

SO THAT THE FUTURE WILL BE OURS

VOLUME 2

ROSS RIVER INDIAN IMPACT REPORT

prepared by

THE ROSS RIVER INDIAN BAND

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Ross River, Yukon Territory.

SO THAT THE FUTURE WILL BE OURS

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for the

ROSS RIVER INDIAN BAND

CHAPTER 8

TWO VIEWS OF THE FUTURE: PART 1 - INDUSTRIAL DREAMS

Industrial Dreams

The previous chapters have looked at the past and present of the land and its' people. In the remainder of the report we re-examine the question of the future. This chapter discusses the dreams for the development of industrial resources on the Ross River lands.

The non-Indian Land Use maps presented in the Atlas supplement this chapter. Regarded collectively these maps show the cumulative land use of current and proposed developments for the region. These maps and the background information of this chapter were drawn from a variety of documents and data sources. They depict a possible future: a business as usual case that may result from plans of both the private and public sectors. The Map Atlas and this chapter reveal the dreams of the Euro-Canadian industrial world, a dream that is only partially shared by the Ross River Indian people.

Three main types of developments are being considered as possibilities for the Ross River region: a variety of new mining projects, two hydroelectric generating facilities, and improvements of transportation infrastructure. The review which follows is limited to projects likely to have impacts on the Ross River Indian Band and which have a reasonable chance of occurring before the end of the century.

MINING PROJECTS

The potential regional mining projects involve the development of tungsten, lead, zinc, silver, barite and coal deposits.

Fig. 8.1 shows the location of deposits that may be developed by the year 2000.

Non-Metallic Deposits

<u>Property</u>	<u>Operator</u>
Tea claims	Yukon Barite Ltd.
Walt/Cathy claims	NL Industries
Ross River coal	Cyprus Anvil Mining

Yukon Barite

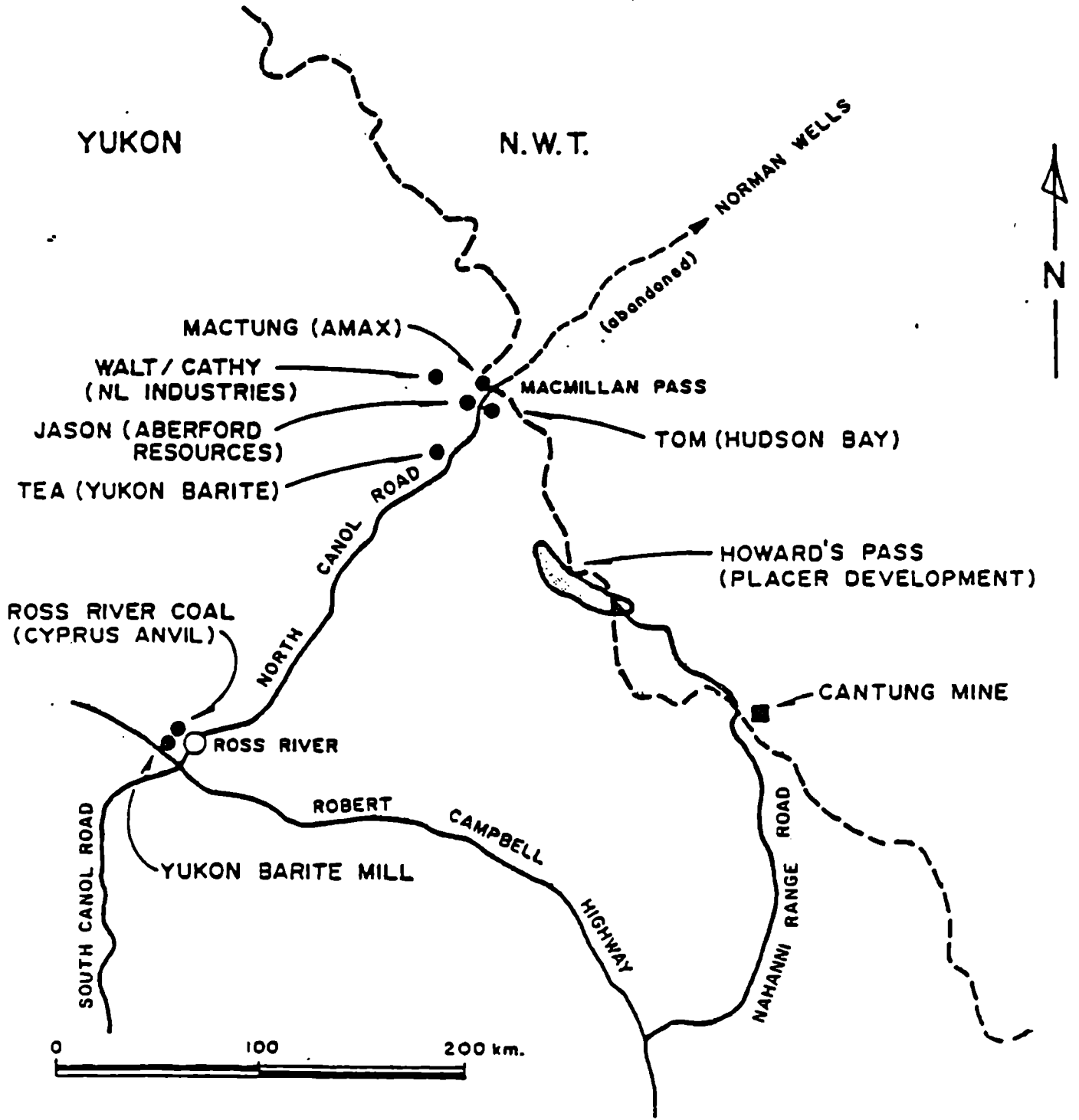
The Tea barite/deposit, controlled by Yukon Barite Company, is located approximately 200 km northeast of Ross River. Access to the property is via the North Canal Road and a 13 km haul route off the North Canal highway. The Tea deposit consists of 180,000 tonnes of high grade mineable reserves and an additional 360,000 tonnes of potential reserves. According to Mr. J. Dodge, President of Yukon Barite, the barite is of high quality with a low heavy metal content and no detectable barium carbonate (witherite). Minimal processing prior to the grinding is all that would be required to obtain a product suitable in off-shore drilling mud applications. Mining would be a relatively simple procedure involving bulldozer stripping of overburden, blasting, and the loading of ore into haul trucks. Plans to

develop the 44 claims of the Tea property covered by the lease agreement between Yukon Barite Ltd. and Welcome North Mines Ltd. of Vancouver have been underfoot for a number of years. The Ross River Indian Band, through its development corporation the Ross River Dena Development Corporation, entered into joint venture negotiations with Yukon Barite Ltd. in the spring of 1982, and had reached several accords on the structure and management of the proposed new venture. Although the Ross River Dena Development Corporation had made several representations to Federal Government ministers and officials of Dome Petroleum, Esso Resources, and Gulf Canada, firm market commitments were not achieved within the time required, and as a consequence Yukon Barite Ltd. withdrew from further joint-venture negotiations.

By fall 1982, however, a firm barite supply contract with Esso and Gulf were finally secured by Yukon Barite Ltd. Esso agreed to take 4,500 tonnes each in 1983 and 1984, while Esso Resources signed a firm supply contract for 1,200 tonnes. These ores were to be delivered by truck for use in the Beaufort Sea oil and gas explorations, thus linking the Ross River area to the Beaufort Sea developments.

With firm contracts in place and financing arranged development work on the mining and milling facilities commenced. From October 1982 to January 1983 approximately 7000 tonnes of ore was extracted and transported to a site on the north bank of the Pelly River near Ross River. This work was

FIGURE 8.1



POTENTIAL MINERAL
DEVELOPMENT PROJECTS

(FROM: Reid Crowther & Partner, 1983b)

undertaken by Yukon contractors and owner-operators of diesel trucks. Excepting two or three labour jobs of short duration, the Ross River Dena Development Corporation, still in its incipient stage, was unable to secure any of the transportation contracts for ore hauls.

A building to house the grinding plant was completed on a mill site approximately 8 km south of Ross River adjacent to the North Canal highway. While it was planned to commence milling operations early in the spring of 1983, financial and other problems were encountered, and all developments abruptly ceased.

At the time the report was prepared, the milling equipment is still not installed, and difficulties surrounding project financing and control remain unresolved. Yukon Barite's 1983 supply contracts with Gulf and Esso have been defaulted.

When fully operational, barite mining would occur during summer months, with ore being transported from the minesite to the milling area. Mining and the number of trucks required for transport to the mill at Ross River depends on what percentage of the milling capacity is utilized. The milling capacity installed will be 36,000 tonnes per year. Assuming full capacity used and per truckload payloads of 15 tonnes, 4800 round-trip truck trips would be generated over the summer months. Assuming a 100 day trucking period, an average of 48 round-trips would occur daily-or 24 loaded and 24 empty

trips through Ross River. Employee traffic and the need to supply mining operations at the Tea property site would add to these traffic volumes.

Mill construction and mining activities have created a few jobs for Ross River Indian Band members, although most of the construction phase employment has gone to non-Ross River residents. According to Yukon Barite, the following number of direct jobs would be created (assuming a one-shift milling operation):

Direct Jobs Created: Yukon Barite

Tea Mine site:	8
Trucking to mill:	7
Ross River Grinding Mill:	
Crew	8
maintenance	3
office	3
general manager	1
Trucking final product:	14
Services:	<u>2</u>
Total jobs:	46

NL Barite Ltd.

A second barite property near kilometer 208 of the North Canal Road is being considered for development by NL Industries of Houston, Texas. Its scale would be similar to Yukon Barite's and the markets are potentially identical. Because of this fact it is doubtful that NL Industries would proceed with development unless there was a large expansion of market demand from northern

petroleum exploration activity. Unless NL Industries were to make ore milling contractual arrangements with Yukon Barite Ltd., they plan to ship raw barite to their final markets. As with Yukon Barite, direct employment would be about 30 persons.

Ross River Coal

During 1980 Cyprus Anvil Mining Corporation acquired three coal mining leases just 3 km southwest of Ross River. During the year a drilling program was initiated and in 1981 a trenching program was carried out to better define the quality and extent of reserves. Approximately 90,000 tonnes of probable reserves were determined although it is expected that once mining has commenced additional reserves will be found.

Coal from an open-pit mining operation would be used to replace the coal currently used by Cyprus Anvil from the Tantalus Butte deposit near Carmacks. During normal operations of the Anvil Mine approximately 18,000 tonnes would be required annually for concentrate drying. In April 1982 the senior author plus a Ross River Indian Band Councillor, while on a visit to the Federal Regional Environmental Review Committee office in Whitehorse, accidentally discovered that Cyprus Anvil had filed a "Ross River Coal Project: Preliminary Mine Life Plan" which detailed a 1982 planned operation to recover approximately 20,000 tonnes of coal. Startled by this information the Ross River Indian Band wrote a letter to the President of Cyprus Anvil requesting a meeting.

In June 1982 a meeting was held with Cyprus Anvil in which the plans for a coal mine were presented. Plans prior to the shutdown of Anvil called for the coal mine's operation on a seasonal basis for three or four months during the summer. The 1982 open pit mine at Ross River would be about 4000 feet long by 550 feet wide by 90 feet deep. The 20,000 tonnes of coal would be recovered at an overall stripping ratio of 6.4:1 cubic meters of waste to coal. Over the five year anticipated life of the mine, at 20,000 mined tonnes per year, approximately 29,770,102 cubic feet of waste material would result. In order to mine the coal the following activities are planned:

- a.) Road-a 75 foot clearing width road off the Campbell highway to the pit will be required.
- b.) Site clearing - In total approximately 22 acres.
- c.) Reclamation - This would start in year 3 and be completed by Year 5, the expected duration of the mine.

In discussions with the Ross River Indian Band, Cyprus Anvil indicated that no decision had been made whether the mining would be contracted out or carried on by the existing labour union at Faro. "The involvement of the Ross River Indian Band, if it proves to be competitive...(Report to the Ross River Indian Band Concerning the Ross River Coal Project, June 1982)" was welcomed by Cyprus Anvil Mining Corporation.

From preliminary feasibility studies, assuming that a variety of jobs could be carried out by skilled people, the permanent manpower requirements would be between 11 and 13

persons. The equipment required for mining operations if purchased new would cost between 3.5 and 4.0 million dollars, and therefore "...one must purchase used equipment or lease or find work over and above the Coal Contract to get a significant return (Cyprus Anvil, June 1982)." With uncertainty regarding the re-opening on the Anvil Mine it is difficult to specify a start-up date for the Ross River Coal project. However, with one year of coal reserves left at Tantalus Butte, and with Cyprus not expected to start-up operations until 1984, the earliest possible commencement would be 1985.

Proposed Metal Mines

Potential metal mine developments are concentrated in the MacMillan Pass-Howards Pass area of the Selwyn Mountains north-east of Ross River. Four prospects being considered include:

<u>Property</u>	<u>Operator</u>
Tom	Hudson Bay Exploration and Development Ltd.
Jason	Aberford Resources Ltd.
Howards Pass	Placer Development Ltd.
MacTung	Amax of Canada Ltd.

Although all these above commercial properties appear to have development potential, metal prices and the economic feasibility of other projects in the world have considerable bearing on the decision to bring these Yukon properties into production. The most imminent development, at present, appears to be the MacTung property owned by AMAX of Canada Ltd.

MacTung: AMAX of Canada Ltd.

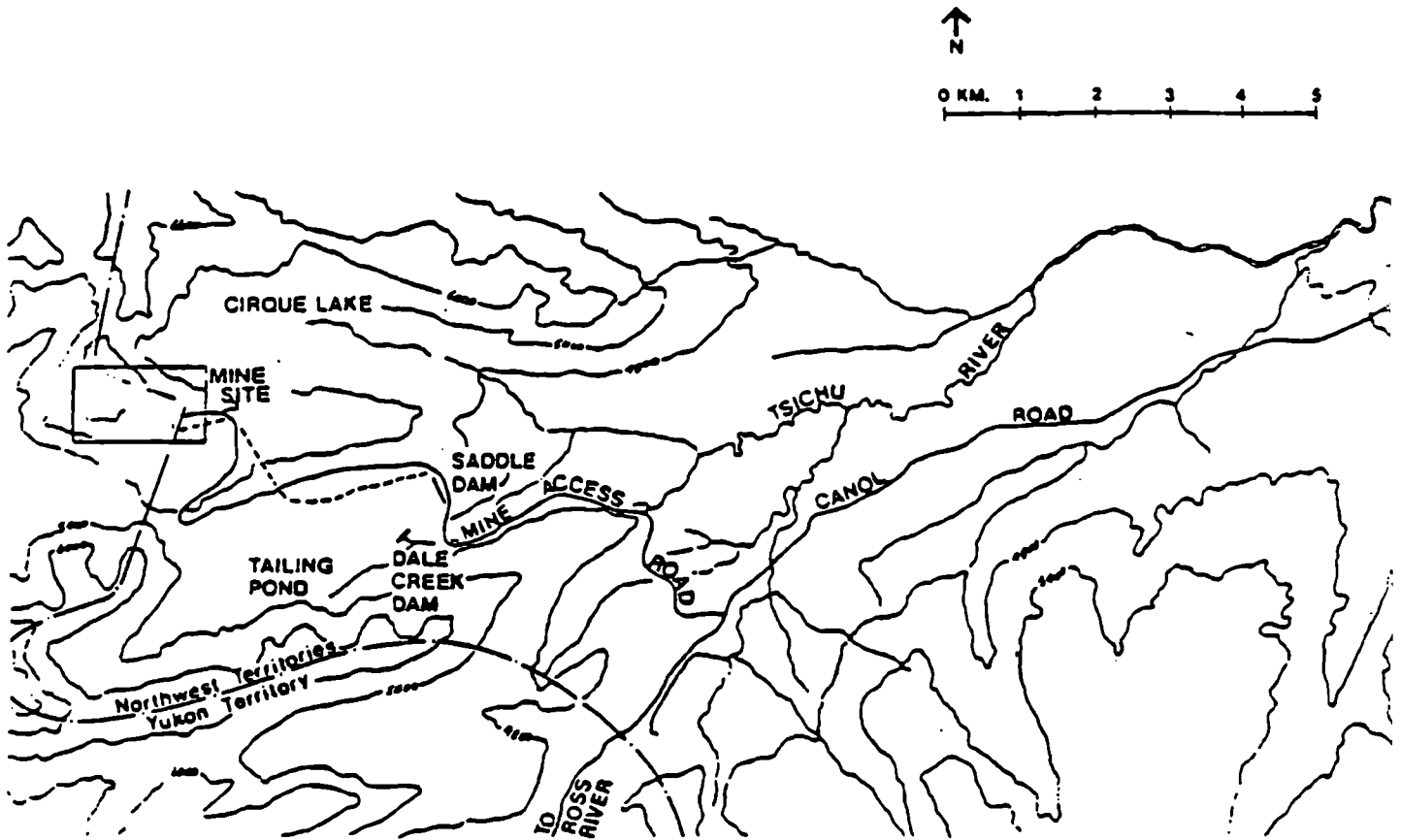
Fig. 8.2 shows the MacTung-AMAX property situated at the Yukon-Northwest Territory border approximately 10 km north of MacMillan Pass. The mine site is located on the southeastern slope of Mt. Allan at an elevation of 6200 feet. Access is via a haul road off the North Canal Road. MacTung is believed to be one of the world's largest deposits of tungsten. The deposit is extensively known following many seasons of both surface and underground exploration. The capital cost of developing the mine/mill is estimated at \$150 million (mid-1981) dollars. The MacTung mineral deposit is estimated to consist of 63 million tons of tungsten ore averaging 0.96 percent tungsten trioxide. Estimated mineable reserves are 13.6 million tonnes of ore averaging 1.02% tungsten trioxide.

Although the final mine plan is not complete, the property life would be in the vicinity of from 20 to 40 years assuming a mill rate of 1000 to 2000 tons/day. A marketable product of between 3500 and 7000 tons per year would be shipped from the mine. Should future market conditions make it economically feasible copper may be recoverable as a by-product.

Ore milling at the rate of 900 tonnes per day is planned with the mill being located adjacent to the mine property. According to Mr. J. Foreman, President of AMAX Canada Ltd. the planned start-up date has been postponed to 1986/87 due to present tungsten market prices which have been severely affected by the recession. Approximately 400 tonnes of ore were mined and trucked to the MacTung property for milling and analysis in 1983. Detailed

FIGURE 8.2

MacTung - Amax Property



(From: Stanley Associates Engineering Ltd. 1982)

engineering feasibility and design is also taking place.

Mine and mill construction when it does commence would take place over an 18 month period with direct and indirect labour requirements of approximately 300 workers. The direct permanent labour requirements once the mine-mill is operating are in the vicinity of 265 persons, with indirect spin-off jobs approximating 240, for a total of 505 employment positions. Table 8.1 which follows gives some indication of the preliminary personnel requirements of the MacTung mine (Stanley Associates Engineering, May 1982, p.7.2).

Transportation

According to Stanley Associates Engineering Ltd. (1982) truck traffic on the North Canal road due to the MacTung project is estimated to average 10-13 trucks per week. These truck movements will be for product movement, fuel and camp resupply. It is anticipated that minimal passenger vehicular traffic will result as the mine is beyond daily commuting distance from Ross River. Airplane access will be via the Tsichu River airstrip which can presently accomodate STOL aircraft under daytime conditions only.

Mine Power Requirements

Until an economical extension of the Yukon power grid to the MacMillan Pass is feasible, power will be supplied by diesel generators located both at the mine and the airport. The estimated peak load energy requirements range between 5 to 6.5 megawatts. The estimated diesel fuel requirements would be in the vicinity of 3.0 million imperial gallons per year.

Preliminary Operating Labour Force for MacTung (Table 8.1)

<u>PERSONNEL</u>			
<u>Administration</u>		<u>Powerhouse</u>	
Accounting	2	Steam Engineers	1
Receptionist	1	Operators	4
Office Clerk (Maintenance)	1	Total	<u>5</u>
Floating Clerk	1	<u>Mine</u>	
Warehouse Clerks	2	Geological Assistants	1
Warehouse Person	4	Samplers	1
Shipper/Receiver	1	Surveyors	3
Payroll Clerk	1	U/G Operators	48
Cookhouse Clerk	1	U/G Mechanics	17
Store Manager	1	Welders	1
Janitors	5	Tireman	-
Laundry Clerk	1	Total	<u>71</u>
Casual Help	<u>3</u>		
Total	24		
<u>Surface</u>		<u>Mill</u>	
Fire/Safety	1	Lab. Techs.	1
Carpenters	8	Lab. Assistants	2
Plumbers	4	Sample Buckers	1
Pipefitter	1	Mill Operators	25
Painters	2	Mill Mechanics	9
H/E Operators	5	Oiler	1
Shovel Operators	-	Total	<u>39</u>
Heavy Truck Driver	3	<u>Summary</u>	
Forklift Operator	1	Total Staff	43
Light Truck Driver	2	Total Hourly	<u>200</u>
Serviceman	1	Contract Food Services	19
Labourers	5	Contract Diamond Drilling	3
Hiab Operator	1	Total	<u>265</u>
Welder	<u>1</u>		
Total	35		
<u>Shop</u>			
Electricians	8		
Electrical Apprentices	3		
Draftsperson	1		
Machinist	1		
Mechanics	9		
Mechanic Apprentices	1		
Welders	<u>3</u>		
Total	26		

Source: Canada Tungsten Mining Corporation Limited - Labour force breakdown for the CanTung Mine.

(From Stanley Associates Engineering Ltd. 1982)

Housing Development Options

Several housing options have been identified for the MacTung project. According to Stanley and Associates Engineering Ltd. (1982: p.2.4-2.5) these include:

Option #1: Commuting from a single existing residential community.

Option #2: Commuting from several existing residential communities in the Yukon and Northwest Territories.

Option #3: A new regional mining centre to serve the entire MacPass-Howards Pass region. This would not be a one company town.

Option #4: A new settlement to be essentially a single company town.

The above four options can overlap and so some combination is possible.

"Since the MacTung deposit has an estimated life beyond 20 years, but is remote and is not close to any existing communities, some combination of Option 2 and 3 or Options 2 and 4 may be appropriate. The development of a regional mining centre or individual company towns will depend largely upon whether other regional mining development takes place and when" (Stanley and Associates Engineering Ltd., 1982: 2.5)

During the summer of 1982 AMAX initiated an "open planning process" which involves meeting with key government, public and Indian organizations throughout the North to advise them of plans and solicit their concerns.

Tom Property

Also located in the MacMillan Pass area is the Tom lead-zinc property held by Hudson Bay Exploration and Development Limited. Exploration of this property has taken place over the past 20 years and most recently a three year \$10 million exploration

program was completed.

It is estimated that the deposit consists of 8 million tonnes of proven reserves averaging 8.6% lead, 8.6% zinc, and 96 grams per tonne silver. There also exists an additional 18 million tonnes of combined lead-zinc reserves.

Early prefeasibility studies conceived the Tom property being developed as an underground mine producing 4500 tonnes of lead-zinc ore per day. The ore would be processed at a nearby mill concentrator. A mine complex of this scale would require a construction labour force of approximately 300 persons, while in full operation about 400 persons would be needed for the mine/mill. Concentrate shipments would generate an estimated 24 southbound trucks per day along the North Canal Road. Mine resupply would average three northbound trucks per day.

Planning and development of the Tom property is now on hold. Hudson Bay Exploration and Development Ltd. is not planning to spend additional money on development over the next few years and all the currently existing underground workings have been flooded. At this point insufficient reserves of necessary quality have been identified to warrant a mine-mill development. Planning for the Tom property has not advanced to the point where the company has a definite position respecting the options of employee housing and townsite development. It is unlikely that this issue will be resolved until metal markets improve and until additional

reserves are discovered that would justify mine development.

Jason

Proximate to the Tom deposit is the Jason lead-zinc property controlled by Aberford Resources Ltd. Here exploratory activity has suggested reserves of 25 million tonnes of virtually identical grade to that of the Tom.

While expenditures for property development and exploration totalled \$1.5 million in 1982, the company plans no future development until world lead-zinc markets improve. At the earliest, given the most favorable conditions, it would be in the late 1980's that the Jason mine would be operational. At that point it is possible that the Tom and Jason mines, because of their closeness and similar ore grades, could utilize a common mill concentrator. At a suggested production rate of 2000,000 tonnes per year concentrate trucking shipments and mine supply traffic would approximate that required for the Tom mine-mill complex.

Howards Pass

The Howards Pass lead-zinc property consisting of three claim groups in the Selwyn Mountains northeast of Ross River is controlled by Placer Development and U.S. Steel. Exploratory drilling indicates the presence of one of the world's largest lead-zinc deposits. Access to the claim is by tote road off the Nahanni Range road. Ore reserves at Howards Pass are in the order of 270 million tonnes averaging 5 to 10 percent combined lead and zinc. On the basis of these reserves the deposit could sustain production rates ranging between 2,700 and 9,000 tonnes per day. At this point it is still not

determined whether development would entail a surface or underground mine. A permanent labour force of 250 persons would be required if production quotas are at the low end of the range. Operating at a rate of 9,000 tonnes per day the mine would exceed the size of Cyprus Anvil which at its' high point employed over 600 persons. Construction labour requirements are estimated at 600 for a period of approximately three years.

Road access to Howards Pass and townsite development are issues that yet have to be resolved. The Yukon Territorial Government prefers an access road linking to the North Canal to capture more regional benefits. Truck traffic volumes from this development are forecasted to be of similar scale for those of the Tom development - 24 southbound shipments per day and 3 northbound shipments for mine resupply. If, however, the presently existing tote road of the Nahanni Range road were developed trucks would pass through Watson Lake to points south.

Regarding the townsite issue, the practicality of a fly-in/fly-out system is in doubt due to climatic conditions. According to Placer, a townsite development within 10 km of the suggested minesite would be the best alternative to house the workforce. In response to this projected need, the Yukon Territorial government has already made preliminary zoning provisions for a new townsite. At this time all but nominal on-site development work has been curtailed until world metal markets improve.

Hydroelectric Projects

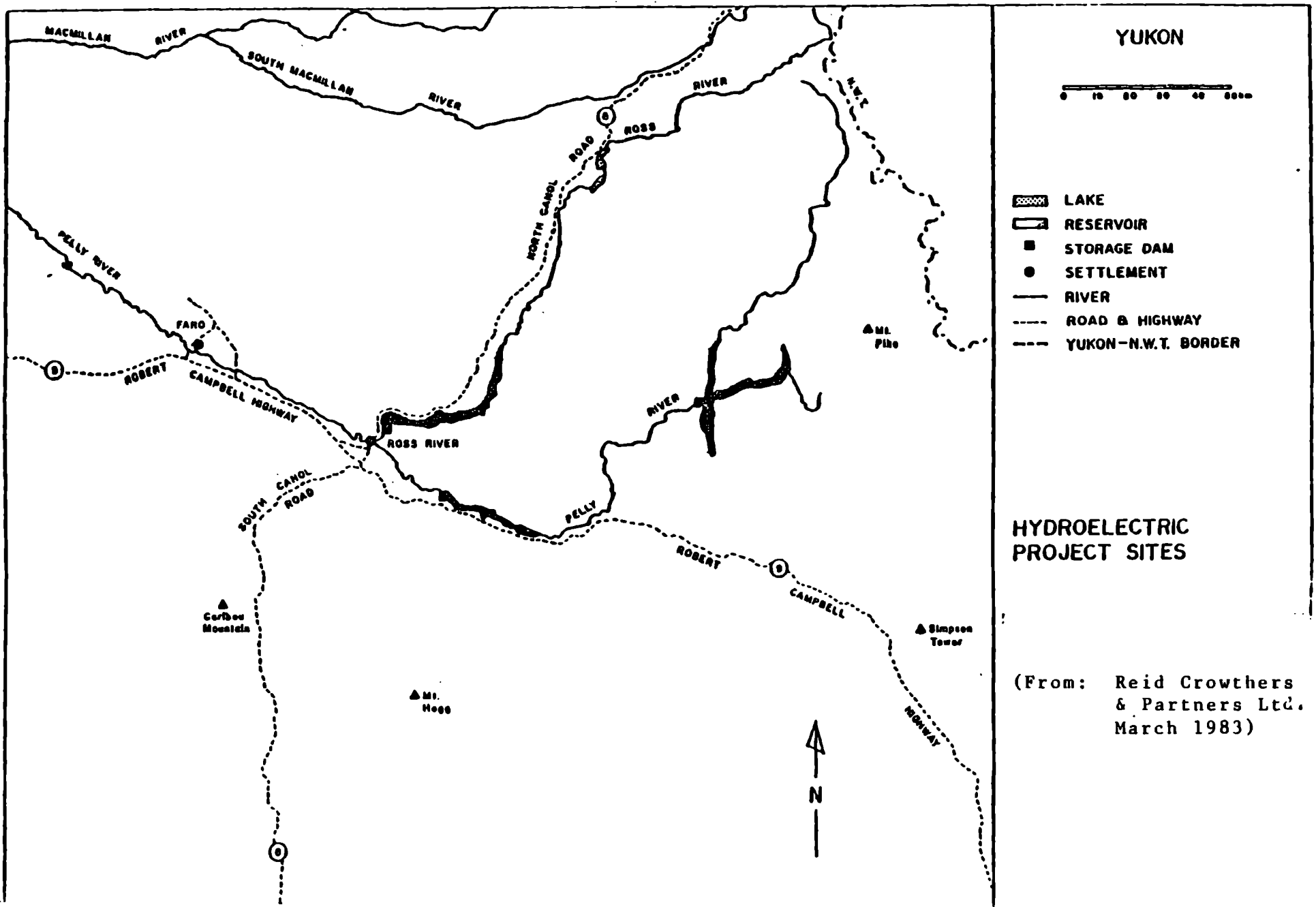
In November of 1982 Northern Canada and Power Commission (NCPC) completed initial engineering and environmental studies of three potential hydroelectric generating sites in the vicinity of Ross River. These sites, Ross Canyon, Hoole Canyon, and Frances River have been investigated and ranked in terms of delivered power costs and environmental impact. According to the NCPC the Ross Canyon and Hoole Canyon sites, shown on Figure 8.3, have excellent generating potential should demand require their development. As the Ross River Indian Band has been unsuccessful in obtaining copies of the NCPC reports, prepared by Reid Crowther & Partners Ltd., information about these projects is based on Socio-Economic Impact Study: Ross River Part 2 Reid Crowther & Partners Ltd. (1983)

Ross Canyon

"The Ross Canyon project site is located 8.2 km upstream from the settlement of Ross River. It would be readily accessible to Ross River via the North Canal Road. The project would consist of an earthfill dam and power plant, with an installed generating capacity of 30 megawatts. A transmission line would be constructed connecting the project with the existing power grid at Faro.

A prefeasibility engineering study estimates the construction phase labour requirements would total 1,050 person years. Construction would extend over 3.5 years with average employment during this time being about 330. During the summer months of the peak year of construction, an estimated 620 workers would be employed at the project site, a smaller number of additional construction personnel would be employed in off-site activities. The project labour force would be housed mainly in a large construction camp near the project site. Smaller camps for the road relocation and the transmission line components would be located at dispersed sites" (Reid Crowther & Partners ltd, 1983: 5.12)

FIGURE 8.3



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Hoole_Canyon

"The Hoole Canyon project would consist of two main elements. An earthfill dam is proposed for a site on the Pelly River about 30 km upstream of the settlement of Ross River. A powerhouse with an installed capacity of 40 megawatts would be constructed in conjunction with the dam at Hoole Canyon. The second element would involve construction of a control structure (Fortin Lake Dam) upstream on the Pelly River, roughly 2 km downstream of Fortin Lake and about 170 km from Ross River. This structure would be used to regulate the discharge of water from Pelly and Fortin Lakes and the flow in the upper Pelly River system.

Major camps would be required for construction at Hoole Canyon and for the upstream control structure. Access to the Hoole Canyon site would be from the Robert Campbell Highway which is located nearby. A 40 km road would be required from the Campbell Highway to the Fortin Lake dam site. The route of the access road, for the most part, would be along the lower slopes of the hills to the west of Fortin Lake. A temporary bridge would be required across the Pelly River at the project site to provide access to the north abutment. In terms of road distance, the upstream storage site would be approximately 145 km from Ross River. Generating facilities at Hoole Canyon would be connected to the Yukon power grid by a transmission line from the project site to Faro. This circuit would generally parallel the Robert Campbell Highway.

In terms of construction labour needs, the Hoole Canyon and Ross Canyon projects would be comparable. The estimated labour inputs for Hoole Canyon construction would total 1,270

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person-years, including hourly and supervisory personnel. Assuming a three year construction period, project employment would average about 400 jobs annually, with employment rising to a peak of 600 during the busiest year. Roughly 60% of the construction labour force would be employed at the Hoole Canyon site, and the remainder on the upstream storage dam" (Reid Crowther & Partners Ltd., 1983: 5.12)

Transportation Projects

In addition to the resource development projects, improvements to the regions transportation systems are being considered. The most significant development is the upgrading of the design standard of the North Canol Road.

The North Canol Road

The Department of Indian and Northern Affairs has carried out numerous studies related to the costs and types of road upgrading that would be necessary to accommodate road traffic that would take place even from modest development of the region's mineral resources. Most recent plans (Canada, 1982b) call for the implementation of the minimal upgrading alternative starting in 1983/1984 with a focus on those sections of the North Canol where design deficiencies are greatest. With minimal upgrading the traffic volumes generated by the development of Yukon Barite Ltd. and the MacTung mine would be

sufficiently accommodated. Development of other MacPass - Howards Pass mines would necessitate road improvement to a DCU 80 standard (80 km/hour standard) and the construction of a two lane bridge crossing the Pelly River at Ross River. According to DIAND the current strategy is to phase road construction over several years complementing the timing to meet the needs of the mining developments. Highest priority for 1983/84 is the section from km 255 to km 281 near Gravel Creek. According to Dr. V. Hume, formerly of Northern Roads and Airstrips, design of this section is near completion and right-of-away clearing should commence in spring of 1984 with grade reconstruction to follow. In most sections a 36 metre clearing width is proposed, although the width may be reduced in those sections where not required. Borrow (gravel) sources along the North Canal "...will be selected not only with consideration of the material availability but also with the awareness of potential environmental impact" (Canada, 1982b). Each of the grading contracts will require at least one construction camp which would be designated in the contract. With minimal upgrading, the operation and maintenance of the North Canal road will be accomplished using the Grader station at Ross River and the one located at Twin Creeks. The equipment currently available at Ross River should be sufficient although additional staff may be required. The Twin Creek location will require the addition of several pieces

of equipment to facilitate winter maintenance.

While information on construction labour requirements are not firm an official with Public Works Canada (PWC) estimated that about 40 to 50 workers would be needed for 15 to 17 km of road reconstruction. Added to this would be survey crews and about 8 PWC supervisory personnel. "Prorating these figures to derive a labour estimate for the proposed initial 26 km section results in a very approximate figure of 85 workers" (Reid Crowther & Partners, 1983: 5.16) most of whom would be lodged in camp accommodation near the work site.

As additional Federal government funds are made available and as the need warrants further improvements, other problem sections of the North Canol road will be upgraded. Should metal markets improve substantially leading to mine/mill development of the major lead-zinc properties in the MacPass-Howards Pass, reconstruction of the North Canol road to the higher DCU 80 standard will take place.

Possible Scheduling of Regional Developments

From the description above it is clear that the Ross River region is, at least potentially, a major development area within the Canadian North. For the purposes of this report two development scenarios have been examined, an 'optimistic forecast' and a 'most probable forecast' of events (Reid Crowther & Partners Ltd., 1983). The scenarios are concerned with the following resource development projects that are likely or possible within the next 15 years:

Yukon Barite Ltd.

North Canal Road Reconstruction

Jason (Aberford)

Ross River Coal

Ross Canyon (NCPC)

MacTung (AMAX)

Tom (Hudson Bay)

Howards Pass (Placer)

Hoole Canyon (NCPC)

In addition to these there is the possibility of a new townsite located in the MacPass-Howards Pass region; a Yukon Territorial Park in the Frances Lake area; several new transportation routes including one off the Campbell Highway to the Fortin Lakes area; and transmission power line corridors along both the North Canal and Robert Campbell Highway systems.

Optimistic Forecast

This scenario describes an 'optimistic' scheduling of resource development projects assuming a strong resurgence of metal prices, good market demand, a conducive investment climate, the identification of adequate ore reserves of sufficient grade, and the provision of regional infrastructure requirements. It is assumed that the scale of mining developments would provide reasonable justification for Northern Canada and Power Commission (NCPC) to seriously consider the construction of the Hoole Canyon and/or Ross Canyon generating sites. North Canal road upgrading

would be to a DCU 80 standard along the entire route.

Although many of the resource development projects are still in the preliminary planning stages, Table 8.2 illustrates the potential direct employment created by each project. Construction of these mine, hydro and transportation projects could conceivably account for between 1000 and 1500 construction related jobs. Under this scenario, by 1990 when all the major mines in the MacPass-Howards Pass are operational permanent direct employment would be increased by about 1000 jobs. Assuming an employment multiplier for Yukon/NWT of 1.9, spin-off jobs would result for a total (direct plus indirect) of 2900 new permanent jobs.

Most Probable Development

Due to prevailing recessionary conditions and the depressed state of the world metal-markets the timing for development of the large lead-zinc properties in the MacMillan-Howards Pass is uncertain. This forecast assumes that the Tom, Jason and Howards Pass properties will not be in production until the mid-1990's, although exploration and property development will continue throughout the 1980's. As a result of this delay new electrical generating sites of Hoole and Ross Canyon would also be postponed. Table 8.3 depicts the most probable regional development scenario by project, and in terms of direct employment created during both the construction and operational phases. Under this scenario approximately 375 construction workers will be required, while permanent direct employment will be in the vicinity of 340 persons. Again assuming a conservative employment multiplier for Yukon/NWT of 1.9 indirect jobs for every

Table 8.2 REGIONAL DEVELOPMENT SCENARIO: OPTIMISTIC FORECAST

PROJECT	YEAR										DIRECT EMPLOYMENT CREATED	
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1995	CONSTRUCTION	OPERATION
YUKON BARITE											10-15	40-50
CANOL ROAD UPGRADING	---	---	---	xxxx	xxxx	xxxx	xx				50-100 SEASONAL	5-10
ROSS RIVER COAL											10 SEASONAL	15 SEASONAL
HACTUNG (AMAX)										250 SEASONAL	265
TOM (HUDSON BAY)						250 SEASONAL	400
JASON (ABERFORD)						250 SEASONAL	200
HOWARD'S PASS (PLACER)						600 PEAK SEASON	250
HOOLE CANYON/ROSS CANYON			---	---	---						300-400 SEASONAL	LESS THAN 5
TOTALS											1720-1925	1180-1195

..... EXPLORATION AND PROPERTY DEVELOPMENT
 --- CONSTRUCTION
 — OPERATION

(Based on:

Reid Crowther & Partner Ltd.,
 March 1983)

permanent job created, about 650 spin-off jobs would result, for a total (direct plus indirect) of about 1000 new permanent jobs.

(Regional Most)

Probable Forecast)

PROJECT	YEAR										DIRECT EMPLOYMENT CREATED	
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1995	CONSTRUCTION	OPERATION
YUKON BARITE *		---									10-15	40-50
CANOL ROAD UPGRADING *	---	---	---	x x x	x x x	x x x	x x x	x x x	x x x		50-100 SEASONAL	5-10
ROSS RIVER COAL *	---										10 SEASONAL	15 SEASONAL
MACTUNG (AMAX) *	---									250 SEASONAL	265
TON (HUDSON BAY)	---		250 SEASONAL	400
JASON (AMERFORD)	---		250 SEASONAL	200
HOWARD'S PASS (PLACER)	---		600 PEAK SEASON	250
HOOLE CANYON/ROSS CANYON											300-400 SEASONAL	LESS THAN 5

* Most Probable Forecast.

..... EXPLORATION AND PROPERTY DEVELOPMENT

--- CONSTRUCTION

----- OPERATION

x x x POTENTIAL CONSTRUCTION

BASED ON:

(Reid Crowther & Partners Ltd., March 1983)

CHAPTER 9

TWO VIEWS OF THE FUTURE: PART 2 INDIAN VOICES AND DREAMS

VOICES Of The Ross River Indian People

The research project included not only map-making and the administration of the economic questionnaire, but, as important, listening to the Ross River Indian people. Knowledge gained by participant observation, map-making interviews and questionnaire administration, was supplemented by open-ended interviews. Approximately 50 extended interviews were held with adult members of the Ross River Indian Band, representing both sexes and all age groups. In reviewing field notes of quotations various themes became apparent. These themes are expressions of what is important today for the Ross River Indian people. They are also an insight into their dreams and aspirations for the future. Rather than re-interpret their voices, it is best to let the Ross River Indian people speak for themselves. For the Ross River Indian people the land and themselves are inseparable. The importance of the land and animals far surpasses the utilitarian aspects of harvesting. The knowledge of the land, the rivers and the wildlife resources is phenomenal, not only amongst Elders, but also amongst those who earn a living for their families as hunters, trappers and seasonal wage workers. On several occasions we have been present in bush camps when elders were telling stories to young people and adults; stories about old battles, about particular hunts, or long-time-ago Indian persons; stories and legends about the land and animals.

The following quotations reveal but one importance of the land for Ross River Indian people: It provides a sense of roots a sense of long historical continuity, a sense of place:

"The land is important you just can't move after you get used to it, that's where you raised up and born around here."

"The Indian people around here know the land good, they identify with it. Anywhere up the Pelly, Ross, Little Salmon, you're at home, not isolated."

"That's what always brings me back here, always keeping in touch with my people, my land, where all the animals are. Right now I know where there are 5 moose, right now."

"Pelly Banks, to rebuild cabins at Pelly Banks, to protect historic sites. A sense of history, if you lose your land your culture, you don't know where you've come from or where you're going."

"Peoples' gravesites are everywhere."

The land also provides a means whereby an Indian person can experience freedom and independence.

"What I like out in the bush is the freedom, instead of working, instead of someone telling you to do this and that. To get out of the rat race."

"When you go out there you forget about whiteman's rat race, you don't worry about bills, going to work, you just relax."

"Finding yourself out on the land, half the time yourself is gone from you because everyone manipulates."

"My Mom went to Whitehorse, had to go to hospital for a week, she snuck out, felt out of place, went out near the bush and lit a fire, that's where they found her."

"Independent out there, you don't live on a clock, or with paper. It's peace you feel out there, self content."

The land and animals are important too for spiritual reasons, for reasons related to old stories and legends, for the preservation of customs:

"We are the people of the land, that's where our home is. It is given to us by Dena Teeah and we have to look after it. Anything you take from it you got to give something back. Dena Teeah makes these things for us to live on, we can't take everything, we have to give some back."

"I think I know quite a bit about the land and the animals, what's available to me, plants, medicine, there are quite a few stories and legends based on our land, our animals, even today some people my age (32 years) still carry on their traditional respects, taboos."

"That's why when we kill anything we can't leave anything behind, if you do next time it will be harder to get."

"You can't play with bones of animals, never make fun of it, laugh at it. Beaver head supposed to hang it up high. Taboo mink, otter, can't bring it back to camp, can't skin it when you're young. Bear, kids must not play on top of fur, also can't walk over the blood, otherwise you'll get sick."

For the Indian people of Ross River the land and animals also provide a sense of security. Not having savings accounts or access to steady jobs, the land and its wildlife resources provide a safety net. If a person is not able, or loses their wage job, livelihood for the family is still possible. The importance of the land and animals to provide this safety net is particularly critical due to the fact that in general the Ross River Indian people are rooted to their home, and unlike Euro-Canadians will not usually leave to seek wage employment in other areas across Canada or Yukon. Further,

not having control over development plans and regulations of governments and corporations, or of the "boom-bust", "inflation-recession" cycles that appear to characterize the Canadian-Yukon economies, the bush sector of the Ross River Indian economy provides a stabilizing mechanism. Within the limits of the productive capacity of the land, animal population cycles, and the skills of the hunter/trapper, a larger measure of control can be exercised in producing a dependable flow of useful goods for the livelihood of the extended family.

"Security for Indians is not so much money, we depend on the land and animals. That's who's gonna survive people out in the bush."

"Indian people when they get money they buy things to live off the land, trap, hunt, cause they're not too sure they're gonna have a job all the time."

"Retirement savings aren't important because you still have food from the land. Custom has it old people will still be looked after."

"If you don't have a job that's where you go, to the land, that's where you make your living, food and furs. It's good to be out there when you're born out there, raised up there when you're little, now its part of you're life. Last couple of years it's getting harder to work, I gotta go out there for food and money."

The land and the animals are considered by the Ross River Indian people akin to a bank, a place to go to get resources to live:

"The land is just like a store, we get berries, meat, animals. We live off moose, caribou, sheep, their hides, we make coats, mitts, moccassins."

"The land is important we gotta make a living. There is nothing else, that's where we get our moccassins, our food our livelihood, it's income."

"Hunting is important because that's how we get our food, it's part of my way of putting food on the table. I eat Beaver-meat, I like it same good as moose meat, I eat the whole thing, just throw away the head and guts. Some of the people here eat "rats" (muskrats)."

"One moose is a couple of thousand dollars worth of meat, store meat is too expensive, besides I like fresh meat a lot better than store meat: moose, caribou, rabbits, lynx."

"I feel close to the animals, I see people crying for fresh meat, can't live without it."

"I like meat for one thing, without meat I might as well chew on a piece of paper."

"I don't like canned food, I don't trust it especially canned meat or fish. I wouldn't mind having meat right now, a big feed of moose meat."

Being out on the land hunting and trapping with brothers, sisters and friends serves another purpose in Ross River. It is a way of bringing people together, of strengthening social relationships between people. It also makes possible the reciprocity of sharing meat and other resources. In fact, on one hunting trip on February 20th/1983 we noted the fact that meat was distributed to 13 people including three who lived in another community.

"I shot a caribou up the North Canal, packed it out, took it home, gave some to my grandmother, mom's brother, two of the guys I was hunting with, and their sisters in Whitehorse."

"I give fish to everybody, we divided it up, just can't use it all myself."

"When I get a moose, all my friends I divide it up, most of it I give to my mother."

On several occasions people talked about the land and animals and their needs to be protected for the future, for future generations:

"This land, granddad tell, just protect this land, you save the puppy wolf, you save that little caribou, little sheep, little young beaver. Protect this land, our country."

"Protect the land for the children, so that they do have a place, not everything is taken from them."

"Its always important, land, for future use, generations."

"This land is very fragile it wouldn't take much to destroy the system."

"If the wildlife gets destroyed, how will we make our living what's going to replace those things."

"It means a lot, I wouldn't want anybody up here wrecking our land, if I had it my way. I can see it already what's happening with the game, mining people, tourists. Feel close when I go out on the land, when you go to the city do you feel close to the city? It's our home."

We were being told not just about hunting and trapping, and the importance of the land, but about a way of life; what it means to be a Ross River Indian:

"Indian culture and values to me is very important because that's where we are at. It's a way of life, the way I live. Time is different, what I don't get done in the morning I get done when I go to bed."

"Elders they are to be respected, to be listened to no matter what, they should be helped with water, woodcutting. It's something they deserve because they are older. Elders are important for their wisdom, their knowledge, history, everyday living in the bush, they are teachers too. Elders are the ones that keep the language, the stories, the history."

"The land will always be important for Indian people in the future, it's instilled in Indian people, it's part of their culture."

"There are Indian foods that is a part of Indian culture Language, old stories, legends. Your roots are very important, relatives, the landmarks around you."

"Indian culture is Indian dance, stick gambling, hunting, trapping, fishing, telling old stories, making snowshoes, handicrafts, toboggans, dog sleighs, family, crow and wolf, special beliefs about animals."

Perhaps the most important lessons learned were not so much about maps and economics, but about what constitutes a way of life for the Ross River Indian people. The way of life that comes to mind is refreshed not only by having experienced in an intimate fashion Indian life in Ross River, but also by such concepts that are associated with phrases as "roots" "the wilderness as home, not frontier," "minimal mobility," "Indian language," "Indian foods," "hunting/trapping," "old stories," "elders," "sharing, reciprocity," "relations with the land, animals, animal spirit," and lastly the incredible strength of the "extended families." The following quotes reveal to some degree what family means for the Ross River Indian people:

"Indian culture is a way of life. Indian food, hunting, trapping, how important family is, family comes first, if any of the family hurt, the rest of the family has to do something about it. I think that the family, not just the immediate family but grandparents, uncles, nephews, is one of the reasons why people are hesitant to move to other places, they might lose the contact and the help. I don't think I'll ever move away from Ross River."

"When you ask the Yukon Vocational School to put on a course, they say its in Whitehorse, why don't you take it, but they don't understand the problem. If you got a family you got to move your whole family to Whitehorse, you almost have to change your whole way of living, it would disrupt everything."

The family, home, and roots to the land and animals affects the willingness of the Ross River Indian people to relocate,

and take a job in a strange location. In order to hunt and trap, close familiarity with the land and cyclic animal populations must be maintained. Also, language and extended family ties with kin would deteriorate if Ross River Indian people became part of the 'mobile' Canadian labour force.

"In Dawson City I worked in the hospital from November till March. I missed home, I missed my family."

"Some people worked at Faro (Cyprus Anvil) for a little while, but couldn't hack staying away from his family. The best location for work is in the village, close to home."

"We hardly know anybody in Whitehorse. One of the good things about Ross River is that it's home, family, friends. We know the land, we know where to go, if we go to Vancouver we just stand around, don't know where to go. It feels good to be back home, it feels safe, secure, you're back at your own place."

"Its home here, cause I know the people and I know the the land, the animals. If you move to a bigger town you gonna lose your language, and when you come back when your Grandma's talking you won't understand, or your Mom and Dad."

The Indian people in Ross River are facing great pressures to change everyday: pressures that emanate from government, from corporations, from schools, and television. Generally, as the following quotes reveal, people are aware of the difficulties of coping with the stress of changes, as well as the importance of preserving Indian way of life as a means to help cope with change.

"I have to teach my kids everyday, they tell me things that happen at school, and I tell them our way and its a lot better than what they teach in school. It's important to teach kids some of the Indian values, to respect others, to teach them the outdoor skills of survival, how to make a fire in winter, how to hunt, trap, shoot, track it down, how to skin an animal. I see Indian culture becoming more important, money is very scarce nowadays, we might have to go back to the bush."

"If you lost your culture, your language, you don't know where you come from."

"As Indian people come into more and more contact with white Canadian culture, they lose their identity, anybody can be a Canadian. We are struggling to keep it right now."

"Long time ago the white people replace Indian economy with their own ways. I say that Indian culture is an important thing to keep, I'd like to see our culture for many years to come."

"I think we're still suffering from Anvil mine, alcoholism. Before they used to enjoy life, hunting trapping. With Anvil comes short-term jobs and money, after it was finished it left people all confused."

"There's a lot of lost souls around here."

One of the problems that Indian people in Ross River face are the high number of deaths associated with alcohol abuse, and the problems of violence associated with alcoholism:

"One of the reasons we (young women) don't often get involved with Ross River Indian men is that they drink too much and are too violent. It doesn't make sense to try to have an Indian family with men seriously addicted to alcohol."

"Drinking and violence, they rough up their families, sling things around the house, sometimes when they get really drunk they get picked up."

"Drink and driving, some run off the roads, more car accidents, quite a few people died every year since the bar was open. Lost quite a few frozen, in fires, in car accidents. Lots of people died from alcohol, choke on drink, suffocate, lots of families break up because of booze, so it affects the children too."

"Indians they not grown up with booze like white people. One of the first things that people do when they drink and have money they buy more booze."

"If they get big checks they'll go drinking, pass out and the money will all be taken out of their pockets."

"Lots of people quit completely, but now all the young people are taking over. Everytime kids get a job they just go after the booze then they lose their jobs."

"The bush might be one of the answers for the alcohol problems. If you take them out in the bush working they stay away from it. If they get a job around here in Ross River they'll just drink."

On many occasions the differences between Indian values and culture and those of Euro-Canadian society was brought to our attention:

"It's hard to get along with white people, they got different ideas, different culture. White man has lot to do with money. White people move everywhere, cops, nurses, they move to where job is. Not too many Indians move anywhere, only to the bush."

"White people follow Canada Food Guide, spicy foreign food. Indian people eat more bush food, got more protein, vitamins, enriched, a lot of fresh blood, not like pork chops all dried out."

"White man have a lot of different churches, gods, all kinds of religion."

"Whiteman, not too much sharing likes to make a lot of money for retirement. Whiteman mobile. They know what to buy in stores, they save for trips to foreign places, they put old people in homes and leave them behind. White people like meetings, lots of paper work. They talk too much."

"Whiteman like high tone stuff, good table, good bed, camper. Indian people just give them a tent and stove and they'll be happy with it."

"The biggest thing in the whiteman's world is to domesticate everything."

"You know what turns the big wheel of the white economy - dollars and cents."

The Ross River Indian people have other experiences with Euro-Canadian society, notably through working at Cyprus Anvil and interacting with the people who live in Faro. The following quotes reveal aspects of their experiences adapting to industrial

type work. They provide insight into the types of difficulties that might arise, should regional developments in the MacPass/Howards Pass area proceed without taking cognizance of the Ross River Indian people, their culture, values and Indian economy:

"Part of the problems at Faro, people weren't getting to work on time. An Indian person would start late in the day and work into the night. A white person looks at their watch all the time. They need to have someone they can go to at work and tell their problems to, like a (cross-cultural) go-between."

"Because of transportation problems, or whatever, they get late or miss a shift, and they just don't bother going back."

"Communication problems between the white person and the Indian person. They got different ideas, different culture."

"Anvil workers were taking young girls and partying and dump them out on the highway. Once, someone in the village shot off a 30:30 and scared them Anvil workers."

"In Faro they have high paying jobs and still they want to go out and get their moose. I and (XX) see Faro people shoot moose for target practice, right by the creek in winter, leave it there by Finlayson Lake 2 or 3 years ago."

"I don't like the routine, I don't like the change of shifts, just when you get used to it they shift you around. Prefer day shift. Bosses - as long as I'm doing it, I don't like them looking down my back."

"When you work for a mine you have to work at their pace."

"Day in, day out, routine. Go to work, do your job, come home. Probably would have stayed one more year, I doubt even that. I couldn't see myself driving truck like that, production oriented, same routine. A little problem with the boss, pounce on you for nothing."

"Problems in advancing yourself in the mine, you had to wait your turn to get seniority, if you got more seniority you could bid on training positions."

"Unions are another problem, Indians get fired first, hired last."

On several occasions Ross River Indian people expressed difficulties adjusting to the environmental conditions while working at Cyprus Anvil:

"They put me in the dryer, that's when I quit. I had that mask on, still doesn't help. Is it ever hot in there."

"My ex-husband tried to work in the mill at Anvil, didn't like the chemicals so he quit. "(XX) tried working there, quit and come back; (XX) quit and come back."

"I would have worked in the garage but not the mill. Oh God, a real hazard in the mill, stink, dust, noise all the time."

Heretofore the VOICES of the Ross River Indian people have expressed what constitutes an Indian way of life. Certainly there exists problems adjusting to life within a modern Euro-Canadian society. The number and intensity of changes that have been experienced by the Ross River Indian people have led to many successful adaptations, but as well, the toll in human lives lost to alcohol, suicide and violent deaths have been high. What is surprising is the incredible resilience and persistence of an Indian way of life, of culture and values, in the face of so much pressure from Euro-Canadian society for change. In addition to these VOICES about what is presently of importance, the Ross

River Indian people have DREAMS for the future. Dreams that include the continuation of Indian economy and culture paralleled with Band controlled developments, of wage jobs and business - a unique blend of bottom-up development combining the 'traditional' with the 'modern'.

DREAMS

Dreams have power for if we could not dream what hope would there be in transforming dreams into reality? While the dream-makers of the Euro-Canadian industrial world are very powerful, and have more effective means to transform their plans into hard realities, the dreams of the Ross River Indian people are clear. What is needed is that they be recognized, valued, and accepted as important unique contributions to the larger Euro-Canadian society. Not only must the Ross River Indian people find resourceful means to transform their collective and personal dreams into reality, but certain guarantees and incentives from the dominant society must also be forthcoming.

The Ross River Indian people in their discussions spoke about their dreams for themselves, their families, their way of life and the Band as a whole. These interviews respecting future aspirations were the first where someone had come to the community to spend time, participate in daily life,

and listen. Persons spoke frankly about what they would like and would not like for the future and when all the information about 'DREAMS' is regarded in a composite manner, the commonality of what the Ross River Indian people want for themselves becomes vividly apparent. As some of the aforementioned quotes have revealed the Ross River Indian people want to preserve and strengthen the Indian way of life, culture and values. The land and animals are seen as being culturally and economically important for future generations as are the activities of hunting and trapping. The following section portrays Band members aspirations for the development of the hunting/trapping sector of the Band's economy, for wage work, education and training business development and the need for better Band recreation/cultural facilities.

Trapping/Hunting

The Band Council would like where feasible. to develop the following plans to facilitate trapping and hunting:

- a.) A trapping management board for the Group Trap area.
- b.) A fee structure for assistant trappers and a policy guideline to assess applications.
- c.) More trapping cabins in remote areas.
- d.) A transportation subsidy as well as transportation corridor system to new areas.
- e.) A bush communication system similar to what the Cree Indian people have under the James Bay Land Claim Agreement in Quebec.
- f.) A guaranteed income stabilization system indexed to inflation similar to the one the Cree have in Quebec.

- g.) A compensation model for trappers and hunters affected by resource developments.
- h.) Better training and education programs for trappers.

People in the village also expressed the following respecting trapping and hunting:

"Trapping is important, my husband does that and I'm interested in it too. A regular income would help, but you got to have more time. An income stabilization system would work in keeping people out in the bush."

"A communication system in the bush is a good idea for emergencies."

"Transportation is needed to get people way out to Otter Lakes, Laforce Lakes, it has to be guaranteed for the fall not spring. There are lots of people interested but because of transportation and money they can't go."

Indian people in the village also expressed their frustrations respecting Unemployment Insurance and welfare and desired a more accommodating system that could meet their needs while encouraging them to return to the bush if wage work was not desired or available.

"It seems if you collect UIC you can't trap, you have to be available for wage work, which means you pretty well have to stay in the village."

"If you get welfare you can trap, but to get welfare you have to declare your earnings. How do you know what your earnings are when trapping is an unpredictable business and you don't always know what you're going to get. Also when you send your furs outside to a furbuyer you sometimes have to wait 3 months to get money back."

WAGE WORK

"The best location for work for people is in the village close to home."

"I would prefer to work in Ross River than anywhere else. I've been here all my life, it's home. I come back here all the time. I know the land here, the animals, my brothers and sisters are here."

"Transportation to work out of Ross River is a problem."

"Hardly any people work in Faro even when its close by, it shouldn't be any different for MacPass."

"A lot of Indian people need a lot of training and skills, but its hard to pull up roots and move somewhere else even if you got skills and training. To work in Ross River is what we would like for our family."

"People want to be independent, they want to work for themselves, or seasonally, and be hunters and trappers."

EDUCATION/TRAINING

Many members of the band were very aware of the dual possibility that education offers. On the one hand education is a tool that can be used to develop one's own culture, taking skills from white culture and translating it for developing Indian culture and society, on the other education can also be used to teach Indian people the values of the Canadian society, - in effect assimilation. The following quotations from Ross River Indian people indicate their aspirations about education and training:

"A mobile elementary school teacher to go to bush camps and teach kids would be a good thing. Parents who want to trap are stuck in town if they got kids."

"Would like kids to learn more about native language, native culture from long ago, to be able to take kids out to go trapping and hunting."

"Upgrading courses in Ross River for those kids and adults who have dropped out."

"Would like to learn more about trapping. Need an instructor, some equipment, a certain area set aside."

"Would like to see higher grades above Grade 10 offered at the school, and basic English and Math. I wouldn't go to Whitehorse."

"A vocational sub-centre in Ross River because if they go to Whitehorse, they drop out fast they don't know most of the people, they just feel strange."

"Scholarships and bursaries for Ross River people so they can attend schools outside if they want."

The following types of education/training courses are of interest to the Ross River Indian people:

- upgrading, functional literacy courses
- carpentry
- basic drivers licence courses
- courses to obtain Class #1 drivers licences
- mechanics and heavy duty mechanics courses
- electrician courses
- heavy duty equipment operators courses
- courses on business management
- accounting/bookkeeping
- secretarial
- nursing assistant/industrial first aid
- taxidermy
- courses on putting together a business bid, how to negotiate a contract and get a bank loan
- proposal writing course
- computer operator/word processing training
- Indian language/trapping/handicrafts classes
- personal money management courses
- community development worker training
- alcohol/family counselling training
- wildlife management training
- Training for land use planning, community planning

Community Facilities/Recreation

Band members expressed the following types of projects they would like to see take place within the Band over the next 5 to 10 years:

- better roads and maintenance of roads in the village
- a covered ice arena/recreation centre for indoor activities
- a playground for younger kids on the Indian village side so that parents could supervise them and where kids wouldn't have to cross the N. Canol road.
- a baseball diamond, with bleachers and a concession

- A Band multi-use centre where people can talk and meet, where there could be a place for alcohol/life skills counselling, bingo, movies. There could be a library for studying and reading, for the radio station, for a daycare. "We need a place where you feel good about, it's our people that need some facilities."

BAND Controlled Business/Employment Opportunities

The Ross River Indian people and their Band Council have expressed a desire to protect and enhance the productivity of the traditional sector activities associated with hunting, trapping and fishing. These are the major means of sustaining Indian culture and of continuing the economic input of food and furs into the mixed Ross River Indian economy. As Chapter 12 (Recommendations), indicates, this shall require specific guarantees and conditions that must be reached with both government and private sector interests active in the MacMillan/Howards Pass area.

Parallel and interfacing with the traditional aspects of the Band's economy, the Band wishes to develop Band controlled business and wage employment opportunities that not only would provide training and wage jobs for Band members, but would also offer opportunity for businesses to make a profit or at least break even. As Chapter 12 indicates, certain conditions and guarantees must be put in place to assist the Band not only in developing the wage/business aspect of the Band's economy, but achieving a balance for protecting and enhancing the bush sector of the Band's mixed economy.

The following are ideas about business opportunities expressed by Band members and the Band Council.

In addition to the list enumerated below, opportunities for business or wage employment may be available with government and private corporations involved in the modernization of the region. These later possibilities would have to be examined by the Band in terms of their short and long term impacts and potential for success. It does not necessarily follow that because a business venture has the capacity to produce a profit for either the Band or an Indian entrepreneur, that it would be of long term social and economic benefit to Band members. The institutions through which the Band could get involved are basically the Ross River Indian Development Corporation, the Dena General Store, or local Indian entrepreneurs. In addition, it is not inconceivable for the Ross River Indian Band to enter into partnerships, or joint-ventures with other Indian Bands or even central Indian corporations such as the Yukon Indian Development Corporation.

Business/employment Development Possibilities

- trucking company, for Dena Ku, YIDC, Mining companies
- bulk fuel
- public laundromat
- a restaurant
- hotel/motel complex
- gas station with repair business
- expansion of store/expediting
- commercial fishing
- game guiding/photography business
- horseback riding/camping for tourists
- road construction/road maintenance company
- supply warehouse
- taxi service from airport to town
- trailer park
- craft store

Together with the Chapters on Indian Land Use, Maps and the Indian economy, this presentation of the Voices and Dreams of the Ross River Indian people communicates the intrinsic values of the way of life of the Ross River Indian people. These Indian values and way of life have been poorly understood, and often have been viewed stereotypically as being backward, primitive, under developed, and in need of wholesale replacement by a more civilized, efficient, modern set of values. In the post-Anvil period, the Ross River Indian people have been subject to enormous pressures from the dominant political economy to assimilate culturally and economically. To a large extent they, as most Athapaskan speaking Indian people, have exhibited a remarkable capacity for adaption, taking what is of value from the new and blending it with tradition to produce a novel, mixed socio-economy. The existence of a high rate of social pathologies is witness to the fact that the costs of adaptations for many has been severe.

The just resolution of a Yukon Indian Land Claim settlement would be one means for the Ross River Indian people to take greater control of their development path. With large-scale regional development on the Ross River lands guarantees and incentives not provided for by a land claim settlement will have to be negotiated with the Government of Canada.

These legal guarantees and incentives must accomplish nothing less than insuring that the Ross River Indian people receive

more than a trickle-down of the benefits from regional developments, and further, that they retain some legal control over the land resources required for the development of their own land use, mixed Indian economy and dreams and culture.

CHAPTER 10

THE ROLE OF WAGE EMPLOYMENT IN THE ROSS RIVER ECONOMY

The Role of Wage Employment in the Ross River Economy

The two views of the future of the Ross River area, outlined in Chapters 8 and 9, arise from two different views of the present there. In the view of government and industry, no economy is perceived to exist at Ross River apart from the wage economy, and consequently the community appears to suffer from too much unemployment, too little income, and too much welfare. The solution, obviously, is in the provision of wage employment, business opportunities, and vocational training. This can have only positive effects, since there is no existing productive activity which can be adversely affected.

Yet there persists an alternative view of the future, held by most of the Indian people of Ross River. It is not set out in the form of position papers, development proposals, or official plans or programmes, but it is there nonetheless in the thoughts of the Indian people, and we have tried to describe it in Chapter Nine. In some respects it contradicts the conventional wisdom about what are the problems and the solutions at Ross River. This contradiction is apparently compounded by the fact that many Ross River Indians clearly state that jobs and business opportunities are important to them and that they would like more of both.

The problem arises from the lack of two fundamentally differing views about Ross River, which results in the same words--jobs and business--meaning different things to different people. In this chapter we will first review the basic economic facts to determine how much employment might

be needed in Ross River. Secondly, by examining the socio-economic structure of the Ross River Indian community, we can suggest what kind of employment might be needed there.

Indian Employment and Income in Ross River

a.) The Community

Cash income in Ross River amounted to just over \$1.2 million in 1982 (Table 10.1). Per capita cash income was thus \$4955 and per household income was \$20,759.¹ Wage employment accounted for half of total cash income, commodity production (chiefly furs) less than a fifth. Transfer payments accounted for nearly a third of personal cash income.

There were 78 jobs held by a labour force of about 125 persons. Thirteen of these jobs were full time, the rest were part time. The average duration of part time jobs was about 2½ months. The total duration of all jobs amounted to about 25 man years, at an average wage or salary of about \$2000 per month. From these figures alone, it would not be unreasonable to infer the following:

- there is considerable underemployment at Ross River, since under conditions of full employment there would be anywhere from 80 to 120 man-years of employment, depending chiefly on the female participation rate
- Since labour is not in short supply, the commodity sector must be limited either by resources or by capital. If the former, no amount of additional investment in gear will improve the situation, if the latter, then perhaps wage employment would be a potential source of capital.
- Transfer payments are relatively high, even in comparison to other northern native communities for which there are data (see, for example, Usher 1982a, 1982b, Dome Petroleum et al., 1983). Consequently more employment (or business opportunities) should reduce the level of transfer payments.

How does the inclusion of domestic production alter this picture? Table 10.2 shows income from all sources in Ross River. The replacement value of domestic production amounts to approximately \$458,000, or nearly 28% of the total. The entire harvesting sector accounted for about \$680,000 in income to the community, or about 42% of the total, which is more than wage employment did.

What we do not know is how long it took people to produce this amount of income. At the current rate of employment income (i.e. \$2000 per month) it would equal another thirty man years. This is a misleading comparison, however, chiefly because this production is not, could not be, nor would anybody want it to be, performed by thirty people on a full-time basis. Precisely because it is a part of the domestic economy of every household, it is performed by almost every adult in the community on a continuing, part-time basis.

As for total income, we are looking at nearly \$1.7 million, which works out to \$6840 per capita or \$28,655 per household. There is not a great disparity between these figures and territorial or national averages. Comparing the local income situation with national averages can be invidious and misleading. Nonetheless, since it is so conventional to do so, a few observations are in order.

The national average income for families in 1981 was \$30,440 (Statistics Canada 1983: 45). Wages and salaries accounted for 76.8% of this amount (ibid.: 74), despite a much higher proportion of business, professional and investment income than in Ross River. If we excluded these sources

TABLE 10.1. Indian Cash Income by Source, Ross River.
November 1, 1981 - November 1, 1982.

<u>SOURCE</u>	<u>AMOUNT</u> (\$,000's)	<u>PROPORTION</u> (%)
Commodities (Furs and Handicraft)	223	18.5
Wage Employment	603	50.1
Transfer Payments	378	31.4
	---	----
	1,204	100.0

TABLE 10.2. All Indian Income by Source, Ross River.
November 1, 1981 - November 1, 1982.

<u>SOURCE</u>	<u>AMOUNT</u> (\$,000's)	<u>PROPORTION</u> (%)
Domestic (Imputed Value)	458	27.6
Commodities (Furs and Handicraft)	223	13.4
Wage Employment	603	36.3
Transfer Payments	378	22.7
	---	----
	1,662	100.0

Source: Chapter 7.

of income from the national figures, wage income would account for at least 85% of family income, and transfer payments would account for over 10%. As well, if we were to add the imputed value of domestically produced food and fuel to the national average, it would make very little difference, whereas in Ross River, it would amount to over 30% of the total.² Thus the comparatively low level of wage income in Ross River is not simply made up by transfer payments, for they account for only about double the national per household average.

After tax comparisons would alter the picture even further. Wages and salaries are the most readily and the most highly taxed form of income. Thus when they increase as a proportion of income, so does tax liability. Domestic income, in contrast is not taxed at all. The after tax benefits of a dollar in domestic income is therefore somewhat greater than a dollar in wage income. On the other hand, the figures we have used for domestic income are gross, not net. The difference is undoubtedly substantial. Tables 7.11 and 7.12 show the high cost of a typical outfit, and the statements of many people that a substantial proportion of their disposable income goes towards the purchase and maintenance of hunting and travelling gear confirms this. Since commodity production (chiefly fur trapping) does not alone generate sufficient income to replace the stock of productive equipment, other sources of income are necessary for that purpose.

Although we have no comparative income data from earlier years, the 1982 figures do not seem to be novel or unusual.

Ross River people have been exposed to some level of wage employment opportunities for many years. As well, we have no reason to think that domestic and commodity production have varied greatly in recent years. Therefore the Ross River economy would appear to have certain distinctive and enduring features, based on the structure of employment and income. It is neither an aboriginal nor an industrial economy, nor even necessarily in transition between the two. It could be on a related and parallel, but not identical, track. It is a mixed economy with a primary emphasis on self-employment and domestic production, and it would appear that the Indian people of Ross River would like the strategic mix of income opportunities--land based and wage based--to continue. Looking at the present balance, they would like more employment in the community than is currently available. But how much more, what kind, and at what cost?

There are 120 people in Ross River between the ages of 18 and 60. Virtually every male in that age group has employment for a few months of the year. Seventeen women are employed, ten full-time. It is uncertain how many more women would seek work if it were available. If it became common for woman to work outside the home, the number of close relatives willing to take over child care and housekeeping would be reduced, and day care would become a constraint. This would be especially acute if, as indicated below, inter-household ties are weakened in the course of a general shift to wage

employment. There are currently fourteen households in Ross River headed by single mothers, for whom this constraint probably already exists. A further consideration regarding the desirable level of employment is that if economic opportunities expanded at Ross River, some band members who presently live in Whitehorse or other communities might return.

It seems likely, however, that twenty or thirty additional man-years of employment in Ross River, generating \$480-720,000 in income (assuming parity with existing wage rates) might be all that the community could usefully absorb at present. Assuming this money entirely replaced the present level of unemployment benefits and social assistance payments to employables (in fact partial replacement is the more likely outcome), the net addition to community income would be \$360-600,000. At this point, per household cash income would be very close to the national average.

b.) The Household

One of the distinctive features of an economy such as Ross River's is the importance of the household as an economic unit. In industrial society, household income is usually thought of as the breadwinner's income, which is to say, the husband's, who goes out to work, and brings in virtually all of the income (in the form of cash) necessary for the maintenance of the household. The economic fate of each household, in this model, is governed by the wage or salary of the chief (and often sole) breadwinner. There is a one-way flow of cash from the breadwinner to other household members, and inter-household transfers of goods and services are assumed to be of

no economic significance.

In Ross River, few if any Indian households actually operate this way. Instead, the pattern is for several household members to make economic contributions to a pool of income from which all benefit. For example, the husband might trap and hunt in the fall and spring, work for wages for three months in the summer, and collect some unemployment insurance. If there are no pre-school age children, the wife might have a full-time job. An older son might also hunt, and work for wages for six months of the year. An older, unmarried daughter might have children of her own, work for part of the year, and obtain a mother's allowance for the rest. An aged parent, plus younger children, would generate further household income from an old age pension, family allowances, and child tax credits.

What is also important in this pattern is the domestic activity of the household, in which all members participate in some way or another, and its substantial contribution to household well-being. Hunting and fishing have already been mentioned. Typically, however, such a household produces for itself a broad range of services which are frequently purchased outside the household in an urban industrial setting. Almost all meals are prepared and eaten at home, child care and housekeeping are internal responsibilities, and a typical Ross River household may be substantially self-sufficient in firewood, the maintenance and repair of productive equipment, and home maintenance and renovation. Further, there are significant exchanges of these domestic goods and services generally along kinship lines.

A typical household thus produces a substantial part of its own material needs directly, and obtains cash through wage employment, commodity production or transfer payments for the remainder (see, for example, the participation tables in Chapter Seven). If there is a developing pattern, it is that women are more likely to seek full-time employment, while men seek part-time employment, in pursuit of this strategy (see Table 7.14). What is also noteworthy is that wage employment is almost entirely local. It is rare for people to commute elsewhere to work, or to leave for long periods to work elsewhere and remit money home to their immediate family and household. Consequently, those engaged in non-industrial forms of production may be technically unemployed, but they are certainly not idle. They are making entirely "rational" (in the conventional economic sense) decisions about how to make a living, in the context of the household enterprise. And although the people of Ross River commonly stress the economic importance of country food, their continued reliance on it in view of the availability of both employment and cash suggests that the mere affordability of alternatives is by no means the sole issue.

While there is no doubt of the importance of wage employment in Ross River, the evidence suggests that it is not the primary focus of economic life there, but rather a means to another end. That is why there is a strong preference for part-time or seasonal wage employment (especially among men, or for full time employment in the home community which allows adequate

opportunity for land - based activity. That is why there is a preference for employment which does not require relocation, and hence relatively little interest in career employment, especially that which requires years of training away from home, and high residential mobility for its continuation. There is a tendency to depend on employment income for specific purposes -- as a seasonal bridge between other activities, or as a means of achieving a targeted amount of money -- rather than as the basis of week to week or month to month subsistence for a whole life time. Or if one member of a household adopts full-time employment, there is a concern that other members be able to assume responsibility for domestic production. There is a concern that both employment and training for it to not interfere unduly with the socialization of children for land-based activities. There is a tendency to use a substantial proportion of income from employment for the purchase of productive inputs for land-based activities. And there is a tendency to view wage employment opportunistically in comparison with self-employment or transfer payments, as means of achieving these various ends. All of these tendencies are well illustrated by the statements of Ross River people themselves, cited in Chapter 9.

The demand for employment is greatest among younger people. This is sometimes interpreted by outsiders as a lack of commitment to land-based activity on the part of young people. But this does not appear to be the case in Ross River. Many younger men who do not yet have a hunting and trapping outfit see wage employment as the best means of getting one. Since wage employment is the critical means of entry into hunting and trapping, there

is a preference among these younger men as well for short-term, local employment with target earnings in mind. It would appear that the demand for career or lifetime employment is very limited in Ross River, and may exist more among young women than young men.

Economic Relations and Social Goals

An enduring and distinctive structure of employment and income is only partial evidence of a fundamentally different economy. The compelling evidence must lie in the social relations which organize economic activity, and in peoples' ideas about those relations and their purposes. We must look at the core features of social and economic organization: the system of production and distribution, land tenure and property rights, the organization of work, the socialization of children, and the structure of community solidarity and mutual aid. It is in these spheres of life that peoples' sense of community and security are rooted. For when we speak of cultural change in the context of economic development, these are its core features, not the visible evidence of material items which are popularly associated with the notion of culture.

Obtaining evidence about these matters requires extensive field research, however, including participation observation. Those research techniques (which require community support and cooperation) are, however, not normally associated with impact assessment, which tends instead to rely for information on surveys, questionnaires, or comments at public meetings. The unique contribution of this impact assessment is precisely that it is based on a long period of participant observation.

To understand the social impact of industrial employment, it is necessary to contrast the prevailing system of economic and social relations in Ross River with those which typify a fully industrialized society.

The Ross River Indians although recently sedentarized, continue to have strong ties to their traditional land base, and continue to be economically dependent on hunting, trapping and fishing. The economic organization of these activities is in many ways similar to that of small-scale fisheries and agriculture in other parts of Canada until quite recently. Most people engage in simple commodity production, that is, the production of commodities which are relatively uncomplicated and can be produced by individuals, households, or a few households in cooperation, using their own tools, labour and knowledge. The resource base is held by the Band in common (in the perception and practice of Band members, leaving aside the legal position of the Crown). The Band had, and continues to have, a system of customary concepts and rules for allocating individual access to the land and regulating individual behaviour on it. Internally, the system of distribution and exchange continues to operate at least partially on the traditional basis of kinship and mutual aid.

The actual production of commodities is controlled and managed by the producers, as individuals or in association with each other. They own the means of production and are therefore self-employed. Producers may meet end-product specifications required by prospective purchasers (whether they are consumers or merchants) but the actual process of production is self-directed.

A fully industrialized system of production and markets is quite different. Industrial employment involves selling one's own labour power at a price to a firm or bureaucracy which then directs and supervises that labour. This productive unit--firm or bureaucracy--owns the means of production, purchases the raw materials and the labour power, and directs the production process which combines these elements. Unlike self-employment, industrial employment involves the separation of the conception and the execution of tasks, that is, a separation of functions between managerial and technical personnel on the one hand, and manual and clerical personnel on the other. The former categories have certain dominant rights, which are delegated to them by the owners of the firm, or by the state. These rights include:

1. the determination of what will be produced, when, by whom and for whom.
2. the determination of the technical process of production, and how and when new technology and equipment will be introduced.
3. the determination of what constitutes safe, healthy and desirable working conditions.
4. the organization, direction and supervision of manual and clerical labour.

These are legal rights which flow from ownership(or from state authority), and are circumscribed only to a limited extent by trade unions, collective bargaining, public opinion, and state regulation.

This implies that manual and clerical employees, as well as the lower rungs of the technical and managerial staff, forfeit their right to direct and regulate their own activities when

they are at work. They are no longer entitled to decide for themselves, or among themselves, how fast or how much to work, when to work, how best to do the job, what constitutes a safe and healthy working environment or work procedure, or what are the most congenial working conditions. It is for these reasons, perhaps, that economists conventionally consider work (by which they really mean labour) as a "disutility", for which compensation must be paid.

What is also distinctive about industrial capitalism is the function of the market. Not only is it the means of assembling raw materials and exchanging commodities, as in pre-industrial systems, it also becomes the means for assembling land and selling labour power. It is not the phenomenon of the market as such which is novel about industrial capitalism, for markets date back to man's antiquity. It is their scope which is novel. Once it becomes the function of entrepreneurs to assemble land, labour and capital for the purpose of production, all of these things must become exchangeable in the market--for practical purposes exchangeable for money.

A market for labour must be established, and labour must become mobile. A market for land must also be established, and so pre-existing systems of land tenure that impede the free exchange of land must be terminated. People, as the embodiment of labour, must become separable from their ties to the land, and from their ties to kin and community. These have been the essential conditions, not incidental, avoidable or mitigatable consequences, of the development of industrial capitalism in western

nations. Virtually all economic historians agree on this, and indeed many theories of modernization and development prescribe this course in the Third World. It is the rendering of land and labour into commodities, and the social consequences of that process, that has been referred to as "the Great Transformation" in the modern history of Europe (Polanyi 1957).

It is the same commoditization of land and labour in the North which, in the modern day, constitutes the parallel "great transformation" for native people in northern Canada, and major development projects are playing a central role in that process. The critical question for social impact assessment is not the so-called modernization of a traditional economy. It is, instead, the nature and consequences of the transition for self-employment in simple commodity production to wage employment in industrial production, and what elements or features of those new relations are significant or incidental with respect to impact.

In the present day context of northern development, here are some of the impacts we can expect on a local society as a consequence of industrialization. The nature and organization of work will change, as has already been suggested above. There will be a shift from flexibility, egalitarianism and consensus among producers to rigidity, hierarchy and dominance. Whereas the self-employed producer can transmit his tools, skills and knowledge to the next generation of producers through apprenticeship and inheritance, under an industrial system the state must assume these functions. The school becomes the institution in

which children are trained, not for specific skills and occupations, but to become members of the labour force--to compete in the labour market. Competition replaces solidarity as a virtue. Cooperation is given new meaning--no longer is it the mutual aid recongized as a necessity among co-producers, but self-denial for a purpose not one's own in a process directed from above.

Industrial activity also rewards or "compensates" work differently than does self-employment. Average income normally rises, but so does the disparity of income between persons and between households. This can be expected to have shock impacts on social structure, and on the general sense of perceived well-being based on existing concepts of rights and obligations among members of the community.

An important consequence of widespread industrial employment is that household production declines, as a proportion of total production, and that households must therefore obtain a greater proportion of their needs through market exchange rather than domestic production. This occurs in two ways: first, there is a tendency to specialize in commodity production for market exchange, at the expense of domestic production, and second, to exchange labour power for cash and abandon household production altogether. This cash income, however, is viewed increasingly as an individual resource and becomes less likely to be pooled on a household basis (viz. Asch 1977), or distributed among households, although gambling may continue to be a means of curculating money and goods. These tendencies accentuate

the emerging differences among household incomes, and both persons and households become less interdependent economically. Mutual aid and sharing networks atrophy.

While personal and household incomes rise, on average, so also does vulnerability to social forces uncontrollable at the local level, although the latter tendency is less easily and less rapidly recongized. As wage employment becomes the dominant, indeed nearly exclusive means by which the average household derives its income, not only must its members adopt the appropriate attitudes and discipline described earlier, they must also adopt different patterns of consumption, investment, and distribution. Income now accrues on a regular and frequent basis, but in smaller amounts, rather than sporadically in large amounts. For the ordinary wage earner, almost all of this regular income is required for daily subsistence. The purchase of large items must therefore be financed on a long and sustained basis of savings, or of debt repayment, rather than obtained opportunistically on the basis of occasional large pulses of income. People must commit themselves to a long and costly education process, largely outside their control, for their children. Their tax liability will increase. With the decline of social solidarity at the community level, they must now avert the risk of household economic catastrophe by investing in pensions and insurance. All of these things incur continuing financial obligations on a regular basis: monthly payments on mortgages, loans, consumer finance, contributions to welfare state programmes, and so on. These obligations are, of course,

quite at odds with the dominant pattern of seasonal activity and irregular income which typifies a simple commodity economy based on self-employment (and in which households tend to meet their daily subsistence needs at least in part by domestic production).

The issue here is that the difference in outcome between industrial employment, i.e. the more or less continuous dependence on exchanging one's labour power for money, as a means of making a living, and other types of productive activity, cannot simply be measured in dollars, because it involves changes in the social order as well as in money income. Consequently it is inappropriate to focus solely on output, i.e. the cash (or even cash-equivalent) return, as a means of comparing the "benefits" accruing from different categories of productive activity.

There are, between the traditional economy of Ross River, and the impending industrial economy, differing rationales and motivations for production and distribution. In the first case, the collective interest of the local community (or of Kin-linked groups of households) is likely to transcend individualism, and this will be demonstrated by such things as the nature of mutual aid and sharing, the means of socializing children, the content of that socialization, and the system of property rights. In an industrial economy, however, possessive individualism is the dominant characteristic. The customary bonds of social structure and obligation are seen as restricting the operation of a free market in which individuals can maximize their own self-interest

by means of entering into contractual relationships. During the old days at Ross River, as in other traditional societies, no member of the group was allowed to starve. Although a certain proportion of households in any such society do not make ends meet, their welfare is seen to be by the group. That is why generosity and the ability to provide for others, were requisite qualities for leadership in aboriginal society. The ascension of the free market as the central economic institution, and of personal gain as the central motivation, means that in industrial society, he who does not work can indeed starve, save to the extent that the state provides a welfare net. It is this possibility of starvation (if not literally, then some modern equivalent deprivation) which is seen as the chief inducement for people to enter the labour market and to meet its requirements. The establishment of a labour market, and its attendant discipline, has inescapably required the destruction of local social solidarity, because that is seen as a barrier to the free operation of such a market.

It follows that there is a fundamental difference in the rationality of the two systems, which is reflected in the world view of individuals, and in the operation of the basic units of production in each--the household in the one and the firm in the other. In a preindustrial society there is no inherent logic of accumulation among producers. Instead, the maintenance and survival of the group is the paramount end. The evidence of success is the ability of the social system to reproduce itself generation after generation. Growth and change may occur, but they are instruments to an end, or byproducts of an end.

Certainly they are not articulated as ends in themselves. In an industrial economy, however, growth, accumulation and change are neither instruments nor byproducts, they are paramount ends. At the level of the firm and the bureaucracy, those are the tests and the hallmarks of success, and without them, survival is not possible. Consequently the social priorities with respect to the organization of production and the distribution are inevitably different.

These local social priorities, however, are not formed in vacuum, but in the context of a changing institutional environment. The Canadian North has witnessed dramatic developments in both the state and financial infrastructure in the last decade or so, in anticipation of major projects as well as in response to them. The state has developed an apparatus capable of administering not only these projects and their impacts, but also the entire land and resource base of the territory in which they are occurring. The state has also provided a public infrastructure of energy supply, transport and communications, along with community facilities, and programmes for social security, health, education, job creation and law enforcement. Planning and management extend to many spheres of life in the North which until very recently were untouched in this way. As formal structures and procedures replace informal ones, some traditional patterns become less possible to continue.

Industrialization, in the form of major projects, is also necessarily accompanied by the local establishment of an appropriate financial infrastructure. This infrastructure includes

the systems for banking, insurance, mortgages, public and corporate finance, markets, trade, and their legal and administrative accoutrements, all of which must be put in place at the local level.

What evidence is there that the people of Ross River continue to adhere to the ideology and rationale of a nonindustrial economy, even while assuming wage employment on a casual basis? A comprehensive answer to this question is far beyond the scope of this report. Consider, however, the major requirements for industrialization: the making of land and labour into commodities which can be exchanged in the market.

The evidence in Chapters 5 and 9 demonstrate that the overwhelming majority of Ross River Indians do not view land as a marketable commodity. Instead it is an inalienable element of their collective existence. It is this profoundly different conception of land that underlies the claims issue, and which is jeopardized by contemporary Canadian systems of land tenure and management.

The question of labour is somewhat less clear. If, however, people have not fully accepted the obligations and the discipline involved, and do not see the rewards as appropriate or adequate compensation for doing so, then they have not yet embraced the rationality of industrial employment, even though they may go to work for wages. Chapter 9 provides strong evidence that autonomous, self-directed work is highly valued in Ross River. There appears to be a strong aversion to industrial work, and a strong preference for the conditions of self-employment. Clearly, hunting, fishing and trapping are attractive for these reasons as well as other. It is also why there is such an interest in small business and individual entrepreneurship. But there is probably not much desire that these

enterprises grow very large, employ anyone beyond the family or community circle, or serve much beyond local needs, and local tourist and truck traffic. It would not appear that there is a class of Ross River entrepreneurs who are committed to competition growth, free markets and similar tenets of western business culture. For example, the requirements of competitive bidding impose certain conditions on local businesses which their owners either cannot or prefer not to meet.

Finally, many Ross River Indians appear to place a high value on the maintenance of the traditional system of mutual aid and sharing. If wage employment is not to undermine that system, then its availability on a local, seasonal or part time basis will be more highly valued than career employment, which places family and community obligations in conflict with the longer term requirements of the job.

These attitudes to employment, which are by no means unique to Ross River but are shared by many native northerners, are recognized by the many special programmes and arrangements provided by governments, and increasingly, by industry. The employment problem is no longer seen as a matter of manual or technical skills training. Many responsible officials refer to the need to inculcate a "work culture" into the native population, by which seems to be meant the appropriate attitudes towards industrial employment and life. A list of these attitudes would include loyalty and deference to the employer, willingness to follow instructions and to accept workplace conditions and discipline, punctuality, the "work ethic" willingness to defer gratification, and consumerism.

Over the longer term, however, we can expect that private employers, and perhaps even public ones, will become less willing to make special exceptions and accommodations to native people in their hiring and employment practices. Underlying all of the special programmes that have been or might be put in place is almost certainly a conviction in their temporary or transitional rather than permanent nature. In the end, those who take up industrial employment will be expected to have the "right attitudes" which consist, essentially, of internalizing and accepting the bargain of full-time, career wage employment as outlined at the beginning of the section.

Those who argue that the organization of work and the system of property rights are not important issues, rest their case on the idea that people choose, as rational, individual decision makers, to obtain the "goodies" which industrial civilization brings. It is indeed true that people like the goodies. Very rarely do we observe individuals, let alone whole communities, consciously rejecting them. It does not follow, however, that people have fully understood and accepted the obligations they have incurred in the eyes of the society that provides those goodies. We would need evidence that the people of Ross River have decided, either individually or collectively, to accept the social contract allegedly required to perpetuate these material benefits.

This report has provided much evidence that they have not. While seeking the benefits, they appear to reject, in considerable measure, the allegedly necessary social obligations which these entail. In order to resolve this contradiction it is first

necessary for the people of Ross River to understand it. But it indicates very clearly that they would far rather have a foot in both worlds, as it were, than simply trade one in for the other.

FOOTNOTES

1 All per capita and per household figures based on 243 people and 58 Indian households in Ross River.

2 The imputed value of firewood, clothing and bedding materials and so on not included in Table 10.2.

CHAPTER 11

IMPACTS

CHAPTER 11

IMPACTS

INTRODUCTION

This study has documented the nature and origin of the economy and society of the Ross River Indian people. It has also outlined, so 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. We now turn to the question of predicting and evaluating the impact of those developments upon the Indian community of Ross River.

The types of impacts we will be discussing in this chapter have to do with the nature of life in the future for the Ross River Indian people. The scale of potential regional developments in the Ross River area and the nature of Indian economic and social life require that we explore a large variety of possible impacts from industrial resource development:

1. Changes can be expected to the village itself, its social or racial balance, and the political ability of the different social groups to make their voices heard;
2. Changes can be expected to the biological productivity of the land and the use of land and biological resources by Indian and Euro-Canadians;
3. Changes can be expected to the social health of Ross River

Indians;

4. Finally, changes can be expected in the balance of the different economic sectors that make up today's Ross River Indian economy.

Each of these types of impacts are discussed below. Chapter 12 outlines some measures we believe will be necessary to mitigate the adverse effects of the proposed regional developments.

Ross River Indians, as we have seen elsewhere in this report, are not strangers to social change or, for that matter, to the effects of northern industrial resource development. In the earlier chapters we have examined how the Indian people have made their living from the animal and plant resources of the Ross River lands; the nature of the present day economy; and how the economy and the Indian system of land and resource use has undergone a series of adaptations to accommodate for modern village life. Finally we have gotten a sense of how the Ross River Indians look on the future: their own dreams for a desirable future.

The dreams are not simple and to some they may even appear contradictory. They include both the persistence of a viable hunting, fishing, and trapping economy and the social system that underpins the economy: and as well access to jobs. There

are, however, restrictions on the types of employment that are considered desirable. Band members who have worked for Cyprus Anvil have had direct experience with the types of industrial work that in good economic times brings a mobile work force to the Yukon from British Columbia, Nova Scotia, and other parts of southern Canada. As we have seen, few Ross River Indians have stayed with this kind of work. The experience, however, has allowed people to think about the types of jobs that would be acceptable. These jobs would allow people to continue living in Ross River, would have flexible enough hour arrangements or work schedules to permit people to continue the harvests of the bush economy, and would have a work environment in which people are not lost as strangers within a predominately white work force.

The other set of dreams that play a role in the future of the lands and of the Ross River Indian people are those of companies and governments for the economic development of the rich mineral resources of the Ross River lands.

In Chapter 8 we reviewed a variety of proposals for the development of major mineral deposits on the Ross River lands and the types of infrastructure -- roads, employees' housing arrangements hydroelectric projects, etc. -- that are being planned or considered to accompany the developments. Within

the next decade it is possible that as many as six new mining operations may be operating within 125 miles of Ross River. These include: Yukon Barite Company's barite claim (Tea); Cyprus Anvil Mining Corporation's Ross River coal leases; AMAX Northwest Mining Company's tungsten deposits (MacTung); Hudson Bay Exploration and Development Limited's lead and zinc claim (Tom); Aberford Resources Limited's lead and zinc deposit (Jason); and a complex of lead and zinc deposit in the Howard's Pass area owned by Placer Development Limited and U.S. Steel Corporation (XY, Anniv, and Op). Although the likelihood of all of these mines becoming operational by the early 1990's is not great, given the current economic recession and its low metal prices, it is likely that some will become active mining operations during that time and that much of the necessary infrastructure for the other developments will be in place.

With the exception of Yukon Barite's claim, which has seen some preliminary mining and the construction of a mill near Ross River before economic and other problems closed down operations, the different mining projects are all in various stages of proposal. The Ross Coal deposit has seen exploratory work and plans for rapid development of the project prior to the shut down of the Cyprus Anvil Mine.

Of the MacMillan Pass and Howard's Pass deposits only

AMAX's MacTung tungsten mine has received planning attention beyond preliminary feasibility studies. Last year's (1982) informed "best guess" estimates placed the construction phase of the mine between 1984 and 1986, and the start-up of actual mining operations in 1986 (Reid Crowthers and Partners, 1982b). These estimates were based on a recovery from the economic recession during 1983 (Cox, 1982). It is likely, however, that the persistence of the recession into 1983 has pushed plans for the development of the MacTung mine further into the future.

The development of the MacMillan Pass mineral deposits requires an all-season transportation corridor linking the area to mineral markets. To facilitate the mining developments the Department of Indian Affairs and Northern Development has been planning the reconstruction of the North Canol Road:

"Reconstruction of the North Canol Road has been proposed to facilitate future mine generated traffic from the Macmillan Pass on the Yukon-Northwest Territory boarder. Five potential mines are expected to begin production in the late 1980's. An all-season reliable access road, connecting the mining area to the existing Yukon road network, has been identified as a primary infrastructure requirement for the mining area" (Canada, 1982b).

Two conditions are required for the development of the lead-zinc deposits in the MacMillan Pass and Howard's Pass area to become economically attractive: an improvement in

world mineral prices and the development of transportation and service infrastructure. With the construction of AMAX's Tungsten mine in the MacMillan Pass and a serviceable all-season road much of the second condition will have been met.

The MacMillan Pass Task Force concluded in 1980 that in the short-term diesel generators would supply the power for the MacMillan Pass mines, but that in the long-term hydroelectric or thermal generating plants would be required (Reid Crowthers and Partners, 1982a: 44). As we discussed in Chapter 8, the Northern Canada Power Commission has been conducting feasibility studies for hydroelectric production from the Pelly and Ross Rivers. If a multi-mine complex is developed in the MacMillan Pass it will probably at some point appear economically logical to switch from oil to locally generated hydro power.

It is clear that what is being considered is not a single project but a major regional development each of whose components supply some of the infrastructure for the next stage. Although the social and economic impacts of each of developments taken in isolation are probably manageable, the cumulative impacts of regional developments have the potential for transforming life for the residents of Ross River. For example, the AMAX Tungsten mine by itself will produce only a slight increase

in road traffic on the North Canal. Estimates have ranged between 10 and 13 round trips per week (i.e. 20-26 single direction trips) for the movement of the tungsten product and hauling fuel and other supplies for the mine. Adding together the estimates of ore truck traffic from all mines, however, a truck will pass any point on the road and into Ross River at the rate of one every 7 to 8 minutes, given a 12 hour work day (Salisbury, and La Rusic, 1981). And this figure is for ore trucks only. It does not include traffic for hauling food, fuel, and other supplies and commuting.

MODERNIZATION AND DEVELOPMENT

The two sets of dreams, those of the Indian inhabitants and those of the developers', are not inherently incompatible, but they can be if the developments proceed with the habits of thought and assumptions about the place of the native inhabitants that have accompanied many other industrial developments in the North. Some of these assumptions have been discussed above: that economics have to do exclusively with the generation and distribution of money; that hunting, fishing, and trapping as a significant means of supplying the food and cash needs of a community is a way-of-the-past and needs replacement by a 'modern' employment based economy; that hunters are unemployed and, if provided with adequate education and skills training, will supply a potentially stable work force and alleviate some

of the problems of importing and maintaining a corps of industrial workers in a strange and at times uncomfortable environment; etc.

From the governments' points of view the mining developments will supply positive national and territorial benefits by creating much needed new jobs for the Canadian and Yukon population and a new source of tax revenues. The companies benefit through the profits generated from the developments. How do the governments and companies view the role of Ross River Indians in their plans for regional mining development? This is an important question, and it is not easily answered. There seems to be no official voice. On starting this chapter we reviewed some of the available government and company documents dealing with the developments to see what they have to say. Answers were not forthcoming. Nonetheless in the Band's and the researchers' dealings with government and company officials the attitudes have been clear: positive benefits will accrue to Band members from an increase in job availability and business opportunities. These are attitudes that fulfill perceived needs. They follow from the belief that the Ross River Indians do not have a viable or "real" economy.

They also follow from some of the ideas of social scientists who have been influential in Canadian and American

government policy makers' thinking about social change and the needs of small rural communities. These ideas have been based, in part, on an opposition between the traditional and the modern, and the replacement of the latter by the former as the natural course of human social evolution. In social sciences jargon this orientation has been called the "neo-evolutionary modernization approach". The problem with this approach is that it has tended to direct "attention away from the analysis of local traditional economies and from the contribution such economies make to the viability of local communities" (Bowles, 1981). The ideas are largely quantitative in orientation, equating increase in dollar value output per person with improved economic circumstances. According to Usher (1982b: 86-89):

"The conventional theory of modernization sees economic and social development as universally and necessarily linked to industrialization. It recognizes that industrialization requires a breakdown and eventual replacement of the pre-existing social order -- that there must be profound ideological and institutional change for industrialization to occur, and a radical reordering of both the social organization of work and the prevailing conceptions of mutual obligations among people, or what political theorists might call the social contract. But out of such change is thought to emerge a higher standard of living, a better quality of life, and greater personal choice. Although fraught with transitional difficulties at certain stages, industrialization and its benefits are seen to meet certain fundamental and perhaps even innate human needs and wants. The evidence is simply

that people seem to accept, rather than reject, the trappings of industrial development when these are made available. People like the material benefits, or the "goodies", people take wage employment, and they move to urban areas where these jobs and material benefits are more readily available. The majority of people are thus alleged to be "voting with their feet", and their behaviour, which is seen to be essentially voluntary, and the result of purposeful, individual choice, thus confirms the essentially benign and beneficial nature of the transition.

When these changes are largely externally generated, as in the case of a small, foraging society coming into contact with a large, industrial society, acculturation is said to occur. The affected group adapts, in response to the models and incentives for change which are provided by both a free market economy and directed social change, the latter intended to ease the transition from the old to the new. There will be massive cultural replacement, particularly in the spheres of work, institutional life, and social relation, resulting in individual behaviour which is more functional to the modernized, industrialized economy.

This model of economic development and cultural change has dominated the social sciences since World War Two, and has informed much of the theory and practice of economic and social development in both the third world ... and the rural and remote parts of the developed world. Certainly this model has guided the ideas of the great majority of those responsible for the social and economic development of northern Canada during the post-war era. It is the intellectual foundation of the more popular view that simply sees industrialization as inevitable, desirable, and beneficial -- the more the better, and anyone not yet on the train should certainly hurry aboard. Indeed, this model is really the essence of what we conventionally call "development".

When these ideas are applied to northern Canada, they lead naturally to the conclusion that major projects are in principle a good thing. In

this view, economic change, modernization, and cultural replacement have already occurred on a massive scale in the Western Arctic. These processes, which began nearly a century ago, lead inevitably to a convergence with industrial society which must now be completed with one final step: the provision of universally available industrial employment. Most of the arch is already in place, what is needed now is but the "keystone."

There is a belief of inevitability in this model which leads researchers to look on changed as either contributing to modernization or obstructing it. The inherent danger in this perspective is that its biases lead researchers and policy makers "away from questions about the adaptive contributions of traditional local economies to the vitality of community life and about the ways that traditional practices might be more constructively intergrated with economies and lifestyles which include more modern technological elements" (Bowles, 1981).

The recent reexamination of these ideas and studies done by a variety of Canadian social researchers looking at the ways that local traditional economies of northern native communities contribute to the viability of these communities has led to a change in the concept of modernization. Modernization is a term which now has two different understandings: 1. the replacement of a tradition local resource based economy by a

cash-wage labour-business economy; or 2. the economic rationalization of the less efficient or more labour intensive parts of the local economy by the use of appropriate technology. One use of the concept seeks the wholesale replacement of one set of economic institutions and the set of social relations which underpins the economy by another. The second is, in reality, the extension of a process of adaptation with long established historical roots. Northern and other natives quickly changed from arrows to bullets and skins to woven cloth. The early post-contact changes required a increase in emphasis on harvesting fur bearing mammals to finance use of the new imported technology; just as the shift to trucks, skidoos and outboard motors from dogs and canoes requires a cash input into the economy from seasonal wage labour and transfer payments.

Ross River Indians have not fit comfortably within the view of government planners that local communities benefit from northern resource developments by expanded opportunities. From the direct experience of Ross River Band members with the development of the Cyprus Anvil Mine, as well as numerous other examples across the Canadian north, it is clear that small, traditional communities do not always experience improved employment opportunities from resource developments. Some of this has been due to problems in training and inadequate education, some due to a lack of resolve on the part of employers

and government to cope with the difficulties of culture change, and some of it due to union membership requirements. But Band members have not been passive in this process. The life change requirements of the standard mining wage labour system that working for Cyprus Anvil represented were tested in the same way that people tested the trade goods of the early fur traders. Many of the difficulties experienced by the people, which ultimately led to their rejection of this kind of work, had to do with stress generated by coping with changes in the patterns of mutual aid, food sharing, extended family life, rootedness in place, and other social and economic parts of culture that make Ross River Indians and others a distinct element within the Canadian mosaic.

1. CHANGES TO THE VILLAGE:

The Possible Scenarios for Development Change of Ross River

As a village Ross River occupies a unique position in relation to the proposed Mackenzie Mountain mining developments. It is the most accessible settlement, which makes its consideration as a supply and transportation centre for the developments, and as a possible residential village for the mine workers only natural. Ross River's physical location, on the junction of the Robert Campbell Highway and the Canol Road, potentially makes it a crossroads-highway town with the reconstruction of the North

Canol and the development of the MacMillan Pass mineral deposits. Indeed, if Ross River had a chamber of commerce the village could reasonably be promoted as the gateway to the MacMillan Pass mining area.

One of the problems of assessing impacts at this stage of the planning process is the lack of firm plans. The timing of actual mine construction as well as the means for transporting and housing the mines' employees remain at the discussion stage. It is difficult to talk about the effects of development if the proposals' details are still hypothetical. On the other hand there are also benefits. Options and preliminary proposals can be influenced more before the governments and companies have committed themselves to a single plan. What we have instead of proposals are a variety of possible arrangements for housing and transportation and for the scheduling of the construction of the mines themselves. If the developments proceed, much of what happens to Ross River Indians in the future will depend on the timing of developments, the arrangements for housing and transporting the work force, and how the Band is consulted about their interests.

What we are left with are scenarios for the effects of development. The consulting firm of ssDcc was commissioned by the Northern Roads and Airstrips Division of DIAND in 1981 to

prepare a discussion paper on the future of the Ross River community if the reconstruction of the Canol Road and the mining developments were to proceed (Salisbury and La Rusic, 1981). They devised 4 futures or scenarios for the village given different development arrangements:

- Scenario 1. Ross River remains a rural settlement, with no reconstruction of the North Canol and no mining development;
- Scenario 2. Ross River develops as a transportation centre for the mines, with the North Canol following its present routing through the village. The miners are housed in other communities;
- Scenario 2a. Basically the same as scenario 2, but the road is rerouted to by-pass the village;
- Scenario 3. Ross River develops as a regional transportation and mining centre. The village becomes a major residential location for the mine work force, who are flown into the mine site. Approximately 250 mine workers, or the equivalent work force for one of the mines are housed in Ross River.
- Scenario 4. Ross River becomes an off-road settlement. The mines are developed, but the road is rerouted away from Ross River, possibly through Faro.

We find no major objection to Salisbury and La Rusic's descriptions of the kinds of change to Ross River that would come about as a result of each of the scenarios. However, their estimates of the balance between the Indian and white proportions of the population need to be reworked now that more accurate and more recent estimates of the Ross River resident Indian and white populations are available from this research and the study done by Reid Crowthers and Partners (1983). As well, their

conclusions do not take account of the changes to Ross River Indian population and their way of life as a result of the different development scenarios. It is also important to note that these are not the only arrangements possible. Some elements of each could be combined; and some of the social and economic impacts on the Indian people can be modified by specific development terms and conditions which provide consideration for the Indian interest in the village as a residential environment and the surrounding economic bush hinterland and its animal populations.

SCENARIO 1:

Briefly, with scenario 1 (no reconstruction of the North Canol Road and no mining developments) Salisbury and La Rusic see very limited population growth. The Indian population would grow by natural increase, but some of the white population would shift to other centres because of a decrease in business opportunities. We estimate that by 1993 the population would rise from the current level of 350 to 372 (Table 11.1). Ross River Indians would represent 73% of the population, rather than the current 70%. Some local business would be created due to the increased population and along with an increased demand for services. Salisbury and La Rusic predict employment problems, and a larger involvement of government due to increased dependence on government programs for cash income.

We do not feel as pessimistic about the desirability of this scenario as did Salisbury and La Rusic, given specific measures to encourage and enhance the current Indian bush economy. Ross River Indians do desire increased job opportunities, but there are limits to the nature of change accompanying the jobs that would be acceptable. It is important to realize that the no-growth scenario is not a dismal turn of events for the Indian people in considering the desirability of the extent of socio-economic change of some of the alternative scenarios. Nonetheless some development will likely take place. Some of the options have already been foreclosed. The road reconstruction plans are in an advance state and the AMAX mine development proposal is proceeding, albeit at a slower rate than initially expected.

SCENARIO 2:

With scenario 2 (Ross River developing as a transportation centre), following Salisbury and La Rusic's projections, the population can be expected to nearly double within 10 years, and the Indians decrease to less than half of the total population

TABLE 11.1. Ross River 1993 Population Projections. Based on Salisbury and La Rusic (1981) updated from 1983 Ross River estimates of the Indian residents and the white population (from Reid Crowthers and Partners (1983)).

	Indian Population	White Population	Total Population	Indians as a Proportion of the Total Ross River Population
1983 estimate	243	107	350	70%
Scenario 1	273*	99°	372	73%
Scenario 2	273	358°	631	43%
Scenario 3	273	949°	1318	21%
Scenario 4	273	117°	390	70%

* The Indian population increase is based on the birth rate of the entire Ross River Band (from the CYI Ross River entitlement list) during the last 10 years less an estimate of 10 year mortalities extrapolated from the 1977 - 1981 mortality statistics.

• The figures for changes in the white population are based on Salisbury and La Rusic's projections adjusted for Reid Crowthers and Partners' larger estimate of the current white population.

(Table 11.1). The increased population would be due to the immigration of transportation service workers and their families. Indian employees would account for some of the truck driving and service jobs, but the numbers of truck drivers, dispatch, and service personnel required if the mines with a high level of ore trucking (i.e. all except the AMAX tungsten mine) were in operation would require importing people from outside the present community.

With the white population at 50%, the Indian people would have lost a lot of their political strength to influence the future of the village. This happened during the construction and early operation phase of Cyprus Anvil, as was well documented by Sharp (1977), with a considerably smaller shift in the population ratio, and still persists today in the two racial groups' different dreams for the village's future (cf Alaska Highway Pipeline Inquiry, 1977). There would be very strong demands for the types of services, education curricula, etc. that are the basis for the life style which people are accustomed to in southern communities. The political ability of the Band to influence policy and planning decisions and protect the Indian interest would become greatly eroded, unless specific provisions to deal with these types of problems were put into place prior to the onset of development. Changes would come about gradually, with the phasing in of road reconstruction, one mine and then

another. Unless the entire development scenario and the cumulative changes and their impacts were clearly seen from the start, many impacts would not be seen as such. Rather, people would be in the same uncomfortable position of other Indian groups who live as a minority on the side of highways, trying to cope with development impacts and being told by outsiders that the stresses, etc. are a consequence of adjusting to modernization.

There would, of course, be significant effects on hunting, fishing, and trapping due to direct impacts of the project, the increased demands for recreational hunting, and the likely increase of tourist and sports hunting and fishing use of the North Canal Road. The detailed examination of these types of impacts are outlined below. In this section we are simply looking at the effects on the village of Ross River and the Indian community.

If the road follows its present routing between the white and Indian residential areas, we can expect service facilities to be developed along "the strip", dividing the two communities physically and socially to an even greater extent than at present. The traffic increase would be gradual, but if all the mines were eventually constructed we can expect an ore truck to pass through town every 7 to 8 minutes.

One of the problems of running the road through town is that some people will get run over. Here are some of the problems of having a large road with a lot of traffic running through town, close to the Indian residential area. The Indian village is stretched along the road and there are problems controlling where children and adults cross. The school is across the road, in the 'white-side' of town. Indian children cross the road 4 times a day: on the way to and from school, and back and forth from lunch. People coming out of the bar, inebriated, may not look for an overpass or other road crossing. People joy riding along the road in skidoos may not be watching out for heavy traffic. Unless adequate road safety or crossing provisions were provided, and unless people used them regularly it is likely that there would be increased mortality of Indian children and adults due to road accidents. Some, but not all, of this problem can be dealt with through elevated cross walks, underpasses, or a crossing guard. It is questionable if the children and adults would all cross at one location and if they would use the crossings, giving the irregularity of the traffic flow.

Increased road noise and dust disturbance would make the current Indian residential area a less attractive living area. The white residential area has a larger buffer and expansion area away from the road than does the Indian area. Indian houses are

closer to the road and the expansion of the present Indian residential area is limited by the Pelly River. Some of these problems can be dealt to a certain extent with by appropriate mitigative measures, such as dust control and limiting the hours of truck travel through town, but noise carries long distances in the background silence of the Yukon.

SCENARIO 2a:

Many of the road related problems can be dealt with through the construction of a Ross River by-pass and the situating of transportation service facilities -- depots, garages, motels, restaurants, etc. -- outside of the village. This suggestion has been made by a number of parties (cf. Fig. 4.6.4. "Ross River - Bridge Sites and [Alternative] Approaches" in the North Canol Road IEE). Salisbury and La Rusic and explored this possibility as scenario 2a. The social changes are basically the same as those of scenario 2, but some of the traffic related problems can be effectively dealt with through the construction of a village by-pass. The physical possibility of a by-pass route should be examined in detail through a separate study of the feasibility of a by-pass route.

One of the problems envisioned by the authors with this scenario is the companies would have less committment to services in town, being primarily concerned about the road, depots, and dispatching centres. They caution that with slow growth there

would be strain on the social services of Ross River, but there might not be a resolve on the part of government and the companies to deal with the problems. One of the objections to the by-pass suggestion came from the Ross River Development Committee of the Ross River Community Association (Canada, 1982b: Appendix F), who argued, among other things, that all businesses are presently situated along the road through town. We feel that it is part of the governments' responsibilities to plan the road location and provide the kind of services necessary to mitigate the effects of the developments on the village. Proper planning and the development of specific terms and conditions could include subsidizing the move of present road related facilities to relocate along the by-pass.

SCENARIO 3: (Ross River as both transportation centre and mining residential location.)

As discussed above, the current plans call for the North Canol Road to be reconstructed as an all-season road to facilitate the mining development. Transportation is required for supplying the mines during construction and operational phases, for trucking the ore and minerals, and for moving a work force in and out. The road is intended for the first two functions. Arrangements for housing and transporting the mine workers are still being discussed.

Plans for housing and transporting the work force have received considerable attention by both the AMAX Mining Company (cf. Stanley Associates Engineering Ltd. 1982.) and the now disbanded MacMillan Pass Task Force (cf. Reid Crowthers and Partners, 1982a: 46). The investigations and discussions concentrated on the costs and benefits of a new resource community versus long-distance commuting. Stanley Associates (1982) presented 4 options: 1. commuting from a single existing community; 2. commuting from a number of existing communities; 3. the construction of a new regional mining centre; and 4. the construction of several new single company mining towns:

"These four options are not mutually exclusive and overlap can occur.

The building of a new settlement to serve a single mine was prevalent in the Canadian north during the '50's and '60's. However, recent mining developments in isolated northern areas has been leaning toward a commuting option (Options 1 and 2).

The commuting option is best applicable in situations where the mine is located in remote areas which are highly inaccessible from major urban centres, where there are no existing communities within daily [road] commuting distance, and where the mine life is short (less than 20 years).

Since the MacTung deposit has an estimated life beyond 20 years, but is remote and is not close to any existing community, some combination of Options 2 and 3 or Options 2 and 4 may be appropriate. The development of a regional mining centre or individual company towns will depend largely upon

whether other regional mining takes place and when."

Ross River, as the closest community by road, was considered too distant for daily commuting. What was proposed instead of road commuting was the initial use of STOL aircraft for fly in/fly out commuting from one or more established communities in the Yukon or NWT which are within STOL flight range of the mine site. Major population centres, such as Whitehorse, Watson Lake, and Fort Simpson would serve as transfer points for people coming from the south and possibly residential locations for the miners. It was suggested that the smaller communities within STOL range, such as Ross River, Wrigley, Faro, etc., might service as residential locations depending on miner demand, government policy, and the desires of the local population.

Salisbury and La Rusic's third scenario envisions Ross River as a regional mining centre, in effect placing a miner's residential community on top of scenario 2. Their population projections were based on housing the working force for one of the mines (approximately 250 workers) in Ross River. According to our reworking of their 10 year population projections (Table 11.1), the population would grow to 1318 people and Ross River Indians would make up only 21% of the total.

All that we said above in the discussion of scenario 2 about the social and political impacts to the Ross River Indian people are equally true for this arrangement. Except, the erosion of the political abilities of the Band to protect the interests of Indian people would be greatly accentuated. In effect, the Band would have shrunk to the position of a significant minority in its own house. The village would become much like Faro, except for its large Indian minority.

SCENARIO 4:

Finally, in scenario 4 the mines are developed but the road is rerouted away from Ross River to Faro or some other junction with the Robert Campbell Highway. The village's ethnic mix would be similar the present one, about 70% Indian (Table 11.1). The village would retain its rural character, not developing as a transportation or mining centre. There may be some population increase due to mining families who would be willing to commute the extra distance to the mine sites. Some people would be attracted to the greater business opportunities of the mining centres, resulting in an initial decrease in the white population. But there may be some increased business opportunities within Ross River in providing specific services to the mines. Costs would be higher, but the village would, for some, be a more attractive place to live.

Given the advanced state of planning of the North Canol Road reconstruction and the conclusions of Stanley Associates Engineering (1982) about the effective use of a STOL fly in/fly out option, if the developments proceed, it would appear that scenario 2 is the most likely case, with some limited housing of mine worker families who prefer a rural Yukon environment commuting weekly to the mine sites.

Now we need to focus on another set of potential impacts, those on the land and animal resources and the way that Ross River people use the resources.

2. IMPACTS TO LAND, RESOURCES, AND THE INDIAN SYSTEM OF USE

Flexibility and mobility are the key words that come to mind when describing the Indian system of land use and the operation of the bush economy. People were quick to adapt, quick to take advantage of new opportunities, and ready to shift to more productive lands within their harvesting areas. In an environment of changing animal populations, where mobility was the key to economic success, planning for the long-term future was inadvisable. Confidence in being able to gain your livelihood was tied to intimate knowledge of the land and diverse animal resource species.

As a consequence of this adaptability and flexibility, when Euro-Canadians have historically come to areas in the North, one of the basic Indian reactions to their arrival has been to take whatever advantages or opportunities were possible. If intrusions were longer-term and in conflict with the Indian economic system, the next step was to move away, to avoid them. Since the Indian economic system is so flexible and adaptable, one could always consider the possibility of shifting one's hunting territory a little; of not using particular camps or fishing spots; of moving back into the woods; or a little further up a river valley and so keep out of the way of newcomers and developers. This describes, in part, the Ross River Indian response to the Anvil development.

Another response was to try out the employment opportunities. The early phases of industrial development offer a lot of short-term jobs, which end as the projects go into operation. The projects are initially attractive since they fit into Indian people's employment aspirations. But once the developments are operational the nature of employment changes. Jobs are longer term, no longer out of doors, shift work and long-term absences are often required. The projects attract their own work force and outsider populations, who compete with locals for short-term jobs and business contracts. To a certain extent this also describes the experience of the Ross River people with the Anvil

development and can equally be expected to apply to the new mining projects.

A consequence of being highly flexible and accommodating, of making ad hoc planning decisions, of withdrawing instead of fighting, means that the interests and concerns of the Ross River Indian people have never been adequately accounted for in regional development plans. There have not been challenges to the enthusiasm and plans of government and industry for the lands and resources upon which the Ross River Indian people rely; instead there has been some short-term capture of new opportunities by a few, and the silent accommodating withdrawal by the majority. It is most ironic that the richness and strength of the Indian system of land and resource use could contribute to the ease whereby lands and resources could be exploited and peoples acculturated to the culture and economy of Euro-Canadian society.

It is within this context that the nature of specific impacts to land, animal resources, and the Indian system of use from proposed regional development must be conducted.

In looking at specific potential biophysical and socio-economic impacts there are a number of problems. In the first place there is a planning vacuum. Again, the proposals of

both industry and government are not firm, and even if they were, a consultative process does not presently exist through which the Ross River Indian Band can make informed response to effect project design, location and timing. Information about the Ross River Indian people and their economy is now available, and will assist the examination of some specific potential impacts. Information about the region's habitat and wildlife resources, however, remains sketchy. This report makes no attempts to assess environmental impacts. Nevertheless, because the well-being of the Ross River Indian people is so closely tied to the land and wildlife resources some areas of probable biophysical impact must be discussed.

The most probable forecast predicts gradual development. The Tom, Jason and Howards Pass mineral properties will not be in production until the mid-1990's, although exploration and property development will continue. As a result of this delay, the NCPC hydroelectric proposals for Hoole and Ross Canyon would also be postponed. Projects that are anticipated by 1990 which would cause environmental impacts include:

Canol Road Reconstruction

AMAX (MacTung) Mine

Yukon Barite Ltd.

Ross River Coal

Under this scenario approximately 375 construction workers will be required, while permanent employment for operation of the mines will be in the vicinity of 340 persons.

In addition to direct impacts from these projects additional problems can be expected from:

- a.) The transformation of Ross River, as discussed above. The most likely village changes, given the 'most probable' development forecasts are:
 - 1. Ross River as a haul/transportation centre with an increased white population approximating 500 - 700 persons, or
 - 2. Ross River as a regional centre with a large white population approximating 1000 - 1500 persons.
- b.) The continuation of mineral explorations
- c.) The possible development of a Yukon Territorial Park in the Francis Lake area and other areas, such as the upper North Canol (Keele Peak)
- d.) Organized promotion of the region for tourism and sports hunting and fishing, or alternately,

- e.) A simple, direct increase in tourism and sports hunting and fishing due to:
1. the increase in regional resident population.
 2. better access to the region due to North Canol road reconstruction and year-round maintenance.

Effects to Land and Wildlife Species

Each of the three mining projects, Ross River Coal, Yukon Barite Ltd., and the Amax MacTung project, will effect the region's productivity. There will be a degradation of the Ross River land's biological productivity resulting from the destruction and modification of habitat by the clearing of mine sites and tailing pond areas, effluent flows into creeks and groundwater, and townsite and road developments. Since the specific project plans are not in an advanced enough stage to look at the details of impacts to land and animals we are forced to limit ourselves to discussing the more obvious types of direct impacts that are likely. The extent of impacts resulting from the 'most probable' development scenario may be low, but over time, and with the full implementation of the 'optimistic forecast', the cumulative impact may be very high indeed. There are many unknowns here; not just knowledge of critical habitats, but also the response of animal populations to large scale environmental change and disturbance over long periods of time.

The animals upon which the harvesting sector of the Ross River Indian economy depend require an unknown degree of integrity of the biological productivity of the region's ecosystem, and so the cumulative effects of human developments must be carefully monitored and regulated.

Direct impacts of the developments may be local, but for the Indian hunters and trappers they will be felt in two ways:

- 1.) through the removal of specific, but limited harvesting areas by the mine site, tailings ponds, borrow pits, etc., and, more significantly;
- 2.) through the decrease in the over-all carrying capacity of the hunting/trapping lands for different animal resource species. Given the present sketchy state of knowledge of critical habitat for the animal resource species and the absence of specific plans for development it is not possible to predict or evaluate the extent of these types of changes at the present time.

However, preliminary information indicates that the Amax MacTung mine and its associated infrastructure will be situated near calving grounds and summer pasturages of the Redstone Caribou herd. This herd is the main source of summer/fall caribou for the Ross River Indian people. Direct environmental

impacts from the operation and disturbance effects of the Amax MacTung mine will probably be local, although it is likely that some caribou range desertion and habitat alteration will occur. If part of the present summer range are abandoned, the overall regional carrying capacity for this herd will undergo a small decrease.

The local environmental impact of the MacTung mine on caribou and other wildlife could increase if tote roads proliferate. A glance at the tote road pattern around Cyprus Anvil and Faro provides evidence of the types of habitat impacts that could conceivably be duplicated in the MacMillan Pass.

The eventual development of six commercially important mineral deposits in the MacMillan Pass with their associated transportation and energy infrastructure under the 'most optimistic' scenario, will accentuate all of these problems causing direct impacts upon the region's carrying capacity for caribou, moose, sheep and other wildlife species to be much greater.

With highway reconstruction, streams and frozen soils are a primary concern in terms of significant habitat change. Frozen soils along the North Canal combined with potential high

truck traffic volumes would lead to problems requiring substantial highway maintenance. Streams could experience siltation downstream of culverts by highway upgrading, effecting downstream salmon spawning gravels. Constant monitoring will be required to mitigate these kinds of impacts. Continuance of mining exploration and the construction of mining tote roads further add to these kinds of problems. The lack of a mechanism to assess the cumulative effects of industrial development in the North makes the potential for successful mitigation very low. Generally, there will be deterioration of the carrying capacity of the lands at the headwaters of the Ross and MacMillan Rivers for various species, the extent of which cannot be predicted.

If there is a deterioration of summer/fall caribou hunting opportunities in the MacPass area, Ross River Indians will have two options to continue harvesting their meat needs: to concentrate on the Finlayson herd for their fall harvests; or to seek access to other areas in the Mackenzie Mountains. In effect this follows the traditional wisdom of moving off to other areas once again. At present the Band's caribou harvest are dispersed between the least 2 caribou herds: the Redstone herd and the Finlayson herd. If development in MacPass area pushes Redstone herd animals to inaccessible areas, the likelihood is that hunting pressure on the Finlayson herd will become greatly

increased. This is not good management. The alternative, which is suggested in the Recommendations chapter is for a system of access to be provided for Ross River Indian hunters to other areas of the Yukon Mackenzie Mountain borderlands if caribou hunting opportunities near MacMillan Pass are significantly effected by the resource developments.

Effects on the Ross River Indian Bush Economy and System of Use

As the Atlas indicates, the siting of the Amax Mine site in the MacMillan Pass region is located within the Ross River Indian Band's recent land use area. Numerous summer/fall hunting base camps are situated near the Yukon/NWT border stretching as far as Camp 222. As well, several families camp along the Amax road and just past the 208 airport. These summer/fall dry-meat camps have been used over the years as the basis from which to make extended hunting trips into the pasturages of the mountain ranges of the MacMillan Pass region. This is an important caribou and moose hunting area for the Band.

The development of the Yukon Barite and Ross River Coal projects are relatively small in scale, but they will bring about additional changes for the Ross River lands and the Indian people. 'Barite Mountain' is a very popular hunting and camping area. They are areas that have significant contemporary trapping/hunting.

The reconstruction of the North Canal Road will also effect Ross River Indian land and resource use. Animals which are depended on for food and furs will be impacted by disturbances such as loud noises from blasting and strange smells from diesel equipment, at least initially, until they adjust to the disturbances. The disturbances will undoubtedly cause animal movements which are strange and unpredictable for hunter/trappers. These disturbances may cause animals to move to more inaccessible locations. Trapping and hunting are based on knowledge of animal behaviour and the predicability of that behaviour. All of these changes will effect the costs and returns to trapper/hunters for their efforts.

There will also be more local problems for hunters and trappers who use the road. Construction along the road will disturb signs and tracks which are vital information sources from which a hunter/trapper assesses the presence of animals and calculates a hunting/trapping strategy.

Should construction workers from these projects be allowed extensive recreational or hunting use of the region not only will their activities effect signs, tracks, and animal movements, but hunting pressure on big game will be in direct competition with the Ross River Indian people. In the past road construction crews have also damaged trapping cabins, destroyed and removed

traps and snares, and poached fur and big game animals.

The North Canol Road IEE (Canada, 1982b) attests that reconstruction would probably have limited impact on most wildlife species.

"Many of the deleterious impacts ... will be minimized by utilizing large sections of existing road alignment. Therefore, the greatest impact will probably occur in sections of road realignment. Areas of greatest impact include borrow pits, stream crossings, construction camps and other areas of vegetation and terrain disturbance." (Canada, 1982b)

In our evaluations we are not just considering road reconstruction, but the use the road will be put to. If all mines were developed about 100 thirty to forty ton trucks will utilize the road each day, or about one every seven or eight minutes of a twelve hour day, with resupply and commuting traffic increasing that flow. The increase in road traffic will have some effect on game animals. The zone of disturbance from noise and dust on foliage may be significant, at least initially (that is, until animals adjust and feel that the vehicles are not predators), and is liable to have initial negative effects on the use of valley feeding areas and habitats important to wildlife. In reality traffic does act as predators for wildlife through road kills.

Of greatest importance, an upgraded North Canol road will allow all-season access for outsiders and this would lead to increased pressures on land and wildlife species. Demands will undoubtedly be made for the development of public camping areas along the road. The increased accessibility for fishing, hunting and other recreational uses will put increased pressure on the same game and fish populations that are the basis for the Ross River Indian bush economy.

Other problems could result from increased off-highway vehicle use which could seriously scar the land and precipitate overhunting and disturbance of animals. Theoretically, such events are controllable, but in practice this may prove difficult due to the remoteness of the region and the tendency of people to resist barriers to free access.

The year-round operation of the North Canol road will improve access to the region not only for industrial and recreational use but as well for Indian use. During the period in which the industrial truck traffic remains minimal it is conceivable that winter usage of the North Canol area by the Ross river Indian people will increase. However, with the predicted "orders of magnitude" increases in truck volume and industrial activity, disturbance effects coupled with the increased danger to passenger vehicle traffic will likely reduce Indian usage of the area.

Such statements as the following express a common sentiment of the Ross River Indian people towards the road reconstruction:

"The sukanis (whitemen) they better make another road, we hunt up the North Canol all the time, and those mining trucks will chase our moose"

In addition to the development of the North Canol-MacPass region the possible construction of NCPC hydroelectric dams at Hoole and Ross Canyon would not only severely impact the winter range of the Finlayson caribou herd, fish and furbearer habitat, but as well, the heartland of winter operations for many Ross River Indian hunter/trappers. In addition to all of these projects, possible YTG campgrounds and parks, especially the proposed YTG park near Francis Lake would have an adverse impact on Indian land usage of the area, if the plans do not take into account the Band's interest in these lands and their animal resources.

For these reasons, that are both complex and numerous the probability is very high that the Ross River Indian people may lose effective control of significant portions of the North Canol and MacMillan Pass and other areas of their hunting/trapping territory, again, unless the Band's interest in these lands are taken into account.

Lessons from the construction of the Cyprus Anvil mine and the townsite of Faro give insights into a likely response of the Ross River Indian people and their economic decision making to developments in the North Canol-MacPass region. At one time several hunting/trapping groups used the Anvil-Faro-Blind Creek area. With the construction and operation of the mine and the townsite a large wilderness area was disturbed. These disturbances, some of which effected animal populations directly, and some of which effected the patterns of the Indian system of land use, contributed to a withdrawal of Indian use from that area and a shift to the increased use of resources along the North Canol and MacMillan Pass area. Loss was not only from decreased animal populations and increased sports hunter and outfitter competition, but due to a perception of disturbance and the decreased efficiency of hunting animals that had retreated to more remote regions. Aside from the Faro fire which destroyed climax forests required by certain furbearers, withdrawal of hunting-camping use of the region came about by the disturbance effects which the presence of more Euro-Canadians had on the area. Camp spots and hunting locales which a family could once use without unpredictable interferences from whites no longer remained attractive, and as a result were either abandoned or used infrequently. In effect, these groups shifted to a new impact zone.

The potential losses of Indian usage of the North Canol-MacPass hunting/trapping territories may occur for similar reasons unless suitable mitigation measures are devised. With the gradual implementation of the 'Most Optimistic' development scenario, cumulative negative impacts will likely increase losses for the bush-sector of the Ross River Indian economy.

The extent and rate of the loss will also be effected by increases in tourism and sport hunter development. These later impacts will be directly attributable to an increase in the regional resident white population and better access of outsiders --both local and non-local-- to the region due to year round operation of the North Canol road. In addition to these simple increases, it is conceivable that the Yukon Territorial Government may actively promote the development of the newly opened areas for tourism and sports hunting and fishing.

The Ross River Indians have much to say about sports hunters. There is a strong dislike for them intruding unguided onto the Group trapline area, and whenever possible they are avoided. The Ross River Indian people are glad that few sports hunters go far into the woods but at the same time they are disturbed by their unwillingness to track and locate animals which they have wounded. The senior author has heard several reports from Indians about whites who practice target-shooting,

wounding moose and other animals. Reports such as the following were not uncommon:

"I and *** see Faro people shoot moose for target practice, right by the creek in winter, leave it there by Finlayson Lake, 2 or 3 years ago."

"One moose between Little Salmon and Faro, right by the lake, they left them there, just used them for target practice."

Such abuse disgusts and alarms people. In the view of the Ross River Indians it represents a lack of respect for animals, a respect that is required both by Indian culture and values and as well requirements for food.

The presence of white sport hunters in Ross River hunting/trapping territory also has general disturbing effects which impacts Indian use. The following quote (Brody 1981) is an accurate description of the senior author's experience of many Ross River Indian hunter's reaction to sports hunters:

"The sight of a white man, rifle in hand, trudging noisily and conspicuously along a trail, with very little of the understanding that Indians regard as integral to any hunting activity, is a cause of anger and despair. If there is one white hunter, there are no doubt others like him within a few miles. They ruin the hunting. Even when they notice only vehicle tracks or footprints in an area they have chosen, Indians abandon the hunt. It is as if an area has somehow become polluted; or more simply, is felt to be unsafe. Although some Whites are cautious, competent, and skillful in the bush, too many sports

hunters are so anxious to make a kill, say the Indians, and so unskilled in the bush, that they might shoot a person... If white hunters are around, most Indians go somewhere else - or go home. In so doing, they leave the forest and the animals to an intruder who, from their point of view, has no clear right to hunt freely on Indian lands' (Brody, 1981, p. 223-234)."

The Ross River Indian people disturbed by these intrusions and angered by the way in which many sports hunters behave, are also concerned about the numbers of resident and non-resident hunters that presently come to the region and the numbers of big-game species they manage to kill. Due to the lack of an accurate overlap between game management units and outfitter zones with the Ross River Indian hunting area it is not possible to accurately estimate sports hunter harvests on the Ross River lands. Simply because we are unable to supply a reliable estimate does not mean that there is no concern or that sports hunter harvests are not significant.

The Ross River Indian concern about the growing presence of white hunters and their harvest of animals which the Ross River Indian people rely upon is a culmination of over 30 years of 'frontier' development. The effect of a succession of 'development waves' commencing with the Canol pipeline and then the Cyprus Anvil regional developments, has been a succession of Indian withdrawals from traditional hunting/trapping lands.

The experience with sports hunters is yet another threat. The question that must be asked now is where will the Ross River Indian people shift their hunting focus to once the development of the MacPass and North Canal region, and possibly the hydroelectric projects and territorial park developments, are a reality?

3. POSSIBLE SOCIAL PROBLEMS

The Ross River Indian people have experienced impacts from a range of 'change events' that include schools, relocation of the village, as well as regional modernization. Many social scientists would agree that it is difficult to substantiate with certainty a strict casual relationship between regional modernization and social impacts. There are too many factors of varying magnitude and duration, and even some that are unknown or uncertain, that make the business of forming 'hard' predictions of social impact upon demography difficult.

Nonetheless, by regarding some of the changes which the Ross River Indian people experienced during the time period subsequent to Anvil-related developments, and by referring to perceptions by Indian people of how proposed developments may affect their lives, some insights can be gained about potential problems that might be mitigated.

The building of the Cyprus Anvil Mine and associated infrastructures accompanied by the arrival of "outsiders" had profound effects on the Ross River Indian people and Indian-white relationships. These effects, some of which were positive, were presented (Chapter 4) because they provide general insights of patterns that might be repeated during succeeding development waves that are planned for the Ross River region. Some families in Ross River described positive exchanges that occurred between their families and construction workers. Some Indians worked as guides and on slashing crews, others worked temporarily on construction jobs. With modernization, electricity, transportation, communication, and better access to health care and schools were brought to the Ross River people. During the construction phases more cash was available to purchase producer and consumer goods. These positive exchanges however, were also accompanied by events that had a more adverse impact on the Ross River Indian people.

The arrival of hundreds of white outsiders to the Ross River community led to the establishment of business services commonly available in larger town. Liquor was soon regularly available. To this day many Ross River Indian people are of the opinion:

"we're still suffering with Anvil mine - alcoholism.

Before we just used to enjoy life, hunting, trapping. With Anvil come short-term jobs and money. After the construction was finished it left people confused."

In the minds of many Indian people the connection between alcohol abuse and death, suicide, violence, and family breakups is incontestable.

"Drunk and driving, some run off the roads, have car accidents. Quite a few people died every year since the bar was opened. Lost quite a few frozen, in fires, in car accidents. Some choke on their drink, suffocate. People who get picked up for impaired driving can't afford to pay the fine, so they throw them in jail. Lots of families break-up because of booze, so it affect the children too."

The senior author's conclusion after two years of contact with the Ross River Indian band is that alcohol is a severe problem. Death statistics for the Ross River Indian band are consistingly much higher than averages for the Yukon Territory as a whole. During the period 1972 - 1976 the Ross River Indian Band death rate was 2.6 times the Yukon Territory average, while in the most recent period of 1977 - 1981, the Band's death rate remains twice that of the average for the Yukon. Interviews with Band members reveal that deaths, violence and accidents linked with alcohol affect every Indian family.

The Ross River Indian Band Council has tried in many ways to curtail alcohol abuse. People have been sent away to treatment centres such as Poundmakers Lodge in Alberta. A trained alcohol counsellor has been hired by the Band. Through Liquor Board hearings the Council has also tried to cut the hours of the local bar. Even with a majority of 70% of Ross River's population the Band Council has been unsuccessful in bringing about social changes regarding liquor. The Ross River Indian people fear that:

"if there were a thousand people in Ross River Indian people would drink more. If they got big checks, they'll go drinking, pass out and the money will be taken from their pockets. Everytime a kid gets a job they just go after the booze and soon they lose their jobs."

Unless a determined effort is made to understand contributing causes of alcohol abuse in Ross River, and an effort made to locally implement a range of preventative measures, including possibly regulation of alcohol sales, it can be expected that problems associated with alcohol may continue and possibly exacerbate. The role of regional modernization in attracting more 'whites' to the region that may demand liquor outlets could be one factor in the situation deteriorating even further. The presence of large quantities of cash gained by single Indian men during their temporary employment during construction phases is also problematical.

"One of the first things that people do when they drink and have money is they buy more booze. If they get big checks they'll go drinking."

The influx of more white people from proposed developments is expected to increase the population of whites in Ross River to between 700 and 1500 persons. They, as during the Anvil period, may bring urban ideas, values and behaviours. Outnumbering the Ross River Indian people they will have the political and economic power to demand changes to Ross River community, and to bring about social and economic services that will accord with their aspirations. Many, not unlike the influx of outsiders that accompanied the Anvil Mine developments, may bring stereotypic images of Indian people, prejudice and racism. This eventuality may negatively affect the ability of the Ross River Indian people to control events and circumstances regarding the development of Ross River itself. Reduced to a minority of the population, inter-ethnic friction, already presently high, is likely to increase. Fights, racial discrimination and prejudice may not be the only consequences of an increased white population in Ross River. If the experience with Anvil construction workers is regarded as representative, Ross River Indian women may expect to be recipients of abuse and violence. Interviews with the Ross River women about the Anvil period indicate that it was not uncommon for Anvil/Faro residents to take young Indian girls partying, buy them alcohol,

abuse them sexually and then dump them out on the highway, sometimes in mid-winter. These types of eventualities of increased violence towards Indian women, not only from white males, but also from angry Indian men afflicted by alcohol, are predictable impacts with a significant probability of occurrence.

Table 4.2 of Chapter #4 is a Perception of Change matrix. It is a statement by the Ross River Indian people about 'perceived changes' that have occurred when they compare conditions during the baseline time period 'before Anvil' to perceived conditions during the time period of the 'Anvil/Faro operation'. The matrix does not casually correlate the changes directly or entirely to 'Anvil/Faro and related developments, but in the opinion of the Ross River Indian people, there exists a high perceptual correlation between the modernization of the region and many of the perceived changes. While the developments brought some positive changes and successful adaptations, in the view of the Ross River Indian people the 'modernization' was, and remains a largely negative experience, that was too much, too soon, too fast.

4. THE RELATIONSHIPS BETWEEN DIFFERENT ECONOMIC SECTORS

The role of wage employment in providing capital to the harvesting sector

One of the advantages of industrial wage employment is said to be that it is the means of generating the cash now necessary for the operations of the traditional sector. This is an argument often used to offset the biophysical impacts and increased competition produced by industrial development. Logically we can break this argument into three parts: first, is income from industrial wage employment actually used to finance harvesting activities; second, are there alternative means of financing these activities which better suit the needs and aspiration of harvesters; and third, would the outcome of a continuing strategy of substituting capital for labour in the harvesting sector, especially in the context of industrialization, be viable or beneficial?

The answer to the first question is a qualified yes. People at Ross River do clearly devote a significant part of their wage earnings to capitalizing their harvesting activities. This may well be due to the fact that at present, employment income is earned in Ross River itself, and would appear to be considered a household as much as an individual resource. There is evidence from other parts of the North that when

industrial employment goes chiefly to young, unattached males, and is located away from the home community, this is not the case. Rather, income is seen as a purely personal resource which may be spent outside the community for personal consumption. So long as increased employment in Ross River were more of the same type of employment as at present, probably more money would flow to the harvesting sector. Otherwise it will by no means necessarily have this beneficial effect.

If the primary objective is to finance the harvesting sector, then wage employment is merely one option, whose merits must be assessed in comparison to others, such as the following.

1. Direct payments to individuals or households. One example is the Income Support Programme which the James Bay Cree obtained as a part of their claims settlement. Periodic lump sum payments are issued to households on the basis of length of time in the bush, family size, and certain other factors (see, for example, La Rusic 1978). Another example is government transfer payments, especially lump sums such as the child tax credit (see above) or even unemployment insurance benefits.
2. Production subsidies or price supports. In the NWT, for example, the Wildlife Service operates several programmes which, on a small scale, serve to raise producers' incomes based on their output. Such programmes could be applied

and expanded.

3. Rents. The settlement of native claims could mean that native people are entitled to income as a consequence of resource development. This income might take the form of compensation payments for collective damages incurred or anticipated, or royalties based on beneficial use. The transfer would occur at a collective level, between the state or the resource corporations on the one hand, and native communities or corporations on the other (this would not, however, be in place of payments to individuals based on damages or expropriation). A native corporation might choose to support harvesting activities in a way which the conventional financial system would not.
4. Taxation. The North Slope Borough in Alaska is able to tax the surface facilities of oil company operations on the North Slope because the Borough includes the entire region. It is like a regional municipality in Canada, on a large scale. Through this very substantial source of revenue, the Borough is able to finance municipal works, construction, and a variety of activities which provide, among other things, a very important source of local employment to native people (see, for example, Morehouse and Leask 1980). Such taxation revenues could also be used in support of harvesting activities.

We are not suggesting that any of these alternatives might not themselves entail certain disadvantages, perhaps even some of the very same ones that industrial employment does. Although a thorough evaluation of these alternatives is beyond the scope of this report, it would be improper to ignore them in the context of social impact assessment.

One advantage does stand out, however, which is that none of these alternatives require the individual harvester to trade off his time to finance his activities. That trade-off is intrinsically necessary with wage employment, even rotational wage employment.

Still unanswered is the question of whether heavy cash injections are truly necessary to the long term survival of the traditional sector, or whether they merely provide a surface appearance of health and prosperity, while simultaneously entraining tendencies which would undermine its long term viability. Here we will simply review some trends that have emerged in comparable situations, chiefly small-scale agriculture and fisheries, and explore the extent to which we might expect similar developments in the North.

The benefits of wage employment will obviously be the greatest when employment earnings are high per unit of time

expended, relative to the returns from alternative pursuits, and relative to the input costs of commodity production. In the context of the Ross River Indian economy, employment will be seen as a beneficial means of obtaining investment capital only so long as a) wage rates are high, b) capital costs are low, and c) alternative cash producing strategies are less attractive. Unless there are compelling reasons to suppose that these conditions will apply continuously for a very long time, the sensible strategy is not to commit one's self too deeply to wage employment.

The problem of time allocation, whether on an individual or a household basis, between wage labour and commodity production, can be a matter of delicate balance. One must be able to spend not only enough time, but the right time, at the latter. Otherwise one risks falling behind, becoming less productive, and making less efficient use of one's capital investments. This last problem becomes more acute the greater and more specialized these investments are. Moving in and out of wage labour, assuming that it is available, is relatively easy. Moving in and out of harvesting is not easy - - the season must be right, the equipment must be on hand, prepared and maintained, and so on. Consequently wage labour can all too easily become a means of facilitating exit from rather than entry into harvesting activity. As a consequence

of an unfavourable year, in which due to low commodity production or prices, disability, seasonal unemployment, or other misfortune; the individual may be forced to devote more time, or the wrong time, to wage labour, the balance may be tipped, and the ability to hunt, fish and trap decreased.

Among the Inuit of the western Arctic, the experience of Dewline construction was that whether employment was initially taken on as a novelty or as a necessity (and it came at a time of extraordinarily low fur prices), more people gradually lost their productive capacity than accumulated the savings which allowed them to gain it (see for example, Abrahamson 1963: 56) 67). This was a time when entry cost were much less than at present. While present circumstances make the option of wage employment, including rotational employment, economically attractive, the overall shift towards the industrialization of the North, could alter the situation.

The problem of balance between wage employment and commodity production is rooted not only in the relative returns from alternative activities, but also in the costs of engaging in them. There has been a rapid increase in the capitalization of harvesting activities. Whereas a typical outfit twenty years ago might have been worth hundreds of dollars, today it is worth thousands. This has resulted from

a number of factors, only one of which is the greatly increased availability of cash derived chiefly from wage employment. People can indeed afford more and "better" equipment, and such equipment has also helped to solve one of the chief problems created by the urbanization of recent decades, namely that of mobility. The level of capitalization is now much greater than would have been possible without increased wage employment opportunities. At the same time, it is a response to wage employment in the sense that increased mobility means less time required for harvesting and more time available for wage employment.

Yet this capitalization entails certain risks. The most recent round of capitalization in Ross River, consisting mostly of snowmobiles and pick-up trucks, has in some cases been financed by household finance companies rather than from current earnings. So far people have not defaulted on these loans, or at least have not had their productive equipment repossessed. But a new round of capitalization, or even a period of declining wage rates and commodity prices coupled with cost increases, however, could tip the balance for some people. Even where there is the ability to repay over the long run, there may be cash flow problems which create difficulties in making regular payments.

Financial institutions are likely to look on outfitting costs as a consumer rather than a business proposition in any event. Consequently, credit worthiness will be based on wage-earning ability rather than on harvesting capability. This could mean that in periods of high unemployment, when people most need the option to hunt and trap, they will have the greatest difficulty obtaining the necessary capital.

Growing indebtedness entails the possibility of the loss of ownership of productive factors, and hence exclusion from production. Although this process has hardly begun in the North, it is one familiar to small farmers and fishermen further south.

Increasing capitalization may lead to more effective but less efficient harvesting of resources. Capital is after all a substitute for labour and skill. There may therefore be a decline of personal hunting skills -- the detailed knowledge of animal behaviour and of hunting and travelling techniques. What also tends to decline, with the use of high-speed, noisy equipment, is the opportunity to observe and watch for the signs of many other features of the environment, not least those of species other than that being sought at the moment.

So far, at Ross River, capital equipment has not greatly reduced flexibility. Snowmobiles, rifles and outboards can be used in a variety of harvesting applications, so that capitalization has not yet led to specialization to anywhere near the same degree as in agriculture and fisheries. Even so, there may already be grounds for testing the hypothesis that as capital inputs rise, the variety of species harvested declines, both on any given trip and in general. There may already be a greater concentration of effort on big game, especially caribou, and on fish close to Ross River, and a decline in the harvest of small game or scattered species, even though they may be quite abundant. A new round of capitalization, including the increased use of airplanes for spotting and transport, might accelerate this trend towards specialization.

Taken together, overspecialization of equipment, the decline of skills, and limited or restricted harvesting time, will probably lead to a significant decline in diversity and flexibility of action -- traditionally the hallmarks of the northern hunter. It might also lead to overdependence on a steady and predictable supply of one or a few resources, which is unfortunately an exceptional rather than common characteristic of northern species and populations. This increasing dependence on a few species will also be the result

of a growing integration of wage employment and harvesting. Even if blocks of time were available for hunting on a rotational basis, there would still be less flexibility. Within these set time blocks, and especially if capital inputs are greater, it will be both easier and more economical to go after populations which are more highly concentrated at predictable locations. The price of failure or even decline in the harvest of one or a few species is catastrophic to the harvester who has invested a lot of capital in (or who has little time for) their pursuit. The hunter who is not so committed, merely goes after something else.

Labour intensive foraging tends to harvest biomass on a broad and opportunistic basis. Capital intensive foraging tends to skim off biomass where it is concentrated spatially and temporally. Consequently we might consider a further hypothesis, which is that a continuing rise in capital inputs can lead to improved harvest levels only up to a certain point, after which there will occur both a declining marginal success rate per dollar invested, and eventually an absolute decline in harvesting success.

The cumulative effects of all of these processes, along with increased sport hunting competition and more restrictive wildlife and land management practices, described elsewhere

in this report, could well be to drive out the small producer. The industrialization of the North could thus lead, through many complex direct and indirect processes, to the elimination of fur, fish and game harvesting as a practical alternative to wage employment for most native northerners.

The relationship between wage employment and transfer payments

There is a prevailing view that the economy of communities like Ross River is sick, because there is an inordinately high level of social welfare expenditures and relatively low productivity. Major projects are therefore seen as the means of remedying this situation, and in particular of reducing reliance on public expenditures. Yet there is no clear evidence that this is actually what happens.

In many native communities for which there are data, social welfare expenditures seem to rise along with wage employment, rather than decline inversely with it. Recent examinations of these trends in several Beaufort Sea communities (Dome Petroleum et al 1983, Usher 1982b) show that social assistance payments, and especially payments for economic reasons (as opposed to those for reasons of health or dependent children), have risen most sharply in precisely those communities where wage employment is the most readily available. This is

especially remarkable in view of the fact that a variety of other transfer payments such as unemployment insurance and child tax credits are now also available in the region, whereas ten or twenty years ago, they were not. The explanation for this in our view lies in the growing industrialization, (in its broadest sense) of the North. This has resulted, as noted earlier, in the increasing individualization of personal and household income, the decline in social solidarity at the community level, and the rising perception of external and arbitrary standards of living as significant yardsticks of local well-being. If similar industrialization were to occur at Ross River, we believe that the entire spectrum of social welfare expenditures would steadily rise, for the following reasons.

First, there will be increasing expenditures on problems like drug and alcohol abuse, child neglect and abuse, wife beating, family breakups, violence and crimes against both persons and property, and so on. And as households become more isolated economic units, those which fail (and there may be an increasing proportion of them) will have no alternative but to rely on state support. Some may argue that these are but the temporary costs of change, and that once people have adjusted, the incidence and the cost of dealing with social pathology will decline. A longitudinal analysis of social

indicators in northern native communities over a 20 or 30 year period (although unfortunately virtually none have been done) however, might well indicate that "temporary" in this context means decades if not lifetimes.

Secondly, quite apart from those people who, for reasons commonly ascribed to personal and psychological maladjustment, become the casualties of social change, there will be the costs of coping with the inevitable periodic downturns in the economy. As people become less and less able to turn to harvesting activities, and what remains of traditional social structure and ideology, in these downturns, the greater will be the costs of social assistance, unemployment benefits, retraining, and the like.

Finally, as the local economy becomes more formalized and industrialized, we can expect an expansion of public expenditures whether times are good or bad. The destruction of community solidarity, and the rising restrictions on traditional land use, must necessarily lead to new local perceptions of economic rights, obligations and well-being, more in conformity with national industrial standards. Consequently there will be a need for the state and the major corporate employers in the region to ensure the maintenance of these standards, whether they involve unemployment insurance, day care, physical and

mental health care, old age homes, or municipal services. The rise in programme and administrative costs seems inevitable under these circumstances. We may also look forward to the subsidization, direct and indirect, of the corporate entities that will be responsible for major projects.

CONCLUSION

Certainly there are hopes that the impending proposals for regional development will not have the types of actual and perceived negative impacts as the Anvil experience. The patterns and contexts for a repetition of many mistakes, however, seem highly likely. Many of the intentions and actions of government and corporations are largely identical to those at the time of the Anvil development. The Ross River Indian Band and its members are severely limited in the input and control they have over impending regional developments. Unless corporate and government institutions abandon their persistent efforts to encourage Indian peoples to wholly adopt the success models of another society, the probability is that the Ross River Indian Band will experience a wide variety of severe socio-economic impacts. When speaking with Band members in their homes it was not uncommon to hear such statements (about the proposed regional developments) as the following:

"That's the problem with big development, especially the road, where you're going to open a whole area to other types of development. Something has to be worked out in terms of control. We have to reach some sort of agreement with government regarding the way development will occur. I think we're still suffering with Anvil mine. Before we just used to enjoy life. With Anvil came short-time jobs and money and after it was finished it just left people confused.

The Anvil agreement of 25% Indian employment is really general. I don't think they looked at that very seriously. In past years when Anvil was running, very few Indian people worked there. I hate to see that happen again, with no details of how that going to down. Getting a certain percentage from government and the mines for the Band, for community upgrading, trapping programs. People enjoy that kind of life hunting/trapping. It would be better than just pushing them into wage work, where they can't cope with it. With any type of development we have to look at its long-term effect on us."

Stated bluntly, the examples of the development experience in the Canadian North are widespread and the lessons should be clear. The hypothesis that large scale developments requiring the inputs of vast amount of capital, energy, sophisticated technology, and public subsidy to bring higher per capita incomes, less transfer payments, and an improvement in the quality of life has not proven itself. Even if evidence from other areas of the North is discounted, the Ross River Indian experience with Anvil development brings ample warnings about the problems of such a development path for the Indian people. Again, according to Sharp (1977:87-88):

"...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 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."

In the case of Ross River it is certainly conceivable that a minority of Indian Band members will benefit from increased regional modernization. There will indeed be some that will successfully adapted to industrial-tied wage employment; some as entrepreneurs who will make money; and even some instances where Band and other Yukon Indian corporations will be successful in securing business contracts and equity participation. These eventualities may be fortunate, and they certainly will be novel. Nonetheless, if the majority of Band members are to benefit and not lose from regional developments, the Ross River Indian Band Council must be prepared to not only negotiate in a formal, legal sense a "Terms and Conditions of Development" agreement, but they must also explore the possibility of another development path. As the next chapter discusses there is a need to develop a Band parallel economy, based on harvesting and local employment, much of which should be seasonal or part-time. While some local Band business development will inevitably be tied to large-scale industrial developments, revenues earned from such linkages should be invested in

projects that can sustain themselves without the need of mega-developments. Such parallel development and locally based investment strategies will not only provide jobs and training, but will also protect Indian families from economic downturns, inflation-recession, and "boom-bust" business cycles which now appear to be a part of the industrial economy.

CHAPTER 12
RECOMMENDATIONS

Introduction

In this chapter we answer in a general manner the question of what the Ross River Indian Band needs to survive, develop, and prosper. Our task as researchers has been to provide information and choices for decision-making. The primary responsibility for actions respecting the Ross River Indian Band are those of the Chief and Band Council. The recommendations which follow, though desirable, may not be achievable via negotiations. (There may be other routes to these ends). Nonetheless the recommendations are presented as a set of goals and principles for negotiations.

The recommendations are based on several assumptions. The first is that a Yukon Indian Land Claims settlement will be a substantial means whereby Yukon Indian people take greater control over their lives. However, the CYI claim should not be seen as the only means for all that the Ross River Indian people require, for their needs and development. Some of our recommendations may be found in the claim, some may not.

The second assumption is that the 'Voices and Dreams' (Chapter 9) of Ross River Indian people are an accurate reflection of what is desired for the future. In essence, what is desired is not development at any price, but rather development that preserves choices for people. The people of Ross River would like to benefit from regional development in terms of wage-jobs, business contracts and skills training. However, there is also, as Chapter 9 depicts a strong desire to preserve Indian culture and the household economies of trapping, hunting and fishing.

The recommendations revolve around the concept of "parallel

development" of both the traditional and the wage/business sectors of the Band's economy.

Given the extent of the potential regional developments, if development is to occur on the Ross River lands, they should be declared a 'Special Yukon Development Impact Region', and negotiations for Terms and Conditions for the development of the region should take place. It is vital to institute these Terms and Conditions prior to any major development to avoid the possible erosion effects of gradual development. These 'Terms and Conditions' of regional development must specifically address the concerns of the Ross River Indian people, as they are the largest and most proximate social group that will be directly impacted from developments.

RECOMMENDATIONS: TERMS AND CONDITIONS OF REGIONAL DEVELOPMENT

The Ross River Indian Band should negotiate overall Terms and Conditions for the regional developments that are proposed for Ross River lands. These negotiations should principally be with the Government of Canada and Yukon Territorial Government, and should not be considered a part of land claims. It is recognized that a great deal of confusion exists regarding government responsibility, which the Band must clarify.

The overall Terms and Conditions for regional developments should also require that additional Terms and Conditions be negotiated on a project specific basis. Parties to these agreements might be the private sector proponent, YTG, and Indian representatives from the Ross River Indian Band.

1. Recommendations: Planning Structure.

Resource developments on Ross River lands will not result from one massive project but a series of projects that will occur gradually over time. At present there are no public mechanisms based in law whereby the Indian people can have significant input into regional planning or decision making.

During the construction of Cyprus Anvil Mine development there existed no government authority, except Indian Affairs, to which the Ross River Indian people could turn to. Respecting the reconstruction of the North Canal road and the proposed AMAX MacTung mine, several meetings have occurred; some of the Band concerns have been listened to and observed, but for the most part the Band has been ignored. What has been done has been voluntary. The preparation of 'Initial Environmental Evaluation' are of minimal consequence in that the Regional Environmental Review Committee has no legal mandate to enforce recommendations, its decisions are not subject to public scrutiny, and further its committee members are not versed in social-economic matters of concern to Yukon Indians.

To minimize impact, protect Indian interests, and receive assured benefits from regional development, institutional structures linked to upper levels of government (i.e. the Ministerial level) are required. These structures would be the primary mechanism whereby the Band could effectively voice its concerns. For all these structures the key element is significant Indian control and input at policy, planning and even decision-making levels. These structures should have guaranteed funding over the long term. The level of funding should be linked to the rate of

capital expenditure of the resource projects; and implementation should be as soon as possible given the scenarios for regional development. The structures are:

2. A Ross River Area Regional Development Planning Authority

This could conceivably be a federally funded authority whose Board of Management would be open to membership of the federal and territorial governments as well as the Ross River Indian Band, and possibly CYI. This authority would set policy directions for regional development and for technical planning committees. Chairmanship could be rotational. It would be empowered to issue land use permits and to conduct hearings for the issuance of licences. Its committees would include:

3. Ross River Area Regional Land-Use Planning Committee

This would be a technical committee that would include Indian representatives. They would be charged with collecting information and making regional land use plans as per the policy directives of the Planning Authority. A major concern would be to protect and express Ross River Indian concerns vis-a-vis other, non-Indian land uses.

4. Ross River Area Regional Wildlife Management Committee

This committee would be responsible for collecting information about wildlife and the supportive habitats of the Ross River Lands. It would attempt to identify critical habitats, especially for regional ungulates. Having equal representation from both YTG and Indian interests, it would recommend maximum sustainable quotas for hunting to the Development Planning Authority.

Separate but complementary to these structures would be a:

5. Ross River Indian Band Impact Monitoring Secretariat

This Secretariat would be 100% Band controlled and operated. Its funding could be from a combined source of public and private sectors. Its primary responsibility would be to provide information to the Ross River Indian representatives on the Authority's committees. Information may be about any concerns the Band has, any impacts the Band is experiencing both in town and on the land. In essence it is an information feedback loop from the Band directly to the Regional Development Authority.

6. ROSS RIVER MUNICIPALITY : ONE-GOVERNMENT SYSTEM

If the community of Ross River grows dramatically in size Ross River Indians may become a minority. A joint-governing body for the municipality of Ross river, with fixed Indian and White Membership is required. If Ross River grows in population due to the developments and the proportion of Indians decrease below 50%, this structure will be required so as to express and protect the Indian interest in Ross River itself. This concept may be part of the One-government agreement proposed via Yukon Indian land claim negotiations.

7. RECOMMENDATIONS REGARDING BAND SERVICES

As per the Community Facilities/Recreation section of Chapter 9 Indian Voices and Dreams:

- a.) better roads and road maintenance in the village
- b.) a covered ice arena for the whole community
- c.) a playground for kids on the village side
- d.) a Band multi-use centre

8. RECOMMENDATIONS REGARDING HUMAN RESOURCE DEVELOPMENT

As elaborated by the Education/Training section of Chapter 9 Indian Voices and Dreams:

- a.) a mobile elementary school teacher
- b.) upgrading courses in Ross River
- c.) grades 11 and grades 12
- d.) a vocational sub-centre in Ross River
- e.) scholarships and bursaries for young people so they can attend schools outside
- f.) a native language/culture instructor in the school

The following types of training courses are also of interest, if offered in or near Ross River by public and/or private sector institutions.

- *upgrading, functional literacy courses
- *carpentry apprenticeships
- *basic driver licence training courses
- *mechanics and heavy duty apprenticeships
- *electrician apprenticeships
- *heavy duty equipment operating courses
- *business management/decision making courses
- *corporate planning courses
- *accounting/bookkeeping
- *industrial first aid
- *courses on how to put together a business bid
- *how to negotiate a contract, get a bank loan

- *proposal writing courses
- *public speaking courses
- *computer operator/wordprocessing courses
- *personal money management courses
- *community development worker training
- *alcohol counselling training
- *personal and family counselling training
- *wildlife management/land use planning
- *land surveying training

Personal Development Workshops

In addition to "skills" acquisition, workshops should be held in Ross River focusing on themes of personal development and life skills training. All the "skills" training, jobs, and business will be without a solid foundation unless core personal development issues are dealt with. These workshops should be for men and women and should include equal white and Indian co-facilitation for optimal results.

9. RECOMMENDATIONS REGARDING WAGE-JOBS AND BUSINESS DEVELOPMENT

a.) WAGE-JOBS

As stated in the chapter on Impacts (Chapter 11), the Ross River Indian Band has a finite need for wage jobs. Approximately 40-50 man-years of employment would be all that the Band's labor force could absorb. Band members have expressed job preferences. Generally women are more interested in wage work that is regular and full-time lasting between 10-12 months. Men are primarily interested in seasonal work during the late spring/summer with time off for hunting in the fall and hunting/trapping in the winter. The Band's labour force is not very mobile, with most members preferring to live and work out of Ross River. In terms of industrial wage work the majority of the Band's labor force are not interested in being an industrial employee on a full-time or career basis. There is not much longterm interest in working in an industrial type setting

where hours of work, working conditions, and rate of production are set by the employer. People want to be independent and preferably self-employed.

Should Band members seek direct employment with any industrial project such as AMAX Ltd., it would be preferable if either a seasonal and/or a rotational wage employment scheme be negotiated. Band members are concerned that typical union contracts do not reflect their own cultural interests. A Ross River Indian union local might be one way to negotiate project specific labor contracts that would reflect Indian cultural preferences for wage-work, time off with/and without pay, seniority, seasonal and/or rotational employment, benefits, etc.

b.) BUSINESS DEVELOPMENT

There are many potential business investments tied to regional industrial development. Investment and business potentials exist both for the Indian entrepreneur and such existing Band business corporations as the Dena Store and the Ross River Indian Development Corporation. The November 19, 1982 AMAX memo and the January 26, 1983 Northern Affairs memo (Appendices 2 and 3), list many possibilities for business participation tied to regional developments. To develop the 'modern' wage and business sector of the Band's economy, individual Indian entrepreneurs, Band business structures, and the Band Council have important roles, as do such organizations as the Yukon Indian Development Corporations. Given the range

of investment possibilities and the finite requirement for employment, the Band Development Corporation must develop business investment criteria and corporate plans. Since the 'traditional' economy provides direct non-taxable benefits to households and is an important part of the Band's mixed economy, business decisions should also take into account this sector of activity. The Band Corporation should decide where it will make direct investments, passive investments, what rate of return and risk is acceptable, and which, among all the investment options, is desirable. Should joint ventures be negotiated with other Indian corporations, the problems related to a "Sharing Agreement" must also be dealt with.

Once the Band Corporation has made an investment decision it should then seek the approval of the Band Council - the Band's political authority. Some potentially profitable business investments may not be desirable from a political, social or traditional economy point of view. The Band Council will have to independently decide the tradeoffs it must make. It will have to decide how much business development it requires, and what would be excessive and possible damaging to Indian land use, hunting and trapping, and the Indian way of life. The Council should have binding authority to stop, or place conditions upon the Band Development Corporation so as to retain control of the ways that economic development activity may affect all the Indian people of Ross River. One method of control is to place financial limits on the borrowing and investment capabilities of the corporation. Another method

of control is to specify that certain types of business contracts must be ratified by the Band Council and others to be ratified via plebisite of all Band members.

The Band Council requires decision making tools and the legal power to control and provide policy direction to the Development Corporation's business investment. It must also try to insure that the traditional economy, Indian land Use, and wider social-political concerns of Band members are incorporated in Band development decision making.

In terms of the modern wage/business sector of the Band's mixed economy the Band Development Corporation requires management expertise, operating and venture capital. These could be negotiated as part of 'Terms and Conditions' for regional development.¹.

10. RECOMMENDATIONS REGARDING HUNTING, TRAPPING, FISHING

- a.) The Band Council wants to retain management rights to the Group trapline and not have a Yukon Territorial government system of management imposed.
- b.) The Band Council requires funding for the construction of trapping cabins in remote areas and a transportation subsidy system for access to these more remote areas.
- c.) A bush communication system similar to that which the Cree Indian people have under the James Bay Land Claim Agreement.

- d.) A compensation model for trapping and hunting (cf discussion below).
- e.) A Trappers and Hunters guaranteed income stabilization system indexed to inflation and similar to the Cree model.
- f.) The Ross River Indian Band requires a hunting territory for the exclusive use of Band members, where sports hunters are excluded and where Indian hunters from other Bands can be regulated. The territory should remain as Crown land but the Band would receive Group Hunting rights on that land, in a similar way in which the Group trapline is for the exclusive use of different Ross River Indian Band trappers. Politically difficult or not, given the extent and consequences of possible developments, the Band requires such an exclusive hunting territory, which implies that certain game zones would have to be Indian zones.
- g.) There should as well be a proprietary element to these rights to hunt within a Group Hunting territory.

What is meant by (g) is that the right to hunt and trap should not just be mere licences to enter without trespassing on Crown land. Every other resource user in the North has certain legal proprietary rights. These are not property rights, or fee-simple ownership rights, as the land remains under Crown ownership. Existing proprietary rights include: mineral claims, grazing licences, timber licences, oil exploration permits, etc. Essentially proprietary rights are characterized by three elements:

1. exclusive use of particular resources
2. compensable rights, which are legal rights in event of third party damage or nuisance.
3. a right to compensation as a result of expropriation of a proprietary right.

All these rights are routinely given in the Yukon to mining companies, and to people who want grazing permits. One group of

people do not have their rights protected in such a way are hunters, fishermen or trappers, and that basically means Indian people. Indian people do not have these three protections. The only place the Ross River Indian people have an exclusive use is on the Group Trapline. However, even on the Group Trapline they do not have compensable rights. In other words when a trapline certificate is issued, that Group Trapline licence is not a binding condition on the party that is granted a subsequent proprietary licence. What that implies for the Ross River Group Trapline, even after a Land Claims settlement, is that when a mineral licence is given to lands where there is already a trapping licence, the mining company is in no way legally bound, obligated, or affected by the Trapline licence. The party with the mineral licence or any other proprietary right can do whatever they please. They are not considered legally to have violated the rights of the trapper, unless they have damaged property such as cabins or traps.

If you have a proprietary right to harvest animals, then if government or a mining company interferes with that, it is an altogether different matter. These type of proprietary right are what is needed by the Ross River Indian people, both for hunting and trapping.

Why aren't those rights there now? Essentially because those rights have not been legally conveyed back to Indian people. They were legal rights which government has, in effect,

expropriated. What we are saying to the Crown is that we'll grant you the ownership of the land, but we want government to convey back to Indian people certain proprietary rights. If that occurs, a developer will think twice about the kinds of damage he might carry out, because a cost can be attached to it. Under this system, the whole business of hunting and trapping compensation is taken out of the sphere of charity, and becomes legal and enforceable.

Proprietary rights also imply a legal right of profit a prendre - which is a right that most other resource users actually have. For instance, it is a right to expect a benefit from hunting and trapping. For example, if you have a timber licence and have set up a livelihood based on trees, you have a right to expect a benefit from those trees. If someone else comes along and destroys the land, or takes all the trees, you have a legal right to stop them and expect compensation. Under this proprietary system, if developments terminate your rights to animals, or right to certain level of harvest subject to the principal of conservation, you have a right to compensation.

Under such an improved system of proprietary legal rights to hunt and trap, the Band may not be able to stop someone from mining or building a hydroelectric dam, but that third party cannot simply enter the land and do as he pleases. Rather, a legal negotiating situation is set up by competing proprietary rights.

The problem now is that the Band does not have a competing proprietary right. All they have is an aboriginal right which at this point in time is undefined by either the courts or the constitutional process. Under this new system of proprietary rights it is not a matter of charity, where a corporation or government will talk to the Band if they feel so inclined. It is not a matter of social policy, it is a legal right.².

11. SOME SPECIFIC RECOMMENDATIONS

- a.) Funds are required for negotiations of Terms and Conditions of regional development agreements, and for any contractual business agreements.
- b.) The Band is presently opposed to the Hoole Canyon Dam proposal, and has numerous concerns regarding the proposed hydroelectric site at Ross River Canyon. The government should make available to the Band Council all present and future planning documents relating to proposed NCPC hydroelectric developments on the Pelly, Ross, and Frances River Systems.
- c.) A fly-in/fly-out system of employees is preferable for the MacMillan Pass developments from various established industrial centres in Yukon.
- d.) A study should be conducted to specifically examine the physical possibility of a Ross River village by-pass of the North Canal Road, and schemes for subsidizing the relocation of existing Ross River business which will cater to resource development traffic to a zoned service area outside the village limits.
- e.) Additional funding is required for alcohol counselling. These could be channelled to a Foundation which the Ross River Band could create, or alternatively to the Yukon Indian Heritage Trust Foundation, a structure created under land claims agreements.
- f.) Re-negotiations of the Cyprus Anvil agreement, particularly the section pertinent to Yukon Indian people.

Finally, if 'Terms and Conditions' negotiations for regional

development on the 'Ross River Lands' do not address issues pertinent to Indian land use, mixed Indian 'traditional' and 'modern' economy, Band members aspirations, and the linkages between the Band's mixed economy and regional development, it is likely that the magnitude of social-economic impacts will be severe, that few may benefit from 'modernization', and that the Band may step closer to economic and cultural assimilation.

Lastly, the recommendations are suggestions for empowering the Ross River Indian people with decision-making capability. In commencing and directing negotiations, clearly the responsibility rests with Ross River Indian people, their Chief and Band Council.

FOOTNOTES FOR CHAPTER 12

1. Access to resource revenues; Indian preferential employment and training; and Indian small business preference are all issues of importance to the Ross River Indian Band. Part 2 and 3 of Banks, N. 1983. Resource Leasing Options and The Settlement of Aboriginal Claims. CARC Publications, Ottawa. has several noteworthy suggestions in these regards.
2. The discussion on proprietary rights are based on pers. com. with Dr. Peter Usher.

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APPENDIX 1

A P P E N D I X I

CONVERSION OF ROSS RIVER HARVEST QUESTIONNAIRE RESULTS INTO FOOD WEIGHTS

A. General Considerations

Converting kills of animals, as reported on harvest questionnaires, into estimates of food available for human consumption is not as simple as it first appears.

Three steps are generally required to come up with a food weight figure for each of the animal species: First, a whole animal weight for the species must be obtained (What, for example, does a moose weigh?); second, the proportion of the animal that is considered edible must be determined (What proportion of the whole weight is considered edible?); and, third, an estimate of the harvest animal population structure is necessary, especially for the more important resource species and for the larger animals (For example, what proportion of the harvest of moose are bulls, what cows, what yearlings, and what calves?)

Each of these steps is fraught with its own problem. For example, the weights of animals may go through substantial seasonal changes, vary between populations, and depend on harvest technique.

B. Estimations of Food Provided by Ross River Animal Resource Species

Table 1 provides an estimate of the amount of food available for human consumption from a harvest of each of the Ross River animal resource species. These estimates are based on published data on animal weights and component weights. The figures used rely heavily on the analyses done for "The Wealth of the Land. Wildlife Harvests by the James Bay Cree, 1972-3 to 1978-9" Research Committee. The food weight estimates of this report represent the most thorough analysis of the food available for human consumption from harvests of sub-arctic forest wildlife done to date.

There are two problems in using these data to derive food weight figures for the Ross River questionnaire results. The first is that many of the live animal weights are based on analyses of wildlife populations from eastern Canada. For some species this poses no major problems. For others, such as moose and fish, it does (see discussion below).

The other problem is that food portion estimates were based on the consumption habits and preferences of northern Cree Indians. Food weights portions available in the literature generally reflect Euro-Canadian dietary habits and consequently had to be increased because the Cree, in general, consider more of the organs and parts of the body edible than would a sports hunter. Since body organs as well as muscle flesh are

TABLE 1. FOOD WEIGHT VALUES USED TO CALCULATE ROSS RIVER INDIAN
BUSH FOOD HARVESTS

<u>SPECIES</u>	<u>FOOD PORTION</u> (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
Grouse	1.2
Ptarmigan	0.7
Lake Trout	1.2
Whitefish	2.0
Salmon	21.3
Grayling	1.0
Jackfish	2.2
Suckers	1.6
Lingcod	0.9

part of the diet for both the Cree and the Ross River Kaska, this probably does not pose much of a problem.

The food values published by the James Bay and Northern Quebec document are conservative estimates. Where a range of values were available, the lower values were generally selected. This was a deliberate and strategic choice done to avoid being accused of exaggerating the results:

"In general, the values assumed have been from the lower portion of the range of reported values. In most cases, we therefore believe (most) of the final weights used err on the conservative side and should be treated as minimums." (p.221)

In choosing food values we have tried to keep to this maxim of erring on the conservative side.

With all of the above reservations in mind, the conversion table was prepared.

B.1. Moose

After reviewing the available literature, the James Bay and Northern Quebec Study concluded that 60% of the whole weight of moose was composed of "flesh, bone in the flesh and fat, including the subcutaneous layer found during the winter period, and an additional 9 to 12% is made up of edible organs." The report concluded that 69% of the total moose weight was potential food. 9% was added to the 'flesh' weight to account for the Cree consumption of organ meats: tongue, lips, heart, liver, brains, eyeballs, and kidneys.

Banfield (1974) shows A.a. andersoni on the Ross River lands, with A.a. gigas just to the west, extending into western Yukon and Alaska. Peterson (1955) similarly lists A.a. andersoni as the moose of the eastern Yukon and A.a. gigas in the western Yukon. Some intergrading of the two subspecies should be expected at the edges of their range. A.a. gigas is the largest of the living forms.

According to Doug Larsen (pers. comm.), YTG Renewable Resources moose biologist, bull moose whole weights in the southeastern Yukon average between 1000 and 1400 pounds; cow moose between 800 and 1000 pounds; and calves average about 600 pounds at 6 months. To arrive at an average whole animal weight it was assumed that harvests were equally split between bulls, cows, and calves. This gives an edible weight of 621 pounds per kill.

B.2. Caribou

The Quebec study considered the food portion from caribou to be 61% of the whole weight. Meat, fat, and bone in flesh 55% of the whole weight and 6% was added for edible organs (4% for tongue, lips, liver, heart, and other minor organs and 2% for the occasional consumption of intestinal contents).

The report noted that there is a considerable difference between the sizes of barren ground and woodland caribou. Three separate calculations were prepared: one based on 2/3 barren ground and 1/3 woodland using the results of a Cree caribou harvest age structure study [39% males, 38% females, 4% yearlings, and 19% calves] (food value = 128 pounds); one using the results of the age structure study and all woodland caribou (food value = 173 pounds); and the third using the actual population age/sex structure and weights from a study done in Laurentide Provincial Park by the Ministère du Tourisme, de la Chasse et de la Pêche [27.4% adult males, 42.4% adult females, 2.2% male yearlings, 2.4% female yearlings, and 25.1% calves] (food value = 136 pounds).

The Cree study opted for the conservative estimate of 128 pounds.

There has been no systematic weighing program for the Finlayson Caribou Herd woodland caribou. However, the Yukon

Territorial Government's Renewable Resources Branch has some figures for total length and heart girth. As there is a relationship between weight and heart girth, their computer has come up with some preliminary weight figures (Rick Farnell and Janet McDonald, pers. comm.) Spring cows average 130 kilograms and fall cows average 150 kilograms. Spring bulls average 160 kilograms and fall bulls 180 kilograms. Fall calf weights average 80 kilograms. Assuming average weights: cows = 308 pounds; bulls = 374 pounds; and calves 176 pounds.

We did two calculations of sex/age proportion of the harvest, one using the Laurentide Park figures and the other the Cree harvest figures. Using the former figures gave an edible meat weight of 174.1 pounds; the latter gave a figure of 185.1 pounds. We assumed an average edible caribou weight of 180 pounds for our calculations.

B.3. Sheep

Mountain sheep are not included in the Quebec study.

Two subspecies of Ovis dalli and an intergrade form are found on Ross River hunting lands: stone sheep and dall sheep and Fannin's sheep, the intergrade. Stone sheep are the more southerly race and are larger than the more northerly stone sheep (Banfield, 1974).

The only information on whole weights of mountain sheep available at this writing is from Banfield. According to Banfield, adult male stone sheep average 200 pounds; no weights were listed for female stone sheep. Dall males ranged between 165 and 200 pounds; the weight of a single female was 125 pounds.

We have interpreted these figures as best we can at this writing. (See table below.) In the table the interpreted figures are placed in brackets. An intermediate figure of 180 pounds was assumed as the average weight of an adult male dall sheep. The interpreted weight of a female stone sheep is based on the weight ration of male and female dall sheep. Estimates of lamb and yearling weights were chosen arbitrarily.

	<u>Stone weight (lb.)</u>	<u>Dall weight (lb.)</u>	<u>Fannin weight (lb.)</u>
male	200	165-200 (180)	(190)
female	(140)	125	(132)
lambs & yearlings	(100)	(90)	(95)

To arrive at a whole animal weight it was assumed that harvests were equally split between each of the three forms and that 1/3 of the harvest were males, 1/3 females, and 1/3 lambs and yearlings. This gave an assumed whole weight of 138.8

pounds for harvested sheep.

No data on weight distribution of component parts of sheep are available at this writing. Sheep are ungulates, as are moose and caribou. The Quebec study used a 69% edible factor for moose and 61% for caribou. In coming up with a factor for sheep, we have assumed a similar distribution to caribou of 61%.

This gives a figure of 84.7 pounds of food per harvest.

B.4. Beaver

The Quebec study concluded that the edible portion of beaver was 63% (55% for meat, bone in meat, and fat and 8% for organs, which in the case of the Crees included brain, heart, kidney, liver, stomach, and eyes.)

After reviewing the available literature, the study concluded that weights of beaver over a wide geographic range are similar and that this holds for both the sexes and different age classes. After looking at records for the age and sex distribution of Cree harvests (45% adults, 28% yearlings, and 27% kits) they came up with a mean whole weight figure of 27.7 pounds and an edible portion of 17.4 pounds.

This figure would seem reasonable for the Ross River data given the apparent geographic similarity in beaver weights, except that the harvest emphasis of the two groups differ. Most of the Cree beaver harvest comes from winter trapping under ice, whereas the main Ross River harvest comes from the spring hunt. If this is true we would expect a greater portion of the Ross River harvest to consist of adults and yearlings. Accordingly I have increased the Cree figure marginally to 18 pounds.

B.5. Lynx

After reviewing the available literature, the Quebec study estimated that 50% of lynx would be a reasonable figure for the food portion. Average whole weights of lynx from the literature ranged from 15 to 30 pounds. A figure of 17 pounds was selected as a whole weight, which gives a food value of 8.5 pounds. We have kept with this figure.

B.6. Black Bear

The literature show whole black bear weights ranging between 300 and 450 pounds. The Cree study used an edible portion of 70%; yielding 210 pounds of food per kill. We have kept with this figure.

B.7. Geese

According to Godfrey (1966) and Frisch (1982) the Canada

Goose of the Yukon interior is the Lesser Canada Goose Branta canadensis parvipes (listed as B.c. brevipes in Frisch).

Bellrose (1976) shows weights for this subspecies ranging between 6.1 pounds for adult males to 4.8 pounds for immature females. We have selected an intermediate whole weight of 5.5 pounds.

The Cree study used an edible portion figure of 70%. This figure may be high for Ross River, since the Goose is a primary Cree resource and they make use of the majority of the internal organs, including intestines, stomach, lungs, heart and other minor organs. We do not know if the same is true for the Ross River Kaska people. Nonetheless we have kept with the 70% figure.

The food weight for geese used here is 4 pounds. (We have taken the liberty to round out the figure from 3.85 pounds to 4 pounds because geese do not contribute a large portion of the total harvests.)

B.8. Ducks

Ducks represent a species group, with 14 common species and an additional 4 less common occurring in the Yukon interior according to Frisch (1982). The most important species in the Ross River economy are the mallard, pintail, and lesser scaup, with an admixture of teal. Weight figures for this group have to be generalized since they include a large range of body sizes. We have used average weight figures from Bellrose (taking the mean of average adult male weights and average immature female weights), and assuming that 1/3 of the harvest comes from each of the major species: Mallard, pintail, and lesser scaup. This resulted in a figure of 2.08 pounds for whole weight of 'ducks'. We reduced this marginally to 2 pounds to account for the smaller size of teal.

We have followed the Cree study in using an edible portion of 70% for ducks. This yields 1.4 pounds per duck.

B.9. Rabbits

We have followed the Cree study in deriving food weight figures for rabbits. This study deemed that "no adjustment for age structure seems necessary because most hares are trapped in winter and hares reach adult size six weeks after birth."

The study used a whole weight of 2.9 pounds, based on a search of the literature. An edible portion of 64% was used following White (1953). This results in a figure of 1.9 pounds of food from hare.

B.10. Porcupine

Again, we followed the Cree study's derivations for porcupine. An average whole body weight of 15 pounds and an edible

portions of 70% (based on White, 1953) are assumed. This results in an edible weight of 10.5 pounds.

B.11. Gophers (Arctic Ground Squirrels)

The subspecies of gopher found on Ross River hunting lands is Spermophile parryii plesius (Banfield, 1974). Banfield includes weights for the "average-sized" more northerly race S.p. kennicotti, but none for S.p. plesius. Assuming that the weights of the two races are not that significantly different, we will use Banfield's figures of 791 grams for males and 698 grams for females. Assuming an equal distribution of harvests between males and females gives a whole body weight of 1.64 pounds (744.5 grams).

Assuming that the edible portion of gophers is similar to that for porcupine (70%) gives 1.1 pounds.

B.12. Ground Hogs (Hoary Marmots)

The ground hog subspecies found on Ross River lands appears to be Marmota caligata oxytona (Banfield, 1974). Banfield lists the average weight for this race as 5.87 kilograms (12.94 pounds).

Assuming, once again, an edible portion similar to that of porcupine (70%) gives an edible portion weight of 9 pounds.

B.13. Grouse

According to Godfrey (1963) the Ross River lands fall within the breeding ranges of 4 different grouse species. White (1953) lists the average whole weight of sharp-tailed grouse at 2.0 pounds. Although Godfrey does not list weights he does include a variety of other measurements. From these it appears that the sharp-tailed grouse is intermediary in size. For this reason we will accept the figure of 2 pounds whole body weight as an average size for Ross River grouse.

The Cree study assumes an edible portion for grouse of 60% based on interpretations from figures on guinea fowl, quail, and pheasants. This gives us 1.2 pounds of food from grouse.

B.14. Ptarmigan

There appear to be three ptarmigan species on the Ross River hunting lands, willow ptarmigan, rock ptarmigan, and white-tailed ptarmigan (Godfrey, 1963). No figures are available to us at this writing on white-tailed ptarmigan. We have no sense of the relative importance of this species in Ross River harvests. Since it is the smallest of the ptarmigan the lack of figures could cause our ptarmigan food weights to be slightly elevated.

Usher (1970) assumes a whole weight of 1.5 pounds for willow ptarmigan and 1.0 pounds for rock ptarmigan. We will assume a weight of 1.2 pounds, reducing the average somewhat to account for a possible white-tailed ptarmigan component.

We will again use the 60% edible portion for grouse and ptarmigan assumed in the Cree report. This gives a edible portion weight of 0.7 pounds.

B.15. Fish

Fish are the most difficult animal group to come up with whole weights for. Size at maturity and the average adult size of fish can vary widely not only between widely separated areas of a given species' range but as well from one lake or river to the next. The best data base for fish weight estimates would be as site specific as possible. Unfortunately, at this writing the only relevant data available is from the Cree report, from northern Quebec, and some information from the N.W.T.

The average size of harvested fish will also vary with the fishing methods used. Ross River Indian fishermen commonly use 4" gill nets and hook and line. The questionnaire asked for separate information about net caught and angled fish harvests.

For food composition of the different fish species we will follow the methods outlined in the Cree report. They modified values found in the standard handbook on food composition to fit the Cree patterns of fish processing and use. The fish edible portions in Watt and Merrill appear to be based on filets; whereas the Cree commonly make use of all of the body meat, some of the organs, edible portions of the heads, some of the skin, and the broth made when the fish and bones are boiled. To take account of this additional use they added an additional 20% to the edible portion reported by Watt and Merrill.

B.15.a. Lake Trout

Scott and Crossman (1973) state that, in general, the average size for lake trout is between 15 and 20 inches. They include data on length and weight of lake trout at different ages from Great Bear Lake and Great Slave Lake. Assuming that Ross River lake trout approximately conform to similar growth relationships, we have averaged the weights for lake trout in age classes whose average sizes range between 15 and 20 inches.

<u>Great Bear Lake</u>			<u>Great Slave Lake</u>		
<u>age</u> <u>(yr)</u>	<u>length</u> <u>(inches)</u>	<u>weight</u> <u>(pounds)</u>	<u>age</u> <u>(yr)</u>	<u>length</u> <u>(inches)</u>	<u>weight</u> <u>(pounds)</u>
5	15.4	1.2	10	14.7	1.3
6	17.2	1.7	11	16.2	1.6
7	18.9	2.3	12	16.2	1.7
8	19.2	3.1	13	16.6	1.8
			15	17.7	2.2
			16	19.2	3.0
Mean Weight		2.07			1.93

Based on these figures we have assumed a mean weight of 2 pounds.

Using the Cree study's edible portion of 57%, gives approximately 1.2 pounds of food per lake trout.

B.15.b Whitefish

Whitefish as used in the questionnaire are a species group, including humpback whitefish, broad whitefish, and inconnu. We have no figures on the proportion of the harvest of whitefish that are made up of each of these species. For these calculations we assume that the ratio is 60% humpback, and 20% for each of the other two species.

For humpback whitefish Scott and Crossman list the average size around 15 inches and show an average weight for 15.4 inch fish from Lac la Ronge, Saskatchewan at 1.7 pounds. The Quebec Cree study examined catches from experimental 3 and 4 inch mesh nets from inland lakes and came up with an average weight of 1.9 pounds. We will assume an average weight of 1.8 pounds.

For broad whitefish Scott and Crossman list average total length as 18 inches. No information on weights are available. Using the humpback whitefish figures from Lac la Ronge, at 18 inches the average weight was around 2.5 pounds.

For inconnu Scott and Crossman list the total length as usually between 18 and 30 inches. They also provide a length weight table for Great Slave Lake inconnu.

Great Slave Lake

<u>age</u> <u>(yr)</u>	<u>length</u> <u>(inches)</u>	<u>weight</u> <u>(pounds)</u>
5	18.6	3.00
6	20.8	4.36
7	22.5	5.62
8	24.0	7.13
9	25.9	8.31
10	27.1	9.75
11	28.6	11.05
Mean weight		7.0 pounds

Using the ration of 60% humpbacks, 20% broad, and 20% inconnu gives a whole whitefish weight of 2.98 pounds. Using the Cree study's edible portion conversion factor of 67% for whitefish we arrive at a food weight of 2 pounds.

B.15.c. Salmon

The salmon caught by Ross River people are nearly all chinooks. According to Scott and Crossman (1973) the usual size for adult chinook ranges between 30 and 40 pounds. No additional information about Yukon system salmon is available at this writing. For a whole weight we took the lower figure,

reducing it by 5 pounds to account for weight loss by the time the salmon have migrated the 1000+ miles to the Yukon headwaters. We will therefore assume a whole weight of 25 pounds.

The edible portion suggested by Watt and Merrill (1963) for Atlantic salmon is 65%. Upgrading this by the 20% suggested by the Cree study to account for a more complete use of the fishes food products gives an edible weight of 21.3 pounds.

B.15.d. Grayling

For grayling we assume a total body weight of 1.4 pounds. Scott and Crossman (1973) mention that the average length of grayling falls between 12 and 15 inches. Although weight figures are generally absent from their discussions, they do mention 12 to 16 inch grayling from Great Bear Lake weight between 1 and 2 pounds.

Figures on the edible proportion for grayling are not available. Instead we use Watt and Merrill's estimates for speckled trout (49%) and add the 20% suggested by the Cree study. This gives an edible weight of approximately 1 pound.

B.15.e. Jackfish

For Jackfish we assume a total body weight of 3.7 pounds. Scott and Crossman (1973) mention that the average length of jackfish is between 18 and 30 inches. They also include length and weight figures for jackfish from Great Bear Lake.

Great Bear Lake

<u>age</u> (yr)	<u>length</u> (inches)	<u>weight</u> (pounds)
7	15.7-20.9	2.0
8	18.9-24.0	2.8
9	21.6-26.3	3.7
10	23.6-29.1	4.5
11	25.2-29.9	5.6

Mean weight 3.7 pounds

This is very close to the Cree study's estimate of 3.6 pounds for "inland" jackfish.

Watt and Merrill estimated that only 26% of jackfish whole weight was edible. Again, it appears that their figures are based on filets. The Cree study increase this to 60% to account the Cree consumption of flesh from the large head of this species. Using the 60% figure gives a food weight of 2.2 pounds for jackfish.

B.15.f. Suckers

Two suckers may be involved in Ross River harvests, the

white sucker and the longnose sucker. However, since the distribution of the white sucker is limited to the Liard drainage part of the hunting lands the figures below are based on estimates from the longnose sucker.

Although Scott and Crossman state that the usual size for this species ranges from 12 to 14 inches, no weight figures are included in their description. The Cree study cites an average weight of 2.7 pounds for 4840 suckers caught in a 4 inch net in Lake Mistassini in northern Quebec. We assume this figure.

The Cree study uses a food portion figure of 59% for suckers. Using this figure the edible value of suckers is 1.6 pounds.

B.15.g. Lingcod

The only weight figures available at this writing are from northern Quebec. The Cree study assumed a whole weight of 1.8 pounds and an edible portion of 50%, which gives a food weight value of 0.9 pounds.

APPENDIX 2



OTTAWA, Ontario K1A 0H4
January 26, 1983.

Dr. V.E. Hume,
Program Manager,
North Canal Road,
Infrastructure Division,
Northern Affairs Program

Your file Votre référence

Our file Notre référence A4365-C1

Equipment and Personnel for
Road Construction and Maintenance
Ross River Band

Further to your request of January 24, 1983 on the types of equipment the Ross River Band would require to undertake road construction or road maintenance, and the types of personnel that other construction contractors could require, we provide the following information:

1. Equipment Requirement for Road Construction

Dump Truck (15 cu ³ yard) one or more	\$ 40,000.	each
Loader 1½ yard	85,000.	each
Grader (140G) min. size	90,000.	each
Vibra Pack Roller	65,000.	each
Crawler with ripper (D8 or equivalent)	250,000.	each
Scraper Optional one or two (Cat. 621 or equivalent)	300,000.	each
Backhoe (Optional)	175,000.	each
Tractor Trailer and Lowbed	80,000.	each
Services Trucks one or two	25,000.	each
Transport trucks one or two	15,000.	each

Plus ancillary equipment such as air compressors, battery chargers, gas heaters, manual compactors, servicing equipment and tools, portable generators, electric welders and acetylene welding equipment.

It must be cautioned however that no attempt has been made to estimate how large a construction contract a company with this equipment could manage, other than it could range from a small to a medium sized grading contract. Also, there are a significant number of other factors to consider in setting up a construction company which include:

- qualified personnel to operate the company including; construction manager, construction supervisor, clerical staff, grade foremen, mechanics capable of welding (at least 2), stock clerk, qualified road construction equipment operators, and possibly someone experienced in blasting.

- required expertise to bid on a competitive basis and to obtain bonding
- fuel storage tanks
- maintenance building
- stock of spare parts retained in a secured area
- on site office (small trailer)
- office accommodations in Ross River
- requirement for on site camp facilities
- load restrictions on the Pelly River ferry (the equipment listed has taken this into account, but larger equipment such as crawlers and scrapers would exceed this restriction).

2. Equipment Requirement for Road Maintenance

Dump Truck 15 c.y. one or more	\$ 40,000.	each
Loader 1 1/3 yard	85,000.	each
Grader (140G size or larger)	90,000.	each min.
D6 crawler wide pad (or equivalent)	150,000.	each
Vibra pack roller	65,000.	each
Service truck (5 ton)	25,000.	each
Transport truck (pick up crew cab)	15,000.	each

plus ancillary equipment similar to that identified above although to a lesser extent in quantity and size.

Many of the concerns expressed above for the road construction also apply for road maintenance; and some commitment should be obtained from the Y.T.G. to contract this work out, prior to any purchase of equipment.

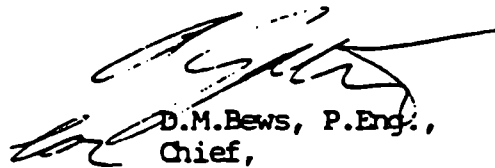
3. Road Construction Work Crew That A Contractor May Hire Locally

Purchaser
Grade Foreman
Maintenance Foreman
Mechanics Heavy Equipment (Diesel)
Spare Parts Clerk or Stock Room Attendant
Operators Heavy Equipment (Construction)
Cooks
Cooks helper (Ladies)
Cleaning Staff (Ladies)
Clerical Staff

In most cases the contractor will be looking for experienced people for these positions. Also in the Yukon a contractor may have to go to unions to hire help which would prevent him from hiring non-union people.

4. A third type of venture may be possible. That would be a transportation venture where the Band contracts for the transportation of goods - for ore haul for mining companies, supplies to mines or construction camps, fuel supply, etc. This would require less variety of equipment including the ancillary equipment, and less initial capital investment as the fleet could be increased when required. Some negotiations with the mining companies by the Department, on behalf of the Band, may be necessary where this type of transportation is anticipated.

I hope these comments adequately respond to your request, but feel free to contact us if you have any further questions.



D.M. Bews, P. Eng.,
Chief,
Transportation Division,
Technical Services &
Contracts Branch.

APPENDIX 3

AMAX OF CANADA LIMITED

INTER-OFFICE MEMORANDUM

SUBJECT: Native Peoples Development

DATE: Nov. 19, 1982

TO: B.Cox

FROM: J. O'Neill

Following is a list of services which could be provided by Native People on a contractual basis.

Transportation

We could support them in an application for authority to set up an interline truck service from the closest supply centre to the Minesite.

We could assist them in setting up schedules to meet our needs.

Also, a hot-shot service for emergency shipments when our needs dictate a faster than scheduled service.

Inter department warehouse truck service.

Housekeeping

Janitor service for bunkhouse, recreation facilities and offices.

Townsite and Plantsite garbage collection and disposal.

Snow removal and road sanding.

Shops and Supply Outlets

Lumber yard and building supply with woodwork shop to make such items as, mine ladders, boxes miscellaneous, cupboards, wedges.

Cut and supply mine timbers, lagging, stalls and posts.

Laundry and drycleaning plant including repair and recycling of coveralls and gloves.

Tire repair shop.

Camp Security

With training by a retired R.C.M.P. Officer, a staff of security persons, male or female, could be trained to do fire watch, camp check-in and out, gate attendance and pipe line monitoring.

Sales Outlets

There is no end to the number of product lines which we will be purchasing and could be handled through a Native Peoples warehouse providing they were set up to do it and given the proper guidance.

There is undoubtedly Government money available to the Native People for setting up business and with some guarantee of our patronage, they should have no trouble getting it.

This is just a preliminary list of suggestions which could be expanded when we get the green light to proceed with the MacTung Project.

JTON:f