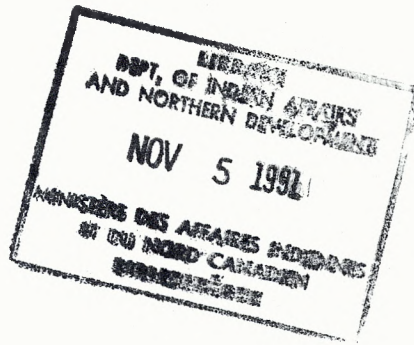


PME EVALUATION OF
THE KASSABONIKA RESERVE FORESTRY OPERATIONS
KASSABONIKA, ONTARIO
(INDIAN-ESKIMO AFFAIRS)

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1972

CONFIDENTIAL



PME EVALUATION OF
THE KASSABONIKA RESERVE FORESTRY OPERATIONS
KASSABONIKA, ONTARIO
(INDIAN-ESKIMO AFFAIRS)

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PME No. 3(Q)-1972
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I. INTRODUCTION

1.1 Background

1. One of the objectives of the Forestry Program is to facilitate Indian endeavours to establish, own, and operate viable primary extraction enterprises. In order to identify the effectiveness and efficiency of these enterprises, the Director of the Indian-Eskimo Economic Development Branch requested Program Management Evaluation to undertake the evaluation of certain of these forestry operations, including the one located at Kassabonika, Ontario.
2. The Kassabonika Reserve has a population of approximately 270. The Reserve is not connected by road or rail, but is serviced by float and ski equipped aircraft throughout most of the year and in the winter by a road to other adjacent reserves (see Appendix"A"). The long distance to the nearest all-weather road (approximately 160 miles), and the high transportation costs, contribute to the very high cost of lumber in the Kassabonika area.
3. A new sawmill was purchased and set up on the Reserve in 1972. Portable mills had been set up previously on the Reserve, but not on a permanent basis. The new mill was established to provide a source of local lumber and overcome high transportation costs, as well as to provide training for the Indian

people, and local employment.

4. The mill is owned by the Department and the 1972 operation was financed through the District Office. However, a Band Council Resolution has been passed by the Band requesting that the ownership and operation of the mill be turned over to the Band, and this resolution was under consideration at the District Office at the time of this evaluation. Some sawing was done at the mill in 1972, but no purchase of lumber from the mill had been made by the Department.

1.2 Scope

1. The purpose of this evaluation was to analyze and assess the existing logging and milling project at Kassabonika in order to establish its efficiency and effectiveness, as a basis for future policy planning and decision making. The emphasis has, therefore, been placed on determining the economic viability of the operation and isolating the more significant variables restricting maximum output at minimum cost, rather than attempting to optimize output.
2. The Kassabonika Reserve is administered by the Sioux Lookout District, and this forestry project was evaluated in conjunction with sawmills located at Bearskin Lake, Sachigo Lake, Muskrat Dam Lake, Big Trout Lake, and Wunnumin Lake, which

are also located in the Sioux Lookout District. The Team made a visit to Kassabonika on August 24, 1972. During this visit the Team was accompanied by the Chief Forester of the Regional staff and a staff member of the Sioux Lookout District Office. Information concerning the wood supply was obtained from the Ontario Department of Lands and Forest Offices in Thunder Bay and Sioux Lookout.

3. A standard format prepared by the Laurentian Institute, consisting of a questionnaire and a model, has been prepared for the Kassabonika forestry operations and is attached as Appendix "B". Some minor modifications have been made to the format due to the lack of a certain statistics, and the accounting methods carried out for this enterprise.

1.3 Acknowledgement

1. The PME Team wishes to acknowledge the assistance provided to it by the Ontario Regional Office, the various staff members of the Sioux Lookout District Office, and the Ontario Department of Lands and Forests.

II. DISCUSSION

2.1 Wood Supply

1. Local surveys indicate that there is a lack of good timber within a reasonable distance from the Kassabonika mill, although a detailed forestry survey of this area has never been conducted. The lack of suitable timber is considered as one of the major constraints restricting output at a minimum cost at this mill. In future, the Band will be forced to either cut and haul its logs a longer distance or purchase heavy equipment to haul the logs from further inland. In either event, it is doubtful whether the accessible timber supply is any more than adequate to meet local demands, and even then the cost of procuring these logs will impose a major constraint on this question.
2. The area within a 60 mile radius of the Reserve boundary has not been surveyed, and a survey of this area is not planned for the near future. The timber in the immediate area of Kassabonika is small, averaging about ten inches at the butt, and is in widely scattered stands. It averages less than ten cords per acre in the best cutting stands. The timber in this area is not committed and no commitments are expected for the next few years. The Band has not been charged a stumpage fee for cuts made on Crown Lands in the past, and this arrangement is expected to continue as long as the Band cuts for its own use.

3. In 1972 the logging operation was conducted on an as required basis, and several small cuts were made at different times.
In future years the Band plans to cut during the winter months.

2.2 Organization and Management

1. The mill and associated equipment is owned by the Department. The 1971-72 operations were financed by the Department, but the Band provided the management and labour. A portable saw-mill has been located here from time to time so there is an experienced labour pool. Local management has experience in the management of small enterprises and is considered adequate for this enterprise, provided technical assistance can be made available on an as required basis.

2.3 Facilities

1. The sawmill is located in the village on a cleared site. The mill is situated about two hundred feet from the water's edge, and the logs must be man-handled up a series of skid-ways to the mill (see Appendix "C").
2. The mill is in new condition and consists of the following:
 - (a) Belsaw, Model 1M, 14D. This mill is capable of sawing logs up to 14 feet long and 18 inches in diameter;
 - (b) Steel carriage assembly 10 feet long by 40 inches wide, with two head blocks and high speed dogs;

- (c) Forth inch diameter, inserted tooth saw blade;
- (d) Thirty foot feed cable;
- (e) V Type Model VF/4H, Wisconsin 25hp, air cooled engine
c/w clutch assembly.

3. The mill has been well set up and its current value, based on procurement costs, is estimated at \$3,000.00.
4. The sawmill does not have a planer, an edger, nor a trimmer. Production is, therefore, limited to rough lumber and its use is restricted accordingly. The maximum production capacity of this mill is estimated to be 4,000 f.b.m. per eight hour shift, although this rate of production was not reached this year.

2.4 Market

1. The annual market for lumber for the next five years is estimated at 40,000 f.b.m. per year. This market is comprised of 25,000 f.b.m. for housing and approximately 15,000 f.b.m. for other uses. Out of this total market the rough lumber requirement is not expected to exceed 15,000 f.b.m. per year, as it is not used in the construction of new houses.
2. There are no other communities or industries near Kassabonika at the present time, so there is no off Reserve market for lumber. The cost of the equivalent grade of rough lumber, purchased at Pickle Lake, Ontario, the closest road-head, was

\$140.00 per M f.b.m., and transportation charges were approximately \$200.00 per M f.b.m. which brought the cost of dried rough lumber to \$340.00 per M f.o.b. Kassabonika.

2.5 Finance

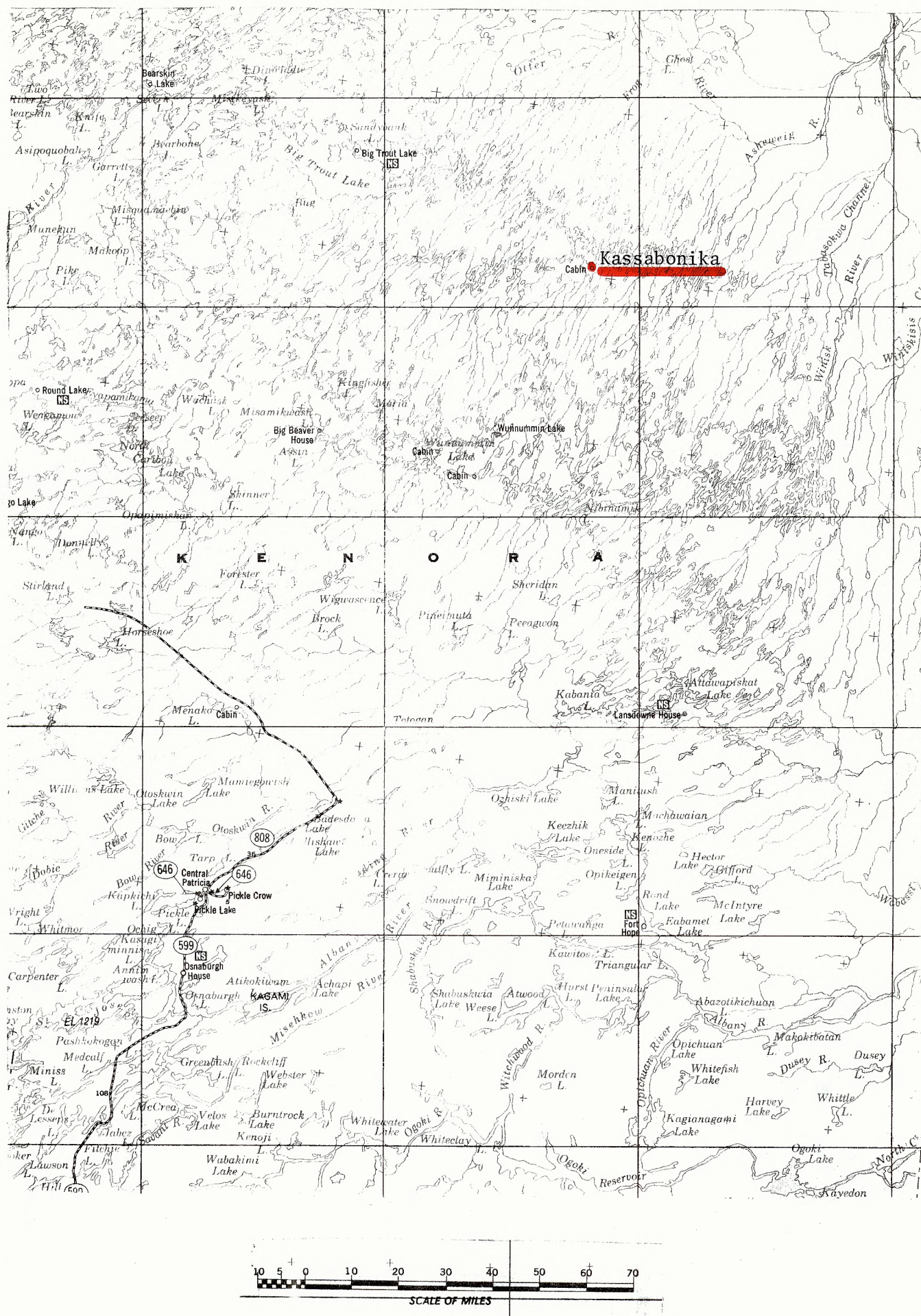
1. The sawmill at Kassabonika was purchased through the District Office and the first year's operations have been financed through the Economic Development Branch. Certain expenditures against the mill have been recorded at the District Office. However, the forestry operations are frequently funded from more than one source, and against more than one code, therefore, the Team was not able to ascertain with any known degree of accuracy the total expenditures made against the mill. Production records have not been retained by the mill, and the total production for the mill is not known, but a production of 10,000 fbm has been assumed, based on the amount of lumber in the yard at the time of the evaluation and the best estimates of those involved in the production.
2. Based on the above information, a break even chart was constructed for the current year's operation. No degree of accuracy can be claimed for the chart as certain assumptions had to be made in the absence of exact data. The chart should, however, give a reasonable indication of the 1972 operations up to September 1972. The break even chart and supporting data are attached as Appendix "D".

3. The break even chart indicates that the average cost of production at the time of the evaluation in 1972 was \$198.52 per M f.b.m.. It further indicates that the break even point was between one and two M f.b.m., and that the operation was viable. It should be noted that the selling price plotted on the chart is higher than the \$300.00 per M that the Department has normally paid for locally produced lumber. A change in the selling price would, of course, alter the break even point plotted on this model. However, a sales price of \$300.00 per M would still indicate a viable operation.

III. CONCLUSIONS

1. It is concluded that:
 - (a) the timber in the immediate area of Kassabonika is small and in scattered stands, but in sufficient quantity to supply the forestry operations located there for the foreseeable future;
 - (b) local management and labour have sufficient skills to operate the current small forestry operations, provided technical assistance is available when required;

- (c) the mill is in good condition and capable of cutting sufficient lumber to meet the needs of the Band;
- (d) the market for lumber on the Reserve is 40,000 f.b.m. per year, but the market for rough lumber is not expected to exceed 15,000 f.b.m. per year. The addition of an edger, planer, trimmer and extra power, that would be required to produce finished lumber does not appear to be economically justified, in order to supply this small, i.e. 25,000 f.b.m., market;
- (e) the current operations are viable and the lumber satisfies a real need in the community;
- (f) the sawmill should be retained at its present level, turned over to the Band, and continue to cut for Band use. The mill should be financed through Band funds, or through a one time operating grant. All lumber obtained from the mill should be on a purchase basis;
- (g) production and cost accounts should be maintained by the forestry enterprise.



KASSABONIKA, ONTARIO

QUESTIONNAIRE AND MODEL TO ASSESS ECONOMIC VIABILITY
OF DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT'S
OWNED AND/OR OPERATED FOREST ENTERPRISES

- (e) Cords per acre: estimates using forest distribution table in (c).

-- Not available by age distribution average. Net merchantable cords per acre is estimated at eight.

(f)

	White & Black Spruce	Jack Pine	White Poplar
Age at Maturity	130	100	80
Height at Maturity	55-60	55	55
Mean Annual Increment, cu.ft./acre	Approximately 15 cu.ft. per acre for softwood.		

- (g) Estimate in acres any significant losses due to fire, insects, blowdown, etc. and the year of occurrence.

-- None significant

- (h) Estimate annual cut in past 5 years.

-- No significant cut.

(i) Estimate annual cut for next 5 years.

-- NIL

2. Off-Reserve (information based on the average square mile)
(within a 60 mile radius of the Reserve)

(a) Ownership -- Crown ALL square miles
-- Private NIL square miles
-- Water 30%

(b) Is there a possibility of obtaining cutting rights, and if so, what would be the contractual basis?

-- Yes, from the Ontario Provincial Government on a short term lease.

(c) Total forested area.

-- 60% of the total area is considered to be forested

(d) Total accessible forested area.

-- Only that area of the forest that is accessible to the Reserve by water.

(e) Forest distribution (acres)

Cover Type	Mature Acres	Immature Acres	Young Acres	Average Sq. Miles
Softwood	Not available in detail by acreage distribution. Estimate is by average sq. mile.			60 %
Mixedwood				25 %
Hardwood				15 %
Total				100 %

- (f) Species composition -- percentage estimates from mill run if inventory not available.

Black Spruce	}	60 %
White Spruce		
Jack Pine		15 %
Balsam Fir		1 %
White Poplar		15 %
Black Poplar		3 %
White Birch		6 %

- (g) Cords per acre: estimates using forest distribution table in (e).

-- Not available by age distribution. The average merchantable cords per productive acre is estimated at eight.

- (h)

	Black & White Spruce	Jack Pine	Poplar
Age at Maturity	130	100	80
Height at Maturity	55-60	55	55
Mean Annual Increment, cu.ft./acre	10-12	10-12	10-15

- (i) Estimate in acres any significant losses due to fire, insects, blowdown, etc. and the year of occurrence.

-- None Recorded

- (j) Estimate annual cut in past five years.

-- 5 - 10,000 f.b.m.

- (k) Estimate annual cut for next five years.

-- 15,000 f.b.m.

II. FOREST MANAGEMENT (ON-RESERVE)

1. Inventories & Plans

	Completed		In Process	
	Yes	No	Yes	No
(a) Photo - reconnaissance	Yr. Completed	XX	Yr. to be Completed	XX
(b) Survey - with field work		XX		XX
(c) Management plans and/or recommendations		XX		XX
(d) Operating plans		XX		XX
(e) Sponsoring Agency		XX		XX

Fed. Govt. _____ Prov. Govt. _____ Band _____ Private _____

2. Silviculture -- past five years

(a)

Treatments	Acres Treated	Species Involved	Age Trees	Year Treated	Objectives of Treatment	Est. Cost Per Acre
Seeding						
Planting						
Cleaning						
Thinning						
Pruning						
Fertiliza- tion						
Other -- specify						

(b) Sponsoring Agency

N/A

Fed. Govt. _____ Prov. Govt. _____ Private _____ Band _____

(c) Are treatments required on the reserve at the present time?

-- N/A

(d) If so, what are the priorities?

-- N/A

(e) If so, what is the purpose of this treatment?

-- N/A

- (f) Are there any treatments schedules for the next five years?
If so, fill out table as in (a).

Treatments	Acres Treated	Species Involved	Age Trees	Year Treated	Objectives of Treatment	Est. Cost Per Acre
Seeding						
Planting						
Cleaning						
Thinning						
Pruning						
Fertiliza- tion						
Other -- specify						

- (g) In your opinion, what sectors of a forest management plan should receive short term priority?

- i) Growing Stock: N/A
- protection _____
- regulation _____
- silviculture _____
- ii) Transportation:
- road development _____

iii) Markets:

product research _____

promotion advertising _____

iv) Other:

please elaborate _____

III. WOOD PROCUREMENT1. Questions

(a) Where is the wood being cut at the present time?

-- On-reserve _____ distance from point of sale*
 _____ miles.

-- Off-reserve XX distance from point of sale*
5 miles.

(b) If wood is extracted from off of the reserve, what arrangements regarding cutting rights have been made with the owners and who are the owners? What are the terms of the contract in respect of:

Stumpage fees NIL per annum

Tenure (length contract) _____ years

Date commenced _____ mo./yr.

Date to be terminated _____ mo./yr.

Renewable options - elaborate The Reserve is permitted to
 cut on an as required basis
 for its own use.

* If wood utilized on reserve, distance will be to mill site.

(c) Is the current operation conducted on a seasonal basis?

-- This mill had been in position for only a few months at the time of the evaluation, and the logging has not established a pattern.

(d) What has been the average number of months in operation over the past five years?

-- Although portable mills have operated here from time to time, there is no record of cut.

(e) Do you think that the operation could be improved by further mechanization or modernization?

-- No, not for the amounts being cut.

(f) If yes, what type of changes would you recommend?

-- N/A

(g) How would you expect this to affect employment and production?

-- N/A

(h) What in your opinion are the most significant variables working against minimizing production costs on this operation?

Check below: --

Labour:

- | | | |
|-----|--------------------------|----------|
| i) | Skill level - low | _____ |
| | - medium | _____ XX |
| | - high | _____ |
| ii) | Low wages or rates | _____ |

- iii) Lack of motivation _____
- iv) Unavailable on a continuous basis _____
- v) Other - specify _____

Management:

- i) No or poor leadership _____
- ii) No incentives given to labour ... _____
- iii) No training provided _____
- iv) No cost control XX
- v) No production control XX
- vi) Other - specify _____

Equipment:

- i) Antiquated equipment thus high maintenance costs and low productivity _____
- ii) Non-integrated system XX

Logging Chance:

- i) Terrain _____
- ii) Small Wood XX

iii) Bad environment - specify _____

iv) High transportation cost _____

v) Other - specify _____

(i) What is your estimate of the potential output per month if the two most significant constraints were eliminated?

-- The sawmill is small, but capable of producing sufficient rough lumber to meet the needs of the Band.

(j) Is it feasible to eliminate these constraints?

-- N/A

(k) If so, what should be done and what would be the approximate cost?

-- N/A

(l) Estimate how this would affect production, operating costs, and employment.

-- N/A

IV. WOOD PROCESSING

(a) Where is the wood being acquired for the mill at present?

-- On-reserve _____ %

-- Off-reserve XX %

(b) If the wood is acquired off the reserve, from whom is it purchased and at what price?

-- From Crown Land. There is no stumpage fee charged.

- (c) Is the present operation conducted on a seasonal basis?
Specify months in operation.

-- The sawmill has been in location for only a few months.

- (d) What is the average number of months worked per annum?

-- N/A

- (e) Do you think that the operation could be improved by further mechanization or modernization?

-- No

- (f) If yes, what type of changes would you recommend?

-- N/A

- (g) How would you expect these changes to affect employment and production?

-- N/A

- (h) What in your opinion are the most significant variables working against minimizing production costs on this operation?

Check below: --

Labour:

- | | | |
|-----|--------------------------|----------|
| i) | Skill level - low | _____ |
| | - medium | _____ XX |
| | - high | _____ |
| ii) | Low wages or rates | _____ |

- iii) Lack of motivation _____
- iv) Unavailable on a continuous basis .. _____
- v) Other _____

Management:

- i) No or poor leadership _____
- ii) No incentives given to labour _____
- iii) No training provided _____
- iv) No cost control XX _____
- v) No production control XX _____
- vi) Other _____

Equipment:

- i) Antiquated equipment thus high maintenance costs and frequent downtime _____
- ii) Non-integrated system XX _____
- iii) Other _____

Sawing Chance:

- i) Large wood _____
- ii) Small wood XX
- iii) Bad environment - specify _____
- iv) Other _____

(i) What is your estimate of the potential output per month if the two most significant constraints were eliminated?

-- This is a small mill capable of producing at about 1,500 f.b.m. per day.

(j) Is it feasible to eliminate these constraints?

-- N/A

(k) If so, what should be done and what would be the approximate cost?

-- N/A

(l) Estimate how this would affect production, operating costs, and employment.

-- N/A

(m) What do you think or understand were the objectives of setting up the operation in the first place?

- i) To enable the Band to cut sufficient rough lumber for its own use.
- ii) Make use of a natural resource.
- iii) Band training.

(n) Do you think these objectives are good or sound objectives?

-- Yes

(o) If no, what do you think the objectives should be?

-- N/A

(p) If yes, do you think that the objectives are being met?

-- Yes

(q) Are there other opportunities which would employ as many or more people at the same level of capital investment? Please elaborate.

-- No, the capital investment is low. It does not exceed \$3,000.00.

(r) Do you think that the current operation or investment represents the best opportunity in lieu of the benefits (monetary and social) received by the people involved?

-- Yes

(s) If answer to (r) is yes, what improvements could be made in the current operation? Please elaborate.

-- None at the moment. An addition of a small planer might be beneficial at a later date.

(t) If answer to (r) is no, what alternate investment would you recommend?

-- N/A

V. QUESTIONS CONCERNING THE PRODUCTION MANAGEMENT VARIABLE

(a) How is the present operation organized?

i) cooperative _____

ii) partnership _____

iii) government supervision - yes _____
 (specify who and sources of funding) - no _____
 Owned & financed by the Dept.,
 but it is planned to turn it
 over to the Band later this
 year.

iv) entrepreneurial (people working
 for and paid by a leader other
 than a government official) _____

v) other (specify) _____

(b) What are the motives of present management?

i) maximize profits _____

ii) supply domestic needs XX

iii) employ as many people as possible ... _____

iv) training XX

v) supply open market _____

VI. MARKETING

(a) What per cent of total production (annual) is sold off the reserve?

-- NIL

(b) To whom is this sold and at what price per 1,000 f.b.m.?

-- N/A

(c) Do you anticipate a potential (next five years) market off the reserve?

-- No

(d) If answer to (c) is yes, where and at what price per cord or M f.b.m.?

-- N/A

(e) Who are or would be competitors?

-- N/A

(f) Can the proposed operation compete without government subsidization?

-- No

(g) If no, list main reasons why it cannot compete.

-- A small market for the product.

-- Lack of funds

(h) Are there institutional constraints restricting sales off the reserve? If yes, please specify.

-- No

(i) Do you think local industry would guarantee purchases of wood or timber on an annual or monthly basis?

-- No

(j) What are the estimated requirements for wood?

		Volume (f.b.m.)	
		<u>1971-72</u>	<u>1973-75</u>
i)	<u>Local</u> (reserve or settlements)		
	houses	25,000	25,000 per year
	docks	}	
	fishing camps		
	other		
ii)	<u>Other Government Agencies</u>		
	education - schools		
	health and welfare		
	-- hospitals		
	other		
iii)	<u>Export</u> (off-reserve)		
	industry - mines		
	- mills		
	- tourists		
	consumer - briquettes,		
	decorations		
Total five year requirements - volume (f.b.m.)			200,000
Total value of requirements (estimated)			\$60,000

The following questions relate to marketing management.

(a) Has there been any attempt to market the product via advertising, promotion or other commercial media?

-- No

(b) If yes, what are the approximate costs?

-- N/A

(c) In your opinion, has this promotion been effective?

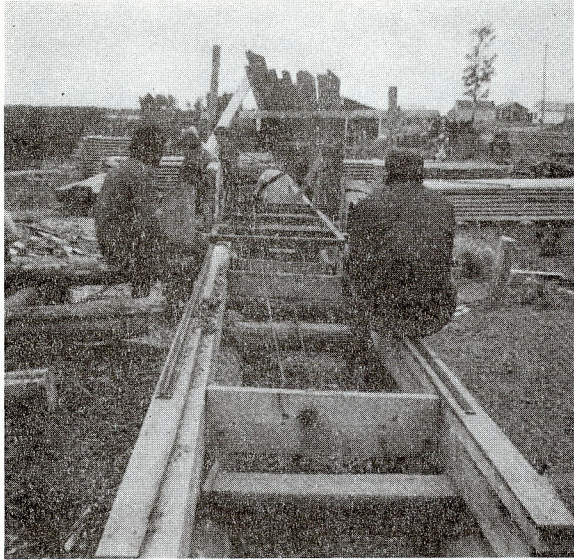
-- N/A

GENERAL INFORMATION

The purpose of this section is to yield information on the physical and cultural setting within which the forestry operation exists.

1. Area Name: KASSABONIKA
2. Agency: SIOUX LOOKOUT
3. Total Area: 15 SQARE MILES
4. Population: 270
5. Number of Family Units: 38
6. Number Children Per Family: 5
7. Labour Force: 35
8. Ethnic Origin: CREE
9. Net Income Per Family: \$1500-1800 (PER YEAR LESS WELFARE)
10. Net Welfare Income Per Family: \$1800 PER YEAR
11. List the present area of employment: FISHING, GOVERNMENT EMPLOYMENT, TRAPPING.
12. List the potential areas of employment: FISHING, TOURIST INDUSTRY
13. What are the more significant problems of the Band: elaborate: ISOLATION

KASSABONIKA, ONTARIO
FORESTRY OPERATIONS



Carriage and Saw



Ladders from Water to Mill



Air Cooled Motor



Lumber Drying in Yard

KASSABONIKA, ONTARIO
 1972 FORESTRY OPERATIONS AS OF SEPTEMBER 1, 1972

VARIABLE COSTS

Purchase of Logs	\$ 375.00
Gasoline	166.28
* Transportation of gas and oil	350.00
Grease	10.00
* Wages	784.00
Total Variable Costs	<u>\$1,685.28</u>

FIXED COSTS

Depreciation of Plant (\$3,000 X 10%)	\$ 300.00
Total Fixed Costs	<u>\$ 300.00</u>
TOTAL COSTS	<u><u>\$1,985.28</u></u>

- (a) Production estimated to be 10,000 f.b.m.
 (b) Average cost per M f.b.m. = \$198.52
 (c) Cost per M for equivalent lumber f.o.b. Kassobonika = \$340.00

* Estimated.

BREAK EVEN CHART
KASSABONIKA, ONTARIO
1972 FORESTRY OPERATIONS

