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ELDORADO ON THE MISSISSAGI:

AN EVALUATION OF CULTURAL RESOURCES  
ON THE ELDORADO NUCLEAR LTD PROPERTY  
NEAR BLIND RIVER, ONTARIO

by

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for

ELDORADO NUCLEAR LTD

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## INTRODUCTION

In the fall of 1980, Archaeology Unlimited was awarded the task of evaluating the cultural resources associated with the property on which Eldorado Nuclear Ltd was constructing a Uranium hexafluoride refinery on the north shore of Lake Huron near Blind River, Ontario (figure 1). The evaluation was contracted for those parts of the property not already disturbed by early stages of construction.

These stages included: construction of the access road; and land clearing at the sites of the refinery, construction camp and parking areas. A gravel quarry had been opened and landfill operations were underway in a marsh.

A number of land depositions and further developments are being considered for other parts of the property. Therefore, it is appropriate that an inventory should be made even at this late stage, so that future decisions may consider cultural resources among others.

This report presents the results of the evaluation. As proposed, the study includes a review of existing literature concerning fieldwork undertaken by prehistorians as well as archival documents and both written and oral local histories concerning 19th and 20th century activities. It also presents results of our own field explorations and attempts to set the whole into a developmental and environmental framework.

Blind River, Ontario, the closest town to the Eldorado Nuclear Limited property, sits astride Highway 17 approximately halfway between the cities of Sudbury, to the east, and Sault Ste Marie, to the west. Six kilometers to the west of Blind River, the delta of the Mississagi River spreads into Lake Huron's north channel. The Eldorado Nuclear property occupies an irregularly shaped section of c. 880 hectares adjacent to the east bank of the Mississagi's main channel, between Highway 17 and the lakeshore, approximately centered at latitude 46 degrees, 11 minutes north, and longitude 83 degrees, 1 minute west.

The field survey commenced on Tuesday May 19, 1981 and continued for a period of ten days, terminating on Thursday May 28, 1981.

## ACKNOWLEDGEMENTS

Due to the long experience of Laurentian University archaeologists in the Mississagi River Delta, the engagement the University Archaeological Survey as a collaborating participant has been instrumental in this project. Professor Helen Devereux has been supportive of the work, and Survey members Kenneth Buchanan and Margaret Bertulli have been competent and a pleasure for Archeology Unlimited have staff to work with.

Participation by members of the Mississagi Indian Band has been enthusiastic. Special thanks must be given to Grand Chief Camille Chiblow, an avid band historian, and to Ella Boyer for her accounts of band activities and old stories. We wish to thank the staff of the logging museum at Blind River for their intrest and historical consultations. Mr. J.E. (Buck) Sarazin an eager supporter of the museun and a knowledgable regional logging history enthusiast provided valuable information and memories. sp

We also wish to acknowledge the general support given the study by archaeologists at the central Toronto office of the Ministry of Culture and Recreation, Historical Planning and Research Branch.

Finally, one must note that both the administrators of Eldorado Nuclear Ltd and their field staff were always helpful in both attitude and action.

The survey staff consisted of three archaeologists, K.T. Buchanan and M. M. Bertulli of the Archaeological Survey of Laurentian University and J. Chism of Archeology Unlimited. P. Brill, an anthropology student at Laurentian University participated as a survey assistant. Cartography was by Françoise Lebrun and M.M. Bertulli and final typing was by Monique Fecteau.

## PROBLEM ORIENTATION AND METHODOLOGY

At its simplest, the problem we are asked to address is whether or not there are archaeological remains on the Eldorado Nuclear Ltd property near Blind River. If so what is their nature and significance and if significant are they endangered so that protective or mitigative measures are recommended. The question of site significance is sometimes a difficult one because there is not broad agreement as to what constitutes archaeological significance.

In this matter, we take the pragmatic stand that a site's significance is highest if it, better than other known local sites, appears to fill a clear gap or to clarify some poorly understood aspect in either local or broader research questions. These questions tend to revolve around the subjects of cultural sequences, season of occupation, site function and social organization of space. Thus, it can be seen that significance might not be based on size or relative richness of artifact content or on whether other sites of the same period have been excavated.

From this perspective, it is critical that a reconnaissance team be able to read the subtile implications presented by the relationships existing between sites of particular cultures and purposes and the environment in which they existed. This viewpoint has influenced the set of procedures followed in this study

Our first tasks were to review very broadly the sequence of pre-historic and historic activities in the Mississagi Delta and to become familiar with the property's physical character. Our effort included a literature review, a preliminary interview with Camille Chiblow of the Mississagi Indian Band, an analysis of topographic maps and aerial photographs and an actual inspection of the terrain in the early winter. This permitted us to determine which parts of the property presented likely areas for habitation and other exploitation. The resulting analysis of archaeological potential became quite elaborate by necessity. With the availability of good geomorphological data and with a broad understanding of the general principles which appear to apply when selecting locations

for settlement, we produced what is essentially an analysis of the past and present living environments of the property. The reader will note that this analysis is characterized by constant recall to what we feel are the important relations existing between people and different environmental factors.

The next procedural task was to carry this body of principles and suppositions into the field. The additional interviews and series of dug tests and close surface examinations were intended to produce a body of fact which would verify or modify our preconceptions and which would present the actual site data needed for an inventory and assessment. In order for this step in the procedure to present valid data, we felt that we were required to examine and test in some areas which seemed less attractive for habitation. Construction activity provided us our control areas. Bulldozer activity had exposed areas of low, level terrain away from present and former waterways. There were road cuts and gravel quarry edges on high, rocky ridges and there was even some machine exposure of indistinct marsh edges. We considered that their visual inspection with limited digging would indeed give us the required check on our biases.

In general, we consider that prehistoric sites having dimensions of no more than 5 m X 5 m are common in the middle-north. Therefore, we choose to test areas with transects of small (30-50 cm) exploratory holes placed at apprx. 5 m intervals. Actual areas where testing, surface inspection and informant visits were made are as follows (figure 3).

1. We chose to test the riverbank despite our impression that it had eroded considerably for much of its length. This was largely precautionary because we could not say how much or little it had actually retreated. The entire length between the Eldorado north boundary and the presumed location of site CbHs-1 (this site has not been relocated since its discovery) was tested with a staggered row of 30 cm square pits dug to a depth of apprx. 15 cm placed apprx. 2 m back from the bank edge at 5 m intervals. We also inspected the eroded riverbank and the surface of the road which parallels the bank at irregular distances from the edge.

It was not necessary to extend the line along the soft sands of the Patrick Point storm ridge because large area and transects had been churned by cars and were exposed for visual inspection. Instead, the line was extended along the area behind the ridge on the chance that camps might have been further from the water for protection from the strong winds striking this area. Both the visual inspection and test line gave special attention to the transect to be followed by the future outfall line to run from the refinery to Patrick Point. A short spur of the line was extended 50m along the north bank of the logging canal to see if a camp had been placed here for the canal's construction.

In addition, the possibility of a buried occupation level under the storm ridge was tested by digging an irregularly-shaped, 2 m deep hackhoe trench(e) at the ridge crest. sp

2. A terrace at 183.5 m AMSL which follows the southwestern and southern edges of a rocky ridge near the northern Eldorado boundary was tested. This former beach varies in width from 10-20 m. It was tested with three staggered rows of pits with intervals of 5 m. This terrace graded from a quartzite sand through gravel and into cobbles. Where this was the situation (cobbles), testing was restricted to a single row of pits. The centre part of this terrace was lost due to an extensive gravel removal operation apparently dictated by a requirement for aggregate at the construction site. Irregular testing was done around the edge of the gravel borrow.

East of the borrow pit the refinery access road was located on what might have been remnants of this beach. A visual inspection was made of the graded edges along most of this road and the short spur leading to the gravel borrow. Additionally, intermittent test pits were dug north of the road when the terrain was level and relatively rock-free.

The western end of the terrace also forms the northeast bank of the faintly-seen river channel bifrication discussed below. sp

3. The most clearly-defined banks of the one abandoned river channel we found on the property was tested with a single staggered line of pits. The channel runs in an arc from the northwest corner of the property down through the construction camp area and back up toward the northeast where it terminates in the marshes. There are indistinct bifrications at both ends of this channel. The western segment was tested along its northeastern bank while the eastern was tested along its southeastern bank. The bifricated segments were tested by our operations along the 183.5 m terrace and by work along the eastern marshes margin. A small stand of pine has been left standing in the middle of the parking lot clearing and we felt that it was once part of the channel bank. Its cut edges were given a visual inspection. sp
4. We tested the short segment of the 1.5 m high sand terrace running east from the river bank, to where it was cut off by the main refinery clearing. A single staggered row of pits was dug.
5. The edges and surface of the road bordering the logging canal was given a visual inspection.
6. The marsh edges were walked out and the one clear, well-drained segment was tested with a staggered line of pits and with several scattered pits as well for extra assurance. The same sandy wedge-shaped land-form formed parts of the abandoned channel discussed above.
7. Surface inspections were made along the newly-installed hydro line approaching the refinery from the access road, and around parts of the perimeter of the refinery clearing. A large part of the hydro line transect cut through the same wedge of sand forming part of the abandoned channel and the marsh edge discussed above.

In the event of a positive test hole, the size of a site was to be determined by the placement of small holes at 2 m intervals in perpendic-

ular transects. If more material was needed for cultural identification, then additional holes, or larger holes could be excavated. Measured plans and stratigraphic profile drawings were to be made when appropriate as well as notes. Photographs were to be taken when it was judged useful.

Historic sites were to be crossed by the test transects and the same recording procedures followed. In this case however, surface irregularities conforming to houses, fencelines etc. could also be recorded as well as pertinent documents or interviews.

Post-field work tasks included further searches for pertinent documentation, analysis of the different bodies of data and a final synthetic interpretation of the property's cultural resources and their significance.

## A GENERAL PREHISTORY OVERVIEW

The locality surrounding the Mississagi Delta has received archaeological attention since 1961 (figure 2).

The first survey of the delta was by J.V. Wright, National Museum of Man, in 1961, during which he located four sites along the east bank of the major river channel, Chiblow 1 (CbHs-2), Chiblow 2 (CbHs-3), Chiblow 3 (CbHs-4) and the Mouth Site, (CbHs-1). H.E. Devereux, during the following two summers, excavated parts of the Chiblow 1 and 2 sites, and discovered yet another site, the Contemporary Bear Site (CbHs-11). A survey of the west bank, undertaken at this time, was unproductive. George I. Quimby, of the University of Chicago, who was vacationing in the area in August of 1962, rendered valuable assistance to Devereux during the excavation of the Chiblow 1 site.

During the 1968 field season, J.V. Wright returned to the delta. On the east bank of the river at Chute No. 5 he discovered the Falls Site (CbHs-7).

During the late summer and early fall of 1975 another survey was conducted for the Ontario Ministry of Natural Resources by M.J. Brizinski, resulting in the discovery of the Renard Site (CbHs-5), Wood's Site (CbHs-8), Poor Little Tree Site (CbHs-9) and the Kor Rock Structure (CbHs-10), all on Fox Island, and the Swimming Bear Site (CbHs-6) on Island No. 5. During the Autumn of the same year, H.E. Devereux performed a rescue excavation on the eroding bank of the Renard Site.

In 1977, M.M. Bertulli of the Archaeological Survey of Laurentian University conducted a further survey of the Mississagi Delta, resulting in the location of a further six sites: the Boom Camp Site (CbHs-15), the Sayers Site (CbHs-12), the Tippe canoe Site (CbHs-13), the Patrick Point Rock Structure (CbHs-14), the Whippoorwill Rock Structure (CbHs-16), and the Bright Lake Rock Structure (CbHt-1).

During that same year excavations were carried out at the Renard, Falls and Chiblow 3 sites and the Boom Camp Site (prehistoric) was tested.

During the intervening years a total of 18 sites of archaeological interest have been recorded. Of this total, 14 have been designated as occupation sites (77.7%), three as rock structures of unknown utility (15.6%) and one as undesignated (6.7%). It is evident that this river delta area had much to offer to an aboriginal population. In addition to shelter from a mature coniferous forest and ready access to water transportation, the river, which is still considered an excellent fishing and spawning area, would have provided sustenance for a large population over an annual period encompassing the spring, summer and autumn seasons. Food procurement during the winter season would probably require a different strategy. Although proximity to a large body of water (Lake Huron) would tend to mitigate the extremes of winter temperatures, the waters of the delta would be frozen during the coldest months and snow accumulations would create considerable difficulty in floral food gathering. The probable result of these pressures would have been an annual migration and dispersion of the clement season macroband into smaller, isolated, self sufficient family groups, who would occupy hunting territories in the upland reaches of the Mississagi and Blind river systems.

The antiquity of occupation by a native population in this region is largely determined by the variation in water level of Lake Huron. According to a graph produced by Lewis (Lewis 1969: 671) the level of the Huron basin has been declining at a constant rate of c. 1.34 millimeters per year for the last 2500 years. On this basis many of the sites within the delta region would have been at or below lake level previous to circa. A.D. 500. Carbon samples from Area C of the Renard Site ranged from A.D. 775 + 85 to A.D. 1520 + 80 (Bertulli 1981, 40), an indication that the area was probably occupied within 200 years of its emergence from the Lake Huron Basin.

Artifactual evidence from the sites in the Mississagi Delta point to an aboriginal Algonkian material culture which did not differ in any major

respect from the material cultures of the Algonkian speaking peoples of much of north-eastern Ontario. The people of the Mississagi Delta were hunters and gatherers who exploited the bountiful natural resources of the region: fish, large and small mammals, fruit, nuts, seeds and clay for ceramic production. Geographic proximity with their Iroquoian speaking Huron and Petun neighbours resulted in some diffusion of ceramic material culture and the introduction of corn agriculture. (Bertulli 1981, 9 and 286-287). It is highly probable that, following the dispersion of the Hurons during 1649, a number of the refugees found a home among the Mississagis resulting in a further infusion of this ubiquitous culture.

The aboriginal occupation of the delta appears to have been from circa A.D. 800 to the present day.

## A GENERAL HISTORICAL OVERVIEW

European penetration into the North Channel of Lake Huron began on a limited basis in the early seventeenth century. The French explorers, Etienne Brule and Jean Nicolet travelled along Georgian Bay from the mouth of the French River to Sault Ste. Marie during the period 1615 to 1634, although neither made specific reference to the Mississagi River or the Penewobecong (Blind) River in his journal. The Jesuit Relations (Thwaites 1959) of the years 1640-1670 contain several references to the visits to the Mississagi mouth of various Jesuit priests who performed baptisms and attempted to win the native peoples to the cause of Roman Catholicism. In 1761, the Scottish adventurer, Alexander Henry, paused in his travels at the Mississagi River mouth and noted the local abundance of sturgeon (Henry 1971: 35-36).

From the middle of the seventeenth century the history of the North Shore of Lake Huron becomes inextricably linked with the economic pursuits of Europeans and later North Americans. Beginning with the fur trade, the historical populations of the area functioned as part of the exploitation of natural resources.

The Mississagi native people flourished during the early part of the fur trade, between 1651 and 1700 as their role as middlemen between the Europeans and other native groups ensured their economic success. With the intensification of the competition between the Northwest and Hudson's Bay Companies and the resulting hostilities between native groups, the Mississagi peoples eventually dispersed from their homeland, although when and where this occurred is not clear. From this point, the historical record is unable to identify precisely the Mississagi, although they did migrate to the Trent River system and the western end of Lake Ontario. By 1800, the appellation, "Mississagi", had become rather vague. In the latter half of the nineteenth century, the aboriginal population of the North Shore of Lake Huron had become entrenched on the Mississagi, Thessalon, Serpent River, Spanish River and Biscotasing Reserves (MacDonald 1974:11).

During the zenith of the fur trade, the Mississagi area was secured by three Northwest Company posts on LaCloche Island, Green Lake and near the mouth of the Mississagi River. This triad of posts prevented furs from leaving the Huron watershed. After the amalgamation of the two trading companies in 1821, the Hudson's Bay Compagny continued to operate the Mississagi River Post until the end of the century, although the quest for beaver pelts declined in the 1830s. A succession of free traders was also active in the area. p

Over the past 140 years the lands along the North Channel have been important in terms of resource exploitation, a state of affairs which has engendered conflicts in land use. Agriculture, timbering, mining, forest conservation, wilderness recreation, fishing, tourism, hydro-electric power production and most recently, uranium refining have been ascendent on the delta.

The decade of 1840 saw an awakening interest in the timber and mining potential of the area including the Mississagi River. Between 1848 and 1876, Bruce Mines flourished as the centre of a copper extractive industry. The nebulous existence of these copper deposits had first been recorded in the Jesuit Relations of 1669-1670 (Thwaites 1959). The metal extractive industry was short-lived except for the post-war uranium boom in Elliot Lake from 1948 to 1959 and its recent resurgence in the late 1970s. However, these early mining forays are important for they provided the base upon which the lumbering industry built to further populate the area, just as the mining industry had capitalized on the earlier fur trading communities. p

Crown Land Surveys from the 1850s to the 1870s (MacDonald 1974:13) indicated that the land was favourable for settlement and noted the timber wealth of the area. Perhaps spurred by the depletion of the Michigan forests, the newly formed Province of Ontario auctioned large timber tracts, notably in 1872 and 1885 (MacDonald 1974:13), and timbering was well underway by the 1880s. The completion of a railroad line to Sault Ste. Marie in 1887 provided additional access and a foundation for

supporting agricultural undertakings, and for sedentary and increased settlement.

During the last century the lumbering industry has been beset by several periods of "boom and bust"; subjected to natural disasters such as the Mississagi-Chapleau Fire of 1948 which destroyed 645,350 acres (MacDonald 1974:63) or 747,520 acres (Ministry of Natural Resources 1977:23); and from the perspective of twentieth century ecology, described as a despoiler of the natural environment.

So the wealth that nature flaunted in the faces of all who entered the woods was marked down for immediate plunder. Scarcely anyone looked upon the forest as more than a first crop which nature had very kindly thrown in without charge. The idea had not yet dawned that it might be an asset in perpetuity.

(Lower 1929:303)

Lumber companies which exploited the Mississagi-Blind River area from the 1860s are listed in Table 1.

From major sawmilling operations, the lumbering industry developed with the later addition of pulping operations, aided by the Ontario legislation of 1898 which prohibited the export of "unmanufactured sawlogs". However, the 1930s saw this industry face the same problem as that of the fur trade a century earlier -- the depletion of the natural resource.

During its period of ascendance, the timber activities generated rapid development of the surrounding area. The Municipality of Blind River was created in 1893 at the outlets of the Blind River into Georgian Bay, and the Mississagi River Improvement Company in 1894 built an elaborate installation to control the sorting and rafting of logs belonging to the different firms operating on the Mississagi River and its tributaries.

TABLE 1

LUMBER COMPANIES OPERATING IN THE MISSISSAGI-BLIND RIVER AREA

|  |           |
|--|-----------|
| Joseph Salvail Lumber Company<br>Montreal, Quebec        | 1853-1868 |
| Williams & Murray Lumber Company<br>Goderich, Ontario    | 1869-1885 |
| George A. Butterfield Lumber Company<br>Alpena, Michigan | 1886-1889 |
| W. R. Lawton Lumber Company<br>Toledo, Ohio              | 1889-1893 |
| Blind River Lumber Company<br>Blind River, Ontario       | 1893-1900 |
| Morgan Lumber Company<br>Bay City, Michigan              | 1900-1904 |
| Dolsen and McEwan Lumber Company<br>Bay City, Michigan   | 1904-1907 |
| White Pine Lumber Company<br>Menominee, Michigan         | 1907-1911 |
| Eddy Brothers Lumber Company<br>Bay City, Michigan       | 1899-1919 |
| McFadden and Malloy Lumber Company<br>Spragge, Ontario   | 1919-1926 |

TABLE 1

LUMBER COMPANIES OPERATING IN THE MISSISSAGI-BLIND RIVER AREA (cont'd

|   |           |
|---|-----------|
| Carpenter-Hixon, Lumber Company<br>Minneapolis, Minnesota | 1926-1935 |
| Blind River Pine Lumber Company<br>Blind River, Ontario   | 1935-1936 |
| J.J. McFadden Lumber Company<br>Blind River, Ontario      | 1936-1946 |
| Huron Forest Products Company                             | 1946-1956 |
| Howard Smith Company (Argus Corporation)                  | 1956-1961 |
| Dominion Tar and Chemical Company                         | 1961-1965 |

(Kauffmann 1970: 139)

Logs were floated down both the Mississagi and Blind Rivers. A canal connecting the booming area on the Mississagi to the mill on the western outlet of the Blind was laborously excavated by man and horse power in 1904 at a cost of \$18,000 (Kauffmann 1970:40) but the route was soon abandoned.

In order to reduce the increased risk of fire caused by the influx of tourists at the encouragement of the Canadian Pacific Railway, the Mississagi Forest Reserve was created in 1904 by an Order-in-Council of the Ontario Government. It encompassed an area of 5250 square miles (Kauffmann 1970:60) or 3000 square miles (MacDonald 1974:50), extending from the shores of the North Channel into the hinterland. By 1908, twenty-two rangers patrolled the area on fire watch (MacDonald 1974:52).

Great Lake shipping concerns sprang up in response to the need for rapid, inexpensive transportation of logs to markets and mills.

Tugs and rafts were the first vessels used but with the construction of a government wharf and warehouse by the Department of Public Works in 1904, shipping in the area entered a new era as it was possible to increase the size and efficiency of shipments of lumber, provisions and equipment. A concomitant of shipping improvement was the development of a vigorous North Channel fishing industry, specializing in the netting of huge quantities of whitefish, sturgeon, trout, and pickerel.

Tourism developed apace after its initiation by the CPR. Two provincial parks and two park reserves now grace the area (Ministry of Natural Resources 1977:73) as well as numerous lodges, resorts and private cottages.

In the 1960s, Ontario Hydro Electric Power Company satisfied its quest for hydro electric power sites on many of Northern Ontario's great rivers and the Mississagi was no exception. It now supports three dams for power generation (Ministry of Natural Resources 1977:101). With the construction of the uranium refinery on the east bank of the Mississagi River mouth by Eldorado Nuclear Limited in 1981, the area's 20,000 residents have entered the nuclear era.

## ENVIRONMENT OF THE STUDY AREA: IMPLICATIONS FOR HUMAN ACTIVITY

In general, we wish to point out the specific attributes of climate, topography protection from winds and food resources which would attract or act against human exploitation, and factors such as erosion or construction activity which would discourage our finding the vestiges of such exploitation.

### CLIMATE

The Eldorado property's location on the Great Lakes has clear implications for the climate. This in turn has several implications for human activities. Chagnon and Jones (1972:369) note that climatic impacts of the Great Lakes are most clear at their centre and for the immediate down-shore wind area. The Eldorado property finds itself in one of these band-like wind areas. One may therefore expect increased winter precipitation, generally increased wind speeds in all seasons and temperature moderation, particularly in winter.

For prehistoric hunting groups this would mean deeper, softer snow in this lake-oriented "snow belt". This would pose more difficult traveling conditions and bury edible plants. These conditions apparently encourage some larger game mammals to move inland during the winter. SP

One may assume that there was also a negative comfort factor in the humid, strong westerly-to-northwesterly winds sweeping along the lakeshore during the winter. In general, a hunting group present during winter, early spring or late fall would most likely seek out locations protected by a heavy windbreak of trees or high landforms. There is some speculation that these conditions led to the winter abandonment of the delta (Bertuilli, 1981:17). This idea will be discussed further after presenting other environmental factors. On the other hand, some reduction of early frost danger seems to have made it possible for indians to grow corn in this northern area as a supplement to fish, game and wild plants for winter survival.

As settlement by both Indians and Eurocanadians became more year-round, the strong winds should have also encouraged them to seek protected living locations. Very well-built houses and efficient heating systems could tend to free inhabitants from the constraints of the climate. Since the sorting of logs for the forest industry was an open-water or warm season activity, one would not at first expect to find associated camps being established in protected locations. However, since strong winds disrupt the actual sorting of logs, the area must be protected from extreme spring and summer winds. Therefore the sorting area and its camp would not be too near the river mouth. Due to the need for insect-sweeping winds, one may further speculate that such camps would have a southern or western exposure if possible.

When discussing the warmer seasons one would do well to generalize from this tendency to seek living sites exposed to winds for keeping away insects. In fact, one might postulate that this has always been a consideration for knowledgable forest dwellers. When this principle is not clearly followed as part of a forest settlement pattern, then one must spend the effort to determine why not. The response should tell the investigator something important about an overriding factor in operation.

Again, the importance of westerly winds must be viewed as a factor for the local forest industry, but in another way. The Mississagi River system is extensive while the Blind River, as the name implies, runs little more than 30 km into the interior ("Dead-end River" would be another translation of its name). The fact is that mills continued to be built at Blind River rather than on the Mississagi. It seems that the strong westerly winds permit logs from the westernmost river (Mississagi) to arrive at Blind River while the reverse would have been difficult. Thus, both rivers could be exploited from the same mill location.

Finally, the combination of moderated temperatures and sandy soils permitted corn horticulture among early (historic only?) indians and extensive garden production among later inhabitants.

## TOPOGRAPHY

The altitude of the study area ranges between Lake Huron water level (c. 176,8 meters AMSL) to 200 meters AMSL at the northern edge of the property. The surface varies from bare Precambrian bedrock sparsely covered with a thin layer of sandy silt to deposits of lacustrine alluvium in the low lying areas between ridges and hills. Near the shoreline the bedrock is visible only as isolated outcrops surrounded by sand or silt or a mixture of both. These attributes of the area conform closely to a general description of the North Channel shoreline for its first 130 kilometers east from Sault Ste Marie. However, the delta has one attribute which sets it apart from any shoreline segment between the Sault Ste. Marie and Spanish River: it has a large marshland environment. This appears to be due in large part to the fact that the delta of the Mississagi River in general and the Eldorado Nuclear property in particular is situated on a very deep deposit of riverine alluvium laid down since the last Wisconsin glacial retreat which uncovered this region approximately 11,000 years ago. The actual locations of these wetlands have shifted as foreshore flats and bays have lifted with postglacial rebound. Bertulli (1981:5), using the data of Lewis (1970:167) has estimated that the large lower flat parts of the delta have been exposed within the last 1-350 years. During this process, the ancient foreshore flats have lifted and drained slightly to form marshy islands and bays, finally to become dry land as other marshes have been formed in their turn. The eastern section of the Eldorado property is presently a major wetland.

The largest part of the Eldorado property, and indeed the part on which the refinery is being constructed, consists of a broad, almost featureless sandplain with a silty base. It is elevated some 2 m above the lake. One small abandoned channel cuts it from the north west before curving to the east and northeast, terminating in the marshes. A large (app. 365m) segment of this channel had been bulldozed where it crossed the refinery construction camp and parking areas. It was difficult to judge whether the channel provided good living environments other than at its two ends where it has good access to wetlands and the river's main channel. At its marsh (eastern) end, it and the marsh have a well-defined, well-drained

sand terrace. Being at the eastern edge of the low, flat plain, it has no exposure to prevailing summer or winter winds.

One other feature was found on this low area. A 1,5 meter sand terrace cut east-west from the Mississagi River bank toward the marshes. All but a short 150 metre segment had been removed where it crossed the main refinery site. It had clearly been first a shoreline and then a very livable margin to a wetland.

In general, it is apparent that the western margin of this large flat area has been eroded by the river. In effect then, if there were good locations for habitation along this particular segment of riverbank during the prehistoric and even early historic periods, they would most likely have been lost into the river itself. It is only as one moves south to a point even with the southern edge of the refinery enclosure that some (at least recent) stability can be seen along the water's edge. Even this could be cut away by an erosional nick-point working down to this bank segment from the north. For the moment, one would expect some preservation of at least early and late historic sites here. It is only here and at Patrick Point itself where the Mississagi River is easily accessible from Eldorado property. This is due to the presence of a sloping rather than a cut-bank. There is an additional comment to make about these sandy soils. They have a certain potential for agriculture which seems not to have been wasted upon both prehistoric and historic populations. Corn and, later, potatoes and general gardening were referred to in documents and interviews.

The other major geographical subareas of the Eldorado property are those characterized by bedrock outcroppings and their associated sand, gravel and reworked till beach terraces. Patrick Point is one such situation. Because the point projects farther into the Lake than the rest of the delta, its southern and western margins are exposed to more winds than other parts of the property.

Along the beach which extends from the mouth of the main stream of the Missisagi River southeastward to Patrick Point, a sand ridge, paralleling the water, rises to an elevation which is not greater than three meters. Approximately 1,90 m below the peak of this ridge, riverine silt was contacted. It is probable that the ridge was formed by ice flows forcing sand back from the beach during the spring break-up, a not uncommon feature in this region. It could also be, in part, a storm ridge since it faces onto the west, still beyond the protection of the delta's islands. The Eldorado parts of Patrick Point would provide little comfort to campers during the spring and fall spawning runs except for areas relatively far from the water.

The other outcrop-terrace situation is found along the northern boundry of the property. Here a rocky ridge rises some 20 m above the river (200 m AMSL). A former beach lies along the base of this ridge at an altitude of 183,5 m AMSL, some 6.5 m above present lake level and is characterized by a deposit of sand and coarse gravel grading to boulder tills as one proceeds eastward. About 305 m of its length had been exploited for aggregate to place on the refinery site and another 150 m had been opened for aggregate before it was found to contain too much silt and large boulders. The balance of its length running to the east property line had an access road built upon it and it would be difficult to say whether it had presented favorable living situations during the period when it had formed part of the lakeshore.

However, nearly 400 metres of former beach terrace remains undisturbed; running in a gentle southeast-east curve from near the property's northwest corner. While the terrace itself was wide enough to be camped on, one was struck by the stark shoreline situation which it would have presented with its exposed position and high rocky ridge. It could have been a less attractive living situation than that of Patrick Point today. The terrace was probably rather more comfortable after its foreshore flats had become wetlands. Today, it is fairly far from water and it has little exposure to wind during blackfly season (a fire or extensive cutting could relieve the latter problem). Proceeding westward, one must note that there has also been erosion of the riverbank near the

northern edge of the Eldorado property. However, the presence of erosion-inhibiting bedrock to the immediate north means that fewer sites of pre-historic as well as historic periods should have been lost. In addition, delta islands break strong summer winds while still allowing enough wind in to drive away the flies. One is less certain that this would have been a preferred situation for cold weather living given the existence of better protected areas in other parts of the delta. However, one must note that although the high part of the ridge does not continue to the riverbank, the bedrock does begin rising by the riverbank and would provide some winter protection.

In particular then one may lament our not having had access to the full length of the 1.5 m sand terrace (wetland margin). Similarly, the northern "high" terrace would have overlooked extensive wetlands once the lake had retreated and might also have provided favorable living situations. Conversely, one is less certain as to the importance of the central segment of abandoned river channel. We could also wish to have viewed the Mississagi riverbank before natural erosion removed possible early living sites. The latter loss was unavoidable. However, the other lost topography is unfortunate and was probably unnecessary since Eldorado Nuclear had offered to finance reconnaissance well in advance of any construction.

## FLORA

The Eldorado property is located on the eastern edge of the Missisagi River Delta complex, placing it near the center of the Great Lakes - St. Lawrence Forest Region. The locale where the Mississagi empties into Lake Huron's North Channel lies at the transition zone of the Algoma and Sudbury-North Bay Forest Sections (Rowe, 1959).

As mentioned previously, this locality is characterized by a lowland along the lakeshore backed by relatively steep-faced south-facing prominences. In the environment adjacent to the Lake Huron shoreline the mega flora is composed, largely, of luxuriant, second growth, mixed conifers and tolerant hardwoods. Dominant among these are eastern white pine (Pinus strobus), red pine (Pinus resinosa), jack pine (Pinus banksiana), white spruce (Picea glauca), yellow-birch (Betula alleghaniensis), sugar maple (Acer sacharum) and hop hornbeam (Ostrya virginiana).

In areas scourged by fire or denuded by lumbering, quaking aspen (Populus tremuloides), paper birch (Betula papyrifera), and several species of willow (Salix) are dominant trees. In the locality surrounding the refinery site, evidence of both lumbering and forest fires are abundant and the concomitant species mentioned above are well-represented.

Underbrush in this area appears to be dominated by striped and mountain maple (Acer pensylvanicum and A. spicatum) neither of which produce examples, in this region, larger than a medium-sized bush.

Wetland margins produce large numbers of larch (Larix laricina) and black spruce (Picea mariana). Overall, at least seventeen kinds of berries are found here in both wet and dry environnements. Chokecherry, raspberry, <sup>~ 1p</sup> cranberry, blueberry, strawberry, cherry and bearberry are among the most important.

Prehistorically, the major trees within the study area were probably white and red pine in mature stands with larch and yellow and paper birch

skirting the low lying and marshy sections. Underbrush would flourish only around the edges and on rock outcrops due to the shading effect of the mature conifers. Such a forest, devoid of undergrowth, would allow relatively easy cross-country travel during the clement seasons while providing shade and protection from the elements for habitations.

The MacLaren biological report (1978) describes the flora in quite a detailed manner. The economic botany of prehistoric and historic Indian populations would suggest that exploitation of these plant communities is so extensive that we cannot detail it here. In general, flora was used in preparation of both internal and external medicines, for eating as seasoning or individual dishes, for obtaining fibers, for obtaining dyes, for obtaining water resistant coverings for watercraft and shelters, for obtaining frameworks of watercraft and shelters, for carving and warping into small items, for heat; and so the list could go on, with accompanying quantities of criteria as to which specimens of the same species serve what purposes best. In addition, there was a certain "cultivation" of different species. For example, controlled forest burning or clearing could produce larger crops of dry-ground berries. Evidence from interviews confirm that large berry areas cause the establishment of seasonal berry-picking camps, thus concentrations of particular floral species have a direct impact on settlement patterns. Or, because standing but dead small-diameter, straight trees made the best conical tent frames one might kill several trees with axe blows to assure a future supply.

We are also not to forget the importance of certain plant communities to other animals so that the presence of bear, moose, beaver, goose or grouse for Indian consumption depended in turn on many of the same plant communities exploited by the Indians. Historically, the presence of heavy concentrations of berrys in areas burned off by Indians are known to have attracted several species of large and small mammals. ~p

In the 19th and 20th centuries the white and red pine forests took on a new significance as they were cut to provide building material and paper for more distant populations. This was not a balanced concept and many negative comments are made about this resource exploitation. For the

Mississagi delta, and the Eldorado property, its signification was a "temporary" change in floral communities and in the increased number of Eurocanadians utilizing the area. A log booming camp was set up; fishing stations were established for feeding the new mill town of Blind River; and more Indian and Eurocanadians built year-round homes along the Mississagi. Thus, an attractive floral resource had first a subtle balanced and then a forceful unbalanced importance for the nature and intensity of human presence and activity.

## FAUNA

When archaeologists discuss what elements in an environment presented an attraction for prehistoric and early historic peoples, faunal resources are most often cited. Obviously, a non-agricultural society without highly advanced transportation technology must procure wild fowl, mammals and fish in order to survive. Plant foods could be considered to either add pleasant variety to a diet, or to be a means of survival during starvation periods (not an uncommon occurrence), while faunal food is more central in importance.

The potential of an area to produce edible fauna is considered by many archaeologists to reflect the potential for human habitation. In a broad sense this is true. However, there are several qualifications which must be made. First of all there are resources which are highly predictable and which are easily procured and which do not appear to change their location due to the simple presence of people. Notable examples among these are stocks of warm and cold water fishes during different seasons, hare, squirrel, and some large birds such as grouse. Seasonally, one must include large water fowl although human presence can cause them to displace themselves. These resources are easily harvested by persons staying close to their camp or home and could be called "near camp" resources. There is another class of animal resource which is perhaps less predictable, or widely scattered, or which inhabits areas where one would not wish to live. They may require stalking due to wariness of people or considerable walking between scattered occurrences, or special and difficult transportation may be required in order for them to be harvested. Examples would be moose, large carnivores, deer, beaver, muskrat, and porcupine. Some researchers would place waterfowl in this category. One could call these "away from camp" resources. While these are not mutually exclusive categories, this classification does point up the fact that a rich potential for certain resources does not necessarily mean that one should look there for a human habitation. However, what is suggested is that one should examine areas with high potential for near-camp resources especially fish, which are also as close as possible to areas having high potential for several away-from-camp resources. Furthermore, at this point in campsite location one should

apply the considerations brought forward during the above discussions of landforms, climate and vegetation relative to comfort during different seasons.

The importance of faunal resources as a food source has become less clear in later historic periods. It is known that lumber companies established fishing stations, including ones on the Mississagi Delta. Economy and preference probably encouraged hunting game for logging camp kitchens as well. Certainly during the depression years or in other hard-time situations, hunting and berry picking (and gardening) would have been intensified. It would seem that sports hunters were encouraged by the railroad and more recently by the highways. The love of hunting is still observable today among both the populations of the Mississagi Indian Reserve and the town of Blind River. However, after the establishment of towns, houses along highways and logging base camps, most local hunters and fishermen would leave from and return to these buildings each day. In effect then, all wild game became "away-from-camp" resources. Non-local hunters and fishermen (and on occasion local persons as well) would still tend to place themselves as near the "action" as possible and one should expect to find evidence of camping at comfortable locations and the occurrence of well-placed motels and lodges as "archaeological" traces of the effect of fauna on modern settlement patterns.

In Table 2, the reader will find species lists which are not specific to the Mississagi Delta region but are, instead, representative of faunal populations which existed prior to the 18th century in northern Ontario. In this regard the lists contain species which are presently considered rare, very rare or extinct. In addition, only those species which would be of economic importance as a food source were included. Because of this selection very small species such as deer mice, voles, lemming, song birds etc. are omitted from these lists. As was the case with flora, recent observations made by biologists of J.F. MacLaren Ltd (1978) for Eldorado present an impression of what one may observe today in the general area of the Eldorado property.

Because one would like to suggest that it was a combination of large marsh resources with exceptional fishing that attracted Indian populations A 6

to the delta, it would be well to discuss the implications of fishing and wetlands. Mississagi Delta waters, including foreshore flats out into the North Channel of Lake Huron, are well known as being rich in fish, a factor which still forms a great attraction for human exploitation. Today, the McLaren environmental studies have confirmed the presence of bullhead, golden and spottail shiner, perch and trout perch, walleye, white fish, cisco, rock bass, pumpkin seed, lake sturgeon, pike, sucker, crappie, sunfish, bowfin, ling, smelt and alewife. All can be taken in net fishing, the method believed to have been common in pre-eurocanadian periods although evidence for hooking and spearing larger fish, especially sturgeon is also well known from archeological sites. All three techniques are widely documented in historic times. In general, warm water species such as catfish, and perch are reduced in number at the delta in cooler weather while the spring and fall of the year is marked by catches of fewer, but larger cold-water fish. Spring sturgeon runs and fall spawning migrations of cisco and whitefish would constitute a large part of this exceptional seasonal resource. It seems clear that if an individual or group knows the favorite aquatic habitats, fall and spring cold water fishing can be twice as rewarding for the effort made as the more widely-spread good fishing of the summer.

With reference to wetland faunal resources, one presumes that as the land has emerged from the lake during post-glacial rebound, marshes have appeared and disappeared only to reappear elsewhere. The greater part of the Eldorado property was foreshore flats and then a marsh. So, one might presume different proportions of water and wetland species at any given period. Nonetheless, the general faunal situation today is probably similar to what one might propose for the last 1500 years at least. Perhaps one only need examine questions of "where" and "when". For example, when Patrick Point was an island and then a high rise above marshes, the economic emphasis for someone camped there might have shifted from fishing to fishing and wetland exploitation (waterfowl, beaver, muskrat, etc). However, in both cases the comfort factor would still have required camping on the downwind side of the rock outcrop. At the rocky ridge along the northern Eldorado boundary, a similar sequence prevailed,

first with, availability of foreshore flats with good fishing and then marshes with rich wetland faunal resources. Here one would suggest that comfortable camping was also not available except at the east end where some wind protection was available. Fall and winter camping could find some shelter due to a recurvature of the shoreline. However, when at least the closest marshes had dried enough to encourage tree growth, year-round camping might have become convenient further west along the ridgebase. The presence of an abandoned river channel near certain segments of the rocky upland could have encouraged settlement at those locations even after more marshes had dried. The channel meant that transport, fishing and drinking water were still available at that time and some wind could still get in to clear insects. Still later, after the channel was abandoned and wetlands had retreated still further from the western half of these uplands, the nearby main channel with its resources would have formed a stronger attraction. Attractive locations near the more persistent wetlands to the east probably continued to exist. Thus, it would appear that fishing might have always been a strong resource due to good foreshore flats during the last 1500 years. At least it is clear that large wetlands were available during the last 1350 years with their obvious resources. However, good camping areas might have been quite restricted during the same period. The low sand terrace midway between these two rocky uplands could have been favorable for spring and fall camping, but it would seem to lack the relief needed for comfortable summer living.

The winter? If we are to believe the proposition that climatic factors discouraged winter occupation in the delta until modern technical means were at hand, then one must leave this issue at the side. Nonetheless, it would be logical to suggest that if heavy fish stocks in combination with wetland resources permitted the spring-summer-fall regrouping of small hunting groups, then the departure of large mammals such as deer, and the deep burial of edible plants might not have reduced the faunal resource sufficiently to discourage all hunting groups. The continued availability of fish seems to be the key issue, and fast-water fishing tends to be available during all but the most severe winters. The presence of rapids just above the Eldorado property might indicate winter sites above, if not on the Eldorado land itself. Again, rotten snow and the lack of ungulates

might make wetland hunting less attractive, but beaver makes very good winter eating. Therefore, one must qualify the situation by agreeing that faunal resources available during the winter might not have supported the large social grouping drawn to the delta during the other three seasons. However, one could hypothesise that small groups continued to exploit the delta during the winter from very carefully selected locations where fish and hare could provide a stable food base upon which other species could be added, especially beaver. sp

TABLE 2

Mammal Species of Economic Importance to an  
Aboriginal Hunting - Gathering Subsistence

|                         |  |
|-------------------------|--|
| Moose                   | - <u>Alces alces</u>                             |
| Moose                   | - <u>Alces americana</u>                         |
| Elk                     | - <u>Cervius canadensis canadensis (extinct)</u> |
| Woodland Caribou        | - <u>Rangifer caribou</u>                        |
| Whitetail Deer          | - <u>Odocoileus virginianus</u>                  |
| Woodland Buffalo        | - <u>Bison bison athabaskae</u>                  |
| Black Bear              | - <u>Ursus americanus</u>                        |
| Beaver                  | - <u>Castor canadensis</u>                       |
| Marten                  | \$ <u>Martes americana</u>                       |
| Fisher                  | - <u>Martes pennanti</u>                         |
| River Otter             | - <u>Lutra canadensis</u>                        |
| Mink                    | - <u>Mustela vison</u>                           |
| Least Weasel            | \$ <u>Mustela rixosa</u>                         |
| Shorttail Weasel        | - <u>Mustela rixosa</u>                          |
| Longtail Weasel         | \$ <u>Mustela frenata</u>                        |
| Striped Skunk           | - <u>Mephitis mephitis</u>                       |
| Coyote (Brush Wolf)     | - <u>Canis latians</u>                           |
| Gray Wolf (Timber Wolf) | - <u>Canis lupus</u>                             |
| Red Fox                 | - <u>Vulpes fulva</u>                            |

TABLE 2

Mammal Species of Economic Importance to an  
Aboriginal Hunting - Gathering Subsistence

cont'd.

|                          |                                   |
|--------------------------|-----------------------------------|
| Bobcat                   | - <u>Lynx rufus</u>               |
| Lynx                     | - <u>Lyns canadensis</u>          |
| Woodchuk                 | \$ <u>Marmota monax</u>           |
| Eastern Chipmunk         | - <u>Tamius minimus</u>           |
| Least Chipmunk           | - <u>Eutamius minimus</u>         |
| Eastern Fox Squirrel     | - <u>Sciurus niger</u>            |
| Red Squirrel             | - <u>Tamius ciurus hudsonicus</u> |
| Northern Flying Squirrel | - <u>Glaucomys sabrinus</u>       |
| Porcupine                | - <u>Erithizon dorsatum</u>       |
| Muskrat                  | - <u>Ondatra sibethica</u>        |
| Snowshoe Hare            | - <u>Lepus americanus</u>         |
| Groundhog                | - <u>Marmota monax</u>            |

(Buchanan 1979 : 17, 18)

TABLE 2

Avian Species of Economic Importance to an Aboriginal  
Hunting - Gathering Subsistence

|                          |                                |
|--------------------------|--------------------------------|
| Common Loon              | - <u>Gvia immer</u>            |
| Red Throated Loon        | - <u>Gavia stellata</u>        |
| Red Necked Grebe         | - <u>Podiceps grisegena</u>    |
| Horned Grebe             | - <u>Podiceps auritus</u>      |
| Pied Billed Grebe        | - <u>Podilymbus podiceps</u>   |
| Double Crested Cormorant | - <u>Phalacrocorax auritus</u> |
| Canada Goose             | - <u>Branta canadensis</u>     |
| Blue Goose               | - <u>Chen caerulescens</u>     |
| Snow Goose               | - <u>Chen hyperborea</u>       |
| Mallard                  | - <u>Anas Platyrhynchos</u>    |
| Black Duck               | - <u>Anas rubripes</u>         |
| Pintail                  | - <u>Anas acuta</u>            |
| American Widgeon         | \$ <u>Mareca americana</u>     |
| Shoveler                 | - <u>Spatula clypeata</u>      |
| Blue Winged Teal         | - <u>Anas discors</u>          |
| Green Winged Teal        | - <u>Anas carolinensis</u>     |
| Wood Duck                | - <u>Aix sponsa</u>            |
| Canvasback               | - <u>Aythya valisineria</u>    |
| Ring Necked Duck         | - <u>Aythya collaris</u>       |

TABLE 2

Avian Species of Economic Importance to an AboriginalHunting - Gathering Subsistence

cont'd

|                        |   |
|------------------------|---|
| Greater Scaup          | - <u>Aythya marila</u>                        |
| Lesser Scaup           | - <u>Aythya affinis</u>                       |
| Common Goldeneye       | - <u>Bucephala clangula</u>                   |
| Bufflehead             | - <u>Bucephala albeola</u>                    |
| White Winged Scoter    | \$ <u>Melanitta deglandi</u>                  |
| Ruddy Duck             | - <u>Oxyura jamaicensis</u>                   |
| Common Merganser       | \$ <u>Mergus senator</u>                      |
| Red Breasted Merganser | - <u>Mergus senator</u>                       |
| Hooded Merganser       | - <u>Lophodytes cullellus</u>                 |
| Goshawk                | - <u>Accipiter gentilis</u> (rare)            |
| Sharp-Shinned Hawk     | - <u>Accipiter striatus</u>                   |
| Marsh Hawk             | - <u>Circus cyaneus</u>                       |
| Rough Legged Hawk      | - <u>Buteo lagopus</u> (rare)                 |
| Red Tailed Hawk        | - <u>Buteo jamaicensis</u>                    |
| Broad Winged Hawk      | - <u>Buteo platypterus</u>                    |
| Golden Eagle           | - <u>Aquila chrysaetos</u> (very rare)        |
| Bald Eagle             | - <u>Haliaeetus leucocephalus</u> (very rare) |
| Osprey                 | - <u>Pandion haliaetus</u>                    |

TABLE 2

Avian Species of Economic Importance to an AboriginalHunting - Gathering Subsistence

cont'd

|                      |  |
|----------------------|--|
| Peregrine Falcon     | - <u>Falco peregrinus</u> (rare)         |
| Pigeon Hawk          | - <u>Falco columbarius</u>               |
| Spruce Grouse        | - <u>Canachites canadensis</u>           |
| Ruffed Grouse        | - <u>Bonasa umbellus</u>                 |
| Great Blue Heron     | - <u>Ardea Herodias</u>                  |
| American Bittern     | - <u>Botourus lentiginosus</u>           |
| American Coot        | - <u>Fulica americana</u>                |
| Black-Bellied Plover | - <u>Squatarola squatarola</u>           |
| Herring Gull         | - <u>Lorus californius</u>               |
| Ring Billed Gull     | - <u>Lorus delawarensis</u>              |
| Bonapartes Gull      | - <u>Lorus philadelphia</u>              |
| Passenger Pigeon     | - <u>Ecopistes migratorius</u> (extinct) |
| Mourning Dove        | - <u>Zenaidura macroura</u>              |
| Great Horned Owl     | - <u>Bubo virginianus</u>                |
| Long Eared Owl       | - <u>Asio otus</u>                       |
| Short Eared Owl      | - <u>Asio flammeus</u>                   |
| Snowy Owl            | - <u>Nyetea scandiaca</u>                |
| Barred Owl           | - <u>Strix varia</u>                     |
| Hawk Owl             | - <u>Surnia ulula</u>                    |

TABLE 2Avian Species of Economic Importance to an AboriginalHunting - Gathering Subsistence

cont'd

|                     |                                |
|---------------------|--------------------------------|
| Boreal Owl          | - <u>Aegolius funereus</u>     |
| Whip-Poor-Will      | - <u>Caprimulgus vociferus</u> |
| Common Night-Hawk   | - <u>Chordeiles minor</u>      |
| Belted Kingfisher   | - <u>Megaceryle alcyon</u>     |
| Pileated Woodpecker | - <u>Dryocopus pileatus</u>    |
| Blue Jay            | - <u>Cyanocitta cristata</u>   |
| Gray Jay            | - <u>Persoreus canadensis</u>  |
| Common Raven        | - <u>Corvus corax</u>          |
| Common Crow         | - <u>Corvus brachyrhynchos</u> |
| Brown Thrasher      | - <u>Toxostoma rufum</u>       |
| Common Grackle      | - <u>Quiscalus quiscula</u>    |

(Buchanan 1979: 21, 23)

TABLE 2

Ichthyological Species of Economic Importance  
to an Aboriginal Hunting - Gathering Subsistence

|                   |                                  |
|-------------------|----------------------------------|
| Channel Catfish   | - <u>Ictalurus punctatus</u>     |
| Brown Bullhead    | - <u>Ictalurus nebulosus</u>     |
| Barbot            | - <u>Lota lota</u>               |
| Bluegill          | - <u>Lepomis macrochirus</u>     |
| Pumpkinseed       | - <u>Lepomis gibbosus</u>        |
| Smallmouth Bass   | - <u>Micropterus dolomieu</u>    |
| Largemouth Bass   | - <u>Micropterus salmoides</u>   |
| Black Crappie     | - <u>Pomoxis nigromaculatus</u>  |
| Rock Bass         | - <u>Ambloplites rupestris</u>   |
| Yellow Perch      | - <u>Perca fluviatilis</u>       |
| Sauger            | - <u>Stizostedion canadense</u>  |
| Walleye           | - <u>Stizostedion vitreum</u>    |
| Freshwater Drum   | - <u>Aplodinotus grunniens</u>   |
| Lake Sturgeon     | - <u>Acipenser fluvescens</u>    |
| Lake Charr/Trout  | - <u>Salvelinus fontinalis</u>   |
| Brook Charr/Trout | - <u>Salvelinus fontinalis</u>   |
| Lake Whitefish    | - <u>Coregonus clupeaformis</u>  |
| Cisco             | - <u>Coregonus artedii</u>       |
| Muskellunge       | - <u>Esox masquinongi</u>        |
| Northern Pike     | - <u>Esox masquinongi</u>        |
| Northern Pike     | - <u>Esox lucius</u>             |
| Creek Chub        | - <u>Semotilus atromaculatus</u> |

(Buchanan 1979: 24, 25)

## SUMMARY DISCUSSION OF THE ENVIRONMENT AND ITS IMPACTS FOR ARCHEOLOGY

Environmental factors present a useful framework within which to view human activities. Noone suggests by this that one can discount cultural and historical factors which appear to have nothing to do with the environment. Cultural groups may decide that a particular animal species is inedible so that a river teeming with highly edible catfish may go ignored. Or, an attractive well-drained terrace with an ideal wind exposure and direct access to several desirable resources may be ignored for camping during several generations because of the presence of graves or fearsome supernatural beings or because one might be exposed to an enemy. Nevertheless, it appears to be a truism that no matter who was, or is, in the Mississagi Delta, there were, and are, specific environmental or geographic factors either favoring or mitigating against their attraction to the area, or favoring their settlement in one specific geographical situation or another. Wide variation in technology and economic emphasis might change why a particular factor is important, or determine its magnitude of importance. For a band of prehistoric Indian hunters and gatherers, prevailing westerly winds could encourage summer camping on rises or banks exposed to the west in order to lift the clouds of black flies and mosquitos. For a logging company it could mean choosing the easterly of two river mouths for a sawmill so that westerly along-shore winds could easily carry logs from the second drainage basin to the mill. For the planner of a uranium fuel refinery it might have no importance at all unless it was suggested that some negative impact on the environment might be reduced if the plant was downwind from a particularly sensitive area.

An archaeologist's interpretation of what factors might be important, and how they influenced human behavior is the reflection of a particular researcher's bias. This is not necessarily a condemnation. One easily admits the assumption that prehistoric people had to eat and that the placement of living quarters would generally bear a favorable relationship to resource-rich habitats. It follows that because of the important association of water with food resources, the northern archaeologist usually finds it easy to admit to an assumption that a search for pre-railroad, pre-airstrip, pre-road archaeological sites will be oriented

to the margins of actual or former streams, rivers, marshes and lakes. This could also be true of certain later sites as well. There are those who are concerned that the attraction to water would be less strong during the winter months when water can be taken in by eating or melting snow. This might be so. Nevertheless, the area to be exploited by a forest-dwelling hunter in winter can be expanded considerably by following frozen waterways. Also, tracks can be detected quickly where animals have followed or crossed a waterway and in most areas a broad resource base must be exploited in winter so that fishing remains an important reason to camp near water. A final bias which will be noted here is a belief that habitation sites would have been selected on some principle of relative comfort. Sometimes this could mean choosing a position exposed to summer breezes and protected from winter winds. In given situations, protection from extreme summer winds might also be a factor. "Comfort" might mean choosing a gravel or sand terrace with easy digging, and excellent drainage instead of a clay or rocky terrace, provided that the choice exists. Within a boreal forest context, these assumptions have considerable support. However, their application must always be made with considerable thought for the possibility that other causes than these ones could have resulted in an observed settlement pattern.

## FIELD WORK RESULTS

### PREHISTORY

The presence of several Terminal Woodland sites dating since 800 AD, often with historic period components, had suggested that we might expect to find other sites of a similar nature on the Eldorado holdings (figure 2). The two possible prehistoric sites already reported for this property (CbHs-1,17) were both from the Patrick Point area south of the abandoned logging canal. Obviously, this area and the river bank in general had received the attention of several archaeologists so that the chances of finding new prehistoric sites here were minimal. However, we were quite hopeful that the terrace near the northern boundary and the terrace at the marsh abandoned channel junction would produce new sites.

On the northern terrace at a distance of two hundred meters from the river's edge, the East Terrace 1 Site (CbHs-17) and east terrace<sup>(2)</sup> site (CbHs,18) were discovered (figure 3). The geographic designation, "East Terrace", specifies the location of the terrace relative to the Mississagi River. The former site consists of a few isolated finds, and the latter, although somewhat more extensive is also limited as far as artifactual recoveries are concerned, and perhaps represents a small group camping for a short time. Both sites are located in a glade dotted with pincherry trees (Prunus) (figure 5). Figure 2 shows the location of these sites in relation to the other known archaeological and heritage resources of the Mississagi delta and the Eldorado holdings. Their precise location is registered with the Ministry of Culture and Recreation (Ontario).

The East Terrace 1 Site can be termed a "find spot" rather than a site on the basis of the paucity of artifacts recovered despite intensive testing in all areas immediately adjacent to the original discoveries, and extensive testing in the general area. Eleven minute ceramic sherds from the body of one vessel were brought to light here. The grit-tempered sherds probably belong to one pot as the uniformity of Munsell colour (5YR 6/6 -- reddish yellow) and hardness on Mohs' scale (2) attest. No decoration was discerned on the sherds, thus limiting inferences regarding

cultural affiliation and time of manufacture. The vessel seems to have been smoothed on the interior before firing. The quality of the ceramic and the dearth of recovered artifacts is characteristic of several sites belived to belong to the Algonkian pattern in Late Terminal Woodland times <sup>sp</sup> between AD 800 to the historic period.

Its location seems too far (200 m) from the present riverbank for an association. However, we have already noted that this would probably have been a harsh environment at the time that the terrace was a lakeshore beach. The slightly later marsh and river channel environment would have been more favourable and the site would have been within 12 m of the marsh edge. The exact location of the river channel is unclear. There could have been one within 12 m, while a slightly clearer one is approx. 100 m to the west.

The East Terrace 2 Site is farther north along the terrace just outside the present Eldorado property boundary. It coveres an area of <sup>sp</sup> approximately 10 X 10 meters and shares the same environmental situation as the East Terrace 1 site except, being further to the northwest, it actually has some winter protection from a westward curve of the high ridge.

The soil is sandy under a black organic layer of duff (figure 4). Cultural material was confined largely to the interface between the brown-black sandy soil and the reddish yellow subsoil.

The site was tested intensively by means of adjacent test pits. A large amount of fire-cracked rock was brought to the surface in addition to ceramic and lithic artifacts which are listed in Table 3. A scattered hearth might have been indicated.

TABLE 3

CERAMIC AND LITHIC ARTIFACTS, EAST TERRACE 2  
SITE, CbHs-18

CERAMICS

|                         |          |
|-------------------------|----------|
| Rimsherd                | 1        |
| Neck/shoulder sherds    | 2        |
| Undecorated body sherds | 55       |
| Decorated body sherds   | <u>8</u> |
|                         | 66       |

LITHICS

|                         |          |
|-------------------------|----------|
| Chert flakes            | 3        |
| Chert shatter fragments | 2        |
| Chert wedge             | 1        |
| Chert cores             | 2        |
| Slate fragments         | 4        |
| Slate net sinker        | <u>1</u> |
|                         | 13       |

In this case also, the sixty-six ceramic sherds recovered are very similar in Munsell colour (5YR 6/6 -- reddish yellow or 10YR 6/4 -- light yellowish brown) and hardness (3). The grit temper consists of large grains of quartzite and feldspathic minerals.

The one rim sherd is plain with a non-radiused lip and thicknesses of 7mm at the lip and 9mm at 2 cm below the lip. It is light yellowish brown in colour and appears to have been finely made albeit with temper granules ranging up to 3mm in size. The two neck/shoulder sherds are decorated with random diagonal scratches and closely-spaced punctates made by applying the end of a small twig to the wet clay. Each punctate is about 3mm in diameter and the same dimension in depth. The decorated body sherds probably belong to the same vessel; identical decoration, fine random

scratching, is exhibited on all of them. Finally, the body sherds are well-made but coarsely-tempered, with wall thicknesses averaging around 8mm.

The majority of these ceramic sherds must belong to the same vessel or to two vessels made by the same potter. It is apparent that the potter exercised a great deal of control over all aspects of the pot-manufacturing process, i.e. paste mixing, vessel construction, drying and firing. In general, the pots were well made and their attributes are typical of Terminal Woodland Algonkian ceramics.

Lithic artifacts were few; other than one shale net-sinker and one chert wedge (a tool used for scoring, incising, or splitting), the recoveries consisted of chipping detritus, such as flakes and shatter fragments which are by-products of tool manufacture, and two cores of chert from which smaller pieces to be further refined into tools are removed by percussion. The slate fragments are unworked but their appearance on this site is congruent with its presence in many other sites on the delta (Bertulli 1981). The types of chert found on CbHs-18 can be traced to the Hudson Bay Lowlands; the Forest Hill Formation which outcrops on Manitoulin Island, Fitzwilliam Island and Collingwood (Fox 1981); Campbell Quarry in Northern Michigan; and an unidentified Southern Palaeozoic source.

Metric data are contained in Table 4.

TABLE 4

METRIC DATA, LITHIC ARTIFACTS, EAST TERRACE 2  
SITE, CbHs-18

| <u>Artifact<br/>Number</u> | <u>Type of<br/>Artifact</u> | <u>Type of<br/>Material</u>    | <u>Length<br/>(mm)</u> | <u>Width<br/>(mm)</u> | <u>Thickness<br/>(mm)</u> | <u>Weight<br/>(gm)</u> |
|----------------------------|-----------------------------|--------------------------------|------------------------|-----------------------|---------------------------|------------------------|
| 1                          | flake                       | Hudson Bay<br>Lowland Chert    | 32                     | 12                    | 4                         | 1.3                    |
| 2                          | flake                       | Campbell<br>Quarry Chert       | 11                     | 9                     | 3                         | 0.2                    |
| 3                          | flake                       | Southern Pal-<br>aeozoic Chert | 11                     | 9                     | 3                         | 0.2                    |
| 4                          | shatter<br>fragment         | Hudson Bay<br>Lowland Chert    | 11                     | 10                    | 4                         | 0.4                    |
| 5                          | shatter<br>fragment         | Thermally<br>altered Chert     | 19                     | 15                    | 9                         | 1.8                    |
| 6                          | wedge                       | Hudson Bay<br>Lowland Chert    | 20                     | 14                    | 5                         | 1.9                    |
| 7                          | core                        | Fossil Hill<br>Chert           | 58                     | 17                    | 17                        | 18.7                   |
| 8                          | core                        | Fossil Hill<br>Chert           | 67                     | 30                    | 23                        | 48.8                   |
| 9                          | fragment                    | slate                          | 62                     | 33                    | 6                         | 16.9                   |
| 10                         | fragment                    | slate                          | 27                     | 23                    | 4                         | 4.4                    |
| 11                         | fragment                    | slate                          | 40                     | 15                    | 4                         | 3.2                    |
| 12                         | fragment                    | slate                          | 27                     | 12                    | 3                         | 1.1                    |
| 13                         | net-sinker shale            |                                | 75                     | 52                    | 10                        | 80.1                   |

The formulation of inferences concerning the past inhabitants' lifeways are severely hampered by the limited number of artifacts recovered. CbHs-18 is not extensive in size -- it occupies approximately 0.2 hectare. This indicates that the site was used by a small number of people. The artifacts are typical of the late prehistoric Algonkian culture (Terminal Woodland). Its position would be consistent with either

a summer or winter occupation being both topographically open to summer winds and topographically protected from winter winds. Its position also suggests that a spring or summer occupation would have been more comfortable if that occupation was after the land to the west and south had emerged sufficiently to permit the growth of some vegetation.

The fact that no site was found on the terrace at the margin of the marsh is disconcerting. This is an ideal spring and fall camping area, sharing many environmental attributes with the prehistoric boom camp (CbHs-15) just east of Eldorado land on the same marsh (figure 2: 16, and Bertulli 1981:138-167).

In effect, there are no excavatable prehistoric sites on Eldorado property. The mouth site (CbHs-1) (figure 2: 29) has not been rediscovered since it was reported in 1961 and there are no associated features or artifacts reported for the Patrick Point Rock Structure (CbHs-14) (figure 2: 17).

## HISTORY

"Field work", when dealing with historic cultural resources may be defined as including the searches which one must make for historic maps, plans, documents and interview projects with local historians as well as actual searches on the ground. For organizational convenience, this is the sense which we will use here.

One of the first questions we asked of the data was what are the associations of named groups of people with the Mississagi Delta in general, and with the Eldorado property in particular. As noted in the above historical overview, specific references to the delta's people are missing in the journals of Brule Nicolet (ca 1615-1634). However, although Champlain's journal does not name the occupants, his map of 1632 (figure 6) does show the river with an inscription which translates as "place where the savages dry raspberries and blueberries every year". One is not certain what significance should be given the fact that this inscription was placed on the east bank of the river. In that this same position was chosen by several mapmakers discussed below for placement of settlement symbols, one is tempted to suggest that this was indeed the side of the river where the people were seen. Since one assumes summer exploration (berry season), it follows that perhaps we are seeing the location of summer camps on these maps.

The Jesuit fathers were frustratingly unspecific about where they were landing in the summers to conduct their baptisms and other missionary activities.

However, they did refer to the people there as "Mississaguas", "Mishesaking" and "Oumisagai". Father L. André is quoted in the Jesuit Relations (Twaites, 1959) on August 28, 1670 as writing that "... these people...are situated upon the banks [note the plural form] of a river rich in sturgeon..." also, "Landing at the place where this Nation had erected its cabins...". The implication is thus made for the first time that various locations might be settled. However "upon the banks" might be more poetic than descriptive.

Prior to Father André, the explorer Alexander Henry had eaten at the mouth (again without being specific) and noted that sturgeon fishing among the Mississagi was the basis of the diet during the summer months.

Mapwise, although a Galinée map of 1670 identifies a Missassagi people, they were shown to the west on the Thessalon River. It was not until the 1702 De l'Isle map (figure 7) that the Mississagi were identified by name on a map as being at the mouth of the Mississagi River. There, two "settlement" symbols were placed on the east bank of the river.

In 1710, a letter from Antoine Raudot, Joint Intendent of Canada (Kinietz, 1940:371), noted that the Mississagi "come together in the spring on the bank of this river to plant corn...". He also noted, as had the Jesuits that fishing was very good, especially for sturgeon. He also wrote that the band included "...from fourty-five to sixty warriors...". However, he did not specify on which bank of the river he found people. Because of the De l'Isle map, we might suppose the east bank. Raudot also wrote of the seasonal moves by Algonkians (the larger cultural group to which the Mississagi belonged) when he noted that people leave "...their village and...go inland in the winter...to hunt. They separate...in order to find more easily something to live on." However, he also gives us our first hint that people might have stayed in summering areas (such as the delta) when he says: "...leaving in the village only those who absolutely cannot march".

In 1746, a settlement is shown on the east bank, this time on a d'Anville map (figure 8). The same is true of Faden's 1796 map (figure 10).

It would appear logical to suggest that historic people living in the Mississagi River Delta during the 17th and 18th centuries were there as a larger macroband regroupment of small winter inland hunting groups. This larger band came together in spring for fish spawning runs, and spent the summer and fall as well untill fall fish spawning runs, ripening corn, and berry harvests were ready as winter food supplements. Although they are

not mentioned in the records, one must wonder if the spring and fall waterfowl migrations were not also a part of this spring-through-fall procurement pattern. Similarly, one notes a lack of mention of large mammals. If exploration by Europeans was a summer activity, they might have missed seeing much of the spring and fall activities. *sp*

As a final characteristic of these early historic groups, elderly and sick persons stayed behind in the "summering" area. It would also seem fair to suggest that summer camps were on the east bank of the river. We cannot easily discuss the size of the macroband during the summer, but Bertulli (1981:13-15) has suggested that it might have been between 120 and 300 during the historic period as compared to 30-150 in the prehistoric period. Such estimations are admittedly crude, but it does suggest that there could have been anywhere from twelve to sixty habitations erected in and around the delta during any given summer. This is based on a theoretical family of five and on a tendency noted elsewhere for boreal forest people to prefer the social situation of two families in a tent. While one is uneasy with such conjecture, it is sufficiently accurate to suggest that one should find evidence of a great number of occupations in this area from centuries of use. Therefore, it seems useful to continue our pursuit of where maps and other data place these historic settlements. We will move next to the 19th Century.

When the treaty of 1850 was negotiated, the Mississagi chose to retain the east bank of the river as their reserve (figure 11). This would appear to conform well with the idea that the placement of symbols on early maps showed where the Indians preferred to place summer camps. The Indians probably entered the treaty with the idea of protecting their "summer residence" from a growing population of retired fur trading personnel, free traders, mining companies and early settlers. At the time, there probably seemed to be no danger of anyone ever settling the vast interior, so why try to protect it as well.

The very location of the fur trade posts themselves probably suggests something about where Indian people were living. We speculate that; the Northwest Company was on the east bank and when the HBC absorbed the NWC in 1821 they moved into the former NWC post. With the new treaty, the HBC was obliged to move back to the west side. A letter from J. Watts to Factor Edward Hopkins dated 13 July 1861 (Hudson's Bay Archives (Company, 1962) verifies all but the original position of the NWC post.

Our speculation regarding the NWC post is based on the fact that the NWC had the advantages in the trade for this region and took the favoured locations for themselves. With the amalgamation of 1821, HBC posts tended to move into the old NWC posts. We propose that this is what happened here, and that the favoured location was where the Indians were, and that the Indians were there for environmental reasons of fishing and summer comfort.

Mississagi oral tradition speaks of intensive summer camping along the east bank from the present railroad tracks south to a point some 100 m into the Eldorado property at its northwest corner (C. Chiblow: May, 1981). A second area of intensive use according to oral tradition (C. Chiblow: November, 1980) was the east shore of Patrick Point outside of the Eldorado boundary. Here, spring and fall camping was common. A third area of historic camping was the marsh edge near the railroad track east of the Eldorado entry road (C. Chiblow: May, 1981). The later was for early fall cranberry picking. Interviews also indicated that the Mississagi used to place sturgeon nets just west of Patrick Point and camp about 120 m back from the east bank (C. Chiblow: Novembre, 1980).

Previous archaeological reconnaissance along the east bank has defined several areas with considerable historic period debris (figure 2: 2, 4, 11, 12, 19, 20, 22). The distribution of these sites conforms well to oral tradition. It is also noteworthy that this section of river is either quite rapid and is favoured for fishing, or is just at the foot of rapid water and is easily navigated while still being excellent fishing. These locations also have excellent summer wind exposure without being too strong

such as at Patrick Point. Former reconnaissance at Patrick Point had not yielded large areas of historic debris so that one cannot confirm this as an Indian camping area. It is suggested that the interviewer was supposed to understand that this was a very recent part of the pattern so that artifacts would be those of any modern camper.

Available township plans for 1861 and 1881 show details for the bank facing the reserve, and it seems clear that several Eurocanadian entreprises were expanding (figures 12, 13). By this time timber cutting rights had also eaten into the eastern and southern parts of the reserve, i.e. the Eldorado property was undergoing cutting at this time. A subdivision plan of 1882 (figure 14) shows that the reserve had been reduced in size. Along the riverbank Indian land comes no further south than Pahpashcah creek. Interviews clarify that camping still continued south of the creek (C. Chiblow: May, 1981). There is some concern on the reserve today that settlers retained their pre-treaty lands for some as-yet unexplained reason.

The same plan (figure 14) and another of uncertain origin (figure 15) indicates that some of the settlers houses of 1882 were on what is now Eldorado property. If Indian concerns are correct, that settlers retained land they already had at treaty, then some of these same houses could have predated 1850. The "Felix Morin" house at the lower edge of Lot 3 was 400 m south of a line even with the southern-most point of Palpashcah creek according to the plan. This conforms roughly with the limit of lot 3 today (figure 20). Interview data (C. Chiblow: May, 1981) indicates that in the 20th century, this property was owned by Monroe Boyer, probably a decendent of an HBC factor. Figure 16 suggests that there were two houses on the Boyer property. It was also pointed out during the same interview that land to the south of the Boyer place was open range for cattle and horses. Within the last thirty years, it has been used mainly for tourist camping and as a tree farm (the Jack Smith tree plantation).

In order to keep all of this in perspective, it is important that one bears in mind that right up through World War II, the Mississagi have viewed their settlements at the delta as only one part of their sphere of

economic activity. Winter hunting and trapping on inland lakes and waterways was still considered a proper activity for a Mississagi, although there was progressively more interest in summer work on the log sorting jack and the mill as a supplement to a bush economy. Finally, during the early years of the 20th century, both summer and winter wage labour was seen as being of interest, even if it was not altogether compatible with attitudes born of independent bush living. There was little variation in the size of the regrouped Mississagi Band at least through the early years of the 20th Century. An HBC plan made at the end of the 19th Century (Fig.15) shows that there were 40 heads of family on the reserve. This implies 200 or fewer persons, still within early historic population estimate ranges. A consistently small population and a large hunting territory extending inland some 165 km to height-of-land (near the CPR tracks and Chapleau) made it possible to maintain a relatively traditional hunting economy and to consider the delta as where one left some persons or as a summer residence until logging camps became more numerous and cut out areas became commonplace. This, the "other" part of the Mississagi territory, was not protected by treaty. Upon reflection today, people conclude that it had not been believed necessary because it had seemed so large and safe. The extent of the winter hunting lands complementing the rendezvous area of the delta can be seen on the Condor map of 1782 (Fig.9). It shows that the height of land was also the extent of Mississagi hunting in the 18th Century.

In effect, there is every indication that historic <sup>native</sup> Amerindian, and to a large extent early settler, occupation was well away from the lake with an orientation to fastwater fishing and insect-free areas for comfortable summer living. Therefore, Eldorado property was only marginally involved. The activities taking place on Eldorado holdings were infrequent and/or very recent Indian camping, tourist camping, stock grazing, log booming <sup>sp</sup> (sorting and rafting), log cutting, tree farming and, of course, intensive Indian camping and settler occupation on the extreme northwest corner of the property.

We have not as yet discussed logging operations in the delta to any extent. It is in another stream of events. The history of logging in this region is presented in some detail by Carl Kauffmann's Logging Days in

Blind River (1970) and from a different perspective by Graham MacDonald's The Mississagi Country: A study in Logging History (1974). The scope and colour and outline of events are well-presented.

For the Eldorado property, the most important aspect of the forest industry was the necessity to form free-floating logs into large raft-like booms near the mouth of the Mississagi for floating to the mills at Blind River and to several mills in Michigan. There must have been sorting and booming operations in the delta prior to 1893. However, this is the first date reference made by Kauffmann (:114). American timber baron F.W. Gilchrist began booming logs that year for export to Michigan. He pruchased the house of James McGauley located just below the Mississagi Falls as his headquarters (Fig.14). He built his booming grounds on the main channel and incorporated this operation in 1894 as the Mississagi River Improvement Company. By 1899 export to Michigan was largely forbidden and the grounds came to serve exclusively the North Channel of Lake Huron. Thirty men worked twelve hours a day from May untill October. The sorting jack and general operations are discussed in Kauffmann (:37-38). The Company was bought out by Eddy Brothers Co. Ltd. in 1899 and was still chartered by Domtar in 1970; although operations had ceased the year before due to the high cost of driving logs down a river blocked by hydroelectric dams.

High costs of log transport had other impacts on human activities at property now held by Eldorado. Just after the turn of the century, Eddy Brothers Lumber Company decided that a cheaper means must be found for transporting logs than by tug-towed booms. The Mississagi River Improvement Co. (owned by Eddy) dug a logging canal from the Mississagi to Blind River. It was completed by horse and hand power in 1904, together with two lift bridges. Technically, it did not function well and was abandoned within about a year.

When we were doing our field examination and testing we concentrated effort on the locations of the canal and the booming grounds, especially

the camp, and the southern tip of the settlement area, i.e. the Boyer Place. All could be found by surface inspection. Test holes themselves contributed nothing to our knowledge of these sites except to suggest by way of negative evidence that:

1) One would expect to find little at the canal unless a search was being specifically made to locate a feature such as a lift-bridge; 2/p

2) the boom camp has been so severely damaged by construction activity that a particular and intensive testing project would be required to fully evaluate its preservation IF one felt that this was justifiable; and

3) the presence of less material at the Boyer Place than at sites further north suggests that the most intensive summer camping was further north and is probably better represented at the three Chiblow sites.

Our activities in general at these three sites were as follows.

1) The M.R.I.C. (Mississagi River Improvement Co.) Logging Canal Site (CbHs-21) (Figs. 2, 3, 17) was not mapped separately. A short spur of our test line was run with negative results along the north bank on the chance that a construction camp might be encountered. Nothing is known about possible associated sites such as construction camps or the actual location of the lift bridges. Surface inspection of the road bordering the canal on the south was negative.

2) The M.R.I.C. Boom Camp Site (CbHs-20) (Figs. 2, 3, 17, 18) was tested only at the road. The disturbed nature of the ground was considered the equivalent of testing since it had the same effect, cutting through the surface to see what is in the "archaeological subsoil". A great quantity of boom logs are covering the ground near the riverbank. We could only find one visible trace of the camp itself, a 1 X 4m depression (outhouse?) 70m from the water and within 5m of the present treeline (Fig.18). Informant data (Sarazin: May, 1981) gave us a general layout of the camp (Fig. 17) although we have been unable to verify exact locations and dimensions of buildings. One must be struck by the lack of obvious

historic deris, other than boom logs, on the disturbed surface of a site <sup>sp.</sup> occupied during eighty years. One would have expected to see log sleeper remains at the walls of former buildings, and the remains of a forge (blacksmith shop) should be quite obvious even if disturbed. Perhaps one must conclude that damage has been deeper than it appeared or that by chance most buildings are still under a layer of logs, vegetation and machine-displaced soil. The latter could not, however, be the case for the forge.

The Boyer Place Site (CbHs-19) (Fig. 2, 3, 19, 20) is undisturbed by recent activity. Although our test lines revealed no artifacts, the ridges of fence lines and the mounds and depressions of houses and outbuildings could be seen and mapped (Fig.20). There was no attempt made to test house traces at the Boyer Place as it was judged unnecessary at this time. House outline "1" in Figure 20 seems to be the older of the houses, possibly the original Morin House. According to interview data, outline "2" was apparently that of Boyer's house; "5" was his barn (on piers); "9" his root cellar, and "3" probably represents several outhouse locations (Chiblow, May 1981). A 1961 photograph (Fig.21) taken by an earlier archaeological expedition (Devereux, 1962-63) shows the Boyer house in-place with an outhouse to the east (to the right side of the photograph). Other traces, outside the Eldorado boundry, are probably those of Boyer's sister and brother-in-law, the Jack Jenette (Genest?) family (Chiblow, May, 1981). In effect, there are three major historic period sites on the Eldorado property. All three touch on unexplored archaeological themes in the Mississagi River Delta: 19th and 20th century domestic sites and 19th and 20th century technical-residential logging sites. One site, the canal, is basically preserved in its original form, although there might be associated features which exist only as archaeological remains. A second site, the boom camp has been cut by placement of a water in take line and associated bulldozing and is in a seemingly poor state of preservation. However, there could be preserved segments of the camp in undisturbed areas. A third site, the Boyer Place is the well-preserved archaeological remains of a settler's home with gardens and outbuildings.

## CONCLUSIONS AND RECOMMENDATIONS

Clearly, the greatest orientation of prehistoric and historic habitation sites in the Mississagi Delta is the 500m stretch of water at the foot of the rapids below the falls. This pattern could be distorted by virtue of the erosion which has taken place along the lower reaches of the river. However, with no control situation, we have felt forced to accept the distribution at face value. The second most important area of orientation is within 75m of the falls themselves. Whether the season be relatively harsh or fair, micro-environments offering shelter or exposure can be found within the confines of those two areas. Because of the locations and many historical references as well, one must conclude that the overriding consideration has been the near-camp resource of fish within an environment minimally exposed to harsh along-shore winds, but sufficiently exposed to insect-sweeping winds. The Eldorado property is marginal to this concentration. In fact, the northwest boundry of Eldorado's land very nearly makes a perfect definition of the extreme southern limit of concentration. A stray portion of pottery (CbHs-17) and the southernmost houses of a historic settlement (CbHs-19) are both just within the boundry. The latter site could assume some importance in studies involving settler's domestic sites and early reserve-period remains. There will eventually be pressure for development of the riverbank because it has a favorable environment. Nevertheless, Eldorado's segment can and should be protected until such time as someone undertakes such studies. Hand?

The site of a small stone structure on Patrick Point (CbHs-14) is not really an understood phenomena at this time (Brizinski, 1975). The presence of several stone structures in the delta, usually distant from any known Amerindian habitation site, suggests that there might have been an aspect of Mississagi ritual life requiring the construction of these features. In any event, we do not yet know the significance of such sites. The site needs to be protected for just that reason. Also, the fact that it is both a visible feature and is so accessable could be positive factors in some future public presentation of regional history and prehistory.

It appears that the prehistoric Mouth Site (CbHs-1) located behind the first rock outcrop south of the canal entrance need not concern us further. There is little or no possibility of research here. The fact of its reported presence can be used in distribution studies, but that now ends the matter unless the site is someday "rediscovered". It is almost certain <sup>AP</sup> that nothing is left of this site.

Several features comprising a booming grounds were posed along the main Mississagi channel, and between the channel and Blind river. This "supersite" dealing with the important forest industry is layed out in such a way as to divert, retain, sort and store logs for transport. The operation had to be kept as close to Lake Huron as possible without risking delays due to strong long-shore winds. The two major components of this complex found on Eldorado land have been given site designations (CbHs-20, 21). Several locations are not so-designated (ex. steel mooring pins in rock and line of off-shore piles).

The M.R.I.C. Boom Camp Site (CbHs-20) was located near the river for both convenient access to the water for work, and for exposure to a southwest wind to free this summer camp from insects. Unfortunately, the site found itself at the river-end of a water intake system for the new refinery and there has been some alteration of the surface. Nevertheless, it is possible that a large (?) part of the site lies under the brushy bank edge which is also littered with boom logs and logs from the actual sorting jack. Although the site is important in historical terms due to its size and long use, one must judge that any of several questions relating to diet, material culture and technology at booming camps, or at logging camps in general, could be better researched in less disturbed camps and at camps presenting more of a "time capsule" situation (i.e. shorter occupations have the advantage of giving a more precise picture for a specific time span).

From another perspective, the accessability of the delta to the public could have made this an ideal setting for a "living museum". An undisturbed boom camp, the canal and the caissons in the river could have formed the base on which such a park could have been founded. However, one

judges that the proximity of the refinery would not now be a positive factor in creating the mood needed for a successful enterprise of this nature. In brief, although every effort should be made to minimize ground-breaking activities in this general area, the significance of the site is not judged sufficient to warrent salvage activities or stringent preservation actions. This is both our archaeological and resource management point of view.

The Eldorado land also includes a part of the M.R.I.C. Logging Canal Site (CbHs-21) where it leaves the Mississagi River heading east toward Blind River. The canal itself seems to present little possibility for archaeological research and as such is of little significance. If evidence of a construction camp were to come to light, then such an associated site could have archaeological significance. However, workers probably stayed at the boom camp. From the viewpoint of resource management, the canal has considerable significance. It is historically interesting, visually attractive in itself and passes through striking landscapes. Any development which would downgrade these positive features should be very strongly discouraged.

From the viewpoint of correct archaeological proceedure, we feel that it was unfortunate that the archaeological community was unresponsive to the possibility of a field reconnaissance prior to the beginning of refinery construction. It would have been useful to have investigated several areas now lost to construction and to have perhaps made a recommmandation which would have retained the option of incorporating the boom camp into an effective cultural resource development. AP

In general, it is of cultural significance that a refinery has been placed on an area of the delta that did not encourage Amerindian or early settler habitation. Its success does not require fish, game, protection or exposure to wind, or water for transportation. It is a clear reflection of the degree to which North American technology has departed from particular environmental factors critical to our collective ancestors.



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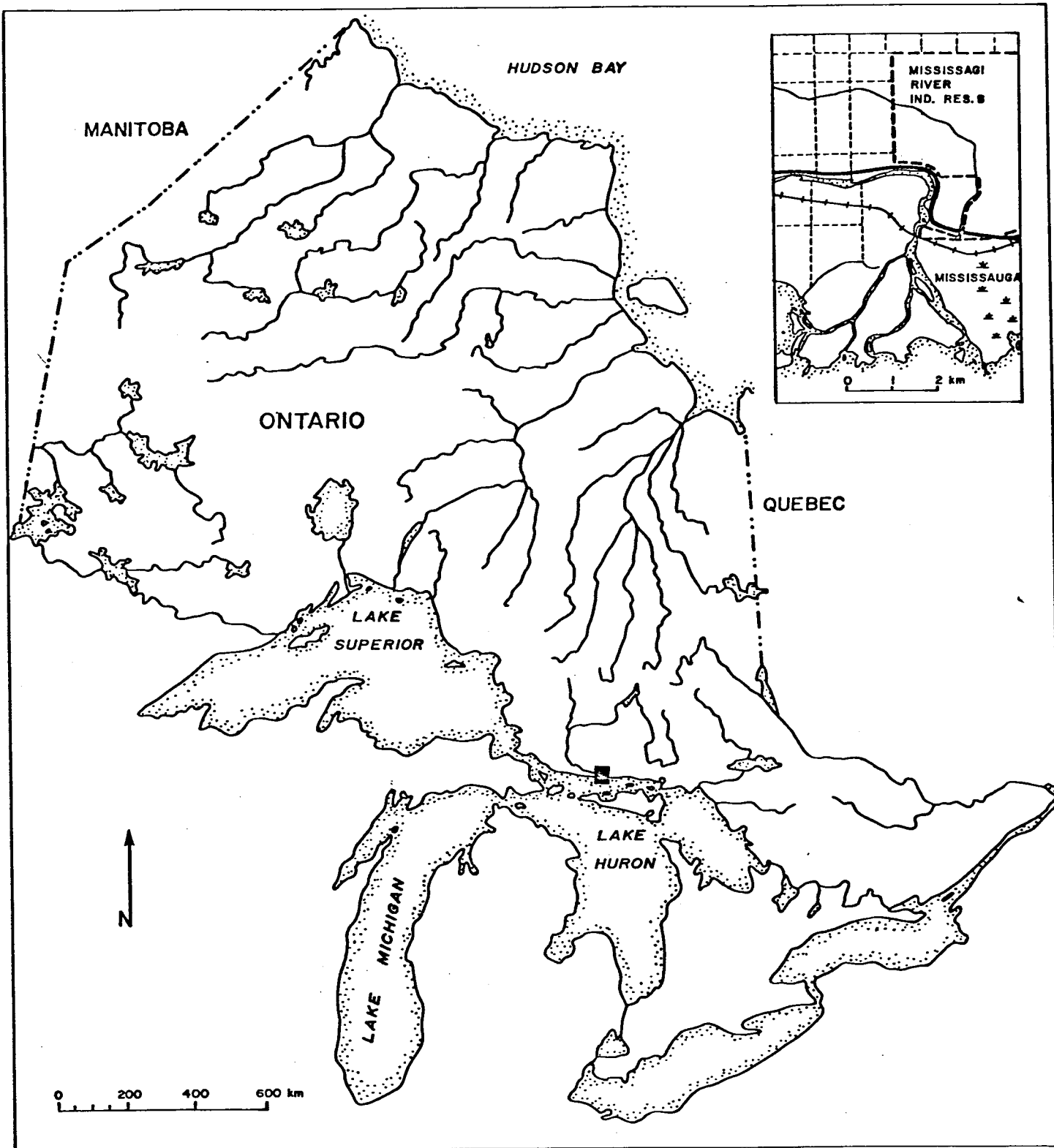
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APPENDIX 1

FIGURES

FIGURE 1: THE MISSISSAGI DELTA AND ITS GENERAL LOCATION



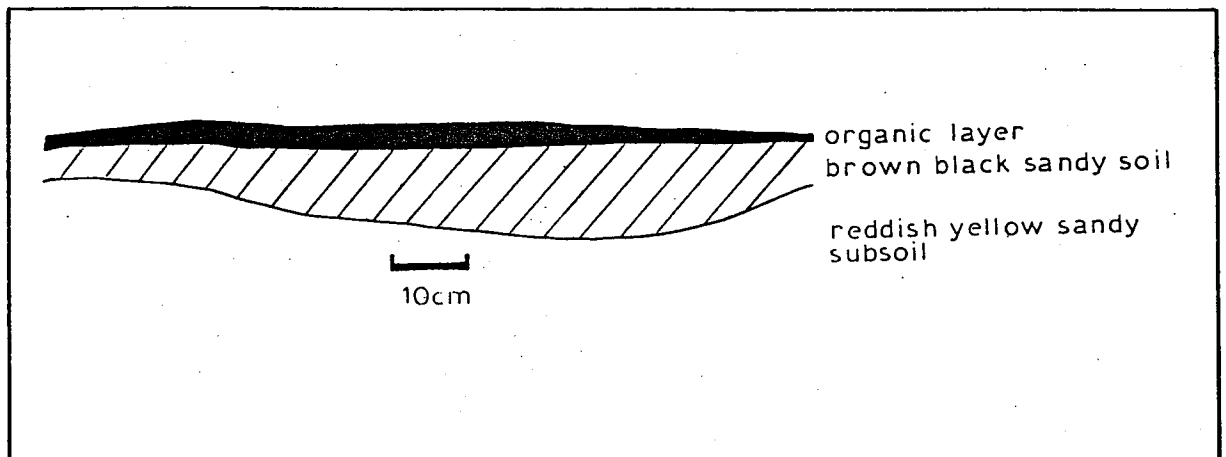
KEY TO FIGURE 2

1. Tippeecanoe Site, CbHs-13 (1600-1750 Amerindian)
2. Falls Site, CbHs-7 (800-Recent Amerindian/Eurocanadian)
3. Whippoorwill Rock Structure, CbHs-16 (unknown date-Amerindian)
4. Chiblow-3 Site, CbHs-4 (1600-Present Amerindian)
5. Sayer's Property (Possible Free Trader Post from pre-1845 to at least 1874)
6. Sayer's Site, CbHs-12 (Prehistoric-historic Amerindian)
7. Sayer's Cemetery (Possible 1850-62 HBC Post adjoining east end) (?same as 5?)
8. Hudson's Bay Post (1862-1900)
9. Wood Site, CbHs-8 (1200-1500 Amerindian)
10. Renard Site, CbHs-5 (800-1700 Amerindian)
11. Chiblow-1 Site, CbHs-2 (Early 18th Century-recent Amerindian ?)
12. Chiblow-2 Site, CbHs-3 (Late 18th Century Amerindian ?)
13. Poor Little Tree Site, CbHs-6 (1500-recent Amerindian)
14. Kor Rock Structure, CbHs-10 (Unknown date Amerindian)
15. Swimming Bear Site, CbHs-6 (1500-recent Amerindian)
16. Boom Camp Site, CbHs-15 (1550-1700 Amerindian)
17. Patrick Point Rock Structure, CbHs-14 (Unknown date Amerindian)
18. A single human burial is reported to have eroded from the river bank at this point.
19. A single human burial contained in a wooden coffin was discovered on the Chiblow-1 Site. A historic house foundation on this site has been identified with a settler's family, the Balls. The burial might have been associated with this family.
20. A concentration of 19th and 20th Century Amerindian/Eurocanadian habitations (Includes CbHs-19)
21. Possible 18th and 19th Century NWC trading post, possibly reoccupied by the HBC between 1821-50, somewhere on the east bank
22. Find Spot of several isolated historic artifacts of European derivation including an American fifty-cent piece dated 1863.
23. Glance booms for control of logs and booms, 1899-1969 north one has cribbed caissons.

KEY TO FIGURE 2    Cont'd....

24. Logging Canal site, constructed to connect the booming area on the Mississagi River to the sawmill at the west branch of the Blind River (CbHs-21 1904-05)
25. Booming Grounds Camp site. (CbHs-20, 1894-1969)
26. Booming Jack with cribbed caissons (erected in 1899)
27. East Terrace 1 site, CbHs-17 (Late prehistoric, post 800 AD)
- 3 & East Terrace 2 site, CbHs-18 (Late prehistoric, post 800)
29. Mouth Site CbHs-1 (prehistoric)
30. Contemporary Bear Site, CbHs-11 (Prehistoric)

FIGURE 4: SOIL PROFILE, EAST TERRACE 2 SITE, CbHs-18





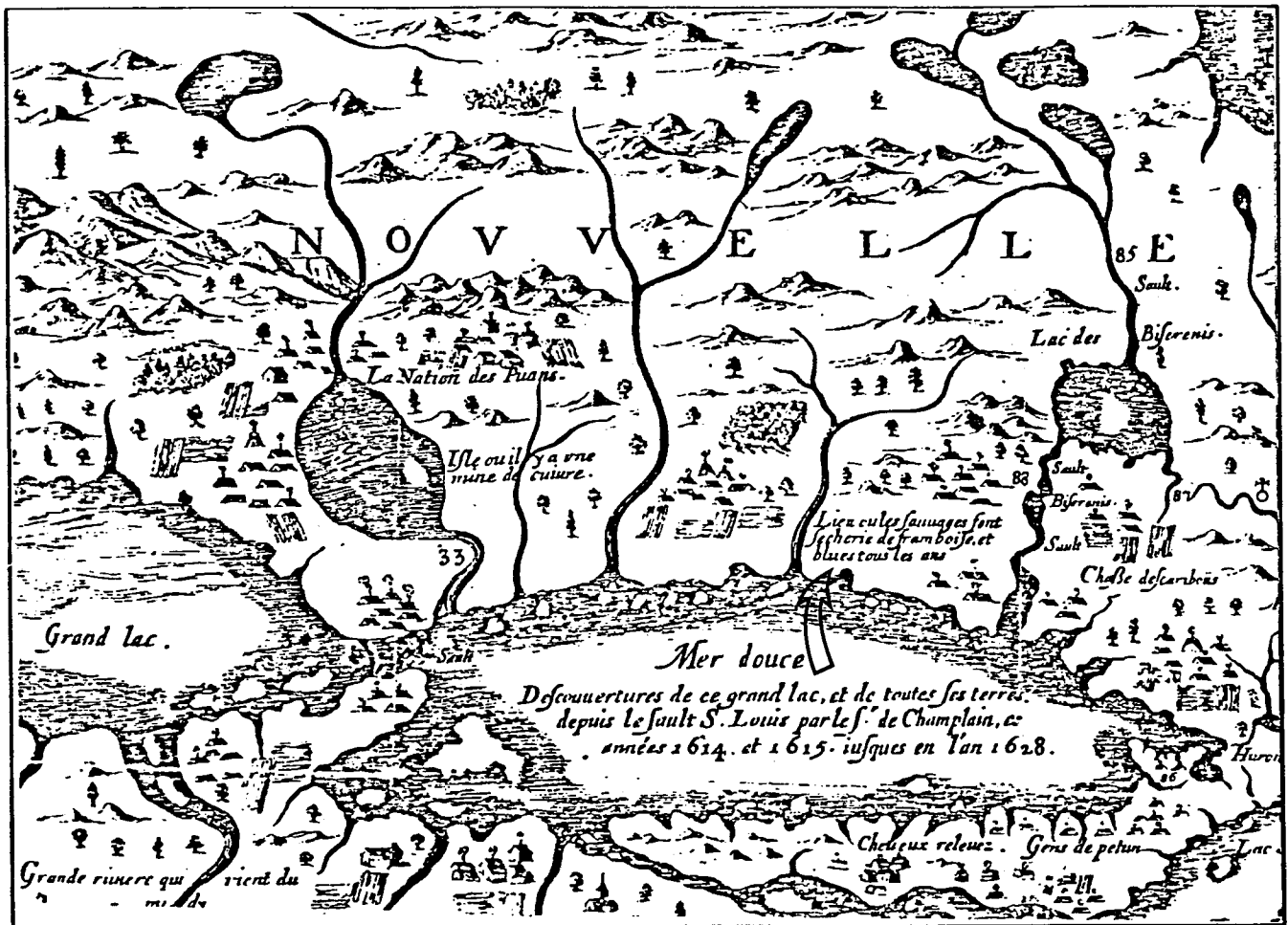
a



b

FIGURES 5a: CbHs-17 (view southeast)  
5b: CbHs-18 (view southeast)

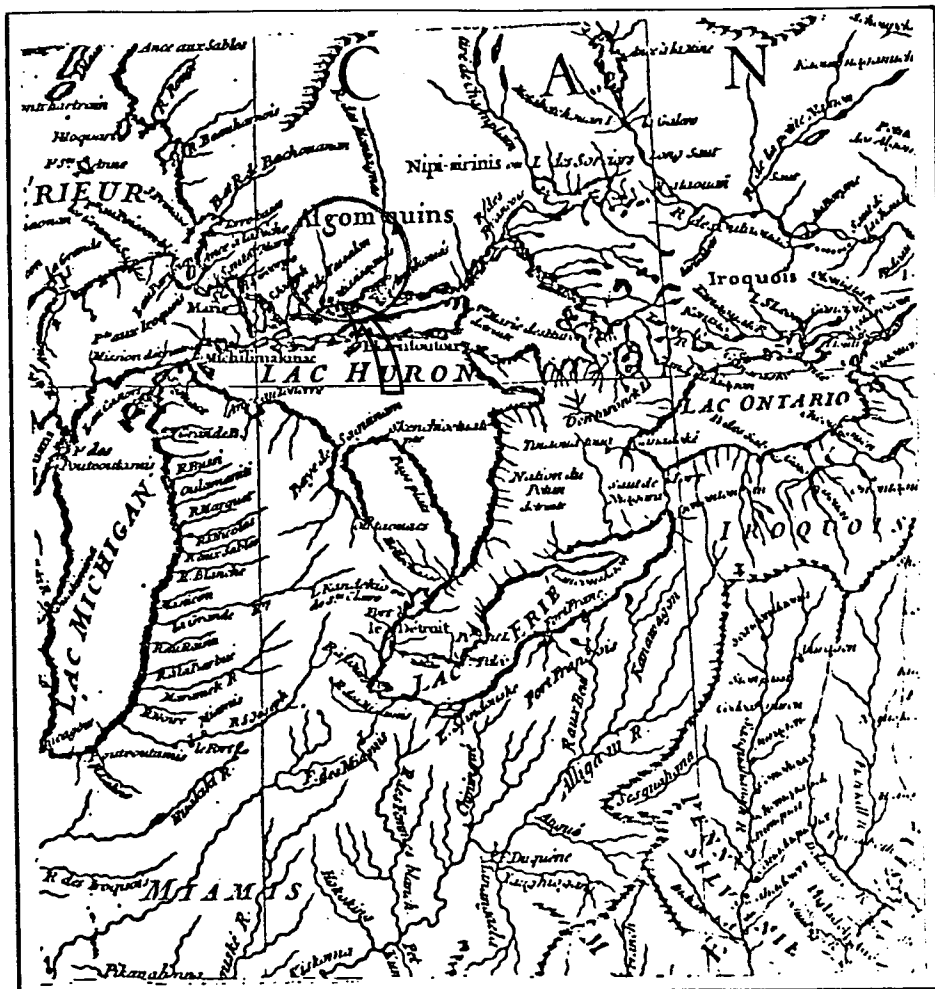
FIGURE 6: PART OF THE 1632 CHAMPLAIN MAP SHOWING THE MISSISSAGI MOUTH WITH THE INSCRIPTION "PLACE WHERE THE SAVAGES DRY RASPBERRIES AND BLUEBERRIES EVERY YEAR"



Source: Carte de la Nouvelle-France, Samuel de Champlain  
Copy Public Archives of Canada

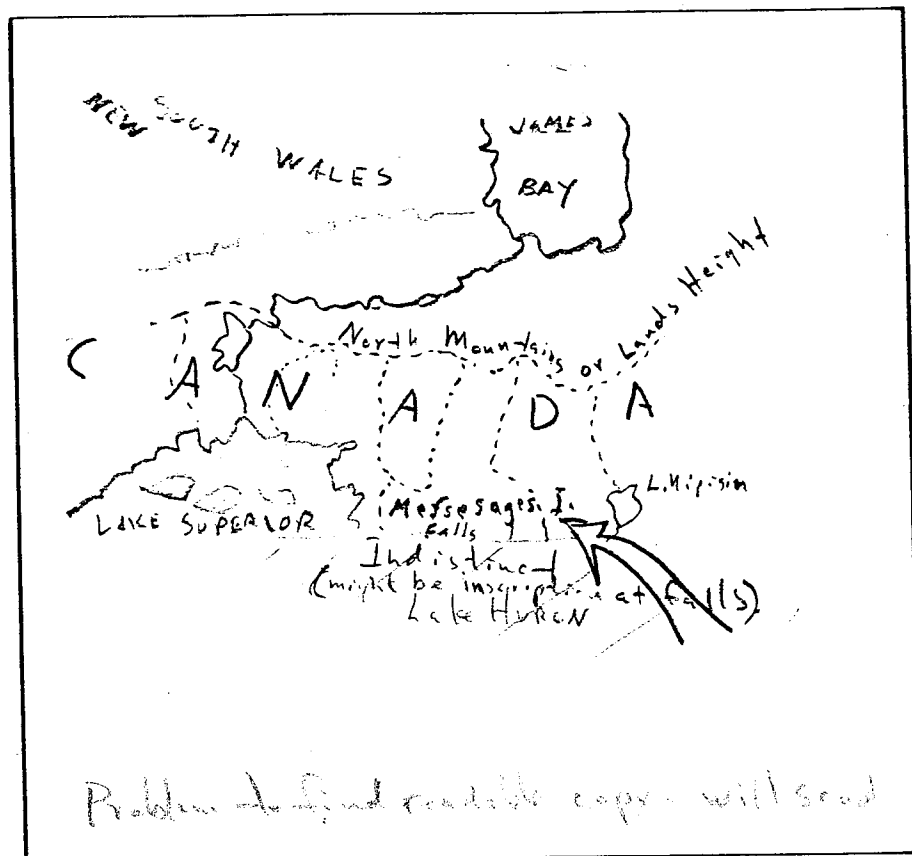
Copy Public Archives of Canada

FIGURE 8: PART OF THE 1746 D'ANVILLE MAP SHOWING A SETTLEMENT ON THE EAST BANK OF THE MISSISSAGI RIVER MOUTH



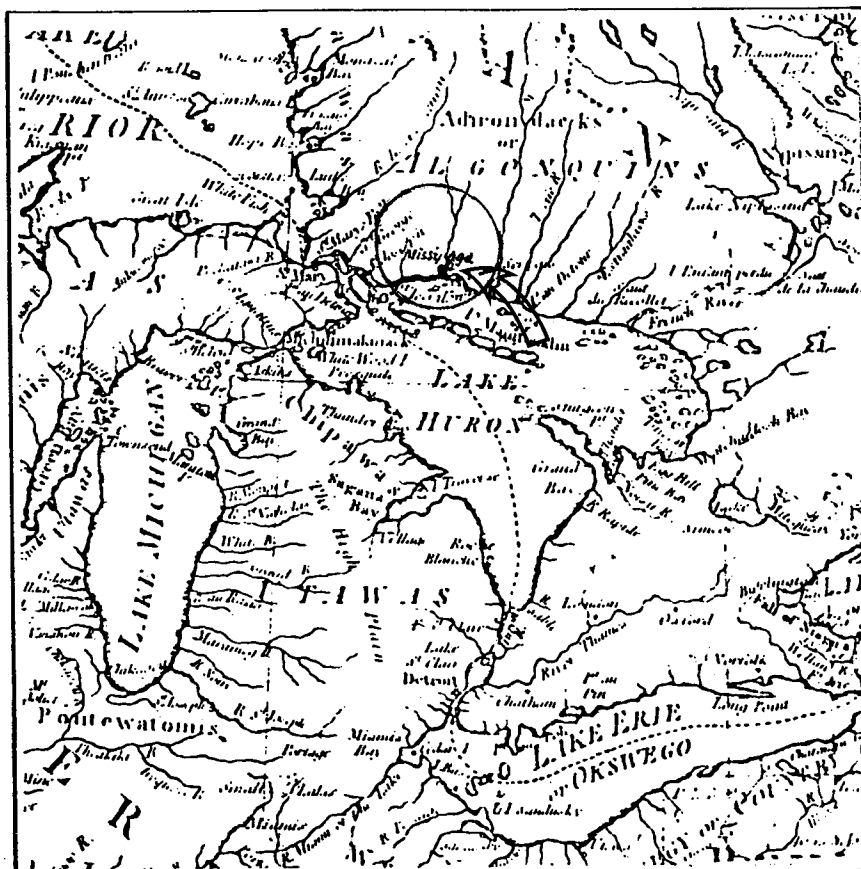
Source: Amérique Septentrionale  
Atlas Général, 1746-1767, No. 10  
Public Archives of Canada

FIGURE 9: PART OF THE CONDOR MAP OF 1782 SHOWING  
THE TERRITORY OF THE MISSISSAGI INDIANS



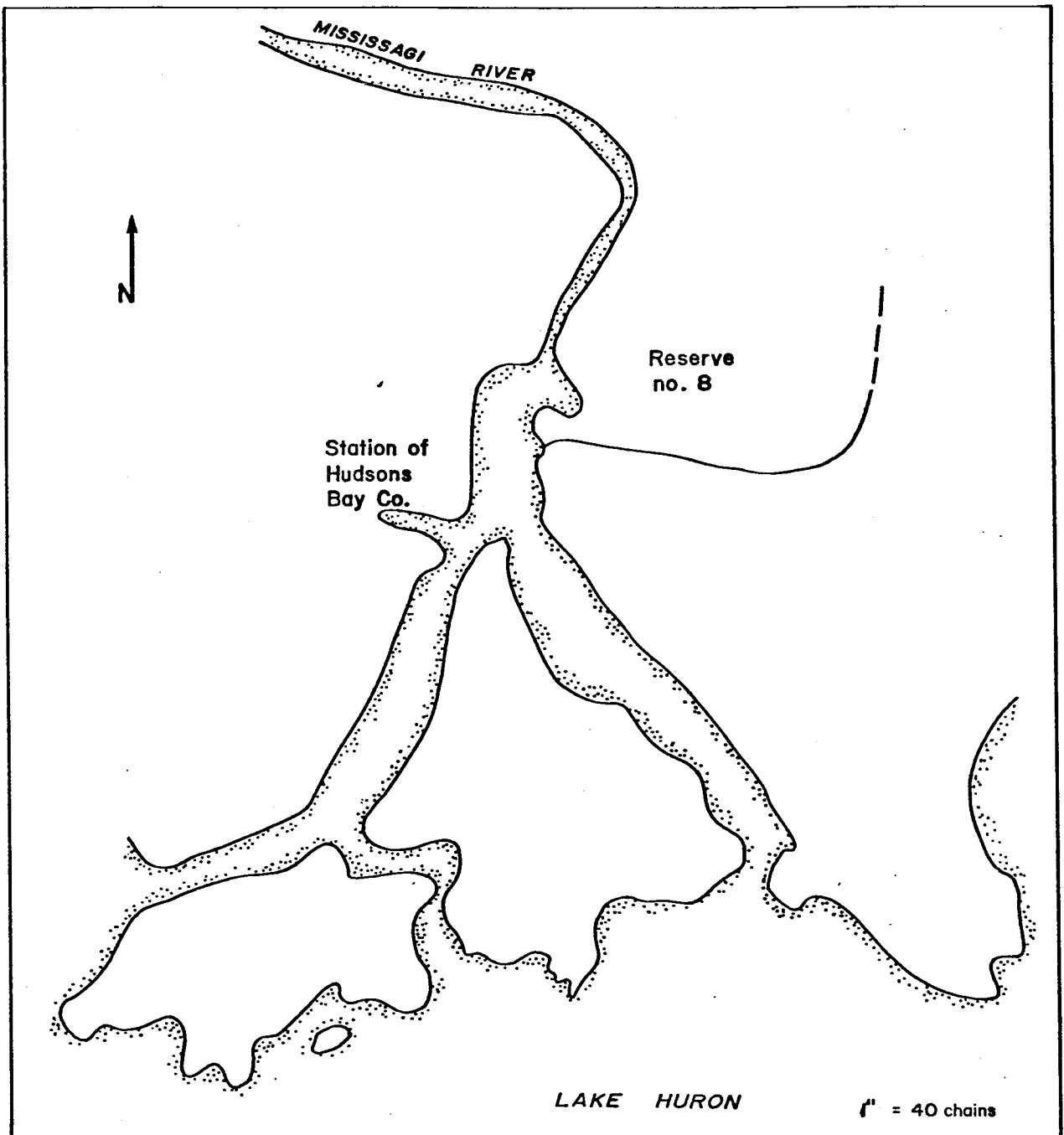
Source: "North America " from Miller's New, complete and  
Universal System of Geography  
Copy: Public Archives of Canada

FIGURE 10: PART OF FADEN'S 1796 MAP SHOWING A SETTLEMENT  
ON THE EAST BANK OF THE MISSISSAGI



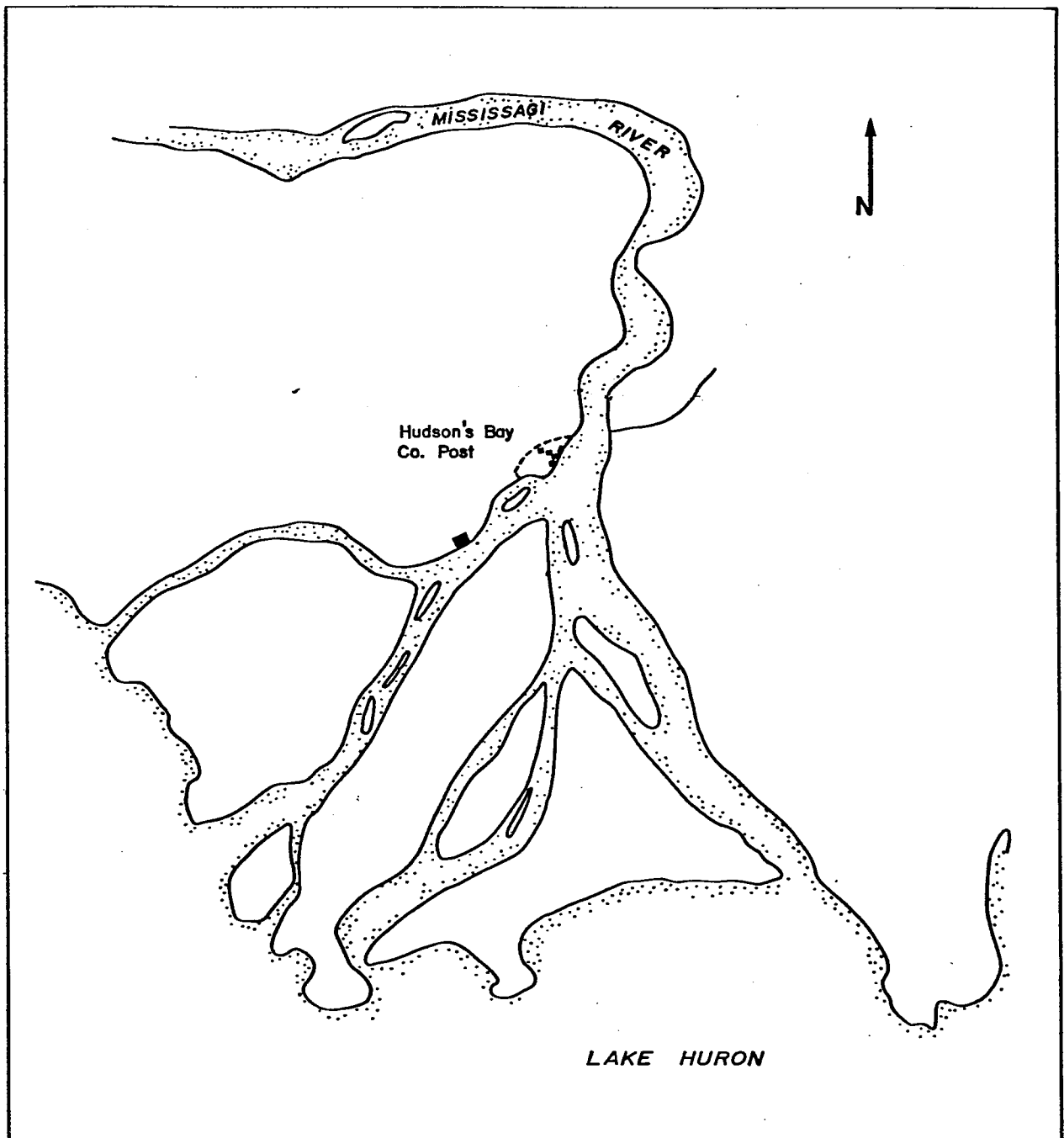
Source: The United States of North America  
from William Fadden's General Atlas, 1796  
Copy: Public Archives of Canada

FIGURE 11: MISSISSAGI DELTA AS SHOWN ON THE 1850 TREATY PLAN



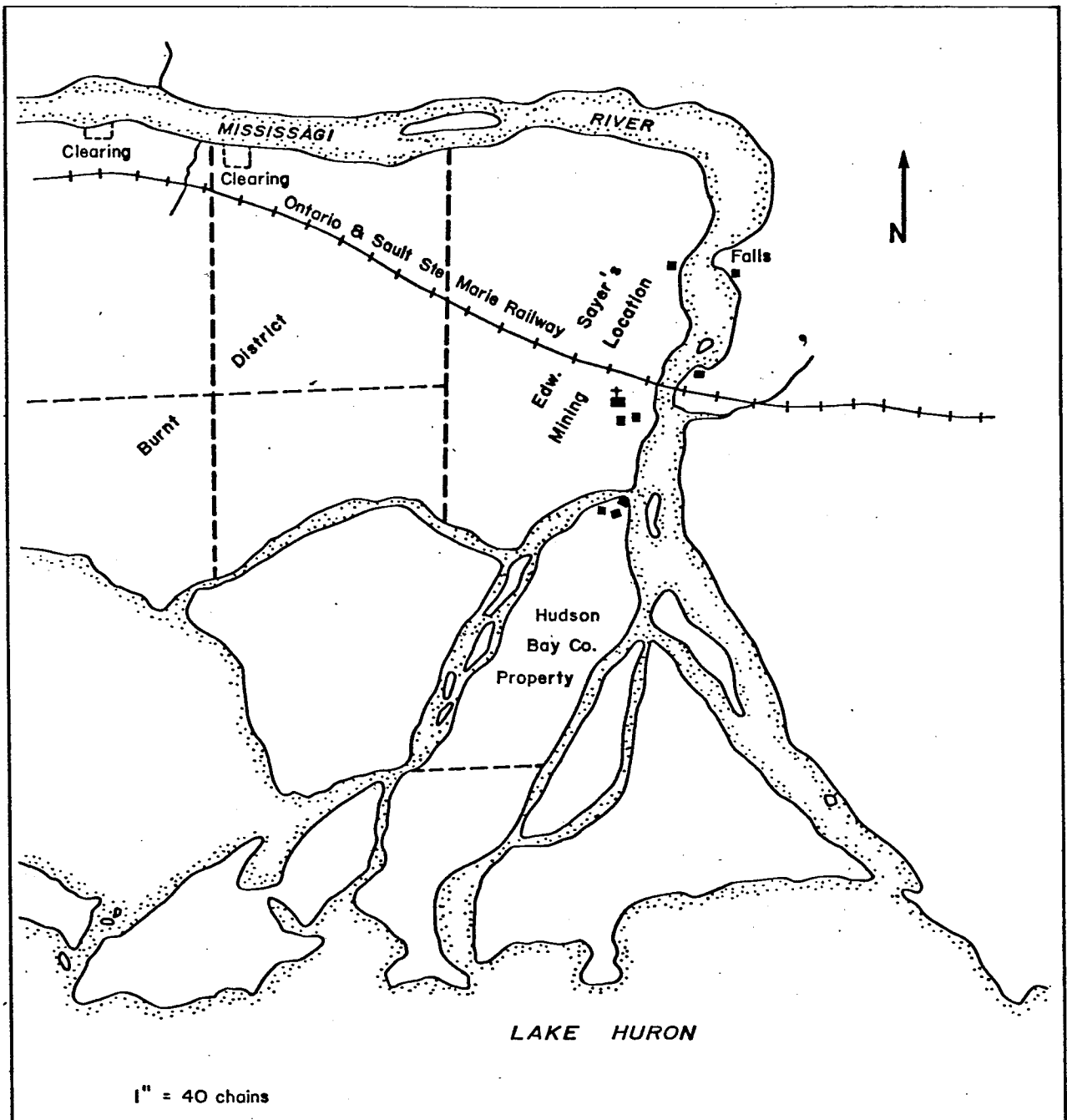
Source: Plan of Indian Reserve lying between the Rivers Mississaga and Penewabecony, North Shore of Lake Huron, Being No. 8 under the treaty of September 9, 1890  
Energy, Mines and Resources, Legal Surveys / T-48

FIGURE 12: WEST BANK OF THE MISSISSAGI DELTA IN 1861



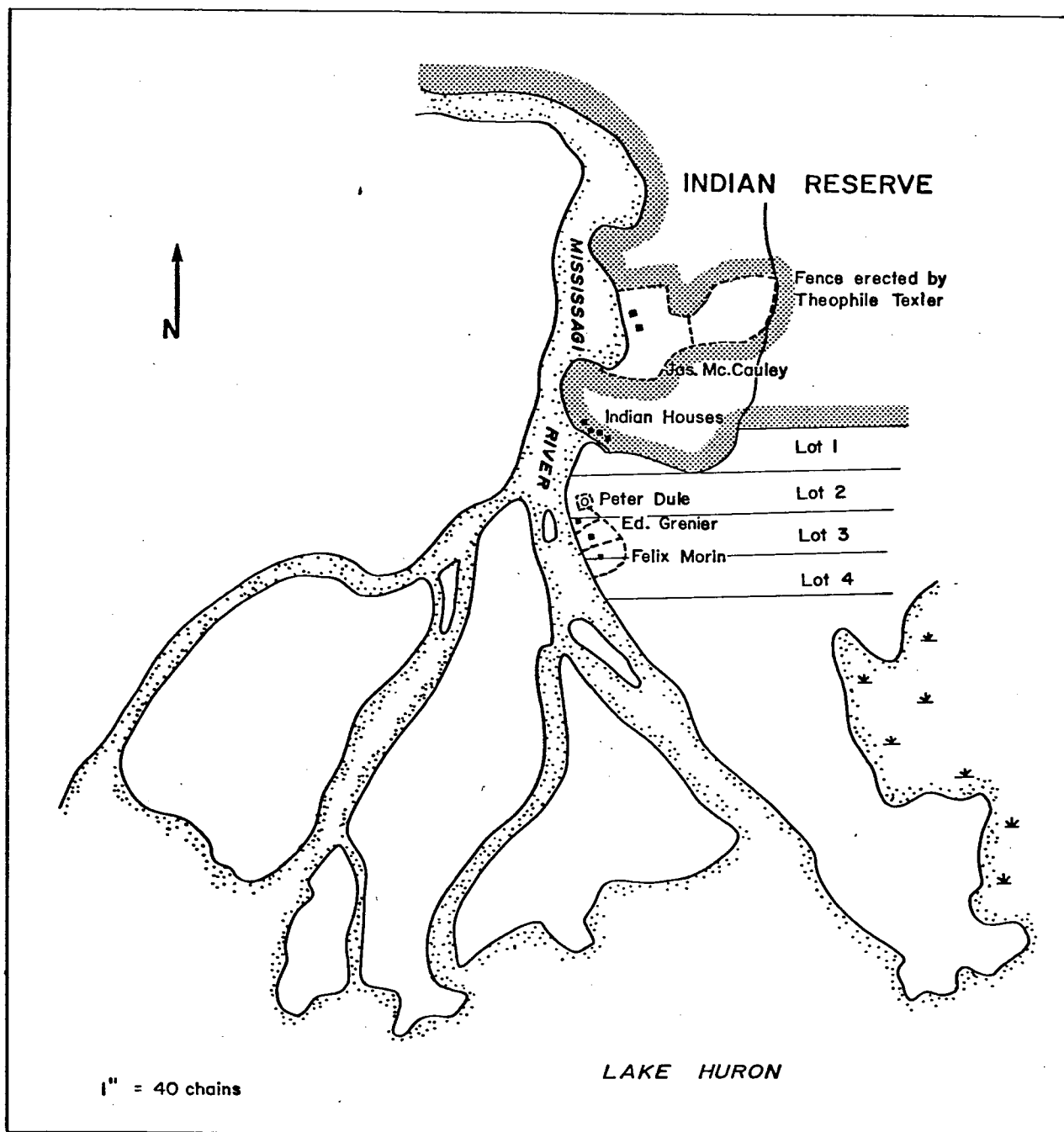
Source: Part of plan of Thompson Township and  
Part of Patton Township, 1861  
MNR Survey Records

FIGURE 13: MISSISSAGI DELTA IN 1881



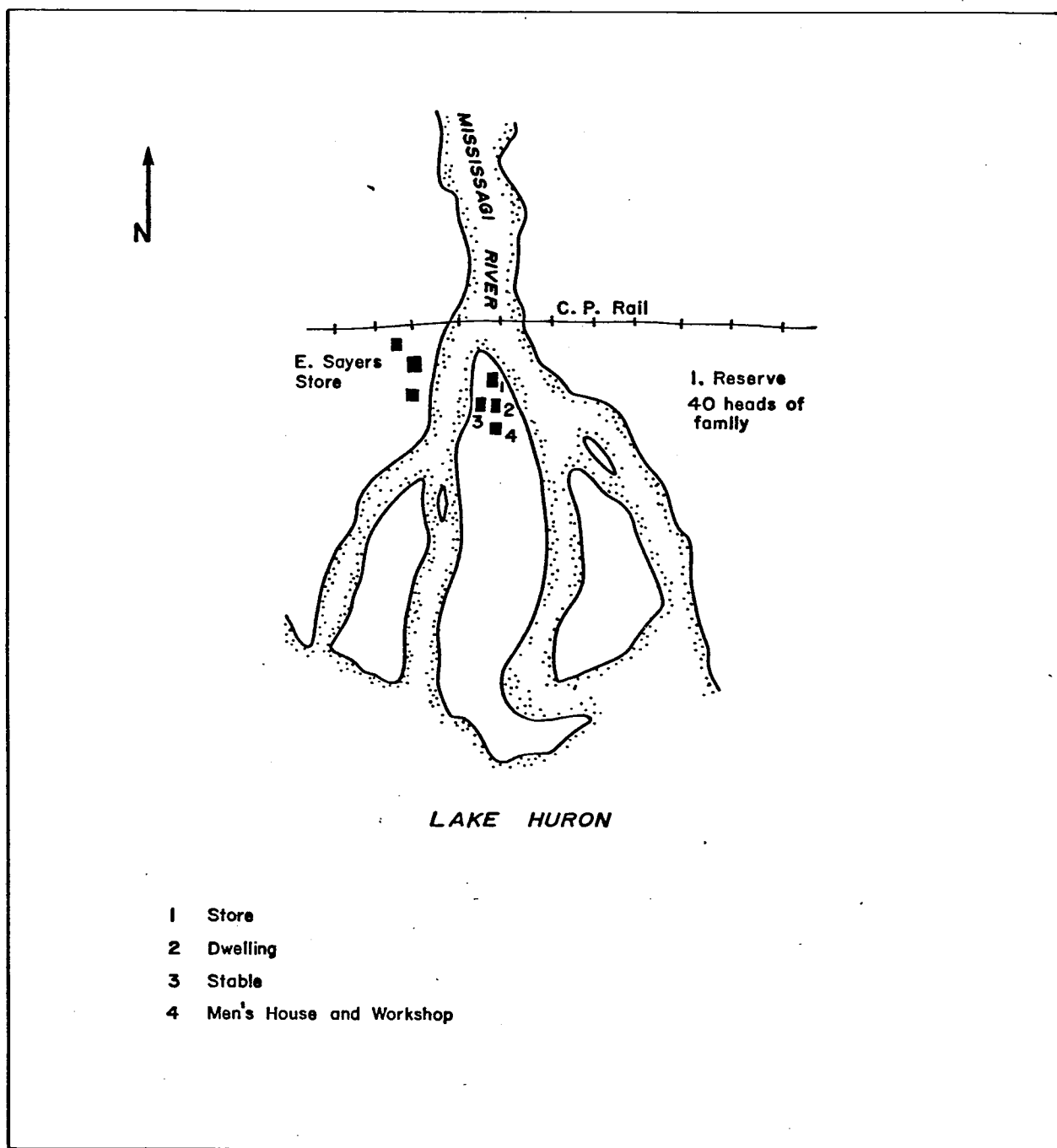
Source: Part of plan of Township of Cobden, District of Algoma,  
by Silas James F.L.S., 1882 (Dec. 13, 1881)  
Scale 40 chains = 1"  
MNR Survey Records

FIGURE 14: EAST BANK OF THE MISSISSAGI DELTA IN 1882



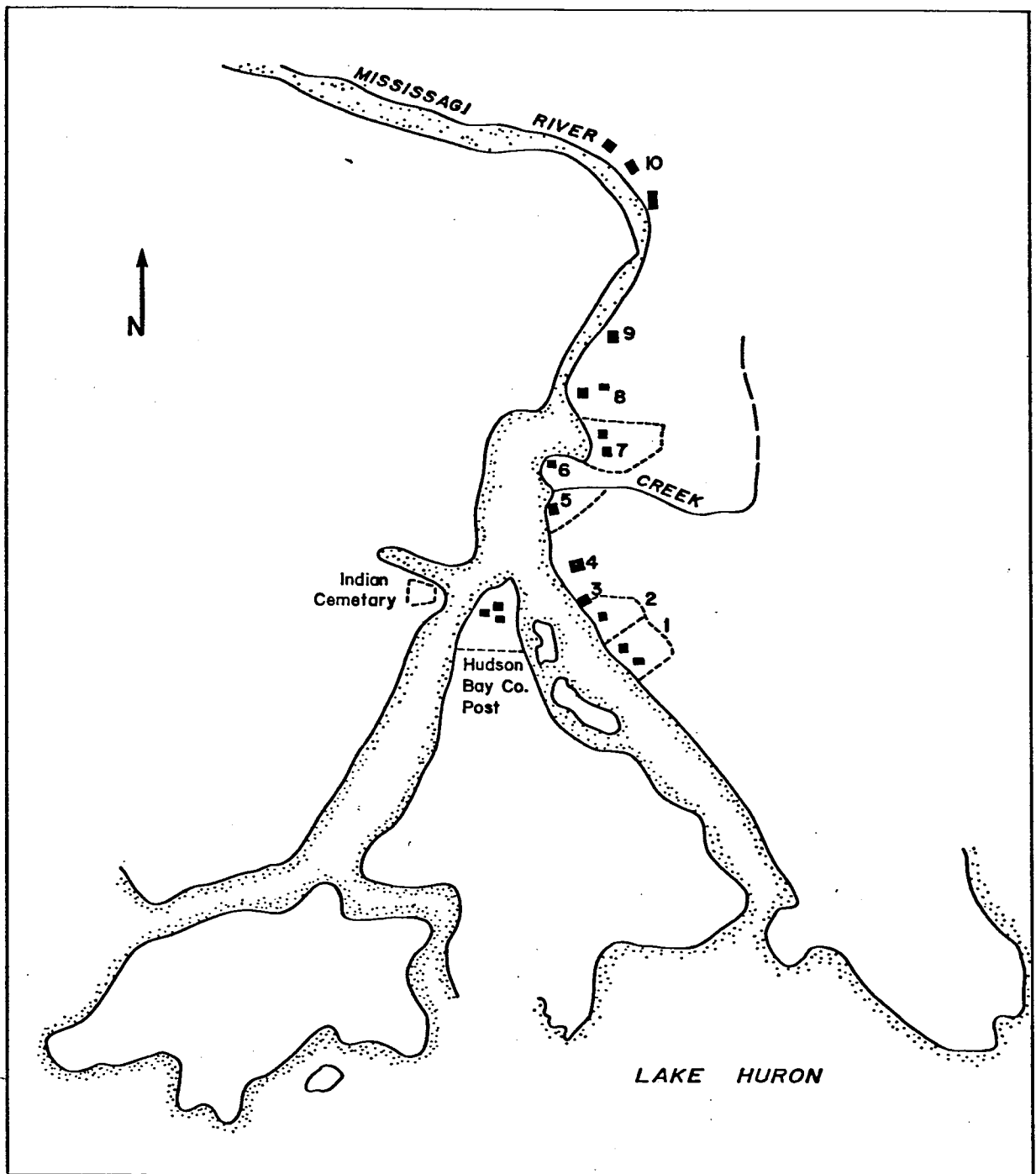
Source: Part of plan of the subdivision of the Mississaga Indian Reserve  
 By G.B. Abrey P.L.S., 1882  
 Scale 40 chains = 1"  
 Energy, Mines and Resources Legal Surveys / CLSR, T-49

FIGURE 15: MISSISSAGI DELTA SOMETIME BETWEEN 1880 AND 1900



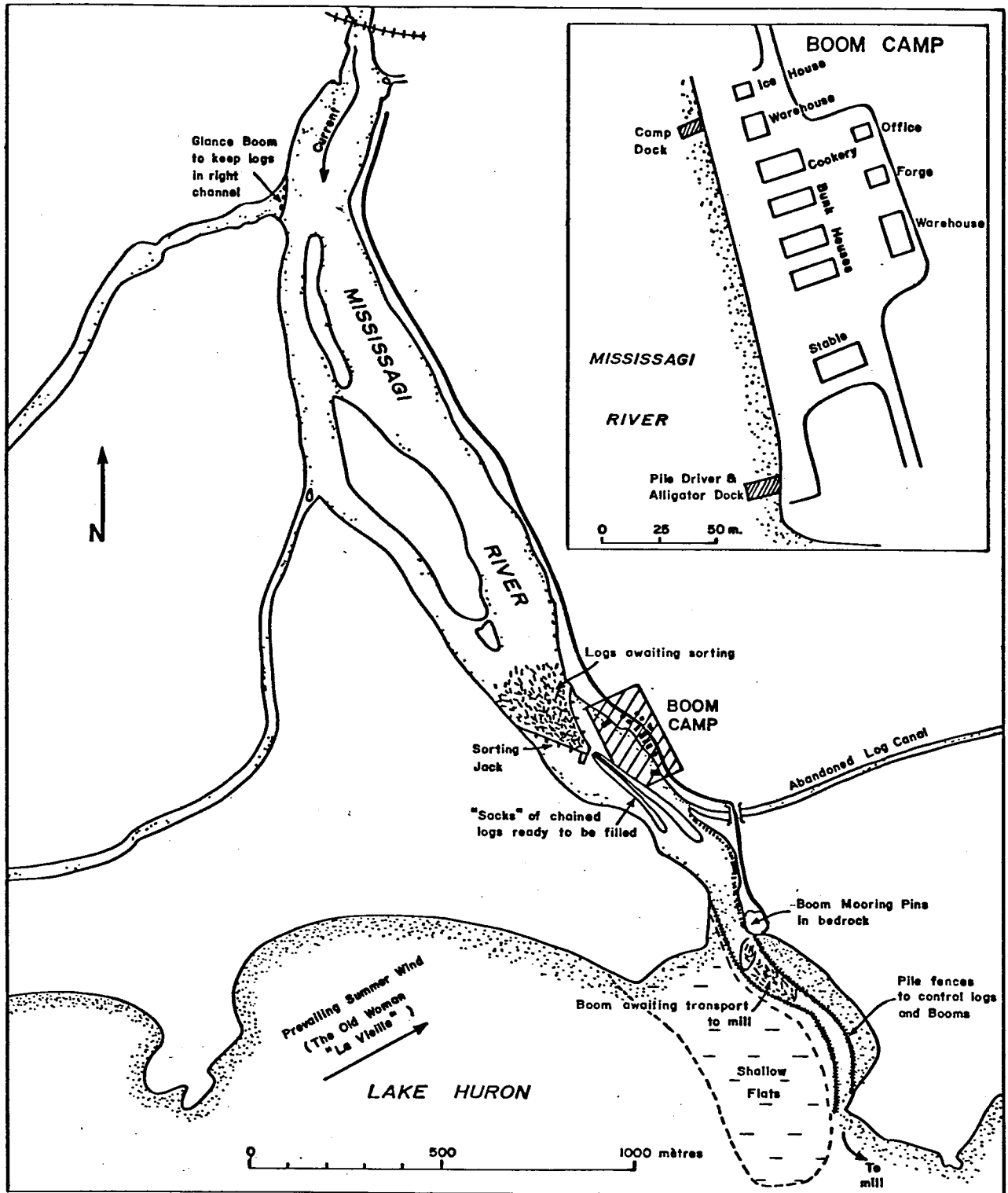
Source: HBC Inventory of Posts  
HBC Archives

FIGURE 16: MISSISSAGI DELTA AT AN UNKNOWN DATE  
IN THE LATE 19TH CENTURY



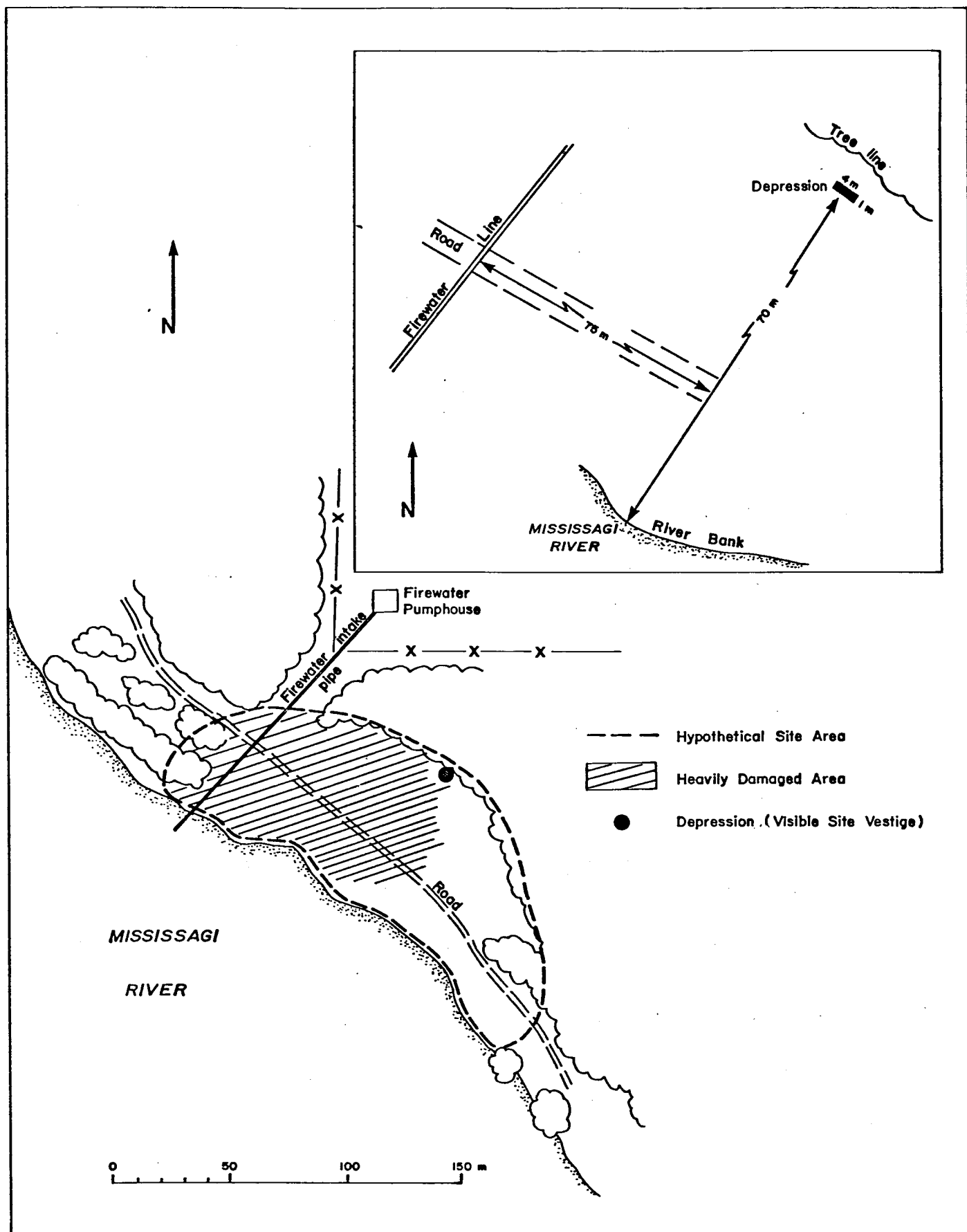
Source: Unknown, but incorrectly titled as 1850 Treaty Map  
Blind River Logging Museum

FIGURE 17: LAYOUT OF LOG SORTING OPERATIONS IN THE MISSISSAGI DELTA AND DETAIL OF BOOM CAMP



Source: Mr. J.E. (Buck) Sarazin,  
Blind River, Ontario

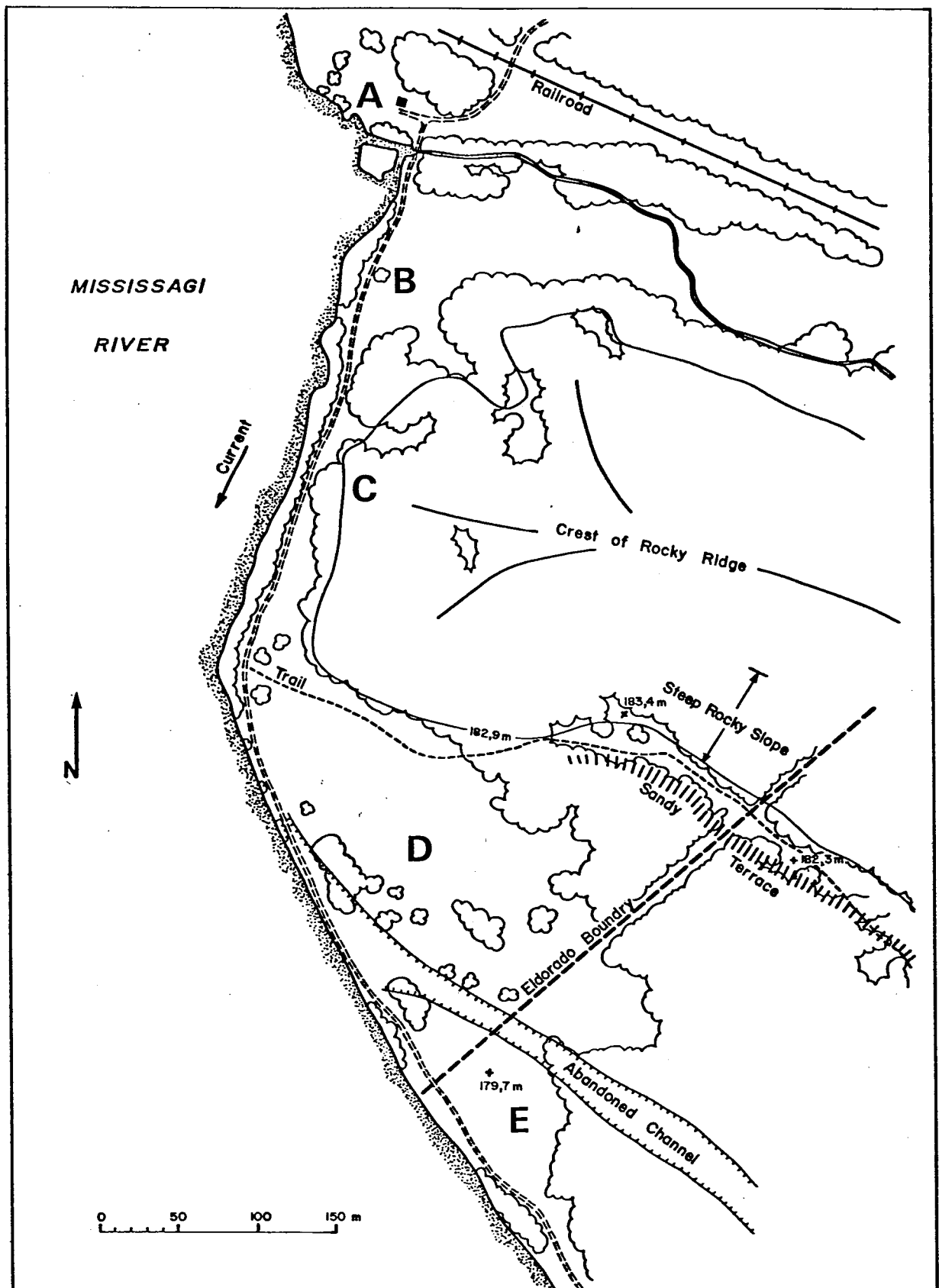
FIGURE 18: GENERAL MAP OF BOOM CAMP ,CbHs-20, AND PLAN LOCATING A DEPRESSION POSSIBLY ORIGINATING WITH THE CAMP



## KEY TO FIGURE 19

- A. Registered as the Chiblow 3 Site (CbHs-4), Archaeological tests yielded 1600-present artifacts (Brizinski, 1975). Excavations yielded artifacts dating from 1850-present (Bertulli, 1981: 242). It was the location of four Mississagi Indian houses in 1882 (figure 14), one of which was probably occupied by Sagajawagigik, the grandfather of Camille Chiblow (Chiblow; May, 1981). Its position is open in summer, protected in winter and has easy access to Pahpashcah Creek and the foot of the rapids in the Mississagi River. It is also oral tradition that a fur trading post was located here (Chiblow; May, 1981).
- B. Registered as the Chiblow 1 Site (CbHs-2). Archaeological excavations yielded early 18th Century-present artifacts (Brizinski, 1975). A burial with coffin was also found (Bertulli, 1981: 288). A house depression was recorded and "recent" artifacts found in tests (Bertulli, 1981: 290). This was the Ball house (figure 16:5) and was of uncertain age but was occupied by relatives of the Balls, the St. Pierres, in the 1930's (Chiblow; May, 1981). The riverbank is exposed to summer winds. Area is protected in winter.
- C. Registered as the Chiblow 2 Site (CbHs-3). Archaeological excavations yielded late 18th Century-recent artifacts. Three depressions were also recorded on the site at that time and tests near one yielded possible late 19th Century artifacts (Bertulli, 1981: 291-2). An unidentified house or feature was in this area in 1882 (figure 14).
- D. Houses belonging to Peter Dule and Ed. Grenier were in this general area in 1882 (figure 14). This segment of riverbank is exposed in both summer and winter.
- E. Registered as the Boyer Place (CbHs-19). Archaeological tests were negative (this report). This was the location of the Felix Morin house in 1882 (figure 14). It was occupied by Monroe Boyer and the Jack Jenette (Genest?) family. Another family related to these two also had a house somewhere, perhaps "6" on figure 20. Oral tradition places "old" Indian camping between "A" and "E" (Chiblow; May, 1981).

FIGURE 19: SETTLEMENT AT NORTH BOUNDARY



Source in part: C. Chiblow and Eldorado Plan E7936-70010B-1

## KEY TO FIGURE 20

1. Depression, possibly a house built by Felix Morin prior to 1882. It was still standing as a two-storey frame house in 1962 (Bertulli, 1981: 290).
2. Depression, probably a house built by Monroe Boyer in the 20th Century.
3. Depressions, probably Boyer outbuildings.
4. Linear depression with backdirt mound, possibly Boyer drainage.
5. Vertical posts, probably pier construction supports for Boyer barn.
6. Faint depression, possibly house or shed of Mr. Boyer's sister and husband, Jack Jenette (Genest?) or another "relative's" house.
7. Half-depression into slope, possibly house or shed of Mr. Boyer's sister and husband.
9. Depressions, possibly Jenette (Genest?) outbuildings.
- . Depressions, cribbing, steps and backdirt mound, probably Boyer root house.
10. Linear ridges, probably garden fence lines
11. Abandoned river channel, some indication that area 100m to east had fainter channel.
12. Depression, probably area of sod removal for lawns.

FIGURE 20: THE BOYER PLACE ,CbHs-19

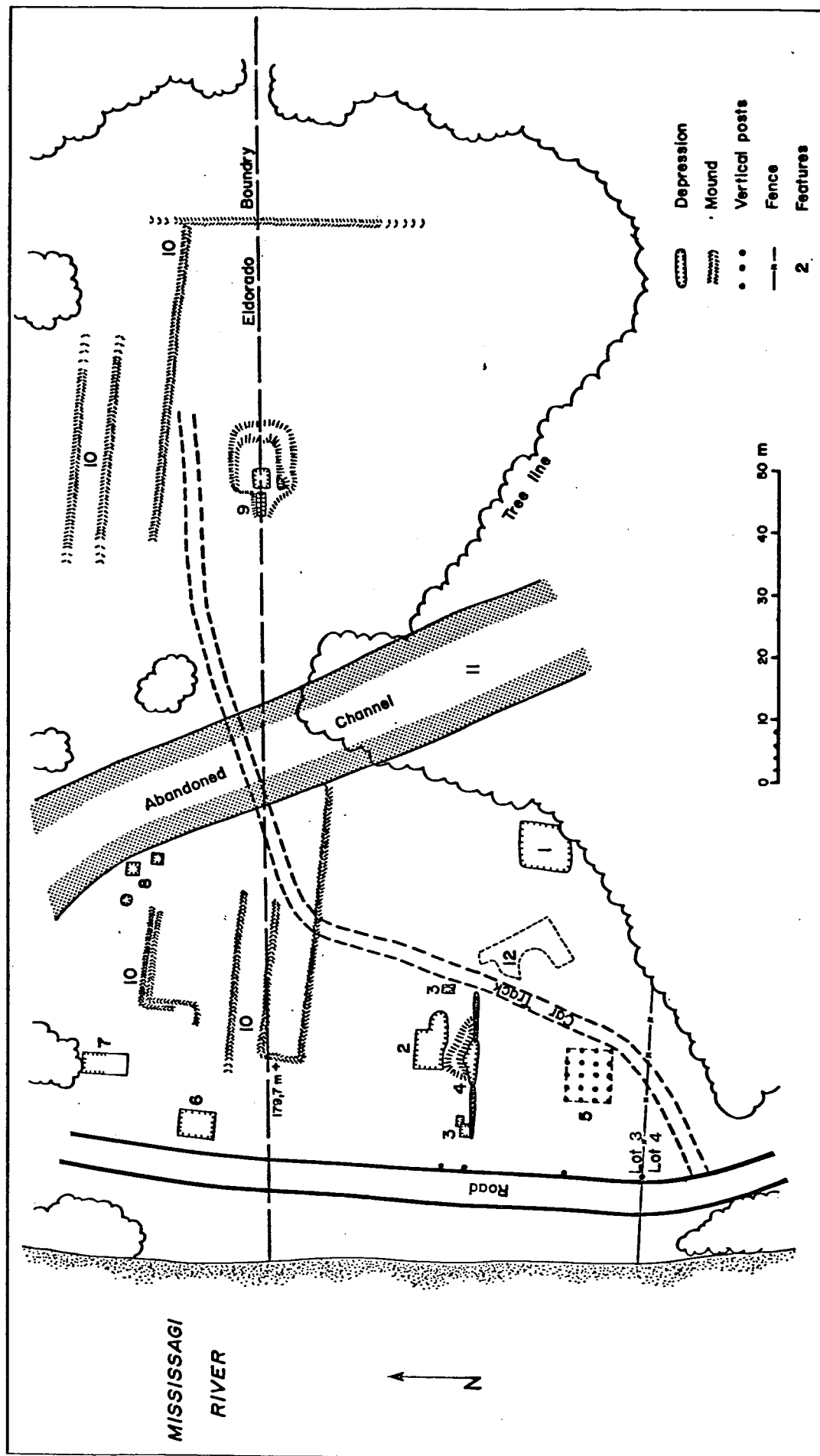
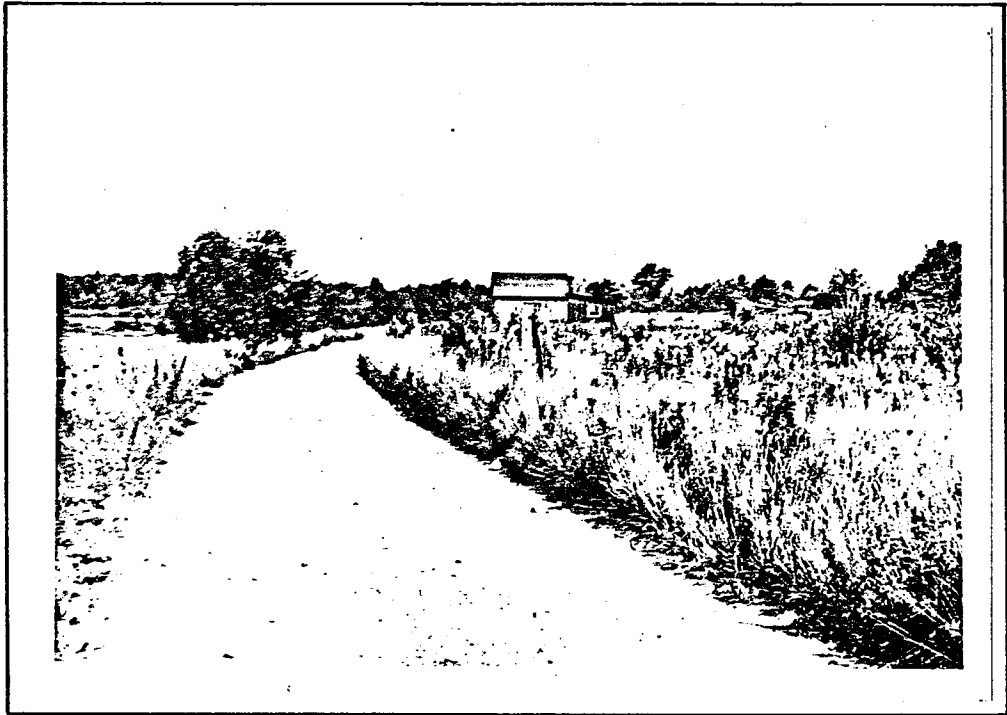


FIGURE 21: BOYER PLACE , CbHs-19 :1962



Source: H.E. Devereux