report. 27 pp. Alaska Methodist University, Anchorage.

1976 A Late Prehistoric Ahtna Site near Gulkana, Alaska. Paper presented at the Third Annual Alaska Anthropological Association, March 26, 1976, Anchorage.



A3 11x17 L R A3 11x17



F

G

B

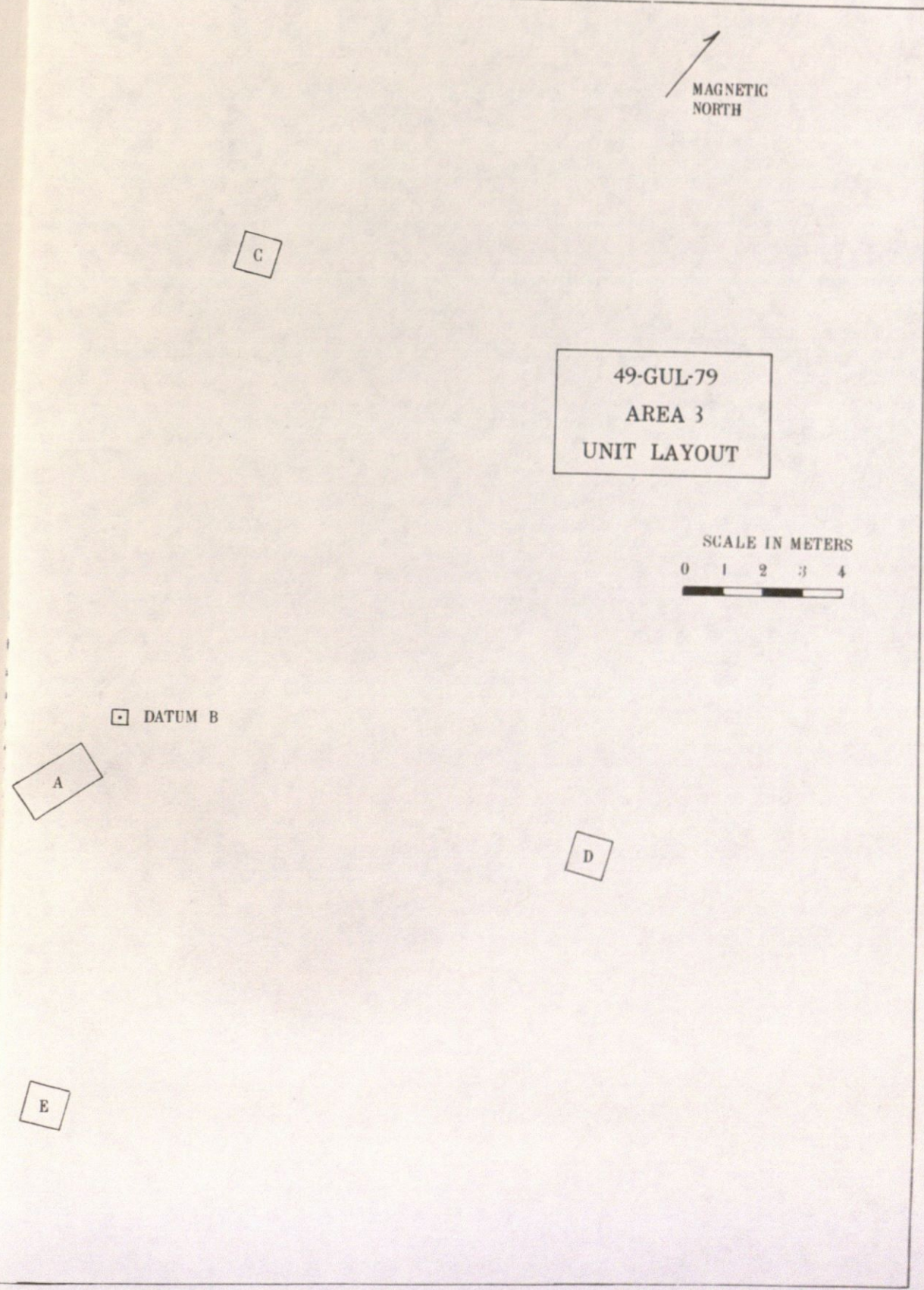
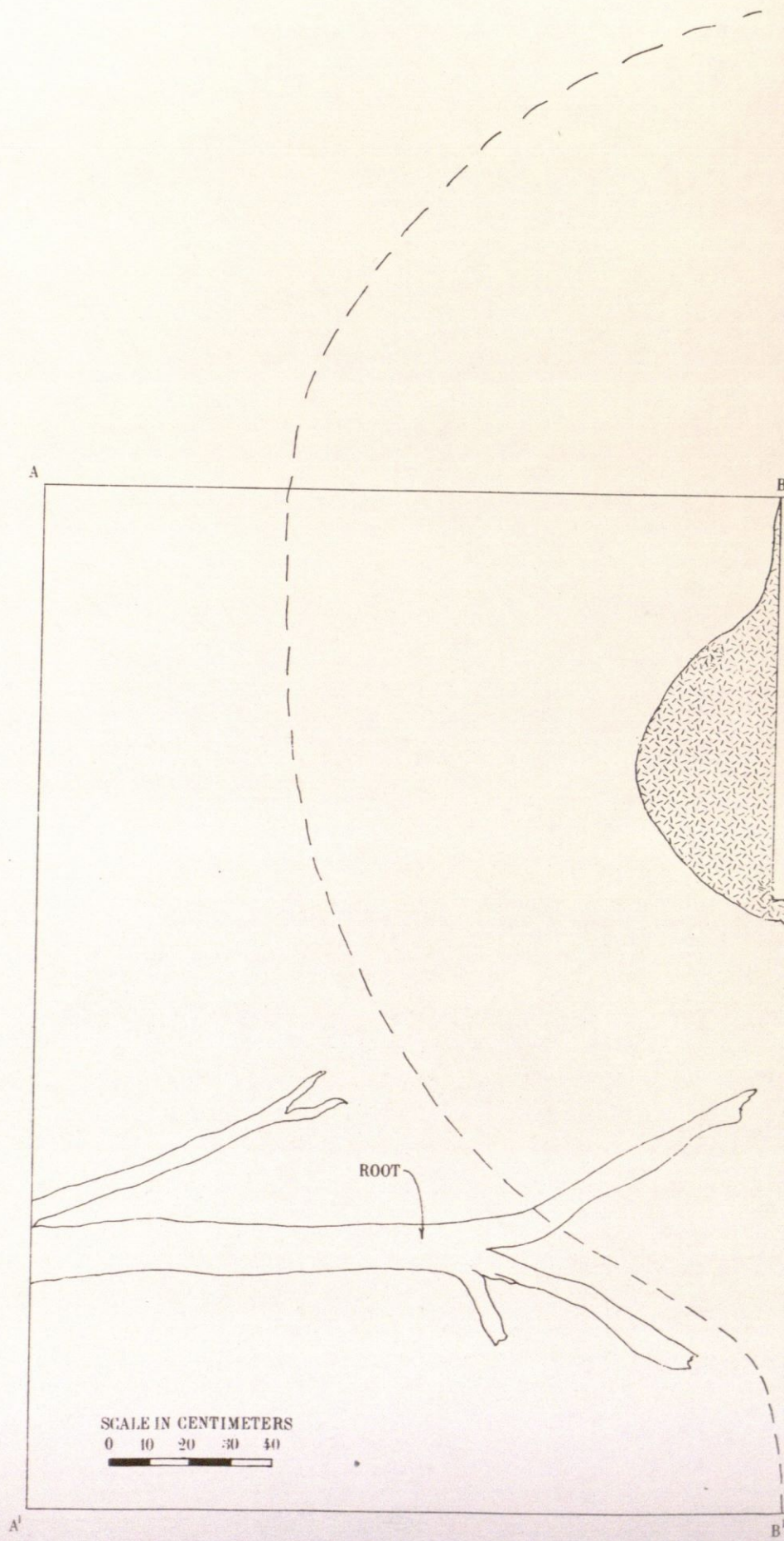
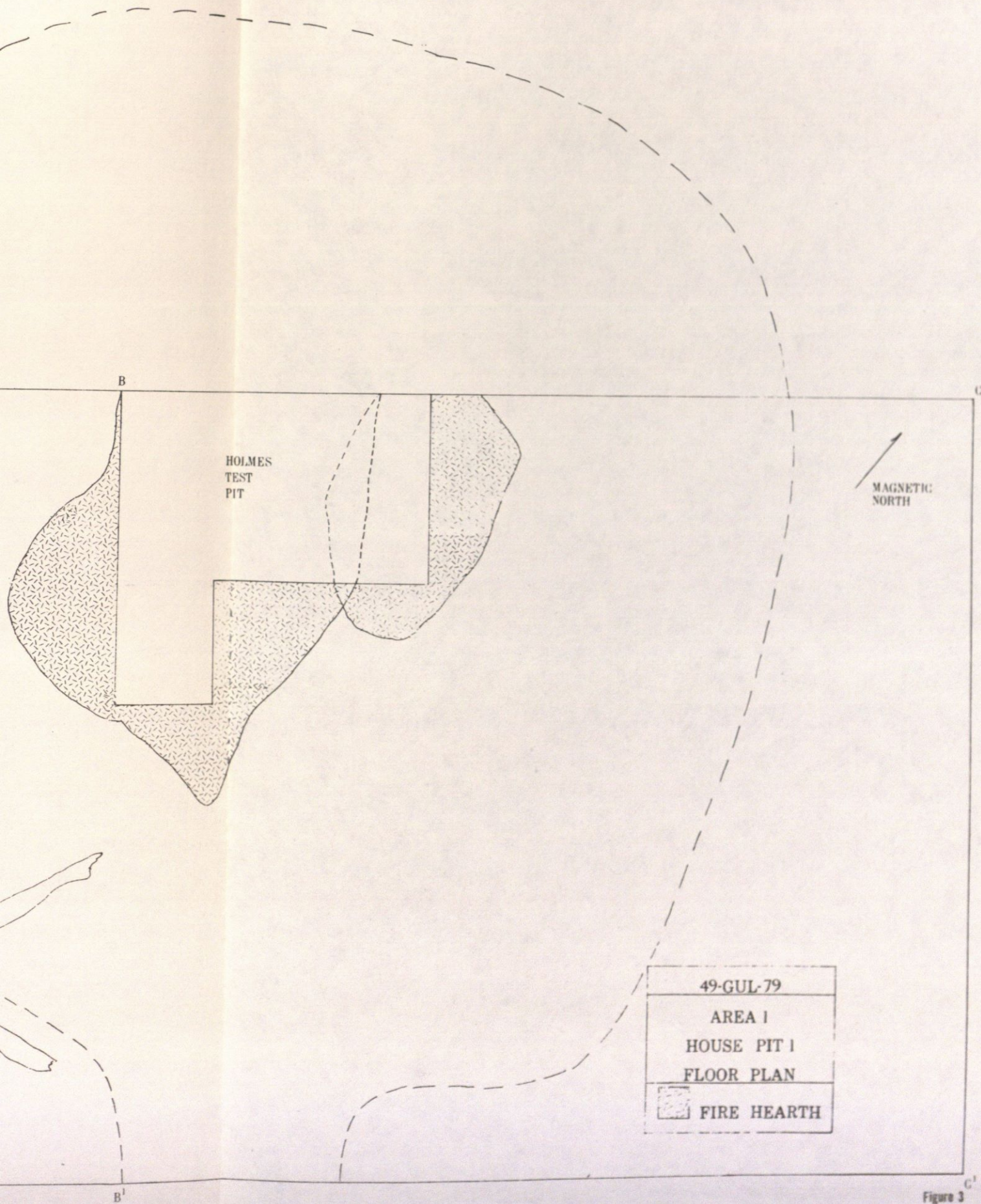
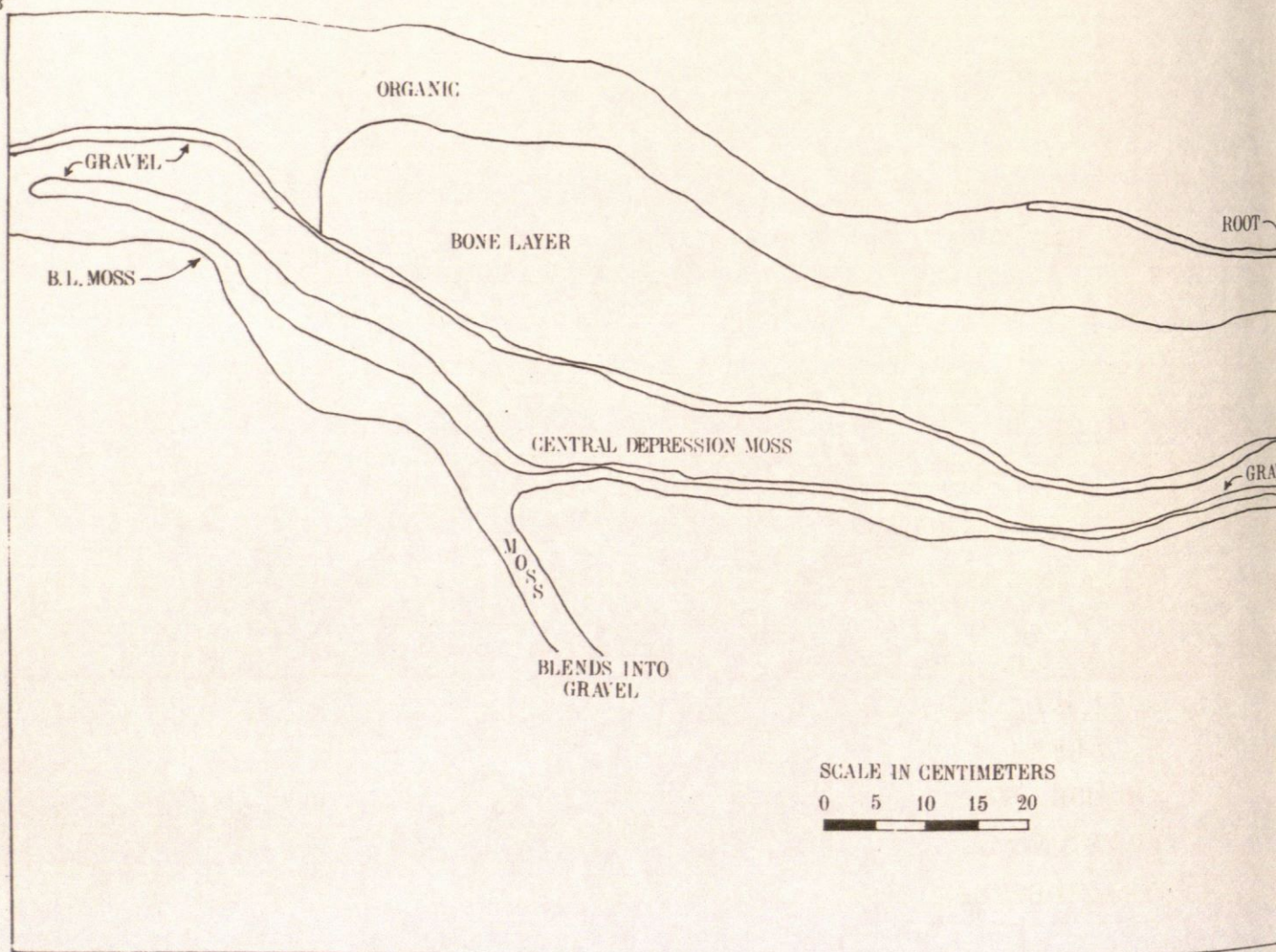


Figure 2





B¹



SCALE IN CENTIMETERS

0 5 10 15 20

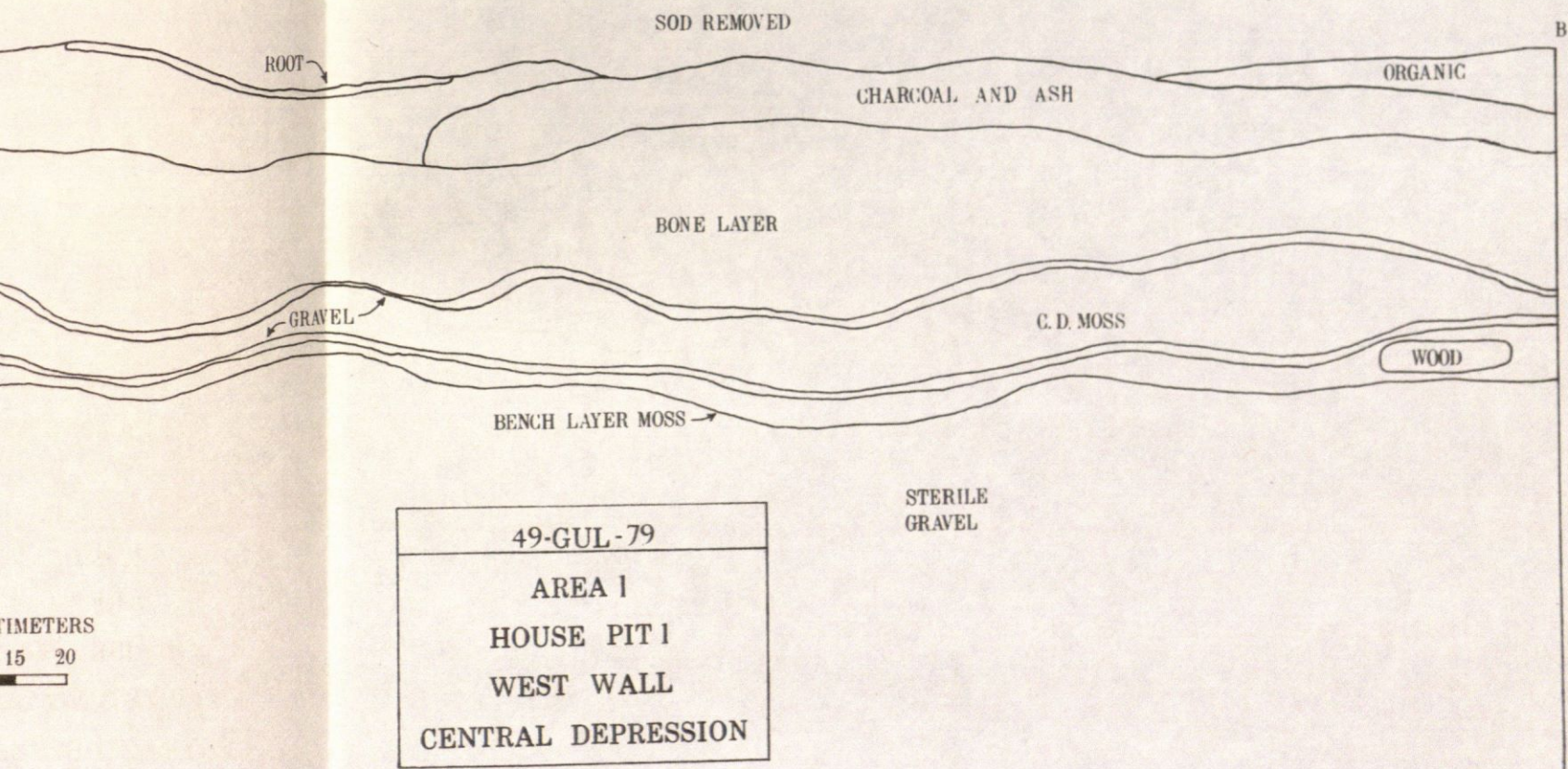
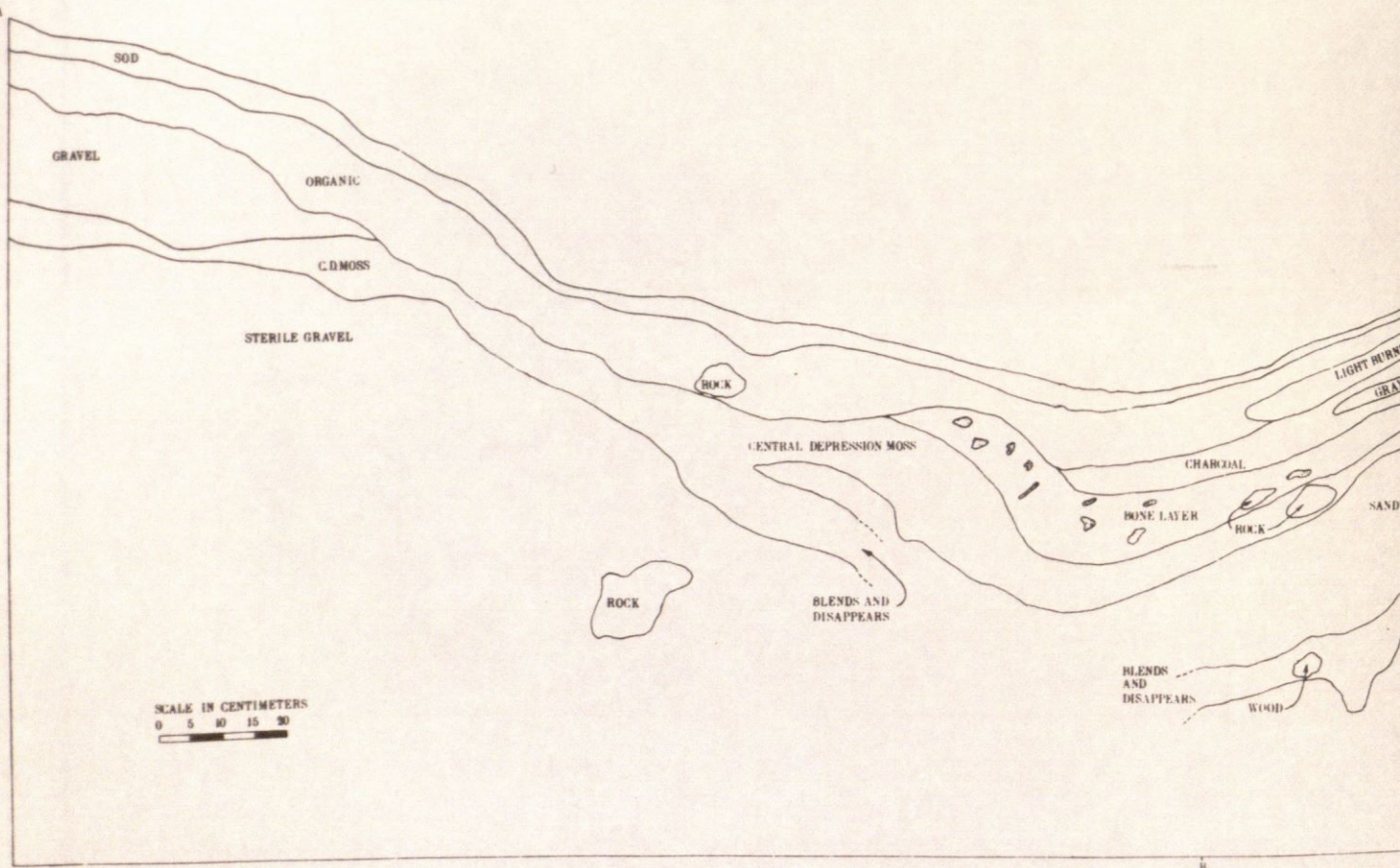


Figure 4



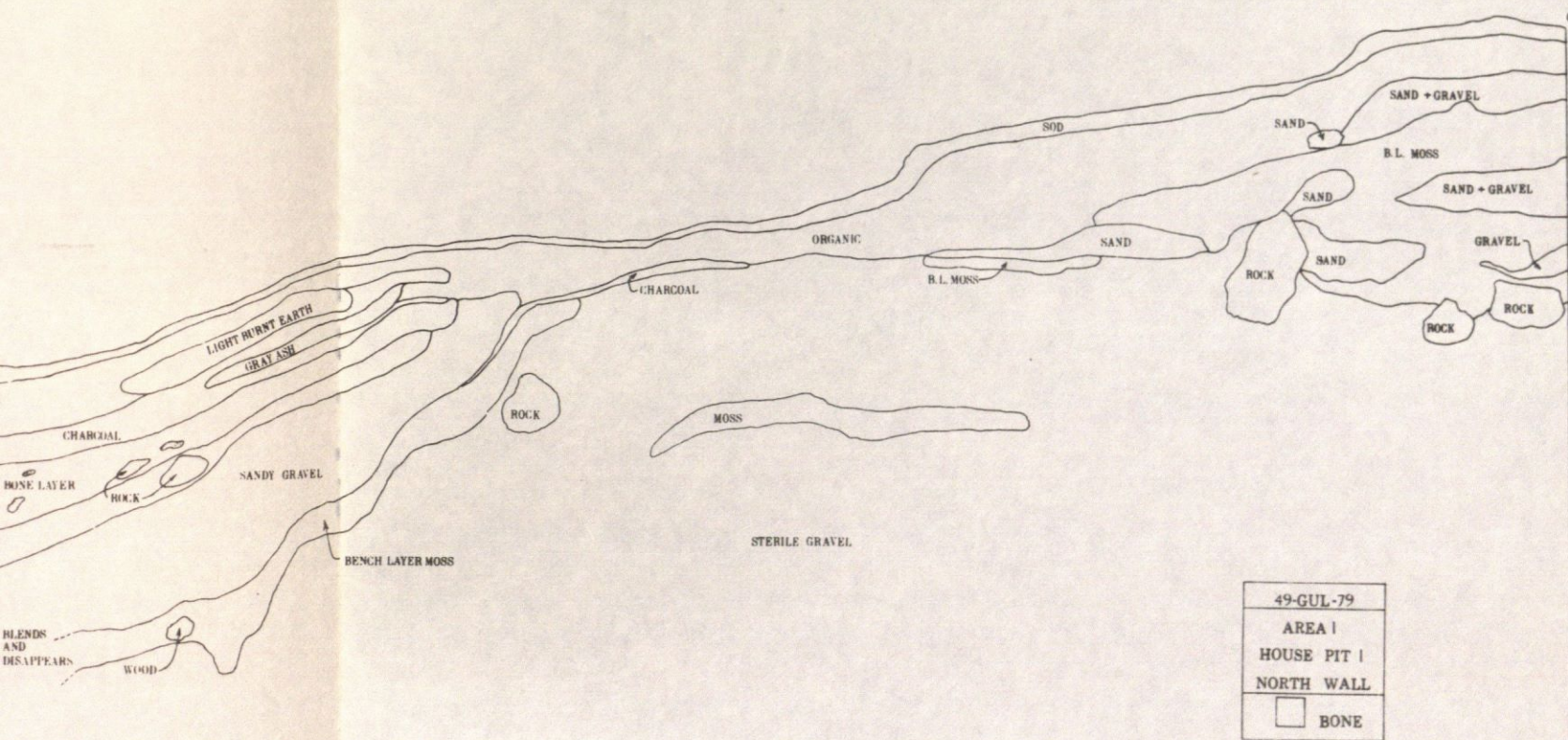
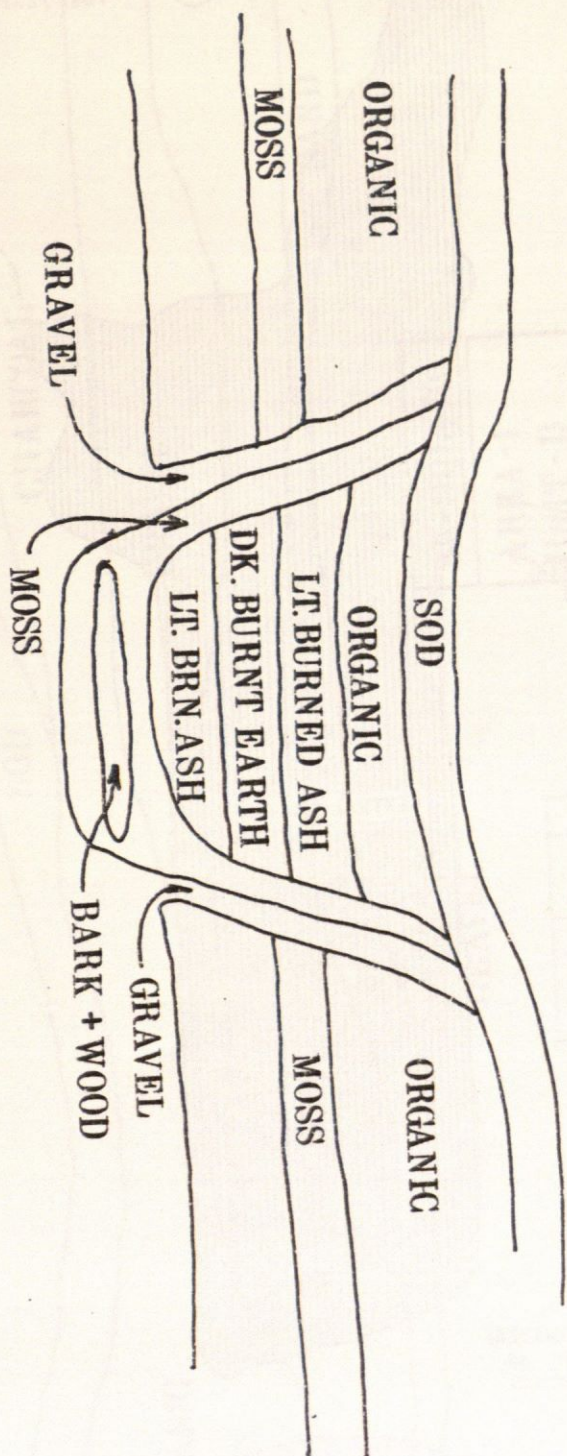


Figure 5

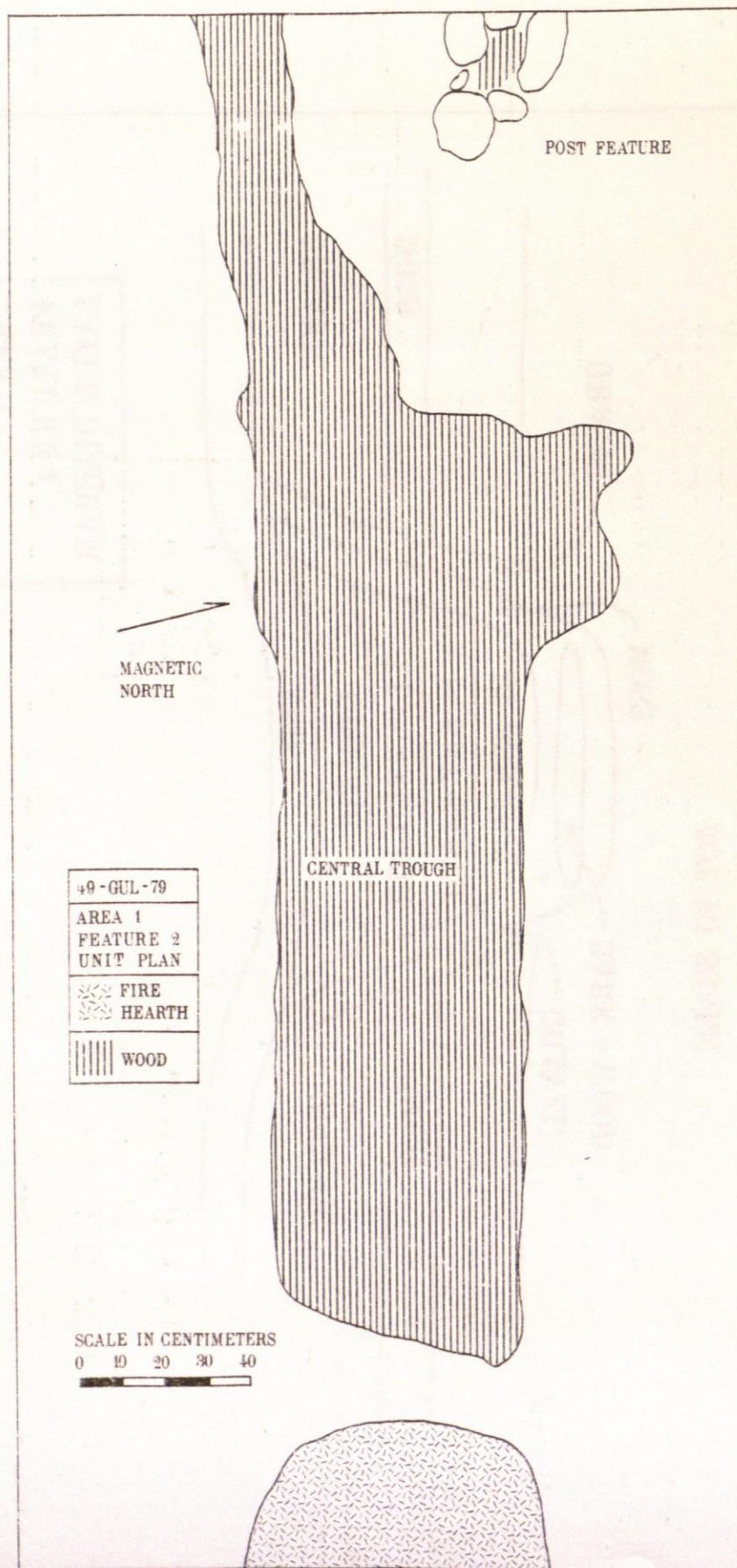
49-GUL-79

AREA 1
FEATURE 1
LAYER DIAGRAM



NOT TO SCALE

Figure 6



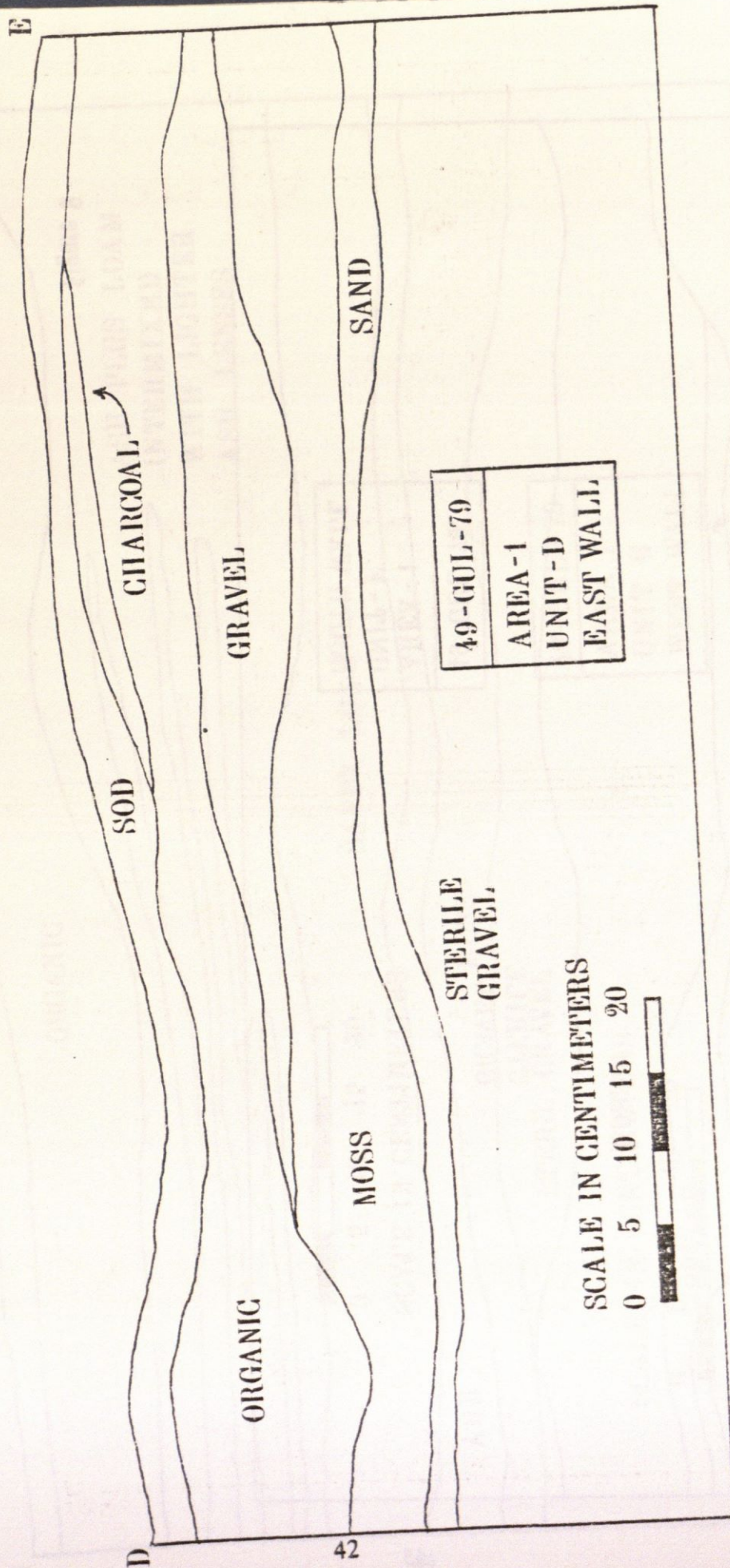


Figure 8

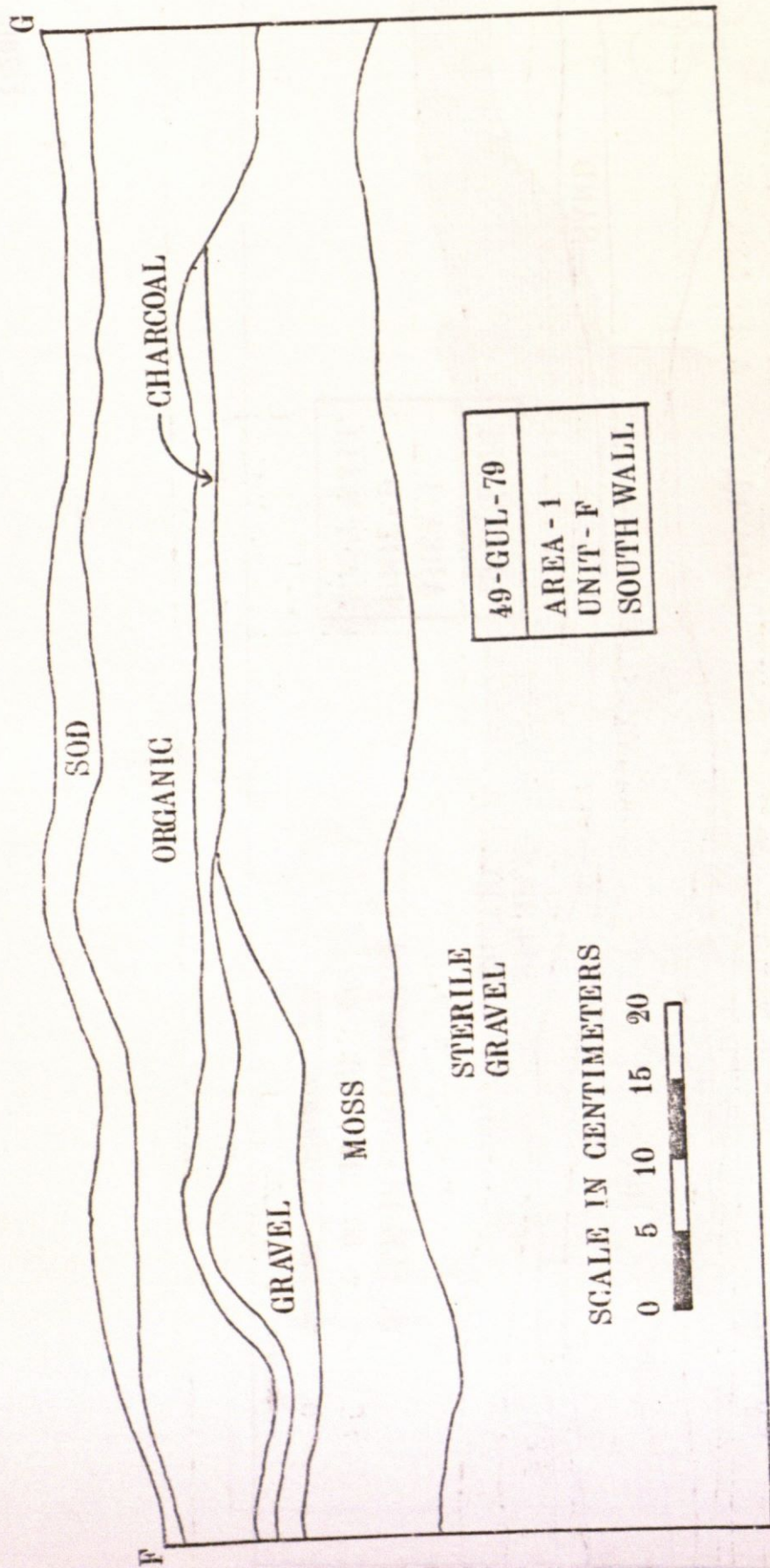


Figure 9

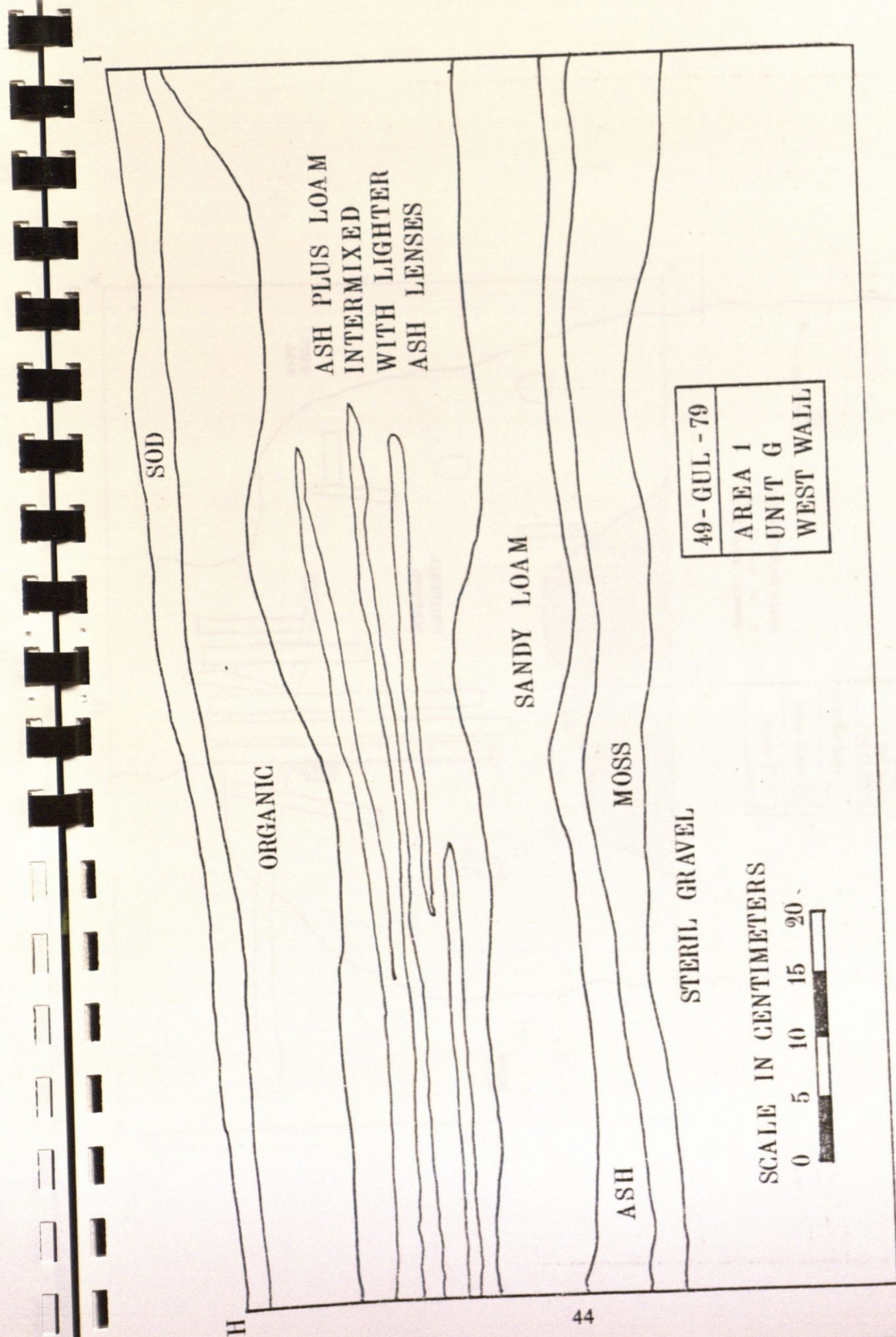


Figure 10

UNEXCAVATED PORTION

49-CUL-79
AREA-3
HOUSE PIT 1
FLOOR PLAN
FIRE HEARTH
BIRCH BARK
WOOD

MAGNETIC
NORTH

DIP
IN
ELEVATION

SCALE IN CENTIMETERS

0 15 30 45 60

B

A

SOUTH
WALL

STRUCTURAL
REMNANTS

NORTH
WALL

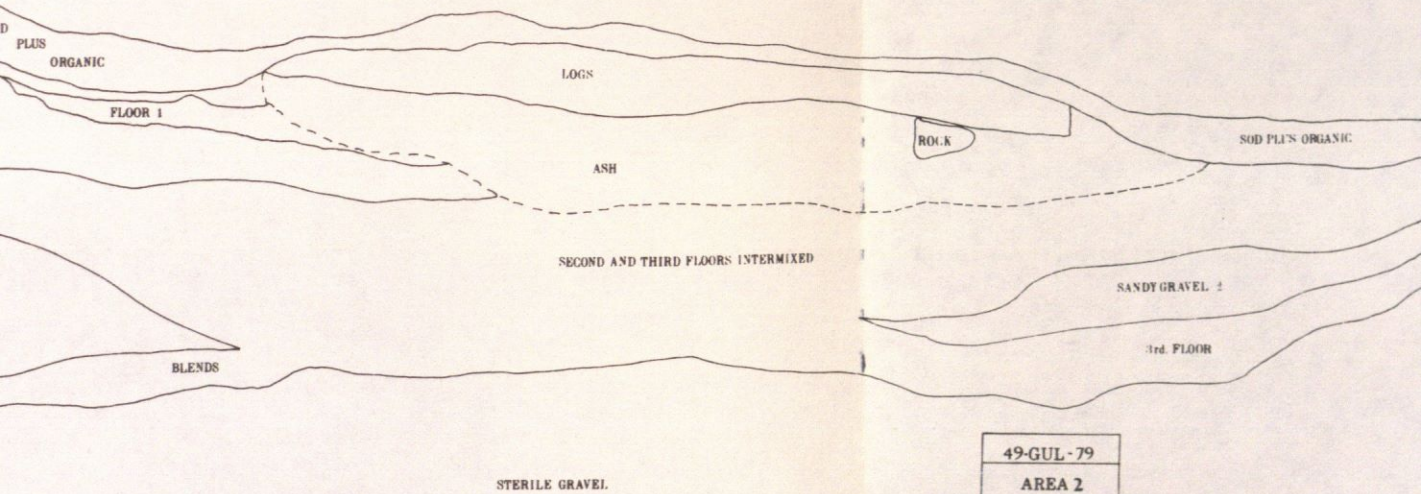
B'

45

A3
11 x 17

L R

A3
11 x 17

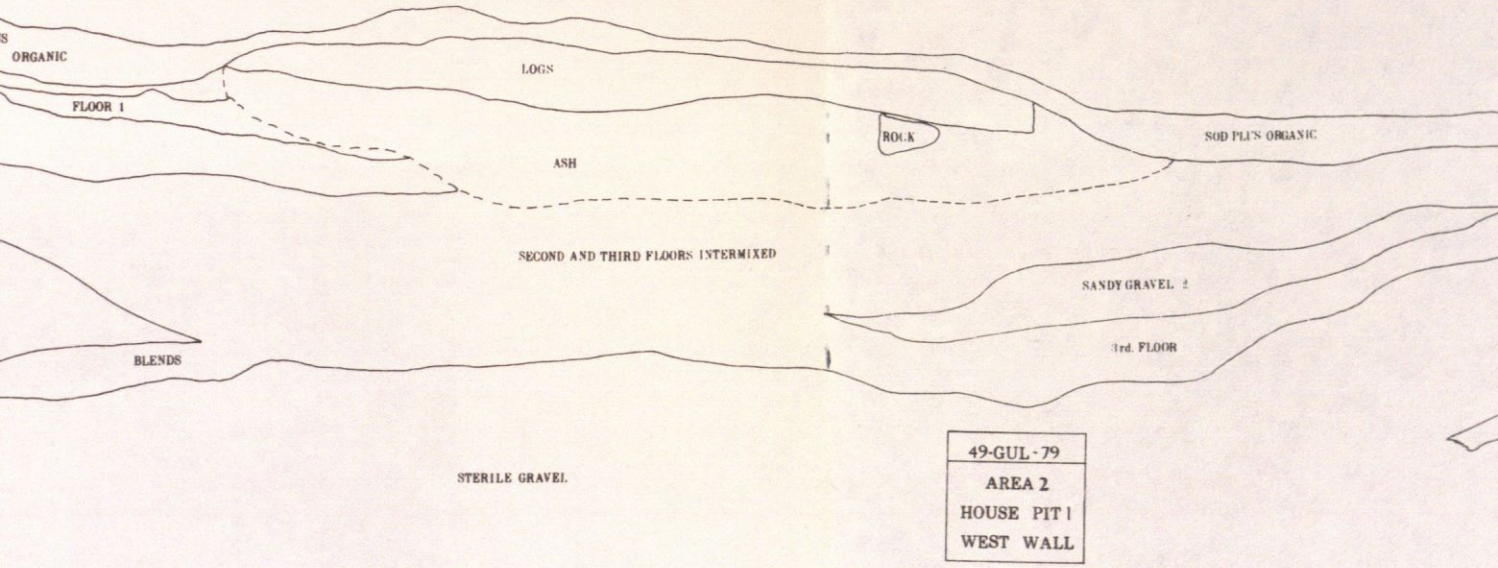


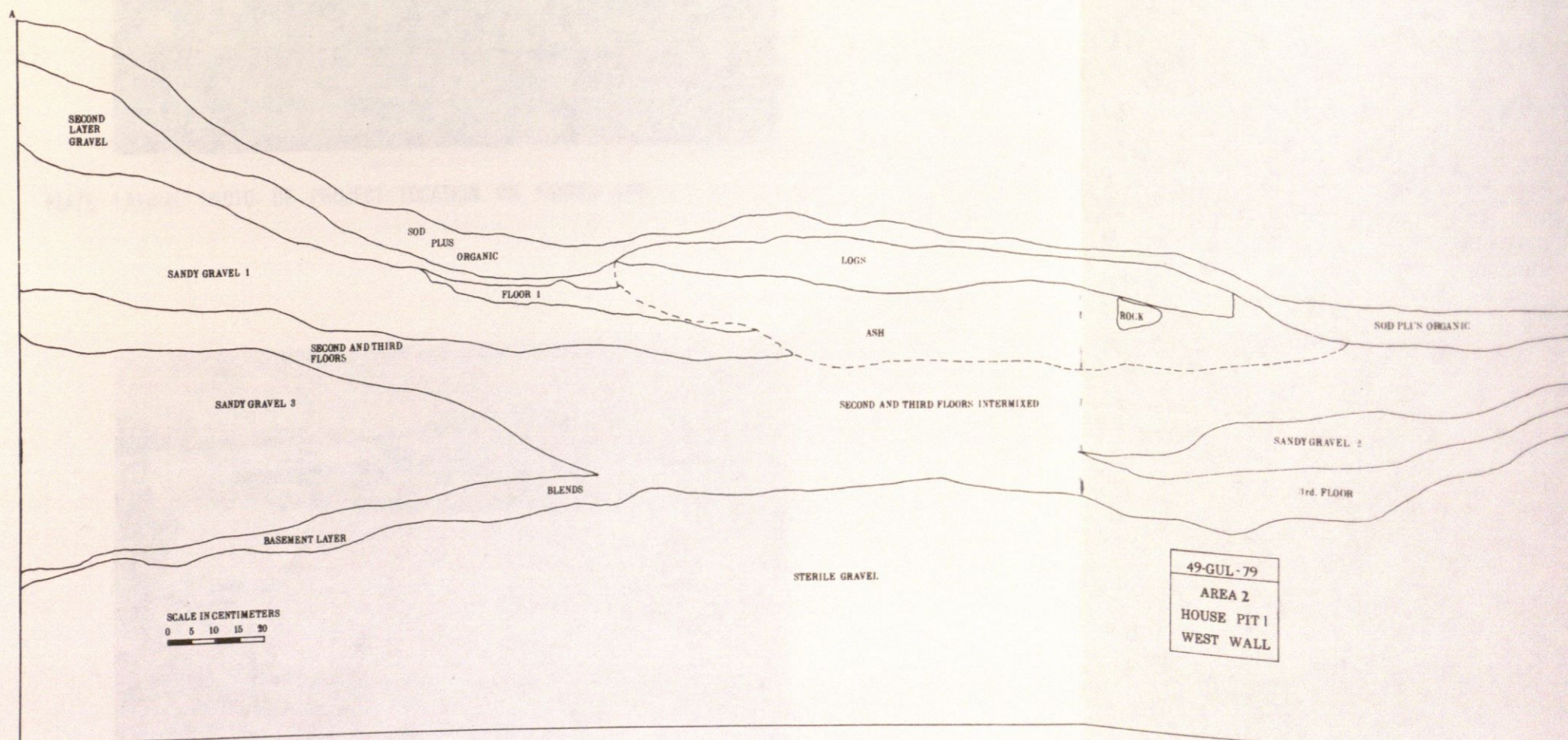
A3
11 x 17

L R

A3
11 x 17

← A3 →





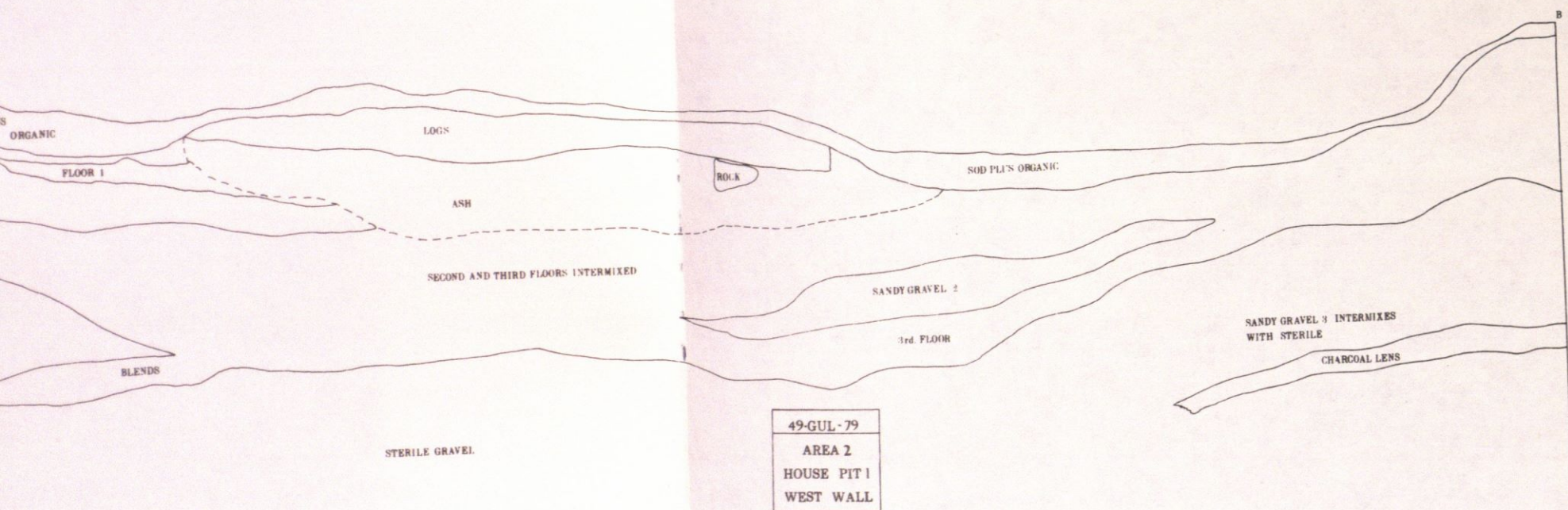


Figure 12



PLATE 1-AERIAL PHOTO OF PROJECT LOCATION ON PAXSON LAKE.



PLATE 2-LOOKING NORTH FROM AREA 1 TO AREA 2 AND FIELD CAMP.
HOUSE PIT 1 IS LOCATED BY THE BUSH ON THE POINT.



PLATE 3-HOUSE PIT 1, AREA 1 WITH EARLIER TEST UNITS IN FOREGROUND.
NOTE THE PRONOUNCED DIP TOWARD THE HOUSE PIT CENTER.



PLATE 4-HOUSE PIT 1, AREA 1 SHOWING SCATTERED BONE AND COBBLES IN
THE UPPER ORGANIC LAYER.

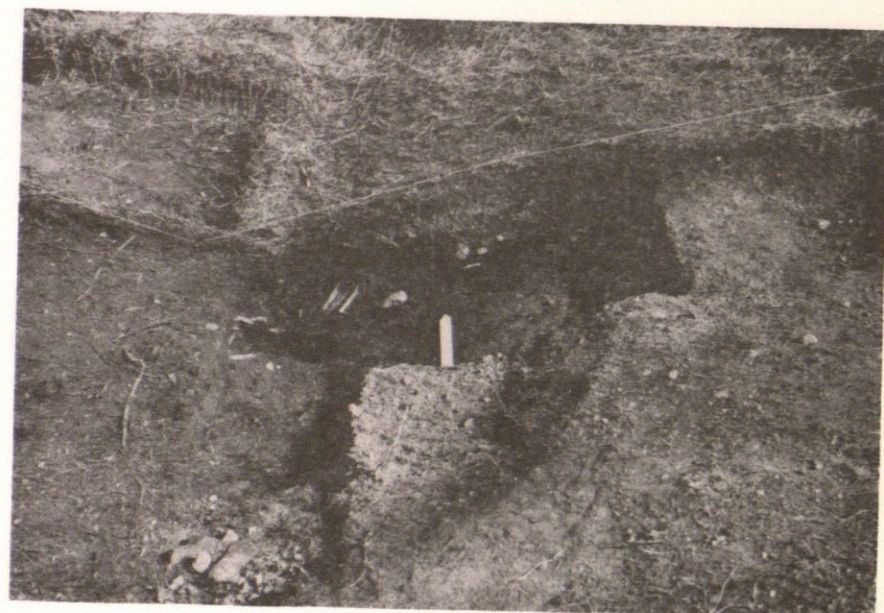


PLATE 5-HOUSE PIT 1, AREA 1 SHOWING EARLIER TEST UNITS, LIGHT COLORED
ASH LENSES. NOTE BONE IN CENTER SIDEWALL.

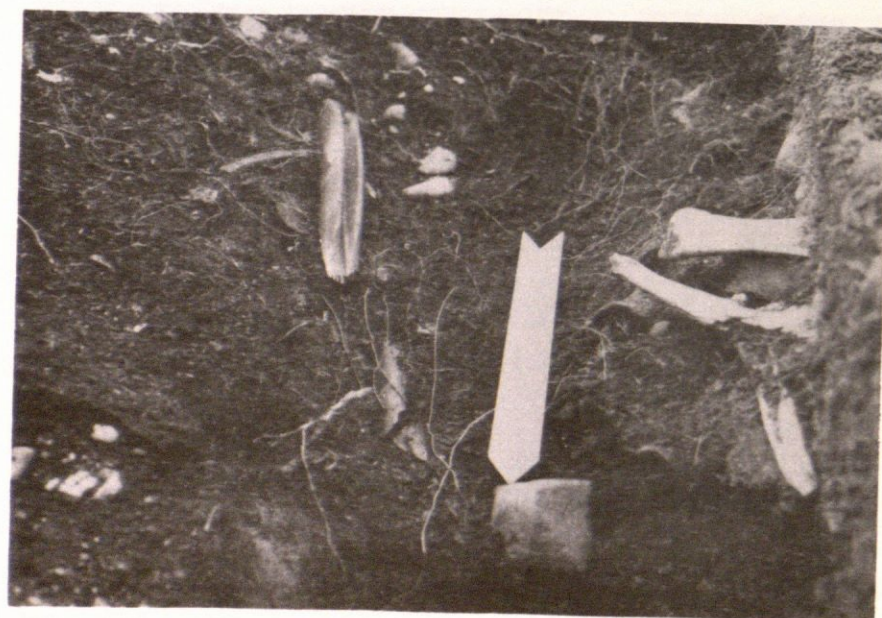


PLATE 6-HOUSE PIT 1, AREA 1 SHOWING FLESHER IN BONE LAYER IN CENTRAL
DEPRESSION OF HOUSE PIT.

← 11 x 17 →

R A4
LETTER

← LETTER →

R A5
HALF LETTER



PLATE 7-HOUSE PIT 1, AREA 1 SHOWING PROFILES OF THE EXCAVATION. NOTE THE STEEP DIP OF THE CULTURAL LAYER.



PLATE 8-HOUSE PIT 1, AREA 1 PROFILE WITH BONE LAYER AND MOSS LAYER UNDERLYING IT.



PLATE 9-HOUSE PIT 1, AREA 1 PROFILE SHOWING BONE AND MOSS LAYERS.
NOTE HOW THIN MOSS LAYER DIPS DOWNWARD ON THE LEFT.



PLATE 10-HOUSE PIT 1, AREA 1 SHOWING BONE CONCENTRATION NEAR CENTER
OF HOUSE PIT EXPOSED IN WEST HALF OF EXCAVATION.

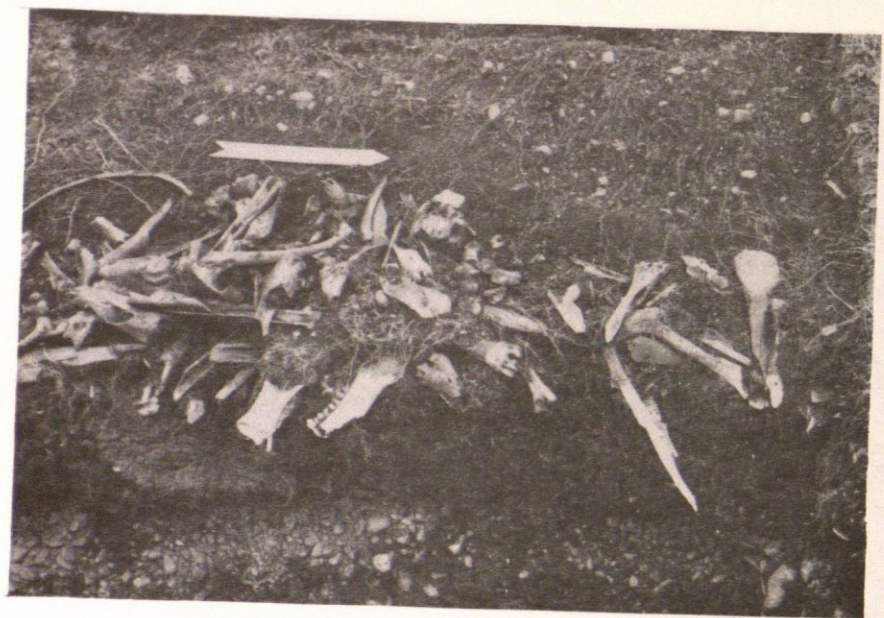


PLATE 11-HOUSE PIT 1, AREA 1 WITH BONE CONCENTRATION EXPOSED OVER UNDERLYING MOSS LAYER IN WEST HALF OF EXCAVATION.



PLATE 12-HOUSE PIT 1, AREA 1 WITH BONE LAYER REMOVED AND UNDERLYING MOSS LAYER EXPOSED.

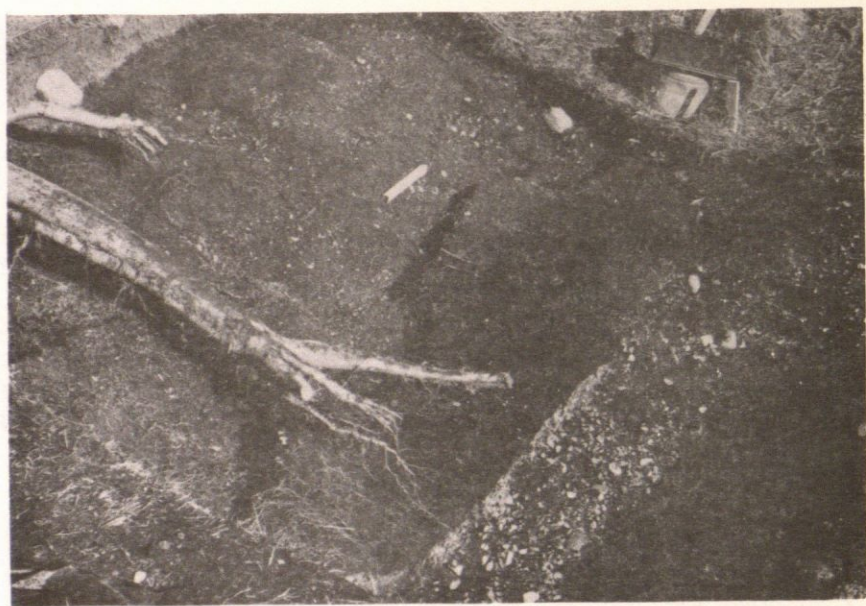


PLATE 13-HOUSE PIT 1, AREA 1 SHOWING MOSS LAYER DIPPING TOWARD CENTRAL HOUSE PIT DEPRESSION.

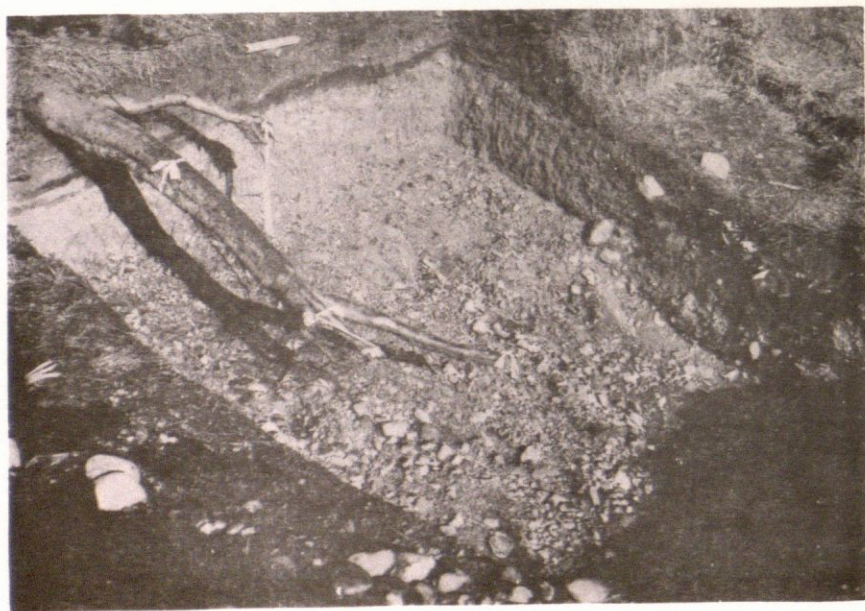


PLATE 14-HOUSE PIT 1, AREA 1 SHOWING PROFILES OF WEST HALF OF EXAVATION. NOTE THE DARK BAND OF MOSS IN THE SIDEWALLS.



PLATE 15-FEATURE 1, AREA 1 SHOWING VEGETATION BEING CLEARED. FEATURE 2 HAD SIMILAR VEGETATION COVER.



PLATE 16-FEATURE 1, AREA 1 SHOWING BONE AND HAMMERSTONE IN UPPER ORGANIC LAYER OF THE PIT FILL.



PLATE 17-FEATURE 2, AREA 1 SHOWING OUTLINE OF TROUGH-SHAPED DEPRESSION
AND BONE SCATTERED OVER AREA.

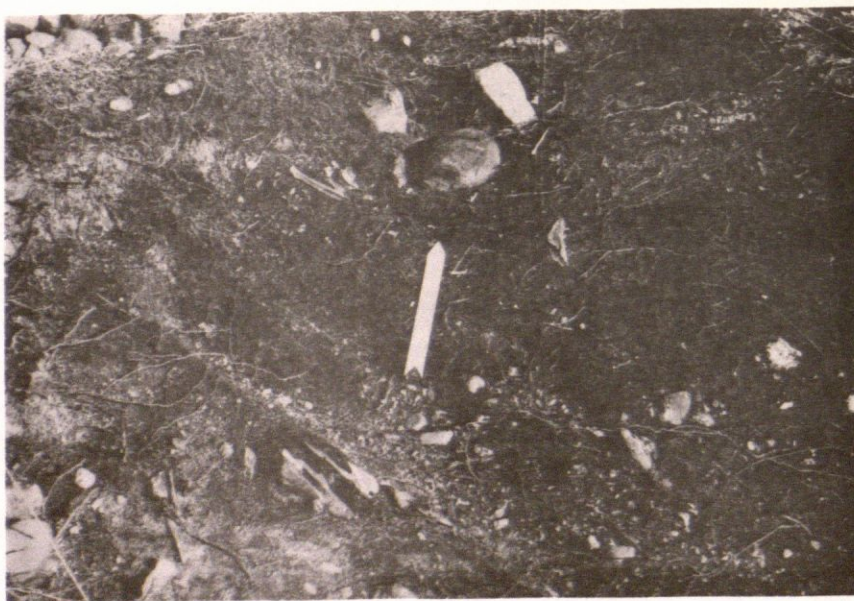


PLATE 18-FEATURE 2, AREA 1 SHOWING BONE UNDERLYING ORGANIC MAT AND POST
HOLE AT ARROW TIP.

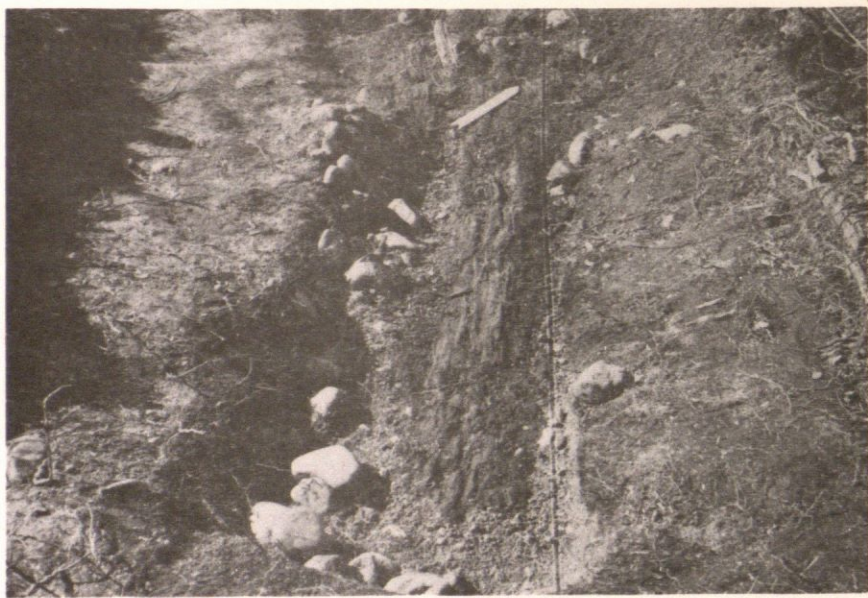


PLATE 19-FEATURE 2, AREA 1 SHOWING DECAYING WOOD AND COBBLES EXPOSED IN TROUGH-SHAPED DEPRESSION.

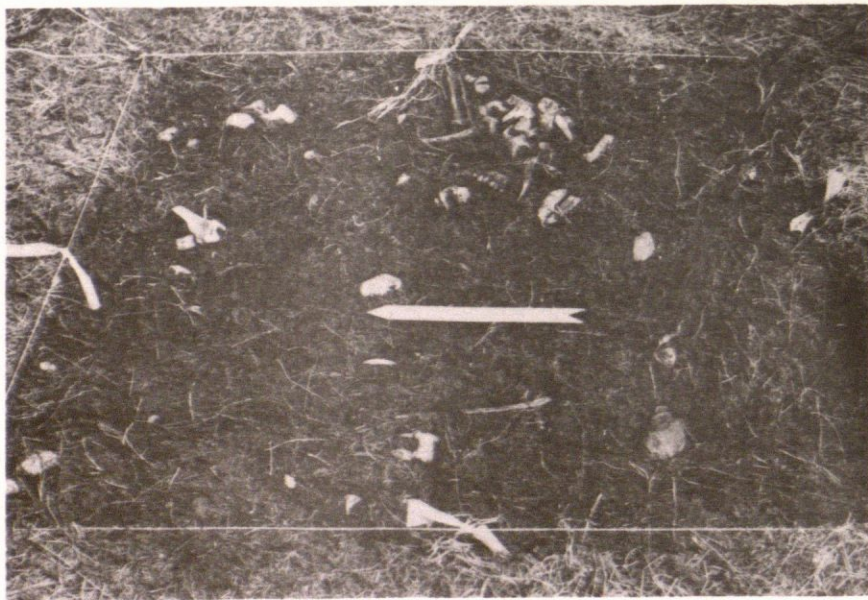


PLATE 20-UNIT D, AREA 1 SHOWING BROKEN BONE SCATTERED THROUGH THE UPPER ORGANIC MAT.

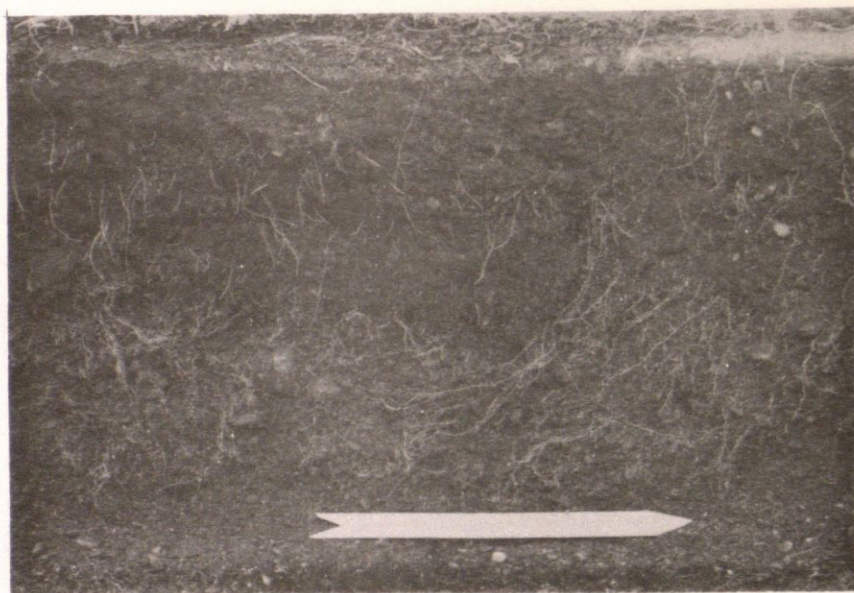


PLATE 21-UNIT D, AREA 1 SIDEWALL SHOWING PROFILE EXPOSED AFTER EXCAVATION.



PLATE 22-HOUSE PIT 1, AREA 2 WITH FIRE AREA EXPOSED NEAR CENTER OF THE DEPRESSION.



PLATE 23-HOUSE PIT 1, AREA 2 SHOWING ANTLER AND WOOD EXPOSED ON EAST END OF THE EXCAVATION.

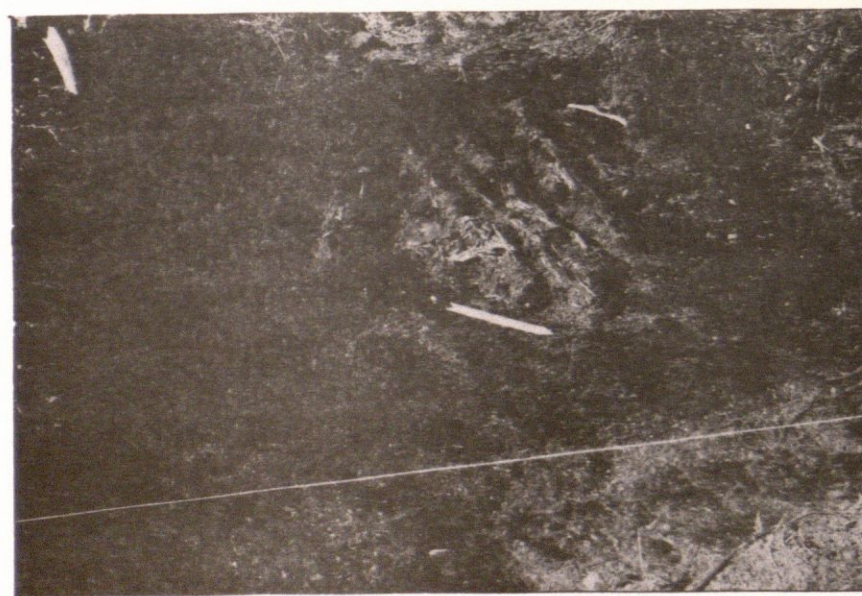


PLATE 24-HOUSE PIT 1, AREA 2 SHOWING WOODEN STRUCTURAL REMAINS EXPOSED.

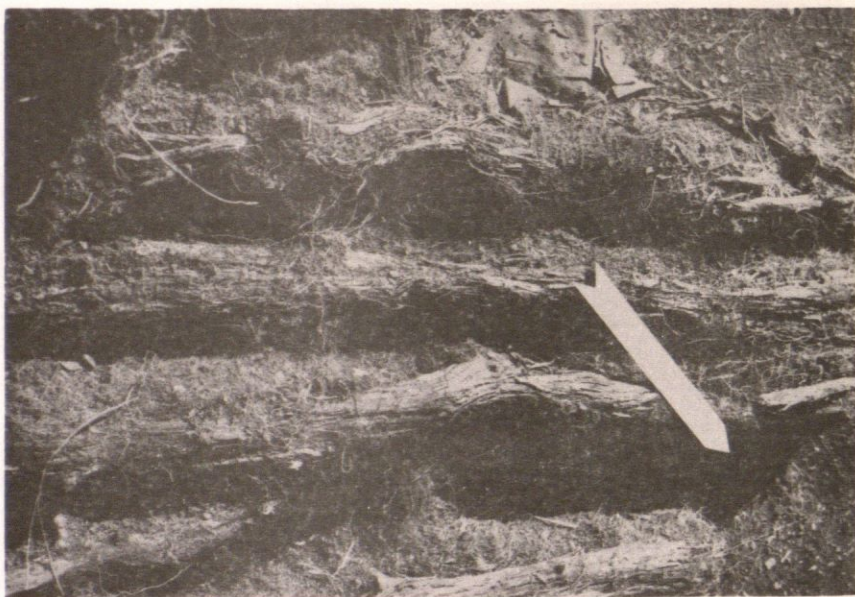


PLATE 25-HOUSE PIT 1, AREA 2 STRUCTURAL REMAINS. NOTE BIRCH BARK IN UPPER PART OF PHOTO.



PLATE 26-HOUSE PIT 1, AREA 2 EXCAVATION NEAR COMPLETION. NOTE DIP OF EAST WALL TOWARD CENTER OF PHOTO.

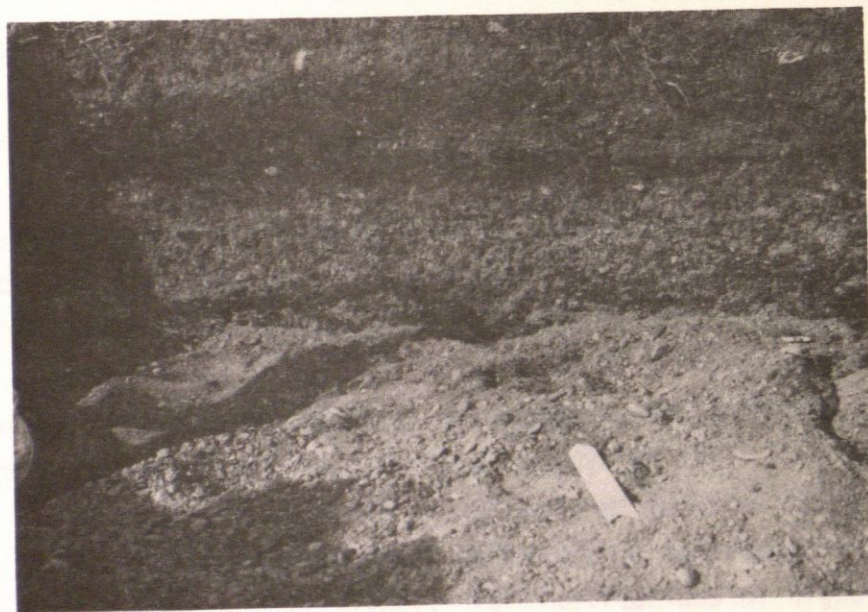


PLATE 27-HOUSE PIT 1, AREA 2 EXCAVATION SIDEWALL. NOTE CHARCOAL LAYER LOW IN LEFT CORNER.

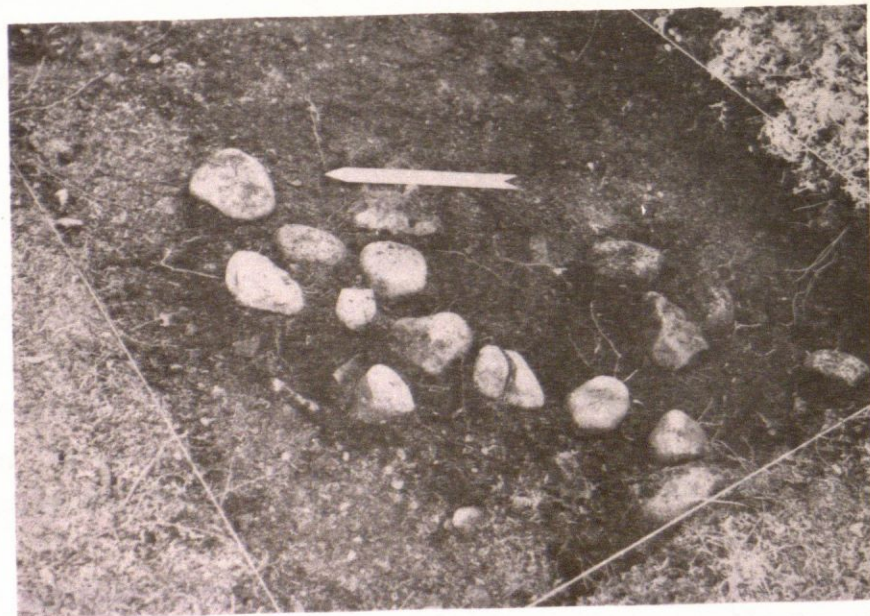


PLATE 28-UNIT A, AREA 3 SHOWING COBBLE FEATURE EXPOSED BY REMOVAL OF ORGANIC LAYER.

This intern report was read and accepted by a staff member at:

Agency: BLM-Anchorage District Office

Address: 4700 East 72nd Avenue
Anchorage, AK 99507

This report was completed by a WICHE intern. This intern's project was part of the Resources Development Internship Program administered by the Western Interstate Commission for Higher Education (WICHE).

The purpose of the internship program is to bring organizations involved in community and economic development, environmental problems and their students in the West for the benefit of all.

For these organizations, the intern program provides the problem-solving talents of student manpower while making the resources of universities and colleges more available. For institutions of higher education, the program provides relevant field education for their students while building their capacity for problem-solving.

WICHE is an organization in the West uniquely suited for sponsoring such a program. It is an interstate agency formed by the thirteen western states for the specific purpose of relating the resources of higher education to the needs of western citizens. WICHE has been concerned with a broad range of community needs in the West for some time, insofar as they bear directly on the well-being of western peoples and the future of higher education in the West. WICHE feels that the internship program is one method for meeting its obligations within the thirteen western states. In its efforts to achieve these objectives, WICHE appreciates having received the generous support and assistance of the National Endowment for the Humanities, the Washington State Office of Community Development CETA Program, the Colorado Department of Labor and Employment; and by more than one hundred and fifty community agencies throughout the West.

For further information, write Bob Hullinghorst, Director, Resources Development Internship Program, WICHE, P. O. Drawer 'P', Boulder, Colorado 80302 or call (303) 443-6144.

11 x 17

A4

LETTER

LETTER

A5

HALF LETTER