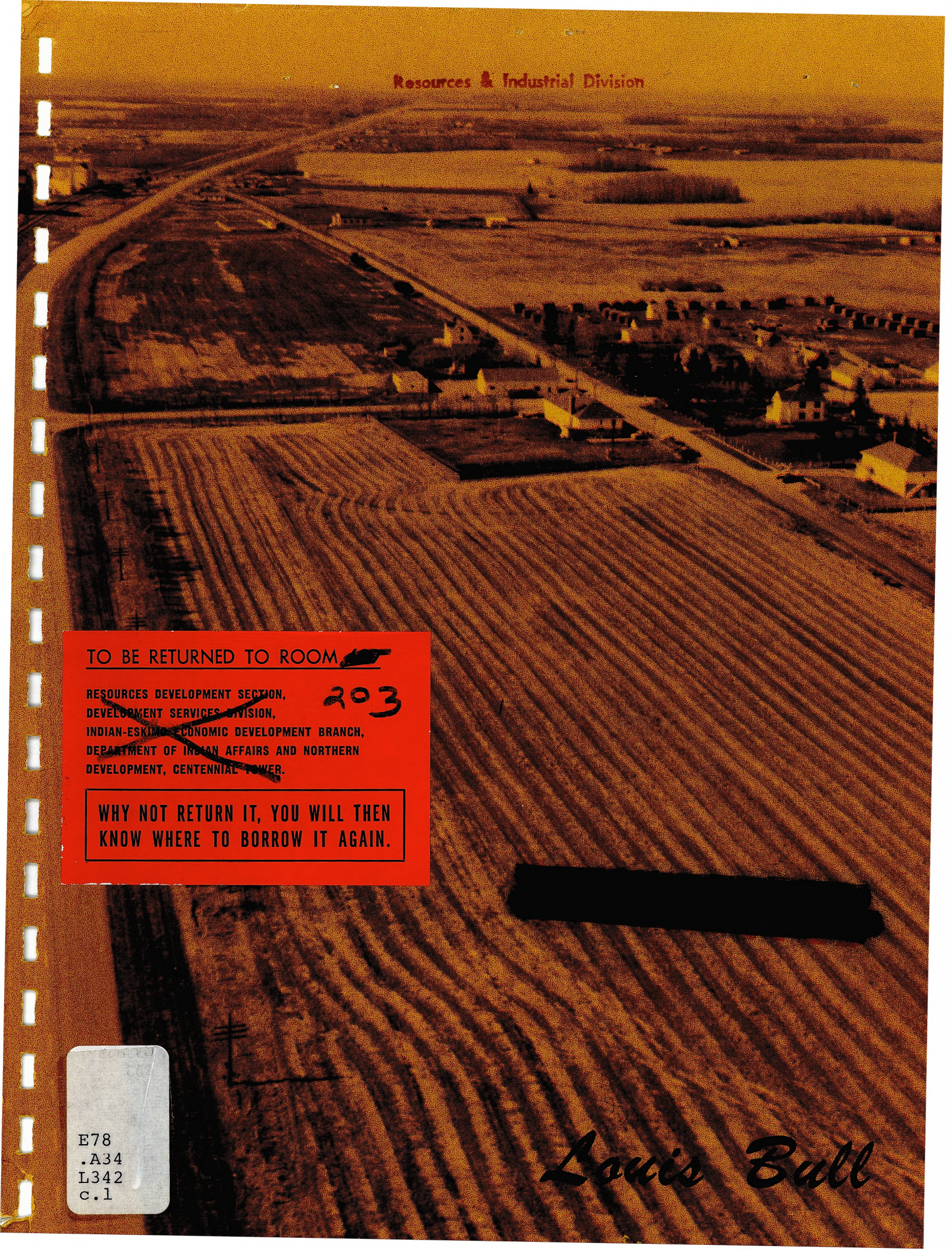

Louis Bull

A LAND USE AND SOCIO-ECONOMIC STUDY

OF THE

LOUIS BULL INDIAN RESERVE NO.138B

PREPARED FOR
THE DEPARTMENT OF
INDIAN AFFAIRS AND
NORTHERN DEVELOPMENT

BY
STANLEY ASSOCIATES ENGINEERING LTD

1969

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May 23, 1969

File: 791-4-a

Mr. T. Turner,
District Supervisor,
Edmonton-Hobbema District,
Dept. of Indian Affairs & Northern
Development

and

Band Members & Council,
Louis Bull Indian Reserve.

Gentlemen:

Re: Socio-Economic and Land-Use Study

We are pleased to present herewith the findings of our recent studies relative to the Louis Bull Indian Reserve. We trust that the high level of cooperation which we have received throughout the duration of our studies is reflected in the pertinance and usefulness of our Report.

We would be pleased to provide any continuing assistance that you might deem necessary in order to arrive at a comprehensive and viable development program.

Respectfully submitted,

Stanley Associates Engineering Ltd.

J. M. Lainsbury, P. Eng., MTPIC,
Study Director.

F. J. Dusel, P. Eng.,
Vice-President.

SOCIO-ECONOMIC & LAND USE STUDY

LOUIS BULL INDIAN RESERVE NO. 138 B

STUDY PARTICIPANTS

LOUIS BULL BAND COUNCIL

Chief: James Bull

Councillors: Joe Brown, Harry Lightning, Dan Deschamps, Simon Threefingers

INDIAN AFFAIRS BRANCH

T. Turner, District Supervisor
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INTRODUCTION

This report has been produced in accordance with a contract dated November 5, 1968, between Stanley Associates Engineering Ltd. and the Edmonton-Hobbema District, Indian Affairs Branch.

The socio-economic and land use studies authorized by the above contract were designed to evaluate the resource potential, both physical and human, of the Hobbema Reserves, and to recommend programs of resource development for the benefit of the Indian people concerned, having regard for the desires and abilities of these Indian people.

The reader should refer to the Four Band Report for discussion involving development opportunities and recommendations relevant to the Hobbema group of Reserves as a whole.

Throughout the duration of this study, the researchers have received an extremely high level of co-operation from the Band Councils, Councils' Steering Committee, the Indian Affairs Branch and the Band members as a whole. It is to be hoped that this excellent relationship is reflected in the validity and usefulness of the comments that follow.

SECTION 1 - PHYSICAL DESCRIPTION OF RESERVE

LOCATION

The Louis Bull Indian Reserve No. 138B is one of a group of four Reserves clustered about the community of Hobbema, Alberta. The Reserve is located between Highways 2 and 2A approximately 50 miles south of Edmonton. The location of the Reserve relative to the surrounding region is illustrated by Map No. 1.

The original boundaries of the Reserve as surveyed in 1909 are shown on Map No. 2 and enclosed 13,760 acres. This compares with a present gross area of the Reserve, also shown on Map No. 2, of approximately 8,400 acres. The transaction which played a major role in the evolution of this Reserve was the surrender in 1909 of 5,308 acres. This area was surrendered to the Crown for sale purposes, with proceeds going to the Louis Bull Band. It is important to note that the areas covered by water in the surrendered area were not in fact surrendered, and still form a part of the Louis Bull Reserve.

HISTORICAL BACKGROUND

The Cree Indians are considered to be part of the Eastern Woodlands group, speaking the dialect of the Algonquin language. They moved westward from Ontario into the northern Prairies forming one of the two largest tribes in all of Canada. The Cree Indians of Western Canada have been classified into two groups; the Woodland Cree and the Plains Cree according to whether they lived in the Northern Woods or the Southern Plains. In pre-European times the Plains Cree probably comprised only those few small bands in Northern Saskatchewan and Manitoba that periodically moved out of their homes on the edge of the forest to hunt buffalo herds on the Prairies. By the early 16th Century they appeared to have wandered over that part of the country west of Lake Winnipeg between the Red and Saskatchewan Rivers. They allied themselves with the Assiniboine Indians against the Blackfoot and Sarcee and assimilated some of the culture of their neighbors, particularly the Assiniboine and Ojibwas.

By the middle of the 18th Century the Cree controlled Manitoba, Saskatchewan and Northern Alberta. They were, however, under constant

attack from the Blackfoot Confederacy and in 1784 an epidemic of smallpox swept across the country. Between 1835 and 1868 wars and diseases had reduced the number of Plains Cree Indians from 4,000 to barely 1,000. Their plight was intensified by a steady decrease in the supply of game and fur bearing animals. The various Bands of the Cree nation remained migratory and became scattered in their attempt to maintain a way of life founded upon hunting and trapping.

Many of the Plains and Woodland Cree Indians entered into Treaty No. 6 with the Canadian Government in the fall of 1876 near Fort Carleton. Additional Cree Bands subscribed to terms of the same treaty during the following years. The Cree thus became distributed among various Reserves in the Prairie Provinces.

The Indians forming the Louis Bull Band were paid treaty in 1879 under the name "Stragglers with Tommy La Potack" and "Stragglers with May-May-Now-A-Tow" as Treaty 6 Indians. In 1880 they were paid treaty as a unified Band reduced in number under the name "Stragglers under Noah Muddy Bull Headman of Ermineskin Band, settled near Pigeon Lake". By 1885 they were being paid treaty under the name of the Muddy Bull Band. Noah Muddy Bull died between 1885 and 1886 and in October of 1886 the Band was recognized as the Louis Bull Band. At this time and up until July 1909, no Reserve was designated for this Band.

In 1909, the Ermineskin Indian Reserve No. 138 was divided between the Ermineskin and Louis Bull Bands on the basis that:

(1) The Louis Bull Band existed as a Band prior to the setting aside of the Ermineskin Indian Reserve.

(2) The area of the Ermineskin Indian Reserve in 1889 far exceeded the allotment of land to which the Ermineskin Band was entitled under Treaty No. 6.

(3) By 1909 the Louis Bull Band was established and occupied land on the Ermineskin lndian Reserve.

Thus in June of 1909 an agreement was reached between the Chiefs of the Ermineskin and Louis Bull Bands regarding division of the

original Ermineskin Reserve and the division was approved on the 6th of July, 1909. Eleven days later 5,800 acres of the original 13,760 acres allotted to the Louis Bull Band was surrendered to the Crown for sale.

PHYSICAL ENVIRONMENT

The topography of the Louis Bull Reserve may be described as generally flat to undulating, with more severe topography occurring in the south-central portion of the Reserve in the area of the Bear Hills. Elevations range between 2,500 and 3,000 feet.

Bedrock in the Reserve is covered by a surficial layer of ground mine and lake deposits of Pleistocene Age and Recent wind deposits.

Sand occurs in dunes in Section 22 and 23 and gravels occur in an esker that trends south, on the west border of the Reserve. Surface water is available from Bear Hills Lake to the northwest; ground water is found at depths of 100 feet. Map No. 3 outlines the geology of the Reserve area.

The growing season extends from approximately April 25 to October 6 (Refer to Map No. 4). Average annual precipitation in the area of the Louis Bull Reserve is 18 inches, 12 inches of which falls between May and September (Refer to Map No. 5). The mean "frostfree" period in this area is 90 days.

LOCAL AND REGIONAL SERVICES

Facilities at the community of Hobbema provide day to day low order services for the residents of the Louis Bull Reserve. Services available at Hobbema include a service station, 3 general stores, 2 taxi services, pool hall, cafe and food store, and a confectionary.

Other facilities available at Hobbema include: (a) Catholic Elementary School -- grades 1 to 9 inclusive, 32 teachers; (b) Preventative Health Services Clinic with a staff of 6; (c) Band offices for each of the Hobbema Bands; and (d) A two-sheet artificial ice curling rink.

Higher order retail requirements are obtained at Wetaskiwin, 11 miles to the north; Ponoka, 9 miles to the south; and at Camrose.

The C. P. R. line between Edmonton and Calgary passes through Hobbema and provides service to the four grain elevators at that centre. No rail passenger service is available from Hobbema. The community is serviced by Greyhound Bus Lines, again running between Calgary and Edmonton, with four runs daily to the north and four runs to the south.

Six trucking companies provide service to Hobbema with rates running in the order of $1.50 per hundred pounds from Edmonton to Hobbema. In addition, there are some 10 or 12 distributors who truck supplies directly to retail outlets in the Hobbema community.

Edmonton television channels 3 and 5 are received on the Reserve, as are radio stations from Edmonton, Camrose and Red Deer. C. P. Telegraph facilities are available at the station. Underground telephone cables have been installed throughout the Reserve, but have not yet been hooked up. The Edmonton Journal, Wetaskiwin Times, Albertan and Bear Hills Native Voice are the newspapers available on the Reserve.

HOUSING

The survey of housing conditions on the Louis Bull Reserve was made in December 1968 and completed in January 1969. There appears to be much moving of families between houses on the Reserve and therefore it must be realized that the occupancy rates mentioned below are valid only at the time of the survey and have possibly changed to some degree during the subsequent period of time.

Thirty-four of the fifty-four houses on the Reserve were occupied at the time of the survey, thus giving a vacancy of 37 per cent. Twenty-four of the homes were found to be in good condition, twenty in fair condition and seven in poor condition. Only six houses had a floor area greater than 800 sq. ft., forty houses had a floor area of between 400 and 800 sq. ft., and eight houses had a floor area of less than 400 square feet.

There was an average of 6.9 people per occupied house on the Louis Bull Reserve, in homes ranging from 1 to 5 rooms. There were fifteen homes with five rooms, seventeen with four rooms, fifteen with three rooms, six with two rooms and one with one room. The crowding index, defined as

the number of people per habitable room, ranged from 0.6 to 7.0 with the average being 2.0. Seventeen houses (50 per cent of the occupied houses) had a crowding index of 2.0 or more. A crowding index of 1 is considered a desirable maximum.

Appendix A contains the criteria used for the housing condition survey. The location of houses on the Reserve and their condition of occupancy is shown on Map No. 7.

ROADS

An adequate system of roads is now available on the Reserve. All of the main roads are gravelled. Map No. 8 shows the roads on the Reserve.

GOVERNMENT

Two documents have a major effect on the Louis Bull Band. The first of these is Treaty No. 6, signed on the 25th day of September, 1877.

Treaty No. 6 was proposed because:

> "...it is the desire of Her Majesty to open up for settlement...a track of country...and to obtain the consent thereto of her Indian subjects inhabiting the said tract, and to make a treaty and arrange with them, so that there may be peace and goodwill between them and Her Majesty, and that they may know and be assured of what allowance they are to count upon and receive from Her Majesty's bounty and benevolence;"

The following quotations from Treaty No. 6 are still significant today:

> "...the...Reserves of land or any interest therein may be sold or otherwise disposed by Her Majesty's government for the use and benefit of the said Indians entitled thereto, with their consent first had and obtained; and with a view to show the satisfaction of Her Majesty with the behaviour and good conduct of her Indians, She hereby, through her Commissioners, makes them a present of $12.00 for each man, woman and child belonging to the bands here represented, and extinguishment of all claims heretofor preferred;"

"...Her Majesty agrees to maintain schools for instruction in such reserves hereby made...whenever the Indians of the reserve shall desire it;"

"...the said Indians, shall have the right to pursue their avocations of hunting and fishing throughout the tract surrendered as hereinbefore described, subject to such regulations as may from time to time be made by her Government of her Dominion of Canada, and saving and excepting such tracts as may from time to time be required or taken up for settlement, mining, lumbering, or other purposes..."

"...such sections of the reserves above indicated and as may at any time be required for Public Works and building of what nature soever, may be appropriated for that purpose..."

"...Her Majesty's Commissioners shall,...pay to each Indian person the sum of five dollars per head yearly;"

"...in the event hereafter of the Indians comprised within this treaty being overtaken by any pestilence, or by a general famine, the Queen, on being satisfied and certified thereof by her Indian Agent or Agents, will grant to the Indians assistance of such character and to such extent as her Chief Superintendent of Indian Affairs shall deem necessary and sufficient to relieve the Indians from the calamity that shall have befallen them;"

"...a medicine chest shall be kept at the house of each Indian Agent for the use and benefit of the Indians, at the discretion of such Agent;"

The Indian Act is a special act affecting only those descendents of Indians who signed treaties, such as Treaty No. 6 mentioned above. The nature of the Indian Act is illustrated by the following quotations taken from the office consolidation of the Indian Act R.S.C. 1952 C 149 as ammended.

28.(1) Subject to subsection (2), a deed, lease, contract, instrument, document of agreement of any kind, whether written or oral, by which a band or a member of a band purports to permit a person other than a member of that band to occupy or use a reserve or to reside or otherwise exercise any rights on a reserve is void.

(2) The Minister may by permit in writing authorize any person for a period not exceeding one year, or with the consent of the council of the band for any longer period, to occupy or use a reserve or to reside or otherwise exercise rights on a reserve.

60. (1) The Governor in Council may at the request of a band grant to the band the right to exercise such control and management over lands in the Reserve occupied by that Band as the Governor in Council considers desirable.

(2) The Governor in Council may at any time withdraw from a band a right conferred upon the band under subsection (1)

29. Reserve lands are not subject to seizure under legal process.

32. (1) A transaction of any kind whereby a band or member thereof purports to sell, barter, exchange, give or otherwise dispose of cattle or other animals, grain or hay, whether wild or cultivated, or root crops or plants or their products from a Reserve in Manitoba, Saskatchewan or Alberta, to a person other than a member of that Band, is void unless the Superintendent approves the transaction in writing.

(2) The Minister may at any time by order exempt a band and the members thereof or any member thereof from the operation of this section, and may revoke any such order. (Note: this section has been invoked on the Louis Bull Reserve).

68. (1) The Governor in Council may by order permit a band to control, manage and expend in whole or in part its revenue moneys and may ammend or revoke any such order.

(2) The Governor in Council may make regulations to give effect to subsection (1) and may declare therein the extent to which this act and the Financial Administration Act shall not apply to a Band to which an order made under subsection (1) applies.

The above sections of the Indian Act are significant in several respects. The sections indicate the degree of paternalism to which the Indian is subjected by the Federal Government, which has tried to protect them

from exploitation by whites, but has also tended to keep the Indian dependent upon the Government and isolated from Canadian society. It must be pointed out that the Indian Act does allow some degree of self-determination on the part of the Indians as evidenced by Section 68, and it is important to note that the Louis Bull Band does in fact control its own revenues and expenditures in accordance with this section.

One further section of this Act is pertinent to the discussion which follows in Section 6 of this report.

> 4.(1) The Governor in Council may by proclamation declare that this Act or any portion thereof, except sections 37 to 41 (dealing with surrender of reserve properties), shall not apply to
>
> a. Any Indians or any group or band of Indians,
>
> or
>
> b. Any reserve or any surrendered lands or any part thereof,
>
> and may by proclamation revoke any such declaration.

The Louis Bull Band is governed by a Council composed of one Chief and four Councillors who are elected for a two year term by the members of the Louis Bull Band in accordance with Sections 73 to 86 inclusive of the Indian Act. This Council, presently composed of Chief James Bull and Councillors Joe Brown, Harry Lightning, Dan Deschamps and Simon Threefingers, also represent the Louis Bull Band's interest in the Pigeon Lake Reserve, through their membership on the Four Band Council.

It might be noted at this point that the Four Band Council is composed of the entire Councils of each of the Montana, Samson, Ermineskin and Louis Bull Bands, and acts with respect to matters concerning the Pigeon Lake Reserve which is owned jointly by each of the Four Bands, and with respect to other matters of common interest to all of the Bands.

To this point in time, the Indian has been regarded as the responsibility of the Federal Government. It is not unlikely that this situation will be modified in the near future since the Alberta Government is presently re-

viewing the possibility of taking over Indian welfare services from the Federal Government. Should this happen it would seem likely that other services to Indian people might also be integrated with existing provincial services. Such a situation would appear desirable for two reasons; it would tend to place the services closer to the source, and it would tend to place the Indian in a more reasonable context with respect to the regional and provincial economy. The current apparent dissociation of the Louis Bull Reserve with respect to the surrounding region may be evidenced by the fact that the Reserve has not elected to become a part of the surrounding Regional Planning District, nor is the Reserve considered part of the adjacent county.

SECTION 2 SOCIAL DESCRIPTION OF THE RESERVE

POPULATION

The population of the Louis Bull Reserve as of December 31, 1967 was 419, of whom 61 were males between the ages of 20 and 65. Figure 1 shows the distribution of the population by age and sex in comparison with a similar distribution for the Province of Alberta. It will be noted that the Reserve population is much higher than the provincial average in the lower age groups and somewhat lower in the working age groups. These points have two major implications; firstly the available labour force on the Reserve is low in proportion to the total population and therefore to the requirement for services, and, secondly the high percentage of young people indicates an unusually heavy demand for educational services and facilities. A further implication which must be considered in future planning involves the relatively high proportion of young people who will be entering the labour market within the next decade.

The population density on the Louis Bull Reserve is 32 persons per square mile. In the surrounding agricultural area, the population density is in the order of one family per square mile

Seventy-three per cent of the residents of the Louis Bull Reserve belong to the Roman Catholic Church; 21 per cent are Baptist and 6 per cent belong to the United Church.

In 1959, four per cent of the Band population lived off the Reserve and this percentage remained constant through 1967 .

The population on the Reserve has been increasing rapidly as indicated by Figure 2. Since 1959 there has been an increase in the order of 6 per cent per year in the population. Based on a 5 per cent increase per annum by 1985 the population of the Louis Bull Reserve should be approximately 870 people. This population would be equivalent to a density of 66 persons per square mile throughout the Louis Bull Reserve, or 9.7 acres per capita

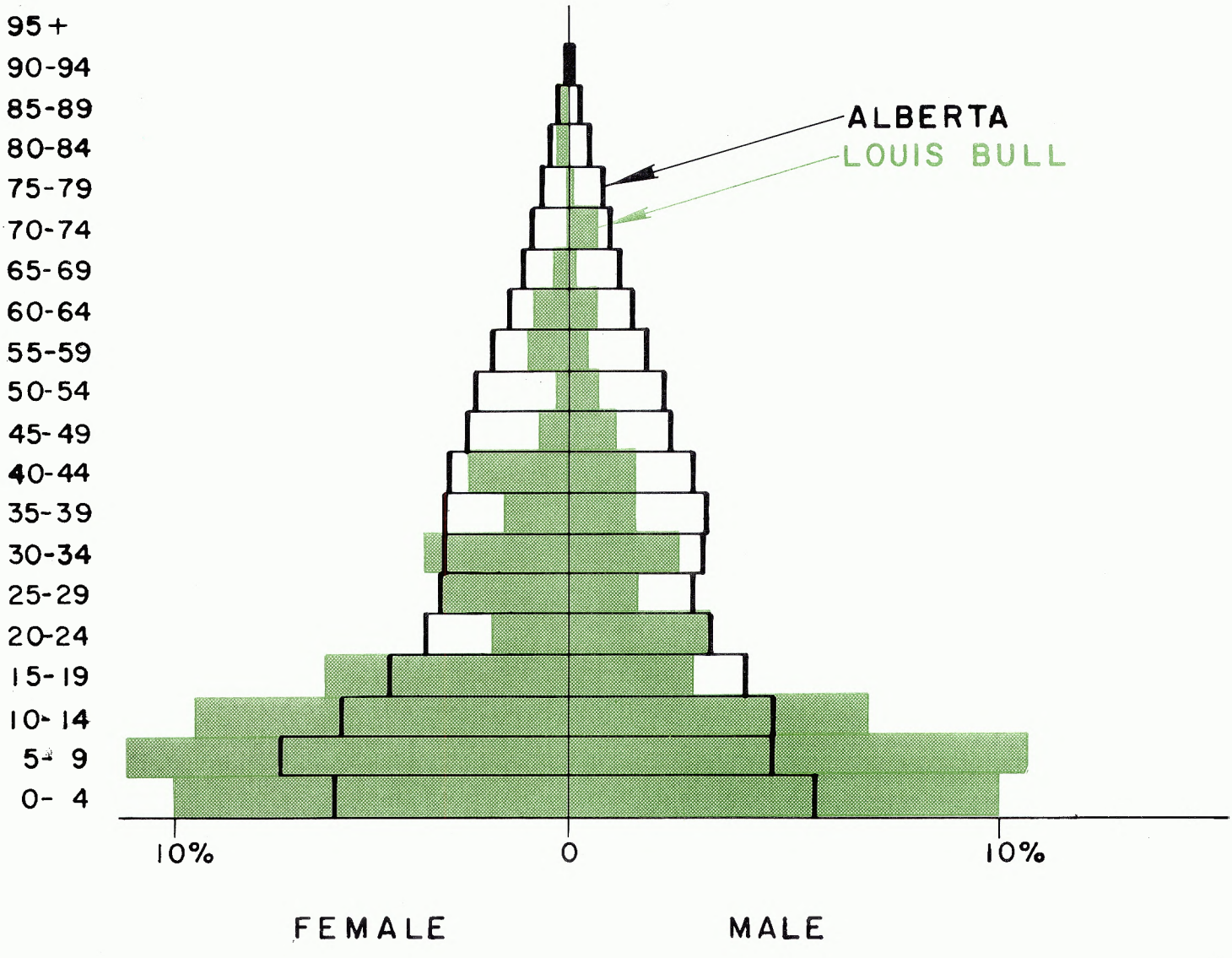

FIGURE 1

AGE-SEX DISTRIBUTION

LOUIS BULL INDIAN RESERVE # 138B

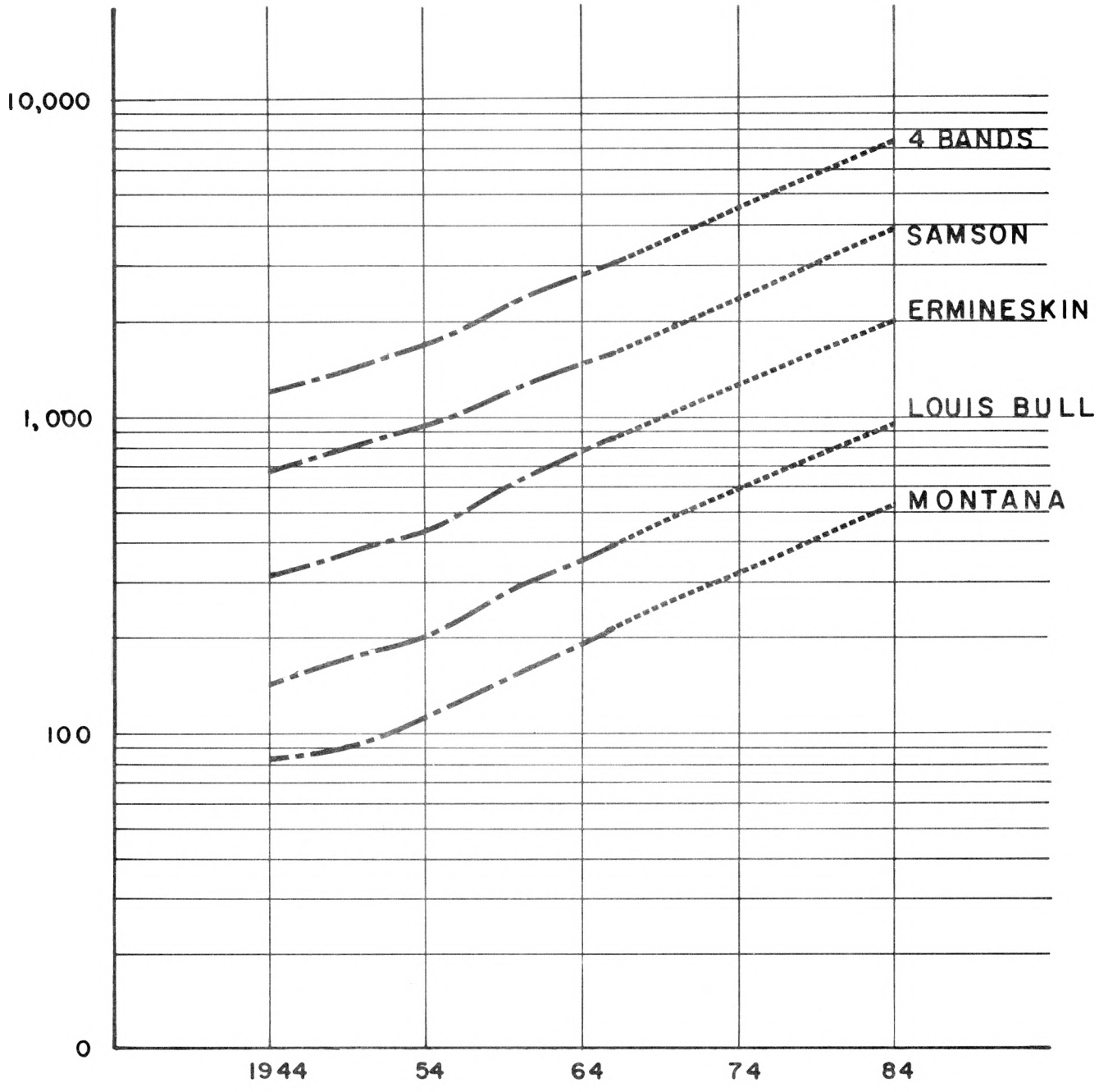

FIGURE 2

POPULATION PROJECTIONS FOR HOBBEMA RESERVES
BASED ON 5 % ANNUAL INCREASES

SOURCE OF HISTORICAL DATA - D.B.S.

EDUCATION

General Introduction

The Louis Bull Reserve has no educational facilities of any kind within its own boundaries. It is entirely dependent on facilities at Ermineskin, Ponoka and other centres. This seems reasonable in veiw of its proximity to other educational facilities and in veiw of its relative size within the Hobbema system. The lack of educational facilities on this Reserve appears to have prevented the formation of an educational identity at any level of the educational system. This is evident in the attitudes toward education on the Reserve and the somewhat hesitant acceptance of many modern ideas. It is quite understandable that many people on the Reserve send their children to school with some reluctance and reservation. It is also understandable that many unemployed adults question the total validity of education which appears to be entirely outside their control or their cognizance.

Many parents on this Reserve endorse education by sending their children regularly to various schools, but the Band has almost no consistent attitude towards the education of its people. It is fragmented and torn between active support and active opposition to a much greater extent than any of the other Reserves in the Hobbema system. There appears to be some evidence of this at all levels within the system

Pre-School

This Reserve has taken advantage to some extent of the pre-school program at Ermineskin. A relatively good staff at that school has attempted to provide a commendable pre-school program for the children from this Reserve. Unfortunately some parents withdrew their children when they, themselves, left the Reserve in the fall of 1968 .

The basic program is meant to provide an opportunity for pre-schoolers to learn English, to adjust to some routines and to become familiar with concepts of the "world outside". No attempt has been made to accelerate the Grade 1 program by an early introduction.

While this program gives the impression of being helpful and successful, it lacks one essential ingredient. There appears to be no involvement of people on the Reserve in planning the program. For this reason there appears to be a lack of identity with the program and its goals as "our program" or "our school".

In-School Program

About half of the students from the Louis Bull Reserve attend the Ermineskin school from Grades 1 - 9. The other half attend integrated schools in Ponoka or Edmonton. A number of prospective Senior High School students attend no school at all. They have dropped out and attempted to find work at various centres around the Reserve. Many parents appear to be quite indifferent to the progress of their children in school and this is reflected in the progress and attitudes of quite a number of students. The purpose of this section is to point out some of the advantages and disadvantages of this system so that Band members may know what is happening to their children. The section is based on observations and discussions with people on the Reserve, with teachers, with Principals, and with children.

Primary and Elementary (Grades 1 - 6)

After children in the Province of Alberta have reached the age of seven, they are required by law to attend school. The children on the Louis Bull Reserve are bussed to the school of their choice, either Ermineskin or Ponoka. Children who attend the Ermineskin school are not integrated with white children while those at Ponoka are. Those children in the Ermineskin school perhaps feel a much closer identity with their own people but are exposed to the feeling among some parents that they are receiving a lesser education. Others are exposed to the determined indifference of their parents. Those children who go to Ponoka experience quite a different kind of parental attitude, but the common attitude appears to be one of suspicion and indifference. What happens to the children at the integrated schools?

(1) Many parents on the Reserve do not know what happens to their children in school. They do not know what is being taught, nor how it is being taught.

(2) Children who have taken the pre-school program seem to have less difficulty when they go to Ponoka for the first time.

(3) Many children have a lot of difficulty with the language. They do not know the meaning of certain words which other students and teachers use. They don't have as much difficulty with language if they can speak English when they first come to school.

(4) It seems that the smaller children fit into the school system quite well and are quite happy but many of the older children seem to be less happy in school. This seems to occur because they do less well in school as they go through the grades and many drop out as soon as they are sixteen.

How does this happen?

It has been noted that children think well of themselves when they first go to school outside the Reserve, but they often fail to keep up with others in school. As soon as they start to fail, they begin to think they are not as good as other children. About half of the students fail at least once before they reach Grade 6. This may happen for many reasons. Some of these reasons may be:

(1) Not many allowances are made in the white schools to change the program for Indian children. The same readers and the same ideas as taught in all white schools are taught by white teachers who know their own society but often know little about Indian culture. Many of the ideas are foreign to the Indian children although it is desirable that they should learn about them.

(2) Some of the teachers understand the problems of Indian children and do their best to help them, but teachers cannot make exceptions when marking children's examination papers in the same class.

(3) Some children from the Reserve often miss school or come late and because there are at present no telephones, the school does not know why the children are absent. Buses from the Reserves to Ponoka have been late more than 50 times in the past school year.

(4) Many children notice more and more as they go through the grades that there is a real difference between what they learn at home and what they learn at school. They begin to see a real difference between the goals of the school and those of their families on the Reserve. Hence, many of them become very frustrated and give up. For example, in school they are taught to do their homework but when they come home, there is no place to do it and little encouragement from parents; in school they are taught many things about other people and other countries, but at home they get very little opportunity to read or to travel; in school they are taught to work with arithmetric, at home they find little use for this because there are not many opportunities to buy, compare and work out mathematical problems; in school they are taught that hard work is a good thing but at home they often find that parents and older brothers and sisters have a very hard time finding jobs and holding them, so they can't work, yet they don't have to starve. Children therefore cannot identify with the goals of the school and have difficulty identifying with the goals of the Reserve. They begin to think less and less of themselves and many of them give up.

How can this situation be changed in the primary and elementary grades?

(1) By inviting parents to school more often and providing the necessary transportation, they will be able to see what is going on in school. Every parent should have a chance to see the teachers in the schools at least twice a year. Interpreters should be provided if necessary. In other places in Canada where people do not speak English, this is done and there is no shame attached to it.

(2) All children who start school should have a chance to attend a pre-school on the Reserve or at Ermineskin for at least two years before they enter the school system.

(3) Children should have a good place to study and read on the Reserve. A good library with many books, records, tapes and even television sets should be provided on the Reserve or at a central location convenient to all of the Hobbema Reserves. This has proven to very helpful in some communities in the North.

(4) More allowances should be made for Indian children in the school programs at Ponoka and other integrated schools. Parents should be helped to understand that this would be an attempt to help their children and not discriminate against them.

(5) Children must be successful most of the time in school in order to think well of themselves and be happy.

(6) Every effort must be made to have school buses arrive at the schools on time.

(7) Teachers should be invited by the Reserve parents to visit their homes not only when there are problems but at other times as well.

(8) Teachers should be come familiar with the Reserve and get to know the ways of life of the children they teach in school. They should be sympathetic to the problems which Indian children face.

(9) Books and stories of Indian history should be taught to both white and Indian children so that both may understand better how the other feels about their culture. Questions raised by white and Indian children about their cultural background should be discussed freely by children in classes with the guidance counselor.

(10) There should be a permanent guidance counselor at Ponoka for primary and elementary children.

Junior High and High School (Grades 7 to 12)

Since many of the children who begin school in Grade 1 do not finish junior high school or high school, it seems apparent that problems exist in this area. In fact, most of the problems begin at the primary and elementary

school level, and the problems faced by high school students are for the most part the same as those faced by the elementary school children. Some of the additional factors which influence students at the high school level are as follows:

(1) Students at the junior high school level begin to look at job opportunities. Boys in particular, begin to wonder what they will do when they grow up.

(2) Many of the job opportunities which teachers describe in school are not known on the Reserve and therefore carry little value for some Indian boys. Girls have a somewhat different attitude towards school since they may learn to cook and sew at school and expect to do this when they get home on the Reserve.

(3) The programs which might assist boys in adjustment are not offered at the integrated schools. These boys are very artistic and skillful with their hands but do not have an opportunity to practice their manual skills. Hence, they lack satisfaction and success in school and tend to drop out. Others drop out because it is the thing to do.

(4) While counselors try to work with these students they often do not fully understand why students drop out.

(5) Many of the students in the junior high schools have little academic success. They almost always have C's and D's in their examinations and hence they land at the bottom of the class and begin to think less and less of themselves in comparison to the rest of the students. This has obvious detrimental effects on their morale.

(6) At Ermineskin, some remedial programs are provided, but these should be extended and enlarged considerably.

The existing system is considered sufficiently worthwhile to justify the attempted correction of some of the difficulties being encountered by Indian students. The following may be considered in this respect.

(1) Many of the suggestions made for the elementary schools may be applied here.

(2) Particular attention should be paid to the problem of the boys in junior and senior high school. It should become important for them to go to school and thus they should be given every opportunity to take part in a much wider program of pre-job training. If it is at all possible for boys to get this opportunity on the Reserve or in town, then a work experience program should be set up in connection with their school work. Even if this means the new program is set up whereby students take their "education" partly out of the school during the school day, this would help the boys understand the need for more education. White boys could also take part in these programs.

(3) Parents should be aware of what is being done in the school and should be encouraged to visit the school often. The principals and teachers think that this could be done and they are in favour of it.

(4) An education centre for students should be set up on the Reserves, which would supplement the learning experience at the Ponoka and Ermineskin schools. This centre should have many opportunities for boys to practice skills learned at school. It should also include a good library and student listening centre. The Bands should decide how such a centre should be established and organized and make plans accordingly.

(5) It is essential that students, parents and teachers work closely together. There should be a serious attempt to help parents understand the problems of the teachers and to help the teachers understand the problems of the students from the Reserve. Effective communications are the key to problem solving.

(6) Parents should have an opportunity to visit many different schools in the province, including technical schools and the Universities, in order to broaden their knowledge of the school system.

(7) A definite remedial program for academic students should be worked out between teachers, students and parents.

(8) A permanent boys' and girls' counselor for Indian students at Ponoka may not be necessary if proper communication is established between counselors, parents and students, but counselors should have many opportunities to visit the school.

Post-School Education

There is considerable evidence that people on the Louis Bull Reserve would like to have a chance to get some additional training and education. At the present time there seems to be no good, continuing program of adult education or training available, yet many of the people have an education much below the grade 6 level.

Some of the problems confronting the adults wishing further education are as follows:

(1) Most adults on the Reserve do not have much education and so cannot take advantage of many standard programs which are available.

(2) Large families and overcrowded conditions make it very difficult for any kind of home study.

(3) The lack of books, magazines and newspapers on the Reserve is very evident. Television and radio are the major sources of outside information available in the home.

(4) Transportation on the Reserve is limited because few people can afford to run cars.

(5) Courses which adults could take are not readily available, although the Indian Affairs Branch provides grants for persons who want to go outside the Reserve to take special vocational training.

(6) Many people on the Reserve do not know what is required to get into special courses.

(7) Many people simply don't realize how much education is required to get and to hold a good job.

(8) Many people on the Reserve have simply given up all hope of ever improving either their education or their ability to get and hold a job after training has been completed.

(9) Very few people on the Reserve appear to have sufficient initiative to do anything about their problems under the present situation.

The following suggestions may be considered in the development of adult or post-school education on the Louis Bull Reserve.

(1) Members must make a serious analysis of the problems associated with adult education. They must assess the latent demand for such courses and must determine the desirable nature of the courses. Many people have suggested that they would like very specific help in upgrading their education and getting training in such areas as mechanics, heavy duty equipment operators, book-keeping, nursing and home-making.

(2) Adult education could take place in the community, during trips off the Reserve and in schools off the Reserve, in private homes or in centres on the Reserves. Members of the Louis Bull Reserve should cooperate with members of the other Hobbema Reserves in an adult education program. Band members must decide what programs they want, how long they want them to run and how much time or money they can contribute to make them a success. Planning and organization should be done by the Band with advisory assistance from without when necessary.

(3) The provision of books, magazines and newspapers could be arranged by Band members with some outside help. Teachers from the schools could help to choose books which could be purchased through Indian Affairs or from Band funds. A real education centre could be set up by the Band with very little assistance

(4) Transportation to and from adult education classes must be arranged. Several teachers have indicated a willingness to go to the Reserve to teach adult classes on a parttime or fulltime basis.

(5) Detailed explanations of all adult courses available to Band members off the Reserve should be made available to all. This information should be obtained and distributed by the Band.

(6) Band members must feel a sense of achievement in both their education and work. Some kind of internal reward system such as public recognition or salary upgrading might be given for improvement of education. The sociological section of this report makes certain recommendations about industry and jobs on the Reserve. These must be closely tied in with adult training and education classes.

(7) Some difficulties will undoubtedly be experienced by new programs but if Band members analyze these problems and discuss freely where they went wrong, then hopefully corrections may be made.

CURRENT SOCIAL ATTITUDES

The following comments by Chief James Bull as reported in the Edmonton Journal, May 11, 1968 relative to proposed changes to the Indian Act, are indicative of the general attitudes of residents of the Louis Bull Band.

> " I think that we should remain in protective custody a little longer, the Government should not try to impose anything against the will of our people. We do not understand the laws of the Government and the Indian Act should be fully explained to us before any changes are made by the Government. We leaders must be very careful when we make our decisions this time, and not make the same mistakes as our forefathers did when they sold our land and rights to the Crown in 1876. It is important that we understand what we are dealing with so that our great-grandchildren will benefit from our decisions. "

The following notes evolved from a sociological survey of Reserve residents carried out during the period of the study.

Employment

Lack of employment was one of the most common problems mentioned during interviews on the Louis Bull Reserve. Apart from the obvious economic implications of unemployment, it was noted that the lack of employment is placing an extreme strain on many of the families on the Reserve. Because the man is constantly home social pressures develop in the house, partially as a result of overcrowding. The man often looks to alcohol for relief and this in turn leads to further problems in terms of socially deviant behaviour.

Another aspect of the employment problem is that some of the men don't want to work fulltime. They would rather have a job that they can leave when they so desire. This attitude has obvious ramifications for any proposed industry on the Reserve. Several people mentioned that if any industry was to be started on the Reserve, it would have to take into account the fact that some people are not going to work steadily at first. People will be late, and will possibly be off work for a few days or even weeks at a time. As one member put it, "We Indians have a system for working things out ourselves, we may not get to work on time, but someone else will show up and we will just have to work it out ourselves. If it is going to be on the Reserve it has got to be Indian".

The labour force survey conducted by the Indian Affairs Branch in 1967-68 indicated that there were 50 people available for employment on the Louis Bull Reserve. These people had an average education of 6.2 grades, however, there are quite a number of these people interested in further training. The skills available on the Louis Bull Reserve as listed in the Labour Force Survey include business training (3), carpenters(2), mechanic (1), home economics (1), leadership course (1). About 75 per cent of the men have had some experience working off the Reserve; most of this has been in the field of agriculture with a few working in lumber camps and road construction.

Housing

Next to employment, housing and overcrowding were the next major problems brought forward by the people on the Louis Bull Reserve. As previously mentioned in Sectinn 1 of this report, the average crowding index on the Reserve is 2.0. This situation of overcrowding is causing many problems, which were accentuated during the severe cold spell in January 1969. In order to conserve funds allocated for heating, several families doubled up. One specific result of the ensuing overcrowding was the deterioration of study habits of many school children who were placed in a position of trying to study in the same room in which five or six younger children were playing. This situation resulted in lower marks and poor school attendance.

One band member commented that the overcrowding situation was making it extremely difficult for the people to lead a decent life. In this particular house, the men were getting out just to make enough room for the ones who had to stay; the women and children. They were going off drinking and coming home drunk and the family life was approaching the point of break-up. This was happening in several other homes as well.

Economics

The people of the Louis Bull Band expressed a requirement for an average income of $35 per capita per month in order to meet the costs of living. This figure varied with the sex and education level of the head of the household. Where head of household was male, having grade 6 or less, the average requirement was set at $33 per capita per month; if he had grade 7 or more, the family required $41 per capita per month. Where the head of the household was female having grade 6 or less the family expressed a requirement for $37 per capita per month; where she had grade 7 or more the requirement was $41 per capita per month.

Some observations were volunteered with respect to the pay scale applied to Band projects. It was felt that incentive programs should be applied similar to those normally found in industries in Wetaskiwin and Edmonton, such that an employee working regularly for a period of one year would receive a salary increase for proving himself dependable. Further indications of

ability and interest in his work should result in further increases. On Band projects, as currently administered, workers receive the same pay whether they work regular hours and show interest in the work or whether they appear only once a week and show no interest.

Recreation

There appears to be a complete lack of organized adult recreation on the Louis Bull Reserve. The children have a skating rink but there is no organized hockey teams as such. One of the band members is taking some of the people to hockey games in Wetaskiwin and is helping out with various tournaments, both in the Province and outside, but generally speaking there is no organized winter recreation. From comments made on the other Hobbema Reserves, it would appear that the Louis Bull Reserve has the best summer recreation program in Hobbema, although this program is not all-inclusive. Because of the lack of organized activities, drinking, card playing and television viewing have become the major recreational pursuits. Drinking has led to problems with the law and has resulted in several car accidents.

Farming

Six people on the Louis Bull Reserve expressed a desire to farm on their own. One idea suggested with respect to farming was that a hay-making co-op should be formed. Much of the Louis Bull Reserve is not suited for grain farming but can produce hay. It was suggested that the Band members get together and form some sort of co-op and put up the hay rather than hiring whites to come in and put it up. When discussing management required for a hay making co-operative or any other type of business, several Band members suggested that members should work out the business and labor rules which were going to be applied, and that Band members would then have to agree to abide by these rules. None of the members were willing to take on the responsibility of forming or managing such a co-operative.

When asked how many acres they thought it would take to make a living from grain farming the average response was 320 acres. The average person interviewed thought that it would take 24 cows to make a living on a cow-calf operation.

Relations with the Band Council

Band members in general have very little knowledge regarding the activity of the Band Council. The Council is regarded and used simply as a welfare group. Seventy per cent of the people on the Reserve expressed dissatisfaction with the Council; the balance appeared reasonably satisfied with what Council is providing for them.

One member suggested that the Council's emphasis on welfare aspects was rapidly destroying any initiative that may exist on the Reserve. Several members were critical of Council's favoritism, suggesting that the Council voted to do things for themselves or their friends and that other people who had no direct contact with the Band Council could not get similar results. It was felt that Council spent too much time with detailed administrative work which could be done by staff members, to the detriment of the formulation of development policy and long range plans for improvement of the Reserve.

Summary of Attitudes

A general feeling exists on the Louis Bull Reserve that little can be done by the Band members Several members mentioned that if any project was to succeed on the Reserve, a white man would have to be brought in to act as a manager or supervisor; there was simply not enough faith in fellow Band members to indicate that a band project without white administration would succeed.

In response to the question "Do you think that the Reserve will be a better place to live in 10 years?" 80 per cent responded that they felt it would be worse; 5 per cent thought it would be better, and the reamining 15 per cent thought it would be about the same as it is now. This gives a general idea of the members' attitude towards the Reserve's future. Fifty per cent of the Band members expected that their children would leave the Reserve. Sixty-five per cent felt that some development on the Reserve would be possible, but most added the proviso "if a white man is brought in to act as a supervisor". Twenty-five per cent did not think that any development would be possible on the Reserve under present or forseeable circumstances and

the remaining 10 per cent had no opinion.

In response to probes regarding general attitudes toward fellow Band members, 50 per cent of Band members expressed no hope for fellow members based on their attitudes, work habits and general motivation. Another 45 per cent thought there was some hope for fellow band members, and the remaining 5 per cent were indifferent, indicating no concern whatsoever for other Band members.

One significant portion of the Louis Bull population which appears to receive little specific consideration from Band Council is the 23 families having a woman as household head. These families have 103 dependents, making a total of 126 people who have little chance of getting off welfare under the present system on the Reserve.

The distance of the Reserve from Hobbema and the lack of transportation in the winter creates a communication problem. Ignorance of Council activities leads to fear and resentment of Council members, and some members feel that friends of Council members are getting more consideration from the Council.

In summary the lack of employment, low educational level, overcrowding of houses, and high number of families with women at the head of the household are creating a social problem on the Reserve. Added to this is the lack of transportation and poor communications.

The Band as a whole is isolated and many members have lost all hope of social or financial advancement. Children growing up in this type of atmosphere tend to have a negative attitude. Any development program for the Louis Bull Reserve must include a comprehensive consideration of all of the factors mentioned. Trying to approach these factors one at a time will end in failure.

Current social and economic rewards on the Reserve for higher education are practically non-existent. There are currently no employment opportunities on the Reserve requiring a higher level of education and it follows that anyone achieving a high level must leave the Reserve in order to utilize their education. For these who do not wish to leave the Reserve there

appears little benefit in attaining a high educational level. As yet only a few band members see getting more education as a basis for improving the Reserve. Most of the parents who want their children to attain Grade 12 or University expect their children to leave the Reserve. Parents on the average expect their children to achieve approximately one grade less education than that which they feel necessary to obtain a good job, and this in itself is a strong indication that many parents have given up hope.

The Band's educational aspirations are such that members cannot compete with the rest of society on an equal basis. Their aspirations with respect to farming are indicated by the amount of land which they feel is necessary in order to make a living, an amount far below that which would be required to succeed in the present economic situation.

Two comments which in varying forms were heard throughout the Reserve are pertinent to the general attitudes found on the Louis Bull Reserve; "The young people are going to have to take over as the old people can't give adequate advice for modern times", and "Whether the parents like it or not the smart kids will get off the Reserve and the dumb ones will stay on it".

SECTION 3 - ECONOMY OF THE RESERVE

BAND INCOME AND RESOURCES

The Louis Bull Band operates under Section 68 of the Indian Act, which gives the Band freedom to control, manage and expend its revenue monies.

Table 1 shows the Band's income for the fiscal year 1967-68, and indicates the balance in Capital, Revenue and Leasing accounts as of March 31, 1968:

The item in Table 1 shown as "Shares to Transferred Members" refers to monies received from other Reserves for members who have joined the Louis Bull Band, usually through marriage. The item "Transferred from Four Band Capital Account" refers mainly to tranfer of oil revenue. Interest items result from the 5 per cent interest paid by the Federal Government on Band funds held in trust.

Total Band expenditures for the fiscal year 1967-68 were $176,461.12. Table 2 shows a breakdown of these expenditures.

A comparison of Tables 1 and 2 shows that Band expenditures exceeded income in the 1967-68 fiscal year by only $357.01.

Band members received $111,096.09 in cash and loans from the Band. Included in this amount are wages paid by the Four Band Council to Band members and $3,312.51 in agricultural lease revenue. Members received a further $31,521 (approx.) in transfer payments (family allowance and old age pensions). In addition, members received monies from such sources as war pensions, treaty monies and unemployment insurance. Some members were employed off the Reserve for varying periods of time, further increasing the total amount of cash available to Band members. It is estimated that approximately $145,000 cash was available to Band members during the 1967-68 fiscal year (approx. $29.00 per capita per month), not including outside earnings, unemployment insurance, war pensions and treaty money.

Complete data for the 1968-69 period was not available at the time of writing. 1969-70 Band income has been estimated by the Band Council as per Table 3.

It would appear that if expenditures are maintained at the 1967-68 level, the Band will operate at a surplus in the 1969-70 fiscal year.

TABLE 1 - SOURCES OF INCOME, FISCAL YEAR 1967-68

Capital Account

Federal Winter Works	$ 9,544.00	
Incentive Subsidy		
Shares to Transferred Members	66.23	
Adjustment Applicable to Other Years	318.57	
Transferred from Four Band Capital Account	81,947.82	
Other	9.00	
Total		$91,885.62

Balance in Capital Account - $212,138.38 as of March 31, 1968

Revenue Account

Oil Surface Lease	2,564.00	
Interest	12,124.10	
Shares to Transferred Members	35.51	
Recovery of Advances	557.26	
Adjustment Applicable to Other Years	557.26	
Other	3,488.00	
Total		$19,326.13

Balance in Revenue Account - $8,542.10 as of March 31, 1968

Leasing Account

Agricultural Leases	6,322.91	
Revenue Interest	394.93	
Adjustment Applicable to Other Years	557.26	
Total		$ 7,275.10

Balance in Leasing Account - $10,189.31 as of March 31, 1968

TABLE 2 - BREAKDOWN OF EXPENDITURES FROM REVENUE AND CAPITAL ACCOUNTS FOR THE FISCAL YEAR 1967-68

	Revenue	Capital
	$	$
Roads	2,772.24	2,458.00
Housing and yards	4,697.17	26,126.00
Water systems	351.90	3,367.00
Public Works		20,268.00
Social Welfare	2,326.26	12,956.00
Assistance to Agriculture	529.83	6,241.00
Celebrations	620.00	
Recreation	2,718.81	1,506.00
Salaries	20,772.49	
Office Supplies	214.91	
Audit	225.00	
Loans	602.00	
Donations	40.00	
Re-establishment	3,712.51	
Oil payments		62,864.00
Shares to transferred members		1,092.00
	39,583.12	136,878.00
Total Expenditures	$176,461.12	

TABLE 3 - ESTIMATED BAND INCOME, CAPITAL AND REVENUE FOR FISCAL YEAR 1969-70

	Capital	Revenue
Oil Royalties	$2,400	$
Housing	6,500	
Road Subsidy		41,930
Capital Interest		10,525
Crop Share		600
Grazing		2,300
Other		20
Agricultural Assistance		1,800
Transfer from Capital	170,196	
	179,096	57,175

SECTION 4 - PHYSICAL DEVELOPMENT OPPORTUNITIES

AGRICULTURAL DEVELOPMENT

Resource Evaluation

Soil

The evaluation of the agricultural resources on the Reserve was based primarily on a study of the soil resources. This information was obtained from the maps prepared as part of the Canada Land Inventory[1]. The Canada Land Inventory is a comprehensive survey of land capability and is an interpretive grouping which groups mineral soils into seven classes according to their potential for agricultural development. Within each class, sub-classes further group soils which have a similar limitation and provide information on the conservation practices necessary for that class of soils. A detailed description of the soil capability classification and a summary of the assumptions used is given in the Canadian Land Inventory Report No. 2[2].

A summary of the land capability with respect to cropping potential given on page 3 of the above report states:

> The first three classes are considered capable of sustained production of common clutivated crops, the fourth is marginal for sustained arable culture, the fifth is capable of use only for permanent pasture and hay, the sixth is capable of use only for wild pasture, while the seventh class is for soils and land types (including rock outcrop and small unmappable bodies of water) considered incapable of use for arable culture or permanent pasture. While the soil areas in classes one to four are capable of use for perennial forage they are also capable of use for perennial forage crops. Soil areas in all classes may be suited for forestry, wildlife and recreation.

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1 Assistance in data interpretation was provided by Mr. T. W. Peters and Mr. A A. Kjearsgaard of the Alberta Institute of Pedology, University of Alberta.

2 The Canada Land Inventory, Report No. 2 - 1965, Soil Capability Classification for Agriculture, Department of Forestry, Ottawa.

For the purposes of evaluating the land available for agriculture on the Reserves the grouping of soils in Table 4 was used.

TABLE 4 - SOIL GROUPINGS

Capability Class	Group	Crops
1, 2, 3	Arable	Grain, oilseed, hay
4, 5	Forage	Tame hay or pasture
6	Native	Wild pasture (native state)

Estimates of the land area in each of these classes were prepared from the soil capability map (Refer to Map No. 9). Arable land was considered as the acreage that can be developed or was already developed for sustained production of wheat, oats, barley, rapeseed, flax, tame hay, or tame pasture. The forage land was considered to be land that could be improved for tame pasture or tame hay to support some form of beef operation. The native land acreage was land that was classified as land unlikely to be improved but could still provide some pasture.

Since the estimated acreages included land occupied by the resident, and land with localized restrictions such as sloughs which would make cropping very difficult, the estimated areage available for sustained cropping (Class 1, 2, 3) was reduced by 15%. This acreage was added to the acreage of native land available.

Climate

Examination of the Canada Land Inventory Report[1] shows that the Reserves are located in Climatic regions 6G and 6H, the boundary in the center of the four Reserves at Hobbema, and on the border of Climatic region 5G. The eastern half of the Reserves are in zone 6G which is characterized by 1800 to 2200 degree days[2]. The area experiences 75 to 90 frost free days,

[1] The Canada Land Inventory, the Climates of Canada for Agriculture, Report No. 3, Department of Forestry and Rural Development, Ottawa, figure 24.

[2] ibid., figure 9, for a definition of degree days. It is a measure of the days above 42°F. during the growing season, as plant growth ceases below 42°F.

and 10 to 13 inches of precipitation from May to September. The western half of the Reserves are in zone 6H which is characterized by 1800 to 2200 degree days, 75 to 90 frost free days, and 12 to 15 inches of precipitation from May to September. Thus all Reserves have the same temperature characteristic but the precipitation during the growing season increases slightly from east to west. The average May to September precipitation[1] is 12 inches. The growing season[2] as measured by the date of the mean temperature above 42°F. extends from April 25 to October 6. These dates reflect the start and end of grass growth for the season. (Refer to Maps 4, 5 and 6.)

Resources Required by Farm Units

This section deals with the data used to determine the resources required to provide a reasonable return on each farm enterprise if the operator was involved exclusively in that enterprise. Obviously any combination of these enterprises can be obtained and in some cases they would be beneficial. The only enterprises considered were grain and forage crops on arable land, cow-calf enterprise for pasture utilization, a beef feedlot, and a farrow to finish swine operation for utilizing grain grown on the Reserve. Poultry and sheep operations could have been added but they require specialized interests, and similar operations in the form of the swine enterprise and cow-calf enterprise are already included.

The data used in this analysis was based on the performance of farmers in the Black Soil Zone of Alberta. Allowances were not made for the additional benefits of farming on the Reserve, such as:

(1) absence of income tax on income from Reserve enterprises,

(2) various grants from the Indian Affairs Branch (i.e. rotating herd program)

Interest on the investment required for the farm enterprises was charged at 5% per annum which is close to the rates charged by the Indian

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[1] ibid, figure 16,

[2] ibid, figure 7 and figure 8.

Affairs Branch. The added benefits mentioned above would serve to moderately improve the income potential of farming enterprises on the Reserve.

It may be noted that the assistance provided by the Indian Affairs Branch until very recently has tended to perpetuate small uneconomic farm units. Current programs appear to be moving toward supporting a more economic farm unit. (i.e. larger loans are being provided).

Cropping Enterprise

The data used here are a composite which resulted from detailed examination of the Alberta Farm Business Reports[1], 1966 Crop Enterprise Analysis[2], Economics of Grain-Fallow Rotations and Fertilizer Use in the Prairie Provinces[3], and the yearly estimated yields for the subject area published by the Alberta Department of Agriculture[4].

Tables 5 to 12 summarize the data used to determine the resources required by a "Basic Family Farm Unit" under two different plans by which rent is paid to the Band. The assumptions used to develop these units were:-

(1) The operator's earnings should be approximately $4,000 annually.

(2) The operator and his family could provide the necessary labor.

Barley and wheat were the only crops used in calculating the arable acreage required for these units as they are the principal crops grown in the area. Oats, flax, and rapeseed were included in Table 5 and Table 6 for comparison.

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1 Alberta Farm Business Reports 1962-66, Alberta Department of Agriculture, Economics Division, Edmonton, Alberta.

2 1966 Alberta Crop Enterprise Analysis, Alberta Department of Agriculture, Economics Division, Edmonton, Alberta.

3 MacKenzie, J. S., Economics of Grain-Fallow Rotations and Fertilizer Use in the Prairie Provinces, Economics Branch, Canada Dept. of Agriculture, Ottawa.

4 November Estimates of Production of Principal Crops, Alberta. Alta. Dept. of Agriculture, Statistics Branch, Economics Division, Edmonton, 1966-67-68

TABLE 5 - SUMMARY OF CROP PRODUCTION COSTS AND RETURNS PER CROP ACRE

ITEM	CROP				
	Wheat	Barley	Oats	Rapeseed	Flax
	$	$	$	$	$
Seed	2.00	1.50	1.00	.75	1.40
Chemicals	.40	.40	.40		
Fertilizer	3.90	3.90	3.90	3.90	3.90
Other Cash Costs	1.50	1.50	1.50	1.80	1.80
Total Direct Cash Costs	7.80	7.30	6.80	6.45	7.10
Equipment Operating Costs	3.80	3.80	3.80	3.80	3.80
Building Maintenance	.45	.50	.60	.10	.10
Total Variable Costs	12.05	11.60	11.20	10.35	11.00
Equipment Depreciation and Interest at 5%	5.80	5.80	5.80	5.80	5.80
Building Depreciation and Interest at 5%	.95	1.05	1.15	.10	.10
Total Fixed Costs	6.75	6.85	6.95	5.90	5.90
Total Production Costs Excluding Land Rental and Labor	18.80	18.45	18.15	16.25	16.90
Yield per Acre	26 bu.	35 bu.	45 bu.	800 lbs.	13 bu.
Price	1.45	.95	.60	.045	2.75
Gros Returns	37.70	33.10	27.00	36.00	35.75

It should be noted in Table 6 that if the Band receives one quarter of the crop, over 1,900 acres of oats must be seeded to give an average income of $4,000 to the operator. If the Band receives one-third of the crop over 1,100 acres of barley have to be seeded. At the present time, it is difficult for one man to farm this much land. It becomes apparent that a crop rotation of wheat and barley with the Band receiving one quarter of the crop is the only feasible plan from the data in this table. Flax and rapeseed are two other alternatives but they are high risk crops.

TABLE 6 - ACREAGE REQUIRED TO PROVIDE OPERATOR $4,000 ANNUAL INCOME USING DIFFERENT CROPS

Rental Plan	Acreage Per Farm Unit			Band Income	
	Cropped	Fallow	Total	Total	Per Acre
No Rent Paid to Band					
Wheat	212	71	283	$ -	$ -
Barley	273	91	364		
Oats	452	151	603		
Rapeseed	202	67	269		
Flax	212	71	283		
Band Receives 1/4 of Crop					
Wheat	421	140	561	3,957	7.05
Barley	628	209	837	5,200	6.21
Oats	1,905	635	2,600	12,858	4.95
Rapeseed	372	94	456	3,348	7.35
Flax	404	135	539	3,612	6.70
Band Receives 1/3 of Crop					
Wheat	633	211	844	7,957	9.43
Barley	1,104	368	1,472	12,177	8.27
Oats	----------Operator loses money----------				
Rapeseed	516	172	688	6,192	9.00
Flax	578	193	771	7,020	9.10

Note: The rotation was assumed to be 3 years crop and 1 year fallow.

Other forms of payment to the Band may be considered rather than the one quarter crop share arrangement mentioned above. Such methods might include cash leases, payment of a fixed percentage of return on investment, or an assessment system based on services supplied by the Band. Each of these systems would tend to change the distribution of income between farmer and Band, but would not change the total income.

Use of any system which would result in the Band receiving less revenue than would be realized through leasing the land to white farmers must be recognized as a subsidy to Band farmers. The Band must decide if it wishes to subsidize Indian farmers, and act accordingly.

Using a crop rotation of one-half barley, one quarter wheat and one quarter summer fallow on 700 acres, a farmer on the Reserve can expect an average gross return of $18,183. To achieve this gross return how-

ever, he must use good management and put about 100 lbs. of 23-23-0 fertilizer or equivalent per acre on the stubble land, and spray for weeds.

TABLE 7 - PHYSICAL PRODUCTION AND RETURN FOR BASIC FAMILY FARM ON RESERVE UNDER 1/4 CROP SHARE RENTAL

Item	Acres	Average Yield		Total Value
Wheat	175	26 bu.	$	6,598
Barley	350	35 bu.		11,585
Fallow	175			
Total Crop Acres	700		$	18,183

TABLE 8 - COST OF PRODUCTION AND PROFIT FOR FAMILY FARM ON RESERVE UNDER 1/4 CROP SHARE RENTAL

Item		Value	
Value of Production			$ 18,183
Direct Cash Costs			
Wheat	$ 1,365		
Barley	2,555		
Equipment and Buildings - Variable Cost			
Wheat	$ 744		
Barley	1,505		
Total Variable Costs			6,169
Net Above Variable Costs			$ 12,014
Fixed Costs			
Wheat	$ 1,181		
Barley	2,398		
Total Fixed Costs			3,579
Net Above Fixed and Variable Costs			$ 8,435
Crop Rental to Band (1/4 Crop Share)			
Wheat	$ 1,649		
Barley	2,896		
Total Rental to Band			4,545
Net Return to Labor and Management			$ 3,890

TABLE 9 - CAPITAL REQUIREMENTS OF FAMILY FARM ON RESERVE UNDER 1/4 CROP SHARE RENTAL

Item	Value
Operating Capital	$ 6,200
Machinery and Equipment Capital	24,000
Building Capital	7,400
TOTAL CAPITAL	$ 37,600

Table 9 shows the cost of starting a 700 acre farm. The $31,400 would be required the first year to buy machinery and graineries, and the $6,200 required for fertilizer, oil, gas, spray, repairs and seed. It is assumed that good used equipment would be bought.

Tables 10, 11 and 12 show the economic and physical requirements for a family farm which is paying the Band 1/3 of the crop. The farm would require 1,200 acres of crop land assuming a rotation of one-half barley, one quarter wheat and one quarter summer fallow. The gross return on this size grain farm would be $31,170 and the Band would receive $10,390. To start a farm of this size $64,600 would be required the first year. This assumes that good used machinery is purchased and kept in good repair. After the first year, operating costs would be the only direct cash cost, but it would increase as the repair bill went up.

TABLE 10 - PHYSICAL PRODUCTION AND RETURN FOR BASIC FAMILY FARM ON RESERVE UNDER 1/3 CROP SHARE RENTAL

Item	Acres	Average Yield	Total Value
Wheat	300	26 bu.	$ 11,310
Barley	600	35 bu.	19,860
Fallow	300		
Total Crop Acres	1,200		$ 31,170

It becomes evident that a one-third crop share arrangement puts the operator at an extreme disadvantage. If the Band wants to rent land on a one-third crop share agreement to Band members, they should probably

share one-third of the cost of fertilizer and spray. This would amount to $3,870 which would lower the risk that the farmer was taking. If this procedure was followed, the Band would net $6,520 but only 1,040 acres would be required for the operator to make $4,000.

TABLE 11 - COST OF PRODUCTION AND PROFIT FOR FAMILY FARM ON RESERVE UNDER 1/3 CROP SHARE RENTAL

Item		Value
Value of Production		$ 31,170
Direct Cash Costs		
Wheat	$ 2,340	
Barley	4,380	
Equipment and Buildings - Variable Costs		
Wheat	$ 1,275	
Barley	2,580	
Total Variable Costs		10,575
Net Above Variable Costs		$ 20,595
Fixed Costs		
Wheat	$ 2,025	
Barley	4,110	
Total Fixed Costs		6,135
Net Above Fixed and Variable Costs		$ 14,460
Crop Rental to Band (1/3 Crop Share)		
Wheat	$ 3,770	
Barley	6,620	
Total Rental to Band		10,390
Net Return to Labor and Management		$ 4,070

TABLE 12 - CAPITAL REQUIREMENTS OF A FAMILY FARM ON RESERVE UNDER 1/3 CROP SHARE RENTAL

Item	Value
Operating Capital	$ 10,600
Machinery and Equipment Capital	41,800
Building Capital	12,200
Total Capital Required	$ 64,600

Cow-calf Enterprise

The data for the cow-calf enterprise were obtained from the Alberta Cow-Calf Enterprise Analysis by B. A. Hackett[1]. The data for farmers on Black Soils were used. The major difference here is that rather than putting a direct charge on hay and pasture, it was assumed that the operator would utilize land which could not be cropped, and instead would pay a pasture rental. This was then used to determine the physical and capital resources required to give the operator an annual income to labor and management of $4,000, assuming that the operator and his family provide all the necessary labor. Grazing rates for the pasture and the cost of maintaining tame pasture were obtained from Love and McMillan[2]. The grazing of crop residue was not included in this analysis. The cost of harvesting forage was calculated from equipment costs given in the Farm Management Data Manual[3] based on yields equal to 80% of the November estimates[4] for the area. The yield estimates were reduced to 80% of the November estimates because:

(1) The land for hay and pasture was in land capability Class 4 and 5.

(2) 1966 crop production was substantially above average.

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1 Hackett, B. A., Alberta Cow-Calf Enterprise Analysis, Alberta Dept. of Agriculture, Economics Division and Animal Industry Division, Edmonton, Reports for 1965, 1966 and 1967 Highlights.

2 Love, H. C. and M. L. McMillan, Alberta's Pasture Resources and Estimated Potential Production From Improvement of Privately Owned Land, Agricultural Economics Research Bulletin 6, University of Alberta, 1968.

3 Farm Management Data Manual, Farm Machine Rates - Alberta. Dept. of Agriculture, Economics Division, Edmonton.

4 November Estimate of Production of Principal Crops, Alberta Dept. of Agriculture, Economics Division, Statistics Branch, Edmonton, Reports for 1966, 1967 and 1968.

TABLE 13 - PHYSICAL RESOURCES REQUIRED BY COW-CALF ENTERPRISE

Item		Amount Per Cow
Acres of Hay to supply 2.4 tons of hay when yield = 1.2 tons/acre		2.0 acres
Pasture required per cow unit @ 85% calf crop (Animal Unit Months)[1]		
Cow	6.00	
Calf	1.70	
Bull (1 bull per 30 cows)	.20	
Replacements (20% per year)	.80	
Total	8.70	9.0 AUM

TABLE 14 - COST OF PRODUCTION AND RETURN PER COW

Item		Value
Gross Return per Cow		$ 90.00
Direct Cash Costs		
Grain and millfeed	$ 6.15	
Harvesting 2 acres hay	6.09	
Veterinary and medicine	1.40	
Reseeding hay every 5 years	2.00	
Other variables (Marketing, building and equipment maintenance and operating)	8.50	
Total Direct Cash Costs		24.14
Net Above Variable Costs		$ 65.86
Fixed Costs		
Haying Equipment (depreciation and interest)	$ 4.42	
Insurance and depreciation (Fences, buildings, feeding equipment)	5.00	
Interest on Fences, Buildings and Feeding Equipment	2.10	
Interest on livestock	9.90	
Total Fixed Costs		21.42
Net Above Fixed and Variable Costs		$ 44.44

[1] Bauer, L. E., 1966 Alberta Farm Business Report, Alberta Dept. of Agriculture, Economics Division, Edmonton, page 25.
Animal Unit Month is a measure of the amount of pasture feed required to support one cow for one month.

Table 14 - Cost of Production and Return per Cow (Cont'd.)

Item	Value
Land Rental where hay acreage equals 4 AUM Total = 13 AUM @ $1.80/AUM	23.40
Net Return to Labor and Management	$ 21.04

Table 14 gives the costs and return per cow based on an 85% calf crop weaned. Direct cash costs come to $24.14 and fixed costs are $21.42. In addition to this there is $23.40 for pasture and hayland.

TABLE 15 - COST OF PRODUCTION AND PROFIT FOR FAMILY LIVESTOCK FARM ON RESERVE

Item		Value
Gross Returns		$ 15,750
Direct Cash Costs		4,225
Net Above Variable Costs		$ 11,525
Fixed Costs		
Depreciation and Insurance on Buildings and Machinery	$ 1,494	
Interest on Livestock, Buildings and Machinery	2,254	
Total Fixed Costs		3,748
Net Above Fixed and Variable Costs		$ 7,777
Band Rental		4,095
Net Return to Labor and Management		$ 3,682

Tables 15 and 16 give a general outline of the physical requirements and financial picture of a cow-calf operation yielding the operator about $3,700. The return is below $4,000 because one man and his family cannot feed and handle more than 175 head of cows without considerable expense being incurred for mechanization. It should be noted that the Band receives more from this size of an operation than the farmer does.

TABLE 16 - RESOURCES AND CAPITAL REQUIRED BY BASIC LIVESTOCK FARM ON RESERVE

Resource		Amount
Cows	175	
Hay Acreage	350 acres	
Pasture Acreage	1,575 AUM[1]	
Labor Required	2,600 hrs	
Operating Capital		$ 4,225
Machinery and Equipment Capital		15,400
Livestock Capital		34,650
Total Capital		$ 54,275

Beef Feedlot

Data used in this analysis were obtained from Alberta Cattle Feeding Analysis Reports by B A. Hackett[2]. The data were used to provide a basis for comparison with the other farm enterprises. Extreme care should be used in evaluating this enterprise as the price of feeder cattle and slaughter cattle varies quite widely. Cost data were the average of the medium cost group in the Black Soil Zone for 1965, 1966 and 1967. It is felt that these figures are representative of the cost of feeding cattle. The data on gross returns from the average of the same groups include the value of inventory at the beginning and end of the year. Thus gross returns in the study were not simply a study of the sales value per steer less the buying cost of the steer. The gross returns also include a return on the weight gain of animals that are in the feedlot at year end.

Table 17 is based on a gross return of $25.17 per 100 pounds of live animal produced (weight added from the feeding enterprise) rather than $27.28 which is the average gross return in the analysis reports. The data from the Cattle Feeding Analysis show that the average weight of the feeders was 589 pounds and the average purchase price was $23.53 per 100 pounds.

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1 1575 AUM is equivalent to 1750 acres of native pasture or 830 acres tame pasture.

2 Hackett, B. A., Alberta Cattle Feeding Enterprise Analysis, Alta. Dept. of Agriculture, Edmonton, 1965 and 1966 Reports, 1967 Highlights.

The average price and average weight of slaughter cattle sold was $24.21 per 100 lbs. and 1,008 pounds respectively. In order to achieve a return of $27.28 per 100 lbs. of live animal, the average selling price would have to be $25.08 per 100 pounds or $0.87 above the average selling price. The higher return was due to a larger margin on inventory. The labor and management return would be $4.44 per 100 pounds of live animal produced if the gross return was $27.28.

This illustrates the importance of marketing in achieving satisfactory returns to a cattle feeding operation. Hackett[1] shows some of the variation in feeder cattle prices in recent years and indicates some of the factors which may aid an operator in his management decisions. Due to the variability of the returns to cattle feeding, the size of the basic unit should be regarded as a general guide for comparison with the other enterprises.

The data were used to estimate the resources required to provide the operator with an annual labor and management income of $4,000. These data are summarized in Tables 17 to 19. All estimates are expressed on the basis of 100 pounds of live animal produced.

From Table 17 it becomes apparent that a man will receive $2.02 per hour on a cattle feeding enterprise. However, this $2.02 is for labor, management and taking the risk (which is quite high in this enterprise). The size of operation as shown in Table 18 will allow for some spare time on the part of the feeder. It is quite possible that he could work for a farmer in spring and fall.

Table 19 shows an initial capital investment of $63,714. This total includes only one-half the total annual number of cattle fed and one-half the total annual operating expenses because there will be two groups of 218 cattle fed each year.

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[1] Hackett, B.A., 1966 Alberta Cattle Feeding Analysis, Alberta Dept. of Agriculture, Edmonton, page 53.

TABLE 17 - ESTIMATED COST OF PRODUCTION, PROFIT AND INVESTMENT PER 100 POUNDS OF LIVE ANIMAL PRODUCED IN CATTLE FEEDING ENTERPRISE

Item		Value
Gross Return		$ 25.17
Feed Costs		
Grain and Millfeed	$ 14.28	
Roughage	3.17	
Pasture	0.40	
Total Feed Cost		17.85
Net Above Feed Cost		$ 7.32
Other Variable Costs		
Veterinary and Medicine	$ .27	
Other variable costs (building and equipment maintenance, etc.)	1.43	
Total of Other Variable Costs		1.70
Net Above Variable Costs		$ 5.62
Fixed Costs		
Insurance and Depreciation	$ 1.19	
Interest (building and equipment)	.59	
Interest on livestock	1.61	
Total Fixed Costs		3.39
Return to Labor and Management		$ 2.23
Labor required per 100 lbs. live animal produced		1.1 hr.
Investment per 100 lbs. produced		
Buildings and Equipment		$ 9.64
Livestock		$ 32.26

TABLE 18 - ESTIMATED COST OF PRODUCTION AND PROFIT FOR CATTLE FEEDING OPERATION YIELDING ANNUAL OPERATOR EARNINGS OF $4,000

Item		Value
Gross Returns (1794 100 lb. units)		
Sale value 428 cattle @ $244	$	104,432
Less Purchase 436 cattle @ $136		59,296
Gross Returns on Added Weight	$	45,136
Total Variable Costs		35,073
Net Above Variable Costs	$	10,063
Total Fixed Costs		6,082
Return for Labor and Management	$	3,981

TABLE 19* - RESOURCES REQUIRED BY CATTLE FEEDING OPERATION YIELDING ANNUAL OPERATOR EARNINGS OF $4,000

Item		Amount
Cattle Required	436	
Labor Required	1,973 hrs.	
Building and equipment investment		$ 17,240
Livestock Investment (1/2 of total)		28,937
Operating (1/2 of total Variable Costs)		17,537
Total Capital Required		$ 63,714

* Table 19 is based on a livestock turnover of 2.0. Thus only 218 cattle would be fed at one time and this reduces the capital required for livestock.

Swine-Farrow-Finish Operation

Data are included on the resource requirement of a swing operation that would provide the operator with an annual labor and management income of $4,000. The data for this unit were taken from the Alberta Hog Enterprise Analysis reports by Hackett and Reddon[1]. Since the only land

[1] Hackett, B. A., and A. Reddon, Alberta Hog Enterprise Analysis, Alberta Dept. of Agriculture, Edmonton -- 1965 and 1966 Reports, 1967 Highlights.

required is for buildings, space limitations for this type of enterprise are minimal. Market and capital limitations are more significant. The number of swine operations or the size of a swine operation depends on the capital investment. For the purposes of this analysis, any economies of scale that would result from a very large operation are assumed to be an added benefit. The 1966 report[1] gives a good summary of where economies of scale are likely to occur.

Cost data are the average of the three years for the medium cost group in the reports[1] and return data were based on the 1967 returns which were slightly above the ten year average and about 4 per cent below the average for the previous five years. Tables 20 to 22 summarize the resources required for the "standard" swine unit.

The labor requirement shown in Table 22 indicates that one man will be working 184 days at 8 hours per day. Since this is not full employment he has two alternatives. He can expand the operation after he is sure he can manage this size successfully or he can work at some other enterprise. It must be stressed that very high levels of management must be maintained to achieve the return shown above.

Multiple Family Units

Detailed cost and return data were not prepared for a multiple family farm for two reasons:

(1) Some economies of scale occur mainly in the areas of reduced labor and equipment charges and increased production per unit. However, it was felt that multiples of the single family unit would give a good estimate of resource and earning potential.

(2) The difference between the linear programming analysis of the total reserve and multiple family units was not significant in the case of Montana and Louis Bull.

If an estimate is needed of the resources required for a multiple family farm, it can be obtained by multiplying the number of families working on the farm by the resources required by the single family units discussed previously.

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[1] ibid.

TABLE 20 - ESTIMATED COST OF PRODUCTION, PROFIT, AND INVESTMENT PER MARKET HOG PRODUCED IN HOG ENTERPRISE

Item		Value
Gross Return		$ 42.00
Variable Costs		
Grain	$ 16.94	
Millfeed	6.02	
Roughage	.35	
Pasture	.01	
Total Feed Cost		23.32
Net Above Feed Costs		$ 18.68
Other Variable Costs		
Veterinary and Medicine	$ .59	
Other Variable Costs (Building and Equipment Maintenance, etc.)	3.10	
Total of Other Variable Costs		3.69
Net Above Variable Costs		$ 14.99
Fixed Costs		
Building and Equipment Depreciation	$ 2.80	
Building and Equipment Interest	1.50	
Interest on Livestock	1.09	
Total Fixed Costs		5.39
Return for Labor and Management		$ 9.60
Labor Required to Produce a Market Hog	3.5 hr.	
Average Number of Pigs Weaned/Sow/Year	13	
Investment Required per Sow		
Building and Equipment		$ 397.
Livestock		$ 283.

TABLE 21 - ESTIMATED COST OF PRODUCTION AND PROFIT FOR HOG ENTERPRISE YIELDING ANNUAL OPERATOR EARNINGS OF $4,000

Item	Value
Gross Returns from 416 Market Hogs	$ 17,472
Total Variable Costs	11,236
Net Above Variable Costs	6,236
Total Fixed Costs	2,242
Return for Labor and Management	$ 3,994

TABLE 22 - RESOURCES REQUIRED BY HOG ENTERPRISE YIELDING ANNUAL OPERATOR EARNINGS OF $4,000

Item		Amount
Sows Required	32	
Labor Required	1,472 hr.	
Building and Equipment Investment		$ 12,700
Livestock Investment		9,100
Operating		11,000
Total Capital Required		$ 32,800

Trends in Farm Sizes

The data used to determine the resources for a single family unit are based on past experience. Farms have been expanding in both physical size and capital resources in the past and indications are that they will continue to do so. Thus the number of families that can be supported in the future by crops and cow-calf enterprises will be less than the estimates provided in this report. The increase in farm size from 1956 to 1966 which has occurred in the two counties which border the Reserve, agrees with the findings in a report by Purnell, Andarawewa, and Stutt[1] who have projected the resource use on Canadian farms to 1980 based on the average

[1] Purnell, G. R., A. B. Andarawewa, and R. A. Stutt, Outlook in Patterns and Practices in Agriculture, Economics Branch, Dept. of Agriculture (Canada), Ottawa, January 13, 1969, Table 8.

rate of growth from 1961 to 1966. They indicate that the capital requirements, machinery investment, and acres per farm, will increase while the workers per farm will decrease. Thus, some provisions should be made for the expansion of Reserve farms if they are to remain competitive.

Louis Bull Reserve Analysis

Land Area

The total agricultural land area on the Reserve as obtained from survey maps is 7,737 acres. Part of this area has been leased to the Canada Department of Agriculture Prairie Farm Rehabilitation Administration for the development of a community pasture. This is a ten year lease, so consideration of alternate development on this area was not reasonable at this time. The lease does not include all of every quarter section affected by the lease. For the purposes of this analysis it was assumed that any quarter that was part of this lease was effectively removed from the agricultural area available for immediate development as the remainder of the quarter would be area left for the resident. Thus the total area left out of the agricultural analysis amounted to 2,078 acres. The remaining acreage is 5,659 acres which is available for agricultural development by the Band.

Soil Resources

The Reserve has substantial variation in soil types on it according to the Canada Land Inventory. Only 1,300 acres are classified as Number 2 Soil and the remainder are all lower in the Land Capability Classification. Approximately 55% of the total area on the Reserve is Class 2 and Class 3 Soil. However, over 40% of the land area falls in Land Capability Class 3. Adjustments for this high proportion of Class 3 Soils were not made in the standard size of the unit to provide the operator with a minimum yearly income of $4,000. However, it should be recognized that it is going to be more difficult for these operators to obtain the estimated gross income from the standard unit than it will be for those operators on Number 1 and Number 2 Soils. Table 23 summarizes the estimated acreages available for crop production and for pasture and hay.

TABLE 23 - ACREAGE ESTIMATES FOR LOUIS BULL RESERVE

Group	Estimated Acreage	Adjustment Community Pasture	15% Adjustment	Revised Estimates
Arable	4,485	- 820	- 550	3,115
Forage	2,280	- 1258		1,022
Native	972		+ 550	1,522
Total	7,737	- 2078		5,659

Table 23 shows that over 60% of the area occupied by the community pasture falls in the forage category which is Class 4 and 5 Soil. Thus the land taken for the Community pasture is not really suited for alternate agricultural development.

The revised estimates were combined with the data on standard units to obtain the number of farms that the Reserve could support. Estimates for the amount of land presently cropped were obtained from crop lease statistics provided by Indian Affairs for the year 1967. For the Louis Bull Reserve there were 950 acres cropped under leases. It was assumed that the remainder of the Reserve was native land which had some capability for pasture according to those pasture capabilities given in Love and MacMillan[1] for Black Soil Zones.

Potential Farm Units

The purpose in this section is to estimate the potential employment and income of family farm units on the Reserve. For the basis of these estimates the 1/4 crop share rental plan for cropping and a basic Band rental for pasture land of $1.80 per Animal Unit Month was used. A potential was estimated under the following two conditions:

(1) the potential of the Reserve with no further land development;

(2) the potential of the Reserve if it were developed in accordance

[1] Love, H. C. and M. L. MacMillan, Alberta's Pasture Resources and Estimated Potential Beef Production from Improvement of Privately Owned Land. Agricultural Economics Research Bulletin No. 6, University of Alberta, Aug. 1968. Table 39.

with the estimated acreages given in Table 23.

Table 24 is the potential employment and income of the Reserve with the present development of resources.

TABLE 24 - AGRICULTURAL RESOURCE CAPABILITY WITH PRESENT RESOURCE DEVELOPMENT

Resource	Farm Units	Farm Capital	Income		Band Income for Cash Rental		
			Operator	Band	$7.00/ac	$8.00/ac	$9.00/ac
		$000's	$000's	$000's	$000's	$000's	$000's
Crop (950 ac.)	1.3	48.9	5.1	5.9	6.7	7.6	8.6
Pasture (4238 AUM)	2.0	108.6	8.0	7.6	7.6	7.6	7.6
Total	3.3	157.5	13.1	13.5	14.3	15.2	16.2

Table 24 shows that 3 farm families could be supported on the Reserve with the present development of Reserve lands. The income to the Band under the quarter crop share rental plan and $1.80 per Animal Unit Month for pasture would be approximately 13.5 thousand dollars. The operator's labor and management income would be approximately 13.1 thousand dollars to bring the total income to the Reserve to 26.6 thousand dollars. In order to achieve this income an investment of 157 thousand dollars would be required. This total income of 26.6 thousand dollars is approximately 11 thousand dollars greater than if the crop lands were rented for $8 per acre and the pasture rented to other farmers for $1.80 per Animal Unit Month. Thus the 11 thousand dollars should be regarded as the labor and management income of the three operators.

Table 25 shows the resource capability of the Reserve if it were developed according to the acreage estimates specified in Table 23. The development costs are assumed to be $50 per acre to develop arable acreage and $41 per acre to develop pasture and hay land. The development would require 150 thousand dollars to be distributed as follows:

108 thousand dollars to develop 2,115 acres of arable land

42 thousand dollars to develop 1,022 acres of pasture and hay land.

TABLE 25 - AGRICULTURAL RESOURCE CAPABILITY AFTER INVESTING $150 THOUSAND TO IMPROVE RESERVE LANDS

Resource	Farm Units	Farm Capital	Income Operator	Income Band	Band Income for Cash Rental $7.00/ac	$8.00/ac	$9.00/ac
		$000's	$000's	$000's	$000's	$000's	$000's
Crop (3,115 acres)	4.4	165	17.2	19.9	21.8	24.9	28.0
Pasture (3,312 AUM)	1.6	87	6.4	6.0	6.0	6.0	6.0
Total	6.0	252	23.6	25.9	27.8	30.9	34.0

Six farm families could be supported on the Reserve after improving the Reserve lands and the income to the Band from crop share rentals would be approximately 26 thousand dollars. An additional 24 thousand dollars would be received by the farm operators as labor and management income. This would indicate a total income to the Band and operators of 50 thousand dollars. In order to achieve this level of income, 252 thousand dollars would be required for investment in farm equipment and livestock. The alternative of cash renting the land would yield the Band an income of approximately 31 thousand dollars if the crop land could be rented for $8 per acre and pasture land for $1.80 per Animal Unit Month. Thus the difference of 19 thousand dollars should be regarded as the income to the 6 farm operators for labor and management.

Linear Programming Analysis

The objective of this analysis was to determine the optimum enterprise mix for the Reserve if it was operated as a single business unit at varying levels of capital investment. From these data, it was possible to observe some general trends of development.

The enterprise data were obtained from the standard unit data in the first of this report and the following modifications were made:

(a) Labor was charged to each enterprise at $1.50 per hour. Labor requirements were taken from standards given in the 1966 Alberta Farm Business Report by L. Bauer[1].

[1] Bauer, L., 1966 Alberta Farm Business Report, Alberta Dept. of Agriculture, Economics Division, Edmonton, p. 25

(b) The beef feeding enterprise was separated into steers and heifers.

(c) The swine and beef enterprises were fed a ration balanced by the model. Nutritional requirements for each class of stock were obtained from the NRC publications[1,2]

(d) Additional crops were considered, mainly forage crops.

The linear programming analysis for the Louis Bull Reserve with rental rates of:

(1)	Cultivated land	-	$8.00/acre
(2)	Pasture	-	$1.80/AUM

indicated that all the money would be used to develop a feedlot and the Reserve lands would be rented to outside operators. It was felt that this would not give development guidelines so the rental rates for all subsequent analyses were reduced to the following:

(1)	Cultivated land	-	$5.60/acre
(2)	Pasture	-	$1.30/AUM

Figure 3 is a graphic representation of the results of the analysis. Each bar lists all the enterprises and amounts of each. The first bar groups some of the smaller crop acreages into 'other' as follows:

Barley hay - 62 acres

Grain silage - 13 acres

In all cases the acreage in grain silage is too small to be worthwhile (i.e. 13 acres). Therefore it should be used as part of the wheat or barley acreage. The grain silage was used in the wintering ration for the heifers and it could be replaced by some other roughage. All the crops grown are used in the feedlot. The feedlot contains mostly heifers on a long term finishing program where they are grown through the winter and fattened in the summer.

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[1] Nutrient Requirements of Domestic Animals, Number IV, Nutrient Requirements of Beef Cattle, Revised Edition, Publication 1137, National Academy of Sciences - National Research Council, Washington, D. C. 1963.

[2] Nutrient Requirements of Domestic Animals, Number II, Nutrient Requirements of Swine, Fifth Revised Edition, Publication 1192, National Research Council, Washington, D. C. 1964.

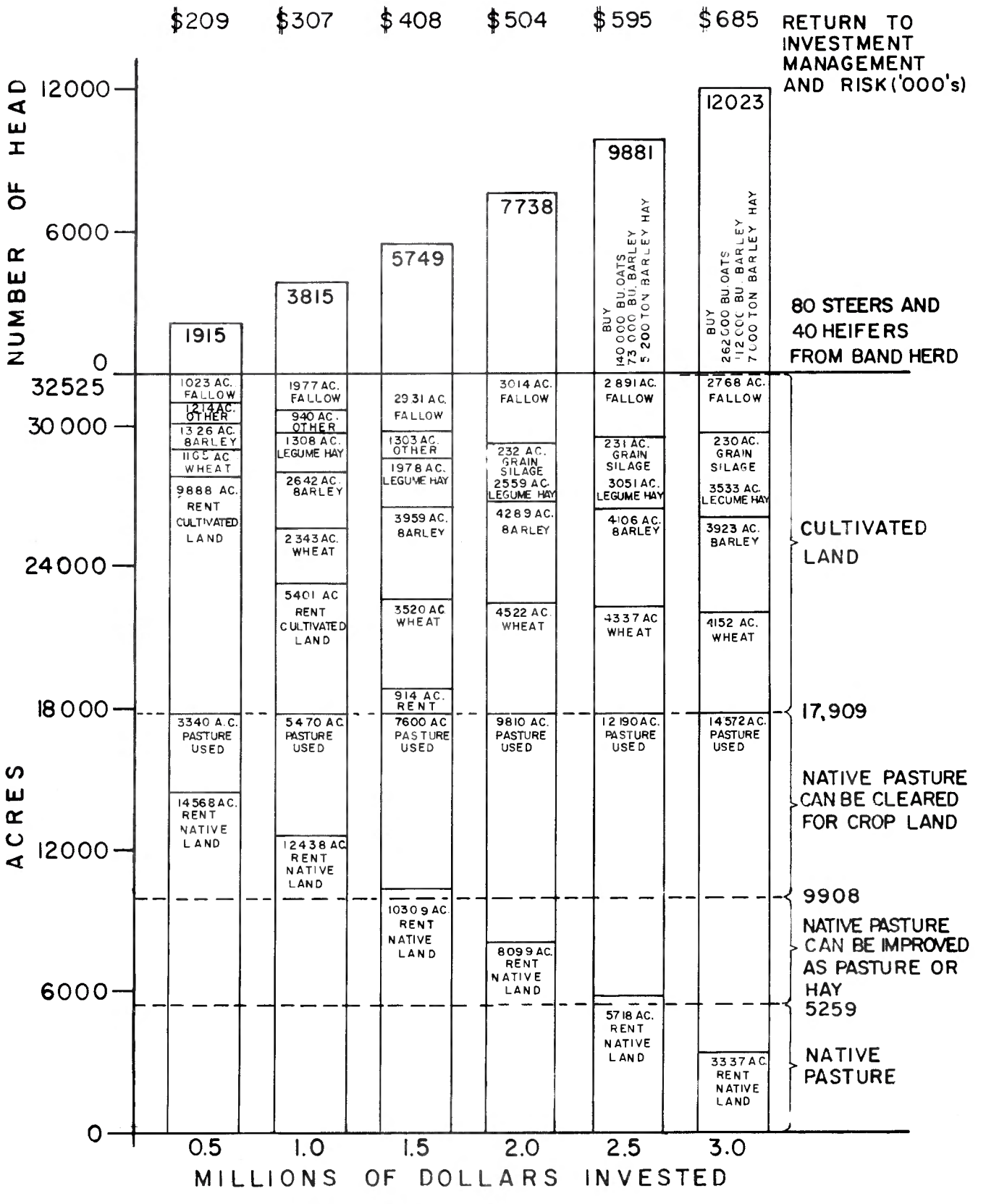

FIGURE 3

LINEAR PROGRAMMING ENTERPRISE SELECTION FOR VARIOUS INVESTMENT LEVELS SAMSON INDIAN RESERVES NO. 137 & 137A

Stanley Associates Engineering

The significant trend as more capital is available is that the feedlot is expanded. Only the Reserve land required to supply feed is used and the remainder is rented to other farmers. Further improvement of Reserve lands was not justified because it took valuable capital from the feedlot.

Much of the pasture area is made up of small patches within cultivated areas and would require fencing to be used. This was not included as a cost. If it is too small to fence then the income to the Reserve should be reduced by $1.20/acre times the numbers of acres not available for renting. The other enterprise selections will not change unless the pasture actually available is less than that required for the feedlot.

The labor requirements at each level of investment are as follows:

Level	Hours (,000's)
$100 thousand	5.5
$200 thousand	8.5
$300 thousand	11.6
$400 thousand	14.6
$500 thousand	17.1
$600 thousand	20.2

Some individual adjustments can be made to improve the solution. For example, the wheat fed to the cattle may be better sold and the money used to buy barley. This would be done only where the equivalent amount of energy could be obtained from barley at a lower cost. Wheat is used in these programs because it produces more energy per acre.

This analysis presents the optimum return based on the prices summarized earlier in this report. Prices on butcher cattle were substantially higher than the average experienced over the past ten years. This was to provide the returns per hundred pounds of live animal produced that were reported in the Farm Enterprise Analyses for Alberta. Beef feeders are usually more interested in the margin between buying price and selling price rather than actual prices, since the margin determines the returns. The optimum enterprise combination here involves feeding heifers which is relatively uncertain. Resources must be available to continue the operation when

returns are very low. The vulnerability of the operation is reduced by using so much home grown feed. However, feeding skills and marketing skills available will also have a substantial effect on the success of the operation.

Management

Throughout this section, good management has been stressed. Unless management of a high quality is available, there is little likelihood of any project succeeding. The following quotation[1] summarizes some of the more important aspects of management.

> The job of management may be broken into three major phases:
>
> 1. The management of money;
> 2. The management of things;
> 3. The management of people.
>
> Each of these distinct areas requires specific management skills, knowledge, and interests. The total management job requires a smooth integration of all three phases, and they must be kept in balance; otherwise, the organization as a whole gets into difficulties.
>
> The Functions of Management
>
> So that the whole subject of modern management can be better understood, it has been broken down into five major functions as follows:
>
> I. Planning;
> II. Organization and staffing;
> III. Direction and leadership;
> IV. Co-ordination;
> V. Controls.
>
> Obviously, these functions are inter-related. It is impossible to treat with any one function without overlapping with other functions. For purposes of this study we will endeavour to deal with those activities which are most apparent in each of the areas indicated above.
>
> These functions of management have been identified by some writers as: planning, organization, integration, and measuring. Other writers call them: planning, organization, directing, and controlling. A

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[1] Carlson, D., Modern Management Organization for Economic Co-operation and Development, Paris, 1962, p. 20

number of other concepts closely related to these terms have been published from time to time in various text books and articles.

The Major Functions of Management

Detailed activities within each of the five major functions of management include many factors, such as:

I. Planning

1. Trends;
2. Objectives;
3. Policies;
4. Programs;
5. Budgets;
6. Works assignments;
7. Schedules;
8. Growth and expansion;
9. Controls and reports;
10. Improvements.

II. Organization and Staffing

1. Organization charts;
2. Functional charts;
3. Position descriptions;
4. Performance standards;
5. Job evaluations;
6. Qualification requirements;
7. Compensation program;
8. Staffing and recruitment;
9. Relationships;
10. Personnel utilization.

III. Direction and Leadership

1. Delegation;
2. Interpretation;
3. Understanding;
4. Acceptance of accountability;
5. Training and motivation;
6. Discipline;
7. Group dynamics;
8. Morale;
9. Productivity;
10. Job satisfaction.

IV. Co-ordination

1. Communication: up, down, across;
2. Integration of all activities;
3. Within the organization;
4. Within departments;
5. Between departments;

6. Between H. Q. and Field;
7. With regulatory agencies;
8. With the industry;
9. With the community;
10. All other relationships.

V. Controls: ratios, standards

1. Criteria for measuring results;
2. Project desired results;
3. Establish check points;
4. Schedules and time tables;
5. Sequence of importance;
6. Performance appraisals;
7. Remedial action;
8. Work simplification;
9. Audits and reports;
10. Board approvals.

To carry out many of the functions mentioned above, good records are essential. Unless the manager knows what is going on in the business, he can not make rational decisions for the future. Decisions based on guesses usually result in error.

> There are many reasons that an organization may fail to make profits. However, experts agree that incompetent management is the number one cause. Dr. A. M. Woodruff in a study prepared for the Small Business Administration analyzed a number of unprofitable business ventures and contrasted them with the other firms that had achieved a good deal of success. He states:
>
> " None of the failures studied occurred because the firm was small. They all occurred because of a very obvious, easily identified management error. The management error might have occurred because one man was saddled with too much, and didn't have time to devote to his various responsibilities, a situation indirectly associated with the smallness, but in the last analysis, the failure was occasioned by a management error which could have been avoided. "
>
> High on the list of management blunders cited in this same study was failure to provide or require "adequate records". In some instances, the accounting papers were no more than checkstubs and a single entry notebook. Vague notions of accounts receivables and cost position were substituted for accurate records. [1]

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[1] Nelson, R. H., Management Handbook for Tribal Business Leaders, Bureau of Economics and Business Research, University of Utah, 1965, p. 6

Many farmers fall into the category mentioned above. However, as will be shown in the next section, these are the people being forced to quit farming. If any Band member wants to be a farm manager, he must be willing to provide the management resources necessary to maintain the production levels achieved by the farmers who supplied the data for:

(a) The November crop yield estimates,

(b) the Alberta Cow-calf Enterprise Analysis,

(c) the Alberta Cattle Feeding Enterprise Analysis, and

(d) the Alberta Hog Enterprise Analysis.

The management requirements can be roughly categorized into decision making abilities and supervision abilities.

Decision making abilities are the qualities necessary to provide the overall management for the farm. The manager must be able to evaluate pertinent information to choose the best alternative for his operation. He must be willing to make the effort to get as much information as possible on the technology available and the risks and uncertainties involved. Once he has the information, he then must be able to analyze it in the light of his financial position and his overall objectives. Once he has analyzed the information he must then make a decision and be able to put his decision into effect. These decisions involve items such as which crops should he grow according to current market restrictions and the capability of his land; when should he buy and sell cattle; when should he emphasize being more efficient in the enterprises currently on the farm; when should he try new techniques.

In summary, the steps in decision making are:

(1) Clarify the problem.

(2) Gather all available information.

(3) Analyze problem.

(4) Arrive at decision.

(5) Put the decision into effect.

(6) Accept the results of the decision, good or bad. This means taking calculated risks to maximize returns, and evaluating the results of every decision after it has been carried to completion.

Once he has decided to take a particular course of action, the manager's supervisory skills are used. This is the ability to organize men and equipment to get the particular job done. On smaller operations, this also involves the skills of operating equipment correctly and efficiently, being able to spot livestock that are not producing, and to correct production problems. The manager must be able to organize operations to meet dead lines as closely as possible, when adverse weather delays him. It is the organizational ability and farming skills which govern the physical production and cost of production for an enterprise. The ability to choose the correct combination of enterprises and the correct time to market is a decision making ability which greatly influences the profitability of the farm operation.

Each farm enterprise requires different skills. Thus the crop enterprise requires the ability to operate equipment and complete the operations on time while the cattle feeding enterprise requires the ability to keep feeders eating high energy rations to maintain weight gains. Lost production occurs whenever the operator does not meet the daily supervisory requirements of the enterprise.

Risk and Uncertainty

The prices used to establish basic farm units were obtained from the enterprise studies conducted in recent years by the Economics Division of the Alberta Department of Agriculture. Love[1, 2] has published data on the income variability of the grain and cow-calf enterprise which is a guide to the uncertainties involved. Data has been extracted from these reports and from statistics published by the Alberta Department of Agriculture[3] to produce graphs of the price performance of certain farm enterprises for the years 1956 to 1966. The graphs also indicate the price used in the preparation of this report. It is obvious that the average prices experienced over the past

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1 Love, H. C., Crop Production Risk in Alberta, Agricultural Economics Research Bulletin 5, University of Alberta, Edmonton, July 1968

2 Love, H. C., Income Variation in Beef Production, Agricultural Economics Research Bulletin 1, University of Alberta, Edmonton, January 1966

3 A Historical Series of Agricultural Statistics for Alberta, Statistics Branch Economics Division, Alberta Department of Agriculture, Edmonton.

few years are lower than the prices used in the studies. This is because:

(1) The enterprise analysis reports have only been done in recent years and the prices are higher than average in this period;

(2) The analysis reports obtained data from farm operators who have better than average performance.

Many methods are available to measure uncertainty. The method used here is the average year to year change as a per cent of average price from 1956 to 1966. This is relatively simple and yet accurate enough that it will show price variability. This is not the only factor as yields and costs of production also vary. The remainder of this section will discuss the variability of each enterprise based on: (1) price variability; (2) variable cost as a per cent of total; and (3) production variability. Two sets of data are provided for the enterprise to show the difference between the 1960-66 average and 1956-66 average.

The common crops exhibit low price variability from year to year. However, the weather has a significant influence on the yield so the variability of gross income is probably a better measure. Love[1], in his bulletin on Crop Production Risk in Alberta estimates the gross income year to year variability for Census Division 8 over the past twenty years to be 27.4 per cent of the mean income for wheat and 22.26 per cent of mean income for barley. Figure 4 shows the estimated bushel values given by Love[1] for Census Division 8 and the Wheat Board Price[2] in Edmonton of Number 4 Northern wheat, 2 Feed barley, and Extra 1 Feed oats. The price variation from year to year is substantially less than gross income variation (6-11%). Many farmers find they can withstand the variation because they have substantial equity in land. This means that the variable costs (labor excluded) in any given year will likely be paid because they represent only about 42% of the production cost. However the farmer paying rent is more vulnerable because

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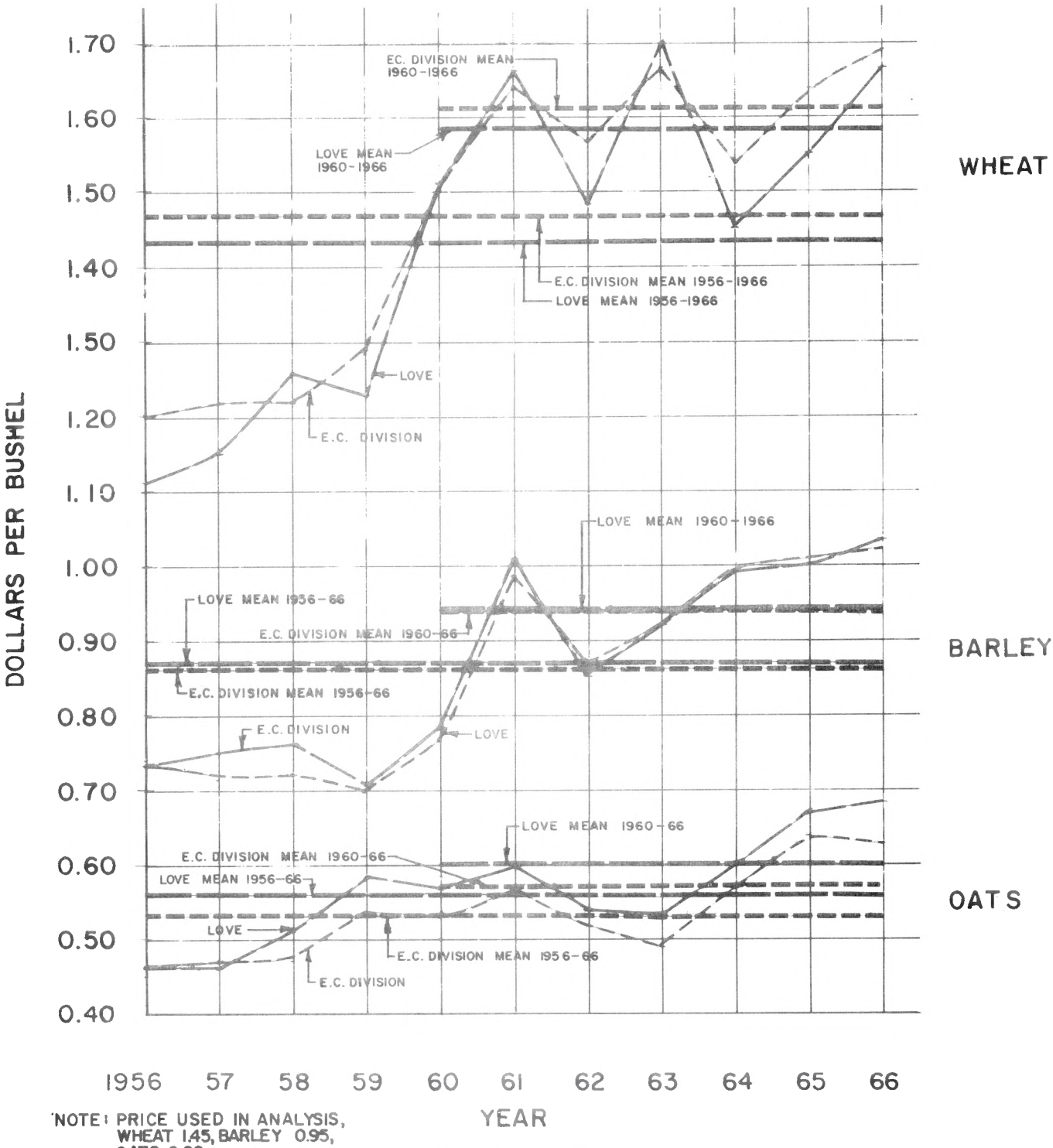
1 Love, H. C., Crop Production Risk in Alberta, Agricultural Economics, Research Bulletin 5, University of Alberta, Edmonton, July 1968.

2 A Historical Series of Agricultural Statistics for Alberta, Statistics Branch, Economics Division, Alberta Department of Agriculture, Edmonton.



NOTE: PRICE USED IN ANALYSIS, WHEAT 1.45, BARLEY 0.95, OATS 0.60.

FIGURE 4

10 YEAR PRICE HISTORY FOR FARM GRAINS

SOURCE: LOVE, H.C. CROP PRODUCTION RISK IN ALBERTA AGRICULTURAL ECONOMICS, RESEARCH BULLETIN 3, UNIVERSITY OF ALBERTA, EDMONTON, JULY 1968.

A HISTORICAL SERIES OF AGRICULTURAL STATISTICS FOR ALBERTA, STATISTICS BRANCH, ECONOMICS DIVISION, ALBERTA DEPARTMENT OF AGRICULTURE, EDMONTON.

variable costs and 1/4 crop share rental represent about 75% of the cost of production.

Calf prices were hard to find for steers and heifers. Thus several sources are shown in Figure 5 and they were the average October prices. Price variation for steers is about 12 to 17 per cent of the mean. Again production is somewhat variable and the variation in average year to year gross income per cow is somewhat more. The rancher is in much the same position as the crop producer as far as being able to withstand adverse prices. If there were no rent to pay, operating expenses would represent the majority of his required cash flow and this is only 35% of total production costs. However land rental plus operating costs excluding labor represent about 70% of the total costs.

Figure 6 is a summary of the price of slaughter cattle to indicate some price variation for slaughter cattle. Over the period considered, the prices for slaughter cattle have not varied greatly from year to year. However this is often considered a very uncertain enterprise because:

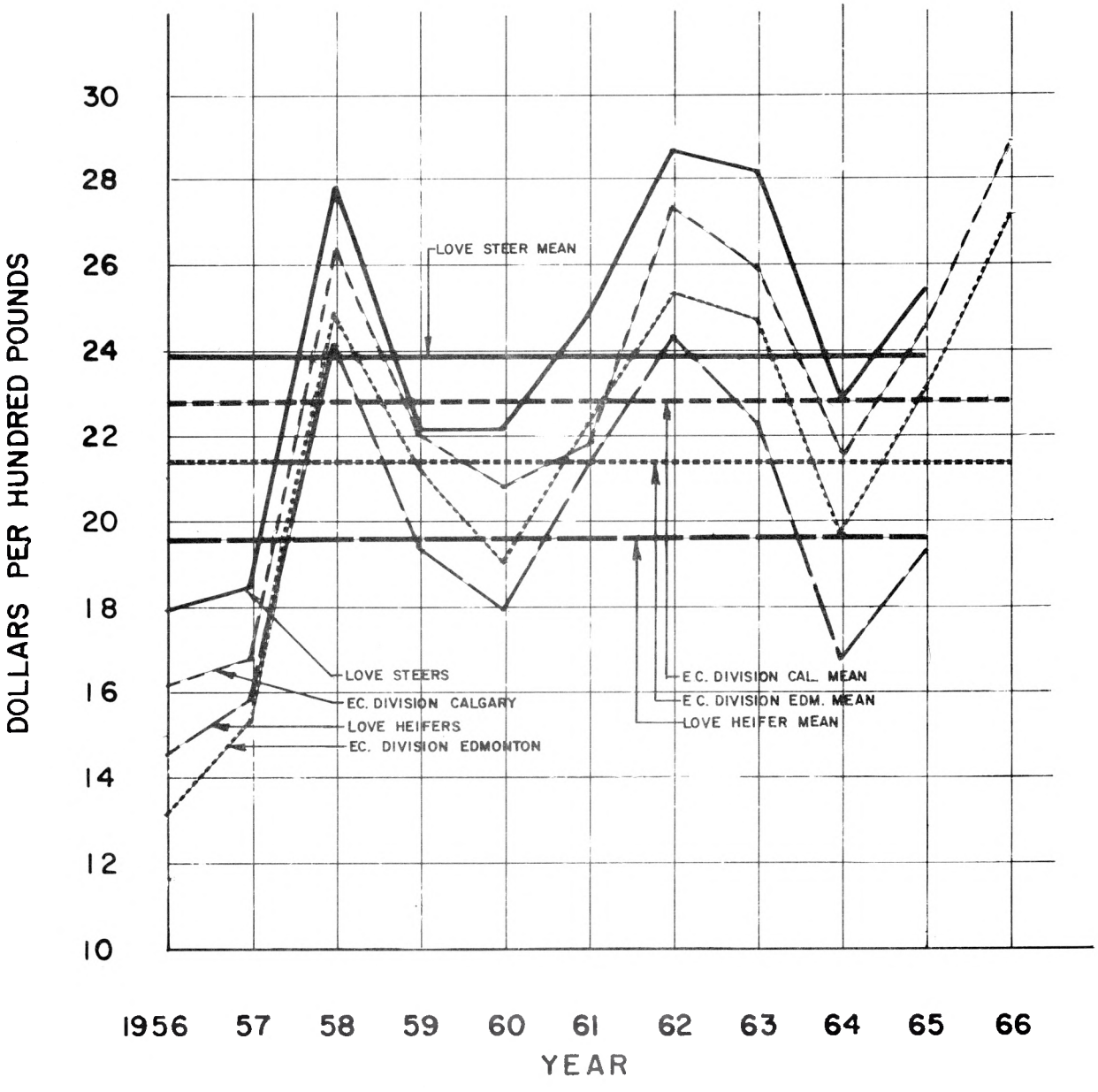
(1) Feeders are purchased on a market at varying prices and sold on a later market at varying prices. Thus he must buy feeder cattle that may be worth less or more per pound than what he paid.

(2) Variable costs are 85% of the total feeding cost when labor is not included in costs.

(3) About 55% of gross returns represent money spent to obtain the livestock.

Thus even though price variation is not substantial, it can make a large difference in the final analysis.

Figure 7 shows the price performance of Grade A hogs. The average price is lower than that used in the analysis because of the influence of recent years on the data in the farm analysis reports. This enterprise is probably comparable to cow-calf as far as income variability is concerned. However variable costs are about 83% of total costs (excluding labor). Thus the hog producer may be more vulnerable than the cow-calf operator. Production variability in this enterprise is largely dependent on the operator.



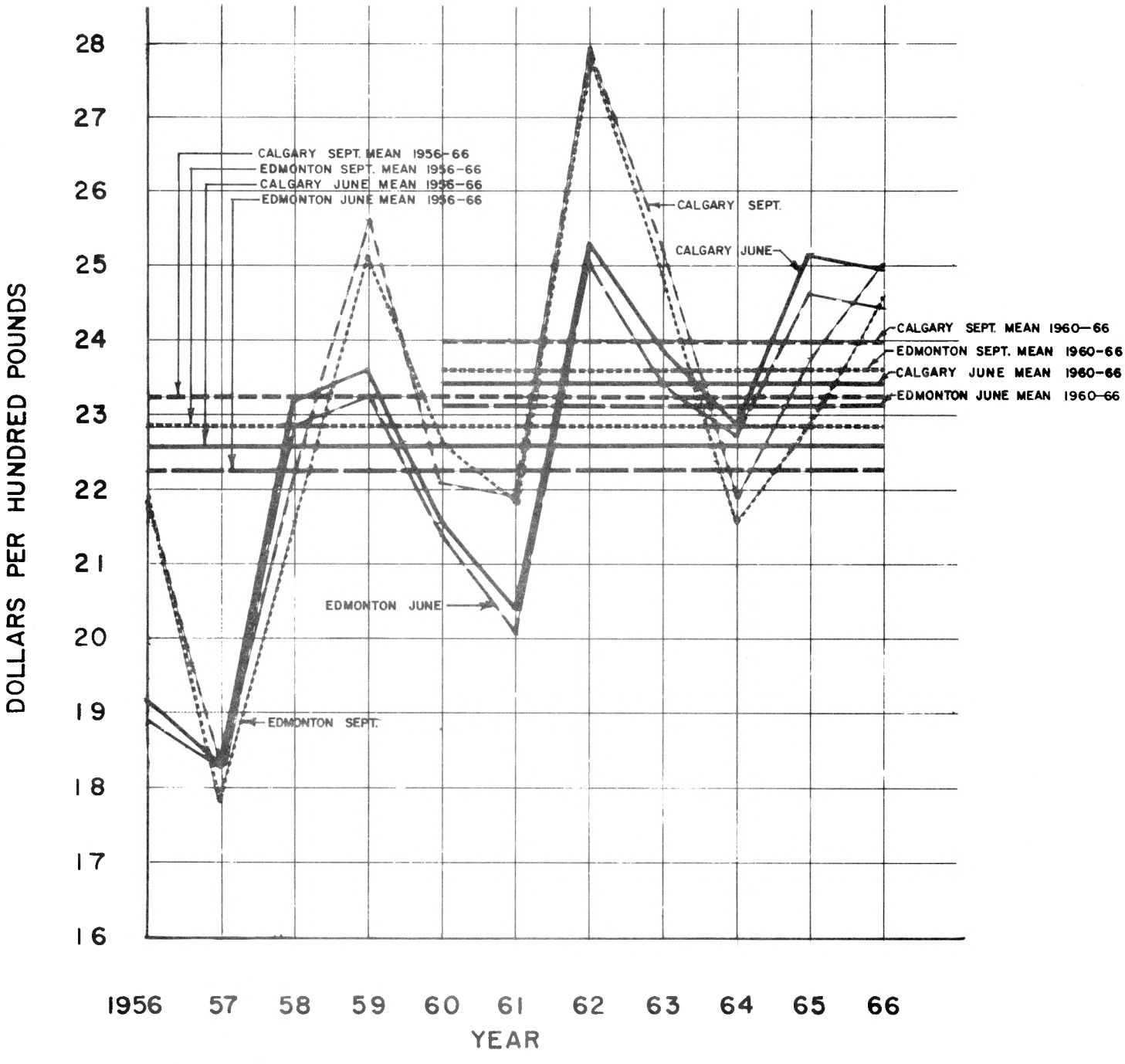
NOTE: PRICE USED IN ANALYSIS,
STEERS 25.00,
HEIFERS 20.00.

FIGURE 5

10 YEAR PRICE HISTORY FOR CALVES AT SELECTED LOCATIONS IN ALBERTA

SOURCE: LOVE, H.C. CROP PRODUCTION RISK IN ALBERTA, AGRICULTURAL ECONOMICS, RESEARCH BULLETIN 3, UNIVERSITY OF ALBERTA, EDMONTON, JULY 1968.

A HISTORICAL SERIES OF AGRICULTURAL STATISTICS FOR ALBERTA, STATISTICS BRANCH, ECONOMICS DIVISION, ALBERTA DEPARTMENT OF AGRICULTURE, EDMONTON.

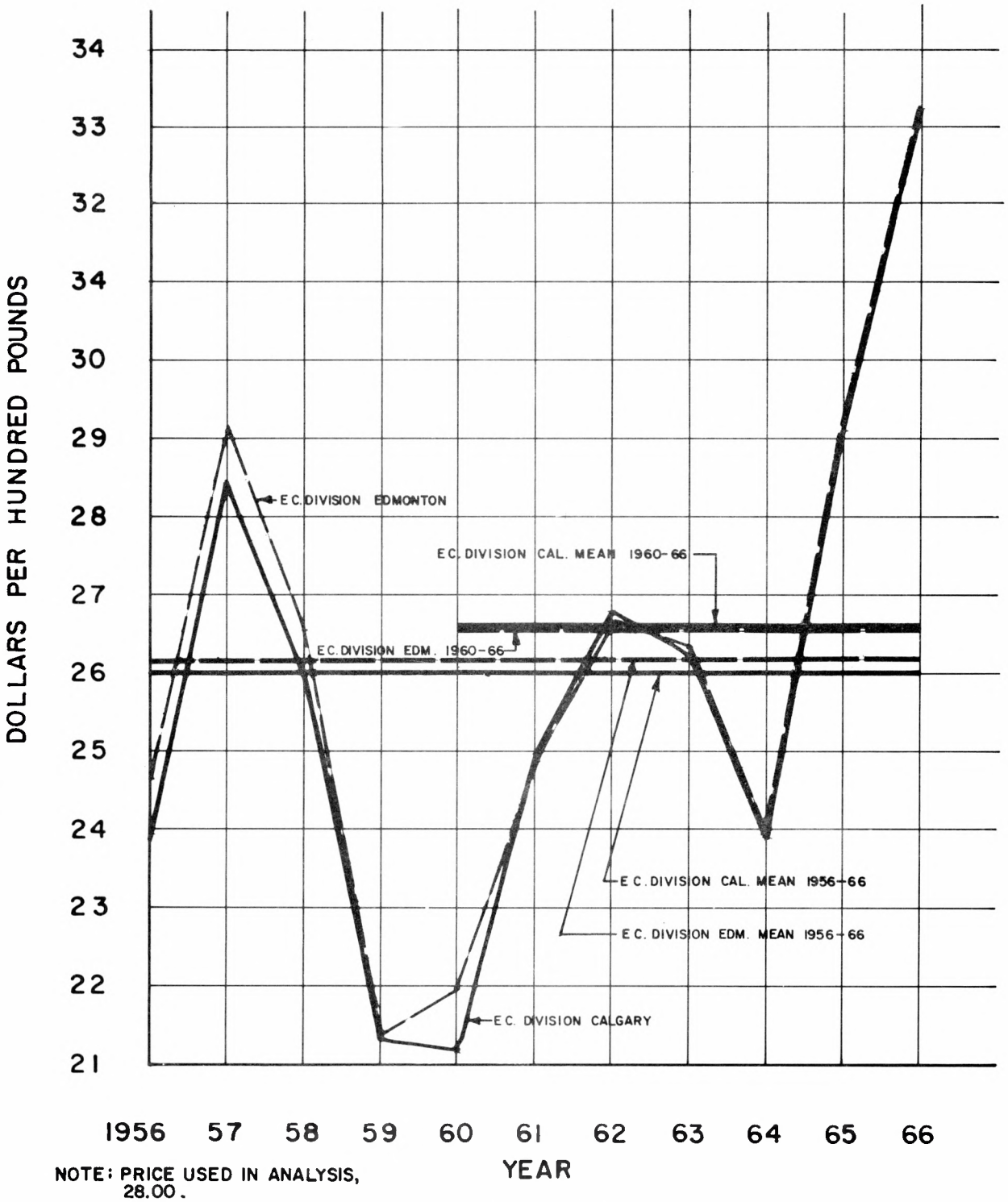


NOTE: PRICE USED IN ANALYSIS,
24.50 FOR STEERS,
23.00 FOR HEIFERS.

FIGURE 6

10 YEAR PRICE HISTORY OF CHOICE BUTCHER STEERS IN JUNE AND SEPTEMBER ON EDMONTON AND CALGARY MARKETS

SOURCE: A HISTORICAL SERIES OF AGRICULTURAL STATISTICS FOR ALBERTA, STATISTICS BRANCH, ECONOMICS DIVISION, ALBERTA DEPARTMENT OF AGRICULTURE, EDMONTON.



NOTE: PRICE USED IN ANALYSIS, 28.00.

FIGURE 7

10 YEAR PRICE HISTORY OF GRADE "A" HOGS IN ALBERTA

SOURCE: A HISTORICAL SERIES OF AGRICULTURAL STATISTICS FOR ALBERTA, STATISTICS BRANCH, ECONOMICS DIVISION, ALBERTA DEPARTMENT OF AGRICULTURE, EDMONTON.

PRIMARY RESOURCE DEVELOPMENT

There are no proven reserves of oil or gas within the Louis Bull Reserve.

One test well, Texaco Imperial Louis Bull IR No. A1-4-23 (Lsd. 4-23-45-25 W. 4 M.), has been drilled on this Reserve. It was drilled in 1954 to a total depth of 5,100 feet, finishing in the Devonian Wabamum Formation. A drill stem test of Lower Cretaceous Blairmore sand recovered 160 feet of gassified oil-cut mud and 105 feet of slightly oil-cut salt water. A test of the Viking sand in this well recovered 1,700 feet of salt water.

There are a number of prospective zones, including sands of the Upper and Lower Cretaceous and the carbonate zones of the Devonian, in the area. The prospects of this Reserve will depend mainly on the presence of local structural or stratigraphic conditions, which may form traps for oil or gas. More drilling will be required before these conditions can be analyzed.

Sand occurs in dunes in Sections 22 and 23 which could be of high quality except where sod lines are present. This sand could be used for building purposes.

Gravel occurs in an esker that trends south on the west border of the Reserve and could be used for road maintainance. Esker gravel is usually poorly sorted and contains much weak materials, but pockets of good gravel may be present.

Other near-surface economic materials are not known to be present.[1]

Map No. 3 indicates the surface geology of the Louis Bull Reserve, and shows the location of the wells mentioned above.

TOWNSITE DEVELOPMENT

It is recommended that the Louis Bull Band co-operate with other Bands on the Hobbema Reserves in the detailed investigation of the desirability and economics of development of an Indian community at Hobbema. A preliminary

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[1] Refer to report by Abcon Engineering Ltd. regarding coal occurrances in the area.

discussion of the implications of such a development are contained in the Four Band Report.

SUMMARY AND RECOMMENDATIONS REGARDING PHYSICAL DEVELOPMENT

Agriculture

Two basic alternatives are available for reasonable agricultural development.

(1) Develop 6 family farms as outlined in a previous section of this report. This would require a capital investment of $246,000, plus an additional $150,000 for clearing. Such an operation would return a total of $62,200 to the Reserve in labor and management wages plus Band revenue.

(2) Develop a Band farm based on a feedlot operation which would require farming of sufficient area to supply feed for the cattle operation, with the balance of the Reserve being leased to white farmers. Such an operation with a $400,000 capital investment would return a total of $85,300 to the Reserve for labor and management and would employ more people than in (1) above

On the basis of the above, it is recommended that a Band farm be developed in accordance with (2) above for the following reasons:

(1) Although the risk involved in a feedlot operation is relatively high, the possible increase in revenue more than compensates for the risk factor. Furthermore, a Band operation would justify the use of an experienced manager who would tend to have a modifying effect on the risk factor, whereas the "family farm" alternative could not conveniently involve a manager and would therefore have an increased possibility of failure.

(2) The Band farm situation would be more amenable to a training program whereby young Band members could be employed to gain experience which could be utilized elsewhere.

(3) A Band farm corporation would have less difficulty in obtaining the necessary capital than would individual family farmers.

All of these recommendations imply changes to the existing system of land tenure. This subject is discussed in Section 6.

Primary Resource Development

With the exception of possible gravel and sand deposits, there appears to be no potential resources on the Reserve that have not already been exploited.

Industrial and Commercial Development

These areas are discussed in the Four Band Report.

SECTION 5 - SOCIAL DEVELOPMENT

GENERAL SOCIAL THEORY ON THE TWO MAJOR PROBLEMS AT HOBBEMA

Band members on the four Reserves at Hobbema are facing two major problems at the same time. The first and perhaps the biggest problem is that they are a minority group which society has set apart through legislation and by means of discrimination. The second main problem is that the Reserves' only labor demand at the present time is in the field of agriculture, which requires more capital and less labor each year.

Minority Group Problems

The Canadian Indian is a member of a minority group, and as such he is often the target for prejudice. For the Indian there are two closely related but distinguishable consequences of prejudice. These are:

(1) the effect of prejudice on the personality traits individual;

(2) the effects of prejudice on the structures and processes of the minority group[1].

Since the personality of an individual is nearly developed by the time he is fifteen years old, to explain or judge the behaviour of the adult without a full understanding of his childhood experiences is to miss basic causes. If the dominant elements of North American society or any other society isolate a segment of the population from contact with prevailing norms and prevent that segment from sharing in the rewards which accrue to the adherence to these norms, the appearance of a subculture with different motivations and standards of conduct should not come as a surprise[2].

> There is a sense of pessimism among the people. The young feel that they must or will fall into the same patterns as their elders. Sociologists tell

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[1] Simpson, G. E. and Milton Yinger Racial and Cultural Minorities, (New York: Harper & Row, 1965) Page 130

[2] Tremblay, Marc-Adelard, and Walton J. Anderson Editors Rural Canada in Transition (Agricultural Economics Research Council of Canada, June 1966) Page 137.

> us that the aimless living, laziness and uncleanliness found on many Reserves is not the fault of the Indians but comes from the normal frustration of minority groups faced with low income living[1].

Certain Canadian policies established for all Indians have contributed to the frustration of Indians as minority groups faced with low income living[2]. Reserve living, for example, tends to isolate the Indian, keeping him constantly aware of his minority group status and forcing him to miss any socio-economic opportunities open to the dominant group. He often feels insecure, an insecurity caused by prejudice which an Indian encounters from childhood.

> In every region of Canada I found a deep-rooted prejudice against them, a prejudice that was stronger in some places than others but one which was noticeable everywhere from Atlantic to Pacific. It was the strongest in the West.[3]

> You understand the Indian people better when you realize that they live in constant fear of prejudice and that they have no united front against this terror because they live (or were bought up) on socially isolated Reserves[4].

Moreover, the Indian Act segregated the Indian population, giving them separate laws with a separate government branch to administer them. Indian leaders have been left with little responsibility and no authority. There is little local tribal government left, and therefore no leadership or leadership training on the Reserves. Adequate education is a prerequisite of any leader, and an Indian dealing with educated government employees should have enough formal education to communicate with them on an equal basis. But the men who should be taking over the tribal leadership haven't received

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1 Mulvilhill, James, The Dilemma of Our Indian People (Le Droil, Ottawa Page 21

2 ibid., Page 137

3 Jenness, Diamond, Canadian Journal of Economics XX (1954) Page 95

4 Mulvilhill, James, opcit,, Page 5

an adequate education. One possible explanation for this lack of education may be found in the following excerpt from a letter written in 1940 by a member of the Department of Indian Affairs.

> The Department doubts the advisability of encouraging the older pupils along academic lines. Under the circumstances, the books required are not being supplied. It is felt that when pupils reach the age of 12 or 14 years the school management should emphasize vocational rather than academic training for the Indian students.

A closer look at the so-called "Indian problem" is called for.

> If their diet was deficient, their health poor, their housing unsatisfactory, it was the fault of the white man, they said, and the white man's government should set things right. So it came about that an atmosphere of mingled apathy and discontent settled on the Reserves, and it was apathy that dominated[1]

Thus a "segregation camp" mentality is slowly built up. The feeling of apathy, mentioned by Jenness, is one of the most serious aspects of what is most commonly referred to as the "Indian problem". Laskin breaks the problem down into three categories: Cultural-ethical; biological; and motivational[2]. The cultural-ethical aspect concerns the decision by Indians to retain as much of their culture as they wish, or to transform themselves into average Canadians. The biological part of the problem is very simple. The Reserves are becoming, or are, overpopulated.

A solution for the motivation part of the Indian problem is the most difficult to foresee. A great deal of research has been dovoted to the source of achievement motive, the readiness to work and postpone immediate satisfactions in order to get ahead. Three generalizations can be made on the basis of the data gathered:

(1) class is more important than race or ethnic group in determining the strength of the achievement motive;

(2) an important line of demarkation can be drawn between lower-lower and upper-lower class (a line of special significance among non-whites);

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[1] Jenness, Diamond, opcit, Page 98.

[2] Laskin, Richard opcit, Pages 87-88

(3) the desire for achievement is not always accompanied by the expectation of achievement[1].

In the attitudes of shame and apathy that prevail on many Reserves, one can see that the achievement motive no longer exists for many Indians. Their attitude can easily be traced to its origins:

(1) the collapse of their traditional tribal culture with its unique values, symbols of achievement, socialization stages, structuring of motivation and meaning of life that is involved;

(2) the introduction of white man's religion, education, generally his norms, which often condemns as diabolical and pagan the Indians' culture, or simply ignores it as unworthy of official acknowledgement;

(3) the encounter with jobs and wages involving new skills and work disciplines which, because they were initially difficult to master, earn for the Indians the stigma of lazy, stupid and good-for-nothing.

Thus, for many the Reserves have become havens from loneliness, contempt, and the failures associated with outside life. The Reserves have become sanctuaries that offer subsistence and relief rations, perhaps shamefully but stoically received[2].

The Rural - Agricultural Problem

Agriculture throughout Canada is undergoing major changes. Technology is the main force causing the changes. The main effect of the changes is that a smaller proportion of farmers are producing a larger portion of the total agricultural product. In 1961, 10 percent of Canadian farmers produced 45 per cent of the value of all farm products sold and 46 per cent of the farmers produced 10 per cent of the value of all farm products sold. These figures can be divided another way, 55 per cent of Canadian farmers produced 90 per cent of the value of all farm products sold and 45 per cent of the farmers produced 10 per cent of the value of all products sold[3]. The fact that many farmers cannot or will not keep up with technol-

1. Simpson, G. E., and Milton Yinger, opcit. Page 142.
2. Laskin, Richard, opcit, Pages 87-88
3. Tremblay, Marc-Adelard, and Walton J. Anderson, Editors, opcit Page 180.

ogy means that they are being forced out of agriculture. In 1901, over 66 per cent of Canadian population were farmers. By 1961 only 10 per cent of Canada's population were farmers [1]. The situation on the prairies where the Hobbema Reserves are located is not quite as dramatic. In 1931, 50 per cent of the population on the prairie s were farmers. By 1961 this figure had dropped to 24 per cent[2]. The above figures give a comparative picture of agriculture with the rest of society. In absolute numbers there were approximately 23,700 fewer people on farms each year in Canada[3]. In the period 1961 to 1966 an annual average of 960 farmers quit farming in Alberta. This means there is a percentage drop of 5.2 per cent each year for the number of farmers in Alberta, or 1 in every 20 farmers quits farming each year in Alberta[4].

All of the above means that some farmers and nearly all of their children are moving to the towns and cities. This action involves far more than the physical movement of resources. It involves the process of urbanization. Urbanization means more than the establishment and growth of towns and cities.

> " Urbanization means a structure of common life in which diversity and the disintegration of tradition are paramount. It means a type of impersonality in which functional relationships multiply. It means a degree of tolerance and anonymity replaces traditional moral sanctions and long terms acquaintanceships[5].

In an urbanized society the challenge is not primarily one imposed by nature nor are natural controls significant in influencing behaviour. The challenge and controls which influence the actions of the urbanite are social, that is, they are man's own creations. The urban dweller must orient himself to social objects, and the cultural, institutional, and psychological

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1 ibid, Page 9

2 Ibid, Page 12

3 Dominion Bureau of Statistics

4 Tremblay, Marc-Adelard, and Walton J. Anderson Editors, opcit, Page 10

5 Cox, Harvey, The Secular City , (New York MacMillan Company 1965) Page 4

of this orientation serve to distinguish urbanized from ruralized society[1]. In a completely rural society, the non-social environment is the major independent variable, the social environment being primarily an effect rather than a cause. In a completely urban society on the other hand, the non-social environment is only incidental, the social objects which man confronts significantly influence the social interactions in which he engages. Thus Durkheim's dictum that we should seek the cause of social facts in preceding social facts becomes more cogent as technology reduces the relative significance of nature and rationalization increases that of social organization[2].

Urbanization is the dominant social force in our society today. It is important then that we remember the statement previously made that "Urbanization is based on the process of technology". Scientific knowledge or progress, which has brought about technical progress or technology, has, because it was forceful and broad, given rise to a civilization based on knowledge. Thus, urbanization is based on knowledge. Knowledge, because it is all inclusive or tries to be by nature, has far-reaching effects on any society which adapts the majority of its functions to knowledge. Thus a civilization that is characterised by knowledge seeks to be all embracing, that is, to encompass the entire society in which it is developing and to leave its mark on every group which helps to make up this society. Any group which does not keep up with technology or knowledge soon finds itself at an extreme disadvantage in an urbanized society. Thus a farmer who does not keep up with the technology soon finds himself at an economic disadvantage. But this is not the only disadvantage he finds himself at. Socially and culturally he becomes more and more distant from what is happening in the rest of urbanized society. The farmer who does not keep up with technology will be forced

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1 Wirth, Louis, Urbanism As a Way of Life, American Journal of Sociology, Vol. 44 (July 1938)

2 Durkheim, Emile, The Rules of Sociological Method (New York: The Free Press of Glencoe, 1950) Page 110

off the farm due to economics, but it may be anticipated that rural inhabitants moving to urban areas with their original inadequacies will not find their situation improved merely because they have migrated. On the contrary, they may encounter additional difficulties in an environment with which they are not familiar[1].

Inherent in the urbanization concept is the idea that modern man is convinced he can control nature. He will be inclined to trust power or authority to that person he believes is best qualified to govern. Power and authority will not be based on someone's good will, but on his ability to judge the situation rationally and subsequently take or indicate the most effective means of solving the problem. However, because of the importance of science, in our modern society, education is perhaps the only means of becoming competent to eventually assume power, and where need be to contest someone's right to it. To quote Fortin "To become a fullfledged member of this society the individual must have ever increasing access to scientific knowledge"[2].

The Hobbema Indians are subject to the same pressures as the white, vis-a-vis agricultural technology.

THE ROLE OF COMMUNITY DEVELOPMENT

> Community development in this section will be defined as:
>
> The process by which the efforts of the people themselves are united with those of the government authorities to improve the economic, social and cultural conditions of the communities, to integrate these communities into the full life of the nation and to enable them to contribute fully to national progress.[3]

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1 Tremblay, Marc-Adelard, and Walton J. Anderson Editors, opcit, Page 401

2 ibid, Page 386

3 Mehta, B., Thoughts on Community Development Khrukshetra X11, 1964 Page 2.

It is important to keep in mind that one is working with the community as a unit; it is the community that is to be integrated into the life of the nation, not the individual that is to be extracted from the community by some aspect of community development process. The word "process" refers to the progression of events that are planned by the participants to serve goals they progressively choose. The events point to changes in a group and individuals that can be termed growth in social sensitivity and competence.[1] This process usually follows a fairly definite pattern if it is successful. There are six major stages in the process: exploration, organization, discussion, action, new projects, and finally continuation[2].

During the exploratory stage as much information as possible is gathered about the community. This information should include social and cultural attributes of the community, history about past projects, activities presently occuring, some data on the physical resources of the community, and those problems that people feel are most pressing.

During the organizational stage the few really interested people hold many formal and informal discussions until they reach the point of committing themselves to work on a problem. This is usually a very small group referred to as the necleus. After this nucleus has committed itself, the discussional stage is initiated. As many people as possible are involved in the discussions of the problem. This is perhaps the most important single stage, for if the general community does not feel that they have had a part in the decisions, they may not involve themsleves actively in the project. Usually outside help is brought in to give technical advice, but final decisisons must be left to the community.

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1 Biddle, William W., and Lauriede J. Biddle, The Community Development Process (New York: Holt Rinehart and Winston), Page 79.

2 ibid, Page 79

Action follows decision. In this stage people work on their own ideas to successfully change and develop the community. With success come self-confidence and pride. If this stage is successful, the people are ready to go on to the next stage that is developing new projects. Hopefully the community will develop a pattern for future problem solving which will build a strong community and in turn strong people[1].

SOCIAL DEVELOPMENT ON THE LOUIS BULL RESERVE

A person's attitudes and aspirations are molded mainly by the society in which he lives. A majority of the people on the Louis Bull Reserve appear dissatisfied with their present environment. To solve some of the existing problems, changes must occur on the Reserve. The members of the Reserve must work out for themselves what their goals will be. Any outside group can only show the vehicles available to achieve the goals which the Band has decided on. If the Band accepts outside goals, the chances of the changes that will take place being what the people want, and the chances of the success of an overall program are very small. Any change that takes place on the Reserve must take into account existing social and physical situations and start working from that point. Throughout this report, alternatives are put forward, but it must be kept in mind by all Band members that only they may choose where they want to go and which vehicles to utilize to achieve thier goals.

The following are some of the vehicles of change which the Band might consider in the achievement of their goal of making the Reserve a better place to live and a better place for their children to grow up.

Town Development

One of the things to consider is the possibility of a town where Band members from all four Reserves can come to live. Young people have consistently mentioned the lack of recreational facilities available to them on the Reserve. If a town were developed, the pooled resources of the four Bands would allow provision of adequate recreational facilities. A rink, swimming pool, and a professional recreational director could be hired to give the young people weekly and weekend activities. At the present time a great deal of

[1] Nelson, Lowery, Charles Verner, Coolie Verner, Community Structure and Change, (New York: MacMillan and Company 1962), p. 441

money is being spent on recreation by the Four Bands, yet judging from the dissatisfaction of the young people, this money is not being spent efficiently.

Those Band members living in a town would be able to take advantage of various courses and social activities without encountering the transportation problems which presently hinder attendance of functions; similarly the communications problem presently existing would be partially eliminated. Because of the proximity implied by residence in a town, it would be far easier for Band Council members and others who may have ideas they might like to put forward, to be able to contact the Band members. Through diversified housing an a planned program of housing construction within a town, the current overcrowding situation could be alleviated.

At present, most Band members obtain necessary goods and services from either Ponoka or Wetaskiwin. If a town were developed, retail and service outlets could be established so that members could obtain all necessary goods and services in their community thus reducing transportation costs and providing employment for many Band members. Development of a town would also alleviate the problem of police protection, which is now made difficult by the dispersed pattern of residences.

One further aspect of town development deserves serious consideration. It is an accepted fact that the young people on the Reserve must look to large towns and cities for higher education and for good job opportunities. A child who is brought up in an urban environment which would be created by a town at Hobbema will find it far easier to adjust to the pressures of living in a city than would a child raised on a farm. Thus the town may be considered as a training ground for urban living.

Farming

Farming is another vehicle which may be considered in making the Reserve a better place to live. If a Band farm is started, it could be a good training centre for the young men who wish to learn work habits and attitudes. In addition, it could prove a useful training ground for those who want to try farming on their own or who want to leave the Reserve and work with farmers in the surrounding area.

Incentive Wage Scale

Employment will be a major concern of any development scheme on the Reserve and one of the primary considerations in this area must be the wage scale. At the present time most Band projects pay a flat rate for as long as the individual works, unless he gets a promotion to foreman status. One vehicle which should be considered in an attempt to achieve greater interest on the part of Band members is an incentive pay scale. Many Band members feel that the present system is highly unfair. It has been suggested that for any Band project, the minimum pay should be $1.50 per hour rising rapidly to $1.75, $1.85 and up to $2.00 by the end of the first year. Such an increase in pay would be based on the individual showing up regularly for work, and not being late. After the $2.00 level is reached, at the end of the first year, his increases in pay would be based solely on his increase in production, the interest he shows in his work, and on his ability to demonstrate increasing efficiency. It is felt that the current low wage rates provide no incentive towards responsibility and good work habits. It is felt that a higher wage rate will be regarded as something to be proud of, and will result in a better quality of work and in better work habits.

Day Care Centre

A properly run and well organized day care centre would allow women to be available for employment. It is felt that by allowing these women to work, they might play a far more responsible role in development of the Reserve. Another employment factor to be considered is the provision of summer work projects for students. At the present time there is very little for the students to do in their summer holidays and on weekends during the school year. It has been suggested that the young people may be employed in the general maintenance and cleanup of homes and yards on the Reserve. This would apply particularly to the homes of the older people who are not able to do this kind of work themselves.

Youth Employment

Several older people have mentioned that they would like to garden but there was no way to get the land broken up in the spring. It has been sug-

gested that a boy with a small tractor with a rototiller attachment could go around to the houses on the Reserve and plow up the yards or garden areas so that gardens could be planted. Girls could seed and help with weeding throughout the summer. Not only would this supply employment but it would help to cut the cost of food for the older people during the winter months. Such a project would have two beneficial results:

(1) it would employ the young people and help them develop some pride in the Reserve;

(2) it would make the Reserve a better place for the older people to live.

Bus Service

Several people have expressed the requirement for a bus service which would service the Reserve and provide transportation into Wetskiwin or Ponoka until such time as shopping facilities are available in Hobbema. Such a bus service would allow the older people to get into town to buy groceries and would cut down the expense of hiring taxis. A bus system would also allow the younger people to get to recreational and sports activities in the evening which they now cannot attend due to lack of transportation. The bus service would also be used to transport workers to their place of employment. It would appear that enough people require transportation during the winter months to make a bus system a desirable venture and may be economically sound assuming use of school buses during idle hours.

Band Council

The Band Council is going to have to consider very seriously its function in the future. At present, the Band Council is thought of primarily as a welfare unit. Added to this is the problem that most of the Band Council's time is spent on small detailed items and very little time is left for policy making and communication with the Band members on what is being done and what is being proposed. To help alleviate these problems, there are two suggestions which may be considered by the Band. The first is that a Development Corporation be set up in conjunction with the other three Reserves (Refer to Section 7). This board's function would be organization, administration and

initiation of all development projects on the Reserve. Another suggestion which has been made to alleviate the problems of the Band is that a Band manager be hired for all of the Reserves. This Band manager would help with a lot of the administrative detail which is tying up the Band Council at the present time. The Band manager's prime responsibility might be as follows:

(1) Supervise the activities of the Band staff, and ensure that all Band records are kept in such a manner as to allow their use as decision-making inputs;

(2) To effectuate policy decisions made by Council;

(3) To supply technical and research assistance as required by Council.

Council business is big business. To achieve some degree of efficiency a much more functional operation has to be developed. It is suggested that a Band manager would probably be the easiest solution to the problem and perhaps the most effective.

Religion

Religion is an important part of the Indian community. At the present time the uncoordinated activity of the various churches on the four Reserves is resulting in a great deal of wasted time, personnel and money. It is suggested that the community's religious leaders get together and help the community achieve its goals by a demonstration of cooperation between the various churches. Such cooperation is particularly necessary in regard to youth activities and recreation.

Recreation

The lack of employment on the Reserve is resulting in serious social consequences which are going to become worse as time goes on. These consequences may be partially alleviated by the development of a good adult recreation program on the Reserve. To help achieve this, it is suggested that a good recreation director be hired by the Four Band Council to initiate overall recreation programs and, where needed, individual recreation programs on each Reserve. The program to be developed should be as all-

inclusive as possible. Because of the severity of the winters in this area, it is suggested that the Four Bands pool their resources and develop an arena, in the town. Considering the amount of money being spent on the outdoor skating rinks by all four Reserves, and the amount of money being spent on their maintenance and upkeep, it is felt that with a little additional financial input a proper arena could be constructed which would be usable in all types of weather and would prove a great asset to the Reserve. This of cource fits in with the town concept and perhaps further recreational facilities could be provided in the same building, such as a swimming pool, gym and other facilities. The facilities in the school should not be duplicated, but they should be used in conjunction with the additional facilities to be provided in the recreation centre. Until such time as these facilities can be made available, it is suggested that far more use should be made of the school gym.

Communications

One factor which all Band members should consider is the poor facilities available for disseminating information throughout the Reserves and to the outside community. Band members must make a special point of going out of the Reserve and talking to non-Indians about the Band and the Reserve. Whites need to know far more about the Reserve and the objectives of Band members if they are to help the Band in achieving its various goals. At the present time, most of the information which the white community has about the Reserve is based on gossip and half-truths. It is up to the Band members to correct this; no one else can do it. One method that the Band might consider to help spread information outside the Reserve and in it as well, is to place a 15 minute radio program on CFCW which tentatively could be called the "Hobbema News". This program could be devoted to telling what is happening on the Reserve, what the plans for the future are, how they plan to achieve their objectives, and how the rest of the society surrounding the Reserve can help, and how they will in turn be helped. The Bear Hills Native Voice is another excellent vehicle for spreading information and news about the Reserve, not only on the Reserve itself, but off it as well. Copies should be made available to the local member of Parliament, the MLA, to various interested groups in Hobbema, Ponoka, Wetaskiwin and Edmonton.

Development of Awareness

To help make the Band members more aware of their own Reserve and the situation on the Reserve, it is suggested that an essay and picture contest be initiated. These contests would have two parts; the first would be to see who could most accurately describe the Reserve, both in picture and in essay form; the second part of the contest would be to see who could come up with the best ideas to improve the Reserve and how these improvements could be achieved. This portion would be primarily in the form of essays. Pictures of previous and present improvements with sketches of possible future improvement would be quite acceptable. This contest would be open to all Band members with various categories for adults, high school students, junior high students and public school students. It is felt that when neighbors start comparing notes on how they are going to improve the Reserve and start thinking about the problems involved, the first step in a development program will have been achieved.

Band Participation in Development

The following are suggestions for overall social development on the Reserve. The first thing to consider is making the people fully aware of the present situation on the Reserve. This awareness program will have to be initiated by an outside group who spend the time required to make personal contact with all Band members. Depending on the resources available, the time required for this stage of the process can be any where from six months to three years. One could then expect that groups could form with special interest in development and other aspects of growth on the Reserve. It is expected that recreation groups, special interest groups, and hobby groups will form to discuss the manner in which they might best contribute to the development of the Reserve. The next step could then be for the groups to collect and analyze all of the available information regarding developments and procedures on other Reserves and in other similar areas throughout the world, and compare these with their own situation to test their possible application to their own situation. Once the initial groups have arrived at their own conclusions, it would then be appropriate for an overall program to be drawn up which would combine the conclusions and recommendations of each group. It is essential that a total program be developed for the implementation of projects rather than on a piece meal basis as at present.

Resource Personnel

Equally important is that an adequate group of resource people be made available. These people will be observing the development process continuously so that they can provide assistance where needed. It is essential that the resource people do not take over the program, but rather assist the Band members in formulation of their own program. Only people who are willing to work within this frame of reference should be considered as resource people. It is essential that the resource people have adequate financing and resources available to them at all times so that they can provide assistance when needed. This implies that the government agencies and regulations must have been cleared to the point that, when Band members are ready to take action, the resource people and financing can move with them and not hold them up. It would be disastrous to the entire development process to tangle the proposed program in bureaucratic red tape for a lengthy period of time, after having achieved a high degree of involvement on the part of Band members.

SOCIAL IMPEDIMENTS TO PHYSICAL DEVELOPMENT OF THE LOUIS BULL RESERVE

Population

The population density of the Louis Bull Reserve is more than four times greater than the density of the farm land immediately adjoining the Reserve, and thus it is apparent that the Reserve is overpopulated in terms of its agricultural resource base. It may be further noted that, on the basis of current population projections, the 1984 density on the Reserve will be approximately one person for every ten acres. The projected population increase will inevitably place an even greater strain on the natural resources of the Reserve and the income available from them.

The large families which are the cause of this rapid population increase make it extremely difficult for any of the Band members to save money. Any development scheme which takes place on the Reserve will have to rely on outside financing or financing from the Band Council. As the population increases, a greater percentage of Band funds will go towards welfare with correspondingly less funds available for development purposes.

It is nearly impossible for a man with a large family and limited resources to save any money for investment. Thus, any investment that the Band member makes is going to have to be in the form of work. Another economic consequence of the large family is the inability to supply adequate services and facilities. At the present time transportation is one of the most obvious examples. Many of the families have no way of getting into town to find out what is going on or take advantage of any new ideas which may be under discussion at Hobbema or perhaps in Ponoka.

Large families in small homes inevitably result in overcrowding. This results in students not being able to find an adequate place to study and as a result dropping out of school because of the increasing frustrations. A further apparent social problem which may be attributed to overcrowding is the many family fights and breakups. The employed male is often quite concerned about the family situation and cannot concentrate on his work, thus his efficiency is impaired. The unemployed male has nothing to do but stay at home where continuing contact with the family under extremely crowded conditions leads to friction.

One important social factor which must be considered when planning for development on the Reserve is the fact that many of the households have a female as the head of the household. In most circumstances, this implies that there is no wage earner in the family and thus these people will have to depend on the Band Council and on welfare for the necessities of life. Thus, nearly 30 per cent of the Reserve population can provide no development input at the present time.

Work Habits and Attitudes Toward Employment

Lack of employment for the last several years, and particularly during the last winter, has caused poor working habits and attitudes to develop. Problems associated with excessive drinking are seen as symptoms of these attitudes. Any development which may take place on the Reserve must include provisions to break down the poor working habits and drinking patterns which have developed.

A further result of the lack of employment may be seen in the general dependency on welfare which has developed on the Reserve. In many homes, welfare has become almost an accepted way of life. The children have grown to accept this as the usual rather than the exception. As these young people enter the work force, strenuous efforts must be taken to break down this dependency on welfare. Men sitting around the house, not able to find work, soon find that they lose pride in themselves. An early objective of any development program must be to reinstate pride.

Economic Aspirations

The general economic situation which most people on the Reserve have grown up in, has resulted in a very low economic aspiration level. The average person on the Reserve indicated a requirement for $35.00 per month in order to live. This low economic aspiration level can usually be achieved through welfare and other transfer payments. If a man does start to work, he can achieve this economic aspiration level fairly quickly and thus the incentive to work is no longer existent and he quits. The only way that a more dependable work force can be obtained is through steady employment. Steady work available on the Reserve and the development of higher economic aspiration levels are essential for the success of any development program.

Recreation

There is a complete lack of adult recreation programs on the Reserve, and few winter programs are available for the youth. This lack of recreation is adding to the developing pattern of delinquency and drinking and results in many young people being sent away to reform schools and jails where they develop socially unacceptable attitudes and become associated with a group who accept crime as a way of life. The drinking patterns which have developed often mean that a man who has received some income will go on a drinking spree, sometimes for 4 or 5 weeks at a time, until his money runs out. With this type of drinking pattern, normal work habits are impossible.

The lack of organized constructive recreation for the Indian youth has resulted in an increased incidence of vandalism. Any project which

is started on the Reserve will have to assume that some vandalism will occur until proper recreational facilities supply an adequate alternative.

Farming Technology

Most members of the Louis Bull Band are not in touch with modern farming industry. This fact is demonstrated by the extremely low numbers given in response to the question "How many acres are required to make a satisfactory income from farming". Before any proper agricultural development can take place on the Reserve, the majority of people must become conversant with contemporary farming practice. The current conception of farming held be many Band members is as much as 20 years outdated. There are a few people, of course, who have a better idea of what is required and they must be assisted in explaining to their fellow Band members what is involved. Until modern farming is understood, any agricultural development will probably be hindered by people feeling that too mu ch money is being spent on initial capital investment and for such items as fertilizer and weed spray.

Relationship Between Council and Members

The very poor communications between the Band members and their Council is going to result in a lot of fear and suspicion about any development project. The Council is usually thought of by most Band members as a welfare group, and they keep wanting the Band Council to do more and more for them; not in the form of development but in some form of welfare. Any development that the Band Council tries is going to be hindered by these two problems; the lack of communication with the Band members; and their present attitude towards the Band Council as a welfare group.

Attitudes

Eighty per cent of the members of the Louis Bull Band feel that the Reserve will not be a better place to live in ten years. This lack of self-confidence and lack of confidence in their fellow Band members and Band Council as a whole is going to act as a serious impediment to any form of development be it social or physical. The feeling of lack of ability was further demonstrated by the assumption by most Band members that any development

program must necessarily entail the use of a white manager. The general feeling of the Band members might be summed up in that it was felt that either the Band Council or Indian Affairs would have to be responsible for any development that took place, and that the Band Council could do nothing and Indian Affairs would do nothing.

The lack of confidence in the Reserve is augmented by the physical problems associated with communication of the Reserve. The Band members do not regularly see each other nor do many of the Band members communicate with their Band office, except when going to get welfare payments or to receive some other form of welfare.

Education

The average educational achievement level of those looking for employment on the Louis Bull Reserve is 6.2 grades. Of those 50 people looking for work on the Louis Bull Reserve, only 6 had Grade 9 or more. These statistics have obvious implications in terms of any development plan. A great deal of attention must be paid to communications, and planned development projects must be explained verbally.

A further hindrance to development in this area is the low level of education which the parents consider as necessary to obtain a good job. This is compounded by the fact that they expect their children to get less education than that which they feel is necessary to obtain employment.

Any development planned to take place on the Louis Bull Reserve must consider the fact that parents consider themselves as being inadequate, and consider their children as being inadequate. Most Band members feel that the Band Council can do very little for them and that the rest of society is not interested in helping them. Generally, attitudes on the Reserve are typified by a degree of hopelessness, with mixed emotions towards the possibility of development.

SECTION 6 - LAND TENURE

One of the recognized inhibitors to successful development of the Louis Bull Reserve lies in the present system of land tenure. Under the present situation some members have been given, either formally or informally, the right of occupancy to particular quarter sections of land. Since few of the Band members are farming, most of the arable land is leased. During the 1967-68 fiscal year, individual Band members received a total of $3,313 in lease revenue from property on which they lived, while the Band's Leasing Account was credited with the amount of $6,323 being lease revenue from lands not occupied by members. Thus the total lease revenue to the Band was $9,636, somewhat less than the $26,600 indicated by Table 24 as being the total income capability of reserve lands. The present uncertain status of land tenure is partially responsible for this operating inefficiency.

As the population of the Band increases, tenure problems will become magnified as greater demands are placed upon the reserves resources. Some of the present and anticipated tenure problems may be outlined as follows:

(1) Band members are unsure of their status with respect to property on which they live;

(2) Lack of specific policy leads to misunderstanding and suspicions of favoritism in allocation procedures;

(3) Unless a townsite is developed, problems will arise in the future regarding new house location (1985 Band population is projected at 870 people who will require approximately 140 homes, or one house per 60 acres);

(4) It appears unlikely under the present system that a member could obtain control of enough land at terms which would allow him to operate an economical farm enterprise.

(5) The present system would not allow operation of a Band feedlot operation on the basis recommended in this Report.

It is essential that the Band give consideration to alternate systems of land tenure which would be more amenable to development planning. The alternatives available may be viewed as a continuum, ranging from one extreme of total private ownership to another of total communal or Band owner-

ship. Some possible alternatives are discussed below:

(1) Divide all Reserve land among present members and provide Certificates of Possession for each parcel, so that members interested in farming could purchase land from other members and accumulate an economic farm unit. This alternative would give each member an equal share of the Reserve land but provides little incentive towards optimum land use and makes coordinated planning almost impossible;

(2) Place all Reserve land in Band ownership. This alternative would lend itself to optimum development control but would not allow for individual enterpenureal initiative;

(3) Use a combination of land 2 above, on the basis that the Band would control all land but would make allowances for members who prove their farming ability over a predetermined period of time to receive Certificates of Possession to sufficient land to allow an economic farming operation. This alternative would provide adequate development planning and control while encouraging individual initiative.

The above alternatives, or other similar tenure systems must be reviewed by the Band and a course of action selected which will complement the goals of overall development planning on the Reserve.

SECTION 7 - PLANNING FOR IMPLEMENTATION

A development study such as this is of no value whatever unless the resulting report is completely understood by those affected and unless the appropriate action is planned and implemented.

DEVELOPMENT OF UNDERSTANDING

The authors have attempted to present this report in as simple a manner as possible, but it must be recognized that several of the topics covered are fairly sophisticated and defy simple descriptions. With this in mind and realizing that the average grade level of Louis Bull Band members is less than grade five, it becomes obvious that a supplementary system must be found to increase the degree of understanding of this report. To accomplish this objective, it is recommended that an audio-visual presentation of the basic theme of this report be prepared, and used on a continuing basis throughout the development period. Such a presentation might use a series of slides with a synchronized taped commentary. Much of the visual material would involve the presentation of ideas and the skilled use of graphic techniques is dictated. While an audio-visual presentation adds promise of being extremely effective, it will have to be supplemented in turn by experienced personal contact.

Before the contents of this report can hold any meaning for Band members, it will be necessary for them to develop an awareness of their present situation, not only as they see it, but as their children see it. One suggestion which might bring forth the child's perspective is the promotion of an essay or picture contest, in which children of various age groups would be asked to picture the Reserve as they see it now, and as it might appear in ten years. Experience elsewhere has shown that the results of such a program can be very revealing. Another way of increasing awareness is to employ some means of comparison and contrast. To this end, it is recommended that more field trips to other Reserves be organized, particularly those Reserves which have undergone or are undergoing successful development programs.

Awareness and interest can also be generated through the use of the news media. Radio discussion groups might debate common problems, and a regular 15 minute radio program of Hobbema news and development ideas over CFCW (Camrose) would serve to inform both Band members and neighboring whites. About one-half of such a program could be in the Cree language. The "Bear Hills Native Voice" appears to be a successful venture, and should be supported wholeheartedly by both Council and Band members.

GEARING UP FOR DECISION MAKING

The ability to make decisions with assurance and authority must stem from two basic factors; a growing desire for self confidence and identification, and an understanding of the decision making process.

Self confidence stems from some basis of pride, both within the individual and with respect to his perceived association with his culture and environment. Individual pride may be developed to some extent through the information programs suggested above, and will be re-enforced by successful operation of initial development programs if the individual is allowed to identify with such programs.

Pride, as a result of the individual's association with his Reserve and community, may be partially developed by the simple process of improving the appearance of the Reserve. To this end, it is recommended that a 'community clean-up' program be developed which would utilize the energies and talents of young people on the Reserve. These people could be employed during the spring weekends and summer holidays in tilling gardens on the Reserve, helping older people plant and weed their gardens, general yard clean-up, landscaping of public buildings and painting of homes and outbuildings.

A pragmatic approach to decision making is sometimes taken for granted in white society, but cannot be assumed when considering the Indian culture. It is therefore recommended that the decision making process outlined below be emphasized and taught at all levels, from elementary school through adult education and Band Council.

1. Problem identification.
2. Collection of pertinent data
3. Information analysis
4. Decision
5. Action and Feedback.

STRUCTURING FOR DEVELOPMENT

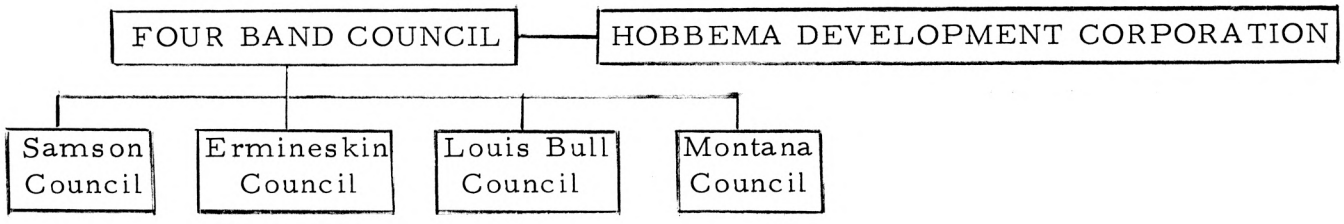
Having digested the contents of this study and having decided upon those areas in which action should be initiated, Band members must next establish an organizational structure capable of bringing about the required action.

It is felt by the authors that the existing framework of Reserve government is not amenable to the type of dynamic development programs needed. Furthermore, it must be noted that the four bands comprising the Hobbema group have much in common and should therefore consider any extension of common interests which promise economic or other savings. One obvious area in which the concept of 'common interest' applies is in connection with the development of an urban community at Hobbema, as discussed in the Four Band Report. Many other areas present themselves upon reflection.

The Louis Bull Band has a limited scope for development, by virtue of its limited membership and area. Thus the training and job education available will be primarily agricultural and rather limited in terms of numbers. A co-operative development program planned in conjunction with the other Reserves will make all areas of employment and training throughout Hobbema available to all Band members. Furthermore, integrated development will increase the collective bargaining and purchasing power of the group, and will enhance the degree of savings which may be derived from bulk purchasing of equipment and supplies.

It is therefore recommended that overall planning and co-ordination of development on the Hobbema Reserves be delegated to a Development Corporation. This Corporation would be an administrative body which would act in accordance with terms of reference established by the Four Band Council, to enact and implement development policies legislated by that body.

Individual Band Councils would retain their current welfare function, and play a role in formulation of development policy through their membership in the Four Band Council. The resulting structure may be shown diagramatically as follows:



Such a structure would require that the Four Band Council be properly defined and given specific responsibilities, since at present its status is strictly ad hoc.

The development corporation would require at least one experienced administrator to act as chairman, with other experienced resource personnel available as and when required. For a more detailed discussion of the proposed Development Corporation, refer to the Four Band Report.

POSSIBLE SOURCES OF FINANCIAL AID TO DEVELOPMENT

The following is a list of departments or agencies which may be viewed as possible sources of capital for the Bands during various stages of their development. The Bands should establish initial contact with these agencies, determine for themselves the role that they might play, and then choose their course of action accordingly.

1. Human Resources Development Authority (HURDA) - will provide loans and grants towards a total community concept. (Federal and Provincial).

2. Indian Affairs Branch - make use of revolving fund loans and development loans . (Federal)

3. Central Mortgage & Housing Corporation (CMHC) - mortgage funds available for housing, apartments, homes for the aged. (Federal)

4. Industrial Development Bank (IDB) - loan capital available for

starting business, particularly applicable to hotel and service industries. (Federal)

5. Farm Syndicate Loans - available for farm machinery . (Federal)

6. Farm Credit Corporation (FCC) - loans of up to $100,000 per Reserve available to improvement of land for new or enlarging farms. (Federal)

7. Farm Implement Loan (FIL) - Loans available to assist existing farmers to make improvements. (Federal)

8. Alberta Credit Corporation (ACC) - loans available to assist new and expanding businesses . (Provincial)

9. Chartered Banks - loans available to assist business.

10. Treasury Branch - loans available to assist business.

11. Alberta Farm Purchase Board (AFPB) - loans available to new or enlarging farms (Provincial)

12. Trust & Life Insurance Companies - loans available for business purposes.

13. Prairie Farm Rehabilitation Administration (PFRA) - financial assistance available for dugouts and community pastures. (Federal)

14. Regional Development Department - function not fully defined at this time . (Federal)

15. Alberta Housing & Urban Renewal Corporation (AHURC) - may provide assistance to a non-profit housing corporation . (Provincial)

16. Battle River Regional Planning Commission (BRRPC) - may provide long range planning assistance.

It is imperative that the organizations and agencies mentioned above be made aware of the Band's goals and be willing to work towards these goals at such a pace that resources will become available to the Band when necessary, and not when convenient for the agency involved. The activities of these bodies must be co-ordinated and every effort made to achieve mutual understanding of each other's roles and capabilities. It is further essential that the Federal and Provincial Governments make immediate decisions as to their joint responsibilities towards the Indian people.

Apart from financial aid, many of the above agencies can offer resource personnel to the Bands on a continuing or intermittent basis. It is most important that such personnel have empathy with Band members, be creative, be able to work in existing systems, be able to adapt as changes occur, be technically competent, and have previous development experience. Resource personnel should be selected accordingly.

DEVELOPMENT IN TIME

Before any projects are started, a total development plan should be arrived at by Band members. It will probably take a minimum of six months before Band members are aware of what is involved in such a process, and are in a position to start working towards a long term development plan. It is important that such a plan be developed by the Band members and directed towards their own conception of desirable long term goals.

The development plan should be drawn up as a five year program, to be reviewed and updated annually. The program should be made as flexible as possible, and it should be emphasized that changes can and probably will be made to the program, as Band members become more confident and competent in the management of their Reserve.

ROLE OF THE INDIAN AFFAIRS BRANCH

The Indian Affairs Branch has a bad public image. It is felt that this image has been brought about to a large extent by the almost total misunderstanding on the part of Canadian society of the Indian situation and of the degree of difficulty associated with the function of the Indian Affairs Branch. The image is further developed by the very nature of the Branch's

responsibilities under the Indian Act and by the necessary nature of their association with the Indian people. It is felt, however, that the Branch's image has improved over the past few years from that which was developed as a result of earlier interpretations of the Indian Act which placed the Branch's officials in the role of pseudo-dictators.

It is the impression of the authors that the present image of the Branch is deserved to some extent. During the conduct of this study, it has been noted that not all of the staff members attached to the Branch are able to develop an empathetic relationship with the Indian people, neither did all staff members display total competence in their position.

It is felt that the effectiveness of the Branch can only be improved through the development of cordial relationships with the Indian people, which implies development of an improved public image. There are two specific areas in which adjustment and re-organization of the Branch may lead to this type of relationship. Insofar as an institution may be judged by its officers and members, it is suggested that a program of selected personnel recruitment and staff adjustment is essential to ensure that all Branch personnel who come in contact with the Indian people are both capable and desirous of forming empathetic relationships with these people. All staff members must be capable and willing to work enthusiastically towards the developing goals of the Indian people. Office personnel must also be able to identify with the function and requirements of field personnel so that field men are not unnecessarily delayed or frustrated due to a lack of understanding on the part of office staff. Field personnel cannot develop self respect, nor can they generate respect on the part of the Indian people when they are denied a meaningful level of authority and responsibility Furthermore, field personnel cannot operate efficiently when a large amount of their time must be devoted to paper work. It is suggested that the Branch investigate the possibility of a re-organization and re-assessment of responsibility which would lead to a decentralization of authority not only to the regional and district level, but more important, to the field level.

The present role of the Indian Affairs Branch appears to be three-fold. The Branch primarily is the administrator of the Indian Act; the Branch has assumed the responsibility of providing guidance to the Indian people in the areas of administration, organization and development, and finally the Branch is a major source of finance for the Indian people. The energies of the Branch have, in the past, been directed almost wholly to the physical development of Indian Reserves and of the Indian people. It is suggested that, with the acquisition of the necessary resource personnel, the energies of the Branch could be directed into a more comprehensive sphere of interest which would place much heavier emphasis on social development of the people. A trend in this direction has been noted, but should be accelerated.

The Indian Affairs Branch has been accused many times in the past of being a paternal organization, an accusation which, to a large degree, is justified considering the functions which have been delegated to or assumed by the Branch. By taking action towards getting out of the welfare business and placing Indian welfare with the Provincial Government so that the Indian could function on the same basis as other Provincial residents, the Branch may start to move away from this paternal type of activity. As a further step in this direction, the Branch might consider removing itself from the field of direct development financing altogether, and encourage the Indians to utilize the same financing sources as their white neighbors on the basis that the Branch would co-sign notes in cases where the Indian Act prohibited an Indian from providing the required collateral.

Assuming the changes suggested above, the role of the Indian Affairs Branch could lead towards a much more positive and meaningful contribution to Indian development and welfare. Because of the image of the Branch and because of their functional relationship with the Indian people, the Branch must be considered as an integral part of the Reserve power structure and it is felt, therefore, that the resultant position largely inhibits the effectiveness of the Branch in a social development position. Thus, it is felt that the key to the future role of the Branch lies in co-ordination and technical resource input. There are a multitude of government organizations and private agencies whose goals and activities with respect to the Indian people

overlap, and in some areas are contradictory. By virtue of their delegated authority and influential position, the Indian Affairs Branch is in an excellent position to co-ordinate the activities of these groups to the betterment of the Indian people and to then provide whatever technical services or resource inputs are necessary to complement the activities of these other groups so as to allow a total and comprehensive approach to Indian development. Ideally, this is the role of the Band Council, which will be gradually assumed as their level of competence increases.

SECTION 8 - SUMMARY OF CONCLUSIONS

The following is a summary of the conclusions reached throughout this study, grouped under general headings.

POPULATION

The population of the Louis Bull Band is increasing in the order of 6 per cent each year. This rapid increase is placing severe strains on the natural resources available to support the Band. Approximately 4 per cent of Band members live off the Reserve.

HOUSING

Housing is overcrowded and inadequate. Fifty per cent of occupied homes on the Reserve have a crowding index of 2.0 or greater. Overcrowding is resulting in family breakdown. Thirty-seven per cent of all houses on the Reserve were vacant at the time of this study, many as a result of their isolated location.

PROVINCIAL GOVERNMENT

The Provincial Government should take over Indian welfare services and coordinate their activities in the field of Indian development with the Federal Government.

BAND COUNCIL

Council spends an excessive amount of time on administrative detail which could be handled by a competent administrative staff thus leaving the Council available for making policy decisions.

TRANSPORTATION

Transportation is a major problem on the Reserve which amplifies the difficulties of communication.

COMMUNICATION

Written communications are not used to any extent on the Reserve. Communication is almost non-existent between Band members and Council, between Band members and Indian Affairs, and between the Reserve and society as a whole.

EDUCATION

The average Band member has a low level of formal education. The Reserve and the school system appear to offer the student different goals; there are few rewards for getting a higher education. There is a distinct lack of identity with the school system on the part of Band members, although the people generally want more education for both adults and children.

RECREATION

Year-round recreation programs of a constructive nature are lacking, although Band members want more organized recreation programs, particularly for youth. The summer recreation programs on this Reserve are regarded as being the best available within the Hobbema Reserves.

SOCIAL

Band members feel that they and their children are inferior members of society. They expect things to be worse in the future. Relationships with white society and Indian Affairs are regarded as a game; the whites have the money and the object of the game is to get as much of this money as possible with the least amount of effort.

There does not appear to be any generally accepted goal for the Reserve.

Welfare has become an accepted way of life on the Reserve and members regard Council as a welfare group. In fact, less than 10 per cent of the 1967-68 budget was devoted to Reserve development.

As overcrowding and unemployment continue, the social situation is expected to decline further.

Work habits and attitudes are not condusive to full and steady employment. Members are dissatisfied with the absence of an incentive wage program.

Religious organizations are not playing an effective role in helping members realize their potential.

AGRICULTURE

There is a definite lack of knowledge among Band members regarding modern agricultural practices. Unless members are willing to learn modern procedures, they will not be able to farm successfully. Agriculture can support only a few families on the Reserve. To obtain maximum income most land should be leased with the balance used to supply the requirements of a feedlot. The soil classification indicates that superior management will be required for a successful agricultural program.

INDIAN AFFAIRS BRANCH

The Indian Affairs Branch has a bad image. The image can and should be improved through a program of selective personnel recruitment and decentralization of authority to competent field personnel. The paternalistic nature of the image may be improved through transfer of the Branch's welfare obligation to the Provincial Government and by encouraging the Indians to use common sources of funds rather than direct Branch loans. The future role of the Branch lies in the area of coordination of the many resources which are available within the Canadian society and applicable to the development of the Indian people, plus the input of supplementary technical assistance.

SECTION 9 - SUMMARY OF RECOMMENDATIONS

The following is a summary of the various recommendations contained in this report. The recommendations cover a wide range of topics and activities, and are not necessarily complementary.

It is essential that the Indian people review these recommendations, which in effect provide a range of action alternatives, in light of the data and discussion on which they are based, so that future action is founded on a full understanding of the basis on which the decisions are made.

GENERAL

(1) It is essential that the findings and recommendations of this study be known and understood by all Band members. It is therefore recommended that an immediate information program be initiated, based on an audio-visual presentation of the findings of this study.

(2) It is recommended that the Louis Bull Band join with the other Hobbema Bands in a detailed review of the existing Reserve-Government structure. It is suggested that consideration be given to broadening the powers and responsibilities of the Four Band Council, and to the formation of a Four Band Development Corporation to act as a funding and control agency for all Reserve development programs.

(3) It is recommended that the Louis Bull Band co-operate with the other Hobbema Bands in a detailed investigation and evaluation of an urban community of Hobbema. (Refer to the Four Band Report for supporting documentation for this recommendation).

(4) There appears to be no concensus of opinion among Band members regarding the desirable direction and nature of development; in other words, the Band has no goal. It is recommended that no implementation of programs be planned until such time as the Band has thoroughly discussed and analyzed their present situation and agreed on general development goals.

AGRICULTURAL DEVELOPMENT

(1) Three basic alternatives are presented which represent a range of involvement and capital investment:

(a) Lease all property to white farmers.

(b) Develop the Reserve on the basis of economic family farm units

(c) Develop the Reserve on the basis of a single Band farm centered around a cattle feed lot operation.

It is recommended that the Band choose from these alternatives on the basis of perceived goals as agreed upon by Band members, and on the basis of an evaluation of possible participant interest and training potential. Consideration must also be given to the varying degree of risk associated with each alternative, and to the necessary changes to the present tenure system.

INDUSTRIAL AND COMMERCIAL DEVELOPMENT

(1) Recommendations for development in these areas are contained in the Four Band Report.

HOUSING

(1) It is recommended that current house construction policies be reviewed with the objective that no further housing investment be incurred until such time as the existing stock is completely utilized.

(2) Assuming agreement in principle with the concept of townsite development at Hobbema, interim housing should be so designed as to facilitate movement of housing units to a townsite location at the appropriate time.

SOCIAL AND EDUCATIONAL DEVELOPMENT

(1) Initial development emphasis should be directed towards those programs which will tend to develop pride and confidence within the Band and which show the greatest promise of economic success.

(2) Education, both as a prerequisite and as a continuing benefit, must be a major consideration of any development scheme.

(3) It is recommended that an "incentive" wage scale be instituted on all Band projects.

(4) It is recommended that the Louis Bull Band co-operate with the other Hobbema Bands to develop a comprehensive recreation program, including the acquisition of a qualified fulltime recreation director. Church officials should be encouraged to integrate their activities with such a program.

(5) It is recommended that a concerted effort be made to improve communications on the Reserve. This applies to internal communications between Council and Band members as well as external communications designed to enhance the Reserves' image off the Reserves. This implies increased support of the Bear Hills Native Voice and the investigation of a possible radio program, among other things.

(6) As a step towards increasing the level of awareness of existing conditions on the Reserve, it is recommended that an essay and picture contest be organized, the objective of which would be to describe the Reserve as it is today. The contest should be open to children and adults.

(7) It is recommended that members play an active role in the continuing development of the pre-school program at the Ermineskin School, and become much better informed regarding the purpose and aims of the entire school system.

(8) Improved communications are necessary for a higher level of educational achievement. It is recommended that a well structured program of parent-teacher meetings be organized; that efforts be made to make both parents and pupils aware of the educational requirements of the labour market; and that an adequate guidance counselling service be made available.

(9) It is recommended that more vocational training be made available for all age groups, and that specifically designed post-school programs be increased.

(10) Adequate library facilities should be available to all Band members. It is recommended that a library be included in any planning of a town centre.

(11) In an effort to increase pride in the Reserve, it is recommended that a "student summer work program" be started, whereby students would be employed by the Band to improve and plant yards and gardens and engage in general clean-up activities.

(12) Until a central community is developed, it is recommended that a bus system be organized in conjunction with the other Bands to provide transportation to Hobbema, Ponoka and Wetaskiwin.

(13) It is recommended that the Band press for the earliest possible settlement of Federal-Provincial cost sharing programs.

(14) It is recommended that the Indian Affairs Branch undertake a program of staff adjustment and selective personnel recruitment as a step towards improvement of their image. Welfare functions should be transferred to the Provincial Government. The Branch should consider removing itself from the direct lending field. The Branch's future efforts should be directed towards co-ordination of comprehensive development on Indian Reserves.

APPENDIX A

HOBBEMA INDIAN RESERVES

HOUSING SURVEY - BUILDING CONDITION CRITERION

A. Good Condition

1. Structurally sound
2. Weatherproof
3. Fully completed
4. All components in satisfactory condition
5. Clean and well maintained.

B. Fair Condition

1. Major structural components in satisfactory condition
2. Not fully weatherproofed
3. Not fully completed - missing details of trim, doors or windows, etc.
4. Minor repairs required
5. Maintenance required

C. Poor Condition

1. Structurally sound
2. Non-weatherproof
3. Substantially incomplete - missing complete components such as roofing, siding, doors, etc.
4. Substantial repairs required to complete components
5. Substantial maintenance required, evidence of high degree of neglect.

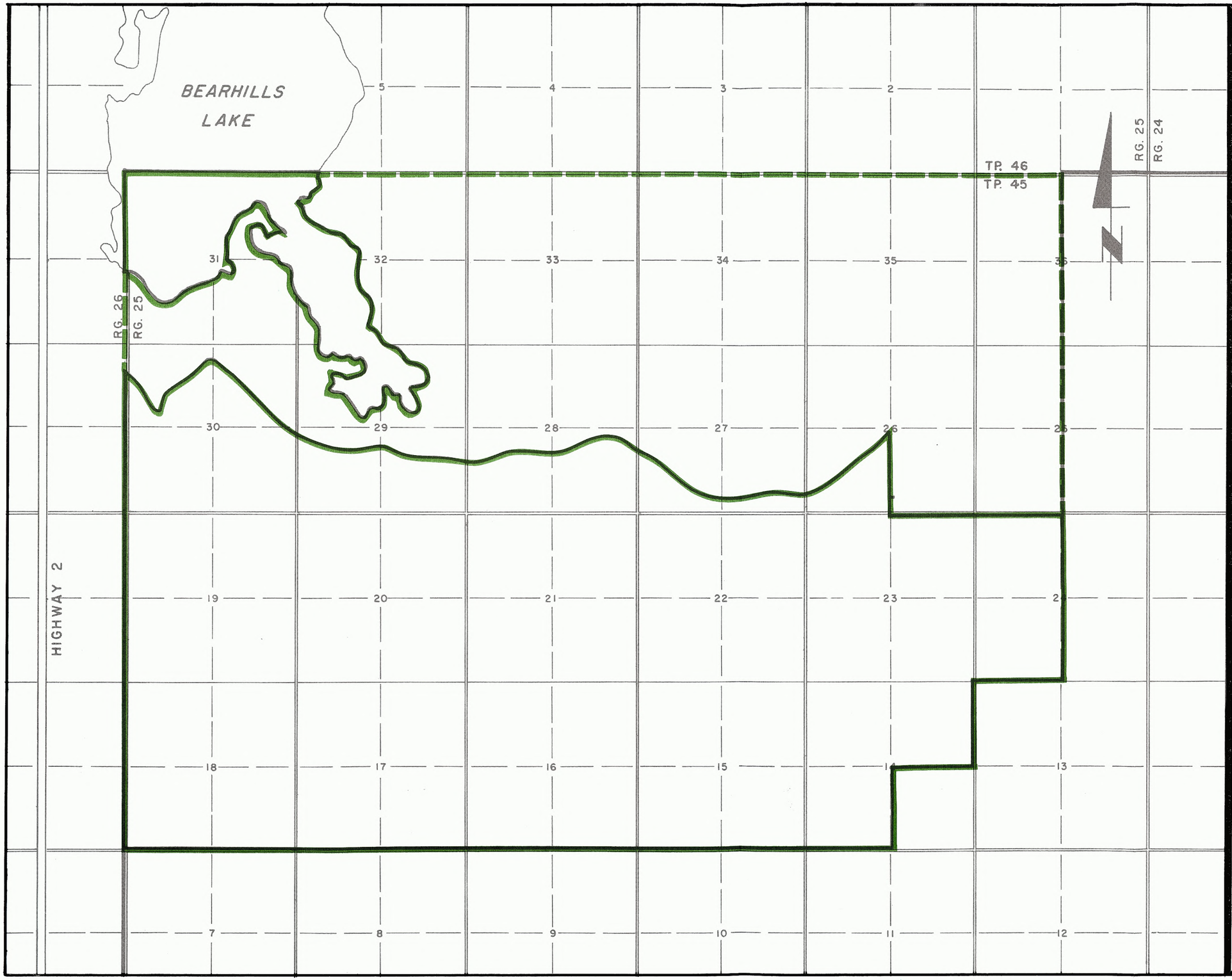
SOCIO-ECONOMIC & LAND USE STUDY

MAP No. 1

LOUIS BULL INDIAN RESERVE #138B

LOCATION PLAN

STANLEY ASSOCIATES ENGINEERING LTD.



SOCIO-ECONOMIC & LAND USE STUDY

MAP No. 2

LOUIS BULL
INDIAN RESERVE #138B

ORIGINAL AND PRESENT RESERVE BOUNDARIES

LEGEND:

PRESENT BOUNDARY OF RESERVE

ORIGINAL BOUNDARY OF RESERVE

STANLEY ASSOCIATES
ENGINEERING LTD.

BEARHILLS LAKE

TP. 46
TP. 45

RG. 26
RG. 25
RG. 25
RG. 24

HIGHWAY 2

20-40
5-10
10-30
20-50

SOCIO-ECONOMIC & LAND USE STUDY

MAP No. 3

LOUIS BULL INDIAN RESERVE #138B

GEOLOGY

LEGEND:

- AREA OF REPORTED THICKNESS OF SURFICIAL MATERIAL
- 10-30 THICKNESS IN FEET (APPROXIMATE)
- ESKER: GRAVEL, SAND, SILT, CLAY
- SAND AND SILT DUNES
- OIL AND GAS WELLS
- ABANDONED

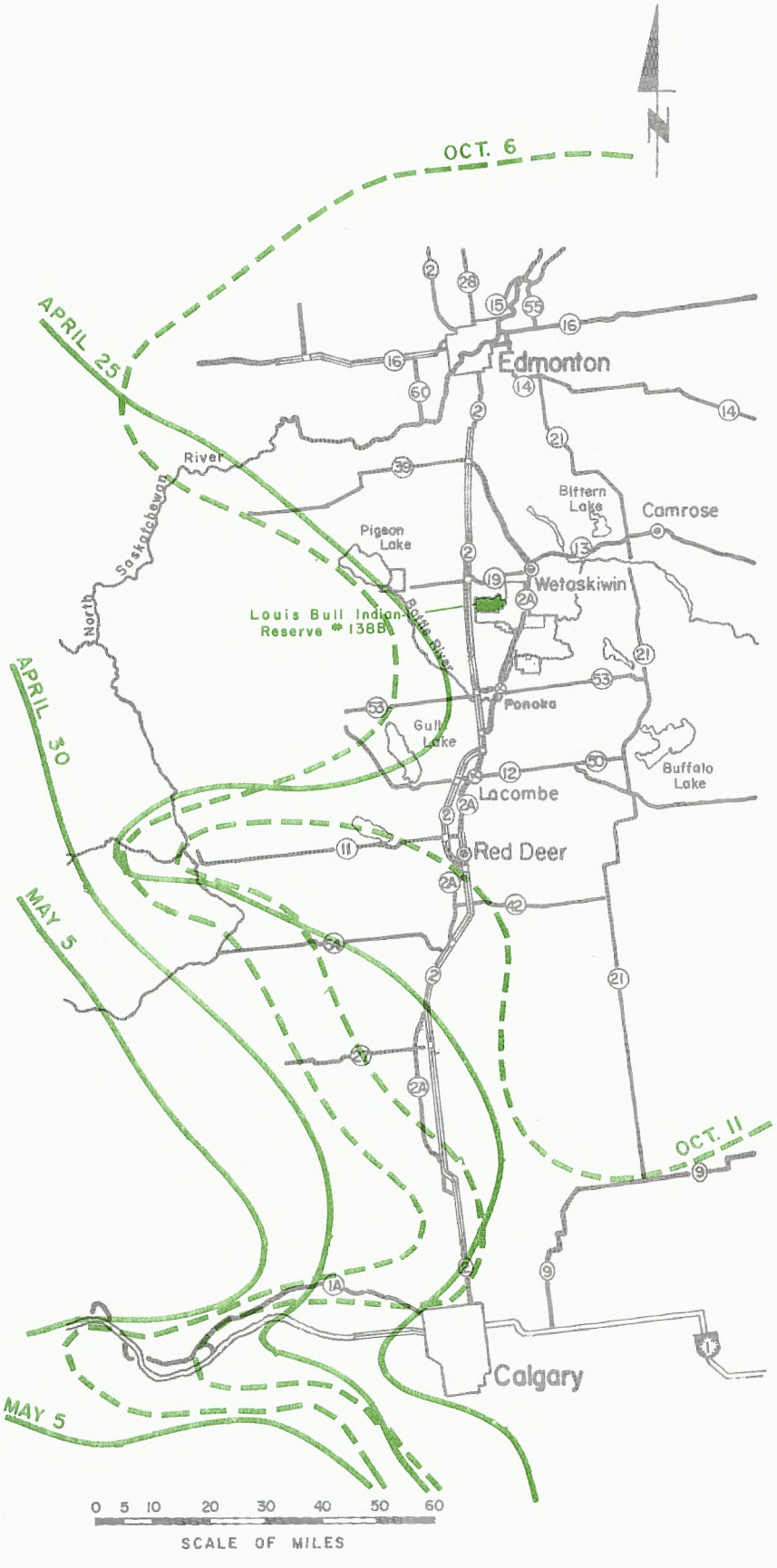
STANLEY ASSOCIATES ENGINEERING LTD.

SOCIO-ECONOMIC & LAND USE STUDY

MAP No. 4

LOUIS BULL INDIAN RESERVE #138B

GROWING SEASON



LEGEND:

BEGINNING OF GROWING SEASON

END OF GROWING SEASON

SOURCE:
THE CANADA LAND INVENTORY
REPORT No. 3

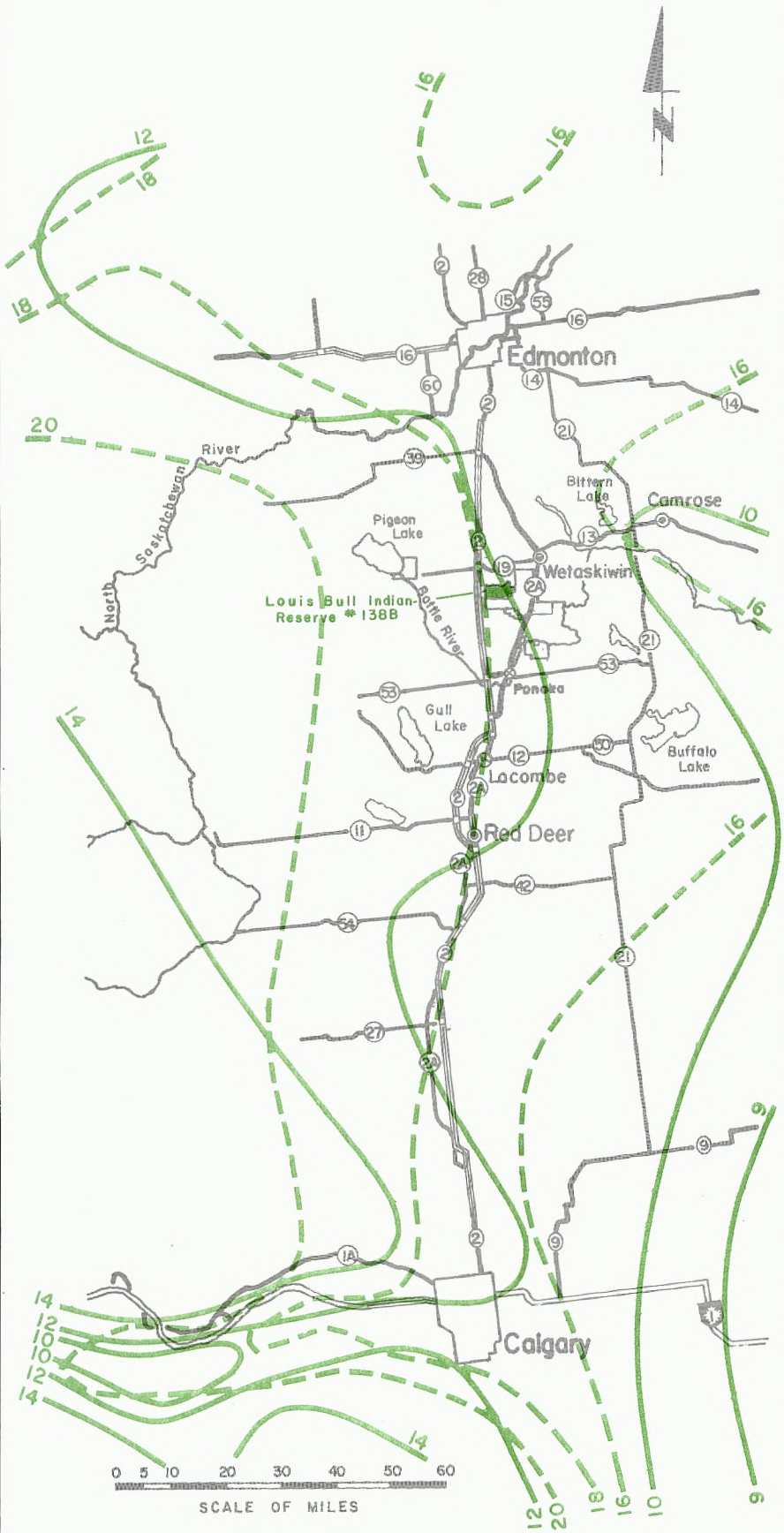
STANLEY ASSOCIATES ENGINEERING LTD.

SOCIO-ECONOMIC & LAND USE STUDY

MAP No. 5

LOUIS BULL INDIAN RESERVE #138B

PRECIPITATION



LEGEND:

- AVERAGE ANNUAL PRECIPITATION (INCHES)
- AVERAGE MAY TO SEPTEMBER PRECIPITATION (INCHES)

SOURCE:
THE CANADA LAND INVENTORY
REPORT No. 3

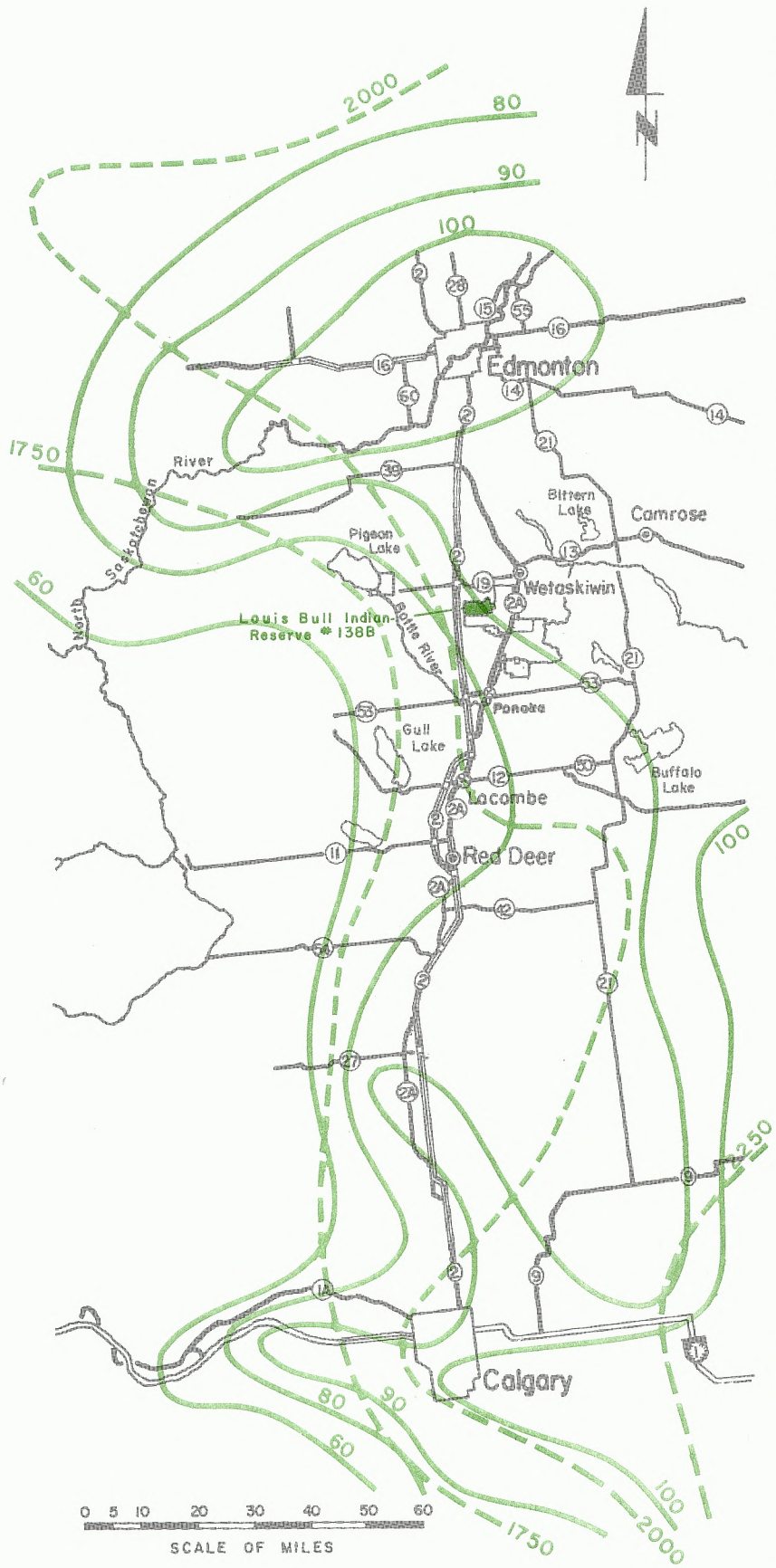
STANLEY ASSOCIATES ENGINEERING LTD.

SOCIO-ECONOMIC & LAND USE STUDY

MAP No. 6

LOUIS BULL INDIAN RESERVE #138B

FROST FREE PERIOD AND DEGREE DAYS ABOVE 42° F



LEGEND:

MEAN "FROST FREE" PERIOD (DAYS)

DEGREE DAYS ABOVE 42° F

SOURCE:
THE CANADA LAND INVENTORY
REPORT No. 3

STANLEY ASSOCIATES ENGINEERING LTD.

BEARHILLS LAKE

TP. 46
TP. 45

RG. 26
RG. 25
RG. 25
RG. 24

HIGHWAY 2

SOCIO-ECONOMIC & LAND USE STUDY

MAP No. 7

LOUIS BULL
INDIAN RESERVE #138B

HOUSING

LEGEND:

- OCCUPIED HOUSE
- VACANT HOUSE
- CHURCH

STANLEY ASSOCIATES
ENGINEERING LTD.

BEARHILLS LAKE

TP. 46
TP. 45

RG. 26
RG. 25
RG. 25
RG. 24

HIGHWAY 2

5 4 3 2 1
31 32 33 34 35 36
30 29 28 27 26 25
19 20 21 22 23 24
18 17 16 15 14 13
7 8 9 10 11 12

SOCIO-ECONOMIC & LAND USE STUDY

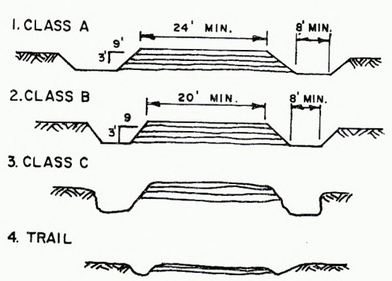
MAP No. 8

LOUIS BULL
INDIAN RESERVE #138B

ROADS

LEGEND:

- CLASS A GRAVELLED
- CLASS B GRAVELLED
- CLASS C GRAVELLED
- CLASS A NOT GRAVELLED
- CLASS B NOT GRAVELLED
- CLASS C NOT GRAVELLED
- TRAIL



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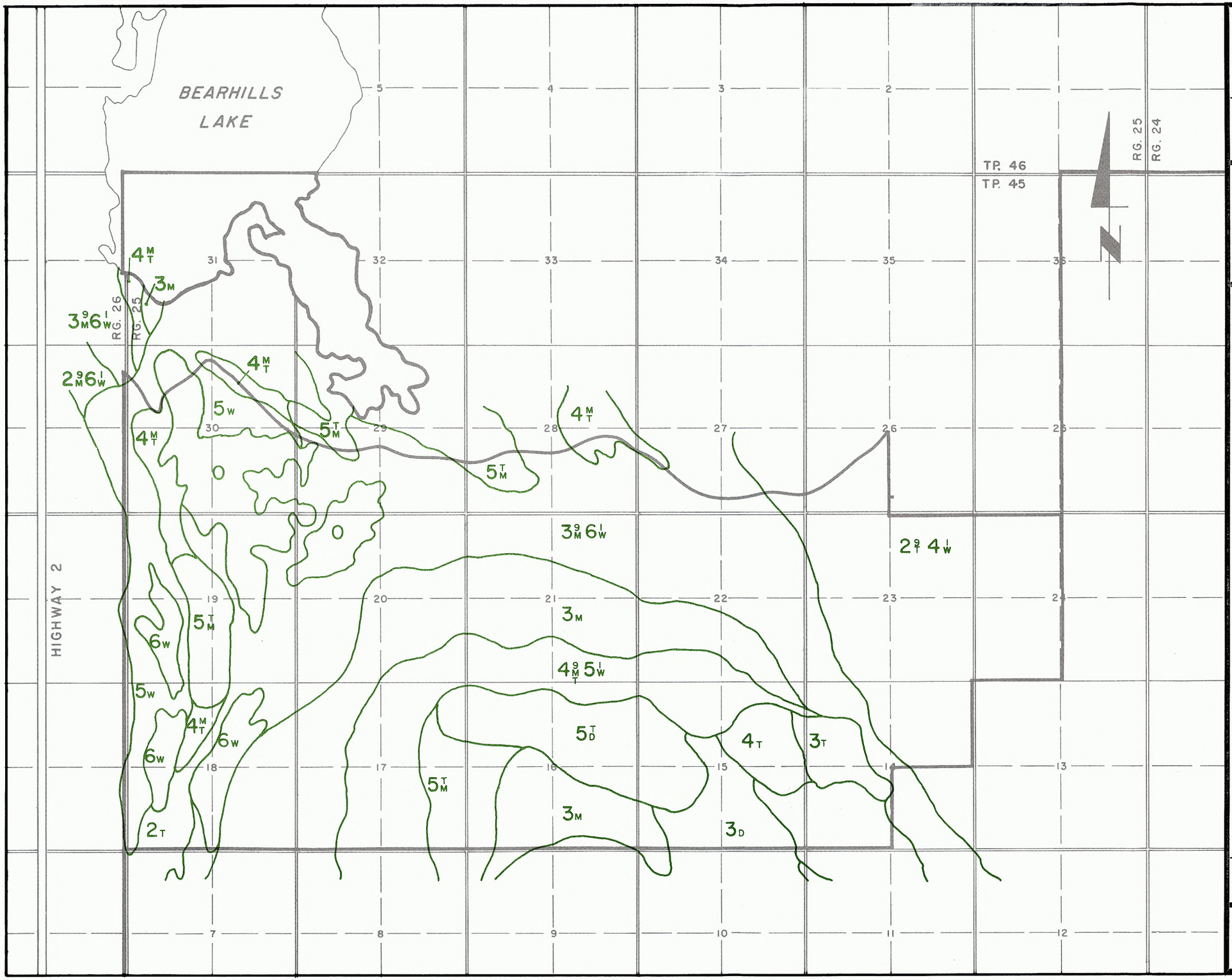

SOCIO-ECONOMIC & LAND USE STUDY	MAP No. 9

LOUIS BULL
INDIAN RESERVE #138B

SOIL CLASSIFICATION

LEGEND:

CLASS

1	SOILS IN THIS CLASS HAVE NO SIGNIFICANT LIMITATIONS IN USE FOR CROPS.
2	SOILS IN THIS CLASS HAVE MODERATE LIMITATIONS THAT RESTRICT THE RANGE OF CROPS OR REQUIRE MODERATE CONSERVATION PRACTICES.
3	SOILS IN THIS CLASS HAVE MODERATELY SEVERE LIMITATIONS THAT RESTRICT THE RANGE OF CROPS OR REQUIRE SPECIAL CONSERVATION PRACTICES.
4	SOILS IN THIS CLASS HAVE SEVERE LIMITATIONS THAT RESTRICT THE RANGE OF CROPS OR REQUIRE SPECIAL CONSERVATION PRACTICES, OR BOTH.
5	SOILS IN THIS CLASS HAVE VERY SEVERE LIMITATIONS THAT RESTRICT THEIR CAPABILITY TO PRODUCING PERENNIAL FORAGE CROPS, AND IMPROVEMENT PRACTICES ARE FEASIBLE.
6	SOILS IN THIS CLASS ARE CAPABLE ONLY OF PRODUCING PERENNIAL FORAGE CROPS, AND IMPROVEMENT PRACTICES ARE NOT FEASIBLE.
7	SOILS IN THIS CLASS HAVE NO CAPABILITY FOR ARABLE CULTURE OR PERMANENT PASTURE.

SUBCLASSES

S	SOIL LIMITATIONS
T	ADVERSE TOPOGRAPHY
W	EXCESS WATER
X	SOILS HAVING A MODERATE LIMITATION CAUSED BY THE CUMULATIVE EFFECT OF TWO OR MORE ADVERSE CHARACTERISTICS WHICH SINGLY ARE NOT SERIOUS ENOUGH TO AFFECT THE CLASS RATING.
D	UNDESIRABLE SOIL STRUCTURE
M	MOISTURE LIMITATION

EXAMPLE

$3^{9}_{T}5^{I}_{W}$ AN AREA OF CLASS 3, WITH TOPOGRAPHIC LIMITATION AND CLASS 5 WITH EXCESS WATER LIMITATION, IN THE PROPORTION OF 9 : 1.

SOURCE:
THE CANADA LAND INVENTORY
REPORT No. 2

STANLEY ASSOCIATES
ENGINEERING LTD.