

DESIGN IMPLICATIONS OF SITE SELECTION  
AND RESOURCE UTILIZATION  
ON LAKE WAPISU

By the Cree of Nelson House Manitoba  
and

A USEABLE SHORELINE CLASSIFICATION SYSTEM  
FOR THE BOREAL FOREST

A Thesis

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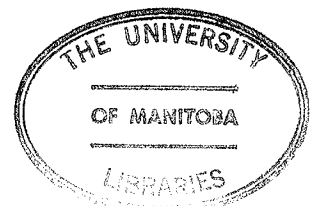
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In Partial Fulfillment  
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Master of Science (C.E.)

by

Melvin Robert Orecklin

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"DESIGN IMPLICATIONS OF SITE SELECTION  
AND RESOURCE UTILIZATION  
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A dissertation submitted to the Faculty of Graduate Studies of  
the University of Manitoba in partial fulfillment of the requirements  
of the degree of

MASTER OF SCIENCE

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## ABSTRACT

The thesis deals with the utilization of the land-water interface by the Cree of Nelson House in Northern Manitoba.

Section I is an analysis from the pre-historic to the near present through library resources and interviews. The Cree through time have been limited to an increasingly smaller area of resource utilization. Within these boundaries, they continue to utilize the resources, on similar sites, in a manner resembling the pre-contact era, but with the incorporation of Euro-Canadian technology.

Section II investigates present day sites on Lake Wapisu through field research, and analyses the ecological, socio-economic, and cultural factors of site selection.

Section III is a revamp of the Newbury Shoreline Classification System of 1968, in order that it may be more easily applied for use in physical impact and assessment studies.

Section IV extrapolates the material in the earlier sections, in a set of planning implication, which include schooling, community siting, and archaeology, and the effect on the utilization of the hinterland by the Nelson House people by the Churchill River Diversion.

Dedication:

To Ms. K.

## PREAMBLE

The Boreal Forest of Northern Manitoba is a area of increasingly greater importance to the outside world "up south". The original intrusion of the white man came as a result of the wealth to be made in the fur trade. In the past twenty years, however, the north has proved to be of great economic value in the utilization of resources such as timber, minerals, and most recently water, for hydro electric power production.

This thesis topic was suggested by Dr. Robert W. Newbury of the Department of Civil Engineering because he was limited to the description and physical processes of geomorphology and hydrology. However, his knowledge of the native culture, and more specifically, their utilization and exploitation of the physical resources was small.

As large engineering projects are influencing the traditional ways of life of the Indian, it seems appropriate that an engineer should also become aware of that life-style he is potentially affecting. Engineers are requested to include social and economic criteria in the planning process, and in the broader sense of development, include these criteria for all the peoples of the third world, whose cultures are significantly different from those enjoyed in western "civilized" society.

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## INTRODUCTION

This thesis is an investigation of the Woodland Cree of Northern Manitoba, utilizing the approach of ethnohistory with particular reference to their relationship to water-oriented land units.

The utilization of "water landscapes" for recreation, permanent habitation and aesthetic siting is poorly understood in non-built environments. In 1971 Leopold and in 1969 McCarg began to devise systems that would reflect and rank the attributes and components of natural landscapes for a wide range of uses. The rankings are subjective and often intuitive. This thesis attempts to borrow from the ancient intuition of a people whose knowledge of survival far exceeds that of the Western environmental consultants who are assuming the responsibilities of planners and developers.

The first section of this thesis deals with library resources, and the second section deals with actual field research. The third section of the thesis is a revamping of the Shoreline Classification scheme first detailed in Chapter II of the "Physical Impact Study, Interim Report 1972" (Newbury, 1973), for the Lake Winnipeg, Churchill and Nelson Study Board in the hope that the refining of these definitions will permit the system to be more easily applied.

By studying the present utilization by native people of a lake isolated from the direct impact of white man, (for example, lacking cottages, dams, and having poor or no access by road or rail), present usage by the Cree can be investigated. By the location of the sites left by the Cree in past years, the ecological and/or cultural determinants of those sites can be inferred. This knowledge is then applied in Section IV as a set of Planning Implications.

Field research was undertaken during the summer of 1974 on Lake Wapisu, sixty miles west of Thompson, Manitoba and immediately upstream of the Notiqi control structure of the Churchill River diversion on the Rat River. The lake is twelve miles west of the Nelson House Indian Reserve. The history of the region is the history of Nelson House and its supporting hinterlands, and the utilization of Lake Wapisu is the usage by the Cree of Nelson House.

### ACKNOWLEDGEMENTS

Firstly, I wish to thank Dr. Bob Newbury, not only for being my advisor, but more for being a person with whom I enjoyed spending time. He is part of a new breed of engineer, environmentally conscious, aware of the beauty of the processes of nature, and aware that as engineers we have the responsibility of our actions to Canada, to our employers, but more importantly to ourselves, and to the people for whom we plan. Without his financial support and that of the Agassiz Centre for Water Studies the field work would have been impossible. There is no better place for a hydrologist to become more comfortable with his subject matter than to live on the lakes that he is studying. For the necessity of needing this hands-on-feel for the land and water I also thank Dr. Newbury.

Secondly, I wish to thank the Archaeological Research Centre, especially Ms. Mary Ann Tisdale and Mr. Wayne Wiersum with whom I spent the summer on Lake Wapisu.

Thirdly, to the people of Nelson House who are the basis of this thesis, and some of whom became my friends, I hope you enjoyed the crew on Wapisu, for we have enjoyed being with you and learning from you.

And lastly, I must thank Irene Knutson who doesn't want me to say anything about her.

## SECTION I

### AN ETHNOHISTORY OF THE CREE OF NORTHERN MANITOBA:

#### NELSON HOUSE, THE PARTICULAR STUDY AREA

### THEORY

The principal meaning of ecology is "adaption to environment" and the concept of adaptive processes permits a wide latitude of possible behaviour patterns. The term cultural ecology includes the economic, social, political and ideological articulations of a culture which are most closely involved in the utilization of the environment: 1) the interrelation of exploitive or productive technology and environment, 2) the behaviour patterns involved in this exploitation and 3) the extent to which these behaviour patterns affect other aspects of the culture. However cultural ecology is "less concerned with the origin and diffusion of technology than with the fact that it may be used differently and entail different social arrangements in each environment" (Steward, 1954).

Within the scope of this thesis, and as an engineer, I am less concerned with the social, political, and ideological factors than with the economic and technological aspects of cultural ecology. By this I mean the equilibrium between man, his environment and the technology with which he can exploit the resorces necessary to subsist, the



external or internal pressures which change the dynamic balance of the system towards or away from a state of equilibrium, and how this equilibrium and these pressures have affected and do effect the location of sites by the Cree, at both the macro and micro scales. In considerable part I am concerned with the material culture of the society: the weapons and instruments for hunting and fishing; containers for gathering and preparing food; transportation devices used on land, air, and water; sources of food and fuel; the clothing and housing to counteract the extreme cold of winter; and the changes which are incorporated into the culture by external stimuli, for example, white man's technology and the fur trade, disease, and changing food reserves.

It is only after these elements of cultural ecology, within the framework of the northern Cree, are reported, that the sites which these people choose may be analysed. Without the articulation of these factors, it is impossible to assess the amount or variation of usage within the microcosm of L. Wapisu. That is, what are the historic and present methods of utilization and how closely does Wapisu represent this totality?

The historical material was obtained from original sources such as the Hudson's Bay Company Archives (H.B.C. Arch.), journals of early explorers, books written by early

missionaires, anthropological ethnohistories and ethnologies, and direct interviews with the people of Nelson House, white government employees and the clergy.

## BIOPHYSICAL DESCRIPTION

The Boreal Forest of Manitoba stretches in a wide band across the north and central section of the province (Map I.1). On the south it is bordered by parkland along the southern shores of Lakes Manitoba and Winnipeg and on the north by the transitional zone towards the tundra north of the Churchill River.

It is difficult to succinctly characterize such a huge area but in general the region forms part of the extensive Pre-Cambrian peneplain of northern Canada. In the north west part of the area it has an elevation of from 1300 to 1500 feet above the sea, but gradually diminishes in height eastward in a broad general slope through which the Nelson and Hayes Rivers and in part the Churchill River, flow to the sea. "There are no high elevations, and the general level of the interstream areas is not more than 100 to 200 feet above the level of the streams.

"The plateau has a gently rolling surface characterized by rounded outlines which have resulted from long continued and profound glacial scour and subarctic erosion. It is intersected by rivers and streams innumerable and is dotted by lakes of all size" (McInnes 1913:4).

The bedrock surface is covered by unconsolidated deposits ranging in thickness from a few inches to several hundred feet. This mantle of mixed boulders, gravel, sand,

and clay was deposited or reworked during the Wisconsin Phase, the last of the four major advances and retreats of the continental ice sheets during the Pleistocene.

(Newbury, 1968:18)

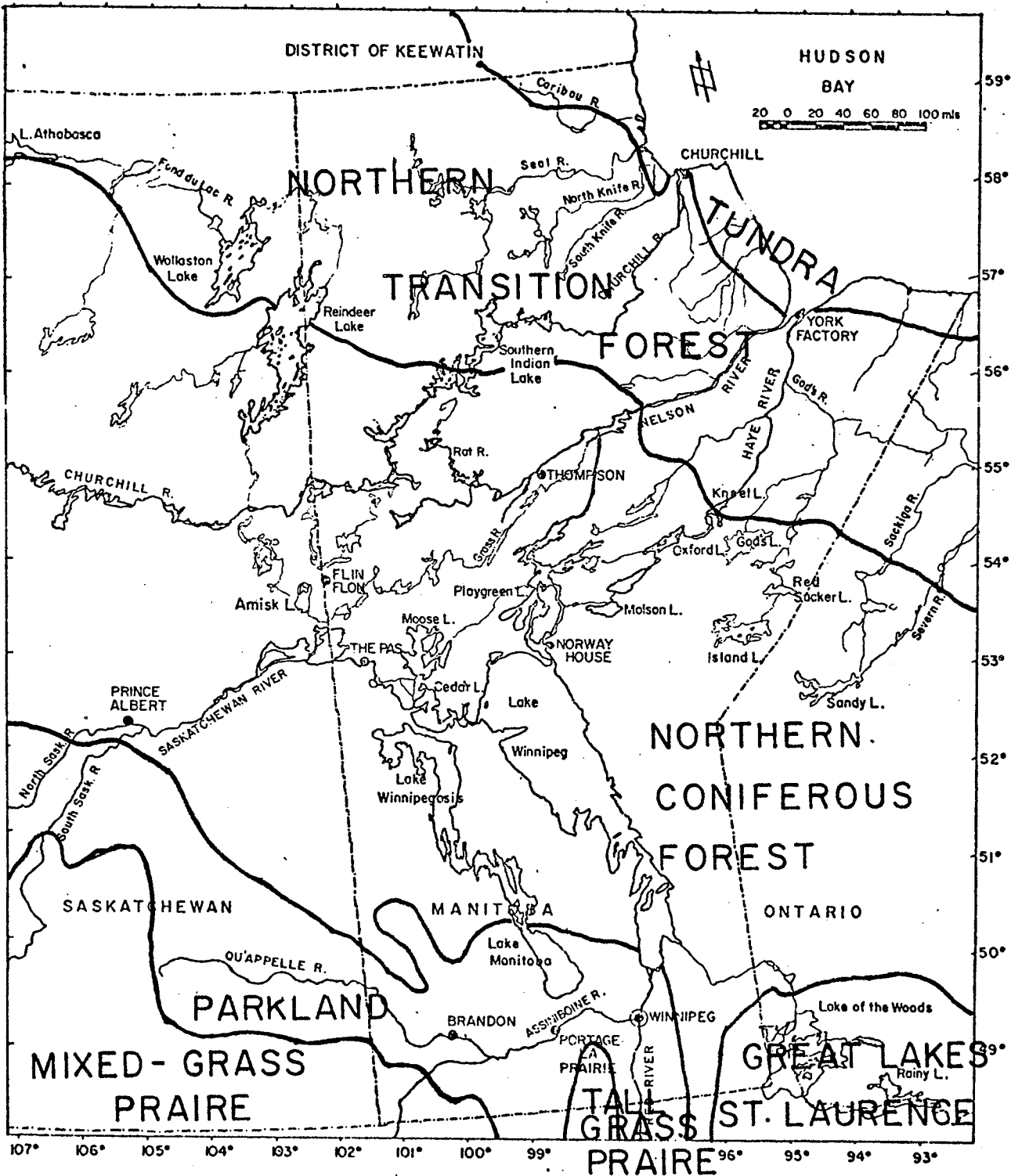
It is an area of great seasonal temperature ranges with an extremely severe winter and moderate to light total precipitation concentrated in the warm months. Summers are short and cool and have less than four months with an average temperature over ten degrees C. This cold snowy subarctic climate is well illustrated by the climograph of Thompson (Figure I.1), which can be assumed to be representative of the area. It is in the zone of discontinuous permafrost and ground-ice is common in fine lacustrine and organic materials.

Much of the forested portion of the Boreal Forest consists of closed stands of conifers, but there are numerous localized areas which due to topography, soils, and edaphic or biotic factors, are composed of mixed broadleaf and evergreen species. On mesic sites, which in this region are characterized by a clay overburden, the forest consists of a single subsidiary stratum of a dense carpet of wet-form mosses and a closed canopy of black spruce. There are occasional areas of white spruce, but the communities dominated by this tree tend to be in particularly favourable conditions of soil and climate. Xeric habitats,

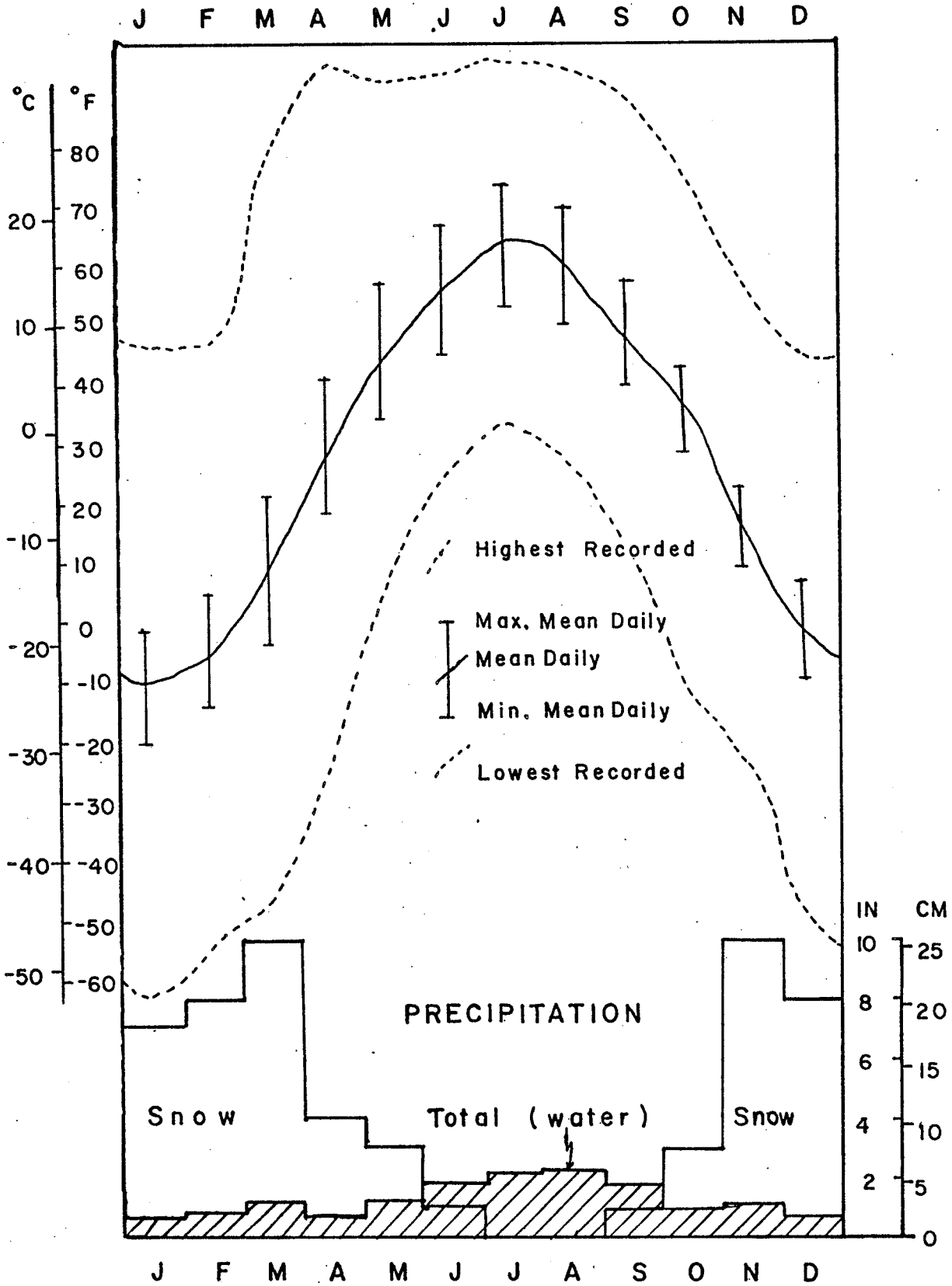
for example, outcrops, sand plains and eskers, are dominated by jack-pine. There are some stands dominated by paper birch. Mixed woods frequently occur on fluvial or laucustrian deposits in deltas or beside lakes and rivers. Commonly these forests are composed of a mixture of spruce, aspen, balsam poplar, balsam fir, and willow. A detailed explanation of the micro-environment of the land and water interface will be treated in Section III of the thesis. Hydric sites on poorly drained peat soils support black spruce and tamarack. In the wetter peat bogs tree growth is inhibited and some bogs are entirely treeless. (Lukens, 1970; and Ritchie, 1956)

The physiograpy and biota of the Boreal Forest give a penultimate limit to the native people from an ecological view. To survive, they are forced to use the limited resources to their fullest. As will be seen these parameters will figure prominently in the cultural dynamics of the Woodland Cree.

# NATURAL VEGETATION ZONES



MAP I. I



CLIMOGRAPH for THOMPSON, MANITOBA

FIGURE I.1

PRECONTACT: THE ARCHAEOLOGICAL RECORD \*

The Boreal Forest of Northern Manitoba was buried under ice when the first immigrants from Asia came to North America. However, the south western part of the province was apparently free of glacial ice and apparently also free of meltwater lakes as early as 12,000 B.P. (Before Present) (see Elson, 1967; Fig. 7 for map). The people inhabiting this section were a part of the "Big Game Hunting" tradition of Clovis-Folsom and Plano complexes known as the Paleo-Indian group. They were concentrated in and originated in the grasslands and were definitely associated with the hunting of an extinct form of bison and the Great Woolly Mammoth (Willey, 1966:38).

Northern Manitoba probably emerged from underneath the ice as the final glacial retreat moved northwards about 10,000 B.P. only to be rapidly submerged under the waters of Glacial Lake Agassiz for at least another 3,000 years (see Elson, 1967; Fig. 9 & 13). It was probably during this time that the buffalo hunters from the northern plains moved into southern Manitoba.

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\* The archaeological section is in main extracted from Mayer-Oakes (1967 & 1970), MacNeish (1958), and Wright (n.d.), unless otherwise referenced.



Certainly by 7,500 B.P. much of this area was grassland. It is likely the first occupation of Northern Manitoba occurred by 7,000 B.P. (personal communication: O. Mallory). Lake bottom became mixed forest and shorelines became established about 4,500 B.P.

The Paleo-Indian people who penetrated into the Shield, gradually adapted to the particular conditions of the region and by 4,500 B.P. or even earlier had developed a culture typical to the Boreal Forest and distinctive from adjacent and contemporaneous societies. Archaeologists have assigned to this new culture the name Shield Archaic. These people were pre-ceramic hunter and gatherers. The first excavation in the north of this civilization was near Grand Rapids on Lake Winnipeg at the Tailrace Bay Site (Mayer-Oakes, 1970), and Mayer-Oakes attributed his findings to the people of the McKean occupation of the Shield Archaic. The settlement pattern was small briefly occupied campsites along waterways with the people in nomadic bands.

Approximately 2,500 B.P. an important new industry appeared - pottery making. For the purpose of classification only, this is designated as the Initial Woodland period and it becomes necessary to give a different name to the same people who have adopted a single, but new major trait - pottery. Thus the Shield population of the Archaic period became the Laurel population of the Initial Woodland period.

Wright suggests that the idea of pottery was adopted from the south via stimulus diffusion and that the Laurel populations of the Shield evolved a distinctive ceramic complex after they had acquired the essential techniques of manufacture. However, this hypothesis is not well supported by work on Lakes Wapisi and Notiqi, by the Archaeological Research Centre. The Laurel pottery on these lakes suggests direct diffusion or migration, rather than stimulous diffusion (personal communication: O. Mallory).

The pots were made by the coil method. Crushed rock was kneaded into clay as the tempering material and the surfaces were smoothed and decorated after coiling. The method of firing is still unknown, but the remains of kilns have not been found. The pottery was used for storage, the drawing of water and cooking.

Judging from their size and weight, points from the Initial Woodland period were probably used for darts and spears in hunting. From the Heron Bay site, on the the north shore of Lake Superior (A.D. 100), a number of beaver incisor tools, awls, toggle harpoon heads, snow shoe netting, needles, pendants, beads and pottery markers were recovered. Net sinkers also first appear associated with the Laurel tradition.

The span of time from approximately 1,000 A.D. to contact with whiteman, is known as the Late Woodland. Even

though during the entire historic period the north central area of Manitoba was occupied by the Cree, and the south and east areas by the Assiniboine and Ojibway, the archaeological evidence cannot directly associate the remains of these Late Woodland people with the natives of today. Within this period, archaeologists have identified two concurrent phases within the Boreal Forest of Manitoba, which are differentiated mainly on variations of pottery types: the Selkirk and Manitoba. Considerable controversy exists as to which focus represents the prehistoric pattern for the present Indian groups.

It has generally been accepted that the Selkirk focus was the product of the Cree. However, Wright (1971) points out any device which attempts to associate the small bands of Northern Algonkian speakers of the 700 years before white contact with today's Cree, Assiniboine, Ojibway, Salteaux, etc. will probably encounter difficulty. It would appear that the various bands of Cree could have been using Selkirk ceramics, Selkirk ceramics combined with other pottery types such as the Manitoba, Blackduck, or Iroquois, or other ceramic types, or no ceramics at all depending on their geographical location.

The pottery making was generally a duty of the woman. In an area of low population, where the social organization was based on residence of a married pair in the husband's

father's group and wives were selected from groups other than one's own (formally exogamous patrilocality), bands frequently acquired women from considerable distance. This resulted in a stable male culture, and understandably the mixture of pottery types would diffuse over a wide area and become a simple reflection of the female mobility.

The people of the Selkirk and Manitoba phases made use of a wide range of the possible floral and faunal resources and an equally wide range of tools with which to exploit them.

Archaeological artifacts include unilaterally barbed harpoons which suggest that a spearing method of fish harvest was employed. Impressions formed on ceramics from twisted vegetable fiber and leather thongs imply the use of knotless nets, probably dip nets, and net sinkers imply the use of the gill net.

The dominant bone material at most Selkirk sites is fish. At the Grand Rapids Tailrace site (Lukens, 1970) 46.5% of the total bone is fish and of these 83% are sturgeon.

It appears the major subsistence base of the above site was the sturgeon. This is a remarkable fish which may grow to be eight feet long, weigh three hundred pounds, and live eighty years. Because choice spawning grounds are few, the sturgeon is highly vulnerable to capture. In the latter part of May or early June, the fish ascend large rivers to

spawn and are especially susceptible to capture. It was prized for food, because it was the only fish which contained large quantities of fat. The only alternative supply of fat was from large mammals in the fall. Sturgeon would be caught by harpoon at the foot of rapids or by putting a baited hook, perhaps a sharpened barbed bone, out overnight in shallow water.

The second most common faunal remains of fish from the Tailrace Site are northern pike or jackfish. This species spawn in early spring in shallow marshy areas of lakes and streams. They can grow as large as fifty pounds and reach forty inches in length, but average two or three pounds. While they are the most common shore fish and are easily hooked or netted, they return the least amount of flesh for their size.

The remaining five species identified from the Tailrace Bay Site constitute only 2% of the fish remains. Whitefish have been abundant in all the large lakes in Northern Manitoba, and especially so in the northern sections of Lake Winnipeg near Grand Rapids throughout historic times where they have supported a large commercial fishing industry. Yet only two whitefish bones, both apparently from recent occupation were identified in the faunal analysis of the site. This may be due to the fact that they spawn on rocky reefs or shoals in the spring when the sturgeon catch is

more profitable. At other times of the year they require very long nets which may have been difficult to manufacture using local materials.

About forty kinds of mammals presently occur in the northern woodland. The twenty-two not represented in the Tailrace Bay Site fauna are shrews, bats, mice, wolverine, weasels, striped skunk, grey wolf, coyote, squirrels, and three cervidae, the elk, whitetail and mule deer.

The absence of the whitetail and mule deer is not unexpected since neither immigrated into the north until the early nineteen hundreds in response to man-made changes in the environment. Archaeological and recent records suggest that the elk are possibly not indigenous to the northern lowland, and any present abundance may be historic. The remaining mammals not found may be due to cultural bias (the skunk), the intelligence and cunning of the animal (the wolverine), or a simple lack of utilization at this particular site.

Dog bones were found in significant numbers. It is obvious the dog was indigenous at the time of contact. This situation is unlike that of the Swampy Cree of the Hudson Bay lowland who as Trudeau (1966:19) indicates imported the Inuit husky.

The most common bone comes from the rabbit. Fur bearers represent the second largest collection of bone

with moose, bear, and caribou also present.

The former status of the bison in the north woodland is uncertain. This species was abundant in the aspen parkland of southwestern Manitoba in early historic times and the wood bison is described by Garretson (1938:7) as "very numerous in the forests surrounding Lakes Winnipeg and Manitoba". In any case, bison certainly vacated the area by the turn of the twentieth century.

The archaeological record indicates that the bow and arrow was used for hunting. It is likely, however, that such animals as the beaver, muskrat, and hare were caught in snares or traps rather than shot.

Bird bone from the Tailrace Bay Site was less abundant than either fish or mammal, yet did contain some thirty-four species and includes three near or totally extinct types. Only three of the thirty-four species remained in the area year-round, two grouse and the common raven. Most of the migratory species were summer residents, however, swans and snow geese were common when stopping on their yearly migratory routes.

Most of the birds identified are of moderate or large size, therefore supporting the assumption that their bones represent dietary remains.

Tools connected with the working of hides are abundant. Scrapers may have been hafted into wood or other holders to

produce more convenient implements. Bone awls are also present and could have been used for piercing birch bark, skins, or leather. The decoration on the pottery reveals impressions of sinew and strands of rawhide that might have been used for sewing hides together. There is good indication that weaving or string fabrication had progressed sufficiently to produce bags and cloths. Woodworking tools may have been made from beaver teeth. Making tool from bone seems to have been an important activity and includes awls, scapula hoes or shovels, and fleshers.

In summary (modified from Wright, n.d.:38): 1) From man's earliest occupation of the Shield to the time of contact, the way of life has not changed significantly for 5,000 years. 2) This cultural homogeneity through both space and time is a product of physiographic factors that are collectively unique to the Boreal Forest of the Canadian Shield. 3) The prehistory of the Shield is essentially the prehistory of the Northern Algonkian-speaking people. 4) These prehistoric antecedents reflect the cultural and technological relationships seen to exist among the historic and present day population of the area.

From a viewpoint of cultural ecology, the importance of the archaeological remains is that they give a base for the technology level and subsistence pattern at the time of contact. From this and early historical reports, the extent



of assimilation of white man's trade-goods and technology  
can be assessed.

### THE TRADERS: CONTACT TO 1823

The fur trade was the only outside directive force affecting the economic and subsistence equilibrium of Western Canada from the period of contact to the entrance of the missionaries in the 1850's. To be successful it required the mutual adoption of technology from Indian to white man, and trader to trapper. It was a partnership for the exploitation of resources.

Prior to 1670, and the establishment of the Hudson's Bay Company, the Assiniboine and Cree to the west and south of Hudson Bay were linked to the Ottawa-Indian-French trading network and were one of the most important suppliers of furs to that network during the middle of the seventeenth century. They exchanged goods with the Indian middlemen in the region of Lake Nipigon (Ray, 1974:12).

The earliest evidence indicates that the Woodland Assiniboine and Cree jointly held the land between the lower Saskatchewan and the upper Nelson Rivers, and the middle Churchill River between Southern Indian Lake and Reindeer Lake (Ray, 1974:19).

It is likely that in the late prehistoric and early post contact era, the Assiniboine and Cree travelled in small migratory bands (Mayer-Oakes, 1970:370) the size of which depended upon the seasons and local reserves of food.

The accounts of both the English and French for the

period 1690 to 1774 suggest the cycle of the Woodland Cree who maintained direct trade with the forts on Hudson Bay. During the warmer months of the year the men would leave their families to fish and hunt along the shores of lakes and rivers in the Shield area and ascend to the coast where they would trade. In late August, September, and October they hunted in the wooded areas adjacent to the prairies, taking moose and trapping beaver. From November to March they moved into the parkland belt proper where they often lived with the Assiniboine, hunting bison, and trapping wolves and fox. In March, April, and May they reassembled along the lakes and rivers to build canoes, trap furs, fish, and hunt waterfowl (Ray, 1974:4).

The Hudson Bay lowlands appear to have been virtually unoccupied in prehistoric times, and its historic and present Algonkian population is regarded as a recent phenomenon that is directly related to the establishment of European trading posts along the coast (Wright, n.d.:5).

There is no evidence to indicate that the Woodland Cree or Assiniboine remained in the Boreal Forest north of Lake Winnipeg during the winter.

Henry Kelsey, the first white man to see the Saskatchewan River in 1690 and 1691, wrote that his companion Assiniboine headed south west and spent the winter in the parkland where they lived off the bison herds. The

band returned the next summer to the forest, where the women and children were left while the men travelled to York Factory to trade (Kelsey, 1929:1-4).

The native people exploited several or all of the Boreal Forest, the parkland, and the grassland; the ability to exploit these differing zones gave them a great deal of ecological flexibility.

Between 1683 and 1717, York Factory at the junction of the Hayes and Nelson Rivers was the only trading post on the west coast of Hudson Bay. Up until the Treaty of Utrecht in 1713 when the French yielded the entire Bay to the English, the post changed hands several times between these two nations.

During this period, York Factory was drawing Indian trading parties from as far as the Missouri River in the south west to at least the Great Slave Lake in the north west (Ray, 1974:59).

The Indians who travelled the farthest spent up to four months in the journey. If the ships from England or France were late, as they were in 1716, on the return the Indians faced great hardships and starvation and many of the travellers died as winter set in and ice prevented the use of their canoes. This led to a major shift in the economy and the Cree began to function as middlemen (Ray, 1974:60).

The incorporation of the gun by the Cree had

consequences which were out of proportion to its use as a hunting tool. It is questionable as to whether the gun was significantly more effective than the bow and arrow. It did reduce the time required to kill larger animals in the Boreal Forest, for the animal does not have to be stalked while it weakens from loss of blood as when hunting with bow and arrow, and though accuracy is lost in comparison with the traditional method, scatter shot could be used on wildfowl, moose, and deer when hunting at very close range.

The flintlock was not well adapted to the cold and had a tendency to freeze in the winter. The Indians lacked the technical ability to repair their guns when they failed, as often was the case, and it would remain useless until the owner could make the long trip back to the Bay in the spring where the Hudson's Bay Company armorer could repair it.

From an analysis of the trade from the coastal factories, Ray (1974:79) draws the conclusion "that there is little evidence to support the commonly held view that all of the Indians became critically dependent upon firearms very soon after their introduction".

The importance of the gun and its initially high sales was in warfare, for its shock value was quite high. It permitted the Cree to exert pressure on their enemies who did not possess the weapon, and as a result the Cree moved northward and south west. James Knight, in charge of York

Factory said the Indians told him that as many as six thousand men had been killed along the Cree-Chipeweyan border. Most of these losses were borne by the Chipeweyan who did not have ready access to the trading posts until 1717 when Fort Churchill was established by Knight. However the Cree did not go unscathed and their dependence on arms in war led to the slaughter described below, when York Factory was held by the French whose ships did not arrive as regularly as the English.

"the wars has allmost run'd this Country it being so thinly Peopled at the best. there has been all those Indians as they call em Sinnepoets (Cree) Destroyed so that of about 60 Canos as use'd to Come Yearly thee is not Above 6 familys left wch they told me this Reason for it that they had lost the Use of Bows & Arrows by having Guns so long Amongst them & when they dissappointed of Powder Shott wch was Often by the Ships not coming there Enemies found They had no guns to Defend themselves wth made warr Upon them & Destry'd above 100 Tents Men, Women and children " (York Factory Journals (James Knight) 1715-16, PAC HBC 239/a/2 p.22).

Prior to the 1750's there is little evidence that the Assiniboine and Cree acquired many goods at York Factory specifically for trade with the tribes farther north and south west. Rather they bartered their furs for the items

they wished to use themselves. And after a year or two of usage they passed them on as second-hand goods for three to nine times what they had paid for them in furs (Ray, 1974:68).

In contrast to the Indians who travelled the long distances back into the Boreal Forest and then during the winter farther into the parkland and prairie, the "Home Guard" of the coastal Hudson's Bay Company posts, began to stay year round. These people were probably the ancestors of today's Swampy Cree. The initially limited game resource of the Boreal Forest was quickly depleted due to the early adoption of firearms and the trapping of fur bearing animals. As a result, they became the first group of Indians to become dependent on a wider range of European goods, particularly cloth and blankets as they found it increasingly difficult to find enough skins and furs to make their own clothing.

This pattern of depletion, and the consequent dependency on the white man's goods was to be repeated throughout the forest zone later as the Company began to expand inland. However so long as the Hudson's Bay Company remained on the coast, the Cree who continued to travel could maintain a monopoly with the plains tribes and keep this delicately balanced system operating. Through their inland trade, they managed to obtain nearly all of the furs

they required to satisfy their own demand for goods and few did their own trapping.

The force which caused the equilibrium to shift was the intrusion of the French traders into northern Manitoba between the Saskatchewan and Lake Manitoba during the period 1830 to 1850 in an attempt to capture the trade on its way to the English on the Bay. The Cree continued as middlemen, but this marked the beginning of the period of competition.

According to the trader Andrew Graham, the average Indian needed only 70 M.B. (made beaver) with which to satisfy his basic needs (Williams, 1969:263). This maximum was not set by desire but by volume and weight, the result of a nomadic existence and the limited transportation capabilities back home.

By 1774, the Montreal traders who had taken over from the French and who were collectively known as the Nor'Westers were intercepting the trade to the Bay so effectively that the English were forced to change their policy of using Indian middlemen. With the expansion of the fur trade into the Athabasca District, the richest fur district in the western part of the continent, the H.B.Co. found it necessary to establish supply networks which would draw heavily upon the bison of the parklands and grasslands, for the resources of the forest could no longer support the traders.



Cumberland House, the first inland Hudson's Bay Company post was founded by Samuel Herne in 1774. It was well provided with food and was "the key to an entire system of waterways; westward lay the route to the Rockies, north to Athabasca, the Peace River country and the vast unknown beyond Great Slave Lake; east to the Churchill and Nelson on the one hand, and Lake Winnipeg and Red River on the other" (Burpee, 1935:162-3). Norway House at the north end of Lake Winnipeg followed in 1801.

Between the Treaty of Paris in 1763 and the merger of the Hudson's Bay Company and the North-West Company in 1821 trading rivalries reached their peak in Western Canada. The intense competition favoured a ruthless exploitation of the region, and this led to an almost total depletion of the fur resources in the forest area. As early as 1795 the Cumberland House Journals indicated that the land around the post had been trapped out for a number of years. Twenty years later the situation had not yet improved and beaver were still scarce (Ray, 1974:117).

As well as the intensive trapping the beaver also experienced disease which greatly decreased their numbers. As a result the Indians became almost exclusively dependent on the muskrat, which is in turn dependent on water levels. Water elevations are periodic in nature, so that the prosperity of the trappers was linked with the presence and

absence of drought.

The opening of inland posts marked the end of the period of the Cree acting as middlemen, and the beginning of their new role as trappers. To obtain the European goods to which they had already become accustomed they were forced to take their own furs. And in spite of the fact that the fur resources were declining, to carry on as trappers they had to buy more white goods: ice chisels, axes, traps, and other equipment.

Tobacco and alcohol became prerequisites for trade. Even though the Woodland Cree needed many more goods than in the previous era their demand for utilitarian and ornamental items did not rise at the same rate as prices fell during this period of competition. They found it easier to obtain the goods, and could satisfy their needs with less effort due to the falling prices. They spent an increasing amount of time drinking and smoking.

The Cree were unaccustomed to long range planning. Rather, they lived on a day-to-day basis and believed that if the animal spirits were given due respect there would always be enough game for the future (Glover, 1962:75-6). In 1821 the Hudson's Bay Company and the North-West Company joined forces. The traders attempted to convince the Indian bands that they should conserve their resources, and that various species should not be hunted year after year when

they were endangered. But the Cree had no traditional sense of territoriality. If an area was untrapped the land was considered a "free resource" and a neighbouring band had the right to move in and utilize the resource. Band boundaries were not sharply defined, but rather bands tended to return to the same general area year after year.

In an effort to deal with this problem, Governor George Simpson initiated a new company policy that was to profoundly affect the lives of the Indians. He proposed settling Indian families in well-defined territories on a permanent basis. He realized that this would involve changing a basic feature of the Indian life style - mobility.

Declining resources and a growing economic dependency placed the Indian in a weak position vis-a-vis the trader and they were forced to accept most of the economic reforms which the Company initiated (Ray, 1974:217).

By the middle of the nineteenth century the transition from middleman to trapper was complete. This was reflected in the transition of the subsistence base from large game to small game and fish, with trapping of furs providing the unit by which English goods could be purchased. This pattern of trapping remains to the present day. The following chapter examines the mutual exchange of technology between trader and trapper in the early era.

### EARLY TECHNOLOGICAL ADOPTION

The most obvious and the usual way of looking at the Cree technology is from the view of the white man. But without the incorporation by the European trader of aboriginal technology, the intrusion of the white man into sub-arctic Canada would have been an impossibility.

The interconnected river and lake network of the Shield provided not only effective travel routes, but throughout most of the area the only feasible means of travel. The birch bark canoes were the express travel of fur trade. They were designed for rapid transit on streams which were obstructed by rapids, falls, and shallows, and were so light that one or two men could easily carry one on his shoulders over the numerous portages, and as the canoe only drew about four to six inches in the water, few places were too shallow to float it.

"Though it is the most frail of boats, yet it can be loaded down to the water's edge, and under the guidance of these Indians, who are unquestionably the best canoe men in the world it can be made to respond to the sweep of the paddle, so that it seems almost instinct with life and reason" (Young, 1890:71). It could even be used to cross Lake Winnipeg, a body of water which due to its shallowness is known for storms which can keep large modern steel-hulled steamships in harbour.

The canoes, "were made of sheets of birch bark a quarter of an inch in thickness, which was sewed together with rattap, the root of the spruce split into thread, and the seams were made water tight with pine-tree gum. The inner surface was reinforced by a light coat of lathing which was held in place by cedar ribs (or spruce split very thin north of the cedar limit (Young, 1890:73)) bent bow shaped and inserted into the edge of the gunwales, giving the vessel firmness and strength" (Simpson, 1931:345).

Because the craft was so frail, it was frequently in need of repair. For that purpose every canoe carried supplies of birch bark, rattap, and gum. Mending was simple and was done with dispatch, an ordinary rip requiring but an hour to close up.

The canoes were twelve, fifteen, thirty, and even forty feet long, and from two to four feet broad (Ballantyne, 1879:71). The beauty, utility, and level of technology of the birch bark canoe can be assessed by comparing it to its present day equivalent. Modern canoes have almost the same dimensions, and can carry roughly the same load for a given length. The only difference is that the fiberglass, alluminium, or canvas canoes sold today require much less repair work. (personal communication: Ed Boudreaux, owner of The Happy Outdoorsman, Winnipeg).

The Indians were able to make fifty or sixty miles per

day with no storms or headwinds, and during the early period when natives of the Peace River Delta would travel to York Factory, trips of three thousand miles over the summer were common.

During the winter, travel depended on two artifacts : snow shoes and dog sleds.

In reference to the snow shoe, Harmon (1904) stated, "It is little surprising that the Indians, who are accustomed to them, will walk further in a day on good snow shoes, than they could do on bare ground". Today's commercial snow shoe not only duplicates the various types of early snow shoes, but also their method of fabrication and materials. As Dr. Richardson described in Franklin's Journal (1910:88), "All the superiority of European art has been unable to improve the native contrivance of this useful machine".

As for the dog sled: "So rough and wild is the country that we know of no other vehicle that could take its place, and no animal that could take the place of the dogs" (Young, 1890:90). "Winter travel in the North by dogs has been the custom from time immemorial. In fact it was the only way of travel in those great old days. For years ... horses were considered impossible. In the intense cold of the North, they could not work and exist; then dogs for common travel are twice as fast" (Gaudin, 1942:31). "And unlike the horse

which requires unremitting attention - hunting it when it is grazing loose and drawing it when in harness - the dog is always on hand when required" (Robert 1929:58). During the summer it will forage food for itself and can be tamed to help in the hunt, by surrounding large game and retrieving water fowl. In times of starvation, the dog can be killed for food and was in fact relished as a delicacy by both the Indian and Canadian voyageurs. The flavour of the dog is described as the same as that of young pig (Harmon, 1904).

The load was either placed directly on the dogs, which were accustomed to carrying sixty or seventy pounds of weight the distance of twenty-five or thirty miles a day (Harmon, 1904), or used in teams to pull sleds or carioles. These were nothing more than "2 1/2 inch oak boards, about eight feet long and seven or eight inches broad stitched together with thongs of deer skins and strengthened with a few light pieces of wood as crossboards and carrying a load of from 150 to 300 pounds" (Young, 1889:211). The four or six dogs were attached in tandem with a trace of well tanned moose hide. There is a record of a dog team being driven 140 miles in a single day, though forty miles per day was more normal.

In addition to means of travel, the Cree also gave the white traders the apparel with which to survive the intense cold of winter. "The dress of the male consists of a

blanket thrown over the shoulders, a leathern shirt or jacket having a hood to put up under the fur cap in windy weather or in the woods to keep the snow from his neck and a piece of cloth tied round the middle. They wore a kind of wide hose called Indian stockings, which, reaching from the ankle to the middle of the thigh are suspended by strings to the girdle. These have been universally adopted by the white residents as an essential part of their winter clothing. Their shoes or rather short boots, for they tie round the ankle, are made of soft moose skin, and during the winter they wrap one, two or even four pairs of flannel socks according to the cold" (Dr. Richardson in Franklin, 1910:76).

At the beginning of the fur trade the Europeans depended upon the natives for fresh supplies of game. Early traders were quick to point out that "if it were not for the Liquor & Tobacco We should Not get a butt of Victuals to put in Our Mouths, but what We could have caught ourselves" (Rich, 1951:80). However, as the fur trade moved westward, pemmican from the huge supply of plains bison and supplied by the plains Indians made it possible to develop the interior communications system of the North-West Company and the remarkable transportation system of the Hudson's Bay Company, independent of the limited animal biomass of the forest region.



In fact, the food reserves of the Boreal Forest would not support people in transit, and even the Indians residing in the forest were sometimes reduced to famine. Thus the introduction of flour, lard, and tea supplied by the trader was highly desirable. These items soon became staples, although only supplementary to their diet of fresh meat, fish, fowl, and berries. Store bought food could never be procured in sufficient quantity to last through the ten months or so when each family group was isolated from the others in its trapping territory, but they would contribute to relieving hunger in times of famine (Skinner, 1911:11).

The Cree were quick to incorporate various pieces of European technology where they were obviously superior to the aboriginal tool. The best example is the steel blade of the knife and axe. Unlike the rifle which is a complicated, repair-prone implement requiring shot and powder, the blade need only be periodically sharpened. Thus almost as soon as white men appeared, the stone tools of precontact times disappeared.

Before white man, fires were started by "twirling a piece of wood on a bowstring. This was supplanted by a specially devised steel, a piece of metal a half inch wide, one eighth of an inch thick, and five inches long, bent until the two ends met. Flint was had for the picking up & tinder was procured from the mushroom-like excrescences growing

on the birch tree. These last when dry were very inflammable & well filled the place of cotton which costs money" (Robert, 1929:71).

One can well imagine the desire to start fires easily, for warmth and tea, "especially when unrtaking a journey in winter, when the hands got so benumbed with cold that even matches proove slow enough to start the welcome blaze" (Robert, 1929:71).

Because skins for clothing were more difficult to procure than in the precontact days due to resource depletion, "the summer dress of the Indian was almost entirely provided by the Hudson's Bay Company. It chiefly consists of a blue or grey cloth, or else a blanket capote, reaching below the knees, and strapped round the waist with a scarlet or crimson worsted belt. A very coarse blue striped cotton shirt is all the under clothing they wear, holding trousers to be quite superfluous, in lieu of which they made leggins of various kinds of cloth which reach from a few inches above the knee down to the ankle" (Ballantyne, 1879:67).

Unlike our modern society, the Cree did not incorporate European goods as a result of an artificially stimulated demand such as advertising, but adopted, or supplanted only those aboriginal tools which had more efficient equivalents. As evidence in 1821, Nicholas Garry listed only "cloth,

flints, duffel for socks, guns and ammunition, tobacco, blankets, vermillion, rum, jackets, playing cards and hats as the more popular trade items" (Garry, 1900).

### THE ERA OF TRAPPING: DIRECTED CHANGE

For a century and a half the Hudson's Bay Company had controlled the vast area of unsettled land in the north west, but had no interest in settling the aboriginals in specific locations, permitting them to trap and hunt in whatever location they wished. By 1821 two social realities confronted the company. One, in the Boreal Forest, overtrapping in the centres of the most intense competition during the fur trade war between the Hudson's Bay Company and the North-West Company had increased the Indians' dependence on trade for powder, shot, and basic foodstuffs, and then left them suffering from privation as the fur bearing population was severely depleted. It was not until the competitive phase came to an end in 1821 that the Company acknowledged the impact a shortage of fur bearing animals was having on the Indians, who were starving for lack of pelts with which to trade for ammunition.

In 1824 Governor George Simpson wrote, "The Country between York & Frog Portage is much exhausted, indeed we did not see a single animal on the whole route exceeding the size of a Musk Rat & not so much as the vestige of a Beaver. The Indians however say that the latter was not entirely exterminated & that if the District was allowed to recruit for a few Years it would still be productive of Furs" (Simpson, 1931:14).

To this end Simpson instigated two directive measures: 1) to interdict the killing of beaver for four or five years throughout the district, in order that the fur resources would have a chance to reestablish themselves; and 2) to shift trading posts around and settle Indian families in well-defined territories on a permanent basis so that the fur bearers could be utilized in a regulated way.

The second social reality which Simpson recognized was the disease which the Indians had acquired from the white man. As they lacked any immunity to the contagious European ailments, such as whooping cough, measles, influenza, and small pox, they suffered terrible losses. David Thompson estimated the population was reduced by disease from one half to one third of its earlier size (Glover, 1962:236).

All the Indians whom Franklin met in the forest region in his first voyage to the Polar Sea in 1819 were in a state of starvation and suffering greatly from an epidemic state of whooping cough and measles. The diseases not only desimated the population but those who survived had their strength so greatly sapped that they could not go out and provide the meat with which to regain their strength (Franklin, 1910:49).

Simpson saw the H.B.Co. not only having an economic force with which to establish permanent settlements, but a paternalistic and social force. "Our different trading

establishments are the resort or refuge of many natives, who from age, infirmity, or other causes, are unable to follow the chase; they have the benefit of the care and attention, free of expense of our medical men, ... every trading establishment being, in fact, an Indian hospital" (quoted in Pettipas, 1972).

After 1821, the trapping of fur bearers was no longer a subsidiary occupation. Trapping had become the basic subsistence pattern, for it was only through the acquisition of furs that the Woodland Cree were able to obtain from the post those materials, which they had become dependent upon for survival.

Trapping and hunting had always be concomitant activities within the subsistence pattern. "The Cree were well adapted to the demands of the trappers existence living in small groups over a large territory. While trapping received a decided impetus following the advent of the fur trade, the culture, in general, seems to have shown as much continuity as change" (Trudeau, 1966:16). From the Indian view what had occurred was that the emphasis and time had shifted towards trapping.

The Hudson's Bay Company's attitude was summed up by a Mr. Boron in 1890. "...flour, pork, tallow and wollen clothing and blankets having now become necessities of life to many of the present generation of natives, & powder,

shot, guns, axes, & nets etc having become equally indispensable to the rudest Indian... the position of the natives of this territory in relation to the Hudson's Bay Company...has therefore, been for many years, & still continues to be, a position of absolute subservience & dependence" (H.B.Co. Arch. B155/a/62).

While the Cree had undergone a degree of acculturation brought about by the Hudson's Bay Company, the missionary was the first to attempt an aggressive form of directed culture change. He attempted to introduce the ideology and institutions which characterized Victorian society. "Ethnocentric to the core he believed all races in the human family, once freed from their ignorance, could share the greatness of Christian civilization as it existed in Britain. Evangelical theology became the guide book for transmitting not only a religion but an entire culture" (Goosen, 1975:24).

The ideal society which it strove to introduce was based upon the model of the small self-sufficient agricultural community, modified by circumstances to include fishing and hunting for supplementary food. Farming would teach the Indian foresight as well as THE PROTESTANT WORK ETHIC and would provide the security from starvation which was seen as a basic requirement of civilized society.

Education was deemed to be the best method of

furthering the aims of evangelism and civilization. By a process of formal classroom instruction, the Indians would be taught the doctrine of Christianity, the manners and morals of Victorian society, and the manual and mental skills which would enable them to become useful members of a civilized society. Second only in importance to the church, every new mission was to have its own school house, where the orderly business of learning could be carried out.

At the same time the Hudson's Bay Company could expect some direct advantages from a plan of evangelizing the Indians. Sir George Simpson argued that because the converted Indian would seek to imitate the European in manner and dress, his consumption of European produce and manufactured goods would increase, benefitting trade and the increased need for trade goods would require more serious attention being paid to the business of the hunt. Moreover traders would enjoy greater safety in travel through Indian lands, and could draw from provisions at Indian communities. Indians so civilized and pacified would also be an excellent source of runners and boatmen for Company transportation. It became almost a prerequisite for Company employment for the Indian to have become a Christian (Simpson, 1931:108). Also if the native communities could be encouraged to grow crops, it would reduce the food required to support even the smallest settlement.



Prior to 1839, the Wesleyan Church Missionary Society had limited its operation in western Canada to the immediate area surrounding the Red River settlement. In that year the Company assessing the advantages of Christianizing the Indians agreed to sponsor the passage of three Wesleyan missionaries and the important school-master. These included Rev. John Evans, superintendant of missions at Norway House, Mr. Jacobs, a school-master for Norway House, Rev. W. Mason at Lac la Pluie and the Rev. R. Rundle at Edmonton.

The missionaries not only acted as prothesizing agents of the Christian religion but when the Indian communities later came under treaty, these ministers often became the representatives of the Federal Government. Their attitude was indicated by E. McCool (Sessional Papers, 1889:159):

"On many of the reserves visited the advance in culture and the improvement in the construction of dwelling houses are most encouraging indications of the gradual development of a more enlightened civilization among the rude savages who cling with superstitious reverence to the barbarous customs and traditions of their untutored ancestors.

Good comfortable log cabins with improved conveniences are rapidly superseding the wretched filthy wigwans and miserable wooded hovels which were scarcely

any better adapted for human occupation than the lodges of beavers or the winter quarters of the other wild animals would be."

## THE ETHNOHISTORY OF NELSON HOUSE

The field research for this thesis was carried out twelve miles west of Nelson House, Manitoba. In order to understand the sites which were found in the summer's work, a detailed history of Nelson House is presented within the framework of the previous chapters (see map #II.1).

During the 1790's, the era of intense competition between the Hudson's Bay Company and the North-West Company, traders were active along the Churchill and Nelson Rivers. However, if any posts were established in the area of Three Point Lake, no Factory Records have survived in the H.B.Co. archives.

The earliest reference to the area is from David Thompson, surveyor for the Company, who had been exploring there in 1793 (one hundred years after Kelsey had first travelled in the region): "... we set off from Chatham House on Wintering Lake & on the 4th day June 2nd we entered the Wepoosaw River (Burntwood River) on June 6th we arrived at the Neestawyans, or the three tracks at this place the water of the Musk rat river & another of no note disembaque into the Weeposaw river, we saw there about 20 Canoes of Northern Indians " (H.B.Co. Arch. B. 239/b/58, fos 16d and 17).

There is evidence that William Sinclair operated a post at Nestoowyans, or "three points", called York House over

the winter of 1794-95, but it was abandoned in 1795. (H.B.Co. Arch.B 239/a/96, entry for 13 August 1794; B.239/b/58, fos. 32 d-33; B. 239/a/99; B. 239/b/79, fos. 8; B. 228/a/1). It should be noted though that the early journals were poorly kept, apparently by men of little education.

The earliest mention of the name "Nelson House" was on a sketch map drawn by a Mr. Flew in the year 1798 (H.B.Co. Arch. A.30/8, fo.44).

In 1823, as has already been examined, the Boreal Forest had been greatly depleted of its fur resources. The Company's trade on the Nelson River was concentrated on Split Lake. This resulted in the impoverishment of its neighbourhood and it was therefore decided that as part of Governor Simpson's resolutions the Split Lake post should be abandoned and a post established in its stead at the "three points about half way between Split Lake and the point at which the Churchill and Nelson Rivers separate" (H.B.Co. Arch. B.239/k/2, fo.22d). Up until this decree, Nelson House, was at best considered a temporary post for the winter season, though there was three other permanent posts of the Nelson River Department: Split Lake; Nelson House on Nelson Lake, on the upper Churchill River (established about the year 1800 and abandoned in 1827); and Southern Indian Lake (H.B.Co. Arch. B.91/a/8).

This new post was to be known as Fort Seaborn ( from H.B.Co. Arch. Fort Seaborn Journal, 1833-34). There is a good indication that the Cree who had been trapping around Split Lake, followed the post in its move to Three Point Lake. Thus the first of Simpson's objectives seems to have been successful. During the winter of 1823-4 the natives had a tolerably easy time, and though the Indians were entreated "by every means in their power to refrain from killing beaver", due to an unusual scarcity of reindeer, they had no other means of subsistence than to resort to the use of the beaver as food.

The Cree were constantly encouraged to defend their trapping grounds. In a letter dated 28th of September 1843, Donald Ross wrote to John Isbister, Factor of Nelson House; "I am sorry to hear that one of your Indians was shot by those of the English River for destroying their Beaver, but at the same time I cannot say but he deserved it, as in parts of the country where Indians really value their hunting grounds, it is death to those who encroach on them from other quarters" (H.B.Co.Arch B.154/b/1,fo.32d).

Unfortunately, no other journal than the one from that very first year (1833-4) has survived from Fort Seaborn, or Nelson House as it be came to be called, until 1907. However, there is evidence to indicate constant occupation of the post until the present day.

The maze of rivers which lay between Cumberland and York Factory offered considerable choice of routes from the Bay to the rich fur trade of the Athabasca region. In 1821 Governor Simpson was convinced that the Nelson River route, along the Burntwood and Rat Rivers over the Kissing River Portage to Southern Indian Lake and on to Frog Portage was certainly quicker for canoes than the usual Hayes-Echimamish-Norway House route. For two years (1824 and 25) an attempt was made to use this new route, but was then abandoned (Rich, 1960).

The Nelson-Burntwood way, in fact, never became a highway for the fur trade. Although a light canoe might make time, it was ill suited for the York Boat. The country could not support men in transit, and so the production of pemmican would have to be organized in the prairies and the load brought north from Saskatchewan. The normal route was much better located and hence the paradoxical discovery that the shorter route was much more expensive.

Rev. Semmons (1844:101) relates a story of the destruction and death of a York Boat crew at a rapids upstream on the Nelson from Split Lake (Birthday Rapids). This must have taken place in those two years that the route was attempted, and Semmons draws the conclusion that this incident led the Company to work the Hayes River as a less dangerous route to the west, "and the Nelson has never since

been used by the York Boats".

The use of the Burntwood would also have meant that the voyagers would forfeit the delights of Norway House and Cumberland House en route, and they were strongly reluctant to miss one of their few opportunities to enjoy the pleasures to be had in a community.

The history of Nelson House between 1824 and the turn of the century comes in most part from the books and reports of the missionaries. Rossville was the original Methodist mission in the North-West, having been founded by the Rev. James Evans in 1840, and named after his friend and patron, Chief Factor, Roderick Ross of Norway House, from which Rossville was only a few miles distant.

In 1854, the Indian Missions in the North-West Territories were transferred from the English Wesleyan to the Canadian Methodist Church.

The very first visit of a missionary to Nelson House in 1869 by the Rev. James Young is described in his book "By Canoe and Dog Sled" (1890:84-8). Not only is the following excerpt important from an historical view, but it also gives the bias from which the missionaries were undertaking their work.

"On one of my canoe trips, when looking after pagan bands in the remote Nelson River District, I had some singular experiences ...

We had been journeying on for ten or twelve days when one night we camped on the shore of a lake-like river. While my men were busily employed in gathering wood and cooking the supper, I wandered off and ascended to the top of a well wooded hill which I saw in the distance. Very great indeed was my surprise, when I reached the top, to find myself in the presence of the most startling evidences of a degraded paganism.

The hill had once been densely covered with trees, but about every third one had been cut down and the stumps had been left from four to ten feet high, had been carved into rude representations of the human form. Scattered around were the dog-ovens, which were nothing but holes dug in the ground and lined with stones, in which at certain seasons as part of their religious ceremonies, some of their favorite dogs - white ones were always preferred - were roasted, and then devoured by the excited crowd. Here and there were the tents of the old conjurers and medicine men, who, combining some knowledge of disease and medicine with a great deal of superstitious abominations, held despotic sway over the people. The power of these old conjurers over the deluded Indians was very great...

Here on this hill were all these sad evidences of the degraded condition of the people. I wandered around



and examined the idols, most of which had in front of them, and in some instances on their flat heads, offerings of tobacco, food, red cotton, and other things. My heart was sad at these evidences of such degrading idolatry, and I was deeply impressed with my need of wisdom and aid from on high, so that when I met the people who here worshipped these idols I might so preach Christ and Him crucified that they would be constrained to accept Him as their all-sufficient Saviour...

These old conjurers had the same feeling toward me as those who made silver shrines for Diana of Ephesus had towards the first preachers of Christianity in their city. They trembled for their occupation. They well knew if I succeeded in inducing the people to become Christians their occupation would be gone, and they would have to settle down to work for their own living, like other people, or starve...

A few more visits effectually settled them in the truth. They have cut down idols, filled up the dog-ovens, torn away the conjurers' tents, cleared the forest, and banished every vestige of the old life. And there, at what is called "the Meeting of the Three Rivers," on that very spot where idols were worshipped amidst horrid orgies, and where the yells, rattles, and drums of the old conjurers and medicine men were heard

continuously for days and nights, there is now a little church, where these same Indians, transformed by the glorious Gospel of the Son of God, are clothed and in their right mind, sitting at the feet of Jesus.'...

... The Indians now all profess themselves to be Christians. Scores of them by their lives and testimonies assure us of the blessed consciousness that the Lord Jesus is indeed their own loving Saviour. Every conjuring drum has ceased. All vestiges of the old heathenish life are gone, we believe for ever.' "

The visits to Nelson House so impressed Young that the Reverend John Semmens was asked to undertake a mission in the community. In June 1874 he moved into a small mud "mansion" which included a three-legged stool, a mud chimney, and a small window giving a southward view. However as he had no interpreter he stayed only a brief time (Semmens, 1884:112). The next year (1875) he returned with Edward Papanekis, as assistant and interpreter, a converted Cree who was to become the first ordained native minister in Northern Manitoba, to build a church in Nelson House on the site of that ancient dog feast. Apparently this first Methodist Mission was built in almost the same spot as the present day church, though this is not well substantiated. Semmens did not stay long in Nelson House and in 1880 the services of Papanekis were to be dispensed with (Semmens,

1884:187). For eleven years Nelson House was to have no resident Methodist minister, though the Hudson's Bay Factor, William Isbister, continued to conduct three services each Sabbath, and teach those children who remained nearby during the winter.

The Roman Catholic priesthood became active in Northern Manitoba during this time period, with missions at Cross Lake and Southern Indian Lake. As some of the people at Nelson House became converted by the Roman Catholics, Isbister began to fear that they would leave his protectorship and move closer to the priests. So, though he was a Methodist, he invited the Roman Catholic Church to Nelson House and in the fall of 1883 Father Etienne Bonald arrived and built his church at Otwahoowin, which was probably the present Catholic Point, but the records are unclear.

In 1889 a report by Inspecting Officer J. McDougal describes the location of the Hudson's Bay Company Post as "on top of a hill in the North West Bay of Three Point Lake. A central point of land for the Indians belonging to the Post, but distant from the regular fisheries." (H.B.Co. Arch. B.195/e/1). The post consisted of some eight buildings: a dwelling house 20' x 40' with a connecting kitchen, a 20' x 30' men's house, a log shop for Indian employees, a provision store, fish house, workshop, barn,

and milkhouse. It also shows that independent traders were active and had located themselves at the narrows of Three Point, about three miles from the Company Post, as well as having outposts at High Rocks (probably the present Highrock Indian Reserve) and at each end of Indian Lake.

In 1891 the Methodists appointed another minister to Nelson House. This man, the Rev. Samuel Gaudin, was to give the community its first stable school, church, and probably most important through his wife Anna Gaudin, the regions very first nurse. The site of the new mission was chosen as half way between Otwahoowin (described as five miles to the east) and the Bay on Three Point Lake, and was given the name Poplar Point (Gaudin, 1942:41). This location was to become the nexus of today's reserve, with the Bay, the nursing home, the co-op store, the school, and the coffee shop. However Poplar Point was for some years a rather solitary place with the Gaudins' nearest neighbors two miles distant.

Though Nelson House had had direct white contact for over one hundred years, one must not get the impression that it was "close" to the outside world. Norway House, the centre and transshipment point for the fur trade, had only two steamers a year bringing supplies north from the terminus of the Canadian Pacific Railway in Winnipeg, four hundred miles to the south. And Nelson House was another two

hundred miles to the north. In the eleven years that Gaudin spent in Nelson House only four visitors had come, and mail was received at best four times a year.

The primary duty of the missionary was of course to convert the natives to the ways of Christianity. But the Gaudins became part of the community, not just outsiders.

"When the Indians of Nelson House learned of Anna's death they said, 'There was never one like her, and there never will be another who thought only of herself when there was noone else to think about.' "

Just inside the door of the church at Nelson House is a bronze plaque to the memory of the first nurse to the Northern Cree that reads -

To the glory of God and sacred to the loving memory of the devoted service given by Anna J. Gaudin...For...ministering to the sick and needy of the Nelson House native people (Shiple, N. 1955:Epilogue).

Treaty # 5 in 1875 brought the people of Beren's River and Norway House and other reserves into contact with an entirely new directive force - that of the Federal Government, with its children's allowance, old age pension, and forced schooling. However the people of Nelson House did not know of the signing and it was not until 1908 that the Nelson House Band signed their adhesion to Treaty 5.

The church and government felt the Indians should lead a

more settled life, one in tune with Eurocanadian manner and thought, and to this end attempted to instigate an agrarian subsistence pattern.

Each family of five people, or in the proportion thereof, was to receive the quarter section of land that was so traditional in the opening of the Canadian prairies to homesteaders. The treaty stated that the area ceded was "reserves for farming lands" and any band of Indians who would "cultivate the soil" shall receive two hoes and a spade for every family, ploughs, harrows, scythes, and axes, and seed to plant the actual land broken up for cultivation. "Also for each band one yoke of oxen, one bull and four cows - all of the aforesaid articles to be given for the encouragement of the practice of agriculture among the Indians" (Treaty #5).

The missions and the Hudson's Bay Company Post were all set on private land within the confines of the reserve so that the Indians would have a model on which to base the gardens of their new agrarian life.

"Much of the land was well adapted for agriculture. Wheat ripens well at Norway House and Cross Lake. At Nelson House many of the Indians regularly grew potatoes, and both fur traders and missionaries regularly cultivated small crops of turnip, carrots, parsnips, radishes, cabbage, cauliflowers, onions, lettuce, beans, peas, etc" (Tyrrell,

1900:7F). It appears that the crops grown were sufficiently large to assist materially in the support of their families throughout the winter. But today not a single Cree family at Nelson House has planted a garden, though vestiges of large potato plots remain around one of the abandoned Hudson's Bay Posts.

The government actively involved itself in killing the native culture. "...measures must be taken to hasten their end. They are vestiges of savage life and while they continue among the Indians of any band, the work of civilizing them must be comparatively at a stand still. The farming instructor, the teacher, and the missionary cannot accomplish much among people who give themselves for weeks together to the excesses of heathen celebration" (Laird, Indian Commissioner in Annual Report of the Department of Indian Affairs 1902:185-192).

With the coming of treaty, schooling became mandatory for children during the winter. Thus no longer was the trapper able to take his children and wife with him to the bush. This had profound implications on the yearly settlement pattern.

Some children were also sent out of the community to the residential boarding school at Norway House, but found that "advantage gained at school is of small account in practical life as it is in the wild north-land. They have

been educated for agriculture and commerce; and must live where there is neither agriculture nor commerce. They are taken from fishing and hunting at the formative age, and after years of careful training for a different mode of life, return to hunt and fish. In some respects they are worse off than if they had continued in normal conditions." (Semmens in Annual Report of the Department of Indian Affairs 1903: 81-3)

Gradually, people began to build more permanent homes on the reserve and the community of Nelson House as it exists today evolved. In the last sixty years many social and technological changes, such as wage labour, the introduction of more efficient means of transportation to the outside world by bombardier and later by road, electric power, telephone, and television etc. greatly influenced life on the townsite. However, one of the last directed changes which affected life outside the community, was the development of the Registered Trap Lines (from Carmicheal 1973).

In response to a burgeoning demand, fur prices began a steady ascent in 1897. The philosophy was "take all you can" but the resident trapper population was estimated at less than fifteen hundred, a number too small to destroy the trapping equilibrium. The advent of the itinerent white trapper upset this long-standing balance between resident



trapper and the wild fur resource. In the late 1920's with the resumption of construction of the Hudson Bay Railway, many men employed on the line found it more profitable to trap (interview Jerry Malaher). This was the beginning of the Depression and the trappers attempted to compensate for low prices with an increased catch.

Registered trap lines were introduced as a system designated to eliminate destructive competition by introducing planned fur harvesting. It had as its purpose the same objective as the decrees of Governor George Simpson a hundred years earlier in 1823. But instead of allocating areas to bands it attempted to allocate exclusive trapping rights to individuals.

Boundaries were settled through negotiations between chiefs and councillors of neighbouring bands, and based on the natural lines of divisions which bands themselves had established since 1823. The anticipated transition from community to individual lines within the band areas could be undertaken gradually. But the natives were so anxious for implementation of the R.T.L.'s that all disputes were settled quickly and amiably. By 1945 all of Manitoba was under the R.T.L. system.

Trappers were protected from outsiders and they could conserve their stock of fur bearers so that the benefits would be theirs instead of their wandering competitors. The

rehabilitation of the beaver was seen as one of the keys to the R.T.L. system's success. No other fur bearer brought such consistently high prices and the species is non-cyclic and responds readily to protection. Thus, sufficient breeding stock, properly conserved would insure a relatively steady income for the professional trapper.

## THE YEARLY SUBSISTENCE QUEST OF THE CREE AS TRAPPER

BY 1823, and the establishment of Nelson House as a permanent post, the Hudson's Bay Company had instigated its system of Debt. Trappers would be given an advance for supplies for the winter's trapping; this tied the hunter to that post and gave him incentive to be a productive trapper that season, so he could pay off his debt and be given an advance the next year.

Debt was incurred in early fall (mid-September to the end of the month) and all or most of the Indians would leave the post for their trapping grounds as individual family groups. The first few days or weeks were devoted to organizing the camp. Men would go out for short moose hunting expeditions and women would set snares and fish in order to build up reserves of food for the first months when trapping activities would be at their peak (Trudeau, 1966:45). Sleds, snow shoes, fish nets, dog harnesses, and clothing were all made or repaired during this time of year.

The missionaries and Hudson's Bay employees would remain in Nelson House and require large supplies of fish to be used primarily as dog food. Each sled dog would be given two fish as its daily food requirement. So a single team of four dogs would have required at least 2,000 fish in reserve for the winter.

Travel to the winter trapping grounds might take only a

few hours or as long as several weeks. The first motorized Peterborough canoe was seen in Nelson House in 1908 (Shipley, 1955), and immediately the desire to own such a vehicle became very strong. People could travel farther with motors for hunting, but they travelled no further for trapping and fishing. Trap lines had by then already become established. The yearly cycle remained unchanged, but more trips would be taken as a result each year (Interview: Angus Bonner).

Until mid-December trapping was the primary occupation. It should be noted that trapping and hunting are not mutually exclusive activities. While trapping, an Indian is constantly looking for moose and caribou tracks or beds, and when hunting, he ordinarily carries a few traps in his bag in case he should come across otter tracks, beaver houses, or mink burrows (Trudeau, 1966:47).

Aboriginally martin, muskrat, fox, and otter were caught using deadfalls. "They are the simplest construction, being composed of two logs, the one of which is supported over the other by means of a small stick, in such a manner that when the animal creeps between the two and pulls the bait, the support is removed and the upper log falls and crushes it to death" (Ballantyne, 1879:94). The introduction of steel traps was rapidly accepted, and were reported as "most common" by Harmon in 1820 (1904:280). They

were superior to the more traditional methods and more effective as trapping became the subsistence pattern.

The people returned to Nelson House for Christmas, to sell their pelts, to replenish provisions, and to socialize with other Indian families. "It was customary for the Indians long before they became Christians, to have a great feast at the beginning of the New Year. In the old times, the principal article of food at these horrid feasts was dogs, the eating of which was accompanied by many revolting ceremonies. The missionaries, instead of abolishing the feast, turned it into a religious festival" (Young, 1890:66). Perhaps eight hundred or a thousand might be present for the Christmas feast (ibid p.68).

It is interesting to note that it was the white man who introduced the custom of the handshake. New Years is still known as "Kissing Day", and the kiss served the purpose of our more formal greeting (ibid p.66).

Afterwards the Cree returned to their winter homes. There was little trapping in January or February, because of the extreme cold. Around Easter, there was a second trip to the Post, after which trapping and hunting were resumed (Trudeau, 1966:46) and again the missionaries combined the religious aspect with the traditional yearly settlement pattern.

Late winter was the most difficult time of the year.

During this period it was hard to secure the necessities of life. The large quantity of fire wood required was obtained only by a great expenditure of labour and time. Hunting was hazardous because of climatic conditions, and game was often difficult to find. The whitefish taken or caught in the fall was often exhausted. Fishing was curtailed. This was partly due to the fact that fish remain somewhat inactive in deep water, but in addition the ice is so thick in February, it sometimes took nearly a whole day to set one net. Formerly the small amount of European food brought in by the group in the fall had been consumed by late winter. Even today some families have no flour by early spring (Edward and Rodgers, 1959:137). It was with much joy and relief that camp was moved to the marshland for the spring migration of ducks and geese (Semmens, 1884:73).

By late May breakup had occurred, the families stored away winter clothes and equipment and returned to the Post by canoe (Trudeau, 1966:66). The past year's debt was paid off and, after 1908, the treaty money was paid at this time.

Summer was a period of relaxation for most, with "a monotonous diet of fish relieved by wild raspberries, strawberries, and blueberries" (Mason, 1967:28).

The middle of June to the middle of August was the period of freighting supplies from Norway House. "For this work the Hudson's Bay Company employed twenty-eight able

bodied men of Nelson House to travel in the York Boats. Three boats were in the brigade and two trips were made each year. In this way on the two trips they were able to transport about twenty-five tons of various supplies to the Indian fur trade" (Gaudin, 1942:77). After the completion of the Hudson Bay Railway supplies were transported by bombardier train from Waboden. Today supplies are brought in from Thompson on Manitoba Provincial Highway Route 391 by transport trailer.

It is almost impossible for the trapper today to survive without store bought food. With the coming of compulsory school, men could no longer take their wives with them into the bush. In former times women set snares, and fish nets with evidence that these activities provided a substantial part of the diet, and they prepared the meat and pelts of the fur bearers and cervidae procured by the hunter. The trapper today has little time to devote directly to food production and must transport most of his food from the store to camps, and must provide food for his wife and children in the town (Bishop, 1974:29; & VanStone, 1965:20).

The duration of time spent in the bush has diminished markedly. The advent of the snowmobile has made travel in winter much faster and more pleasureable. A trapper must prepare his own food, make his own repairs, cut wood and do

all the other associated necessities of day to day life, and upon returning from his trap lines find an empty and lonely cabin. Instead of spending months in the bush, the trapper today will skidoo to his trapline for several days and return to Nelson House, the cycle being repeated many times over the winter.

This model of the yearly subsistence quest of the Cree comes primarily from the experience of Trudeau (1966) at Winisk, Ontario. However it agrees well with Russel (1966) at Sandy Bay, Saskatchewan; The swampy Cree of western James Bay (Honigmann, 1965); Oxford House (Mason, 1967); Rupert House (Knight, 1968); the Mistassini of Quebec (Edward and Rodgers, 1959); and the interviews with the people of Nelson House.



### Present Day Subsistence

The housing of today's Cree, while in the hinterland, presents an interesting example of the change from the camps of three hundred years ago. "In many instances formal features are the same, but the materials involved are different" (Mason, 1967:20).

At contact, the typical Cree summer lodge was a conical teepee formed by lashing two long poles together with a third pole making a tripod. On this base twenty-five other poles are laid, their butts forming a circle ten to twenty-five feet in diameter. Teepee covers were of moose and of caribou hide.

As supplies of hides became harder to obtain during the era of depletion, either rolls of birch bark (Ballantyne, 1879:70) or slabs of spruce bark were used (Interview: Nathan Moose). Later canvas or blankets obtained from the traders began to replace the natural materials (Movie: Job's Garden).

Now store bought canvas-walled tents are preferred, and almost universally used by the Nelson House People while in the bush (personal observation).

Winter dwellings were much the same, but the framework was reinforced as high as seven feet from the base with loosely laid split poles, chinked with moss, covered with bark or canvas and a layer of moss, and excavated for two or

three feet below ground level, and carpeted with thick layers of spruce boughs. With the usual fire hearth in the centre and smoke hole at the top, this teepee could comfortably house a large family in temperatures of fifty degrees below zero (Mason, 1967:21).

Overnight winter camps, as were used when travelling long distances, or when caught overnight while hunting, were remarkable in their simplicity considering the extreme cold. A place was sought, which during the previous summer had been burned in a forest fire, killing the trees, and leaving them so dry that they made the best of fuels. In the lee side of some dense forest, a dozen or so trees from twelve to twenty inches in diameter were felled and chopped up into lengths of from ten to fifteen feet. Snow shoes were used to shovel the snow into three sides surrounding a ten foot square. On the fourth side which was chosen to be up wind, a huge fire was built with the cut logs. A person would then sleep under the stars, completely wrapped from the top of the head to the toes in many layers of clothing (Young 1899:163). Jake Moose, a Nelson House man twenty-three years old remembers camping in this style with his father as a young boy.

Mason (1967:23) considers the dome-shaped bark wigwam described by Skinner (1911:13) for the Eastern Cree to be rare except near the southern border where cultural features

resemble those of the neighbouring Ojibwa.

About 1900, William Isbister, Factor of Nelson House, began to encourage the construction of log cabins. Today almost all trappers have a single room cabin as winter dwelling. They are of spruce logs, notched to fit at the corners; they have roofs of light poles covered with bark and earth, or roofing paper and are furnished with a few chairs or benches, built-in bunks and shelf space, and are heated with a stove in the middle of the floor.

In early times, before the depletion of game, people prided themselves on being good hunters and the catching of fish by a hunter was frowned upon by others. In later years there was no other form of subsistence and fish became an accepted staple of the diet.

The Cree sometimes took the largest fish, such as sturgeon, trout, and some whitefish, with spears. At other times they caught fish in drag or scoop nets. Fish weirs are an uncommon site now. However, in 1940 Mason (1967:33) notes that due to a scarcity of netting twine, many Indians were forced to build weirs under the guidance of a few old men. Fish traps are used in narrows and rapids and Angus Bonner (interview) noted their use at the end of Footprint Lake.

Two converging barriers of logs are stretched across a stream. At the apex a quadrupod made of four forked logs

interlocked at the top, was erected. Suspended from this stand was an inclined trough-like basket made by lashing together, parallel poles which had the bark stripped off. One end of the triangle laid below the surface; the other was elevated above the water. The rush of the current swept the fish up on the poles. The water escaped through the spaces between the poles while the fish were pushed higher up the trough by a man who wielded a netted scoop. Sometimes men waded into the river above the weir and threw stones into the water to send the fish downstream. (Anonymous: article from Nelson House School Records)

However, the general method of fishing used today is the gill net, some twenty to sixty fathoms in length, which contain from twelve to forty meshes, of from two to seven inches in width. "Upon lines which are fixed upon each side of the net, for the purpose of strengthening it, they fasten, opposite to each other, a small stone and a wooden buoy, once in about the distance of about two fathoms. The net is carefully thrown into the water and by means of the stones on the one side and the buoys on the other, it becomes extended to its full breadth. The ends of the net, which form a semi-circle are sewed by stone; and it is visited every day, and taken out of the water every second day, to be cleaned and dried" (Harmon, 1904:290). The method today only disagrees with Harmon's description in

that store bought commercial fish nets are used.

Fishing is important in fall, as winter food, and in the early spring, when many species of fish are moving into shallow water to spawn.

Winter fishing is a "common practice" (Interview: Angus Bonner). A jigger propells the net by, in effect, walking underneath the thick ice cover. Holes in the ice are now either drilled by machine or by the use of an ice chisel. Before the Indians had metal, rocks were heated in huge bonfires and burned their way through the ice cover. Snow was heaped over the hole and acted as an effective insulator so that the hole would not freeze overnight. Winter fishing was also done in the open water at the outlet from lakes and on rapids where the ice either never forms or forms late in the winter.

Fishing for the Hudson's Bay Company had always been an activity which occupied the Nelson House people from the earliest days of the Company. Thus the introduction of commercial fishing in 1944 fitted into a well-established summer economic pattern. It is a most popular and adaptive economic activity. It not only allows the people to camp in the bush during the summer months with their families, but also provides them with a source of income without interfering with the formal education of children. Also food costs drop during summer months, as many of the fish

caught are consumed and fish are eaten at least once each day (Bishop, 1974:39).

The major fish taken is the whitefish, with lesser amounts of jackfish, tullibee, burbot, and pickerel. Unfortunately sturgeon, which is so valuable as a supply of oil and perhaps caviar, has almost entirely vanished from Northern Manitoba. It takes twenty years before the sturgeon can reproduce and because it is such an easy fish to capture during its spawning run, today it is an extreme oddity.

The major game for both winter and summer were the moose, deer, and caribou.

Moose are easiest to hunt in the fall rutting period; and are also fattest at this time of year, having a thick layer over their back quarter. During winter they move into sheltered swampy valleys. They tend to stay in a restricted area for the winter in groups of three or four, and may be run down by a hunter in snow shoes, as the deep snow impedes their speed and they soon tire. During the summer they move more freely through the bush but on hot, calm days they are often found at the water's edge in order to escape insects, to drink, and to cool off. As fall approaches they are found in shallow waters eating roots of large aquatic plants. The Cree today almost invariably carry a gun in their canoes in the chance that they will sight a moose

along the water's edge.

There were two types of caribou in the area, the woodland and the barrenland. The woodland caribou and the deer occupy the same adaptive plateau and are hunted in a similar manner to the moose. The barrenland caribou formerly moved southward into the area in November or December or during the spring months when they dropped their young. "While herding they almost lose their fear of man & so hundreds may be killed...When a hunter gets on the track of a herd his object is to kill their leader - the whole herd is thus thrown into disarray until a new leader asserts itself, and the hunter may be fortunate enough to get venison to keep him and his family for months" (Young, n.d.:272).

In July and August the migration is northward, and the Cree would wait at open rivers to slay the animals while they were helpless in the water (Masson 1967:12).

Within memory of old Indian hunters, moose were scarce, but the great herds of caribou migrated annually as far south as the Hudson Bay Railroad. Today the situation is reversed. Barrenland caribou have not been seen south of Brochet since the 1940's (Interview: Jerry Malaher), but many moose are caught each year.

## Conclusion

The first section of this thesis has shown that the Cree have experienced direct, acculturative and resource pressures, and indirect assimilative pressures which have limited their ability to move within the Boreal Forest, since the first contact with white man in the seventeenth century.

Before the Hudson Bay Company, the Cree could travel through the forest and plains in search of optimum food resources in response to the changes of season. As they became dependent on certain trade goods, and food resources diminished, they became first middlemen, and then trappers. During each stage they became more confined in what may be described as a home territory or yearly travel route. Eventually communities became established around specific trading posts and the yearly subsistence pattern was limited to movement between the post and trapping grounds. Today the Nelson House people live on a government Indian reserve and own the rights to very specific and well-defined registered trapping lines.

The nexus of this thesis is that within these imposed and perhaps artificial boundaries, the Cree while in the hinterland, continue to create sites which are little influenced by external stimuli at the micro level. Therefore an examination of these sites is a method of observing the



utilization of the natural environment by the native people in a state as close to the indigenous as is now possible. And through this process the Cree's preferences and desires of their way of life may be inferred.

## Section II

### SITE SELECTION AND RESOURCE UTILIZATION ON LAKE WAPISU

#### The Problem

Is it possible to discover significant associations between sites found on Lake Wapisu and specific factors (or combinations of factors) such that any regularities in the selection of site loci may be derived?

A site is defined as any locus of human occupation, for any length of time. Many authors, (Chang, 1958, 1962, 1974; Willey, 1953; Vanstone, 1971; and Cambell, 1968) have pointed out that site selection is a function of environmental factors, cultural preferences, and external stimuli. As has already been shown, at the macro scale, the Nelson House Cree are no longer able to select where they wish to wander in search of their subsistence as a result of external stimuli. In this section it will be demonstrated that within the microcosm of Lake Wapisu, environmental and cultural factors of site selection within systems of resource utilization may be determined and defined.

## Methodology

Field research was carried out on Lake Wapisu (see Map II.1) for two and a half months during the summer of 1974.

The entire shoreline of Lake Wapisu was classified according to the shoreline scheme of Section III (see insert, Map App IV.1 and 2) at a scale of one inch to one half mile (one centimeter to one quarter kilometer).

Site loci on Wapisu are quite small, and almost invisible while on the water or in the air (except for about half a dozen large camps and trapping cabins). Therefore to locate sites, it was necessary to walk along the shoreline. Once a site was found a standard site report was completed (see Figure II.1). Sites were pin-pointed on maps traced from air photo mosaics of the Burntwood River Mapping Project of the Lake Winnipeg, Churchill, and Nelson Study Board at a scale of one centimeter to one hundred and twenty-five meters (approximately). This permitted location of sites to within twenty meters of their true situation. Extensive photographic records were taken of each site, and of each major feature. Colour slides using a Nikkormat 35 mm camera with a wide angle lens, were found to be a good way of capturing the general location of the site, of the shoreline characteristics, and physiognomic unit upon which it was located, and the general vegetation in the area. A

Yashicamat 2 1/4 in sq camera with black and white film was used for recording individual site features and artifacts. All photos were recorded with date, film number, shot number, direction of shot, speed, f-stop, and description of shot on both the site reports and in a separate photo notebook. This cross-referencing was found useful in later site analysis.

As some of the sites were identified as to purpose and location by the people of Nelson House, informant data was recorded.

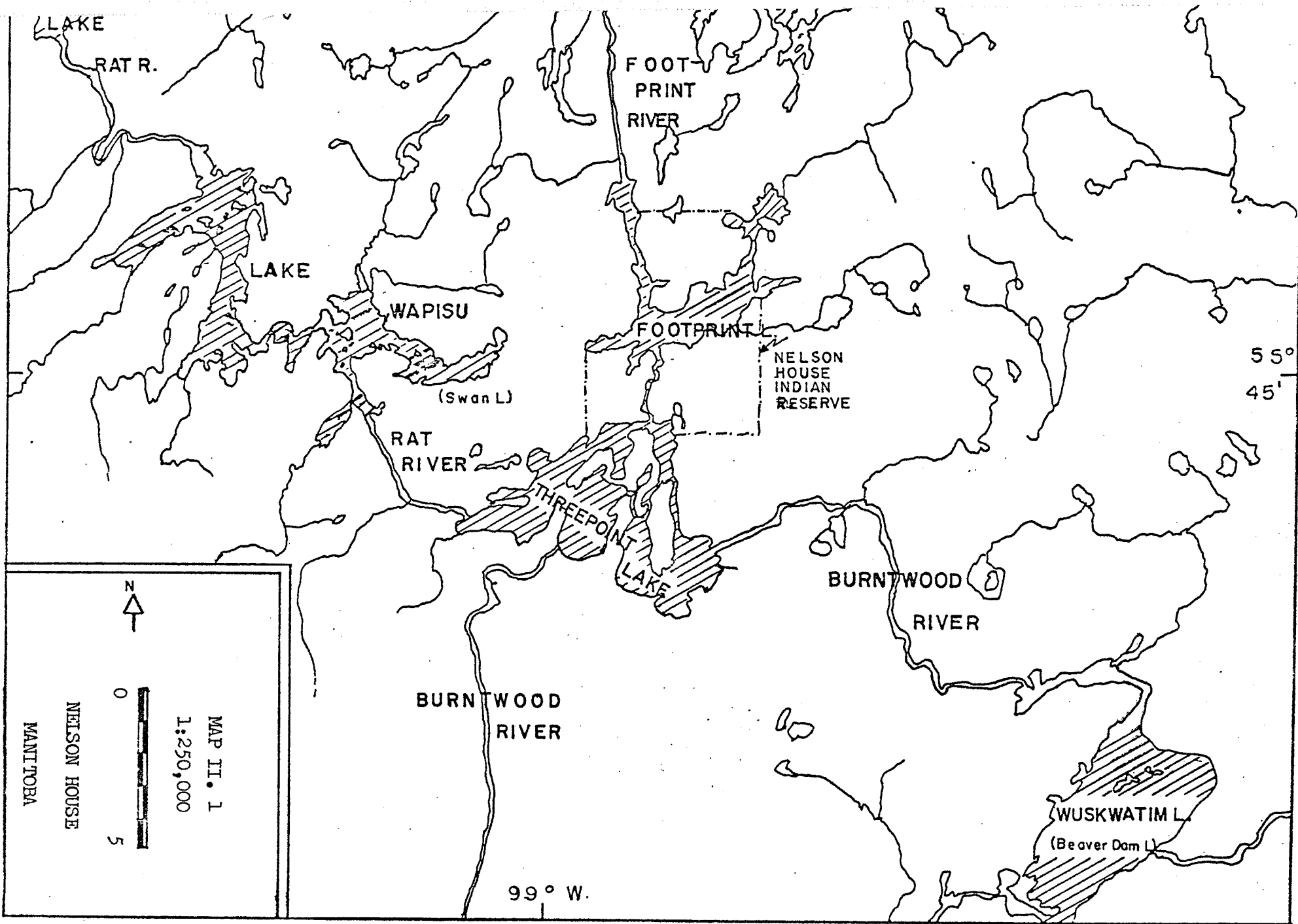
Accurate descriptions of the site were made, often accompanied by a map or sketch. Several typical site descriptions are included in Appendix I.

It was hoped at first to walk the entire shoreline of Wapisu, however the field season limited the survey to the north west lobe, the south east lobe, the central east lobe, and the central portion of the lake known as the narrows. (See insert Map IV.1 for survey limits.) This represents about 90 km or about one half of the lake's shoreline.

Eighteen islands and fourteen creek mouths were surveyed. A creek was defined as any water inlet to the lake which would be navigable by a small canoe at an estimated high water level.

Basic transportation was either a twelve-foot

aluminium boat or an eighteen-foot square-back freighter canoe powered by a ten horse-power outboard motor. Both worked well, and were capable of holding equipment, the author, and an associate researcher. However, the small aluminium boat proved to be unstable with more than two people or in waves over three feet high. Occasionally a twelve foot canoe was used for access on creeks and in shallow marshes.



MANITOBA  
NELSON HOUSE

MAP II. 1  
1:250,000

99° W.

55°  
45'

Figure II.1

SITE REPORT

Site #

Type of site:

Location: Map #

Lat

Long

Informants:

Note reference:

Sketches: (sketch showing features, artifacts, etc)

Map: (sketch map using hand level and tape measure)

Photos: Colour slides

date

page reference

film #

shots #

photographer

black and white

date

page reference

film #

shots #

photographer

Artifacts: (description of refuse, etc)

Features: (description of hearths, tent spaces, etc.)

Other: (animal bones, chopped trees, etc)

Materials collected:

Present condition: (general description)

Vegetation:

Soil:

Shoreline classification:

Slope:

Physiognomic unit:

Distance from shore:

Other

Figures and Maps

Page no:



## INTRODUCTION

Lake Wapisu has been used by the people of Manitoba for much longer than the recorded history of the area, as was shown in Section I. The sites which were found over the summer of 1974 reflect the present usage by the Cree of Nelson House, but within this small area the site selection and systems of resource utilization reflect a set of ecological parameters which have been operative for a much longer period of time than the surviving sites. Thus an analysis of present sites is not only illustrative of the way of life today, which has incorporated many of white man's goods and technology, but of a culture, the foundation of which has remained unchanged in four centuries of white contact.

Site selection is broken into a type classification which is based on the size and length of occupation. The smallest identifiable site is the hearth. In increasing complexity, the other types are small camp, camp, and log cabin.

Some one hundred and twelve sites were located along the shoreline of Lake Wapisu. By far the largest number of sites (56) were hearths, short stopping-off points of which only charred wood and a small amount of general refuse remained. Thirty-four small camps with the remains of one or two tent spaces were found, and four larger camps with three

or more tent spaces. There are two log cabins which were actively used by trappers during the winter of 1973-4, and two log cabins which had fallen into disrepair. Three winter roads were located. A commercial fishing station and the accompanying living areas, the Archaeological Research Centre dig site (a traditional canoe-building spot) the summer's base camp (situated on the foundations of a former saw mill), and several fish caches, were sites of larger extent. Two sites left by bush crews of Manitoba Hydro were found.

In general, a site was delineated such that it included all the features and artifacts which were in relative close proximity to one another and associated with a single site utilization.

Having established a basic typology, the systems of resource utilization can be defined.

1) Travel

-summer

-winter

2) Non-commercial fishing

-summer: local consumption - small camp

-winter: local consumption - large camp

- caches

3) Hunting

-large game

- water fowl
- 4) Berry picking
- 5) Trapping
  - commercial: cabins
  - camps
- 6) Other
  - modern Indian industry: sawmill
  - commercial fishing
  - archaeological dig site
- 7) Hydro
  - white man

The diversity of sites found on Lake Wapisu represents the entire range of activities which the historic literature and Nelson House interviews indicated that the Cree took part in. Therefore the assumption that the microcosm of Lake Wapisu is a representative segment of the Nelson House culture over a long period of time is probably true.

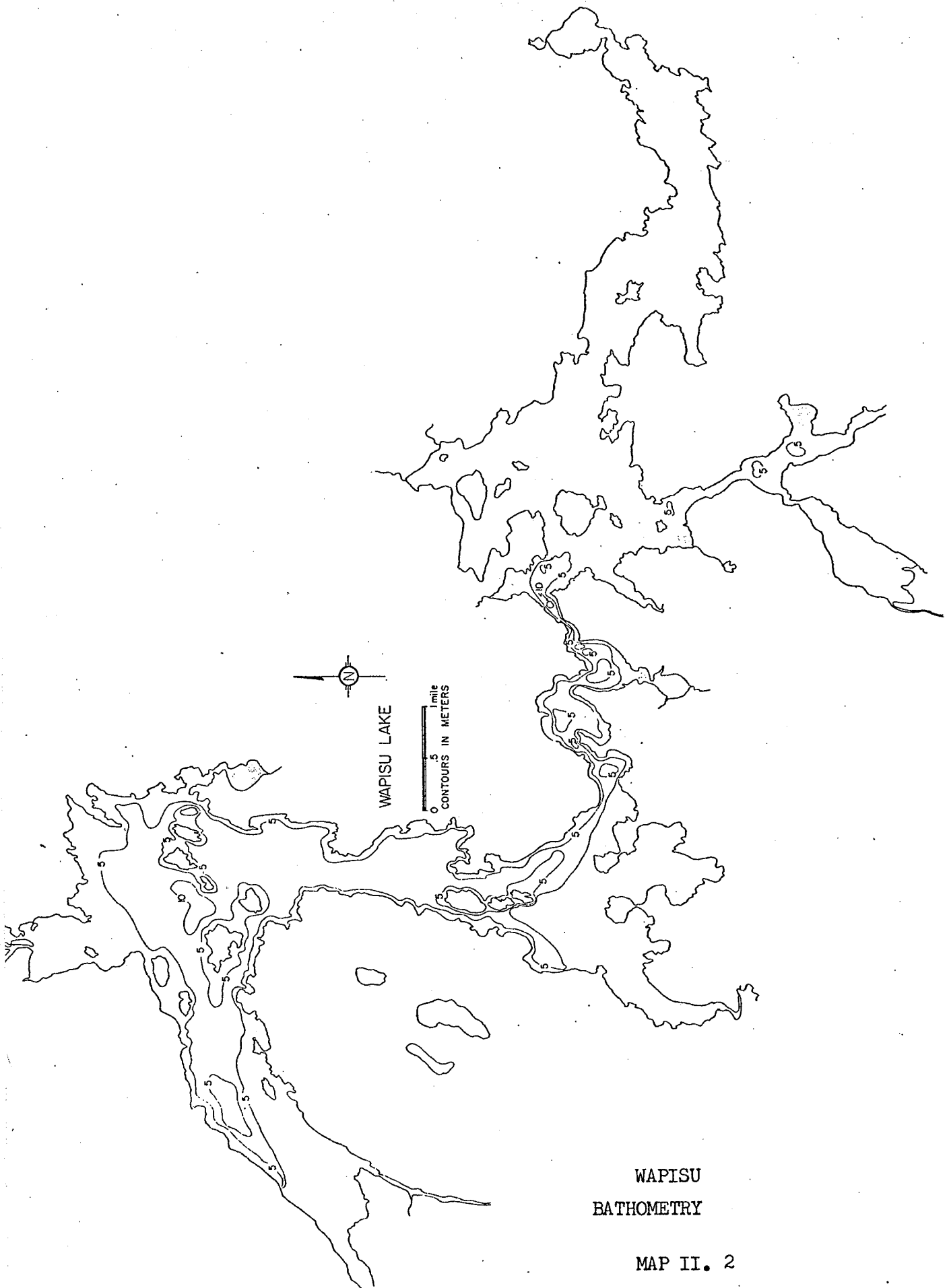


Figure II.2

Physical Parameters of Lake Wapisi

Total Area	40.89 million sq. meters
	15.79 sq. miles
Number of Islands	99
Island Area	2.00 million sq. meters
	0.77 sq. miles
Water Area (0 m. contour)	38.89 million sq. meters
	15.02 sq. miles
Maximum Depth	10 meters
	32.81 feet
Mean Depth	8.03 meters
	26.34 feet
Volume	128.33 million cubic meters
	0.20 million acre-feet
Shoreline Length	
Lake Outline	149.34 kilometers
	92.80 miles
Islands	32.51 kilometers
	20.20 miles
Total	181.85 kilometers
	113.00 miles

from: Brown, 1974.

## SITE SELECTION - TYPE

### Hearth

A hearth as a separate site was simply the remains of a fire and a small amount of refuse in isolation. The remains of fires were of course found in larger sites, and these were included as features of the larger site.

Hearths represented 50% of all the sites on Lake Wapisu and were remarkably consistent in their appearance. The amount of refuse was very small. Often there was nothing except the remains of charred wood to mark the spot. (photo II.1) Rarely were there more than three cans left around. Of these, Campfire Sausages, bean cans, and stews were the most common. Tea bags were often found; tea has been a necessary part of any short stop since the drink was introduced centuries ago by the Hudson Bay Company.

The hearths were built in contrast with the white man's rules of fire-making as exemplified in any boy scout manual. The wood for fires was almost never chopped into small pieces or split. Most hearths were formed of long pieces of spruce or driftwood about two meters in length. There was not a single instance of a hearth site having been built within a ring of stones. Those hearths found in a wooded area may have been extinguished by water, but never by being covered by earth, and large numbers were probably

left to die by themselves. Nor were the remains of the fires scattered. The logs were often found in situ. Hearths were often built at the base of a tree, with consequent scorching of the bark, the tree being used as a natural reflector for heat rather than as a wood supply.

A single hearth on the lake (site 25) was obviously different from all others. It was located on island 1, ten meters from site 24. There were no rocks conveniently located on which to sit while resting beside the fire; the fire pit was much larger than usual; the location was damp; there was a Shake and Bake container; the ashes were covered by sand and some were heaped to one side. Unlike other hearths it did not blend into the landscape, but seemed superimposed on it. It was therefore probably not a Cree site, but one built by white man.

55% of hearth sites were on or beside a spit or outcrop and 28% were in or beside a cove. The cove-spit physiognomic collection is typical of an irregular shoreline. Not a single hearth was found along a regular shoreline, that is one in which the shoreline was of a single classification for more than a quarter of a kilometer.

Hearths are often found on exposed bedrock spits, open to the wind. Even a gentle breeze would clear the area of insects, and thereby enhance the enjoyment of any stop.

The granite which forms the spit is shattered, and these small differences in height make comfortable chairs.

A large portion of the south shore of the eastern lobe was heavily burned about ten years ago. (Photo II.2 & II.3) Penetration into this area is almost impossible. Very few sites of any type were located along such a shoreline. Where a site was found (eg. site 84), it was located in what was described as the only pleasant spot in the entire area, near a creek mouth and isolated from the destruction in the backshore by a thin fringe of growing mature forest.

The high percentage of hearths found in exposed places indicates that these would be used in warmer times of the year. In all probability, winter hearths, because they are built on top of the snow cover, would fall into disarray as the snow melted and would be much harder to locate. Therefore the sample of hearth sites is probably biased towards snow-free occupation.



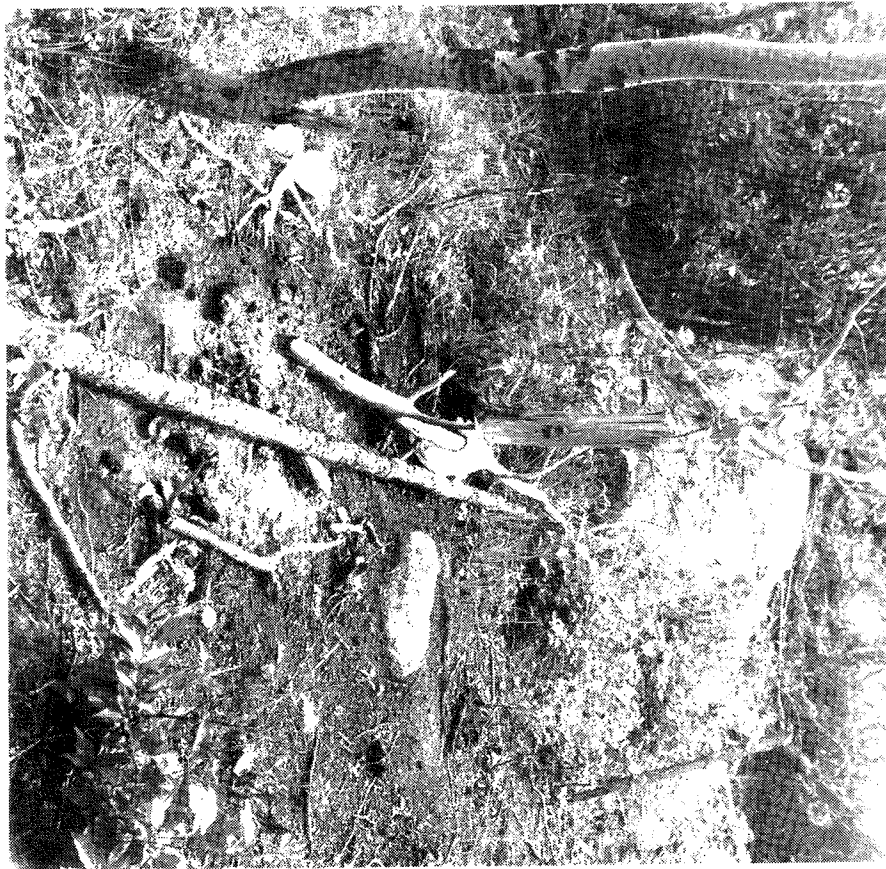


Fig. II.1 Typical Hearth site.



Fig. 2 Burn Area.

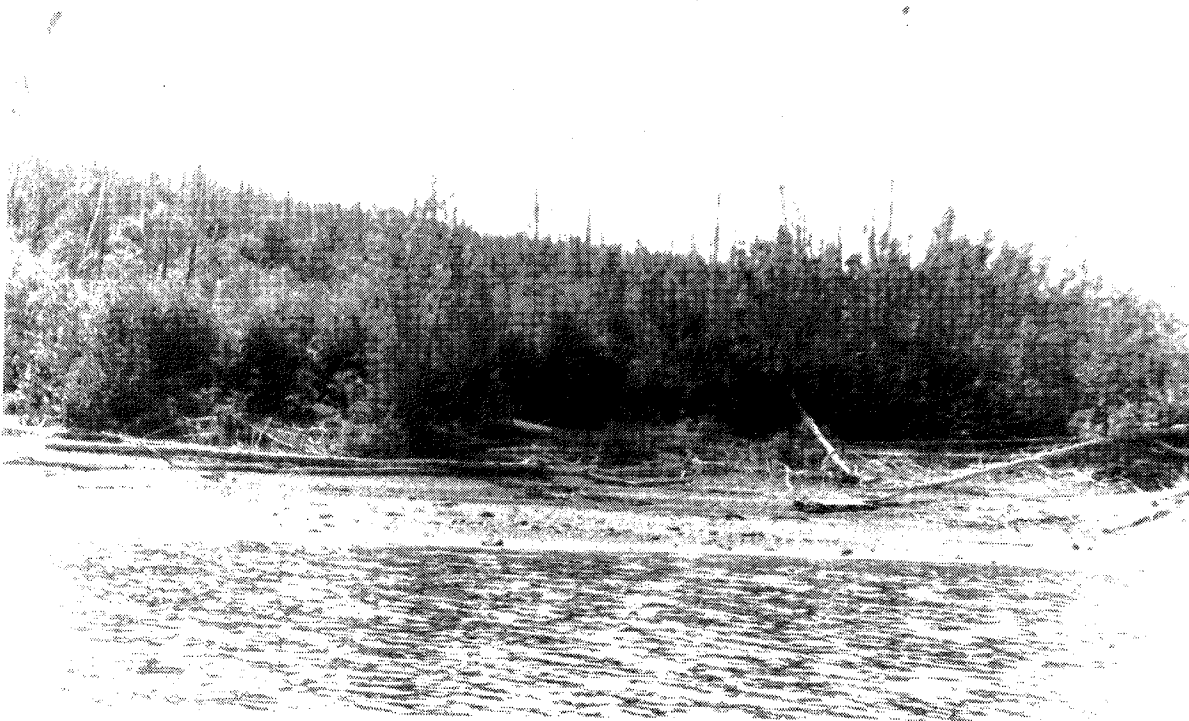


Fig. 3 Burn Area

### The Small Camp Site

A small camp is a site with only one or two tent spaces. Whether both tents were erected and used concurrently, or whether the site was reused over several years, was often impossible to ascertain. The important parameter is in the size of the living area, and the required area is quite small. The most common tent used by the Nelson House Cree is about two meters by three meters in size. This provides sufficient room for a fairly large family. The only other open space is the cooking area, a hearth of between one and three meters in diameter. Therefore a small camp can be constructed in only twelve square meters.

A relatively flat spot (less than two degree slope) is a prerequisite, but because the amount of level ground needed is only the size of the tent, this can usually be found in any given area. In fact, the easiest way for an observer to find a small flat location, is to locate a small camp!

In contrast to the hearth sites, small camps tended to be located within or at the boundary of the bush, rather than having an open exposure. In general most trees were left standing, and those few which were cleared, permitted a small open area to be expanded into one which would serve as a comfortable size for the living area.

Thirty-five small camps were located along the surveyed shoreline. This represents 28% of all sites. There is a marked contrast between sites used during the snow-free period and the rest of the year.

The first type of winter camp was located just inside the forest boundary. The trees which surround the site give extremely good protection from the cold winter winds. The ground between the tent sites was not flat and on two sites was covered with boulders. The tent was simply built on the snow with no thought of the ground below.

The second type of winter camp was located well within the spruce forest, five to eighty meters inside the treed zone. The slope was usually flat, but was occasionally as steep as five degrees. The floor of the tent was invariably covered with spruce boughs. These acted as insulation against the cold ground, and as a mattress. Often a small spruce tree (two or three meters in height) was found beside the camp, with its limbs deboughed. Small spruces provide better branches for the floor covering than larger trees because the limbs are not thick, and so will not cut into a person's back when sleeping.

On several sites there was no indication that a tent had been used. Informants (Jacob Moose and Abraham Spence) described winter camping. Snow was cleared down to the ground for the winter bed with snow shoes, and piled on

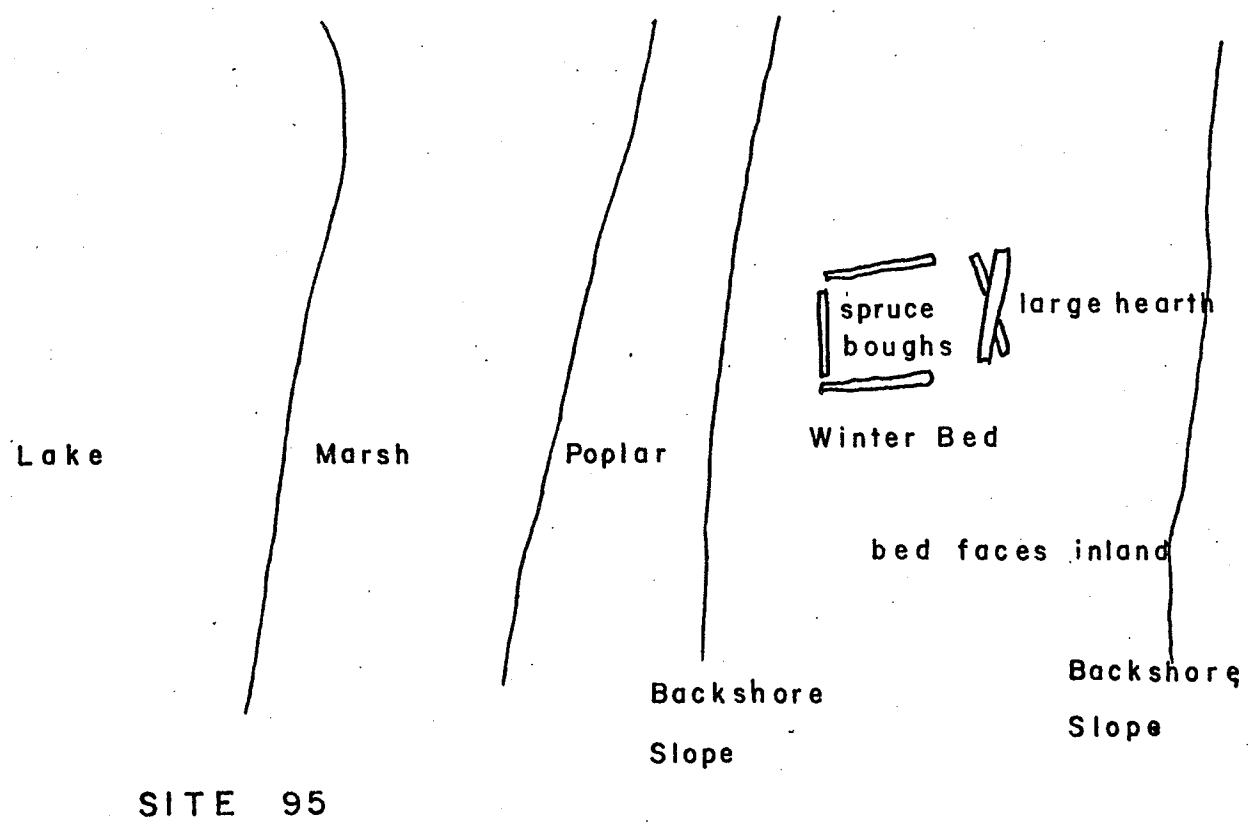
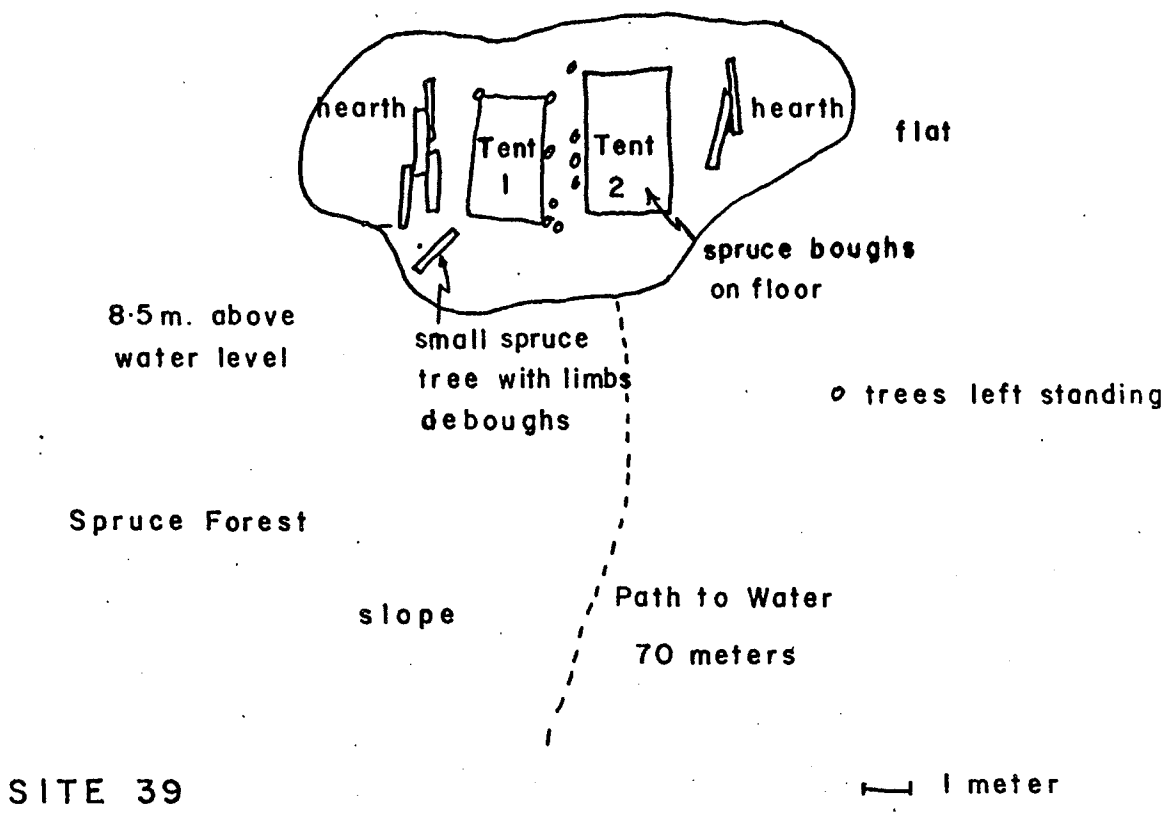
three sides. Spruce trees were then cut and piled three high along these borders. The boughs from these trees would make a thick covering over the snow. A large fire was built on the fourth side, and tended throughout the night. The heat reflected by the logs and snow banks was sufficient to permit a comfortable sleep.

Where tents were used, the hearth was always built just outside the tent door. Figure II.3 are sketches of the remains of two winter camps.

Summer sites are typified by site 114 (see Appendix I for site description). This camp was observed during and after occupation. Photo II.4 is a shot of the family (father, mother, three children, and dog) in their canoe. The purpose of the trip, apart from the pleasure of being in the bush, was multifold. A large bore rifle was carried in the hope of locating a moose and a shot gun was carried for wild fowl (three ducks were caught and eaten). Berry picking was also carried out. Photo II.5 shows the spit on which the camp was located. The burn in the background was very severe, but a few meters of unburned spruce isolated the camp from the tangle of fallen trees in the rear. Photo II.6 and II.7 are taken from the same location, during and after occupation. All that remained were the two tripods and crossmembers of the tent frame and the hearth. The rubbish, cans, garbage bags, etc. detailed in the site description

were probably left behind by a Hydro crew in 1972 or 1973.

Of all the sites on Lake Wapisiu only two (sites 16 and 90) had evidence of a semi-circular lean-to on which an outside covering was laid (Photo II.8 & 9). There was no indications of wigwams having been used as living quarters, though in Nelson House, and at the Moore cabin (site 115) wigwams were used as smoke houses. This is an example of the native technology having been entirely superceded by imported white goods.



PLAN VIEW of WINTER CAMPS      FIGURE II. 3





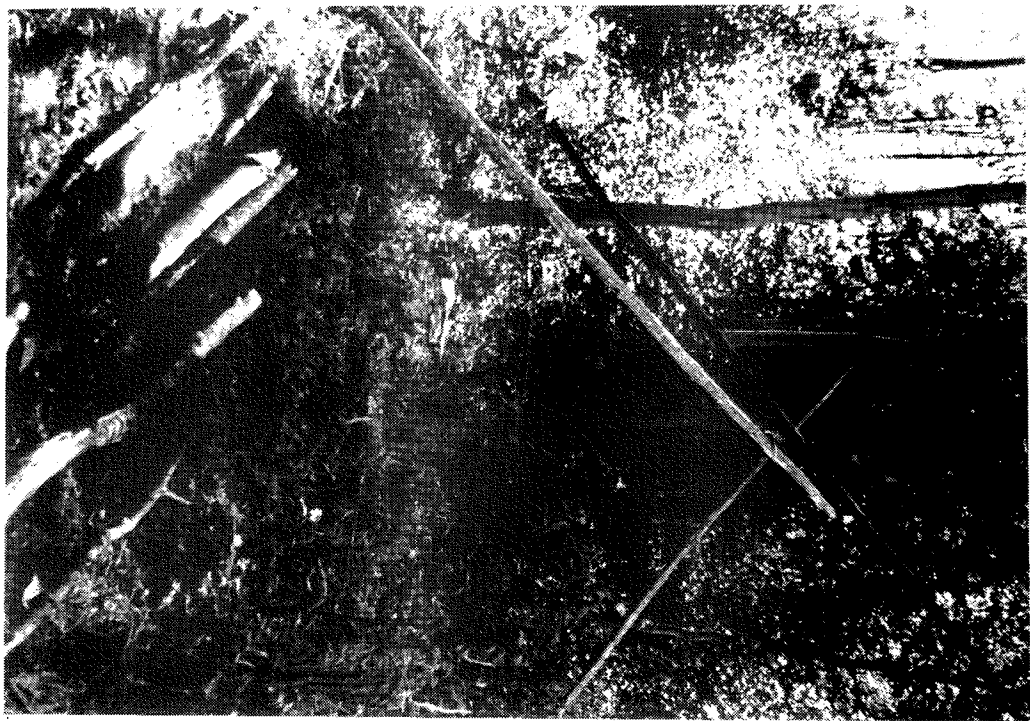


Fig. 7 site 114 after family has left.



Fig. 6 site 114 close-up.



Fig. 8 lean-to over which a covering  
is laid.

### Large Camps and Trapping Cabins

Several large camps (three or more tent spaces) were found on Lake Wapisu. Site 9 is a winter camp associated with a winter road (site 10) to Nelson House from the lake; site 26 (Sled Island) is a multicomponent site covering a small island and having a multiseasonal occupation; site 35 and 59 are winter fishing camps; site 79 is a large inland camp that may have been used for trapping or fishing; site 93 is an area on the lakeshore at the beginning of a trail to a trapping cabin (site 112), and site 113 is the remains of a commercial fishing camp (last used in the summer of 1973).

Large camps are only built in response to the exploitation of one or two specific resources. Each camp will be discussed under its particular utilization in a following section. However some structural aspects are similar. The commercial fishing camp supported about ten men and their families. Rather than clear a large amount of bush, the living areas were nucleated into smaller loci of three or four tent spaces, spread over about one half of island 21. Not a single site on Wapisu contained over six tent spaces of which probably no more than three were occupied concurrently. This would indicate that the Cree tend to have a cultural preference for relatively small nuclear camps within the framework of a larger grouping.

The main difference between large and small camps, beside the number of tent spaces was in the periferal features. Because the large camps were occupied for a longer time period there are secondary structures: fish drying racks, racks which served as stove bases, racks for the storage of motors, spits on which to roast meat, outhouses, tables, etc. (Photo II.9). In several of the large camps some of the tents were laid over raised platforms of plywood, which were in turn sitting on bases, two or three logs in height.

In comparison with the debris and secondary features left by white man, the amount and diversity of the remains were very limited.

Four log cabins were found on the lake. Site 112 (owned by Sam Wood, Photo II.10) and site 115 (owned by the Moore family) are now used as bases on registered trap lines. Site 86 (once owned by Angus Bonner, Photos II.11 and II.12) and a cabin on site 113 (commercial fishing camp) are no longer occupied and have fallen into disrepair. There are two buildings once used for commercial fishing: the ice house and the fish storage house.

All these buildings are indicative of a high level of technical knowledge in their construction. This is especially apparent in the structure of the ice storage shed (Photo II.13 and II.14). It is built of a double thickness

of logs chinked with moss. It is so well insulated that although the outside temperature was in the ninties when it was observed, the interior was about sixty degrees, and the ground was cold to the touch.

According to informants a small log cabin takes only two days to construct. The Nelson House people therefore have the technology and knowledge to erect a permanent-type dwelling in a short space of time. Yet cabins are not used except for trapping bases, and where such buildings are required for industry. The Nelson House people prefer to live in tents while in the bush, even during the winter. They claim that tents are warmer than cabins during the cold months, as the chinks in log cabins are difficult to insulate against draughts.



Fig. 9 site 79 showing several secondary features.

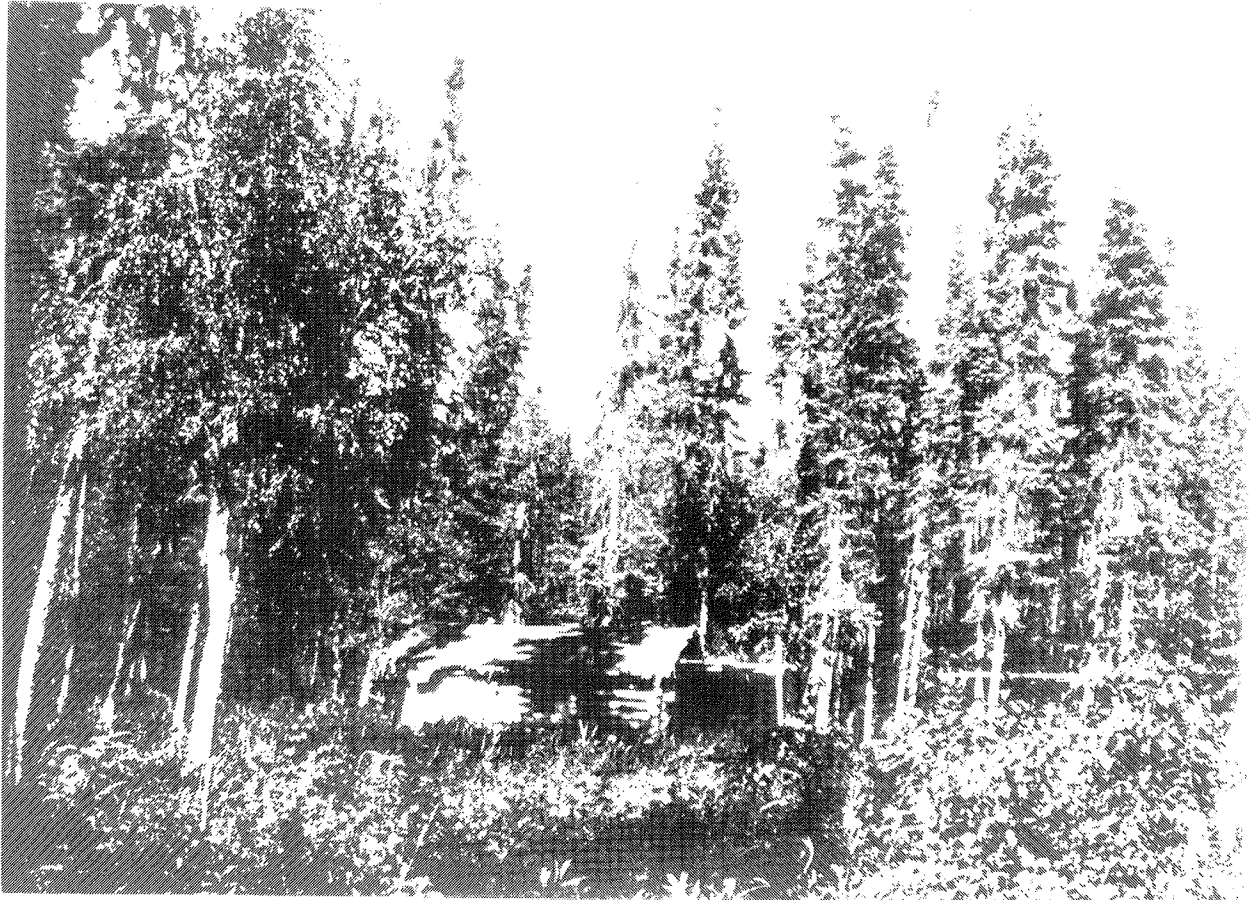


Fig. 10. site 112 Sam Wood's cabin

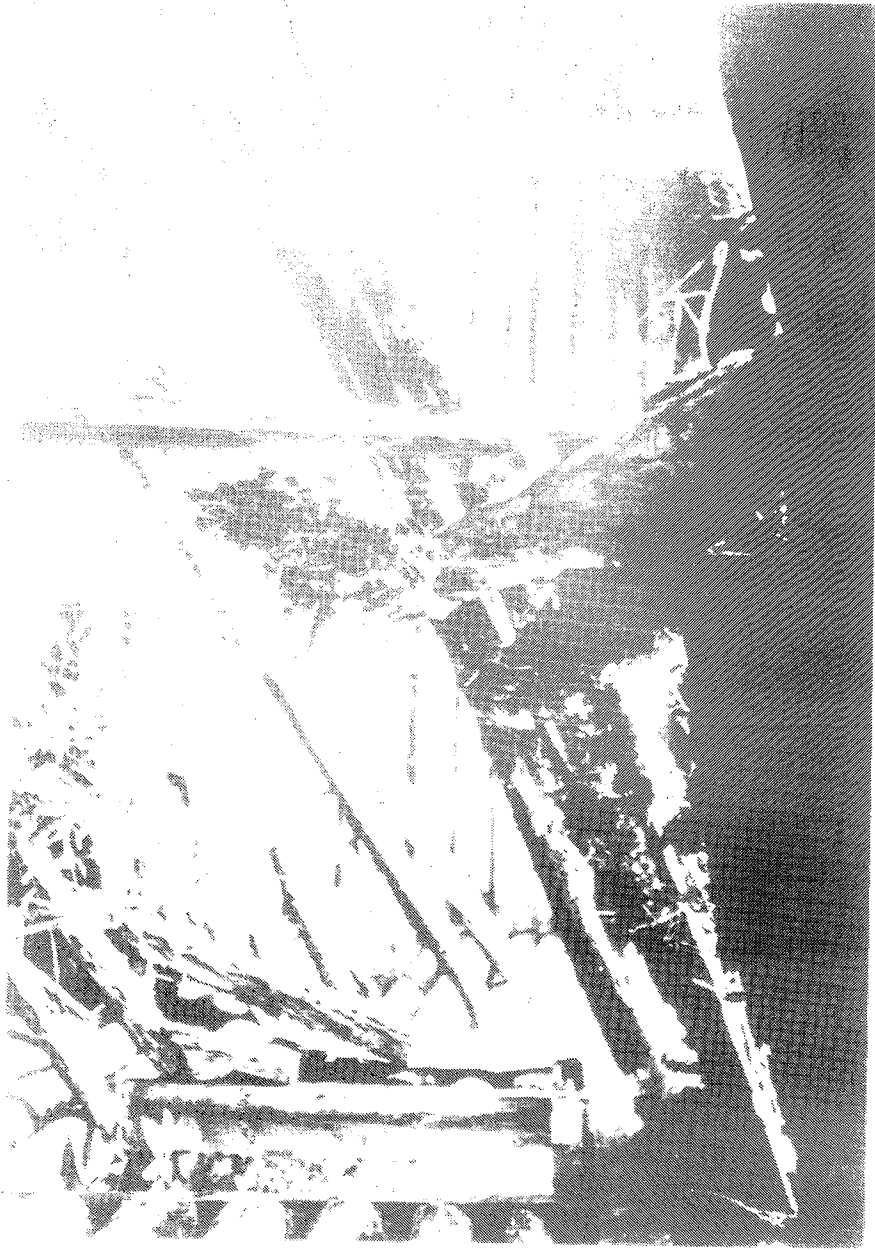


Fig 12 site 86 inside cabin



Fig 11 site 6 Angus Bonners Cabin



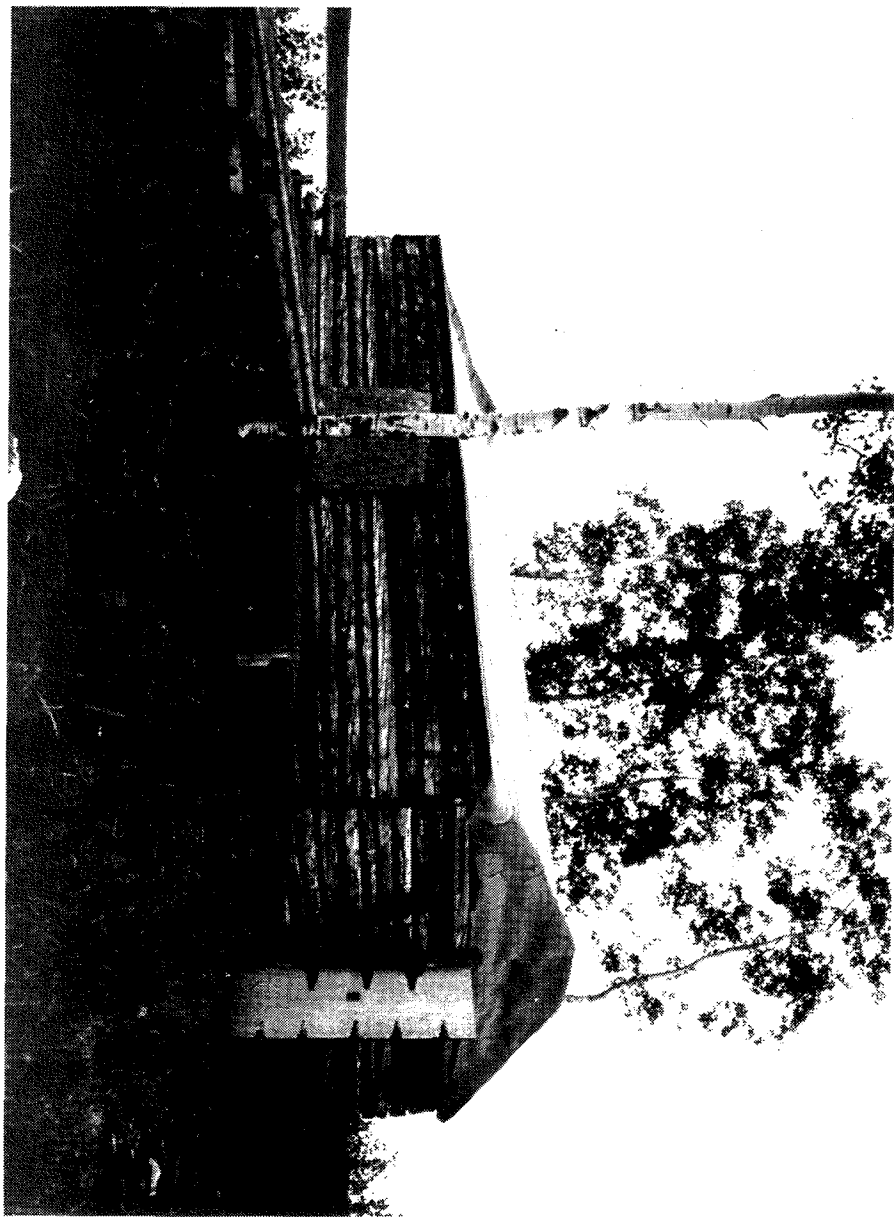


Fig. 14 site 112 ice house.

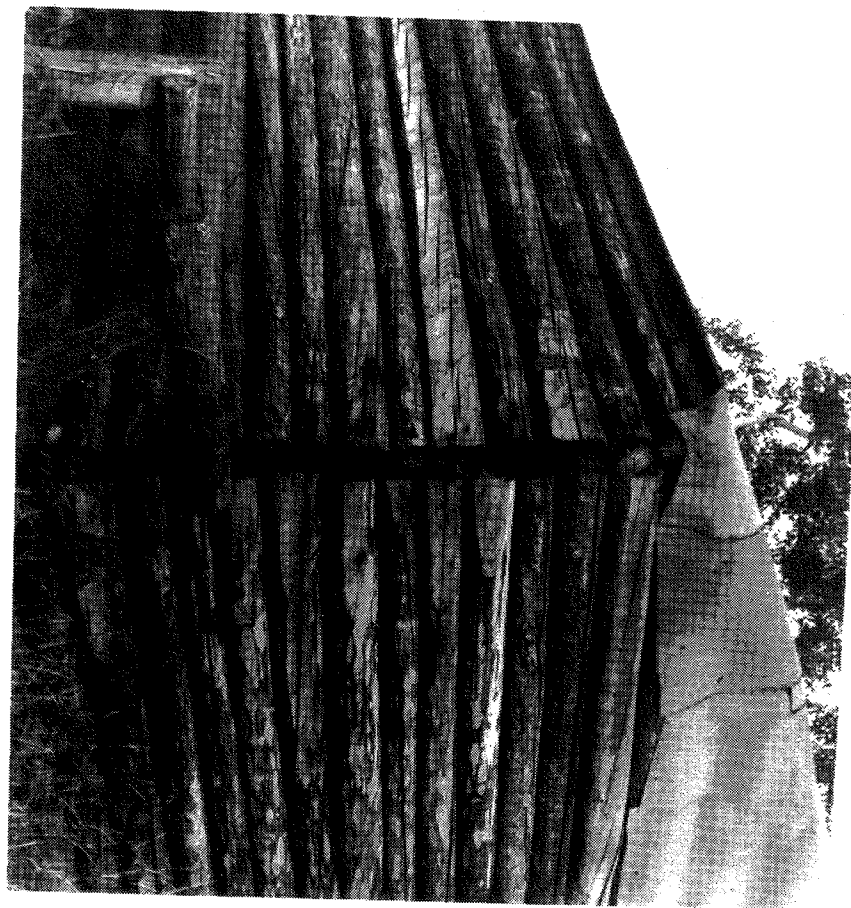


Fig. 13 site 113 close up of  
construction of ice house.

### Randomly Found Artifacts

Seven sleds or toboggans were found along the shorelines of Lake Wapisu. Photo II.15 is a sled found near site 26. It was obviously homemade, from lumber, nails, wood scraps, and three or four different thicknesses of rope. The tips of the sled were covered with flattened tins of baking powder (Blue Ribbon) and snuff (Copenhagen). It measured 2.6 x .58 x .12 meters. Photo II.16 shows an eight foot toboggan which was probably homemade. The quality of workmanship was very good, and it could have been commercially built, though it has retained no insignia or lettering of any company.

Four of the sleds were located in isolation from any other sites and it can only be assumed that they were left on the lake during winter and washed ashore after breakup.

Several of the other sleds were obviously cached in preparation for a following winter. This attitude towards material goods is different from that of the white man's, and seems to correspond with the Indian attitude of previous centuries towards birch bark canoes. The canoe or sled could then be left for use in following years, but because it was, or is not overly difficult to build a new one, it might also have been left with no thought of reutilization.

Four small docks (Photos II.17 and II.18) were found on the north west lobe of the lake. They were about six meters long and built of debarked spruce logs with rungs

every half meter. It is possible they were wash ups. However they were only found on the north shore of the one lobe, and so were probably associated with the commercial fishing camp. But there were no sites near any of their locations. There seems to be no ecological or economic reasoning for their particular location; nor is there any reason, if they were not used for the commercial fishing boats, why the docks were not found more extensively throughout the lake.

On several locations on the lake, initials were carved into the moss on steep bedrock outcroppings. One such location which read quite clearly "AW", "JG", and "MB" was signed "Sept 1960". This indicates the very slow process of soil formation by the growth of lichen on granite outcrops and the resulting fragility of that system.

A single rock cairn was found on the lake. No site was found near its location, at the entrance to one of the narrows. It is in a very beautiful spot with a fine view (Photo II.19 and II.20). Unfortunately no informants were questioned about its significance as it was discovered near the end of the field season.



Fig. 16 Random finds - toboggan & sled.

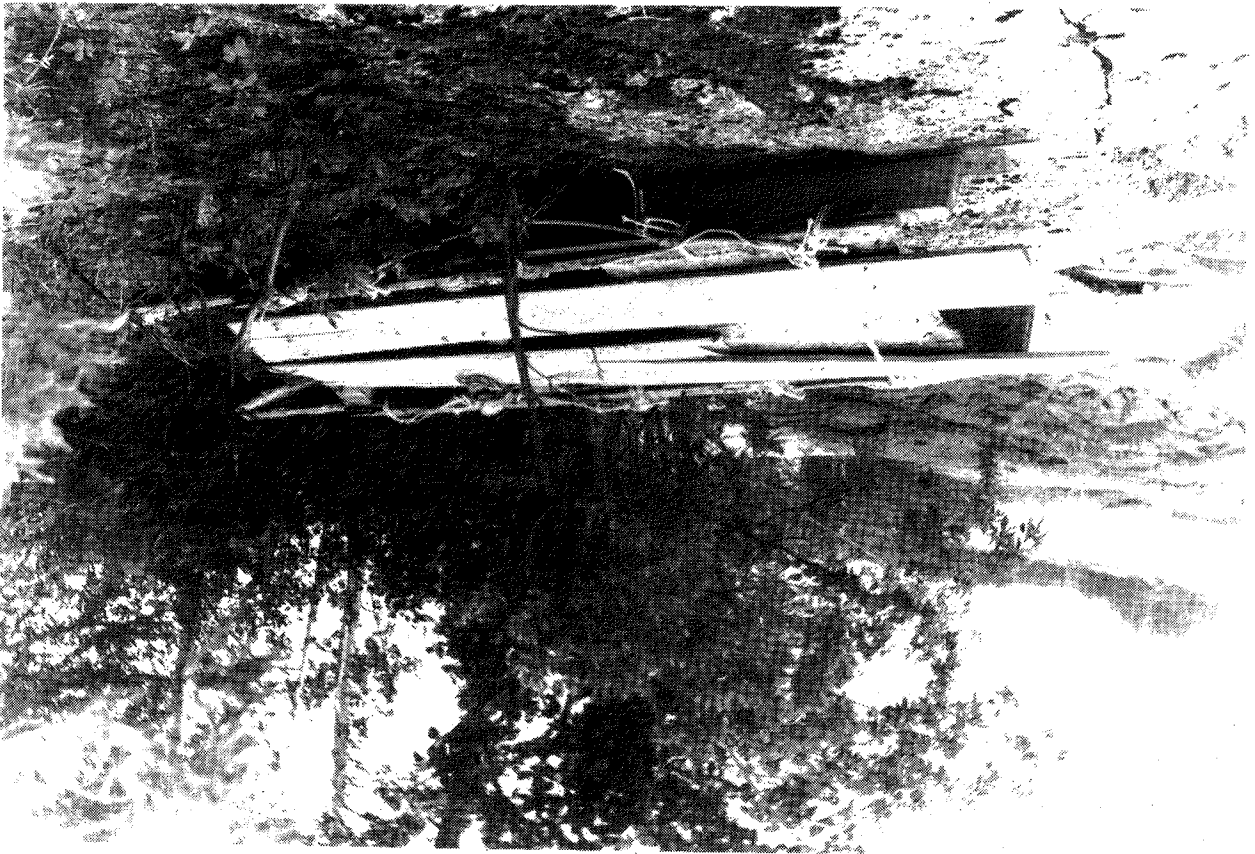


Fig. 15 Random finds - toboggan &

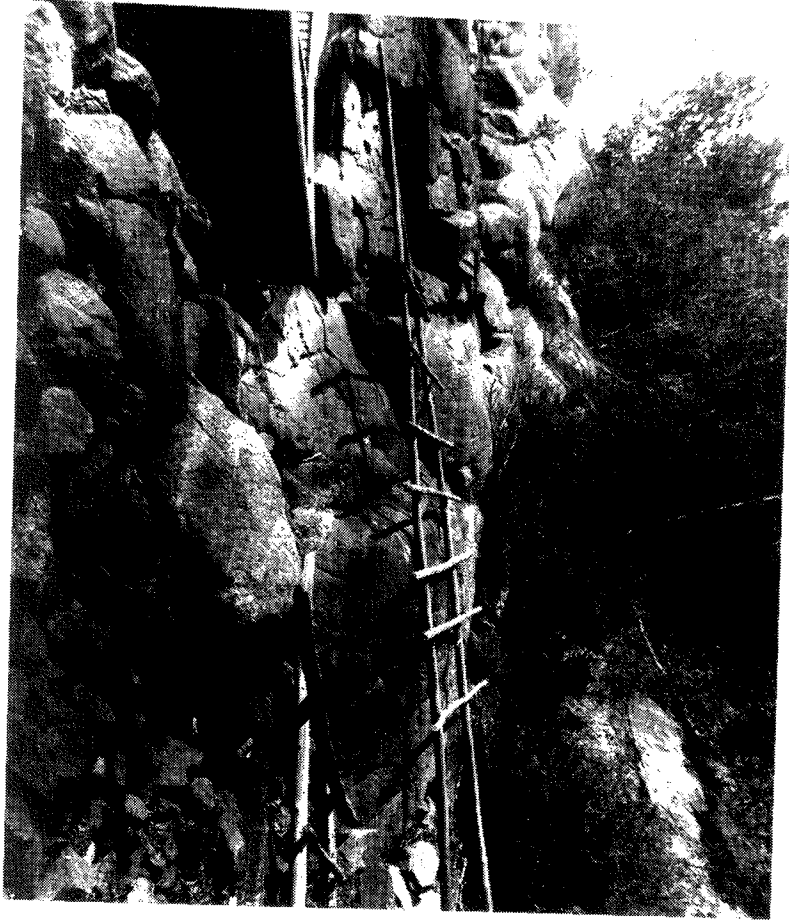


Fig. 18 Random finds - small spruce  
docks.

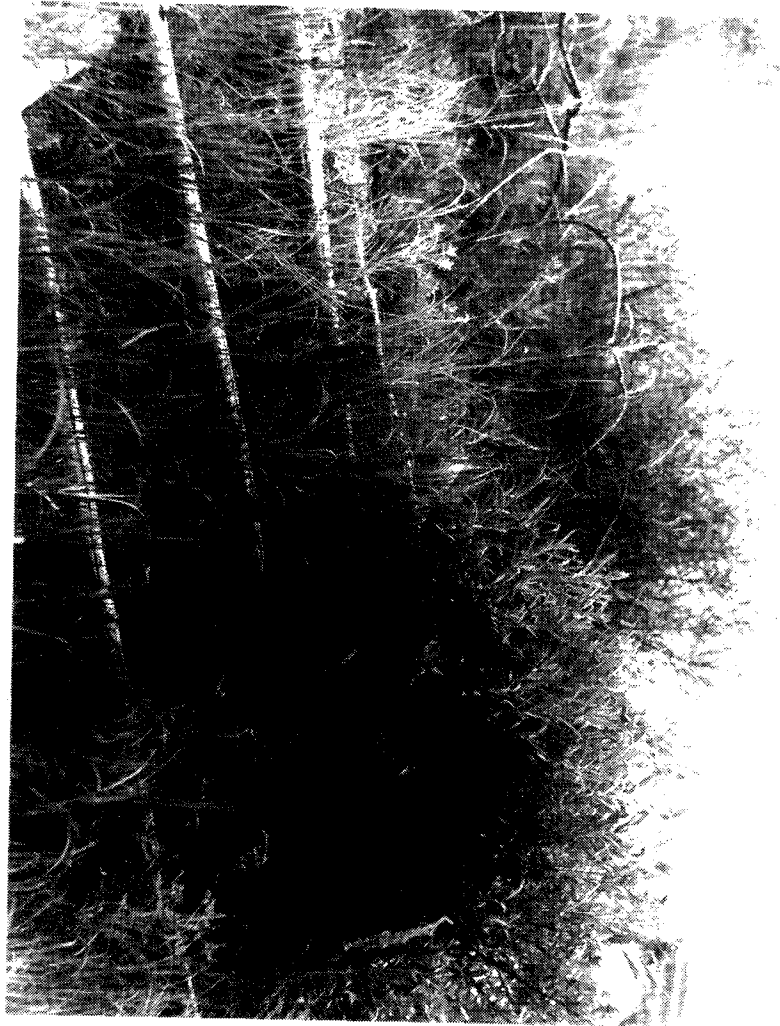


Fig. 17 Random finds - small spruce  
docks.



Fig. 20 from water - cairn in centre of photo.



Fig. 19 Rock cairn looking down from top of hill.

## SYSTEMS OF RESOURCE UTILIZATION

### Travel

The travel patterns within and across Wapisu account for the location of many sites directly, and many more indirectly (see Map II.3). Lake Wapisu is used a resource pool by the people of Nelson House, often for single day or short duration trips as evidenced by the fact that 81% of all sites are hearths or small camps. The lake is only about twelve miles from the community by water. For canoes with three and a half horse power motors (the most common size) this represents the limit of a single day's return trip while still allowing time to exploit the resources. During winter there is a snowmobile path to the lake and the return trip is even shorter than the water route.

Before the building of the Notiqi control structure, the lakes on the upper Rat River were also used, and there was a commercial fishing camp on Rat Lake. The route continued on to the community of South Indian Lake and was extensively travelled.

Within Wapisu the twelve small camps and hearth sites on island 16 through 20 are directly associated with the summer canoe route along the Rat River (loci 1 on Map II.3). The shoreline along the Rat River downstream of Wapisu is typical 2-3 (alluvial shoreline), rather marshy

and muddy. In the central east south lobe, there is extensive burn on one side, alluvial shoreline along the other, and long stretches of regular low bedrock outcrop (pure 1-3). These islands are natural locations for lunch stops on a trip from Nelson House, in terms of distance. They are located along the travel route, and are almost the first spot along such a route, which would make a pleasant stop.

The narrows (loci 2 on Map II.3) are a second intensively used area. The visual access surrounding the narrows is perhaps the best on the lake. By standing on sites 93, 94, or 95, one can see south towards the Rat River and west through the narrows. Site 114 is located in the central west lobe on what may be described as a mirror image of loci 2. This reinforces the conclusion that visual access within the determinate of travel pattern is a major influence in site selection.

The narrows represent a natural boundary between the central west and central east, eastern lobes of the lake, and a junction between the summer and winter travel routes. Two of the three trapping cabins on the lake (Sam Wood's and Angus Bonner's) are located at the entrance to the narrows. As trapping cabins are used during periods of both ice and open-water conditions, their location at the mouth of the narrows is a function of both the differing seasonal travel



patterns, and the central location of the narrows within the whole lake.

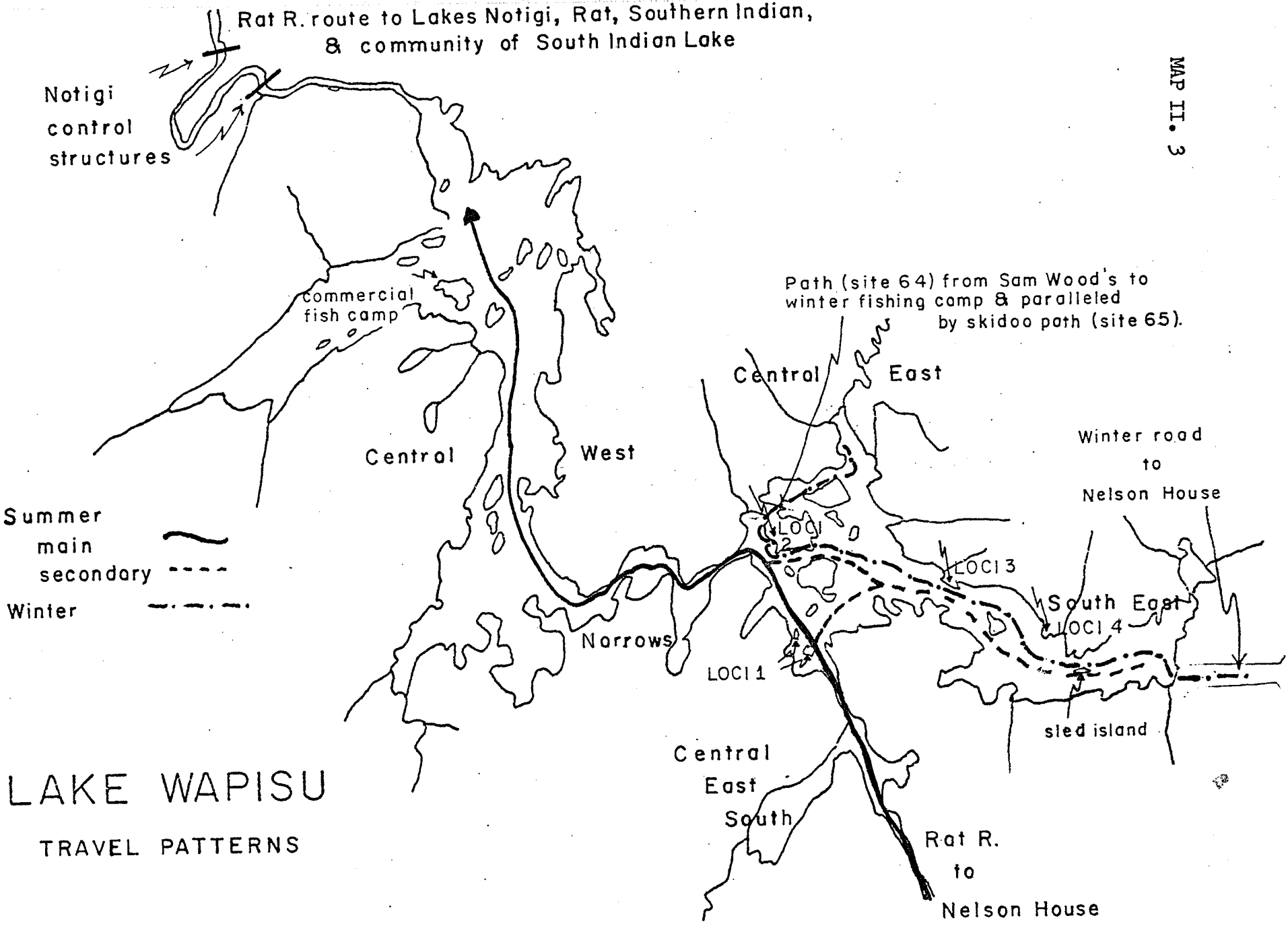
During winter skidoo travel is east-west across the eastern lobe, from the winter road. The road itself (site 10) is about eight feet wide and well cleared of bush and trees. The fact that the people have spent the time clearing a trail, indicates the value of Wapisu as a resource pool. Site 9 is located at the end of the road, and beside the mouth of creek 2, and was obviously used as a camp during the winter. A dog harness was found hanging upon a tree (Photo II.21). Several small bridges (Photo II.22) of trees chopped and laid across the stream were found.

The primary reason that the road was built was so that the non-commercial fishing camps and related sites (loci 3 and 4 on Map II.3) could be reached easily and quickly during winter from Nelson House. Approximately one-fifth of all sites on the lake are within these two loci.

Site 64 (see Appendix I) is a path leading from loci 2 across a small isthmus towards a winter fish camp, site 58. There are about six small camps along the two hundred meters of trail and within the bush, some of which are winter beds and others, tent sites. A skidoo path (site 65) parallels the trail through a swamp. The travel pattern is directly responsible for these sites.

Sled Island, site 26 (see Appendix I for site description) is a multicomponent, multiseasonal site, which must have been selected because of its location directly on the winter route and on the secondary summer route. It was used as a cache for a sled (artifact 2). Three areas were delineated on the island. Areas B and C were probably winter sites. Area A, because of its open exposure was more typical of a site used during a warmer season. A piece of fire hose was found on the island, and it may have been used in the repair of dog harnesses or as general purpose rope.

The relative density of sites in the eastern lobe in comparison with the scarcity in the north west lobe may be partially explained by travel patterns. Assuming a family has travelled from Nelson House in order to exploit a resource, there is no reason to travel an additional eight miles to the north end of the lake, when similar resources (eg: fishing for local consumption) is to be found at the entrance to the lake. For the same reason the commercial fishing camp was located farther from the more heavily exploited eastern lobes so there would be less competition for the available fish.



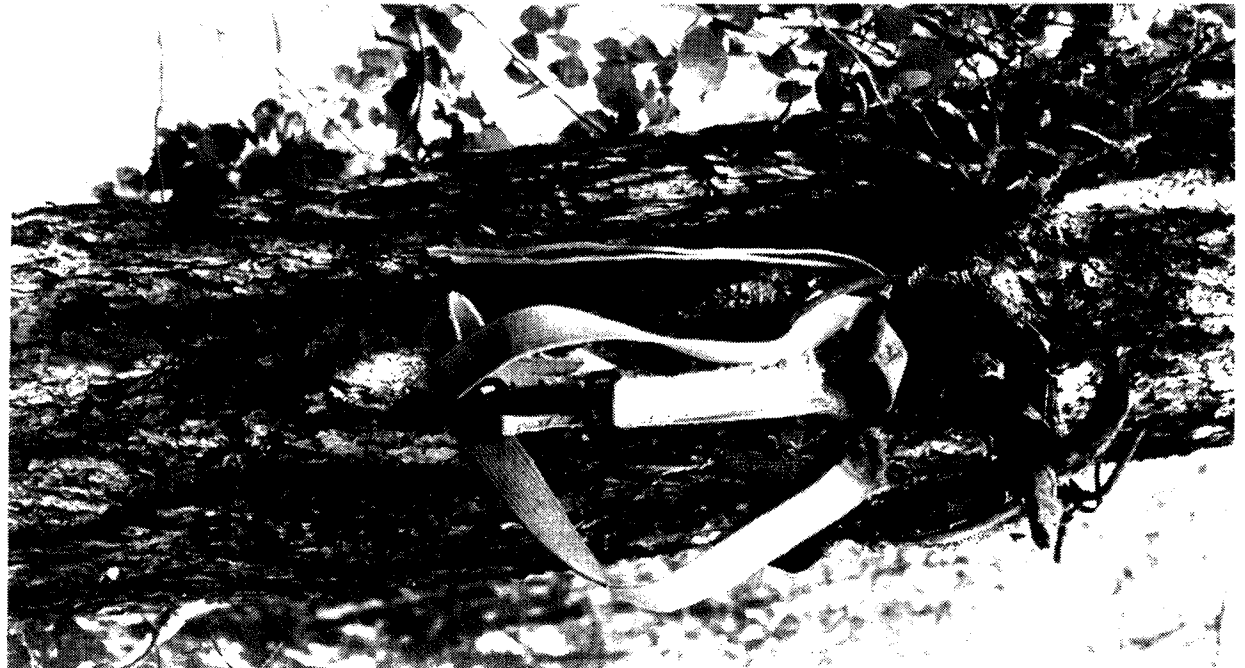
LAKE WAPISU  
TRAVEL PATTERNS

119

across stream.



Fig. 21 site 9 - dog harness on tree.



### Non-commercial Fishing

The single most important resource on Lake Wapisi is its fish, as produce for commercial fishing and for local consumption. Industrial utilization will be investigated in a following portion of this thesis.

Fish represent a major part of the diet of the people of Nelson House, and seventeen sites had evidence of fishing. However, it is reasonable to assume that many more sites were used when fishing, as the evidence linking sites to fishing activities is often scant. For example, two hearth sites were associated with the activity because a few fish bones were found in the general area of the site. The skeletal remains of fish decompose relatively quickly. But most fish, if they are filleted, are cleaned well away from the living area, and the guts flung into the water. Considering that 50% of all sites are hearths, and many hearths have no known association, it may be that they were used as lunch stops on day trip or short term fishing expeditions.

Several small camps had been used on fishing trips. The key diagnostic factor is the fish drying rack which might be of a teepee-like construction (Photo II.23) or a single pole tied between two trees. Most fish are netted, and white fish are the most common. These are gutted, split, and hung over a smoldering fire for a day. This method is

typical of summer fishing for local consumption. The two men in one such camp (site 116) over a period of three days, caught, cleaned and smoked about four hundred white fish.

The location of the summer fishing sites are often near a large tributary across which the nets are strung. This is true of sites 5 (on the Rat River, Photo II.24), 57, and 116.

Fall and winter fishing is a more intensive activity. Fish are netted in late fall and stored in caches in preparation for the winter. Sites 29 and 34 are the fallen remains of two caches. Site 29 (Photo II.25 & 26) is located in a break of a low bedrock outcrop within a cove. Site 34 is situated around the spit from site 29. It is in an unusual location at the top of a steep wooded slope approximately eight meters above the water, and completely surrounded by mature spruce. There are no other features or artifacts near either cache.

The structures are built of spruce in a cabin-like fashion, but only four or five logs high. Smaller spruce are laid on this foundation to form a roof (Photo II.27 and II.28). The smoked fish were hung on thin struts within the cache, to freeze safe from predators like dogs, bears, wolverines, and wolves, until they were needed in the winter, and the ice was safe to carry the fish on sleds.

Sites 35, 59, and 88 are fall-winter fishing camps.

The latter camp is relatively small, with a fish cache, a tent area, and a winter bed. Fishing would be carried out in fall and the smoked fish cached. The users would then have returned from Nelson House during the winter to retrieve the food supply. Site 59 was a much larger camp, but was not surveyed. It was used by Sam Wood whose cabin is site 112. Its infrastructure is a cross between sites 35 and 113.

The short path to the site from creek 8 is littered with axe-felled willow and birch. The explanation of this apparently wonton chopping was impossible to guess and was most atypical of other sites on the lake. Many hypotheses of its purpose were considered in terms of ecological or utilitarian criteria, but the informant, Jake Moose explained that it was only the result of children playing, a cause which had never been considered. This emphasizes the value of dialogue with informants as well as direct observation and induction.

Site 35 is the most fully documented camp on the lake (see Appendix I). Abraham Spence, an old man of eighty or more, accompanied the researchers on a visit to the site and his explanation of various features prevented misinterpretation on the part of the observers. The camp is invisible from the water (Photo II.29) even though its boundary is only three meters behind the backshore slope. Placing the camp within the spruce forest gives excellent

protection from cold winds. The cache (Photo II.30) is of the same form as the other three caches on the lake, but is in much better repair even though the camp has been unused for at least five years. The cache would have been built in the early fall as the trees around this feature had been chopped close to the ground, leaving short stumps. As snow builds up depth on the forest floor, stumps increase in height (Photo II.31). The observation of the various heights of the tree stumps is an important estimator of seasonal occupation.

There are three tent spaces. All have fire places located in what would have been just outside the tent door. Two out of the three are orientated with the tent opening inland, to utilize the heat from the fire in the most effective manner in winter. There are two winter beds (Photo II.32), and they have very large hearths beside them. Photo II.33 is a shot of features 8 to 11. Abraham Spence and Jake Moose (man in photo) explained that this was once a "large building" of spruce poles covered with bark, a wood-covered teepee. However, all that is left is a pile of bark and a few poles felled helter-skelter. This type of construction is unique and no mention has been made in the literature of a dwelling so constructed, but it may be the "dome-shaped, bark wigwam" described by Skinner (1911:13) for the Misstassini of Quebec. There are stones on the ground on



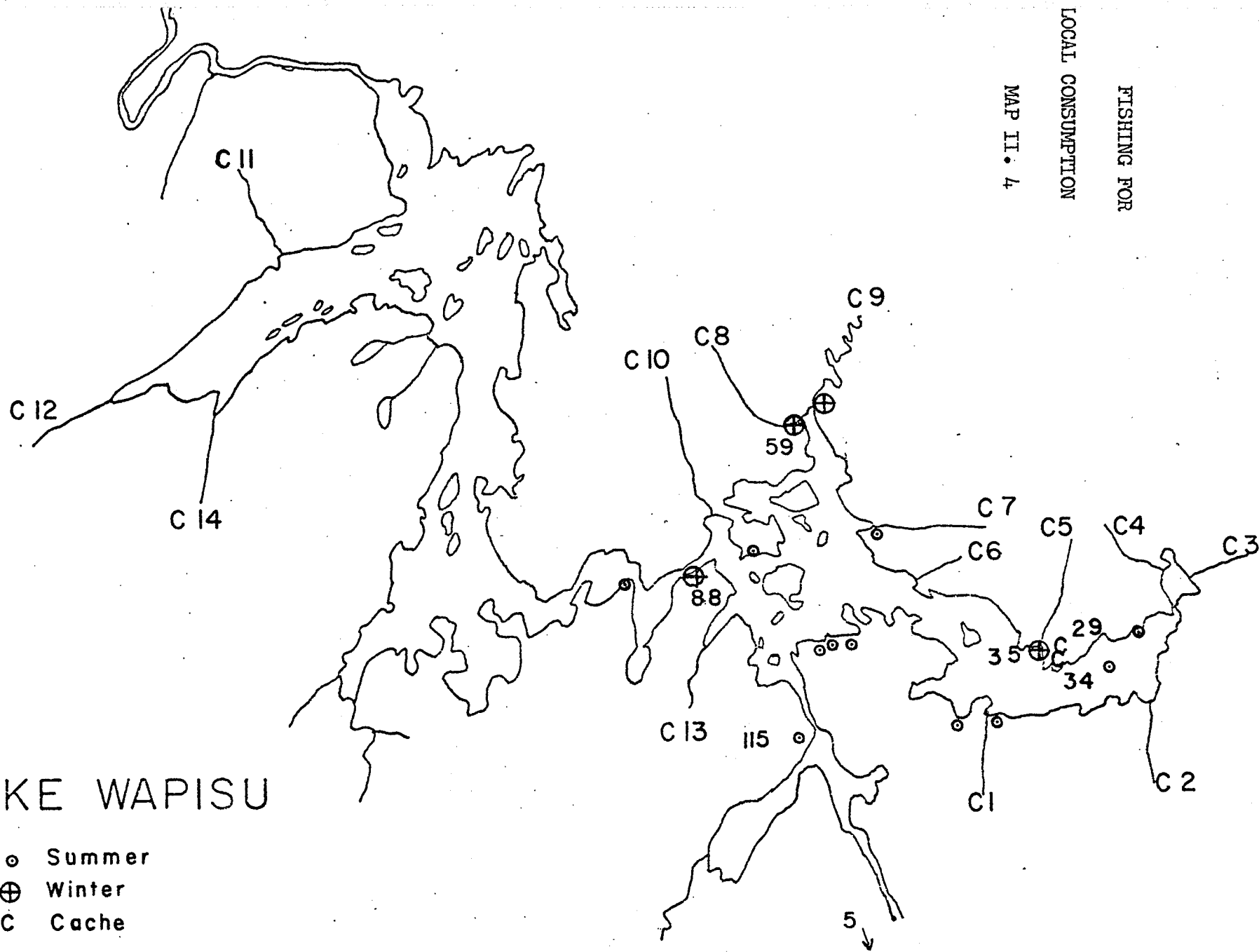
which a tin stove was set. It is unclear as to whether the stove was inside or outside the dwelling. Feature 5 is a very large fish drying rack, approximately two meters off the ground (Photo II.34). It was built this high to prevent dogs reaching the fish. Photo II.35 shows Abraham Spence holding a thick pole that he explained was used as an ice chisel.

Fish nets can be placed anywhere in the lake and so the parameters influencing site selection of the caches and camps are relatively simple. Travel patterns, as have already been examined are the macroscopic determinant. Microscopically, protection from winds can be considered one important parameter. Of the five major sites associated with fall-winter fishing (sites 29, 34, 35, 59, and 88) four are on the north shore of the eastern lobes and one is located at the narrows. All are located behind a shelter of mature spruce. Summer fishing camps are located close to the fishing locations and on a dry spot, with good canoe access.

FISHING FOR

LOCAL CONSUMPTION

MAP II. 4



LAKE WAPISU

- Summer
- ⊕ Winter
- C Cache



Fig. II.23 site 116 - small camp -  
fish being smoked.



Fig. II.24 site 5 - small camp.



Fig. II.26 site 29 - close-up of break.



Fig. II.25 site 29 - setting net across  
small tributary; cache in  
break of structure.

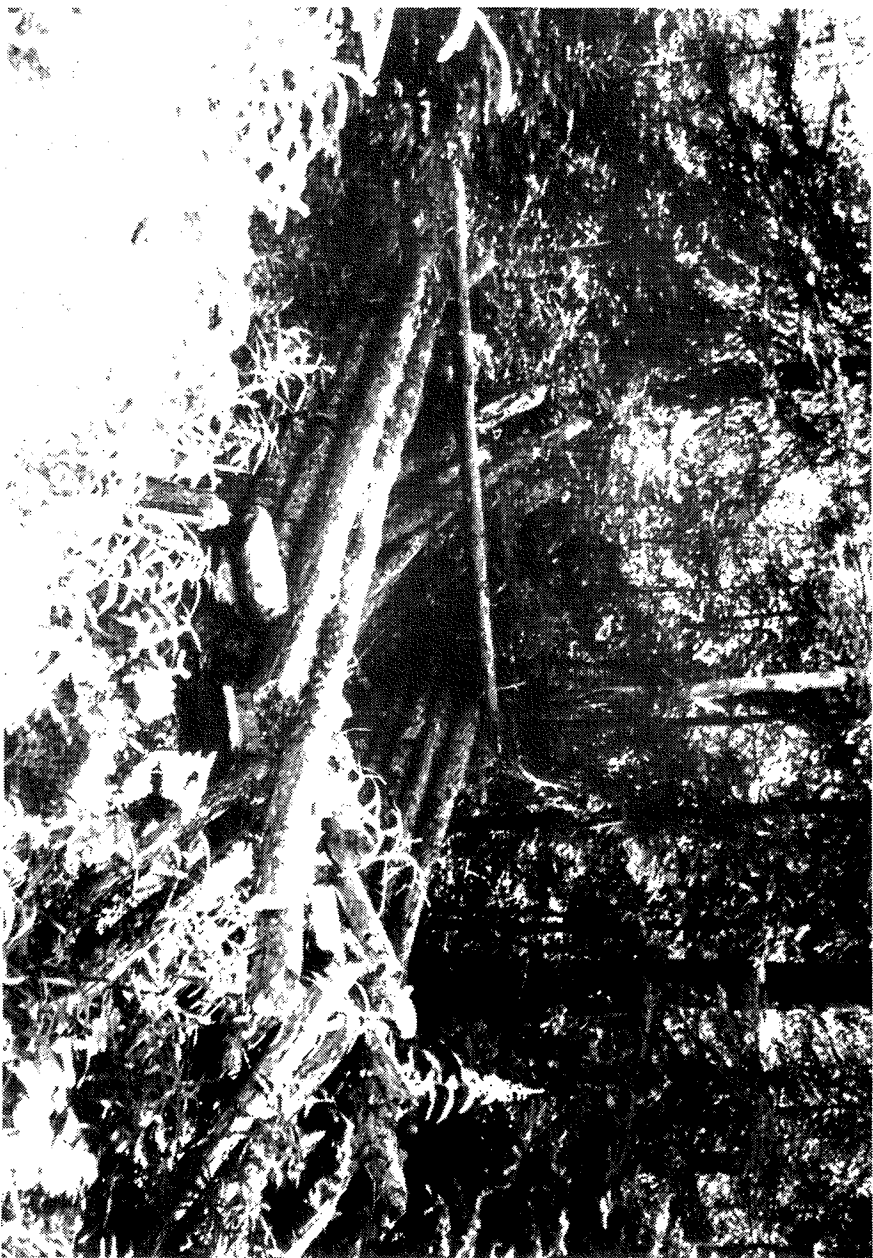


Fig. II.28 site 29 cache.



Fig. II.27 site 29 cache.



Fig. II.29 site 25 from porch.



Fig. II.20 site 25 cache, Abraham  
C. and S. W. 1904



Fig. II.32 site 35 - winter bed.

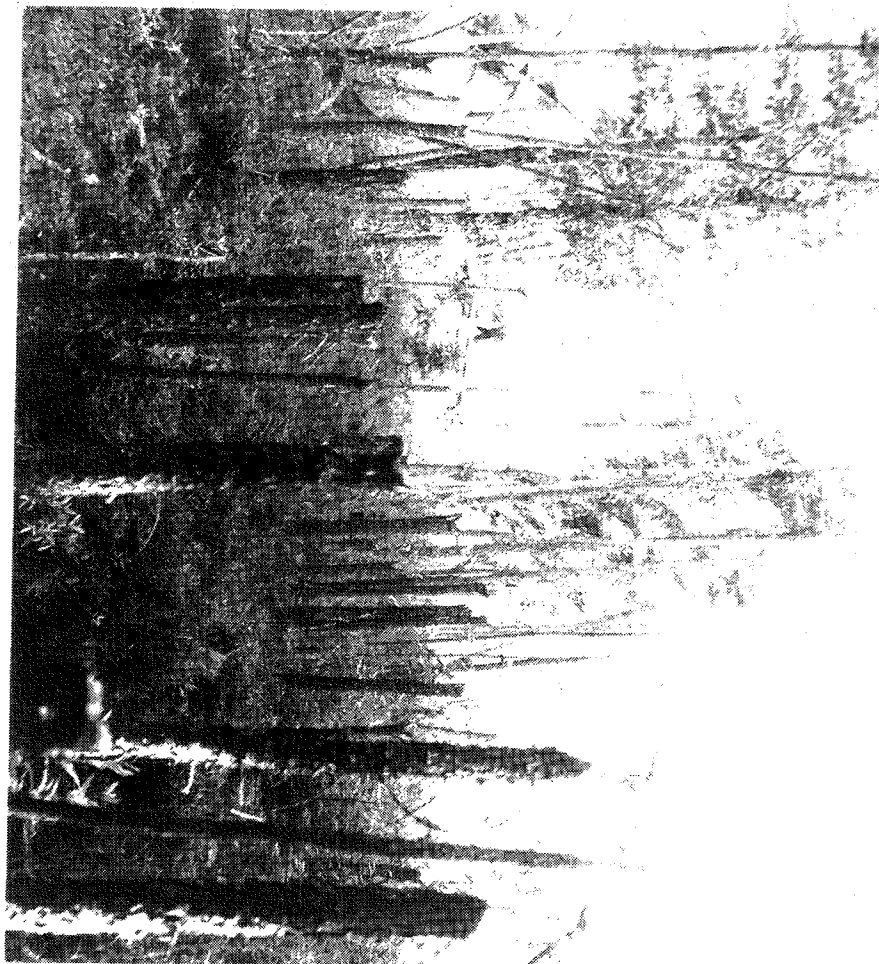


Fig. II.31 site 35 - trees chopped at different lengths.



Fig. II.33 site 25 - remains of bark structure.



Fig. II.34 site 26 - large drying rack.





Fig. II.35 site 35 -- Abraham Spence  
with ice chisel.

### Hunting

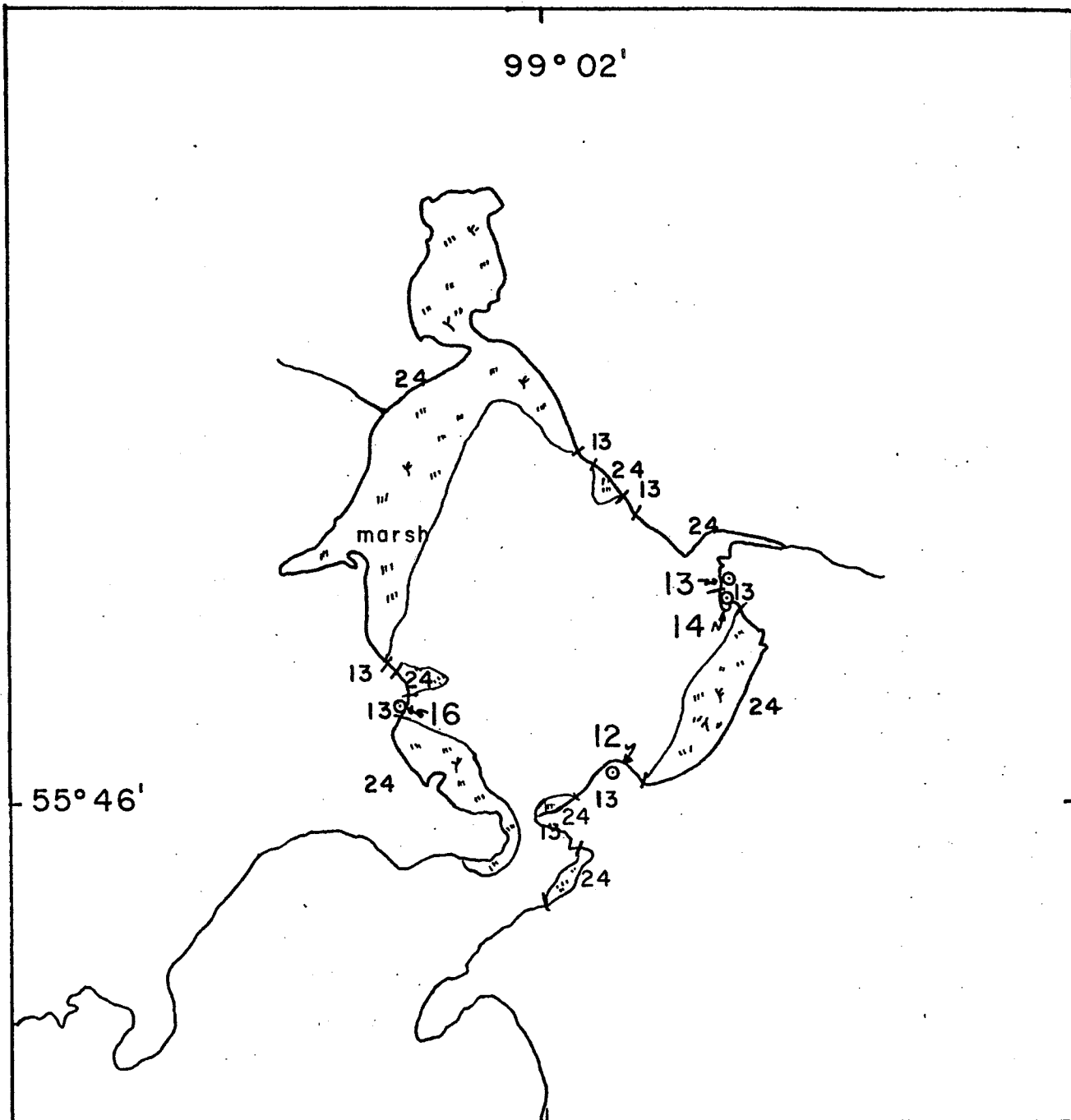
Definite proof of large game hunting was found in only two sites (8 and 79). The former was a small camp, and the evidence was a single cervidae skull (Photo II.36) placed on the top of a small tree. It was too small to be a moose, and probably too large to be a deer. It was therefore judged to be caribou. In any case the skull was very old. The latter had moose bone in a hearth site.

Why there were no more large game hunting sites is open to conjecture. However, Nelson House informants say hunting has been poor in the last few years. It may be that the animal populations have been over hunted in such close proximity to the community. Kill sites may also be farther into the bush, an area which the methodology of this survey does not encompass. Site 17 had clear tracks of a moose and a following hunter trailing off into the backshore area from a large mudflat. Large game once killed, may be butchered into quarters before returning to Nelson House, leaving few remains. In at least half a dozen spots moose bone was found without any associated site. In any case because bone from large animals was almost non-existent in any hearth site, or near any camp, cache, or cabin, it is reasonable to assume that such game is no longer a significant portion of the diet of the Nelson House Cree while outside the community.

In contrast to the scarcity of evidence of large

game hunting, in at least 10% of all sites shot gun shells were found in the immediate vicinity, evidence of hunting for wild fowl. The typical site was near or in a marsh on a dry location such as a bedrock outcrop. Several sites were found to have bird bone in their hearths.

Many more sites were found in marsh locations, and can probably be assigned to duck or goose hunting. Extensive areas of marsh are relatively rare on the lake. Where they were situated, such as the most eastern bay of the lake, most available areas for sites were used. In this example (see Map II.5) of the six rock outcrops found, four contained at least one site.



EASTERN BAY on L. WAPISU

MAP II. 5



Fig. II.36 site 8 - caribou skull on  
twig.

### Berry Picking

Gathering of berries is a common summer and early fall activity, one that is often done by families on combination fishing-hunting trips. The hearth on site 22 was probably used while berry picking. A lard can was found in a large patch of wild strawberries near the hearth.

Berries are an important food (interview: Elfrida Spence). The most common varieties collected are blueberries, raspberries, saskatoons, strawberries, and choke cherries. However, only the one site could be directly linked with this activity. In general, little refuse is associated with gathering, the summer 1974 was a particularly lean year for berries, and most berry patches are further inland than was surveyed.

### Trapping

There are three trapping cabins on Lake Wapisu. The Moore cabin (site 115) was not surveyed, as it was discovered on the day before the field season ended. It is located on the south east corner of island 21, the same island which contains the commercial fishing camp. But the Moores were not commercial fishermen and so did not build their cabin because of the proximity to the fish camp. However, the factors which prompted the building of the cabin must have been similar to the factors of selection for the fish camp (see next section).

Angus Bonner's cabin (site 86) is located at the eastern entrance of the narrows on the flat top of a large spit on the south shore (Photo II.37). The cabin is built of logs chinked with moss, with a few boards nailed to the exterior to plug holes. It has fallen into disrepair (Photo II.38). A calender dated 1966-7 was found nailed to a cross member. Assuming that that was the last year of occupation, it has taken only seven years for the roof of the cabin to fall in from snow accumulation. The living area surrounding the cabin which had been cleared measured about 15 x 30 meters and is now clogged with shoulder-high raspberries. It is a popular berry picking area. Several very tall populars have been left for shade. This has resulted in a beautiful natural landscape (Photo II.39).

The third cabin (Sam Wood's), site 112, is situated on the opposite shore of the narrows in an almost mirror image of site 86 (see Appendix I for site description). Sam bought the rights to Angus Bonner's trap line, when the older man could no longer use it and built a new cabin.

It was built approximately one hundred meters from the shoreline and well into the bush in a large flat upland. Photo II.40 and II.41 show the cabin and the approach from the water. Standing beside the cabin it is impossible to see the water. Sam Wood said he didn't care about the view, and that in winter he was more concerned with the cold winds, and keeping them from blowing against his cabin. In fact cabins are never used in summer; instead a tent is used nearer the water (sites 93, 94, and 95, see Map App IV.4). Photo II.42 is taken at the base of the path leading to Wood's cabin. The opening to the narrows is in the upper centre of the shot and the spit on which Angus Bonner's old cabin is located, is in the upper left. Most trapping equipment, ice picks, hatchets, saws, traps, etc. had been left in the cabin for the summer. The skidoo and sled were cached (site 62, Photo II.43) near the winter road from the cabin to the winter fish camp (site 59).

Site 79 (see Appendix I) in the north west lobe is a large camp with evidence of trapping activities. There is a rack possibly used for the storage of motors, and three



tent spaces. A trail, probably a trap line, leads off into the bush, and was followed until it reached a beaver pond at least two kilometers inland. Within the living area stumps were found at differing heights, and one hearth site was associated with snow conditions as the ground beneath it was unburned.

Evidence therefore leads to the assumption of winter trapping with some early fall, summer, or spring occupation. It was the only site in which a cooking spit was found over a hearth (feature 6). Beaver bone was found inside the ashes of the fire. Locational factors were identical with those of the cabins. Unfortunately no informants were asked about this site. It is very close to the Moore cabin and is probably on the Moore's registered trap line. Why there should be two base camps in a single trapping area is unclear.

Within the boundaries of the registered trap lines, an external directive force, the trapper can locate his base of operations in any place. They have chosen sites which correspond with major summer and winter travel patterns to and from Nelson House, on flat terrain, well protected from the cold winds of winter (the only season in which the cabin is occupied), and inland with no thought given to visual access from the cabin and little given to convenient spots for canoe landings.

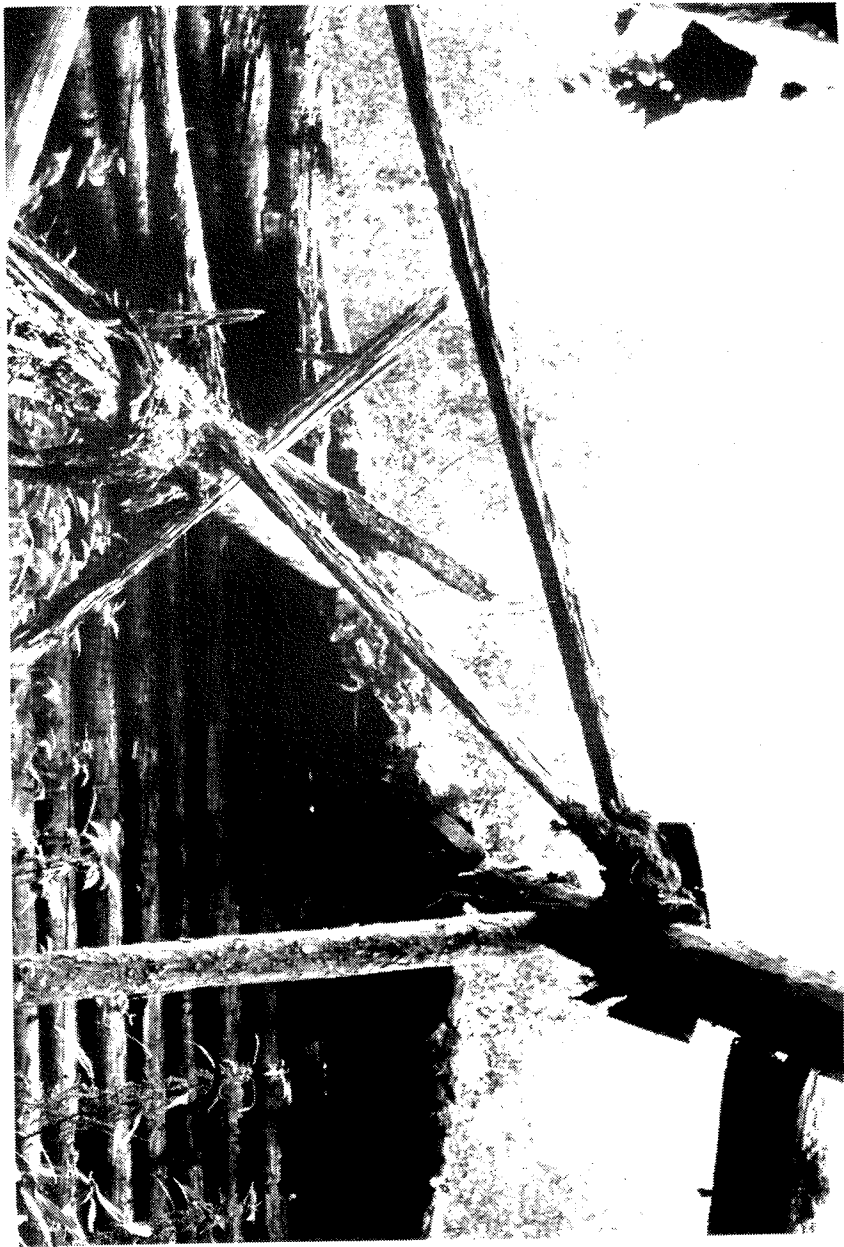


Fig. II.38 site 86 - cabin roof caved

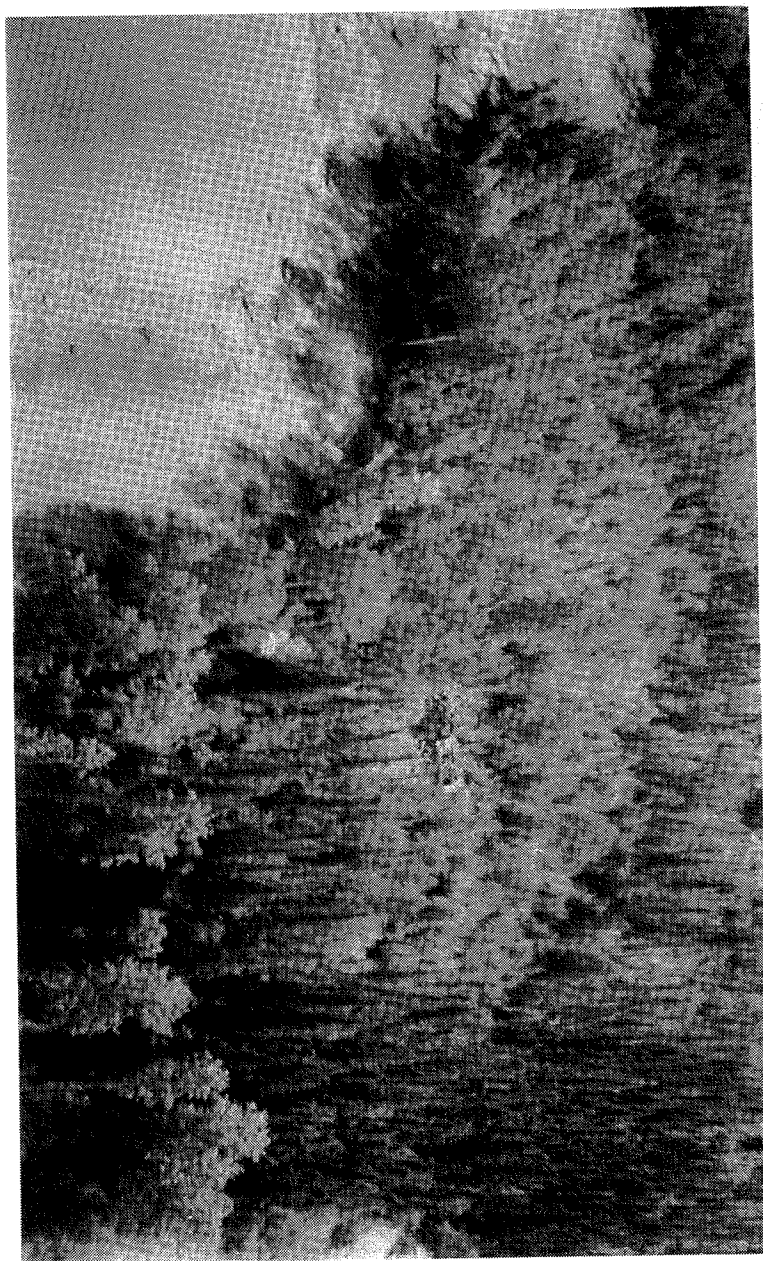


Fig. II.37 site 86 - photo of cabin  
taken from helicopter.



Fig. II.39 site 86 - Angus Benner's  
old cabin.

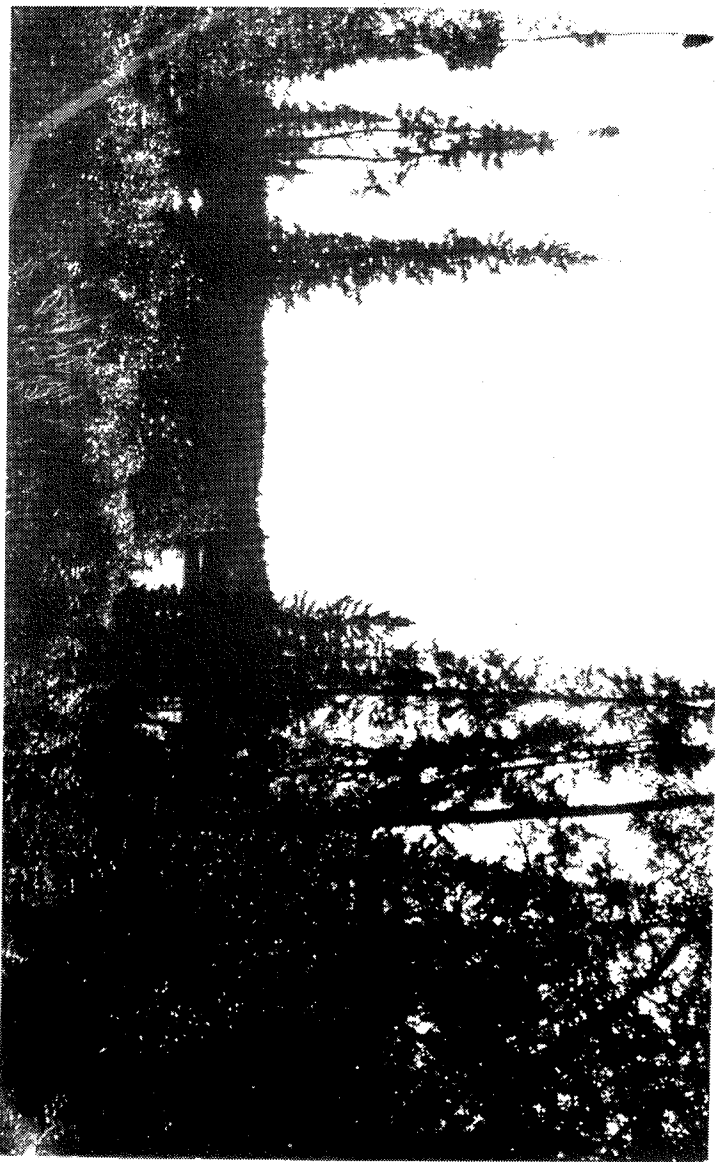


Fig. II.41 site 112 - path to water  
from cabin.



Fig. II.40 site 112 - Sam Wood's  
cabin.



Fig. II.43 site 62 - skidoo & sled  
cache.



Fig. II.42 at base of path to site 112  
showing view of narrows.

OTHER

Commercial Fishing Camp -- Site 113

This large site, which supported up to fifteen families, and averaged around ten, is located on island 21 (Map II.6) in the north west lobe. Commercial fishing began in the area in 1944 under the direction of a white owner. In 1969 the Fresh Water Marketing Board was formed and urged the people to form a co-op to the exclusion of the white middlemen. On Wapisu during the years 1963 to 1973 (the last year of operation) the yearly catch averaged about eight thousand pounds.

Fish were netted, stored in the fish house (Photo II.44 and II.45) under ice, and flown out every day or every other day. A large dock juts out into the water for easy access by float plane. The ice was obtained in winter from the lake and kept in the ice house until summer (Photo II.46, II.47, and II.48).

These two buildings were built on a large rounded spit of relatively flat land. Though the area to the shore has been well cleared, two tall stately poplars have been left standing and from the water it is perhaps the most beautiful spot on the lake.

According to one fisherman (Eli Linkletter) an island was chosen to keep predators away from the catch. Any

bears or wolves which were trapped on the island after breakup would be shot and these animals would then present no problem until the following year. Though the location often experiences rough water with waves meeting in two directions (from the west and south), the dock is well sheltered from the prevailing winds in summer. The fishermen are very experienced boatmen and informants scoffed at the idea that the swells would be an obstacle in fishing. The open area around the ice and fish houses was cleared because of the concentration of men needed in the commercial fishing activities and to open the area to breezes which would clear it of insects. The north west lobe is removed from the most intensively fished section of the lake in the south east, and was therefore an open resource which could be exploited with little competition.

The living area on the island for the fishermen and their families was found to be broken into three nucleated area of between one and five tent spaces. They are strung out along a path south across the island from the fish house.

The first feature, one hundred meters from the trails start is a shell of a log cabin (Photo II.49 & 50). Its floor has been long overgrown with vegetation and there no traces of the roof. In comparison with the other cabins on the lake, this frame is poorly constructed with wide gaps

between the logs. As all other living areas have tent spaces, and this is the sole cabin for the fishing camp, this can be taken as definitive proof of the people's choice of tents as homes during the summer.

Area 1 (Figure II.4) was situated on the first piece of level ground above the back shore slope (Photo II.50). Like the location of the cabins, it is surrounded by mature spruce and has no open vista of the lake. There are three and a perhaps a fourth tent spaces. Photos II.51 and II.52 are of features 1 and 6. The raised tent bases are only used on long term camps. They would be drier in wet weather and would inhibit small animals in search of food from burrowing into the tent. Photo II.53 shows a table and a fish drying rack. The catch taken by the men in commercial fishing would also represent a major portion of the diet of their families during the summer and probably during the winter in Nelson House. Feature 3 (Photo II.54) is a structure of entirely unknown purpose. Including the cabins only two biffies were found in association with Cree sites, and both in site 113. Feature 9 of area 1 was the most elaborate (see Photo II.55).

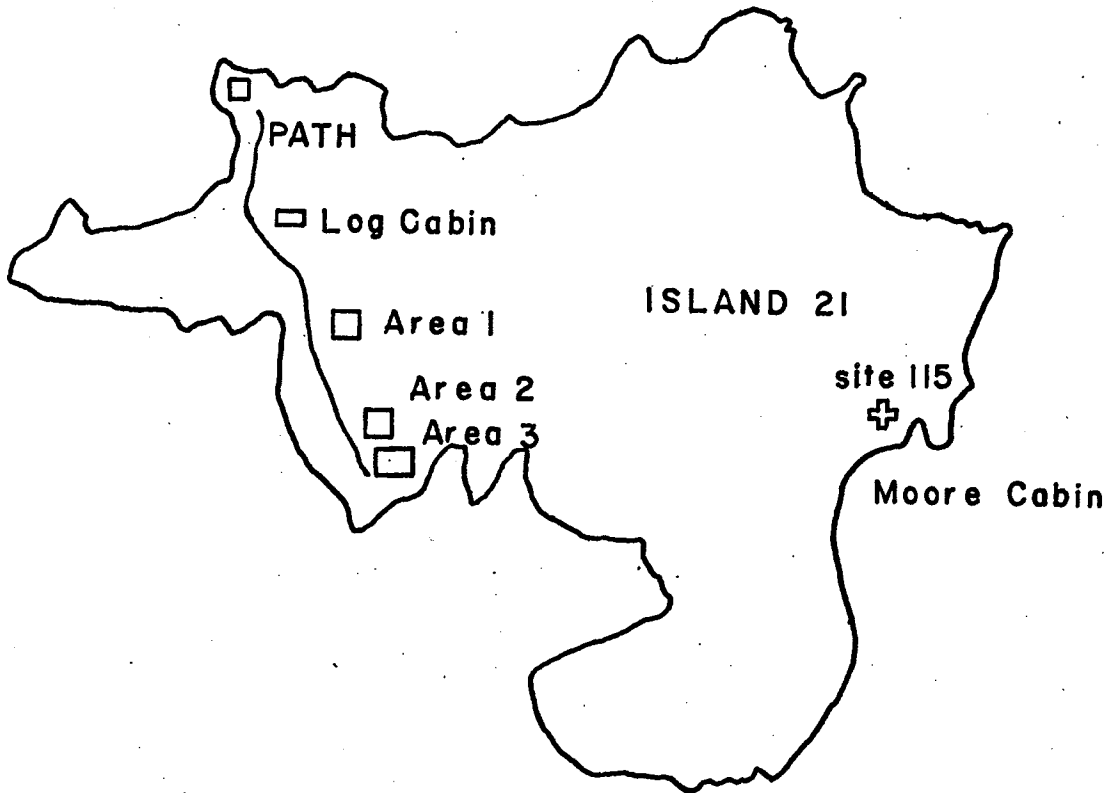
Photo II.56 is a general shot of Area 2 (Figure II.5). This would have been used by a single family as there is but one raised tent base. Area 3 (Figure II.6) is the largest camp of the three with two four-meter square raised



tent bases (see Photo II.57 for feature 2), and three more typical tent spaces with spruce bough floors. There is also the rusted remains of two stoves.

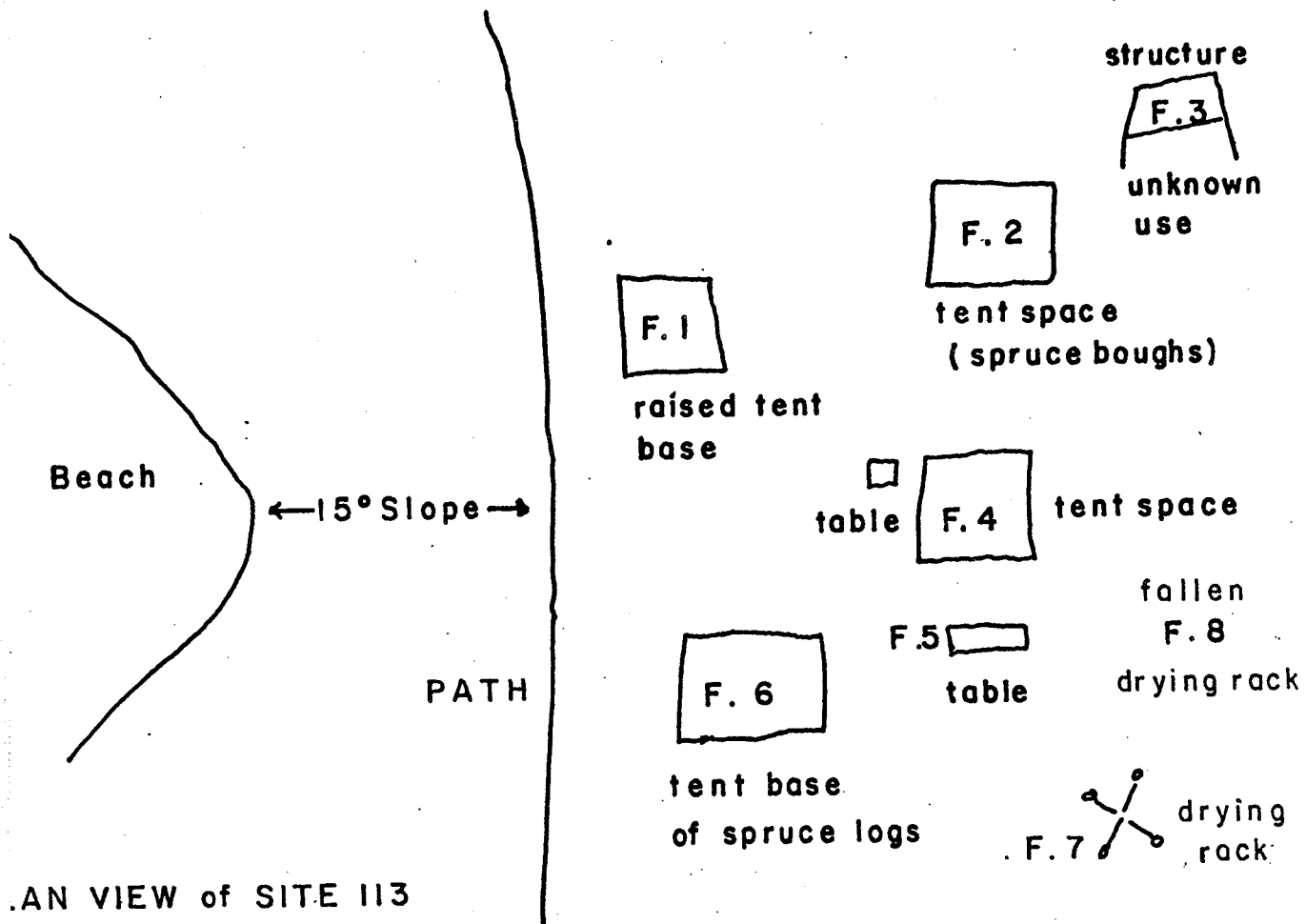
The camping areas of the commercial fishing station have little refuse around them. They are built of material found growing in the immediate area with some scrap lumber and sheets of plywood. There is suprisingly little garbage, and the areas have a clean uncluttered appearance.

┌───┐ 100 meters



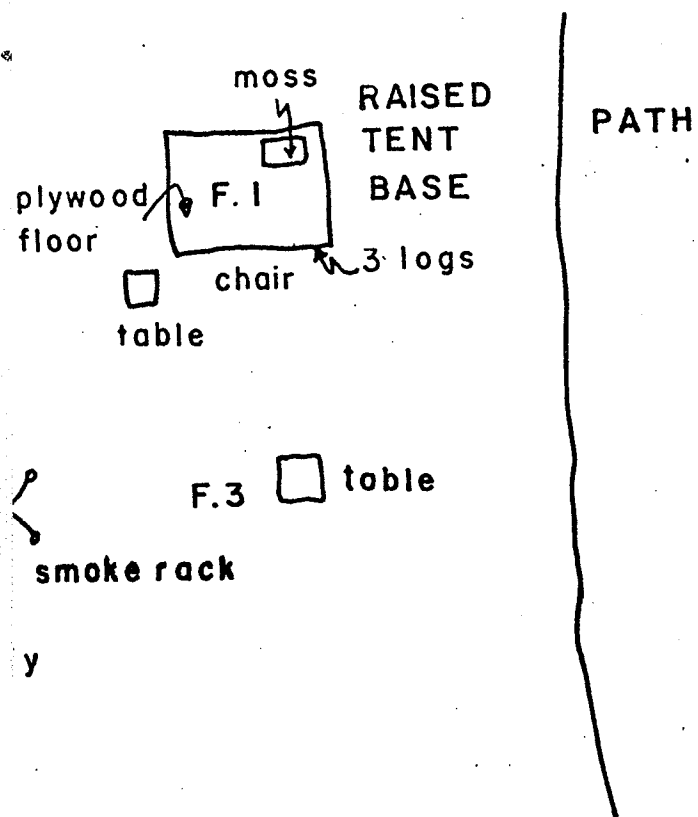
COMMERCIAL FISHING CAMP

MAP II. 6



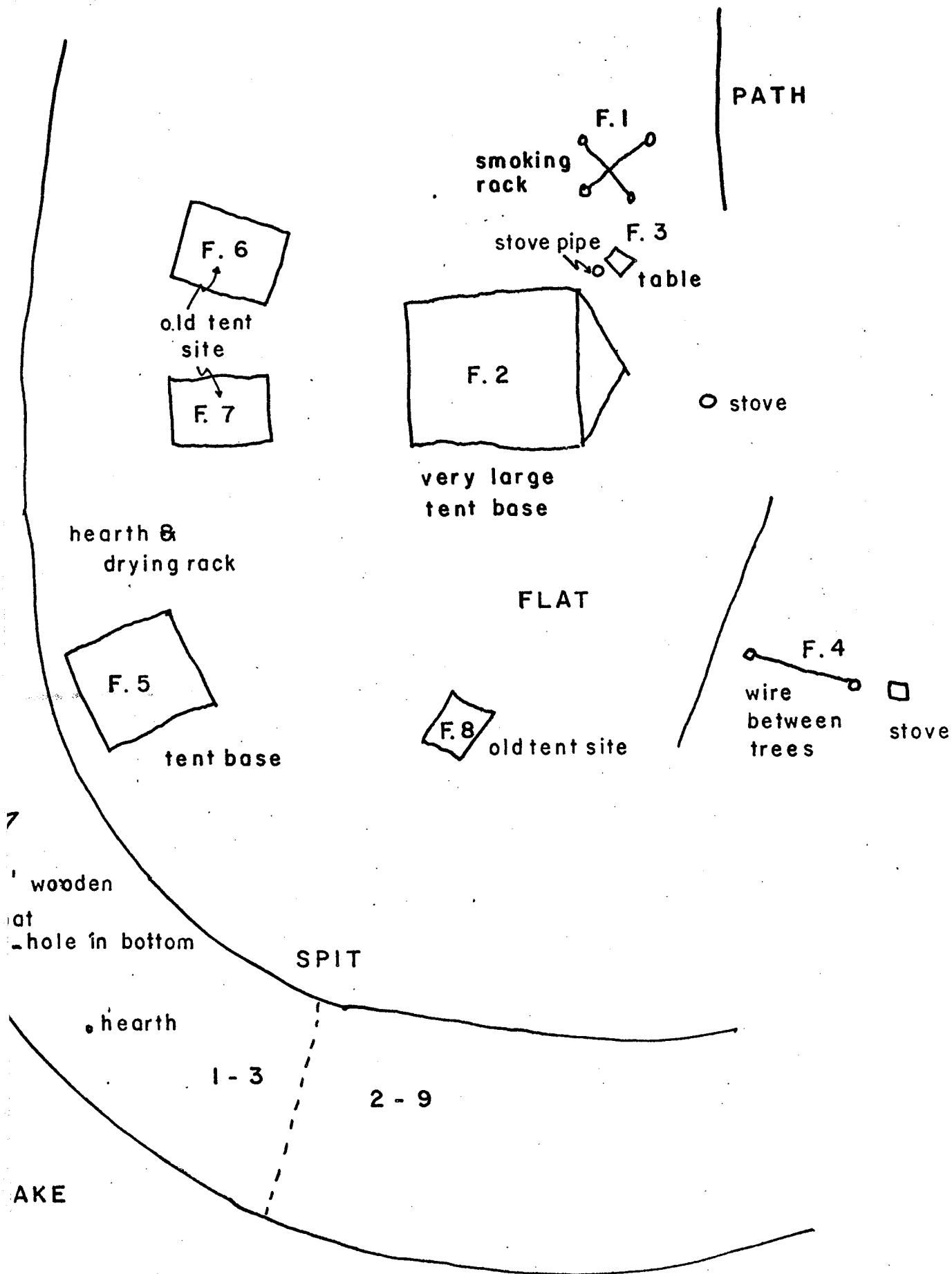
.AN VIEW of SITE 113  
 AREA 1

FIGURE II. 4



PLAN VIEW of SITE 113  
 AREA 2

FIGURE II. 5



PLAN VIEW of SITE 115 - AREA 3

FIGURE II.6



Fig. II.44 site 113 - fish storage house

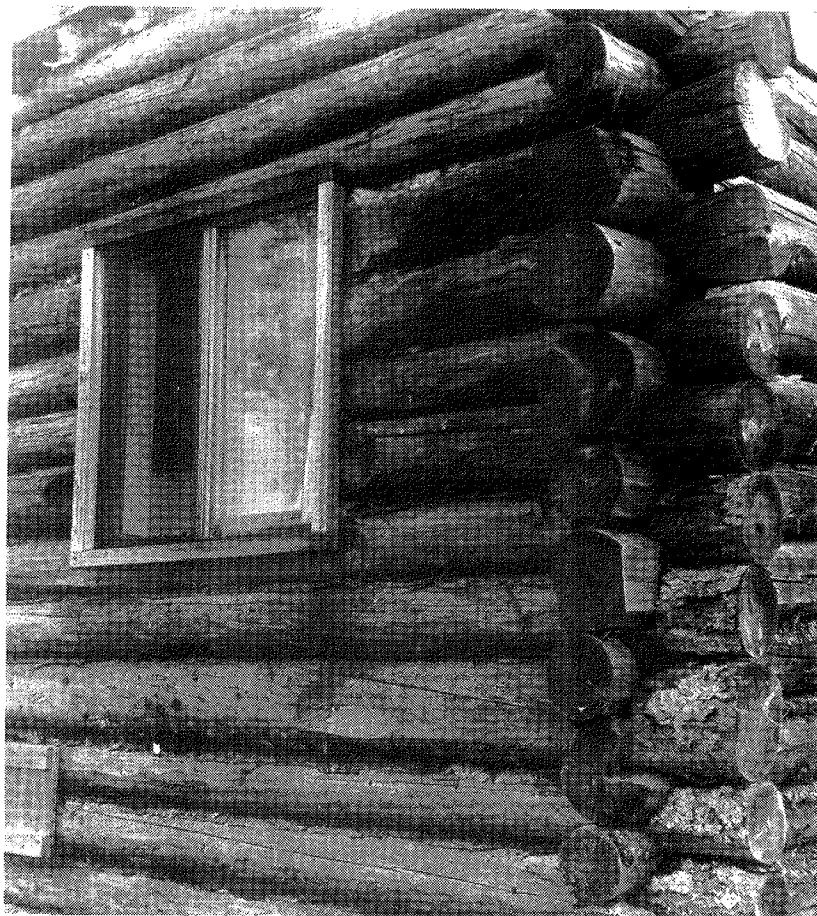


Fig. II.45 site 113 - close up of window & log construction.

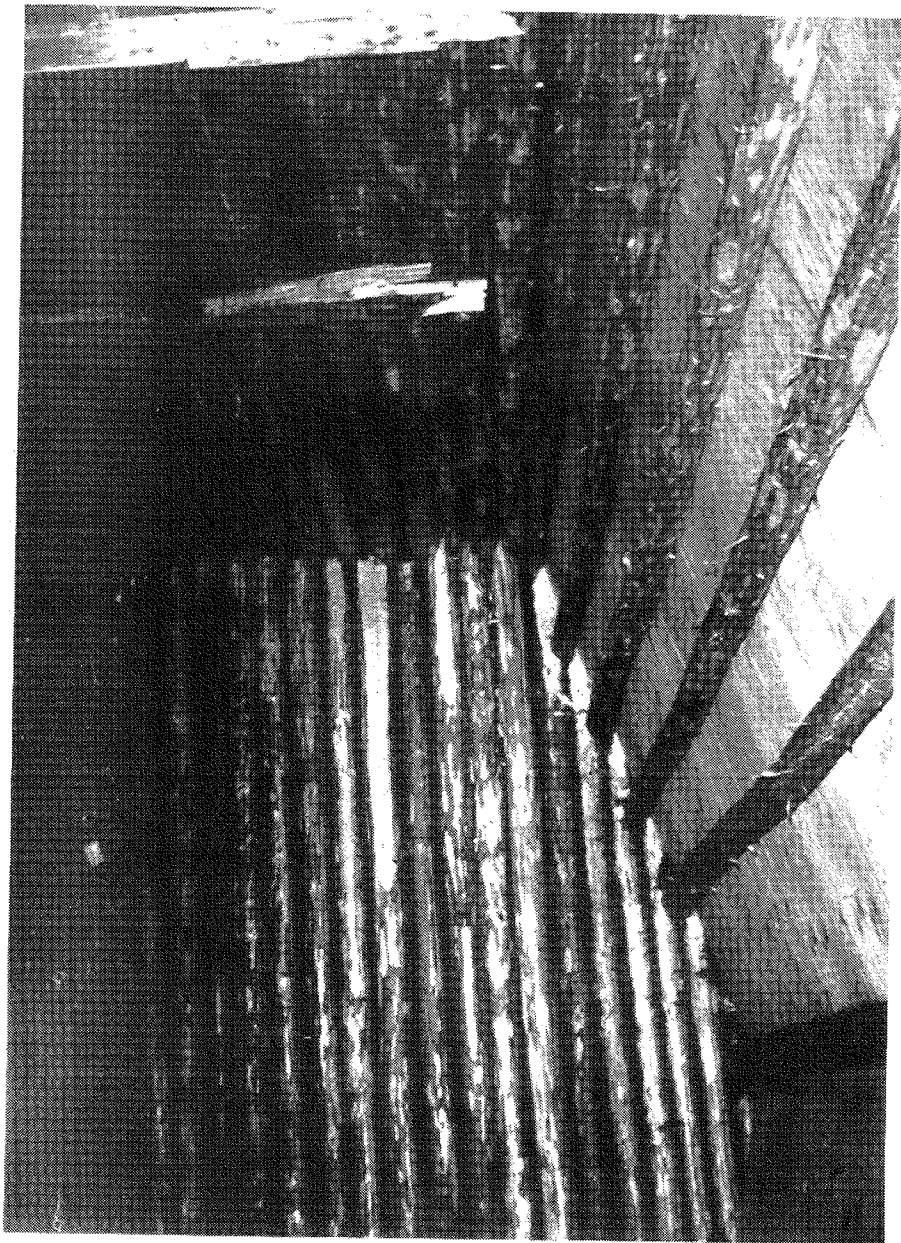


Fig. II.47 site 113 - interior of ice house.

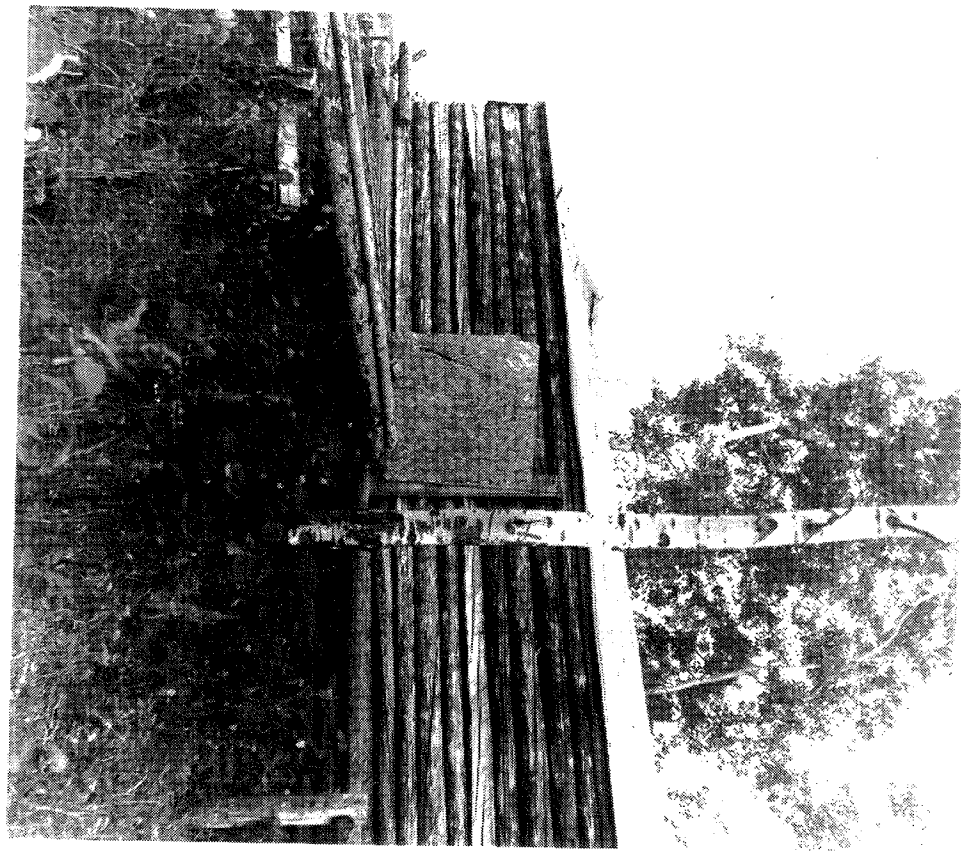


Fig. II.46 site 113 - ice house.



Fig. II.48 site 113 - ice house door  
showing thickness of  
insulation.

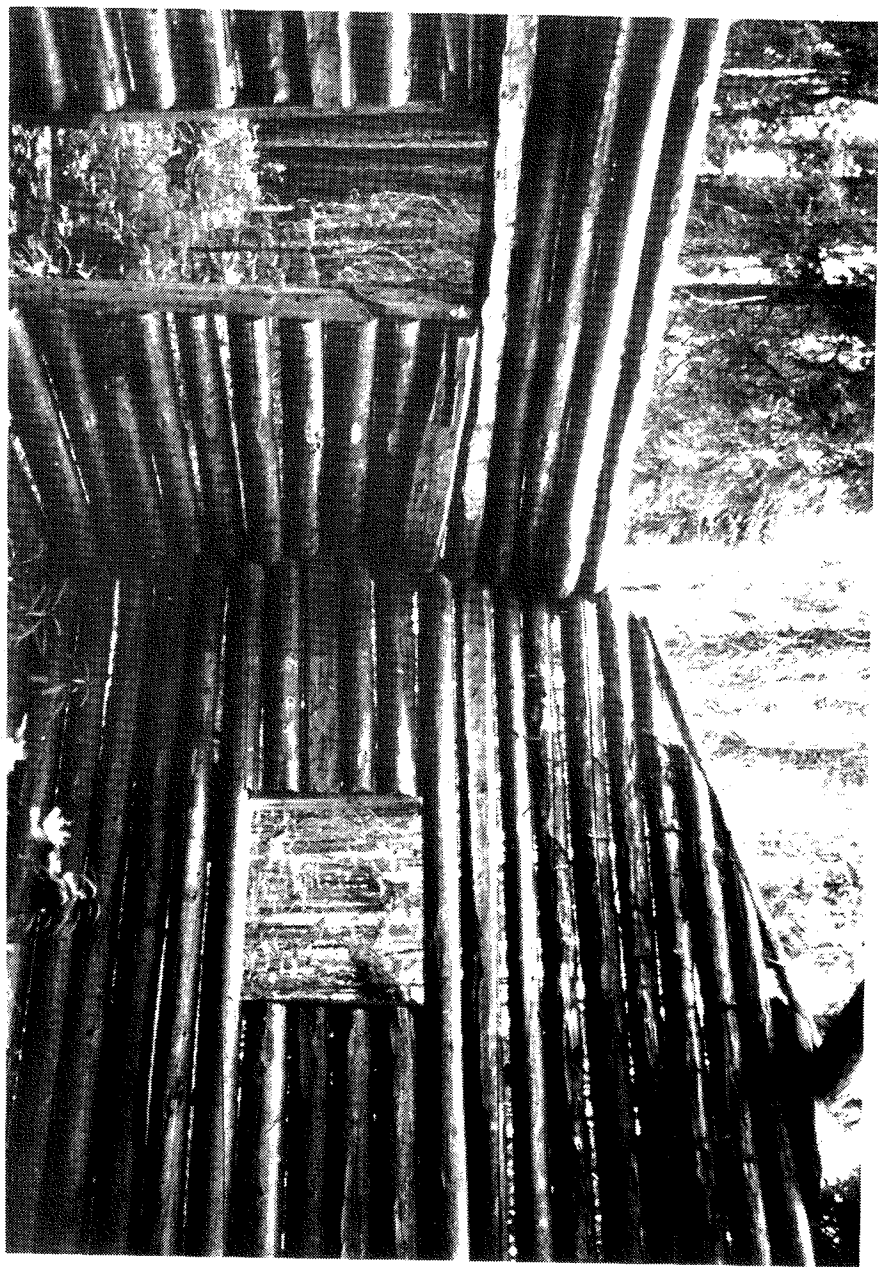


Fig. II.50 site 113 - log cabin on path

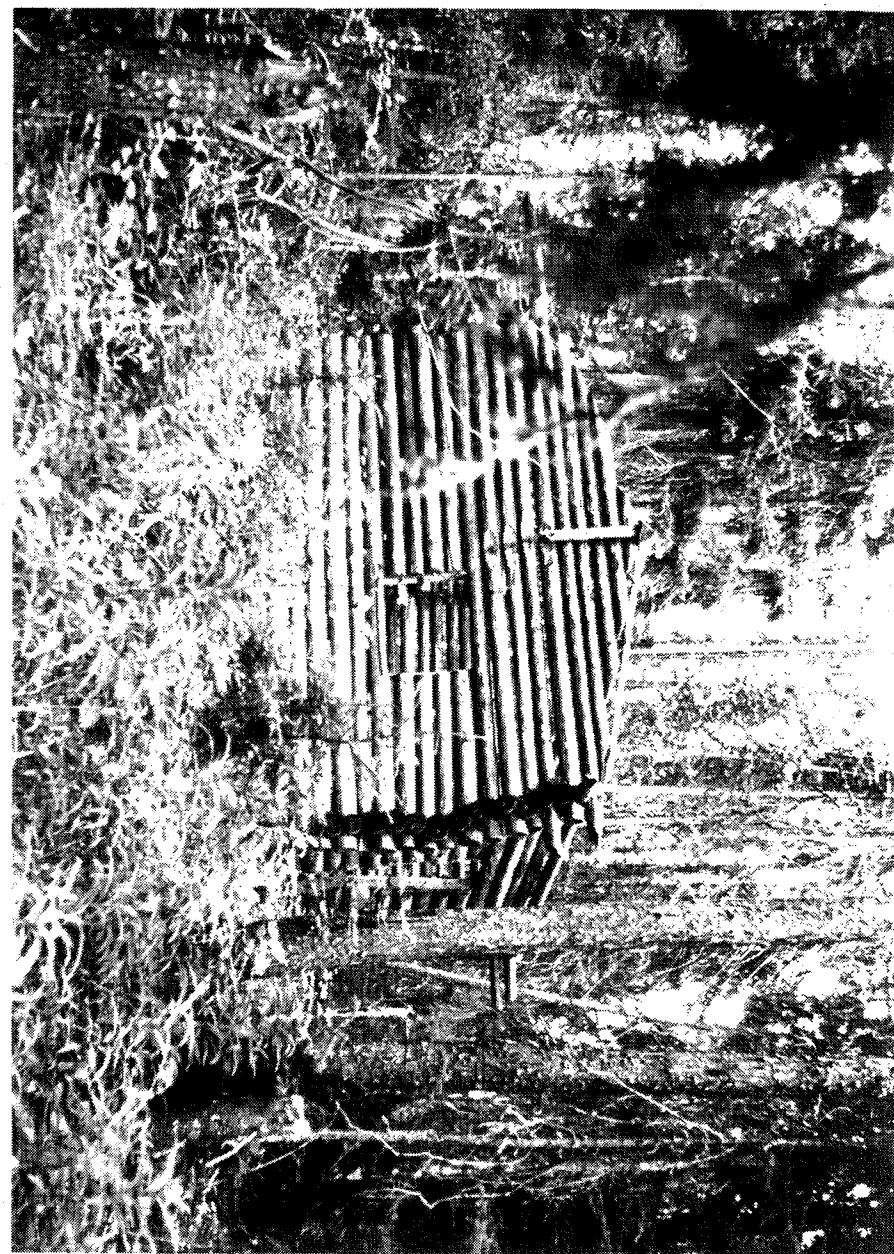


Fig. II.49 site 113 - log cabin on path



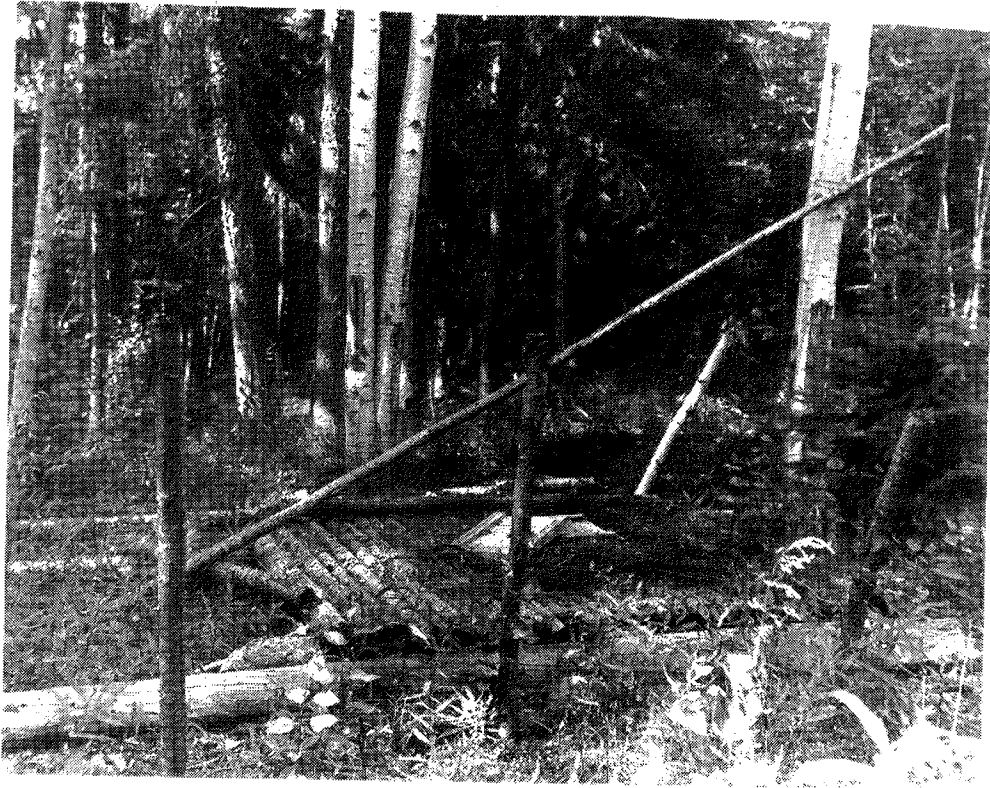


Fig. II.51 site 113 - area 1 feature 1  
raised tent base.



Fig. II.52 site 113 - area 1 feature 6  
raised tent base.

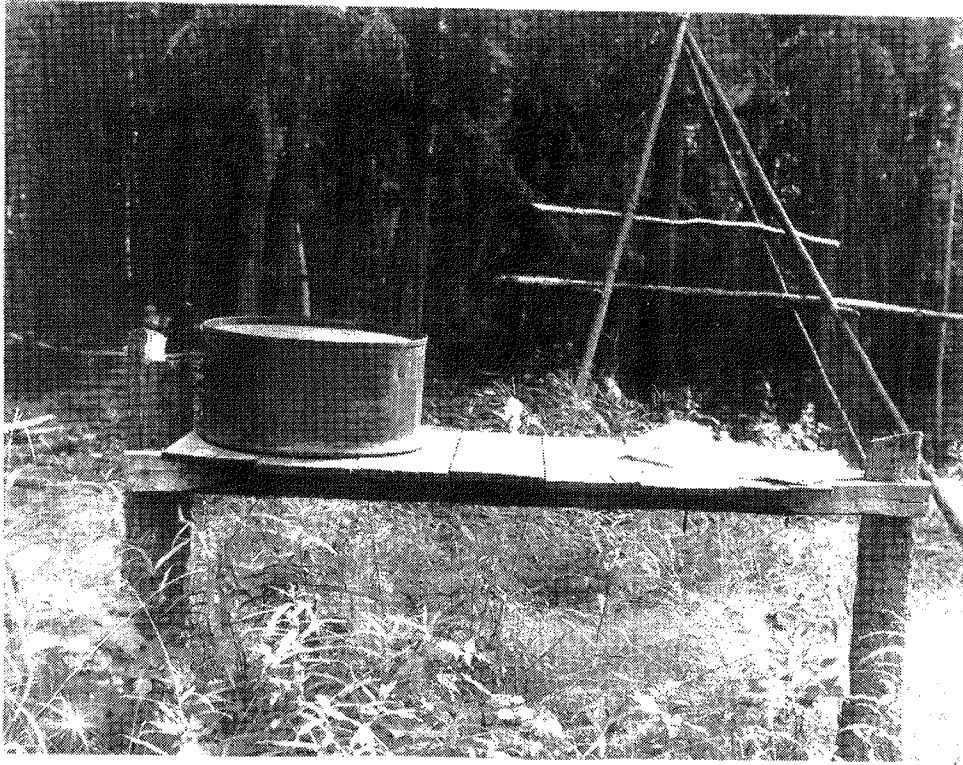


Fig. II.53 site 113 - area 1 table & fish drying rack. feature 3-structure of unknown purpose.

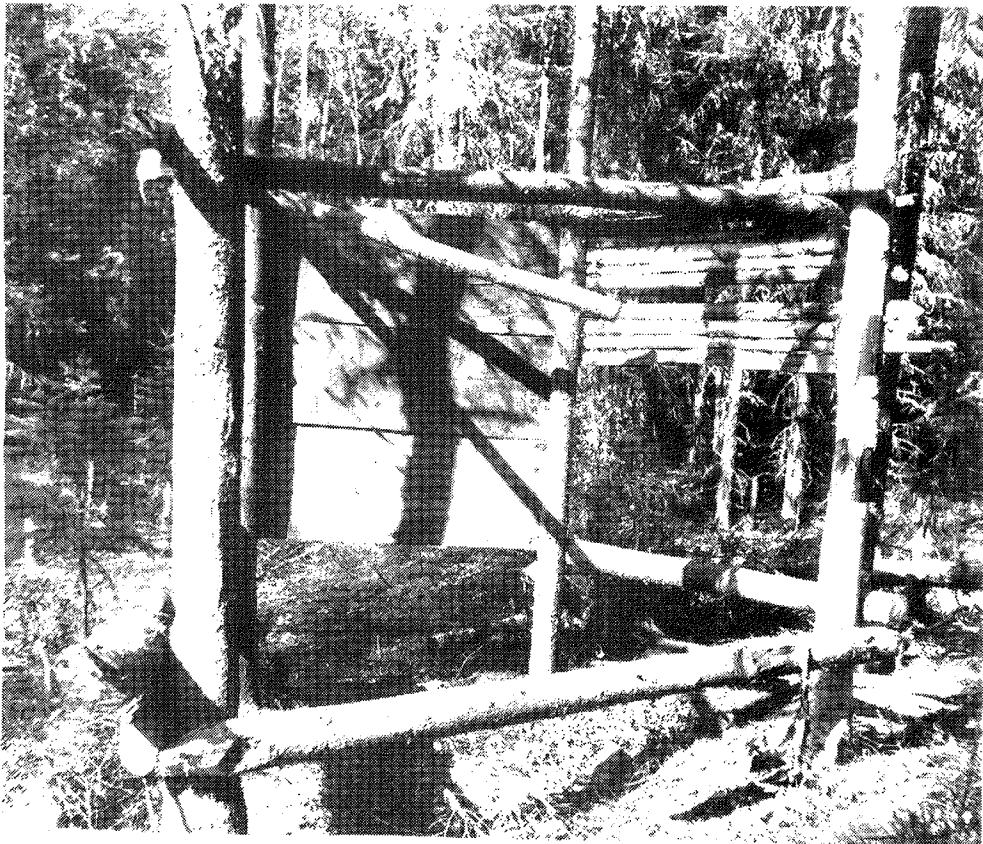


Fig. II.54 site 113 - area 1 table & fish drying rack, feature 3 structure of unknown purpose.



FIG. II.55 site 113 bivy.

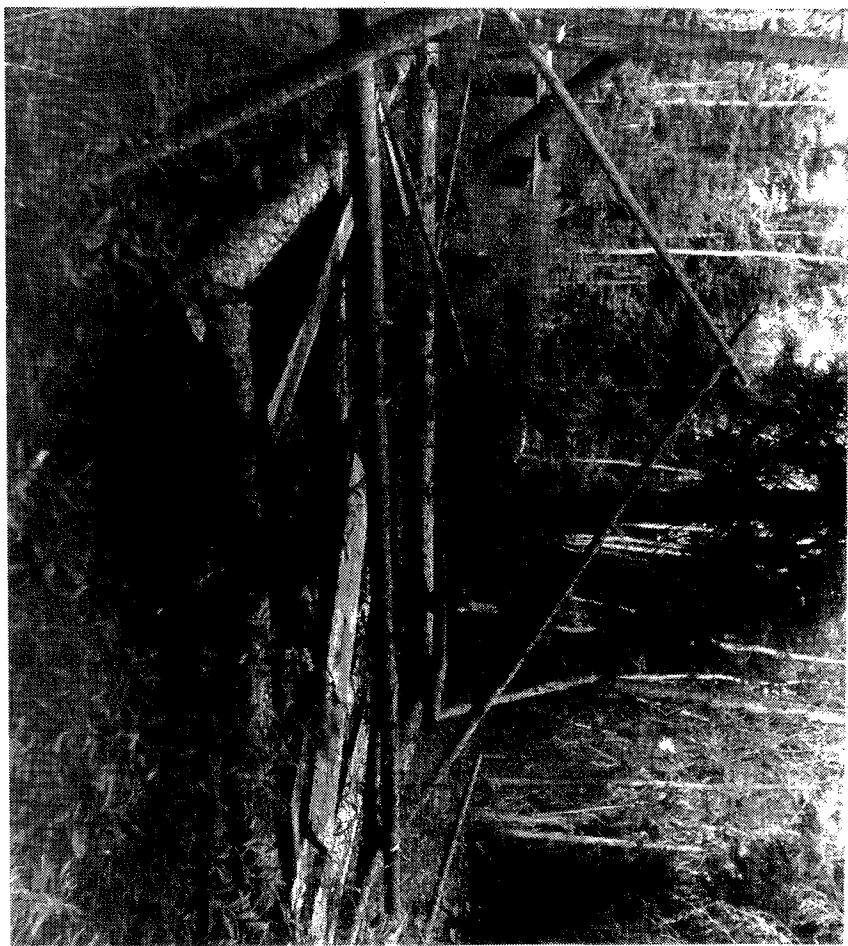


Fig. II.57 site 113 - area 3, feature  
2 very large tent space.



Fig. II.56 site 113 - Area 2  
general shot.

Saw mill

Site 1 was the base camp for the Archaeological Research Centre during the summer of 1974. It was located on the remains of an old saw mill which was disassembled about ten years ago. A refuse heap of saw dust and log ends, and a small fire pit were the only remnants of this industry. Large areas of burn destroyed timber surrounding Nelson House and to get sufficiently large timber for sawing, the mill was built on Lake Wapisu. The cut boards were taken back to the community and many houses were built of Wapisu lumber.

### The Dig Site

Site 2 was located at the entrance to the first large opening of the lake from the Rat River. It was a traditional canoe-building spot as evidenced by numerous flat stones used in the construction of boats (interview: Abraham Spence). The site has proof of occupation from at least the Initial Woodland period (2,000 B.P. by carbon 14 dating). This site is an example of how a small area with advantageous locational factors - on a flat spit, directly on a major travel route - has been chosen for activities for centuries.

### Hydro Sites

This thesis is concerned with the sites left by the Cree of Nelson House, but there were two camps left by Manitoba Hydro crews in 1973. Although they were not in the lobes of the lake which were surveyed, they were sought out and detailed for comparison purposes.

H-1 was a large bush camp (Figure II.7) for a survey crew. There were four log bases on which were placed portable trailers (Photo II.58). The site is on a regular 1-3 shoreline and a large dock (Photo II.59) gives access to the water. The shoreline was steeper than those of the Cree sites on low bedrock outcrops. The dock was not made for canoes. It was exposed and though there was a cove nearby, which would have given protection, it was not utilized. The living area was not flat. Towards the rear of the camp the incline approaches twelve degrees and it was sufficiently steep that one felt the grade when walking in the camp. There was significantly more garbage and of a different type than on any of the native sites: a modern full-sized propane stove was left; beer bottles, paper, pop cans, life jackets, and other loose refuse littered the ground; and a dozen forty-five gallon gasoline drums were abandoned. The clearing in the living area was much more extensive. A large area was totally swept clean with the scrub, and trees piled to one side. It was as if the space had been wiped free of

all vegetation. However, a protecting layer of trees was left standing between the camp and the water.

In general the site would not have been chosen by the Cree for a large camp, nor even if it had been selected, would the construction or refuse have been similar. The Hydro camp was imposed on the environment, not like the Cree camps which seemed to fit in with the environment.

H-2 was a lunch stop at the end of a survey line. Obviously the only factor determining the location was the point on a topographic map at which the survey line reached the lake. There was an enormous amount of garbage which was only partially stuffed into green garbage bags. Milk cartons, egg shells, and beer bottles were scattered over the shoreline. The site was marked "BM 60" in fluorescent orange paint on a rock, and was decorated with survey tape.



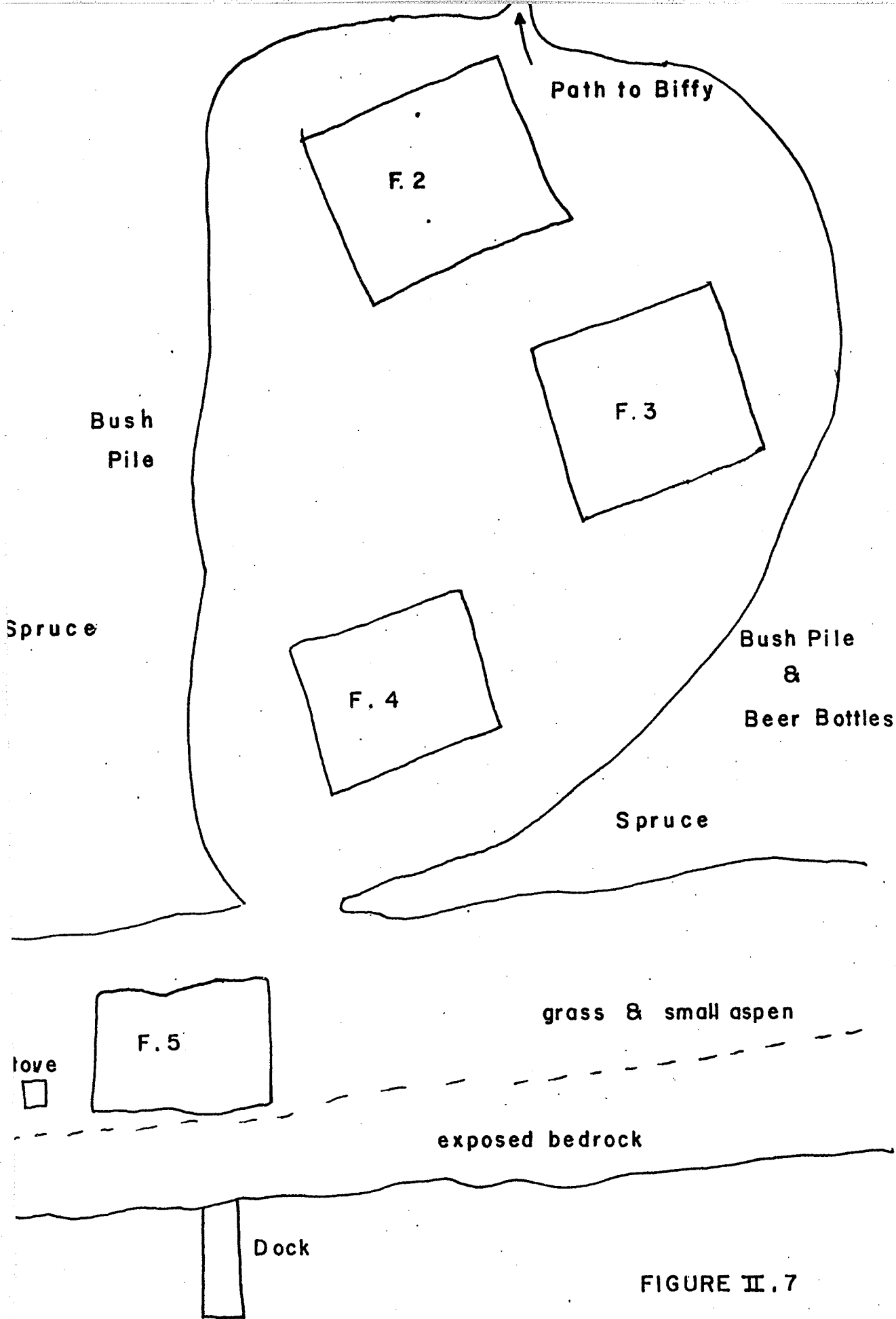


FIGURE II. 7  
 PLAN VIEW of HYDRO CAMP (H-1)

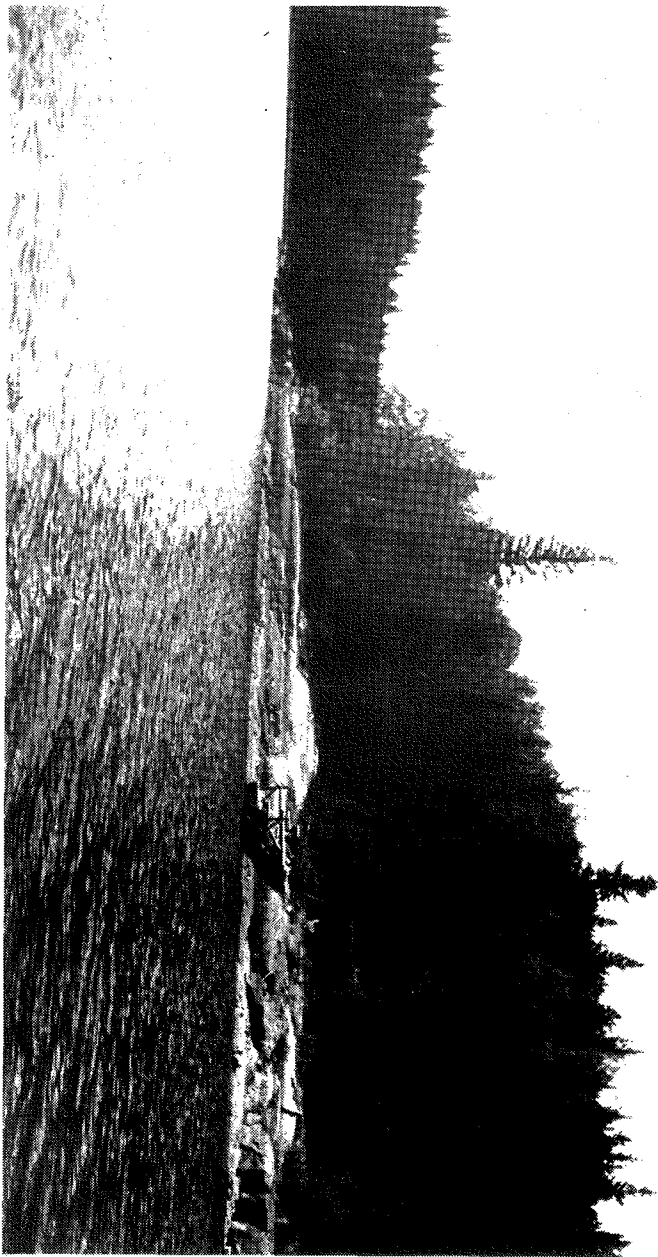


Fig. II.59 site H-1 shoreline.



Fig. II.58 site H-1 portable trailer base.

## Summary

The parameters which influence site selection on Lake Wapisu are:

### 1) Irregularity of shoreline

The more diverse the shoreline per unit length in terms of shoreline classification the more probable the occurrence of a site.

### 2) Presence or absence of burn in the backshore

Almost the entire south shore of the lake from the Narrows to the eastern boundary of the south east lobe was heavily burned about ten years ago. This determinant explains the relative lack of sites of the south shore in comparison with the north shore on the same part of the lake.

### 3) Travel patterns

Many sites are directly associated with the travel patterns to and from Nelson House in both winter and summer.

### 4) Visibility

Many sites were located in an area with a fine view, but whether the aesthetics of the spot directly influenced site selection is unknown.

### 5) Previous or customary usage

Sites were often found clumped together in one small area (eg. Maps App IV.2, 3, & 4), the same location having been used for a number of years, and occasionally at different seasons.

6) Creek mouths

Of the thirteen creeks observed only two failed to have at least one site at, or in close proximity to its mouth.

7) Marshes

Sites in marsh areas are located on the few dry areas, usually rock outcrops. These are often associated with the hunting of wild fowl.

8) Beaches

Not one site was located on a beach, between the waterline and the first shrub growth (classification 2-2, 2-7, or pure 2-9). Sites when found on these shoreline types were inevitably in the treed area in the backshore.

9) Inland

Where small sites are found in the bush behind the shoreline, they are located in an area with little undergrowth, within the boundary of

the forest, and use the bush as a windbreak.

10) Height above water

Very few sites except the trapping cabins, were more than five meters above the existing water level, and often much less.

11) Open exposure

This permits wind to clear the site of insects, and cool the camp in summer.

12) Canoe access

This is not very important. Though people with little experience on the lake look for easy access (a gentle land-water interface), the Nelson House Cree, docked their canoes on almost any type of shoreline, with the exception of very steep 1-3 or 1-1.

13) Slope

Almost all sites, with the exception of a few winter beds and some hearths, are on land with a very shallow slope (at most five degrees).

and

14) Dry ground

Sites are always placed on land with good drainage. This is especially apparent on sites at creek mouths and in marshes.

## SECTION III

### SHORELINE CLASSIFICATION SYSTEM

#### A Revamp of the Physical Impact Study Characteristics of Churchill-Nelson Shorelines

### INTRODUCTION

In 1972 the Churchill, Lake Winnipeg, and Nelson Rivers Study Board commissioned Dr. Robert Newbury to "predict effects of the planned water power developments on the shores of the Rat, Burntwood, Churchill, and Nelson River Systems" (Newbury, 1973:3). As a necessary part of this study, a classification system of shoreline types was developed.

This system seemed to be a useful way of characterizing the shorelines along which the sites in Section II were found. The typical examples delineated encompassed such characteristics as "general morphology, stratigraphy, and composition of shoreline materials; type, zonation, density, and size of vegetation; drainage characteristics; and occurrence of permafrost". Once the system has been used by an investigator for a short period of time, a very vivid and exact mental picture is formed of the specific shoreline types.

As originally formulated, fourteen shoreline types were defined. They were broken down into bedrock and

bedrock-controlled, alluvium or overburden, and organic. Of these, there were definitely no organic shorelines (Type 3-1, Floating Fen), Type 2-8 (Low Willow Shoreline), or Type 2-1 (Ice-scoured Till Bank) on Lake Wapisiu.

Great difficulty was had in separating out some of the remaining eleven classifications. Many of the definitions, as given, were imprecise and ambiguous. For example, the difference between Type 2-2 (Shoreline in Coarse Sediment) and Type 2-7 (Low Shoreline in Coarse Sediment) was "the latter (Type 2-2) are not dissimilar to the sediments underlying Type 2-7 except in that they are thicker" and Type 2-7 has relief which is low, "but consistently higher than that of Type 2-2". The accompanying photos do not help much and can almost be interchanged, especially in the close up shots of the beaches in Types 2-2 and 2-7.

In general, the researcher had great difficulty applying this useful classification system. In order that other investigators may use the shoreline classification system, and that the shoreline types in Section II are meaningful, this section attempts to clarify the shoreline types. The numbering system of the original report has been retained, but the shoreline titles have been changed so that they associate more closely with the formative processes or description of the type.

Six types were found on Wapisu, plus one new classification. Typical cross-sections, a short description, photos, and several sketch maps should make the application and understanding of the types simpler.

Two words in the descriptions following must be defined: pure and typical. The pure shoreline type is that description of the shoreline which is most differentiated from all other types. It rarely occurs, but when found forms a regular shoreline extending over fifty meters. The cross-sections are of the pure shoreline type. The typical shoreline, is the more common occurrence, and several different shoreline types are typically found within any given fifty meters.

Ground truthing may distinguish between two adjacent shorelines with an interface of only five meters, roughly the width of a thin pencil line on a map of scale one cm to .122 kilometers (one inch equals one half mile). This interface is not well defined and one shoreline type gradually blends into another type. In other words the system may be applied to the limit of the "uncertainty principle".



# SHORELINE

BEDROCK CONTROLLED

OVERBURDEN CONTROLLED

CONSOLIDATED

UNCONSOLIDATED

DEPOSITIONAL DEPOSITS

ALLUVIAL DEPOSITS

STEEP  
BEDROCK  
(1-1)

LOW  
BEDROCK  
(1-3)

LARGE  
BOULDER  
RIP-RAP  
(1-6)

BEDROCK  
TILL  
BEACH  
(2-9)

LOW SHORELINE  
BLACK SPRUCE  
BOG  
(2-7)

SAND  
BEACH  
(2-2)

ALLUVIAL DELTA  
(2-3) (2-4)

TYPICAL  
SHORELINES  
FOUND  
TOGETHER

1-1 with  
2-9 base

typical spit

2-9 with  
marsh

no creek

cove

with  
creek

banks

river

at mouth

SHORELINE TYPES

FIGURE III. 1

## VEGETATION

The zonation of vegetation types is classified as follows: coniferous forest, deciduous zone, willow zone, backshore slope, scattered ground cover, and rushes.

**Coniferous forest:** The spruce forest is the stable climax of the boreal forest. It may consist of white or black spruce or a combination of both. There are occasional birch, balsam poplar, and trembling aspen. There is little or no secondary stratum, and the forest floor is covered with a thick carpet of moss and lichen. Bear berry, common juniper, three-toothed cinquefoil, wild sarsaparilla, high bush cranberry, twinflower, labrador tea, and mint are common.

**Deciduous zone:** The common trees are paper birch, various species of willows and alder and trembling aspen. There is often a thick secondary stratum of immature trees and such bushes as willow, alder and red-osier dogwood. The groundcover is may be thick and varied, or may consist of a layer of dead leaves. As well as those low-growing plants found in the coniferous forest, there may be ground hemlock, various grasses and sedges, yellow clintonia, wild lily-of-the-valley, yellow lady's slipper, sweet gale, buttercups, saxifrage, all types of berries (strawberry, gooseberry, raspberry, choke-cherry, saskatoon, black crowberry, bunchberry, cranberry, and snowberry), wild rose,

vetch, wild pea, fireweed, Indian pipe, wild rosemary, cassandra, golden rod, yarrow, coltsfoot and others.

Willow zone: Willow, alder, and red-oiser dogwood are the most common. The density of the willow zone is often such that penetration through a thick patch of scrub willow is nearly impossible. Ground cover is relatively scarce with grass and sege being the most common.

Backshore slope: The backshore slope (BSS) represents the limit of wave action on the overburden. It would be formed during an unusually large storm (perhaps 1 in 10 years). There is often undercutting with consequent slumping in the deciduous zone. Trees are often felled or left leaning at a large angle from the vertical. Driftwood is common at the base of the slope. The vegetation is similar to the deciduous zone, however, the largest variety of plants is found on the backshore slope.

Scattered ground cover: This is found in a water-washed zone which is occassionally flooded. Grass, sege, lichen, and mint are common.

Rushes: Water weed, bullrush, horsetail, cattail, pondweed, and other mesic plants are typical.

## WATER LEVELS

The identification of the shoreline types is dependant, to a great extent on the water level at the time of observation. In the Study Board Report, classification 1-5 (Low Bedrock - Controlled Shoreline) appears to be nothing more than a Type 1-3 (Low Bedrock Shoreline), with a somewhat higher lake level and in an area such as the outlet lakes (eg: Sipewisk and Cross) where the general topography is lower than around Lake Wapisu.

Lake or river levels can also affect the different vegetation zones, and their relative widths. Thus a beach at high water level during a spring storm may be non-existent, but by September it may have grown to forty meters in width. This aspect was of particular concern on Lake Wapisu, which had no major inflow due to the completion of the Notiqi coffer dam on the Rat River in the winter of 1973-4.

Figure III.2 is a graph of lake elevations at Nelson House for the fourteen years of recorded data. As can be seen, the open water lake elevations varied by up to four meters in a single year. As most shoreline classifications are dependant upon the three meters in elevation above the water level, this is a major concern.

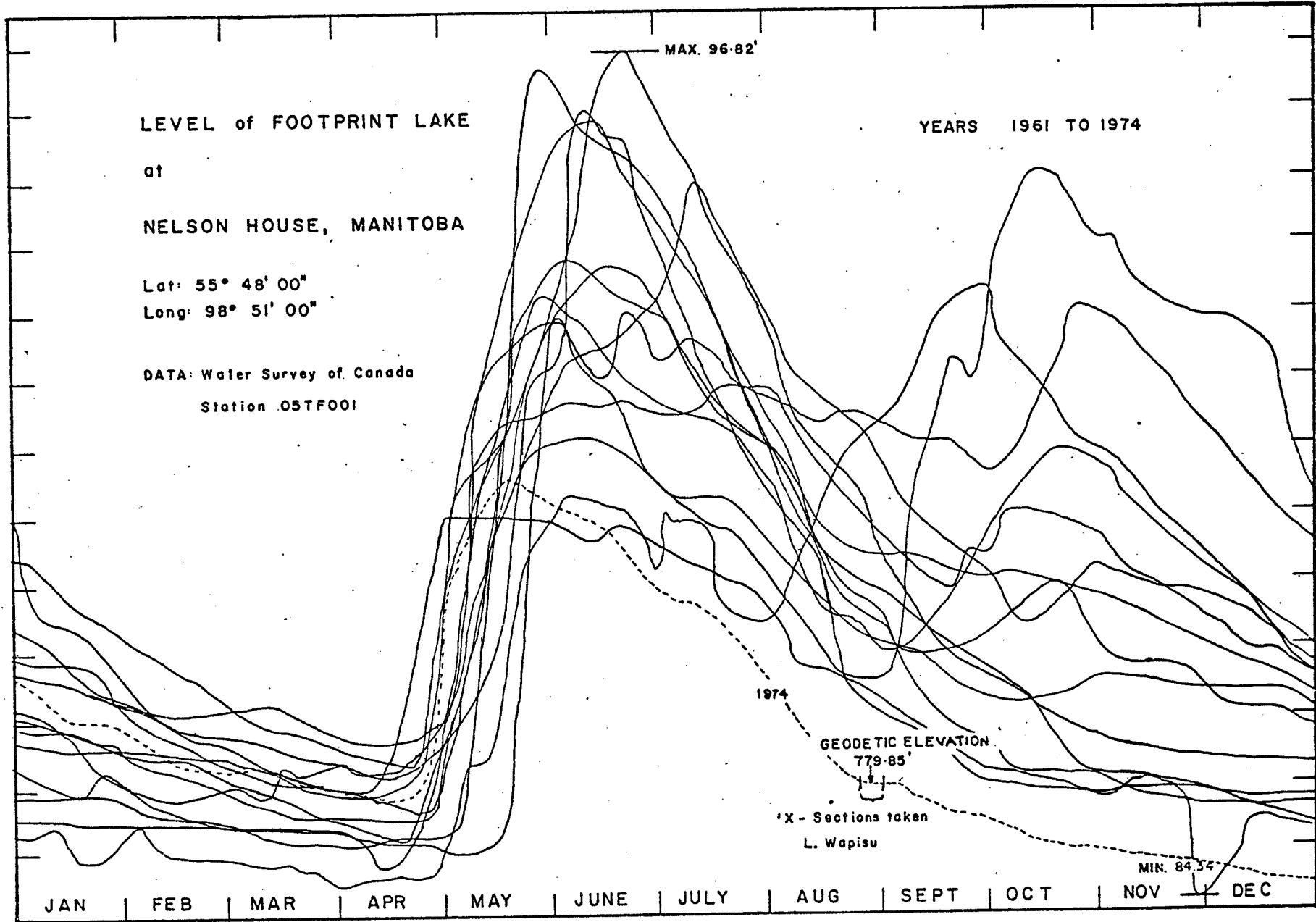
If water levels are low, classification becomes less ambiguous; if however, the observer is attempting classification at high water levels, an unresolvable

uncertainty will be introduced, and the classification must be made on less exact definitions.

Water levels during the 1974 field season were low, but not out of range of the natural variation. Pollen traces were consistently found over the entire length of the lake, .85 meters above the water line. This reference point is drawn on the shoreline cross-sections as an aid to other users of the system.

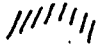
178

FIGURE III.2



# LEGEND TO SHORELINE CLASSIFICATION DIAGRAMS

## SYMBOLOLOGY



**BEDROCK**



**SILTS and CLAYS**



**GRANULAR  
MATERIAL**



**ORGANIC MATERIAL**

## VEGETATION



**Black spruce**



**White spruce**



**Jackpine**



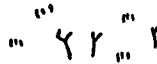
**Willow or Alder**



**Paper Birch**



**White or Black Poplar**

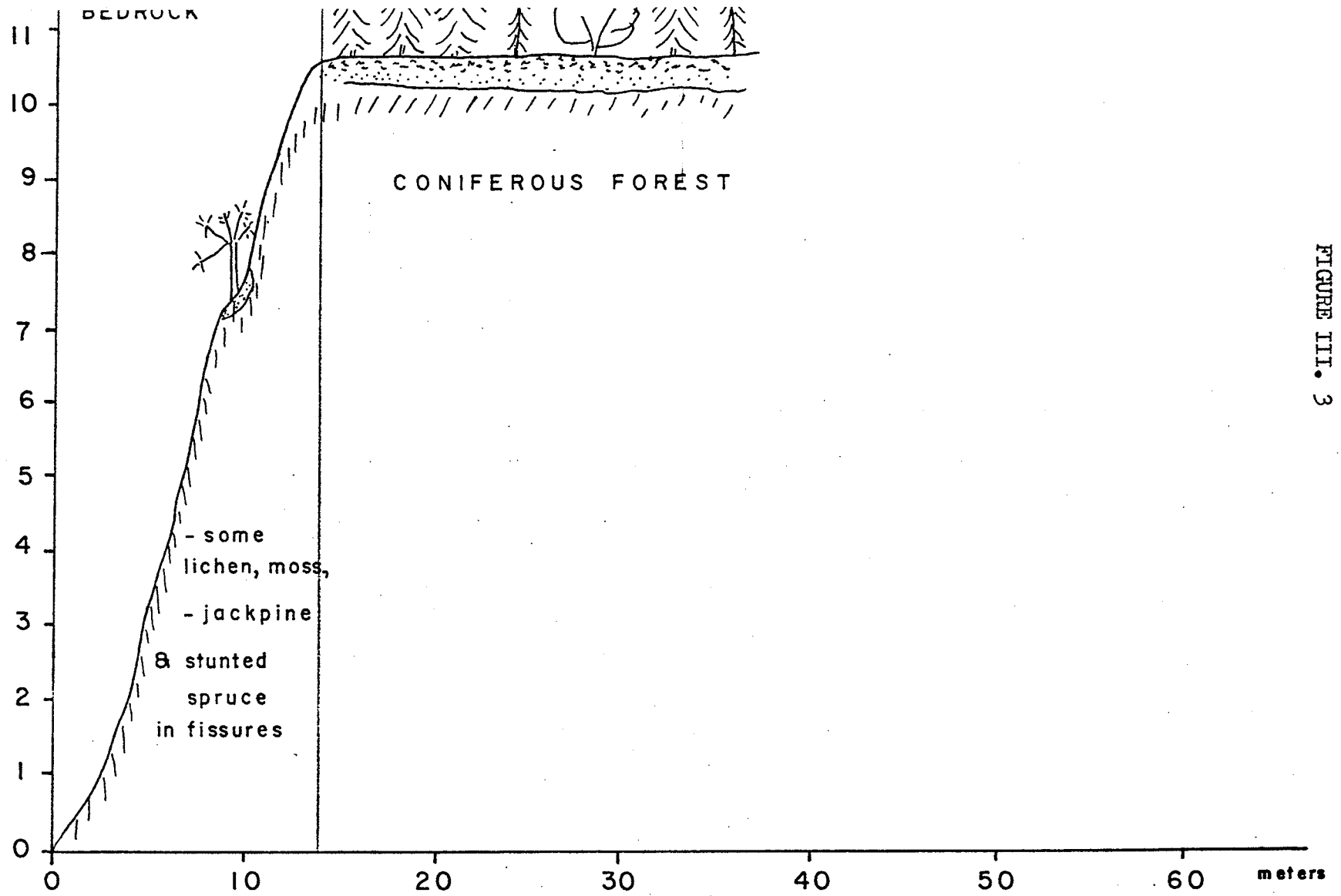


**Rushes or Sege**

### 1-1 Steep Bedrock Shoreline

Type 1-1 is characterised by a steep outcropping of bedrock with slopes often over thirty degrees. It is the easiest shoreline to classify. The rock face juts up out of the water, but occasionally at the base of the rock face, a shoreline typical of 2-9 develops from fallen rock. The difference between 1-3 and 1-1 is in the height above water before which the slope permits soil to form and spruce to grow. This was arbitrarily taken as three meters. The rock face often has fissures with more gental slopes in which jackpine grow.





TYPE: I-1

STEEP BEDROCK SHORELINE

FIGURE III. 3



Fig. III.1 - Type 11

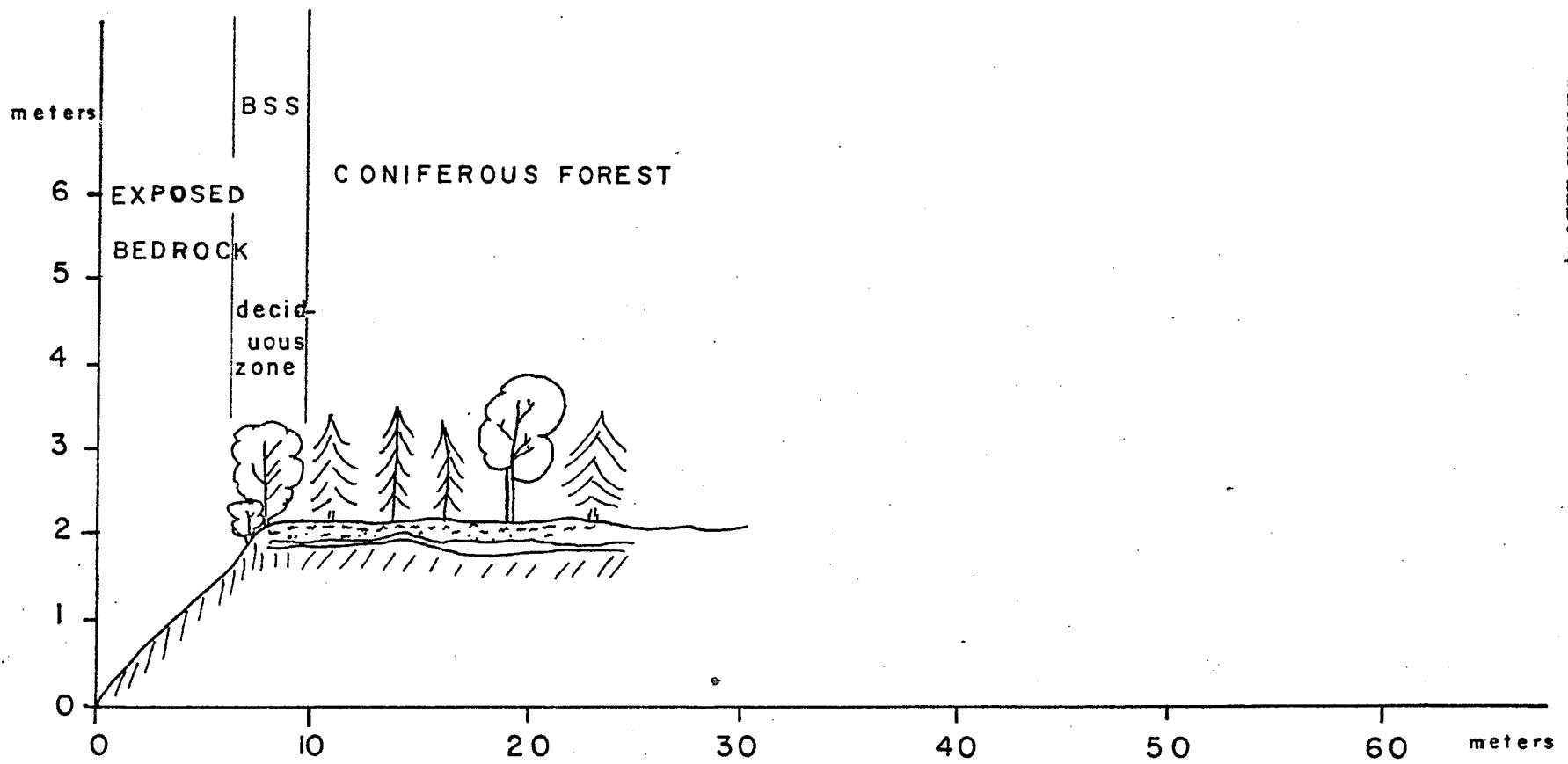


Fig. III.2 - Type 11

### 1-3 Low Bedrock Shoreline

Pure 1-3 is a relatively rare shoreline and very regular. The exposed bedrock raises from the water line to a height of less than three meters and there is a very small (less than one meter wide) deciduous zone with the coniferous forest behind this. The slope in the coniferous zone is very shallow (less than five degrees).

The more typical 1-3 forms an irregular shoreline, often in conjunction with 2-9, with many spits, coves and inlets. The water washed zone is wider and the gradation from exposed bedrock to open shrub willow, to deciduous, to coniferous zones is more spread out, and is a function of the size of the spit. The slope in the coniferous zone is variable and may be quite steep.



TYPE: 1-3

LOW BEDROCK SHORELINE

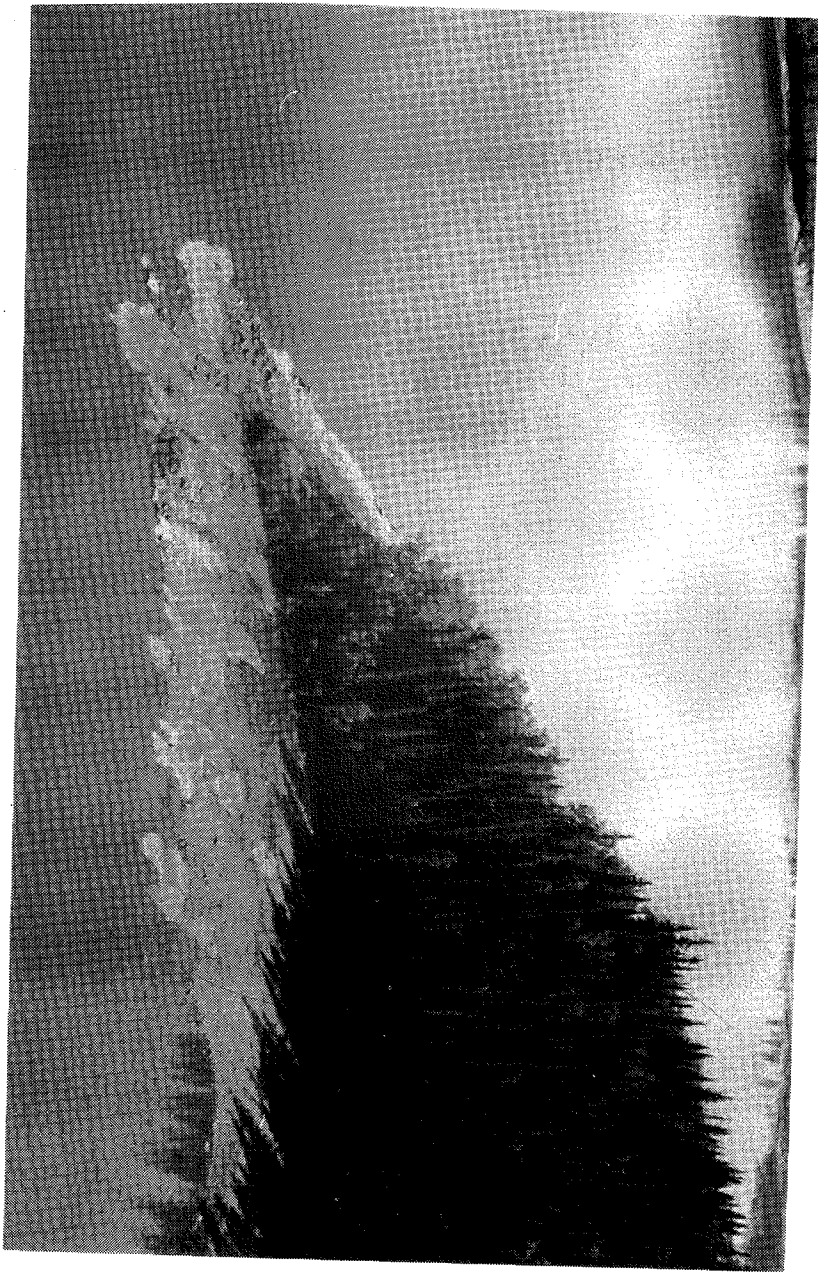


Fig. III.4 - Type 1-3.

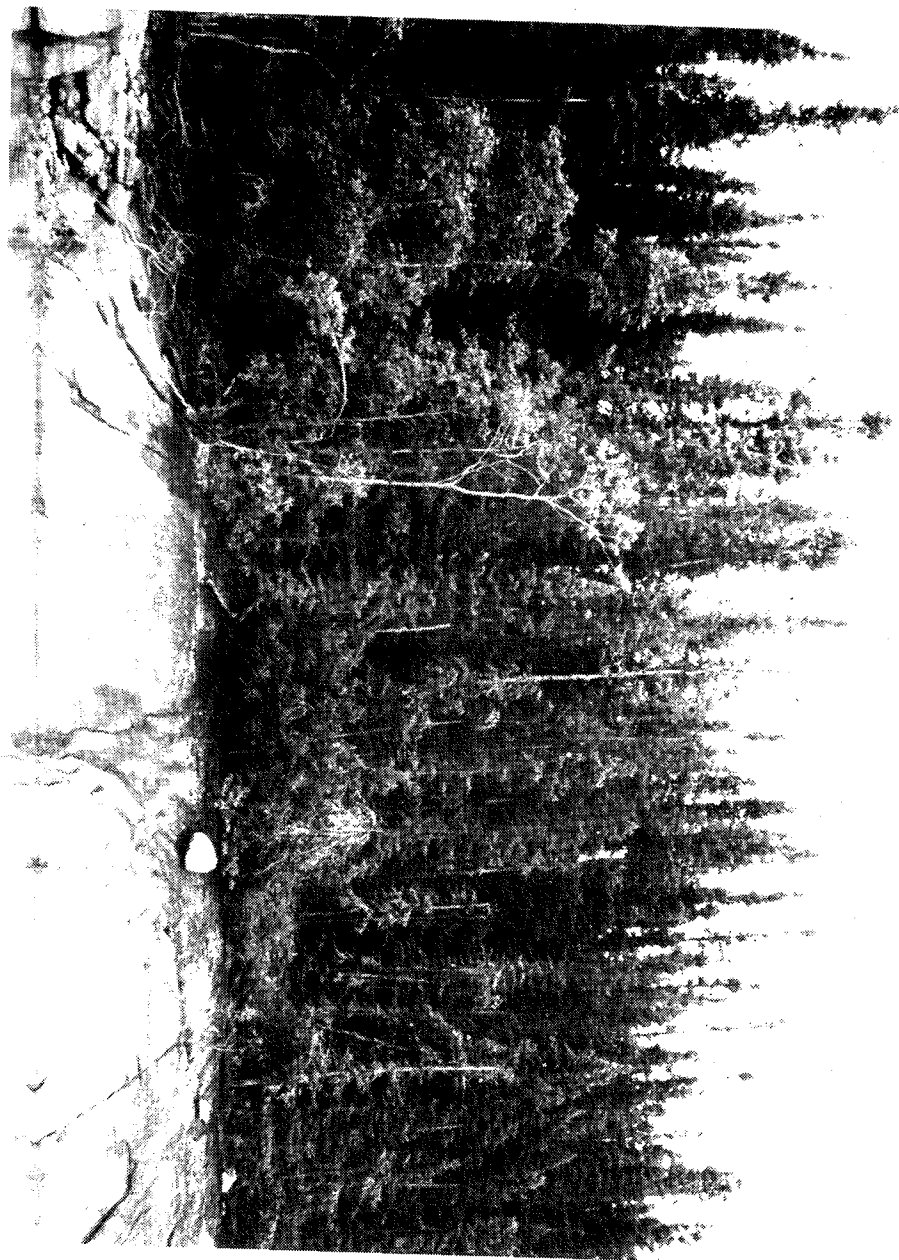


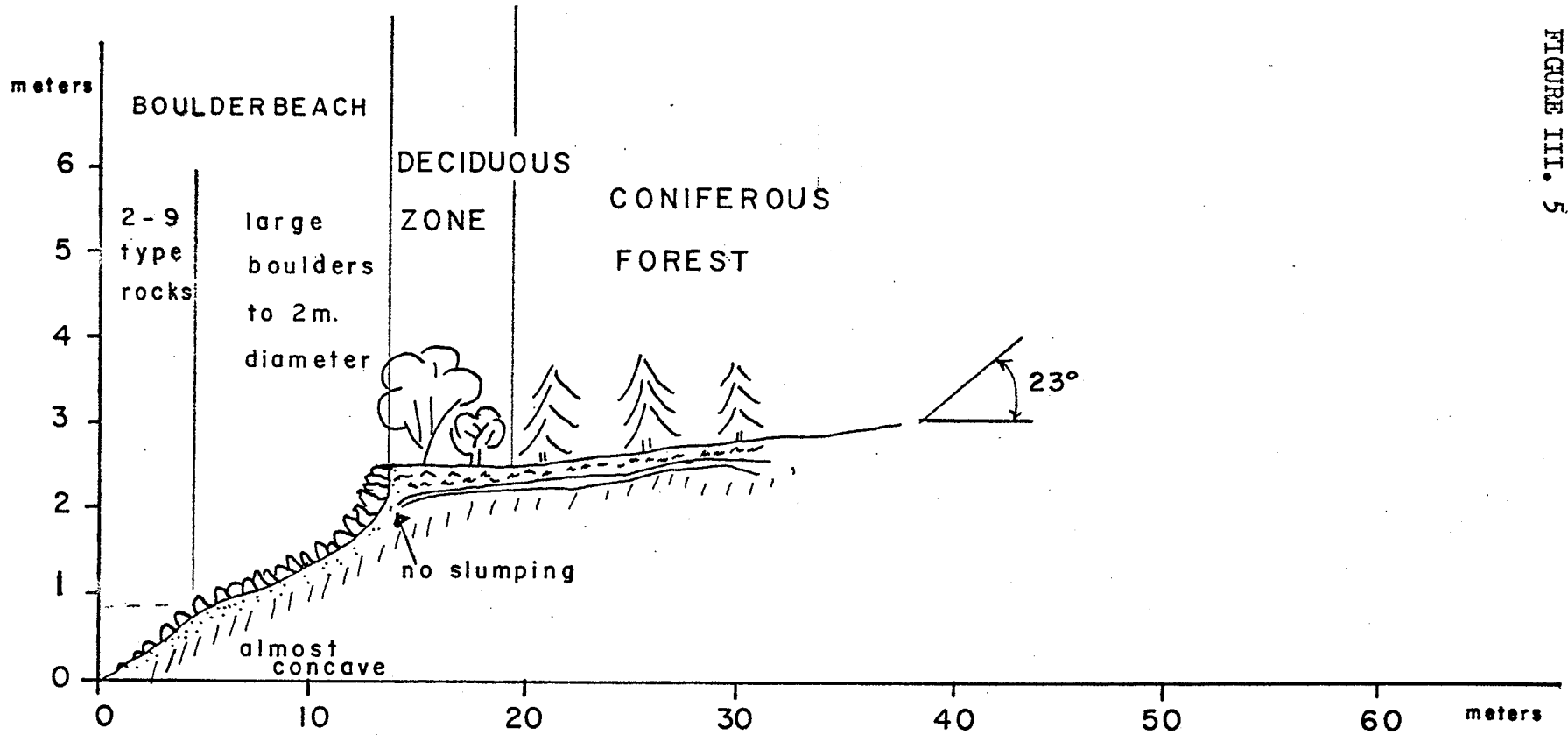
Fig. III.3 - Type 1-3.

1-6 Large Boulder Rip-rap

(new classification)

Type 1-6 is similar to 2-9 near the water's edge except that the boulders are much larger, often two meters in diameter. There is no bedrock outcropping in the backshore. It is the rarest of the shoreline types on Wapisu.

The beach has on an almost concave appearance quite unlike 2-9 in the second zone. The parent material was pro-glacial, perhaps an alluvial fan which had been washed off the glacier and left in situ by the clay overburden. The boulders are sharp edged, indicating the absence of water and glacial action. The backshore slope has no undercutting and is relatively gentle. There is no poplar zone, but there may be some ash and other typical edge vegetation. This intermediate zone is relatively thin and quickly melts into the coniferous zone which has a relatively steep angle (greater than twenty degrees).



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TYPE: 1 - 6

LARGE BOULDER RIP-RAP



Fig. III.5 - Type 1-6.

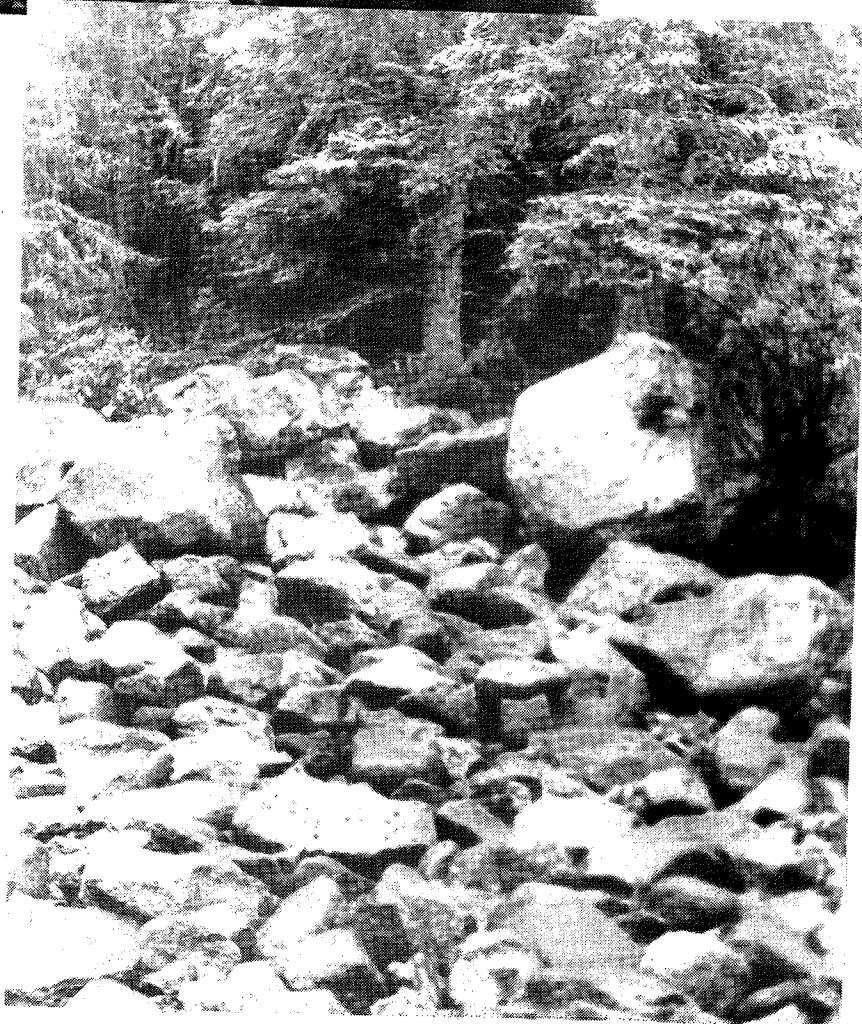


Fig. III.6 - Type 1-6.



## 2-2 Sand Beach

(formerly shoreline in Coarse Sediment)

Type 2-2 is the shoreline which one thinks of when imagining a sand beach. The sands are sorted, with the finer sands toward the water's edge. Vegetation is rare to non-existent in the sand zones. There is a well developed deciduous zone, first of stunted willow, and then poplar and ash which gradually changes into the coniferous zone.

It is formed from deposition of water-borne sand and silt and is subject to changes in beach width as a function of the time since the last large storm.

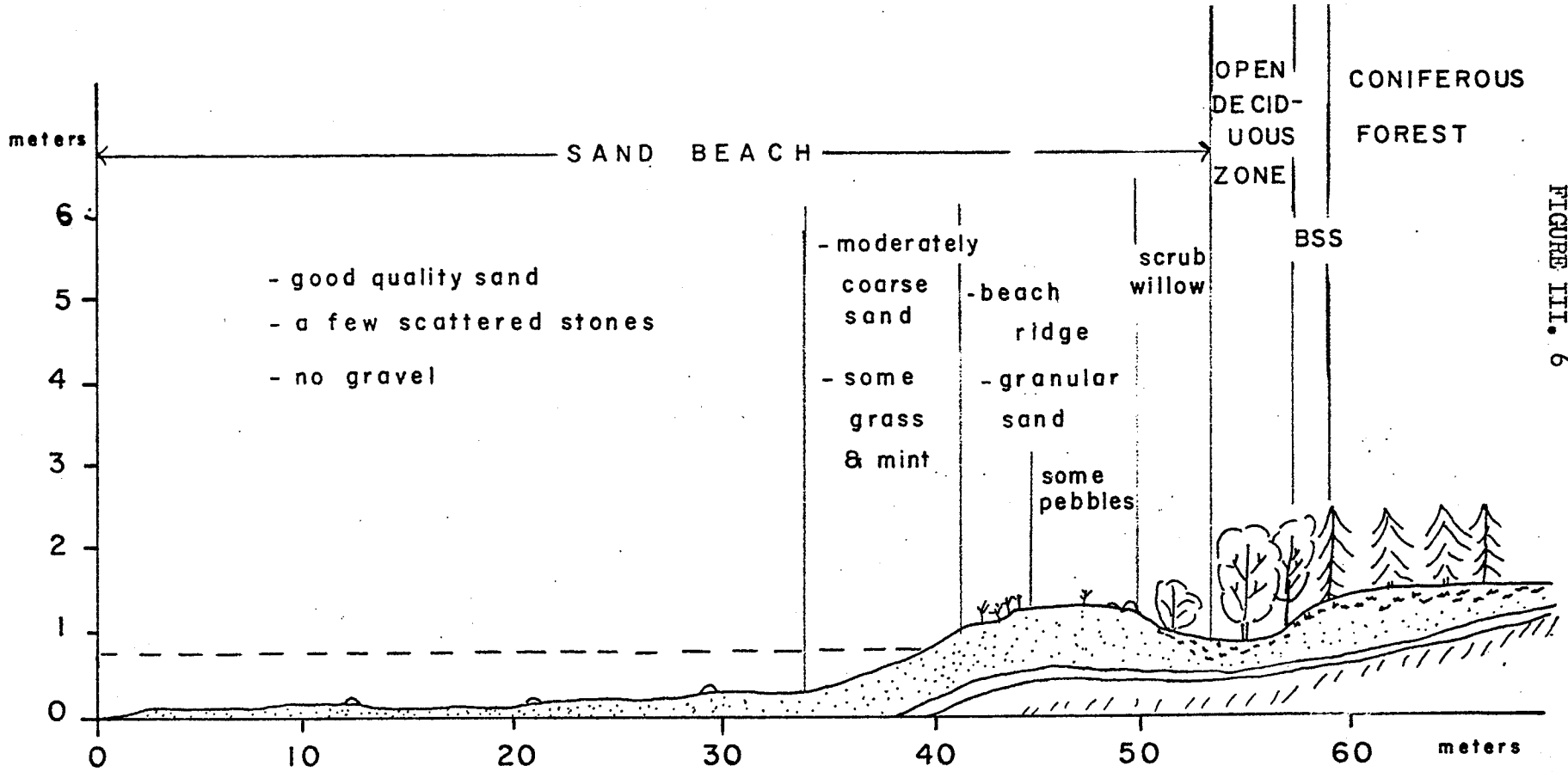


FIGURE III. 6

TYPE: 2-2

SAND BEACH



Fig. III.8 - Type 2-2

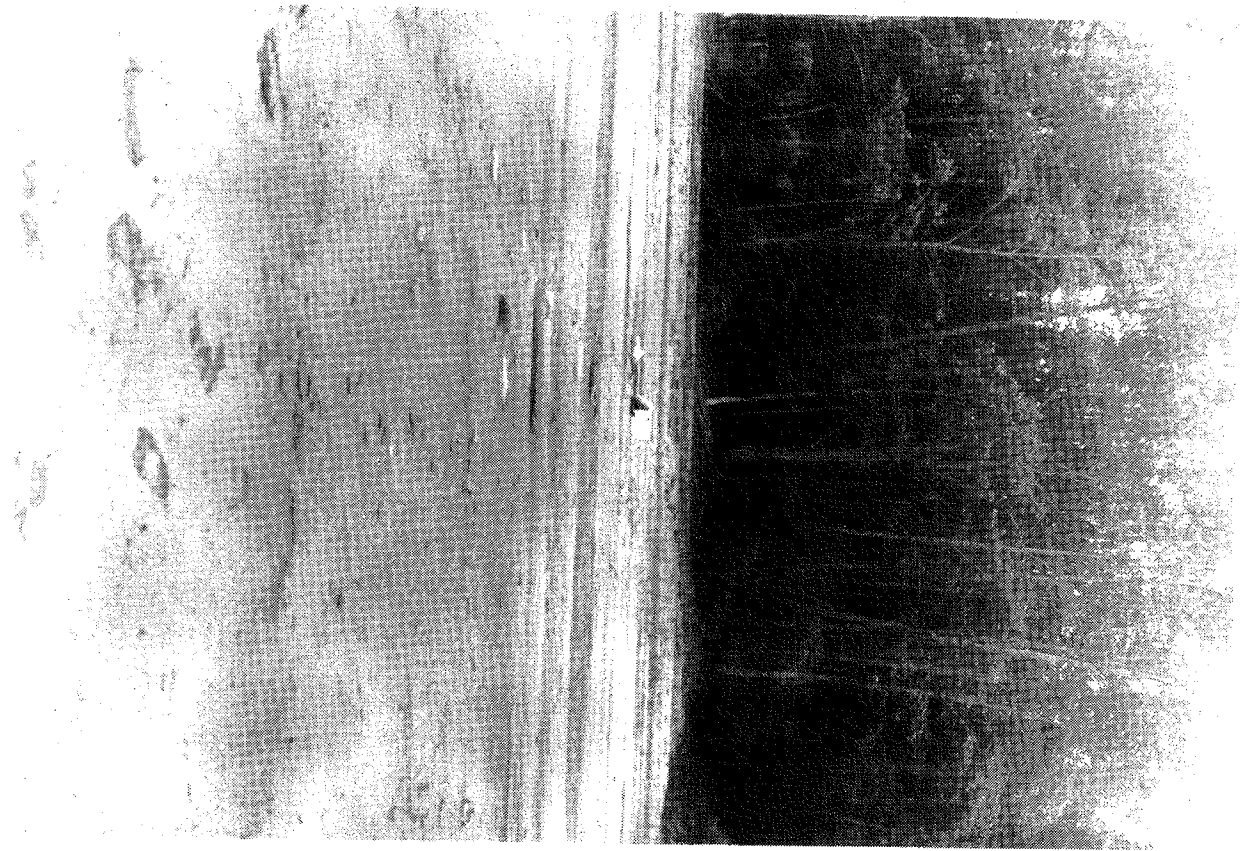


Fig. III.9 - Type 2-2

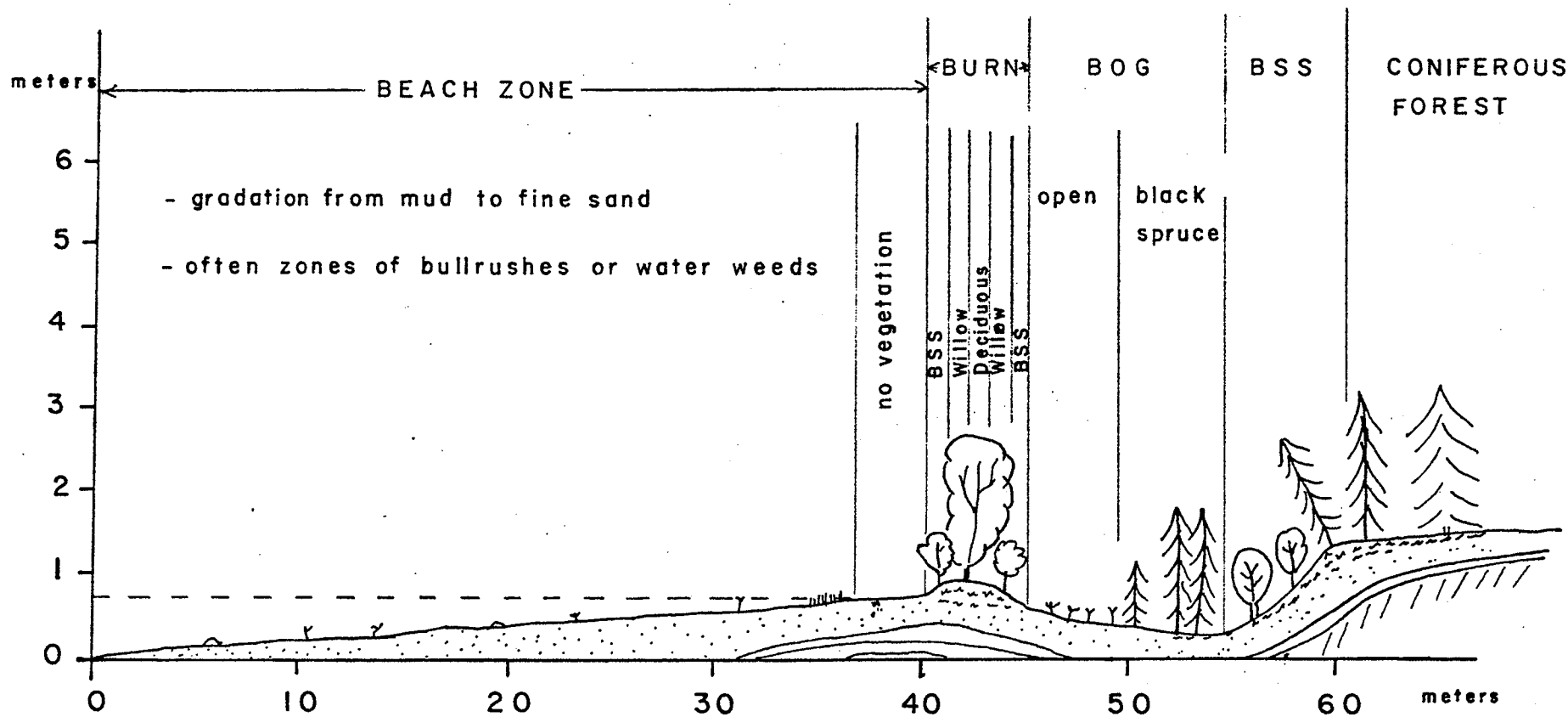
2-7 Low Shoreline - Black Spruce Bog

(formerly Low Shoreline in Coarse Sediment)

Type 2-7 presents a low shoreline profile formed of fine laustrine deposits. The beach zone, near the water's edge may be murky, formed of extremely fine laustrine deposits, which are sorted in increasing size towards the burn. In pure 2-7, behind the burn, the land decreases in height forming an enclosed zone of open or closed black spruce bog, or, if sufficiently wet, an open marsh. In effect, this sand bar dykes a section of low land and creates a poorly drained pond, which may be periodically broken down during large storms.

The typical 2-7 does not have a well-developed black spruce bog in the backshore. On Wapisu there is an insufficient quantity of suspended silt and sand in the water to form a burn of sufficient height and length to entirely enclose a lagoon.

2-7 may be easily differentiated from 2-2 even if the lake does not have sufficient laustrine deposits to form a well developed dyke and consequent bog, by the slope of the backshore coniferous forest. The slope in 2-7 is consistantly lower than in 2-2 . In addition, the beach material of 2-7 is finer than that of 2-2.



TYPE: 2-7

LOW SHORELINE - BLACK SPRUCE BOG

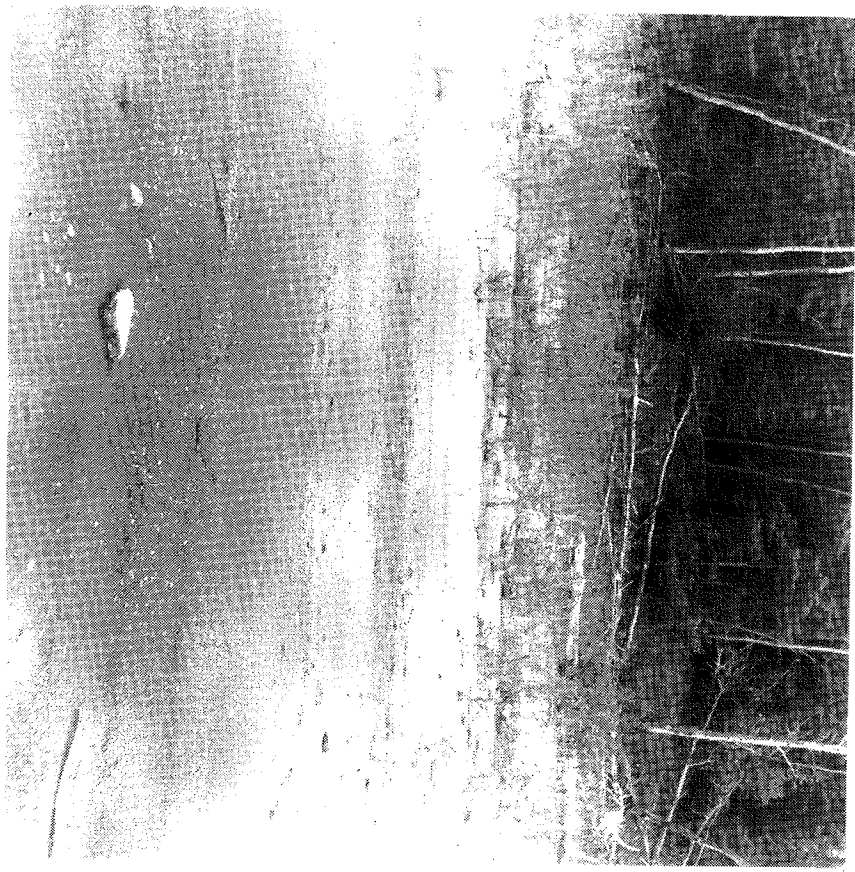


Fig. III.11 - Type 2-7

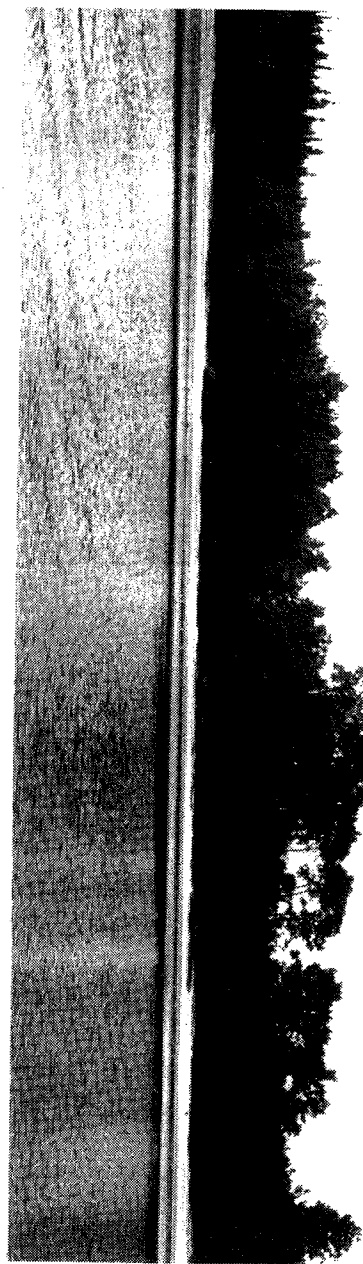


Fig. III.10 - Type 2-7

### 2-3 Alluvial River Shorelines

(formerly Alluvial Shorelines of Moderate Height)

Rivers form a lacustrine shoreline as they flow through alluvial material. A masking layer of overburden about one to two meters deep over bedrock characterizes Type 2-3.

Although found normally along river channels, they are occasionally found along lake shores, where they resemble Type 2-4. In this case they are remnants of old river banks and are not formed by the delta building process.

They typically have a zone of bullrushes and water reeds, a shrub willow zone, a poplar ash deciduous zone, a well-defined back shore slope with slumping, especially where permafrost is present, and a coniferous zone behind this. A typical 2-3 may have all or just a few of the above zones.



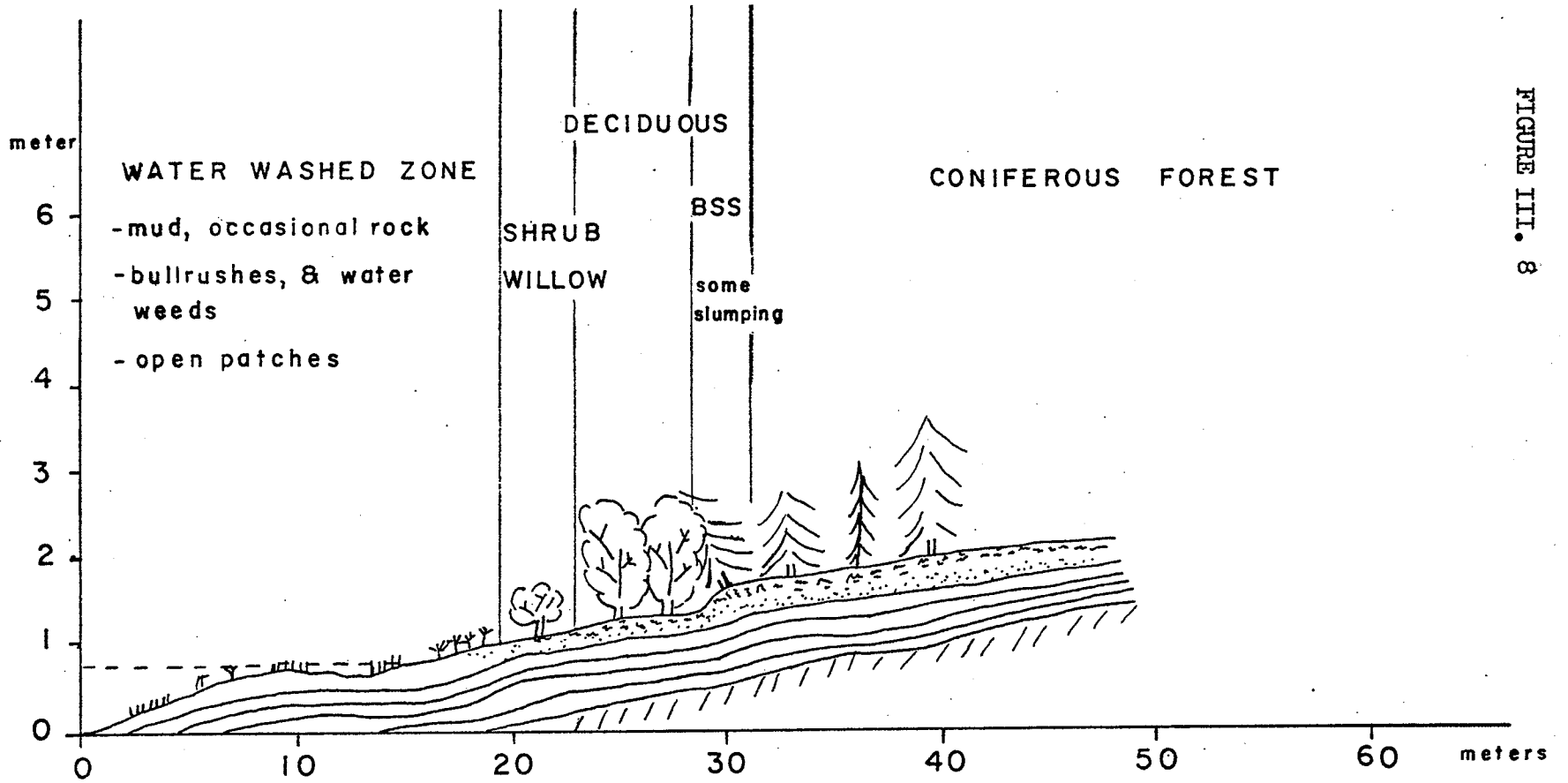


FIGURE III. 8

TYPE: 2-3

ALLUVIAL RIVER SHORELINE

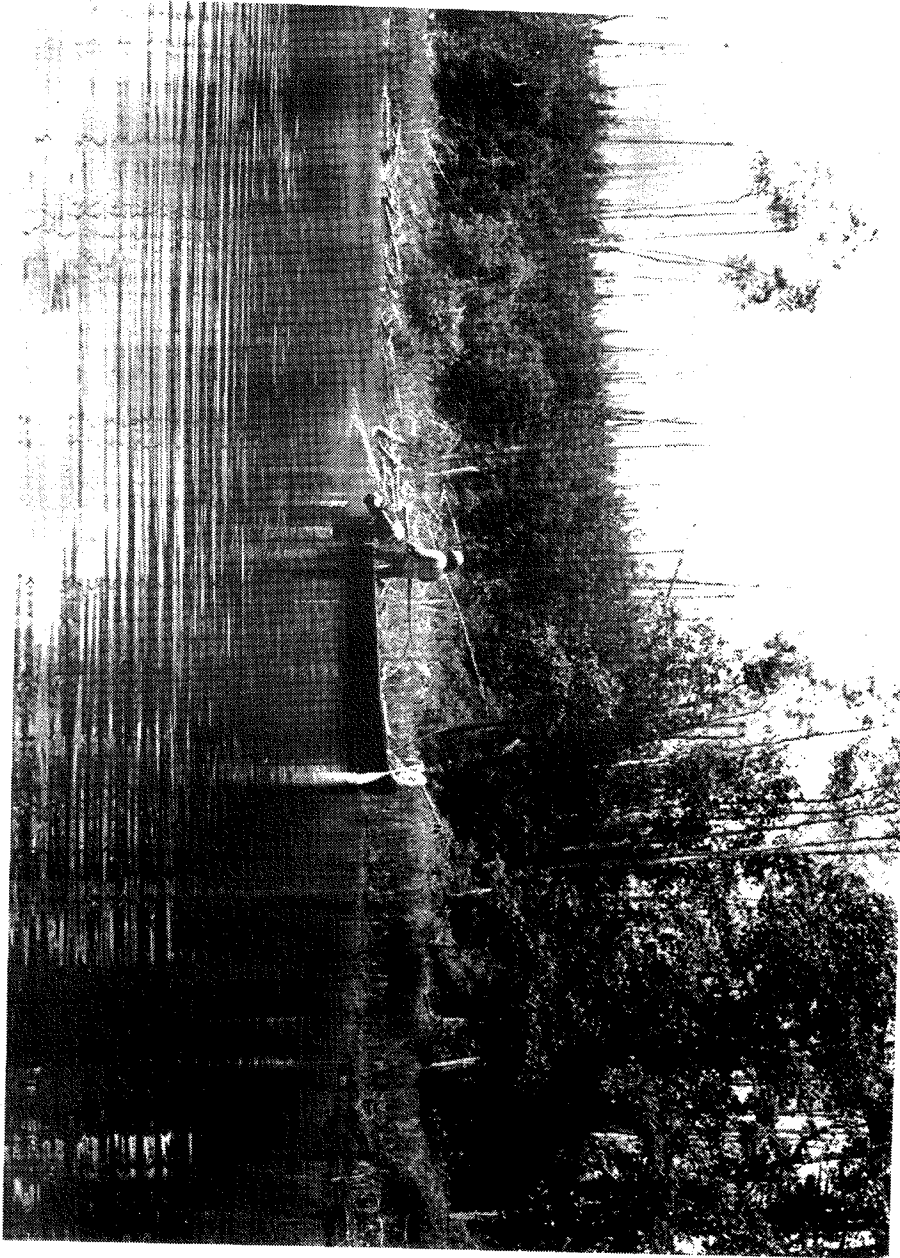


Fig. III.13 - Type 2-3



Fig. III.12 - Type 2-3

2-4 Delta Shoreline

(formerly Low Alluvial Shoreline)

The cross-section of 2-4 is exactly that of 2-3, but the formative process is different. 2-3 is formed by a river flowing through glacial alluvial material; 2-4 is created by the river process of delta formation. Bedrock outcropping is rare, except in the backshore.

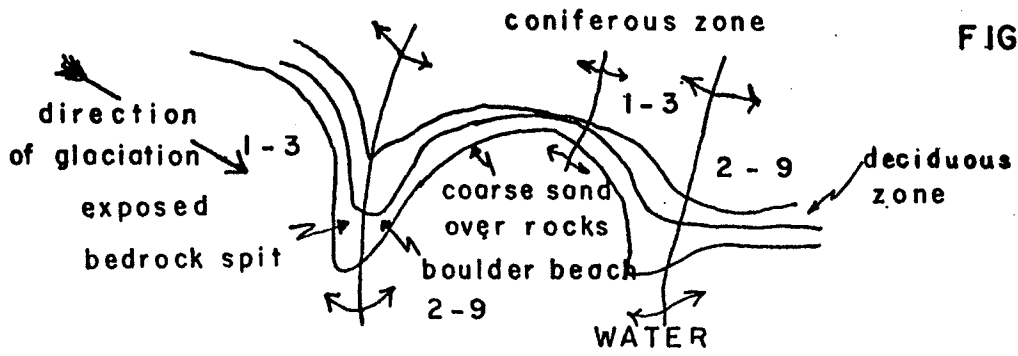
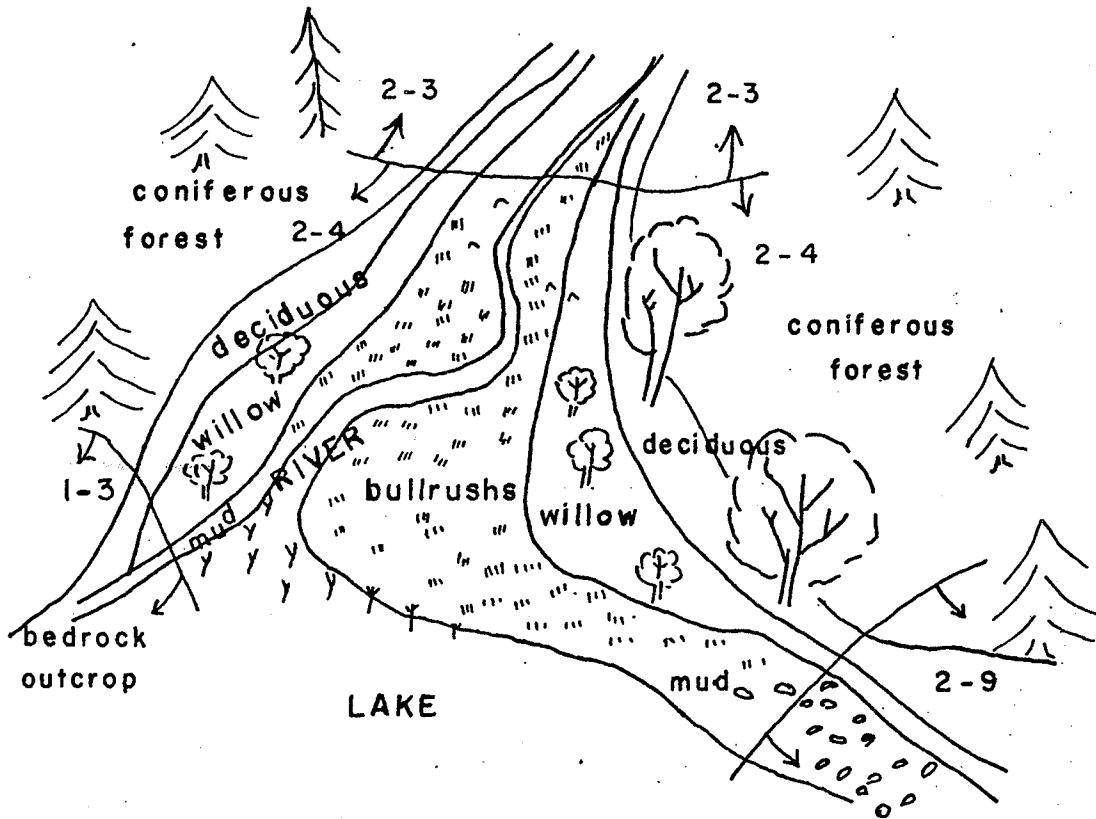


FIGURE III. 11

PLAN VIEW of SPIT & COVE FORMATION



TYPICAL STREAM DELTA

FIGURE III. 9

2-9 Bedrock Till Beach

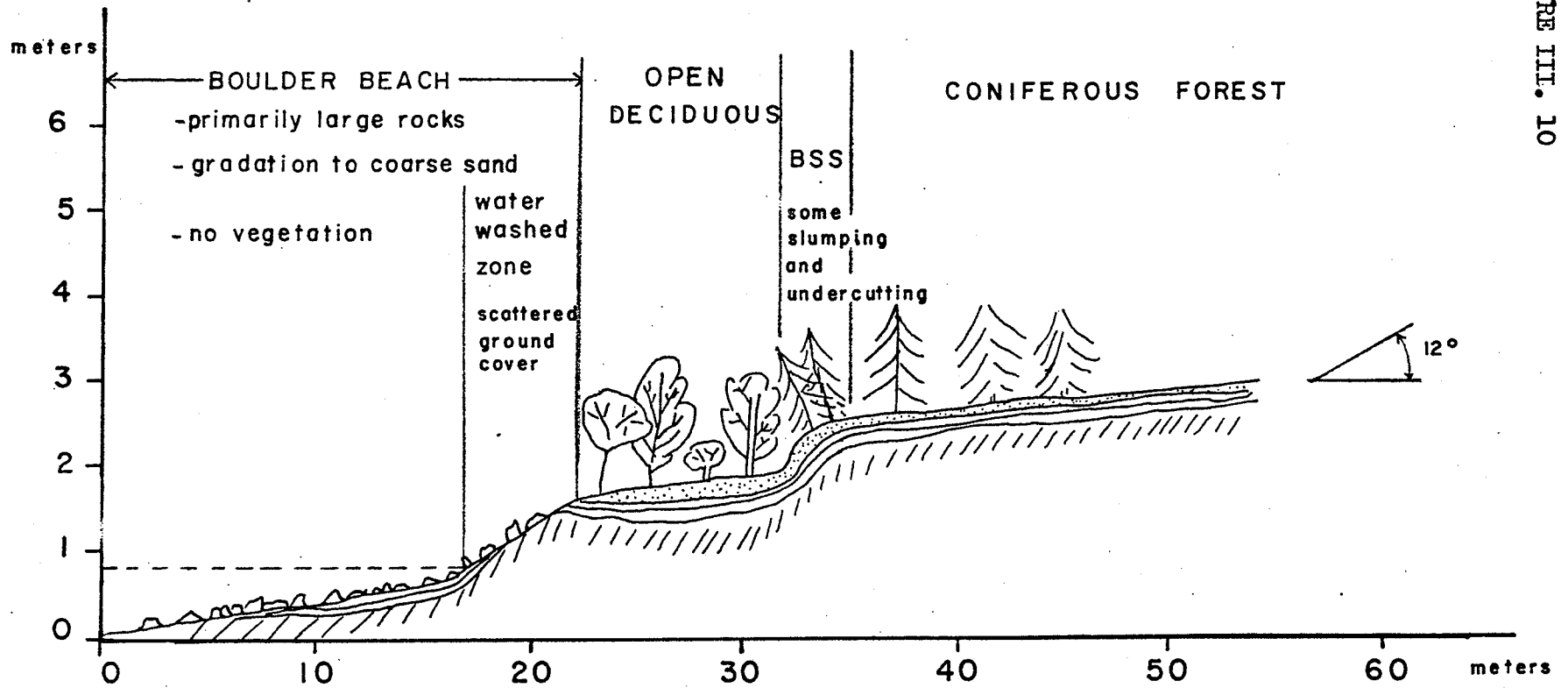
(formerly Bedrock - Controlled Shoreline with Overburden Beach  
Type 1-4)

Pure 2-9 forms a regular shoreline. There are no bedrock outcroppings, and the overburden beach is primarily composed of large rocks, with stones and coarse sand between them. There is a large deciduous zone of poplar with a definite backshore slope before the coniferous forest begins.

The typical 2-9 shoreline is formed in conjunction with 1-3, along irregular coasts. The 1-3 forms the headland and lee side of a typical spit, with 2-9 along the windward coast. Like a typical 1-3, the zonation may be stretched, or it may be compressed, a function of the size of bay and spit.

During the last glacial advance, the bedrock was scoured, forming 1-3 and 1-1 Types, and glacial till was deposited forming the 2-9 boulder till beach. The rocks on the beach have been rounded and pitted by glacial and wave erosion.

FIGURE III. 10



TYPE: 2-9

BEDROCK TILL BEACH



Fig. III.14 - Type 2-9



Fig. III.15 - Type 2-9

## SECTION IV

### PLANNING IMPLICATIONS

#### INTRODUCTION

The substance of the preceeding sections has been based on extensive field reseach, library resources, and interviews, and has led to a set of inductive conclusions which are documented. However the work of this thesis also leads to a set of conclusions which are subjective and extrapolative. But they are the most relevant if the thesis is to be used by engineers, planners, and others concerned with altering, or planning within the lifestyle of the Cree of Northern Manitoba.



### Schooling

Part of the purpose of education is to impart a sense of identity and to pass on knowledge through which a student may feel more fulfilled. I would suggest that a necessary part of the school system in Cree communities be of the Cree culture. This would include studies of native roots, history, cultural heritage and the relationship between people and nature. I am hopeful that the historical section of this thesis will provide the basis for a curriculum of a Northern history course in the school at Nelson House.

Section II indicates that the Cree have in the past placed a high value on spending time in the hinterland. If the traditional culture of the Cree community is to flourish, then children must be given the opportunity of living in the bush. The old men and women of Nelson House were delighted that I wished to speak with them of their experiences. These people should be asked to participate in camping outings. Students should not be penalized for missing school if they are able to travel to trapping cabins in the winter, and should be encouraged to do so. And the technology of subsistence should be taught and given credibility as a valid recreational and occupational activity. The fabrication of snowshoes and canoes, the stitching and decoration of clothing such as mukluks, gauntlets, and jackets, the art of fishing, trapping, and

hunting, the building of log cabins, and the old methods of preparation of game for food, and hides for tanning should all be supported. This might be accomplished by including the old people as teachers' aides in vocational training and encouraging these activities through races and competitions. In general, the idea that the Cree culture is a viable, living, and worthwhile lifestyle must be fostered.

## COMMUNITY SITING

If the morphology of housing sites at Nelson House is examined parts do not conform with the findings in section II.

There are three identifiably different units. In the first, homes, often two or three in a nuclei together, are spread out along the shoreline, with a wide treed area between dwelling areas. These conform well to the site locational factors of the trapping cabins, especially so if the roadway which is a relatively new addition to the community is ignored. They are oriented towards the shoreline, but do not have open vistas.

The second unit is known as Dog Point. It has homes on large lots with a circumscribing road as the focus for the orientation of the houses. However the "subdivision" is surrounded by mature wood, although the buildings are in an open pasture.

The last unit is Poplar Point. All trees have been removed, and houses are on two parallel roads, very close together in a large open field.

If the cultural preferences of distance and layout expressed by the large sites of Lake Wapisu are still operative, then these three units of housing morphology at Nelson House were listed in order of decreasing fitness. The present morphology, especially on Poplar Point, is less than

thirty years old, and was formed when families moved from homes sited in a traditional pattern along the lakes and rivers surrounding Nelson House to homes built on the reserve proper.

Planning implications of this analysis are large. It may be that the Cree no longer need or wish to continue the traditional site preferences within their new communities. However I do not believe this to be true. In conducting a settlement relocation, or a seasonal camp, or a rebuilding of a Cree community, I would attempt to incorporate the following factors of site selection:

- 1) The orientation of homes is towards the water.
- 2) A Type 1-3 or 2-9 shoreline is the most preferable, with a relatively gentle slope to the water's edge. There should be acceptable canoe access, and not on a sand beach. The shoreline should be irregular, and the best site would be on a large point or cove.
- 3) The homes should be situated on the first level ground behind the shoreline, with as short a distance as practical from dwelling to water. This is particularly important if there is to be no water supply provided in the development. That is, shorten the distance water need be hauled to the house.
- 4) The area should be in a mature spruce forest.
- 5) Roads should be built in such a manner that they do

not overshadow the traditional site factors.

6) The people should be allowed to select an alternative of nucleation of homes to preserve family kinship patterns.

7) Between these residential groupings as large a treed area as possible be preserved in tact, and no unnecessary clearing be done.

and

8) The planning must be carried out with the people and not imposed upon them.

## ARCHAEOLOGY

The one site on Lake Wapisu which was excavated in 1974 has evidence of utilization for over 2,000 years. It was originally planned that the results of an archaeology survey along the shorelines of L. Wapisu could be compared with the results of this thesis. An investigation of the hypothesis that the factors and density of site selection of pre-white contact are the same as those of today would be important to anthropology for it would help in locating archaeological sites and estimating their frequency. Unfortunately the archaeological survey was not carried out. Thus it remains an hypothesis which should be investigated.

## THE CHURCHILL RIVER DIVERSION

The most basic fact which must be understood is that the Cree do not have the same culture as the white man, and do not have the same objectives in life, nor the same route on the "path to happiness". This concept is unfortunately all too easy to state glibly, and all too easy to forget if contact with those affected by a project is fleeting or non-existent.

Some may view the Cree as a primitive culture of "low" value. But the Cree people are members of a civilization which has survived for 7,000 years (personal communication: O. Mallory). In no way, except through myopic, ethnocentric vision, can a civilization flourish in the north for such a long period, and not be considered viable. To ignore the history and lifestyle of the natives of Northern Manitoba, is to invite a conflict in culture.

In terms of engineering planning this fact must be incorporated as a major and necessary part of the planning procedure!

I would propose the following method, which is simplistic, but radical, if previous large engineering projects such as the Churchill River Diversion are examined. After the preliminary design studies are complete, a report in clear, unambiguous and full detail MUST be presented to any communities and their government and private

representatives which will be affected, both in English and the native language. The objective would be first to inform, in order that the mystique and fear of outside development be dispelled. The second is that the engineers and planners learn from the people their reaction, so that the iterative process towards a final plan will have the native peoples input as an inherent part of the project and not a report in a Post-Completion Impact Study.

According to Manitoba Hydro, optimum summer water levels at Nelson House will be some eighteen feet above present levels as a result of increased flows in the Rat River, from the diversion of the Churchill River. This will be the approximate height of flooding on Lake Wapisu. Extrapolation of the conclusions of Section II under the given increase in water levels, lead to the following results:

- 1) The more diverse and irregular the shoreline, the more probable the occurrence of a site. With the diversion, the present shoreline will be inundated. Until wave action can clear the overburden to bedrock, the shoreline will be very regular and hence the number of favourable sites will be drastically reduced.
- 2) The Cree choose sites which I can only describe as beautiful locations. A large portion of the



backshore around Wapisu was burned about ten years ago. The very few sites that were found in such areas were inevitably screened from the burn by a small fringe of mature spruce and deciduous growth. After flooding, the standing and dead timber will be comparable to the tangle of a burned area. Therefore such locations would not be acceptable site locii, in terms of present site determinates.

- 3) Some 400 archaeological sites have been located along the shorelines which will be flooded by the Churchill River Diversion. Once water levels are raised these known sites, and the 4,000 other sites estimated to be there, will be lost forever. This represents a major loss to the archaeological record and to the native history of Manitoba.
- 4) Creek mouths are almost inevitably used for sites, especially when on fishing trips. These will be inundated by diversion.
- 5) Exposed bedrock outcrops in marshes are used as sites while hunting. These will be covered by raised water levels.
- 6) Sites on spits, (50% of all hearths are located on spits and a further 38% are along coves) are well used. A raised water level will prevent their usage.
- 7) Sites are almost inevitably on whatever level ground

is available. As much of this is a result of wave action and the resultant backshore area, diversion will prevent their selection.

and

8) The most important factor vis a vis a raised water level: very few sites of any kind were more than five meters above the existing water level. Therefore after raising water levels by diversion of the Churchill River the Cree people will no longer be able to select locations for their sites which adhere to a centuries old pattern. Traditional sites, such as the dig site will be flooded, bedrock spits in marshes and the level, dry land along creek mouths will no longer be available and a regular shoreline, littered with dead and dying trees will make access to the shoreline difficult.

## CONCLUSION

This thesis has investigated the parameters of site selection of the Cree of Northern Manitoba as a method of analyzing the usage of the land and water by native Canadians. As far as I have been able to ascertain it is unique not only in this province, but in the entire Boreal Forest.

It has shown that the people of Nelson House make extensive use of not just their reserve, a community which has been established within living memory of the older residents, but what has been their lives away from the community, is the land which immediately surrounds the present water levels of the lakes and rivers. And it this fringe of land at the water's edge, within five meters of existing water levels which Manitoba Hydro will inundate.

As a result of my findings, I cannot but come to the conclusion that the Churchill River Diversion will contribute to anything less than cultural genocide.

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Richardson, B. & Fournier, J.P.  
Job's Garden.

National Film Board  
The Cree of Paint Hills.

Interviews

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Owner of the Happy Outdoorsman, A Camping and Canoe  
Supply Store, Winnipeg.

Burns, Bob.

Trapper Education Officier, Department of Mines, Energy,  
and Resources, Government of Manitoba.

Malaher, Jerry.

Former Director of Manitoba Wildlife Branch, Government  
of Manitoba. Honourary President of Manitoba  
Naturalist Society.

Russel, Rocky.

Professor, Department of Geology, University of Manitoba.

NELSON HOUSE RESIDENTS

Mr. and Mrs. Angus Bonner.

Madeline Bonner.

Eli Linkletter.

Abraham Lobster.

Arabella Lobster.

Alice, Jack, and John Moore.

Nathan and Jean Moose.

Jake, Nancy, and Dave Moose.

Steven Moose.

Alfred Moose.

Abraham Spence.

Issac Spence.

Jimmy D. Spence.

Sam and Benjamin Wood.

APPENDIX I

TYPICAL SITE REPORTS

Site # 7

Notes: Irene Knutson July 8, 1974 page 8

Type of site: hearth

Location: Map # 3

Lat 55 45' 00"

Long 99 05' 00"

Informants: none

Photos: Nikkormat

July 8

page 1,2

Film B

shots 12 - 19

Photographer: Mel

Sketches: none

Map: none

Artifacts: none

Features:

1.. hearth on rocks

Other: fish bones

Material collected: none

Present Condition: except for the hearth, no other disturbances

Vegetation: on granite outcrop, some grass and shrubs

Soil: none

Shoreline classification: 1-3 between 2-9 (E) and 2-4 (W)

Slope: less than 6 degrees

Physioqnommic unit: spit

Distance from shore: 6 to 8 meters

Remarks:

small hearth, appears to possibly have been a short  
stopping off place, no evidence of continued use  
good wind exposure  
a lovely view  
burn in back area  
to west is mud flat of small creek, with marsh  
vegetation  
not good access from boat  
very open

Site # 26 (Sled Island)

Type of site: large camping area

Informants: none

Note References: none

Location: Map # 4

Lat 55 45' 30" Long 99 45' 30"

Map: App I.1

Sketches: none

Photos: Nikkormat

July 25 page 4  
Film I shots 8 to 11  
Photographer: Irene (135, 163, 162, 161)

Yashica

July 25 page 4  
Film F,G shots 7 to 12  
Photographer: Mel 1 to 12

Artifacts:

1. home-made wooden sled, possibly for skidoo, made with lumber, nails, three or four different kinds of rope, and wood scraps, tips are covered with tin from baking powder (Blue Ribbon) and something called Copenhagen (probably snuff), bracing is 2.6 m X .58 m X .12 m
2. spark plug, found down the slope from the sled (Bosch, Germany, M24071..02), very large for a motor boat, may be for a skidoo
3. strip of blue material, possibly nylon, found in vegetation on northern spit
4. refuse near area A  
piece of tang package  
Mcgavin Toastmaster bread wrapper  
disposable diapers  
tea bags  
fireman's hose (may be associated with feature 1)  
empty package of The Bay enriched white bread referring to incorporation in 1972
5. refuse found near feature 4  
Spork can, somewhat rusted  
tin can, very rusted, opened with 4 cuts crosswise
6. refuse near area B  
shot gun shell, standard 4 - 12 gauge WW  
shot gun shell, Canuck - 12 gauge heavy 4  
Eddy matches  
king size No. 7 cigarettes with surgeons' warning  
scraps of canvas and canvas strap (feature 8)  
Blue Ribbon baking powder tin, somewhat rusted  
Vogue cigarette tobacco, small package  
Player's filter (calendar: July 1972 - June 1973)



package, The Bay enriched white bread  
Calm Air ticket to South Indian Lake (02708)  
Hudson's Bay tea leaves  
white nylon rope (features 8 and 11)  
large file, rusted (feature 8)  
Puritan Beef steak and gravy can, somewhat rusted  
whittled stick in spatulate form (6" X 1/4")  
wollen sweater sleeve, grey (feature 8)  
knife, steel, laminated, blade made in  
Sweden, very nicked and rusted, point broken,  
handle looks to be hand made or else carved to  
fit hand, nail at end (between features 7 and  
10)

Vogue papers (feature 10)  
boot insulation or winter coat (feature 10)

7. refuse near area C  
somewhat rusted sardine can  
rusted can on cut poplar, tree is young, leaves  
are still green and only slightly tinged  
with brown on edges, right by hearth  
scraps of corrugated cardboard box that was  
taped shut  
strip of paper, piece of foil  
white rope tying three poles together (one of  
driftwood, two spruce)
8. random find: chert scraper, 2.6 cm X 2.6 cm wide,  
rhomboid, X 3 mm, banded tan chert, worked on distal  
and one lateral edge, continuously worked, some  
notching, made of secondary expanded flake
9. Bombadier part, little rubber ring about 4 or 5 cm in  
diameter, on the west shore, Bombadier written on it,  
well chewed

Features:

Area A:

1. tenting area, upright poles of spruce, large  
poplar also used, floor is pretty rough, no  
covering, string tied to tree in rear
2. large hearth, bones of large bird and egg shells  
in centre, burnt into part of tree stump
3. hearth, overgrown with small shrubs, heavy growth  
of young poplar and ash around it, moderate  
slope
4. large hearth, on a steep slope, immediate area  
was cleared
5. small hearth at base of medium large spruce tree,  
only slightly covered by cones and needles, on  
steep slope
6. small hearth, at base of large spruce tree, on steep  
slope, covered over alot by cones, needles, small  
spruce twigs, and some moss, at edge of spruce

forest

Area B

7. large hearth with refuse and burnt bones of small mammal, some refuse, somewhat overgrown
8. tenting area, spruce bough floor, spruce supports
9. hearth beside feature 8, no refuse, somewhat overgrown, stump burnt
10. small hearth, some refuse (air ticket), somewhat overgrown, stump burnt
11. two chopped spruce trees tied to two upright spruce trees, beaver femur underneath, may be drying rack of some sort, but also other possibilities

Area C

12. tenting area, floor of spruce boughs, some needles (browned) still on branches, somewhat overgrown by rose bushes, three poles tied together, with sharpened ends, may be a form of lean-to, but size would indicate tent
13. large hearth with some refuse, birch bark used to start fire, bones of large bird in centre, somewhat overgrown on edges by rose bushes
14. small hearth with cardboard associated, somewhat overgrown by moss and rose bushes
15. small hearth, no refuse, somewhat overgrown by rose bushes and grass

Other:

fish heads on northern spit, pickeral

Area A

fish bones  
chopped wood  
egg shell  
bird bone in feature 2, hearth, burnt, large bird, possibly duck size, not chicken, maybe partridge, etc.

feature 4, chopped wood

Area B

beaver femur, around feature 11  
small mammalian burnt bones in feature 7  
feathers, plucked between feature 7 and 11, either mallard or green wing

Area C

bones of a large bird (possibly duck or pheasant, although may be larger bird, smaller than chicken but not by much) in feature 3, large hearth, bones not charred

deer bones found on east shore

a great deal of chopped wood

Vegetation:

see map of island (Map App I.1)

parts of the top of the island are almost impenetrable because of large dead spruce trees, particularly near the south end of the island

the top of the hill on the west side is mainly spruce with very little undergrowth, moss, some fireweed, juniper, and rose bushes (no poplar), however most of the ground is covered with dead spruce branches, needles, and cones

on the east side, the corresponding half has a few spruce, but this is where the large dead trees lie; underbrush here is heavy, fireweed, rose bushes, and poplar saplings; also there is one area around area B that is covered with dead spruce branches

there appears to have been a ground fire on the top as many of the trees (those still alive as well as those dead) are burnt, particularly around their bases

area B is the only occupied area in this zone

features 4 - 6 are in a spruce forest at the northern end that appears to have escaped the burn; here again there is very little undergrowth except moss

at the next level down to the rocks, except on the west side, where the slope is too steep, is a poplar forest with scatterer (six or so) spruce; there are also dogwood and willow (there are some willow along the west side also)

areas A and C are in this zone at opposite ends of the island, close to the rocks where the vegetation is sparse

also raspberries, saskatoons, alder, ash, rose bushes, moss, and weeds in poplar area

Soil: humus

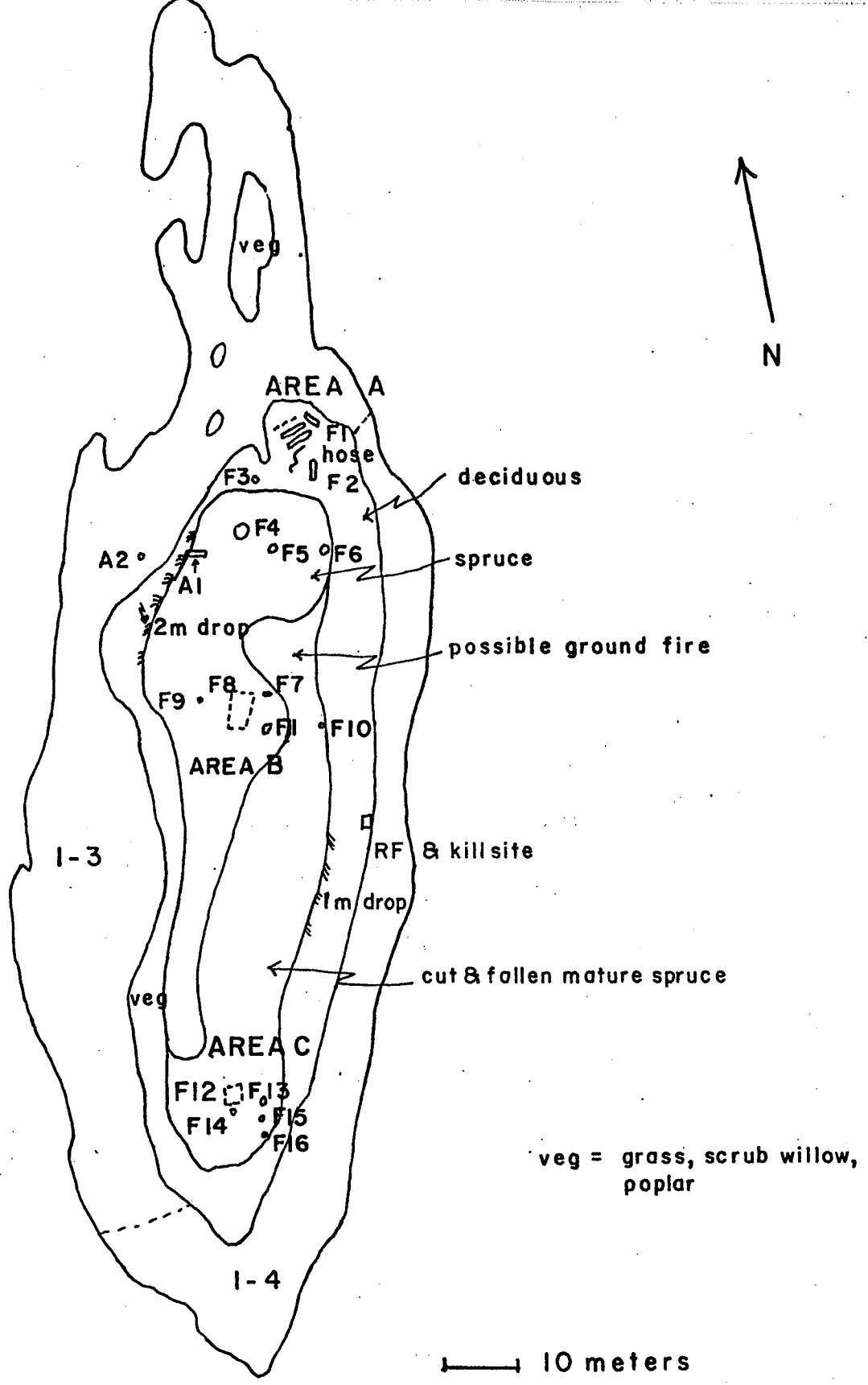
Slope: see map and feature description  
area A, B, and C gentle

Shoreline classification: areas A and C are 1-3  
see Map App I.1 for whole island

Physiognomic unit: island

Other:

areas and features are fairly secluded from the wind, though not overly well (particularly area B on the top and area A which is a bit more open)



SITE 26 SLED ISLAND

MAP APP I .1

Site 35

Type: large camping area  
Note References: none  
Informants: Abraham Spence  
Location: Map # 3  
Sketch: Figure App I.1  
Map: none  
Photos: Nikkormat

Film J                                  shots  
Photographer: Mel                      (197 - 216)

Yashica  
Photographer: Mel

Artifacts

1. sled runner propped up on feature 1, 2.02 m long, .06 m wide
2. piece of blue cord in feature 1
3. sled runner on terrace, mate to artifact 1, .045 depth at deepest, .02 at shallowest, long burnt strip of tin off edge, bottom is lined with tin (slightly rusted) and nailed on, six long screws coming through
4. green nylon rope and string used in feature 2
5. four stakes found in feature 1, longest is 36 cm with a diameter of 2 cm, end is pointed, other end has small notch; second, third and fourth stake are the same except that the last third appears to have been broken off
6. artifacts associated with feature 6  
two New Brunswick sardine cans, 3 1/2 oz, 92 gm, somewhat rusted  
can of Spork Luncheon meat  
one very rusted tin can, opened with seven prongs  
one very rusted tin can lid or base, large  
two rusted tin cans  
three large logs, cut down and notched, end of one has been burnt  
one rusted lard can thrown to one side  
two rusted pieces of a lard can, may be associated with end piece
7. artifacts associated with feature 8  
bilingual instruction for electric heater (portable) thermostat  
section of wire mesh half a meter to a meter long and about a quarter of a meter wide  
pieces of foil  
piece of white cord  
piece of same white cord tying tent poles together
8. artifacts associated with feature 12

- rusted tin can, stew size
  - large dark amber coloured jar, looks like a large pill jar, on bottom was 700 5,1844<D>9, broken
  - small box, Eddy matches
  - tin can lid
  - Hudson's Bay Company, flanelette diapers of cotton, one dozen 26 X 26
  - piece of thick tweed, red check on black
- 9. artifacts associated with feature 13
  - 1 1/2 oz can of Blue Ribbon ground black pepper
  - coffee can lid, very rusted
  - small can, rusted
  - 14 oz. can Calinta fruit cocktail, very rusted
  - label from Libby's beans, may be off one of the small rusted cans
  - cardboard label, torn, royal blue, aqua, and white, showing base of wheel
  - empty plastic bag, no label
  - bottom half of 12 oz can of Spork, somewhat rusted
  - Export A package, no surgeon's warning
  - small pill vial, label torn off, perscription type
  - small can Libby's beans (2 for 89 cents) with label still on, very rusted, same as other small tin can (same price too)
- 10. artifacts which may or may not be associated with feature 15
  - rusted tin can
  - Du Maurier package, no surgeon's warning, no. on stamp is 21-13.1
  - flattened piece of tin can
- 11. artifacts near feature 16
  - rusted tin can
- 12. artifacts near feature 17
  - tin can very rusted (almost through)
  - coffee can
  - tin can very rusted
  - tin can very rusted with two small bullet holes through it (large stew size)
  - piece of brown paper bag
- 13. artifacts associated with large cleared and burned area between features 1 and 2, and the rest of the site
  - wool material on nylon backed base, grey with crossed bright red and yellow stripes
  - can of Klim powdered whole milk with vitamen D added
  - The Borden Co, Toronto, one pound

Features:

1. large cache, 5 logs high (13 cm diam), 22 logs across top (2.8 X 3.3), thinner logs laid across longitudinally (depth is .65; to top of roof .75),

one is directly under the top log in the middle, the logs below it have been notched, there is a log directly below it which slants from the ground up to the upper log where it is tied with blue cord, this is 1.1 meter over from the east wall; another thin log 1 meter over from the west wall goes longitudinally out from under the top horizontal log, the log below it was notched; a stake 36 cm long was also found inside (about 2 cm in diameter), another stake was found, although this one appears to be broken; there are two more long thin logs just inside each wall, parallel to the others; the logs are all spruce; three propping posts have been set along the south wall and an extra short log added to the outside; logs have been notched at corners; the north wall is similar to the south except that only two propping posts have been used, or remain standing, and there is no evidence of an extra log; present condition of feature 1: logs are still strong and can support a person's weight (even the thin underneath ones), tall weeds and rose bushes have grown up inside, especially in the one area where the roof logs have been moved to one side; the floor is covered with wood chips, dead leaves, and some moss; on the south wall, there is an extra log covering a hole; charcoal is present in the north east corner, may have been part of a ground fire

2. possible fish drying rack, with cut spruce log tied to spruce tree with green nylon cord and white string
3. tent base, spruce bough floor, only slightly overgrown with bear berry and labrador tea, few tent poles in evidence but area is surrounded by spruce trees
4. hearth in association with feature 3, made in depression right by large dogwood tree at what is probably tent door in south east corner, no refuse, also the tree stump is burnt
5. large drying rack made of spruce with one birch tree propped up against it, the four upright poles are large, and with one exception, notched on the top; the exception has a branch fork; the structure consists of four trees chopped off fairly high in a square formation with two small logs running across them, north to south, and then five even smaller logs running at right angles to that; there is a recent archaeological survey test pit immediately below the rack
6. work area, covered with debris and wood chips
7. hearth, no debris, 1972 archaeological survey test pit (ARC survey) placed in the centre (another one is nearby), somewhat overgrown by moss

8. tent space, floor of spruce boughs, two tent poles tied with white cord, only slightly overgrown with small rose bushes, bear berry, and moss
9. possible tent space beside feature 8, only a few spruce branches on ground, wood chips, possibly isn't tent space, as so few spruce boughs, no evidence of tent poles, and no trees in area that could have been used for tent supports, ground is extremely irregular with large depressions; may possibly have been part of work area
10. hearth, large, very overgrown by moss and bear berry
11. small hearth, very overgrown by moss, no debris
12. tent space, spruce bough branches and poles, very overgrown by weeds and young poplar (3 or 4 years old), cross end poles still together; 1972 archaeological survey test pit in centre
13. intense activity area just in front (?) of tent, feature 12
14. wood pile, scattered
15. very large hearth (winter hearth), may be associated with feature 18, refuse is not close, but may be associated; located in slight gully leading to beach
16. sharpened stick stuck in ground by large spruce tree, sharpened stick lying on ground beside it, large slice taken off of spruce tree longitudinally, gum has hardened, bottom of tree burned
17. small hearth, heavily overgrown with moss and bear berry, tin can associated with bones
18. may be associated with feature 15, as located in the same gully, large hearth, no refuse in general area, looks very similar to feature 15
19. very large hearth, much like features 15 and 18, no litter, spruce tree behind it, bottom of it has been burnt (slash through tree at same level as feature 16, gum has not yet hardened so that you can tell it was made with an axe, and then smoothed out a bit)
20. piles of spruce logs, too thin to be used as tent poles, branches from them lie in the immediate area, not all branches have been removed (winter bed)

Other:

1. bone, found in feature 17, may be medium large bird, burnt
2. a great deal of the area has been cleared, the smaller trees generally by axe, although some of the larger trees show evidence of having been sawed; some of them have been moved although a great many were left as they fell; the stumps are on the average very high (thigh or higher) which may suggest that they were chopped down while there was snow on the ground
3. fish jaw, small pike, found in area between features 1



and 2 and the rest of the site  
4 archaeological survey test pits from the Archaeological  
Research Centre's surveys of 1972 and 1974, summer  
seasons

Present conditions:

for individual feature, see feature inventory  
area in which clearing has been done shows evidence of a  
ground fire, however this does not extend beyond the  
area of clearing; it is possible that a ground fire  
occured before the site was occupied; the site may  
have been chosen because there was a large clearing  
with fireweed in it, or it may have been purposely  
cleared with the aid of several small fires

Vegetation:

beach has grass and some reeds  
on way up terrace: poplar, aspen, dogwood, willow  
in area of features 1 and 2 there is an occasional birch  
tree; between features 1 and 2 there are few spruce  
but alot of heavy underbrush in the form of small  
spruce, wild roses, tall and short weeds, and moss  
between features 1 and 2, and the rest of the site there  
is spruce except for a small ravine with an  
extension of the poplar forest; north of this is the  
burnt and cleared area, vegetation consists of  
fireweeds and labrador tea, and other tall weeds,  
there is also moss; there is also a great deal of  
fallen dead spruce trees which make walking  
difficult

the area not in between the two ravines is spruce forest  
with underbrush where the forest has been cleared

Soil: humus

Slope: generally flat

site is very close to terrace leading to beach  
there are two small ravines dividing the site into three  
main areas: features 1 and 2, features 5 to 11,  
and features 12 to 20; features 3 and 4 are further  
inland

the slope inland from the site appears very gentle

Physiognomic unit: beach at end of cove

Shoreline classificaton: 2-4 with no marsh grass, and 1-3  
on either side

Other:

reasons why it is considered to have been a site used  
during the months of snow (fall, winter, spring)

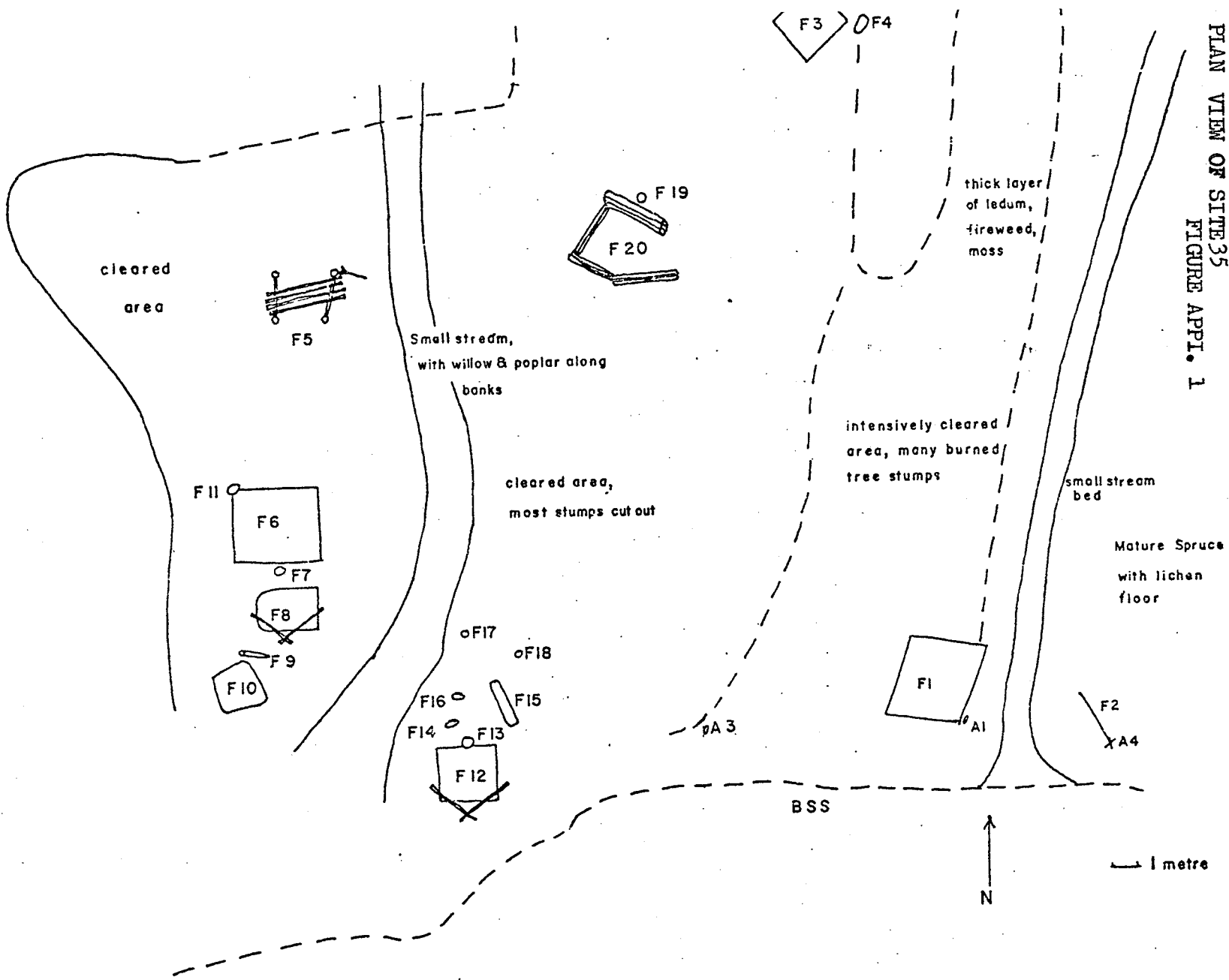
1. trees are chopped high off the ground
2. access by boat is not particularly good as there  
are water weeds
3. hearths are located (in two out of three tent  
spaces) inland from the tents
4. presence of a winter bed and three cold weather

hearths

5. ice chisel

unusual place for a site, no obviously exploitable  
resource; perhaps fishing in next cove to the west,  
no evidence of hunting or trapping

PLAN VIEW OF SITE 35  
FIGURE APP. 1



Site #64

Type of site: winter road with large camping area

Informants: none

Note reference: none

Location: Map # 6

Lat 55 46' 45"

Long 99 10' 00"

Map: none

sketch: Fig. App I.2

Photos: Nikkormat

August 3

Page 9

Film I

Shots 6

Photographer: Mel

(132)

Yashica

August 3

Page 14

Film X

Shots 5 - 11

Photographer: Mel

Artifacts:

1. Associated with feature 1: homemade shoeshoe
2. Associated with feature 2: sardine can
3. Associated with feature 3: top of black rubber boot
4. Associated with feature 5: spork can
5. Associated with feature 6: string
6. Associated with feature 6: yellow nylon rope
7. Associated with feature 6: homemade showshoe, broken
8. Associated with feature 15: rusted tin can
9. Associated with feature 15: one pound can of Burn's lard
10. Associated with feature 18 and 19: tin can on stick, rusted
11. Associated with feature 22: Red Reflector from a skidoo

Features:

1. birch pole set into large notched tree stumps, drying rack
  2. hearth by feature 1, heavily covered with dead leaves and slightly overgrown
  3. large hearth
  4. winter bed area, small
  5. large hearth
- Note: features 3, 4, and 5 are associated with one another; they are heavily overgrown with moss and covered with dead leaves
6. birch pole tied with string between birch tree and spruce tree
  7. large hearth, very overgrown, logs scattered
  8. tent area, spruce bough floor
  9. large hearth, only slightly covered with dead leaves
  10. tent area, spruce bough floor
  11. large hearth, logs scattered

12. tent area, spruce bough floor, somewhat overgrown
13. large hearth, overgrown with moss
14. winter bed, small, spruce bough floor, somewhat overgrown
15. large hearth, somewhat overgrown
16. small winter bed, spruce, very overgrown, tall weeds
17. large hearth in middle of path, logs scattered, covered with dry leaves
18. large hearth, covered with dead leaves, fire of birch
19. tent area or winter bed, spruce bough floor, somewhat overgrown
20. large hearth, covered with dead leaves
21. tent space, very old, tree growing in middle, 6 to 7 year old poplar
22. hearth, overgrown
23. hearth, overgrown
24. winter road, just barely wide enough for a skidoo

Other:

1. clearing throughout the path
2. canis skeleton in interior

Present condition: see individual feature notes

Vegetation:

in mixed poplar and spruce forest with some undergrowth willow to one side; spruce forest to the other  
alot of birch trees (relatively)

Soil:

humus along path  
sand beach at one end with mud flat (feature 22, etc)  
marsh at the other end with mud flat (feature 1, etc)

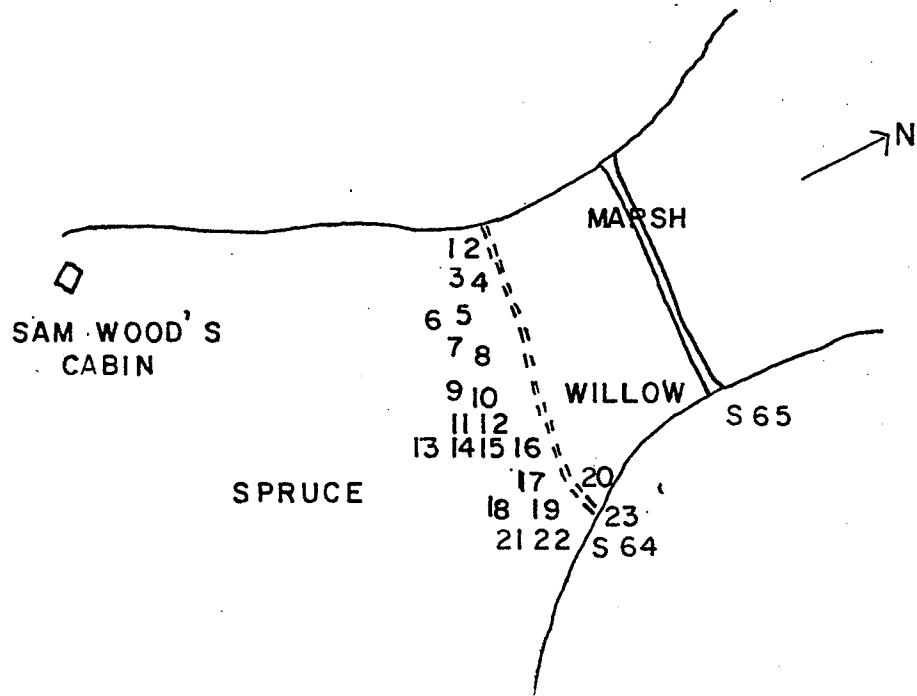
Physiognomic unit: narrow area in penninsula

Shoreline classification:

2-4 at either end with a little bit of 2-7 at end of later features

Other:

with one exception (feature 20), all features were located on the spruce side of the path rather than the willow  
between the two ends there are two areas, one of poplar and mixed forest (most features), the other of a dead looking poplar forest (no features)  
many 1972, 1974 archaeological survey test pits along and beside paths



SITE 64

FIGURE APPI.2

Site # 79

Type: large camp

Informants: none

Note reference: none

Location: Map # 11

Photos: Nikkormat

August 8

page 10

Film I

shots 36,37

Photographer: Mel

(154, 155)

Yashica

August 8

page 11

Film S

shots 7 - 11

Photographer: Mel

Sketches: Figures App I.3

Map: none

Artifacts:

1. associated with feature 1  
three gallon gas tank, pink coloured (may have faded from orange), cap is missing, three bullet holes in it
2. associated with feature 2  
eight cm square piece of wood, pointed at both ends
3. associated with feature 4  
rusted tin can with two holes punched in it, similar to a Carnation milk can
4. associated with feature 5  
child's white cotton sock with two red stripes at top  
can of "residual Household Spray - containing Lindane - non-staining - kills moths, cockroaches, flies, mosquitos, etc - Green Cross products" 32 fluid oz, slightly rusted, cap still on  
8 oz can of Blue Ribbon baking powder, slightly rusted  
rusted tin can, small
5. associated with feature 6  
small can of Heinz meat dinner, baby food  
very rusted Carnation milk can  
rusted tin can, smallish, 22 shot or BB hole into can, but not out, screw on cap  
smallish can, very rusted, D 21 on base  
rusted, flattened tin can, bullet hole through it, found in middle of hearth  
somewhat rusted tin can of Melrose baking powder, double acting, H. L. MacKinnon Co Ltd, 16 oz  
green cord tying stumps and wire  
rusted tin can with two holes punched, not a

Carnation milk can

6. in general area  
    rusted Carnation milk can  
    rusted tin can
7. associated with feature 7  
    half a long metal zipper, jacket size
8. general  
    two tin cans, one of which held a liquid, although  
    not a Carnation milk tin
9. associated with feature 9  
    small tin can, baby food ?

Features:

1. rack, possibly for motors, made from spruce, the north east two poles are stakes, the south west are trees; two cross bars are halved (lengthwise) spruce, and there is another stake with a nail on the the top between the north east and south west poles; there are two more stakes to the east south east, and a piece of quarter inch plywood hs been added to form a shelf; there is a three gallon gas can on the top of the shelf; directly south west is a large birch tree with a nail stuck in it, a large section has been stripped and the stripped section has been sliced on both sides (as in site # 35, feature 16); above the stripped area is some carving, DNL HAH on the south side, and MARY on the north
2. hearth, heavily overgrown with moss and twinflower, as well as covered with dead leaves and twigs
3. hearth, heavily overgrown with moss, covered with dead leaves and twigs, located in a slight depression
4. hearth, small, ground is not burnt, therefore probable that the fire was made on snow, small tree stump (chopped off) in middle is not burnt also, covered with moss, dead leaves, twinflower, burnt sticks also, not in hearth form (that is , they're scattered)
5. tent space, tent poles of spruce and possibly birch, no definite evidence of a spruce bough floor as there are spruce boughes scattered all over the site; four upright poles along west side and four along the east; 1972 archaeological survey test pit in centre
6. hearth with four large flat rocks around it, artifacts found in centre of the hearth, two forked sticks at either end, two spruce poles at either end with spruce poles tied onto them with green cord; two large trees with notches on top, the notched tree trunks are much like those in the drying rack of site # 35; three spruce poles, thin, lie across hearth; tied spruce poles are like those in site #



26 in feature with beaver femur underneath it; of the four poles lying down, one is tied to the bottom of the nearest pair of tied poles; hearth is very deep (see Figure App I.3)

7. log frame, large spruce trees, smaller cut logs around it, small, vegetation in centre is no different from vegetation outside it

8. tent area, older than the others, very overgrown with twinflower, rose bushes, and other weeds, also large ash tree growing in the middle, two upright poles along rack side, also moss and bear berry

9. hearth, associated with feature 8, very overgrown with moss

10. path to lake on east side of spit

11. path inland from large cleared area, ends at marsh

Other:

1. associated with feature 6  
burnt bone in hearth, large mammel, probably moose, concentration of fragments

Present condition:

see individual feature

much birch bark stripping and spruce gum collecting

Vegetation:

in inner area, spruce forest with some birch and occasional poplar, moss, little undergrowth

in area closer to shore, ash, birch, poplar, and occasional spruce

Soil: none

Slope: gentle

Physiognomic unit:

immediately behind spit with a sheltered area for boats

Shoreline classificaton:

1-3 with 2-9 to west (bedrock outcrop behind 2-9)

Other:

1972 archaeological survey test pits dot site

large cleared area and smaller older cleared area near water

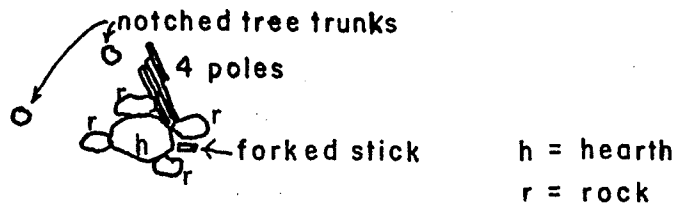
trees are cut down with both high and low stumps (see site # 35)

much birch bark stripping

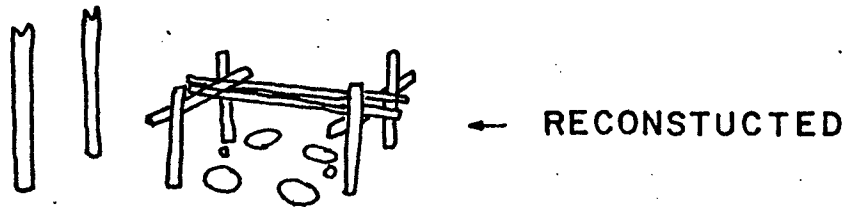
also much slicing of trees

evidence supporting summer habitation: gas can and motor holder

evidence supporting occupation when snow on ground (tree stumps and feature 4, hearth)



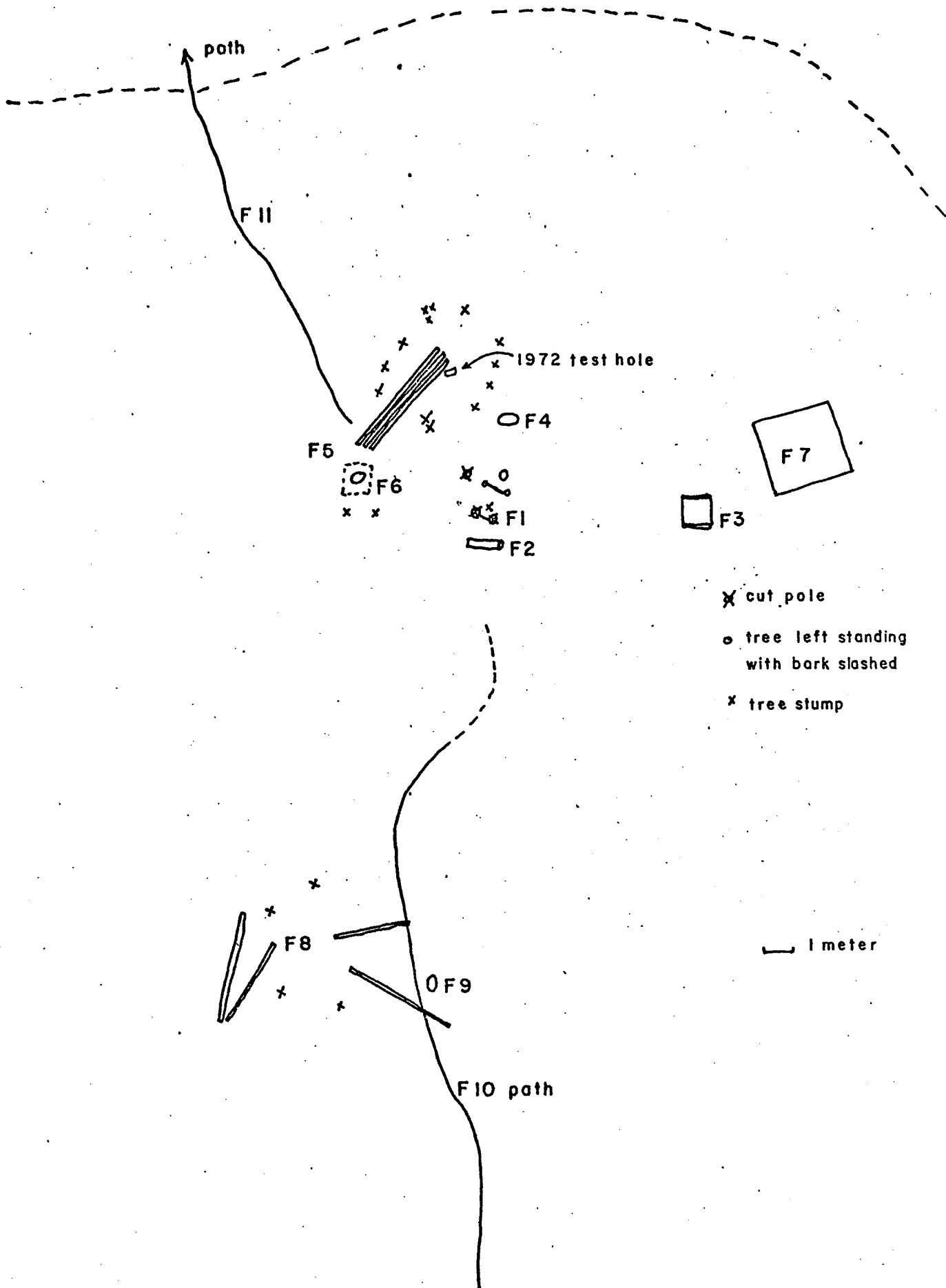
PLAN



SITE 79 HEARTH FEATURE 6

FIGURE I. 3

Heavy Undergrowth



PLAN VIEW - SITE 79

FIGURE APPI.4

Site # 112

Type: trapper's cabin

Informant: Sam Wood

Note Reference: none

Location: Map # 9

Lat 55 46' 40"

Long 99 10' 00"

Photos: Nikkormat

August 21

page

Film L

shots 5 - 18

Photographer: Mel

(333 - 347)

Yashica

August 21

page

Film Y

shots 6 - 10

Photographer: Mel

Sketches: Figure App I.6

Map: none

Artifacts:

associated with feature 1

cardboard, plywood, thin brown paper, lumber, used as insulation

door of plywood with string pulled latch, the string pulled down from the outside lifts the latch; the string is continuous going through two holes and attached to a wooden latch by a nail; 1.45 m X .67 m X .035 m

three 1 1/2 oz cans of Copenhagen snuff

one pound package of Burns weiners

stove, dry wood in place in stove so that the fire is ready to light; cost \$15 at Hudson's Bay; same as ARC used in Wapisu camp; four burners and oven; pipe going out of ceiling, at that point in the ceiling there is a space covered with a sheet of tin, cut and folded downward to accommodate the pipe; the stove sits on four large flat rocks which support each side

a small bench made of lumber and spruce poles was put against the wall; .4 m X .6 m

a drying rack made of birch with a pair of green pants (patched at knees) drying on them; 1.3 m X 2.55 m

behind the rack there are several pieces of paper that have been cut out of magazines, nailed and glued to wall; directions for Vick's Vaporub; Chaos during the Change over by Theodore H. Epp from the February 1971 edition of Goodnews Broadcaster, pasted on upside down; from the same issue, Cures for Ills on Campus by John A Alexander, pasted on sideways; Prevailing Law-

lessness and The Woman Alone from the same issue; because of the way they are put up they may not be for decoration; also Significant Religious News, a magazine associated with the Back To The Bible radio program, table of contents is pasted sideways over the door may have been used to temporarily plug leaks, especially in the case of the one over the door as it is a continuation of the heavy brown paper, three of the others are pasted on where the brown paper overlaps

empty can of Spork

coat hanger

wooden crate from Freshwater Fish Marketing Corp., top removed; inside is heavy winter green suade jacket

door propped up against the wall with a pair of socks hanging from them; .75 m X 1.85 m

empty 14 oz can of Libby's Spaghetti, barely started to rust; price 2 for \$.65; no. on bottom of tin is AEL24 SPAG3

3 pound package of Robin Hood Quick Oats cut and nailed onto wall as a small recepticle

writing on heavy brown paper on wall

Robert, Trapper, George Wood, April 12/74.

Betsy Sams.

"If you use some of the wood, please replace them - signed the boss - PS sweep the floor"

a drawing of a moose with antlers and a beard with "H. Spence, L. Moose, G. Moose"

empty package of 24 oz whit bread

empty cans, bearily rusted, 15 oz, 425 gm, Burns Spaghetti and Meat Balls, price is \$.55, bottom says EST 23, U2895M

bed of plywood, two legs, the rest is supported by boards nailed to the wall; mattress made of nylon, like that of a tent floor, from a large tent, filled with dry reeds, very thin; 1.5 m X 1.85 m X .5 m

over the bed is a drawing on the wall of a beaver with a small piece of paper nailed in beside it with "Irene" written on it

also written above the bed is "Hurbert Spence Nov 19 1971", "Abe McDonald Nov 19 1971", and "George Lawrence"

cap for gasoiline can (pail type)

spark plug for Mercury outboard, V40FFK, AC, marine very rusted hatchet head

two full boxes of Oneida Victor Traps, long spring woodstream opportunitis, raccoon, fisher,

- muskrat, etc
- one large drying board (ie: larger than mink)
- one full box of traps for beaver, otter, wolf, etc,  
from Oneida Victor Traps (long spring)
- ice chisel, handle is hand made, heavy red metal  
chisel at end
- rusted Oneida Victor Trap, smaller than those for  
raccoon, fisher, muskrat, etc
- two large drying boards
- two small drying boards, about mink size
- spout end of plastic gallon milk jug
- can of Copenhagen snuff
- table just beneath window, two legs, 3/4 inch  
plywood, attached by a board to the wall; on  
the table is a three pound can of Burn's Pure  
Lard; inside the can is the lid of a snuff can,  
a few nails, and a rusted hinge; also on the  
table is a large clear glass kerosine lamp; .95  
m X .55 m X .85 m (ht)
- a Freshwater Fisheries Marketing Corporation wooden  
crate has been nailed to the wall over a  
drawing of a coyote from the Road Runner show;  
inside the crate there is a large nail and the  
bent lid of a tobacco can
- a sale's slip from Hudson's Bay Northern Stores,  
IJ.11.73 to Jonah Wood for \$22.51 worth of  
groceries
- a large rusted saw in the corner
- a bench made of lumber and plywood, may be hand  
made, but not obviously so; 1.2 m X .25 m X  
.45 m (ht)
- drawings of Uncle Scrooge, also a naked woman
- empty box of fifteen dozen eggs
- in a brown leather case, a copy of the New Testament  
in Cree
- window, three panes of glass still in, one was  
cracked, one pane repaired with plastic and  
cardboard; .75 m (wd) X .65 m
- artifacts in porch
  - one can of Spork
  - can of Campfire sausages
  - large pail
  - tea bags
  - package of Du Maurier, with warning
  - empty package of white bread (The Bay)
- 2. litter around feature 1
  - 4 1/2 oz can of baked beans
  - two packages of white bread from The Bay
  - rusted saw (same size as one inside cabin)
- 3. associated with feature 2

pieces of paper  
religious tract  
gasoline can (one or two gallons)

**Features:**

1. trapper's cabin

interior is 4 m (EXW) X 4 m (NXS) X 2.3 m (ht at centre) X 1.7 m (ht at sides); the door is on the east wall and the window is on the south wall facing the path down to the lake  
the floor is made of two large sheets of plywood and lumber

insulation of moss, paper, cardboard  
one centre beam, supports attached to logs of end walls

plywood used for end walls where roof starts  
small porch built outside door, of boards and plywood

also, six logs laid in front of door on ground, step porch is 1.95 m high from ground and 1.85 from logs  
door is 1.4 m high  
porch is 1.65 m X 4.1 m high

2. large drying rack, 2 m high X 2.1 m X 3 m

3. path which leads up from lake

**Other:**

1. clearing has been done in general area of cabin

2. articulated canis skeleton tied to stake

**Soil:** humus

**Slope:** gentle, path is up high terrace

**Shoreline classification:**

**Physiognomic unit:** small inlet in larger cove

**Other:** right by good travel route (narrows, winter road)

SAM WOOD'S CABIN - SITE II2

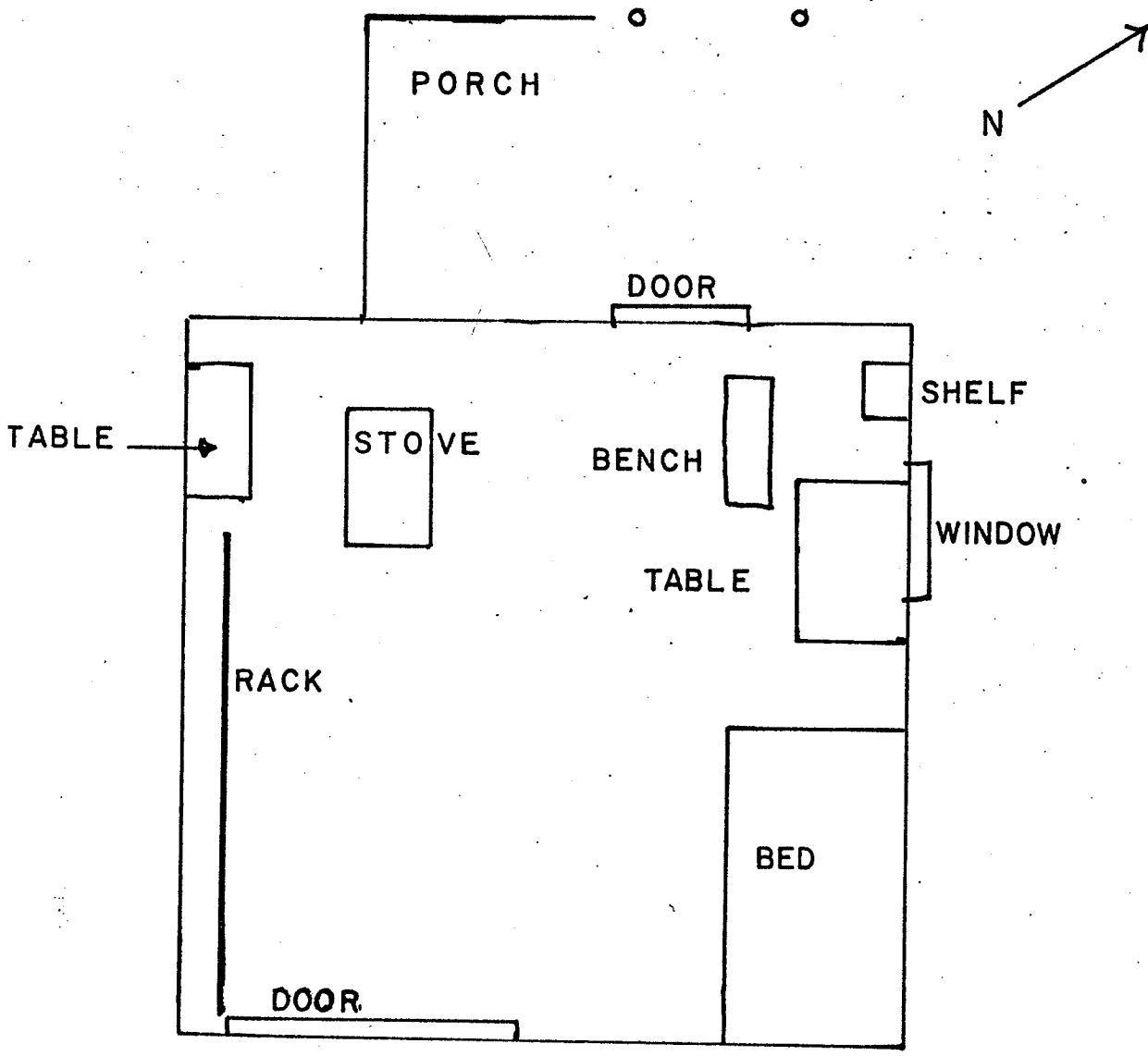


FIGURE APP1.5



Site # 114

Type of site: small camp

Informants: none

Note references: none

Location: Map # 20

Lat 55 46' 00"

Long 96 16' 00"

Sketches: Figure App I.5

Map: none

Photos: Nikkormat

August 20

page 13

Film L

shots 20, 21, 30-33

Photographer: Mel

Yashica

August 22

page 14

Film DD

shots 8-11

Photographer: Mel

Artifacts:

1. Sat. Aug 2 Free Press Leisure Magazine
2. torn coat
3. hydro tag "MH BM WN 62)"
4. survey tape
5. weiner wrapper
6. string
7. can of Zing orange
8. Carnation Evaporated milk tin, rusted, previous occupation (Hydro?)
9. blue berry can, rusted
10. Kleenex box
11. Aylmer Tomato soup can, rusted
12. garbage bag

Features:

1. tent space  
two groups of tent poles in a tripod arrangement  
poplar side poles and spruce ridge pole  
spruce boughs on tent floor  
rocks left in centre of tent area, probably used to  
keep edge of tent down
2. hearth  
long spruce and birch logs
3. small piece of wood wrapped around tree and tied with  
string, chopped pole beside it

Other:

duck wings and feathers, three ducks shot last night

Present condition:

vacated sometime between 10:30 AM and 3:30 PM

previous occupation Hydro (?), no camp but perhaps a  
lunch stop

Vegetation:

poplar, willow, and ash  
tent area is in a small glade, with a few spruce trees to  
rear

three meters in is a heavy burn

Soil: humus

Slope: flat

Physiognomic unit: rocky shoreline just before cove

Shoreline classification: 1-3

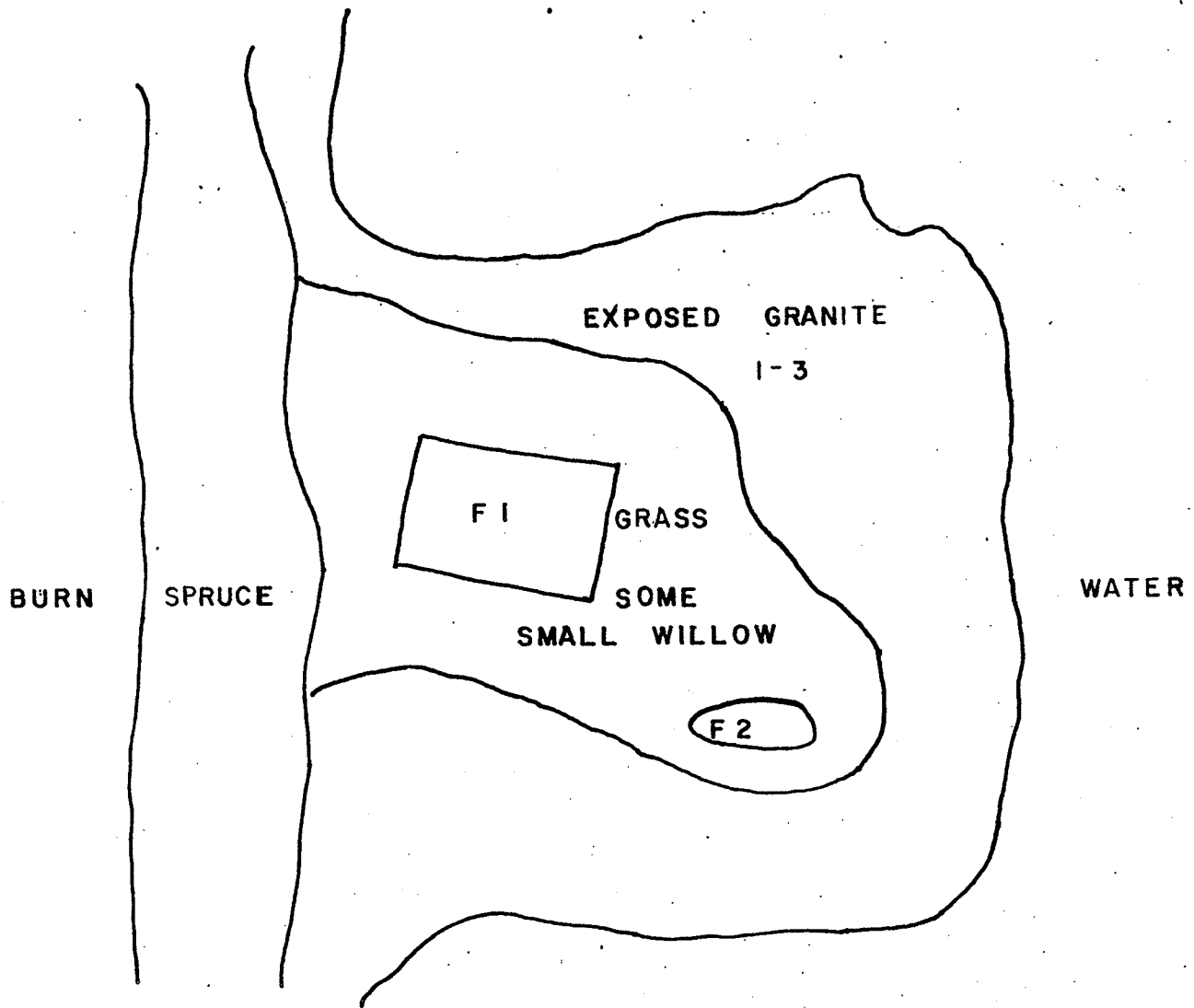
Other:

visibility, view of narrows, north and south

location is mirror image of site of Sam Wood's cabin  
(site 112)

the occupants pitched camp for night; father, mother,  
three children, and dogs

use: hunting: moose (unsuccessful), ducks (caught  
three); berry picking



SITE 114

FIGURE APP I.6

APPENDIX II

A List of the Common Plants in the Boreal Forest

EQUISETACEAE	
Equisetum	horsetail, scouring rush
LYCOPODIACEAE	
Lycopodium	club moss
LYCOPODIACEAE	
Pteridium	bracken
TAXACEAE	
Taxus canadensis	ground hemlock, Canada yew
PINACEAE	
Pinus banksiana	jack pine
Picea glauca	white spruce
Picea mariana	black spruce
Juniperus communis	common juniper
Larix laricina	larch, tamarack
TYPHACEAE	
Typha latifolia	common cattail
ZOSTERACEAE	
Potamogeton	pond weed
GRAMINEAE	
Phragmites communis	common reed grass
Poa	grass species
Carex	sege
CYPERACEAE	
Eleocharis	spike rush
Scirpus	bullrush
LEMNACEAE	
Lemna	duckweed
LILIACEAE	
Clintonia borealis	yellow clintonia, bluebead
lily	
Mianthemum canadense	wild lily-of-the-valley
Smilacina trifolia	false Solomon's seal
SALICACEAE	

Populus balsamifera	balsam poplar
Populus tremuloides	trembling aspen
Salix	willow
<b>MYRICACEAE</b>	
Myrica gale	sweet gale
<b>BETULACEAE</b>	
Betula papyrifera	white birch, canoe birch
Alnus crispa	green or mountain alder
Alnus rugosa	speckled alder
<b>SANTALACEAE</b>	
Geocaulon lividum	northern camandra
<b>NYMPHAEACEAE</b>	
Nuphar variegatum	yellow pond lily
<b>RANUNCULACEAE</b>	
Ranunculus	buttercup
<b>SAXIFRAGACEAE</b>	
Saxifraga tricuspidata	saxifrage
Ribes	currant, gooseberry
<b>ROSACEAE</b>	
Fragaria virginiana	wild strawberry
Potentilla tridentata	three-toothed cinquefoil
Rubus chamaemorus	baked-apple-berry
Rubus idaeus	raspberry
Rosa	wild rose
Prunus virginiana	choke-cherry
Amelachier alnifolia	saskatoon, juneberry, service berry, shadberry
<b>LEGUMINOSAE</b>	
Astragalus	milk vetch
Vicia	vetch
Lathyrus ochroleucus	vetchling, wild pea
<b>EMPETRACEAE</b>	
Empetrum nigrum	black crowberry
<b>ANACARDIACEAE</b>	
Rhus radicans	poison ivy
<b>ONAGRACEAE</b>	
Epilobium angustifolium	fireweed
<b>ERALIACEAE</b>	

<i>Aralia nudicaulis</i>	wild sarsaparilla
<b>CORNACEAE</b>	
<i>Cornus canadensis</i>	bunchberry
<i>Cornus stolonifera</i>	red-osier dogwood
<b>PYROLACEAE</b>	
<i>Monotropa uniflora</i>	Indian pipe
<i>Pyrola</i>	wintergreen
<b>ERICACEAE</b>	
<i>Arctostaphylos uva-ursi</i>	bear berry, Kinnikinick
<i>Andromeda glaucophylla</i>	wild or bog rosemary
<i>Chamaedaphne calyculata</i>	cassandra, leather leaf
<i>Kalmia polifolia</i>	bog-laurel, swamp-laurel
<i>Ledum groenlandicum</i>	labrador tea
<i>Oxycoccus microcarpus</i>	small cranberry
<i>Vaccinium uliginosum</i>	Alpine Bilberry
<b>Boraginaceae</b>	
<i>Mertensia paniculata</i>	forget-me-not, bluebells
<b>LABIATAE</b>	
<i>Mentha arvensis</i>	wild mint
<b>CAPRIFOLIACEAE</b>	
<i>Symphocarpus albus</i>	snowberry
<i>Linnaea borealis</i>	twinflor
<i>Viburnum trilobum</i>	high bush cranberry
<b>COMPOSITAE</b>	
<i>Solidago</i>	golden rod
<i>Aster</i>	
<i>Achillea</i>	yarrow
<i>Petasites palmatus</i>	sweet coltsfoot

### APPENDIX III

## SIGNIFICANT DATES IN THE HISTORY OF THE BOREAL FOREST OF NORTHERN MANITOBA

### Prehistory

- 10,000 B.P. to 8,000 B.P. Northern Manitoba covered by glacial ice and the early phases of Glacial Lake Agassiz. Paleo-Indian Period: A small portion of southwest Manitoba was open and Fulsom and Plano hunters present.
- 7,700 B.P. Present lakes and drainage started to become established.
- 6,000 B.P. Lake levels were no more than 5 to 25 feet higher than present day.
- 4,500 B.P. Shield Archaic: Plains bison hunters move north into the Boreal Forest. The McKean occupation is the earliest clear evidence of human habitation.
- 4,000 B.P. Contemporary lake levels and a climate, flora, and fauna of approximately modern type.
- 2,500 B.P. Initial Woodland: Pottery diffused northward (Laurel tradition).
- 1,000 B.P. Terminal Woodland: Various regional developments become apparent (Manitoba and Selkirk foci pottery types).
- 500 B.P. Historically identifiable cultural groupings (Cree, Assiniboine, Ojibwa, etc.)

## History

- 1610 A.D. Hudson Bay discovered by Henry Hudson.
- 1668 A.D. Radisson and Groseiller sailing on the Nonsuch, for French interests, winter at a post on the Hayes River seven miles upstream of the present York Factory.
- 1670 A.D. The Hudson's Bay Company charter for exclusive trade on Hudson Bay was granted to English merchants by Charles II.
- 1672 A.D. York Factory established on Hayes River within a few miles of Hudson Bay.
- 1683 - 1713 French - English competition in the Bay with York Factory changing hands several times.
- 1690 - 1692 Kelsey: the first voyage of a white man from the Bay to the Saskatchewan River.
- 1713 A.D. The Treaty of Utrecht: French yield the Bay entirely to the English.
- 1717 A.D. Fort Churchill established by James Knight.
- 1763 A.D. Treaty of Paris: Canada transferred to British rule.
- 1774 A.D. Cumberland House founded by Samuel Herne.
- 1798 A.D. Oxford House erected.
- 1801 A.D. Norway House established.
- 1821 A.D. H.B.Co. and North West Co. amalgamate.
- 1823 A.D. Governor George Simpson orders trading posts throughout Rupert's Land to be repositioned, in response to resource depletion. Nelson House established as a permanent H.B.Co post.
- 1840 A.D. Norway House Mission begun.



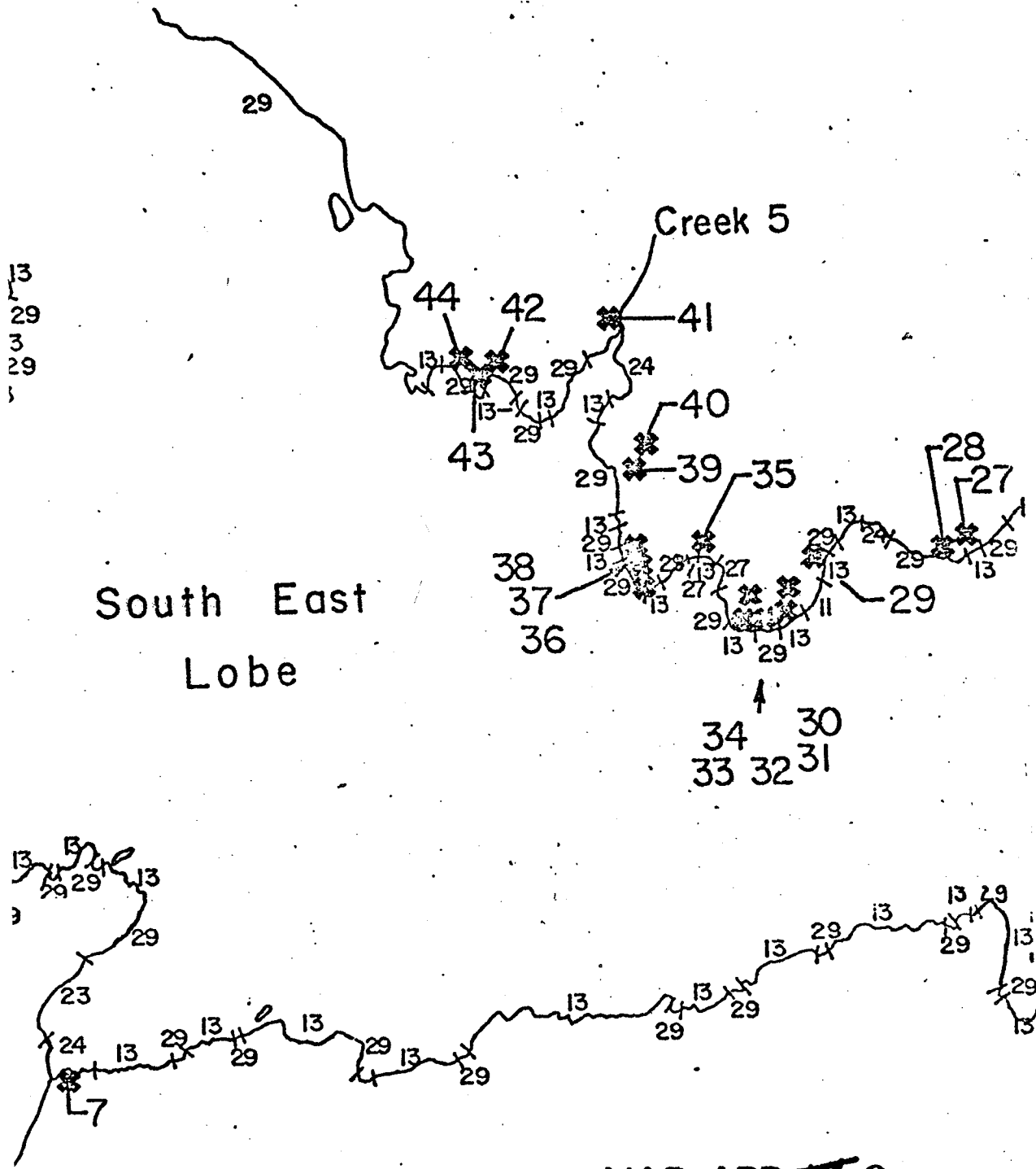
1908 A.D. Nelson House becomes a treaty  
reserve.

APPENDIX IVSite Inventory and Maps

Site#	Location	Type	Other
1	CE	sawmill, ARC base camp	
2	CE	dig, canoe building, at least 2000yrs occupation	
3	CE	small camp	Sam Wood
4	CE	hearth	
5		downstream on Rat from Wapisu	small camp Nathan Moose
6	SE	small camp	
7	SE	hearth	
8	SE	hearth	
9	SE	camp	
10	SE	winter road to Nelson House	
11	SE	small camp	
12	SE	hearth	
13	SE	hearth	
14	SE	hearth	
15	SE	small camp	
16	SE	small camp	
17	SE	hearth	
18	SE	hearth	
19	SE	hearth	
20	SE	hearth	
21	SE	hearth	
22	SE	hearth	
23	SE	hearth	
24	SE	hearth	
25	SE	hearth	white man's site (?)
26	SE	camp	sled island (I2)
27	Map IV.2	hearth	
28	IV.2	small camp	
29	IV.2	cache	
30	IV.2	hearth	
31	IV.2	hearth	
32	IV.2	hearth	
33	IV.2	hearth	
34	IV.2	cache	above site 33
35	IV.2	camp	Abraham Spence winter camp
36	IV.2	hearth	
37	IV.2	hearth	
38	IV.2	small camp	
39	IV.2	small camp	

40	IV.2	small camp	
41	IV.2	small camp	
42	IV.2	small camp	
43	IV.2	hearth	
44	IV.2	small camp	
45	SE	hearth	
46	SE	small camp	
47	SE	path	
48	SE	hearth	
49	SE	small camp	
50	SE	hearth	
51	SE	small camp	
52	SE	small camp	
53	CE	hearth	
54	CE	small camp	
55	CE	hearth	
56	CE	hearth	
57	CE	small camp	not surveyed
58	CE	small camp	not surveyed
59	CE	large winter fishing camp	not surveyed
60	CE	small camp	
61	CE	small camp	
62	Map IV.3	hearth and skidoo cache	
63	IV.3	small camp on winter road	
64	IV.3	winter road and camps	
65	IV.3	winter road	
66 - 69	numbers missed		
70	NW	hearth	
71	NW	hearth	
72	NW	hearth	
73	NW	hearth	
74	NW	small camp	
75	NW	hearth	
76	NW	small camp	lean-to
77	NW	hearth	
78	NW	small camp	
79	NW	camp	
80	NW	hearth	
81	NW	small camp	
82	NW	hearth	
83	number missed		
84	CE	hearth	
85	Na	hearth	
86	Na	cabin	Angus Bonner
87	Na	hearth	
88	Na	small camp and fish cache	
89	number missed		
90	Na	small camp	
91	Na	hearth	
92	Na	hearth	

93		IV.3	camp	
94		IV.3	hearth	
95		IV.3	small camp	
96		IV.3	small camp	
97		IV.3	small camp	
98		CE	hearth	
99		CE	hearth	
100		CE	hearth	
101	Map	IV.4	hearth	
102		IV.4	hearth	
103		IV.4	hearth	
104		IV.4	hearth	
105		IV.4	hearth	
106		IV.4	hearth	
107		IV.4	hearth	
108		IV.4	hearth	
109		IV.4	hearth	
110		Na	hearth	
111		IV.3	small camp	
112		IV.3	cabin	Sam Wood
113		NW	commercial fish camp	
114		CW	small camp	
115		NW	cabin	Moore
116		CES	small camp	
H-1		CW	hydro bush camp	
H-2		Na	hydro survey camp	



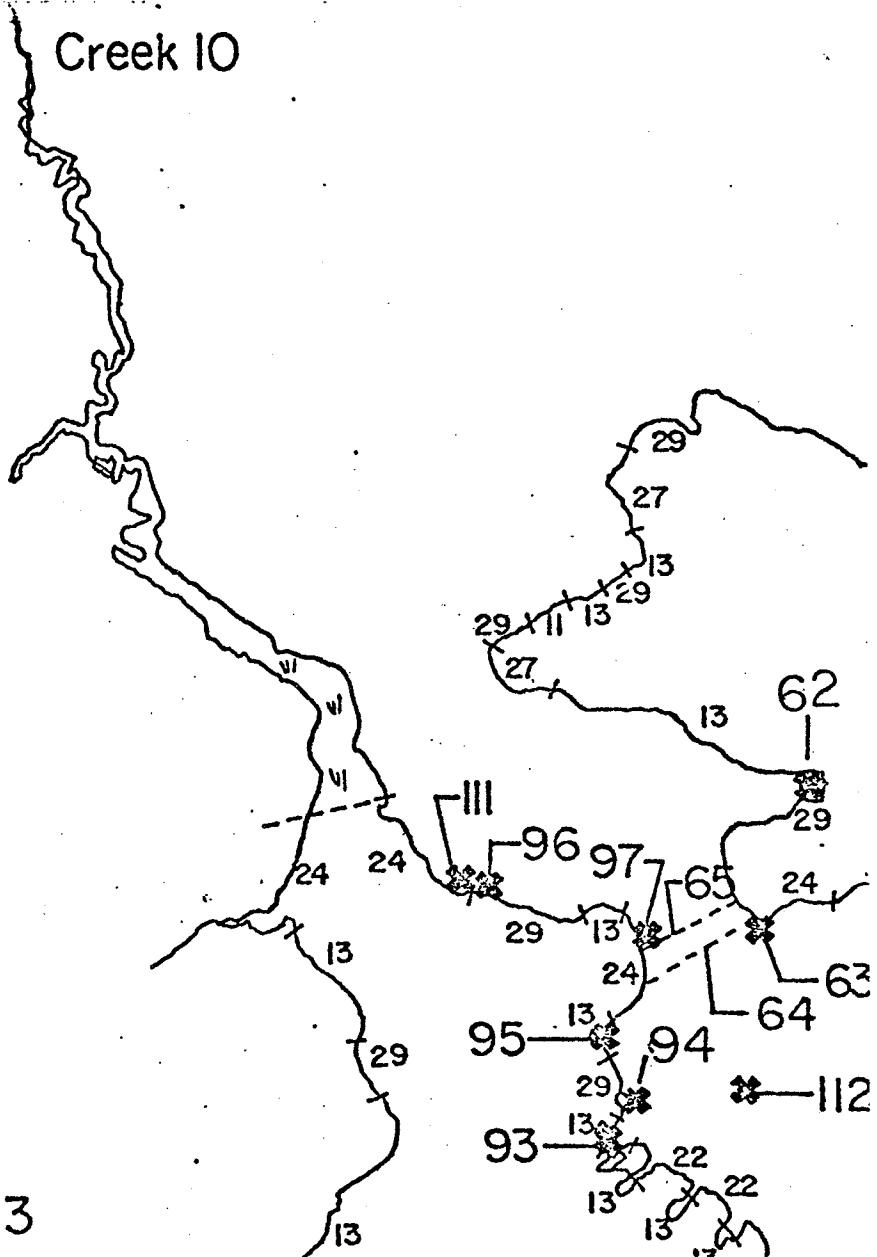
13  
29  
3  
29  
5

South East  
Lobe

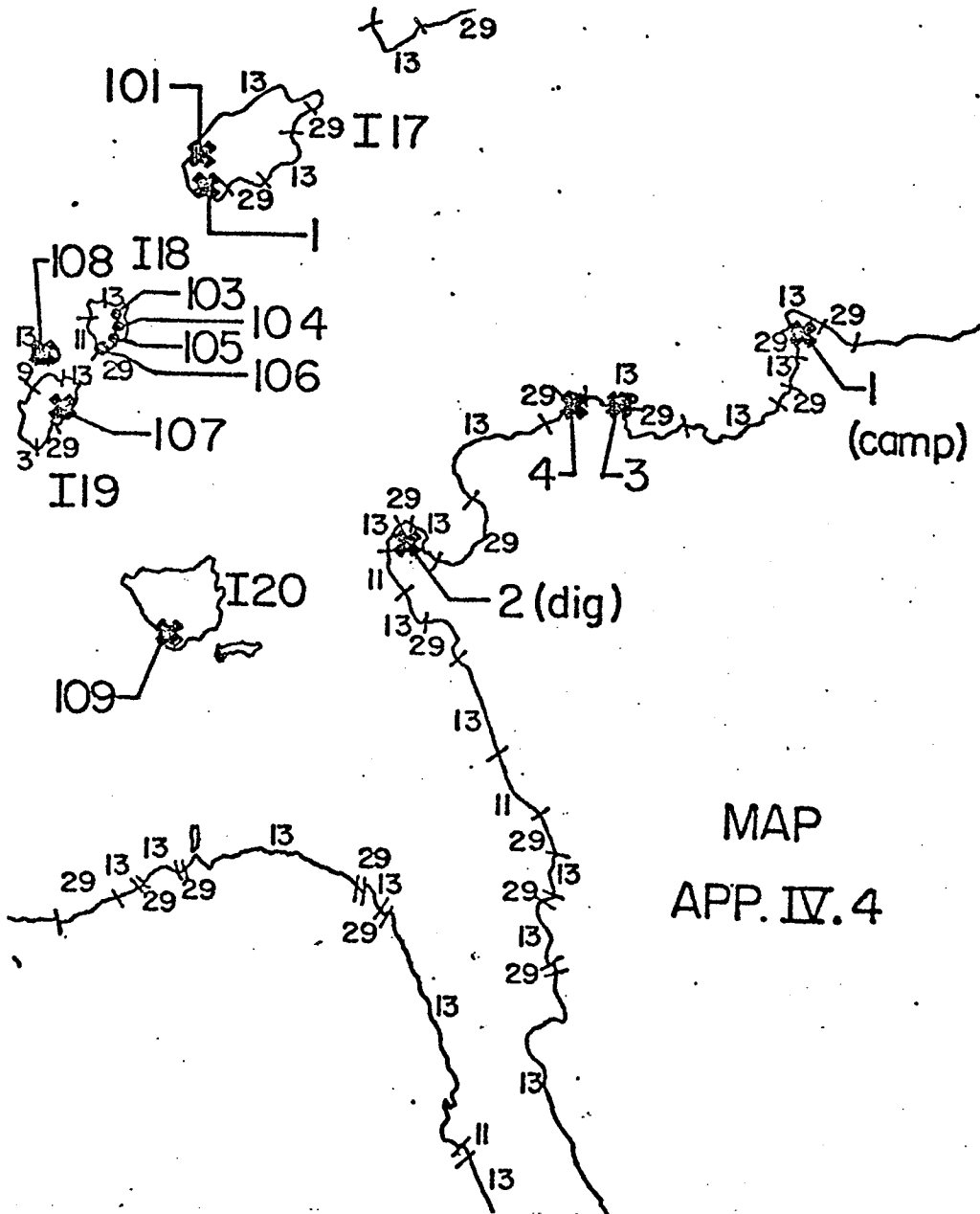
Creek 5

Creek I

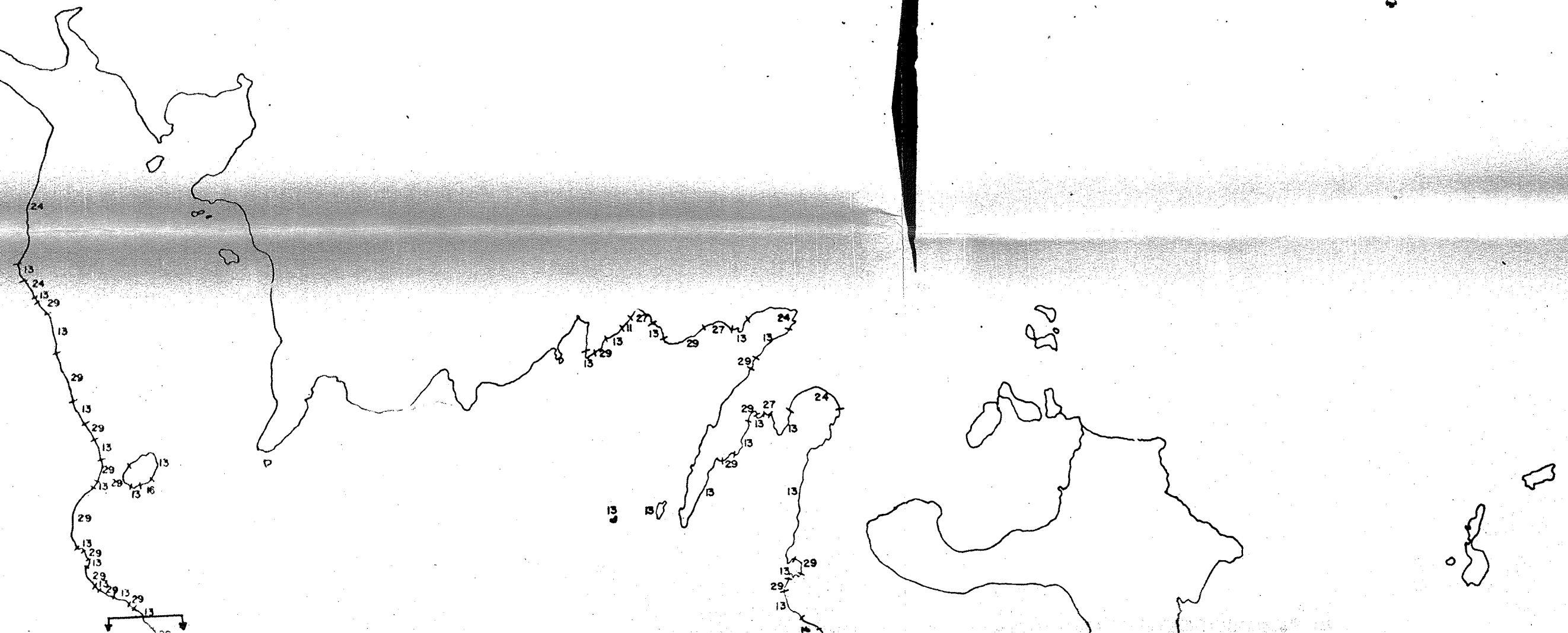
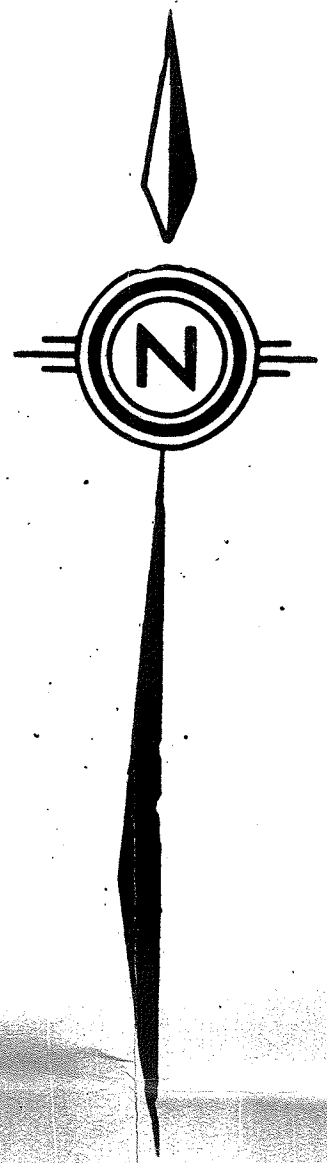
MAP APP. IV 2



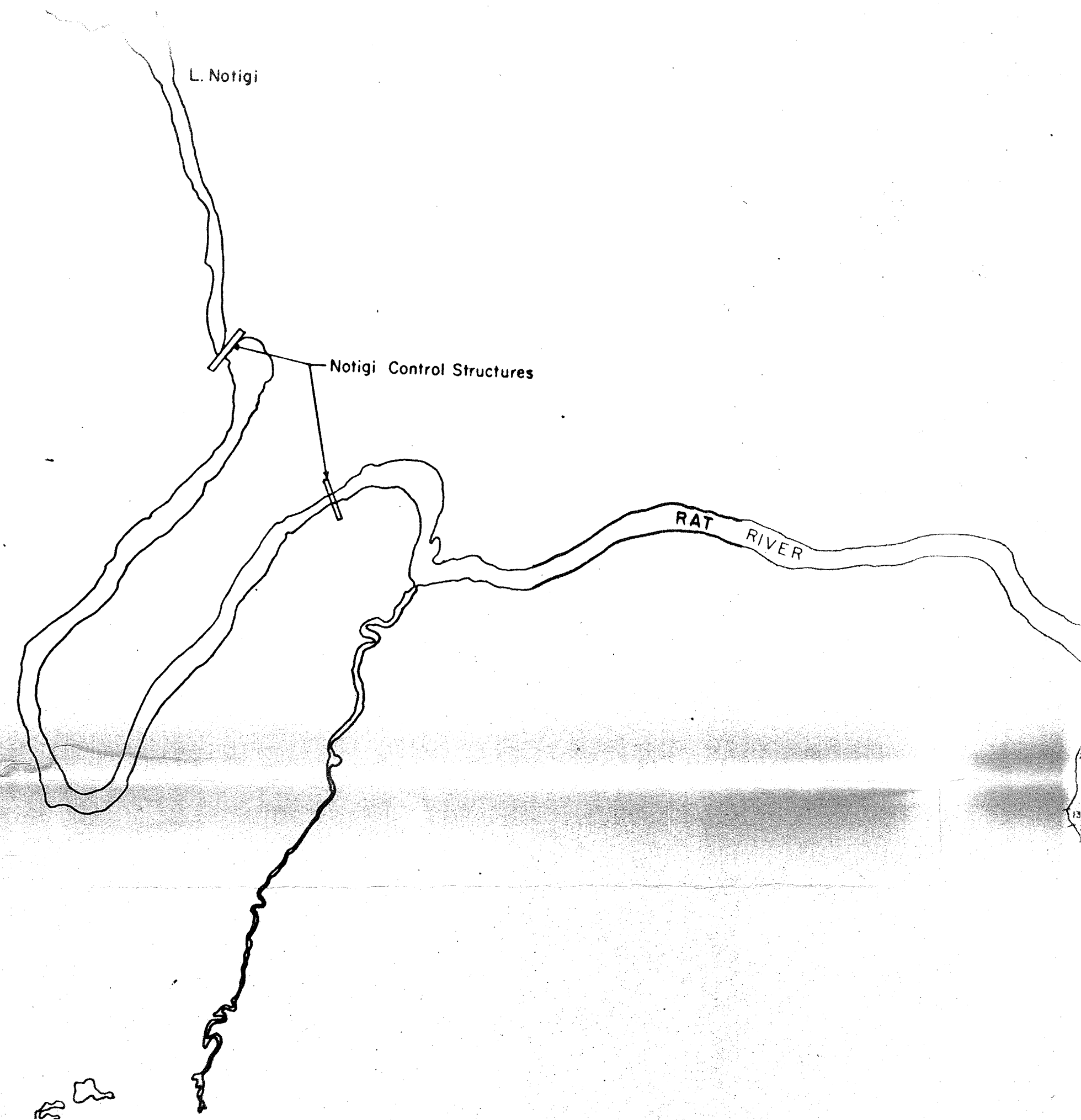
MAP APP. IV.3



MAP  
APP. IV. 4



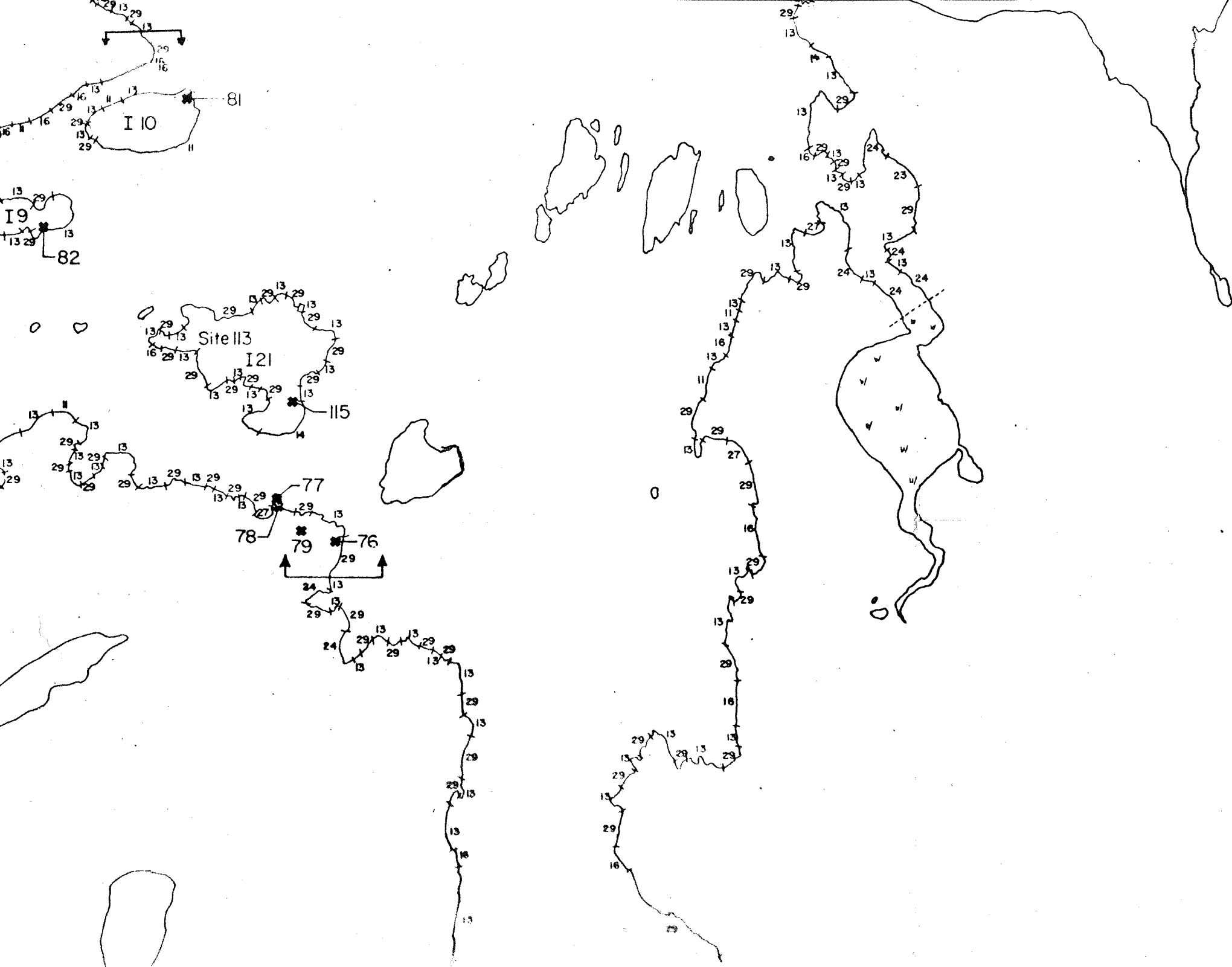




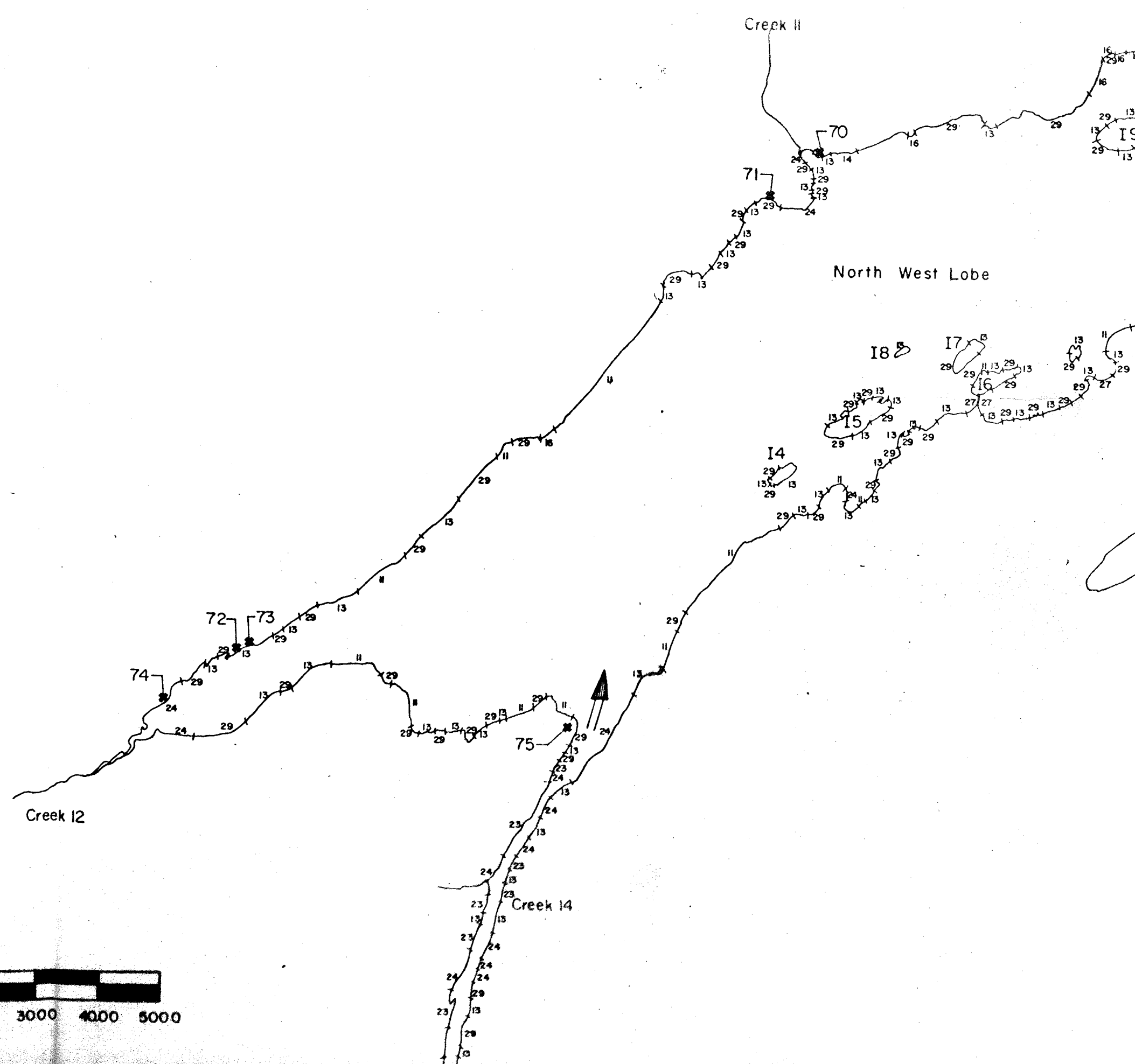
L. Notigi

Notigi Control Structures

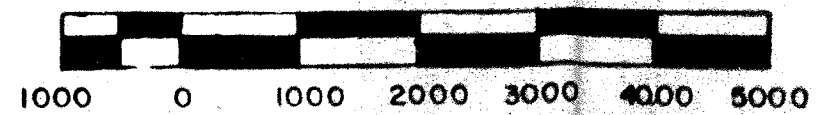
RAT RIVER



正A武正 珊A甲D5A

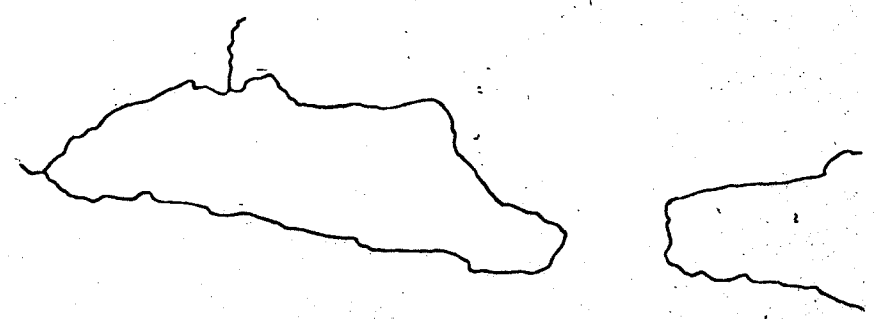
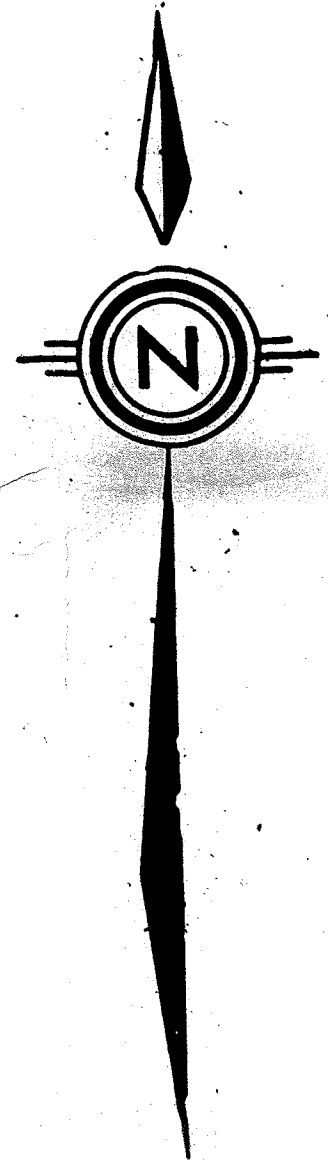
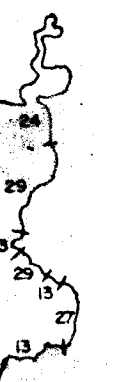


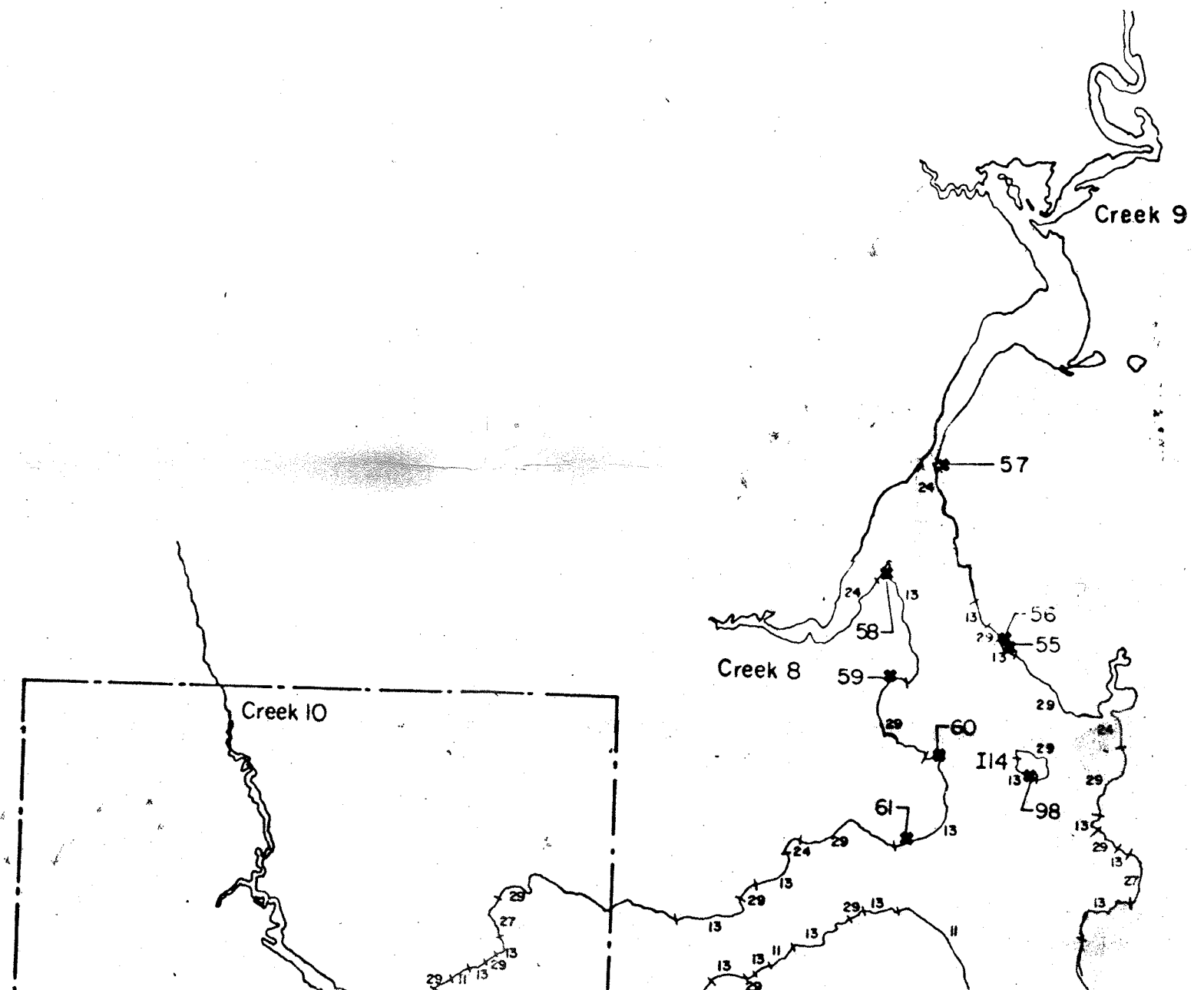
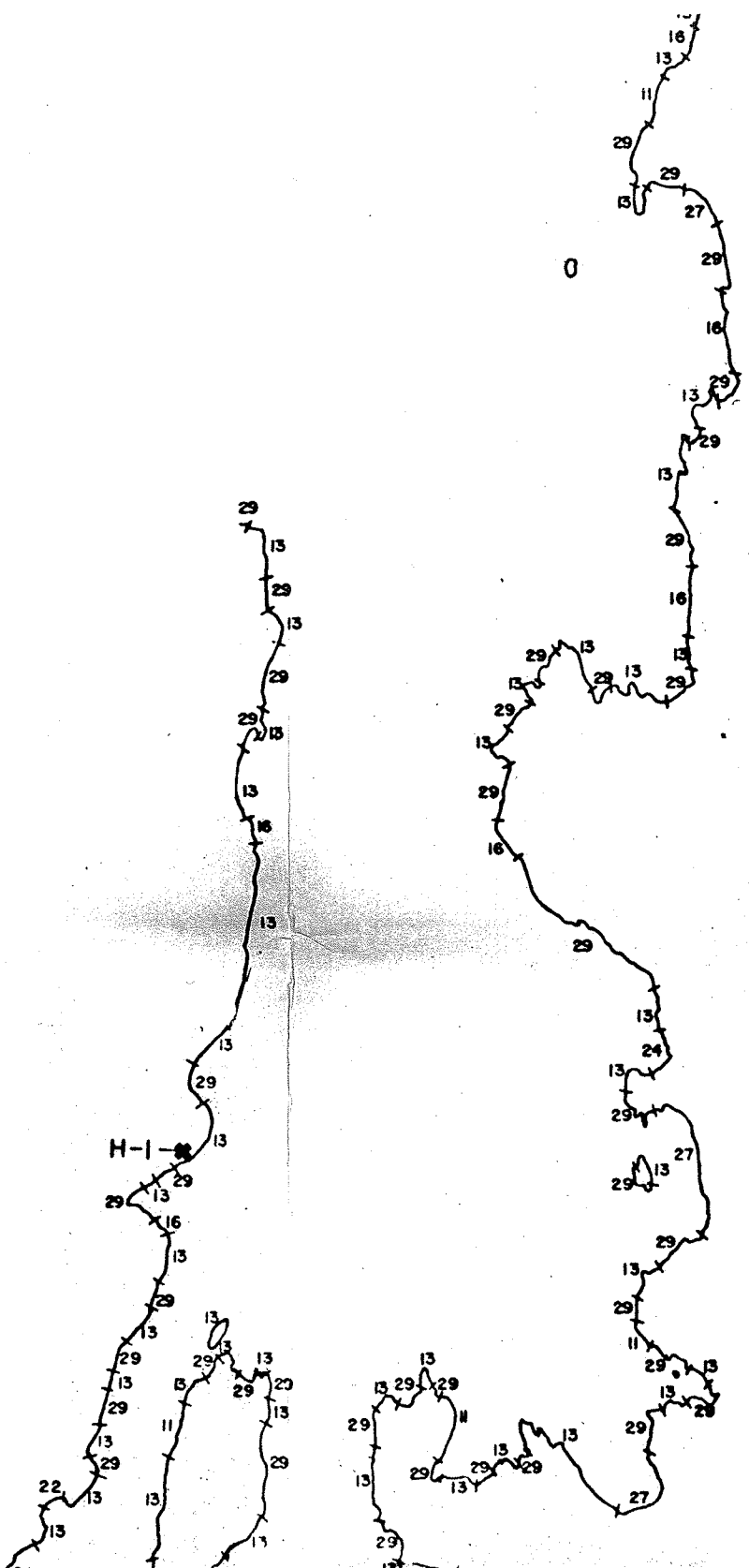
FEET

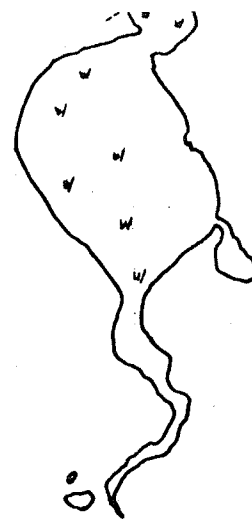
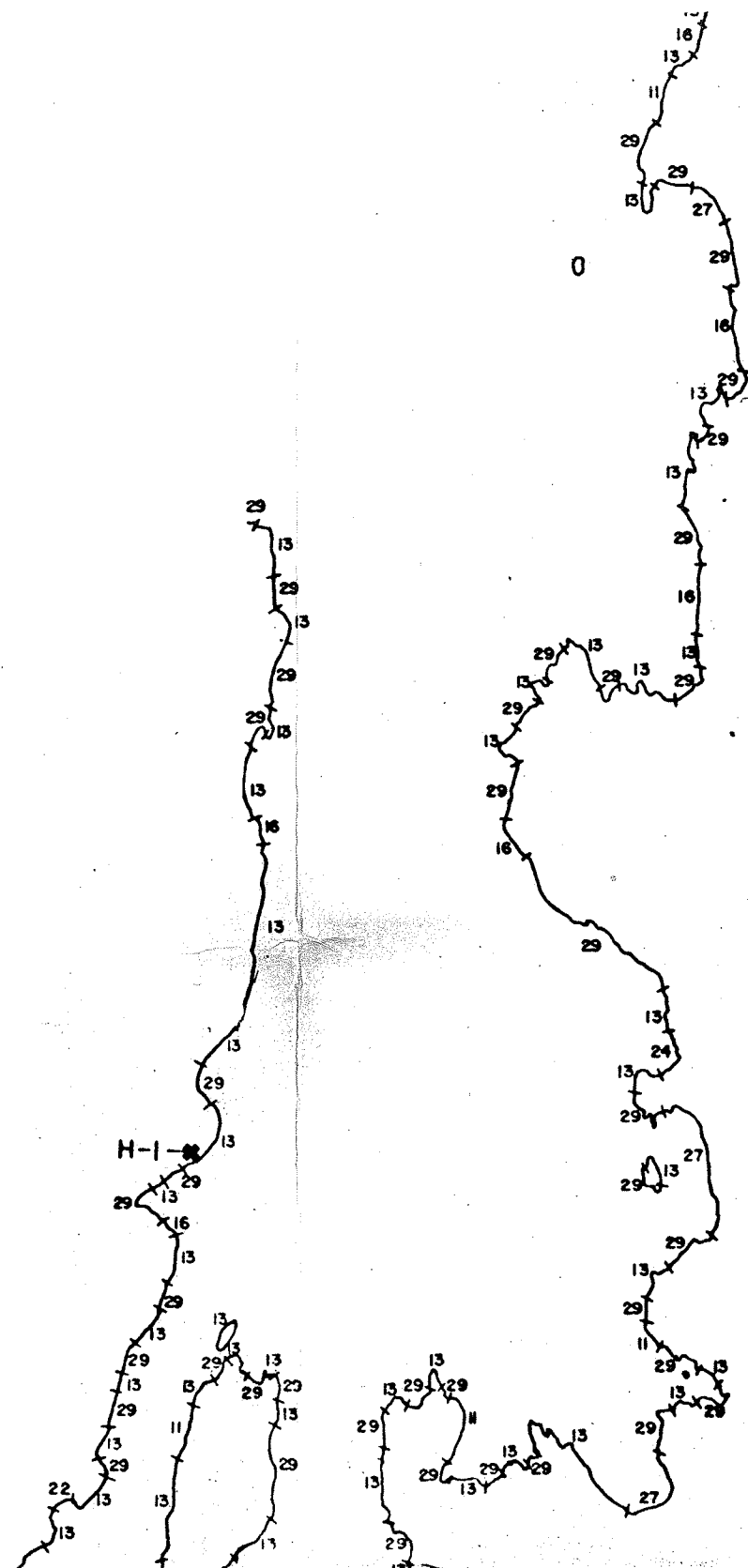
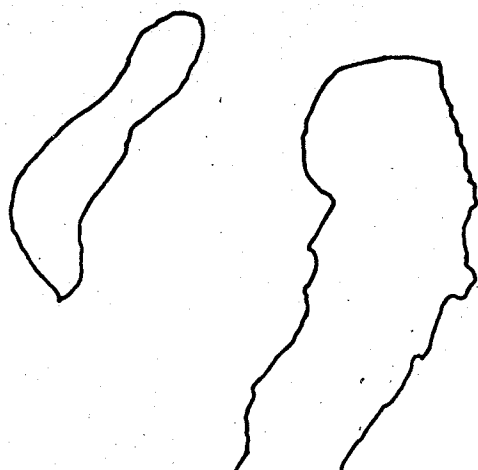


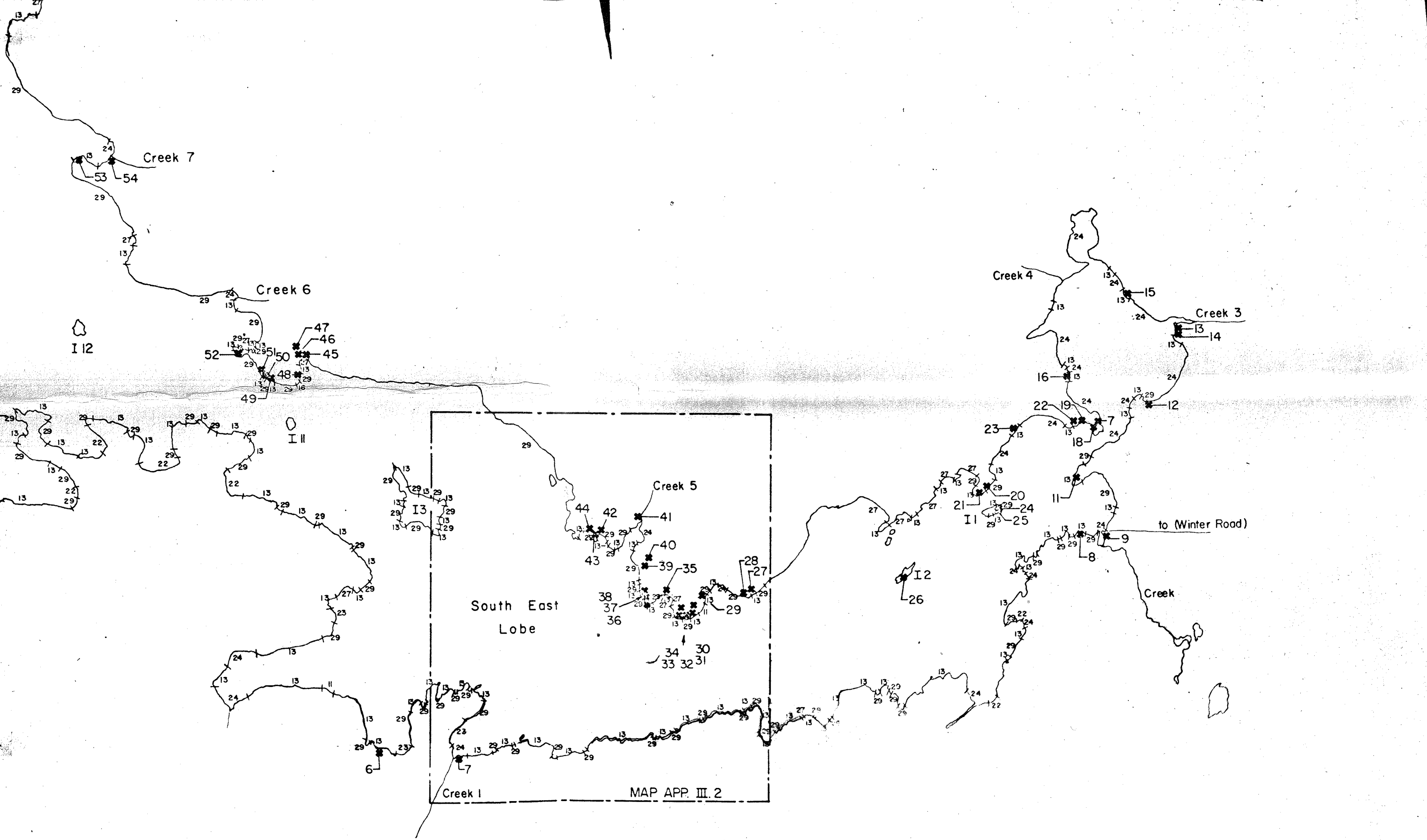


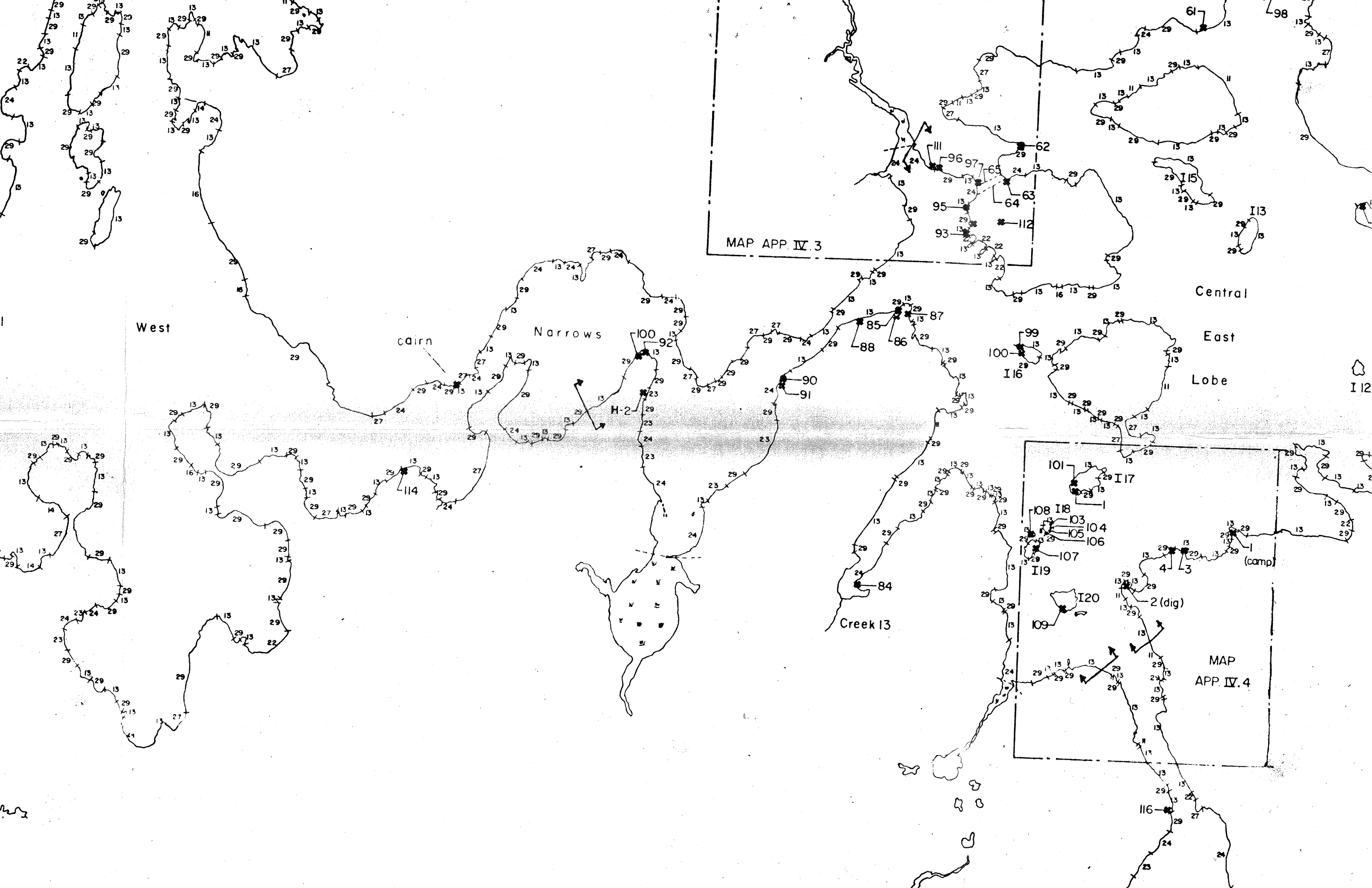
Creek 9











MAP APP. IV. 3

MAP APP. IV. 4

West

cairn

Narrows

H-2

Creek 13

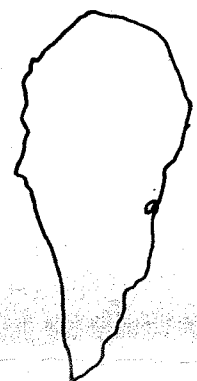
Central  
East  
Lobe

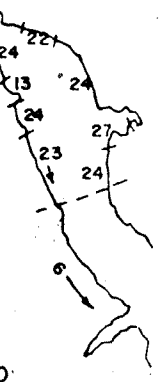
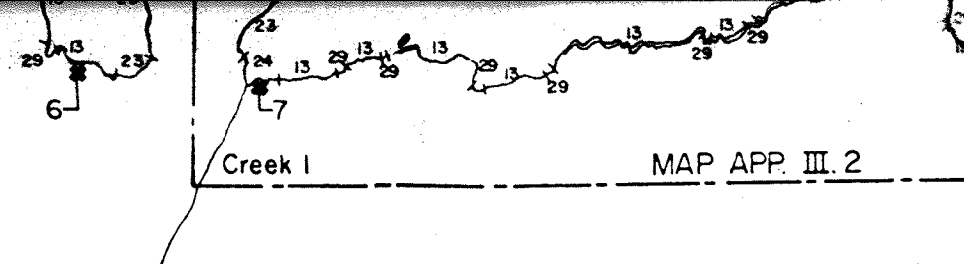
I12

(camp)

2 (dig)



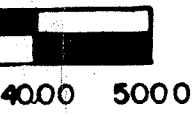




oint Lake  
House

# LAKE MAPS

## map APP III. 4 (a)

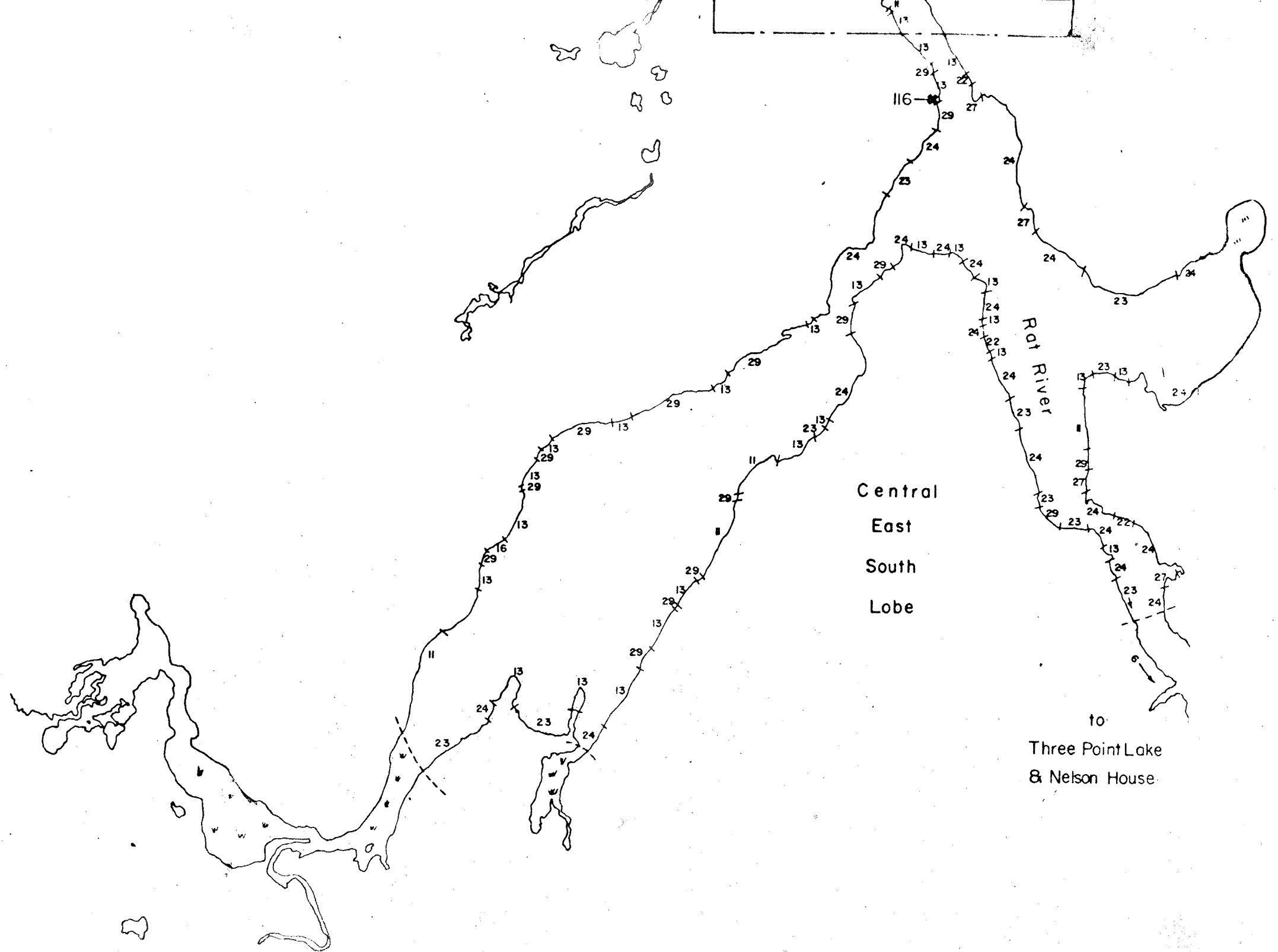


4000 5000



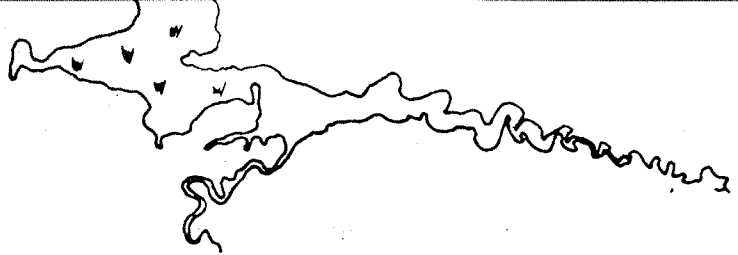
METERS

1500

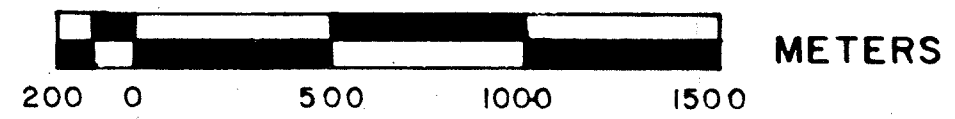
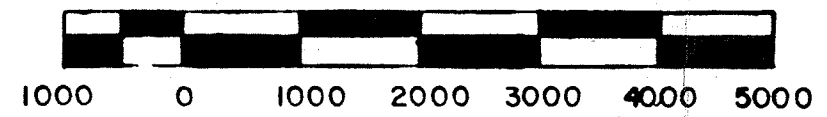


Central  
East  
South  
Lobe

to  
Three Point Lake  
& Nelson House



FEET



METERS

