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THE DEVELOPMENT OF SETTLEMENT PATTERNS IN HAY RIVER, NORTHWEST TERRITORIES, 1892-1971

by

WILLIAM WAYNE ZARCHIKOFF

B.A. (hons), Simon Fraser University, 1970

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF

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ABSTRACT

This study describes and analyses developments in the emergence of the settlement of Hay River, Northwest Territories. The emphasis is upon the Hay River landscape as it evolved from 1892 to 1971.

The study examines the settlement morphology of Hay River and also the development of the community from the time of the earliest missionaries to the fur traders, fishermen, boatmen and contemporary corporations, in terms of the movement and survival of its basic elements. Some consideration is given to the role of climatic conditions, particularly in relation to the seasonal character of activities.

Geographical and historical aspects of the pre-European and European fur trade phase of settlement in the Great Slave Lake area are reviewed. These areas of interest are identified: the significance of fur-trading centres; the importance of edible fish in and around Great Slave Lake; and the difficulties of communication and transportation. Fundamental to the whole discussion are the relatively small scale and the isolation of settlements in the area.

The techniques of historical geography and, in particular, the traditional combined cross-sectional and vertical theme approach, are employed in developing the story of Hay River. This allows the integration of the description of the Hay River land-

scape in stages with an analysis of the factors that bring about successive changes in the landscape and hence the settlement of Hay River today.

The most striking feature of each phase of development was the close association between a specific technological improvement or a natural disaster and the building of a new Hay River. Each "new town", except the fishing village, was built to supercede or replace the original town. It was shown that this did not happen, but a lag developed in terms of people moving to the new towns; because of this we may infer that four Hay Rivers exist at the same moment. Each Hay River has adopted a specific character or personality of its own.

In examining the historical geography of Hay River, much insight is to be gained into the problems of northern development; it is incumbent upon geographers further to develop techniques for the description and analysis of factors that have contributed to the geography of northern settlements, so that they are equipped with a greater range of alternatives in dealing with such problems.

ACKNOWLEDGEMENTS

Many people participated in this study from its inception to completion. Grateful appreciation is made to my wife Diane and children Sherry and Rebecca who helped in many ways. I am also indebted to Messrs Marten Brown, John Clark, Derek Macleod, Robert Kissner, Mrs. Jennett Crew and Ms. Theresa Townsend who offered consultative services which were utilized.

Thanks are also due to Mr. R. Francis, (the photographs) and my senior supervisor, Professor MacPherson, whose willingness to offer assistance during both the data collection and analysis phases of this research is extremely appreciated.

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Last, but certainly not least I want to thank the members of the Simon Fraser University Graduate Scholarship Fund for without their assistance, this study would not have been finished.

TABLE OF CONTENTS

LIST OF MAPS AND FIGURES

LIST OF PLATES

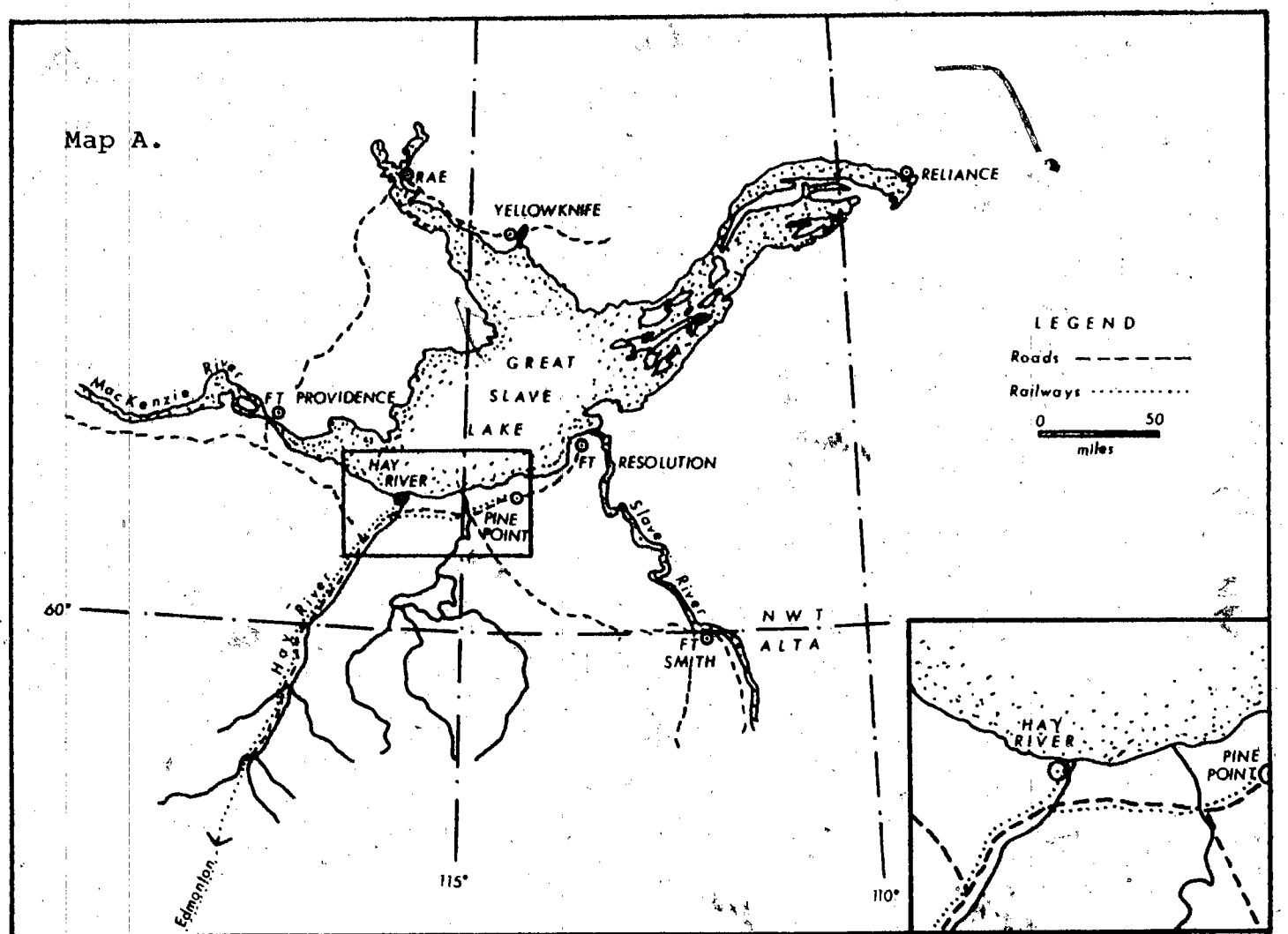
LIST OF TABLES

There is very little in the present-day landscape that cannot be explained by reference to the past. The geography of the present is almost all history.

-H.C. Prince in The Geographical Imagination

The human geographer has the obligation to make cultural processes the base of his thinking and observations. His curiosity is directed to the circumstances under which groups or cultures have diverged from, or been assimilated to, others. Most of the history of man has been a matter of differentiation of culture and of reconvergences.

-Carl Ortwin Sauer in Forward to Historical Geography



Location of Hay River, in relation to present-day lines of communications and other settlements

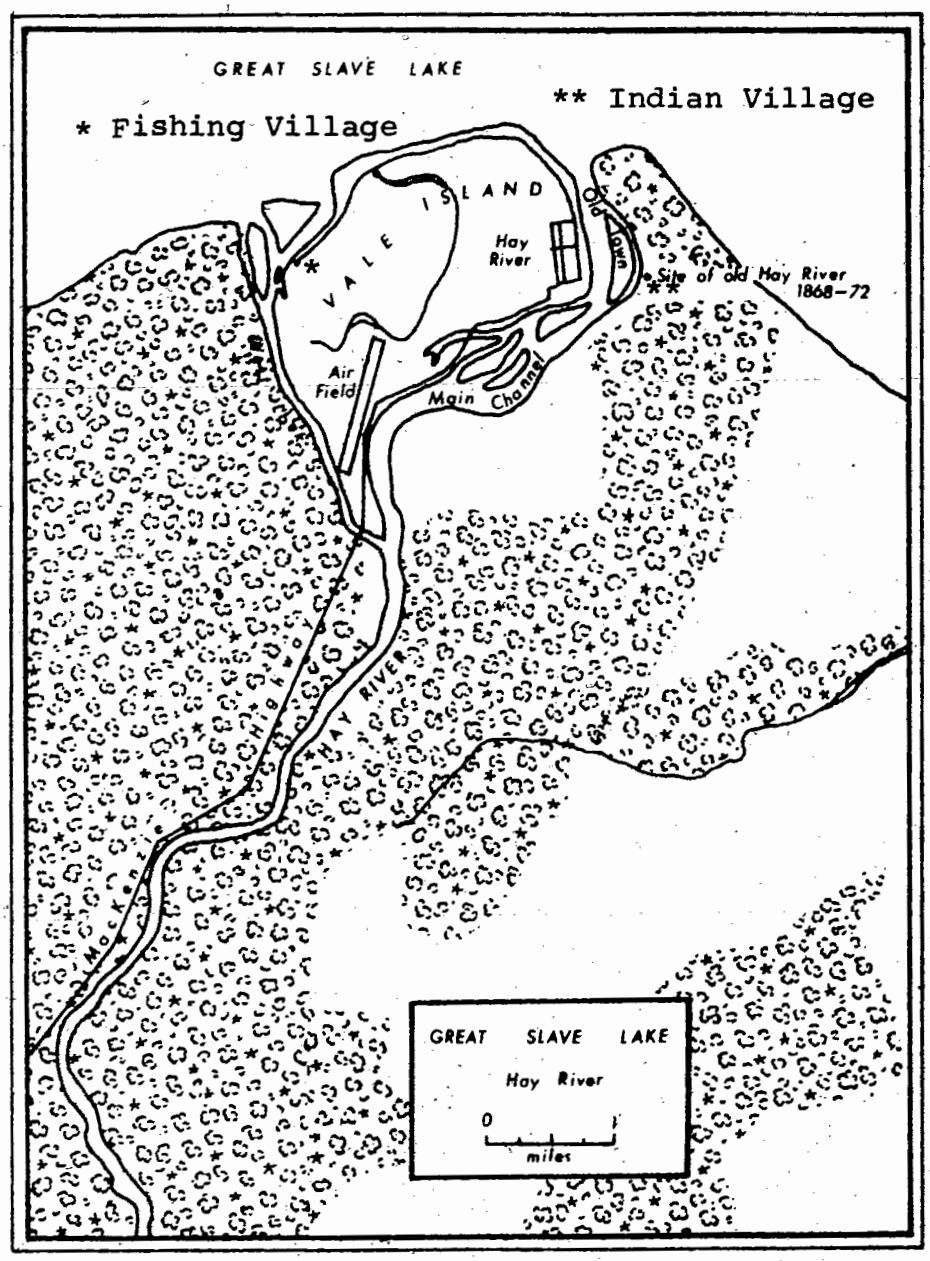
CHAPTER 1

INTRODUCTION

> Tugboats and barges, freight trains and bush planes, trucks and bulldozers. That's Hay River, Northwest Territories. Man's country. Transportation hub of the north. Doorway to the western Arctic. End of steel for the CN's Great Slave Lake Railway. Beginning of the Mackenzie River's trans-shipment lifeline. Hustle and bustle.
>
> "It's also a town racked with the gaw-damndest growing pains," says Mayor Don Stewart. "We've grown so fast from a little Indian village to an up-and-coming boom town we don't know which direction we're heading."
>
> - Frank Rasky, On Main Street

Hay River, Northwest Territories is an "up-and-coming boom town" which is made up of several concentrations of population: the New Town, the Old Town, the West Channel and the Old Indian Village. The population of approximately 3,000 persons, is composed of 355 Indians, 1190 Metis (or non-treaty Indians), the balance is white or non-native. The four concentrations of population are separated by several miles of road, bridges and water. The New Town is located on one bank of the Hay River, the Indian Village on the other bank (with no bridge connection) and the Old Town on an island in between these two at the mouth of the river where it enters Great Slave Lake. West Channel is a separate settlement on the island, approximately four miles away from the Old Town (see map on page 2).

Map 1. Hay River Delta



Source: Drawn by D. Ballantyne, New York, N.Y. from sketch maps of G.R. Rae, (1962), The Settlement of the Great Slave Lake Frontier Northwest Territories, Canada From the Eighteenth to the Twentieth Century, A PhD Thesis Submitted to the Department of Geography, University of Michigan, Ann Arbor, page 320.

Because the divisions in the community are so clearly observable, it is possible to discern patterns in settlement morphology. If such patterns can be identified, they may have considerable significance for the formulation and execution of northern policy in and with local communities.

Though the study focuses on settlement morphology of Hay River, it also explores the development of the community from the time of the earliest missionaries to the fur traders, fishermen, boatmen and contemporary corporations, in terms of the movement and survival of its basic elements. Some consideration is given to the role of climatic conditions, particularly in relation to the seasonal character of activities.

The development of settlement patterns in Hay River can be divided into three stages. The first stage extends from approximately 1892 to 1938. This phase comprises description of the pre-European and early fur trade phase of development in the Great Slave Lake area. Such a description facilitates understanding of the development of later settlements in Hay River. This stage is characterized by a small settlement of Indians living in either teepees or in small log huts in a clearing on the bank of the Hay River. This settlement often shifted, because the Slave Indians were dependent upon fishing and fur trapping as their source of livelihood, and these industries are directly affected by climatic conditions.

The second stage, covering the years from approximately 1939 to 1964, is marked by the development of the Great Slave Lake commercial fishing industry and the completion of the Mackenzie Highway in 1948. These two developments brought profound changes to the Hay River area. They stabilized the Old Town and led to a decline of the Indian Village. Settlement movement occurred in Hay River during this stage and was especially obvious in the fishing camps and Old Town.

The third stage, extending from 1965 to 1971, is characterized by rapid landscape change. These changes were caused by a flood, the development and later decline of the fishing industry, the location of a major mining development some 68 miles distant at Pine Point, and a staedy build-up of all types of agencies necessary to handle transportation to and from Hay River -- motor vehicle and truck, river and lake barges, air, and railway. Hay River might be called the ground transportation "hub" of this part of the north.[1] All these developments further precipitated settlement movement in Hay River. During this stage of development, the climatic conditions become increasingly important, for the local economic base cannot provide adequate employment opportunities for the people in the community during the winter months. The climate, in effect, determines the settlement morphology of Hay River--a settlement morphology which is different from one season to the next.

By building upon existing knowledge of Hay River, examining the landscape and the interaction of the people, their land and resources, an appreciation and understanding of the historical development of Hay River settlement will be facilitated.

Method

Historical methods are only means and not ends in themselves. As such they need to be linked to purposes or directions (Schulberg and Baker, 1971: 72-80). If anything, this is an understatement of the degree to which the term "historical methods" has acquired myriad and often conflicting connotations. Since an historical method is adopted in this study, it is necessary to clarify our use of the term and so specify its properties and reference.

Certain objectives have been imputed to a plea for the integration of history and geography. Murphey and Sherman (1966: 15) insist that "every investigation of human society is more useful if it can place its particular inquiry within the double frame of historical time and geographical space". They further state that "neither historical nor geographical analysis is complete unless it critically applies both dimensions".

In much the same manner Richard Hartshorne, (1939: 135) quoting Kant (1923: 4), describes the position of geography as related to history when he says:

> "Description according to time is history, that according to space is geography." "... history differs from geography only in the consideration of time and area (Raum). The former is a report of phenomena that follow one another (nacheinander) and has reference to time. The latter is a report of phenomena beside each other (nebeneinander) in space. History is a narrative, geography a description...."

> "geography and history fill up the entire circumference of our perceptions: geography that of space, history that of time."

Ratzel (1882), Brunhes (1921), Febvre (1922), Sauer (1925), and Brown (1938) have been quite convinced that it is very risky to divide the disciplines of geography and history according to the concepts of time and space without considering the approach undertaken. The facts of geography are the facts as they are approached in the course of history. [2]

> The fact that certain people live on an island has in itself no effect on their history; what has an effect is how they conceive of their insular position; whether for example they regard the sea as a barrier or as a highway for traffic. Had it been otherwise, their insular position, being a constant fact, would have produced a constant effect on their historical life; whereas it will produce one effect if they have not mastered the art of navigation...a fourth if everyone uses aeroplanes. In itself, it is merely raw material for historical activity, and the character of historical life depends upon how it is used (Febvre, 1922: 225).

Richard Hartshorne echoed the same thoughts in The Nature Of Geography, where he applied the following principles:

> "...while history is concerned with the integration of phenomena in periods of time, it must recognize more or less separate histories for each major area of the world. Likewise geography, integrating phenomena in areas, recognizes separate geographies of each period of time.... A practical difference results from the fact that, while the study of foreign histories permits the use of the same methods...the study of past geographies does not permit of the direct field observations of present geography" (Hartshorne, 1939: 185).

Closer to our concern with Hay River, the historical method identified as the traditional combined cross-sectional and vertical

theme approach espouses a similiar view, pointing out that any understanding of place must have two distinct but consistent aspects. First, it must create a framework for understanding the distribution of behaviour in time and space, and from which predictive statements might be derived. Second, it must give a framework that enables the identification of the process by which individuals come to exhibit the behaviour in question, and from which can be derived predictive statements about the interrelationship of the individuals and the place. [3] Koroscil (1972: 186) says that "the goal of this approach is to integrate the description of the landscape in stages with an analysis of the mechanisms which brought about successive changes". This approach is well suited to the study because it is "a working method which has been sanctioned by successful practice demonstrated in the literature" (Newcomb, 1969: 30).

In such an approach, it is clearly demonstrated that every landscape has individuality as well as relation to other landscapes, and the same is true of the forms that make it up (Sauer, 1925: 325). It is obvious, therefore, that this approach uses a specific set of demands.

> We know that habitat must be referred to habit, that habit is the activated learning common to a group, and that it may be endlessly subject to change. The whole task of human geography, therefore, is nothing less than comparative study of areally localized cultures, whether or not we call the descriptive content the cultural landscape. But culture is the learned and con-

> ventionalized activity of a group that occupies an area. A culture trait or complex originates at a certain time in a particular locality. It gains acceptance, that is, is learned by a group - and is communicated outward, or diffuses, until it encounters sufficient resistance, as from alternative traits, or from disparity of cultural level. These are processes involving time, but especially those moments of culture history when the group possesses the energy of invention or the receptivity to acquire new ways (Sauer, 1941: 359-360).

The nature and variation of this set of demands will be discussed within the context of settlement patterns in Hay River. The specific and "most obvious problems of localization of habit that need inquiry in historical ... terms are: (a) dispersal or agglomeration of habitations, (b) the spacing and size groups of clusters of settlements that develop under particular cultures, (c) functional specialization as between town and town within one cultural area, or (d) functional differentiation within a major town" (Sauer, 1941: 374).

It would seem useful to end the discussion by reminding the reader that although this study is intended to focus on the town of Hay River, Northwest Territories, some of its observations are equally applicable to other "towns" in Canada's North. It should also be noted that the field-work was carried out between mid-June and the end of August 1971, yielding a set of data which can only be considered significant for that settlement phase and within that seasonal period.

Phases in settlement patterns of Hay River were delineated

using evidence derived from a comparative analysis of documentary sources, magazine articles, newspaper articles, observations in the field, and discussion with persons working and living in the research area. Different kinds of research materials were used to describe and explain settlement developments depending upon the time period or phase. For example, the pre-European early fur trade phase of settlement development was based primarily upon the authoritative works of Innis (1930,1956), Jenness (1963), Rae (1962), and Usher (1971), and did not include information found in newspaper articles or by interviews with persons working and living in the research area. The contemporary period, 1964 to 1971, was less concerned with written materials but relied more upon the discussions and interviews with local residents.

Other research sources included Government documents, and other published and unpublished materials, including maps and photographs of Hay River and environs. The libraries of Simon Fraser University, Burnaby and the University of British Columbia, Vancouver, and the excellent public library in Hay River offered other data. Numerous agencies, too many to list here, [5] were helpful in providing material; but two agencies deserve special recognition, the Department of Indian Affairs and Northern Development, Ottawa, and Travel Arctic, Yellowknife.

Physiography

> My father, you have spoken well; you have told me that heaven is very beautiful. Tell me one more thing. Is it more beautiful than the country of the musk-ox in summer when sometimes the mist blows over the lakes and sometimes the water is blue and the loons cry very often? That is beautiful, and if heaven is still more beautiful my heart will be glad and I shall be content to rest there till I am very old.
>
> SALTATHA,
> "a Dog-Rib Indian,
> to a priest,"
> quoted in
> The Barren Ground of
> Northern Canada
> By Warturton Pike

Hay River, as shown in Map I, is situated on a tongue of land within the wide delta where the Hay River enters Great Slave Lake. The river flows from south to north along the shore of New Town and, after a sharp bend around the point, leads around a group of low-lying alluvial islands and enters Great Slave Lake through two main channels. The largest of these islands is Vale Island where both the Old Town and the Fishing Village are situated. Adjacent to the east channel of the Hay River lies the Indian Village which is part of the river's delta.

Strand lines of beach deposits from Glacial Lake O'Connell are found south of the delta. (See plates 1 and 2) The sediments underlying Vale Island are fine-grained sands, silts, and clays. Clay and till with boulders underlie these deltaic

Plate 1. The Hay River, from approximately three miles south of New Town (photo, R. Francis), 1971

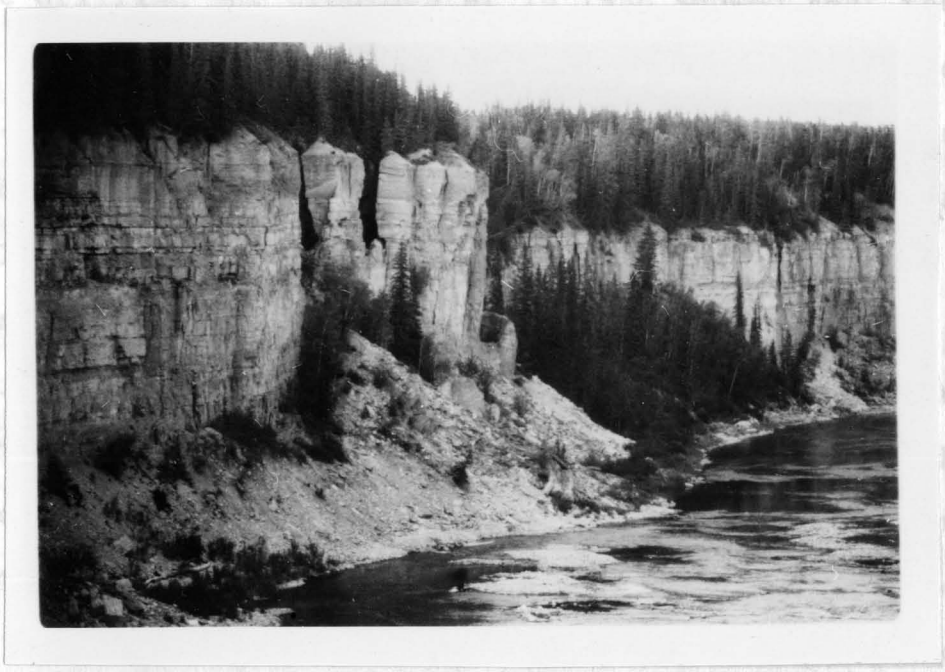


Plate 2. The Hay River, from approximately three miles south of New Town (photo, R. Francis), 1971

materials. Paleozoic shales of the Fort Simpson Formation underlie the recent deposits (Advisory Commission, 1965: 1).

Test drilling for groundwater in 1958 showed that the deltaic and glacial sediments were from 60 to 90 feet thick on Vale Island.[6] The drilling found permafrost, "a thermal condition in soils, muskeg, sands, clay and bedrock where temperatures are always below freezing", (Pritchard, 1971: 149) between depths of 4 to 30 feet (Advisory Commission, 1965: 2). Permafrost is throughout the settlement and combines with the alluvial soils to present drainage, building and erosion problems. For example, the permafrost underlying the site presents the greatest single problem in design and construction of the buildings. The permafrost is not a problem if it remains frozen, it has ample bearing strength; problems only appear when it thaws (Cooper, 1968: 153). Thus, all buildings in the town attempt to keep the soil underneath them in as nearly its natural state as possible. Cooper (1968, 154), illustrates two methods that are used in Hay River: the buildings are supported on piles and gravel pads are used as a foundation. Both methods create a free air-space which reduces the amount of heat transferred to the ground.

Natural vegetation in the area includes both trees and grasses; poplar, spruce, birch and other small trees are found in the dry areas, while the wet areas are covered with small shrubs, or marshy vegetation; little natural vegetation will be

found in those areas of the town where development has taken place.

The climatic conditions of the Great Slave Lake area, and in particular, Hay River, as shown in Table 1, are characterized by long cold winters (late September to mid-April) and short warm summers (mid-June to end of August).

Many reports of the adverse effects of the climatic conditions were obtained from local settlers and are recorded in the journals of explorers, fur traders and missionaries. For example, Reverend J. Marsh writing about his experiences at St. Peter's Mission in Hay River said :

> The climate here is very severe in the winter. Frequently the temperatures fall, for many days in succession, as low as 40°F below zero, while occasionally it drops to 55°F and 60°F below and the past spring (1906) saw it 62°F below on its coldest morning. In mid winter our days are very short, the sun holding its head above the horizon for less than five hours daily, which makes our nights very long and tiresome, often bearing down on our souls like a heavy fog.
>
> The summers are delightful and their joy is only diminished by the myriads of mosquitos and "bulldog" flies that tend to make the months of June and July almost unendurable with their presence. [7]

Indeed, many settlers in Hay River look forward to the ending of summer and the coming of winter. Judgements as to when winter is coming are made on the basis of the amount of open water and ice cover on the lake. As Rae (1962: 31) noted, in different years freeze-up and break-up may vary from 7 to 10 days but the sequence for the most part does not differ from that shown in Table II.

TABLE I

GREAT SLAVE LAKE

ENGINEERING DESIGN DATA - CLIMATIC ELEMENTS

HAY RIVER, NORTHWEST TERRITORIES, CANADA

Location: 60° 51' N. 115° 43' W. Elevation(MSL): 529 Ft.

Element	Characteristic
Winds	
Gusts, computed max.	90 mph
Mean Speed - all seasons	10 mph
Prevailing directions	NW, SW Quadrants
Precipitation	
Mean annual total	12 inches
Mean annual design	48 inches
Design snow load	36 inches
Air Temperatures	
Record high	96° F
Record low	-62° F
Summer design T. (1%) [a]	85° F
Winter design T. (1%) [b]	-45° F
Sub-Surface Temperatures	
Soils	Permafrost
Humidity (Vapor Pressure)	
January	.05 inches
April	.09 inches
July	.32 inches
October	.16 inches

a) Summer design temperatures (1% basis) is the temperature value in degrees fahrenheit, at or above which 1 percent of the July hourly outdoor temperatures occur.

b) Winter design temperatures (1% basis) same as "a" above except based on January conditions.

Source: Compiled from data on page 34, of G.R. Rae, (1962), The Settlement of the Great Slave Lake Frontier Northwest Territories, Canada from the Eighteenth to the Twentieth Century, A PhD Thesis Submitted to the Department of Geography, University of Michigan, Ann Arbor.

TABLE II
GREAT SLAVE LAKE
SURFACE CONDITIONS

Event	Duration	Dates
Navigation season	4 months	June 15 to October 15
Freeze-up and Break-up	2.5 months*	Spring (May 1 to June 15) Fall (October 15 to November 15)
Ice covered	5.5 months	November 15 to May 1

* The 2.5 months refers to the total time of open water (break-up) and ice cover (freeze-up). The 7-to-10 day period as noted earlier, refers to that time when the ice is strong enough to support domestic and commercial fishing operations as well as trucks carrying freight (Rae, 1962: 30-31).

The surface conditions of Great Slave Lake are key factors in Hay River's economic development. Because the economy is centred upon transportation services which are dependent upon an open water system, it is difficult and sometimes dangerous to predict when cargo should start up-river in the spring-summer or when barges and other sailing vessels should be dry-docked in the fall-winter.

Review of Literature and Sources

The student of written records concerning Canada's North has a relatively difficult task. Although his main subject is encompassed within about the last 200 years, there are few records or documentary sources to guide him. Most records and documentary sources that are available seem to be concerned with "non-renewable single resources based settlements rather than research centred on a settlement which has permanency for a variety of reasons, and will probably continue to be permanent and not disappear from the landscape" (White, 1972: 24-25). Hay River is a settlement of this kind. For example, the work of R.A. Jenness, Great Slave Lake Fishing Industry, a Northern Science Research Group Report, 1963, the Canadian Hydrographic Service, Great Slave Lake and Mackenzie River Pilot, printed by the Queen's Printer, 1958, and J.C. Guiltner's, The Peace River Country and Mackenzie Highway, Historical and Tourist Guide, are sources which focus upon single resources related to the historical geography of the resource, but do not provide a detailed account of how this resource is related to the historical geography of the Hay River settlement.

Thus, the description and attempted explanation of the historical geography of Hay River settlement are based upon various kinds of evidence, dependent upon the period. Information on the indigenous phase of settlement has been drawn primarily

from archeological research directed by D. Jenness, (1940), "Prehistoric Culture Waves from Asia to America," in Annual Report of the Smithsonian Institution, and his research published as "The Indians of the Northwest Territories and the Yukon", in Canada, Department of Mines and Resources, Canada's Western Northland. Jenness documented evidence was supplemented by the works of J.L. Giddings, "Ancient Bering Strait and Population Spread," in H.B. Collins, (editor) Science in Alaska, Selected Papers of the Alaskan Science Conference, published by the Arctic Institute of North America, and C.F. Borden, "West Coast Crossties with Alaska," in J.M. Campbell, (editor) Prehistoric Cultural Relations Between the Arctic and Temperate Zones of North America, a Technical Paper, 1962, the Arctic Institute of North America.

Evidence concerning early European contact and the beginnings of the fur trade settlements was sought from four principal sources: Alexander Mackenzie's Voyages from Montreal, on the River St. Lawrence, through the Continent of North America, to the Frozen and Pacific Oceans; in the years 1789 and 1793. With a preliminary account of the rise, progress and present state of the Fur Trade in that country, London, printed for T. Cadell, Jun, and W. Davis, Strand; Cobbett and Morgan, Pall-Mall; and W. Creech, at Edinburg by R. Noble, Old-Bailey, 1801. Samuel Hearne's A Journey from Prince of Wales Fort on Hudson's Bay, to the Northern Ocean. Undertaken by Order of the Hudson's

Bay Company, for the Discovery of Copper Mines, & North West Passage, &c, in the years 1769, 1770, 1771 & 1772, London, Strahan and Cadell, 1775. Harold A. Innis, The Fur Trade in Canada, (revised edition), Toronto, Irwin and Gorden, 1956. The fourth is George R. Rae, "The Settlement of the Great Slave Lake Frontier Northwest Territories, Canada from the Eighteenth to the Twentieth Century," A PhD Thesis Submitted to the Department of Geography, University of Michigan, Ann Arbor, 1962.

Information on the contemporary settlement of Hay River was obtained from a wide variety of sources. The most important information, and possibly the most accurate, is to be found in "Hay River". This document was put out by the Advisory Commission on the Development of Government in the Northwest Territories which visited the settlement on August 31 and September 1, 1965. This report traces the historical development of the settlement as related to the growth of the transportation and fishing industries. Another source used is "An Inquiry re Administration of Justice in the Hay River Area of the Northwest Territories," printed by His Excellency the Governor General on the 4th July, 1967. Although this report is primarily concerned with justice in the Hay River area, it provides an excellent account of the role played by the Royal Canadian Mounted Police in the settlement; the liquor problem as associated with the Indian and Eskimos is documented, and a review of the health services provided to the citizens of the area is undertaken.

George R. Rae's work, as mentioned, is a clear account of the historical geography of the Great Slave Lake area and Hay River as related to the roles that fur trading, fishing and mining have had upon the peopling of this part of Canada.

While such works have broadened our understanding of northern communities, many issues remain unresolved. The present-day literature about the area suggests that we press on to investigate, describe and analyze the significant historical processes involved in the emergence of northern town settlements.

REFERENCES, CHAPTER 1

1 After Bulletin issued by Department of Indian Affairs and Northern Development when the Advisory Commission on the Development of Government in the Northwest Territories visited the town in 1965, p. 4.

2 A more detailed account will be found in Carl O. Sauer, "Forward to Historical Geography", Annals of the Association of American Geographers, Vol. 31, 1941, pp. 1-24.

3 See Chapter V for further details regarding this point.

4 See, for example, J.O.M. Broek, The Santa Clara Valley, California: A Study in Landscape Changes. University, Utrecht, 1932.

5 Other agencies that were most helpful in providing materials include the following: Department of Industry and Development, Government of the Northwest Territories, Yellowknife; the Government of the Northwest Territories, Hay River, Planning Office; Northern Science Research Group, Department of Indian Affairs and Northern Development, Ottawa; Cominco, Pine Point Operations, Northwest Territories, Information Office; and Richard M. Hill, Manager, Inuvik Research Laboratory, Northwest Territories.

6 The drilling conducted in 1958 was continued in four holes down into the shale and limestone of the Fort Simpson Formation, but the presence of gas and highly mineralized water showed that groundwater suitable for the town could not be obtained by deep drilling.

7 Quoted in R.E. Johns, "A History of St. Peter's Mission and of Education in Hay River, N.W.T. Prior to 1950", The Musk-Ox, No. 13, 1973, pp. 24-25.

CHAPTER II

THE PRE-EUROPEAN INDIGENOUS AND EARLY FUR TRADE PHASE OF SETTLEMENT IN THE GREAT SLAVE LAKE AREA

Knowledge regarding the history of the pre-European populations is almost non-existent. The sketchy details which do exist have largely been derived from the work of a few ethnologists and linguists working on the Indian populations of North America.

Inferences as to the origins of the indigenous populations of the Great Slave Lake area suggest that a land bridge connecting the Bering Strait to the mainland of North America was present during the Pleistocene Period. We may assume that this was the migration route of the present-day Indian populations in the area. It is theorized that this route allowed the migration of present-day Indian populations to extend up the Mackenzie into the southwestern United States. [1] Biological and archaeological evidence give further credence to this theory, as does research by linguistic scholars. [2] They conclude that two great families exist in the north:

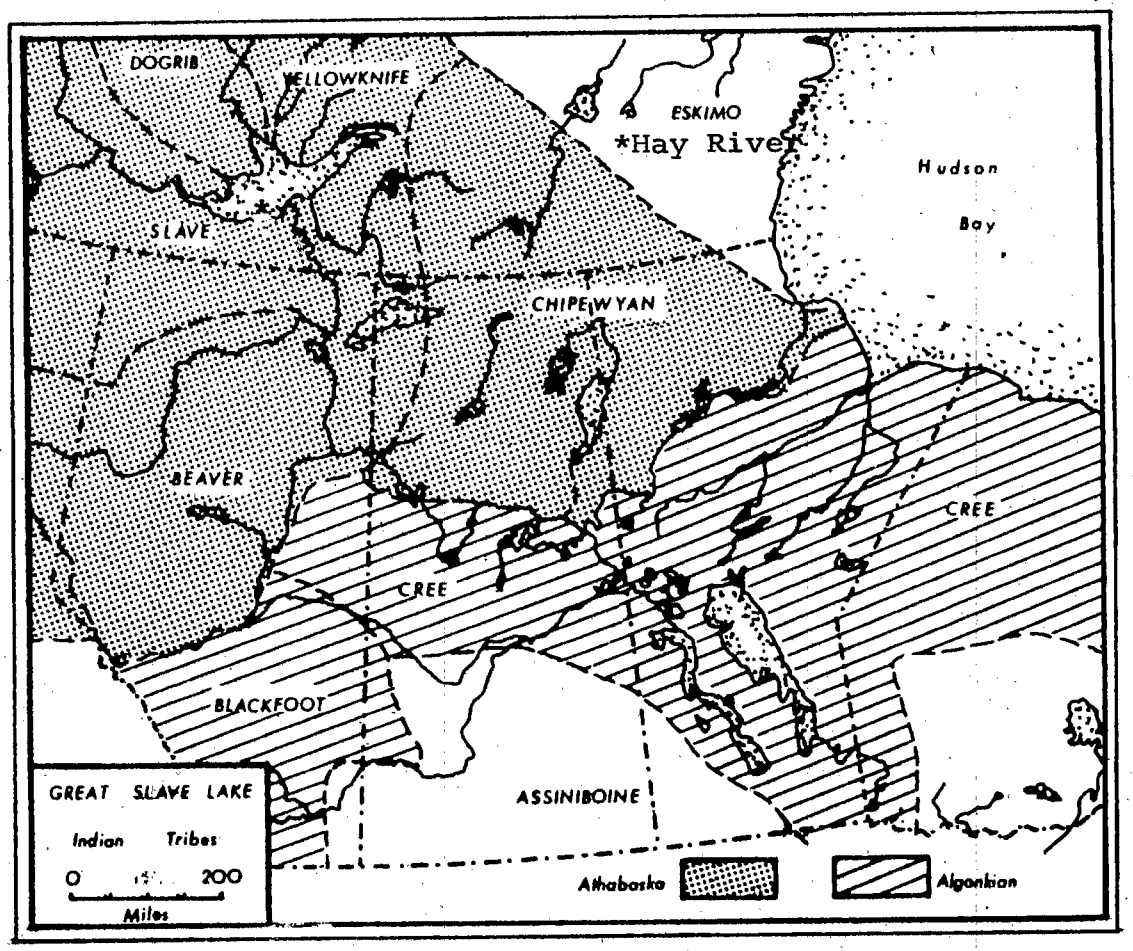
> The Algonkian in the east, the Athapaskan in the west. The Algonkian languages of the subarctic include Malecite, Naskapi, Montagnais, Ojibwa, and Cree. The subarctic Athapaskan languages include Chipewyan, Beaver, Sekani, Slavey, Tutchone and many others (Rae, 1962: 37).

The Indians that migrated across the Bering Strait and

up the Mackenzie and then settled around the Great Slave Lake area spoke an Athapaskan language or a modified version of this language. Figure I shows four Athapaskan tribes inhabiting the Great Slave Lake area. The Northern Indians or Chipewyans, the largest group of Athapaskans in Canada, occupy a vast triangular area which touches the Hudson Bay at the mouth of the Churchill River with the other corner reaching the tip of Great Slave Lake. A second tribe, the Dog-ribbed or Dog-ribs, occupy the territory between Great Slave Lake and Great Bear Lake. A third tribe, the Athapuscow or Slave Indians[3] live along the south shore of the West Arm of Great Slave Lake. The fourth tribe, the Copper Indians or the Yellowknife Indians, inhabit the northeastern shores of the Lake and that area to the east of and adjacent to the Dog-ribs (Rae, 1962: 42-44).

These four Athapaskan tribes inhabiting the Great Slave Lake area were basically a woodland people. While they were good hunters and trappers, the culture was based upon a water resource, fishing. Fish, the most important foodstuff played much the same role in their existence as maize did among some mid-latitude Indians. The technology which they developed for fishing is a reflection of the culture's inherent survival skills. As Rae (1962: 44) points out: "These native fisherman had developed an ingenious fish trap, in the pattern of a stake-fence

Figure I. Great Slave Lake, Indian Tribes



Source: Drawn by D. Ballantyne, New York, N.Y. after F.W. Hodge, Handbook of American Indians North of Mexico, Bulletin 30, Smithsonian Institution, Bureau of American Ethnology, Washington, D.C.: Government Printing Office, 1907.

and brush wire with a water chute and catch box, to obtain food during the fish runs in the rivers".

Generally speaking, however, the societies of the Athapaskan tribes were not very complicated. Life within the tribal unit was simple and intimate. Blanchett (1926: 24) says that "the dwellings of northern Indians included such types as stone-and-moss huts, conical skin teepees, brush shelters - all of them small, crowded and smoky". These people were found "... to be timid and inoffensive ... Their mentality is not of a high order, and in the past they did not not set much value on human life (Blanchett, 1926: 25).

For example, the Indians were nomadic, moving from campsite to campsite to flee the refuse that gathered near their dwellings. Nearly all of these dwellings are dirty, squalid breeders of disease, tuberculosis in particular (Rae, 1962:259). Another important reason for these Indians moving was the availability of fish, and the numerous rivers and lakes of the Mackenzie Basin provided ready highways for the people's movements to winter and summer fishing locations. Winter travel was by toboggans pulled as sleds by the women and older children. Dog sleds were seldom used until the establishment of the Canadian Fur trade.

The fur traders introduced a technology foreign to these essentially Stone Age tribes. Up until European contact, their

tools were simple, made from available materials with no secondary processing. For example, implements such as axes were nothing more than the teeth and jaws of beaver skeletons. In the case of the Yellowknife or Copper Indians, the available metal, copper,was hammered into implements such as knives, arrow points and axe heads. Their skills in metalwork soon spread to the other tribes as knowledge of this new material and its use was acquired. [4]

EUROPEAN CONTACT

Some evidence suggests that the French may have been the first to discover and settle among the Athapaskan tribes in the Great Slave Lake area. As early as 1863, Emile Petitot, a French missionary, observed half-breeds (claimed to be half French and half Indian) of long ancestry living along the Slave River and around Great Slave Lake. [5,6] Petitot described these men as "...without finances and education, and without any aim in life who unfortunately never paid any attention to the idea of claiming the honors of discovery and exploration". [7] He indicates that these settlers wandered from the site now occupied by the City of Calgary, Alberta, which was constructed as a fur trading post in 1751. [8]

As has been mentioned, the societies of the northern Athapaskans spoke the same language. Jenness (1937: 49) notes that this offered a unique advantage to the fur traders exploring

northern Canada when he noted that:

> Any fur trader, missionary or adventurer, after mastering a dialect in the lower St. Lawrence, could communicate readily with almost any native encountered westward through the Great Lakes and on into the great plains. In a like manner, upon learning a dialect of the Athapaskan tongue, one could converse with all natives encountered in the great Mackenzie and Yukon basins.

Language, then, was an important factor which set the boundaries of the early fur trade route.

THE EARLY FUR TRADE ROUTE

The Journal of Samuel Hearne, tells us that the early fur traders at Great Slave Lake were not Europeans, but Indians. The Chipewyans were ideally located to become the first to channel trade to the Europeans at Fort Prince of Wales (Figure I, page 24).

The Chipewyans soon depleted the fur-bearing animals in their territory, the Canadian Shield. "The Chipewyans were barred from penetrating into fur-rich country southwest of Fort Prince of Wales and along the valley of the Churchill River. These lands were occupied by the ancient Algonquin speaking enemy, the Crees" (Rae, 1962: 49). The Chipewyans searched for furs to the northwest, away from the Crees and within the Yellowknife and Dog-ribbed Athapaskan tribes. "The Copper (Yellowknife) and Dog-ribbed Indians, composed the whole of their trade; which

on an average of many years...(extending from 1713 to 1760) seldom or ever exceeded six thousand beaver per year". [10] In effect, the Chipewyans acted as the go-between or middle-man between the Yellowknifes and Dog-ribs and the Hudson's Bay Company.

> The Chipewyans zealously guarded their profitable business and allowed none of the natives of the "unknown interior" to trade directly with the Hudson's Bay Company. They plundered any of the Dog-ribs or Yellowknifies who ventured through their territory to the coast, and by doing so forced the natives in the "unknown interior" to rely on them for iron and other white man's goods (Rae, 1962: 178-179).

The warfare that had existed between the Chipewyan and the Crees ended after the fall of the French Colonies along the St. Lawrence in 1759. The result was the Indians abandoned the Seal River route to Great Slave Lake. [11]

Samuel Hearne, December 24, 1771, arrived at Great Slave Lake. He was a factor with the Hudson's Bay Company who was sent into the "unknown interior" in search of copper and to investigate the existence of a Northwest Passage. Hearne described and mapped many geographical features, whose importance was probably unknown to him, but later turned out to be of significance in the era of the Canadian fur trade. [12]

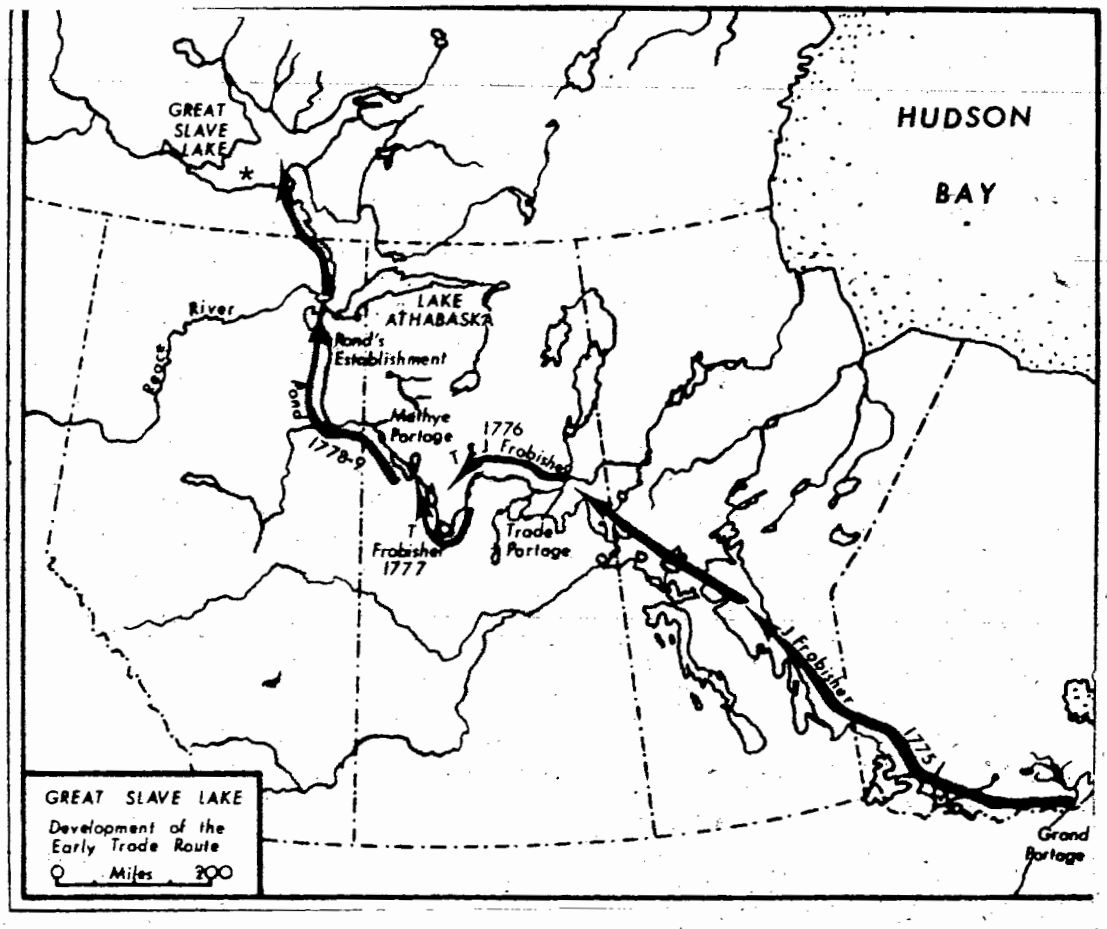
The success of Hearne stimulated others to follow and as a result the early fur trade changed direction. The Canadian fur traders from Montreal began to spread over every part of the country, particularly where the French had established settlements before the fall of Canada. Their fur trading operations

were so successful that the Hudson's Bay Company moved inland to compete. In effect, a contest for furs was actively begun between the Hudson's Bay Company and the Canadian fur traders from Montreal (Rae, 1962: 69-70). According to Usher (1971:28), a major expansion of permanent posts into the hinterland areas occurred up until the 1920's (Figure II indicates the development of the early trade route). Almost all (excluding defence and meteorological stations) fur trade posts were near winter encampments or along major travel routes from the hunting and trapping grounds to the forts, which made interception of the trade possible (Usher, 1971: 28).

> Indeed, the locational factors in the fur trade became not unlike those in gasoline retailing, and as in that business, the independents, although in competition with the large companies, also depended on them. Many did not export their furs directly, but traded them to the large companies in the main centres, and resupplied through these companies as well. Very often, company outposts were run not by company employees, but by independents, perhaps even using their already existing establishments, on informal arrangements (Usher, 1971: 28).

From the 1880's to 1921-22 there were 140 licensed white trappers in the Northwest Territories. This rose to 500 by 1926-27, and stayed at or near that figure until World War Two (Usher, 1971: 29). Most of these trappers entered the N.W.T. via the early trade route as shown in Figure II. Usher (1971:20-28), contends that virtually all trappers who entered the N.W.T. went to a fur trade post which he defines as "an existing trade establish-

Figure II. The Development of the Early Fur Trade.



* The location of Hay River, Northwest Territories.

Source: After a map on page 72 of G.R. Rae, (1962), The Settlement of the Great Slave Lake Frontier Northwest Territories, Canada From the Eighteenth to the Twentieth Century, A PhD Thesis Submitted to the Department of Geography, University of Michigan, Ann Arbor.

ment in continuous operation for a period of 2 years" or "any kind of structure, building or tent or any means of conveyance used to contain merchandise for barter, or sale, so soon as it is used for such a purpose".[13] Hay River, then, became a "fur trade post" in 1896. The following chapter will detail this development.

REFERENCES, CHAPTER II

1 For a more complete discussion of indigenous migrations see, for example, P.M. Koroscil, "The Changing Landscape of Whitehorse, Yukon Territory: A Historical Perspective", in J. V. Minghi, (editor), Peoples of the Living Land, B.C. Geographical Series, Number 15, pp. 186-187 and D. Jenness, "The Indians of the Northwest Territories and Yukon," in Canada, Department of Mines and Resources, Canada's Western Northland, Ottawa: The King's Printer, 1937, p. 49.

2 See Ibid., p. 186 and J.L. Giddings, "Ancient Bering Strait and Population Spread," in H.B. Collins, (editor), Science in Alaska, Selected Papers of the Alaskan Science Conference, Washington, D.C., Arctic Institute of North America, 1952.

3 These Athapaskans were given this disdainful title by the Crees. The Crees apparently considered them as a degenerate lot and may have applied this term very much as the expression "squalid barbarians" is used today. Mackenzie noted: The expression, "slaves", "by no means involves the idea of servitude, but was given to these fugitives as a term of reproach that denoted more than common savageness". See, G.R. Rae, "The Settlement of the Great Slave Lake Frontier Northwest Territories, Canada From the Eighteenth to the Twentieth Century", A PhD Thesis Submitted to the Department of Geography, University of Michigan, Ann Arbor, 1962, pp. 42-43.

4 These copper implements were made as hard as steel by being steeped for many hours in boiling caribou blood. See Rae, Ibid., pp. 44-45.

5 Emile Petitot, Autour du Grand Lac des Esclaves, Deuxième Edition, Paris: A Savine, 1891, pp. 76-78, cited in Rae op. cit., p. 39.

6 E. Petitot, "Geographie de L'Athabaskaw-Mackenzie et des Grand Lacs du Bassin Antique", Bulletin de la Société de Géographie, Paris, 1875, pp. 5-42 (July); pp. 126-183 (August); pp. 242-290 (September); Ref. on pp. 21-24 (July 1875), cited in Rae, op. cit., p. 40.

7 Ibid., p. 78, cited in Rae, op. cit., p. 41.

8 L.J. Burpee, The Search for the Western Sea--The Story of the Exploration of North-Western America, London: Alson Rivers, Ltd., 1908, cited in Rae, op. cit., p. 40.

9 Rae quoting Hearne states: "The established rule is "to get" ten times the price for everything they purchase that is given for them at the Company's Factory", Fort Prince of Wales. "It is at this extravagant price that all the Copper or Dog-ribbed Indians, who traffic with our yearly traders, supply themselves with iron work". Rae, op. cit., p. 50.

10 Ibid., p. 179, cited in Rae, op. cit., p. 50.

11 The new route chosen followed the 1,100 miles of the Churchill River to its headwaters at Lake La Loche, on Methye Lake, a twelve mile portage through La Loche, the route follows the Clearwater and Athabaska Rivers to Lake Athabaska.

12 The geographical features, namely the accurate charting of the many lakes and streams, made it possible for a fur trade route. See, Rae, op. cit., pp. 69-73.

13 Northwest Games Act, P.C. 1053, 1 May, 1918 and P.C. 1146, 1926, Quoted in P.J. Usher, Fur Trade Posts of the Northwest Territories 1870-1970, Ottawa: Northern Science Research Group, Department of Indian Affairs and Northern Development, 1971, p. 20.

CHAPTER III

THE HISTORICAL GEOGRAPHY OF THE SETTLEMENT OF HAY RIVER (1892-1938)

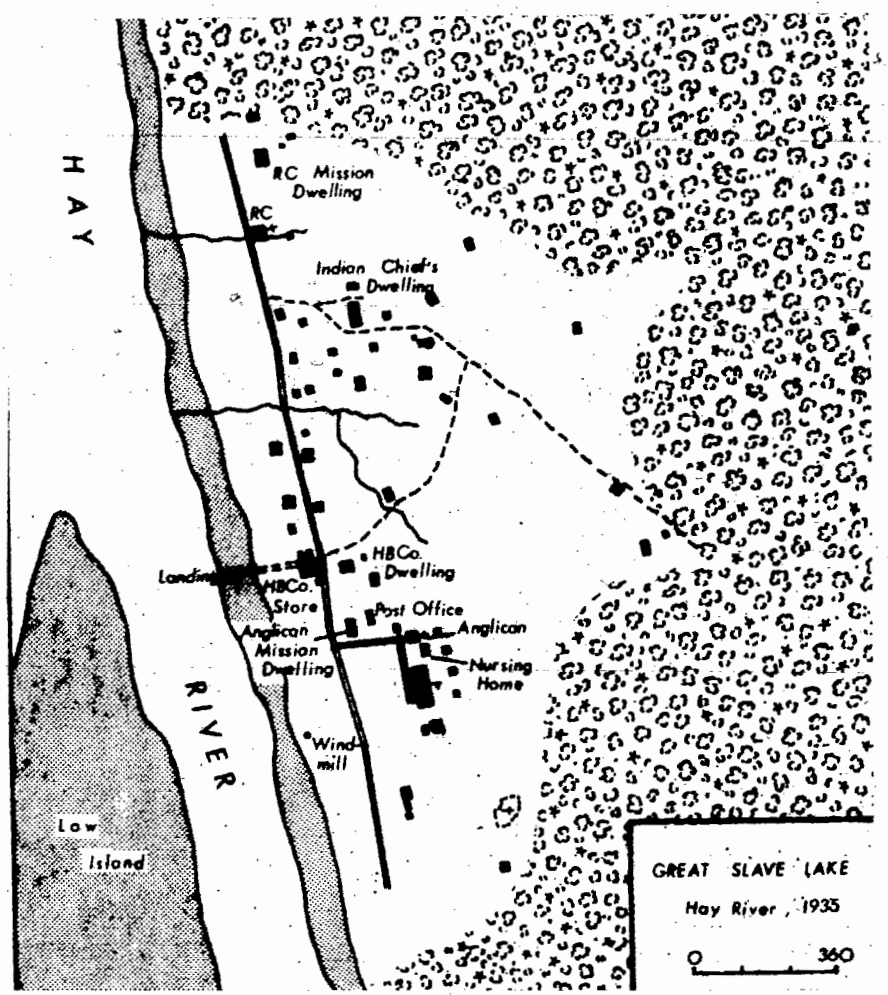
There are four distinctive developments in Hay River during 1892 to 1938: the establishment, growth, and decline of St. Peter's Mission School; the changes in modes of transportation in the Great Slave Lake area; the development of the Hudson's Bay Company trading post; and the beginnings of a fishing industry.

When Reverend Thomas J. Marsh arrived in June 1892,[1] the early settlement of Hay River was concentrated on the east bank of the Hay River, (See Map 2), as a small Indian encampment of sixty or seventy Slave Indians living in teepees or in small log huts. Camsell (1954: 38-40), indicates that Marsh, largely by his own efforts, developed the Hay River mission into an important and influential unit of the Anglican missions in the North.

In 1894 a large one-roomed house was constructed; it later became St. Peter's Mission, a boarding school for 40 children. A church and hospital were added between 1910 and 1920.

Marsh's annual report to the Department of Indian Affairs in 1906 gives some information on settlement conditions and facilities in Hay River, 1892-1906. The following excerpts have been extracted:

Map 2. The original settlement of Hay River located on the east bank of the Hay River.



Source: After a map on page 59 of G. Taylor, "A Mackenzie Domesday: 1944", Part 2 of The New North-West, edited by C.A. Dawson, Toronto, 1947.

Mackenzie River District,
Hay River Boarding School,
St. Peter's Mission
Hay River P.O.,
Via Edmonton, Alberta,
December 1, 1906.

Frank Pedley, Esq.,
Deputy Supt. General of Indian Affairs,
Ottawa.

Sir,...Hay River, on its east bank, on the southwest shore of Great Slave Lake, within the limits of treaty No. 8. It is not on an Indian reserve, but in the unorganized territory of Mackenzie River, under the supervision of the Royal Northwest Mounted Police.

Land.- We have under cultivation rather more than eight acres of crown lands adjoining the Indian village of Hay River. The soil in the immediate vicinity is flat alluvial deposit, on a bed of sand, and is adapted for agriculture. A varied growth of timber extends all round us. The land has simply been acquired through settler's possession and is the property of the mission.

Buildings.- We have the following buildings: (1) A large dwelling-house, used as our boarding school, composed of three parts, successively erected, the last being three storeys high, the whole constructed of logs and boards, containing eighteen rooms. (2) A new dwelling-house, still only partially completed. Its size is 23 X 15 feet, three storeys high with a two-storey lean-to attached, 25 X 15 feet. It will contain twelve rooms when finished. We are using the whole of this building, the main part as storerooms and the lean-to as a dwelling for part of our staff. (3) A workshop fitted up for carpentering and blacksmithing and containing a complete saw-pit. (4) and (5) Storehouses in which are kept clothing, provisions and general supplies. (6) Woodshed. (7) Small fish-house. (8) Cattle byre. (9) Hen-house. (10) Our church, which is roofed and shingled now, but must remain unfinished for want of sufficient help capable of completing it.

Farm and Garden.- The garden simply represents a small piece of land fenced off seperately, in which we grow cabbages, cauliflower, beets, carrots, parsnips, onions, radishes, lettuce, peas, beans, and etc., chiefly used for the benefit of the staff and mission help.

There are no roads, however, throughout the country and no horse

feed stations, so we cannot dispense with our dogs as yet, although we should very much prefer the horse if it were possible. Our hog venture of 1903 is a thing of the past history now, having failed to secure a mate for my remaining sow and so had to kill her.

Food Supply.- The greater part of our food is obtained from local sources. Setting nets in the lake almost all the year round we are seldom, if ever, without fish on our tables. The remainder of our provisions, consisting of flour, meal, tea, sugar, bacon and a little dry fruit, etc., is annually imported a year or eighteen months ahead....

General remarks.- Some better conception of our surroundings than is general may be realized when it is understood that our nearest neighboring hamlet is eighty miles distant and cannot be reached without days of travel, except in summer when there are steamboats passing here on four or five occasions only. Our winter travel is all by the slow and tedious means of dog-train. There are no stopping-houses along the way, so that we have to sleep under the open canopy of heaven.

I have, etc.,

THOS. J. MARSH
Principal.

(Sessional Papers, 1908: 388-393).

Aside from the above, it appears that the Department of Indian Affairs was not entirely satisfied with the quality of the accommodation provided for the children, nor with the over-crowded conditions as reported in 1913.

> The school is an old building, the original log house has been added to from time to time to meet the steady increase of attendance. The result is not all that might be desired. The ceilings of the first two storeys are low, the lighting is insufficient and the ventilation poor. The third storey, however, is very much higher, having for ceiling the gable roof, and the lighting and ventilation are extremely good. 2

Marsh attributed these difficulties to the smallness of

the settlement and its almost isolated conditions combined with "want of sufficient help" or "labour shortages" (Camsell, 1954: 40). The Indians demanded exorbitant wages for their labour, but their attitude changed to one of respect when they found him (Reverend Marsh) quite able to do without their assistance (Camsell, 1954: 39).

From Marsh's departure in 1907 until 1927, the Rev. Canon A.J. Vale administered St. Peter's Mission: this was a period when the mission and the settlement were affected by changes in economic activity, religion and government. The early part of Vale's administration, however, was a continuation of Marsh's effort. In 1910, Vale could report, in addition to the facilities reported by Marsh, a new stable with accommodation for 6 cattle and 2 horses, a dwelling for hired help, and a dwelling for the interpreter. The church, he reports, is completed. In 1910 there was room for about 60 persons at the mission. [3]

In addition to the developments at the mission from 1910 to 1929, the building of lakeports to accommodate the export of furs and fish attracted settlers to Hay River. Besides development of a port and increased population, fur trading and fish exports required adjacent forests to supply wood for construction and fuel and foodstuffs for the expanding population. As well, modest development of an urban infrastructure was necessitated. In the east bank settlement where natural resources were favorable, labour and capital began to concentrate and a shipyard

began to develop. Elsewhere, however, the economic developments were small. Indeed, Sergeant R.W. McLeod of the Mounted Police writing in 1925 notes how small Hay River was, as shown in Map 2, page 35.

> The place consists of English and Roman Catholic missions, Hudson's Bay Company, Hislop and Nagle, and Sweigert Trading Companies, and about 25 small buildings in which the Indians are living. 4

The fur and fish boom during the 1920's brought prosperity to only a few, most of whom were new and transient. Thus, at this time while a few were thriving economically, Hay River Mission School was debating closure of the school. New appointees to Hay River Mission positions were informed in a letter that said:

> "an effort is being made to persuade the Indian Affairs Department to have the Hay River School transferred to a point much nearer the mouth of the Mackenzie River". 5

Although the Federal Government was committed to provide some expenses of education for Indians in the Hay River area, the government had done virtually nothing to assist the Hay River Mission School. [6] The monies received from the Department of Indian Affairs did not meet the operating expenses of the Hay River school. The per capita grant for treaty Indian pupils in 1928 was $180.00. [7] An Inspector of Treaty Number 8 summarized the government's policies when he said: "As for the schools in my opinion they are doing good work at a very small cost to the government. It would be difficult to see how a better or cheaper policy in regards to schools could be worked out than the one in

vogue".[8] The financial dealings of the church with the Federal Government, rather than the church wanting to move the school nearer the mouth of the Mackenzie River, may have been more important as a reason to relocate the school. The school, however, did not relocate until some 10 years later in 1938.

Morton (1970), Carrothers (1967), Robertson (1967), Judd (1969), and Lotz (1969) suggest that, up until 1931, the Federal Government left decisions to the missionaries, the Mounties, the Hudson's Bay Company, and other fur traders on the spot. This situation was especially true in Hay River, when the missionaries, the Mounties, Hudson's Bay Company, Hislop and Nagle, and Sweigert Trading Companies caused Hay River's expansion to be specifically dependent upon themselves and, of course, their dependence was dictated by uncomprehended world fur and fish price fluctuations. This dependency on a changing world fur and fish market had an immediate and pervasive effect upon the settlement morphology of Hay River. For example, when the fur trade gravitated to Hay River after 1900, the export boom produced a labour force and caused the fur and fish industries to locate in different parts of Hay River. For the first time, the fur and fish enterprises occupied different locations. The fishermen moved across the east channel of the Hay River and began to settle the area where the west channel enters Great Slave Lake (Maps 1 and 3). The Hudson's Bay Company fur-trading post which was built adjacent to the Anglican Mission was located on the

east bank settlement. It was constructed in 1894 and was placed approximately 1,000 feet further north from the original post built in 1868.

The Hay River post served the Buffalo Lake area. Buffalo Lake is a shallow, marsh-fringed lake forty miles south-east of Hay River harbour. "A multitude of small streams well-stocked with beaver flow northward from the "Caribou Mountains" and empty into Buffalo Lake. The marshes and land surrounding the lake formed a natural sanctuary for numerous marten, muskrat, ermine and mink" (Rae, 1962: 252). The Buffalo Lake area was also the natural habitat for caribou, wood buffalo, and moose. The major drawback of this region was the absence of edible fish. The Buffalo River, the fifty-five-mile-long spillway of Buffalo Lake, is a spawning stream for the poisson inconnu (Rae, 1962: 252). The inconnu make excellent dog food, but in contrast to the whitefish become palling diet for humans when eaten day after day (Rae, 1962: 252). The Hay River, on the other hand, is a spawning stream for whitefish, a fish that is an excellent diet if eaten day after day. Because Hay River was a whitefish spawning stream and the Buffalo River an inconnu one, the Hudson's Bay Company selected the site of Hay River over the site of the mouth of the Buffalo River (Rae, 1962: 255).

Despite this increase in fur trading at Hay River post, the settlement continued to be small and isolated. Figure III

shows the growth and decline in the number of trading posts in Hay River, while Figure IV shows the classification of the trading posts by time, region and ownership.

CHANGES IN MODES OF TRANSPORTATION

During the fur-trade, Hay River, like all other settlements in the Great Slave Lake region, was greatly influenced by changes in transportation. If one were to rank the importance of the Hudson's Bay Company, the missions and the developments in transportation during this phase of settlement, the last would rate highest.

The lands south of Great Slave Lake and Hay River were badly drained, muskeg-filled troughs that were un-navigable even by boats or canoes; therefore, travel had to be by foot. The canoe was the main mode of transportation along the Great Slave Lake-Mackenzie River trade route. (See Figure II, page 30)

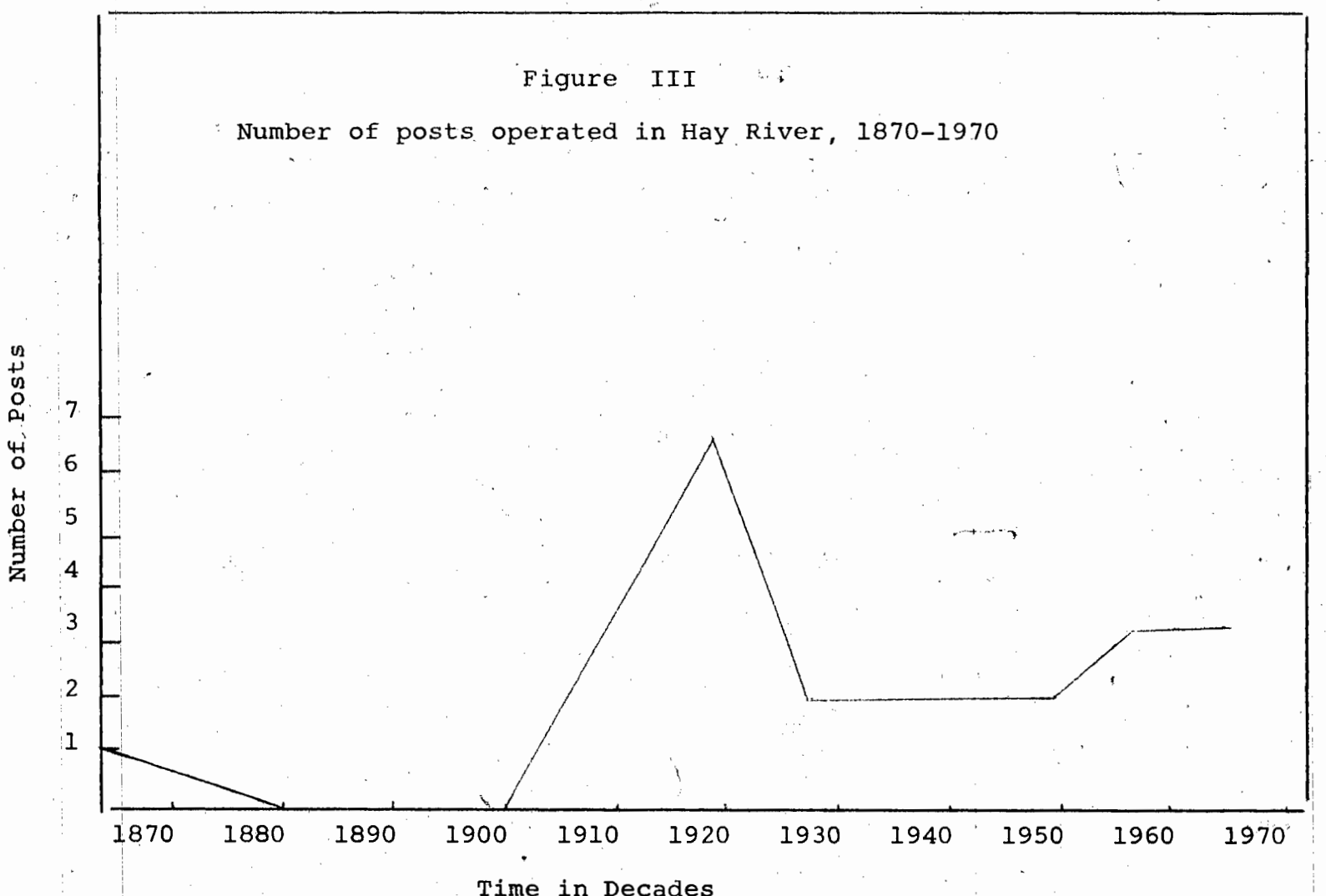
In 1822, canoes were replaced by York boats on the Slave River, Great Slave Lake, and the Mackenzie River.[11]

> These boats were flat bottomed scows about thirty-five feet long with a cargo capacity of about five tons. Each York boat was manned by eight men and when moving up stream was tracked, like a canal barge, by the crew walking the banks pulling a long tow line. On lakes and smooth rivers boats were either rowed by eight oars and steered by a long sweep or carried along by hoisting a large square sail (Alcock, 1920: 68-72).

Although York boats became the standard freight carriers on the Great Slave Lake-Mackenzie trade route, canoes were still

Figure III

Number of posts operated in Hay River, 1870-1970



Source: Compiled from data on pages 33,46, and 47, of Peter J. Usher, "Fur Trade Posts of the Northwest Territories 1870-1970", Northern Science Research Group, Department of Indian Affairs and Northern Development, Ottawa, 1971.

Figure IV. List of fur trade posts in Hay River by time & ownership, before 1870-1971

Hay River	Years during which fur trade posts operated [1]	Ownership
	1868-1875	Hudson's Bay Company
	1901-present	Hudson's Bay Company An outpost trade may have been conducted here as early as 1895. Originally located in the Old Village on the east bank at the mouth of the East Channel. Moved to the Vale Island Townsite about 1949. A second store was opened in the new Townsite about 1966, and the Vale Island store closed in 1970.
	1901-1912	Hislop & Nagle
	1901-c,1919?	Swiggart, G.M.
	1912-1938 Purchased from H&N	Northern Traders
	1917?-1920	Peace River Trading Co. (Diamond P. Stores)
	1920-1924 Purchased from Peace River Trading (Sold to H.B.C.)	Lamson & Hubbard
	1949-1957?	Porritt, Robert
	1951-1955?	Dean, Stanley F.
	1961-1962?	Spreu, Herbert
	1966-present	Steinwand, A. (Arny's General Stores)

1. A(?) denotes unsure of closing date of trading post.

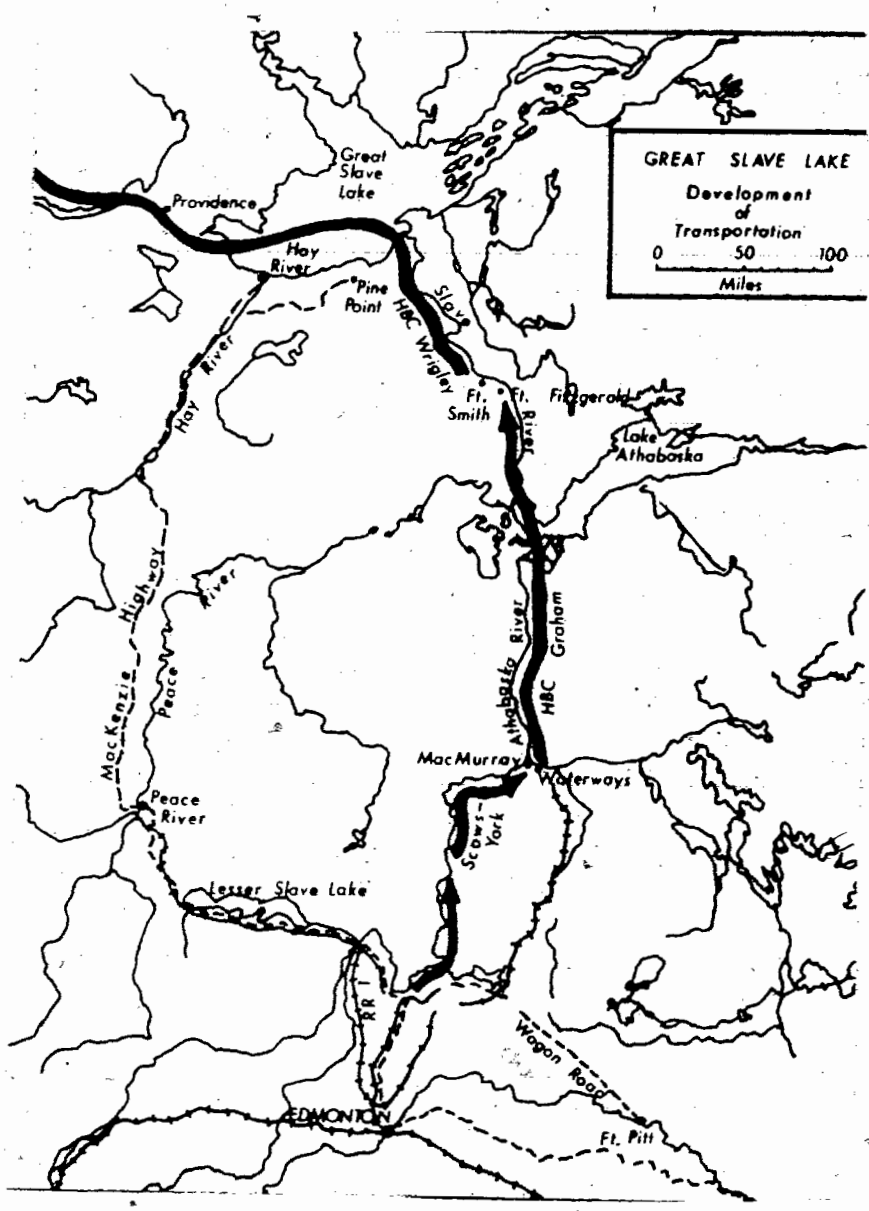
Source: From data on pages 46 and 47, of Peter J. Usher, "Fur Trade Posts of the Northwest Territories 1870-1970," Northern Science Research Group, Department of Indian Affairs and Northern Development, Ottawa, March 1971.

used to exchange furs, goods and supplies at each local settlement.

The York-boats were replaced by steamboats in the late 1880's; and these were replaced by diesel-driven tugs pushing barges in the 1930's and 1940's. The developments in transportation, (Figure V), brought a major change to Hay River. Prior to the steamboats, all trade in furs, goods and supplies were exchanged from the settlement on the east bank of the Hay River. (See Map 2, page 35). By 1920, this site was unable to meet the fueling demands of the steamers due to a shortage of timber. Vale Island, (Plate 3), lying opposite the settlement, was well timbered. Therefore, the steamers began to dock at Vale Island for fuel, the wood having been cut in winter and stored as cordwood. This change-over in docking the steamers created a settlement pattern which was roughly analogous to the east bank settlement, an unpaved street, a store, an occasional house. No fur traders, fishermen or Mounted Police resided there. The lone social institution was a general store.

During the era of steamboat transportation, Hay River harbour slowly established itself as a mid-point in trans-shipment for the steamboats on the Great Slave Lake-Mackenzie trade route. With the boom in the fur trade in the 1920's, the discovery of oil at Norman Wells in 1920, the construction of a railway line from Edmonton by way of Lac la Biche to the confluence of the Clearwater and Athabaska Rivers, where the town of Water-

Figure V. Great Slave Lake, Developments of Transportation



Source: Drawn by D. Ballantyne, New York, N.Y. from sketch maps of G.R. Rae, (1962), The Settlement of the Great Slave Lake Frontier Northwest Territories, Canada from the Eighteenth to the Twentieth Century, A PhD Thesis Submitted to the Department of Geography, University of Michigan, Ann Arbor, page 215.

Plate 3. Areal View of Hay River Settlement (photo, R. Francis), 1971

Plate 4. The Hay River, from approximately three miles south of New Town (photo, R. Francis), 1971

ways now stands, and an increase in fish cargo, it appeared that Hay River would boom and soon become the transportation centre for the District of Mackenzie (Rae, 1962: 261-266).

The constraining power of the depression in the 1930's spelled disaster for Hay River. By 1938, the depression had made Hay River a poor dying community. The next chapter examines these developments as they affected the geography of the settlement of Hay River.

REFERENCES, CHAPTER III

1 The date, June 1882, is recorded in the Annual Report to the Deputy Supt. General of Indian Affairs, cited in R.E. Johns, "A History of St. Peter's Mission and of Education in Hay River, N.W.T. Prior to 1950", The Musk-Ox, No. 13, 1973, p. 23. (Hereafter cited as A History of St. Peter's Mission). Camsell (1954: 39), however, states that Mr. Marsh arrived in Hay River in the fall of 1894.

2 This statement was made by Inspector H.A. Conroy of the Department of Indian Affairs, in his report on the mission in 1913. Quoted from Sessional Papers, 1913: 382 and, cited in A History of St. Peter's Mission, p. 26.

3 This is an estimate based on number of persons attending school. Quoted from Sessional Papers, 1911: 491 and, cited in A History of St. Peter's Mission, p. 26.

4 The Roman Catholic Mission in Hay River, 1910, was very small. The Roman Catholic Church was operating larger mission schools at Fort Providence and other points north. The Sergeant R.W. McLeod statement is quoted from Sessional Papers, 1910: 179 and, cited in A History of St. Peter's Mission, p. 26.

5 This letter (1928) was followed by further correspondence in 1935, which said: "The question of the future of our school at Hay River has been receiving very special attention, and it is highly probable, I think, that our Society will provide funds for the proposed joint school for the lower regions of the Mackenzie River, but no definite decision can be reached in this connection until this Autumn..." (Missionary Society, 1935), and, cited in A History of St. Peter's Mission, p. 27.

6 The teachers were paid directly by the bishop as deposits in southern banks. It is not known whether or not the government paid the teachers a stipend. The amount of per capita grant from 1910-1928 at Hay River was $72 per Treaty Indian pupil. Figures from A History of St. Peter's Mission, p. 27.

7 Non-native mission staff were paid in funds deposited in southern banks, whereas native helpers were paid in trade goods based on a unit value called "skin".

8 A clause in Treaty Number 8 says: "Further Her Majesty agrees to pay the salaries of such teachers to instruct the

children of said Indians as to Her Majesty's Government of Canada may deem advisable," (Canada, 1899), and, cited in A History of St. Peter's Mission, p. 27.

9 Several factors besides the availability of whitefish at Hay River influenced the decision. The land near the mouth of Buffalo River is not a good point in which to locate since it is boggy just back from the shore. The river has numerous boulder-filled rapids and a high velocity which makes paddling upstream an impossibility. One has to depend solely on a track line. The flow of Buffalo River is very irregular and often fluctuates rapidily. Quoted from G.R. Rae, "The Settlement of the Great Slave Lake Frontier Northwest Territories, Canada from the Eighteenth to the Twentieth Century", A PhD Thesis Submitted to the Department of Geography, University of Michigan, Ann Arbor, 1962, pp. 254-255.

10 Quoted in Rae, Ibid., p. 211, from F.J. Alcock, "Past and Present Trade Routes to the Canadian Northwest", The Geographical Review, (August, 1920), pp. 68-72.

CHAPTER IV

THE EMERGENCE OF A SETTLEMENT HIERARCHY (1939-1964)

The depression had deleterious effects on Hay River; the Royal Canadian Mounted Police were withdrawn as an economy measure in 1935, and the Northern Traders abandoned their post in 1937 (Rae, 1962: 261). At the same time, however, the depression caused an influx of population into Hay River, accompanied by a greater structuring of social and economic activity.

Wolforth (1971: 57) notes that the spatial patterning of human activity becomes increasingly structured in the settlements, because interests were recognized on the basis of loyalty to and affiliation with a particular settlement as well as to an ethnic group. He further suggests that settlement concentration is a corollary of urbanization. This process of urbanization occurred in Hay River, when the depression had the effect of eliminating the more marginal traders in eccentric locations and of encouraging concentration of the trading function in Hay River. This procedure has been well documented by Wolforth (1971) in his discussion of Inuvik which identifies the situation that occurred in Hay River. For example,

> The result was that these came to fill more the role of urban centres strictu sensu than they had in the past, in that social and economic activities came to be increasingly structured by their presence. As the movements of Indian, Metis and white residents of the Delta and surrounding area were channelled through the settlements, the transactions conducted there came to dominate the use of the resources of

> Eskimos and surrounding areas. Where in the past trapping had been a part, albeit an important one, of the domestic economy it now became its primary generator. Where in the past the visit to the trading post had been an adjunct to the land-based economy as a means of gaining equipment and food with which to conduct activities on the land with greater efficiency, it now became its most important component (Wolforth, 1971: 58).

This process of urbanization in Hay River and its emergence as a settlement hierarchy was further strengthened, when in 1942 the United States Corps of Engineers began the construction of an airstrip on Vale Island. The building of the airstrip resulted in the planning of a new townsite on the west bank of the east(main) channel on Vale Island. (Map 1) A fishing village, also at the mouth of a different channel on the river, West Channel, (Map 3) was planned and constructed in 1942. At the same time, the construction of the Mackenzie Highway System from Grimshaw, Alberta, some 380 miles to the south was begun.

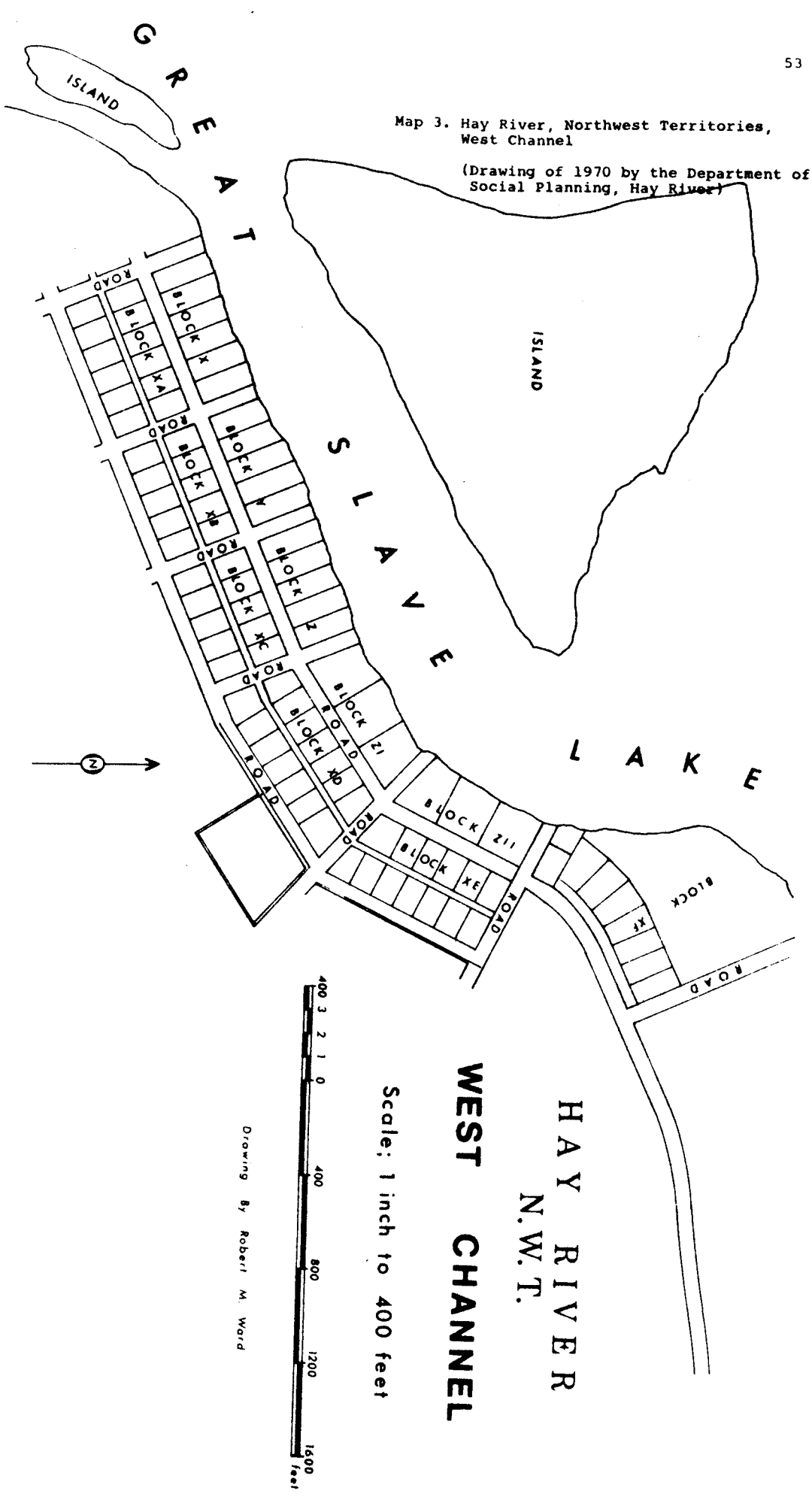
The combined effects of these developments further strengthened Hay River as a dominant urban centre in the District of Mackenzie. This chapter examines these developments as the key geographical agents during the period 1939 to 1964.

HAY RIVER HARBOUR

The Hay River, about 300 miles in length, is the largest stream flowing into Great Slave Lake. It has its source in the interior of northern British Columbia, then enters Alberta, flows

Map 3. Hay River, Northwest Territories, West Channel

(Drawing of 1970 by the Department of Social Planning, Hay River)

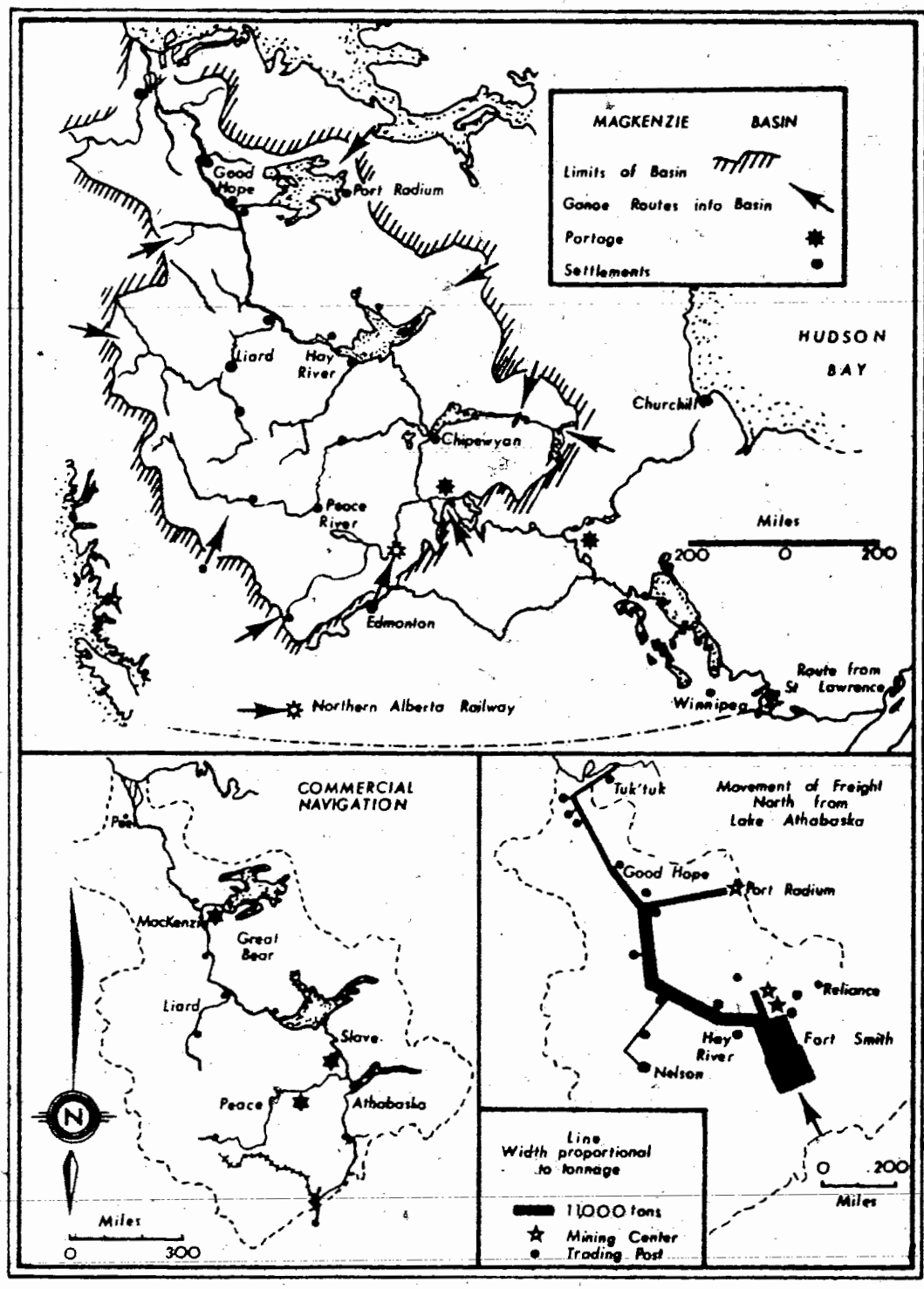


through the Northwest Territories and enters Great Slave Lake. About forty miles above Great Slave Lake, the Hay River flows over 2 falls. One is Alexandra Falls, where there is a sheer drop of 106 feet, and about one and one-half miles further downstream, it flows over the Louise Falls, which drops a further 52 feet in a series of steps. Below the Louise Falls are 3 miles of rapids through a gorge, 170 feet deep, that extends downstream for a distance of 5 miles. (See Plates 5 and 6) Below the gorge, the river cuts through blue-green soft shales which gradually rise, then form bold bluffs along both sides of the valley. [1] Entering the plains above the delta, the river is about 100 yards in width and leads around a group of low-lying islands, before entering Great Slave Lake by 2 main channels. Vale Island and the shores adjacent to the east and west channels of the Hay River are all part of the river's delta. (See Map 1)

The harbour facilities at Hay River provide access to the waterways of Great Slave Lake and the Mackenzie River. These harbours were and are the principal facilities used to transport most of the water freight in the District of Mackenzie. (See Figure VI)

The best natural harbour is located on the south shore of West Arm. (Map 1) Lake and river vessels may be accommodated along either side of the river for more than a mile upstream. A small finger of land acts as a natural breakwater and protects the small estuary from the storms on West Arm. The harbour is

Figure VI. The Mackenzie Basin.



Source: From T. Lloyd, "The Mackenzie Waterway: A Northern Supply Route", The Geographical Review, 1943, page 418.

Plate 5. Alexandra Falls, Hay River
(photo, R. Francis), 1971

Plate 6. Louise Falls, Hay River
(photo, R. Francis), 1971

located at the halfway point on the water route from Fort Resolution to Fort Providence, a distance of 75 sailing miles (Rae, 1962: 248-251).

The direct impact of the harbour facilities on the urban environment can be seen, heard and smelled. For example, the development of the harbour facilities became the major determinant of the location, function and growth of Hay River settlement. As both settlement and harbour grew, their common needs for additional land came into conflict which has increased significantly in more recent times. [2] This conflict has caused the settlement to regard the harbour facilities as being the chief contributor to visual, noise, air and water pollution. Though not as noticeable by its physical presence, the construction of the Mackenzie Highway had a substantial impact on the settlement, which will be discussed below.

THE GRIMSHAW TRAIL

The pressure on Hay River harbour facilities was generated by mining and industrial developments in Yellowknife. "Yellowknife in 1938 was booming and before 'freeze-up' that year large quantities of freight destined for Yellowknife still remained in the warehouses at Waterways" (Curleigh, 1940: 257). An alternate supply route was needed.

> A survey of the possibilities revealed that the most feasible overland connection lay between Hay River and the railhead of Grimshaw north of

> Peace River. Part of this route was already in existence. As the Peace River farming country had pushed its frontier northward, the railway and the road likewise had been extended for eighty-five miles to the new agricultural town of Grimshaw. North from Grimshaw an unimproved farm road proceeded for fifty or sixty miles. The route continued as a wagon trail northeastward to Fort Vermillion on the Peace River and then zig-zagged northwestward as far as a small fur post called Upper Hay River (Rae, 1962: 315).

A distance of one hundread and sixty miles of bush, muskeg and forest separated Hay River settlement on the Great Slave Lake and Upper Hay River post. Equipment and men were employed by the Alberta Government to cut a tractor road between these two points and to improve the old farm roads and wagon trails in the southern section; work commenced in mid-February and was completed in April (Curleigh, 1940: 257-258).

For the first time, Great Slave Lake was connected to the road network of the outside world. The new road was put to immediate use.

> Tractor trains carrying much needed supplies for Yellowknife proceeded north from Peace River and arrived in the gold mining settlement a few weeks later. The standard tractor train consists of a caterpillar-tractor pulling several 15-ton sleds and a caboose. The train runs on a 24-hour schedule, averaging 50 miles a day. The haul between Hay River and Yellowknife was possible only when the ice on Great Slave Lake was at least 40 inches thick. Ice that thick almost always occurs from mid-January to early May (Rae, 1962: 315).

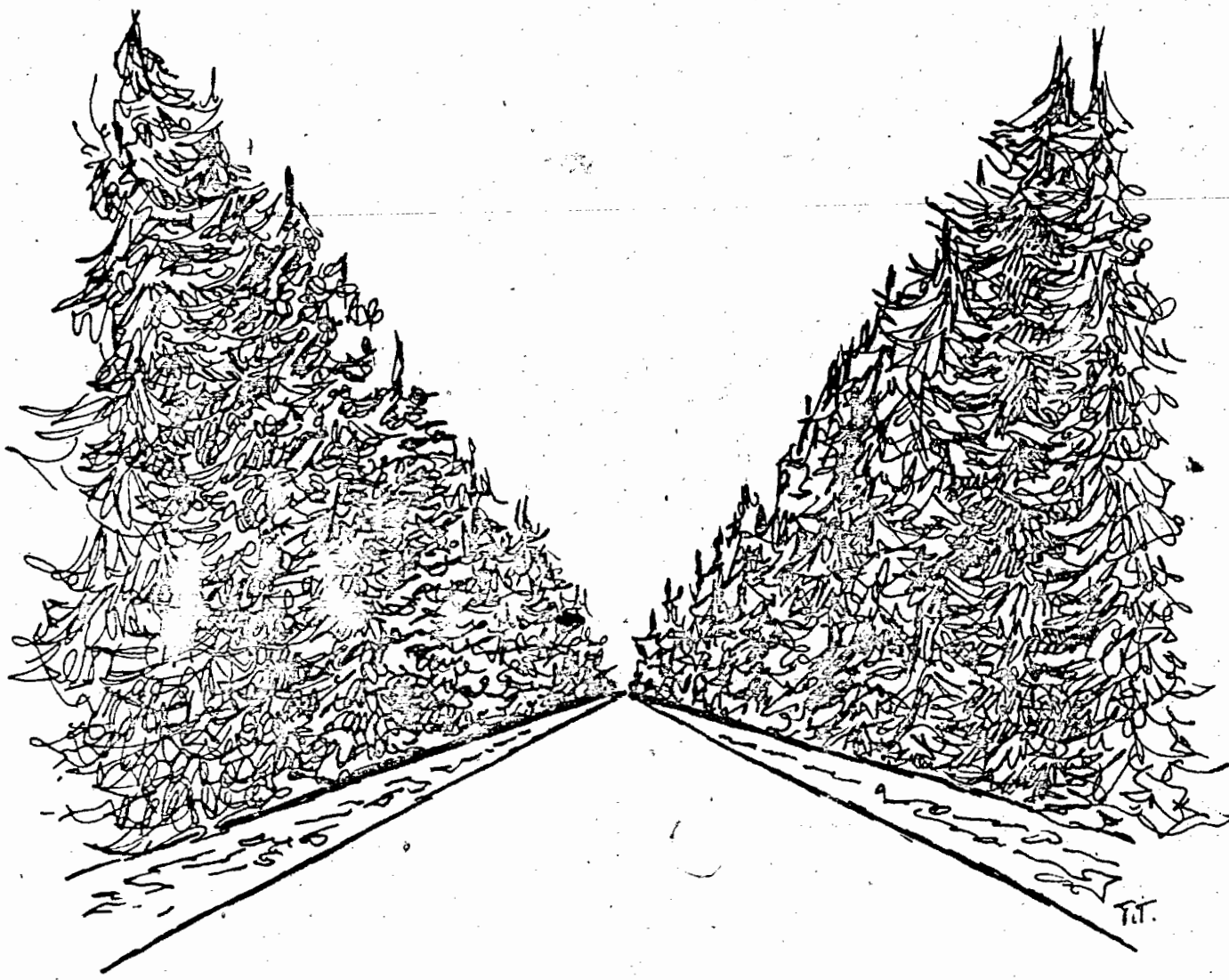
The use of the Grimshaw Trail was short-lived. As the boom in Yellowknife subsided, tractor-train supplies were no

longer needed. By 1942, the winter road had been practically abandoned (Hewetson, 1947: 218). According to Rae (1962: 317), "Canol, the World War II military project designed to utilize the petroleum reserves at Norman Wells", forced the rebuilding of the Grimshaw Trail as an all-weather highway. The new highway was to be named the Mackenzie Highway, in honor of the noted explorer, Alexander Mackenzie.

The project required a re-survey of the route between Grimshaw and Hay River and resulted in the construction of a 386-mile gravel road between the two points of which only 81 miles of the route lay in the Northwest Territories. The Dominion Government paid the entire costs of the 81 miles of the highway from Hay River south to the boundary and also two-thirds of the costs of the part in the province of Alberta. The Alberta Government provided access and the remaining one-third of the funds (Rae, 1962: 316).[3] Construction plans called for project completion by the end of 1947; heavy rains, however, hampered the construction crews and, in consequence, the road was not opened until the fall of 1948.

The building of the Mackenzie Highway (Figure VII) changed Hay River dramatically. First, the population doubled. There had been no more than fifteen or sixteen Caucasians located at the Hudson's Bay post, the Roman Catholic mission and the Anglican mission and nursing home in 1941. The newcomers, airport and signal personnel and highway maintenance men, increased the population

Figure VII. The Mackenzie Highway



Source: Drawn by Terry Townsend from sketch maps obtained during field trip of 1971.

to 33 in 1946 (Rae, 1962: 318). Second, the Mackenzie Highway was not constructed through the original settlement, but left the mainland, crossed several small islands in the upper reaches of the harbour on Vale Island and paralleled the opposite side of the original settlement. It finally ended at a small "turn-around-loop" at West Channel (Map 3, page 53). Both settlement movement and settlement demise were clearly highlighted by the construction of the Mackenzie Highway. The highway provided the impetus for the planned development of a new town on Vale Island at the western side of the harbour. It also arrested the growth of the original town on the east bank of the Hay River.

Another important consequence of the construction of the Highway was the beginnings of a segregated community: the Caucasians tended to reside in the New Town, the Indians and Metis population in the original town.

The growth of this New Town on Vale Island was rapid. (Table 3) While the number of permanent whites at the old Hay River settlement remained at 33 in 1946, the population of permanent whites in the Vale Island settlement jumped to 324 with an additional 900 non-residents or "floating population" sojourning in the booming town (Rae, 1962: 330). Most of the new "permanent" and "floating population" lived in the Vale Island settlement rather than the original town. Indeed, many of those who had resided in the original Hay River settlement began to

TABLE 3

POPULATION CENSUS, 1941-1971 *

Year	Total Population
1941	163 estimate
1946	209 estimate
1951	792 census
1956	859 census
1959	1,200 estimate
1961	1,334 census
1965	2,500-3,000 estimate
1971	3,000 estimate

* These figures represent "permanent" residents and do not include non-residents or "floating population" in Hay River. The information was obtained from the Government of the Northwest Territories, Hay River, Planning Office, during visit in June 1971.

move to the Vale Island settlement; for example, the Hudson's Bay Company moved in 1949.

Another instance of settlement movement was demonstrated when a small fishing village was created at the "turn-around-loop" in West Channel to accommodate the fishing industry and fish-

ermen (Plates 7 and 8 & Map 3, page 53). This "sub-town" settlement lies on the right bank of the western distributary of the river and is called "West Lock" or "West Channel". Present building codes require all new fishing plants and docks to be located in "West Channel", and so in reality the "sub-town" is a fishing village with 6 of the area's 8 fishpacking plants; the other 2 plants had been built on the other side of the island before the building regulations were enacted (Rae, 1962: 335-336). In many respects, "West Channel", is a self-contained town with its fishing plants, stores, a few houses and quarters for the transient fisherman. At present, "West Channel" looks like a Maritimes outport fallen on bad days. There is little doubt that the completion of the Mackenzie Highway hastened the planned settlement in West Channel, and in turn stimulated the fishing industry.

THE FISHING VILLAGE

Commercial fisheries in the Great Slave Lake region operated on a seasonal basis, the winter fishery (December 1 - March 31) and the summer fishery (May 15 - September 30). The summer fishing operation is carried out in a similar manner to other commercial fishing on the Great Slave Lake, whereas the winter fishing is a highly specialized operation.

> Small fishing camps are located on the frozen lake, and the fish are caught in gill nets through the ice and a unique tool called a "jigger" carries a line beneath the ice from hole to hole. The nets are then set in the water and are lifted each morn-

Plate 7. Lakeshore Development of West Channel Settlement
(photo, R. Francis), 1971

Plate 8. Mackenzie Highway and West Channel Settlement
(photo, R. Francis), 1971

> ing. The catch is then hauled over the ice to Hay River, usually in specially built vehicles, where it is processed in a manner no different from that practiced in the summer (Rae, 1962:332).

The fish were brought to a "fish factory" where they were processed, packed in cartons and frozen. Most of the catch was then barged up the Slave River to the railhead at Waterways when refrigerated railroad cars transferred the fish to Toronto with a large percentage of the catch being transshipped to Chicago.[4] This process of catch and delivery was called the "frozen fish business". After the completion of the Mackenzie Highway, the "frozen fish business" became the "fresh fish business" since trucks could deliver the fish to market. Fifty pounds of fish and fifty pounds of ice were packed in the boxes, loaded on trucks and hauled over the highway to the railhead at Grimshaw, Alberta (Rae, 1962: 331). This fresh fish arrived in Chicago 5 days after it left Hay River. The "freezer barges" on the Slave River have been totally replaced by "freezer trucks". Following the opening of the Mackenzie Highway in 1948, a stimulus was given to commercial fishing operations on Great Slave Lake as indicated in Table 4, page 66.

The data shows a tripling in production between the years 1947 to 1948. This required more manpower, and many of the Indians and Metis residents (combined with transients or nonnatives) took employment in the fish industry and moved from the original settlement to the fishing village and the other townsite on Vale

TABLE 4

GREAT SLAVE LAKE FISHERY PRODUCTION FIGURES, 1945 - 1952 [a]

Year	Value
1945	$ 112,000 [b]
1946	560,000 [b]
1947	535,000 [b]
1948	1,528,000
1949	2,161,000
1950	2,297,000
1951	2,262,000
1952	2,225,000

[a] Data from Canada Yearbook for years 1948-1952

[b] Estimated by subtracting $3,000 from combined total of Northwest Territories-Yukon Territory.

Island. This settlement movement further contributed to the growth and development of both the fishing village and especially the new town settlement on Vale Island at the expense of the original settlement.

THE SETTLEMENT ON VALE ISLAND: NEW TOWN

As has been mentioned, the Vale Island settlement on the western side of the harbour became the fueling depot and distribution centre for freight and supplies headed north. The growth of this settlement pattern is linked, to a large extent, with the growth of Yellowknife Transportation Company. The Company started in 1946 when Earl Harcourt went into operation with a few wooden tugs and barges and 3 new steel barges, each capable of carrying 500 tons of freight. In 1946 the company moved 5,500 tons (Sullivan, 1960: 17). After the completion of the Mackenzie Highway in 1948, nearly 50,000 tons were moved on the company's 6 tugs and twenty barges during the short four-month season (Sullivan, 1960: 17).

The effect of Yellowknife Transportation Company Ltd.[5] and Northern Transportation Company Ltd. on the settlement patterns developed in Hay River is equal to the enormous effect the Mackenzie Highway had upon the landscape. These 2 companies gave rise to an entirely new form of human settlement in Hay River. On the one hand, the transportation companies attracted employees whom can best be described as "permanent impermanent workers";[6] these workers are employed by the transportation companies on the understanding that their welfare in the form of food and accommodation will be provided until the termination of their employment at the end of the shipping season. The companies provide accmmoda-

tion in both bunkhouse styles and individual houses on lots. The companies have purchased large segments of land in the settlement which seems to have become a major readjustment in the ownership of land in Hay River. The townsite on Vale Island was surveyed in consultation with these two transportation companies. [7] The town was surveyed alongside the Highway and forms a small pattern of streets.

The companies have had a major impact on Hay River settlement by drawing people away from it as well. Because these companies are primarily in the business of moving freight through the Mackenzie Water System, they require an enormous staff (approximately 800) to man the tugs and barges. Thus, the transportation companies exert both a centrifugal and a centripetal force with respect to the settlement. [8] These developments are restricted to the short four-month shipping season and do not reflect the conditions of Hay River for the rest of the year. The shift from summer to winter climatic conditions signifies an important structural change in the distribution of urban population in Hay River; indeed, the urban structure changes radically from one season to the next. The summer months are characterized by a greatly increased population which is highly mobile while the winter months show a decline in population and a scarcity of jobs. Moreover, we should recognize that these developments are more or less confined to the Old Town settlement.

This picture is greatly simplified, but provides a framework for the discussion that follows in the next chapter. It outlines the major forces shaping the settlement pattern of Hay River.

Warehouses and docks were constructed to handle the freight and supplies for transshipment to Yellowknife and other northern communities. The dockside area became the main part of the settlement, since the docks, laundries, Hudson's Bay Company, a department store, a two-story hotel, a church, a town hall, government offices, a fire hall, a post office, and several homes are located here. During the 1950's and early 1960's, the clustered settlement pattern of the town changed to a hodge-podge mixture of residential, commercial and industrial establishments scattered along the riverbank and extending inland in a more dispersed manner. (See Plates 9 and 10)

The town looks like a Hollywood set of a western movie. "Here it's wooden sidewalks and wooden stores, including one whose sign reads: Herve's Barber & Shower Baths. Along the waterfront everybody seems to live in either a tumbledown shack or a trailer: some, like fur trader Bob (The Cat) Porritt, paying $1 for a weekly two barrels of fresh water" (Rasky, 1971: 5).

Most of the streets in the town are gravelled; drainage structures are provided along the main street, the Mackenzie Highway. Most roads are pot-holed and rough-surfaced and become pools when it is wet and dust-bowls when dry. It is not unusual

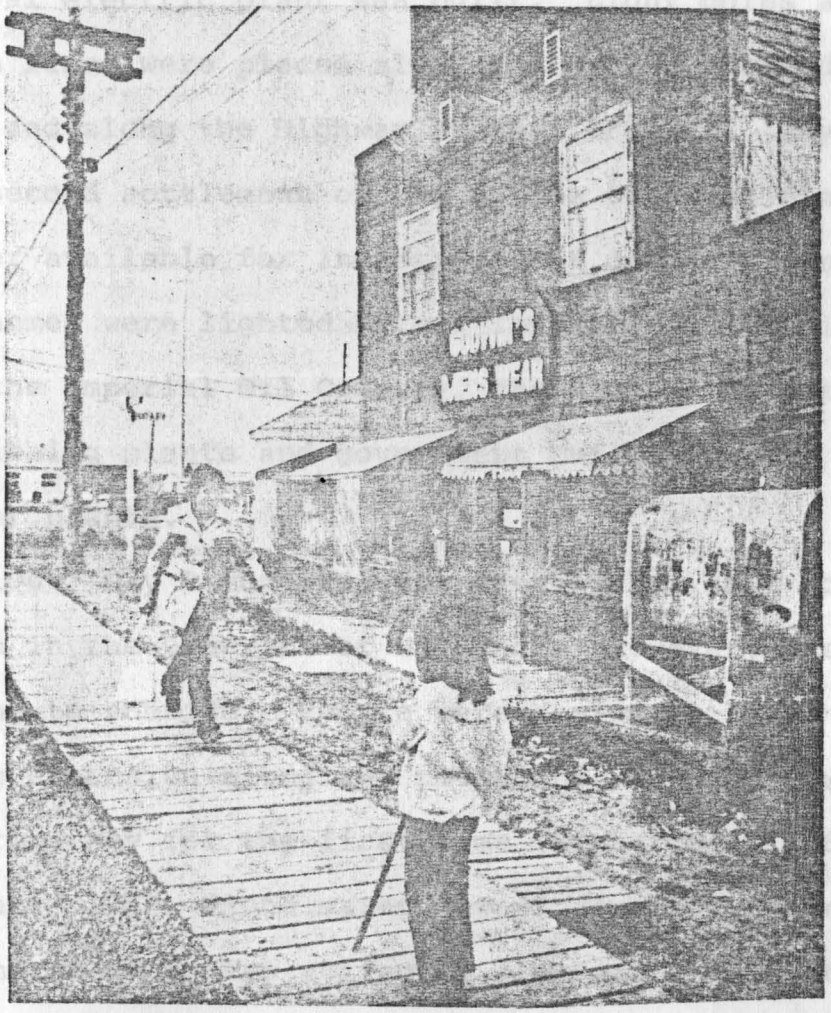
Plate 9. The Mackenzie Highway Entering Old Town (photo, R. Francis), 1971

Plate 10. Main Street (The Mackenzie Highway) Old Town, Hay River (photo, R. Francis), 1971

Plate 11. Residential Building in Vale Island Settlement
(photo, R. Francis), 1971

Plate 12. The C.N. Telecommunications Building in Vale Island
(photo, R. Francis), 1971

Plate 13. Wooden Sidewalks in Hay River (photo, F. Rasky), 1971



Source: On Main Street, 1971, Frank Rasky, Canadian Panorama, October 23.

for the streets to be wet and muddy in the morning and dry and dusty in the afternoon.

Hay River had its first public utility in 1953, when a small diesel electric plant was built. Light poles and transmission lines were placed along the grid-patterned streets of the town and along the Highway at West Channel. Hay River became the second settlement on the shores of Great Slave Lake to have power available for industrial and domestic consumption. Previously homes were lighted by oil lanterns and candles, while the hotel, the Imperial Oil Company, the signal station, airport, the fishing plants and government buildings each had small private power plants.

By 1963, Hay River was well established as a dominant urban centre in the District of Mackenzie; however, the boom was beginning to subside. People were coming to live here, land was becoming expensive along the riverbank, and there was a sense of permanency for the first time (Richardson, 1969: 22). This same year, 1963, flood waters swept down the channels of the river and the town was seriously flooded. High waters persisted for several days and the town population had to be evacuated. The flood forced the government to move the townsite to the left mainland bank of the river 4 miles further up river on better and higher ground. There a new residential-commercial subdivision was to be located and most people were expected to move to the new site.

REFERENCES, CHAPTER IV

1 As further explained in the section on physiography (pages 11 to 16).

2 The notion of conflict in the present discussion is closely connected with Northern Transportation Company Ltd. expropriating land in the Old Town for the construction of a new dock facility.

3 This large-scale project was a Dominion Government modernization program, to relieve the situation at Yellowknife.

4 For years the local residents referred to the Hay River area as the "Chicago Fish Market," since most of the catch (mostly trout and whitefish) was sent directly to Chicago.

5 The Yellowknife Transportation Company Limited has ceased to operate, while a new company, Kaps Transport Limited began operation in 1969.

6 This social condition is noted in B. White, "The Settlement of Nootka Sound: Its Distributional Morphology, 1900-1970", A Master's Thesis Submitted to the Department of Geography, Simon Fraser University, 1972. This concept was originally used and developed by Ira Robinson, New Industrial Towns in Canada's Resource Frontier.

7 Conversation with manager of Northern Transportation Company Limited, July, 1971.

8 In the same way that the fur economy in the Mackenzie Delta exerted both a centrifugal and centripetal force with respect to settlements. See, for example, J. Wolforth, The Evolution and Economy of the Delta Community, Ottawa: Northern Science Research Group, Department of Indian Affairs and Northern Development; 1971, pp. 60-72.

CHAPTER V

CONVERGENCE UPON THE NEW TOWN AND ITS CONSEQUENCES (1964-1971)

The New Town (Plates 14,15,16 and 17) is like other settlements in the Great Slave Lake region. There are about two hundred residences, twenty-five businesses, and 2 churches within the town. Many of the buildings are clustered in areas of serviced lots with a neatly arranged industrial zone which includes the town's power plant and various government garages and yards. The paved business street, 4 blocks long, includes the bank, the post office, 2 main general merchandise and grocery stores, the municipal hall, the library, the office of the weekly paper, a liquor store, a drugstore, a cafe, and a hotel. [1]

The town has a four-member police force, a volunteer fire department, a hospital, a complex of buildings which house the various government departments and agencies. The high school is located in the town, while the grade school is on Vale Island, just north of the town limits. [2]

The relatively recent construction of the town has permitted a consolidation of facilities in the central community. It was expected that most of the outlying facilities would close, and the populace would move into town. Thus far, there is little evidence of either facilities closing or the populace moving into town, which may be due to the fact that most of the economic

Plate 14. Typical Residential Building in New Town, Hay River
(photo, R. Francis), 1971

Plate 15. Typical Residential Building in New Town, for N.T.C.L. employees
(photo, R. Francis), 1971

Plate 16. Trailer Residence in New Town, Hay River, for N.T.C.L. employees (photo, R. Francis), 1971

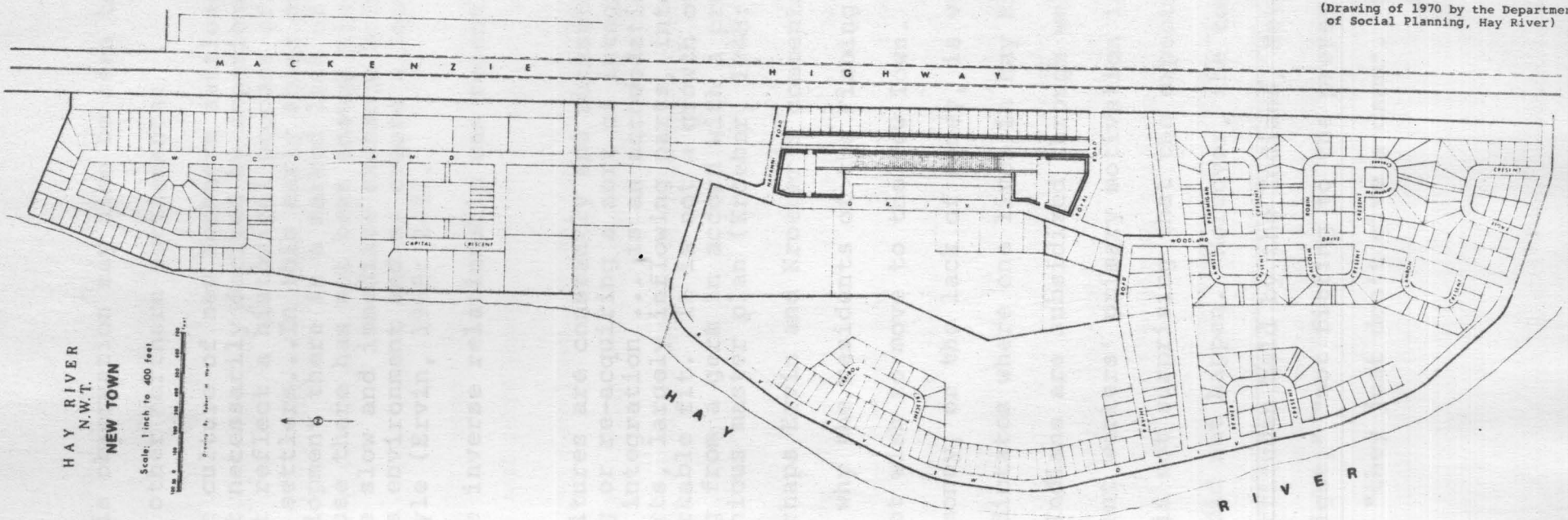
Plate 17. Federal Government Housing Project for Treaty Indians in New Town, Hay River (photo, R. Francis), 1971

activity takes place in Vale Island and most of the workers could not be bothered to move. It should be noted that Northern Transportation Company Limited (N.T.C.L.) and Kaps Transport, the two largest single employers in Hay River, are situated on Vale Island and both provide accommodation there. The companies provide frame houses and trailers for accommodation in the New Town, but these types of dwelling are, in practice, restricted to management and permanent staff. It would appear that Vale Island will continue to be the place of residence for a large proportion of the total population until these two large companies move their accommodation for workers from the Island to the New Town.

The Federal Government also supplies accommodation for the Treaty Indians. Frame houses were constructed for the Treaty Indians in the New Town. (See Plate 17 and Map 4) The government encouraged the Treaty Indians (a population of 355 in 1967) to move into the new homes built for them on the east bank of the Hay River in the New Town. Many Indians did not want to move. Many, not being Treaty Indians, could not. "The native peoples are deeply divided between treaty and non-treaty Indians, and Metis. Some families even are divided by their different status. The Indians do not have a unified leadership, the government scheme cutting the village in half, has divided them even more" (Richardson, 1969: 22).

Map 4. Hay River, Northwest Territories, New Town

(Drawing of 1970 by the Department of Social Planning, Hay River)



This observation may also be seen to hold for the culture of other northern settlements:

> The culture of new Northern settlements then is not necessarily derived by experience, and does not reflect a historical process of adaptation by settlers...In this early stage of community development there is a marked lack of innovation because there has not been enough time to develop the slow and immediate exchange between man and his environment and so create a local culture or style (Ervin, 1968: 2-3).

The inverse relationship was recently explained this way:

> Cultures are constantly and automatically acquiring or re-acquiring a sort of integration. Cultural integration ... is an accomodation of discrete parts, largely inflowing parts, into a more or less workable fit. It is not a growth of parts unfolding from a germ in accord with a pre-existing harmonious master plan (Kroeber, 1948: 645).

Perhaps Ervin and Kroeber's comments are appicable in explaining why the residents of the Fishing Village and the Old Town did not wish to move to the New Town. Also it is noticeable that money, or the lack of money, is very important in so far as it dictates where one lives in Hay River. Recognizing that most Indians are subsidized through welfare payments and the transient workers' primary motivation is the acquisition of money, it is not surprising that the expected re-location of these residents did not happen. Moreover, the townspeople often mention that the attitudes held by the Indians, Metis, and transients are "not right," "not fitting to the proper development of Hay River," or "they just don't give a damm". This rejection results

in a situation of mutual mistrust and an unwillingness of these groups to become neighbours.

Many of these factors, as illustrated above, may become less meaningful, if the economic base of the New Town continues to develop along the lines of its current course. We have noted in our earlier discussions that the economic base in Hay River has shifted from furs to commercial fishing to transportation and now it seems that the economic base in Hay River is becoming more and more dominated by consumer services that are offered in the New Town. With the construction of new shopping facilities and other social amenities in the New Town, the outlets located in the Fishing Village and the Old Town are finding it increasingly difficult to compete and may soon be forced to close. Some of those services in the Fishing Village and the Old Town have closed or transferred their business to the New Town, which has forced most residents in these areas to travel into the New Town for needed services. The distance to be travelled is approximately 3 to 7 miles and often is a hardship, for most residents are without transportation; and so many are being strongly influenced to reside closer to if not in the New Town.

Expressed in the above statements is the general idea of "acculturation" and "assimilation", the process of an outsider being accepted as a genuine member of a new social group (Berelson and Steiner, 1964: 646). With the development of the New

Town, the impetus for one to become acculturated and assimilated into a society was provided. As we shall see, one process is occurring without the other. This theme may be better appreciated and understood if we acknowledge the work of J. Sonnenfeld (1966: 77-82), in his article "Variable Values in Space and Landscape: An Inquiry into the Nature of Environmental Necessity".

In this work Sonnenfeld examined culture, society, and economy as three alternatives for distinguishing and classifying the spatial and landscape preference of populations. He found these distinctions inadequate and proposed "...a different basis for the classification of spatial and landscape preferences, one consistent with what is known concerning the role of adaptation level in determining environmental sensitivities, one which lacks a restrictive bias" (1966: 77-78).

To distinguish and classify the spatial and landscape preferences of population, Sonnenfeld made a division of two groups he terms native and nonnative.

> This native/nonnative distinction is not based on ethnic or racial grounds but rather on residence: thus there are those native to a city, or region, or country; those native to rural, urban, or suburban environments, and so on. The nonnative by contrast is the migrant or transient, "native to somewhere else"; moving from rural to urban settings, from city to suburbia, from Southwest to Northeast, from mid-latitude to tropics, etc. The nonnative differs from the native in a number of respects. He has, for one, a more varied environmental experience: he has been elsewhere, he has lived in some other kind of environment. He brings with him this envir-

> onmental experience plus certain "relic values" which condition his attitude toward space and landscape (Sonnenfeld, 1966: 77-78).

Sonnenfeld maintains that the native can assume adaptation, adjustment, or other accommodation to his environment, no matter what the environment, in given time, whereas there would be no easy way to accommodate the nonnative's taste; for landscapes are symbols for him and largely non-specifiable in a permanent sense (Sonnenfeld, 1966: 80). Of course, in time, Sonnenfeld claims, the nonnative may become a native: but for the less altered personality the landscape will show flaws and may provoke a further move (Sonnenfeld, 1966: 80). This native/nonnative distinction between two dissimilar groups residing in the same environment seems to be the case in Hay River with the added dimension of the further distinction along ethnic or racial lines. That is, the migrant or transient group (nonnative) who lives in West Channel and the Old Town are primarily Caucasian and tend to isolate themselves from both the Indians and Metis and the permanent (native) residents living in the New Town. This isolation seems to be geographic distance as well as social distance. This is peculiar and puzzling when we recognize that the majority of the transients work side by side with the permanent settlers at N.T.C.L. and Kaps Transport which are both located on Vale Island. Observation suggests that the transients deliberately stay away from the permanent residents and the permanent residents keep clear of the transients, Indians and Metis. It may be said that

the amalgamation of the native/nonnative cultures involved may be postponed almost indefinitely because of their opposition to one another. For example, in Hay River it is fair to say that the Anglo-transients are more assimilated without being acculturated, whereas the Indian and Metis are more acculturated than they are assimilated. Note that

> Migration is an instrument of cultural diffusion and social integration. The person who migrates from one community to another unites in himself two cultures. Temporarily, he tends to be a disruptive force in the community into which he enters. If members of one culture invade a community of another culture in large numbers, they tend to form a "community within a community" and to create cultural diversity and ethnic tension (Bogue, 1969: 487).

At this point it would be benefical to introduce some observations concerning the population structure in Hay River so that the preceding comments can be viewed in context.

The greatest population growth occurred in the years 1961 to 1965, and began to stabilize in the years 1965 to 1971. Of importance is the fact that during this period (1961-1965) the doubling of the population occurred through the settlement of the New Town. The remaining settlements, the Indian Village, the Fishing Village and the Old Town did not experience a drastic drop or increase in population, but rather remained the same as before the construction of the New Town.

However, the character of the population in the Fishing

Village and particularly in the Old Town changed. These areas attracted the migrant or transient (nonnative) population, a fact which dulled the possibility of the New Town becoming the "one" and only town in Hay River.

The building of the New Town had a spill-over effect in the areas of health and justice.

The relations and interactions between the Indian children and the white children were drastically limited when persons such as Mrs. Stan Dean declared "that the main reason her children continued to take correspondence courses after the Federal School opened was the high degree of tuberculosis among the Indian children in Hay River". [3] Mrs. Dean and others prevented their children from interacting with Indian children in a school situation; we would be safe to assume that these white parents probably prevented all social interaction. The significance seems to be that the "real" or the "perceived" health condition of the Indians may account as a factor in the differential levels of development among the different towns or areas of the towns that were developing. The background and conditioning of an attitude such as "burn the Indian shacks" or "stay away from the disease-ridden Indians", may have influenced the very structured relationships of Indians, Metis, and the white population groups in Hay River.

For example, the following comments were put forward by

Inspector Conroy:

> One thing I want to speak of in particular is the condition of the Indian shacks, which are small and kept very dirty, so much so in fact that to my mind they should be burned down or destroyed in some way. Of course, the Indians would have to be recompensed. Giving them enough duck to make teepees would, in my opinion, eradicate diseases, as quite a few have tuberculosis. 4

This is not to say that those sets of influences or attitudes have been present at all times nor are they consistent or unilateral in character. What it does suggest, is that the "real" or "perceived" health standards in Hay River may be a key factor to consider when discussing the rationale as to why people stayed or moved from one area of the town to another in the geography of Hay River settlement. Unfortunately, these inferences cannot lend themselves to objective and statistical verification due to their subtle and subjective nature. This, however, should not detract from their importance.

ADMINISTRATION OF JUSTICE INQUIRY IN HAY RIVER

A newspaper called "Tapwe", a Cree word meaning "That's for sure" or "That's definite", published a series of editorials in March, April and May, 1967, that resulted in an inquiry into the administration of justice in the Hay River Area of the Northwest Territories. The editorials suggested that courts were closed to the public, that steps were taken to hamper the press,

and that all individuals did not receive fair treatment in the courts in the area. A more complete picture may be gained by examination of comments from editorials cited in evidence before the Honorable Mr. Justice W.G. Morrow, the Hearings Commissioner.

The April 10, 1967 issue of Tapwe contains, among others, the following comments.[5]

> "There are, admittedly, some individuals who do not want publicity because they do not want fair treatment. They expect to receive preferential treatment because of their 'pull' with public officials".
>
> "There is no secret of the fact that Indian and Metis teenagers in Hay River are being shipped away to jail for drinking while underage while the children of white parents are discreetly warned or subjected to modest fines for similar offences".

Constable R.J. Anderson gave the population figures and certain statistics relating to convictions in Hay River and area which showed that out of a total population of 355 Indians (Treaty Indians) there were 201 charges preferred.[6] The statistics further show, however, that 101 individual Indians were involved, an awesome figure of one-third of the Indian population which passed through the Justice of the Peace Court in 1967. It is interesting to note that the total population in Hay River in 1967 was 2,575, being 355 Indians, 1,190 Metis or non-treaty Indians, and the balance whites or non-native. The Hay River liquor store sales in 1966 totalled just over $500,000.00, a figure just below the comparable figures for Yellowknife with double the population.[7]

The Commissioner, Mr. Justice W.G. Morrow, in his report suggests that the large number of liquor charges were attributable to the liquor store sales. He further suggests that "the old type Hay River is no more, the new type Hay River is in the throes of becoming a business and commercial centre, and it is stepping out of the frontier era into a more sophisticated way of life ... with the divisions in the community of Hay River that are so clearly to be observed, with the insinuations of 'family compacts' and so on". [8]

The more sophisticated way of life seems to be the consumption of booze, concern with liquor offences, especially Indian drunkeness, and the methods of handling such offences by the Police and Justice of the Peace.

It is clear from my experience and my observations that drunkenness, especially Indian drunkenness, is a very serious problem in Hay River, but seems to be restricted to certain areas of the town. Most Indian drunkenness occurs in individual homes located in the Indian Village or the Fishing Village with the next most popular spot being the local bar in the Old Town known as the "zoo". Very few Indians or Metis frequent homes or the bar in the New Town to drink. The same segregation or social isolation can be said of the white populace who live in both the New and Old Towns. Drunkenness in the white population seems to be restricted to the person's residence or either of the towns' bars. Of significance is that many white persons have developed a

strong enough bias against the Indians that they do their best to live as far away as possible from the Indians because of their drinking habits. Drunkenness may be much more of an important factor than it is thought to be when explaining why people stay or move from one area of Hay River to another.

An editorial on the Indian drinking problem in the Edmonton Journal on January 9, 1968, provides further insight into this matter when it said:

> The Indian hasn't had decades of experience with controlled drinking. He hasn't had time to build anything like the white man's invisible network of customs and attitudes to keep liquor under control. Add to the fact that alcohol strips away his inhibitions and exposes his bitterness at his second-rate status, you have trouble (sic).
>
> In the long run, the only solution is a serious attack on the culture of poverty in which the vast majority of Alberta Indians live. In the short run, there must be better control of abuses.
>
> ... there should be a concerted attempt by all governments -- and business and labour -- to provide jobs and opportunities for the native population.

It is obvious, then, that almost invariably the economic and social structure of Hay River is definitely related to the drinking habits of both the native and non-native population. Perhaps there is a need to investigate, describe and analyze more fully the connection between the developing settlement morphology of Hay River and alcohol.

SUMMARY

Our approach taken was identified as the traditional combined cross-sectional and vertical theme approach. This approach allowed the integration of the description of the Hay River landscape in stages with an analysis of the means which brought about successive changes in the landscape and hence the settlement of Hay River as it is today.

Analysis of the obtained data indicated that there was a definite relationship between the shifting of Hay River's economic base and the introduction of a technological invention or improvement. This relationship was demonstrated in our analysis of the fur trading posts, the fishing village industries, transportation services, and the emergence of a settlement hierarchy in the Old Town. In each case the level of development was minimal and isolated to a particular locale. We noted that it was not until the completion of the Mackenzie Highway in 1948, that Hay River began to establish itself as the centre in transportation services for the District of Mackenzie. By the 1960's there was a sense of permanency for the first time. The study showed that this sense of permanency was short-lived when in 1963, flood waters swept down the channels of the river and the town was seriously flooded. It was expected that the construction of a new town would consolidate all facilities and the outlying populace would then move to the New Town. The study

showed that little evidence exists which supported this view, but rather the development of a New Town co-existed with other "Hay River" towns. All of these interpretations are, of course, qualified by the limitations which are inherent in the study.

It should be further noted, that the various developments in Hay River that have been discussed are not any final product but only proposed or suggested as ways in which we can broaden our understanding of Hay River and northern settlements in general. It is incumbent upon geographers to describe and analyze the factors that have contributed to the geography of northern settlements so that we are equipped with a greater range of alternatives in dealing with their complex problems.

It seems clear that the techniques of historical geography and, in particular, the traditional combined cross-sectional and vertical theme approach are useful in developing the story of Hay River from Indian times until the near present. Perhaps the most striking feature of each phase of development was the close association between a specific technological improvement or a natural disaster and the building of a new Hay River. Each "new town", except the fishing village, was constructed to supercede or replace the original town. It was shown that this did not happen, but a lag developed in terms of people moving to the new towns; because of this we may infer that four Hay Rivers exist at the same moment. Each Hay River

has adopted a specific character or personality of its own.

It is not within the scope of this study to attempt to make the value judgment which would determine whether the latest "New Town" should supercede the other towns. However, in view of the health standards and social factors evident in the town it seems beneficial that room should be found for the inclusion of the entire population in the New Town. Note that

> The new townsite is really flashy. It has a new Hudson's Bay Company store, a supermarket, a large liquor store, a comfortable inn, a bank, government offices, and a superb new library (Richardson, 1969: 22).

> Everything here is ultramodern ... a suburbia nicknamed "Snob Hill", where smart houses cost up to $35,000 and life is sedately citified as in Edmonton 700 miles south (Rasky, 1971: 5).

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1 The paved section of the Mackenzie Highway is also located in the New Town and runs parallel to the main street.

2 The high school was due to open in the fall 1971.

3 This example is cited in R.E. Johns, "A History of St. Peter's Mission and of Education in Hay River, N.W.T. Prior to 1950", The Musk-Ox, No. 13, 1973, p. 28.

4 These impressions are similiar to the explanation given as to why Indian children are sent each fall to attend residential schools in Yellowknife, Fort Smith and Fort Simpson. In Hay River today, it is generally conceded that an Indian home is not in itself a regressive influence. At the same time, though, it is widely believed that large numbers of Hay River children are sent to residential schools by Welfare authorities to remove them from an unsuitable home environment. With few exceptions, these children are, by coincidence, Indian children. These comments are found in Ibid., pp. 25 & 28.

5 The editorials can be found in "Inquiry re Administration of Justice in the Hay River area of the Northwest Territories", The Honourable Mr. Justice W.G. Morrow, The Commissioner, The Queen's Printer, Ottawa, 1968, pp. 112-120.

6 The statistics show that 881 cases went before four Justices of the Peace for adjudication and of this number 609 were cases involving charges under the Liquor Ordinance. Indian status persons accounted for 117 of the 609 persons. For further detail, see Ibid., pp. 25-27.

7 The high proportion of liquor offences among the Indian population would be found to be true in other parts of the north. Liquor or intoxication is a factor in almost every case that comes before the courts -- Indian, Eskimo or White.

8 The Commissioner, Mr. Justice W.G. Morrow was speaking in reference to the suggestion that the current Justice of the Peace is identified with one of the groups only. His recommendation was that Rudy Steiner should no longer remain as Justice of the Peace.

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