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HISTORY OF THE ATHABASCA OIL SANDS REGION 1890 to 1960's VOLUME II: ORAL HISTORY

by

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for

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SUMMARY OF FINDINGS

HISTORICAL SETTING

During the last two centuries, the Athabasca Oil Sands region has been an eldorado for resource development. With the economy of the fur trade predominating from 1778 until the 1950's, the major forces shaping the development, i.e., private enterprise, church missions, and government enterprise, have come from outside the region.

Prior to 1890, society in the region was conditioned by fur trade economy and religious proselytism. The fur trade, dominated by the Hudson's Bay Company, sought economic benefits which depended on stable social conditions. To a certain extent, social stability was reinforced by the presence of missionaries. Their role was one of introducing Christian religious practices and attendant material comforts of education and health care to the original inhabitants. Thus these two external influences, Company and Church, complemented one another. Subsequently, the missionaries provided to the original inhabitants also paternal protection from intrusion of government and industry in their expansion into the region. Oral history interviews indicate that this paternal activity lessened as churches began to focus upon the needs of newcomers.

Separated by muskeg from the south and accessible only through the Churchill-Clearwater rivers, the society of the region remained relatively isolated until the establishment of Fort McMurray in 1870. When steamboats were introduced on the Saskatchewan River in 1875, the Churchill River-Clearwater River route began losing its traffic. The arrival of the Canadian Pacific Railway in Calgary in 1883 sealed the fate of the old canoe and York boat route. In the same year the Hudson's Bay Company cut a road from Fort Edmonton to Athabasca Landing and launched the S.S. Grahame at Fort Chipewyan. Fort McMurray became the southern terminus for northern transportation in the Mackenzie River Basin. These developments opened the isolated north of the fur trade to the expanding industrial frontier of southern Canada, represented by Edmonton interests. The completion of the

Alberta and Great Waterways Railway to Waterways in 1925, cemented the growing relationship of metropolitan Edmonton to an oil sands hinterland based on Fort McMurray.

The changes in transportation and routes led to the entry of agencies of the Crown, the third major external influence in the region. The entry of government and of new forms of private enterprise initiated the transition of the region from a fur trade economy to one based on industrial resources. From the 1890's to the time of the transfer of natural resources to Alberta in 1930, the attitude of the federal government reflected not only concern for the protection of these resources, but also the desire to ensure their development through the introduction of legislation and regulations. These activities initiated changes in the region's social structure. A new order, one of settlement and development was introduced, if not imposed upon the old fur trade society. This new social order, oriented towards efficiency and scientific management, began to supplant the traditional paramilitary and ecclesiastical society established by a monopolistic fur trade and missionary catholicism.

GOVERNMENT AND ECONOMIC DEVELOPMENT

When the Canadian Pacific Railway began its task of linking Canada together by rail, the federal government assigned the Geological Survey of Canada (GSC) to assist in the western surveys. The GSC was also given the responsibility of recording natural and human history phenomena discovered in the process of geological survey work. A second federal government agency, the Mines Branch also began the task of land surveys. During the last three decades of the nineteenth century, a considerable part of the Athabasca Oil Sands region was surveyed and mapped.

In 1875, the North-West Territories Act established, with some limitations, an indigenous government in western Canada. In 1882, four districts were created by order-in-council. North of the 55th parallel, the district of Athabasca was unorganized, untaxed, unrepresented, and therefore controlled by the federal government in Ottawa through the Department of the Interior.

During the period considered by this study, i.e. between 1890 and 1960, four major phases can be distinguished in the economic development of the Athabasca Oil Sands region. The first phase, which lasted from 1890 to 1930, was characterized by the establishment of federal controls in the region, and by explorations for oil and surveys conducted by the GSC and the federal Mines Branch.

The improvements in transportation permitted the federal government to impose regulatory controls over resources in the region. In 1891, a fisheries inspector was appointed to oversee a number of districts, including Lac La Biche. A Game Preservation Act was passed in 1894, which banned the hunting of wood bison until 1900, and imposed closed seasons on big game, fur-bearing animals, and birds. Liquor prohibition of the 1875 Act, which was lifted in 1891 in the organized districts of Assiniboia, Saskatchewan, and Alberta, was continued in Athabasca district. This ordinance led to an extension of the North-West Mounted Police (NWMP), later to become the Royal North-West Mounted Police (RNWMP), patrols and posts in the region. The initial move of the NWMP into the region in 1890 was dictated by a need to create law and order in an area being promoted for its potential mineral riches and settlement possibilities. During the first 35 years of its activities, the NWMP and the RNWMP established the presence of the Crown in the region.

Prior to this period, the native peoples had been left mostly on their own; although the Indian Department had encouraged ranching and farming practices. During the 1890's it was suddenly discovered that the native population was about half of what it had been reported by the Indian Department. The native peoples were suffering as a result of changes in living styles, the introduction of alien ailments such as measles, and a decline in game resources. Since meat, fur, and fisheries were endangered as white society moved north, especially during the Klondike Gold Rush, the government entered into treaty negotiations for the region, which were concluded in 1899 with Treaty No. 8.

A direct impact upon the development of the region and upon its inhabitants had also the activities of the federal Foresty Branch. The Branch played a particularly important role in the region between

1912 and 1930, i.e. prior to the transfer of natural resources to provincial jurisdiction.

During this time, and especially during the years following World War I, the north was stimulated by such factors as railway building, settlement, oil sands speculation, and a buoyant fur market. This increased pressures upon the area, and necessitated the creation of fire ranging patrols, forest reserves, and a proliferating bureaucracy which signalled an increased federal presence. The Forestry Branch correspondence between 1912 and 1924, shows the way in which a federal agency used its administrative, conservationist, and economic or employment powers in the study area. In its policy of employment towards the native population, the Forestry Branch succeeded in replacing many native workers by white settlers. This policy reflected prevalent attitudes of white Canadian society toward native cultures at that time.

The activities of the Geological Survey and of the federal Mines Branch facilitated federal involvement in a potentially important energy industry at a time when resource ownership was becoming an increasingly contentious issue between Ottawa and Alberta. In 1888, the Canadian Senate sponsored a committee to enquire about the resources of the Great Mackenzie Basin. Its report publicized and promoted the region as a resource potential, rich in furs, agriculture, and minerals. While the forecast was overly optimistic if not unrealistic, it did serve to focus attention on the region.

The new provinces of Alberta and Saskatchewan were created in 1905, but the federal government continued to control resource development in these provinces until 1930. A series of wells had been drilled in the Athabasca Oil Sands by the Geological Survey in the 1894 to 1897 period, but had been abandoned with no definite results. In 1907 the Canadian Senate conducted a new survey of Canada's northwestern resources which resulted in another optimistic forecast of potential development.

The second phase in the region's development overlapped with the first phase and lasted from 1910 to 1930. This phase was marked by an increased economic activity on part of the private

enterprise, the construction of railway, and the establishment of salt industry and of commercial fisheries in the region.

Following the unsuccessful attempts of the GSC to exploit the oil sands during the 1890's, a number of private individuals became interested in the potential of the region. The majority of them were speculators, but a small number made determined efforts to develop successful techniques. Two of these individuals, Count Alfred von Hammerstein and Robert C. Fitzsimmons, were particularly important. Both of them started drilling for oil which was believed by geologists to be trapped beneath the sands; and Fitzsimmons established also a separation plant at Bitumount. Neither of these two developers was successful. They were representative of an intermediate group of entrepreneurs, whose attempts made it obvious that successful exploitation of the oil sands would depend upon extensive support by government in technical research, upon inexpensive or subsidized transportation, and upon increasing demand from markets outside the region.

The Senate hearings of 1907 motivated both the Federal and the Provincial government to consider seriously the oil sands as a source of petroleum and, more important at the time, as a source of asphalt to pave the badly needed roadways of western Canada. J.A. Cote, J.K. Cornwall, and A. von Hammerstein spearheaded a campaign to open up the Athabasca country. In 1913, the federal government assigned a young engineer, S.C. Ells, to survey the extent of the tar sands. His maps and reports sparked a flurry of interest on the part of speculators and promoters. However, most of these entrepreneurs failed in rapid order.

In an attempt to rationalize the problems of mineral development, especially in the areas of coal and the oil sands, the Research Council of Alberta was formed by the Alberta government. The government sponsored also the construction of the Alberta Great Waterways Railway to Waterways in 1921. The railway construction to Waterways was completed by 1925, but difficulties in financing had resulted in an incomplete and unstable grade. In fact, it was not until 1946 that any major improvements were initiated.

The first salt deposits were accidentally discovered at the mouth of Horse River when Northern Alberta Exploration Company sank two exploratory wells in the search for the elusive oil believed by geologists to be trapped beneath the sands. Although salt was discovered between 1907 and 1912, it was not until 1919 that the Alberta government drilled a well near the lower townsite of Fort McMurray. When the Alberta and Great Waterways Railway reached the Clearwater River in 1923, the salt industry appeared profitable. A second government well confirmed the existence of salt deposits, and in 1925 the Alberta Salt Company constructed a plant at the mouth of Horse River. This enterprise constituted the first salt mine in the region. It employed about 15 men, but prohibitive transportation costs forced its closure in 1926. A second salt mine was established in Waterways in 1937, and lasted until 1951. At that time, more accessible salt deposits were discovered in Alberta at Elk Point.

The introduction of regular train service to the Athabasca Oil Sands region meant that commercial fishing became possible because perishable foods could be shipped to Edmonton in ice cars. In the spring of 1926, McInnes Fish Company began operations on Lake Athabasca. Between 1926 and 1939 the operations concentrated on the lake trout. Whitefish was not taken because of a tapeworm infestation problem in the 1930's and the resulting U.S. embargo on whitefish. The U.S. market for fish was centered in Chicago. Commercial fishing proved to be a very profitable enterprise in the region, and in the earlier years over two million pounds of trout were taken. The number of lake trout in Lake Athabasca began to decline from 1942 onwards, and the fisheries began to move farther east into Saskatchewan.

The third phase, between 1930 and 1950, represented the start of active federal support for private enterprise in the resource development. The federal involvement came as a result of the previous failures of private entrepreneurs to exploit the oil sands; and as a result of high freight rates, increasing use of automobiles, and alternate sources of oil for asphalt, which shifted the emphasis from using the oil sands in paving programs to techniques devoted to the recovery of liquid and semi-liquid carbons.

One of the first serious attempts to establish a commercial separation plant was made by Max. W. Ball in the 1930's and 1940's. His company, Abasand Oils Limited (AOL), was privately funded. But its establishment and operation would have been impossible without the support of the federal government, which eventually resulted in the government assuming control of Abasand Oils Limited in 1943. The story of AOL reveals the continuation of attempts by the Mines Branch to achieve success in exploiting the oil sands.

Throughout these years AOL failed to get into sustained production because of the lack of suitable technology to mine the oil sands, which were saturated with abrasive marcasite nodules that wore out excavating equipment. Furthermore, the outbreak of World War II brought shortages of skilled labour, a situation which was eased when the federal government permitted AOL to bring in American personnel. Then, on 21 November 1941, fire destroyed the plant. Plans were immediately launched for reconstruction and the lease agreement was extended to 1943. While the Mines Branch began to consider cancelling the lease, the United States' need of asphalt and diesel fuel for the Canol Project, which was to result in a pipeline from Norman Wells to Whitehorse, caused the federal authorities to conduct a thorough examination of AOL. This examination made them aware that although the AOL plant's capacity was too small, it could assist in the war effort and it could serve as a training ground for personnel required in larger scale operations. It was decided to continue the operations (estimated at \$300,000) by directly assuming control of AOL. On 1 April 1943, the federal Department of Mines and Resources signed an agreement with AOL to assume control of its property, plant and operations for the sum of one dollar.

Due to an extensive drilling survey program, launched in 1942, federal government involvement in the Athabasca Oil Sands region continued until early 1947. However, the destruction of the AOL plant by fire in 1945, and the growing involvement of the provincial government in oil sands development led the federal authorities to doubt "whether the Dominion Government should continue this exploration of purely Provincial resources".

The fourth phase, which started in 1930 and ended in 1960, marked the provincial take over of the natural resources. Resource ownership was a contentious issue between provincial and federal jurisdictions from the time the North-West Territories were originally established, until the final transfer to provincial ownership in 1930. From 1914 until 1925, the questions surrounding oil sands development in Alberta remained one focal point for such intergovernmental competition. In the years between 1925 and 1930, when the transfer of natural resources was effected, a more co-operative approach evolved through the efforts of the Bituminous Sands Administrative Committee (BSAC). Within this political context, both the federal Mines Branch and the newly formed Research Council of Alberta were central to the development of the Athabasca Oil Sands. These groups, separately and in conjunction through the BSAC, determined the first large scale and systematic approaches to the nature and extent of oil sands development. Significant technical experimentation was supervised for the Research Council of Alberta by Dr. Karl A. Clark, who designed and built an experimental plant at Waterways in 1929. The plant established the possibility that gasoline could be refined from the thick impervious bitumen. These cooperative government ventures marked the height of development to 1930.

The transfer of natural resources to Alberta in 1930, coincided with the onset of the great depression. This brought a temporary end to provincial government initiatives in the oil sands region. However, following the disastrous fire at the Abasand plant in 1945, the provincial government reacted by announcing it would build a separation plant which would demonstrate, once and for all, that separation of oil from the sands was possible.

In the 1945-51 period, a second Alberta Research Council experimental plant became operational at Bitumount. Bitumount was selected because it contained a quarry, buildings, and preliminary facilities to begin the experiment. These were left by Robert Fitzsimmons' project, which had fizzled in financial failure. This time, the plant proved to be a success. In 1949, it was concluded that Bitumount ...

...had served its purpose which was to demonstrate, technically there was no obstacle in the way of separating the oil from the oil sands.

In 1951, the Alberta government sponsored the first Athabasca Oil Sands Conference. This was attended by over 100 professional and technical personnel from government and from multinational oil and mining companies. At the conference, a commissioned consultant, Sidney Blair, reported that it was now commercially feasible to produce oil from these stubborn sands.

At the same conference, the provincial government announced its policy on oil sands leases and royalties. These leases, available for \$1.00 an acre, were for a term of 21 years *(renewable), and provided a 10% royalty on the raw product. The most significant part, however, lay in the clause that a plant had to be constructed within two years and operating within five years. Furthermore, the government made it clear that no special support would be provided for development of schools and roads. Nonetheless, Mr. Tanner, Minister of Lands and Mines, stated the government position to be:

...that whatever company or companies are prepared to put their risk capital into this development are actually partners with the Government and the Government with them in that undertaking.

During the early 1950's, a few exploration permits were taken out by companies, but no major developments occurred. The government's attitude during the 1950's was conditioned by the fact that Alberta's conventional oil supplies were rapidly increasing. The market demand was accelerated, however, when in 1956, Egypt blocked the Suez Canal thereby endangering the supply of oil from the Middle East to North America. Companies began to take out exploration permits which in 1958 had reached 93. Sun Oil Company Limited, short of oil supplies, contracted with Great Canadian Oil Sands Limited and Abasand Oils Limited to develop leases four and 14. This event marked the beginnings of a new era of economic development for the Athabasca Oil Sands region.

SOCIAL CHANGES

Sands region, it is necessary to understand the dynamic relationship which existed between the indigenous and the immigrant inhabitants, a relationship which was based on the need to successfully deal with their bio-physical environment. Central to the evolution of human community was the successive introduction of immigrants to the region and the eventual perception of themselves as indigenous residents. For the purposes of this study the terms immigrant and indigenous distinguish differences in degrees of commitment to the common good of communities established within the study area. Much of the drama and the tension that envelopes the history of the region is found in the social and economic relationships existing between immigrant and indigenous groups.

During the period under study, the population of the Athabasca Oil Sands region consisted of Indians, Metis, and white people. The Chipewyans, who historically occupied the region, were being supplanted from the south by the Crees. By 1890, Crees were the chief occupants around Anzac and Fort McMurray; while farther down the Athabasca River at Fort MacKay, Chipewyans and Crees occupied adjacent territories. Around Fort Chipewyan, the traditional Chipewyan territory lay southeast of the Fort in line with Portage La Loche. The Cree people migrated north from the Wabasca-Desmarais-Birch River area and occupied the territory southwest of Fort Chipewyan.

Between 1890 and 1950, the Indian people were dispersed in trapping locations around Fort Chipewyan. The people lived in bush settlements which were occupied during the winter months at the height of the trapping season. Some of these settlements had small trading posts. It would appear that these settlements declined rapidly in the 1950 to 1960 period. The reasons were: the accessibility to the now compulsory schooling and to family allowances and other forms of social assistance provided in the major centers, and changes in employment opportunities.

The human setting today consists of four major communities in the Athabasca Oil Sands region: Anzac, Fort McMurray (including Waterways), Fort MacKay, and Fort Chipewyan. Although historically, the importance of the region has been attributed to the fur trade, the local economies of the four communities differed. Fort Chipewyan, Fort MacKay, and Anzac were centers where fur trapping and trading constituted the chief economic activity. In contrast, Fort McMurray's primary role was its strategic location as a transportation terminus; fur trapping and trading were less important to the well-being of the community. These differences in local economies meant that Fort McMurray's social composition and social structure differed from that of the three trapping communities. While the trapping communities were inhabited predominantly by the indigenous population, Fort McMurray's residents were mostly immigrant to the region.

The community of Fort Chipewyan was composed of Metis people. A few white people were associated with the work of the fur trade, the churches, or the police. The Metis people occupied the village area of Fort Chipewyan. The Chipewyans and the Crees, in the early days, had traditional camping places: the Chipewyans camped near the Hudson's Bay Company Fort, while the Crees camped near the Roman Catholic Mission. This spacial division pointed out the social differences existing among the three groups in Fort Chipewyan. The situation at Fort MacKay was similar although there were fewer Metis in the settlement.

In both these communities, the different social classes were essentially Chipewyan, Cree, and village Metis. The Metis worked for the trading posts and generally were service-oriented people. They did not mix with the Chipewyan and the Cree people, nor did the Chipewyans and Crees get along; in fact the relations among them have been described as hostile.

Early residents of Fort McMurray stated that in 1907 Fort MacKay was larger than Fort McMurray. At that time the Roman Catholic Church was established in Fort MacKay, but it was not until 1914 that churches were established at Fort McMurray. Around 1912, there was an extensive land boom in the Fort McMurray district. The

first settlement survey of Fort McMurray was conducted in 1913. The boom at Fort McMurray was apparently rooted in the belief that oil was going to be extracted from the oil sands. Fort McMurray had a population of five or six families in 1907; that number had more than doubled by 1914.

When the railroad was completed to the Clearwater River in 1921, white and Metis people began to move into the oil sands region. The population of Fort McMurray, which was about 200 people in the early 1920's, grew to about three to four hundred people by the late 1930's. But a census taken in 1942 revealed that between Anzac and Lake Athabasca there were 1041 residents. Most of the increase in the late 1930's can be attributed to the establishment of the second salt plant at Waterways, which supplied the main employment. Other sources of employment were seasonal and included lumber, fishing and shippard operations. In the late 1930's, Fort McMurray's industries included also a sawmill operated by Hugh Stroud on Franklin Avenue and the Abasand Oils Limited plant which was situated on the Horse River. Most of the skilled help for the Abasand plant was imported from the outside, until fire destroyed the plant in 1945. Abasand Oils Limited established a townsite for its workers on the Horse River; this was the first company town in the Athabasca Oil Sands region.

Following the Japanese attack on Pearl Harbor in December, 1941, the United States and Canada decided that, in order to defend Alaska and maintain it as a strategic area in Pacific operations of the World War II, it would be necessary to build a road to Alaska and provide a source of fuel independent of sea lanes. The Canol Project was conceived as a military operation under the direction of the U.S. Army. The plan was to build a pipeline from Norman Wells on the Mackenzie River to Whitehorse in the Yukon, where a refinery was to be established.

Work was begun by the U.S. Army engineers, private contractors, and Imperial Oil Limited. By June, 1942, a military camp and dock facilities had been constructed at Waterways. The impact on the region was sudden and unprecedented in developments in the

Canadian north. People, interviewed about the Canol Project, said that the communities of Fort McMurray and Waterways were overwhelmed by the presence of over three thousand black and white soldiers who camped on the Prairie between the two settlements. Men were hired as pilots and deckhands, while the women made as much as \$25.00 a week laundering clothes and linen. It is not surprising that the people experienced a slump in the economy after the departure of the U.S. troops. Fort McMurray and Waterways reverted to the old seasonal economy of transportation and trapping, with no other industries except the salt plant which continued to operate until 1951.

During the period under study, the Crown assumed a "developmental laissez-faire" policy in which economic development was left to free enterprise, and social services were left until they were able to be supported and demanded by population in the region. This attitude remained in effect until the massive economic developments of the 1960's. The scale of these developments accentuated public awareness and increasing government concern for the provision of social services within the region. Provincial enactments, such as the New Towns Act (1955), Northland School Division (1961), Northern Development Council (1964), Community Development (1964), and Alberta Newstart (1968), were indicative of the changing social policies related to the development of the north. Through these measures the Crown assumed an increasingly active role in socio-economic developments in the oil sands region.

CONCLUSION

The Athabasca District was administered by the federal government as an unorganized district of the North-West Territories for many years, and the federal presence was the most important in shaping the administrative structures of the area. The Province of Alberta did not receive jurisdiction over its natural resources until 1930. In many ways, therefore, the presence of the federal government ultimately determined developments in the region during the period under consideration.

Between 1890 and 1960, Edmonton, with its proximity to the region by water and rail, played a key role in the efforts to develop the region's natural resources. By the 1960's, Fort McMurray, with its English-speaking population and strategic location, had become the regional centre of a socio-economic regime which supplanted the old socio-economic order based largely on the fur trade. In 1963, Fort McMurray became New Town, while completion of the Great Slave Lake Railway to Hay River marked the end of Fort McMurray's predominant role as the transportation terminus for the Mackenzie River Basin. In 1964, Great Canadian Oil Sands began plant construction. The era of commercial development of the Athabasca Oil Sands entered the region.

In this transition, however, the indigenous population of surrounding communities and bush settlements relocated, either to Fort McMurray or to centers outside the region. This migration occurred at a time when there was a large influx of newcomers into the region. The interaction of indigenous and inmigrant groups deserves further research, especially in relation to education and health, responsibilities which were once assumed by church organizations but have been now taken over by the federal, provincial, and municipal institutions.

ACKNOWLEDGEMENTS

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1. INTRODUCTION

The Oral History of the Athabasca Oil Sands region is to provide a means through which the experiences, ideas, and recollections of long-term residents of the region could be recorded on audio-tape (Parker 1979:58). This report complements the preceding socio-economic report (Volume I) and represents the result of field studies conducted in the Alberta Oil Sands Environmental Research Program (AOSERP) study area (Figure I). Between 1890 and 1960, changes in human environment can be categorized under four major components, viz.:

- 1. Population Migration
 - a) The location and movement of indigenous people within the region.
 - b) The interaction of "immigrants" and indigenous people.
- 2. Economic Changes
 - a) A description of the technological and economic changes which have occurred,
 e.g., transportation, fur production,
 fisheries, industries.
- 3. People and Their Environment
 - a) What attitudes were held toward, and what uses were made of natural resources, land, shelter, subsistence (food and clothing).
- 4. Society and Government
 - a) What societal structures existed and what changes occurred, and why?
 - b) What types of local government existed?
 - c) What was the role of "outside" government agencies (provincial, federal)?
 - d) How did "outside" government agencies develop programs of education, health, and education?

These categories are postulated on the following historical phenomena:

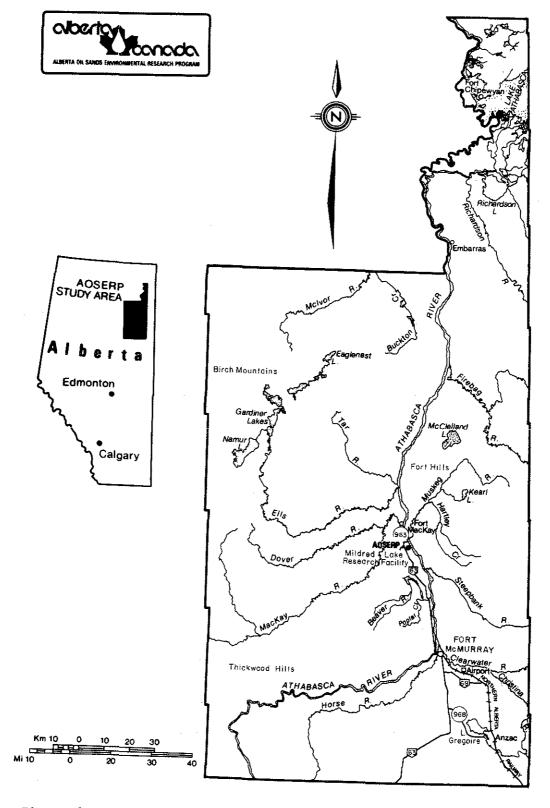


Figure 1. Location of the AOSERP study area.

- The region has been an area of resource development, e.g., fur trade, fisheries, salt, oil sands;
- 2. The region has been astride major transportation arteries which led into Canada's far north, i.e., transportation was a major development;
- Only a few "outside" government agencies existed in the region until the Post-World War II period; and
- 4. Local (municipal) government was non-existent in the region until 1947 when village status was attained by the amalgamation of Fort McMurray and Waterways.

These phenomena resulted in a situation where there are few, if any, written records within the region, e.g., village/town records, weekly newspapers. The lack of local sources (records written by indigenous people) means that the historian has to reconstruct what happened on the regional scene by gathering historical evidence from surviving "old-timers". Use of the method of oral history interviews is intended to fill the gaps which exist in written records and to recreate a regional historical perspective.

1.1 PURPOSE AND DEFINITIONS

The purpose of the project is to record the recollections and memoirs of elders and indigenous persons of the communities of Anzac, Fort McMurray, Fort MacKay, and Fort Chipewyan.

An <u>elder</u> is defined as a person of approximately fifty (50) years residency in the region, and an <u>indigenous person</u> is one who has resided about twenty (20) years in the region, 20 years being taken as an adequate time to establish a permanent residence.

1.2 METHODOLOGY

Because the region's peoples have been subjected to considerable research by "outsiders" during the past two decades, it was decided that the interviewers should be recruited from among persons familiar with the people, language, and customs of the region's communities. It was assumed that, in this way, the project would not be considered disruptive by elders and indigenous persons.

Through the assistance and advice of Native Outreach personnel, in particular Mrs. Alvena Strassbourg, native interviewers were selected. In addition, the assistance of the Fort McMurray Historical Society, especially that of Mr. R.E. (Bob) Duncan and Mrs. Darlene Comfort, was invaluable. Selection of the field personnel was completed in October 1977 (Appendix-6.1).

During this time a manual of procedures was prepared (Appendix 6.2) which included a standard format which was to be used in the interviews. The format outlines specific subject guidelines for interviews:

- 1. Family data;
- 2. Personal data;
- 3. Shelter;
- Food and diet;
- 5. Clothing, footwear;
- 6. Education;
- 7. Health;
- 8. Social assistance;
- 9. Employment experiences;
- 10. Transportation, communications;
- 11. Business methods;
- 12. Government;
- 13. Social life and customs;
- 14. Catastrophes; and
- 15. The present and the future.

On Saturday, 5 November 1977, an oral history workshop was introduced by Ms. B. Kasinska-Banas, Research Manager, Human System,

and Mr. R.S. Jamieson, Director, Boreal Institute for Northern Studies, University of Alberta. The coordinator of the oral history project, Mr. J. Parker, conducted an in-depth training session for the interviewers (Appendix 6.3).

The interviewers agreed to payment of \$20.00 per tape hour.

A list of potential interviewees was drawn up by the participants (Appendix 6.4).

Tape equipment and supplies were provided by the contractor, the Boreal Institute for Northern Studies.

1.3 PROGRESS

The initiation of the project came at the onset of freeze-up and the start of what proved to be a good fur trapping season. This made it difficult to contact potential native informants who were out at their traplines. In Fort McMurray, two interviewers dropped out (one due to new employment; the other became ill) while a Chipewyan interviewer was required in Fort Chipewyan. In early January 1978, replacement interviewers were enlisted.

In Fort MacKay, however, the project was suspended at the request of the Northeast Alberta Region Commissioner's Office in order that its research in the community could be completed. The resulting delay postponed any further work in that community in 1978.

Mr. R. Woodward was enlisted as field co-ordinator in July 1978, in an effort to acquire interviews from native people in the Anzac and Fort McMurray area. This measure produced minimal results.

As a consequence, the co-ordinator spent time in the field interviewing persons known to have significant experiences in the region.

2. HISTORICAL BACKGROUND TO THE COMMUNITIES

In order to provide a setting for the interview data, which does not pre-date 1910, it is necessary to provide a brief historical overview of each community in the region. These overviews are based upon documented historical sources.

2.1 ANZAC

Approximately 20 miles south of Fort McMurray on the Northern Alberta Railways Company line lies the hamlet of Anzac, whose origins remain rather obscure. The name Anzac itself represents an acronym given to the Australian-New Zealand corps in World War I (Holmgren 1972:6). From this name it might be assumed that the construction of the Alberta and Great Waterways Railway after the war created the hamlet of Anzac. There are some indications that native settlements existed in and around the site prior to the coming of the railroad. Anzac is situated near Gregoire Lake which was formerly known as Willow Lake. This lake is a source of fish, a food which was essential to the existence of native communities in the region. The area around Anzac was then and still is today a rich source of furs.

2.2 FORT McMURRAY

The transfer of Rupert's Land to the new Dominion of Canada in 1870 was preceded by difficulties encountered on the old transportation route into the Athabasca Oil Sands region (up the Churchill River system to the Portage La Loche and down the Clearwater River to its confluence with the Athabasca River). Men such as Roderick Macfarlane and William McMurray realized that the end of the Hudson Bay Company's monopoly would mean an influx of free traders into the region. Furthermore, use of the old Portage La Loche route had always caused great difficulties in obtaining sufficient men to build the boats and man the brigades necessary to bring in the goods for the country. Competition from free traders would call for more goods to be brought into the Athabasca country. In order to maintain its

advantage in the fur trade, the Hudson's Bay Company would have to establish new posts at strategic points where they could counter free trading competition. So it was in the spring of 1870 that William McMurray engaged Henry John Moberly to proceed from Fort Chipewyan to the mouth of the Clearwater River and to establish there a new post for the Hudson's Bay Company. Initially, Moberly's first task was to improve the route over the Portage La Loche by constructing a cart road over it in the 1870's.

During the same period, the Roman Catholic Church attempted to establish a transportation route for its northern missions because of the lack of assistance in getting over the Portage La Loche. In 1856, Bishop Taché set out from the Lac La Biche Mission, followed the La Biche River to the Athabasca River, and descended that river to Fort Chipewyan. When the Oblates of Mary Immaculate missionaries travelled from St. Boniface to the Lac La Biche Mission in 1867, they were accompanied by Grey Nuns whose destination was Fort Providence on Great Slave Lake. A scow was built at Lac La Biche and travelled down the La Biche-Athabasca rivers to Fort Chipewyan. This experiment was undoubtedly watched with interest by the Hudson's Bay Company, especially when, in 1871, the missionaries decided to attempt the construction of a cart road from Lac La Biche to Fort McMurray. If that cart road had been constructed, the valuable furs of the Athabasca country would have become available to many free traders. According to H.J. Moberly, a Hudson's Bay Company party was sent from Lac La Biche to examine the feasibility of the road in 1872. The group reached McMurray but not without the loss of nearly all their horses and reported that the route was impossible. Following this survey, Moberly went to Cold Lake and in his words:

... made a complete map for a good road, with the estimated cost of construction, and offered to finish it in one season. This offer was not accepted, for the reason that it was thought such a road would enable free traders too easily to get into the North (Moberly 1929:149).

Moberly was then instructed to survey the navigational possibilities of the river between Fort McMurray and the head of the

rapids on the Slave River at what is now called Fort Fitzgerald. This survey heralded the decision of the Hudson's Bay Company to follow the advice of Roderick Macfarlane and William McMurray and to introduce steam navigation upon the Athabasca-Slave River system. Fort McMurray was to serve as the terminus of that system.

It is reasonable to ask why the site of Fort McMurray had not been a major trading post prior to 1870. First, Fort McMurray is situated below rapids on the Clearwater River and below the rapids of the Athabasca River. This location could have discouraged natives from travelling to the Fort McMurray area. Secondly, H.J. Moberly's memoirs stated that "(he) was surprised to discover ... evidences of a previous post on this identical spot. Enquiry disclosed the fact that, 86 years before, this forgotten post had been abandoned in consequence of the death from smallpox of almost all the Indians in the locality." (Moberly 1929:142). Therefore the site of Fort McMurray may have been seen as an undesirable place to live because death and sickness had once struck the area. When the natives travelled west to the Chipewyan Lakes-Birch Mountains-Wabasca region they went across country from a point approximately 40 miles downstream from Fort McMurray.

2.3 FORT MacKAY

The area around the site of Fort MacKay has always been known as a good trapping area. It leads to excellent fur bearing regions which were first tapped by early North West Company and Hudson's Bay Company posts, namely, Pierre au Calumet, and Berens House. Fort McMurray had to compete against traders from Lac La Biche and the Portage La Loche posts where higher prices were paid for furs. Therefore, in 1891, a post was established at the mouth of the Red River which was sometimes known as Little Red River and is today the MacKay River. Between 1891 and 1912 the post was known as Old Red River Post (Comfort 1974:251). It provided a rendezvous for trappers from the western and eastern parts of the Athabasca Oil Sands region.

2.4 FORT CHIPEWYAN

Fort Chipewyan began its existence in the eighteenth century with the entry of Peter Pond into the Athabasca Oil Sands region. In 1788, Roderick MacKenzie established Fort Chipewyan on the south side of Lake Athabasca on the peninsula which is now called Old Fort Point. About the turn of the century the Fort was relocated onto the north shore of the lake and for much of the nineteenth century, when the Hudson's Bay Company held a monopoly on the fur trade, was the main focus of the trade in the Athabasca Oil Sands region. The fur trade company had some establishments along the Athabasca River between Fort McMurray and Fort Chipewyan but these were only seasonal posts. The communities of Fort McMurray, Fort MacKay and Anzac came into existence at a much later time.

In 1828, Fort Chipewyan had a population of 70 people, excluding the natives. Within the next seven years the population of the Fort decreased to 18 men with their families. The reason for the decline in population may be attributed to the Hudson's Bay Company's fur trade monopoly, which was established when it amalgamated with its only competitor, the North West Company, in 1821.

During the 1870's, Roderick Macfarlane, Chief Factor for the Hudson's Bay Company, had the Fort rebuilt. John Macoun's description of the post in 1875 provided a clue as to the number of people in residence:

> Fort Chipewyan is situated on a peninsula at the west end of Lake Athabasca. Under the fostering care of Mr. Macfarlane, it has obtained the pre-eminence of being the capital of the north. All the buildings are of the most substantial character, are all shingled and whitewashed, and present from the lake quite an imposing and beautiful appearance. Two large stores with glass windows, each 63 x 31 feet and 17 feet high, stand next to the landing. In a line with these stand 8 houses, occupied by the employees of the Company, all whitewashed, while in the rear, and between the two first mentioned stores, is the clerk's house, 40 x 30 feet, and 17 feet high. This building is well plastered, and was so warm last winter (1874), from the heat of two stoves, that water did not freeze in it. On the

left of the clerk's house, looking lakewards, is the general store, and on the right Mr. Macfarlane's own house, which is both warm and comfortable (Macoun 1877:166).

During a visit to the Fort in 1898, surveyor J.W. Tyrrell said that:

The Fort consists of a long row of 18 or 20 detached log buildings, chiefly servants' houses, connected by a high strong wooden fence or wall, so as to present an unbroken front to the water; behind which, in a sort of court are situated the Factor's dwelling and two or three other good sized buildings (Tyrrell 1908:45).

From Macoun's description of eight houses for Hudson's Bay Company employees and Tyrrell's description of 18 or 20 houses, one may assume that there had been an increase in the number of people living at Fort Chipewyan. Although part of the increase may be attributed to natural causes, e.g., increases in families, other developments during the same period portended the changes sweeping over the region.

With the above background, based on historical documentation, one may now assess the data collected in the oral history project.

3. BACKGROUND TO THE INTERVIEW DATA

It was not intended that interviewees should provide a description and/or chronology of the region. The intent of the interview process was to acquire as much information as possible about the pre-selected subjects previously outlined. Therefore, the thread of narration is provided by the historian, a thread which stems from documented historical sources.

In order to distinguish the documented sources from the oral sources, the latter are indicated by insertion of the words "interview" or "memoir" in the footnote acknowledgement.

In collecting the oral evidence, the usual approach was to provide the interviewee with an opportunity to detail his/her working experiences. Consequently the format of an interview was thematic within a chronological time frame. To convert this raw interview data, which skips back and forth over a given time frame, into analysis is a dilemma which underlies any historical interpretation. The interviewee's life is the actual vehicle of historical experience. Generalizations of life experiences are difficult but on the other hand, one must endeavour to keep analyses as close to life experiences as possible.

The method employed was to group experiences around major and minor themes which were established in the research design, i.e., economic changes, population and migration, people and their environment (conditions of life), and society and government.

Overlap of information was considered essential to preserving as much as possible of the interviewees' portrayal of their life styles. For example, there are occasions in a life experience when employment and population migration cannot be realistically separated.

One final comment on the literary form is necessary. History which employs oral eye-witness accounts is a different kind of experience. As the historian writes, he becomes aware of the interviewees, their gestures, their language and their expression of meaning. There may be dialect words and grammatical errors. To

correct these shortcomings would mean a more scholarly report; to leave them alone means that they are lively reflections of the interviewees who lived the historical events. The latter course was chosen. Supported by substantial quotations in which the interviewees seem to be heard talking, even thinking aloud, in their own, very different styles, the writing has remained as faithful as possible to both the character and meaning of the original.

3.1 SUMMARY AND ANALYSIS

The human setting today consists of four major communities in the Athabasca Oil Sands region: Anzac, Fort McMurray (including Waterways), Fort MacKay, and Fort Chipewyan. However, the interview data reveal two interesting general facts, first, about population distribution and second, about economic differences.

Interview data, which relate to the period between 1910 and 1965, indicate that historically there was a much greater dispersal of people in the region. A number of bush settlements, no longer in existence, have been identified. From the information gathered, it would appear that these settlements declined rapidly in the 1950 to 1960 period. Reasons given were the necessity of schooling in the major centers, family allowances and other forms of social assistance, and changes in employment opportunities, for example, wood-cutting.

Although the economic importance of the region has been attributed to the fur trade, the interviews lead to the assessment that the local economies of the four communities differed. Fort Chipewyan, Fort MacKay, and Anzac were centres where fur trapping and trading constituted the chief economic activity. In contrast, Fort McMurray's primary role was its strategic location as a transportation terminus; fur trapping and trading were less important to the well-being of the community. These differences between Fort McMurray and the three trapping communities became apparent in the interviews. The differences mean not only that the economy differed between Fort McMurray and the other communities but that the social

composition, the social structure, and the type of people living in these communities also differed considerably. Consequently, it is possible to conclude that the impact of economic and technological advance differed among the communities.

3.2 ECONOMIC CHANGES

3.2.1 Transportation System

In the summer of 1883, a steamboat whistle echoed across the Athabasca delta. It marked the advent of steam transportation into the Athabasca Oil Sands region. The construction of the S.S. Grahame at Fort Chipewyan in the 1882-83 winter season was also significant in that it reduced the number of boats and men required to haul freight into the Canadian north. Furthermore, the old canoe-York boat route into the region via the Portage La Loche-Clearwater River was doomed. The trade canoe, measuring about 32 feet in length, four and one-half feet in width, two feet in depth, carried about 2000 pounds of freight and was manned by five men. 1820 and 1880 it was superseded by the York boat which measured about 30 feet in length, seven to eight feet in width and three and one-half to four feet in depth. With a crew of seven to eight men, it carried approximately 5000 pounds of freight. The change-over from canoes to York boats had caused a reduction in the number of native men required to work on the brigades. Ten canoes carrying twelve tons of freight required the assistance of 50 to 60 voyageurs; four York boats carried almost twice the amount of freight but only employed 28 to 32 men (Parker 1967:67).

Following the introduction of steamboat transportation on the Saskatchewan River system from Fort Garry to Fort Edmonton and with the arrival of the Canadian Pacific Railway in 1883, it became obvious that new routes could be utilized to reach the Athabasca Oil Sands region. During the winter of 1881 to 1882, three scows were constructed at Athabasca Landing to transport materials down the Athabasca River to Fort Chipewyan. In July 1882, the S.S. Northcote

unloaded material at Edmonton for a new steamboat which was to be built at Fort Chipewyan. Captain John H. Smith supervised the construction of the new steamer in the winter of 1882 to 1883. The developments in construction marked the beginnings of a new economy for the Athabasca Oil Sands region. The transportation route shifted from the Churchill River-La Loche-Clearwater system to one based upon supplies arriving at Calgary and being transported overland to Athabasca Landing, which now achieved pre-eminence as the entry port into the region. The immediate need was for scows which would be capable of running through the rocks, ledges, and rapids of the Athabasca River between Athabasca Landing and Fort McMurray (Zaslow 1971:56). The construction of these scows was described by Captain Julian Mills:

After we had been there for a couple of days a carload of lumber came in for the scows that had to be built to take the freight down the river. After it was unloaded we started to saw the ribs for them out. They were 2 by 4's 10 feet long and the side ones were four feet long. We put a frame up. Put a tarp on it and an air-tight heater in it to work in. As it was pretty cold we had to put a gas lantern in it as there was no power or windows for light. Getting around 50 ribs sawed, we had to nail them together, then take them outside and pile them, and start all over again.

When that job was done, we started to build them. The scows were about 40 feet long, and were built upside down. The ribs were set on planks and blocks, then the bottom planks were nailed on, then the sides were done. A place where the sides met bottom, called the knuckle, had to be caulked with oakum; all the rest was done with cotton clothes line by putting it in the seams and nailing it with $l\frac{1}{2}$ inch nails. Tar or pitch was run in and after it was heated with a rig they had a funnel with a long handle on it and a wheel below. The wheel would push the cotton down hard, then the tar would run on top of it and harden, thus making a good water-tight seam.

After about six had been finished we had to get them out of the road as there was not enough room to build them all at once. Being upside down they had to be turned over which was done by putting an A-frame at each end. With a block and tackle they turned against the A-frame and pulled from the bottom and they just slid down onto rollers to the river (Julian Mills Interview 1978).

Captain Mills has also provided a description of the route taken by these scows from Athabasca Landing down river:

Our family moved to Athabasca Landing from Winnipeg in the fall of 1912 where my father had been building the steamers Athabasca and Slave River for the Hudson's Bay Company ... Shortly after the ice went out in the spring, scows that had been built earlier were loaded with supplies to be shipped north to the different posts.

These were a boat of about 35 or 40 feet in length and 10 or 12 feet wide which would hold about 10 or 12 tons. Each was equipped with a long sweep and four oars, and a crew of five men, who used the oars when needed to get the boat out into the river or back to shore, but were mostly hired to handle freight that had to be unloaded to lighten the scow when running some of the rapids later on.

Getting out into the river, we just drifted along at about three miles an hour, tying up at night when it got dark and were away again at daylight. This went on till we got to the Grand Rapids which were about 140 miles down the river. There the scows were ... taken down through a narrow, rocky channel to the head of the island where they were tied up and unloaded. The freight was then loaded onto a small flat car that ran on a narrow guage railway and held about a ton or two. This was then pushed by hand to the foot of the island, about 4 mile. The empty scow, in the meantime, had been run down another channel and tied up on the end of the island to be reloaded. empty flat car was then pushed back to get another load. This went on till all the scows were loaded again.

We started off on the 80 miles to Fort McMurray and a series of rapids. It was pretty good going until we got to what they call the Big Cascade. There the scows had to be lightened up due to the fact that at this place the water goes a sheer drop of about four feet and there is a danger of breaking its back when going over. That meant the stuff had to be carried over a short portage and loaded again.

We started off again when everything was over, on the few miles left to McMurray. There we tied up right at the place where the bridges are over the Athabasca River. There the Hudson's Bay had a store and a warehouse. We stayed there a few days and started off again, this time to drift to Smith Landing, now known as Fitzgerald.

Getting to the lake was the place where the crew of four men came in. They had to row all the way across it to Chip. We were off again the next morning on the last leg of the trip; and many the time I have thought about it, when skipper on the boats later on, making the trip in a day and a half from McMurray to Fitz compared to over a week by scow.

Landing there the freight was taken over the Smith portage by Red River carts pulled by oxen. I don't remember if they had horses then or not. I spent the rest of the summer on the S.S. Mackenzie River with my father, who had built it at Fort Smith in 1906-07 (Julian Mills Interview 1978).

The Athabasca scows and the Athabasca steamboats dominated the transportation scene in the Athabasca Oil Sands region between 1882 and 1921. The S.S. Grahame, which was launched at Fort Chipewyan in 1883, began full service in 1884 and the original hull lasted until the mid 1890's when the planking was replaced and renewed. The second Grahame was in service until 1914, at which time construction of the S.S. Fort McMurray was commenced. Captain James W. Mills of the Hudson's Bay Company was in charge of the construction and his son, Julian Mills, recalled the year that the

boat was built:

The Fort McMurray was built by my father in 1914-15. She was a stern wheel steamboat of about 150 feet long and about 20 feet beam. The engines had been taken out of the Grahame, a boat the McMurray replaced on the run from McMurray north. It had accommodation for about 50 passengers and carried a crew of about 25. It was a steel frame hull with plate bulkheads in it. During the building of it, there used to be an old fellow by the name of Paul Fontain who would come and sit watching the work going on. One day I heard him tell someone, "That boat will never float, it's got too much iron in it." Little did he know that he was partly right. I think he was disappointed when it was launched, that it did float, but the rest is another story.

As freight was being hauled into Peace River by rail then, the Hudson's Bay Company decided to get their freight going north by that route. So that summer the Fort McMurray went up the Peace River to the Vermilion Chutes to load. As the boat running on the upper river was quite small, it took two or three loads to get a load for the McMurray so it had to stay at the Chutes for a couple of weeks. that time the water had been going down every night, and by the time it was ready to go the water was quite low. My father, who was skipper at the time, decided to wait a couple of days. After a conference with the pilot, they decided to pull out the next day. The next day we were away at daylight. That evening, about 7 p.m., going down a shallow spot, the boat struck a rock and, leaking quite bad, it was run ashore and beached. There being no communication with the boats at the time, they did not know there was a raise in water coming down. That night it started to come up and by next morning it was up to the top of the windows on the saloon deck (about 15 feet) and a pretty sorry looking mess it was, water that high and driftwood piling up against the house at the front end. It was wondered if it would stand the strain and not take the house off altogether, but it held. All this time we had to camp out on the beach.

When the water went down low enough, the job of salvaging everything that was not ruined started. As the boat had water-tight compartments in it, one hold was done at a time (the freight had been loaded below decks). All the freight was taken out. Steam got up in one boiler and pumps and steam siphons were put in to keep the water down as much as possible. Then the job of patching started. It was found the boat had struck the rock on the bow on one side and holes ran diagonally across the boat to the stern. As it had steel frames, holes were punched between each frame; altogether there were 52 holes that were patched.

A unique method was used to do that. At that time Chicago Chicken, commonly known as sow belly, was shipped in bales of two pieces each. These pieces were about two feet wide and about three feet long, and, being from three to four inches thick, were a perfect patch for the holes. Each piece was cut to the size of the hole to be patched, laid on, and a heavy plank put on top, jacked down and spiked down, and as the boat ran the rest of the summer without leaking too bad, it turned out all right.

Later on, when the boat was pulled out at Chip, it was found the fish had eaten nearly all the fat out from some of the patches so there was only the rind left.

After pulling the boat out in the Quatre Fourches River at Chip, the crew started out for McMurray. We had two canoes with five men in each and if you think paddling a lot of fun, try doing it up stream for 180 miles in the fall (that was before outboards). We did have a couple of days off though, as we woke up one morning with a strong north wind blowing so we cut down a spruce pole, used a tarp we had as a sail, and let the wind take us along. I don't remember how long it took to get to McMurray but after a couple of days rest we started off for Athabasca Landing and home.

This time we had about four or five pack horses to carry our gear and grub but we walked across

the House River portage and this being in the fall it was anything but pleasant. It was cold enough for ice to form at night on the muskeg and our feet were wet all day. Upon getting to House River, a little gasoline-powered boat that had been wired for before we left McMurray, met us so the next hundred miles was pretty good (Julian Mills Interview 1978).

The impact of the new, more efficient, modes of transportation was first noticed in employment opportunities created along the Athabasca River system. Crews were to man the scows which floated downstream from Athabasca Landing to Fort McMurray. Between 50 and 60 scows were needed yearly to move the freight into the Athabasca Oil Sands region.

On the average, a scow was manned by seven men and could carry ten tons of freight. Therefore about three to four hundred men would be employed along the Athabasca River route in any one season. A crew consisted of a steersman, a bowsman, and trackers. According to Sidney Ells, trackers were paid \$45.00 for the trip regardless of the time occupied; they had to return to their point of embarkation without any further remuneration. In addition to board and room on the scows, the crews were supplied with mocassins and tobacco (Ells 1962:14).

The steamboats also provided employment for woodcutters and deckhands. These people were usually recruited from the population residing within the region. A steamboat such as the Grahame could burn great quantities of wood, which had to be cut during the winter months and stacked at accessible points along the river between Fort McMurray and Fort Chipewyan. Woodcutters were paid \$4.00 to \$5.00 for a cord of wood any they could cut about 200 to 300 cords during the course of one winter.

A steamboat required anywhere from one to two dozen deckhands; the rate of pay for a deckhand in the period between 1915 to 1940 varied between \$45.00 a month to \$60.00 a month. Interviewees have indicated that deckhands were difficult to obtain on a regular, reliable basis; and an interview with one former deckhand revealed

that he was not really willing to spend his summers working the boats away from home (Roderick Fraser Interview 1978).

With the construction of the railroad from Edmonton to Lac La Biche and from Lac La Biche into Waterways, the scow transport system between Athabasca Landing and Fort McMurray was discontinued. The railroad made its impact upon the Athabasca Oil Sands region in two ways: first, a new community, Waterways, was created in the valley of the Clearwater; second, the railroad improved the transportation system into the region and made it more accessible to the migration of people from the outside world. The railroad itself did not create any local employment because railroad workers were imported by the construction companies from the outside. Two hundred labourers were taken downstream from Athabasca Landing in 1920 to complete the construction to Waterways.

These men, who were promised 15 cents an hour, were all Europeans, including Bukovinians, Poles, Halychane and other Slavs. Among them were Hnat Barabash of Edmonton, who later recalled the incidents which occurred that spring and summer.

The men worked a ten hour day which, at 15 cents an hour gave them \$1.50 a day. Out of this sum they paid \$1.00 a day for food and lodging, and \$1.00 a month towards a "doctor's fee". Mr. Barabash said that no one ever saw the doctor during the whole time they worked there. On Sundays and rainy days, when the men did not work and were not paid, the \$1.00 a day for food and lodging was still deducted. As a result, at the end of the first month they had little to show for their work (Woywitka 1972:1).

3.2.2 Commercial Fisheries

The introduction of regular train service to the Athabasca Oil Sands region meant that commercial fishing was possible because perishable foods could be shipped to Edmonton in ice cars. In the spring of 1926, McInnes Fish Company began operations on Lake Athabasca. Between 1926 and 1939 the operations concentrated on the

lake trout. Whitefish was not taken because of a tapeworm infestation problem in the 1930's and the resulting U.S. embargo on whitefish. The U.S. market for fish was centered in Chicago. Commercial fishing proved to be a very profitable enterprise and in the earlier years over two million pounds of trout were taken. The number of lake trout in Lake Athabasca began to decline from 1942 onwards and the fisheries began to move farther east into Saskatchewan. Between 1945 and 1951 commercial fisheries practically shut down their operations on Lake Athabasca. Mr. Roy Schlader described this time as one which had a very serious effect on the local economies because fishing provided summer employment until the ** trapping season opened (Roy Schlader Interview 1978). When McInnes Fisheries resumed operations on Lake Athabasca in the 1950's they took goldeye from Lake Claire. Pickerel was also in demand. late 1950's heavy runs of pickerel were discovered in Richardson Lake and this became an important source until the mid 1960's when over-fishing forced closure of the lake.

McInnes Fish Company established its base of operations at Waterways. In addition to the fisheries, a sawmill was operated during the winter months and employment also was provided for the local people of Waterways in cutting and storing ice. The ice was taken by barges down to Lake Athabasca in preparation for the summer operations, which usually commenced in mid-May, after the trapping season, and continued until mid-September when freeze-up was imminent and the trapping season reopened. Therefore, employment was provided for up to four months. McInnes Fisheries used about a dozen two-man boats in their summer operations; however, of the fishermen employed most were from the outside. Fishermen were paid about seven to eight cents a pound for their catches in the pre-World War II period, while the dockhands received 60 to 70 cents an hour on a 10 hour day, plus overtime. All employees worked a seven day week and generally, the wages were set at the minimum. Post-World War II pay in the 1950's was nine to 10 cents a pound for fishermen while dockhands were paid 80 to 90 cents an hour. Although

local residents were employed, the fishermen were usually brought in from the outside and this situation very often caused resentment in Fort Chipewyan. According to the fish company, local people usually found some excuse to go home, and as a result, arrangements were made at Fort McMurray to employ fishermen from Lake Winnipeg, Portage La Loche, and Buffalo Narrows. There were, however, a few local fishermen from Fort Chipewyan, among them John Lepine, Peter Ladouceur, the Villebruns, and Ignace Mercredi. Arrangements were made with the fishing crews to go out for the summer. There was no payday until the end of the fishing season. A commissary was available for food supplies, and credit arrangements were made with the fishermen and their families to buy food from the commissary. Debts and credits were settled at the end of the fishing season, when fishermen might take home \$200 to \$300 profit. According to Mr. Schlader, the people who worked for the fisheries enjoyed this arrangement because it provided them and their families an assured source of food for the summer months.

During the 1960's, the decline of goldeye and pickerel, and strict government regulations, finally led to the end of commercial fishing on Lake Athabasca. In 1969, the Government of Alberta made Lake Athabasca a closed zone, a regulation which meant that only local fishermen could take fish from Athabasca, and banned commercial fishing companies from the area. In the 1970's the Fresh Water Fish Marketing Corporation was set up under government supervision and is co-ordinating fishing operations in the Lake Athabasca area (Roy Schlader Interview 1978).

3.2.3 Local Economies

The term, "local economies", denotes those economies which developed before those employment opportunities related to the operation of river boats and the fisheries, both of which were introduced from the outside in the twentieth century; and prior to employment offered by other industries, which were often discontinued after a brief existence. The two main sources for employment were in the church mission at Fort Chipewyan and by fur traders.

The role of the missions has been recognized as having a dual purpose, that is, they endeavoured first, to help the indigenous peoples in their material wants and also to minister to their spiritual needs. However, the interview data indicate that a large, established mission not only provided spiritual, health, and educational services, but also provided employment to a number of local people. Such was the situation at Fort Chipewyan.

When the young men left school they were able to find seasonal and occasional employment at the Roman Catholic Mission. Although the mission was staffed by priests, sisters, and laybrothers, additional help was required to keep the mission farms going. During the period under study, the Fort Chipewyan Roman Catholic Mission kept a number of domestic animals, such as dairy cattle. The Hudson's Bay Company post also maintained domestic animals for food supplies. Haymaking usually began in mid-June and lasted until the first week of July. The best place to obtain hay was at Duck Lake twelve miles away from the mission at Fort Chipewyan (Noel MacKay Interview 1978).

The Roman Catholic Mission at Fort Chipewyan established a sawmill, which operated for a number of years. These sawmills were run by the lay-brothers; however, they would employ local people to assist in the log-cutting and sawmill operations. Logs were obtained from the Quatre Fourches River and hauled to the sawmill with dogs because, in the early days of logging operations, few horses were available. Seven dogs pulled one log. At the sawmill different types of lumber were cut and planed. Eight men were required to work at the sawmill: two lay-brothers and six community residents. A man working for the mission could make \$1.00 a day plus rations of beans and bacon. Mr. Noel MacKay said that a man could work for the sawmill and obtain lumber for his own needs (Noel MacKay Interview 1978).

The mission also required a large number of fish to feed its inhabitants each winter. During the fall months, the Mission, the Hudson's Bay Company, and the free trader, Colin Fraser, would

establish their fall fisheries on Goose Island, about 15 miles across the lake from Fort Chipewyan. Fish to be used for dog food were taken in September; after that month fish would be taken for human consumption. The fishing stations were located at Goose Island, Big Island, and Point Brulé. Fish were caught in nets, stored on stakes, and after freeze-up, stored in caches. During the very early days oxen and dogs were used to transport the fish to Fort Chipewyan; later, horses supplanted the oxen.

Thirty-five thousand fish were taken in 60 nets at an average fall fishery. Daily tallies were noted until the quota was realized, usually before Christmas. Whitefish and pickerel were preferred catches although trout could be netted at Big Island in January. Fishermen were paid \$1.25 per day plus their room and board (Noel MacKay Interview 1978).

3.2.4 The Trap-Line Economy

In the period 1890 to 1960, the general economy of the region was based on the trapping of furs. There were two aspects of the trap-line economy: first, there was the trader and the system he devised to deal with native trappers; and second, there was what may be termed the trap-line orientation of the native people.

It is important to note that following the establishment of free traders in the late 1880's a brisk competition occurred for the furs, a situation which had not existed since the first two decades of the nineteenth century. During a time of intense competition, the local trading economy tended to become a seller's market rather than a buyer's market. In order to survive, traders had to establish posts wherever they could be assured of a steady supply of furs. If a post had two or more traders, their prices would generally be competitive. Special furs, such as the silver fox, would receive a bid from each trader and the trapper decided which one offered the best price.

The traders developed "tripping" to get the best fur catches; this system was commonly practised in the region between 1890 and 1950. Tripping involved the employment of local people,

usually Métis who were familiar with trading and trapping methods. A tripper would set out from the main post and travel to the different bush settlements or trap-lines in order to obtain furs from a trapper. A tripper would carry, in his cariole, trade goods consisting of flour, lard, sugar, tea, coffee, dry goods and canned goods. The trading would be conducted in one day and if the trappers wanted more, the tripper would return to the post to get it for them. In the words of Roderick Fraser:

Some guys were pretty cagey, they'd order it from two trippers, and then if he got there ahead of you you'd have all this stuff; oh boy, one guy did that to me! Sometimes a trapper would not be prepared to barter his fur for a certain price to the tripper so the tripper would take the trapper's fur into the post and keep it there until Christmas, then the trapper would come in to the trading post and make a deal with the trader rather than the tripper (Roderick Fraser Interview 1978).

The tripping system involved a considerable amount of shrewd dealing and negotiating on the part of the tripper as well as the trapper. The tripper who arrived first at the source of the furs had the best opportunity to leave with the furs in his cariole. Mr. Victor Mercredi related the story of how his father, Pierre Mercredi, the Hudson's Bay Company manager, outwitted the free trader, Colin Fraser, on one occasion. Word was received at Fort Chipewyan that the trappers were coming in from Peace River toward Fort Chipewyan with a very good fur catch. Pierre Mercredi knew that Colin Fraser would be up early in the morning and after furs. Colin Fraser had a distinct advantage in his location, which was nearer to the Lake Claire-Quatre Fourches trapping area. Pierre Mercredi woke his son, Victor, at 3:00 o'clock in the morning to harness the dogs. After muffling the harnesses Pierre and Victor set off for the Quatre Fourches, where they traded for the furs and began their journey homewards. On the way they met Colin Fraser, who realized to his surprise and consternation that he had lost his opportunity to obtain the furs (Victor Mercredi Memoir 1964).

Each trader would maintain a considerable quantity of goods at his store, such as dry goods (including socks, towels, shirts, pants, underwear, flannelette), flour, sugar, tea, coffee, tobacco, groceries and trapper's hardware. One trader described the trading ritual which involved offering food gratis to attract the furs. This expense was marked down against the post. A trapper and his family could arrive in the evening, have supper, and then breakfast, before beginning to trade furs. The meals generally were based upon bannock so it was important for a trader to have a good bannock baker working for him. Mr. Jim Faichney said that this trading ritual began to die out around 1940 (James Faichney Interview 1978).

Most traders also used the traditional credit-and-debt system; that is, the trader would give credit to trappers in order to outfit them for the trapping seasons. Trappers would pay their debts when they came in with their catches of fur. The credit-and-debt system formed the basis of the trap-line economy.

Three "outfits" were needed on the trap-lines. First, the fall outfit was the most important to a trapper because at this time he_acquired staples, perhaps at a cost of \$400 to \$500, which would be charged against him in the trader's books.

These charges were known as the trapper's debts and would be repaid when he returned at Christmas. After Christmas, a trapper would require a winter outfit which was less substantial in terms of quantity and cost. A trapper was not so anxious to go out in January and February, the months which were usually too cold and therefore not very productive. If a trader wanted a trapper to set out after Christmas he would have to be prepared to outfit him on credit. Finally, when the trapper went out in the spring, few supplies were required for an outfit because the longer, warmer days provided opportunities to hunt, fish, play cards, and dine on rabbits.

Understanding this trap-line orientation is basic, not only to a knowledge of the economy of the region, but to provide insights into the movement of indigenous peoples and their relationship to their environment within the Athabasca Oil Sands region.

3.3 POPULATION MIGRATION

During the period under study, the population of the Athabasca Oil Sands region consisted of Indians, Métis, and white people. The Chipewyans, who historically occupied the region, were being supplanted from the south by the Crees. By 1890, Crees were the chief occupants around Anzac and Fort McMurray; while farther down river at Fort MacKay Chipewyans and Crees occupied adjacent territories. Around Fort Chipewyan, the traditional Chipewyan territory lay southeast of the Fort in line with Portage La Loche. The Cree people migrated north from the Wabasca-Desmarais-Birch River area and occupied the territory southwest of Fort Chipewyan. Between 1890 and 1950 the Indian people were dispersed in trapping locations around Fort Chipewyan. The people lived in bush settlements which were occupied during the winter months at the height of the trapping season. Settlements existed at Birch River, Jackfish Creek, Quatre Fourches, Prairie River, Hay River, Embarras Portage, Gull River, Egg Lake, Peace Point, Big Eddy, Kenny Woods, Old Fort, Garden Creek, Big Slough, Old Fort Bay, Jackfish Lake, and Pointe de Roche. Trap-lines existed around these settlements, some of which had small trading posts. Mr. Bob Allen has described the settlement at Jackfish Creek on the Peace River in the 1930's. The families who lived at Jackfish were the Ratfats, Piches, Vermilions, Frises, Chises, Shortmans, Courtoreilles. During the summer, the people from Jackfish would come to Fort Chipewyan and camp out at Quatre Fourches. In the fall, they would return to Jackfish Creek to catch goldeyes, then the men would move out to the trap-lines along the Peace River. The wives would stay in the settlement at Jackfish Creek while the men were away trapping (Robert Allen Interview 1978).

It is possible to compare these bush settlements to the small, rural, white settlements on the prairies which were so common prior to World War II. Mr. Roderick Fraser said that during the existence of these bush settlements travel was much easier: one could travel from Fort McMurray to Fort Fitzgerald, a distance of approximately three hundred miles, without ever camping outdoors.

Today, there is only one house on the river between Fort Chipewyan and Fort Fitzgerald (Roderick Fraser Interview 1978).

In the mid-1940's, people began moving into Fort Chipewyan from the bush settlements. Interviewees suggested that the provision of family allowances on a monthly basis was the main factor for the people to live in town. The second reason was the introduction of Wood Buffalo Park area regulations, which banned any trading stores inside the park. A third reason, according to evidence given by a trader, was the decline in the fur market in the late 1940's. Times were very difficult and the logical choice was to move into Fort Chipewyan where some social assistance would be available.

At the trapping community of Fort MacKay a similar situation existed. Trapping areas were centered around bush settlements which were situated at Old Fort, Moose Lake, Namur Lake and Chipewyan Lakes. Although trading posts had existed around the mouth of the MacKay River for some time they were apparently seasonal in nature. The first permanent post was established for the Hudson's Bay Company by Mr. James Faichney in 1949. From that time on, more and more people began to move into the area surrounding the Hudson's Bay Company Post and the Roman Catholic Church, which had been established in the early 1900's. The population of Fort MacKay in 1949 was approximately 200 people. At that time it was an isolated post with access to Fort McMurray via the river during the summer and a pack trail during the winter. However, during the 1950's increasing activity on oil sands leases, exposed Fort MacKay residents to the town life of Fort McMurray and the white culture (James Faichney Interview 1978).

The community of Fort Chipewyan was composed of Métis people. A few white people were associated with the work of the fur trade, the churches, or the police. The Métis people occupied the village area of Fort Chipewyan. The Chipewyans and the Crees, in the early days, had traditional camping places: the Chipewyans camped near the Hudson's Bay Company Fort while the Crees camped near the

Roman Catholic Mission. This division pointed out the differences existing among the three groups in Fort Chipewyan. The situation at Fort MacKay was similar although there were fewer Métis in the settlement. The different social classes were essentially Chipewyan, Cree, and village Métis. The Métis worked for the trading posts and generally were service-oriented people. They did not mix with the Chipewyan and the Cree people, nor did the Chipewyans and Crees get along; in fact the relations between them have been described as hostile. For example, intermarriage between Cree and Chipewyan families was practically unknown because it was forbidden by custom. However, the Métis would from time to time intermarry with the Cree or Chipewyan. The Cree and Chipewyan would tend to look down upon the Métis and called them half-breeds because they were not considered pure blooded. As a result of these socio-economic differences, a considerable amount of rivalry existed among the treaty and non-treaty natives (Roy Schlader Interview 1978).

Following the First World War, fur prices were very high and there was an influx of Métis from Lac La Biche. These people were received favourably in Fort Chipewyan because Lac La Biche had always been a source of supplies and a connection with Edmonton. The Métis who migrated brought with them a different language dialect based upon prairie Cree. They held a positive attitude to schooling because their parents and grandparents had been exposed to the white man's method of education; and they were also more familiar with agricultural techniques in farming and gardening (Patrick Mercredi Interview 1979).

Early residents of Fort McMurray stated that Fort MacKay was larger than Fort McMurray in 1907. At that time the Roman Catholic Church was established in Fort MacKay but it was not until 1914 that churches were established at Fort McMurray (William Bird Interview 1978). Although oral history interviews have not revealed the events which occurred in the Fort McMurray area between 1905 and 1918, some of the documented sources such as the Edmonton newspapers indicated that there was an extensive land boom in the Fort McMurray

district about 1912. In fact, the first settlement survey of Fort McMurray was conducted in 1913. The boom at Fort McMurray was apparently rooted in the belief that oil was going to be extracted from the oil sands. At that time, geologists believed that large pools of oil lay trapped beneath the oil sands and all that was required was to drill for the oil. Fort McMurray had a population of five or six families in 1907; that number had more than doubled in 1914.

When the railroad was completed to the Clearwater River in 1921, white and Métis people began to move into the AOSERP study area. The Métis people were no longer required to work on the scows along the Athabasca River and some of these families relocated from Lac La Biche and/or Athabasca Landing to Fort McMurray. One informant stated that her father decided to move down north simply because there was a more open, freer lifestyle, a lifestyle which was threatened by the increased agricultural settlement around Lac La Biche (Alvena Strassbourg Interview 1978). Some white people decided to establish businesses and services in Fort McMurray and Waterways. The Ryan brothers, Pat and Mickey, began freighting and mail services from McMurray down north to Fort Smith. Other white people, such as Angus Sutherland and Walter Hill came in to establish local businesses.

The 1920's were marked by a number of "kitchen sink inventors" endeavouring to extract oil from the oil sands. Some of them, the Drapers for instance, were shipping oil sands outside as paving material. In addition to the Hudson's Bay Company, other trading companies began operations in the region. The Northern Trading Company, Colin Fraser, Lamson and Hubbard, were among those companies which began operations in the region. Employment was available for manual and skilled labour on the boats. The economy around Fort McMurray at this time may therefore be described as a seasonal one based upon transportation during the summer months and trapping during the winter months. With the onset of the Depression in 1930, however, oil sands developments came to a standstill. Only

in the late 1930's did new employment possibilities appear in Fort McMurray and Waterways.

The population of Fort McMurray, which was about 200 people in the early 1920's, grew to about 300 to 400 people. by the late 1930's. According to Mr. Walter Hill, a census taken in 1942 revealed that between Anzac and Lake Athabasca there were 1041 residents. Most of the increase in the late 1930's can be attributed to the establishment of a salt plant at Waterways. Constructed by Industrial Minerals Limited in 1937, it carried on operations until 1951 when it was relocated to Unity, Saskatchewan. Operation of the salt plant incurred high transportation costs because coal for the operation had to be shipped in and, of course, the salt shipped out to its market. Mr. Lawrence Tolin stated that when he arrived in Waterways in 1939, 18 houses were under construction and there was employment for 55 men at the plant. years of operation, the salt plant supplied the main economic reason for Waterways. All other sources of employment were seasonal. According to Mr. Tolin, McInnes Fish Company provided seasonal work in their lumber, fishing, and shipyard operations, employing about 12 to 15 local people (Lawrence Tolin Interview 1978).

At the salt plant, the men earned about \$3.00 an hour and the 10 women who worked in packaging and pressing block salt were employed at a rate of \$.85 to \$1.35 an hour (Ethel Bird Interview 1978).

Fort McMurray's other industries in the late 1930's included a sawmill operated by Hugh Stroud on Franklin Avenue and the Abasand Oils Limited plant which was situated on the Horse River. Most of the skilled help was imported from the outside for the Abasand plant which employed about 12 to 20 people until fire destroyed it in 1945. Abasand Oils Limited established a townsite for its workers on the Horse River, the first company town in the Athabasca Oil Sands region.

3.3.1 The Canol Project

Following the Japanese attack on Pearl Harbor in December, 1941, the United States and Canada decided that, in order to defend Alaska and maintain it as a strategic area in Pacific operations of the World War, it would be necessary to build a road to Alaska and provide a source of fuel independent of sea lanes. The Canol Project was conceived as a military operation under the direction of the U.S. Army. The plan was to build a pipeline from Norman Wells on the Mackenzie River to Whitehorse in the Yukon, where a refinery was to be established.

Work was begun by the U.S. Army engineers, private contractors, and Imperial Oil Limited. By June, 1942, a military camp and dock facilities had been constructed at Waterways. The impact on the region was sudden and unprecedented in developments in the Canadian north (Barry 1976). Julian Mills recalled the event:

Shortly after the war started, oil and gasoline being in short supply, it was decided by the War Measures [Board] to get oil from the wells at Fort Norman. That meant that the river would be the only way freight could get there. Shortly after that, men, boats, lumber, machinery, supplies of all kinds started to come in. Accommodation in the way of camps were set up, in fact all the Prairie was covered with buildings of all sorts: warehouse, shipyards, oil tanks. Trains coming into Waterways were coming at the rate of about 10 or 12 a day.

They started to build [boats] right away and as soon as they were launched they were loaded. There was all kinds of boats came in, little ones that had been running on the Mississippi and Missouri rivers. There was also larger ones sent in on flat cars in sections that were welded together. The smaller ones were about 75 feet long with 28 foot beam. They were two-screw, with two V.8 Cat engines and had accommodation for 12 men. The larger ones were about 100 or 120 feet long with 30 foot beam. They had two Vivian engines in them. They also had room for 12.

With all the boats running, as well as all the companies hauling freight a lot was hauled in a short space of time. Steel barges were also constructed, they were 120 feet long with 28 or 30 foot beam, I don't know how many of them were built ...

I forgot to mention the way the pipe was sent down the river from Waterways. They had small barges that came in with the army. They were aluminum, about 30 feet long and eight feet wide. They were hooked together four-wide with timbers between and the same at the back, and the pipe loaded crossways: they carried quite a load, they had 36 horse powered Johnson engines on them.

When that was all over and they started to move out again a lot of the stuff was sold. The N.T.C.L. bought the small boats (the small steel ones). The steel barges were sold as well. Buildings were sold as well. My house at the Prairie was at one time a warehouse, cut into four pieces and sold to different people. Some cats and cranes were also sold, others were shipped out, but a lot of the small stuff was put in a hole and buried.

Now looking at the Prairie one would never know that things like that had ever gone on (Julian Mills Interview 1978).

People, interviewed about the Canol Project, said that the communities of Fort McMurray and Waterways were overwhelmed by the presence of over three thousand black and white soldiers camped on the Prairie between the two settlements. Men were hired as pilots and deckhands while the women made as much as \$25.00 a week laundering clothes and linen. According to Mr. Noel MacKay:

You know what happened? They raised the wages. The old wages ... was only \$45.00 a month. They never went any higher than that. The army came in and doubled it. They wanted help to get these pipes through. Didn't matter who it was, you wanted to work, you got work ... all you wanted to eat, right there on the boats. That was a

good big thing. Since then the wages have stayed up on boats (Noel MacKay Interview 1978).

Mrs. Ethel Bird recalled the arrival of the troops in 1942 and some of the activities in the community:

We were there when overnight we had about 900 white men coming in and the next night 900 "darks" and they had to separate them. They wouldn't put them together because they used to fight. It was unbelievable. Everything started going. That's when they got the airport. They're the ones that built it.

They had camps on the Prairie here and they're the ones that pushed the railroad here. Prefabricated buildings and tents were used. An advance group came in to plan the camp. There were over 2000 here ... and work for everybody ... built barges all winter ...

They had to separate the darks and whites—one week they had to stay in Waterways and the next in McMurray—they made sure the negroes were in McMurray and the whites were in Waterways.

They had a "colored" band and, oh, they could play ... we used to have a dance every Thursday. There wasn't much drinking then because there wasn't no liquor stores, just the tavern and that was only open for an hour a day and they had sold their quota (Ethel Bird Interview 1978).

Mrs. A. Strassbourg stated that a change in lifestyle began to occur in Fort McMurray and Waterways during the Second World War. "It was like a boom and it seemed like the way of life changed from that time on. A lot of people turned to drinking ..." People became more accustomed to a cash economy and employment within the community. Men could leave their trap-lines and find jobs in town working on the boats and barges, freighting, and serving beer in the hotels.

Life in Fort McMurray after the army had left is best described by Mrs. Strassbourg:

And then, when they moved out of here it was just like a ghost town. Everything just died; they just moved out overnight ... It seemed to me like you could hear a pin drop when they moved out (Alvena Strassbourg Interview 1978).

It is not surprising that the people experienced a slump in the economy after the departure of the U.S. troops. Fort McMurray and Waterways reverted to the old seasonal economy of transportation and trapping, with no other industries except the salt plant which continued to operate until 1951.

Interviews collected to December, 1978, do not provide much information about Fort McMurray and Waterways after the early 1950's. However, some description of the people and their environment to that date had been made available in the interviews.

3.4 PEOPLE AND THEIR ENVIRONMENT

3.4.1 Land and Housing

During the 1920 to 1950 period, the native Métis were not very concerned about land ownership. Open land was available and no one really foresaw the need to acquire property. A two-storey house could be rented for \$4.00 a month in the 1920's. Lots in Fort McMurray were priced at \$100.00 in the early 1930's. In Waterways, land was available only on a lease basis because Huggard Real Estate owned all of the property in the Waterways area. The Tolin family leased a lot for \$15.00 a year plus taxes. Finally, a number of the white residents of Waterways met together and decided to take steps to acquire property. Mr. Huggard, then of Winnipeg, came in to resolve the matter and some lots were sold to individuals. Mr. Lawrence Tolin purchased a lot for \$75.00 in 1942. Mr. and Mrs. William Bird, with \$100.00 as a downpayment, purchased a home and lot for \$1,000.00 in 1943. The interviewees stated that throughout this period there was a casual attitude toward land because of its 🚿 availability. Many native people simply took up residence along the river and at the edge of town with no thought for ownership of land.

A similar attitude toward land prevailed at Fort Chipewyan until the late 1950's. Mr. Noel MacKay stated that when he married in 1927 he could rent a log cabin for \$10.00 a month. In his words, "People didn't care too much for land at that time" (Noel Mackay Interview 1978). Taxes for a lot in Fort Chipewyan in the late 1920's were about \$14.00 a year. In 1959 Mr. MacKay sold one acre of land to Alberta Power for \$1,500 and bought three acres for \$1,200.

An average native home during the first 30 years of the century has been described as being about 16 feet by 20 feet, heated sometimes by a stone fireplace although heaters and stoves were becoming more common. Inside the home there would be perhaps two rooms. One was the kitchen and living area, furnished with a table and benches. The other room was the bedroom, which the parents and children shared. Parents would have a bed while the children would sleep on furs spread over the floor. Some of the families who worked for the Hudson's Bay Company and other traders were able to afford homes built from scow lumber. When scows arrived at Fort Chipewyan they were dismantled and the lumber was used for building materials. Many of the older homes in Fort Chipewyan are built from scow lumber, for example, the houses of Mr. Roderick Fraser and Mr. James Fraser. These scow lumber homes were often of two stories, to accommodate large families (Patrick Mercredi Interview 1979).

Homes constructed by white people in Fort McMurray were on the average 20 feet by 24 feet in size, and made of logs and lumber. During the 1930's, Hayward Lumber and McInnes supplied building materials to the residents. Shingles were shipped in but rubberoid was more commonly used for roofing. There would be four or five rooms in the average home: a kitchen, a livingroom and one or two bedrooms. Heating was by wood but coal was used after the salt plant was established in 1938 (Lawrence Tolin Interview 1978).

Wood was required as fuel for the homes in all of the communities, and wood-cutting and wood-hauling preoccupied many people. Mr. Noel MacKay cut wood not only for his own family but

also sold wood to residents in Fort Chipewyan. Mr. Lawrence Tolin sold wood at \$2.00 a rick to his customers in Waterways. Most of the male informants said that when they left school one of their first duties was to cut and haul wood for their homes.

3.4.2 Education

The first schools in the region were established in 1874 by the Roman Catholic Sisters of Charity (Grey Nuns). Shortly after, the Church of England also set up a school in Fort Chipewyan. Informants have indicated that with few exceptions, they attained perhaps three years of schooling. Mr. Noel MacKay described a day in the life of the mission school at Fort Chipewyan:

The water we used for washing our faces had to be carried up there by pails by the boys. And it was used that day for cleaning up and washing up, and then comb your hair and go to church. There was a chapel in there, seven o'clock in the morning, that was when you're ready to go after you were called to get up and ... go to service in the chapel-right there--all children--before breakfast.

And then when we got through the chapel prayers and taking communion, we took our Sunday clothes off and left them in our bedroom; and used other clothes to go downstairs, what you wear everyday. Then you were called to breakfast. Girls and boys, girls on their side and boys on their side. You get up and walk around with your tray and you pick up what is given to you to eat. The Sisters were dishing it out to you; most of the time it's fish and one slice of bread, not even butter on it. We drank mostly water; once in a while we were lucky to get a glass of milk, but not often.

The next move was to go to the boys' room and that's where your winter jacket's hanging with a number on it-mine was number eight--l still remember. Put on that jacket and heavier socks and shoes ... and you were driven to open the door and go saw some wood with a crosscut saw. The Sisters gave you on a piece of paper--you

and your partner--are 14 piles of wood you got to cut today. There's seven sticks in one, two, three--fourteen high! You got to live on [cut] that that day. You start working to beat hell! The logs ... been hauled there already with two oxen. That's what the hired men done for the kids, hauled their wood in so they can cut it. Sometimes it takes quite a while because the saws are not even sharp. Sometimes I figure we're just wore out that billet. It's a heartbreak ... You report to the Sister your saw is dull. "Oh, Brother's coming after dinner." Yes, might come next after dinner and by that time you're working with a piece of metal just trying to wear out the wood.

Then we were called back at 9:30 for school and each of us went to the schoolroom, there was only two classrooms, one for the higher like say, grade seven, and one for grade one, two, three. What we were using at that time we called it slates—no paper—and you done your writing—whatever Sister told us. There was no outside teachers from the government ... You went to the board ... and it was hard sometimes ... If you didn't do your work right, you didn't go to dinner, you stood right there ... You don't have no dinner because you've been a stubborn student ... You do the work until it's finished ...

And, you must not talk when you eat around the table unless you get permission. If she said, "silent," you got to keep that mouth shut or you'll stand right in the middle of the floor with no dinner.

Most of the time dinner was roasted fish, but in half ... and on the way, you picked up two potatoes and a piece of bread.

After dinner you cut wood ... at 1:00 you hear the clap from the Sister, go on the run to school ... 3:30 or 4:00 ... we got to finish our wood. Then we can go play—we had a sliding place there—on sleighs the Brothers made for us ... never get out of the yard—make seven feet high—a fence all around us ...

I didn't live with it very long ... l left school in grade three ... I wanted to go in the bush with my father (Noel MacKay Interview 1978).

Throughout the study period the Roman Catholic Church and the Anglican Church operated schools in Fort McMurray until the late 1930's when local school districts were formed. The first school at Fort MacKay was established, on a voluntary basis in 1949, by Mrs. Faichney. It was later followed by government sponsored schooling.

Differences in attitudes toward education existed between the Métis people of Fort McMurray and those of Fort Chipewyan. The attitude of parents at Fort McMurray was that schooling was necessary and the children should attend school in order to get an education and "better themselves." This attitude, which may be interpreted as being one of the white culture, was not to be found in Fort Chipewyan until after the arrival of the Lac La Biche people in the 1920's. People in Fort Chipewyan preferred the lifestyle of the trap-line economy (Patrick Mercredi Interview 1978).

3.4.3 Food and Clothing

Mrs. Alvena Strassbourg said that the food in the home consisted of moose meat, rabbits, bacon, macaroni, beans, pies, cake, jello, and cream. Meat and fish were often canned and dried meat was used as a snack. Mrs. Strassbourg's grandmother, however, followed an older practice of drying foods rather than canning them, for example, carrots, corn, and peas were hung in flour bags and dried. Meat was put in a container in the well, which acted as a cooler. Only staple foods such as flour, sugar, tea, lard, and oatmeal were purchased at the stores. Treats might consist of a bag of candies for the children, and oranges and apples were bought at Christmas time. The Métis people were meat and fish eaters. Breakfast, dinner, and supper would consist essentially of meat or fish with potatoes; and the quantities consumed did not differ between the breakfast and evening meals. Moose nose, and beaver and muskrat tails were considered delicacies (Alvena Strassbourg Interview 1978).

For clothing, the native people were accustomed to the white man's styles. Clothes were made and remade in the home and for the men blue denim overalls, mocassins and rubbers, shirts, fedorah and ten gallon hats were commonly worn. The women preferred to buy cloth to make their own dresses, and prints in silks and rayons were preferred. On feast days and holidays blue serge pants or suits with white shirts were worn by the men. Tweed caps began to be very popular. The Crees would wear silk handkerchiefs around their necks while the Chipewyans wore them around the shoulder (James Faichney Interview 1978).

3.4.4 <u>Leisure and Recreation</u>

Leisure and recreation had two patterns, the first of which could be found in the trapping communities while the second was centered in the transportation community of Fort McMurray and Waterways. At Fort Chipewyan, leisure times and recreation times occurred when trappers entered the community to trade their furs, that is, at Christmas, Easter, Treaty time, and in the early fall. The Indians held tea dances during which there could be an exchange of gifts, and the Métis had fiddle dances. These fiddle dances were usually held in someone's home and consisted of the Red River Jig, Duck Dance, Reel of Eight, Breakdown, Drops of Brandy. A New Year's celebration meant that the people would put out their best food and visit one another until dark. These visits would be followed by a big fiddle dance, where the fellows might amuse themselves with the firing of rifles and the occasional shooting at stovepipes. At Treaty time drum dances would be held by the Crees, but the festivities would be especially marked by different forms of gambling. Hand games were played by the Chipewyan people and poker was another very popular form of gambling (Noel MacKay Interview 1978).

Mrs. Strassbourg said that the Tolin brothers introduced western style music to the people in Waterways and Fort McMurray in the late 1930's, and after this time, regular dances were held at the dance hall.

July 1st proved to be a big day for celebration in Fort McMurray and Fort Chipewyan. The day was marked with the usual sports events and foot races. The communities of Waterways and Fort McMurray had organized sports in ball and hockey and the rivalry between the two communities was sometimes very fierce. One striking feature of the recreational activities was that the native people preferred games which had a challenge in them, whether it be gambling, foot races, or dog races.

At Fort Chipewyan the Crees, the Chipewyans, and the Métis did not often mix during certain festivities, such as tea dances and fiddle dances. On the other hand, the social structure at Fort McMurray was such that the whites and the Métis people tended to mix during a number of leisure and recreational activities.

3.4.5 Health and Medical Care

Once again, the role of church missions in providing certain basic services in the communities becomes obvious in the interview data. At Fort Chipewyan the Roman Catholic Mission provided a nurse and a pharmacy for the people. In addition, several of the Indian Affairs agents were medical doctors who provided medical care to anyone needing it. At Fort McMurray the Roman Catholic Church established a hospital in 1937. Prior to this time Sutherland and Hill Drugs provided basic medical needs to the residents. Medical services to the outlying Treaty people were provided at Treaty time.

The native people were especially afflicted with influenza and tuberculosis. Equally dangerous were chickenpox and measles to which the native people had little immunity.

None of the elders interviewed to date was born in a hospital in the region. Most of them were delivered by midwives who played a very important role in health care. Both Treaty people and Métis people had midwives in their settlements.

3.4.6 Communications and Roads

When Treaty No. 8 was signed at Fort Chipewyan in 1899, the native people asked that a railroad be constructed to their community. Since that time the introduction of communications and road transport have tended to follow economic developments. The Ryan brothers introduced a regular communications and freight system into the north in the 1920's based at Fort McMurray. Their operation provided regular mail service to communities in the Athabasca Oil Sands region. Before the Ryan brothers arrived mail was routed through Athabasca Landing and downriver by dog team to Fort McMurray and Fort Chipewyan. The Ryan brothers introduced a motorized vehicle on the rails north of Lac La Biche as far as Waterways; horses then carried the mail to Fort Chipewyan and Fitzgerald (Julian Mills Interview 1978).

A major improvement in communications by mail occurred with the introduction of planes into the region. Airmail service was introduced in 1929. Since that time airplanes have become a common sight in the Athabasca Oil Sands region. Unfortunately, no person identified with early bush flying in the region has been interviewed; in fact, it was not possible to identify and locate individuals with this type of experience.

Communications were also established by radio which was introduced to the region in the late 1920's. Interviews have not yet identified the exact date of arrival of the Royal Canadian Signal Corps along the northern communication route, but it was thought to have occurred in the 1930's (Julian Mills Interview 1978).

3.5 GOVERNMENT

Organized government structures and services have only been introduced into the region on a massive scale since the development of the large oil sands operations. When the Athabasca District was formed in 1883 as part of the Northwest Territories, it was unorganized, untaxed, and lacked elected representation. Therefore, leadership in terms of government came from the churches, the

Hudson's Bay Company, and agencies of federal government such as the Mounted Police and Indian Affairs. Interviewees have stated that any decision-making in the community was centered on the trapping economy. There would be a meeting of trappers to decide upon their trapping areas which in the early days were not zoned or registered. Interview data indicate that individuals such as Colin Fraser, Fred Fraser, and John James Loutit played an important role in local leadership. This style of local government continued until after the Second World War when a community association was formed in Fort Chipewyan. The purpose of the association, however, was to try to get the residents together in leisure and recreational activities such as dances and bingos. The proceeds of these events went to the community association and enabled it to continue its existence. Only with the introduction of community development services by the provincial government did Fort Chipewyan begin to consider organizing a local government. It should also be mentioned that Indian Affairs Agents, especially Mr. Jack Stewart, were influential in Fort Chipewyan (Isabel MacKay Interview 1978).

In Fort McMurray, a Board of Trade was organized by the white businessmen shortly after World War I and often expressed its concerns for improvements in the community. Mr. Lawrence Tolin stated that when he arrived in Waterways in the late 1930's there was no government and any community decisions were initiated by businessmen such as Mr. Jack Fairburn. Mr. Tolin recalled only two issues which brought residents together in a town hall type of meeting. One of these was the problem of land ownership and the second was a forest fire which threatened the existence of the community in the 1950's. Local government became formally organized in Fort McMurray and Waterways when they amalgamated as a village in 1947 (Lawrence Tolin Interview 1978).

According to Lawrence Tolin, government offices were located in Fort McMurray rather than Waterways. In 1939 there were the Royal Canadian Mounted Police (RCMP), a forestry officer, the Signals Corps, and the post office. Of these government

services, the RCMP probably played the most important role in the communities. In 1896 the North-West Mounted Police had a post at Fort Chipewyan and in 1913 a post was established at Fort McMurray. In addition to their usual roles as policemen, RCMP officers often served as welfare agents and magistrates. The local Justices of the Peace were established in Fort Chipewyan and Fort McMurray sometime after World War I. During the same decade, the federal government established a forestry office in Fort McMurray, as a part of fire control measures. After 1930, this role was assumed by the provincial government.

Interviewees have not been able to give definite dates on the establishment of game officers although more than one informant stated that government officials very often turned a "blind eye" to illegal game hunting.

4. ASSESSMENT

The oral history project was designed to acquire historical information not available from any other sources in the region. A standardized list of sample interviewees was compiled in the hopes that local interviewers would be able to acquire a substantial number of interviews. For reasons listed above in the introduction to this report, an aggregate collection of interviews did not materialize. Instead, strategic sampling was employed, that is, the project co-ordinator initiated contacts with potential informants, a situation which resulted in a "snowball" effect where one informant often identified several more knowledgeable informants. These individuals supplied recollections which form the basis of the above report.

The results have been positive because, not only has factual information been placed in a historical context, the interviews provide a multiple number of viewpoints which may be utilized in the formation of a regional historical perspective. Interview evidence often furnishes a clue to the actual social behavior and the social expectations of the time because there is an interpretation of experiences from interviewees cognizant of their lifestyles and expectations. The historical information conveys insight and understanding as to how and what people thought about the past, and it may serve as a basis for inference about the meaning of events.

Some of the interview evidence indicated a reflective attitude toward general values which were believed true of the past and yet which tended to conflict with the more precise record of daily routine. For example, education was generally held to be of value and yet daily life 50 years ago seemed to decry the need for formal education. In terms of economic well-being, stages of improvement were readily recalled while, on the other hand, "hard times" were ones in which "everybody got by".

At its best, oral history is only one form of evidence. In order for it to be useful, it should be tested against other forms of evidence found in written records. It is difficult to

transpose individual interviews into historical generalities.

Trappers with long working experiences have given their lives to a seasonal lifestyle and they have done so because they were prepared to accept its conditions. These conditions need to be examined within a wider context. Therefore, the oral history data should be used to complement the data being uncovered in documented sources. The synthesis of oral and documentary historical information should provide a fuller appreciation of the historical evolution of the Athabasca Oil Sands region.

5. REFERENCES CITED

- Barry, P.S. 1976. The prolific pipeline: getting Canol underway. Dalhousie Review. 56(2):252-267.
- Comfort, D.J. 1974. Ribbons of water and steamboats north.
 D.J. Comfort, McMurray. 313 pp.
- Comfort, D.J. 1975. Pass the McMurray salt please. D.J. Comfort, McMurray. 34 pp.
- Dawson, C.A., ed. 1947. The new northwest. University of Toronto Press, Toronto. 341 pp.
- Ells, S.C. 1962. Recollections of the development of the Athabasca Oil Sands. Department of Mines and Technical Surveys Information Circular 139. Ottawa. 88 pp.
- Ironside, R.G., V.B. Proudfoot, E.N. Shannon, and C.J. Tracie. 1974. Frontier settlement. University of Alberta, Edmonton. 283 pp.
- Macoun, J. 1877. Geological and topographical notes on the lower Peace and Athabasca rivers. Geological Survey of Canada. Report of Progress for 1875-1876. Ottawa. 5(1):87-95.
- MacGregor, J.G. 1952. The land of Twelve Foot Davis (A history of the Peace River country). Applied Art Products Ltd., Edmonton. 395 pp.
- MacGregor, J.G. 1974. Paddle wheels to bucket wheels on the Athabasca. McClelland and Stewart Limited, Toronto. 190 pp.
- Mair, C., and R. Macfarlane. 1908. Through the Mackenzie Basin.
 William Briggs, Toronto. 494 pp.
- Moberly, H.J. 1929. When fur was king. J.M. Dent & Sons Limited, London. 237 pp.
- Oppen, W.A. 1972. Fort Chipewyan. Department of History, University of Alberta. 24 pp.
- Parker, J.M. 1967. The fur trade of Fort Chipewyan on Lake
 Athabasca, 1778-1835. M.A. Thesis. University of Alberta.
 214 pp.
- Parker, J.M. 1979. Athabasca oil sands historical research project.
 Vol. 1: designed. Prep. for the Alberta Oil Sands
 Environmental Research Program. AOSERP Project HE 2.4.
 75 pp.

- Rourke, L. n.d. [1928] The land of the frozen tide. Hutchinson & Co. (Publishers) Ltd., London. 352 pp.
- Tyrrell, J.W. 1908. Across the sub-arctic of Canada. William Briggs, Toronto. 280 pp.
- Woywitka, A.B. 1972. Strike at Waterways. Alberta Historical Review. 20(4):1-5.
- Wuetherick, R.G. 1972. A history of Fort Chipewyan and the Peace Athabasca delta region. Departments of the Environment of Canada, Alberta, and Saskatchewan. 1973 Supporting Studies: Peace Athabasca delta project, Technical appendices, Vol. 3. 178 pp.
- Zaslow, M. 1971. The opening of the Canadian north, 1870-1914.

 McClelland and Stewart, Toronto. 339 pp.

6. APPENDICES

6.1 INTERVIEWERS

Mrs. D. Comfort, Fort McMurray

Ms. M. Stone, Fort McMurray

Mrs. T. Boucher, Fort MacKay

Mr. W. Powder, Anzac

Mr. R. Woodward, Anzac

Ms. T. Marten, Fort Chipewyan

Ms. A. Marten, Fort Chipewyan

6.2 PROCEDURE MANUAL

Advisory Committee

Role: - When necessary, to advise on specific problems which may arise in the project.

- To facilitate.
- Informal structure, chaired by the project co-ordinator.
- Meets at request of project co-ordinator (project co-ordinator may consult with individual members).

Membership: - R. Jamieson

A. Strassbourg

B. Kasinska-Banas

J. Parker

Administration

The Boreal Institute for Northern Studies, The University of Alberta, holds ultimate responsibility for administration of the oral history project. The contract is between this agency and the Alberta Oil Sands Environmental Research Program (AOSERP). Disbursements and payment of expenses incurred in the project are the prerogative of the Boreal Institute.

Project Co-ordinator

- Mr. J. Parker, project co-ordinator is assigned:
- 1. Primary authority to plan and conduct the project.
- 2. To recruit and select qualified interviewers.
- 3. To liaise with interviewers.
- 4. To supervise interviewers so that acceptable historical standards are maintained.
- 5. To select, in consultation with the advisory committee and the interviewers, interviewees for the project.
- 6. To analyze tape interviews.
- 7. To submit invoices to the Boreal Institute on behalf of the interviewers who shall be reimbursed directly by the Boreal Institute.
- 8. Any other professional duties which may be deemed necessary to successfully complete the project.

6.2.1 Goals and Guidelines

6.2.1.1 <u>Description of oral history</u>. Oral history seeks to record on tape the ideas, experiences, and impressions of persons who might not otherwise leave any written record. Oral history utilizes and adds to existing information; it is not a substitute for more traditional techniques of research. Therefore, the oral history program must be directed at collecting historical information which will add to our knowledge of the communities in the oil sands region.

The procedure is an interview in which one person asks another person to remember people, places, ways of living, ways of making a living.

Oral history fills in the gaps in our written historical knowledge. An interview does not capture everything that someone knows - it captures part of a person's life experience. Oral history is a method of discovering what someone remembers about the past.

6.2.1.2 <u>Limitations of oral history</u>. No matter how many questions one may have; no matter how articulate the questions are, the interviewee will only answer what he wants to. He may not be willing to provide any more information. A person cannot be "pumped" for more information than he wants to provide an interviewer.

Secondly, the interviewee may make mistakes and errors. There is little that can be done unless the interviewee is shown that the interviewer knows some facts.

Careful thinking and planning is necessary to win the respect and co-operation of the interviewee.

6.2.2 Principles of Oral History Research

- 6.2.2.1 Problems of the interview. Complex interaction.
- 6.2.2.2 Skills required. Ability to do research.
 - To plan an interview so that it will achieve the best results.
 - To establish rapport with the interviewee.
 - To ask appropriate questions.
 - To be flexible in the interview.
 - To be aware of the rights of the interviewee.
- 6.2.2.3 Rights of the interviewee.
- Must protect the rights and interests of the interviewee.
- Restrictions must be guaranteed.
- Make certain that the interviewee understands the purpose of the interview, what use the information will serve, where the tapes will

be kept "outside" and that he/she will receive a copy of the tape.

- 6.2.2.4 <u>Co-operative effort</u>. Encourage the interviewee to take part in planning the interview. Listen to his/her ideas about <u>what</u> they can tell you.
- 6.2.2.5 <u>Historical accuracy</u>. Remember that the interviewee may not have all his facts and dates correct, but do not try to correct him. Guide him by careful questioning to tell of people and events he obviously knows and understands. The aim of the interview is not to discover facts, but to uncover the ideas, attitudes, feelings and responses of the interviewee to the subject areas.

6.2.3 The Interviewer

The interviewer needs to have certain qualities:

- 1. A sensitivity to people.
- 2. Open-mindedness.
- 3. Curiosity about the interviewee and his/her role in shaping the history of the community.
- 4. Must be flexible enough to pick up clues from the interviewee's comments and reactions.
- 5. An ability to understand the interviewee's point of view although you may not agree.
- 6. An ability to remember and recall information. Remembering what has been said by an interviewee increases rapport. A good memory also helps in organizing the interview as it develops.
- 7. An ability to organize the interview and guide it to a "successful conclusion".
- 8. An ability to sit quietly and listen.

9. An ability to adjust when the interviewee brings up a good new topic or when a <u>bad</u> new topic appears. Firm gentle guidance is often required.

6.2.4 Interviewer's Role

No interviewer can ever be fully prepared for any interview because each is unique. A good interviewer, however, develops a sense for the right question. He/she also realizes when he/she is ready to conduct an interview. An interviewer should always lead from strength, that is, understand your questions and know your interviewee. Be familiar with essential facts that will keep your interviewees honest and that will engage their respect.

Preparation:

- 1. Know your equipment.
- 2. Background research.
 - a) Histories.
 - b) Pre-thinking.
- 3. Know your interviewee.
 - a) Attitudes.
 - b) Beliefs.
 - c) Age, sex, education.
 - d) Health problems.
 - e) Occupations, career. Fishing methods, trapping methods.

Pre-interview:

Get acquainted visit without equipment. Tell potential interviewee that you want to "talk about" his/her experiences. Advise and show the interviewee what the general topics are. Discuss these in general terms. This is the time when you enlist the co-operation of the interviewee in planning the tape recorded interview. This is time to stress that the tape should be satisfactory to both persons. The interviewee is a human being,

not just a source of history. The interviewee should not be asked for more information than he/she can give. Remember the interviewee may tire easily. Don't wear out his/her energies.

Emphasize the value of the oral history tape for future generations in the community.

6.2.5 <u>Techniques for Interviewing</u>

Background Preparation:

- 1. Reading basic sources.
 - a) The Land of Peter Pond
 - b) On the Edge of the Shield
 - c) From Paddle Wheels to Bucket Wheels
 - d) Ribbons of Water and Steamboats North
- 2. Plan interview times and review list of interviewees.
- Become familiar with background of each interviewee.
 Discover and be aware of what his/her biases and prejudices are.
- 4. Make one or two pre-interview appointments with people you know are easy interviews. Do not tackle a tough one first.

Who is the interviewee?

What did he/she do?

What are his/her biases? Prejudices?

How did he/she make out in life? e.g., health, work, family.

Find out who the interviewee knew.

Find out where the interviewee lived.

Find out what the interviewee knows about the subjects outlined in the Guidelines.

6.2.6 Who Should Be Interviewed?

There is no need, nor is it practical to interview the entire population of indigenous people in each community.

Therefore, criteria has been established:

Elders: A resident of fifty (50) or more years in the oil sands region.

Indigenous: A resident of twenty (20) or more years in the oil sands region.

Interpretation:

- Elders and Indigenous persons may be found in native (status and non-status) culture, and white culture.
- 2. Priority will be given to interviews with Elders.
- Interviews with Indigenous persons shall supplement interviews with Elders.

Selection of Interviewees:

- Ultimate responsibility for the selected list of interviewees rests with the project leader, Mr. Robbie Jamieson, Director, Boreal Institute for Northern Studies.
- Immediate responsibility for initiating and compiling the selection of the interviewees rests with the co-ordinator, Mr. Jim Parker, University of Alberta Archivist.
- 3. The co-ordinator shall make the selection in consultation with the interviewers, Mrs. Alvena Strassbourg, Mr. Robert (Bob) Duncan, and any other individuals and organizations within the oil sands region.
- 4. The co-ordinator shall be responsible for ensuring that a representative selection is made from native and white cultures. The representative selection will strive to include a cross-section of persons from different communities and occupations.

6.2.6.1 Criteria for a successful interview.

- Both the interviewer and interviewee fully understand the historical importance of what they are doing.
 They are re-creating history. They "click" and they "rap". They understand one another.
- 2. There is a sympathetic recollection of earlier times.

- 3. There is a reflection upon these earlier times.

 Remember that the interviewee is looking backward and he/she may offer some of his/her philosophy on "what went wrong" or "what went right". Encourage this attitude.
- 4. The most useful information is often in a dialogue that a question stimulates rather than in the immediate answer.
- 5. Voluntary co-operation of interviewee and the preparation and tact of the interviewer are basic ingredients of a good interview.
- 6.2.6.2 <u>Selection criteria</u>. Although there may be a large number of potential interviewees, the immediate task is to identify the Elders most likely to provide the most and the best information about each of the subjects of study. There will be some overlapping and duplication, but the resulting list of names should be manageable. Priorities will have to be established, but they should be flexible and serve as guidelines for interviewer planning. The priorities will assist in evaluating the progress of the project and in the assignment of resources.

6.2.6.3 Potential problems and possible solutions.

- 1. Chance.
 - a) Health.
- 2. Change of residence.
- 3. Postponement, not available.
- 4. Refusal to be interviewed.

Schedules must be flexible. Do not book too many ahead. If it is possible, contact alternate interviewees when an appointment is cancelled. New names can be added to the list; other names may have to be dropped or set aside. Final results should not be expected to coincide with the initial plan. Undoubtedly, the plan will have to be reviewed and changed when necessary. Contact the co-ordinator when there is a problem.

6.2.7 Interviewee Characteristics

- 1. Co-operative, willing to talk.
- 2. Reluctant to talk, may be shy or afraid of gossip.
- 3. Worried about the machine.
- 4. Has an "axe to grind".
- 5. Willing to please, "yes" attitude.
- 6. Long-winded story-teller.
- 7. Forgetful, convenient forgetfulness: is seldom a liar, because others are being interviewed.
- 8. Interview-hardened.

6.2.8 Proposed Model

For each community priority groups will be established.

1. Group 1: Vital interviewees

Every effort should be made to record these persons. Their contribution is basic to a history of the oil sands region. For example, persons prominent in all of the subjects.

2. Group 2: Unique interviewees

These persons should be interviewed because they will ensure a useful and comprehensive history of the oil sands region. For example, persons who were prominent in at least one of the study subjects.

3. Group 3: Interesting interviewees

These persons will probably be Indigenous people who perhaps played a marginal role in the subject areas. For example, their family may have been prominent in one of the subject areas.

4. Group 4: Potential interviewees

These persons may be able to provide some information about the subject areas and they may be interviewed if time and resources permit.

A Sample Model

Fort Chipewyan

Proposed List

Ernie Bourke Robert Siddall
William Flett Archie Simpson
Edward Flett Sam Tuccaro
Fred Fraser Clayton Wylie
Roderick Fraser Horace Wylie
Frank Ladouceur Howard Wylie
John Lepine Snowbird Marten

6.2.9 Conducting the Interview

Noel MacKay

Begin with informal conversation and set up equipment.
 Explain the equipment and test it.

Lawrence Yanik

- Make certain the microphone will pick up both of your voices. Play back test tape.
- 3. Begin questioning; use the Guidelines.
- 4. Do not read the questions.
- 5. Use the Guidelines as a checklist.
- 6. The interview does not have to follow the order proposed in the Guidelines.
- 7. Remember, the interviewee may not be able to answer all the subjects outlined in the Guidelines.
- 8. Use open-ended questions. For example;

Discuss

Tell

Recall

Compare

Define

Expand upon

Explain

Relate

Detail

- 9. Listen carefully to the story so that you can pick up names of places, people, happenings, events. Use these key words to set up another question. This is the way to guide the interview.
- 10. Do not rush the interview. Use silence when the interviewee is thinking.

- 11. Keep in mind the basic questions: who, what, when, where, why, how.
- 12. Know when to end an interview. An average interview is one to one and one-half hours. Do not tire the interviewee. Come back another time.

6.2.10 Guidelines for Interviews

- 1. Family data.
- 2. Personal data.
- 3. Shelter.
- 4. Food and diet.
- 5. Clothing, footwear.
- 6. Education.
- 7. Health.
- 8. Social assistance.
- 9. Employment experiences.
- 10. Transportation, communications.
- 11. Business methods.
- 12. Government.
- 13. Social life and customs.
- 14. Catastrophes.
- 15. The present and the future.

1. Family data

- a) Genealogical data, ancestral parentage (forms to be provided).
- b) Background of parents, their occupations.
- c) Size of family.

2. Personal data

- a) Place of birth.
- b) Date of birth.
- c) When did you arrive in the community?
- d) How did you arrive in the community? (Route taken and type of transportation.)

- e) Why did you choose this community?
- f) How did you acquire land and dwelling?

3. Shelter

- a) Description of dwellings.
 - 1. Size of home, number of rooms.
 - Construction materials (roof, walls, windows, doors, floor).
 - 3. Furnishings, decorations.
 - 4. Other buildings.
- b) Fuel and light.
 - 1. Where obtained, how.
 - 2. Difficulty of obtaining.

4. Food and diet

- a) Staple items obtained in home, e.g., meat, bannock, vegetables, how obtained?
- b) Food obtained from "outside" the home.
- c) Daily diet (breakfast, lunch, supper).
- d) Domestic animals (livestock).

5. Clothing, footwear

- a) Home-tailored.
- b) Type of material, dress, style.
- c) What clothing was purchased?

6. Education

- a) Out-of-school i.e., learning in the home, from the parents.
- b) Schooling period.
 - 1. Where.
 - 2. When.
 - Type of school system, e.g., public, religious, residential, day.
 - 4. Subjects taught.
 - 5. Impressions (values) of schooling.

7. Health

- a) Family ailments, diseases.
 - 1. How ministered, by whom, e.g., midwives, medicine men, nurses, doctors?
- b) Home remedies and treatments (describe).
- c) "Outside" medical services.
 - 1. Health nurses.
 - 2. Doctors.
 - 3. Dental care.
- d) Water supplies.
- e) Most common medical problems, e.g., epidemics.

8. Social assistance

- a) Provided by whom? e.g., neighbours, relatives, religious groups.
- b) Discuss the impact of formal social assistance e.g., pensions, family allowances, other, on family.

9. Employment experiences

- a) Trapping:
 - 1. Where.
 - 2. When.
 - 3. How (methods).
 - 4. Levels of income, effect of work on family.
- b) Fishing:
 - same as 1. to 4. above.
- c) Other: (forestry, river transport, oil sands)
 same as 1. to 4. above.

10. Transportation, communications

- a) Did you travel about? How often? How far?
- b) Vehicles.
 - 1. Type e.g., dogs, horses, canoes, boats, etc.
 - 2. When were these in most common use?
- c) Roadways, waterways, trails, railroads.

- d) Instruments of communication.
 - Type e.g., post, radio, telegraph, telephone, television.
 - 2. When did you obtain these instruments?

11. Business methods

- a) Where was the closest store?
- b) How many were there?
- c) Who operated them?
- d) How did you get to them?
- e) What was used as exchange, e.g., money, barter?
- f) Use of cash and/or credit?
- g) What types of goods were available?
- h) Scarcity of trading goods?
- i) Could you get a better buy at trading centres?
- j) What did you do for banking services?

12. Government

- a) Local administration.
 - 1. Who, why, when, how.
- b) Local associations and groups.
- c) "Outside" government.
 - 1. When and how were departments established in your community?
- d) Relationships between the above.
- e) Law and justice.
 - 1. Police, type of and role of.
 - 2. Common offences and punishments given.

13. Social life and customs

- a) Family customs, e.g., weddings, funerals.
- b) Community events, dances, picnics, parties, cards.
- c) Recreation, games, sports.

- d) Religion, role.
 - 1. Native.
 - 2. White.
- e) Music, musical instruments, songs.
- f) Arts, crafts, handiwork.
- g) Weather forecasting, e.g., use of land, water, sky, flora, fauna.

14. Catastrophes

- a) Floods.
- b) Fires.
- c) Blizzards.
- d) Drought.
- e) Insects.
- f) Boat sinkings, train wrecks, plane crashes.

15. The present and the future

- a) Comforts and pleasures of today that are enjoyed the most.
- b) How does the future look now as compared to 20 or 30 years ago?

6.2.11 Summary

A good interview depends upon careful preparation, a friendly relationship, skilled questioning, and interviewees who are willing to co-operate.

<u>If</u> there are reasons for not interviewing someone (for example, language, male/female relations), then do not interview the person. Contact the project co-ordinator.

6.2.12 Tape Labels

Print:

- 1. Interviewee's name.
- 2. Interviewer's name.
- 3. Date of interview.
- 4. "Side One", "Side Two".

6.3 SEMINAR AGENDA

Date and Time: Saturday, November 5, 1977

9:30 a.m. to 5:00 p.m.

Place:

Alberta Oil Sands Environmental Research

Program, Mildred Lake Camp

9:30 a.m.

- 1. Introduction of Participants (J. Parker).
- 2. Introduction of the Project (B. Kasinska-Banas).
 - a) AOSERP Human Environment.
- 3. Administration of the Project (R. Jamieson, A. Moore).
 - a) Equipment, tapes.
 - b) Handling and mailing procedures.
 - c) Interviewer agreements.
- 4. Oral History: Goals and Guidelines.
- 5. The Interviewers.
 - a) Qualifications.
 - b) Preparation.
- 6. The Interviewees.
 - a) Criteria.
 - b) Legal rights.
 - c) Selection.
- 7. Helps in Interviewing.
- 8. The Pre-interview.
- 9. The Interview.
- 10. Summary.

6.4 INTERVIEWEES

1. Community: Anzac

William (Bill) Woodward Suzanne Hilliard Robert (Bob) MacKenzie William (Bill) Cardinal Winston Plewes James (Jim) Cardinal Lawrence Whitford Fred MacKenzie Liza Powder Peter (Pete) Whitford

8 English speaking

2 Cree speaking

2. Community: Fort McMurray

Mary Powder George Golosky Virginia Auger Harriet Foley Mary Rose LaCorde Philemon Collins Bill Bird Ethel Bird Katy Sanderson Sam Cardinal Walter Hill Sophia Eymundson Romeo Eymundson Stan Wylie Florence Wylie Steve Brooks (Indigenous) Michel Gladue Christine Gladue Alice Armitt Carolyn Waniandy Jack McBride Len Williams

3. Community: Fort MacKay

Albert Ahyasou William Ahyasou Liza Ahyasou Joe Ahyasou Margaret Ahyasou Veronica Roland Emil Boucher James Grandjambe Mary Grandjambe Albert Grandjambe Rosene Grandjambe Narcisse Shott Elizabeth Shott Bella Boucher Armas Boucher Victoria MacDonald Ernie LaCorde Maggie LaCorde Helen Powder Modeste Powder Gabe Orr Evelyn Orr Melina Ahyasou William MacDonald

Elsie MacDonald Father George Begin James Faichney

4. Community: Fort Chipewyan

John Adam
Ernie Bourke
Edward Flett
Roderick Fraser
Frank Ladouceur
Benjamin Marcel
Isidore Marten
Snowbird Marten
Noel MacKay
Victoria Mercredi
Madeline Tuccaro
Horace Wylie
Howard Wylie
Lawrence Yanik

6.5 INTERVIEWS COMPLETED

Name	Address	Occupation	Subject
Ethel Bird	Fort McMurray	Housewi fe	Fort Chipewyan, Fort McMurray
William Bird	Fort McMurray	Riverboat Captain	River Transport
Sidney Blair	Bolton, Ont.	Consulting Engineer; Canadian Bechtel	Karl A. Clark, Fort McMurray, Oil Sands
James Donovan	Anzac	Trapper	Anzac, Fort McMurray
James Faichney	Barrhead	Trader	Fort McMurray, Fur-trade
Mary Grandjambe	Fort MacKay	Housewife	Fort MacKay
Rosene Grandjambe	Fort MacKay	Housewi fe	Fort Chipewyan, Fort MacKay
Gladys Hill	Fort McMurray	Housewife	Fort McMurray
Walter Hill	Fort McMurray	Druggist	Fort McMurray
Ben Marcel	Fort Chipewyan	Trapper	Fort Chipewyan, Trapping
Robert MacKenzie	Anzac	Trapper, Farmer	Anzac, Trapping Farming

Name	Address	Occupation	Subject
Victoria Mercredi	Fort Chipewyan	Housewife	Fort Chipewyan
Julian Mills	Edmonton	Riverboat Captain	River Transport
W. Plews	Anzac	Trapper	Anzac
Helen Powder	Fort MacKay	Housewife	Fort MacKay
Lawrence Tolin	Barrhead	Drayman	Waterways, Salt Plant
Alvena Strassbourg	Fort McMurray	Native Councillor	Fort McMurray
R. Fraser	Fort Chipewyan	Park Warden	Fort Chipewyan
N. MacKay	Fort Chipewyan	Trapper	Fort Chipewyan
P. Mercredi	St. Albert	Priest	Fort Chipewyan
Isabel MacKay	Fort Chipewyan	Housewi fe	Fort Chipewyan
Victor Mercredi	Fort Chipewyan	Carpenter	Fort Chipewyan
R. Schlader	Edmonton		Fisheries
R. Allan	Fort Chipewyan	Trapper	Fort Chipewyan

7.		LIST OF AOSERP RESEARCH REPORTS
1. 2.	AF 4.1.1	AOSERP First Annual Report, 1975 Walleye and Goldeye Fisheries Investigations in the Peace-Athabasca Delta1975
3. 4.	HE 1.1.1 VE 2.2	Structure of a Traditional Baseline Data System A Preliminary Vegetation Survey of the Alberta Oil Sands Environmental Research Program Study Area
5.	HY 3.1	The Evaluation of Wastewaters from an Oil Sand Extraction Plant
6. 7.	AF 3.1.1	Housing for the NorthThe Stackwall System A Synopsis of the Physical and Biological Limnology and Fisheries Programs within the Alberta Oil Sands Area
8.	AF 1.2.1	The Impact of Saline Waters upon Freshwater Biota (A Literature Review and Bibliography)
9.	ME 3.3	Preliminary Investigations into the Magnitude of Fog Occurrence and Associated Problems in the Oil Sands Area
10.	HE 2.1	Development of a Research Design Related to Archaeological Studies in the Athabasca Oil Sands Area
11.	AF 2.2.1	Life Cycles of Some Common Aquatic Insects of the Athabasca River, Alberta
12.	ME 1.7	Very High Resolution Meteorological Satellite Study of Oil Sands Weather: "A Feasibility Study"
13. 14.	ME 2.3.1	Plume Dispersion Measurements from an Oil Sands Extraction Plant, March 1976
15.	ME 3.4	A Climatology of Low Level Air Trajectories in the Alberta Oil Sands Area
16.	ME 1.6	The Feasibility of a Weather Radar near Fort McMurray, Alberta
17.	AF 2.1.1	A Survey of Baseline Levels of Contaminants in Aquatic Biota of the AOSERP Study Area
18.	HY 1.1	Interim Compilation of Stream Gauging Data to December 1976 for the Alberta Oil Sands Environmental Research Program
19.	ME 4.1	Calculations of Annual Averaged Sulphur Dioxide Concentrations at Ground Level in the AOSERP Study Area
20.	HY 3.1.1	Characterization of Organic Constituents in Waters and Wastewaters of the Athabasca Oil Sands Mining Area
21.		AOSERP Second Annual Report, 1976-77 Alberta Oil Sands Environmental Research Program Interim Report to 1978 covering the period April 1975 to November 1978
23.	AF 1.1.2	Acute Lethality of Mine Depressurization Water on Trout Perch and Rainbow Trout
24.	ME 1.5.2	Air System Winter Field Study in the AOSERP Study Area, February 1977.
25.	ME 3.5.1	Review of Pollutant Transformation Processes Relevant to the Alberta Oil Sands Area

26.	AF 4.5.1	Interim Report on an Intensive Study of the Fish Fauna of the Muskeg River Watershed of Northeastern Alberta
27.	ME 1.5.1	Meteorology and Air Quality Winter Field Study in the AOSERP Study Area, March 1976
28.	VE 2.1	Interim Report on a Soils Inventory in the Athabasca Oil Sands Area
29.	ME 2.2	An Inventory System for Atmospheric Emissions in the AOSERP Study Area
30.	ME 2.1	Ambient Air Quality in the AOSERP Study Area, 1977
31.	VE 2.3	Ecological Habitat Mapping of the AOSERP Study Area: Phase I
32.		AOSERP Third Annual Report, 1977-78
33.	TF 1.2	Relationships Between Habitats, Forages, and Carrying Capacity of Moose Range in northern Alberta. Part I: Moose Preferences for Habitat Strata and Forages.
34.	HY 2.4	Heavy Metals in Bottom Sediments of the Mainstem Athabasca River System in the AOSERP Study Area
35.	AF 4.9.1	The Effects of Sedimentation on the Aquatic Biota
36.	AF 4.8.1	Fall Fisheries Investigations in the Athabasca and
50.	711 11011	Clearwater Rivers Upstream of Fort McMurray: Volume I
37.	HE 2.2.2	Community Studies: Fort McMurray, Anzac, Fort MacKay
38.	VE 7.1.1	Techniques for the Control of Small Mammals: A Review
39.	ME 1.0	The Climatology of the Alberta Oil Sands Environmental
23.		Research Program Study Area
40.	WS 3.3	Mixing Characteristics of the Athabasca River below
		Fort McMurray - Winter Conditions
41.	AF 3.5.1	Acute and Chronic Toxicity of Vanadium to Fish
42.	TF 1.1.4	Analysis of Fur Production Records for Registered
		Traplines in the AOSERP Study Area, 1970-75
43.	TF 6.1	A Socioeconomic Evaluation of the Recreational Fish
		and Wildlife Resources in Alberta, with Particular
		Reference to the AOSERP Study Area. Volume I: Summary and Conclusions
44.	VE 3.1	Interim Report on Symptomology and Threshold Levels of Air Pollutant Injury to Vegetation, 1975 to 1978
45.	VE 3.3	Interim Report on Physiology and Mechanisms of Air-Borne Pollutant Injury to Vegetation, 1975 to 1978
46.	VE 3.4	Interim Report on Ecological Benchmarking and Biomonitoring for Detection of Air-Borne Pollutant Effects on Vegetation and Soils, 1975 to 1978.
47.	TF 1.1.1	A Visibility Bias Model for Aerial Surveys for Moose on the AOSERP Study Area
48.	HG 1.1	Interim Report on a Hydrogeological Investigation of
		the Muskeg River Basin, Alberta
49.	WS 1.3.3	The Ecology of Macrobenthic Invertebrate Communities in Hartley Creek, Northeastern Alberta
50.	ME 3.6	Literature Review on Pollution Deposition Processes
51.	HY 1.3	Interim Compilation of 1976 Suspended Sediment Date
-		in the AOSERP Study Area
52.	ME 2.3.2	Plume Dispersion Measurements from an Oil Sands Extraction Plan, June 1977

53.	HY 3.1.2	Baseline States of Organic Constituents in the
-1 .		Athabasca River System Upstream of Fort McMurray
54.	WS 2.3	A Preliminary Study of Chemical and Microbial
		Characteristics of the Athabasca River in the
55.	HY 2.6	Athabasca Oil Sands Area of Northeastern Alberta
56.	AF 3.2.1	Microbial Populations in the Athabasca River
٠٠٠.	AI 3.2.1	The Acute Toxicity of Saline Groundwater and of
57.	LS 2.3.1	Vanadium to Fish and Aquatic Invertebrates Ecological Habitat Mapping of the AOSERP Study Area
١,٠	LJ 2.).1	(Supplement): Phase I
58.	AF 2.0.2	Interim Report on Ecological Studies on the Lower
		Trophic Levels of Muskeg Rivers Within the Alberta
		Oil Sands Environmental Research Program Study Area
59.	TF 3.1	Semi-Aquatic Mammals: Annotated Bibliography
60.	WS 1.1.1	Synthesis of Surface Water Hydrology
61.	AF 4.5.2	An Intensive Study of the Fish Fauna of the Steepbank
	•	River Watershed of Northeastern Alberta
62.	TF 5.1	Amphibians and Reptiles in the AOSERP Study Area
63.	ME 3.8.3	Analysis of AOSERP Plume Sigma Data
64.	LS 21.6.1	A Review and Assessment of the Baseline Data Relevant
		to the Impacts of OII Sands Development on Large
/ -	100100	Mammals in the AOSERP Study Area
65.	LS 21.6.2	A Review and Assessment of the Baseline Data Relevant
		to the Impacts of Oil Sands Development on Black Bears in the AOSERP Study Area
66.	AS 4.3.2	An Assessment of the Models LIRAQ and ADPIC for
00.	A3 7.5.2	Application to the Athabasca Oil Sands Area
67.	WS 1.3.2	Aquatic Biological Investigations of the Muskeg River
•,.		Watershed
68.	AS 1.5.3	Air System Summer Field Study in the AOSERP Study Area,
	AS 3.5.2	June 1977
69.	HS 40.1	Native Employment Patterns in Alberta's Athabasca Oil
		Sands Region
70.	LS 28.1.2	An Interim Report on the Insectivorous Animals in the
		AOSERP Study Area
71.	HY 2.2	Lake Acidification Potential in the Alberta Oil Sands
		Environmental Research Program Study Area
72.	LS 7.1.2	The Ecology of Five Major Species of Small Mammals in
72		the AOSERP Study Area: A Review
73.	LS 23.2	Distribution, Abundance and Habitat Associations of
		Beavers, Muskrats, Mink and River Otters in the AOSERP
74.	AS 4.5	Study Area, Northeastern Alberta
	WS 1.3.4	Air Quality Modelling and User Needs
15.	W3 1.3.4	Interim Report on a Comparative Study of Benthic Algal Primary Productivity in the AOSERP Study Area
76.	AF 4.5.1	An Intensive Study of the Fish Fauna of the
,	M 7.J.1	Muskeg River Watershed of Northeastern Alberta
77.	HS 20.1	Overview of Local Economic Development in the
,,,	.,	Athabasca Oil Sands Region Since 1961.
78.	LS 22.1.1	Habitat Relationships and Management of Terrestrial
,		Birds in Northeastern Alberta

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