# PME EVALUATION OF THE KASHECHEWAN FORESTRY OPERATIONS

KASHECHEWAN, ONTARIO

(INDIAN-ESKIMO AFFAIRS)

CONFIDENTIAL



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Program Management Evaluators:

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# I N D E X



...ii

LIST OF APPENDICES

# 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 Kashechewan, Ontario.

2. Kashechewan is located on the Albany River, approximately 85 miles northwest of Moose Factory (see Appendix "A"). The mill was purchased by the Department in 1971 and was moved to its present location, and set up in 1972. The primary objective of the mill was to cut local lumber for the school that was to be constructed on the Kashechewan Reserve in 1972-73. It was estimated that approximately 100,000 f.b.m. of lumber could be used for this purpose. The mill was to then be relocated in the settlements of Attawapiskat and Sinclair Island between 1972 and 1975, to similarly provide lumber for the proposed school building programs there.

3. The mill was set up in the spring and summer of 1972 and sawing commenced in August 1972. Approximately 51,000 f.b.m. of lumber had been cut by October 1972, and this lumber was being used in

...2

the construction of the school on the Reserve. Ownership remained with the Department and all expenses pertaining to production were funded by the Department.

1.2 Scope

1. The purpose of this evaluation was to analyze and assess the existing logging and milling project at Kashechewan 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 significant variables restricting maximum output at minimum cost, rather than attempting to optimize output.

2. The settlement at Kashechewan is administered by the James Bay District. At the time of this evaluation there was only one other sawmill administered by the District, and that mill was located at Moose Factory. The Team made a detailed visit to Kashechewan on October 3-4, 1972. During this visit the Team was accompanied by the Regional Forestry Officer. Discussions were held with members of the James Bay District staff, and with the Chief of the Albany Band who was engaged in the actual lumbering operations. Information concerning the wood supply was obtained from the Provincial Ministry of Natural Resources.

...3

3. A standard format prepared by the Laurentian Institute, consisting of a questionnaire and model, has been prepared for the Kashechewan lumbering operation and is attached as Appendix "B" to this report. Some minor modifications have been made to the format due to the lack of certain statistics and the accounting methods carried out at the site of the operations and the James Bay District Offices.

### 1.3 Acknowledgement

1. The PME Team wishes to acknowledge the assistance provided to it by the Toronto Regional Office, the James Bay District, the Ontario Ministry of Natural Resources, and Chief Wesley of the Albany Band.

## II. DISCUSSION

### 2.1 Wood Supply

1. A detailed forestry survey of the Fort Albany Reserve which includes the settlement of Kashechewan has never been carried out. However, records compiled by air photo reconnaissance indicate that the Reserve has a forested area of approximately 26,121 acres out of a total of 89,780 acres.

...4

2. The area within a 60 mile radius of the Reserve boundary has not been surveyed and no survey of this area is planned for the near future. Approximately 71 per cent of the area within a 60 mile radius of the Reserve boundary is classified as waste or water. Merchantable stands of timber are found mainly along the river and stream banks, with spruce comprising about 76 per cent of the total timber, and with the balance being made up of poplar, fir and cedar.

3. Good stands of spruce are known to exist within a few miles of the Reserve, and sufficient timber exists in the immediate area to keep the mill adequately supplied for the foreseeable future. The timber located on Crown Land in this area has not been committed, and no commitments are expected in the next few years.

4. The mill has only been in position for a few months and the logging operation has not established a pattern. The first logging done for the mill was carried out in the winter months of 1971-72. The logs were cut on the Reserve about one-half mile from the mill site. A total of 1,009 logs were cut and delivered to the mill. These were scaled to 69,371 f.b.m. and Department paid a contract price of $80.00 per M f.b.m. for these logs delivered to the mill site, for a total of $5,549.68. An additional 991 logs have been cut but are still in the bush. These logs cannot be transported to the mill site until after freeze-up, because of the lack of heavy equipment.

...5

5. The Band lacks heavy equipment which prevents them from hauling logs from any great distance in the bush. The logs are currently being cut near the edge of the river, where they can be floated to the mill site after break-up occurs. The river bank near the mill site is approximately 30 feet high when the river is at normal flow. This means the logs must be hauled up the river bank to the mill site. Since the Band lacks mechanical equipment the logs are now brought up this steep incline from the river by manual labour. The location of the mill away from the river bank means that further transportation of the logs is necessary after they are brought up the incline from the river. This manual transportation of the logs is time consuming and, therefore, expensive, and a primary contributing factor to the high cost of the logs delivered to the mill site.

6. The use of mechanical equipment to haul or skid the logs to the mill site during the winter months should be investigated. The use of the Band tractor or rented equipment might be feasible, since the distance from the source of the logs to the mill site is not great. If this is not possible or economical, then some form of winch and cable assembly should be used to haul the logs up the high steep river bank. This additional use of mechanical equipment should considerably reduce the current high procurement cost of the logs which currently contains a very high manual labour content.

...6

## 2.2 Organization and Management

1. The forestry operations at Kashechewan have been established there for less than a year. The mill is owned by the Department and the management to date has been provided through contract. To date, the management has been non-Indian and provided from off the Reserve; one manager was hired to set up the mill and another was hired to manage the sawing operations.

2. It was appreciated by the District Office that certain training programs would be required before the local labour could become reasonably productive and produce lumber that would meet the specifications of the construction trade. This training was conducted on the job. The standard of the lumber produced has been high enough to meet requirements, and total production at the time of the evaluation was being used in the construction of the school.

3. Training in respect to the quality of output appeared to be adequate. However, the manager was of the opinion that the work habits of the labour force left much to be desired, and pointed out that local labour was only effective six hours out of an eight hour day. He further noted a degree of resentment towards a non-Indian manager.

...7

4. The Band has been approached concerning the takeover of the mill, but they have shown little interest in this regard, as they feel the mill is not viable at this time. However, the Chief of the Band is of the opinion that he has adequate management, labour, and technical resources on the Reserve to operate the mill if outside financing is made available.

2.3 Security

1. The entire cut to date has been moved to the school site so that security of the finished lumber does not present a problem at this time. The mill is located at the edge of the village and can be kept under constant observation. The slab wood resulting from the first cut has been distributed throughout the settlement, and no inventory of logs or lumber was on hand at the time of the evaluation.

2.4 Facilities and Layout

1. The sawmill and planer are located on the edge of the village and approximately 500 feet back from the bank of the river. The main road from the village leads to the mill, which is situated in a cleared site of approximately two acres in size. The mill is set up in such a manner that the logs brought down the river must be pulled up a steep river bank and then transported about 1,000 feet further before they reach the mill site.

...8

The logs must then be man-handled to the carriage. Since all this transportation is done by hand, it is an inefficient and expensive operation.

2. The Chief of the Band expressed his concern over the lack of mechanized equipment to bring the logs to the mill, and expressed his desire to see the mill moved closer to the site of the logging operation. He was of the opinion that the lumber would be easier and cheaper to move than the logs.

3. The mill was not in new condition when it was purchased, and this has resulted in considerable local criticism. The total cost of the mill erected on site was $13,303.00, and this figure included a new power unit. A detailed break out of costs is shown at Appendix "C". At the time of the evaluation only the head saw and carriage and power unit had been set up. The planer, which is in serviceable condition, was on site, but had not been used. The re-saw was left in the village, and was in a non-serviceable and damaged condition (see Appendix "D").

4. The mill operated for approximately six weeks during the summer and employed an average of six men. Production averaged about 2,000 f.b.m. per eight hour day, but peak production went as high as 3,500 f.b.m. for an eight hour day.

5. The physical condition of the mill caused some production problems, and the mill required constant realignment to ensure a satisfactory end product. The bulk of the sawing was done with a 40 inch saw, but a 48" saw was used on the larger logs.

6. The sawmill as it is presently set up should be capable of sawing 5,000 f.b.m. per day, and the planer should be able to plane at least this amount. The mill is not new and has suffered from transportation and handling. Realignment problems are likely to continue, and care must continue to be exercised in sawing. For these reasons any further move of this mill from its current site should be carefully considered, as it would be an expensive operation, and the mill would be difficult to set up and properly align.

## 2.5 Markets

1. The primary objective of the sawmill was to cut local lumber for the school at Kashechewan, and the initial order was for 50,000 f.b.m. for 1972, which the mill met. The total construction requirement for the school will be more than 50,000 f.b.m., and this additional lumber might have been provided by the mill if the planer had been in operation, and production started earlier.

...10

2. District plans indicate the construction of new schools in the adjacent settlements of Attawapiskat and Sinclair Island between 1972 and 1975, and a further market of between 50,000 - 100,000 f.b.m. for each of these schools should be created. In addition to the above, there is an average of six new homes built each year in Kashechewan, ten per year at Fort Albany, and six per year at Attawapiskat. This would indicate an annual market of 165,000 f.b.m. in the three communities for house construction alone. A market of at least 200,000 f.b.m. for the next two years can, therefore, be anticipated. There is very little construction off the Reserve at the present time, and therefore, there is no outside market for lumber for which this mill can compete.

2.6 Finance

1. The forestry operations have been financed by the Department and with the exception of the slab wood, the lumber has been used by the Department for construction of the school at Kashechewan.

2. A break even chart based on production costs and production output figures has been constructed and is attached as Appendix "E". In addition to the variable costs, a charge for depreciation has also been considered in the construction of the break even chart. The selling price of the rough lumber is

...11

calculated at $115.00 per M f.o.b. Moosonee, plus $85.00 per M f.b.m. transportation charges to Kashechewan, for a total of $200.00 per M f.b.m.

3. The chart indicates that the average cost per M f.b.m. based on an actual production figure of 51 M f.b.m. was $239.00 per M f.b.m., and that the break even point could not be reached under this set of circumstances. The chart in fact indicates that the total loss will increase as sales increase.

4. One obvious factor that accounts for a part of the loss on operations is the high price paid for logs. A quantity of 1,009 logs scaled out to 69,371 f.b.m., and these were purchased at the contract price of $80.00 per M. However, these logs produced only 51 M f.b.m. of lumber, so that the procurement cost in fact was approximately $108.00 per M f.b.m. A second factor was the high cost of the mill and resultant annual depreciation cost. In determining depreciation, the full procurement and set up costs were considered.

5. A second break even chart has been constructed and is attached as Appendix "F". This chart is intended to indicate the results that would have been achieved had the procurement price of the mill been written off after purchase. This chart indicates that under this set of conditions the forestry operations would have made a

...12

small profit. It must be noted, however, that repair and maintenance costs charged are very low since the mill was set up this year. In future years a higher cost for these expenses must be expected.

## III. CONCLUSIONS

1. There is an adequate available supply of timber in the immediate area to meet the needs of the sawmill for the foreseeable future.

2. Logs are available within a short distance from the sawmill, but the mill is located in such a position that the logs must be man-handled up a very steep river bank. The lack of heavy equipment in the logging operation results in the heavy use of manual labour which contributes to the high procurement cost of the logs.

3. There is an adequate supply of local labour, but local management is inexperienced in the operation of small enterprises. Local labour is only 75 per cent productive.

4. The lumber currently being produced is of good quality, but the planer must be placed in operation if the material is to be used for house construction.

...13

5. The primary objective of enabling the Band to provide lumber for school construction on their Reserve has been met to some degree. If additional logs had been available at the mill site, it is possible that more lumber could have been used.

6. The sawmill is not new, although it was purchased and set up this year. It is capable of producing lumber to the specifications required for house construction although constant realignment is necessary while cutting. Any additional move of this mill would be a risky and expensive proposition.

7. A continuing market of 165,000 f.b.m. per annum exists in the immediate area.

8. A total of 51 M f.b.m. has been cut to date at an average cost of $239.00 per M. Lumber of equivalent quality can be imported for $200.00 per M. The mill has not been a viable enterprise.

9. The forestry operation could be a marginal enterprise if the $13,304.00 capital already expended is written off and if procurement and production costs are carefully controlled and managed.

...14

## IV. RECOMMENDATIONS

1. It is recommended that:

   (a) the James Bay District retain the mill on its present site and finance its operations for the following year;

   (b) the approximate 1,000 logs now cut in the bush be recovered and brought to the mill site;

   (c) that a mechanical means, such as a winch and cable assembly, be installed to haul the logs up the river bank;

   (d) a lumber list indicating the lumber requirement for house construction at Kashechewan, and Fort Albany be drawn up, and that sufficient logs be procured and moved to the mill site this winter to provide at least 100,000 f.b.m. of the lumber requirement for the next year;

   (e) a professional manager be hired on a contract basis next year to manage the sawing and planing operations, and that stringent cost and production figures for this operation be maintained;

   (f) the new objectives of the forest enterprise at Kashechewan be:

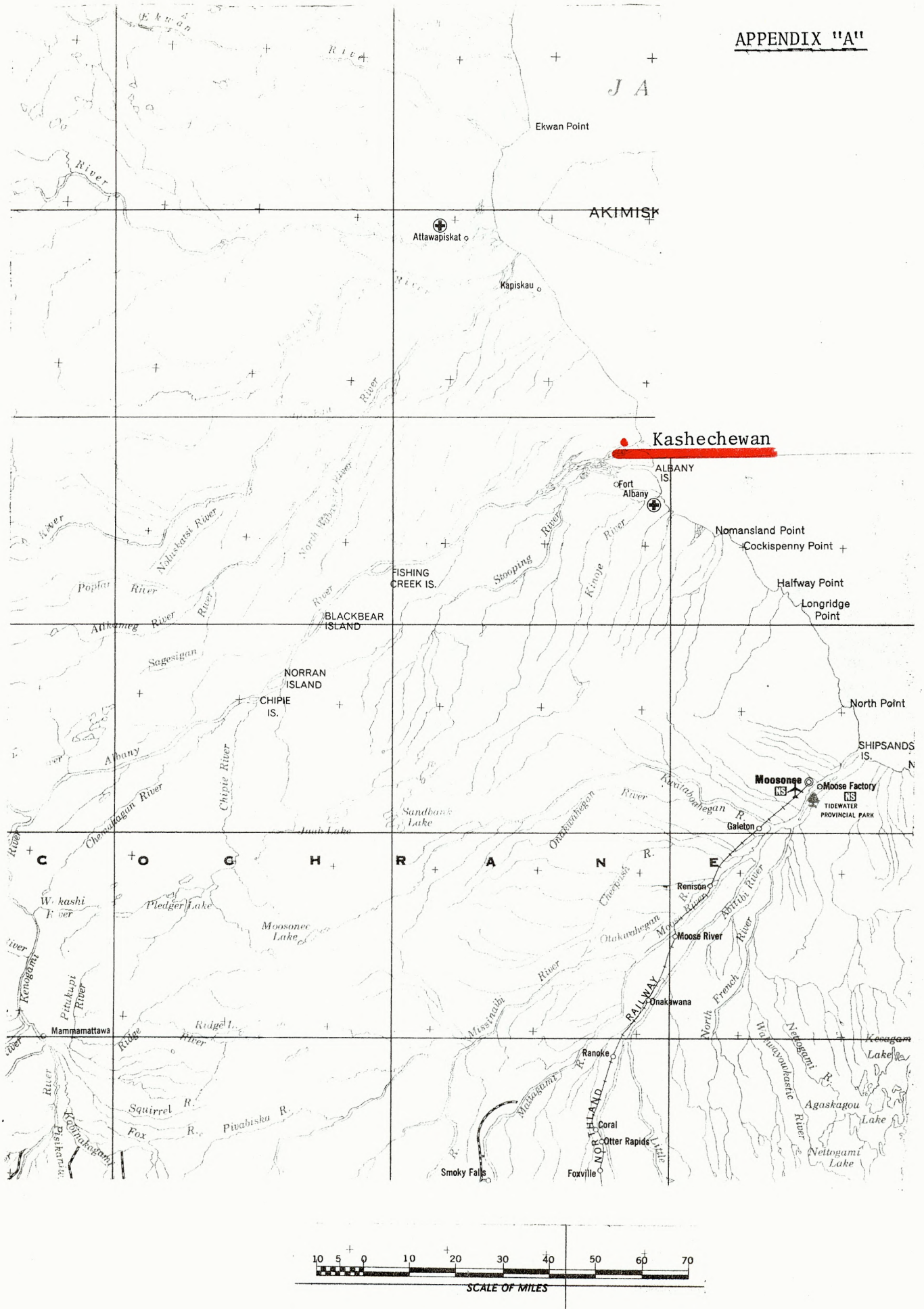
      (i) to provide local lumber to meet the housing and general construction needs of the Band;

...15

(ii) to train Indian people in the general operation and management of small saw-mill operation;

(iii) to provide local employment for Band members.

APPENDIX "A"


Kashechewan
Ekwan Point
AKIMISKI
Attawapiskat
Kapiskau
ALBANY IS.
Fort Albany
Nomansland Point
Cockispenny Point
Halfway Point
Longridge Point
FISHING CREEK IS.
BLACKBEAR ISLAND
NORRAN ISLAND
CHIPIE IS.
North Point
SHIPSANDS IS.
Moosonee
NS
Moose Factory
NS
TIDEWATER PROVINCIAL PARK
Galeton
Renison
Moose River
Onakawana
RAILWAY
Ranoke
Coral
Otter Rapids
Foxville
Smoky Falls
Mammamattawa
Pledger Lake
Moosonee Lake
Sandbank Lake
Agaskagou Lake
Kenagam Lake
Nettogami Lake
CHOGHRANE
SCALE OF MILES
10 5 0 10 20 30 40 50 60 70

APPENDIX "B"

*KASHECHEWAN, ONTARIO*

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

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

*Total Reserve - 89,780 Acres*
*(Including Ft. Albany)*

## I. WOOD SUPPLY (POTENTIAL)

### 1. On-Reserve

(a) Total forested area ..... *26,121* acres

(b) Total accessible forested area ..... *26,121* acres

(c) Forest distribution (acres)

| Cover Type | Mature Acres | Immature Acres | Young Acres | Total |
|---|---|---|---|---|
| Softwood | | *12,658* | *8,079* | *20,737* |
| Mixedwood | *897* | *2,693* | | *3,590* |
| Hardwood | *897* | *897* | | *1,794* |
| Total | *1,794* | *16,248* | *8,079* | *26,121* |

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

| | |
|---|---|
| Black Spruce ..... } White Spruce ..... } | *76 %* |
| ~~Jack Pine~~ ..... | |
| Balsam Fir ..... | *1 %* |
| White Poplar ..... } Black Poplar ..... } | *22 %* |
| White Birch ..... | *1 %* |
| | *100 %* |

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

| *Cover Type* | *Mature Acres* | *Immature Acres* | *Young Acres* |
|---|---|---|---|
| *Softwood* | *Not available by age distribution.* | | |
| *Mixedwood* | *Average merchantable cords per acre is* | | |
| *Hardwood* | *estimated at six.* | | |
| *Average* | | | |

(f)

| | White & Black Spruce | Jack Pine | White Poplar |
|---|---|---|---|
| Age at Maturity | *130* | *NIL* | *80* |
| Height at Maturity | *55-60* | *"* | *55* |
| Mean Annual Increment, cu.ft./acre | *Approximately 6 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.

-- *1000,000 f.b.m. in 1972.*

...3

(i) Estimate annual cut for next 5 years.

-- *150,000 f.b.m.*

2. Off-Reserve (information based on the average square mile)

(a) Ownership -- Crown ..... *ALL* square miles

-- Private ..... *NIL* square miles

-- Water *& Muskeg* ..... *71%*

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

-- *Yes, Ontario Provincial Government - short term timber lease.*

(c) Total forested area.

-- *29% of the total area is considered to be forested*

(d) Total accessible forested area.

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

(e) Forest distribution (acres)

| Cover Type | Mature Acres | Immature Acres | Young Acres | Average Sq. Miles |
|---|---|---|---|---|
| Softwood | *Not available in detail by acreage* | | | *23%* |
| Mixedwood | *distribution. Estimate is by aver-* | | | *4%* |
| Hardwood | *age sq. mile of which 29% is forested* | | | *2%* |
| *Total* | *2%* | *18%* | *9%* | *29%* |

...4

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

| | |
|---|---|
| Black Spruce ..... | 76 % |
| White Spruce ..... | |
| ~~Jack Pine~~ ..... | |
| Balsam Fir ..... | 1 % |
| White Poplar ..... | 22 % |
| Black Poplar ..... | |
| White Birch ..... | 1 % |
| | 100 % |

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

| *Cover Type* | *Mature Acres* | *Immature Acres* | *Young Acres* | *Average* |
|---|---|---|---|---|
| *Softwood* | *Not available by age distribution.* | | | |
| *Mixedwood* | *Average merchantable cords per acre* | | | |
| *Hardwood* | *is estimated at six.* | | | |
| *Average* | | | | |

(h)

| | Black & White Spruce | Jack Pine | Poplar |
|---|---|---|---|
| Age at Maturity | *130* | *NIL* | *80* |
| Height at Maturity | *55-60* | | *55* |
| Mean Annual Increment, cu.ft./acre | *Approximately 6 cu.ft. per acre for softwoods.* | | |

...5

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

-- *None*

(j) Estimate annual cut in past five years.

-- *No significant cut*

(k) Estimate annual cut for next five years.

-- *None*

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 _____

...6

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 | | | - - - *N I L* - - - | | | |
| Pruning | | | | | | |
| Fertilization | | | | | | |
| Other -- specify | | | | | | |

(b) Sponsoring Agency *N/A*

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

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

-- *NO*

(d) If so, what are the priorities?

-- *N/A*

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

-- *N/A*

...7

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

-- *NO*

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

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

i) Growing Stock:

protection ..... _____

regulation ..... _____

silviculture ..... _____

ii) Transportation: *(SECOND PRIORITY)*

road development ..... _____

...8

iii) Markets: *(FIRST PRIORITY)*

product research ..... _____

promotion advertising ..... _____

iv) Other:

please elaborate ..... _____

## III. WOOD PROCUREMENT

### 1. Questions

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

-- On-reserve *XX* distance from point of sale*

*one-half* miles.

-- Off-reserve _____ distance from point of sale*

_____ 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 ..... *N/A* per annum

Tenure (length contract) ..... _____ years

Date commenced ..... _____ mo./yr.

Date to be terminated ..... _____ mo./yr.

Renewable options - elaborate .... _____

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

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

-- *This mill has been in position for only a few months at the time of 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?

-- *Two months in 1972 only.*

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

-- *Yes*

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

-- *Have to find some means of hauling logs by mechanical equipment. At present it is being done manually.*

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

-- *Would not change production or employment due to limited market, but would reduce operating costs.*

(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 ..... *XX*

- medium .....

- high .....

ii) Low wages or rates ..... *XX*

...10

iii) Lack of motivation ..... _____

iv) Unavailable on a continuous basis _____

v) Other - specify ..... *Poor work habits, Productive hours average ~~6 hrs out of an 8~~ hr shift*

Management:

i) No or poor leadership ..... *Weak*

ii) No incentives given to labour ... *XX*

iii) No training provided ..... *XX*

iv) No cost control ..... *XX*

v) No production control ..... *XX*

vi) Other - specify ..... _____

Equipment:

i) Antiquated equipment thus high maintenance costs and low productivity ..... *XX*

ii) Non-integrated system ..... *XX*

Logging Chance:

i) Terrain ..... *GOOD*

ii) Small Wood ..... _____

...11

iii) Bad environment - specify ..... *Logs have to be hauled up a 30 ft. bank from water's edge to ground level.*

iv) High ~~transportation~~ *hauling* cost ..... *Logs are hauled by manual labour.*

v) Other - specify ..... _____

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

-- *(a) Double Production or, (b) Reduce Production costs by 50%*

(j) Is it feasible to eliminate these constraints?

-- *Yes, mechanical equipment can be installed to reduce manual labour, but work habits can only be improved through time.*

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

-- *Utilize possible existing equipment or if necessary purchase additional equipment to establish a system of hauling logs from the water's edge, up the river embankment and to the mill. New equipment costs should not exceed $1,000.00.*

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

-- *Reduce operating costs by 20%; Reduce employment by two man months; Increase production by 25%.*

## IV. WOOD PROCESSING

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

-- On-reserve ..... *100* %

-- Off-reserve ..... _____ %

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

-- *N/A*

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

-- *No pattern yet established. Summer operation proposed for the future.*

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

-- *Six men for two months.*

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

-- *Not at the present time, except that the planer should be placed in operation.*

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

-- *N/A*

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

-- *Better quality end product increase employment by four man months.*

(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 ..... *XX*

- medium .....

- high .....

ii) Low wages or rates ..... *XX*

...13

iii) Lack of motivation ..... XX

iv) Unavailable on a continuous basis .. _____

v) Other ..... _____

Management:

i) No or poor leadership ..... WEAK

ii) No incentives given to labour ..... XX

iii) No training provided ..... XX

iv) No cost control ..... XX

v) No production control ..... XX

vi) Other ..... _____

Equipment:

i) Antiquated equipment thus high maintenance costs and frequent downtime ..... XX

ii) Non-integrated system ..... XX

iii) Other ..... _____

...14

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

-- *Yes, but do not go far enough.*

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

-- *To produce lumber for local housing and for other Band needs and to provide training for Indian people.*

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

-- *Primary objective has been basically met.*

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

-- *NO*

(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.

-- *(a) New Objectives should be set for this operation;*
*(b) Production planning should be introduced;*
*(c) Financing by the District.*

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

...16

V. QUESTIONS CONCERNING THE PRODUCTION MANAGEMENT VARIABLE

(a) How is the present operation organized?

i) cooperative ..... _____

ii) partnership ..... _____

iii) government supervision - yes ..... *Owned and Operated by the Department*
(specify who and sources of funding) - no ..... _____

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 ... *XX*

iv) training ..... *XX*

v) supply open market ..... _____

VI. MARKETING

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

-- *NONE*

...17

(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.

-- *Finished spruce can be brought in to Kashachewan for $210.00 per M f.b.m.. At present it is costing Kashechewan $239.00 per M f.b.m. to manufacture rough lumber.*

(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*

...18

(j) What are the estimated requirements for wood?

| | Volume (f.b.m.) | |
|---|---|---|
| | 1971-72 | 1973-75 |
| i) Local (reserve or settlements) | | |
| houses | *120,000 per yr.* | *120,000 per yr.* |
| docks | | |
| fishing camps | | |
| other | | *20,000 per yr.* |
| ii) Other Government Agencies | | |
| education - schools | *100,000* | *200,000* |
| health and welfare -- hospitals | | |
| other | | |
| iii) Export (off-reserve) | | |
| industry - mines | | |
| - mills | | *NIL* |
| - tourists | | |
| consumer - briquettes, decorations | | |
| Total five year requirements - volume (f.b.m.) | | *900,000* |
| Total value of requirements (estimated) | | *$180,000.00* |

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: *KASHECHEWAN*

2. Agency: *MOOSE FACTORY, JAMES BAY DISTRICT*

3. Total Area: *89,780 ACRES ( INCLUDES FT. ALBANY)*

4. Population: *500*

5. Number of Family Units: *126*

6. Number Children Per Family: *3*

7. Labour Force: *90*

8. Ethnic Origin: *CREE*

9. Net Income Per Family: *3,600*

10. Net Welfare Income Per Family: *1,200*

11. List the present area of employment: *HANDIWORK, GUIDING, GOVERNMENT EMPLOYMENT, HUDSON BAY COMPANY, HOUSE AND BUILDING CONSTRUCTION.*

12. List the potential areas of employment: *AS ABOVE*

13. What are the more significant problems of the Band: elaborate:

-- *ISOLATION.*

# KASHECHEWAN SAWMILL
## EQUIPMENT INVENTORY AS OF OCTOBER 1972

| ITEM | QUANTITY | | PURCHASE PRICE |
|---|---|---|---|
| Sawmill | Forano Portable with 40" and 48" blades | - 1 | |
| Planer | | 1 | $ 4,000.00 |
| Re Saw | Bolenders (unserviceable) | - 1 | |
| Pulleys, Belts, Etc. | Miscellaneous | | 500.00 |
| Power Plant | Perkins Diesel Unit Serial No. 28280 (New) | - 1 | 3,400.00 |
| | | | $ 7,900.00 |

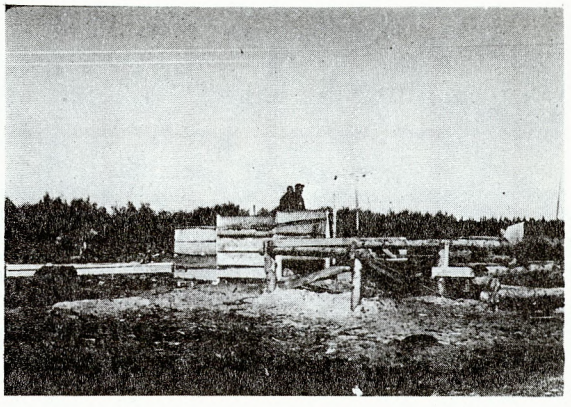
TRANSPORTATION AND SET UP COSTS

| | | |
|---|---|---|
| Transportation Costs | $ 4,228.46 | |
| Set up Costs | 1,175.09 | |
| | | $ 5,403.55 |

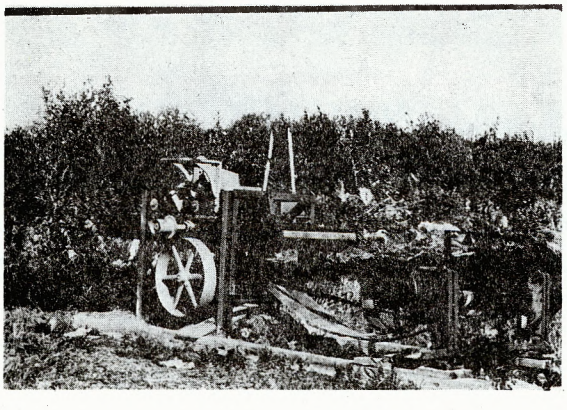
COST OF MILL ERECTED ON SITE ..... $13,303.55

# KASHECHEWAN, ONTARIO
## SAWMILL

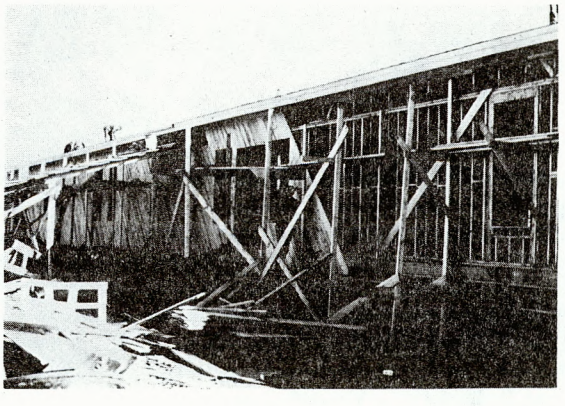
Headsaw and Carriage



Sawmill Site



Planer



Lumber siding from Sawmill being used on new School Construction.

KASHECHEWAN FORESTRY OPERATIONS

FOR THE PERIOD APRIL 1, 1972 - OCTOBER 3, 1972

VARIABLE COSTS

| | | |
|---|---|---|
| Wood Procurement (Logs scaled to 69,371 f.b.m. at $80.00 per M f.b.m.) | $ 5,549.68 | |
| Management | 1,840.02 | |
| Labour | 3,058.00 | |
| Fuel (405 gals. @ 75¢) | 303.75 | |
| Transportation | 70.80 | |
| Spare Parts | 36.86 | |
| Miscellaneous Expenses | 25.76 | |
| Total Variable Costs | | $ 10,886.87 |

FIXED COSTS

| | | |
|---|---|---|
| Depreciation - Plant and Equipment ($13,304.00 X 10%) | $ 1,330.00 | |
| Total Fixed Costs | | $ 1,330.00 |
| TOTAL COSTS | | $ 12,216,87 |

Notes:

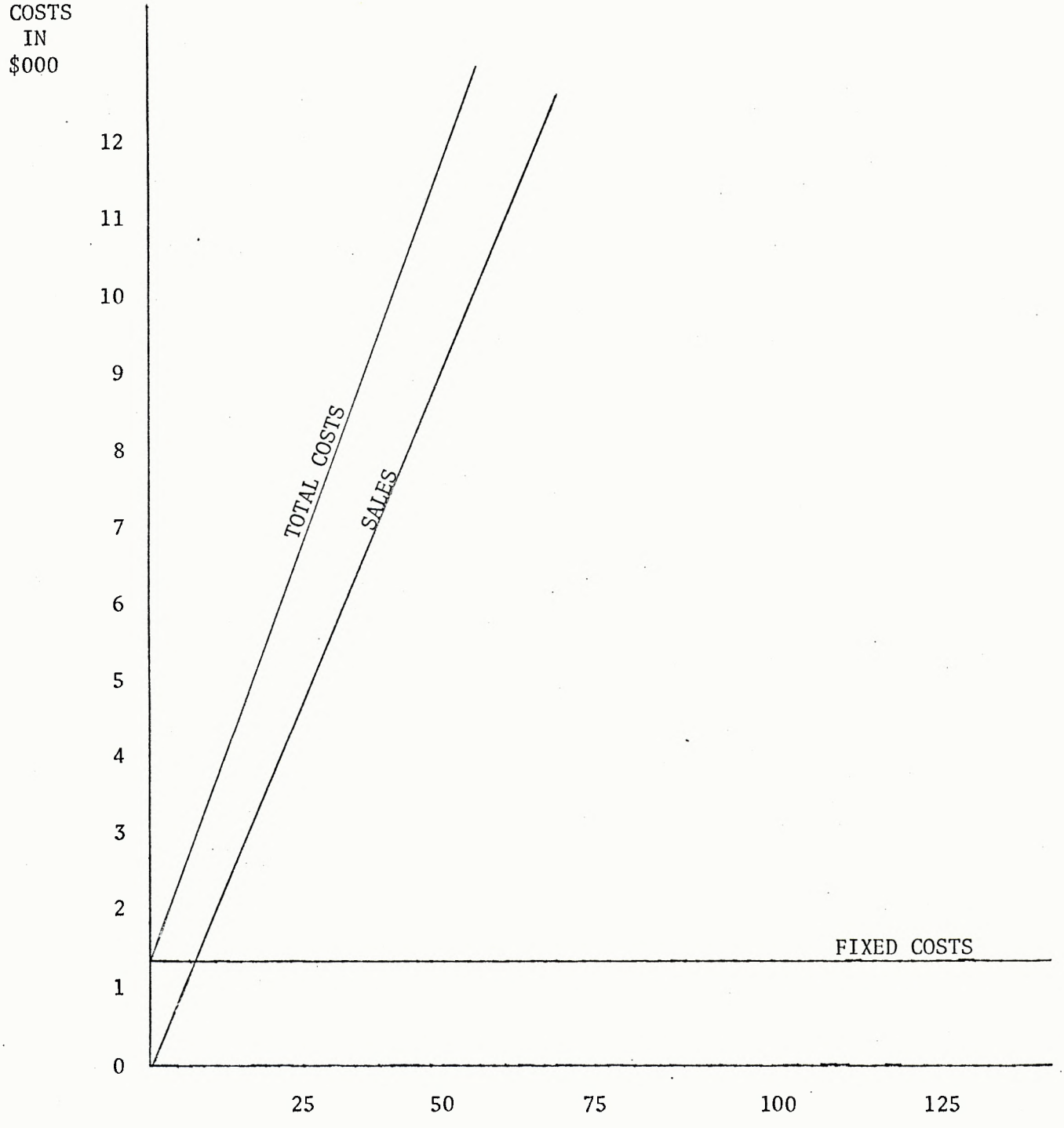
(a) Production for Period = 51,000 f.b.m.

(b) Average Production Cost = $239.00 M f.b.m.

(c) Selling price for equivalent lumber is $115.00 per M f.b.m., fob Moosonee, plus $85.00 per M transportation charges to Kashachewan = $200.00 M f.b.m.

KASHECHEWAN FORESTRY OPERATIONS

BREAK EVEN CHART



# KASHECHEWAN FORESTRY OPERATIONS
## FOR THE PERIOD APRIL 1, 1972 - OCTOBER 3, 1972

### VARIABLE COSTS

| | | | |
|---|---|---|---|
| * | Wood Procurement (logs scaled to 51,000 f.b.m. at $80.00 per M f.b.m.) | $ 4,080.00 | |
| | Management | $ 1,840.00 | |
| | Labour | 3,058.00 | |
| | Fuel | 303.75 | |
| | Spare Parts | 36.86 | |
| | Miscellaneous Expenses | 25.76 | |
| | Total Variable Costs | | $ 9,344.37 |

### FIXED COSTS

* NIL

| | |
|---|---|
| TOTAL COSTS | $ 9,344.37 |

Production for period = 51,000 f.b.m.
Average production cost = $183.00 per M f.b.m.
Selling Price = $200.00 per M f.b.m.

* Assumed for illustration purposes.

KASHECHEWAN FORESTRY OPERATIONS