SO THAT THE FUTURE WILL BE OURS

VOLUME 1

ROSS RIVER INDIAN IMPACT REPORT

prepared by

THE ROSS RIVER INDIAN BAND

January 1, 1984.
Ross River, Yukon Territory.

SO THAT THE FUTURE WILL BE OURS

prepared by

Peter Dimitrov and Martin Weinstein
with contributions by Peter Usher.

for the

ROSS RIVER INDIAN BAND

1984
Ross River
Yukon Territory

We are of the opinion that 'Terms and Conditions' of regional development should be negotiated with government so that the Band can obtain guarantees respecting several issues of import. The Band is located geographically close to proposed developments, and because it is the largest and closest social group that may experience direct impacts we as researchers believe the Band deserves special considerations. Lastly, in respect to these recommendations, we believe that whereas Yukon Land Claim negotiations may provide part of the answer to the Band's requirements, a 'Terms and Conditions' of development agreement should be negotiated either distinctly, or as a separate agreement in principle.

Finally, I wish to acknowledge the co-operative spirit in which this project was carried out. I hope that the many levels of information available to the Band from this project will be of value in the years ahead. Should this report receive wide circulation throughout the North it may also prove to be of a high cross-cultural educational value.

Yours sincerely,

Peter Dimitrov
Project Director.

PD/mh

ACKNOWLEDGEMENTS

I would like to express gratitude to the many people who have made this research project possible. It is impossible for me to mention them all by name. Nevertheless I am especially grateful

- to Chief Clifford McCleod and the Ross River Indian Band Counsellors who deserve immense credit in guiding this project and opening doors to the village.

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- to those many many persons unmentioned, but who know who they are, that made contributions just by their presence. Thank You!

Sincerely,

Peter Dimitrov

Peter Dimitrov
Project Director

"Not enough millions of dollars. Money
go back to government. This us land,
now I can't let it go. Money don't
cry for us. Look, daddy, granddad (their graves)
we camp up in the mountains, we sleep,
make camp, have water from the mountain,
have beaver swim up. We can't push away
the land. Some people want to push
away, they got no sense, that's all."

Elder John Dickson
February 20, 1983.

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CHAPTER 1

INTRODUCTION

Introduction

This report documents the nature and origin of the economy and society of the Ross River Indian people. It reveals that there is a 'mixed' Indian economy comprising wage labour and the productive activities of hunting, trapping and fishing. It outlines the aspirations of the Ross River Indian people for the future.

Juxtaposed to these, the report also sketches, as far as is presently known, the scope and nature of a number of proposed industrial developments in the region over the next ten to fifteen years. Since both the Indian economy and the proposed regional industrial economy utilize land resources, the Land Use Atlas, which accompanies this report, demonstrates not only land use, but also areas of potential conflict.

One of the objectives is to address the question of predicting and evaluating the impacts of proposed regional developments upon the Indian community of Ross River. In doing this, we have had to address and identify a set of assumptions which seem to exemplify the prevailing government and industry view of Indian economies and the effect thereupon of 'modernization'. We have tested their validity against the evidence of this report and from comparable situations. In doing so we have made our own predictions and evaluations respecting the impact of regional development. Finally, we propose some measures that we believe are necessary to mitigate adverse consequences and capture some benefit from proposed developments.

In modern industrial society the chief indicators of economic well-being are considered to be employment and income. The higher these two things are in any community the more likely we expect people to be better off in other spheres of life--socially and psychologically, as well as economically. Most impact assessments have therefore focused attention on the following types of questions:

1. To what extent will the development generate new income, employment and business opportunities in the region?

2. To what extent will development effect positively, or negatively existing economic (by which is meant cash generating) activities in the region?

As northern Indian Bands tend to exhibit low levels of cash income, wage employment and business activities, there is an easy assumption that industrial development can only be of benefit to them. Since direct transfer payments and public investment are (or are thought to be) higher on a per capita basis than nationally, it is therefore assumed that increased incomes generated by wage employment and business activity will serve to reduce levels of transfer payments and create a local tax base from which to pay for social services. That is why industrial activity is often seen as the basis on which Indian individuals and Bands can begin to "pull their own weight" in Canadian society.

Recently however, it has generally come to be recognized in evaluating development impact on northern Indian communities, that at least two additional factors must be considered as essential to Indian impact assessment (see, for example Berger 1977, Bowles 1977, Brody 1981, Geisler et al. 1982). First, Indian people are acknowledged to have different cultural traditions and values from the rest of Canadian society, and

development should therefore assist them in maintaining these things, if they so choose, rather than undermine or destroy them. Secondly, it is acknowledged that many northern Indian people pursue a 'traditional' economy based on hunting, trapping and fishing, which they value for reasons in addition to cash incomes which they generate.

Despite these advances in impact assessment methodology, however, there remains a conventional belief that this 'traditional' economy is declining in importance and is incapable of significant expansion, even though it is undergoing 'modernization.' Some implications of the conventional hypothesis are thought to be as follows:

1. Because no one still relies on this sector exclusively for a living, it can increasingly be viewed as a recreational activity or as a lifestyle choice, instead of a permanent part of a Band's economic base.

2. Those who do engage in traditional activities will need increasing amounts of cash to purchase both productive gear and other household needs. As the traditional economy can no longer generate adequate amounts of cash, wage employment increasingly takes place. The maintenance of the traditional economy, and indeed Indian culture itself, is thus seen to be increasingly dependent upon wage employment and industrial activity which generates it.

3. Even if harvesting continues as an economic activity, the limited resource base will impose restrictions on the numbers of people who can engage in it, and more and more Indian people will have to find other ways of earning a living.

These views are not just abstract hypotheses of minimal consequence. They are often hidden in the policies, documents and assumptions of would-be developers of the northern frontier. In the Band's and the researchers' dealings with government and company officials the attitudes have been clear: because Bands tend to have low levels of cash income, wage employment and

business activities, the emphasis has been to stress the hypothesis that industrial development can only be of benefit to Band members. Rarely is the hypothesis questioned, or the issues respecting scale of development and their implications on existing Band culture and socio-economy examined. Rather, emphasis is placed on delivering services that will enable Bands to participate in wage jobs and businesses linked to major resource development.

The recent publication on "Economic Circumstances in (the) Yukon Territory" (Fournier, 1979) used for some of the conclusions about the hunting sector of the Ross River Indian economy in the North Canol Road Initial Environmental Evaluation (Canada, 1982) is a good illustration of the conventional hypothesis.

In the analysis of the Yukon economy, hunting and trapping are delegated to 7 of the report's 80 pages; and of these three are tables and a list of references (Fournier, 1979). Hunting is seen as an important part of Yukon's past but:

> "Today, it is relatively less important though it attracts some individual income as sport and recreational activity."

Similarly, although furs were the only important Yukon resource before the 1880's:

> "With the Klondike gold rush and subsequent developments in mining, many, who at one time had relied on the fur industry, now had an alternative source of income available to them."

For the Indian hunter/trapper in the future:

> "It is generally felt that as socioeconomic conditions improve for the native peoples their dependence on hunting to provide their meat requirements will diminish."

The report goes on to say that:

> "At the same time we can expect resident (sports) hunting to grow due to increased leisure time."

Presumably what is meant here is that the demand for resident white sports hunting will increase as Indians buy more meat from the store or that Indian food hunting will be replaced by sports hunting, given regional 'modernization.'

Three quarters of the Yukon's 500-600 trappers are status and non-status Indians. Trapping is seen by Fournier as an essentially unattractive economic activity, but it is seen as an economic activity, in contradistinction with Indian hunting.

> "The uncertain cash income and yields plus the relative hardships of running a winter trapline, indicate that the number of trappers will continue to decline as other more attractive jobs become available."

The North Canol Road Initial Environmental Evaluation (IEE) (Canada, 1982) discussion of the importance of hunting for the Ross River Indian people makes use of Fournier's conclusions about the decline of Indian hunting with increased wage employment:

> "Recreational hunting in the MacMillan Pass by non-resident hunters provides important income to the local economy. Resident hunting to supplement Native meat supplies is still important but dependence on this resource diminishes with improved socio-economic conditions" (Fournier, 1979) (Canada, 1982)

At least two views can be drawn from this brief statement. One, the proper economic role of hunting in a modern economy is the generation of cash and jobs through sports and outfitting hunting opportunities. And secondly, given jobs and the benefits of modern life, hunting will no longer be a significant force in Indian life.

There is nothing inherently incorrect with the conclusion that Indian hunting has declined with increasing wage opportunities and government transfer payments. Across the Canadian North Indians no longer get all their food and clothing from the bush. Hunting has certainly declined in economic importance since the pre-fur trade days; it has even declined in importance since the earlier part of the twentieth century. The problem with these types of statements is what is implied about the future and the process of economic change. It is assumed that there are no limits to the decline, it is continuous, one-way process; given jobs, it will continue into the future until Northern Indian hunters become occassional sports hunters like their white neighbors. Further, these statements about the inevitable decline of Indian hunting assume that the economic model based on the 'industrial modernization' of Canada's north has long-term viability - assumptions which with the growing economic crisis in the western world are causing many economists to believe that another development paradigm is required. These type of statements need therefore to be cast as testable hypothesis rather than as assumptions or even fact.

Trapping comes off a bit better in the IEE. Yukon Territorial Government records of Ross River Indian trapline harvests for 1972-80, which show the relative health of the trapping sector of the Ross River Indian economy, are included, but in an appendix. The report also notes that government figures for native fur harvests "are notoriously underestimated and inaccurate."

The Ross River Indian economy comes off worst of all. Hunting trapping, and fishing harvests are not seen as part of the community's economics. Rather, if we look at the assumptions inherent in the discussions of the Ross River community economy, the only legitimate sphere of economic activity is through wage employment and commercial business:

> "The present economy of Ross River is based on employment with the federal and territorial governments, service oriented facilities and some outfitters and guides.
>
> The primary source of income for the community is through tertiary activities which support geological explorations in the region. These services include the hotel, two stores, a service station and Trans North Territorial Airways and employ approximately 35 people in the peak summer season.
>
> The rest of the tertiary sector is government employment, and the Federal government is responsible for about 10 full and part-time jobs. The Territorial government hires a ferry operator, 5 teachers and a part-time native alcohol anti-abuse worker.
>
> The Band is the largest employer of native people, hiring for jobs ranging from house building to welfare work.
>
> The Department of Indian Affairs and Northern Development is actively involved in funding various Band projects." (Canada, 1982)

Given this discussion, we will consider in the specific context of Ross River Indian Band, the validity of these assumptions, and whether certain other questions not normally addressed in impact assessment are equally, if not more important. At the outset however, we can simply state that this report shows beyond any doubt that Ross River falls into the class of northern communities for which impact assessment must consider the questions of traditional culture and economy, as well as employment and income.

We will now proceed by outlining the history of the Band's involvement in regional development planning, followed by a discussion of research objectives and methods, and lastly an overview of Ross River today.

The Origins of the Study

From the Ross River Indian Band's perspective there were several reasons for initiating this study. First, the Band's past experience with industrial resource developments (the Cyprus Anvil Mine) have not been entirely positive. (Chapter 4)

Since the Anvil Mine developments, the Ross River Band Council has assumed greater responsibility for the development of the village and the well-being of its members. The Council is aware that several major resource developments (Chapter 8) are being proposed for the region and they desire input to protect the Indian interests and gain some benefits from development.

During 1981 the Band Council unsuccessfully attempted to gain a seat on the MacMillan Pass Task force, a development planning body that included both corporate and government representatives. Despite repeated attempts, and even with media pressure, the Band Council was disallowed membership. Letters to government agencies outlining Band concerns were often not replied to. In the case of the proposed reconstruction of the North Canol road, the Band met on several occassions with representatives of DIAND's Northern Roads and Airstrips department. Meetings were sometimes cordial but, from the Band's perspective, it seemed impossible to exact specific guarantees on a range of their concerns.

During the winter of 1981/82 numerous discussions were held with Yukon Barite Ltd. in an attempt to negotiate a joint-venture agreement. These talks failed with the withdrawal of Yukon Barite due to time deadlines which the Band could not meet. Other discussions with executives of AMAX of Canada Ltd. were cordial and frequent. The Band Council had established a rapport with the President and other officials. Despite the hope that relations with AMAX Ltd. might prove rewarding, the Band Council had many concerns respecting overall regional development. They wanted companies and government to legally abide by a negotiated "Terms and Conditions of Regional Development' agreement. Goodwill and charity were not viewed as sufficient guarantees to safeguard the Band's concerns and aspirations. Corporate presidents could be reassigned, governments could change, and mines could reduce operations or shutdown. The Band Council wanted not only to express its range of concerns, it wanted legal guarantees for its members that could weather the storms of change.

On April 20, 1982 the Ross River Indian Band presented the Honorable Minister John Munro with a preliminary document outlining a request for funding to prepare an impact assessment. After 6 months of negotiations with the Department of Indian and Inuit Affairs agreement on funding was reached. The Department had agreed to provide 50% of the funds, with the remaining portion being provided to the Department by AMAX of Canada Ltd.

Objectives of Research

The initial research project was titled the "Ross River Indian Band Impact Assessment of the AMAX (MacTung) Mine and North Canol

Road development." Subsequent to funding, this Band controlled project decided to enlarge the scope of its investigation. While it was possible to look at project specific impacts, the Band was concerned with cumulative impacts of regional development that might occur with gradual implementation. For this reason the project focuses on broad questions related to the cumulative impact of proposed regional developments upon the Band. Specifically the objectives were:

1. To map and define Indian land use of Band members.

2. To profile the Bands mixed wage and land based economy by providing information about employment, transfer payments, and harvesting activities.

3. To profile present and proposed regional developments that might occur on lands used by Ross River Indian Band members.

4. To assess the aspirations and capabilities of Band members on a range of issues.

5. To identify potential impacts and problems that Band might experience as a result of regional modernization.

6. To recommend actions to the Band that if implemented might reduce adverse impacts and benefit Band members over the short and longterm.

7. To provide information to the Band Council that might be of value for informed decision making, for public hearings, or for negotiations respecting regional developments.

Methods

Elsewhere in Canada, Indian and Inuit organizations have devised a variety of methods to document the operations of the Indian economy, the extent of a communities cultural - economic dependence on the land, and the indigenous system of land and

resource use (Bennett 1977; Freeman 1976; Weinstein 1976; Brody 1981; James Bay and Northern Quebec Harvesting Research Committee, 1982)

The methodology of this research project has relied on these established and tested procedures with modifications adapted to the unique situation of the Ross River Indian people. As subsequent chapters detail, the essential methodology has been Indian and non-Indian land use mapping, questionnaire administration, participant observation, and open-ended interviews.

Potential Band informants were both status and non-status Band members normally resident or living near Ross River itself. Information regarding non-Indian land use was obtained from a variety of literature sources, while mapping of Indian land use was obtained from 73.7% of the 141 adults that comprised the total sample population.

To obtain information about the Band's mixed economy, Band members' education and training levels, and levels of transfer payments, a questionnaire was administered and some Band Council records reviewed. Of the 243 people on the CYI's Ross River enrollment list who are considered resident of Ross River and vicinity, the questionnaire represents annual harvest and cash incomes information from approximately 90% of adult Ross River Indians and their dependents. Open-ended interviews and participant-observation by the Project Director provided a variety of information on other topics.

The report's structure presents in Chapter 2 an introduction to the Ross River Land and resource animals. This is followed

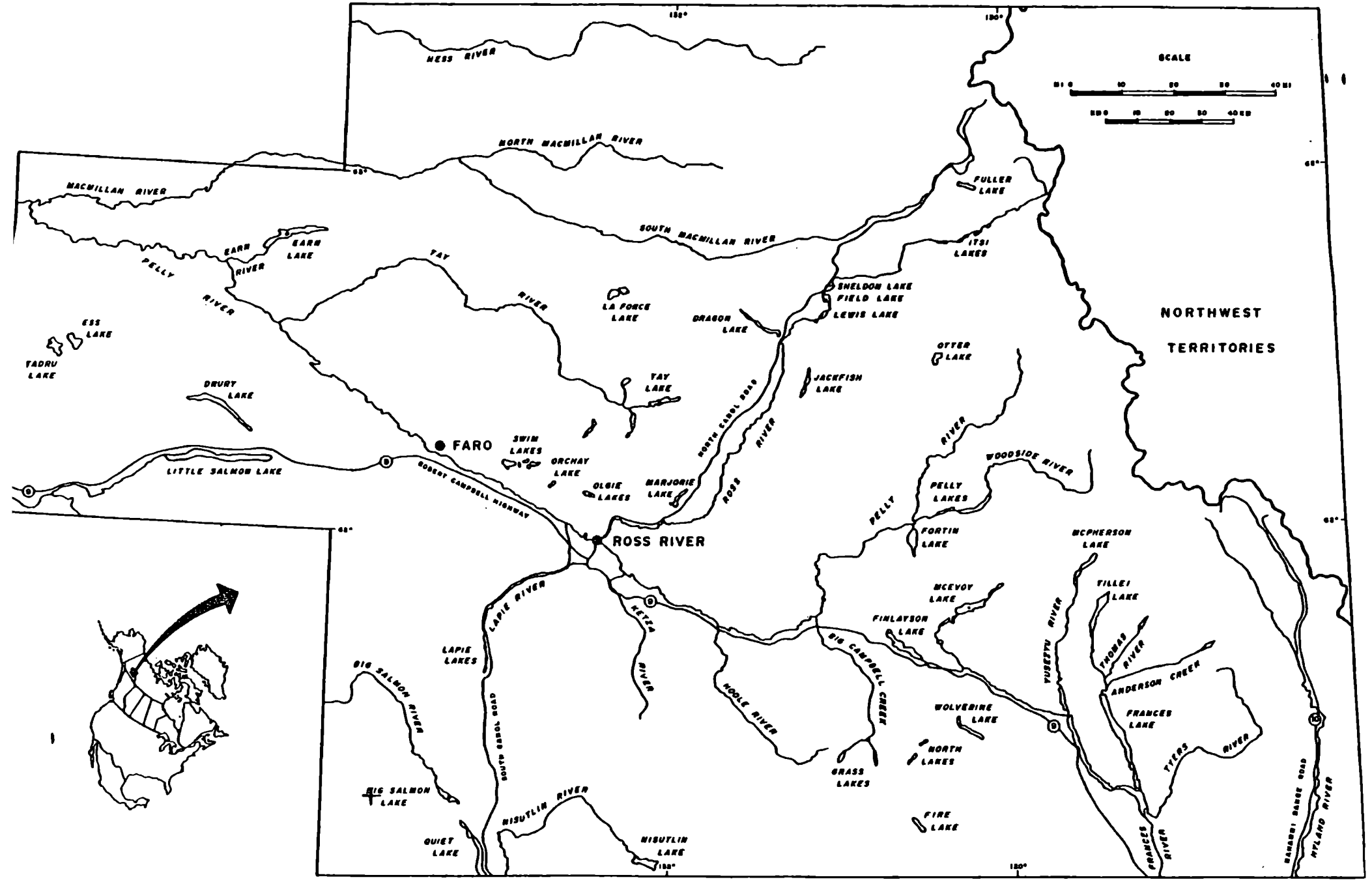
in Capters 3 and 4 by a history of the Ross River Indian people. Chapters 5, 6, and 7 provide a view of the Indian land and resource use and economy, while Chapter 8 and 9 focus on two sets of 'dreams' for the future: Indian and Industrial. Chapter 11 details findings about impacts, and Chapter 12 presents our recommendations.

In many ways this is a joint research effort. It was initiated by the Ross River Band Council, who were involved and consulted throughout the study. Mapping interviews and economic questionnaire administration were carried out by the Band interviewers: Doris Bob and Ann Smith, and the associate research director, George Smith. Peter Dimitrov, as project director, was involved in all phases of the research, from research design and administration, to field interviews of the mapping and economic questionnaire, to open-ended interviewing and participant observation, to review of the resource development documents. George Smith, also involved in all phases of the research, was largely responsible for the extent that this research accurately portrays Ross River Indian life. Martin Weinstein was responsible for research design and some of the interpretations of the findings. Peter Usher provided advice on the research design and recommendations. The report was jointly written by Peter Dimitrov and Martin Weinstein, with Chapter 10 and section 4 of Chapter 11 written by Peter Usher.

Ross River Today

The study area (Figure 1.1) is situated approximately 250 road miles northeast of Whitehorse. It encompasses the areas north and south of the Campbell Highway, west of Little Salmon

Figure 1.1 The Study Area.



Lake, and as far east as the Frances and Hyland River systems. The Ross Lands also takes the areas east and west of the North and South Canol Roads. Major drainages include the Pelly, Ross, MacMillan, Frances, and Hyland rivers, as well as their tributaries.

The community of Ross River (Figure 1.2) is an ethnically mixed community split racially and geographically by the North Canol Road. Latest surveys (Reid Crowther, 1983) indicates that the white population numbers about 107 people, with approximately 39 children 19 years of age and under.

The present Indian population on the Council for Yukon Indians Ross River land claim beneficiary list totals approximately 326 persons. Of these 242 are resident to Ross River.

The age/sex structure of the beneficiary list (Table 1.1) shows some unique characteristics. Throughout the Yukon Territory approximately 10.8% of the population is nine years of age or younger. The Ross River Indian Band as a whole (i.e. both resident and non-resident) is much younger than the Territorial average with approximately 24.8% of all band members 10 years of age or younger.

Within all the Yukon Territory, approximately 14.7% of the population ranges between the ages of 10 to 19. In the Ross River Indian Band on the other hand, 26.7% of the Bands population lies in the age group 11-20 years. For the Band as a whole approximately 50.6% of the entire population is under 20 years of age, while the territorial average is only 25.5%. (Figures for Yukon Territory are from: Yukon Economic Review, June 1981).

Figure 1.2 Existing Land Use Ross River

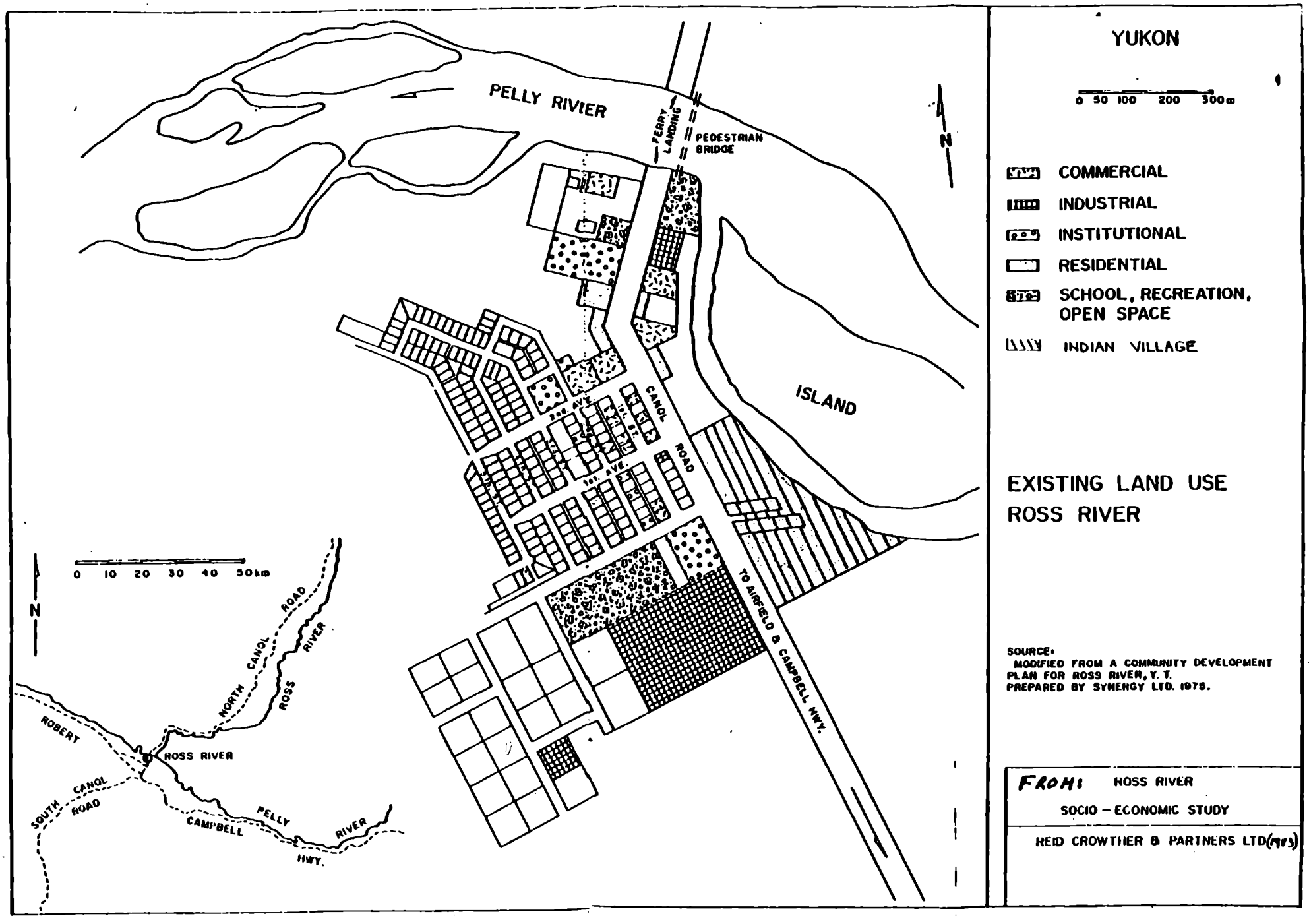


TABLE 1.1

Age/Sex Distribution of Total Ross River Indian Band
(Based on the CYI Ross River Beneficiary list)

Age Group	Males	Females	Total	
0-5	23	26	49	15.0
6-10	12	17	29	8.9
11-15	17	21	38	11.7
16-20	24	25	49	15.0
21-25	16	21	37	11.4
26-30	13	13	26	7.8
31-35	8	7	15	4.6
36-40	10	8	18	5.5
41-50	10	11	21	6.5
51-60	13	7	20	6.2
61-70	7	6	13	4.0
71-+	4	7	11	3.4
TOTALS	157	169	326	100.0

Household surveys of the Ross River Indian Band (Table 1.2) indicates that average household size is 3.9 persons. This figure is certainly related to the young demographic structure of the Band. Nonetheless there 31 households out of a total of 58 that have at least 4 persons or more. For our purposes a household is defined as the main domicile or residence for a person or group of persons that normally reside within a residence. This residence may be a house in Ross River or a bush cabin which is a main domicile. The Ross River average household size of 3.9 persons is markedly less than the national Indian average of 5.6 persons (DIAND, 1980).

TABLE 1.2

Households: Ross River Indian Band

Size of Household (1)	Number of Households With a Particular Size
1 person	5 households
2 persons	15 households
3 persons	7 households
4 persons	11 households
5 persons	5 households
6 persons	7 households
7 persons	4 households
8 persons	1 households
9 persons	2 households
10 persons	1 household
TOTAL # OF HOUSEHOLDS:	58

Average household size: 3.9 persons

(1) A household is defined as the main residence or domicile for a person or a group of persons that normally reside within the residence. It may be a house in Ross River or a bush cabin depending upon which is the main domicile. The average household size of 3.9 persons is markedly less than the national Indian average of 5.6 (Indian Conditions 1980, DIAND Ottawa).

CHAPTER 2

THE SETTING: PART 1: THE LAND

THE LAND

The Ross River Indian hunting and trapping lands and the present-day settlement of Ross River are located in the central southeastern part of the Yukon Territory, with a portion of the Band's hunting lands extending across the Yukon boundary into the Northwest Territories.

These lands are topographically quite varied, consisting of mountain ranges, isolated mountains, upland plateaus, and deep, wide valley bottoms. Technically speaking, all of the Ross River lands are part of the southern and eastern portions of the Intermontane Yukon Plateau region of the Canadian Cordillera. Even though the general area is quite mountainous, with a more varied topography than similar intermontane plateaus to the south in British Columbia, the general evenness of its mountain summits marks it as a plateau.

The major mountain ranges frame much of the Ross River lands, the Selwyn Mountains, on the north along the Yukon-Northwest Territories boundary, and the Pelly Mountains, on the south. The summit of Keele Peak in the Selwyn Mountains just to the north of Macmillan Pass on the Northwest Territories boundary exceeds 9,700 feet, although most of the other large peaks range between 6,000 and 7,500 feet. The Pelly Mountains, with summits to 7,800 feet, are generally higher than the Selwyns although they lack mountains as high as Keele Peak. Several lesser mountain ranges, the Glenlyon Range, the Anvil Range, the Campbell Range, the South Fork Range, the Itsi

Range, and a variety of isolated mountains modify much of the upland character of the remainder of the region.

The mountain and uplands regions are split by several wide valley bottoms. The most extensive of these are the Ross River Valley and the Pelly River Valley. The middle reaches of the Pelly River flow through the floor of the Tintina Trench, a major geological feature comparable to the Rocky Mountain Trench. The trench valley broadens to about 8 miles across near Ross River (Bostock, 1948). The Glenlyon and St. Cyr Ranges of the Pelly Mountains form an almost continuous wall-like face to the southern side of the Trench within the Ross River hunting lands.

The Pelly and Macmillan Plateaus, subdivisions of the Yukon Plateau, are large expanses of rolling uplands, broken by higher isolated peaks and smaller mountain ranges, sandwiched between the two mountain ranges. The Pelly Plateau stretches from Frances Lake to the Ross River Valley and consists of rolling uplands 3,000 to 5,000 feet in elevation. The major river valleys are entrenched 1,000 or more feet below the table lands. The Macmillan Plateau stretches from the Ross River Valley to the Macmillan River. Its surface is more broken by isolated mountain peaks and ranges than that of the Pelly Plateau; these include the Anvil and South Fork Ranges and Mount Sheldon.

THE WATER

Most of the Ross River lands fall within the Pelly River

drainage area, although the far eastern lands are drained by the Frances River and other tributaries of the Liard, which itself ultimately flows into the Mackenzie. Some of the southern slopes of the Pelly Mountains are drained by the Nisutlin and Big Salmon Rivers, while the far western areas are drained by the Little Salmon River, all tributaries of the Yukon.

A profusion of medium and small size lakes dot the Ross River landscape. The largest of these include Frances Lake, Finlayson Lake, and McEvoy Lake draining into Frances River; Quiet Lake draining into the Big Salmon River; Little Salmon Lake draining into the Ross River. Many smaller lakes dot the Ross River Valley lowlands and the headwaters valley of the Pelly.

CLIMATE

A continental climate predominates throughout the central and southeastern Yukon. In general throughout the Yukon, the St. Elias Mountains and the coastal mountains of southeastern Alaska and southwestern Yukon form a barrier to the maritime influences of the Pacific. To the east, the Mackenzie Mountains form a barrier to winter cold waves from the NWT (Kendrew, and Kerr, 1956). Winter cold waves with extreme low temperatures do however, at times, penetrate from the north, across the northern Yukon; as does modified maritime air from the Pacific. As a consequence, the Yukon as a whole has recorded some of the highest and lowest winter temperatures in arctic North

America (Youngman, 1975).

The climate of the Ross River lands is typified by long, cold winters and short warm summers. Lakes and ponds begin to freeze in October. Snow fall is light in the valley bottoms, with considerably higher accumulations in the plateau uplands and mountains (Table 2.1). Valley bottoms are generally colder in winter than the uplands. Winter temperatures can be extremely cold. In fact, Ross River's extreme minimum temperature of 59.4°C has only been exceeded by two locations in the Yukon (Canada, 1982). Winter days, however, are frequently clear and windless.

The climate is also quite dry. Records of annual precipitation average between 263.6 mm (10.4 inches) in the valley bottom at Ross River 698 meters elevation) and 367.7 mm (14.5 inches) on the uplands at Anvil (1158 meters elevation). June, July and August are usually the wettest months, but Ross River's recorded rainfalls for these months have only averaged 105.8 mm (4.2 inches).

TABLE 2.1. Temperature and Precipitation on the Ross River Lands (from Canada, 1982)

	Lat.	Long.	Elev. (m)	TEMP (oC) Annual	Jan.	July	Extreme Min. (Month)	PRECIPITATION (mm) Annual	June-Aug.	Ann. Snowfall (precip. mm)	Days With Snow
ROSS RIVER	62 59'	132 27'	698	-5.7	-28.6	12.8	-59.4 (Jan.&Feb.)	263.5	105.8	105.8	41
WIL	62 22'	133 23'	1158	-3.4	-19.8	11.5	-46.1 (Jan.)	367.7	179.9	179.2	68
ARO	62 14'	133 21'	694	-2.8	-24.5	14.9	-55.0 (Jan.)	287.7	104.3	125.9	62
URURY CREEK	62 12'	134 23'	609	-2.5	-23.7	14.3	-54.4 (Jan.)	349.4	102.9	175.7	90
JIET LAKE	61 09'	133 04'	812	M	M	13.0	-52.2 (Feb.)	M	110.6	M	M
HELDON LAKE	62 37'	131 17'	884	M	M	11.7	M	M	163.5	M	M
HITEHORSE	60 43'	135 04'	703	-1.2	-20.7	14.1	-52.2 (Jan.)	261.2	102.5	136.6	73

NOTE: M= information is not available for these records.

THE FOREST

The forested areas of the Ross River lands generally fall into the closed canopy regions of Canada's boreal forests, although the sub-alpine forests are more park-like, with open spaces between the trees. Trees generally cover the valley bottoms and plateau areas. Alpine tundra occurs on the slopes above the treeline (between 1,350 and 1,500 meters above sea level). In all, forest covers about 40% of the Ross River lands (Rennie, 1977).

The southeastern part of the Yukon has a greater diversity of tree species than other regions (Oswald and Senyk, 1977). The species include white and black spruce, larch, alpine fir, lodgepole pine, aspen, balsam poplar, and Alaska and water birch; while some of the larger shrub species include willows and speckled alder (Hosie, 1973). White and black spruce dominate as climax forests on relatively well drained and undisturbed sites. Black spruce is the dominant species on the organic soils of the more poorly drained areas. Lodgepole pine, aspen and other species are rapid recolonizers after fires and other disturbances. On the upper slopes, in the subalpine - treeline zones, alpine fir is the dominant species.

In the south-central and southeast parts of the Yukon, lodgepole pine is the main early successional invader following disturbances, such as fire (Oswald and Senyk, 1977). Aspen colonization is usually limited to warm, south-facing slopes. White and black spruce become established later, the timing

possibly being related to seed availability. In upslope areas after extensive fires reestablishment of spruce forests can be quite slow. "Stands of lodgepole pine more than 100 years old with only a few scattered spruce are" frequently encountered (Oswald and Senyk, 1977). However, spruce eventually becomes established. Black spruce forests with an admixture of white spruce and an understory of alder and/or moss represents the climax vegatation on upland slopes.

Willow and balsam poplar are the initial colonizers on new streamside, alluvialsites following floods. These are rapidly replaced by white spruce, generating from seeds deposited on the river banks as the flood waters receed. When flooding becomes infrequent, white spruce stands develop quite rapidly in the valley bottoms.

Along the middle reaches of the Pelly and Macmillan Valleys there is good forest growth, with white spruce growing to sawtimber size in places. Grasslands, rather than trees, occur on the dry, erosion prone, south-facing slopes along the Pelly River. On well drained sites in the valley bottoms and adjacent uplands, lodgepole pine and white spruce dominate, with admixtures of trembling aspen. Black spruce, frequently joined with white spruce, occur on wetter ground. Mixed stands of white spruce and alpine fir appear on the upper slopes. Spruce tends to be limited to slopes below 925 meters (Rowe, 1972). In the higher elevation areas, stands of alpine fir continue up the slopes beyond the limits of the spruce.

Much of the Pelly Mountain region is treeless. At lower elevations, in the valleys and on the lower plateau slopes, there are open forests of black and white spruce with feather moss/sphagnum undercarpets. Lodgepole pine occurs on burnt over areas. In the Pelly Mountain region broadleafed trees are generally scarce, except for warmer alluvial areas. Alpine fir is the dominant tree of the sub-alpine zone here as on the other areas of the Ross River lands.

On the Pelly and Macmillan Plateaus open black spruce forests, with occasional stands of lodgepole pine dominate. Most of this area is above 900 meters. Nearly all of it is between 1,200 and 1,700 meters. (Treeline throughout the region lies between 1,350 and 1,500 meters elevation.) White spruce, occasionally mixed with aspen or lodgepole pine, occur on the warmer, better drained sites (Oswald and Senyk, 1977).

In the mountainous headwaters region of the Macmillan, Ross, and Pelly Rivers, a large portion of the terrain is higher than 1,500 meters in elevation, i.e. above the treeline. This area, on the western slopes of the Selwyn Mountains receives more precipitation than other parts of the Ross River lands. Open stands of white spruce occur on better drained sites and open stands of black spruce occur on the more poorly drained sites.

THE ANIMALS

The animals of the Ross River lands, which are the resource base for the Ross River Indian Band's hunting, fishing, and trapping economy, are commonly found throughout the Yukon

Territory. The Yukon has quite a diverse fauna. Yukon animals are a blend of the species generally found across the forested regions of the Canadian north (moose, black bear, beaver, lynx, porcupine, wolverine, etc.) plus additional complements of animals usually associated with the western mountains (mountain sheep, hoary marmot or ground hog, as it is locally called, grizzly bear, etc.), the far north (arctic ground squirrel and the inconnu, a species of whitefish), and the Pacific drainages (chum salmon and king salmon).

Table 2.2 lists the larger species of mammals, birds, and fish that occur on the Ross River lands, most of which play a role in the Ross River Indian hunting, trapping, and fishing economy. Few formal biological studies of fish and wildlife have been done in the Ross River region, although some preliminary investigations of the big game mammals have been done by the Yukon Territorial Government for game management purposes and to obtain baseline data for an assessment of the environmental impacts of the Macmillan Pass/Howards Pass mining proposals; and some baseline data collections have also been done for the fur mammals and fish. Rather than compile a detailed description of the major animal species based on what is known about the biology of these species from other areas, we will concentrate on what is known about the major food and fur animal resource species on the Ross River lands. In particular, we will concentrate on the regular patterns of change in animal populations due to annual migrations and animal population cycles.

TABLE 2.1 Animal Resource Species in the Ross River Region. (Based primarily on Banfield, 1974; Belrose, 1976; Elson, 1974; Godfrey, 1966; McPhail and Lindsey, 1970; Rand, 1975; Scott and Crossman, 1973; and Youngman, 1975.)

MAMMALS	
Ungulates	
-Moose	*Alces alces gigas /andersoni*
-Caribou	*Rangifer tarandus caribou*
-Dall Sheep	*Ovis dalli dalli /stonei*
-Mountain Goat	*Oreamnos americanus*
Bears	
-Black Bear	*Ursus americanus*
-Grizzly Bear	*U. arctos*
Fur Mammals	
-Beaver	*Castor canadensis*
-Lynx	*Lynx lynx*
-Marten	*Martes americana*
-Mink	*Mustela vison*
-Weasel	*M. erminea*
-Otter	*Lontra canadensis*
-Wolverine	*Gulo gulo*
-Red Fox	*Vulpes vulpes*
-Wolf	*Canis lupus*
-Coyote	*C. latrans*
-Muskrat	*Ondatra zibethicus*
-Red Squirrel	*Tamiasciurus hudsonicus*
Small Game Mammals	
-Hoary Marmot (Ground Hog)	*Marmota caligata*
-Arctic Ground Squirrel (Gopher)	*Spermophilus parryii*
-Porcupine	*Erethizon dorsatum*
-Snowshoe Hare (Rabbit)	*Lepus americanus*
BIRDS	
Upland Game Birds	
-Blue Grouse	*Dendragapus obscurus*
-Spruce Grouse	*Canachites canadensis*
-Ruffed Grouse	*Bonasa umbellus*
-Sharp-tailed Grouse	*Pedioecetes phasianellus*
-Willow Ptarmigan	*Lagopus lagopus*
-Rock Ptarmigan	*L. mutus*
-White-tailed Ptarmigan	*L. leucurus*

Waterfowl	
-Lesser Canada Goose	Branta canadensis parvipes
-Lesser Snow Goose (M)	Anser caerulescens caerulescens
-White Fronted Goose (M)	A. albifrons
-Sandhill Crane (M)	Grus canadensis
-Whistling Swan (M)	Olor columbianus
-Mallard	Anas platyrhynchos
-Pintail	A. acuta
-Green-winged Teal	A. carolinensis
-American Widgeon	Mareca americana
-Shoveler	Spatula clypeata
-Canvasback	Aythya valisineria
-Greater Scaup	A. marila
-Lesser Scaup	A. affinis
-Common Goldeneye	Bucephala clangula
-Barrow's Goldeneye	B. islandica
-Bufflehead	B. albeola
-Harlequin Duck	Histrionicus histrionicus
-White-winged Scooter	Melanitta deglandi
-Surf Scoter	M. perspicillata
-Common Merganser	Mergus merganser
-Red-breasted Merganser	M. serrator

FISH

-Lake Trout	Salvelinus namaycush
-Broad Whitefish	Coregonus nasus
-Lake Whitefish	C. clupeaformis
-Round Whitefish	Prosopium cylindraceum
-Inconnu	Stenodus leucichthys
-Grayling	Thymallus arcticus
-Pike (Jackfish)	Esox lucius
-Longnose Sucker	Catostomus catostomus
-White Sucker	C. Commersoni
-Burbot (Ling Cod)	Lota lota
-Chinook Salmon (King Salmon)	Oncorhyncus tshawytscha
-Chum Salmon (Dog Salmon)	O. keta

M--For the most part, only birds which breed in the area are included in the table (Godfrey, 1966). The exceptions are a few species of larger birds which migrate through the area and which have played a role in the Ross River hunting economy. These have been annotated with an 'M' in the table.

MAMMALS

Ungulates

The Ross River lands are particularly rich in their diversity of the ungulate species. Moose, woodland caribou, moutain goat, and Dall's sheep all occur on these lands.

Goats and Sheep

Mountain goats are at the northern limit of their range within the Selwyn Mountains (Banfield, 1974 and Youngman, 1975). They appear to be anything but abundant on the Ross River lands. They were not encountered by Rand (1945) during his survey of the mammals along the Canol Road in 1944; and Youngman cites only two records on the Ross River lands, both from the mountains north of Frances Lake. During a helicopter survey of goats and sheep in game management zones between the Robert Campbell Highway and the Yukon-N.W.T. boundary in the summer of 1981, Netti (n.d.) located only 9 goats: 7 in the Itsi Range and two in the Selwyn Mountains to the south.

Both the white and the dark, but variable coloured sub-species of Dall's sheep are found on the Ross River lands (Youngman, 1975). Banfield also lists the intergrade 'saddle-backed' or 'Fannin's' variety as occuring in the Pelly Mountains. The saddle-backed intergrade was reported as fairly common in the Rose-Lapie River and upper Ross River areas by Rand (1945). Generally, the white variety's distribution within the Ross River lands is on the more northerly mountains and the darker varieties on the mountains south of the Pelly River, although Fannin's sheep have also been seen on Tay Mountain north of the Pelly (Stelfox, 1967).

During Netti's (n.d.) investigation, no sheep were seen on lands to the east of the Canol Road. Four or five groups of sheep were seen on high land to the west of the Road, with the largest concentration (62) in the management zone containing Keele Peak, adjacent to Macmillan Pass.

Caribou

Several different herds of woodland caribou are also found on the Ross River lands. The exact demarcation of discrete herds is subject to dispute, as an understanding of the biology of these caribou is still fragmentary. Recent studies by the Yukon Territorial Government Department of Renewable Resources and others has lead to a preliminary understanding of the movements and habitat use of two of the main herds in the area, the Redstone Herd and the Fortin-Finlay Herd.

The Redstone Herd, which is thought to number between 5,000 and 10,000 animals ranges over middle sections of the Mackenzie Mountains, wintering in the spruce forests along the Keele and Redstone River of the N.W.T. and moving west into the Mackenzie Mountains along the Yukon-N.W.T. boundary in spring and summer. Two other herds, believed to be discrete groups, the Bonnet Plume Herd and the Nahanni Herd, occupy the more northern and southern sections of the Mackenzie Mountains (Anon., 1982) and apparently do not contribute to the caribou populations on the Ross River lands. The winter ranges of the Mackenzie Mountain caribou are on the eastern slopes of the mountains in the N.W.T. The Redstone Caribou move out of the high snowfall areas in the Macmillan Pass/Howards Pass mountains

to winter ranges within the snow shadow of the Selwyn and Mac-Kenzie Mountains, where snow depths are relatively shallow, ranging from 1 inch to 1 foot (Simmons, 1970). They return to their calving grounds, on the heights of land of the Mackenzie Mountains in the area of Macmillan Pass and on the headwaters of the Keele and Natla Rivers in the N.W.T., by mid-May (Farnell and Nette, 1981), following the corridors of the Natla, Keele, and Ekwi River Valleys (Archibald, 1974). In summer, the caribou disperse throughout the alpine regions of the boundary mountains (Farnell and Nette, 1981).

While the Redstone Herd is shared between the Yukon and the N.W.T., evidence suggests that the Fortin-Finlay Herd, estimated at between 2,000 and 2,500 caribou, is limited to the Yukon. Movements of this group was studied by Farnell in 1982 using radio telemetry tracking. The survey (Farnell, 1982) and local knowledge suggests that this herd's range-use pattern is very traditional and well established. The herd's winter range lies in the lee of the Pelly Mountains, which avoids heavy snowfall areas, between Hoole River and Wolverine Lake. The peak time for calving is the end of May to early June. By this time the caribou have moved into dense spruce forest habitat, primarily east in the highlands in the headwaters of the Pelly River and the Frances Lake drainages. Several of the tagged caribou moved south, across the Campbell Highway onto the northern Slopes of the Pelly Mountains and a few moved north to the plateau area near the Ross River and to the Otter Lake area. In early June there is a post-calving dispersal to

spruce forest and alpine habitat in the St. Cyr Range of the Pelly Mountains and the headwaters area of the Pelly River. In early fall, as the rutting season starts, the migrations reverse and the caribou begin to aggregate again along the lower elevations of the north flanks of the St. Cyr range and in the Pelly River highlands north of McPherson Lake.

Farnell also identified two other wintering groups during the study: one near Tay Lake, to the west of the Ross River Valley, and the other near Lewis Lake, wintering on the lands to the east of the Valley.

Other caribou occur in the area, but details are lacking at this writing. A report by Reid, Crowthers and Partners (1982) mentions a Pelly Mountain Herd of about 2,000 animals, as well as the Fortin-Finlay Herd, and a Big Winter Herd north of Wolf Lake. Fuller (1956-7) mentions a MacMillan Plateau herd of 2,000 "strongly migratory" caribou which summers on the western slopes of the Hess Mountains in the headwaters of the Macmillan River, and apparently winters in the lake country at the headwaters of the Tay River and its tributaries. Farnell and Nette (1981) mention as Anvil and South Fork Range herd which is abundant on the lands to the west of the Ross River, whose wintering areas are not presently known. It is possible that the latter two groups are part of the herd identified by Farnell in 1982 as wintering in the Tay Lake area.

Moose

Moose presently occur throughout the Ross River lands.

Rand (1945) mentioned that during his 1945 examination of the mammals of the Canol Road area, moose were "fairly common over the whole area from the lowest valleys up to the willows above timberline." Moose may be relatively newcomers into this area of the Yukon. Rand cites a comment by Mr. Drury (of the Taylor and Drury Fur Trading Company) that, according to some of the area's "oldtimers", there were no moose in the area prior to 1900.

Moose movements and habitat use in the area are imprecisely known. Several recent studies by the Yukon Territorial Government's Department of Renewable Resources have looked at moose distribution in the area between the Pelly Mountains and the Selwyn Mountains during the post-rutting period in the fall and during the late winter (Farnell and Nette, 1981; Markel and Larsen, N.D.).

During the late fall, most moose are located at elevations between 4,000 and 5,000 feet in willow shrub and birch habitat near the treeline, although some of the moose utilize river valley and boreal forest habitat at lower elevations. Moose densities are highest to the north and east, especially in the more mountainous headwaters areas of the major rivers. Areas adjacent to the lower Ross River Valley, on the other hand, have very sparce populations of moose at this time of the year.

During late winter, most of the moose move to forests at elevations below 4,000 feet, and the areas of greatest density become reversed from the fall. Moose concentrations are highest on lands near the lower Ross River and the Pelly, and lowest

in the headwaters region. It appears that moose, like the caribou, move out of the high snowfall areas on the western slopes of the mountains during the winter. What is not clear is the direction that the moose move. Markel and Larsen (N.D.) felt that the seasonal shift in moose densities could be interpreted in two ways: a northeast movement of moose out of the Ross River lands into the N.W.T. and a corresponding northward move of animals south of the Pelly River; and, alternatively, a southwest move of moose from the highlands near the N.W.T. boundary to the lower Ross River drainage area.

Other Mammals

Other than Rand's 1944 survey and a study of fur-bearing mammals along the North Canol-Macmillan Pass corridor (Slough 1983), there appears to have been little if any investigations done on the non-ungulate mammals of the Ross River lands.

Two features characterize the ecology of Yukon wildlife, and the ecology of the Ross River lands within it, and distinguish the Territory from other regions within the Canadian transcontinental sub-arctic forest. One of the features is the mountains with their relatively low elevation treeline. This produces two major plant communities which are separated by elevation, the forest and the alpine scrub and tundra zone. Some of the mammals are limited to one zone or the other; other species, such as caribou, fit the different qualities of the two zones into their life cycles and make use of each zone at different times of the year.

The other distinguishing feature is some of the animals themselves. The arctic ground squirrel, for one, is limited to lands north of the 60th parallel and north of Hudson's Bay, and a small area of northern British Columbia. On the Ross River lands they occur from the lowlands to the tundra zone. Their colonies are relatively common, but have an irregular distribution (Rand, 1945). Another distinguishing faunal element is the hoary marmot, or ground hog as it is locally known. The range of the ground hog is limited to the alpine tundra zone within the Cordillera Mountains.

Other elements of the alpine tundra animal community include the mountain goats, Dall sheep, and grizzly bear. Although grizzly bears range into the boreal forest zone on the Ross River lands, they are more common within the tundra zone (Rand, 1945), where they are known to influence plant communities through their feeding activities by broadcasting the seeds of the plants they eat (Shelford, 1963).

Another difference is the population densities of the aquatic fur mammals. The aquatic fur mammals, beaver and muskrat, occur on streams and marshes, but do not have the abundance within the mountainous country that they have in many of the marsh, low elevation areas of the sub-arctic forests in other areas of the Canadian north.

The species composition of the boreal forest zone is similar to that of other forested regions of the Canadian subarctic, with the exception of the presence of arctic ground squirrels and the lack of abundance of the aquatic fur mammals.

Black bear have been common in the wooded country adjacent to the Canol Road (Rand, 1945). Snowshoe hare are periodically abundant, during the peak periods of their 6-13 year population cycle. Based on what is known from other areas, the carnivores that feed on the hare (lynx, etc.) also go through a population cycle which is slightly out of phase with the hare's.

Finally, judging from the Ross River group trapline returns, the carnivorous fur bearers (marten, red fox, etc.) are relatively common to abundant on the Ross River lands.

THE FISHES

Salmon

Another distinguishing element of the animals of the Yukon, and the Ross River lands within it, is the presence of Pacific salmon. Two species of salmon spawn in the Pelly drainage, chinook and chum salmon. Chums are known to migrate as far as the Macmillan River, but only the odd ones enter the Pelly River (Pat Milligan, DFO, pers. com.). Both species are at the limit of their migrations within the Yukon River drainage as they enter spawning grounds on the Pelly and Macmillan Rivers. Within the area of the Ross River lands, salmon spawning is known to occur on the Pelly, Lapie, Ross, Hoole, Woodside, Macmillan, Riddell, South Macmillan, Big Salmon, North Big Salmon, Nisutline, Rose, McConnell, and McNeil Rivers (Walker, 1976) and some of their lesser tributaries (Elson, 1974).

Information on Pelly salmon beyond that cited above is very scanty. Spawning estimates are limited to aerial surveys done

in the last few years by the Alaskan Department of Fish and Game and ground surveys by the Department of Fisheries and Oceans in 1982. Approximately 80 chinook spawners were observed by DFO in the Ross River in 1982; figures for the Pelly are not available, but numbers were quite low (P. Milligan, pers. com.).

Two baseline studies of chinook salmon rearing habitats along the North Canol Road were done in 1981 and 1982 (Davies and Shepard, 1981; Environcon Ltd., 1982). The chinook spawn in the area during the late summer and fall, eggs hatch during the following spring, and the juveniles spend up to two years rearing in the Yukon River system before entering the sea. Seven rearing streams were identified in the North Canol area (Davies and Shepard, 1981): Tenas Creek, Tay Creek, Blue Creek, Pup Creek, Twin Creek #1, Riddell Creek, and Boulder Creek. The investigators, however, considered it "likely that chinook may be found rearing in most of the tributaries to the Ross River that cross the North Canol Road" and that the "same situation probably exists for the South Macmillan tributaries, at least as far upstream as Boulder Creek."

The Environcon Ltd. study looked at juvenile overwintering habitat in the same area from the point of view of road construction timing. Many of the rearing streams identified by Davies and Shepard had no flows in reaches adjacent to the Road during early March. The study concluded that construction timed to this period could reduce impacts to juvenile salmon, but that the present scanty information about the habitat usage of

salmon in this area necessitated additional investigation if the impacts of road construction were to be minimized.

Other Fishes

Few investigations have been conducted on the other fish species. Consequently, biological information about the fish stocks in this area is very limited. A review of the existing inventory information and a survey of fish species in the Pelly, Ross, and Macmillan Rivers was done by Elson (1974) (see Table 2.2). Species of larger fish that occur in the area's rivers and lakes include lake trout, broad whitefish, lake whitefish, round whitefish, inconnu, grayling, jackfish (or pike), longnose sucker, white sucker, and ling cod (or burbot).

Compared to many other areas of the Yukon, the Ross River region has an abundance of smaller lakes. Many of these are concentrated in the flats of the lower Ross River Valley and the headwaters area of the Pelly River. A number of medium-sized lakes, such as Frances Lake, the Pelly Lakes, Jackfish Lake, Finlayson Lake, Sheldon Lake, etc., are also scattered throughout the region. Although no biological studies on the fisheries productivity of these lakes appear to have been done, judging from local reports of the domestic fisheries they support, their fisheries productivity is relatively high for northern lakes.

THE BIRDS

Upland Game Birds

A variety of grouse and ptarmigan are known or though to breed on the Ross River lands. These include the blue grouse,

ruffed grouse, sharp-tailed grouse, willow ptarmigan, rock ptarmigan, and white-tailed ptarmigan. The blue grouse is a permanent resident, at the northern limit of its breeding range within the Ross River lands. Habitat use by this species varies seasonally. Breeding takes place on open mountain slopes, burnt forests, and near the treeline. It inhabits coniferous forests during the winter, where it feeds primarily on spruce needles. The spruce grouse is distributed throughout the Yukon, (except for the far north) where it is a permanent resident of the boreal woodland. The Yukon distribution of the ruffed grouse is similar to that of the spruce grouse. It is, however, partial to deciduous and mixed growth woodland. It is also a permanent resident, but its populations undergo periodic fluctuations. Populations of sharp-tailed grouse also undergo cyclic fluctuations. The habitat of this species includes burnt areas and forest openings.

All three North American species of ptarmigan occur on the Ross River lands. The white-tailed ptarmigan is limited to mountainous areas and the southern and central Yukon. Breeding takes place in alpine highlands with some individuals descending into the forests for the winter. Rock ptarmigan are also alpine zone breeders; they descent to valley bottoms and lowlands for the winter. Willow ptarmigan frequent willow meadows and stream edge at higher elevations during the summer and similar habitat at lower elevations during the winter.

Waterfowl

A variety of duck species and the Canada goose breed on the Ross River lands (Table 2.2). The area, however, is not part of any of the major North American migratory corridors (Belrose, 1976), although populations of Canada geese, white fronted geese, and lesser snow geese breeding in Alaska and, in the case of the lesser snow geese, in Siberia migrate through the southern areas of the region. Ducks breeding in central Yukon and Alaska also migrate through the area. Both the Pelly Mountains and Frances Lake areas are part of the migratory flyway for some sandhill cranes populations (Theberge et al., 1980).

Frances Lake is a major staging grounds within the Yukon for swans, geese and diving ducks (Theberge et al., 1980). Some of the diving ducks even winter over on ice free waters of the East Arm of Frances Lake. McPherson and Tillie Lakes, north of Frances Lake, are important nesting sites for waterfowl. The Pelly Mountains are also a significant nesting area for ducks and geese.

CHAPTER 3

THE SETTING, PART II: THE PEOPLE TO THE 1960's

THE PEOPLE

The Ross River lands are more than physical geography, forests and animal populations. They are also a human homeland, with an ancient history of Indian occupancy. To complete our discussion of the setting for this report we need to add an historical dimension and people the landscape. There are some severe difficulties in this. Our present understanding of the history is quite fragmented. On the one hand, formal archaeological studies in the lowlands of the southeast Yukon appear to be lacking (Clark, 1981). And on the other, direct white contact with Pelly and Ross River drainage area Indians came at quite a late date compared to other areas of the subarctic. The first fur trade posts were established in the 1840's and only operated for a few years before being abandoned. The main period of fur trade posts in the Ross River area dates from the twentieth century. It is important to keep in mind that it is the record which is fragmented, not the historical Indian occupancy.

According to evidence from a variety of scientific disciplines, a large part of the Yukon River Basin was ice-free during the last glaciation and an ice-free corridor from the unglaciated areas connected the central North American Plains as the major Cordillera and Canadian Shield Ice Sheets melted apart, perhaps 10,000 years ago. Although the Pelly River Valley/Tintina Trench and Frances Lake Corridor is thought to be one of three possible access routes to southern North

America from the Yukon Basin Refugium (Cruikshank, 1974), direct evidence for this is presently lacking, along with other information on Indian life in the area before direct contact was made with Europeans through the fur trade.

The available record of historic human occupancy of the Ross River area begins with the entrance of Hudson's Bay Company fur trader/explorers into the area in the 1840's. The upper Yukon River Basin was one of the last areas of subarctic North America to be explored by Europeans. As a consequence there was a relatively brief time period between the first direct fur trade contacts and the ingress of other interests: missionaries, scientist/explorers, Klondikers and other miners, etc. The impacts of economic and social change and the adaptations of the Indian inhabitants in the upper Yukon Basin took place over a shorter period of time than in other areas of the subarctic.

The entrance of the HBC followed the merger with the Northwest Company in 1821 and a focus by the new organization to enlarge its operations into the country west of the Mackenzie River. In the late 1830's the HBC concluded an arrangement with the Russian American company for the lease of trading rights to the Alaska Panhandle. Competition from this source was thus largely eliminated and the Company turned its attention to the lands to the north. In 1840, Robert Campbell was given the job of exploring the headwaters of the Liard River and crossing the height of land into the then unknown drainage basin north of the Liard (Wright, 1976).

From Campbell's accounts we know that the Pelly River Indians had already obtained a variety of European trade goods prior to direct contact. These goods are believed to have been obtained from traditional trading networks between Yukon Basin Athabaskan Indians and Tlingit and perhaps Mackenzie River Indian traders (Karamanski, 1983). An intertribal trade network existed in areas of the Yukon before the entrance of Europeans and their trade goods into the area, through which the Tlingit traded seal oil, shell ornaments, dried fish and other maritime products in exchange for hides and furs, moccasins, and copper (Coates, 1982). With the Russians on the coast, the Tlingit, and through them, the Tahltans, were able to add European manufactured goods to their established trade networks and became middle-men in the fur trade. The HBC traders were seen by the Tlingit as interlopers in the established Indian trade networks.

It is not known, however, if the trade domination of the Tlingit included the southeastern Yukon prior to the entrance of European goods, although it is likely (Tanner, 1965). In fact, there is virtually no information about the nature of Indian society and culture on the Upper Pelly prior to direct involvement with white fur traders. Even the early post-contact information we have is scanty. Our ideas of the nature of pre-contact Indian society in this area is largely based on conjecture from what is know about other Athabaskan groups.

The Upper Pelly Indians probably had an aboriginal hunter-gatherer band society, with extended family groups or bands scattered throughout the groups' territory. Bands would occupy different

types of habitat seasonally according to their system of use of the available animal resources on their territory. These groups, on the Ross River lands, contrasted with some of the western and northern Athabaskan Peoples in not having access to concentrated animal resources. In the north, the Kutchin and the Han had access to large herds of caribou, while the Peoples of the western Yukon had access to relatively large populations of salmon. Larger population concentrations were required seasonally to operate caribou surrounds and salmon traps.

Groups such as the Ross River Indians, on the other hand, had a greater similarity to Athabaskan and Algonkin societies in the central Canadian subarctic. They depended on moose, 'woodland' caribou, and a variety of other dispersed animal resources and consequently required relatively low population densities and a more loosely organized band society to operate their hunter-gatherer economies (Denniston, 1966; Tanner, 1965). A general dispersal was required, due to the dispersed nature of the food resources on their traditional lands, except for particular times of year, such as the late summer and fall, when groups could amalgamate to hunt more concentrated resources, such as moose, caribou, and sheep on their upland ranges.

Robert Campbell and his men, including his Indian companions Lapie, Kitza, and Hoole, penetrated into the upper Liard River drainage in 1840 and crossed over the height of land to the Pelly, after following Finlayson Creek and Finlayson Lake north from

Frances Lake. They were elated by the recognition that they had crossed into a new (for the Europeans) river drainage area and potential transportation system.

An early controversy surrounded the unexplored Pelly River. Campbell at first felt that the Pelly was a connecting route to the Colville River, draining into the Beaufort Sea. HBC Governor Sir George Simpson, on the other hand, felt that the Pelly flowed to the Pacific and was anxious to develop its trade potential and expand to the coast north of the Alaska Panhandle. He ordered Campbell to establish a trading post at Frances Lake and then explore the River to the coast, unaware of what a monumental task this would be. The true nature of the Pelly River was debated for another 10 years (Karamanski, 1983). There was no sense, at the time, of the enormous size of the Alaskan Peninsula.

Campbell and his men returned to Frances Lake in 1842 and established a trading post. They crossed over again to the Pelly in the spring of 1843 and then descended the river by canoe to its junction with the Yukon River. Campbell's description of the upper Pelly include valuable observations on the beauty of the country, its abundance of wildlife, and the first encounters of Pelly River Indians with whites:

> As we descended the river it increased in size, and the scenery presented a succession of picturesque landscapes. Our first obstruction was a bad rapid (Hoole's) about 25 miles from Pelly Banks; where we had to make a portage, then for about 90 miles we had a fine flowing current till we came to another rapid ('Desrivieres' after one of the French Canadians with me) between 2 high walls of rock, about 1/4 mile long: strong current which we ran. Wright from whom this passage is quoted, notes "This rapid on present-day maps is

named Hoole Canyon. (The rapid that Campbell called Hoole's is today unnamed.") Ranges of mountains flanked us on both sides, those on the right were well-wooded, while on the left the hills were covered with grass, only the ravines being wooded. (Wright notes "This must be an error in recollection or in transcription: the right and left sides should be reversed.") Moose and bear we often saw as we passed along, and at points where the precipice rose abruptly from the water's edge we frequently observed the 'Big Horn' or wild sheep above us. These were very keen-sighted and quick to take alarm and when once started would file off swiftly and gracefully. When we chance to get one we found it splendid eating. On the 2nd day we saw 2 Indians with whom we had a smoke and talk. Next day as we rounded a point, we surprised an Indian family camped on the bank. The wife and children ran off and hid, but they came back when they found we were friendly. They belong to the 'Knife' tribe of Indians and had never seen a white man before. We had a talk and smoke with them and after eating we gave them some small presents and went on our way, leaving them apparently well pleased at the meeting." (from Robert Campbell's 'Two Journals' 1808-1853: quoted in Wright, 1976).

Campbell's and other explorers' journals (Dawson, 1888; Pike 1986) do not provide much information about the lives of Ross River area Indians. They contain only infrequent references to encounters with Indian People on the upper Liard and Pelly. The impression one gains is of a land with few native inhabitants. To draw this type of conclusion, however, would be grossly misleading. The explorers travelled the river system during the summer months. The Indian pattern, in following the movements of their main animal resources, was one of changes in altitude, moving between river valleys in winter and alpine pasture lands in the warm months. This perhaps explains why there were so few descriptions in these journals of encounters with the native inhabitants of the area (Cruikshank, 1974).

A short lived trading post was opened at Pelly Banks in 1845 (Wright, 1976). For several years the Company didn't expand its trading operations beyond Pelly Banks, although summer trips were

made down the river for hunting and general reconnaissance. In 1848 Campbell set out to establish a fort at the confluence of the Pelly and the Yukon Rivers, Fort Selkirk. In 1852, Fort Selkirk was pillaged by the Tlingit, who resented the Company's interfering with their activities as middle-men between the Upper Yukon and Pelly Indians and the coastal fur traders.

In fact, the Tlingit trade was more dependable for the Indians, being close to a reliable source of goods from the Pacific and, as well, more profitable for the HBC than the Pelly trading posts. Campbell's trade goods were transported overland from the Atlantic coast by canoe brigades. The trade cycle of the Hudson's Bay Company's Pelly River posts took a full seven years between the shipment of trade goods from England and the return receipt of Pelly River furs (Coates, 1982). Since the Company ultimately reaped the benefits of the Tlingit trade, in any event, through their lease of coastal Alaska Panhandle trading rights from the Russians, they decided to abandon the direct trade in the southern Yukon. Instead, their focus turned north, to the more profitable trade at Fort Youcan which had been established in 1847 on the Yukon River's junction with the Porcupine, in present day Alaska.

The accidental burning of the Pelly Banks post in the winter of 1850 signaled the end of direct trade on the upper Pelly until the turn of the twentieth century. Fort Frances, on Frances Lake, which was primarily a staging post on the transportation route between the Liard and the Pelly, was abandoned in the spring of 1851. The Tlingit assault on Fort Selkirk, in the following year, signalled the HBC's complete retreat from the southern Yukon.

With the abandonment of direct trade in the southern Yukon,

there is a gap of several important decades in the historical record for the area. The Company expected that the upper Pelly River Indians would switch their trading activities to other posts, such as Fort Halkett on the Liard and Fort Norman on the Mackenzie. This apparently did happen, as there are periodic references in the journals of more distant trading posts, of the arrival of Frances Lake and upper Pelly Indians (Wright, 1976). Dawson (1886), for example, notes that Pelly Indians sometimes travelled to the Dease Lake Post to trade. It is also likely that the trade during this period continued through Tlingit, and Tahltan, middle-men. Honigmann (1964) was told by his Liard River Kaska informants that Pelly River Indians sometimes travelled south to the Watson Lake area to trade with Tahltan middle-men, who carried trade goods they had gotten from the Tlingit. Upper Laird and Frances Lake Kaska also occassionally went to the Pelly to fish salmon.

One of the most puzzling episodes that is missing from the historical record is the question of what happened to the Pelly or "Knife" Indians originally encountered by Robert Campbell on the upper Pelly River. This question has important implications today. Many anthropologists' maps of Yukon Indians show the Southern Tutchone on the upper Pelly drainage area and the Kaska on the upper Liard River and Frances Lake area. This contrasts greatly with the Ross River Indian People's sense of themselves and their identity as Kaska Indians.

The maps of historic Indian land occupancy that accompanies articles about Yukon Indians in the Smithsonian Institution's recent and important volume on the Subarctic Indians (Helm, 1981) exhibit some of the confusion that clouds the issue. The nineteenth century Kaska territory in the Yukon is shown as being limited to the upper Liard drainage (Honigmann, 1981). The historic territory of the Mountain Indians is shown as the lands to the east of the Yukon/N.W.T. boundary (Gillespie, 1981). Finally, a map of the twentieth century tribal territory of the Tutchone shows the Tutchone territory extending east along the Pelly drainage to Ross River (McClellan, 1981). In between these areas on the maps is the upper Pelly and Ross River drainage area. Although the maps in the articles discussing the Kaska, Tutchone, and Mountain Indian Peoples are silent about the Indians of these lands, the general map of tribal distribution in the western mountain area includes the upper Pelly and Ross River within the Kaska Indian cultural area (McClellan and Denniston, 1981).

This confusion stems from a series of conflicts and battles between the upper Pelly and Frances Lake Indian People and the N.W.T. Mountain Indians in the middle 1800's, which culminated, in 1886, in the massacre of a group of Pelly Indians by the Mountain Indians near Macmillan Pass, at the headwaters of the Ross River (Gillespie, 1981; MacNeish, 1957). Gillespie cites a number of fur traders' accounts of these conflicts and, as well, a period of starvation among the Mountain Indians:

> "1829 Hudson's Bay Co. encourages peace between 'Goat Indians' (Mountain Indians whose traditional territory lay on the eastern slopes of the Mackenzie Mountains between

Macmillan Pass and the Yukon/B.C boundary) and Touetchoetinne' (Kaska speakers near Frances Lake)."

"1830 Mountain Indians at Good Hope report war in mountains."

"1835 Mountain Indians at Fort Norman report wars in mountains in past two years."

"1835 -36 Mountain Indians report war with other Indians in the mountains in 1834."

"1843 Over 50 (Indians) die at Fort Good Hope of starvation and 25 at Fort Norman in 1842."

"1886 Last war in the Mackenzie Mountains; survivor of Pelly Indians join Mountain Indians of Fort Norman."

The HBC traders' experience at Frances Lake in the early 1840's had been one of extreme hardship and periodic starvation. The starvation and relative scarcity of game was not limited to the Frances Lake area. It was also plaguing the entire Mackenzie district. At Fort Good Hope 52 Indians starved to death during the winter of 1841/42 and others were driven to the extremes of canabalism (Karamanski, 1983). In the early 1840's the hare-lynx population cycle was at one of its periodic lows in the Mackenzie and Western districts (Elton and Nicholson, 1942). This, however, only goes part way toward explaining the famine. Hare are an important resource during the periods of their abundance, but the main food resource in the southeast Yukon and for the Indians of the eastern Mackenzie Mountains were the ungulates. We can therefore speculate that caribou and moose populations were also low at the time. The Hudson's Bay Company, at the time, had a policy of self-sufficiency for its distant posts, to reduce the size of incoming cargoes (Innes, 1962). Some of the posts were more important as meat supply provisioners than for their fur production.

A decline in general resource animal populations in the Mackenzie may have been caused, in part, by the increased hunting pressures associated with the new fur trade.

We can only speculate about the reasons for these conflicts. However, with a depletion of animal resources in the N.W.T. it appears that the Mountain Indians crossed over the Mackenzie Mountains into the Yukon to trap for furs (Gillespie, 1981) and possibly to hunt moose and caribou. It is likely that the uplands of the Selwyns and Mackenzie Mountains were used by both the Ross River area's Indians and the N W T - Mountain Indians for their fall dried-meat hunts. Social relations existed between the two groups. They had partnerships which consisted of gift exchanges and mutual aid (Field's letter of 1913, refered to by Tanner, 1965). There is a great similarity in the languages of the Pelly, Laird, and the Mountain Indians (MacNeish, 1957). If game was scarce, however, conflicts could have arisen. With the Hudson's Bay Company pull-out of the southern Yukon, the Mountain Indians might have been in the superior position of being closer to a more regular supply of guns and ammunition.

The primary source of information about the 1886 massacre comes from the ethnographic account of the fur trader Poole Field (MacNeish, 1957). Field claimed that the Indians who occupied the upper Pelly during the early contact with the fur trade had almost disappeared. His account was based on the story of an old Pelly Indian woman. In the fall of 1886 the Pelly Bands travelled to the headwaters area of the Ross and South MacMillan Rivers for

their annual dried-meat hunt, where they had a friendly meeting with a group of Mackenzie Indians. The rest of the Mackenzie band were expected to arrive the next day. The old woman and her husband, not trusting the strangers, decided to camp further down the Ross River valley:

> "Next day about sunrise, the old woman said, they heard shooting at the camp they had left which kept up all day at intervals (the Indians at that time had muzzle loading rifles), which made them believe they were shooting at each other instead of just saluting each other which was the custom when two strange tribes met. So they came on down the river to the mouth where they stayed that winter waiting for some of the Pelly's to return. Three of their dogs returned but none of the Indians which made them pretty sure that there had been trouble of some kind to have kept them all from returning. So they went up the Pelly and over to the Liard, where they met with a tribe of Indians called the Centre Indians with whom they were friends and had met before and told them what had happened and joined the tribe. Some time after some of the Centre Indians made a trip to Ft. Liard, and heard that some of the Pelly were still alive and were living with Indians called the Mountain Indians and then trading at Ft. Norman on the Mackenzie" (MacNeish, 1957).

This account is the basis for the speculations that the middle 1800's Indian inhabitants of the upper Pelly had subsequently been replaced by a group of Kaska Indians from the upper Liard, (cf also McDonnell, 1975: 379-386). Field's report, however, contrasts with Warfield Pike's encounter with a small band of Pelly Indians in 1887, the year after the 'massacre', on the west branch of Frances Lake (Pike, 1896). According to Pike's Dease Lake Kaska interpreter, they had left the main band of the Pelly's in the fall and passed the winter between Frances

Lake and Pelly Lakes.

Glenda Denniston, in 1966, examined the historical record to answer the outsider's question of the place of the Ross River Indians in the network of northern Athabaskan groups (Denniston, 1966). From her examination she concluded it was clear "that the early explorers and traders, including Campbell in 1841, considered the Indians of the lower Pelly River, near its confluence with the Yukon (the Tutchone), to be distinct from those of the upper Pelly River;" and that:

> "...the inhabitants of the upper Pelly were considered by their Kaska neighbors to be basically the same people both before and after the massacre of 1886. This suggests that the linguistic and cultural similarity which can today be observed between the Ross River and western Kaska was not a new phenomenon in the area." (Denniston, 1966)

Patterns of change, shifting of bands within the extremes of their home territories, migrations to new lands during time of game scarcity, and the fission and reformation of hunting groups are part of what makes Athapaskan Indians a distinctive cultural group. It is also what makes them so difficult to fit into the more fixed definitions and structures of Euro-American society. Some of the outsiders confusion about "who the upper Pelly Indian are" comes from the hunting group naming traditions of Athabaskan Indians. Traders and explorers frequently attempted to map the distribution of different hunting groups by asking their neighbours about them. The problem was that the Indian 'political' naming system differed fundamentally from our own. Ours tends to be static and attempts to be universal, while the traditional Athapaskans system was dynamic and relative. Each

group had its own name for themselves and for neighbouring and distant groups. In some situations the names would change, or the names would remain and the groups change. Consequently the names might change over time and the names of distant tribes would differ according to which group you asked. All of this has made the attempts of early explorers and traders to apply fixed names to different Athabaskan groups misleading in many cases (Denniston, 1966).

The whites didn't leave the southern Yukon for long. When they returned it wasn't because of the Yukon's richness in furs, it was for gold. The Ross River area was spared the extremes of the cultural shock of the southwestern Yukon, but some of the incursions of the gold rush spilled over into the southeastern Yukon. In 1874, 1,500 men were prospecting for gold at Dease Lake. Some of those who were unsuccessful expanded their search toward the Liard. As gold production dropped in the Dease fields, some of the miners tried their luck on the headwaters of the Liard and Frances Lake. In 1881 a prospecting party found gold on the Big Salmon River; and in 1882, 2 groups made the first ascent of the Pelly as far as Hoole Canyon. In 1887 some prospectors worked the upper Pelly and possibly the lower Ross River. In 1894 Inspector Charles Constantine of the Northwest Mounted Police was sent to the Yukon on a fact-finding mission. He reported that there were about 500 miners on their way to prospective gold fields from the coast and that many men were working on the Pelly and Stewart Rivers. The Big Salmon and Little Salmon had paid well for the few who had worked them. The reason

that more prospectors hadn't attempted these rivers were their problems of getting supplies that far from the main travel and trade routes (Wright, 1976). A horse trail, cut between Lower Post to Frances Lake and over the divide to the Pelly, routed overland goldrush trackers to the Klondike gold fields along the Pelly (Honigmann, 1964; Cruikshank, 1974).

The miners and the gold rush had a profound effect on Yukon Indian society. The miners were competitors for the same fur and game resources that had been the historic means of livelihood of the Yukon Indian peoples. Many of the miners trapped for furs in the winter to finance their trapping activities, and of course also hunted for food. Their greatest impact, however, was the displacement of the fur trade as the primary basis of the economy. With this displacement and the destruction of the Indian monopoly as suppliers of furs came the elimination of the major source of Indian control over Indian-White contact. During the pre-Klondike era the Indians were in a position of control over technological, social, and economic change in the Yukon through their influence over the fur trade. With the economic shift of the gold rush and the influx of whites involved in economic activities to which the Indians were only peripheral partners, they lost a large part of their means to influence white activities in the area (Coates, 1982).

As the Klondike gold rush collapsed, entrepreneurs began looking for new economic opportunities in the Yukon. Much of the region's surplus of labour and facilities became focused once again on the fur trade. In the early 1900's the Hudson's Bay

Company briefly returned to the upper Pelly. Poole Field and John Lewis opened an HBC trading post at Pelly Banks in 1900, which was sold a few years later to Taylor and Drury, a Whitehorse trading company that was established during the gold rush. Another trading post, built by Tom Smith, was established about the same time, at the confluence of the Ross River with the Pelly, across the River from present day Ross River. This post was also purchased by Taylor and Drury (Cruikshank, 1974; Denniston, 1966).

Ross River was seen by the fur traders as a strategic location, since it was the navigational limit of steamboats on the Pelly and provided good access for goods. The area hadn't had a trading post for fifty years, there was a relative abundance of fur bearing mammals in the region, and fur prices were good (Sharp, 1973). The post at Ross River was well situated to serve the Indians of the area; other groups to the north who hunted and trapped in the Macmillan River country: and, as well, the Indian hunting groups who occupied the lands to the Carmacks area (McDonnell, 1975). The Ross River post became an important Indian centre. By 1915 Anglican Church records note that about 250 Indians were trading at the two posts (Cruikshank, 1974). Visitors to the area were impressed by the general health and vigour of the Ross River and upper Pelly Indian people[1] which contrasted with the condition of some Indian groups in other parts of the north.

At this time a fairly stable pattern of land use existed amongst the different Indian groups trading into the Ross River

and Pelly Banks posts (McDonnell, 1975). The hunting groups became more intensively involved in the fur trade with the proximity of the posts. Most of the year was spent in the bush pursuing the seasonal round of hunting, fishing, and trapping. The increased emphasis on furs in the seasonal round required additional travel due to the dispersed nature of many of the fur resource species. As discussed above, the density of beaver populations on the Ross River area lands are not as great as they are elsewhere in the non-mountainious and swampy lowlands of the Canadian subarctic. Beaver are sedentary and provide a harvest of food as well as furs. Most of the other fur bearers are mobile predators, not generally eaten except under starvation conditions. The need for mobility to trap the non-sedentary fur species led to the incorporation of dog sled technology and its concomitant food requirements.

Hunting groups would come in to the post for two weeks to a month and then return to their traditional area (Sharp, 1973). The different groups trading into the Ross River post during this period, however, remained culturally and economically distinct. Interchanges appear to have been limited to ritual competitive singing and Indian gambling during the few weeks a year that the groups visited the post (McDonnell, 1975). This basic pattern persisted until the 1940's, when the combined effects of the Canol Road and Pipeline (build through the lands near the post during the Second World War), the newly introduced government programs, and the drastic post-war decline in fur prices required another

set of adaptations.

Moose and caribou populations in the southeastern Yukon, which have been the heart of the Ross River Indian people's hunting economy, appear to have gone through a series of ups and downs during the 150 years or so that we have some records for. From a review of the available literature Cruikshank (1974) feels that caribou replaced the moose in the early 1800's, and that the moose returned to the upper Liard and Pelly drainage in the 1870's. In the early years of the twentieth century, Poole Field was told by Indian elders that when they were young there were no moose in the area, only caribou. In the late 1880's Dawson noted that moose were plentiful on the upper Liard and in the 1890's Pike noted that the upper Liard, the Frances Lake area, and the Pelly were among the best moose country in North America. On the other hand, there was an absence of caribou on the Pelly during the visit of the big game hunter and author Charles Sheldon in 1904 and 1905.

The Ross River area became internationally famous in the early part of the twentieth century as a big game sports hunting area. The activities of big game hunters and white trappers put an increased pressure on Indian food and fur resources. Cruikshank (1974) cites a 1908 report by the Canadian government explorer/ geologist Joseph Keele that game was disappearing from the upper Pelly region and that white trappers had been high-grading furs. By 1908, $136,000 in furs had been trapped in the Pelly and Macmillan region over a 5 year period.

There was a major contrast in attitudes between the Indian inhabitants and the white trappers toward the land and its animal

resources. For the white trappers the fur trade was an extension of the gold rush, with its focus on riches. They trapped intensively, cleaned out the fur animals in an area, and then moved onto new grounds. For the Indian inhabitants, the lands and its produce, the animals, were the bank. The accumulation of riches didn't fit into their culture, which requried mobility to tap the interest and, during periodic times of game scarcity, to withdraw some of the capital. For the Indian families food production was the key activity in their economics, furs simply represented a means to purchase tea, flour, sugar, salt, some clothing, and rifles, ammunition, and traps and snare wire. Cruikshank (1974) quotes passages from Keele and Fields' reports that reflected these differences in attitudes toward the management of game and fur resources:

> "The Indians seldom trap a locality out, as they are forced to move their camps often in search of game, and consequently trap lightly over a large area." (Joseph Keele)

> "The Indians are continually on the move, only stopping a few days in one place and cover a large tract of country in one year. Their food supply is taken from such a large country that it leaves plenty to breed from so although an Indian kills a lot of game in the year he does the country very little harm." (Poole Field)

Fur prices during the twentieth Century have gone through some major fluctuations which depended on external market demand and world economics. The post World War I period saw a boom time for the fur trade, which lasted until the economic depression of the 1930's. Fur prices began climbing again during 1934 and reached record levels in the mid-1940's.

The HBC's fur trade monopoly on the upper Yukon had been effectively destroyed during the gold rush, as many of the prospectors doubled as fur traders and part-time trappers. A large company, such as the HBC, was able to moderate some of the price fluctuations. With the emergence of small companies and independent traders, who sold furs at regional auctions, this type of cushion no longer operated and furs varied with the external market conditions. Companies such as Taylor and Drury attempted to establish local monopoly conditions for the trappers by artificially setting high prices for both furs and retail goods and paying for the furs in their own coinage which could only be used at their posts. In this way a profit would be made on the total transaction, but fur prices appeared higher to the trappers drawing them in to particular trading posts (Tanner, 1965). Higher prices at the Taylor and Drury posts on the Pelly drew some of the Indian trappers from the Watson Lake area. The Yukon was somewhat cushioned from the cut-throat competition of independent traders elsewhere in Canada during the fur price boom of the 1920's by a Territorial Ordinance requiring traders to be licenced and to operate out of a place of business (Tanner, 1965).

During the boom of the 1920's and 30's a variety of other posts joined those at Ross River and Pelly Banks. Independent fur buyers opened 3 posts on the Macmillan River, another at Sheldon Lake on the upper Ross River, and still another on Frances Lake. Taylor and Drury opened yet another post on Pelly Lakes and a

small outpost at Rose Point, west of Ross River on the Pelly (MacDonnell, 1975). The opening of trading posts in this variety of locations had some important social consequences for the area's Indian people. The Ross River post no longer operated as a central social meeting ground for the different hunting groups, since they could trade furs closer to their own hunting and trapping areas (McDonnell, 1965).

The value of furs increased sharply throughout the late 1930's and through the Second World War. In 1945, when the major decline in fur prices which lasted through the 1960's, set in, the average price paid for beaver in B.C. was $52. and marten was $63. The market for furs remained depressed throughout the 1950's and 60's, hitting rock bottom during the late '50's when average B.C. beaver prices dropped below $10, lynx as low as $3.25, fox under $1. and marten $5.00. The levels of prices paid for furs during the 1920's and early 1940's didn't become re-established until fairly recently, during the middle 1970's.

From the material available to us it is not clear if the activities of white trappers persisted in the Ross river area during the 1930's. By the middle 1940's, however, the Indians were once again the exclusive fur harvesters (Rand, 1945). But it was not as though the Indian people had became masters of their own house. World War II brought a series of events to the Ross River area, and the southern Yukon as a whole, that "opened the area to a development process which has reduced the quality of life for Indian people and has made them increasingly marginal to the Yukon's economy and social structure" (Cruikshank, 1977).

In April 1942, 3 regiments of American soldiers arrived in Whitehorse by train to begin the construction of the Yukon section of the Alaska Highway. The Ross River people didn't experience the direct impacts of Highway construction, but the Canol Project (Canol = Canadian Oil) brought a series of dislocations to the Ross River Indians similar to those experienced by Indians whose traditional lands lay along the Highway corridor (Cruikshank, 1977). The construction of the Canol Pipeline and Road in 1942-44 saw the influx of 3000 men into the area and the creation of a road transportation link, through the South Canol Road connection with the Alaska Highway, to the outside world (Sharp, 1973).

The documentations of the impacts of the Canol construction on the Ross River Indian people is not as good as for the Alaska Highway. Nonetheless the stories of Ross River Indians elders include disease, pressures on game population, alcoholism and sexual abuse. In 1942, the American Engineering Corp Commanding Officer requested that the Territorial Government grant special hunting privileges for his men and Canadian civilians working on the Highway (Cruikshank, 1977). This led to increasing competition for game and a loss of Indian control over their resources in a major way due to the sheer numbers of new competitors. The entrance of a Euro-American population into the area also brought with it foreign diseases to which the Indian population had no immunity. The Ross River and Lower Post Indians were some of the people most isolated from the influence of white society prior to the construction of the Highways. In 1938, a devastating measles epidemic at Ross River had wiped out whole families (Denniston, 1966). A diptheria

epidemic struck Ross River during the winter of 1942-43. Three people died during the epidemic. "...(A) woman living near Ross River in 1943,...described how her mother was able to save some children by swabbing their throats with iodine. She remembers the Army construction workers stopping work to build caskets for all the children who died" (Cruikshank, 1977).

There was a change in alcohol drinking patterns among those Indians exposed to Highway construction and the military. The use of alcohol had been incorporated into Indian social patterns at least since the gold rush. Drinking was usually limited to well-defined social contexts and to celebrate specific events (Cruikshank, 1977). From studies done among Indian hunting peoples elsewhere in the north, we know that drinking was limited to celebrations and social gatherings when people came out of the bush to trade furs (Brody, 1981). This was also likely to have been true for the Ross River people. During the construction phase, however, new patterns of drinking were learned by the younger Indians through exposure to large amounts of alcohol and the binge drinking habits of young military and civilian men working on the roads and the pipeline.

Nonetheless, for the Ross River Indians, in contrast with Indian groups living near the Alaska Highway corridor, the major impacts of the Canol Project were short-lived, limited to the actual construction period. Miller (1972) quotes a Whitehorse Indian Affairs official saying in 1970 that : "The Ross River Indian Band is the last self-sufficient group and, economically,

the most traditional in the Yukon." As the War shifted to the South Pacific the Canol Pipeline was shut down. The Canol Road was abandoned in 1950, but reopened briefly in 1951-52 to permit pipeline and equipment salvaging (Sharp, 1973).

The post War period, however, brought fundamental changes for the Ross River people. Fur prices dropped dramatically year by year until they bottomed out about 1953. The riverboat system was disbanded because of the new road network. Traditional summer jobs cutting firewood for the boats, which were needed as an alternate source of cash during the low fur market to purchase the hardware for hunting, fishing, and trapping, clothing, and food staples such as tea, sugar, and flour, were no longer available except for the brief Canol salvaging period. Taylor and Drury closed their Pelly Banks trading post in 1949, opened another at Pelly Lakes in 1950, and closed it in 1952 (Miller, 1972). At the same time a set of new government programs was introduced which required major alterations in Indian residency patterns to be near a post office and led, over time, to the kind of Indian village residency pattern that we are familiar with in the Yukon today. The Family Allowance Act was passed in 1944-45 and operated as a direct inducement to register children in schools (Cruikshank, 1977). Welfare payment were made more available and revisions made to the Old Age Pension Act, providing a small income for people over the age of 70. All of this resulted in a progressive increase in the number of hunting/trapping groups staying for longer periods of time near the Ross River post.

For Indian and Inuit people throughout the North the declining fur prices led to an economic crisis. The currency inflation at the end of the forties only made matters worse; it became extremely difficult for Indian people everywhere to rely on trapping as the main source of providing a cash income. For the Ross River Indian people this proved to be no exception. The decline of fur prices and the inflation meant that the Ross River Indian people were cash-poor. This caused hardship and, sometimes, even hunger as they had less money to purchase rifles and bullets and store-bought food. The decline in fur prices meant not only a shortfall of cash but also a reduced incentive to rely on trapping as the main means to obtain money. With the closure of the Pelly Lakes trading post in 1952, it became even harder to obtain the necessary supplies for hunting. There was an increased reliance on government assistance programs during these desparate times and this required being close to a post office. Many of the Indians living near Pelly Lakes or Pelly Banks moved to Ross River where Tom Connolly had taken over the Taylor and Drury trading post. It was this crash of the fur prices that led the Ross River Indian people to settle around what became known as the 'old village', located on the north side of the Pelly River. In 1952 a polio epidemic struck the village. This migration of the Ross River Indian people led to the temporary abandonment of more distant trapping and hunting areas and a shift to land use closer to the settlement of Ross River.

Co-incident with the temporary abandonement of traditional hunting and trapping areas, the Yukon Territorial government created the Department of Game and Publicity under the directorship of Them Kjar. The first budget of the Department of Game and Publicity for 1949-1950 was $22,000. Its principal concerns were a predator (wolf) control (using poison) program and a trapline registration program. The Yukon system of trapline registration commenced on January 1st 1951 and followed the system instituted in British Columbia in 1926. The registration program placed no limit on the size of traplines and a one-mile no-trapping zone was placed around the boundary of each trapline.

In the drafting of trapline registration regulations "... correspondence shows that Them (Kjar) consulted with Territorial Agents and the Yukon Fish and Game Association " (McCandless, 1976: 27), but not with Indian Affairs, the department with a legal trust relationship to Indian people in Canada. The Director of Yukon Affairs in Ottawa wrote the Territorial Commissioner expressing concern about Indian traplines. He also"...enclosed a letter from D.J. Allan, Superintendent of Reserves and Trusts which asked that Indians be given a statement of preemptive right (McCandless 1976, p. 27)" to trap. Ignoring the suggestion of Mr. D.J. Allan, a preemptive right was not granted and a registration fee of ten dollars per year was levied. For many Indian people who had abandoned their traplines and who were extremely cash-poor the fee seemed high. While our brief survey of Yukon archival material respecting trapline registration did not reveal letters from Ross River, the petitions that Kjar received in

July 1950 from Indian trappers in Teslin and Old Crow requesting suspension of the registration program were indicative that Yukon Indians were experiencing problems with the program.

> "For the fiscal year 1951/52, 412 trappers registered their lines not including group traplines at Old Crow, Peel River and Ross River. By March 1954, 429 traplines had been registered (McCandless 1976, p. 27)".

For the Ross River Indian people the essential problem, aside from the $10 annual fee, was that the registration program and the maps formulated to show trapping areas did not take into account the flexible system of rotational trapping by families throughout the Ross River lands. Registration tended to underestimate the total area of use. Additionally, the registration system tended to individualize and formalize 'ownership' of trapping areas.

In 1957 and 1958, fur prices dropped again this time to the lowest level in one hundred years. Not having regular access to money or wage jobs many Ross River Indian people could not afford to renew the fee and the Indian agents at Indian Affairs would not authorize use of departmental funds for trapline renewal.

Many Ross River Indian people moved. Some families left for Watson Lake, others to Carmacks and even Whitehorse. The principal reason for moving was the hope of finding wage jobs to supplement household income. Some were more successful than others. Many of the Ross River Indians ended up near Upper Liard working for a sawmill owned by a local entrepreneur.

To compound the problems of being cash poor, and of leaving a homeland and moving to a strange region to take up industrial wage employment, during the summer of 1958 the Yukon Territorial government initiated a new registration trapline program, requiring payment of fees to cover a five-year registration period. The new regulations required a higher fee to cover the five year period, and also required the holder of a registered trapping area to trap their area every year or risk forfeiting their licence. This regulation, in effect when fur prices were low, placed additional hardships on the Indian trapper. Ross River Indian trappers responded to government pressures by amalgamating their individual traplines and forming the Ross River Group Trapline areas number #1, #2, and #3 - thereby saving much of their trapping areas from loss.

The Residential School Experience

While the registration of traplines was taking place during the 1950's, the new phenomenon of residential schools was having its own effect, not only on Ross River Indians, but on Indian people throughout the Yukon. Ross River Indian children were flown by plane to Lower Post, B.C. where they attended residential school for ten months out of the year. While education in the 3 R's did take place, the effects on the children and the families still at home were detrimental to family life and the traditional education system. In order to understand some of the effects of residential schools on Ross River Indian society and the kind of adjustments that this experience

required, not only from the children but other members of the Band, we need to outline some aspects of the traditional Yukon Indian education 'system'. In her unpublished paper European Influence on Indian Education, Mary Easterson, 1982, a Yukon Indian teacher, notes that generally speaking schools are designed by the dominant society to reflect their values and culture.

> "As a minority group, Yukon Indians experience difficulty with an education process which ignores culture and values learned in the Indian child's early childhood and which later transformed their traditional mode of learning: that is, learning acquired through observation the direct manipulation of objects and experience. The acquisition of knowledge and skills was acquired through a threefold method of teaching: by watching, listening and doing. The Elders and parents played a major role in this learning process.
>
> For example hunting strategies which involved calculation in wind fluctuation to successfully track down an animal, the reading of foot patterns to determine how long the animal had passed by, the direction of the wind and animal movement in order to avoid having the animal sense one's presence and the skinning and butchering of the animal required the interaction of the two processes.
>
> In addition, Yukon Indian people developed a system of belief which offered them an explanation of their existence, provided them with a framework for their values and also provided a means by which moral education was taught... Their ideology taught them to respect all living things in the natural world especially animals on which life was dependent. Values of sharing and co-operation were stressed...Therefore, oral tradition as a teaching strategy required the child to not only store and process the information but also internalize the message into a value system. The actual teaching was carried out by the Elders, members of the family and by the extended family...It was through the practical and mythological demonstrations that the young Indian child learned and understood the world around him (Easterson, 1982)."

The removal of the Indian child from the community for up to 10 months of the year created disruptive problems not only for the child, but also for the family structure. Ross River Indian society was forced to change from a family controlled education mode to one designed and controlled by an alien society. With English as the working language of the schools, communication between Elders and the children deteriorated. Since the advent of the residential schools Elders were no longer the primary guiding force. Instead of reliance on traditional values and ways of perceiving the world and relating to each other, new values began to emerge.

> Values of "...sharing and co-operation gave way to individualism and competition,... the "new" Biblical teaching which claimed man's superiority over animals and nature conflicted with the Indian belief that all life lived in harmony (Easterson, 1982)".

Traditional skills of hunting and survival on the land were devalued at the residential school. Due to the expectation of employees of residential schools that "Indian children should perform ... at about the same conceptual level as the lower (school) levels (King, The School at Mopass, 1967: 49)" expectations of the progress of the Indian child were lower.

For the Ross River Indian people the residential schools taught basic skills that were for the most part irrelevant to the society to which they returned, while at the same time imparting the values of southern Euro-Canadian society. The experience eroded traditional values, skills and structures

which had been a historically successful adaptive response to the realities of life as hunter-trappers in an isolated northern setting. As a result of the residential school experience many Indian people were caught in a world with neither the skills to succeed in the bush nor the skills to compete in competitive work world (Easterson, 1982). While the responses to the fur trade era can be considered the first set of post-contact changes for the Ross River Indian people and the Canol pipeline the starting point of a second set, the events of the 1950's (the downturn of the fur economy, the trapline registration program, the polio epidemic, and the residential school experience) brought severe pressures on Ross River Indian society. Although the people relocated and complied with government regulations and used modern hunting and trapping tools, the restructuring of land use patterns, traditional belief systems and the lessened demand for furs made reliance on a bush economy very difficult. These changes did not occur abruptly. Even with low fur prices people still continued to hunt and trap, but there was an increased dependence on cash from seasonal wage employment and such government programs as family allowance, old age and disability pensions, and even some subsistence welfare payments. In order to participate in occassional wage work and to receive government aid, many Indian families choose to remain near Ross River and other settlements where wage employment and the postal service was available.

As for the community of Ross River itself, the decline of the fur trade and the access provided by the South Canol road led to the inmigration of white residents employed as prospectors or with the newly established big game outfitter. Even though change was occurring, white and Indian residents functioned well together.

> "There was a mutual need to function co-operatively based on the exchange of resources held by one group and desired by the other. There interests though economically different had many common elements...(Sharp, R. 1967, p. 38)."

However, the advent of the sixties, with the relocation of the old village and the intensive mineral exploration of the region leading up to the construction of the Campbell Highway and the Anvil mine at Faro, signified yet another major turning point for the Ross River Indian people and their inter-ethnic relations.

The Village Relocation; 1960-63

The old Indian village was located on the north side of the Pelly River at the confluence of the Ross River. The trading post at that site served as focus around which the Indians of Ross River had settled for varying times of the year. When the Canol road and pipeline was built a suspension foot bridge was constructed across the Pelly which served as the primary access to the village. To gain easier access and provide increased government services to the Indian people, the Department of Indian Affairs and the Catholic Church co-operated in relocating the Indian settlement to the south

side of the Pelly River, along the east side of the Canol road. According to the Ross River Indian people, the move took place between 1960-63 and was largely a DIA decision on behalf of the people. After the relocation people continued to live in wall tents until log housing and a community plan for the new settlement was provided by the Department.

The rest of Ross River, on the west side of the Canol Road, was also surveyed and later sold or leased, primarily to Euro-Canadians who came to Ross River for employment opportunities in the mineral exploration industry. The relocation of the Ross River Indian people to a site not of their choice, and the predominance of whites that were later to move into the new subdivision was viewed by government planners, at least initially as a model 'integrated community.' The harsh present-day reality, however is that today's Ross River is an integrated community in name only, with the settlement split by the North Canol road along ethnic lines.

Footnote

[1]Cruikshank (1974) cites separate reports by Northwest Mounted Police Corporal F.H. Thompson and Charles Sheldon, in 1910 and 1911 respectively, which commented on the excellent health of the Indians they met.

CHAPTER 4

CHANGES SINCE THE CYPRUS ANVIL MINE DEVELOPMENT

Introduction

Many of the changes faced by the Ross River people during the 1950's were experienced by other native groups in the Yukon and throughout the North. The Band, however, is distinctive in their efforts to return to their homelands following the exodus of many families to other settlements in the hope of securing employment to offset the depression in the fur trade. This determination to continue as a hunting and trapping people and their success in this can be seen through the observations of the Whitehorse Indian Affairs official that the Ross River Indian people in the early 1970's were one of the most traditional and self-reliant Indian groups in the Yukon (Miller, 1972).

But the Ross River Indian people have not been isolated from the environmental and social impacts of major industrial development. During the late 1960's the Cyprus Anvil Mining Development brought about the dislocation of several family groups from their traditional hunting and trapping lands in the Faro area and a fundamental change to the village of Ross River itself.

An examination of the changes and impacts that occurred to the Ross River Indian people as a result of the Cyprus Anvil Mine Development must consider the major events that accompanied the project. These events in general were:

1. The in-migration of a large labor force for both the construction and operation phases of the project.

2. The development and expansion of communication, energy, transportation infrastructure and social services to support the mine and its employees.

3. A boom in secondary developments which, in the case of Anvil, resulted in large-scale mineral exploration throughout the region.

4. Change to Ross River community itself.

Mineral Exploration

The discovery and subsequent development of the Anvil ore body by the joint venture of Dynasty Exploration Ltd. and Cyprus Mines Ltd. led to a hectic staking rush in the region, especially between 1964 and 1969. Of the 15,708 claims staked in the entire Yukon during 1966, approximately 10,000 were in the Anvil-Ross River region. Most of the 40 miles between Ross River and Anvil and the entire Tintina Fault area was subject to intense scrutiny.

Between 1965 and 1969, three to five exploration companies operated out of Ross River. These companies hired geologists, prospectors, pilots, and students. Indians were also hired, primarily as prospectors, assistant prospectors or sesmic line cutters. "Exploration companies said they preferred to hire Indian men because they were "bush wise"; they were less likely to get "bushed" or lost or to split a shin with an axe than were people from the outside (Sharp 1977:61)"After several seasons working as assistant prospectors many of the Indian men felt they should be making prospectors' wages as they were often finding more 'showings' than the prospectors they were helping. In order to become prospectors an exam had to be

written in Whitehorse. Having to move and take a written test deterred many men, and as a consequence few obtained the lucrative and skilled jobs of prospectors. However, by 1970, the year exploration activity declined, the Yukon government and Canada Manpower finally responded with a prospectors' course in Ross River. Of the approximately 25 Indian men that took the course all passed with honors. Unfortunately, with the decline in exploration few could find work; and all were limited in the work they could accomplish on their own due to capital and equipment shortages. In addition, all who had worked with the exploration companies had signed agreements stating they would not prospect for three years in areas where they had prospected for the company.

There were several spinoffs of the exploration activity in addition to the seasonal jobs, income, and influx of outside workers which it generated. One was the network of tote roads which provided easier access to the country, opening up new areas for hunting by vehicles. Another was the gradual expansion of the white controlled business sector in Ross River itself. What had once been a small primarily Indian village was changing into a northern, ethnically mixed community with a service sector capable of providing many of the consumer goods available in small southern towns.

Construction Phase: Cyprus Anvil

The actual construction of the Anvil mine and the Faro town-

site commenced in 1966. The general contractor, Parsons Ltd., sub-contracted much of the project to other firms, who in turn hired their own workers, many from southern Canada. Of a total of approximately 500 men employed during the construction phase only 15 Indian men from Ross River were employed (Sharp 1977; 53). The imported labor was a transient group who generally moved from one large project to the next. Usually they were quiet and work-oriented but there were a significant number of exceptions. The construction was primarily undertaken by single males who resided at the worksite in bunkhouses, and although all the basic necessities were provided there was limited entertainment. Some married men had arranged accommodation for their families at Ross River. At the end of the six day shifts, on Saturdays, they would travel to Ross River to rejoin their families. These new families, numbering about ten, had no social affiliations in Ross River and many had different attitudes from the older white members of the community. To them "...the structure and ambience of the older community were incomprehensible (Sharp 1977: 55)." Few of these construction workers had any previous contact with Indian people and most held sterotypes of Indians that were at best uncomplimentary. This, coupled with their consumer lifestyle that demanded the availability of 'southern' amentities was to change the entire character of the old Ross River community.

> "The trading post was changed into a department store; a garage was built; a bar and beer parlour

> were opened (in 1967-68). A motel, a cafe, police station, health clinic, territorial road maintenance garage, a water system, trailer court, a number of new houses, and a school were built in fairly rapid succession", (Sharp 1977: 52).

All services and amenities were established on the 'white side' of town. These new institutions reflected Euro-Canadian biases and the assumption that these constituted an improvement for the community was rarely questioned. "This assumption was accepted with such conviction that many Indian people also accepted the proposition unquestionably (Sharp 1977: 66)." The provision of water supplies, the quality of housing, the maintenance of the roads, the placement of government institutions, and the generous allocation of surveyed lands for future development, all on the west side of the Canol road, emphasized the inequities between whites and Indians that prevailed throughout the Anvil project. With these conditions the settlement of Ross River became sharply divided. The white sector resolved into three groups: the old-timers, the government workers and the mining-construction personnel. The Indian community, newly organized with a Band Council in 1965, was also becoming fractioned, with the Indian Affairs Branch differentiating between Status and non-Status Indians. As a result of both the exploration and construction phases almost every aspect of the Ross River Indian lifestyle had been affected.

> "Whatever the character of the changes accompanying the development, one thing was abundantly clear: the conditions which gave rise to change were not controlled nor appreciably influenced by the Indian people", (Sharp 1977: 57).

The influx of white people brought urban ideas, values and behaviours. It also brought sterotypic images of Indian people, prejudice and racism. While the white and Indian children associated easily, there was little contact between the adults aside from brief meetings at the store and the bar.

It was at the bar that conflicts occurred most easily. Saturday evenings would see the arrival of quite a few single construction men at the Ross River bar in hopes of "some action."

> "This action included drinks, fights, sexual encounters with women and girls, or all of these if the night was particularly eventful, as many were. Liquor was always present. It facilitated open conflicts and hostilities and it was used as an inducement for sexual encounters" (Sharp 1977: 59).

G. Miller refers to fights in his report:

> "...The natives report from time to time they are brutally beaten by whites in town. From my direct observations I have concluded that violence between whites and Indians, particularly when the latter have been drinking, is a rather common occurrance. However, in nearly all cases, it is the natives who are the losers" (Miller, 1972).

Sharp (1977: 59) not only concurs with Miller but states further that:

> "...the Indian people were losers, not only in fights, but in the whole scheme of things. The climate of drunkenness, beatings, sexual exploitation and frustration at being incapable of altering these conditions, led Indian people into more frequent violent acts among themselves."

Even in the new Ross River School which the children of the Anvil workers attended, the Indian people were the losers. Although the predominant student population was Indian, the non-Indian parents demanded and obtained a southern Canadian school

curriculum, with little variation to accommodate the differing needs of the Indian children.

Not only were losses for the Ross River Indian people prevalent within the 'integrated' community but conflicts were occurring out on the land. There, more white hunters and fishermen competed for the resources which were the basis for the Indian hunting and fishing economy. The siting of the mine and townsite itself, as a subsequent chapter will explore, led to land use conflicts with Indian hunters and trappers. Thus, while there were jobs during the boom times of mineral exploration, many conditions for the Indian people had taken a turn for the worse during the construction period. Jobs were not as plentiful as predicted; violence and inter-racial conflict were more common as was alcohol abuse.

To be fair, throughout the construction Anvil Mines attempted to minimize some of the negative impacts which were occurring to Ross River and the Indian people. It offerred some jobs to Indians and purchased lumber and logs from the Band's Co-op Sawmill set up by Indian Affairs and located near Blind Creek. In addition, to smooth 'ruffled feathers', mine management often visited Ross River and Anvil's workers were frequently asked to avoid conflicts with local people.

> "However, it appears that the good intentions of the Corporation and the government were of less consequence than the interactions between their employees and the Indians of Ross River, or than the attitudes of some of the men toward employing or working with Indians. ...There were no specific stipulations about employee behaviour or employment during the construction phase ... even if there had been it is doubtful these would have had any significant effect in avoiding most difficulties. The comments of the construction workers clearly indicated that they would find their own good times on their

> own time, time which the company had no rights over", (Sharp 1977: 60).

While this section has outlined some of the changes that occurred as a result of mineral exploration and the construction phase of the Anvil mine, other developments which occurred almost simultaneously, brought additional changes.

Infrastructure Developments: Anvil Era

Along with the Anvil mine and the changes wrought to the traditional lands upon which the mine and townsite of Faro were built, an extensive road network brought mixed blessings for the Ross River Indian people. The reopening of the South Canol Highway in 1962, the completion of the Robert Campbell Highway in 1968, and the reopening of the North Canol to the North West Territory border placed Ross River at a crossroad. The access provided by the roads meant:

> "...cheaper freight rates on commodities, much greater ease in reaching bush camps, ... increased employment opportunities, and more accessible government services and assistance. Year round roads also aided the continued operation of many of the businesses in town", (Sharp, 1977: 74).

While there were some benefits, the roads combined with the recent infusion of money and alcohol in the community, coupled with the increase in Indian vehicle ownership, led to deaths and traffic injuries in large numbers for the Ross River Indian people. In 1967 no Indian owned a car, while in 1974 10 cars were owned (McDonnell, 1975). A perusal of the mortality statistics (Table 4.1) substantiates the climbing Indian death rates from 1968 to 1973 - many of which were alcohol-related tragedies.

Table 4.1

Mortality Statistics: ROSS RIVER INDIAN BAND 1967-1981

Year	Males	Females	Totals	Deaths/1000	Yukon deaths/10
1967	1	0	1	3.3	4.9
1968	2	0	2	6.7	5.6
1969	2	0	2	6.7	5.9
1970	0	2	2	6.7	6.4
1971	0	2	2	6.7	5.7
TOTALS:	5	4	9		

Percent Males: 55.5%
Percent Females: 44.5%
Average Indian deaths per 1,000 for period 1967-1971: 6.0
Average deaths per 1,000 for Yukon for 1967-1971: 5.7

continued....

1972	1	4	5	16.7	5.5
1973	5	1	6	20.0	5.6
1974	3	0	3	10.0	5.9
1975	5	1	6	20.0	5.4
1976	1	1	2	6.7	5.6
TOTALS:	15	7	22		

Percent Males: 68.2%
Percent Females: 31.8%
Average Indian deaths per 1,000 for above period: 14.7
Average Yukon deaths per 1,000 for above period: 5.6
Ross River death rate 2.6 times Yukon Territory average for the period 1972-1976.

Continued....

1977	2	1	3	10.0	4.9
1978	2	0	2	6.7	4.1
1979	n/a	n/a	n/a	n/a	5.9
1980	1	1	2	6.7	6.0
1981	4	2	6	20.0	6.1
TOTALS:	9	4	13		

Percent Males: 69.2%
Percent Females: 30.8%
Average Indian deaths per 1,000 for period 1976-1981: 10.9
Average Yukon deaths per 1,000 for period 1976-1981: 5.4
The Ross River Indian death rate was twice as high as the average for the Yukon Territory for this period.

Total Male deaths for 1967-1981: 29(65.6%)
Total Female deaths for 1967-1981: 15(34.4%)
Grand Total: 44

In addition, increased access led to a greater presence of 'outsiders' in the community both on a transient and permanent basis. This "...disrupted established social interaction and increased inter-racial tension", (Sharp 1977: 74). As a result of the roads, the Ross River airport, the arrival of radio and television, and the linkage to the Yukon hydro-electric transmission grid, the relatively closed socio-economy of the Ross River Indian people became even more open to government and market place influences from outside. While there were benefits from this modernization, self-reliance and control over a way of life, economy, culture and language was fast ebbing out of Indian hands.

The roads provided access for white hunters and Indian hunters from other regions. The improved transportation access also made possible increased industrial activities throughout the Ross River traditional lands. Rather than providing significant benefit to the Ross River people, transportation, communication and energy infrastructure became instrumental in undermining traditional cultural values and economic activities, while at the same time facilitating the increased extraction of non-renewable and renewable resources from the Ross River lands.

Operational Phase: Cyprus Anvil

With the operation of the Mine, some of the construction workers and their families moved to the new town of Faro. Those who stayed behind went into private business or took up employment with the government or mineral exploration companies.

Due to the amenities provided by Faro, such as a recreation centre, movie theatre, bar and hotel, there were fewer visits to Ross River and consequently "...a decrease in the kinds of exploritation of the community discussed earlier", (Sharp, 1977: 69).

For many of the families and single people that resided in the new town of Faro the outdoor life, particularly hunting, became not only a sport but also a way to curtail the costs of food. Even though many of the Anvil employees had partly subsidized housing, utilities and food, many considered it a 'right' to hunt and have access to game resources. For the Ross River people who did not receive these subsidies, and for whom hunting and the eating of country food was an economic and socio-cultural necessity, the increased presence of hunters from Faro (and other communities) meant competition for wilderness game resources. This competition "...meant a decline in the number of animals taken by (Indian) people in Ross River", (Sharp, 1977: 69). The loss due to sports hunter pressure must be added to the loss of the trapping area around Faro where several Indian hunting/trapping groups had lived. The presence of a large white population in Faro also entailed a greater recreational use of land by hikers, motorcyclists, skidoos and vehicle traffic along highways and tote roads. For the Ross River Indian people this was experienced as 'disturbance' and often negatively effected their land use. People would simply avoid areas they traditionally used.

The village of Faro did provide for the Ross River Indian

people better access to medical services and gradually some people began to take advantage of banking, shopping and recreational services not available in Ross River.

The federal government felt that the modernization of the region through public service improvements and the operation of Cyprus Anvil Mine would benefit not only the nation, but also provide employment opportunities for Indian people. The 1967 Anvil Agreement not only clarified the responsibilities of government and Cyprus Anvil respecting the construction and operation of the mine, it was a policy device wherein the government attempted to ensure that Cyprus Anvil would:

> "...make special provisions for the training and employment of Yukon residents and will ... draw heavily on the Indian population of the Territory", (DIAND, 20 March 1967: p.1).

While the government provided no legal sanctions against Anvil if native employment goals were not met, Section 3.2a of the Anvil Agreement required that Anvil make a:

> "bone fide" effort to employ competent local residents, particularly Indians and Eskimos, to the extent of at least 5 percent of the total number of employees within the first year, rising to 10 percent in the second year, and 25 percent in the fifth year after the mine comes into production", (Anvil Agreement, 1967: Section 3.2a).

While Section 3.2a may have been complied with for the first two years, it was a total failure from the Ross River Indian point of view. Promises to have locals and in particular Indians employed were not lasting. Neither the conditions of employment nor the other circumstances of life in Faro were appealing to the Ross River Indian people; and when the economy

turned down, the adage of "last hired first fired" often rang true. There was minimal consultation with the Ross River Indian people. As a consequence the Company was either not aware of, or simply not concerned about, the innumerable 'barriers' and 'problems' experienced by northern native groups in making the transition to industrial wage work. What might be considered an employment or business opportunity for the average Canadian was often not the case for the average Indian person living in Ross River.

Field interviews conducted during 1982-83 revealed that for the majority of Ross River Indian people employment with Anvil was an option that was neither attractive nor realistically workable. While in few instances the reasons given for not working at Anvil were economic -- the cost of transportation or of moving an extended family, the primary reasons (which are discussed in Chapter 9 and 10) were related to cultural and lifestyle differences with the white workforce, and the enormous difficulties in adapting to the manner in which an industrial plant functions and work is organized. There was a recognition by Ross River Indians that over the short-term committment to industrial work might bring in greater income, but over the long term it would require substantial sacrifice of important aspects of the Indian way-of-life and its culture and economy. According to Sharp (1977: p.87,88):

> "...it appears that for the Indian people of Ross River the (Anvil) development was too much, and too fast to allow the evolution of social and cultural mechanisms to cope with change, and to allow them the opportunity to gain, economically from the development ... when the classic question of development is asked "Who benefits and who pays?", it appears that, in this case, the interests of the

> mining companies have prevailed, followed by those of a few established white entrepreneurs and in-migrants. The interests of the Indian people of Ross River were given little consideration."

This conclusion by Sharp is corroborated by reference to a 'Perceptions of Change' matrix completed by Ross River Indian people during the field research component of this project (Table 4.2). The results of the matrix reveal the impressions of the Ross River Indian people about changes that occurred by comparing perceived conditions before Anvil to more recent conditions. In no way does the matrix causally connect the 'changes' directly to 'Anvil/Faro' and related developments, but our opinion and that of many of the Ross River Indian people there exists a high correlation between the modernization of the region and many of the perceptions. While the development brought some positive changes in the view of the Indian people the 'modernization' generally had a negative impact on the Indian people of Ross River. As a change beyond their significant input or control it was too much, too soon, for successful adjustment and adaptation. The 'Anvil Agreement' was an inadequate measure to accommodate cultural differences, to regulate social change, or to provide the Ross River Indian people with the resources or mechanisms to better adapt to the changes.

Political Developments During The Recent Period: 1973-83

In 1973 the Council for Yukon Indians (CYI) tabled their first position paper "Together Today for Our Children Tomorrow"

Table 4.2

Perceptions of Change Matrix

	Perceived Conditions Before Anvil	Perceived Conditions During Anvil/Faro Operations
Outfitting by non Indians	L	M
Hunting by non-Indians	L	H
Fishing by non-Indians	L	M
Trapping by non-Indians	L	L
Hunting by Indians from other Yukon Bands	L	M
Recreational vehicles in bush	L	H
Numbers of short term seasonal jobs for Indian people	H	L
Numbers of permanent jobs for Indian people	L	L
Numbers of Band business contracts	L	L
Personal stress levels	L	H
Physical health of Indian people	H	L
Mental health of Indian people	H	L
Deaths by accidental causes	L	H
Numbers of crimes towards personal property	L	H
Amount of alcohol abuse	L	H
Violence towards women	L	H
Violence towards elders	L	H

Legend Index

High - H
Moderate - M
Low - L
Unknown or Uncertain - U

expressing their demand for a negotiations of land claim settlement. Since that date, CYI and all the Yukon Indian Bands, including Ross River have been involved in a very complex and exhausting negotiation process, whose final conclusion will lead to a significant reordering of life for Indian people throughout the Yukon Territory. At the time this report was written it was expected that an interim-agreement would be completed for ratification by the Bands sometime during the months of December 1983 or January 1984. The interim-agreement contains over 50 sub-agreements covering such areas as land selection, wildlife harvesting, education, economic development, and compensation. An important guiding principle behind all the sub-agreements is that, upon ratification of the Final Agreement by the Canadian House of Commons and the Yukon Indian General Assembly, political jurisdiction over many areas covered by the settlement will be shared between the Yukon Territorial Government and the Yukon Indian people. For the Indian people of Ross River the process of land claims negotiations has not largely interfered with their way of life on a day to day basis. For the majority, life continues much as before and there is little knowledge of the technical details contained within the sub-agreements. The major burden of land claims has fallen upon the Chiefs and Band Councils who, by necessity, are involved in numerous land claims meetings in Whitehorse and elsewhere.

The stresses upon the political leadership of the Band are considerable. They include interfacing with a variety of

government agencies and major corporations, as well as, Land Claims and the day to day operation of Band business. In addition to these, since 1973 the Ross River Indian Band council has taken more active leadership and responsibility for development of the village and the welfare of its members: such as housing construction, social programs, trapping development, and a cautious entry into Band business enterprises. Many of these projects have shown considerable success - not the least of which has been the Dena General store and the Band housing program. Over the past several years more than ten new houses has been built with the aid of Indian Affairs and CMHC funds. The program has not only provided a higher quality of housing, it has been a major source of employment and skills training for Band members. To complement the housing program and employment programs the Band has successfully operated a Group Home for children. This program home, which reconciles schooling conflicts discussed in Chapter 3, allows adult members of a family to spend longer periods of time in the bush trapping and hunting while the children are living in the village and receiving schooling. The Band Council has also been active in trapline development and management. The Group traplines which had three zones has been amalgamated into Zone #1 and #2, each with their own leader. This amalgamation was followed in 1979 be the creation of a 5 mile trapping-radius zone around the community of Ross River, (for trapping by children and elders). In 1981 the Ross River Indian Local Trappers Association was

formed and the Band became a fur depot, selling traps/snares and accepting and paying members advances for furs brought in. In addition to these developments, the Band Council is actively attempting to assist trappers in opening up areas accessible only by aircraft. A recent example of this policy is the construction of 4 new trappers' cabins in the Otter Lakes area, and the proposed developments around LaForce Lake. As a subsequent chapter will detail, there are several current development plans for the trapping sector of the Ross River Indian economy, plans which reveal the continued interest of Band members in trapping as one means of earning a livelihood.

To meet the consumer needs of Band members, and to turn a profit the first business enterprise organized by the Ross River Band Council has been the Dena General Store. The initial concept of a Band store took the form of a co-operative. This proved unsuccessful and was reorganized as a business venture in 1977. Since the reorganization, and with improved management, the store has been successful. In 1983 it expanded to a new, larger premise with the addition of a small coffee-shop.

In 1982 two mining corporations, Cyprus Anvil and Yukon Barite Ltd., each approached the Ross River Indian Band Council with joint mining business venture proposals. The Band Council, Indian Affairs, and the Council for Yukon Indians all expended considerable resources examining the feasibility of these proposals. For a period of four or five months, joint-venture negotiations were held with Yukon Barite Ltd. and significant

progress was made in achieving some preliminary understandings. However, due to the inability of the Band to secure barite contracts within the time limit specified by the agreements with Yukon Barite Ltd., the possibility of a mining joint-venture ceased. This first attempt by the Band Council to become actively involved in mining was not without valuable lessons. Not the least of these lessons, in the opinion of the senior author, was the inability of the Ross River Indian Band to control the events surrounding the details of joint-venture negotiations, or to control the circumstances that led to Yukon Barite's withdrawal and adoption of a new financial backer. Successful joint-venture negotiations might have led to the Band being able to provide more jobs, an independent cash flow, and an equity position from which to finance other developments, etc. On the other side, however, are the innumerable hurdles of project financing, construction and operation. These would have severely taxed the already strained abilities of the Band Council to carry out other development plans more suited to the present skills and aspirations of Band members, over which the Band would have a greater degree of control. In fact, it is the observation of the senior author that even during the joint-venture negotiations other aspects of the Band related to housing and land claims were put on the 'backburner' due to lack of time and the shortage of skilled human resources to deal with many items simultaneously.

During this time, while the Band Council was making progress

in accomplishing Band development goals, mineral explorations were continuing throughout Band traditional lands. Prior to the present recession, the MacMillan Pass Task Force, composed of the Yukon Territorial Government and the major corporations active in the MacMillan - Howards Pass area, were making plans for the development of the region. Despite repeated attempts to gain input to this Task Force through representations to government, neither the Council for Yukon Indians or the Ross River Indian Band were allowed membership. Instead membership was provided to the Yukon Indian Development Corporation, a pan-Yukon Indian business development corporation which does not represent the political, social and economic interests of the Ross River Indian people. Although the advent of the recession brought about the dismantlement of the Task Force and a slow-down in the implementation of regional plans, the Band Council and many of the Ross River Indian people remain highly concerned about future developments and their possible effects on their way of life.

As a result of concerns over proposed regional developments the Band Council initiated an impact assessment proposal titled 'So That The Future Will Be Ours.' The impact assessment project, of which this report and the map atlas are one outcome, is the first comprehensive attempt to consult the Ross River Indian people about their concerns and hopes for the future.

As subsequent chapters will indicate, the accomplishment of improving the well-being of Band members and fullfilling personal and Band aspirations will require much more than just wage-jobs, business contracts and casual discussions with

government and industry. It will as other chapters suggest, require negotiations for the provision of certain resources and guarantees designed to accommodate the culturally and economically unique development situation of the Ross River Indian people.

CHAPTER 5

THE INDIAN SYSTEM OF LAND USE

Introduction

The Indian land use maps (Chapter 6 and the Atlas) and the questionnaire results (Chapter 7) demonstrate the extent of the Ross River Indian people's interest in the land and on the harvesting of renewable resources. Underlying the maps and the economic statistice is a sophisticated system of land use which is scarcely apparent to the casual observer. This system is a social and human ecological adaptation to the region's ecosystem, within which Indian people have lived for thousands of years. It has evolved over many generations and is based on a vast knowledge of land, animal movements, climate variations, as well as hunting and trapping skills. Because of the immense body of direct and orally transmitted knowledge possessed by the Ross River Indian people, this presentation cannot possible do justice to the complexity and richness of the Ross River Indian system of land use. Nevertheless, the impact of proposed industrialization upon Indian hunting-trapping and a way of life can be evaluated only if we have at least a general idea of this Indian system of use.

For Euro-Canadians to understand the Indian land use system several difficulties immediately arise. Most of us tend to think of an economy as a production, distribution, consumption process that takes place within a national or international context and in which household needs are purchased by dollars earned from wage labour. Few have experience in understanding how a domestic or

household oriented economy meets the needs of a community outside of the marketplace functions. The present day Ross River Indian economy is a mixed bush-wage economy. With the bush component of the economy it is easy to pay primary attention to the trapping component because trapping generates cash for personal use. Within the trapping sector there is something recognizably 'economic' that we can relate to using the familiar Euro-Canadian framework. Indeed there exists an unstated prejudice, a judgement, of what is or is not economic; if it produces wage jobs, or cash, or commodities for the marketplace, then and only then is it an economic activity.' The danger exists that if we are unquestioningly swayed by this attitude we will focus on trapping, as it is a more familiar type of economic activity than the hunting side of the Indian economy - where meat rather than cash is produced, and where meat is distributed via a network of family exchange mechanisms for the consumption of all persons within a community. In dealing with out-siders - the whiteman - the economic subject of discussion has historically been trapping and the fur trade. Hunting and fishing, while considered important activities, are often taken more for granted by Indians especially when talking to white outsiders. They are simply what people do.

In addition, many of the meetings which the Ross River Indian people have had with corporate representatives have taken place during the winter trapping season. When talking about animals and resource harvesting activities, Indian hunters and trappers have a very strong inclination to focus on the current harvest

activities of the seasonal cycle. In addition to this, discussions with corporate officials have tended to emphasize topics which are considered 'economic' by the outsiders, that is business contracts and wage jobs, and as well trapping. These are more comprehensible subjects for discussion than the economic and cultural importance of hunting to the entire Ross River Indian society. For these reasons many of the concerns regarding developments have tended to focus on wage jobs, business contracts and trapping rather than hunting, fishing or even berry picking.

The dependence on country food and production to fulfill the needs of the household is an important difference between the hunting/household Indian economy and market economies. Another important difference which must be taken into account if we are to understand the impact of industrial developments on hunting/trapping household Indian economies is the kind of control that hunters have over their resources. Hunters and trappers have to adapt their activities to the natural production of the land, animal population cycles and seasonal movements. This fact does not imply that hunters and trappers have no choices or control over their environment. In fact, Indian hunters and trappers spend a considerable amount of their time reading and discussing signs related to the presence of animals and using this information to select hunting/trapping strategies that would ensure an efficient return for their efforts. In some cases, animal habitats are selectively enhanced and hunting/trapping strategies operate to manage animal populations.

We have divided discussion of the system of land and resource use into two time periods: before Anvil Mine and its associate developments and the period after. The basic system of land and resource use followed by Ross River Indian people prior to their settlement into village life, and the changes in the structural and social fabric of the village brought about during the time of the Anvil development, essentially date back to the beginnings of involvement with the fur trade. Involvement with the fur trade modified the traditional seasonal round by placing a greater emphasis on fur bearing animals. The use of dog teams allowed a more efficient harvest of the relatively dispersed fine fur animals (lynx, marten, fox, mink, etc.), which is one of the riches of the Ross River lands. But the increased reliance on dogs for travel created additional mouths to feed. This led to a greater emphasis on fishing, especially during the winter months (McDonnell, 1975: 47). Except for these modifications, it is likely that the annual round prior to the late 1860's predated contact with Euro-Canadians and involvement with the fur trade.

In the minds of the Ross River Indian people the Anvil development marks the beginning of a distinct era in their history. People had settled into village life and modified their annual round to adapt to this change. It also saw the development of the Robert Campbell Highway permanently linking Ross River with the outside world and providing road connections with other parts of the traditional lands through the Canol Road and a network of mining exploration tote roads. The new

road network provided a more convenient way to travel to land areas from the village and fixed bush camps. The post-Anvil system can be best understood as a modification of the basic system to take into account the problems of operating a hunting, fishing, and trapping economy from a fixed village or bush camp base.

The Seasonal Round

1.) The Basic Indian Year

The division of the year that we are most familiar with is a four season arrangement. On the other hand the Ross River Indian year is essentially one of five seasons. For convenience we will call these seasons: (1) the fall dry meat hunt, (2) early winter hunting and trapping, (3) late winter hunting and trapping, (4) spring beaver, muskrat, and bear hunting and (5) summer slack. The approximate timing of these seasons during the calendar year is indicated on the outside perimeter of the circle in Figure 5.1. Each of these five Indian seasons is characterized by a different set of harvesting activities and land use. The seasonal arrangement of the figure equally describes the recent past as well as the present.

ii) The Seasonal Round Prior to the Anvil Mining Developments

Figure 5.2 adds the dimension of movement and seasonal resource harvesting to the Ross River Indian year. The figure shows the pre-Anvil harvest cycle and the residency pattern. The circle in the centre represents various arrangements of trading posts.

Figure 5.1 The Basic Indian Year

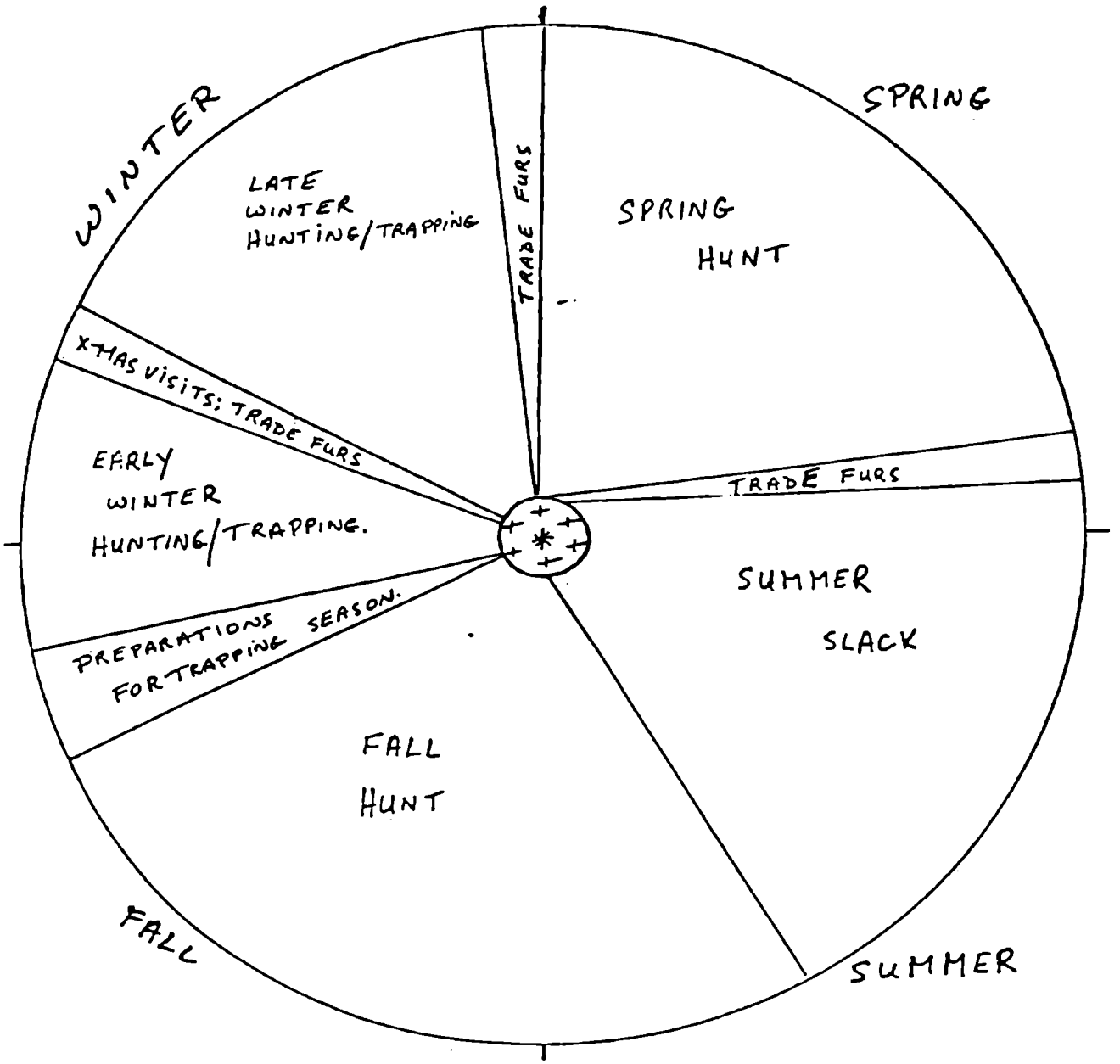
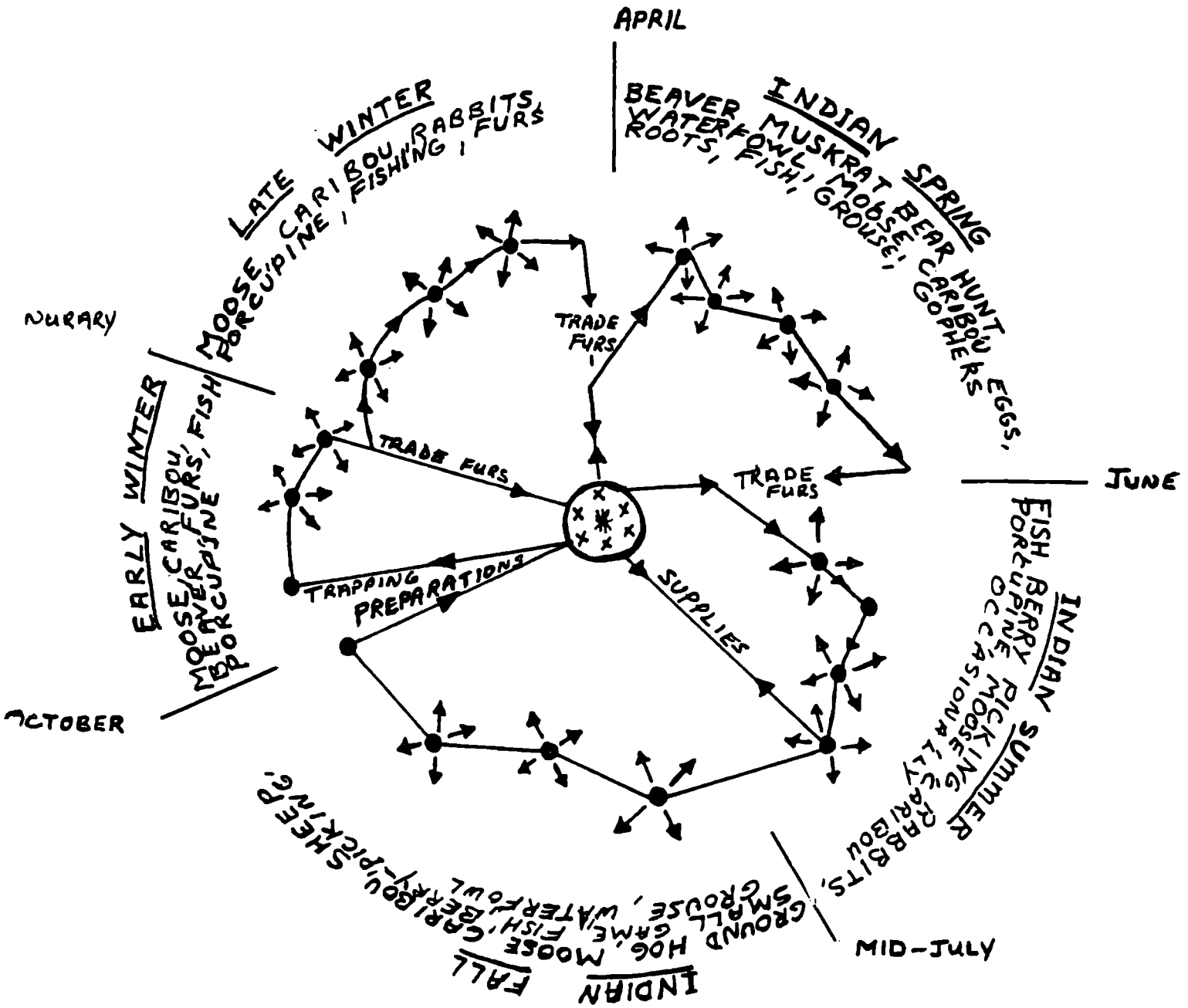


Figure 5.2
Seasonal Harvest Cycle And
Residency Pattern: Pre Anvil



The seven stars represent the large variety of trading posts that operated prior to the 1950's fur trade depression. The posts operated by Taylor and Drury Ltd. were located at Ross River, Pelly Banks, Pelly Lakes, and Ross Point. In addition, independent fur buyers had three posts located along the tributaries of the MacMillian River - Russel Post, Husky Dog City and another, whose name we have not been able to identify. All these posts were located in good trapping country and served differing sub-groups of what are today the Ross River Indian people. The seven stars serve as a reminder that the focus of trading activities for the various family groups shifted a number of times during the late 19th and early 20th century. The solid black dots indicate main camps and trapping cabins. The arrows indicate movement. Back and forth arrows along the same line indicate trips to one of the trading posts with a return to the main camp. The four arrows emanating from the dots represent hunting/trapping fishing activities near the main camp. The lines linking the various dots represent the movement of people from one camp to another to follow migrating game resources, to travel to a cache, or simply to go to a more suitable encampment. As caribou and moose are important resource species throughout the year much of the Ross River Indian harvesting and land use patterns are closely related to the movements and physical states of these animals.

The Spring Hunt

In spring harvesting emphasis shifts from ungulates to smaller game, beaver and fish. In April, as the days become warmer, a crust develops on the snow. Wolves are able to run over the snow surface. As a result of more efficient hunting by the predator caribou movements become less predictable (McDonnell, 1975: 69). Caribou hunting continues into May but becomes more difficult due to their erratic movements and less productive due to their lean physical condition. By May, cows and their yearlings would move to their calving grounds at higher elevations, after which they would move into the mountains in small herds, with the bulls following closely behind.

Moose are an important resource in late winter as they had descend into sheltered lowlands and willow patches near lakes and river banks. However, as the snow melted in late April, and moose wander up to higher grounds, hunting for this ungulate becomes more difficult. Although the cows would once again descend into the lowlands near rivers during calving time, thereby making hunting potentially efficient

the Ross River Indians, following advice from Elders, generally did not hunt cows or calves at this time of year. From late April to early June the more sedentary living pattern of winter changed. Harvesting shifted from big game species to the hunting of small game and birds, fishing, and gathering. In particular, at this time of year, greater

reliance was placed on gophers, rabbits, porcupine and grouse. This required considerable mobility for if a domestic group had not acquired some food surplus by the end of winter they had to rely on animals which were dispersed and which existed in small quantities. However, movement was restricted as a consequence of two things directly related to food production:

> "movement was restrained by where these (food) caches were: for they could not afford to abandon them completely and had to stay in the vicinity. ...The second key factor which restricted movement was the necessity for some individuals to possess intimate knowledge of the land in order for a group to effectively exploit an area during the weeks of spring. A domestic group could not just find itself anywhere in the spring--it had to be situated in a region familiar to at least some of its members" (McDonnell, 1975: 97,98).

> "Place names indicated the main food supply in a particular area, although other resources in smaller amounts would also be available. ...Knowledge of place names indicated two things about an individual; firstly, that he knew an area well enough to exploit it efficiently during the spring and, secondly that he was, or had been, in fairly close contact with all others who shared the same knowledge" (McDonnell, 1975: 89).

Spring harvesting of dispersed small game species was supplemented by net fishing for whitefish and line fishing for spring runs of greyling. Migrating geese, ducks and even cranes would also be hunted. Wild waterfowl and grouse eggs would sometimes be collected as a delicacy. Although in many instances, following the advice of Elders, they would be deliberately left to hatch. "Bear-roots" and such plants as poplar buds and willow stems would also be gathered. During Spring breakup

beaver and muskrat would be hunted along river and stream banks and in marshes. Because the beaver was a rich high energy food it was a welcome variation to the Spring diet.

Indian Summer

The warm months of summer from early June to mid-July was a time-period when not a great deal of big game hunting took place. The time immediately following the birth of the young was a period when Ross River Indians would typically let most game species go so as they could 'fatten-up' and be in prime condition for the fall hunt. Certainly some hunting did take place. Moose would sometimes be killed if intercepted along one's journey; or, if there was a need, would be hunted at 'salt-licks' usually found adjacent to sloughs. The principal summer diet though consisted of small game, fish and berries, supplemented with occassional big-game meat. Salmon fishing along the Pelly, Campbell, Poole and Ross Rivers would usually take place in late July/August. Compared to Spring, movements of main camps were not as frequent and it was not uncommon for several hunting groups to be camped close to one another near good fishing locations. The warm months of summer were important times for socializing between the different hunting groups. To escape the hot weather and flies in the valleys some family groups would also travel to the mountains where they would camp and hunt the occassional caribou or sheep. Some of the summering sites became prominent meeting places, and one, at the confluence

of the Ross and Pelly Rivers eventually became the site of the old village. Towards the end of summer, around mid-July, the fall hunt got underway as the Ross River Indians began a serious preparation to put away food supplies for winter.

Indian Fall

By late summer and fall the larger summer fish camps would split into smaller hunting groups and people would travel to upland and mountain areas which, according to their knowledge of animal behaviour, distribution, and current population levels were likely to provide successful hunts. The major focus of the fall hunt was big game. Moose, caribou and sheep on their upland summer pasturages. As the hunt was underway berries, small game, migrating birds and fish would also be taken. Bull moose and caribou were the most highly prized as they were exceptionally fat prior to their rutting. Once the rut was underway, however, the hunt would shift to cow moose and caribou (McDonnell, 1975: 74). The main purpose of the fall hunt was the preparation of dry meat which would see people through the early part of winter. Following a successful kill, the meat would be brought back to main camp where the women would butcher it into thin strips for drying over a smoke-fire. While the dry meat was being prepared, the men would return to the trading posts to obtain a supply of store bought staples (tea, sugar, lard, baking powder, etc) and the necessities for winter trapping (snare wire, traps,etc)

During the time of the residential schools, trips to the Ross River post would also be made to see the children off to Lower Post for the year. After the men returned from the posts the family hunting groups would move again, this time to winter trapping and hunting areas in the valley bottoms.

Early and Late Winter

Winter camps usually consisted of a wall tent or small log cabin. They would generally be situated where there was a good supply of fire wood. From this base the round of early winter hunting and trapping would take place. At the time that snow started to cover mountain pastures caribou would return to the lowlands where they would feed on lichens and caribou moss. Fresh meat throughout the winter primarily consisted of caribou and moose which inhabitated the lowlands. For diet variation fish and small game such as rabbits and grouse were obtained. Although the main beaver hunt took place in spring, some beaver would be snared or netted using beaver-net under the light ice cover of early winter. As the thickness of the ice increased on the rivers and lakes, emphasis shifted to such fine species as lynx, martin, mink, fox, squirrel, and wolverine. Using dogs, the trappers typically worked a trapline out from the main winter camp, often staying out overnight in small lean-twos or cabins, and returning to the main camp with their catch. Travel would often be along rivers and lakes as well through forest trails. Cow moose or caribou encountered while trapping

would be hunted so as to maintain a supply of fresh meat. Prior to Christmas a trip would generally be made to one of the trading posts, often Ross River, for trading of furs, visits, and to attend religious events. Then it would be back to the main winter camp for more trapping and hunting until the arrival of spring, whereupon another trip would be made to the posts for trading and resupply prior to the spring beaver-muskrat hunt. In some cases these areas were close to the winter trapping areas while in other instances they were entirely different. Figure 5.2, which represents the pre-Anvil seasonal harvest cycle and residency pattern, probably understates the complexities of movements. What is missing are break-ups and reorganizations of hunting/trapping groups and more frequent shifts to promising trapping or hunting grounds. In general though, this was the traditional pattern of seasonal resource and land use followed by the Ross River Indian people from the turn of the century until the major regional developments associated with the Anvil Mine. It is this pattern which has been modified to fit into the Band's present more sendentary residency pattern.

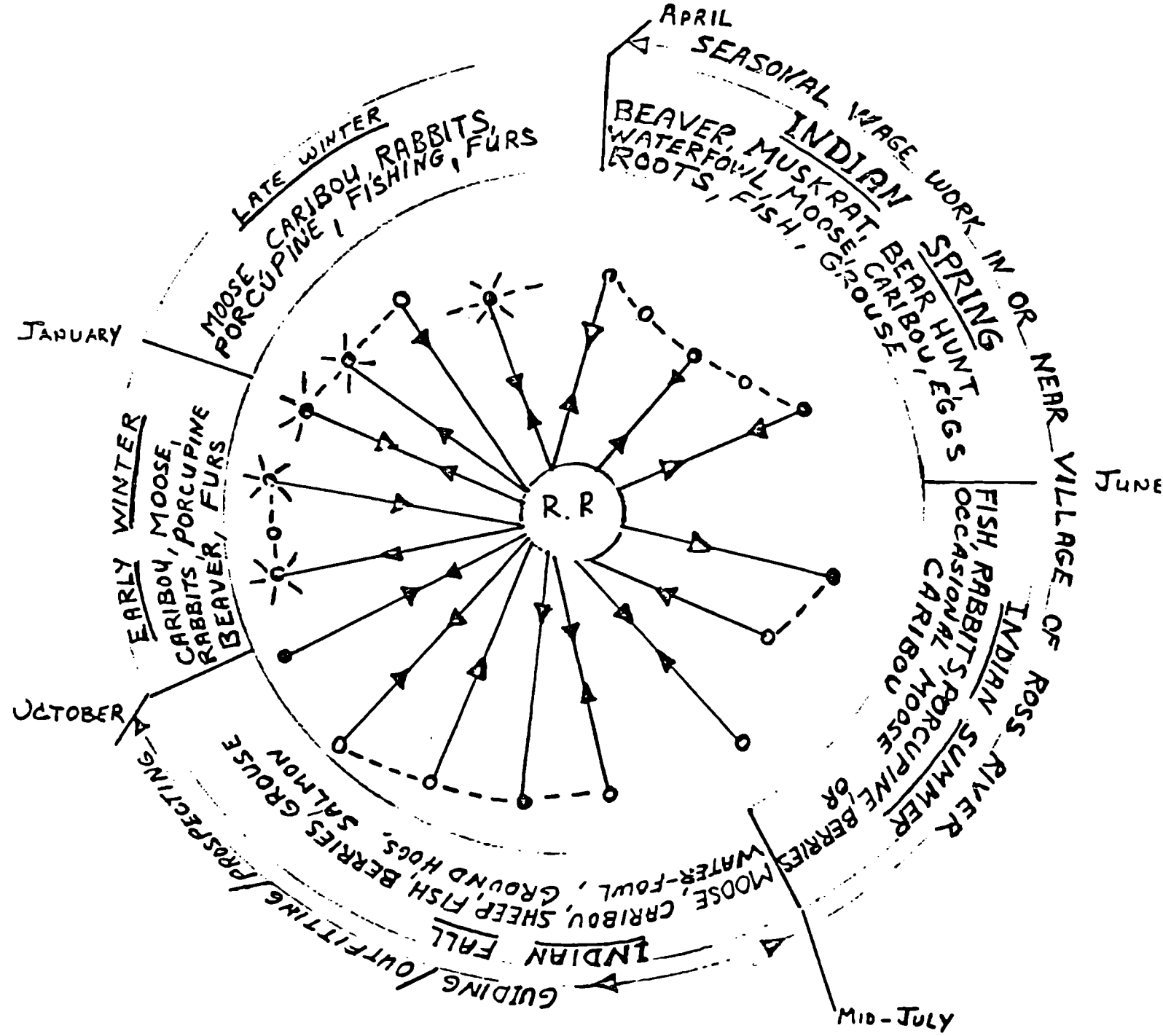
The Seasonal Round: Post Anvil Period

By the early sixties many Ross River Indian families had moved to the old village, and from there to the present village site on the south side of the Pelly River. Those who didn't totally make this shift to Ross River village life maintained bush cabins from which they would carry out their hunting/trapping activities interspersed with occassional trips to Ross River for supplies, mail, visits, etc. This time marked a shift from a largely

semi-nomadic lifestyle to a residency pattern that can be characterized as semi-sedentary. The traditional round of seasonal movement became modified so that people could continue to hunt or trap either from the main base camp that the village of Ross River represents or from camps along the Campbell or North Canol Highways. By and large the animals harvested and the seasonality of the harvest, that is, the Indian Year, have remained the same. As a result of the more sedentary lifestyle, however, adaptations have been necessary in order to continue harvesting activities. The new Yukon Highways, both the Campbell and the North Canol interestingly were built over or close to traditional Ross River Indian trails. In effect the highways have become a modified trail system for Ross River Indians. Trucks and skidoos have increasingly been used as the means to operate the hunting/trapping economy from the fixed base of the Ross River Indian village.

Figure 5.3 represents the seasonal harvest cycle and residency pattern that has prevailed since the late 1960's and the completion of Cyprus Anvil and associated development. The year is again broken into five Indian harvest seasons. The circle at the centre represents the Indian village, and the black dots represent bush log cabins, while the open circles represent wall-tents and less permanent camps. Once again the lines show movement. Lines with double arrows indicate trips generally by truck, out from Ross River to bush camps and hunting/trapping locales.

Figure 5.3
Seasonal Harvest Cycle And
Residency Pattern: Post Anvil



PERMANENT BUSH CABINS
LESS PERMANENT BUSH DWELLINGS, TENTS;
MOVEMENT TO AND FROM ROSS RIVER
MOVEMENT IN BUSH

Movement and residency patterns during the more recent period are more variable, reflecting differences in time committment to wage labor, the restrictions of having children at school, and differences in the locations of the families' main dwelling. People living in Ross River who do not have a permanent committment to full-time wage employment travel out to bush camps two weeks or longer without returning to Ross River. People with full or part-time employment, or whose children are of school age and are not living in the Band's Group home tend to travel out to bush camps for day, weekend, or holiday trips. Finally, the back and forth arrows also represent people whose main domicile is a bush camp and who travel into Ross River intermittantly. Broken lines indicate a mixture of short or long term bush activities that occur by horseback, and boat in the warmer months: and snowshoe, skidoo, and dog-team in the winter. Seasonal wage employment activities are indicated on the outside of the circle.

Fall

The fall remains the season for dry meat camps. The hunting focus is on moose and caribou, supplemented by fish, small game, sheep, berries, grouse and waterfowl. For many of the people one of the most important hunting areas at this time of year is in the headwaters of the Ross and MacMillan Rivers near the MacMillan Pass, which is important summer rangeland for caribou and moose. It is for this very reason that people can obtain both moose and caribou that the area is important for fall harvests. In fact, the MacMillan Pass is the principal area

where the Ross River Indians have ready access to caribou during the summertime. Favourite bush camp areas at this time of year include the Blue Mountains, along Dragon Lake, Barite Mountain, Tsichu mountains, Tay mountains, and the Sheldon Lake area.

During the Indian fall there is a great deal of back and forth traffic along the North Canol Road and much use of camp spots that have been used repeatedly year after year. The road would be actively used by people as they travel to camps or by others bringing meat back to the village. Some of the families spend part of the late summer-fall hunt up the Lapdie River, on Ketza Mountains, in the Seagull Lake area, and in the Pelly River area between Faro and Pelly Lakes. Fall is also a time when some of the men are employed as guides with big game outfitters.

Early Winter

By late September, early October, the fall dry meat hunt is largely over; moose and caribou are in the post-rut period and their meat has a disagreeable odor. People have returned to Ross River, children are in school, and preparations are being made for the advance of winter. Wood is cut and hauled. Prior to the start of trapping season on November 1st there is much speculation about key fur species and the prices they will fetch in the coming year. Traps are bought, snares made, and skidoos repaired in anticipation of snow fall in November. Prior to the formation of heavy ice some beaver trapping takes place, but as temperatures drop the main trapping emphasis shifts to fine furs:

marten, squirrel, fox and mink. The major fresh meat during this period consists of caribou taken from the Finlayson Caribou herd that occupies the Pelly River lowlands. For variety rabbits, porcupine, fish and small amounts of store-bought meat are also consumed, as well as the dry meat from the Fall hunt.

In terms of travel patterns there is a great deal of truck traffic up and down the Campbell Highway from Ross River to bush camps, and from there out by skidoo. In addition, although the North Canol is officially closed, some trappers go as far as Sheldon Lake, and into the Orchay and Tay Lakes area. Vehicle traffic between Ross River and the bush camps around Tenas Creek and Marjorie Lake is common. Another form of travel is by dogteam. Approximately 5 dog teams are still used by people as an alternative to the mechanical problems and cost of skidoos.

Late Winter

After the Christmas break, part of which is spent in Ross River itself and the rest with children and families out in the bush camps, life settles in for a season of trapping, with more attention paid to the larger fur-bearers such as lynx. During this period of the New Year longer periods are spent in the bush camps; when the weather turns intensely cold, bush activity often ceases and people remain indoors. Furs are skinned and stretched, and the women spend time preparing gloves and moccassins. The major winter diet continues to be caribou, although by February moose have descended into the lowlands and

a fat cow moose is often sought. While virtually every male (and some women too) engages in some winter trapping or hunting there are some that spend a greater portion of their time living out of bush-camps than others. Some work full time, and some who are not interested in trapping or can't afford the cost of an outfit, spend much of their time in Ross River usually supported by Unemployment Insurance or welfare. From the senior author's own experience, however, there are few who would choose the alternative of staying long periods of time in Ross River if other more suitable arrangements could be devised. Nonetheless those who do not participate in winter bush activities still have access to fresh meat via family distribution networks.

Spring

To mark the advent of spring many families take a long skidoo trip from Ross River up the Pelly River to the Pelly Lakes area. Along the way caribou might be shot and shared among the travellers. Later as the winter passes, and the snow and ice melts, spring beaver hunting along the Pelly and Ross Rivers takes place. Others go to the Blind Lakes, Orchie Lake and Tay Lakes. Because the caribou are too skinny the diet switches from caribou to the occassional moose with greater reliance on fish, small game, grouse and store goods. Wage work in the form of building construction usually starts around May and continues throughout the summer.

Summer

Summer for many of the Band members is a mixture of occassional hunting and seasonal wage labor. Work is usually for the Band or government agencies such as Forestry, Highways or Department of Public Works. Most hunting is for small game as the Ross River Indian people even today prefer to allow their major food species the time to 'fatten-up' prior to the fall hunt. A survery of meat sales from the Ross River Indian Band store tends to confirm the fact that a greater reliance is made on store-meat during summer months. When school breaks in mid-June whole families tend to move out into fishing and hunting bush camps. By mid-July the fall hunt begins again.

Although we now have some understanding of the seasonal and historical operation of the Ross River Indian economy there are a number of matters that remain to be clarified. In general what are Indian hunting economies all about, how do they operate, and what are some of the special features of the Ross River Indian hunting/trapping economy?

Some Generalities about Hunting Economies

Irrespective of how rich an area may have seemed to explorers and others intent on developing the frontier, Indian hunters and trappers have always had to adapt their system of land use and harvesting to the relative abundance of different species at different places and times within a hunting/trapping territory. Some of these adaptations are obvious, such as the reliance on

aquatic animals within a territory characterized by many lakes and streams or in the case of few waterways, a heavier reliance on terrestrial wildlife. Other adaptations and strategies are more complex, and relate to the web of interactions of a region's ecosystem. The northern boreal forest is an area characterized by major changes in its animal populations. On one hand some animals move in and out of particular areas seasonally. Caribou moose and waterfowl migrate. With caribou and moose the shift may be simply to other areas within the hunting grounds. In most cases Indian hunters are very aware of the major shifts of animal species and utilize this knowledge to manage their harvesting strategies.

Along with seasonal migrations and shifts of animal populations from one location to another within a hunting territory there are some dramatic animal population cycles that take place over longer periods of time. Perhaps the most-well known of these is the snowshoe hare population which goes through a six to thirteen year cycle. At the peak of the cycle population densities can reach as high as 3,000 hare per square mile, and at the low point the population can drop to about 35 per square mile.

In addition to migration patterns and population cycles there is a third type of change seemingly more random and unpredictable than the other two. This is the decline or increase of animal populations over time. For example, Ross River Indian Elders have alluded to times when populations of moose and caribou were low. They have also mentioned more remote periods when animals

existed that are no longer present today - for example large animals with tusks. Changes and variations of these kinds mean that Indian hunters have to be flexible in their patterns of harvesting, willing to move as game migrates, and willing to shift their reliance to other animals as one species becomes less available. The importance of having access to a wide variety of wildlife is not solely for variety of diet. The entire resilience of a renewable resource harvesting Indian economy over long periods of time depends not only on rotational harvesting within a hunting territory, but on the ability and willingness to shift the focus of hunting from one species to another. Animals move and populations go up and down but what is relatively inelastic are the food needs of the people. If the availability of one of the principal food resources becomes scarce for whatever reason, people have to make up their food needs by more intense hunting of other species or greater use of store-bought foods. The resilience of a Band hunting economy is in part connected to the fact that people who are dependent on harvests from naturally occurring animal populations must have access to a variety of species to manage through times of population decline. Other mechanisms which buffer the vulnerability of a Band during times of low country food supply are the reciprocal meat distribution systems that typically exists among kin-networks.

There are several other consequences of an Indian harvesting system. For one, hunters generally do not pursue scarce species.

For example: when the hare population is down hunters generally ignore them as a small game food animal. Here, the prime consideration is the relative efficiency of the food harvest from different species. Animals like moose or caribou that will provide hundreds of pounds of meat are considered differently than snowshoe hares or grouse that provide only a few ounces. This is not to say that small game and fish are not important: they serve as important food inputs not only for dietary variety, but to tide families over until a larger animal is killed. The efficiency of obtaining one's food from different species of animals depends on a number of factors. Among these are: the relative abundance of an animal species, their concentration or dispersal, the weather, the hunting technique used, and the amount of food the animal will provide in relation to hunting time expended.

A second concern of most northern Indian hunting systems is management of resource animals. In this case the primary goal of management is to preserve a food and fur supply from a variety of species over long periods of time. This management objective is related to the perceptions and feelings that Indian hunter/trappers have towards the land and animals as their sense of security, their savings bank, their homeland. In order to reap the benefits from the land this involves a stewardship responsibility in looking after the land and animals. In respect there are certain limits on people's ability and willingness to

manage or preserve populations. When families are short of meat and if access to non-endangered species is difficult or prohibitively expensive, hunters may abandon long-term concerns in order to meet immediate needs of their families. Similarly, when hunters and trappers feel that their conservation efforts are being thwarted by other land users, who are beyong the control of their system, their efforts at management for the long term does not make sense. Generally though, Indian hunter/trappers concern for the long term viability of animal populations and their critical habitats result in a conservative approach to harvesting to meet inelastic needs for food. The emphasis is not on maximizing harvest yields in whatever manner possible, but rather to harvest game animals and fur-bearers so as to preserve supplies over a long term future. The above comments are general features common to northern Indian hunting economies. The question then is: What are some of the special features of the Ross River Hunting/Trapping economy?

In terms of major resource species we can characterize the Ross River economy as big game/small game/fish/fur mammal economy. Caribou, moose, rabbits, fish, gophers and porcupine are the staples of the meat side of the economy, while marten, lynx, muskrat, squirrel and beaver are the staples of the fur side of the economy. Generally though the key to the region's hunting system has been its richness in ungulates, both historically

and at present. One of the distinctive features of the Ross River Indian economy is that some of the key species, such as moose, are generally dispersed throughout the year: while others such as groundhogs and gophers, are concentrated in particular habitats accessible only during certain times of the year; and still others such as caribou are dispersed at certain times of year and concentrated at others. Some of the big game species, particularly goats, sheep, and some of the smaller game species (eg. arctic ground squirrels, gophers, hoary marmots, and groundhogs) are limited to certain habitats, while moose and other small game species are broadly distributed throughout the region. Moose hunting when the animals are abundant and accessible provides a very efficient way of providing food needs. For the Ross River Indian people moose are preferred to caribou due to their higher fat content. However, moose are not animals that move in large herds, rather they are scattered individually or in small groups over large areas. According to Indian hunters they do not have clear and predictable migrations, although there is a general shift of moose populations to progressively higher ground in summer, and lower, more snow-free valley bottoms and side-hills in winter. It is because of these facts regarding moose that much emphasis is placed by the Ross River Indian people on tracking and trails and knowing special habitats where moose reside during different times of year. There are many advantages to relying on moose and caribou; if one of these animals is killed food needs will be satisfied for several days.

But if you miss and have no other food as standby, especially in winter, one would be too weakened to hunt effectively. In the past that was the reality of the Ross River Indian hunting system. Of course, today food can be bought in stores. Nonetheless the Indian economy is not based on single species but must rely on a wide resource mix. Although the increased availability of cash makes it possible for people to purchase some store bought meats to tide them over when they have neither moose or caribou, there remains a strong preference for country food. Small game such as rabbits, groundhogs, gopher, porcupine, grouse and ptarmigan as well as various kinds of fish act as a backup resource and provide dietary variation. The problem with small game, especially hare and grouse, is that they cannot be considered a year to year staple because of their intrinsic population cycles, and as a consequence fish tend to be used as a more 'fail-safe' food source. This reliance on small game and fish continues today. The Pelly and Ross Rivers as well as many of the major creeks and secondary rivers are popular fishing spots. Locales such as Seagull Lakes, Bruce Lake, Marjorie Lake, Pelly Lakes, Dragon and Sheldon Lakes are not only well used for fishing, they serve as a sound location for a summer-fall base camp from whence to hunt. Major fish species sought include several types of whitefish, laketrout, greyling, jackfish, and salmon. With respect to the trapping sector of the Ross River Indian economy, the Ross River Group Trapline area is one of two Group Traplines held by Yukon Indians, the other being held by the Old Crow Band. The Group Trapline

is presently divided into two management areas, Area #1 and #2. Both of these have a group trapline leader who together with the Band Council serve the interests of the Indian trappers. Unlike the period prior to the Anvil developments, when people trapped and hunted wherever they travelled, most trapping today is carried out from bush camps located along the North Canol and Robert Campbell Highway systems, and from bush camps further off the road corridors. The Indian trappers of Ross River deliberately employ a rotational system of trapping so as to give specific areas 'a rest' in the hope that animal populations will regenerate themselves to more abundant levels. While such self-regulation of trapping may not serve the needs of government resource agencies, and while it may not maximize short-term monetary benefits, it has been a very flexible way for the Ross River Indian people to ensure harvests over an intergenerational time period. In the same manner that Indian trappers exercise a measure of self-regulation, indigenous management practices also exist for wildlife species used for food.

Although it is important to meet one's needs for country food, waste is not tolerated by Elders and so there is a tendency to hunt big game only to fill food needs. Actual examples of management include not hunting rare species, or letting certain animals of particular age or sex go even though the opportunity exists to kill them. Elders' guidelines about taboo animals, about leaving the young to mature and rules respecting the management of the Group Traplines all serve the purpose of game

management by regulating the behaviour of "men as predator." The continued reliance on small game is another way in which the Indian system of hunting reduces pressure on the populations of just one or two big game species. Finally, considering that aboriginal lands have been home for thousands of years, and where there is little inclination to leave, people have large concerns respecting the ability of the land and animals to sustain themselves, their children, and their children's children. These concerns are not only for dietary and economic reasons, but also for social and cultural values.

CHAPTER 6

MAPS & MAPPING

METHODS

Faced with a lack of 'hard data' regarding the importance, or lack of importance of Indian land and resource use, a mapping research design and economic questionaire was developed to answer the question whether land for hunting, trapping, fishing and camping was still important for the Ross River Indian people. Furthermore, the mapping research design was intended to clarify what specific lands were important for particular uses. To answer these questions the research team together with the Band Council decided to go directly to individual Band members and ask them to map on 1:250,000 topographic maps which lands they had used for hunting, for harvesting of fur-bearers (trapping), fishing and camping.

After interviewer training and testing of the mapping methodology, the Band interviewers were sent out in the field. Band members eighteen years of age and over were asked to provide biographical information and then to map their land usage. The interviewees were asked to map the areas they had used for hunting, trapping, fishing, and camping during their lives. In all cases strict confidentiality of the maps and all raw data was observed, with no persons outside of the interview team seeing the maps of other individuals. The confidentiality was required not only because it was important to build a 'trust relationship' with interviewees, but also the research team believed the validity of all field research data would be enhanced if informants were denied the possibility

of seeing and possibly duplicating other informants' mapping information. Two time periods that marked important transition events in the recent history of the Band were chosen as the focus for mapping. Specifically, resident Ross River Indian adults 18 years and older were asked to delineate land usage during the time period before the Anvil mine developments, and then for the period after the Anvil mine developments. In total 106 adults or about 73.7% of the sample population of 141 were interviewed about their land use.

The individual maps show the details of important hunting, trapping, fishing and camping locations. In addition all interview maps show areas of importance for particular species of wildlife. Due to the fact that these maps were obtained by assuring their confidentiality to the informants, it became important to devise a methodology that could show the aggregate useage of land by the entire Ross River Indian Band yet maintain individual confidentiality.

Using transparent overlays, hunting, trapping, fishing and camping composites were prepared to represent the entire Band's land usage for each time period - before and after the Anvil Mine developments. These overlays when placed on top of a topographic base map make it possible to identify not only the spatial extent of usage, but also the importance of particular lands. In addition to the Ross River Land Use Maps the knowledge gained by interviews and participant-observation about the Ross River Indian system of land use provided much

of the basic understanding of the movements and resource harvesting activity on the land which was discussed in Chapter 5.

The Ross River Indian Land Use Maps (See Atlas & Fig. 6.1, to 6.8)

The composite 'before' maps represent land use of Band members living today, prior to the development of the Anvil Mine. They represent land use from the turn of the century - during the childhood of today's elders - to the late 1960's. During this period the Ross River Indian people lived a semi-nomadic lifestyle travelling continuously through their home-land utilizing wildlife resources in the manner outlined in Chapter 5.

The composite 'after' maps represent land use of Band members from the late 1960's to the present. The lines on this map are necessarily more numerous, since all people over the age of 17 were eligible for these interviews.

To gain a geographic sense of the importance of the land in terms of locations where people camped, the mappers asked informants to provide two types of information respecting camp locations. One map details Base Camp locations (#1 camps). These are camping locations that have either a cabin, a permanent-wall tent base, or are locations where people have regularly spent upwards of a couple of weeks. The Map entitled #2 Camps denotes camping locations of a more temporary nature where people would stay for a period of less than two weeks

before moving to a different location. These maps provide a quick approximation of the relative importance of given areas during each of the time periods. Each of the campsites has its own harvesting 'hinterland' equal to a day's travel out from the campsite. The major limitation to this approximation, however, results from day trips out from Ross River during the recent period, when a camp would not necessarily be occupied.

The most striking observations of the 'Before' camp maps are the immensity of camping spots and their wide dispersion. Each symbol on the overlay indicates a camping spot for the informant who completed an individual map biography, rather than a separate cabin or wall tent. Locations with numerous clusters of #1 or #2 symbols represent camp locations that are important for several people or families. The importance of these camping spots are not only as bases from which to reside and carry out harvesting activities, but, as an examination of the biographical material accompanying each informant's individual map suggests, these are also places where people were born, grew up and died. They are places of cultural importance in terms of significant events within individual and faimly life, of memories, of stories, of legends. In particular for the Ross River Indian people, the Pelly River and its tributaries have always been of immense importance. One observes clusters of important camp locations extending from the Pelly/Fortin Lakes area to Ross River, and then further

along the Pelly beyond 'Faro' into the foothills of Rose Mountains. Other camp spots of economic and cultural importance are along the Lapie, Ketza, Hoole, and Campbell rivers, as well as throughout the Finlayson and Frances lakes region. To the west of the Ross River system are such famous Indian camp spots as Tenas and Gravel Creek, Dragon Lake, Marjorie Lake, and along the east side of the river are noteable locations as Jackfish, Sheldon/Lewis and Otter Lakes. Although these locations are referred to by their English names, each geographic location has an Indian place name which signifies the cultural and economic importance of the area.

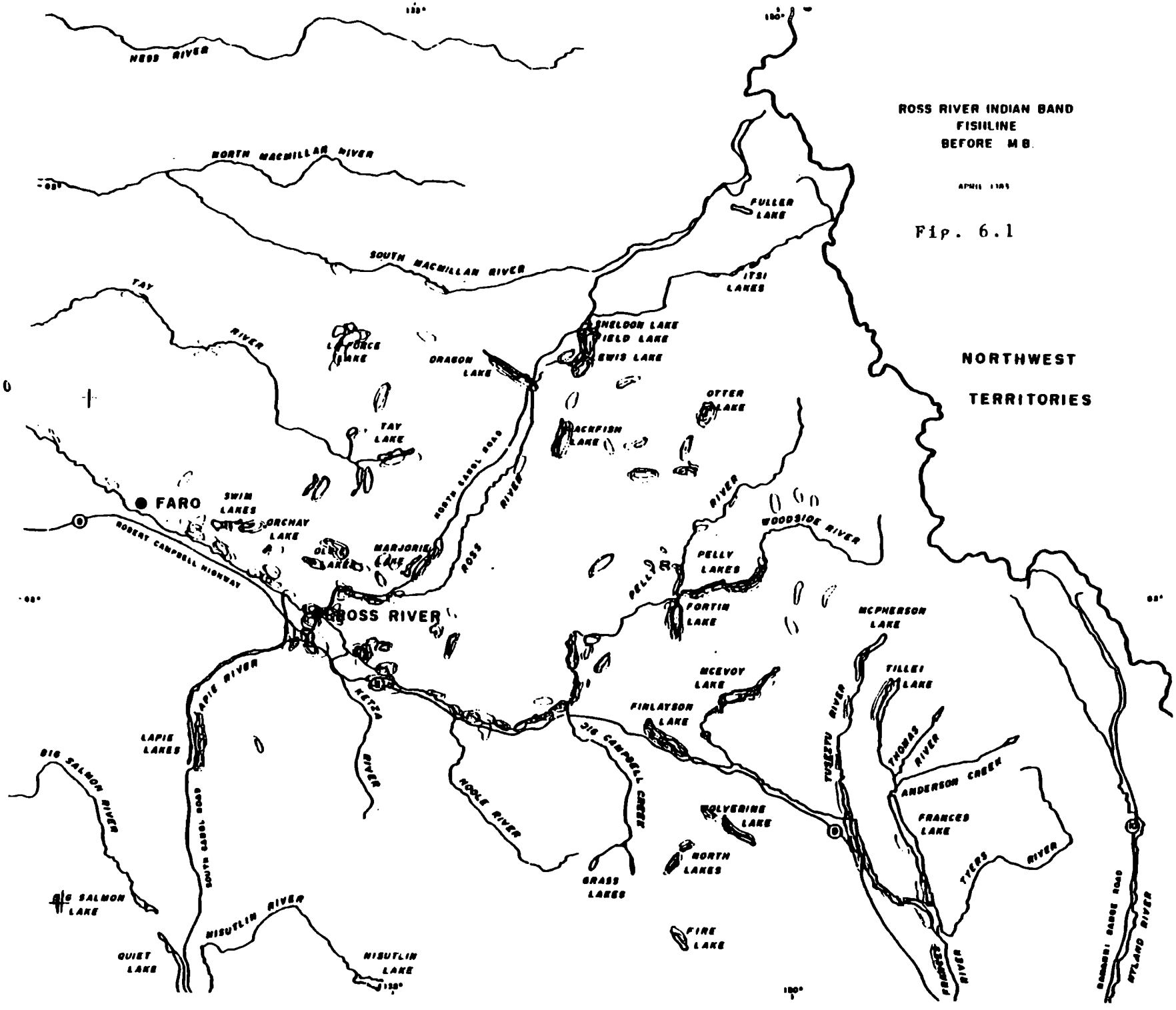
In looking at the more recent Camp Maps many of the remarks related above for the 'before' period continue to apply. Most of the camp locations named previously, that were popular 'Before' Anvil, continue to have significance in the more recent era. There are, however, some interesting differences between the 'After' and 'Before' Camp maps. On the 'After' maps there is a large preponderance of #1 and #2 Camps located proximate to road networks, although there remains a significant number of camp locations along the major river systems and close to large lakes that continue to be used. Due to cost associated with transportation some of the more remote camping locations used during the 'Before' period, such as the Otter and LaForce lakes area, have not been used as frequently. The Pelly and Ross Rivers as well as their major tributaries all continued to be important, albeit less commonly today than in the past.

One of the more striking contrasts between the After and

Before maps is that the area proximate to the North Canol has a much more intensive camping use pattern in the recent past. For example, during the 'After' period the area around Blue Hills, Dragon and Sheldon Lakes have been important summer camp locations for about four extended families, who hunt in the mountains nearby. Camp locations which serve as hunting base camps around the NWT/Yukon border area extend from about three miles south of the NWT border as far as Camp 222. As well, several families camp along the Amax road and just past the 208 airport.

While the reopening of the North Canol road and increased availability of trucks may provide a partial explanation for the apparent increased land use of this area, there are other factors involved which make it very difficult to compare the Ross River Indian use of this region during the two time periods. Many of the Elders that were alive during the 'Before' Anvil period are now dead or in some cases unable to reliably respond as map informants due to their infirmity. Therefore, the land usage described in the 'Before' period is not as complete as the contemporary period. Nonetheless a check of the 'Before' hunting maps notes that the area north of Sheldon lakes was used in the 'Before' time period and is certainly of importance today. Camp maps for both time periods demonstrate visibly not only an occupational use of the land, but also the historical continuity of interest in the land and use of specific locations.

The fishing maps are divided into two categories. Interviewees were requested to map all those locations that they had used for net-fishing and for fishing with hook and line during both time periods. Both the 'Before' and 'After' Fishing maps are covered with circles; in some cases with numerous overlaps of the same locale. More precisely, the areas along the Pelly and Ross River as well as the numerous lakes in the region that had been used by the Ross River Indian people in the 'Before' Anvil time period, were to a large extent still in use during the more contemporary period of 'After' Anvil. For example, the Pelly River and the lower parts of the Ross River are important for salmon netting. Salmon has always been an important species, and in the view of the Ross River Indian people will remain a small, but important variation of the summer-time diet. Although it is hazardous to rate some fishing locations as more importnat than other, because they differ in accessability, and seasonality of use, there are some locations that are more popular than others, and which should be considered high priorities for protection not only from the Indian economy perspective but also for a cultural-historical reason. Rather than single out these site-specific locations it is best to refer to the Map Atlas and the Ross River Indian Band itself for such identification. Finally, the fishing maps for both the 'After' and 'Before' time periods graphically present evidence of not only a continuity


ROSS RIVER INDIAN BAND
FISHLINE
BEFORE M.B.
APRIL 1985
NORTHWEST
TERRITORIES
NEOS RIVER
NORTH MACMILLAN RIVER
SOUTH MACMILLAN RIVER
FULLER LAKE
ITSI LAKES
TAY
RIVER
LA FORCE LAKE
DRAGON LAKE
SHELDON LAKE
FIELD LAKE
LEWIS LAKE
OTTER LAKE
TAY LAKE
ROBERT CAMPBELL HWY
FARO
SWIM LAKES
ORCHAY LAKE
OL LAKES
MARJORIE LAKE
ROSS RIVER
PELLY RIVER
WOODSIDE RIVER
PELLY LAKES
FORTIN LAKE
MCPHERSON LAKE
MCEVOY LAKE
TILLEI LAKE
FINLAYSON LAKE
TOUCHTU RIVER
THOMAS RIVER
ANDERSON CREEK
FRANCES LAKE
TYEES RIVER
LAPIE RIVER
LAPIE LAKES
KETZA RIVER
ROOSE RIVER
316 CAMPBELL CREEK
WOLVERINE LAKE
NORTH LAKES
GRASS LAKES
FIRE LAKE
BIG SALMON RIVER
BIG SALMON LAKE
QUIET LAKE
NISUTLIN RIVER
NISUTLIN LAKE
HYLAND RIVER

Fip. 6.1

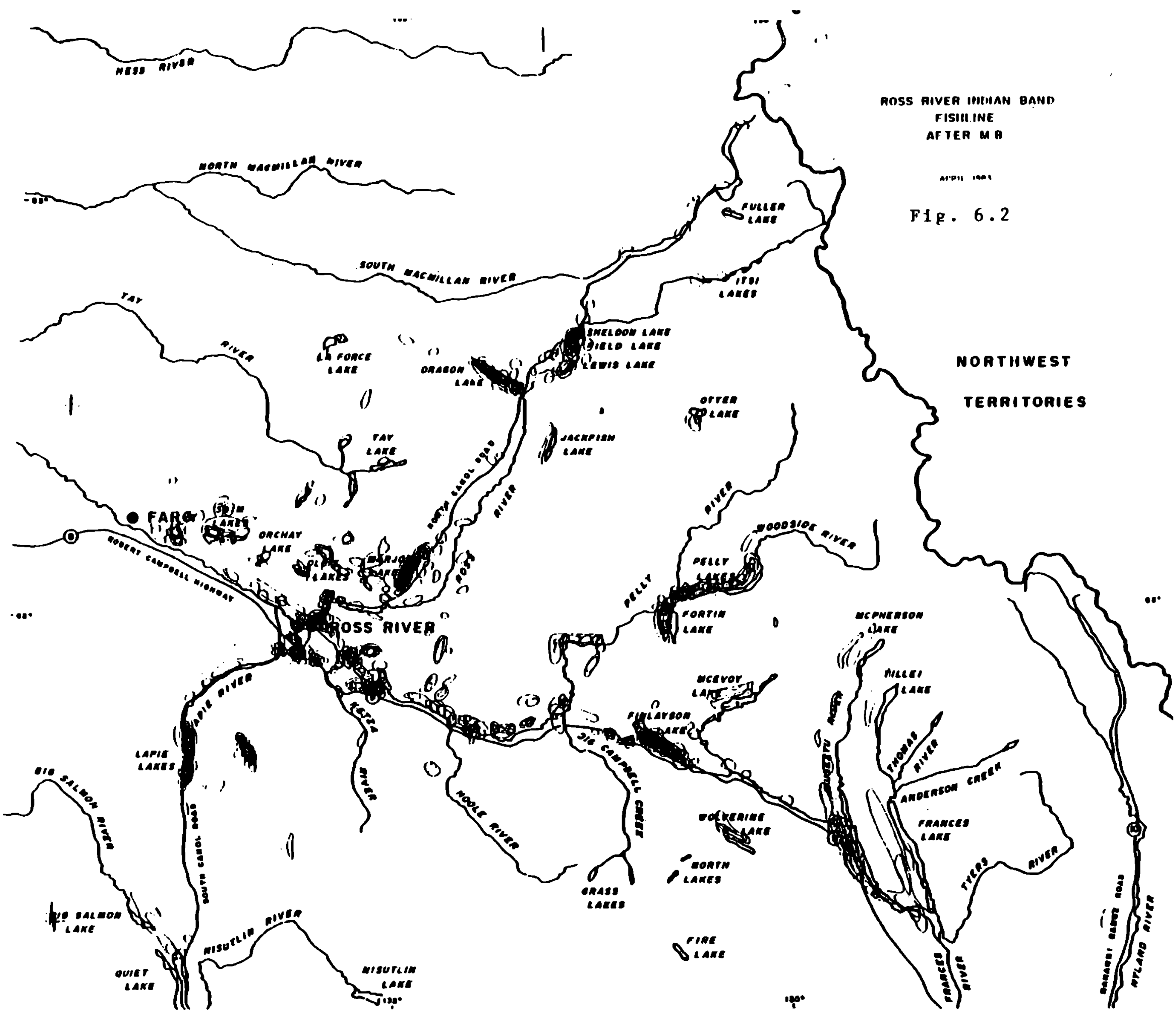
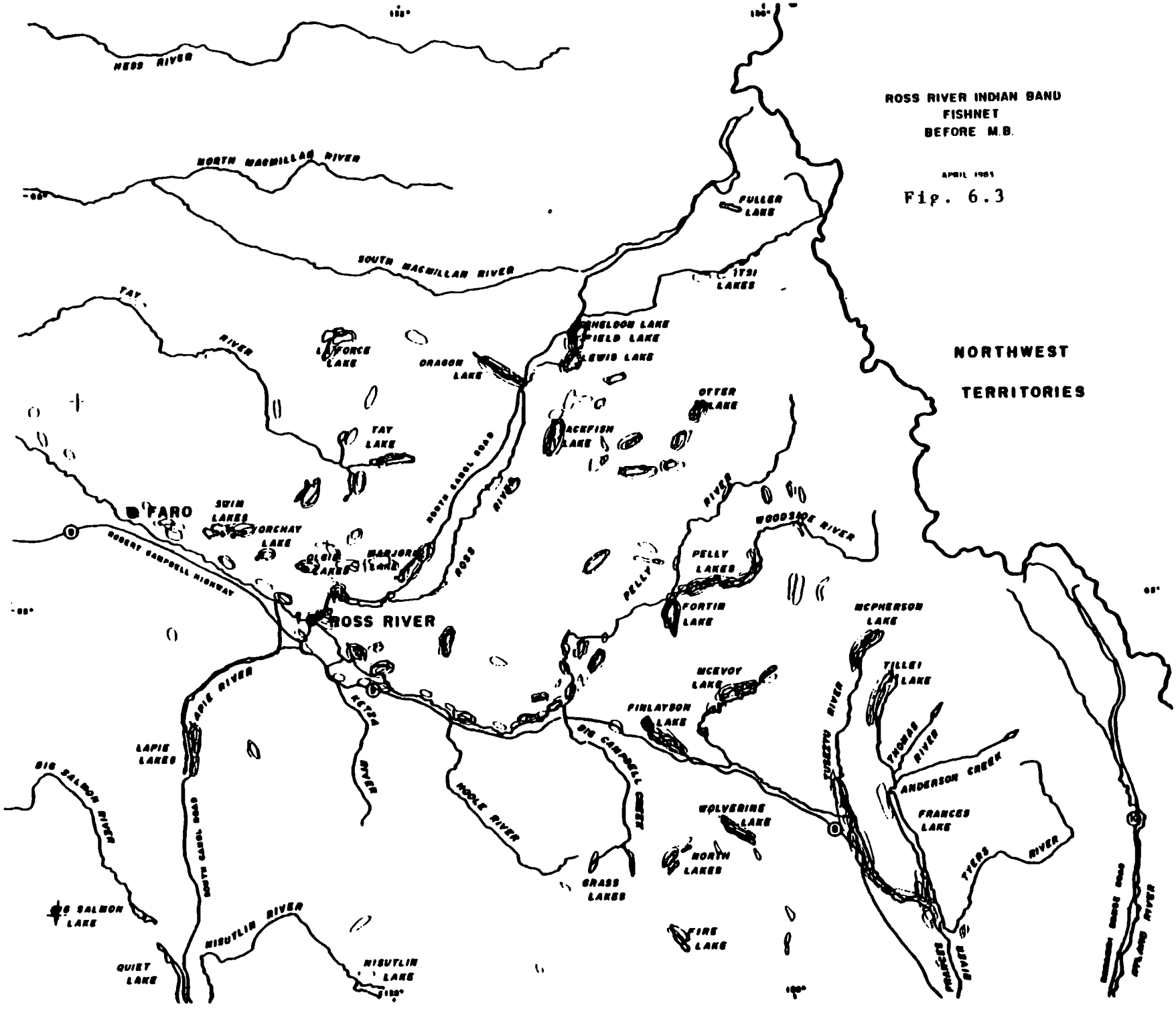
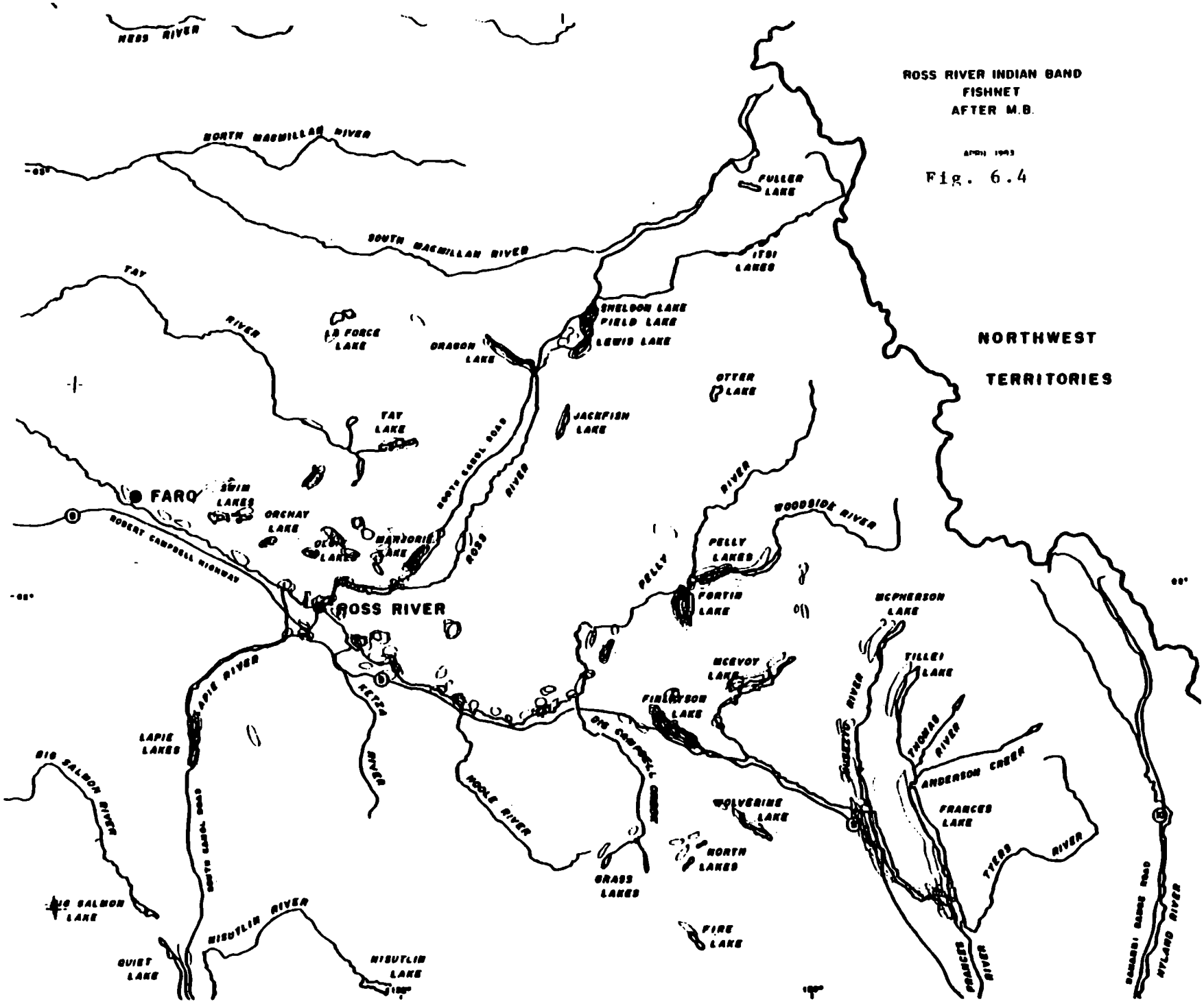

ROSS RIVER INDIAN BAND
FISHLINE
AFTER MB
HESS RIVER
NORTH MACMILLAN RIVER
SOUTH MACMILLAN RIVER
TAY RIVER
FULLER LAKE
ITSI LAKES
SHELDON LAKE
FIELD LAKE
LEWIS LAKE
LA FORCE LAKE
DRAGON LAKE
NORTHWEST TERRITORIES
OTTER LAKE
JACKFISH LAKE
TAY LAKE
NORTH CANOL ROAD
ROSS RIVER
FARO
ORCHAY LAKE
ROBERT CAMPBELL HIGHWAY
WOODSIDE RIVER
PELLY LAKES
PELLY RIVER
FORTIN LAKE
MCPHERSON LAKE
LAPIE RIVER
KETZA RIVER
MCEVOY LAKE
FINLAYSON LAKE
HILLEI LAKE
THOMAS RIVER
ANDERSON CREEK
FRANCES LAKE
LAPIE LAKES
BIG SALMON RIVER
SOUTH CANOL ROAD
HOOLE RIVER
BIG CAMPBELL CREEK
WOLVERINE LAKE
NORTH LAKES
GRASS LAKES
TYERS RIVER
BIG SALMON LAKE
NISUTLIN RIVER
FIRE LAKE
QUIET LAKE
NISUTLIN LAKE
FRANCES RIVER
NAHANNI RANGE ROAD
HYLAND RIVER

Fig. 6.2


ROSS RIVER INDIAN BAND
FISHNET
BEFORE M.B.
APRIL 1981
Fig. 6.3
NORTHWEST
TERRITORIES
NEES RIVER
NORTH MACMILLAN RIVER
SOUTH MACMILLAN RIVER
FULLER LAKE
ITSI LAKES
TAY RIVER
SHELDON LAKE
FIELD LAKE
LEWIS LAKE
DRAGON LAKE
FORCE LAKE
OTTER LAKE
TAY LAKE
PACKFISH LAKE
FARO
SWIM LAKES
ORCHAY LAKE
ROBERT CAMPBELL HIGHWAY
ROSS RIVER
SOUTH CANOL ROAD
PELLY RIVER
WOODSIDE RIVER
PELLY LAKES
FORTIN LAKE
MCPHERSON LAKE
TILLEI LAKE
MCEVOY LAKE
PINLAYSON LAKE
LAPIE RIVER
LAPIE LAKES
BIG SALMON RIVER
BIG SALMON LAKE
QUIET LAKE
NISUTLIN RIVER
NISUTLIN LAKE
HOOLE RIVER
GRASS LAKES
WOLVERINE LAKE
NORTH LAKES
FIRE LAKE
BIG CAMPBELL CREEK
THOMAS RIVER
ANDERSON CREEK
FRANCES LAKE
TYERS RIVER
MACKENZIE RIVER


ROSS RIVER INDIAN BAND
FISHNET
AFTER M.B.
Fig. 6.4
NORTHWEST
TERRITORIES
NEELS RIVER
NORTH MACMILLAN RIVER
SOUTH MACMILLAN RIVER
TAY
RIVER
LA FORCE LAKE
DRAGON LAKE
SHELDON LAKE
FIELD LAKE
LEWIS LAKE
FULLER LAKE
ITSI LAKES
OTTER LAKE
JACKFISH LAKE
TAY LAKE
FARO
SWIM LAKES
ORCHAY LAKE
MARJORIE LAKE
ROBERT CAMPBELL HIGHWAY
SOUTH CANOL ROAD
ROSS RIVER
PELLY RIVER
WOODSIDE RIVER
PELLY LAKES
FORTIN LAKE
MCPHERSON LAKE
TILLEI LAKE
MCEVOY LAKE
FINLAYSON LAKE
LAPIE RIVER
LAPIE LAKES
KEELE RIVER
BIG SALMON RIVER
BIG SALMON LAKE
QUIET LAKE
NISUTLIN RIVER
NISUTLIN LAKE
HOOLE RIVER
DRY CAMPBELL CREEK
GRASS LAKES
WOLVERINE LAKE
NORTH LAKES
FIRE LAKE
THOMAS RIVER
ANDERSON CREEK
FRANCES LAKE
TYERS RIVER
FRANCES RIVER
HYLAND RIVER

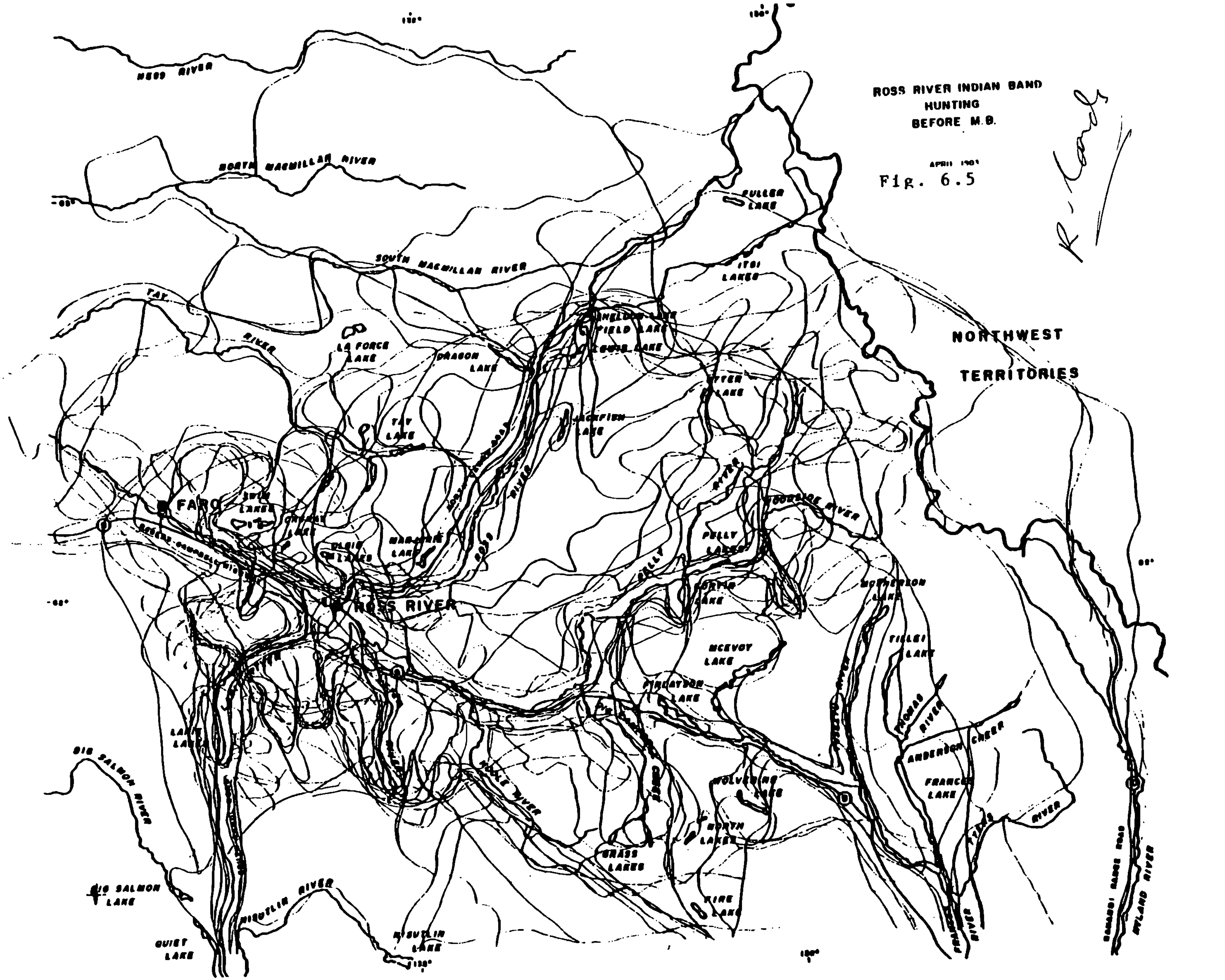
of fishing at specific locations during different seasons for varied species, but also an importance of fishing as a vital ingredient of the Ross River Indian economy.

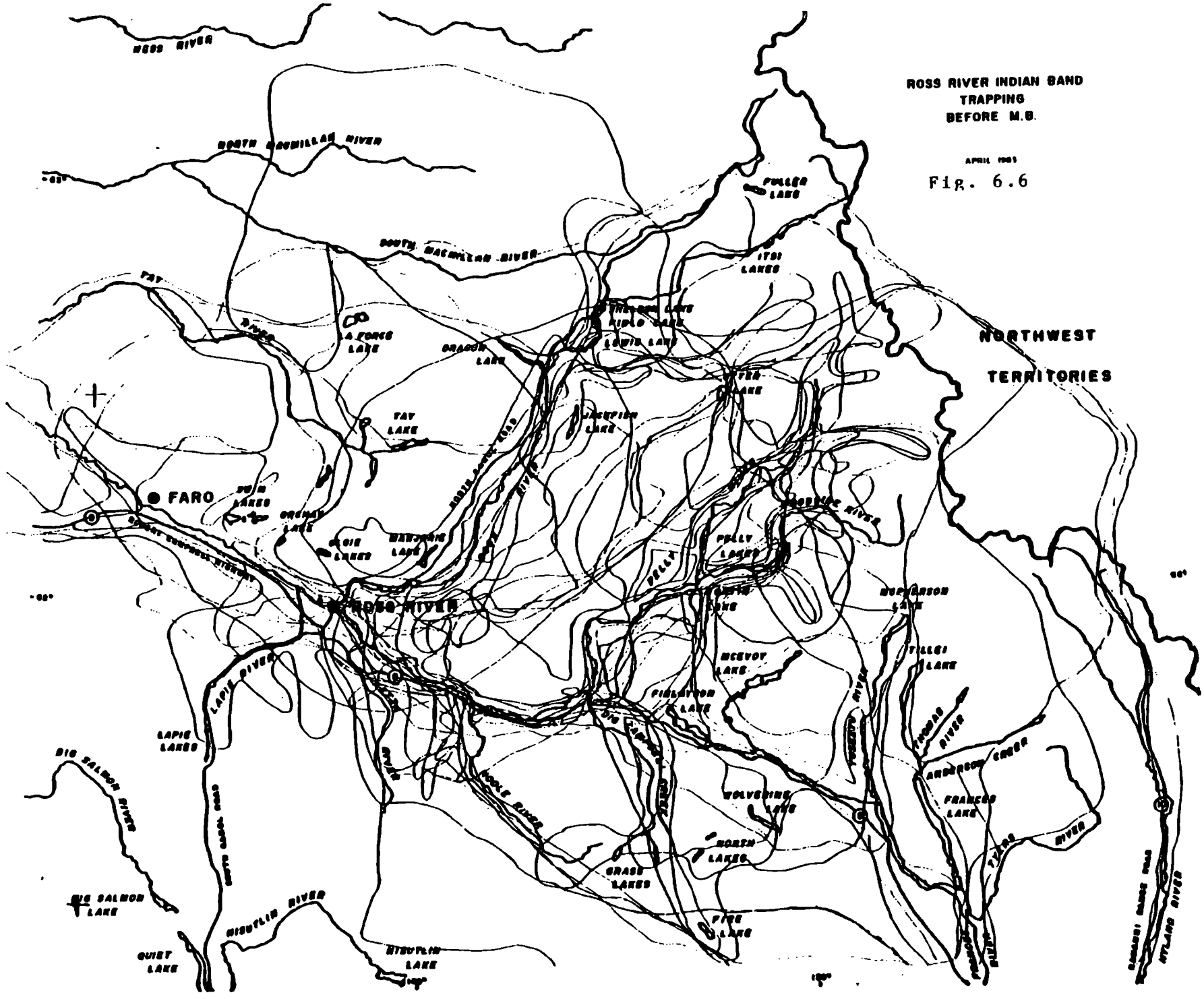
Respecting the 'Before" Anvil hunting and trapping maps one observes numerous lines criss-crossing each other, covering very large geographic areas. In fact the hunting territory during this time period measured about 236 miles (east-west) and 160 miles (north-south) or about 37,760 square miles in area, while the trapping area measured about 148 miles by 208 miles or 30,784 square miles. While these are large territories they are underestimates because they do not include the land use of some Elders who had travelled into British Columbia and the Northwest Territories. During the 'Before' time period Band members had a semi-nomadic lifestyle and while trips to trading posts occurred during different times of the year, the maps visibly show that there existed a non-central or non-nodal use pattern. As Chapter 5 noted, the seasonal round is in part, an adaptation to the dispersals and concentrations of the primary wildlife resource populations as they migrated between habitats during different times of the year. The hunting and trapping maps represent the Ross River Indian people travelling through varied habitats, lowlands, valleys and mountains as they carried out resource harvesting during the seasonal rounds that comprise the Indian year. Although it is best to refer to the Atlas to gain a deeper appreciation of specific areas of importance, in general, habitats close to both the Ross and Pelly River

ROSS RIVER INDIAN BAND
HUNTING
BEFORE M.B.

APRIL 1981

Fig. 6.5


NORTHWEST
TERRITORIES
HESS RIVER
NORTH MACMILLAN RIVER
SOUTH MACMILLAN RIVER
FULLER LAKE
ITSI LAKES
TAY RIVER
LA FORCE LAKE
DRAGON LAKE
FIELD LAKE
JACKFISH LAKE
TAY LAKE
FARO
ROSS RIVER
PELLY LAKES
McEVOY LAKE
TILLEI LAKE
THOMAS RIVER
ANDERSON CREEK
FRANCES LAKE
FRANCES RIVER
WOLVERINE LAKE
NORTH LAKES
GRASS LAKES
FIRE LAKE
LAKE LAKE
BIG SALMON RIVER
BIG SALMON LAKE
QUIET LAKE
NISUTLIN RIVER
NISUTLIN LAKE
RIVER
CANADA RANGE ROAD
HYLAND RIVER


ROSS RIVER INDIAN BAND
TRAPPING
BEFORE M.B.
APRIL 1983
Fig. 6.6
NORTHWEST
TERRITORIES
FARO
ROSS RIVER
ROSS RIVER
NORTH MACMILLAN RIVER
SOUTH MACMILLAN RIVER
TAY
TAY LAKE
DRAGON LAKE
LA FORCE LAKE
ITSI LAKES
FULLER LAKE
FEE LAKE
LAKEFISH LAKE
PELLY LAKES
PELLY RIVER
MCEVOY LAKE
FIDLEROON LAKE
TILLEI LAKE
THOMAS RIVER
ARROWROCK CREEK
FRANCES LAKE
FRANCES RIVER
WOLVERINE LAKE
NORTH LAKES
GRASS LAKES
FIRE LAKE
LAPIE RIVER
LAPIE LAKES
BIG SALMON RIVER
BIG SALMON LAKE
QUIET LAKE
HIHUFLIN RIVER
HIHUFLIN LAKE
ORCHAN LAKE
DUNN LAKES
CANOL ROAD
ROBERTS CREEK
HYLAND RIVER

systems as well as tributary rivers and creeks flowing into these systems were important for hunting and trapping during much of the year, with upland habitats being more important during the late summer and fall dry-meat hunts. Regarding the 'After' hunting and trapping maps, the most striking observations are the differences with the 'Before' maps in areal size and in land use patterns. In terms of the 'After' trapping map one notes that while it still covers a large spatial area measuring approximately 144 miles (east-west) and 112 miles (north-south) or about 16,128 square miles, this is an areal decrease of about 47 percent from the 'Before' it would be erronous to conclude that the Ross River Indian people do not consider this land important. The Ross River Indian maps are useage maps, what they do not show, and what is of vital importance to the system, are wildlife habitats. For example, the maps show a greater concentration of harvesting areas in the valley bottoms. For moose and caribu, however, upland summer pasturages are vital to their continued productivity. Even if these areas were never hunted they would be integral to the Ross River Indian system of use because they are part of the basis for the ecosystem's biological productivity.

The changes brought about by village life have made it extremely difficult to reach the more remote areas and the economic costs of transportation to isolated regions are

typically too high for the average person to bear. Nevertheless, the Band Council has several plans for re-opening trapping/hunting areas in the more isolated locations of the Group Traplines and is actively seeking funds to provide their own system of transportation and communication infrastructure.

In addition to the above reasons for decreased trapping/hunting use of certain areas within the Group Traplines, it must be pointed out that the area around Faro and the Cyprus Anvil mine was hunted and trapped intensively by eight extended family groups during the 'Before' Anvil time period. Due to the influx of a large white population, industrial activity, and the Faro fire, the area, while it still contains some furbearers and wildlife, is not used as frequently by the Ross River Indian people. The principal reason for this reduced use is the destruction of habitat for such fur bearing species as marten and squirrel (which require climax forest habitat conditions) by the Faro fire, but as well the disturbance and unpredictable influences of Euro-Canadians on what was a relatively undisturbed bush and wildlife environment.

Respecting the 'After' trapping map, it is important to note that all the trapping takes place on Group Traplines. While traps, snares and even cabins may be owned by individuals or families, no one person 'owns' a trapline. The Ross River Band Council assumes management responsibility for the Group Trapline as a whole and any damage or irreversible destruction

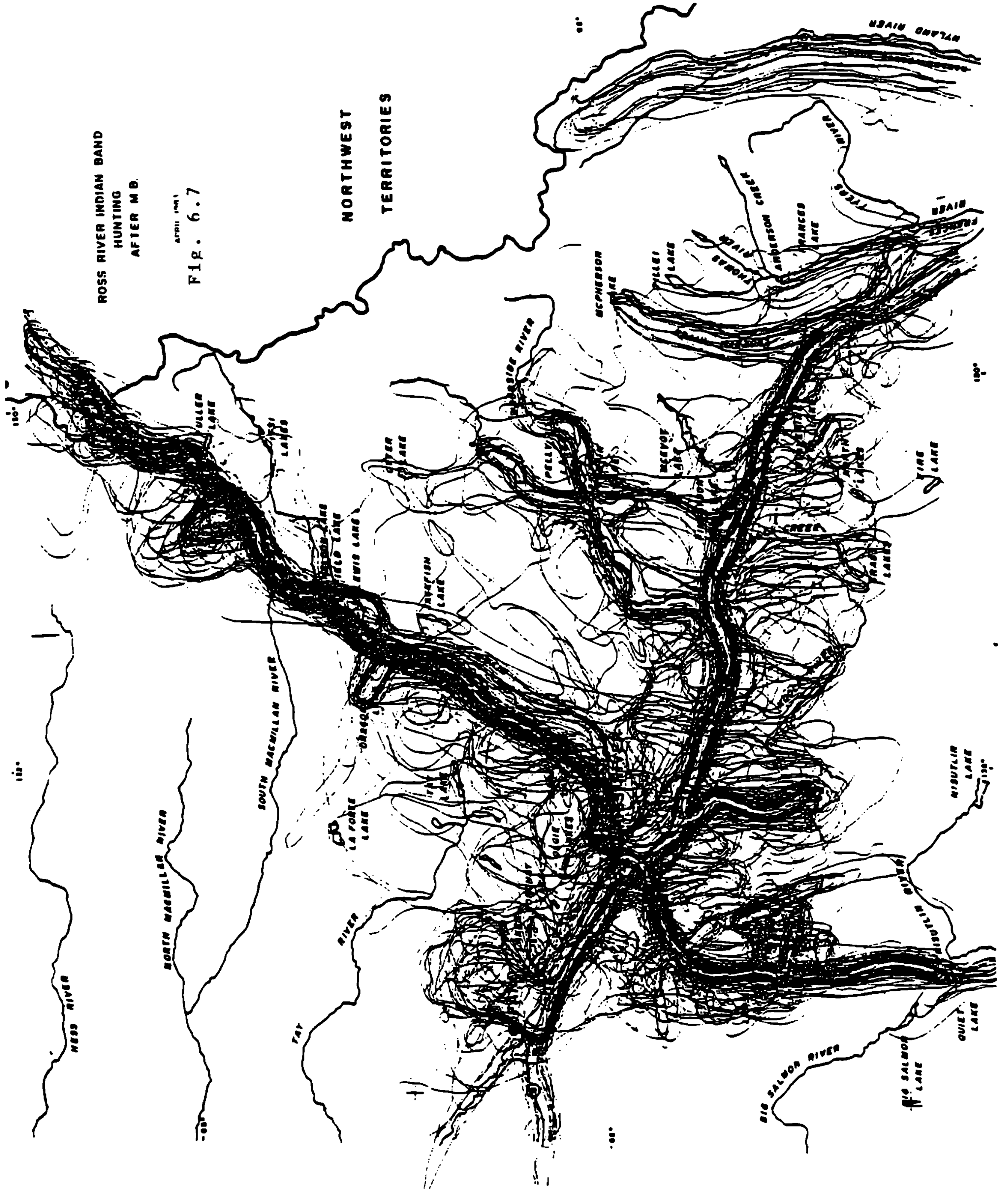

ROSS RIVER INDIAN BAND
HUNTING
AFTER M.B.
NORTHWEST TERRITORIES
SOUTH MACMILLAN RIVER
NORTH MACMILLAN RIVER
TAY RIVER
LA FORCE LAKE
BIG SALMON RIVER
BIG SALMON LAKE
QUIET LAKE
NISUTLIN LAKE
NISUTLIN RIVER
FIRE LAKE
ANDERSON CREEK
FRANCES LAKE
FRANCES RIVER
THOMAS RIVER
MCPHERSON LAKE
MCEVOY LAKE

Fig. 6.7

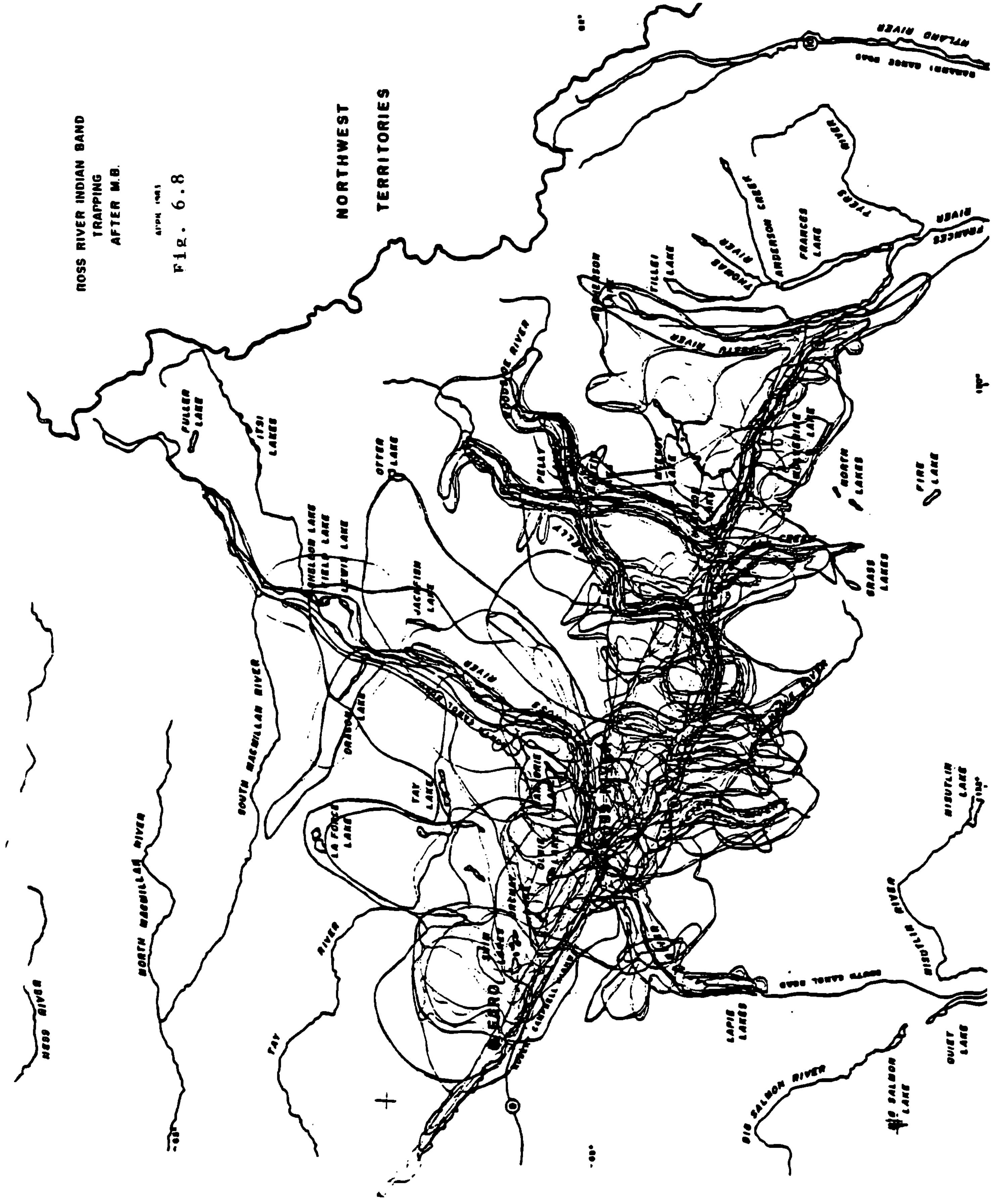

ROSS RIVER INDIAN BAND
TRAPPING
AFTER M.B.
NORTHWEST TERRITORIES
FULLER LAKE
ITSI LAKES
OTTER LAKE
JACKFISH LAKE
SOUTH MACMILLAN RIVER
NORTH MACMILLAN RIVER
HESS RIVER
TAY RIVER
TAY LAKE
LA FORCE LAKE
PELLY RIVER
TILLEI LAKE
THOMAS RIVER
ANDERSON CREEK
FRANCES LAKE
FRANCES RIVER
HYLAND RIVER
NAHANNI RANGE ROAD
NORTH LAKES
FIRE LAKE
GRASS LAKES
LAPIE LAKES
NORTH CANOL ROAD
NISUTLIN RIVER
NISUTLIN LAKE
QUIET LAKE
BIG SALMON RIVER
BIG SALMON LAKE

Fig. 6.8

to furbearer habitat that might affect furbearer populations is a concern to the Band Council. Therefore, any compensatory negotiations should be held with the Council and not individuals.

Present day trappers travel principally by skidoo, although dogs are still used by some. Men and women either trap alone, or as a husband/wife team travelling out from a main camp or the village between one and three days at a time, setting and checking traps and snares. Personal trapping 'lines' can be very small, consisting of only 20 or 30 traps, while others may have as many as 200 traps and snares out for the duration of the season. The most intensive areas of trapping use are north and south along the Pelly River and its tributaries, as well as areas to the east and west of the Ross River and off the North Canol road, extending approximately 30 miles north of Sheldon Lake. In the months of June, hunting for beaver and muskrat takes place along the Pelly and Ross Rivers, and around Tay, Blind, and Orchie Lakes for between three weeks and a month. Hunting for caribou and small game also takes place while trapping. For this reason the Trapping Land Use maps not only reveal the spatial extent of trapping, but also indicate spring/winter hunting areas.

With regard to the 'After' Anvil Hunting map, one of the most obvious patterns is the preponderance of hunting area lines that appear close to the transportation corridors, along the Campbell Highway and North Canol road. At first glance, looking at this map, one might conclude that the Ross River Indian people are principally road-hunters. While it is true that big game and small game animals are often killed when

intercepted close to the road, that is not the only explanation respecting the convergence of hunting area lines along the highways. The roads are not only transportation corridors for resource developers and travellers through the southeast Yukon hinterland. They are also part of the travel infrastructure of the modern Ross River Indian economy. They are the means whereby the modern domestic economy can continue to be carried out from the fixed base of the Ross River village and permanent bush camp residences. Additionally, as Ross River Indian Elders reveal, all of the existing roads in the region were built on, or close to, what were Indian trails along the valleys of the principal river systems and tributary rivers and creeks. These trails were used to gain access to specific hunting, trapping and fishing areas and served as transportation corrdiors between main camps.

As well, to a certain extent, the preponderance of lines along the valley bottoms and close to the roads are an artifact of our method of aggregating the individual hunting areas. All hunters use the road system for access to hunting areas. Some groups 'primary' hunting areas lie east of the Ross River and north of the Pelly, others concentrate on lands north of the Pelly and west of the Ross, still others concentrate on lands to the south of the Pelly. Individual hunting maps, for the most part, show relatively large hunting areas, with one or more boundaries along the Campbell Highway or Canol road. When the individual areas are aggregated dense lines appear

along the roads because part of the boundaries of each person's hunting area lies along the road and because all people hunt while travelling the roads outside their primary areas.

The dark lines that follow the Campbell Highway are in part the result of two-way truck traffic from Ross River to bush camps adjacent to the highway. While travelling these roads wildlife signs are observed, and in the winter/spring the bush camps serve as bases from which trapping and hunting takes place. Hunting of the Pelly River lowlands for small game takes place year round, while hunting for moose and caribou take place concurrently during the winter/spring trapping season and is mainly in areas far off the road. In spring, summer, and fall some people travel along the Pelly River by boat to their main hunting areas, hunting as they travel. Regarding the hunting areas along Ketza and Lapie rivers, as well as the Ross River and North Canol road area, these regions are used by certain family groups in the wintertime by skidoo, and by more groups in the summer/fall when the roads are open. The North Canol road is typically closed in winter, and while some hunting of the area does take place during this period it is restricted primarily to the area between Gravel creek and Ross River. Although trappers travelling by skidoo past Sheldon Lake will hunt caribou and small game if intercepted and needed.

In the summer when the North Canol opens, the road is used to travel from Ross River to family camping, hunting and fishing spots which according to Elders have been in use by kin-relations

of the existing Ross River Indian people for generations. Of primary importance to the modern Ross River Indian people is their contemporary harvest of moose and caribou in the region of the Yukon/NWT border region. With the seasonal migration of the Fortin Finlay herd to the mountains bordering the Pelly River lowlands, travel to the Itsi, Hess and Selwyn mountains via the North Canol Road makes possible harvests of the Redstone herd which provides the only fresh caribou meat to the Ross River Indian people during summer/fall.

Another artifact of the composite methodology is an apparent difference between the number of hunting and trapping areas during the recent 'After' period. Comparing the trapping map with hunting maps it appears that there are many more lines on the hunting maps. A thorough check of individual maps revealed that there were only 8 more hunting lines, all belonging to women who were single or with several children who hunted but did not trap. The appearance of more lines on the 'After' hunting maps when compared with the 'After' trapping maps is in part due to the fact that the lines on the trapping map cover different areas and in some cases the circles are 'nested' inside each other, while the hunting lines run, in part, near transportation corridors. These later lines are extremely close together giving the impression of intense hunting activity along the road corridors. As discussed above, hunting in the valley bottom areas, where the roads are located, is important, but understates the extent of land use during the

recent time period.

Finally, our method of splitting up the various land use activities and aggregating them as hunting, fishing, trapping, etc. distorts the integrated nature of Ross River Indian resource and land use. When a Ross River Indian speaks of going trapping it is important to realize that 'going trapping' does not just refer to setting traps and snares, but going out on the land for a whole range of activities including camping, hunting, and fishing. Similarly when out on the land during summer and fall hunting, the activities of fishing, camping and berry-picking are all concurrent activities. The Ross River Indian maps reveal the spatial aspects of an integrated system of land usage, which when placed together with information about the Indian System of Use and the results of the economic questionaire in Chapter 7, document the existence and characteristics of a modern, rural household-oriented mixed hunting, fishing, trapping, and cash economy.

Juxtaposed to the Ross River Indian maps, however, are other types of land use maps which portend other realities and dreams for the usage of lands traditionally and presently used by the Ross River Indian people.

Non-Indian Land Use Maps: Present and Proposed Uses (see Atlas)

As previous chapters have indicated the lands upon which the Ross River Indian people have depended have also been used for a variety of other purposes. Roads and airports have been built, mineral claims staked, mines developed, outfitting areas opened up, and even new towns built.

This use of the land and regional resources by Euro-Canadians, governments and corporations has not taken place overnight, but rather in an incremental fashion, although much of it was associated with the development of the Cyprus Anvil Mine. In addition to the existing state of industrial and competing wildlife use in the region there are numerous proposals for future regional developments.

Due to the fact that the process of 'modernization' of the region has taken place gradually and incrementally, and because there has been no accessible and complete map documentation of present and proposed land uses on their traditional lands, the Ross River Indian Band thought it important for impact assessment purposes to prepare such a set of land use maps that could be compared to the Band's hunting and trapping land use. Using a variety of information sources eight overlay maps have been prepared, which when viewed together, demonstrate the cumulative extent of present and proposed non-Indian land uses. The Atlas maps are to a large degree self-explanatory. Some background information about present non-Indian land use, however, will be of value in understanding the present situation of non-Indian land and resource use on traditional Ross River Indian lands.

The Outfitters Map

There are eight outfitter zones within the boundary of the Ross River Indian Band's land use territory, and aside from one zone that is withdrawn, all are active. The outfitters whose names appear on the overlay, have the exclusive right to take

non-Yukon residents hunting and fishing within their respective zones. Major species hunted by non-residents within these zones are moose, caribou and sheep, all of which are primary food sources for the Ross River Indian people. Table 6.1 tallies the kills of each of the above species per outfitter zone for the years 1979-1981 inclusive.

Table 6.1

Big Game Harvests by Non Yukon Residents in Outfitter Zones

Outfitter Zone	Moose			Caribou			Sheep		
	1979	1980	1981	1979	1980	1981	1979	1980	1981
# 7	10	7	10	11	13	18	5	5	12
# 8	1	2	1	2	0	3	3	1	5
# 9	14	17	19	12	17	17	10	7	14
#15	5	7	3	6	7	3	12	8	8
#19	7	11	4	7	12	4	3	3	4
#20	9	9	8	7	14	15	1	3	0
#22	4	5	12	9	5	17	5	2	0
TOTALS/YEAR	50	58	57	54	68	77	39	29	43

Average Annual Big Game Harvests in the Outfitter Zones 1979-1981

Moose: 55 Caribou: 67 Sheep: 37

The Game Zone and Sub-Zone Map

This map shows the Yukon Territorial Governments division of the Ross River land use territory divided into Game Zones 4, 8, 10, and 11 and their subsequent division into Game Sub-Zones. These Game Zones are managed for The Yukon Territorial Government Department of Renewable Resources. The YTG does not separate statistics respecting the numbers of non-Indian resident hunters and fishermen that use each Game Zone, although estimates of 'sports hunter days' or effort are available (Kale, 1981). However, overall, Yukon-wide information about the total number of hunting and fishing licences issued to resident non-native Yukoners is available: 3608 in 1979-80; and 3579 in 1980-81. Big Game licences authorize the harvest of big game, small game and game birds by Yukon non-Indian residents. Fishing licences issued to non-Indian Yukon residents, numbered 10,401 in 1978-79; 10,987 in 1979-80; and in 1980-81 there were 11,892. When correlated with Yukon Territories population for each of the above years these figures show that sports hunting and fishing is a very popular pursuit among the non-Indian Yukon population.

Table 6.2 shows moose and caribou harvest and 'Days Effort' by non-Indian hunters in Game Zones 4,8,10 and 11. Because of the lack of exact overlap between the Ross River Indian hunting area and both the outfitter and YTG Game Zones we have not attempted to calculate the sports hunter kills within the Ross River Indian

hunting areas. Rather, the tables are provided to give a 'rule of thumb' impression that the area is used by non-Band members and their harvests are significant. The tables corroborate the statements by many Ross River Indian people that their 'traditional' territory is now open to large numbers of non-native Yukon hunters who not only compete for the same wildlife resources and favourite camp spots used by Band members, but also by their presence in the bush engender elements of unpredictability and disturbance.

Surface Disposition Map

This map represents the existing surface uses and permits of land use within the Ross River hunting/trapping land use area. Information of this sort is constantly being updated and therefore cannot be taken as complete. The information on the map comes from two sources: one being the Yukon Land and Resource Inventory Atlas (Slaney, 1975), and the other DIAND's Active Series Land Use Permit Maps. The numbers on the map refer to land use permits. For instance YA2Q122 is a YTG gravel quarry, other permits belong to Union Carbide, Yukon Barite, Federal Department of Public Works, Northern Canada and Power Commission, etc. A more complete listing of permit holders is available from the Land Use Department, DIAND Whitehorse.

Major Highways and Access Roads

This map shows all the existing major highways and mining access roads on Ross River lands. All these regional roads have been built since the construction of the Anvil Mine development and the Campbell Highway. It is noteworthy to observe the large

network of tote roads surrounding the Anvil mine and the Faro townsite that have taken place during the last 15 years. This network of roads provides access to Ross River Indian lands for recreational users, sports hunters, and potential industrial land users.

Mineral Dispositions

The information for this map, which shows the areal extent of mineral dispositions within the Ross River Indian land use territory, is taken from DIAND's publication "Yukon Geology and Exploration 1979-1980". Most of the claims shown on the map are subsequent to 1966, when the Anvil Mine staking rush took place. Some of the leases are in locations that are very important economically and culturally to the Ross River people. Unfortunately during comprehensive Yukon land claim negotions the Band was not allowed to make land selections in lease areas.

Mineral Resources and Development Status Map

This map shows the existing Cyprus Anvil Mine at Faro and other mineral properties that are commercially important or are significant prospects for commercial development. Commercially important deposits shown by an empty circle are primarily located in the MacPass-Howards Pass area, while other significant deposits are more widely dispersed, particularly in areas close to the Ketza River. Following the name of each mining property are symbols of different types of mineral deposits. For instance the Ketza (Iona) property is followed by the symbols Ag and Pb

indicating a silver-lead deposit. Such information is useful in that should the prices of silver rise substantially the possibility of a mine at that location would be increased, and thus forward plans could be made by the Ross River Indian Band to accommodate that eventuality.

Areas of Environmental Significance and Proposed Parks

This map shows the location of proposed International Biological Protection Areas such as Cirque Lake. In addition a proposed Yukon Government Territorial Park in the Frances Lake area is outlined. For the Ross River Indian Band clarification must be sought regarding the status of the Park proposal, its boundaries and whether hunting, fishing and trapping will be allowed to continue within that area.

Proposed Developments and Access Routes

This map outlines the locations and land uses of proposed regional developments that are more fully described in Chapter 8. It shows proposed new roads and mine developments and also the areas that could be effected by proposed Northern Canada Power Commission hydroelectric dams. In addition to the textured areas symbolizing possible reservoir areas, the downstream reaches of the Ross and Pelly Rivers would be effected by the way in which water discharges from dams are regulated. This map is preliminary. Information from government agencies and NCPC itself, as requested by the Ross River Indian Band, was not made available. Items which should be added to the map in the future would include

proposed transmission routes and a possible Yukon Territorial Government (YTG) development zone in the MacPass-Howards Pass area, which would accommodate a possible new townsite.

In conclusion, the industrial land use maps of the region portray the nature of the land use that each non-Indian economic sector embodies as it carries out its business. In this case land use refers to much more than just the fact of using land for particular purposes. The maps refer to permitting and mineral staking that ultimately lead to the development of resource extraction and business facilities based on the region's resources. The maps are not only a 'point-in time' description but they indicate the possible development of industrial resources over time. They show, in addition, a system of land tenure and property rights that is being gradually granted to non-Indians. Viewed in conjunction with the Ross River Indian Land Use maps it becomes graphically apparent that among other requirements, sophisticated, sensitive regional planning that accounts for cross-cultural differences is paramount if adverse land use and socio-economic conflicts are to be minimized.

CHAPTER 7

THE INDIAN ECONOMY

The Indian Economy

Introduction

The Klondike Goldrush not only changed life in the Yukon, it also changed how people in the rest of Canada thought about the Yukon. The Yukon came to be seen as the Whiteman's North, a place where Euro-Canadians could make their fortune on the frontier, first through gold and then, after the more easily developed placer gold deposits had petered out, through furs. To a large extent these attitudes continue today, although the source of the Yukon's riches have changed over the years. After the devasting fur trade depression of the late 1940's, the '50's, and the '60's, the dreams of fortunes to be made from fur and gold were replaced by more mundane non-precious minerals, such as lead, zinc, tungsten, and oil.

The Indians on this kind of a potentially rich economic frontier have sometimes been seen as partners in development. But far more frequently they have been viewed as an unemployed labour force waiting for the benefits of industrial economics and settlement to progressively make its way north and provide them with employment and the other opportunities of civilized life. In the meantime they maintain themselves through welfare, the odd temporary job, some trapping, and occassional subsistence hunting and fishing. Wage employment and transfer payments (welfare, old age pensions, child allowance, etc.) are classified as income, whereas the returns from the bush are not. A full-time hunter/trapper would therefore be officially be classified

as unemployed. According to one social scientist, "conventional economic analysis thus systematically misrepresent the Indian economy" (Brody, 1981). Northern Indians are essentially seen as a people without an economy.

Tied to this latter attitude are some far reaching and deeply entrenched cultural stereotypes about the economics and lives of hunting societies. Among these are the view that there is nothing intrinsically worthwhile about hunting societies; that man-the-hunter lived a mean, brutal, and culturally destitute hand to mouth existence full of uncertainty, a constant and unrelenting struggle for survival, and starvation.

In the last 15 years there have been two important developments which have changed much of the thinking of social scientists about hunter-gatherer peoples in general, and northern Canadian Indians and Inuit in particular. On the one hand, there has been a revolution in anthropology which has "discovered" that the productive activities of hunter-gatherers are relatively efficient, reliable, and abundant (Feit, 1982). The kinds of negative ideas about the lives of hunter-gatherer peoples, that we discussed above, contrasted with the leisured, self-assured lives anthropolgists were experiencing first-hand as they conducted field research among hunter-gatherers.

The other development has been numberous studies of the economics of contemporary native hunting, trapping, and fishing peoples across northern Canada, from Labrador to the N.W.T. and northern British Columbia, and throughout Alaska. In Alaska, in fact, the State government has its own Division of Subsistence,

under the Department of Fish and Game, whose social scientists have conducted scores of studies on the economics of hunting, fishing, and trapping communities throughout the State. As far as we can tell the research initiated by the Ross River Indian Band is the first time this type of analysis has been conducted in the Yukon Territory.

The value of these studies is that they have not focused exclusively on the past, rather they have looked at the contemporary production of food and furs from traditional land areas and some of the problems associated with maintaining this type of economy in the modern world. The economies of these communities have, from necessity, a mixed economic base. They produce food and cash from the sale of furs, as in the past. But the residency patterns of native societies have gone through substantial changes with the movement of the bands into fixed villages, and there are associated problems in maintaining the mobility required to carry out animal harvesting when people need to be near schools and other social services. The modern hunting economies require cash, and that is the sense that they are a mixed economy. With the movement into villages, some of the traditional and more productive areas of land have become distant. To get back there requiries money to purchase vehicles --trucks, skidoos, and boats and outboard motors--or to charter aircraft. The technology of modern hunting and trapping--rifles and shotguns, shells, traps, tents and trapping cabins, and an inventory of miscellaneous hardware--also requires a cash flow.

Ironically, perhaps, some of this research has shown that jobs are often not seen as an end in themselves in these communities, but as a means to continue the hunting economy.

With this as an introduction we need now to focus on the contemporary Ross River Indian economy itself.

THE RESEARCH METHODS

To arrive at an understanding of the contemporary Ross River Indian economy a relatively simple and straight-forward questionnaire was designed, which asked questions about the harvest of the various animal resource species and about income from employment and some government programs (family allowance, child tax credits, unemployment insurance) during the course of one year. (November 1981 to October 1982) Information about overall Band members' income from other government programs, such as welfare, old age pensions, etc. was obtained directly from the Band Council's records. The questionnaire was field tested and modified several times following the advice of the Band interviewers.

This resulted in an improved questionnaire which asked the more difficult harvesting questions in an ordered sequence that could be more easily answered by the interviewees. In the re-worked questionnaire people were asked about their animal harvests seasonally, rather than for an entire year. Questions about fish harvests were split by harvesting method: separate questions were asked about net catches and catches using a hook and line. Interviewees were asked for estimates of the numbers

of fishes caught seasonally on hook and line. They were also asked questions about the intensity of their net fishing efforts: how many nets were fished each season; the length of time they were fished; how often they were checked; and the usual numbers and types of fish they would find in the nets. The questions asked about fish harvests were more elaborate than for the other animal groups because past native harvesting research has shown that recall estimates of fish catches are particularly difficult. Splitting the fish harvest questions by method and season and asking about net fishing intensity were done as an attempt to increase the accuracy of the estimates.

We attempted to administer the questionnaire to as many people 18 years of age and older who are on the Council for Yukon Indian's Ross River enrollment list and who are 'normally' resident in Ross River and vicinity as was possible. Sub-sampling was not attempted because of the small sample size.

There are 243 people on the CYI's Ross River enrollment list who are considered resident of Ross River and vicinity. Of these 141 were 18 years of age or older. In all, 92 questionnaires were administered to 127 of the 141 adults. (Some of the questionnaires were answered by both adult members of a family). Questions were also asked about nonadult family members for the sake of completeness: the interviewees were asked to include information about the harvests and income of their children under the age of 18. The questionnaire thus represent annual harvest and cash income information from

approximately 90% of adult Ross River Indians and their dependents.

THE ECONOMY

The Ross River Indian people harvest a great variety of animals for the food they provide and for furs. Table 7.1 lists the animal species and species groups that play a role in the food and fur sectors of the economy. In our discussion of food harvests we shall be discussing harvest from the different animal groups (big game mammals, small game animals, waterfowl, edible fur animals, and fish) rather than on species by species basis. This has been done deliberately, to keep to our commitment of confidentiality to the Ross River Indian Band Council. Without this commitment as well as the usual undertakings of confidentiality to individual interviewees none of this information would have been forthcoming. There is a general reluctance among Indians to provide full details of their hunting, fish, and trapping harvests. This has resulted from a peculiar double-bind kind of experience. On the one hand, Indians have been frequently accused of over-harvesting and wastage. At the same time there is a prevalent attitude that Indians have ceased to use the bush and no longer need to hunt, trap and fish. This latter view is due in part to the quiet and 'hidden' nature of Indian hunting. Moose, for example, are generally butchered in the forest and the meat packed in bags and covered in the back of a pickup or sled, rather than being draped over car fenders. As a result, outsiders, including those who live close to northern Indians, frequently have a limited sense of the extent of Indian hunting, fishing, and trapping.

TABLE 7.1. Animal Resource Species and Species Groups of the Hunting, Fishing, and Trapping Sector of the Ross River Indian Economy.*

BIG GAME MAMMALS
Moose
Caribou
Dall Sheep
Mountain Goat
Black Bear
Grizzly Bear

EDIBLE FUR MAMMALS
Beaver
Lynx
Muskrat

NONEDIBLE FUR MAMMALS
Marten
Mink
Weasel
Otter
Wolverine
Red Fox
Wolf
Coyote
~~Muskrat~~
Red Squirrel

SMALL GAME ANIMALS
Hoary Marmot (Ground Hog)
Arctic Ground Squirrel (Gopher)
Porcupine
Snowshoe Hare (Rabbit)
Grouses
Ptarmigans

WATERFOWL
Geese
Ducks

FISH
Lake Trout
Whitefishes
Grayling
Pike (Jackfish)
Suckers
Burbot (Ling Cod)
Salmons

* Species groups, such as whitefishes have been indicated in the table by pluralizing the name. A list of all likely species, including the scientific names of species and some subspecies, is presented in Table 2.2.

Who hunts, fishes, and traps today? Table 7.2 shows the proportion of our questionnaire sample who were involved in the harvesting side of the renewable resource economy during our sample year. As the table's footnote indicates, the data for participation in the hunting, fishing, and traping sector of the economy are based on actual harvests, and therefore likely underestimate the true involvement. The involvement for men was universal, and for both men and women extraordinarily high. All men hunted successfully during the year, and 88% of all adult men and women hunted and made a kill. 75% of the men trapped successfully and 80% of all adults fished. Active trappers included people from all age groups (Table 7.3).

Besides their harvests of meat and furs, Band members also gather 6 different types of berries, a root (tentatively identified as Hedysarum alpinum (Porsild, 1953), and several other types of plant products for food, as well as a number of medicinal plants and firewood. Although general questions about food plant and firewood collection were asked, it was not found feasible to quantify the amounts harvested. 70% of the people gathered berries during the year; 5% collected wild eggs; 25% gathered wild roots (Table 7.2); and nearly all households used wood as a primary heating source (Table 7.4). As we have not been able to quantify these harvests they have not been included in our calculations of the harvesting sector of the Ross River Indian economy. Nonetheless, these and other harvest of food and medicinal plant products are important parts of the economy even though they are left out of our calculations.

Table 7.2. PARTICIPATION IN THE HARVESTING SIDE OF THE DOMESTIC ECONOMY

Hunting-Total Sample*	88.0%
Hunting-Men Only	100.0%
Trapping-Total Sample*	57.6%
Trapping-Men Only	75.0%
Fishing-With Nets*	23.9%
Fishing-With Hook and line	80.4%
Collecting Berries	70.1%
Collecting Wild Eggs	4.8%
Collecting Roots	23.9%

*Harvest participation figures for hunting, fish, trapping are based on the portion of the questionnaire sample who indicated that they had successfully killed game during the year. These figures do not take into account people who may have hunted, trapped, or fished unsuccessfully. And the figures do not take into account people who were not active hunters, trappers or fishermen, but who were involved in other activities of the domestic economy, such as butchering, food preservation, etc.

Table 7.3. AGE GROUP INVOLVEMENT IN TRAPPING. (Based on the Questionnaire Trapping Returns of the Primary Fur Resource Species).

AGE GROUP	BEAVER	LYNX	MARTEN	FOX	MUSKRAT	MINK
Under 20	11.8%	1.4%	0.9%	4.3%	17.4%	0.0%
20-29	5.3%	13.0%	14.3%	14.1%	5.8%	30.4%
30-39	12.4%	21.6%	7.7%	16.0%	11.6%	2.7%
40-49	14.7%	26.4%	21.6%	25.2%	7.8%	21.4%
50-59	40.0%	19.5%	12.4%	22.7%	32.8%	20.5%
60+	15.9%	18.2%	43.0%	17.8%	24.6%	25.0%

Table 7.4. HOUSEHOLD HEATING FUEL USE

Wood Only	86.0%
Wood With Oil Back-up	3.5%
Wood With Electrical Back-up	8.1%
TOTAL WOOD	97.6%
Electricity Only	0%
Oil Only	2.3%

The key to understanding the Indian economy is meat. Meat has historically been the primary food of northern native cultures. Today, meat still dominates the diet. Indians consume, what appears to people from agriculturally based societies, prodigious quantities of meat, although the amounts are less than in the past, now that the diet is supplemented with store-bought carbohydrates and vegetables.

For our calculations harvest figures were transformed into quantities of edible meat. This was done by estimating the amount of food provided by each of the resource species or species groups. Table 7.5 lists our estimates of the average edible weights of meat yields from each of the resource animals.

These figures rely heavily on the animal weight and edible proportion estimates of a major 7 year study of James Bay Cree animal and food harvests (James Bay and Northern Quebec Harvesting Research Committee, 1982). As part of this study the James Bay and Northern Quebec Harvesting Research Committee conducted an extensive review of the available biological literature for whole animal weight statistics. Some of the average animal weight estimates used in the James Bay study were, however, specific to eastern Canadian animal populations. When necessary and where western or Yukon data were available, the Cree estimates were modified to attempt a better fit for fish and wildlife conditions in the Ross River area. Fish pose the greatest problem in this kind of exercise due to the large size variability of different populations of the same species at maturity. Since average weight figures were not available for Pelly Drainage fish, we

TABLE 7.5. FOOD WEIGHT VALUES USED TO CALCULATE ROSS RIVER INDIAN BUSH FOOD HARVESTS.

SPECIES	FOOD PORTION (pounds)
MOOSE	621.0
CARIBOU	180.0
SHEEP	85.0
BEAVER	18.0
LYNX	8.5*
MARTEN	0.0
WEASEL	0.0
WOLVERINE	0.0
FOX	0.0
WOLF	0.0
COYOTE	0.0
MUSKRAT	0.0
SQUIRREL	0.0
FISHER	0.0
MINK	0.0
OTTER	0.0
BEARS	210.0
GEESE	4.0
DUCKS	1.4
RABBITS	1.9
PORCUPINE	10.5
GOPHERS	1.1
GROUND HOGS	9.0
GROUSES	1.2
PTARMIGANS	0.7
LAKE TROUT	1.2
WHITEFISHES	2.0
SALMON	21.3
GRAYLING	1.0
JACKFISH	2.2
SUCKERS	1.6
LINGCOD	0.9

*Only about 1% of lynx meat is consumed by people. We have modified our meat harvest figures to take this into account.

attempted to find weight statistics for other western subarctic fish populations. The details of our derivations of edible food estimates for each of the animal resource species are presented in Appendix 1.

According to our calculations the hunting, trapping and fishing sector of the Ross River Indian economy provided 138,574 pounds of edible meat during the year 1981-82 (Table 7.6). If we assume that the 10% of the Indian population not represented by our questionnaires harvested similar amounts of food, the figure should be adjusted to 152,431 pounds. Looked at another way, Ross River Indian bush food harvests provided about 1.7 pounds of meat per capita per day. These values are in line with those found by similar studies done in other areas of the Canadian north. For example, in northeastern British Columbia where native harvesting research was conducted among three Indian Bands, meat harvests ranged from just under one pound of meat per capita per day to over two pounds (Brody, 1981).

These types of meat production figures are an unusual way to present economic returns. For the sake of comparison with other economic activities we are forced to calculate a dollar equivalent value for the harvests. This is, at best, an uncomfortable conversion and, at worst, it may be not only misleading but fraught with dangers. Bush harvesting activities are not only economic, they are the essence of the culture; the very thing that life is about for northern Indian hunting peoples.

TABLE 7.6. Ross River Indian Annual Meat Harvests.

	Food Harvests (pounds)
Big Game Mammals	89,159
Small Game Animals	11,826
Edible Fur Mammals	3,434
Waterfowl	736
Fish	33,419
TOTAL QUESTIONNAIRE HARVESTS	138,574

Harvest Adjusted for the Total Population: 152,431

Another problem is that for many native people there is simply no equivalence: beef is not equal to moose or caribou. The potentially dangerous element in this type of conversion is its obvious temptation for resource developers to use such dollar figures as a measure for compensating the destruction of a way-of-life. In such a way an entire culture can be purchased relatively cheaply compared to the costs of a multibillion dollar megaproject. These figures are provided only so that the relative importance of the different sectors of the Ross River Indian economy can be compared.

At first glance it may appear relatively simple to come up with dollar equivalents for meat harvests. This exercise, however, has its own problems. The prices of commercial meat vary with location, the quality of the product, and the way the meat is purchased. The variety in northern native diets comes from the different types of animals and the different muscle and organ meats that are eaten. For this reason we have used a variety of commercially available meats for the conversions. For our discussions we will use the retail costs of meats at the Ross River Band store. The use of local retail costs for deriving an imputed substitution value for country foods is the procedure recommended by Mr. Justice Thomas Berger in his report on the Mackenzie Valley Pipeline Inquiry (cf. Berger, 1977:14). In practice the retail costs are how people think about economic decisions. This is how most Ross River Indian people would buy meat in the absence of bush food harvests. If anything these figures err on the conservative side. For one, there are taste preferences for

wild meat as a staple of the diet. More significantly, perhaps, the two types of meat are not identical nutritionally. Bush meats have a significantly higher protein content than the meat from domestic animals (Berger, 1977:14).

Our estimates of the dollar value of meat from harvests of big game are based on beef prices; small game and fur mammal meat is based on pork; waterfowl on chicken; and fish on commercially caught whitefish. In this exercise we have deliberately attempted to err on the conservative side whenever choices were available. For example, rather than selecting the more expensive commercially caught lake trout or salmon for a fish equivalent, less expensive whitefish was choosen. Table 7.7 shows the dollar value of commercial meats which were used for these conversions. The table lists the actual summer 1983 retail costs of meat at Ross River. The figures are the prices actually paid by Ross River Indians for commercial cuts of meat.

Table 7.8 shows our estimates of the dollar equivalents of the annual meat harvests. Actually two sets of figures are shown. Meat replacement costs for questionnaire sample was equal to $416,062.05. When adjusted for the entire Band, (assuming once again an equal distribution of harvests between those people who were interviewed and those who were not) the meat equivalent dollar value becomes $457,668.25. This is the value that we will be using for our later calculations.

The Ross River Indian Band comes close to being self-sufficient in providing its own meat requirements from hunting. Table 7.9

Table 7.7. CASH EQUIVALENTS OF HARVESTED BUSH MEATS.

	Type of Commercial Meat	Dollar Values Per Pound*
Big Game Mammals	Beef	$3.40
Small Game Animals	Pork	$3.37
Edible Fur Mammals	Pork	$3.37
Waterfowl	Chicken	$2.29
Fish	Whitefish	$1.79

* Retail Ross River prices were the current summer 1983 prices in the Band store for beef stewing meat, pork chops, and whole frying chicken. The only fish for sale was salmon. A retail whitefish price was estimated by comparing FOB Whitehorse price for coho salmon with the prevailing price in the Ross River Band store.

Table 7.8. THE ESTIMATED VALUE OF ROSS RIVER INDIAN ANNUAL MEAT HARVESTS.

	Food Harvests (pounds)	Dollar Values
Big Game Mammals	89,159	$303,130.40
Small Game Animals	11,826	39,853.62
Edible Fur Mammals	3,434	11,572.58
Waterfowl	736	1,685.44
Fish	33,419	59,820.01
QUESTIONNAIRE TOTALS	138,574	$416,062.05
Adjusted Totals	152,431	$457,668.25

shows a monthly breakdown of meat sales by the Band store during 1981/82. The total annual value of meat sales was $56,109. If we assume that this represents one-half of the store-bought meats purchased by Band members during the year, (the rest being purchased on trips to Faro or Whitehorse or at the two other Ross River village stores) $112,218 would have been spent on store bought meats. The imputed meat substitution value of bush food harvests represents over 80% of the combined value of bush food harvests and our estimate of the annual store bought meat purchases. This rough calculation indicates that Ross River Indians produce about 80% of their own annual meat requirements.

The land and its animals provide more in the way of economic returns than meat. Band members are active trappers and some of the furs and hides are turned into saleable handicraft items. The questionnaire also asked a set of questions about the annual harvest of fur bearing mammals during 1981/82. Information about the annual sale of handicrafts were obtained from the Band's records. In terms of dollar income, lynx was the most important fur mammal trapped followed by marten and fox. To arrive at a trapping income estimate for 1981/82 we multiplied the questionnaire returns by the average Yukon fur prices for the year. This came to $192,533. Up-grading this figure by 10% gives an estimated annual value of $211,786 for the Band's trapping activities. On top of this, annual handicraft sales were $10,866.

Table 7.9. DOLLAR VALUE OF MEAT PURCHASED FROM THE ROSS RIVER INDIAN BAND STORE*.

November, 1981	$4928
December	7504
January	6088
February	1105
March	4216
April	3377
May	5091
June	5452
July	7256
August	3575
September	3238
October	4279
TOTAL	$56109

* Information source: Ross River Indian Band store, pers. comm. Margie Etzel, Store Manager. The figures are rounded to the nearest dollar, and cover the period November, 1981 to October, 1982. It is acknowledged that not all store-meat purchased by Band members is bought at the Band store.

The combination of meat-dollar values, fur sales estimates, and handicraft sales gives a value for the Band's annual harvesting mode of production (Table 7.10). For the Band as a whole we estimate this to be $680,320 for our sample year. Thus harvests from the land provide the Band with cash and income-in-kind of substantially more than one-half of a million dollars per year.

The real value of domestic sector harvests and products exceed this figure. We have not included estimates for the dollar equivalent values of a variety of other products because of the difficulty of quantifying the harvests and making a conversion to dollars. These other products include firewood for domestic heating, food and medicinal plant harvests, and mukluks, mitts, snowshoes made for family use. Placing an imputed dollar value on household harvests of firewood would significantly increase the figure for the domestic side of the economy. 97.6% of Indian households use wood as a household heating fuel (Table 7.4) and for 86% of the households wood is the only heating fuel. Most of this wood is cut and hauled by the users, some is purchased, and some cut by householders who pay to have the wood hauled. Because of the different arrangements and the difficulties of calculating accurate dollar value for household wood harvest that they engender we have not included firewood in our estimates of the value of the harvesting sector.

Besides the direct earnings and earnings-in-kind from the harvesting sector of the economy, many Band members have seasonal jobs, a few have permanent jobs, and most families receive

Table 7.10. THE TOTAL ESTIMATED VALUE OF THE DOMESTIC SECTOR OF THE ROSS RIVER INDIAN ECONOMY.

Food Harvests	$457,668
Fur Sales	211,786
Handicraft Sales	10,866
Total Value	$680,320

payments from one or more government transfer payment programs. In addition, the Council for Yukon Indians operates an Elder's Benefit program for people 60 years of age and over.

As discussed in Chapter 5, the costs of purchase for a modern hunting, trapping, and fishing outfit are significant, running into thousands of dollars. Table 7.11 lists the costs of hunting and trapping gear in Ross River, and Table 7.12 indicates the types of harvest equipment owned by a representative Ross River Indian hunter/trapper. An infusion of cash has become necessary to purchase the equipment and services to place people in productive harvesting areas from the village base-camp. As a result many people have turned to part-time wage employment and some to full-time employment, and the Band's economy has become a mixed hunting/fishing/trapping and wage economy. Several comments by Ross River Indians speak directly to attitudes about money and how it is used:

> "Most of my money goes for hunting gear, trapping, hunting trips, gas. Sukani people (Whitemen) spend money a lot differently than how we spend our money."
>
> "Most of my money goes to guns, shells, skidoos, trucks, and gas. Even though we don't always kill anything we just go out (on to the land). Lost of money goes for gas."
>
> "Indian people when they get money they buy things to live off the land, trap, 'cause they're not too sure they're gonna have a job all the time. They know they can always fall back on the land with the equipment they own."
>
> "Indian people don't save that much money--it just comes and goes."

Table 7.11. COSTS OF HUNTING, FISHING, AND TRAPPING GEAR IN ROSS RIVER

	1983 Retail Prices
Sleeping bags	$300-530
Assorted Firearms	
(.22, shotgun, and .306)	$1000-1500
Truck	$3000-7000
Reconditioned truck motor, installed	$1600-1800
Skidoo	
-new	$1900
-used	$700-1200
Skidoo toboggan	$50-300
New Skidoo motor	
-single track	$450
-double track	$1000
Skidoo maintenance per season	$500
24 Foot boat	$1200-2000
20 H.P. boat motor	$1500-1800
Gasoline, per litre	$.62
Wall tent	$290
Tent wood stove	$70
Tarpaulins	$40 each
Trapping cabins	$2000 each
Axe	$35
Hunting knife	$19-30
Flashlight battery (large)	$15.36
Fishing nets	$60-150 depending on size
Traps and snares	$150-300 per season
Bullets and shells	various prices

In addition there are the costs of bush clothes, rental coasts of 2 way radios for use on extended trips, and the costs of airplane charter for trips into the more remote areas of the Ross River hunting and trapping lands.

Table 7.12. EXAMPLE OF PRODUCER GOODS OWNED BY A REPRESENTATIVE INDIVIDUAL (Male, age 35).

---

1 Skidoo
1 Skidoo sled
1 1980 Truck
1 24 Foot river boat
1 35 H.P. outboard motor
1 Motorcycle
2 Wall tents
3 Pup tents
3 Sleeping bags
4 .22 Rifles
1 .243 Rifle
1 .22 Magnum rifle
1 30.30 Rifle
1 30.06 Rifle
1 Shotgun
1 Pair binoculars
Various rifle scopes
6 Dozen traps
200-300 Snares
3 Axes

To return to our numerical analysis, the annual earnings from wage labour for our questionnaire sample totalled $548,072. If we assume again that the 10% of people not included in the questionnaire sample earned an equivalent amount, the total employment earnings would come to $602,879.

Besides economic information, the questionnaire also provided some interesting insights into the relative importance of various employers and employment patterns. The Band was by far the most important employer for Ross River Indian people (Table 7.13). Fully 50% of the 78 jobs held during 1982 by the people who completed the questionnaire came from Band run programs. Federal and territorial government agencies were the next most important employers, providing 23% of the jobs. Other types of employers included local Ross River non-Indian businesses outfitters, Indian businesses, the Church, mining companies, and, the CYI and other private, non-profit institutions. Local Ross River businesses provided about 13% of the jobs: of these 5% were generated through Band members' businesses and 8% by local non-Indian businesses. Mining companies provided only two direct jobs, a slashing job for Yukon Barite and a truck driving job for Cyprus Anvil, although it is likely that some of the employment for local non-Indian businesses were related to the mining industry.

Table 7.13 also shows a breakdown of the contribution of the different categories of employers to the overall questionnaire employment earnings, since the number of jobs are not necessarily

TABLE 7.13. Types of Employers and their Relative Importance in Providing Jobs and Income During 1982 for Ross River Band Members.

Types of Employers	Number of Jobs	Percent of Jobs	Percent of Employment Earnings
Ross River Indian Band	39	50%	50.1%
Governments (YTG and Federal)	18	23%	27.8%
Local Non-Indian Businesses	6	8%	6.4%
Outfitters	5	6%	3.5%
Band Members' Business Enterprises	4	5%	3.0%
Church	2	3%	0.2%
Mining Companies	2	3%	2.6%
CYI and Other Non-profit Institutions	2	3%	6.5%

related to the duration of employment or pay scales. Many of the jobs held by Band members were seasonal and of short duration (see below). Differences in the figures for percent of jobs and percent of contributions to Band-wide employment earnings in the table generally have to do with the duration of employment. For example, the contributions of government agencies and non-profit institutions to Band-wide employment earnings were significantly greater than the number of jobs they supplies. This was due to most of these jobs being long term or permanent. The converse was true for local non-Indian businesses, outfitters, Band members businesses, the Church, and the mining companies. Many of the jobs for these employers were short or part-time.

Most of the jobs held by men were of short duration, lasting between a month or less and 6 months (Table 7.14). Most of these jobs were seasonal employment during the summer and fall months, with a scatter of jobs during the spring. There were very few during the winter months. Men held few longer-term or permanent jobs (10 - 12 month's employment during the year were considered as permanent employment). Men's longer-term or permanent positions were primarily with Yukon Territorial Government agencies. Women, on the other hand, had considerably fewer jobs, but a higher proportion were long-term or permanent. Most of the longer-term jobs held by women were with Band Council.

The questionnaire also asked a series of questions about formal education levels and skills training (Tables 7.15 and 7.16). The average grade level completed by the 90 people who responded

TABLE 7.14. Duration of Jobs Held by Ross River Band Members in 1982.

Duration of Employment	Numbers of Jobs	
	Men	Women
1 month or less	19	2
2-3 months	19	3
4-6 months	16	2
7-9 months	4	0
10-12 months	3	10
Total Number of Jobs	61	17

TABLE 7.15. Ross River Band Formal Educational Levels.

Grade Level	Number of People Whose Formal Education Ended At Each Grade	Number of People Completing Grade	Percent of Respondents Who Completed the Different Grades
4	1	90	100%
5	5	89	98.1%
6	7	84	93.3%
7	13	77	85.6%
8	25	64	71.1%
9	13	39	43.3%
10	18	26	28.9%
11	2	8	8.9%
12	5	6	6.7%
12+	1	1	1.1%

TABLE 7.16. Number of People Who Have Taken Various Skills Training Programs.

Industrial Skills	
Carpentry	19
Prospecting	11
Truck Driving	7
Heavy Equipment	3
Mechanics	1
Welding	1
Other Skills	
Life Skills and Up-grading	29
Office Skills	5
Management Training	4
Community Health Representative	2
Art	1
Cooking	1

to the question about the last grade completed was Grade 8. Forty-three percent of these people had a Grade 9 or higher education. However, only 6 people had completed high school, and of these one person had been to university. The main stumbling block in high school completion appears at the Grade 11 and 12 level. Twenty-six people had completed Grade 10, but only 8 had gone on beyond this level.

Many of the interviewees had taken one or more kinds of skills training. The details of the numbers of people who have taken various skills training programs are shown in Table 7.16. The greatest numbers of people have taken life skills or educational up-grading programs and a relatively large number of men have taken carpentry, prospecting, or truck driving training. Relatively few people have taken training in other industrial skills.

Income from transfer payments come from a number of federal and territorial government programs, and the CYI Elders benefit program. Our information about income from unemployment insurance, family allowance, and the child tax credit come from questionnaire data. Information about income from federal government old age pensions, YTG pension supplements, CYI Elders benefits, social assistance, and guardian allowances, on the other hand, come directly from the Band Council's records. As before, the questionnaire information needs to be upgraded by 10% to account for the part of the Band not interviewed.

Table 7.17 presents a breakdown of Band income from the various transfer payment programs. The table is split according

TABLE 7.17. Ross River Indian Band Income From Transfer Payments.

Questionnaire Data	Questionnaire Total	Estimate for Total Band
Unemployment Insurance	$73,602	$80,962
Family Allowance	30,556	33,612
Child Tax Credit	28,126	30,939
Band Record Data		
Federal Pensions		36,000
YTG Supplement		14,400
CYI Elders Benefits		42,408
Social Assistance to Employables		42,241
Social Assistance to Unemployables		75,388
Social Assistance Special Needs		6,487
Guardians Allowance		15,839
ESTIMATED TOTAL TRANSFER PAYMENTS		$378,276

to the source of the data. Questionnaire data had to be increased by 10% to come up with an estimate for the total Band population. Our total estimate of the Band's annual income from transfer payments is $378,276.

To arrive at a profile of the Band's annual income we must add our estimates of earnings from each of the sectors of the economy: the harvesting sector (hunting, fishing, trapping and handicraft production), wage labour, and transfer payments. Our estimate of the total income from all sectors comes to $1,661,475. Of this, approximately 41.0% or $680,320 came from the harvesting sector of the economy; 36.3% or $602,879 came from wages; and 22.8% or $378,276 came from transfer payments.

These figures become very abstract when we consider the day to day lives of people. What after all does an annual community income in excess of one and a half million dollars a year mean? From the above calculations we know that meat harvests returned approximately 1.7 pounds of edible meats per capita per day. This type of figure has some meaning in the day to day lives of Ross River Indian people. Looking at the overall income figures in a similar way, the Ross River Indian mixed cash and harvesting economy provided a per capita income equivalent to $6837.34 and of this the domestic sector of the economy--hunting, fishing, and trapping--provided 41%. Looked at another way, for every dollar earned from all other sources, the traditional economy brought in 69 cents. The average per capita income for Canadians

during 1981 was $9,530.20; the 1981 per capita income for Yukoner's was $11,997.30 (Glen Grant, Dept. Economic Development and Tourism, YTG, pers. comm.). Without the harvesting sector of the economy the per capita income of Ross River Indians would have been only $4,037.67.

These estimates substantiate the direct statements of the Ross River Indian people to the researchers, and to such public consultative bodies as the Alaska Highway Pipeline Inquiry (Alaska Highway Pipeline Inquiry, 1977), about the importance of hunting, fishing, and trapping to their lives today.

Compared to some other northern Indian groups, the Ross River people have relatively high levels of incomes from employment and at the same time they have relatively high levels of meat harvests. In fact, the levels of meat harvests compare with those Bands in the northeastern part of British Columbia, where similar studies have been done, whose employment is very limited and whose levels of income from wage labour is very low (Brody, 1981). Levels of meat harvest for one northeastern B.C. Indian community which had a relatively high commitment to wage labour and whose traditional lands have been considerably impacted by industrial resource and agricultural developments were about 1 pound of meat per capita per day, whereas another community with far fewer jobs and a lesser level of impacts on their traditional lands had harvests above 2 pounds per capita per day. When an economic sector analysis was done for the former community it was found that renewable resource harvesting

brought in 63 cents for every dollar earned from other sources: for the latter community renewable resources brought in $2.67 for every dollar from other sources. In Ross River the equivalent figure was 69 cents (as mentioned above), but meat harvests were nearly as high as in the latter northeast B.C. community. Some of this is undoubtedly due to inflation during the 3 or 4 years that separate the studies; the price of meat apparently not keeping pace with wage scales. Part of it is also due to a higher level of employment in Ross River than among Indian Bands in northeastern B.C. As noted above, much of this relatively high level of employment in Ross River is due to the management and initiative of the Ross River Band Council and, to a lesser extent, to Band entrepreneurs in providing employment for Band members.

But there is potentially another kind of problem with the kind of analysis presented here, which may undervalue the importance of meat harvests. The Band's annual requirements for meat have a limit, whereas, if Band members act in the same way as other members of the general consumer society, there is no limit to needs for cash. Meat in a traditional hunting society is not simply kept by the hunters or their families, it is dispersed throughout the village through an exchange network. People will continue to hunt until the village has an adequate level of meat return, but meat cannot be banked in the same way that dollars can. In traditional northern Indian societies meat isn't used to create wealth. Given the finite needs for meat, if there were

an increasing amount of jobs available it would appear over time that the importance of meat harvests were declining even if harvests remained constant. In this way too it would appear over time that the importance of meat harvests were declining even if harvests remained constant. In this way too it would appear that the domestic sector of the Ross River Indian economy is only slightly more important to the Band's overall economy than it is for the northeast B.C. Band whose domestic sector supplies 63 cents for every dollar earned from other sources, even though the Ross River meat harvests are substantially higher. This is obviously not the case. Rather it is due to attempting to express the value of the harvesting sector of the economy in dollar terms.

This chapter has concentrated on numbers, but that is not all there is to an Indian economy. There is a basic utilitarian side to hunting, fishing, and trapping, but if we simply extract the economic side from the culture we would be guilty of an abstraction that has little or no reality in how the Ross River Indian people think about their present lives or about the future. Land based harvesting activities are what life is about for many northern Indian peoples. The need for a cash income and involvement in the wage or business sector is not an end in itself. It is largely to be able to purchase and maintain the equipment required for participation in the bush harvesting sector and to offset the effects of hunting and trapping from a village

base. The perpetuation of the Band's harvesting activities is dependent not only on cash inputs and the sound management of the productive capacity of the land, but as well on the integrity of certain socio-cultural aspects of Indian Band society.

Indian hunting/trapping is not an individual endeavour. It would not be possible without collective contributions and divisions of labour within the Band. The social relationships between people, extended family life, and the role of elders are vital mechanisms which underpin the Indian economy. To be a successful hunter/trapper not only must specialized technical skills and intimate knowledge of land and animal behaviour be acquired, but one must continually maintain good social relations with extended family and friends through such institutions as 'reciprocity'. The success of the hunt would be significantly lessened if friends and elders did not help by providing up-to-date information about animal sightings and signs: if women did not make moccassins and dry meat: if help was not available to pack meat out of the bush, or to fix broken equipment by sharing knowledge and spare parts, or to take care of children; if new skills were not taught: or if meat was not shared when supplies were low. In essence then, the entire socio-cultural fabric of Ross River Indian society is closely interwoven with renewable resource harvesting activities, which, in turn, intimately ties this fabric to changes in the region's ecosystem and animal populations in a way that is beyond simple economics.

The natural production of the land is a form of security. Some of the Ross River people have said that the land is their bank:

> "Once you got everything organized you work for yourself out in the bush. I think the land is important. Our security is out there in the bush. That's where our money is, our food too. We just got to go and get it. It's our store, our bank; its important to protect the land."

Animal populations do increase and decrease, especially some of the small game animals, such as the snowshoe hare and grouse. Northern hunting societies have historically adapted to these types of changes by harvesting a wide variety of animal resources. When one animal population declines people shift their major harvesting emphasis to other animal resources. There is little point in going after what is rare. This is a wisdom learned over time.

If the Ross River Indian people are to continue harvesting nutritious food through hunting and fishing and cash from trapping, their close association and cultural continuity with the land and animals must be maintained. It is by not being part of the mobile Canadian workforce--by being rooted to the land--that it is possible for the Ross River people to acquire the detailed information about the land and animals so vital for the success of their harvesting economy. Furthermore, this historical association with the land has produced a large body of oral knowledge, which, passing from generation to generation via extended family kin relations, is available to the hunters and trappers of this generation and the next.

What is being asked of people now is not only to shift their economic emphasis over to industrial resource development and the Euro-Canadian economy, but also to re-orient key socio-cultural elements of Indian society to more closely enable participation within the Euro-Canadian economy. While to a certain extent this re-orientation has already happened (cf for example McDonnell, 1975), through the historic involvement with the fur trade and more recently through increasing involvement with short-term seasonal work, schooling, etc., the scale and inherent characteristics of the regional developments being proposed for the Ross River lands will bring momentous changes which will tax the resilience and adaptive capacity of the Ross River socio-cultural fabric enormously.

The example of involvement with the fur trade and wage labour has not been reassuring for the Ross River people. The fur trade has gone through periodic ups and downs as fur fashion changes. People still remember the dislocations caused by the fur depression of the 1950's. At present the market for furs remains high, even in the face of an economic recession in the industrial world. The recession has depopulated nearby Faro. Most people left for somewhere else. For the Ross River people there is nowhere else. The Ross River lands are home and its snow covered mountains and plateaus and forests are what the real world looks like. Even with mining shut down throughout the Yukon there is still meat on the table.

This is not to say that there is no need for cash in the modern Ross River Indian economy. Dollars are required for all of the miscellaneous purchases of the modern life as well as for the technology of hunting--not only for guns and ammunition, but trucks, skidoos, and gas. The change in residency patterns from semi-nomadic to semi-sedentary village life has made travel a necessity to continue harvesting the land. People are fully aware of the needs for cash to purchase vehicles, fuel, and repairs. But the needs are not seen as either/or--a replacement of the hunting, fishing, and trapping sector and its supportive sociocultural relations by exclusive participation in an industrial system as wage labourers. Rather, what is seen is the need for the parallel development of both the bush economy and patterns and types of employment which will allow the harvesting sector of the economy to continue to flourish. To accomplish this the 'Indian system of production' must first be recognized, understood, and valued by the society in which it is embedded, and by the varied institutions of Euro-Canadian society which impact on Indian lives.