# Skill Development and Training Opportunities Between Alberta and the Northwest Territories

Prepared for the Northern Labour Market Information Clearinghouse

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### A. Introduction

In October 1998, Alberta and the Northwest Territories (NWT) signed a Memorandum of Understanding (MOU) for Co-operation and Development. This MOU is a broad agreement that provides an overarching framework for co-operative initiatives between the two jurisdictions. The first meeting of the Steering Committee was held in September 2000.

At a meeting of Co-Chairs of the Alberta-Northwest Territories Memorandum of Understanding for Co-operation and Development in August 2001, it was identified that there was a need for a study to examine opportunities for skill development and training between Alberta and the Northwest Territories.

Specifically, the Co-Chairs were seeking,

- Existing connections and training opportunities between northern Alberta colleges and Aurora College in the NWT;
- A listing of training opportunities between Aurora College and Northern Alberta colleges;
- Common and unique industry needs in Northern Alberta and the NWT for skill development and training; and,
- Recommendations for follow-up actions.

# **B.** Background

Northern Alberta and the Northwest Territories share many common demographic, economic, and cultural similarities. Both the Northwest Territories and Northern Alberta are sparsely populated. Only about 250,000 people, less than 10% of the Alberta population resides in Northern Alberta. In 2001, 40,860 people lived in the Northwest Territories. Of these, approximately 17,570 (or 43%) resided in Yellowknife, which has historically been the fastest growing community in the Northwest Territories. (*NACD 1999-2000 Annual Report; Statistics Quarterly Northwest Territories*)

The populations of Northern Alberta and the Northwest Territories consists of a high proportion of Aboriginal persons. Census results from 1996 indicated that some 48% of the Northwest Territories population was Aboriginal while 4.6% of Alberta's population was Aboriginal. However, in 1996, 33.8% of Alberta's Aboriginal population resided in the seven Northern Alberta census regions. (*Alberta Aboriginal Population 1996. Census Divisions and Selected Cities*) Many Aboriginals in Northern Alberta and the Northwest Territories reside in small, isolated communities where unemployment rates may be two to three times higher than those in the larger centres.

The large Aboriginal population in Northern Alberta and the NWT is significant. Over the next ten years, the Aboriginal working age population in both Northern Alberta and the NWT will

grow three to five times faster than their non-Aboriginal working age counterparts. (*Report of Working Group on Aboriginal Participation in the Economy*) Aboriginals will be a significant group replacing the large baby boom age workers, the majority of whom will be retiring over the next decade.

Both the NWT and Northern Alberta are currently experiencing shortages of skilled labour across a number of industries and occupations. Some of these shortages are found across Canada, particularly health-related occupations (such as doctors, nurses, occupational therapists) and information technologies (such as software developers, network administrators). Specific skilled labour demands affecting the NWT and Northern Alberta are highlighted in Section D.

# C. Existing Connections and Training Opportunities Between Northern Alberta Colleges and Aurora College of the NWT

Aurora College is the sole NWT college. It delivers a variety of college programs at three campuses, 13 community learning centres and other community sites in the Northwest Territories. In Northern Alberta, college and university transfer programs (up to the first two years of bachelor degree programs) are delivered by six public colleges: Fairview, Grande Prairie, Keyano (based in Fort McMurray), Lakeland (based in Vermilion), Northern Lakes College (located in Grouard), and Portage College (located in Lac La Biche).

Aurora College and all the Northern Alberta colleges have credit transfer arrangements. None have any formal transfer arrangements with each other. Transfer eligibility is determined through direct inquiries to the Registrar's Office in each college. The vast majority of transfer arrangements are with Alberta's universities (University of Alberta, Athabasca University, University of Calgary, and University of Lethbridge) as well as the Northern Alberta Institute of Technology (NAIT) and Southern Alberta Institute of Technology (SAIT).

None of the Northern Alberta colleges have any formal connections with Aurora College in the Northwest Territories. Linkages tend to be more informal, such as networking between individual registrars and student services coordinators in the NWT and Alberta.

# 1. Aurora College

Aurora College's admission priority is firstly Northern Aboriginals and secondly long time NWT residents. According to Aurora College's Registrar's Office, any Albertans who apply for admission to Aurora College would be denied because the college is at capacity delivering programs and courses to Northerners.

The Northwest Territories Apprenticeship Program currently administers training in forty two designated trades. Aurora College offers in-school apprenticeship trades training for six of the Northwest Territories' designated trades: Carpenter, Heavy Equipment, Mechanic, Housing

Maintainer (First and Second Level), Electrician, and Oil Burner Mechanic Special for Plumber/Gasfitter. All other apprenticeship technical training takes place in Alberta, Manitoba, and New Brunswick to accommodate NWT's small number of apprenticeship registrations.

### 2. Northern Alberta Colleges

For this paper, interviews were conducted with Student Services or Registrar's Offices of all the Northern Alberta colleges and Aurora College. Keyano and Grande Prairie Regional College direct market their programs and services in the Northwest Territories by doing school visits or community group meetings. However, this is only done annually or every two years. None of the other four Northern Alberta colleges reported that they did any direct marketing of their programs and services in the NWT. Since Aurora College is already at capacity serving Northern students, they have no reason to directly market their programs outside the NWT.

All Northern Alberta college representatives who were interviewed indicated that they had students enrolled from the NWT. Most had come directly from high school in the NWT. The numbers of NWT students attending Northern Alberta colleges seems to be quite small. Grande Prairie Regional College was able to provide statistical information on actual numbers of NWT students, which, during the past three years were: ten in 1999/2000, six in 2000/2001, and four in 2001/2002.

Those interviewed at Grande Prairie Regional College and Portage College identified the following specific programs that tended to attract NWT students: Office Administration, Business Administration, Early Childhood, and Bachelor Social Work Program. Portage College identified the Social Worker Diploma Program and its nationally recognized Community Health Representatives Program as two particular programs that attracted students from the Northwest Territories.

Table One illustrates the major program offerings at each of the Northern Alberta colleges and any programs aimed specifically at the Northwest Territories.

**Table 1: Northern Alberta Colleges' Program Offerings** 

Northern Alberta College	Program Offerings	Programs Aimed Specifically at the NWT
Fairview	Range of college and university transfer (UT) programs.	Small Engine Mechanics Apprenticeship Training
	Apprenticeship trades training* offered in:  Automotive Service Technician  Carpenter  Electrician  Heavy Equipment Technician  Motorcycle Mechanic  Partsman  Plumber  Steamfitter/Pipefitter	
Grande Prairie Regional	Welder     Range of college and UT programs.     No apprenticeship programs	None
Keyano	Range of college and UT programs. Apprenticeship trades training in:	None
Lakeland	Range of college and UT programs. Apprenticeship trades training offered in:	None
Northern Lakes	Range of college and UT programs. No apprenticeship trades training	None
Portage	Range of college and UT programs. Apprenticeship trades training offered in Cooking and Welding.	None

<sup>\*</sup>In 2000/2001, NAIT offered 7,701 (43%) of the available 17,910 trades training seats in Alberta training institutions, while SAIT offered 29% (5,194 seats). The remaining 28% (5,015) of trades training seats were divided among seven Alberta colleges, including four Northern Alberta colleges. (*Apprenticeship and Industry Training. Annual Report 2000-2001*)

# D. Common and Unique Industry Needs for Skill Development and Training in Northern Alberta

Table 2 compares the 1999 contribution of Gross Domestic Product (GDP) by Industry Group for the Northwest Territories and Alberta. It shows that the common industries which make the greatest percentage contribution to GDP in both Alberta and the Northwest Territories are: Energy, Finance and Real Estate, and Transportation and Utilities.

Table 2: Industries by Percentage Contribution to GDP, Alberta and the Northwest Territories, 1999

Alberta NWT

Alberta				
Industry	Percentage Contribution			
	to Alberta's GDP (1999)			
Energy	20.7			
Finance and	12.6			
Real Estate				
Business and	11.7			
Commercial				
Services				
Manufacturing	11.1			
Transportation	10.8			
and Utilities				
Retail and	10.3			
Wholesale Trade				
Health and	8.5			
Education				
Construction	7.4			
Public	4.3			
Administration				
Agriculture	2.6			
<b>Total Percentage</b>	100			

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Industry	Percentage Contribution
	to NWT's GDP (1999)
Energy	20.6
Government	16.3
Service	
Education	12.7
and Health	
Finance and	11.2
Real Estate	
Construction	9.1
Transportation	7.5
and Storage	
Communication &	7.0
Other Utilities	
Retail and	6.4
Wholesale Trade	
Business Services/	5.8
Other Service	
Accommodation,	2.4
Food &	
Beverage Service	
Manufacturing	.32
Fishing & Trapping	.07
All Others	.61
<b>Total Percentage</b>	100

Sources: Government of the Northwest Territories. 2001 NWT Socio-Economic Scan; Governments of Alberta and Canada. Highlights of the Alberta Economy.

## 1. Common Industries and Their Training/Skill Development Needs

The following major industries are common to Northern Alberta and the NWT. Key training and skill development challenges and opportunities affecting both jurisdictions are also presented.

### Oil and Gas

In 1999, Energy (Mining, Milling, Quarrying & Oil Sands) contributed 20.7% of Alberta's GDP and 20.6% of the Northwest Territories GDP. Alberta produces 65% of Canada's conventional oil, 80% of its natural gas, 49% of its coal, and all of its bitumen and synthetic crude oil. Within the Northern Alberta region are found 100% of all Alberta oil sand production and 40% of its conventional oil and gas activity. The expansion of the Athabasca oil sands deposit in the Wood Buffalo region is and will be a major contributor to Northern Alberta's economy. A total of 2,200 jobs will be created in Alberta as a result of the expansion over the next five or more years.

The Northwest Territories has a significant crude oil and natural gas production. Rapid expansion of the oil and gas sector is occurring with the recent construction of two natural gas pipelines in the Deh Cho region. Significant hydrocarbon seismic and drilling programs are also underway in the Deh Cho, Sahtu, and Beaufort-Delta regions. The value of crude oil shipments in 2000 was \$381.5 million while natural gas shipments were valued at \$59.0 million.

Skilled workers are in short supply in the NWT to transport oil and gas. (NWT Labour Force Development Plan 2002-2007)

### Construction

Non-renewable resource activities are stimulating demand for construction. The Northwest Territories Government estimates that as many as 14,000 new jobs may be created in the construction sector over the next decade. In Northern Alberta, expansion in the oil sands industry is creating \$38.3 billion in construction activity over the next five years. (*Labour Force Development Plan. 2002-2007; Industrial Update 2001*)

Both Northern Alberta and the NWT report shortages in construction-related tradespersons. The current supply of NWT tradespeople is inadequate to meet the demands of the NWT economy. (*Labour Force Development Plan 2002-2007*) The *Alberta Construction Workforce Supply/Demand Forecast* (May 2001) reports that severe shortages in almost all construction trades will occur until the end of 2002. After that, significant shortages for boilermakers, millwrights, plumbers/pipefitters and specialty welders are anticipated. During the spring of 2001, a review of industry needs in Northern Alberta found major shortages of construction-related tradespersons, particularly welders, framers, and drywallers. (*Industrial Update 2001*)

### **Tourism**

In Alberta, tourism supports approximately 100,000 full-time jobs for Albertans and generated \$4.2 billion in revenues in 1999. About \$2.1 billion came from out-of-province visitors. (*Highlights of the Alberta Economy*) The extent of the NWT tourism industry was difficult to determine. However, anecdotal evidence suggests that it is a small industry with considerable potential.

The Grouard/Slave Lake Region in Northern Alberta wants to capitalize on the considerable interest among European tourists in Aboriginal history and traditional lifestyle. There is a need for training heritage interpreters who can teach tour groups about Aboriginal history and traditions. Labour shortages have been reported in Alberta's tourism/hospitality industry.

Ecotourism is a relatively new but expanding phenomenon that offers considerable potential for tourism in the NWT and Northern Alberta. Ecotourism promotes travel that contributes to the conservation of natural areas and the well-being of local people. It works to create unique, low-impact travel experiences.

The Northern Labour Market Information Clearinghouse, a project of the Northern Alberta Development Council, will be preparing a report on Tourism in Northern Alberta for April 2002. It will include an analysis of potential for ecotourism.

In addition to drawing tourists interested in the NWT's Aboriginal history and tradition, the NWT's diamond mining and secondary diamond industries are seen as providing a future focus for tourism-related activities.

# 2. Major Industries Unique to Alberta

Agriculture and Forestry are major industries in Northern Alberta that do not exist in the Northwest Territories.

### Agriculture

Twenty percent of Alberta's agricultural land is found in Northern Alberta. Agricultural cash receipts in Alberta reached \$6.55 billion in 1999. As well, there is a rapidly expanding value added agricultural products sector in Alberta. Labour shortages were reported during 2000 in some areas of primary agriculture and food processing. (*Prepared for Growth: Building Alberta's Labour Supply*)

### **Forestry**

Ninety percent of Alberta's forests are found in Northern Alberta. Total forest industry shipments reached approximately \$4.2 billion in 1999.

# 3. Major Industry Unique to the NWT

Both the diamond mining industry, as well as the secondary diamond industry are currently unique to the Northwest Territories. However, both industries offer considerable potential for Northern Alberta.

### **Diamond Mining**

A prime example of the economic and employment benefits of the diamond industry is the Ekati diamond mine at Lac de Gras, about 300 kilometers northeast of Yellowknife. The Ekati mine has been producing gems for two years. More than 80% of its workforce is a NWT resident, of which 50% are Aboriginal. The NWT diamond industry has estimated that there were approximately 1,200 person-years of employment in the Ekati mine in the construction phase alone. The initial operation phase will have 640 employees, increasing to an annual average of 830 person-years over the 25-year mine life. (*The Potential for Northern Participation in the Exploration and Development of Non-Energy Mineral Mines in Northern Alberta*)

The nearby Diavik mine will begin production in 2003 while a third mine at Snap Lake is delayed and not scheduled to start production until late 2005. (*Edmonton Journal, January 23*, 2002) Once these three mines reach full production, it is estimated they will produce over 12% of the world's diamonds, placing Canada in the top five diamond producing jurisdictions. (*Diamond Facts 2000/2001*)

Aurora College offers "Introduction to Mine Training", a five week program, including a seven day, twelve-hour/day work experience portion designed to give students an introduction into the mining trade. The Minerals, Oil and Gas Division of NWT Resources, Wildlife, and Economic Development offers a two-day introductory workshop on prospecting followed later by a 40-hour course called "Introduction to Prospecting". The prospecting course is one of the prerequisites for the "NWT Prospectors' Grubstake Program". It provides partial funding for NWT prospecting projects up to a maximum of \$8,000 per individual per year. The funding is awarded based on merits of the proposal, dollars targeted for sample costs, and previous performance. (NWT Resources, Wildlife, and Economic Development) Similar prospecting assistance grants are also awarded in BC and Ontario.

Conditions for finding a viable diamond deposit in northern Alberta are reported to be excellent. If a viable diamond mine were to be found in Northern Alberta's Buffalo Head Hills, it could create significant economic benefits to Northern Alberta. This includes substantial revenue,

construction employment, mining employment, and indirect employment that will continue beyond the life of the mine.

Mining companies' representatives interviewed in the summer of 2000 indicated that prospector training in Northern Alberta would be very useful to them. Employment would seem likely for those individuals trained in prospecting and surveying. A follow up recommendation in *Education and Training Requirements of the Non-Energy Mining Sector* (September 2001), called for Northern Alberta colleges to begin a consultation process with the non-energy mining industry as they consider development and delivery of appropriate training programs. (*Education and Training Requirements of the Non-Energy Mining Sector*) As of January 2002, there were no prospecting or value added diamond courses being offered by any Northern Alberta college.

Several Northern Alberta communities have indicated considerable interest in taking one to three day prospecting courses as soon as possible. Such training could lead to more extensive courses held at the Northern Alberta College. In the longer term this could result in college courses for mine training in various trades.

The difficulty of knowing where and when a significant diamond find will take place creates uncertainty about when such training should take place. It is likely to be at least several years before an economic diamond pipe is confirmed in Northern Alberta. (*The Potential for Northern Participation in the Exploration and Development of Non-Energy Mineral Mines in Northern Alberta*)

### The Secondary Diamond Industry

In addition to mining of diamonds, there is the secondary diamond industry that comprises diamond sorting, cutting, polishing, grading, and jewelry manufacturing. Employment in secondary services can add significantly to an economy. In 1999, secondary diamond services in Yellowknife established to handle diamond production from the Ekati mine had resulted in 120 direct and 27 indirect jobs resulting in over \$4 million in income. (*The Potential for Northern Participation in the Exploration and Development of Non-Energy Mineral Mines in Northern Alberta*) At current production, three cutting and polishing facilities in the NWT are estimated to contribute over \$9 million a year to NWT GDP. The Government of the Northwest Territories is actively pursuing the development of this value-added aspect diamond mining. It is seeking to expand by three times the \$5.9 million contributed by the Manufacturing Industry to NWT's GDP in 1999. (*Diamond Facts 2000/2001*)

Aurora College offers "Introduction to Diamonds", a sixteen-week course that introduces students to employment opportunities in the secondary diamond industry. Students identify and grade diamonds based on industry standards. They also gain in-depth understanding of and exposure to careers in the secondary diamond industry (Aurora College Programs).

# E. Recommendations for Follow-Up Action

The following recommendations are presented with a view to enhancing and building on the formal and informal contacts that already exist between the NWT and Northern Alberta. Each requires discussion among respective NWT and Northern Alberta business, government, and educational leaders to determine its feasibility, specific actions, timelines, and who would be responsible for implementing the recommendation.

- 1. Northern Alberta colleges should consider attracting short-time NWT residents who are not the priority clientele (NWT Aboriginal or longtime NWT residents) for Aurora College. This would have some effect on reducing demand on Aurora College's already-full capacity and provide short-time NWT residents with the opportunity to gain entry to a college in Northern Alberta.
- 2. Northern Alberta colleges should investigate opportunities for their students with skills in demand (business administration, tourism, hospitality) to obtain study or work placements in the NWT. This would provide a potential labour source for the extremely tight NWT labour market and provide Northern Alberta college students with an opportunity to hone their skills.
- 3. Northern Alberta colleges should consider the provision of free services to all NWT and Nunavut students similar to that offered in the Edmonton region. This free service is offered to all students on SFA, apprentices, upgrading and trading programs. It offers airport pick up service, assistance in finding housing, orientation to campuses, orientation to city living, counseling, advocacy, and on-going liaison. Services provided are offered through the Northern Student Education Initiative.
- **4. Encourage more regular contacts between Northern Alberta colleges and Aurora College in the NWT.** One possible source of contact is the Education Liaison Association of Alberta. This organization is made up of many of Alberta's post-secondary institutions. It was established to provide information about post-secondary opportunities available in Alberta through the coordinated activities of its members. As well, it offers a forum for the exchange of information and professional development.
- 5. Consideration should be given to arranging for Northern Alberta Aboriginal, municipal government, and educational institutional leaders to personally visit the Ekati diamond mine as well as the secondary diamond industry facilities in Yellowknife. This exposure may enable such leaders to see firsthand the possible benefits the diamond mining and secondary diamond industries could provide their communities in terms of lasting amenities, employment, and economic stability.
- 6. Ontario, BC and the NWT have prospecting assistance grant programs in place to encourage mineral exploration. These programs should be investigated with a view to encouraging the Alberta government to adopt a similar type of program.

- 7. Northern Alberta colleges could arrange with Aurora College to broker courses on "Introduction to Mine Training" and "Introduction to Diamonds". These courses would provide a valuable introduction to mining and diamonds for interested Northern Albertans.
- 8. Consideration should be given to encouraging the Northern Alberta Development Council to work with NWT Resources, Wildlife and Economic Development and find interested Northern Alberta colleges to broker the "Introduction to Prospecting Course".
- 9. There needs to be a systematic effort among Northern Alberta colleges and Aurora College to share success stories involving innovative training for Aboriginal peoples residing in small communities that results in sustainable employment.
- 10. More opportunities need to be provided for Northern Alberta Aboriginal, business, government, and educational leaders to meet together. One example of this was the "Meet the North" conference held in Edmonton during 1998 and 1999. This type of format should be continued, with consideration given to hosting it in different communities in Northern Alberta and the NWT.

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