TRAINING AND EMPLOYING INDIGENOUS WORKERS:

A CONCEPTUAL SCHEME AND A PROPOSAL

by

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for

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ABSTRACT

In this report Dev-Cor Technical Services presents a plan for employing indigenous people under the auspices of the Alberta Oil Sands Environmental Research Program (AOSERP). The introductory section of the report details the assignment as given by AOSERP and briefly describes the Program and its study area in northeastern Alberta. The second section forms the body of the report, providing a general conceptual model of employment and the occupational structure, a proposal for the training of indigenous people which would facilitate their employment, and a research procedure for evaluating the efficacy of the training-employment proposal. The third and final section touches on related points, such as the availability of training institutions and funding.

The final recommendation is that AOSERP contract an outside agency to carry out the recruitment, training, and research procedures outlined in the report and that it utilize this process to meet its commitment to hire local people. It is also an excellent opportunity to research the use of training and employment as an intervention procedure for maximizing the benefits and minimizing the adverse effects of rapid resource development for an indigenous population.

ACKNOWLEDGEMENTS

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1. INTRODUCTION

1.1 NATURE OF THE STUDY: TERMS OF REFERENCE

The purpose of this study conducted for the Alberta Oil Sands Environmental Research Program (AOSERP), as outlined in the terms of reference (attached) is "... to design a working model through which indigenous manpower in various occupational areas may find rewarding and satisfying employment under the auspices of AOSERP." The main types of workers to be engaged are clerical, paraprofessional and professional, and the long-term goal is the systematic placement of indigenous workers in positions of significance in government agencies and oil sands industries. An indigenous person is defined as a person or a member of a family with long-term residence in the project area or peripheral areas.

The objectives of the study may be summarized as identifying literature relevant to training and employment of indigenous peoples, identification of occupations within AOSERP funded research, and the designing of a method for determining training needs, developing a training program, and placing and monitoring indigenous people. This study is also to identify availability of funds for such training and to design a means for placing the indigenous employees following completion of research funded by AOSERP. Finally, it is to consider whether or not the designed model could have application within the provincial government. An implicit assumption of the study is that it is carried out within the overall terms of reference of the Federal-Provincial Agreement which led to the creation of AOSERP and that it is therefore a research proposal within the framework of the specific concerns of the Human Environment Sector.

The report which follows will present a general description of this project and of the AOSERP study area, a general conceptualization of the notions of employment and the occupational structure in society, and a detailed proposal for changing unemployed indigenous people to employed people, primarily through training.

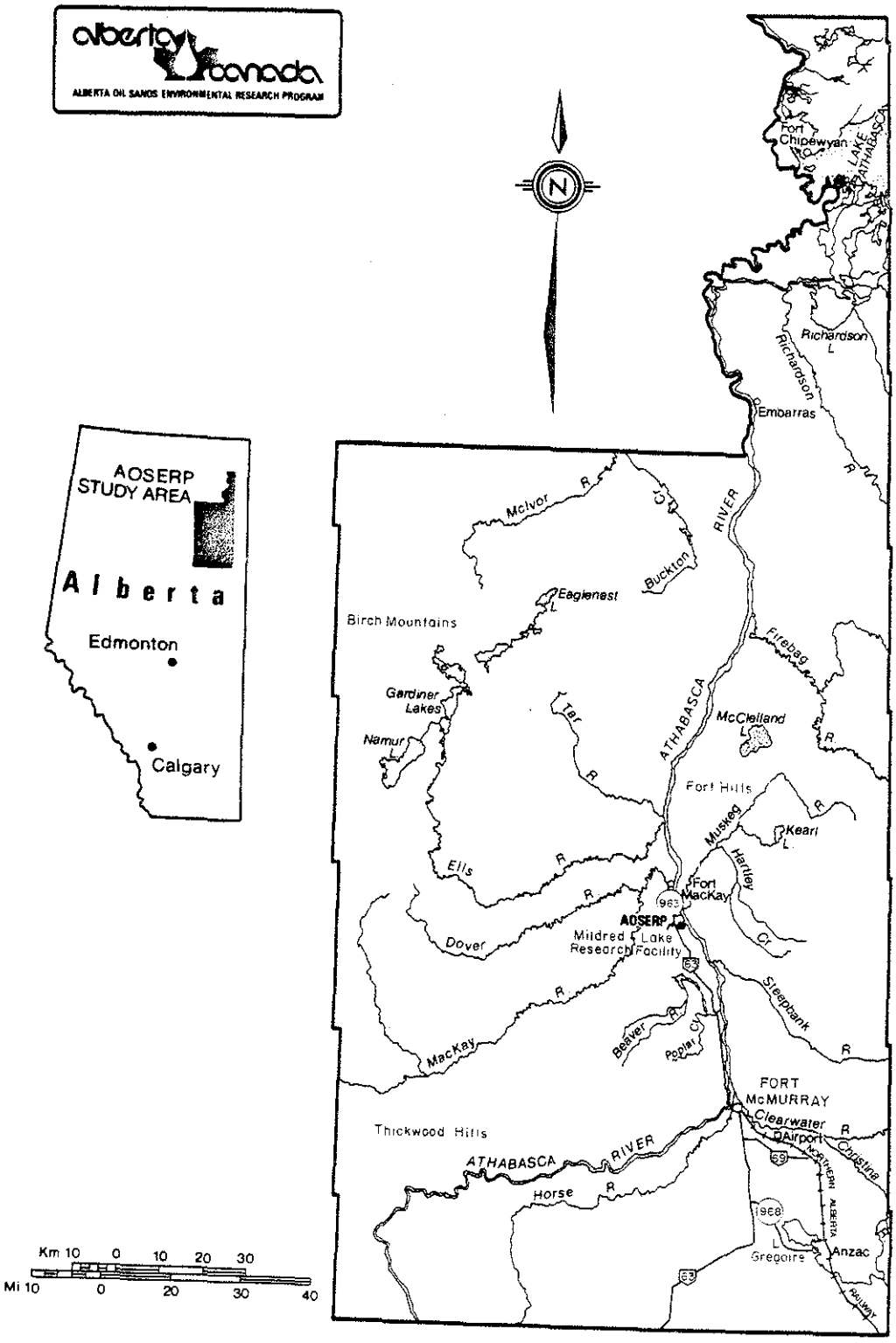

Figure 1. AOSERP study area.

The research proposal, and the rationale for including such training and research within the auspices of AOSERP, will be explicated and administrative considerations such as organization and funding of the project will be discussed. The report will conclude with recommendations for proceeding with the project.

1.2 NATURE OF AOSERP AS RELEVANT TO THE STUDY

AOSERP was established as a result of a February 1975 agreement between the governments of Canada and Alberta "... to provide scientific and technical knowledge for use by governments and industry for environmental planning and protection within the Athabasca Oil Sands region."[2] Although interviews with Technical Research Committee Chairmen and Project Leaders suggest this is partially defined as impact studies (that is, the effects on the physical and human environment of oil sands development) it seems to be primarily defined as environmental policy studies (what kinds of intervention must be developed to protect the environment to the maximum degree possible, given the fact of oil sands development and associated population growth in the area. Thus, the Committees are characteristically not solely doing research in the study area, but are also developing information bases so they can accurately typify various aspects of the environment and draw on other research and existing theory to develop policy recommendations.

The research is funded for five years, from 1975-1980, with a possibility of early termination with one year's notice by either party after 1977, or extension for five additional years to 1985.[3] The 1985 date must be treated as the final date for completion of AOSERP work.

The administrative structure of AOSERP is rather complex, partially because of the shared Provincial-Federal participation and partially because of an apparent effort to avoid building a large bureaucracy solely to accomplish this work. It is probably sufficient to note here that a Steering Committee, which includes representatives of the Ministers of the Environment of both levels

of government, has the responsibility of overall program planning. It provides direction to program management (the Program Director) which carries out the day-to-day decision making of the organization.

Research activities are carried out by a total of eight Technical Research Committees (Aquatic Fauna, Human Environment, Hydrogeology, Hydrology, Land Use and Reclamation, Meteorology and Air Quality, Terrestrial Fauna, and Vegetation). Each Committee is chaired by an individual who also holds a civil service position in either a Provincial or Federal government department, and as a general rule each Committee has a Projects Leader who carries the organizing and executive responsibilities of that Committee. Beyond that there is wide variation in the activity level of each Committee, from Land Use and Reclamation which sees no probable activity for at least another year, as it is waiting for results of other Committees' research, to Hydrology which has as many as ten sub-projects in one phase or another of development. The Chairman (and/or Project Leader) of each Committee reports to the Program Director who ensures co-ordination of their work.

The research of the Committees is grouped into projects, which sometimes consist of a number of sub-projects. This work is contracted to an outside agency (consultant, university) or carried out by a government department. The site of the work may be Edmonton, as for example in library research; Manitoba or Ontario as is the case with some work of the Aquatic Fauna Technical Research Committee; or within the study area in northeastern Alberta. Support staff (e.g., clerical, management) are employed primarily in Edmonton, although there is a base camp in the study area at Mildred Lake.

Projects are approved essentially on a year-by-year basis (although some are clearly to be funded for longer periods) and the results of one will often determine the next stage in the research, not only of the Committee sponsoring the project but possibly of one or more of the other Committees (for example, as noted earlier in relation to Land Use and Reclamation).

One result of this administrative structure, and of the nature of the work, is that it is difficult for most Committees to predict personnel needs for more than the upcoming fiscal year. It also seems difficult for many of them to determine hiring practices, as much of the work is contracted out and is thus not directly in the hands of the Committee. These are not unresolvable problems but they do demand a rather different structure solution than might be possible in a less fluid situation.

All persons interviewed expressed at least some interest in hiring within the study area. Many, however, saw it as logistically extremely difficult or too demanding on their time for them to become personally involved. The overall attitude could best be characterized as pragmatic: "We need people who will get the work done according to the standards necessary for research." Essentially the most expedient methods are preferred, and Committees not only contract out research activities but also contract out labouring and site-clearing activities, or any work which requires short-term labour or expensive equipment.

The categories of staff needed by AOSERP are defined in the terms of reference for this study as clerical, paraprofessional, and professional. The Committee Chairmen tended to define the second as technical (implying a specific educational program at some institution like NAIT) and added a fourth category of labourer. The labouring category may include minimal skills associated with brushing and clean-up or slightly greater skills associated with reading various monitoring devices and so on. There is an important distinction, which perhaps applies at all levels but is especially pertinent at the labouring level, and that is between those tasks which in no way endanger the research no matter how poorly they are done, and those which threaten a total research project even though the task itself requires little skills.

The nature of much of the low skill level of employment is such that very often persons are needed for only a few days a month, or perhaps a few weeks running, then not again. The exact details of jobs, as know to Committee Chairmen, are outlined in Appendix 5.1.

1.3 NATURE OF THE AOSERP STUDY AREA AS RELEVANT TO THE STUDY

The defined research area is 2,834,008 hectares or 28,497.4 square km in northeastern Alberta (Figure 1). The area is roughly bisected by the Athabasca River and includes the major population center of Fort McMurray near its southern border, plus the smaller centers of Fort Chipewyan, Fort MacKay and Anzac. It excludes Wood Buffalo National Park but includes federal lands in the form of Indian Reserves (Namur Lakes, Fort Chipewyan). However, the Indian Bands to which these reserves are allocated do not live on them, preferring the centers of Fort Chipewyan and Fort MacKay.

The study area is within Census Division #12, but considerably smaller than that Census Division which includes towns such as Bonnyville, Cold Lake, and St. Paul. However, it is worth noting that the Census Division was designated a poverty area in Alberta in the 1960's showing for example the lowest average income, the highest percentage of population with no more than grade four schooling, and the highest infant mortality rate of all Alberta census divisions (Schultz, 1966). Because of its designation as a poverty area it has been subjected to two major intervention attempts directed primarily towards native peoples: the provincial government's community development program placed its first field officers in Fort McMurray and Fort Chipewyan in 1964; and Alberta Newstart, working as an adult education research program out of Lac La Biche from 1968 to 1971, included this area within its wider boundaries.

It is perhaps also worth noting that historically this area was one of the first in Alberta to become absorbed into the European fur trade, as Fort Chipewyan was established as a Hudson's Bay post in 1778 and received one of the first Roman Catholic missions and schools in the west, in 1851. At that time and until recently the labour force in the area, both in trapping and related commercial activities, was almost solely the Indian and Metis people.

Reflecting this absorption into the mainstream of the economy of western Canada, the Chipewyan Chief at Fort Chipewyan requested a railway as part of his treaty negotiations in 1898. However, the railway was not built into the area until the Northern Alberta Railway line was constructed from Edmonton through Lac La Biche to Waterways, just south of Fort McMurray, in 1925. One result of this line is a number of small Metis communities scattered along it between Lac La Biche and Waterways, such as Anzac, Chard, and Conklin. Most of these are actually peripheral to the study area.

Other than this relatively early rail line, the transportation and communication infrastructure of the area developed slowly: as late as 1965 there was only a winter road to Fort McMurray. Now a paved highway connects Edmonton and Fort McMurray but one must still fly to Fort Chipewyan. The general image of a large, rapidly developed, modern boom town (McMurray) not exactly in the wilderness but dropped suddenly in the midst of an Indian and Metis population of long residence is not inappropriate. One of the questions of the AOSERP research is precisely what effect the development of a more extensive transportation and communication infrastructure has on the environment.

AOSERP states in its information brochures that the population of the area is 18,000 with 16,000 at Fort McMurray. This represents a very rapid increase in the population of Fort McMurray which was first listed in the census in 1951 as having a population of 926. It increased only slightly in the next 10 years (to 1,186) but more than doubled in the following five (2,614 in 1966) and jumped to 6,874 in the 1971 census.[4] As Great Canadian Oil Sands (GCOS) and Canadian Bechtel Ltd. began activity in Fort McMurray in relation to construction of the GCOS plant in 1964 it is apparent that the oil sands industry has been the major factor in population changes, and that families who lived in the area prior to 1964 could be considered indigenous for the purpose of this study. (Some errors will result, but they are likely to be few enough to warrant use of such crude but simple indicator of indigenousness.)

The majority of this indigenous population is native - Indian or Metis. In 1963, 700 of the 1,300 residents of Fort McMurray were native, most of the 1,500 or so people at Fort Chipewyan were native, and almost all of the 300 residents of Fort MacKay and Anzac (Garvin and Robertson, n.d.). Because of the rapid growth of the oil sands industry, a high proportion of the population has had some work experience: often short-term, often terminated by the employer, and usually work which demanded minimal education or skills.[5] Although up-to-date figures are not available on this group of people in the project area, it is reasonable to infer from other native populations a broad-based population pyramid with the majority of the population below the age of twenty.[6] One implication of this pyramid is that a relatively large number of persons are reaching the age where they should be seeking their first employment.

Educational and training facilities within the area include a reasonably comprehensive elementary-secondary school system (Northland School Division, Department of Indian Affairs and Fort McMurray School systems) and the Adult Vocational Centre at Fort McMurray recently renamed Keyano College. Most of this educational system did not exist when the present adult population was of school age.

In summary, the project area includes one large population center of predominantly recent migrants and a few smaller centers populated almost solely by indigenous peoples. A maximum of 3,000 people, or 15 - 20% of the total population of the area might be so classified and a majority of these families have been within the area or its periphery for about 200 years.[7] There are difficulties in transportation and communication, due to the relatively under-developed infrastructure, but this is typical of northern communities. The indigenous population has, for the most part, those characteristics associated with poverty which cause them to be classified as hard to employ. Before considering how to involve them in employment it will be necessary to develop a general model

of employment and the occupational structure in the society. That will be done in the next section; it will be followed by a specific model of recruitment-training and employment of indigenous people within the auspices of AOSERP and explication of the research problem.

1.4 FOOTNOTES

1. Terms of Reference for Consulting Study Re: Human Environment Research, AOSERP; Project HE 2.3.
2. This is the objective as stated in a bulletin entitled "Information About the Program" published by AOSERP in December 1975; objectives are more complex in Schedule "A" of the intergovernmental agreement which lists one general objective and ten specific objectives.
   Two points from the objectives in Schedule "A" would seem most relevant to this assignment. The general objective concludes with: "This research will be directed to the solution of practical social and technical environmental problems resulting from oil sands development". Objective 5 of the specific objectives is "To advise regulatory and management agencies and the industry (of new information which may be used) ... to minimize adverse environmental effects and maximize beneficial environmental effects." (See Canada-Alberta Agreement for the Alberta Oil Sands Environmental Research Program 1975).
3. Canada-Alberta Agreement for the Alberta Oil Sands Environmental Research Program 1975, Sections V and VI.
4. Statistics Canada, Population Bulletin #92-702, (Canadian Government Publication, 1971 Census of Canada) p. 2-108.
5. Ibid, p. 7, 8. Garvin points out that practically all employable men from Fort McMurray, Chard, Anzac and Fort MacKay were employed in 1965, and about 26% of Canadian Bechtel's staff were native people. Following that, the percentage dropped to 5% and over 100 native men were on Bechtel's "ineligible for hiring" list. He predicts no involvement as the work changes from unskilled labouring jobs to skilled plant jobs.

6. The Census has not enumerated Metis people as a distinct group since 1941, but the Department of Indian Affairs routinely enumerates Status Indian people on reserves and innumerable studies provide similar figures in relation to the Metis population. The most recent enumeration of the native population in northeastern Alberta was the Alberta Native Development Corporation (ANDCO) employment survey, conducted from January to March 1975. There are a number of methodological problems with this survey and it is difficult to interpret their figures and tables, but as an example of a "broad based population pyramid" three selected age groups show the following:

Age 0 - 3	1,096
Age 20 - 24	573
Age 55 - 59	251

(from Alberta Native Development Corporation, Northeastern Alberta Workforce Survey, Edmonton, 1975, no pagination).

7. The ANDCO survey cited in footnote 6 indicates a total native labour force of 633 people, made up of 475 Status Indian and 158 Metis, in Fort Chipewyan, Fort MacKay, Fort McMurray and Anzac. Over 65% of this labour force is unemployed, but it is unclear if the figures include only men or both men and women. The estimate of 3,000 indigenous people in the text would suggest an adult population (male and female, over 15 years) of about 1,500 persons.

2. EMPLOYMENT OF INDIGENOUS PERSONNEL: THE TRAINING MODEL AND RESEARCH

2.1 GENERAL CONCEPTUAL MODEL OF EMPLOYMENT AND THE OCCUPATIONAL STRUCTURE

The social science literature which considers the question of occupations of individual members of a society is replete with discussions of occupational choice and occupational aspirations. By what mechanism does an individual become aware of a specific occupational alternative, make the decision that he is interested in and able to perform that occupation, then carry out the necessary actions (application, preparation by education, etc.) to obtain employment in the selected field? Why is it that for some individuals the occupation chosen is one of high income and/or prestige whereas for others it is a low income and/or prestige occupation?[1]

But the other side of the coin, which might be called the process of occupational selection, or the selection of individuals into an occupational field, is in some senses less well developed in the literature. That is, it is taken for granted that all persons cannot enter any given occupation, even if they should choose or aspire to that occupation, but the mechanisms by which an individual person or categories of persons are excluded from given occupations have only recently become a subject of serious attention in the social science literature. Implicitly this question is partially analyzed when correlations are identified between occupational achievement and ascribed characteristics of the individual, such as sex, race, or socio-economic status. Recent theoretical developments have tended to occur somewhat in isolation from each other in studies of women, analysis of employment problems of the American black population, and analysis of intergenerational occupational mobility in low income or lower socio-economic classes.[2]

Although it would be useful for the research component of the more extended study arising from implementation of the

contract to thoroughly analyze the social theory literature on occupational choice and occupational selection, as defined here, what is needed for this stage of the work is a simple conceptual model of the occupational sphere and employment in it. It is assumed then for further discussion, that the above two processes (occupational choice or employee decisions about employment; occupational selection or employer decisions about employees) describe the mechanism whereby individuals gradually come to take their place in a pre-existing occupational structure in society.[3]

The occupational structure can be conceptualized as a structure on some vertical dimension (for example, occupational differences in salary, prestige, qualifications) and/or on a horizontal dimension (e.g. industrial classification of occupations as in mining, agriculture, manufacturing). It is possible to think of this occupational structure as existing in a society (as for example John Porter does for Canada in The Vertical Mosaic), in a province, in a zone such as northeastern Alberta or Census Division 12, in a prescribed area such as the AOSERP study area, or in a single industry or employing agency such as government, the oil sands industry, or projects funded by AOSERP.

The most general model for analyzing a population in relation to the occupational structure would be the simple dichotomous scale of employed or unemployed. However, both because a number of activities are not considered part of the occupational structure of a society (such as the work of housewives) and because some persons are not considered employable (children, some handicapped persons) and because some persons unemployed eventually cease looking for work, the Canadian Census adds a third residual category usually designated as outside the labour force. Neither the nature nor the membership of this category is of course immutable: children were once of some importance as labour force participants, and at the present time both housewives and students may well move in and out of the labour force at a bewildering rate.[4]

From the perspective of an employer a similar set of three categories needs to be considered, perhaps labelled the

employed, employable, and unemployable. (In fact, the employer is likely to think of a population this way in respect to a given job rather than as general categories, but for the moment the general notions are adequate). Although individuals may move in and out of these categories at any point in time, the employer hires from the pool of people believed to be employable: they are people who have the correct knowledge, skills, and attitude sets, or who are believed able to acquire them on the job. When the individual also believes this about himself (or herself) he is likely to apply for a job which is known to be available.[5] Transformation of a member from the category of employable to employed is achieved simply by hiring.[6]

People viewed as unemployable in this sytem may be in or out of the labour force as far as the previously mentioned census categories are concerned. They may be unemployable because of a belief (either uniquely held by the employer and/or the unemployable or widespread in the society); because of lack of training or education (which may imply lack of skills or knowledge, lack of appropriate behavior norms, or simply lack of a certificate required to practise a given occupation); because of lack of contact between themselves and an informal network from which hiring occurs (which may mean they are isolated from any such network or that a given employing agency is isolated from their inter-personal network); or because company and/or government regulations put them outside of the pool of persons who may be hired (e.g., Early DEW Line policy in relation to Inuit, Canadian government policy at present in relation to some categories of immigrants). The transforming variable which will shift these people from unemployable to employable implies reversing the appropriate mechanisms.[7] It also implies that it is important to operate implicitly or explicitly on the correct variable in the overall system. If people are unemployable because both they and the employing agency believe they are by nature unsuited to the employment it is useless to attempt to modify that situation by training unless training is used covertly to

modify beliefs. Similarly, government regulation which demands a local hiring policy will likely be ineffective if the reasons for employers not hiring from the local population are not identified and changed (but combined with regulations which deny industry access to immigrant labour such regulations may be quite effective in eventually forcing industry to identify the nature of the problem).[8]

It was noted earlier that the employer is actually likely to use the categories of employable and unemployable in relation to specific jobs rather than in relation to employment per se. Again, the reasons for individuals being categorized as unemployable in a specific occupation may be related to beliefs, training, regulations, and informal networks. Of course, many of these operate together: the belief that women can not do mine work (and the eventual development of a superstition that they are bad luck underground) leads to them not being considered for training, lacking membership in informal networks that are related to previous mine employment, and to regulations which forbid the entry of women into mines.

Not only employment per se, but also horizontal and vertical mobility within an employing agency may be linked to one or a number of these mechanisms. Efforts to assist employers in making mobility opportunities available to their employees are generally discussed in the literature in terms of human resources or manpower development. Recent efforts to persuade banking institutions to consider women as managers is a good example of an attempt to modify a belief structure within an organization so that a category of employees (bank clerk, female) may be utilized by the industry in the same way as another category of employees (bank clerk, male).[9]

The terms of reference of this assignment imply a focus on one sector of the population in the study area. The problem is both one of ensuring employment of indigenous employables, in terms of the above analysis, and also of indigenous unemployables. Further, that such employment shall be rewarding and satisfying

implies an awareness of the vertical and horizontal dimensions of the occupational structure of AOSERP projects and awareness of the need to ensure occupational mobility within AOSERP projects. Finally, the concern for transition to other employment when the research project is terminated demands establishment of links with the overall occupational structure of the study area (including government and industry) and possibly with the occupational structure in a somewhat larger area which could include northeastern Alberta and Edmonton. (It may be necessary for employees to move out of the study area if they are to continue in satisfying employment.) Simply stated, it is not enough to see that indigenous people are hired as short-term labourers in AOSERP projects (although labouring jobs may well be the entry into AOSERP project work).

The recruitment and training model which follows must then deal with each of these problems.

2.2 THE TRANSITION FROM UNEMPLOYED TO EMPLOYED: RECRUITMENT AND TRAINING

The research problem of this study might be stated as follows:

1. given that we believe there will be continued development of the oil sands industry in northeastern Alberta and

2. that one result will be increased population, perhaps even new towns in the area and

3. that between the oil sands industry and the increasing population there is little likelihood that more than a very small minority of the indigenous people will be able to live off the land or follow previously established ways of living[10] and

4. that previous social science research has demonstrated that this kind of rapid population growth and change in an area is devastating in its social and psychological impact on native peoples, then

5. it is possible, even though much of this devastation has already occurred in the area, to reduce the negative social and

cultural repercussions by actively engaging the indigenous people in the newly developing employment.[11]

There really are two components to this question: is it possible to actively engage people in employment and will this involvement reduce the personal and family problems which have already occurred in the project area, and which have occurred wherever rapid development is undertaken. This section will deal only with the means of involving local people in employment; the next section on evaluation will develop the research problem somewhat further.

As noted in the previous section there are two points at which transformations occur: from unemployable to employable and from employable to employed. This is simply a matter of hiring, but the commitment of AOSERP to that hiring is extremely critical: it is a useless and frustrating exercise to convert people to employable only to have employing agencies refuse to consider them for employment. Something roughly equivalent to Syncrude Canada Ltd.'s (SCL) letter of intent to hire should be considered so that transition from employable to employed is rapid and not problematic. (This assumes that there can be agreement with the various people responsible for hiring as to the definition of an employable person, and that this definition does not include the notion that indigenous people are by their nature not employable: the interviews reported in Appendix 5.1 suggest that this will be possible.)

It should also be noted that this process may occur at two different levels; first when the person is not employed within the auspices of AOSERP and seeks such employment and again when that person seeks to be mobile within AOSERP. If, for example, an employee must go to Edmonton for technical training and certification to become qualified for a new job which he or she seeks within AOSERP, the equivalent of a letter of intent to hire should again be considered so that his return to employment is nonproblematic.

The transformation from unemployable to employable is much more problematic. The previous section identified four mechanisms: beliefs (about self or as held by others), training

(skills, knowledge, attitude-sets), informal interpersonal networks, and company and/or government regulations. The last is most easily dealt with, as AOSERP has already indicated a commitment to hiring local people. However, in view of the fact that so much of the work is done by contract this commitment may need to be expressed in a regulatory mechanism which demands priority to the hiring of indigenous people. But such a regulation will only be window-dressing unless it is monitored and assistance (in training and/or recruitment) is given to enable contractors to hire local people who are employable in the terms of this report.

The second mechanism, informal interpersonal networks, carries most of the information upon which people rely to make decisions about applying for work. Such networks also carry the information as to why taking a given job is difficult or impossible in relation to other needs of the person (housing, transportation, etc.); thus if an employing agency wishes to employ local people it must tap that information system to determine what needs to be changed to recruit such employees. These networks in northeastern Alberta are most complete within communities, but to a degree cross both community and language boundaries.[12]

It is advisable to begin to tap such networks one community at a time. Information going into the network includes the jobs that are available (on the basis that some of the network-members are employable) and what training is available for those who currently lack skills and/or knowledge. This requires essentially a contact person who acts as a recruiter of both employees and trainees. As much as possible two or more persons who are friends should be recruited (either for work or training) so there is mutual aid and support.[13] The kind of information which the recruiter puts into such networks is not only straightforward information but is also designed to counteract local prevailing beliefs which work against employment (those white guys will never hire us; we can't do that kind of work, etc.). Eventually, as people are employed, these networks begin to work in relation to young people finishing school and seeking their first employment

or people wishing to change jobs. But one should not expect that for a few years.

The third mechanism, beliefs, is extremely difficult to attack directly. Partly one must rely on the debate in the larger society, and at the local level one must try to provide experiences for both indigenous people and prospective employers which will enable them to believe that indigenous people are employable. The difficulty is the self-fulfilling prophecy effect of belief structures so that people tend not merely to see what they believe but actually to create it.[14] This applies to employer and employee, for beliefs about self are as crucial as beliefs about others. A training situation, of course, can tackle this problem of self-image for prospective indigenous employees, and possibly should include a means of making the AOSERP project staff aware of the effect of belief structures.

The final mechanism which must be considered is the one termed training. Although the discussion on beliefs includes the point that training may be used partly to modify beliefs of staff and trainees, its primary focus is one of changing the skills, knowledge and/or attitude-sets of prospective employees (or again, of persons seeking mobility within AOSERP, and perhaps occasionally someone who is about to be released from employment because of incompetence on the job.)

The model being proposed is a composite derived from a great many sources: it looks to traditional socialization or learning practices within the native community, it considers contemporary research in job-training in the poverty community, it draws from discussions in education and sociology which deal with education in general and/or vocational education in particular, and it utilizes the experience of the people with Dev-Cor Technical Services who have worked in a variety of training situations. The assumption is that the model will be applicable to indigenous people in northeastern Alberta be their status Indian, Metis, or non-native.

The findings of Leonard Goodwin imply that one of the major problems of people in the poverty community in the United States is their lack of confidence in their ability to succeed to influence outcomes of events (i.e., they are fatalistic, believe in luck, etc.).[15] Herzog et al. (1972), also found fatalism highly correlated with lack of job success for Nova Scotia Newstart trainees. The implication is that a training program should be directed toward: (1) activities in which persons can achieve a feeling of success and gradually come to hold a positive self-concept of themselves in relation to work; (2) short learning units which can be completed rather than left unfinished, and which can be gradually lengthened; (3) a social environment which maximizes the student's opportunity to make decisions and influence outcomes by his own actions. These are general ground-rules for the approach to training, rather than specific curriculum content.

The notion of a work-social organization on trapline dyads, (see f.n. 13) and the findings of Judith Kleinfeld in Alaska, imply that the pattern of social interaction in the learning situation is extremely important (Kleinfeld 1973). Kleinfeld speaks of warmth of teachers; perhaps the notion that the training situation must be personal and the trainer personable, rather than impersonal and distant, expresses the idea more clearly. Students are recognized as friends, are brought into the course as pairs or larger friendship units where possible and the learning situation maximizes rather than interferes with interpersonal relations.

None of these ground-rules imply that skill and/or knowledge learning occur at some lower level than is necessary for job performance. On the contrary, the learning situation seeks to imitate as closely as possible the job situation, with all its complexity. The secretarial trainee does not type for a few hours, then file, then answer the telephone, but must intersperse these activities as she would in a normal office. As Becker states, this is the way that apprenticeship programs have traditionally worked, as the apprentice works with a journeyman or professional in his

trade (Becker 1972). He also finds through this method that learning is an activity which goes on while work is being accomplished, not simply something for the classroom or leisure time.

But classrooms are still useful, though often omitted from the traditional apprenticeship program because work was proceeding at full pace. Classroom time each day provides an opportunity for discussion of the work, for review of what has been learned and what still needs to be learned, for the student to begin to develop skills in self-evaluation and self-criticism so that on the job he is constantly checking his performance against the possibility of performing better. The classroom is also still the best place to learn what may be called academic skills: upgrading in literacy and mathematics, writing letters and reports that deal with the work done that day, etc. It is classroom but it is still strictly the job-oriented, practical learning which the student needs to know to perform his work.

Finally the transition from training to employment need be neither restricted to a set period of time (weeks or months) nor serial. The student begins, as soon as he is able, to spend a few hours a day or two days a week in an actual work situation. He is paid for that employment at the going rate, or as close to it as his performance allows, and he is expected to perform according to employer standards. This may be the place where he will later receive full-time employment, or simply a place where an employer is prepared to consider some co-operative approach to ensure his present employment needs. As soon as the trainee's skills are adequate he is available for employment: he need not stay in training any longer than that.

There are a number of requirements which must be met by an agency before it can do this kind of training. It must be prepared and able to establish the communication linkage with the informal networks in the indigenous communities; its staff must be relaxes and comfortable with the interpersonal demands placed upon them (which does <u>not</u> mean they work a 24-hour day seven days

a week, but only that they are willing and able to create the climate described above); at least one staff member must have the combination of skill and knowledge to be transmitted to the students, and the staff must maintain contact with possible employing agencies. In the case of the AOSERP project assignments this implies maintaining contact with the AOSERP Committees as to their future employment needs, and the exact skills required by the employer.

The recruitment and training model above would not completely satisfy AOSERP's interest in employing indigenous people; rather an administrative structure must be considered which would deal with the recruitment, training, employing, and monitoring of such people. One such structure will be proposed as the recommendation in Section 4 and it is illustrated in Figure 2.

2.3 THE RESEARCH QUESTION

The gist of the research problem, as stated in Section 2, subsection 2.2, is "... is it possible ... to reduce the negative social and cultural repercussions which have been felt (by indigenous people in other areas of rapid resource development and population change) by actively engaging the indigenous people in newly developing employment?" There may be other reasons, political, humanitarian, or economic, which demand employment of local labour in development situations, and then the question becomes simply how is it possible to do so? However, in impact-oriented research directed towards policy development, the more complex question is the significant research question. Hypothetically this research question remains the same whether the local people consist of a native community, an Alberta farming community, or a Newfoundland fishing village. In practice, the devastation resulting from rapid economic and population changes has been more severe with native peoples than with others, so that if the answer to the research question is positive in this situation it is likely transferable to a great variety of other situations in Canada, although it may require modifications.

The problem must be answered in a two-step fashion, as was noted in the previous section. The first part to solve is the creation of a model for employing local labour. This has been outlined in subsection 1.1, but evaluation of that model must be on an ongoing basis so that it may be continuously refined until in fact indigenous people are finding satisfying employment with the auspices of AOSERP. This process is not remarkable and consists basically of the following:

1. determining that the local employees are satisfied with their employment;

2. determining how long local employees remain engaged by AOSERP projects;

3. identifying transitions from one form of employment to another within AOSERP projects to determine whether or not on-the-job mobility has been accomplished;

4. if there is employee dissatisfaction, identifying the causes;

5. determining whether or not employees have adequate skills from the perspective of supervisors;

6. if there is employer dissatisfaction, identifying the causes;

7. determining whether or not local people who have employment within the auspices of AOSERP are able to find satisfying jobs when they leave AOSERP or their work is terminated.

It is not intended to imply that this is an easy task, and employer commitment of the highest level to the whole Program is extremely important, for there are bound to be a great many problems.[16] However, in research or evaluation terms, it is not a difficult kind of assessment to make. This is especially the case because AOSERP has a relatively small labour force and each person employed can be followed through direct contact, interviewing, and quite informal conversation. The major complexity is in the number of Technical Research Committees, and therefore the number of possible supervisors, who may need to be contacted on a regular basis.

Evaluation of the training process itself must also be ongoing, but this involves an even more routine procedure. Testing as such is generally not recommended with low income populations, but filling out interview questionnaires (especially to measure self-confidence, fatalism, and similar variables identified as most critical for success of workers from poverty communities) should be done on a before and after basis for all, or for almost all trainees. The use of charts like DACUM[17] to measure increasing skill performance is also recommended. Details of the instruments necessary for such evaluation should be worked out by the agency contracted to do the actual training.

The second part of the research problem cannot be considered unless the first part is successful, but information must begin to be gathered to answer it as soon as trainees or employees are contracted. As AOSERP will employ only a few people the consequences of that employment cannot be assessed in terms of impact on the social problems of the project area; it is not useful to attempt to identify changes in unemployment rates, police contacts, etc. Rather each employee must be assessed for changes in his life-style which may be linked to the assurance of long-term employment. The following are only suggestions for this, but as closely as possible the research would utilize information normally collected in recruitment and/or training:

1. change in work pattern: from occasionally employed, or employed a few weeks a year, to full participation in the labour force;[18, 19]

2. change in interest in education: from dropout to attendance at technical school, vocational upgrading, etc. (other than the training program set up by AOSERP);

3. change in family stability: greater security and satisfaction for spouse;

4. change in standard of living: cars, house, etc.;

5. change in children's school attendance; and

6. decreased fear of geographical mobility for occupational reasons.

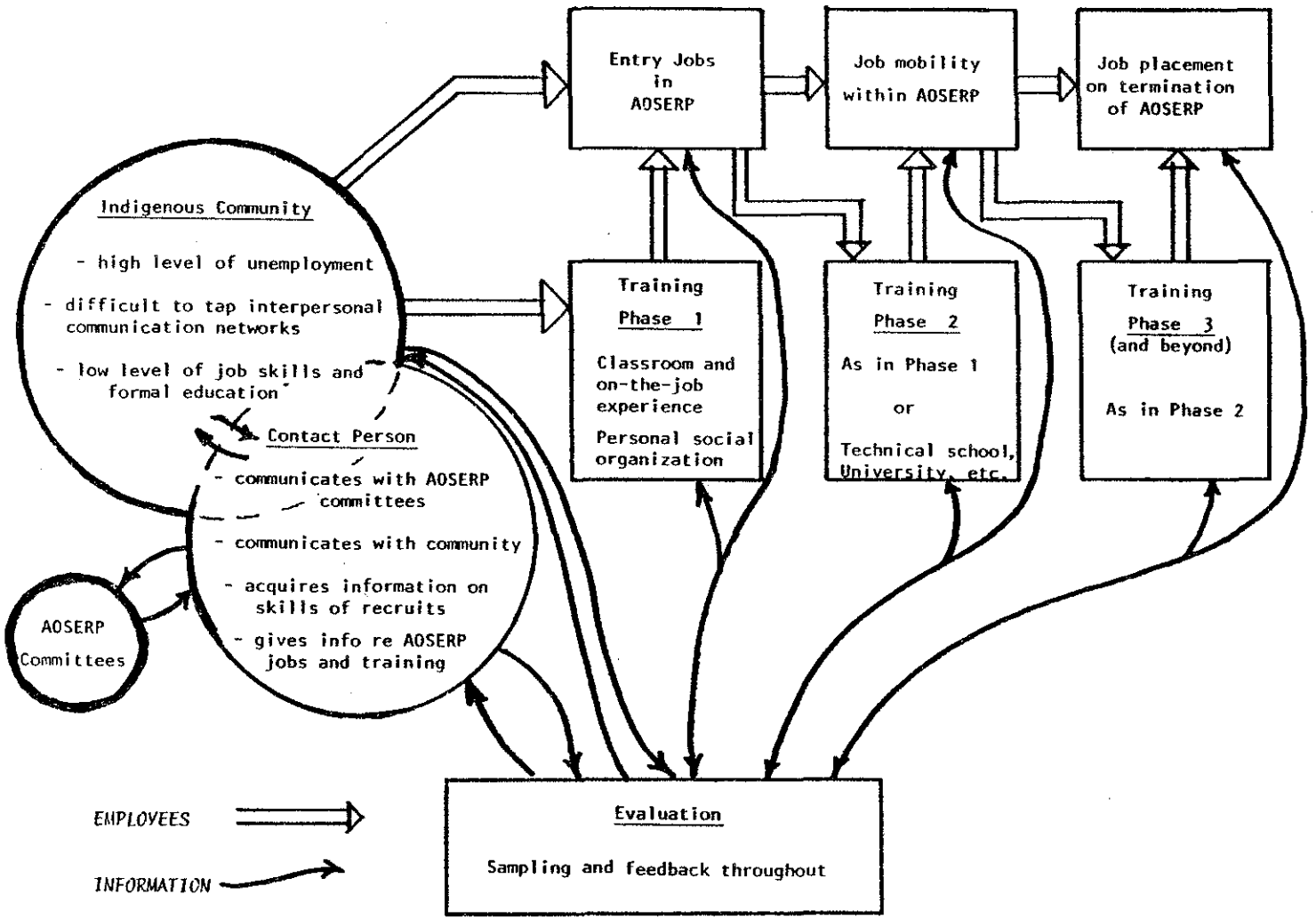

Figure 2. Recruitment and training model for employment May 1976.

It would be necessary to control for differences in age and sex, but these are the kind of variables which one would reasonably measure.

The small number of employees within the auspices of AOSERP may seem to be problematic for research, but in fact it is ideal for doing this kind of impact and intervention study, which is more like a case study in the detail required than a statistical study. In many ways AOSERP is a microcosm of an industry engaging in single resource development: its labour needs are primarily of a very low level (labour) or of a very high level (technical, professional); and its life-time is limited. (It will not exist past 1985 and it must take this into account in all its dealings with labour.) Both of these facts tend to be true of rapid resource development situations: if AOSERP can determine a way to reduce the destruction to the indigenous people it should be very useful for future developmental projects.

2.4 FOOTNOTES

1. Examples of the discussion in this area are Peter M. Blau and Otis D. Duncan, The American Occupational Structure, New York: Wiley, 1967; Bernard Rose et al. (ed.) Achievement in American Society, Cambridge Schenkman Publishing Co., 1969; A.H. Halsey et al. (eds.), Education Economy and Society, Glencoe: Free Press, 1961; and Otis D. Duncan et al., Socio-economic Background and Achievement, New York: Seminar Press 1972.
2. One way of visualizing this as a process of selection by the occupation would be to imagine a series of filters: if the filters were not in place the distribution of people by sex, age, race, socio-economic status, etc. in any given occupation would be the same as the distribution of those groups in the general population one makes a judgement of occupational inequality and then seeks to understand on the basis of social theory the nature of the filters. The same process is applied to questions of educational inequality, which are closely linked to occupational distribution. Although it is not stated in the

form used here, this is basically the method of analysis used by John Porter in The Vertical Mosaic (Toronto: University of Toronto Press, 1966) in which he attempts to determine the nature of elite structures in Canada, and of James S. Coleman et al., Equality of Educational Opportunity, Washington: U.S. Department of Health, Education and Welfare, 1966.

3. It is obvious that we are here speaking of an industrial or so-called post-industrial society. It is of relatively little utility to speak of an occupational structure in relation to a hunting and gathering economy, or even a predominantly fur-trade or agricultural based economy. Other dimensions of status are more significant.
4. Various attempts have been made to model this flow of population both in Canada and elsewhere, usually using a Markov process. See for example Donald Dawson and Frank Denton, Some Models for Simulating Canadian Manpower Flows and Related Systems, Hamilton: McMaster University, 1972.
5. A great variety of possible combinations arise if one analyzes this as a situation in which the employer and employee may have shared or conflicting beliefs about the nature of the employee in relation to any one of these elements (knowledge, skills, attitudes). A total of 32 states can be achieved. For simplicity and clarity no attempt is made here to elaborate each of these possibilities.
6. There is some danger in treating this variable in this fashion, for it may imply that hiring for a few days and/or into any position is an acceptable employer practice. The notion that employment must be satisfying implies, among other things, the need to hire or promote into long-term, well-paid positions. The point in the text that transformation occurs "simply by hiring" needs to be taken in the context of the later discussion about internal mobility of employees.
7. These are the major mechanisms operating but the list is not intended to be exhaustive. An example of an apparently accidental change in local beliefs was given in a recent article

in Chatelaine which describes the hiring of women at the Inco mine in Thompson, Manitoba, for the first time last year. (Judylaine Fine, Go North, Young Women, Chatelaine, Vol. 49, No. 4, (April, 1976) p. 52.)

8. In passing it should be noted that the occupational structure may be modified specifically to include people previously considered unemployable. The development of the concepts of New Careers in the poverty community in the United States reflects such a change. (See the bibliography by Cynthia Vestal and Sally Craig, New Careers Bibliography, National Institute for New Careers, University Research Corporation, Washington, D.C. 1970.)
9. See, for example, Thomas Patten, Manpower Planning and the Development of Human Resources, New York: John Wiley and Sons, 1971, for an extensive discussion of this general topic.
10. The assumption here is that the population changes related to oil sands development are and will be the primary factor in the study area. The increasing numbers of outsiders oriented to high consumption levels will result in local people seeing that kind of life-style as desirable: whether they have been small storekeepers (free traders), or trappers or bush workers, they will not likely want to follow their previous occupational activity. In some cases it is assumed they will not be able to follow earlier occupations as increased population results in changes in the animal populations and land use, but the major point is that they will no longer find it satisfying to remain in such occupations.
11. This is the research question for AOSERP. It is not intended to imply that AOSERP itself can employ enough people to change the nature or intensity of social problems in the study area: it is intended to imply that AOSERP can test a research question which, if answered in the affirmative, will provide information and theoretical models to governments and industry which they may use on a much larger scale to actually modify indicators, or statistics, which demonstrate social breakdown.

12. The success of an organization such as Native Outreach in Fort McMurray depends precisely on their ability to participate in the informal communication networks in native communities, and to become known to such communities. At least one of the difficulties such an organization faces is an inability to persuade employing agencies to think about the activities which they must change if they wish to employ native people.
13. The traditional form of social organization at the work place was characterized by the trapline dyad, in which two persons often formed a co-operative trapping unit which could work together for years. These persons were generally relatives (especially siblings or in-laws) but could be friends. (See for example, June Helms, The Lynx Point People: the Dynamics of a Northern Athapaskan Band, Ottawa: National Museum of Canada, 1961.) In other forms of interaction an intermediary is often required, as when one seeks a favour: such favour asking should be done by a friend, not by the individual. (See Norman Chance, Conflict in Culture: Problems of Developmental Change Among the Cree, Ottawa: Canadian Research Centre for Anthropology, for one form of this.) Of course, many native people have dropped these interaction forms, or use them only in certain situations. However, if the work allows a variety of possible interaction forms so that people may fit into a pattern in which they are comfortable the individual is more likely to stay on the job.
14. This idea was initially developed by Robert K. Merton in Social Theory and Social Structure, Glencoe: Free Press, 1949, but it became particularly popular in explaining school success and failure with the publication of R. Rosenthal and L. Jacobsen's Pygmalion in the Classroom (New York: Holt, Rinehart and Winston, 1968). A recent article summarizes the debate and argues that one interested in intervention procedures must not merely identify negative self-fulfilling prophecies but must generate positive ones which replace the

old belief pattern (William Wilkins, The Concept of a Self-Fulfilling Prophecy, in Sociology of Education, Vol. 49, No. 2 (April, 1976), p.p. 175-183. The debate fits into the larger discussion of the role of ideas and thought structures in human behaviour, from Niel Smelser's idealistic perspective on changing society, (Theory of Collective Behavior, New York: Free Press, 1972), to Burkhardt Holzner's phenomenological perspective on the construction of social reality (Reality Construction in Society, Cambridge: Schenkman Publishing, 1968).

15. Leonard Goodwin, Environment and the Poor: Toward More Realistic Welfare Policies Current History, Vol. 61 (Nov. 1971) pp. 290-307. Also see, Do the Poor Want to Work, Washington: Brookings Institute, 1972 by the same author.
16. Sidney Fine, Guidelines for the Employment of the Culturally Disadvantaged in Optimizing Human Resources: Readings in Individual and Organizational Development, eds. Gordon Lippitt et al., Don Mills: Addison Wesley Publishing, 1971. This article is a particularly fine discussion of the organizational adjustments which must be made to ensure productive employment of persons from the poverty community.
17. DACUM is a term referring to a curriculum process which is used to increase the trainee's involvement in planning his own goal attainment. It is a contraction for Developing a Curriculum, and was used extensively by Nova Scotia Newstart. See DACUM, a brochure published by Nova Scotia Newstart in Yarmouth, Nova Scotia, circa 1970.
18. Full participation in the labour force will need to be defined carefully by the researchers. In this case individuals may prefer certain activities, such as living off the land, at certain times of year and it would not be appropriate to treat them as unemployed. However, the variable to be measured is number of months in the labour force and a significant increase in that variable would be treated as a change in the occupational pattern.

19. There is an assumption here of a continuous demand for labour in the project area. Participation in the labour force is often dependent upon changes in the availability of employment rather than behavioral changes by employees. In fact, the assumption of labour shortage or job availability in the project area will not hold if immigrant labour is easily available and is preferred by the employer: in this case a de facto situation of job shortage is generated for local labour.

3. ADMINISTRATION OF THE RECRUITMENT, TRAINING, AND RESEARCH PROCESS

3.1 CONTRIBUTION AND AVAILABILITY OF TRAINING INSTITUTIONS: RECOMMENDATION

For professional and technically trained workers the educational or training programs are, on the whole, well known to existing staff members. Whether they are programs at the three Alberta universities, other Canadian universities, or at technical schools such as NAIT, SAIT, or Kelsey College in Saskatoon, individuals working in the field normally have some knowledge about these programs and the level of expertise of their graduates.

These professional and technical programs however, are not likely to include indigenous people from the AOSERP study area in their student body, with the possible exception of those in Edmonton. Northern students are more likely to attend Keyano College or other adult vocational centers in northern Alberta, or to have discontinued formal schooling at the elementary level.

However, to the extent that mobility of indigenous people within the auspices of AOSERP demands certification or training from one of these institutions, the overall plan for recruitment and employment of local labour must include the possibility of employees spending some time at the appropriate institutions. As the total time period for the AOSERP research is another nine years, it is to be expected that at least some local population will receive technical training in that time period. It is also feasible for high school students, and possibly others, to complete at least a Bachelor's degree during that period.

To accomplish this certification of technical and professional workers will likely require a similar mix of employment and education as is outlined in the training model. The pattern of co-operative employment[1] used by Syncrude for technical and engineering positions could be adopted so that, for example, two students could alternate semesters of study and work. The important need would be for AOSERP projects to provide entry employment for

local people interested in studying in the environmental field, then work out individually the pattern of work and study most beneficial to the student and the employing agency.

For other positions, especially secretarial and research interviewing and possibly some levels of technical assistants, available institutions either do not have programs or they cannot fulfill the kind of requirements set out in Section 2. It may be possible to use parts of a program, as for example a course offered by Keyano College, but the co-ordinating and primary teaching role should be carried by a smaller institute which can provide the more comprehensive package.

Fine (1971), in his article on employing the disadvantaged, recommends the use of private institutions for special training needs of employers (what Worth (1972) calls proprietal schools in Alberta). The institution selected should be one specifically established to deal with this kind of population, and licensed under the provincial Trade School Act so that the very limited federal and provincial funding sources can be tapped. This approach would be appropriate for AOSERP both because it tries to avoid hiring larger numbers of personnel than necessary, and because it seeks a general approach which may be transferred to government and industry.

To our knowledge, the only training institute of this exact nature in northern Alberta is the Jack Bredin Community Institute, in Edmonton, a non-profit organization providing job-readiness training to disadvantaged individuals and groups. It currently has the capacity to train in secretarial and office work, offset printing, and research-interviewing and is structured to add other training areas simply by plugging in the assistance of a technical specialist to the overall process.

3.2 FUNDING OF TRAINING

Funding for training of individuals in our society comes from three general sources: the individual to be trained, who pays for the acquisition of a marketable skill; the employing industry

which pays for the preparation of skills needed by the industry; and/or government (occasionally philanthropic) agencies which recognize that the total society benefits if its members are employable and have the necessary skills to further its development. The general trend has been towards governments paying for educational and training costs, with the other two sectors of society being expected to pay some part to demonstrate their good will and responsibility. Historically, the individual being trained has very often paid through his labour rather than through cash, as in apprenticeship programs or as low paid trainees in various programs.

In AOSERP's case individual trainee contributions can be expected to be minimal, partly because of the largely indigent nature of the population in northeastern Alberta and partly because of a strong orientation to government sponsorship of training.

Training costs to AOSERP as an employer should be commensurate with what government is expecting of private industry. The oil sands industry is being expected to bear a fairly high proportion of the cost of training their manpower, and AOSERP could accept this as a general policy.

To the degree that this training program would represent the development of an experimental model which could be applied in other rapid growth situations, AOSERP could legitimately fund rather more of it than one would normally expect of an employing agency. However, this should possibly be only the exceptional costs associated with development of the model; that is, costs over and above what training would cost in any other employment situation. If other employers are to be expected to adopt the model they will be more likely to do so if it has been demonstrated that direct costs are minimal.

Therefore a major part of the funding should come from regular government sources which can be tapped by other agencies when they adopt the general model. Canada Manpower, the provincial Department of Advanced Education and Manpower, and the Department of Indian Affairs serve as examples. Each of these organizations

places certain demands on a training situation before they will fund students, demands ranging from the length of time the student must be in the labour force to insistence that the training institution have a provincial trade school license. One consequence is that training monies, in fact, are much more difficult to obtain than would appear from a superficial survey of all possible sources; another consequence is that the person or agency seeking training monies for AOSERP must be well acquainted with this whole field of funding.

In spite of this actual limitation of training monies, the exact availability and amount of funding, and to a degree even the sources of funding, tend to vary within a fiscal year and from one year to another. If a contract is given for training, the contracted agency should be expected to identify and utilize current funding agencies to the maximum degree possible. Even when this is done, some indigenous persons in need of training will not fit into any category for which funds might be obtained, and AOSERP should be prepared to fund such trainees. For additional comments on funding of training, see Appendix 5.2.

3.3 POSSIBLE APPLICABILITY OF THE PROCESS TO PROVINCIAL GOVERNMENT EMPLOYMENT NEEDS

It should be a condition of the training contract, when it is let that the contracting agency will maintain contact with selected government departments. This contact is needed for two reasons: government departments (especially in the wildlife area) are most likely to be the future employing agency of various environmental workers who become trained through the research project; and secondly, government agencies may well find it useful to utilize the training model outlined.[2]

The essence of the model is the maintenance of a certain type of social organization for learning, the close relationship between employment and training, a particular kind of focus for classroom activities, and a time-frame which is based on a student's readiness for transition to work rather than on predetermined time

periods. Administratively, the key is utilization of an external resource which specializes in training, which has concerned itself specifically with training the hard-to-employ, core unemployables, disadvantaged, and which makes use of a contact person in the community. The contact person actually performs a variety of tasks, but in relation to the overall conceptual framework he or she is the person who makes contact with the potential trainee's interpersonal network. It should be noted that smallness is fairly important to the model (although it can be effectively achieved by a number of administrative devices in a larger organization) and the inclusion of a subject matter expert is essential.

This model, or parts of the model, could be tested in the civil service or in industry: it is a general rather than a specific training model for AOSERP projects. It would be particularly useful in relation to the provincial government plans to decentralize government activities, for the basic assumption of the model is that indigenous or local people do not have the skills needed by the employer but given a well-organized program they will acquire them. (One might oppose this to two alternative approaches: local people will be employed no matter what their skills, or skilled people will be hired even if they must be found overseas). As noted elsewhere in this proposal, because the model is developed for a population which is most difficult to employ, it is likely to be much easier to apply in a population which has less problems in the occupational sphere.

It would also be very useful for provincial government departments to become engaged in utilizing the model for their own work force, as provincial government regulations may need to be formulated which will aid this kind of employee development. For example, licensing requirements of any small business which demands years of experience in that business will favour people from outside an area if that business does not exist locally, often in fact will favour urban people rather than rural residents because most of these businesses already exist in the urban community; similarly

union membership requirements are well-known to be a problem for employing local labour in northern mining communities, especially if there happens to be a slump in mining work elsewhere in the country; likewise regulations which demand experience will tend to favour whites in a town in which there is an Indian-white split, or favour whatever group is currently dominant in the business community. Economic development planning which seeks local-level small business development and/or the hiring of local people in available jobs may well require changes in legislation or regulation.

However, one word of caution should be noted. Although this report presents a model, and the basic premises from which it is derived, as fully as possible, in practice it is extremely difficult for such material to form the basis of a program. In the actual situation there are a great many practices which determine the effectiveness of that work: like the apprentice, one must learn the feel of the work, not just the theoretical structure of it. This model should be developed as a pilot project, as one with which people work until it is fully defined: if not by AOSERP then by some other agency. It should then be transferred to other situations on the basis of individuals working within the pilot project, grasping the essence of the overall approach, then moving to apply it in another situation (and possibly greatly modifying it). So much of the impact of rapid economic development has been continuing unemployment or low levels of employment for the local people that a means of reversing such situations should be a major research goal of the AOSER Program.

3.4 FOOTNOTES

1. Thomas H. Patten, Manpower Planning and the Development of Human Resources (New York; John Wiley and Sons, 1971) has an excellent discussion of the notion of co-operative employment.
2. Milton Esman, Development Administration in a Plural Society: Institution Building and Reform in Malaysia, Ithaca: Cornell University Press, 1971. In this book and other articles

Esman develops the notion of Institution Building as means for elites to introduce change and innovations in a society. The concept includes the notion that an organization develops a new way of achieving some goal; it may be new technology, new administrative structures, or any other form of innovation. One of the keys to having that innovation adopted elsewhere in the society is that the innovating organization establishes links with other organizations. This is part of what is implied here by the statement that the training institution which utilizes the model proposed in the paper must establish links with government departments. On the same basis, it should establish contacts with industry in the area.

4. FINAL RECOMMENDATIONS

4.1 RECOMMENDATIONS

It is recommended that AOSERP utilize the proposed training model as an experimental means of employing indigenous labour. At the end of 1980, or 1985, they should expect to have a highly developed model which can be transferred to any rapid growth area in Canada, and they should expect that components of the model could be transferred at an earlier date if other agencies wish to begin experimenting with it. It is an ideal means of incorporating indigenous labour into the work of AOSERP in a responsible manner.

It is further recommended that AOSERP, through its own efforts or through a suitable agent, develop and refine this training model.

The administrative structure within AOSERP should be kept to a minimum. One person will need to be hired to carry some of the functions of a personnel officer, but this person need not be an AOSERP employee. This individual will have the continuing responsibility of enumerating local labour, developing interpersonal contacts within the indigenous community, identifying jobs developing within AOSERP and determining the qualifications of skills needed for those jobs. He or she then must begin the process of determining the training needs of the indigenous people to match them to jobs which will be available in the future. This is the contact person of the training and recruitment model.

It is feasible (and probably desirable) that this person actually be employed by the agency receiving the training contact, but it would be vital that he or she have open communication with AOSERP personnel at all levels: this may mean direct reporting to the Program Director as well as to the Human Environment Committee. (Fine suggests that the person responsible for such programming in industry be at the highest level possible, at least a vice-president, for it takes commitment at that level to make the Program work.)

In view of the complexity of the AOSERP structure, and Committees, it would be advisable to begin this Program with a reduced number of Committees -- preferably those in which the Chairman and Projects Leader are most interested. A maximum of five Committees should be considered, and it would be quite reasonable to begin with two or three.

It would also be advisable to concentrate actual training on a select number of skill areas. In view of the kinds of projects to be carried out, two categories should be secretarial-clerical and research-interviewer. One further category should be identified which is more involved with work in the physical environment. This category may be designated by a title such as environmental research assistant, with the employee expected to do everything from tree-planting to setting nets for fish. It would provide entry jobs for people with low skills and education, it is more likely to attract men than other positions, and it should provide for mobility to technical and professional environmental jobs.[1]

In cost terms, the cost of the program will increase as more AOSERP Technical Research Committees, more job-categories, and more trainees are added to it. The basic minimum includes the contact person working in the Fort McMurray area (although initially this could be a part-time position), administrative back-up to carry such activities as the search for funding, the research component which would need to begin immediately, and the training of at least five trainees. The plan would include the hiring of local people who do not require training, but this would not involve additional costs to AOSERP. The maximum would be the hiring of the contact person on a full time basis and the training of fifteen persons in this fiscal year. Ideally the number of persons trained each year would be between ten and twenty, and some of these would be persons being retrained at a higher level than the previous year.

See Appendix 5.3 for examples of possible costs, depending on the extent to which AOSERP wishes to become involved.

4.2 FOOTNOTES

1. This is essentially the concept of New Careers noted earlier; it is an extremely important one in developing employment programs for low-income or disadvantaged peoples. Such jobs are specifically designed so that the target population may do them, but they also must meet real needs of the employing agency. To avoid either the employee or his co-workers perceiving them as make-work activities, it is generally recommended that some existing jobs be modified to match more closely the abilities of the disadvantaged potential employee, rather than new jobs being created.

5. APPENDICES

5.1 JOBS IN AOSERP, IDENTIFIED THROUGH INTERVIEWING IN MARCH, 1976

A representative of each Technical Research Committee was interviewed in person, with the exception of Mr. Burbidge of the Meteorology and Air Quality Committee who was interviewed by telephone. In some cases information was presented as rather tentative; in other cases the person interviewed was quite certain of his labour needs, at least in the near future. The following is a brief summary of the information gathered.

1. Aquatic Fauna Technical Research Committee (Dr. R. Wallace)

In 1976 he needs five summer staff (April or 1 May to October or November), and two should be University or NAIT students, others could be from the Fort McMurray area. They will need to live in a field camp, or the base camp, and essentially collect and measure fish. Other work, even summer work would require a Master's Degree, and at present will also be done in Ontario.

Future years are likely to be similar to this year.

2. Human Environment (B. Kasinska-Banas)

Administrative positions (1 secretary-stenographer, 1 clerk) will be needed in 1977-78, and a project leader assistant (with at least a Bachelor's Degree and work experience) in 1980-81. In addition, occasional part-time help may be needed for library work (reading, reviewing, writing) which could be summer work for a university student: this too is not expected to be a need until 1977-78, but there is the outside possibility of hiring in 1976-77.

With the exception of the literature review, other projects have been contracted to outside agencies (baseline data, social indicators, archeology, social problems, history of the area). Most will not require data gathering in the project area until 1977-78.

The type of work needed could be classified as "research-interviewing" although somewhat different skills may be demanded of the persons assisting in, for example, the history project as

contrasted to persons assisting in filling in gaps in the baseline data project. Some interviewers with the local Indian languages will be needed (Cree, Chipewyan). A different set of skills will be needed by the archeological assistants, trained to assist in the archeology project.

Numbers here are likely not large: possibly six or as many as a dozen interviewers, two or three persons working as archeology assistants and two or three doing literature review.

3. Hydrogeology (Dr. D. Hackbarth)

There is just one project being sponsored by this Committee, and it is actually being conducted by the Alberta Research Council. It is already past its peak employment needs, now hiring two professional and two technicians for monitoring and data analysis.

No further projects are foreseen at present.

4. Hydrology (Mr. R. Deeprose, telephone conversation with M. Falk)

I sat in on a Committee meeting in this case, rather than interviewing a representative. Ten members were present, discussing this Committee's projects. They see their employment needs as primarily professional (university graduates) and technical with the latter coming primarily from Kelsey Institute in Saskatoon which has a water resources program. They also need "occasional" meter reading (that is a task which may take a few minutes a month) and could possibly use drivers of skidoos and boats (who could also maintain vehicles), and perhaps guides familiar with given terrain.

Mr. Falk detailed positions somewhat, noting that a Projects Leader, and a Project Manager for the water quality project were in the process of being hired or seconded. For the surface water hydrology project there are currently four technicians on staff, two of whom live at Fort McMurray. The lake acidification project will be let to a consultant but they must hire from the area. Similarly an Athabasca Delta project will be given to a consultant.

5. Land Use and Reclamation (Mr. T. Cowan)

Mr. Thiessen was apparently not available for the interview scheduled with him, so his assistant acted in his place.

Mr. Cowan anticipates no project development this fiscal year, although there may be the need to hire a liaison person to work with the oil industry. Such a person would necessarily come from that industry.

Work of this Committee in the following two fiscal years is also expected to be on a small scale, and generally the Land Use Committee will await the result of other Committees' work. Mr. Cowan anticipates the eventual need of professional planners, cartographic draftsmen, people knowledgeable in soils both as soil quality relates to construction activity and as it relates to other forms of land use, and clerical staff. The focus seems rather to be on planning than on research, but actual employment needs can best be described as presently not known.

6. Meteorology and Air Quality (Mr. Burbidge, by telephone)

This Committee hires primarily professionally or technically qualified people: that is, with university or NAIT level training which may be in meteorology, electronics, or as instrument technicians. All six positions are now filled, and no further hiring is anticipated in this area.

They will also need some labour - driving snowmobiles, measuring snow, setting up instrument shelters, etc. Often this will involve only one or two days employment, or perhaps an hour a day for some time, one or two days a month, or maybe a solid month and nothing further. He sees little need for training of these employees, as all that is required is basic literacy and, for some, proficiency in taking readings.

7. Terrestrial Fauna (Mr. D. Neave)

The activities of this Committee are expected to center on the study area as a birdstaging area (for spring and fall migration of birds), the fur-bearing potential of the area, the balance between wolf and moose populations and hunting activities of man, the problems of game disturbance especially for somewhat sensitive or endangered species, and the possibility of game ranching.

Most of these involve work within the study area, although the wolf-moose-hunting project includes stations near Swan Hills,

Cold Lake, and Rochester, Alberta, as well as the one within the study area. Much of the work will be carried on from field camps, and the projects are generally seen as long-term, possibly the full ten years.

In addition to professionals and technicians, Mr. Neave saw a need for people with relatively little training; people who could act as guides, and handle boats and skidoos. The work is highly seasonal with midsummer tending to be the quietest and activity building to a peak in December. Spring and fall migration periods are also busy, and determine the time-frame for some observations.

8. Vegetation and Revegetation (Dr. A. Fedkenhauer)

There are six different projects, and the possibility of a seventh, each assigned to a different agency (Federal or Provincial forest services, Alberta Research Council, different departments at the University of Alberta).

The manpower needs are not certain; some projects will need unskilled summer help (e.g., 5 or 6 tree-planters for a few months, people who can tally and keep records). There may also be need for foresters and forestry technicians, and one labour position at $6,000 per year is to be filled for 1976-77. Much of the temporary help is needed in the summer and projects are likely to look for students who have some training in forestry, botany, soils, etc. Some of these positions may exist for two or three consecutive summers.

5.2 NOTES ON THE AVAILABILITY OF FUNDING FOR TRAINING

As noted in the text, funding for training is available from Canada Manpower, the provincial Department of Advanced Education and Manpower, and the Department of Indian Affairs of the federal government. Hypothetically it may also be available from the provincial Metis Rehabilitation Branch, the federal Department of Regional Economic Expansion, and trust funds or philanthropic organizations which wish to provide assistance to native peoples.

In practice, all of these sources are difficult to tap and often limited by budget restrictions and delayed by complicated paper work. It is not far from reality to consider Canada Manpower as the only ongoing source where assistance has generally been available.

Canada Manpower provides funding for training in two ways: through the Canada Alberta Industrial Training Program (CAITP) wherein employers may be reimbursed for a part of training costs, including a portion of the employee's wages and special instruction costs, with the province paying 50% of the reimbursements; through what is known as private purchase wherein Canada Manpower buys training for individuals with federal money at provincially-approved schools or institutes at rates agreed on with the training school (a living allowance is also paid directly to the trainee).

There are a number of restrictions on these programs. For example, the student must have been in the labour force (i.e., not a student) for at least one year; monies will not be paid to a government agency which already has training monies allocated as this would represent duplication of funding, and it is not expected that the funds will fully cover employer costs of training. A brochure is available from Canada Manpower.

Attempts to obtain training funding from sources other than Canada Manpower would be so specialized that no meaningful discussion is possible at this time. However, it is of interest that the Alberta Manpower Division is in the process of making some training funds available to employers through a purely provincial scheme somewhat similar to CAITP. If AOSERP has no part of its budget designated for training, it is likely that it would qualify as an employer to negotiate training contracts under CAITP or the provincial scheme. It would be noted that contracts under either plan provide for reimbursement after-the-fact and delays in payment, if not allowed for, can create cash flow problems.

5.3 COST OF THE PROPOSAL

Minimum Costs

Contact person, half-time, based on $20,000 per year.	$10,000
Research and administration costs, extra requirements of training organization, specifically for this project.	$10,000
Trainee costs (living allowance for trainees and cost at training institute). Normally payable by Manpower, therefore no costs for five trainees in the first year.	000
Trainee costs for trainees who do not match Manpower categories: living allowance average $75 per week, training costs average $125 per week, = $200 per week. Average number of weeks per trainee (assumes prior training in the case of secretarial trainees) 6 weeks at $200 per week = $1,200. Budget for two to three such trainees only in the first year.	$ 3,600
	$23,600

If these costs were for part of the fiscal year only, they would be reduced accordingly. For example, six months would reduce the contact person and research and administrative costs to a total of $10,000: trainee costs should be budgeted about the same for a total of $13,000

Maximum Costs

Development of the project could not occur at a much faster rate than the minimum costs demand. It would be more effective to hire the contact person full-time and expect him/her to be employed for the duration of the AOSERP research. $20,000

The maximum number of trainees could not be more than fifteen in the first year, and should likely remain about that throughout the project. About one third of these

possibly could not be covered cost-wise by Manpower, which means budgeting for five such trainees. $ 6,000

Research and administrative costs would increase accordingly but by utilizing the facilities of a suitable consultant it would not likely be necessary to hire additional staff. Likely a total of $15,000 would cover the first year, but that would increase as additional research assistants would be needed in following years. $15,000

The maximum then would be, for the first year, $41,000

5.4 TERMS OF REFERENCE

For consulting study re: Human Environment Research. Project HE 2.3 Maximization of Technical Training and Involvement of Area Manpower in the AOSERP Project.

Purpose

The purpose of this study is to design a working model through which indigenous manpower in various occupational areas may find rewarding and satisfying employment within the auspices of AOSERP.

Three main types of workers would be engaged: clerical, para-professional and professional. The ultimate aim is to plan systematically for the placement of indigenous workers in positions of significance in government agencies and oil sands industries.

NOTE: An indigenous person is defined to be a resident or descendant of a family that has a history of long persistent residence in the project or peripheral areas. It could be a native or a non-native person, but not a recent immigrant worker in the project area.

Objectives

1. Canvass the literature to determine:
   a) sources that deal with the entrance of indigenous people into the workforce:
   b) sources pertaining to indigenous people as a part of a training-employment scheme in an environmental research situation.

2. Survey and identify the prospective occupations available within the AOSER Program.
3. Design a method:
   a) to determine the job potential of indigenous people in the project and peripheral areas;
   b) to train indigenous people for employment in the AOSER Program;
   c) for monitoring the training program of the indigenous people;
   d) for placing the trainees in AOSERP and monitoring their work performance;
   e) for monitoring the income levels and work conditions of indigenous employees in AOSERP projects.
4. Identify availability of funds for training of indigenous people.
5. Design a method for placing indigenous employees of AOSERP in suitable occupations following the completion of the project.
6. Assess what application the designed training-employment model could have in the Alberta Government.

Notes

1. Provide a relevant annotated bibliography.
2. Maintain the liaison with the Human Environment Committee and AOSERP Management.
3. Relate the design of the model to research on industrial development scenarios in the Athabasca Oil Sands (copies of the research reports will be provided).

6. BIBLIOGRAPHIES

6.1 SELECTED BIBLIOGRAPHY

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Alberta Oil Sands Environmental Research Program. 1975. Information about the program. Edmonton.

Alberta Oil Sands Environmental Research Program. 1976. An introduction to Alberta Oil Sands Environmental Research Program. Edmonton, C.

Assheton-Smith, Marilyn I. 1970. Community analyses for Alberta Newstart Inc. Lac La Biche: Alberta Newstart Inc.

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Chance, Norman A., ed. 1968. Conflict in culture: problems of developmental change among the Cree. Ottawa: Canadian Research Centre for Anthropology.

Coleman, James S., et al. 1966. Equality of educational opportunity. Washington: U.S. Department of Health, Education and Welfare, (U.S. Government Printing Office).

Dawson, Donald A., and Frank T. Denton. 1972. Some models for simulating Canadian manpower flows and related systems. Hamilton: Department of Economics, McMaster University.

Duncan, Otis D., David Featherman, and Beverly Duncan. 1972. Socioeconomic background and achievement. New York: Seminar Press.

Esman, Milton. 1971. Development administration in a plural society: institution building and reform in Malaysia. Ithaca: Cornell University Press.

Fine, Judylaine. 1976. Go north, young women. Chatelaine, Vol. 49, No. 4, (April) p. 54.

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Goodwin, Leonard. 1972. Do the poor want to work. Washington: Brookings Institute.

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Government of Canada, Statistics Canada. 1971. Population bulletin #92-702. Ottawa: Statistics Canada, 1971 Census of Canada.

Gue, Leslie R. 1970. A selected annotated bibliography concerning future needs in all levels and forms of native education in Alberta. Edmonton: University of Alberta (unpublished).

Halsey, A.H., J. Floud, and C.A. Anderson. 1961. Education, economy, and society. Glencoe, Ill: Free Press.

Helm, June. 1961. The Lynx Point people: the dynamics of a northern Athapaskan band. Ottawa: National Museum of Canada (Bulletin #176).

Herzog, Allen, et al. 1972. The economic benefits of training the disadvantaged. Yarmouth: Nova Scotia Newstart Inc.

Holzner, Burkhart. 1968. Reality construction in society. Cambridge, Mass: Schenkman Publishing.

Kleinfeld, Judith. 1972. Effective teachers of Indian and Eskimo students. Fairbanks: Institute of Social, Economic and Government Research, University of Alaska.

Lippitt, Gordon L., Leslie This, and Robert Bidwell, Jr., eds. 1971. Optimizing human resources: readings in individual and organizational development. Don Mills: Addison-Wesley Publishing Co.

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Nash, Manning. 1958. Machine age Maya: the industrialization of a Guatemalan community. Menash, Wis. American Anthropologist (Memoir 87).

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Patten, Thomas H. 1971. Manpower planning and the development of human resources. New York: John Wiley and Sons.

Porter, John. 1965. The vertical mosaic: an analysis of social class and power in Canada. Toronto: University of Toronto Press.

Rosen, Bernard., H.J. Crockett, and C.Z. Nunn. 1969. Achievement in American society. Cambridge: Schenkman Publishing.

Rosenthal, R., and L. Jacobson. 1968. Pygmalion in the classroom. New York: Holt, Rinehart and Winston.

Schultz, Wolfgang M. 1966. The people and resources of northeastern Alberta. Edmonton: Department of Extension, University of Alberta, (Agricultural Economics Research Bulletin 2).

Smelser, Neil. 1962. Theory of collective behavior. New York: Free Press.

Stone, R. 1962. A model of the educational system. Minerva, Vol. 3:2 (Winter): pp. 172-186.

Vestal, Cynthia, and S. Craig. 1970. New careers bibliography. National Institute for New Careers, University Research Corporation, Washington.

Wilkinson, W. 1976. The concept of a self-fulfilling prophecy. Sociology of Education, Vol. 49, No. 2 (April): pp. 175-183.

Worth, Walter. 1972. A choice of futures: report of the commission on educational planning. Edmonton: Government of Alberta.

6.2 ANNOTATED BIBLIOGRAPHIES

The terms of reference of the contract between Dev-Cor and AOSERP specify that Dev-Cor is "... to provide a relevant annotated bibliography." The discussion between AOSERP and Dev-Cor staff indicated that what was implied was an annotated bibliography relevant to training indigenous people for environmental research.

In the narrowest possible interpretation of that task, Dev-Cor staff have been unable to identify any sources which discuss the training of indigenous people in environmental research. An ERIC current awareness search (computer assisted search of research in education, including vocational education) was done using some 26 descriptors, including Indian, Eskimo, Indigenous Personnel, Minority Groups, and Culturally Disadvantaged, but not one article or book was identified. A periodical index search of social science periodicals not included in the ERIC system also produced no results. It is possible that the occasional article exists, possibly in trade or inhouse periodicals, but nothing was identified by routine search procedures. What is most likely implied is that environmental research, as a field, has not raised the question of employing indigenous people to any extent.

With a broader interpretation of the task a potentially very large literature could be annotated. In this case indigenous is defined as local people so that the literature relevant to the employment of native peoples in economic development in Asia, Africa, Latin America as well as the United States and Canada becomes pertinent. The only limitation is that what is to be annotated is solely training literature, but that proves to be little limitation when it is considered that training must take into account recruitment, career mobility, and transition to other employment. (It does limit the body of literature if one excludes general education and includes only occupational education or training; this has been taken for granted in the above and ensuing discussion.) Some concepts which are used in this literature and seem useful in this analysis include entry jobs or entry workers (the first

positions taken by employees in an organization; by extension the first job taken by young people or others just entering the labour force), career ladders (progression or mobility within an organization, by extension mobility within the total occupational structure), new careers or job restructuring (structuring bridge occupations which facilitate people's entry to employment and/or mobility within occupations, either in a given industry or in a society at large) and of course the notion of job-training in each of these settings.

In that the indigenous people in northeastern Alberta are predominantly Indian or Metis, low income and often unemployed, the literature on employing the hard-core unemployed, the poor, the culturally disadvantaged, as well as the Indian or Metis person becomes of interest. To the degree that the first set of concepts is used (poor, etc.) there is a voluminous literature from the 1960's War on Poverty in the United States: to the degree that one focuses on Indian (or perhaps by inference Eskimo or Inuit) a literature goes back to the Jesuit industrial schools in Quebec in the 1950's. Perhaps the most important point to derive from this whole literature is the importance of setting training into a larger societal context.

Finally, if one believes that some sort of direct transfer may be made from one employment field to another, there has been some attempt to involve indigenous people in specific occupational spheres. This has been particularly true of Indians and Inuit in Canada, but also has been applied as the notion of neighbourhood workers in the United States. To our knowledge the first field to do this extensively, the health field, did so on the basis of a rationale about knowledge transfer and behavior change derived from Anthropology. Early work was sponsored by the United Nations and the World Health Organization in Asia and the Pan-American Health Organization in Latin America; by the late 1950's it had been adopted by the federal government in Canada, and it has resulted in the widespread inclusion of native peoples in the health services. Later the teaching professions recognized serious communication

barriers between indigenous students and cosmopolitan teachers, so that the best trained teachers were ineffective, and training programs for indigenous people were developed in Canada in the late 1960's. Initially these were for training teacher aides and professional teachers with the focus on Indian, Metis, and Eskimo recruits. The equivalent in environmental research (which apparently has not yet happened) would be the formal recognition of local people being able to make a different contribution to this research than outsiders, and a determined effort to train and involve them in the process. (This distinctive contribution may be based on the notion that local people have extensive knowledge of the environment, from local metereological history to terrain, fauna, and flora, or on the belief that they must participate in the research if their friends and neighbours are to contribute to environmental protection.)

The following annotated bibliography is brief and intended to be suggestive only. It is sectioned to reflect the three types of material outlined above, as follows: 6.2.1 Concept; 6.2.2 Native Peoples, Culturally Disadvantaged; and 6.2.3 Specific Programs.

6.2.1 Concept

Adams, R.E. 1975. DACUM: approach to curriculum, learning and evaluation in occupational training, Ottawa: Department of Regional Economic Expansion. pp. 261.

An extended discussion of the rationale and methodology of the DACUM approach to occupational training.

Alivir, Howard P. 1974. An introduction to career path employability profiles. Albany, N.Y.: Films.

An employability profile specifies employment opportunities for which an individual is qualified. A career path is the term applied to an employability profile that combines both the career ladder aspect of advancement and the career lattice element of wide selection.

Anonymous. 1968. New careers in private industry: proceedings of a conference. ERIC Clearinghouse.

Report of a conference which discussed a career-oriented training system which requires (1) visible extra benefits

for the new employees beyond the guarantee of a steady job, (2) a highly developed structure of social services designed to attack the unique problems of the newly-employed disadvantaged trainee, (3) specialized training of administrators and supervisors directed toward working with the disadvantaged employee and modifying certain norms of the work environment, and (4) a career development plan which includes incumbent employees.

Brecher, Charles. 1974. Career progression systems for a multiplant manufacturing corporation: final report. Massachusetts: Information Science Inc. (A project sponsored by the Manpower Administration, Washington, D.C.).

The report explores the obstacles to increased occupational mobility for workers at a multiplant manufacturing firm. Analysis of the job histories of workers at two plants found advancement opportunities to be limited and inequitable because narrow departmental units were used as the basis for defining eligibility for promotions.

Civil Service Commission. 1974. Upward mobility through job restructuring. Washington: U.S. Government Printing Office.

Job restructuring is defined as the process of realigning job duties to develop technician-type or bridge jobs in Federal agencies, as a means to provide upward mobility for employees. Job restructuring consists of six elements: (1) task statements of work, (2) job descriptions of bridge positions, (3) qualifications requirements, (4) selection methods, (5) training plan, and (6) training agreement with the Civil Service Commission. Some obstacles to job restructuring for upward mobility are related to a lack of full management commitment, management practices incompatible with upward mobility goals, attitudes toward minorities and women, misconceptions of job restructuring and upward mobility, and credentialism and professionalism unrelated to job duties.

Corwin, R. David. 1970. New workers in the banking industry: a minority report.

A study of New York banks which had a relatively high proportion of minority employees showed many of the employees were recently hired and had limited upgrading and career mobility. Equal promotion will require complete dedication by management, promotion from within, and the necessary training to provide career opportunities for entry minority workers. Recommendations include (1) establishing an internship program providing college tuition,

a salary for part-time employment, and full-time summer employment; (2) providing for a variety of services such as day care, legal, and medical services for employees.

Donahue, G.A., et al. Communities, pollution, and fight for survival. Journal of Environmental Education, Vol. 6, No. 1. pp. 29-37.

Field studies indicate that attention to environmental issues and involvement in them depends upon community structure. Smaller, homogenous communities tend to choose those alternatives that are perceived in the community self-interest. Larger, more pluralistic communities choose attitudes in line with general societal beliefs and more often favour environmental restrictions.

White, Leslie R. 1969. New careers in local government. ERIC Clearinghouse.

This manual outlines concepts, approaches, strategies, and tactics for developing new careers in local government. It discusses the general concept of new careers and the designing of new careers with special emphasis on planning, recruiting, selecting and training. A model is presented which indicates what can be done to solve public service manpower problems by hiring the disadvantaged.

6.2.2 Native Peoples, Culturally Disadvantaged

Alberta Native Development Corporation. 1975. Northeastern Alberta workforce survey. Edmonton.

Although methodologically weak, and written in such a way that it is difficult to draw inference from data, this is the most recent study of the native population in northeastern Alberta.

Anonymous. 1966. Nome experimental and demonstration manpower project, final report. ERIC Clearinghouse.

The first phase of the project (June 1964 to November 1965) tested the effectiveness and feasibility of centralized training in off-setting the employment problems of rural Alaska. During the second phase (the following year) courses were expanded and changed considerably. Recommendations were for more effective relationships with employers and labour unions, co-ordination of government efforts, and the use of indigenous instructors in future government programs.

Anonymous. Papers presented at the National Workshop on Vocational Education for the Disadvantaged. New York: National Committee on Employment of Youth (Project sponsored by the Department of Health, Education, and Welfare, U.S. Government).

The report of a workshop conducted to provide school administrators and vocational educators with practical information and guidance on how vocational education can most effectively plan, organize, and operate meaningful programs for disadvantaged youth and adults.

Ayers, George E., ed. 1967. Rehabilitating the culturally disadvantaged: proceedings of a Regional Conference on Rehabilitating the Culturally Disadvantaged (Mankato State College, Minnesota). Washington: Rehabilitation Services Administration.

Different and representative approaches to rehabilitating the culturally disadvantaged were presented in 12 papers which included two papers on rehabilitating the Indian.

Berry, Franklin. 1973. The collected papers of the Northern Cross-Cultural Education Symposium, Fairbanks: University of Alaska Centre for Northern Education Research.

Primarily concerned with general education this monograph nevertheless includes papers on teacher preparation of indigenous teachers, both in Canada and Alaska.

Callihoe, H.A. 1975. An action plan for native training and counselling programs. Fort McMurray: Syncrude Canada Ltd.

A proposal for Syncrude to involve more native personnel in its operation at Fort McMurray.

Fine, Sidney. Guidelines for the employment of the culturally disadvantaged in optimizing human resources: readings in individual organizational development. Gordon Lippitt et al., eds. Don Mills: Addison-Wesley Publishing Co.

An excellent summary of knowledge derived from the experience of training and employing the disadvantaged in American industry and government. The author warns against the use of testing devices and counsellors, and recommends among other activities the use of buddy-systems and specifically job-oriented skill training.

Goodwin, Leonard. 1972. Do the poor want to work. Washington: Brookings Institute.

This is the final report of a year long study of women receiving welfare and enrolled in the federal Work Incentive Program (WIN) in the United States. The findings include the point that such women do not lack incentive, but do lack confidence in their ability to find and hold a job.

Herzog, Allen. 1972. The economic benefits of training the disadvantaged. Yarmouth: Nova Scotia Newstart Inc.

This study reports the change in income and employment of Nova Scotia Newstart trainees. It was concluded that both the individual and the community benefited to a sizeable degree on certain criteria.

Kleinfeld, Judith. 1974. Effective teachers of Indian and Eskimo students. Fairbanks: Institute of Social, Economic and Government Research, University of Alaska.

Characteristics of effective teachers, based on classroom behaviour not personality assessments, were identified. Two characteristics of the successful as contrasted to the ineffective teachers were a high degree of personal warmth and demandingness in the classroom.

MacLean, Hope. 1973. A review of Indian education in North America. Toronto: Ontario Teachers' Federation.

Although the focus of this book is on primary and secondary schooling, it also documents some adult education efforts among Indians in Canada. The bibliography includes references to adult training programs.

Modiano, Nancy. 1973. Indian education in the Chiapas Highlands. New York: Holt Rinehart and Winston.

Primarily discussing elementary schooling of Mexican Indians, the book raises many of the problems of education and social change among an indigenous population, whether child or adult. Extended bibliography.

Nash, Manning. 1958. Machine age Maya: the industrialization of a Guatemalan community. Menasha, Wis. American Anthropologist (Memoir 87).

An early analysis of the adjustment of a Guatemalan Indian community to factory employment.

Snodgrass, Marjorie. 1968. Economic development of American Indians and Eskimos, 1930 through 1967: a bibliography. Washington: U.S. Department of the Interior.

The bibliography includes sources on economic development in general and employment opportunities.

Stucki, Larry R. 1971. Canada's "unemployable" northerners: square pegs in round holes..., unpublished paper presented at the American Anthropological Association Meeting Meeting, Toronto, December, 1971.

An analysis of the relationship between native employment in the Northwest Territories and the building of a MacKenzie Valley pipeline. The paper includes a proposal for development of Regional Income Skill Education Centres in the N.W.T.

6.2.3 Specific Programs

Hoff, Wilbur. 1970. The use of health aides in migrant health projects. Bethseda, Md. Health Services and Mental Health Administration (U.S. Government Printing Office).

Intended for migrant project administrators and other professional workers, this document contains recommendations developed from a nation-wide study for evaluating the utilization and effectiveness of Health Aides (indigenous workers) in migrant health programs. Recommendations are provided for five major phases of activity essential for effective utilization of auxiliary health personnel, including: (1) Initial Planning, (2) Recruitment and Selection, (3) Training, (4) Work Supervision, and (5) Evaluation.

Jeanneaus, Joseph A. 1974. Band Development Training Program. Saskatoon: Modern Press (Prince Albert Training Research and Development Station, Department of Indian and Northern Affairs), 5 volumes.

A detailed curriculum outline for training Indian people as community development workers.

Millman, Linda I., and Catherine S. Chilman. 1970. Poor people at work, an annotated bibliography on semi-professionals in education, health and welfare services. ERIC Clearinghouse (RIE, August).

This bibliography was prepared to stimulate needed research and to disseminate information opportunities for the poor and culturally disadvantaged as semi-professionals in human service occupations. The articles collected date from 1964, and are organized into service occupations, community occupations, and issues of testing and selecting semi-professionals. There is also a selected listing of publications which regularly feature articles on the subject and a list of research centers which develop, collect, and disseminate information in this field.

Note: Literature has not been identified on the Department of National Health and Welfare's Community Health Worker Program (and later related programs) which began in 1964, the Morning Star Teacher Training Program for Indian and Metis Teachers operated by the University of Alberta and the Blue Quills Native Education Council at St. Paul, Alberta, and a variety of other professional and para-professional programs for Canadian Native peoples.

AOSERP RESEARCH REPORTS

1.		AOSERP First Annual Report, 1975
2.	AF 4.1.1	Walleye and Goldeye Fisheries Investigations in the Peace-Athabasca Delta--1975
3.	HE 1.1.1	Structure of a Traditional Baseline Data System
4.	VE 2.2	A Preliminary Vegetation Survey of the Alberta Oil Sands Environmental Research Program Study Area
5.	HY 3.1	The Evaluation of Wastewaters from an Oil Sand Extraction Plant
6.		Housing for the North--The Stackwall System
7.	AF 3.1.1	A Synopsis of the Physical and Biological Limnology and Fisheries Programs within the Alberta Oil Sands Area
8.	AF 1.2.1	The Impact of Saline Waters upon Freshwater Biota (A Literature Review and Bibliography)
9.	ME 3.3	Preliminary Investigations into the Magnitude of Fog Occurrence and Associated Problems in the Oil Sands Area
10.	HE 2.1	Development of a Research Design Related to Archaeological Studies in the Athabasca Oil Sands Area
11.	AF 2.2.1	Life Cycles of Some Common Aquatic Insects of the Athabasca River, Alberta
12.	ME 1.7	Very High Resolution Meteorological Satellite Study of Oil Sands Weather: "a Feasibility Study"
13.	ME 2.3.1	Plume Dispersion Measurements from an Oil Sands Extraction Plant, March 1976
14.	HE 2.4	Athabasca Oil Sands Historical Research Project. Volume I: Design
15.	ME 3.4	A Climatology of Low Level Air Trajectories in the Alberta Oil Sands Area
16.	ME 1.6	The Feasibility of a Weather Radar near Fort McMurray, Alberta
17.	AF 2.1.1	A Survey of Baseline Levels of Contaminants in Aquatic Biota of the AOSERP Study Area
18.	HY 1.1	Interim Compilation of Stream Gauging Data to December 1976 for the Alberta Oil Sands Environmental Research Program
19.	ME 4.1	Calculations of Annual Averaged Sulphur Dioxide Concentrations at Ground Level in the AOSERP Study Area
20.	HY 3.1.1	Characterization of Organic Constituents in Waters and Wastewaters of the Athabasca Oil Sands Mining Area

21.		AOSERP Second Annual Report, 1976-77
22.	HE 2.3	Maximization of Technical Training and Involvement of Area Manpower
23.	AF 1.1.2	Acute Lethality of Mine Depressurization Water on Trout Perch and Rainbow Trout
24.	ME 4.2.1	Review of Dispersion Models and Possible Applications in the Alberta Oil Sands Area
25.	ME 3.5.1	Review of Pollutant Transformation Processes Relevant to the Alberta Oil Sands Area
26.	AF 4.5.1	Interim Report on an Intensive Study of the Fish Fauna of the Muskeg River Watershed of Northeastern Alberta
27.	ME 1.5.1	Meteorology and Air Quality Winter Field Study in the AOSERP Study Area, March 1976
28.	VE 2.1	Interim Report on a Soils Inventory in the Athabasca Oil Sands Area
29.	ME 2.2	An Inventory System for Atmospheric Emissions in the AOSERP Study Area
30.	ME 2.1	Ambient Air Quality in the AOSERP Study Area, 1977
31.	VE 2.3	Ecological Habitat Mapping of the AOSERP Study Area: Phase I
32.		AOSERP Third Annual Report, 1977-78
33.	TF 1.2	Relationships Between Habitats, Forages, and Carrying Capacity of Moose Range in northern Alberta. Part I: Moose Preferences for Habitat Strata and Forages.
34.	HY 2.4	Heavy Metals in Bottom Sediments of the Mainstem Athabasca River System in the AOSERP Study Area
35.	AF 4.9.1	The Effects of Sedimentation on the Aquatic Biota
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37.	HE 2.2.2	Community Studies: Fort McMurray, Anzac, Fort MacKay
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44.	VE 3.1	Interim Report on Symptomology and Threshold Levels of Air Pollutant Injury to Vegetation, 1975 to 1978
45.	VE 3.3	Interim Report on Physiology and Mechanisms of Air-Borne Pollutant Injury to Vegetation, 1975 to 1978

46. VE 3.4 Interim Report on Ecological Benchmarking and Biomonitoring for Detection of Air-Borne Pollutant Effects on Vegetation and Soils, 1975 to 1978

47. TF 1.1.1 A Visibility Bias Model for Aerial Surveys of Moose on the AOSERP Study Area

48. HG 1.1 Interim Report on a Hydrogeological Investigation of the Muskeg River Basin, Alberta

These reports are not available upon request. For further information about availability and location of depositories, please contact:

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