

**Age and Education Levels by  
Occupation and Industry**

**Custom Tabulations Data Sample**

**Prepared for the  
Northern Labour Market Information Clearinghouse**

**December, 1998**

## **Introduction**

Demographic information is one of the most powerful tools we have in our attempts to predict future employment and training demands. Following on the Clearinghouse summaries of standard-issue data from the 1996 Census of Canada, we have purchased a set of C96 data that provides age group and education level data for employees in a number of occupations and industries for Alberta, for northern Census Divisions and for several northern communities.

This data has a number of potential uses. By knowing the relative ages and education levels of employees in given occupations, colleges can make reasonable estimates of the demand for new employees and the demand for training for both new and current employees. This data can also be used to show the number of people in a given occupation and the distribution of that occupation throughout several industries.

It would be impossible to provide the entire data set within the scope of a single Clearinghouse report. This report shows samples of possible questions and how they could be answered using this data. While the information displayed here should be useful in and of itself, it will serve mainly as an example of what is available. Clearinghouse partners are encouraged to request information on particular occupations, industries and/or geographic regions.

## **Census Data**

The C96 data is in the form of two spreadsheets. The first includes: Age (10 year groupings); Industries (18 Industry Divisions) for each age group and Occupations (57 Major Groups - 2-digit NOC) for each industry. Data for each of these is divided into Alberta, Census Divisions 10, 12, 13, 16, 17, 18, and 19, and the communities of Grande Prairie, Peace River, High Prairie, Slave Lake and Cold Lake.

This provides data for the first table and set of graphs looking at age levels in various industries and communities, as well as for the notes on the distribution of occupations among industries.

The second spreadsheet contains data for age groups (5-year cohorts), highest level of education achieved (Less than High School Graduation; High School Graduation; Trades or Other Non-university Certificate; University certificate or diploma below Bachelor's; Bachelor's degree, MD., DDS., DVM; Diploma Above Bachelor's of Masters Degree; and Earned Doctorate Degree) and occupations as above for each education level. Data is broken down for the same geographies as above.

This provides data for Table 2 and the set of graphs that display education levels by occupation and by region, as well as for Table 3, looking at the education levels of different age groups within one occupation.

In the graphs below, the northern Alberta figures are the totals for Census Divisions 10, 12, 13, 16, 17, 18 and 19. This is a larger area than the Clearinghouse region, which only includes parts of CDs 10, 12 and 13, but it gives a reasonable picture of the region.

## ***Age Levels by Industry and Geography***

*“How many construction workers are likely to retire over the next ten years in my area?”*

To answer this question and others like it, we can break down the data by industry and age for six communities in northern Alberta. In the following table, data on employees in the construction industry has been broken down to show the percentage of workers in different age brackets in six different communities. This table shows that the larger communities, Grande Prairie, Wood Buffalo and Cold Lake, have higher concentrations of younger workers than the smaller towns. As construction tends to be a younger person’s industry, a large number of people, now between 35 and 44 years of age will probably leave the industry over the next ten years.

Table 1. Percentage of Construction Industry Employees in Age Cohorts by Community

Ages	Grande Prairie	Peace River	High Prairie	Slave Lake	Cold Lake	Wood Buffalo*
15 -24	23	14	0	10	31	19
25 - 34	28	25	38	43	24	31
35 - 44	29	25	25	24	28	28
45 - 54	13	17	0	22	7	15
55 - 64	4	14	25	0	0	6
65+	2	6	0	0	10	1
Total #	1450	180	40**	255	145	1645

\* Census Division 16, includes the Regional Municipality of Wood Buffalo and Wood Buffalo National Park

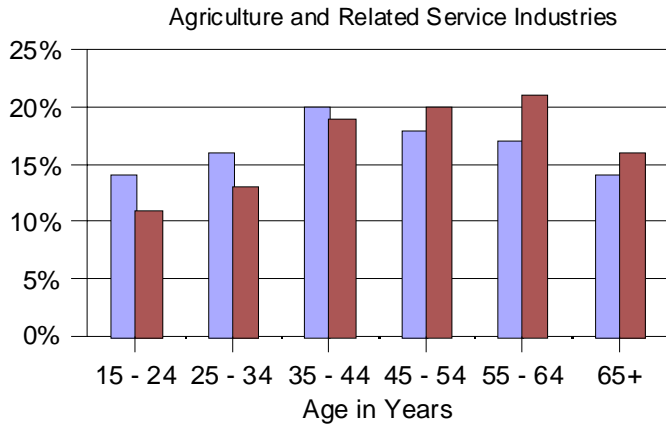
\*\* Statistics Canada rounds data to the nearest multiple of 5. This results in some discrepancies between partial figures and totals, particularly for small populations.

## ***Provincial and Regional Age Levels by Industry***

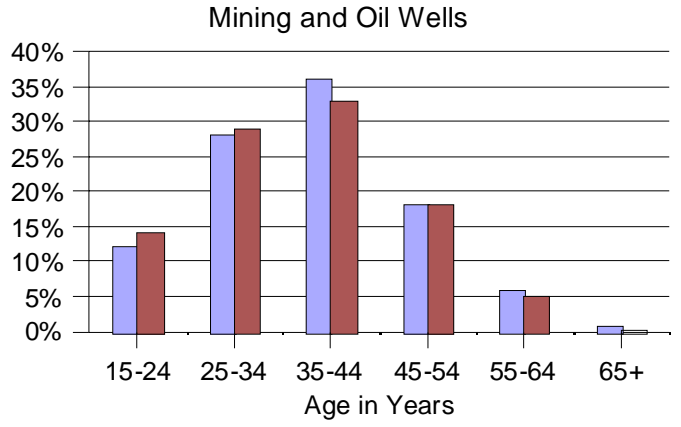
*“Do northern age breakdowns in my industry follow the provincial pattern?”*

The following six charts show the percentage of employees in the respective industries that are in each age group. With the exception of agriculture and related service industries, most industries have a younger average workforce in the North than in the province as a whole.

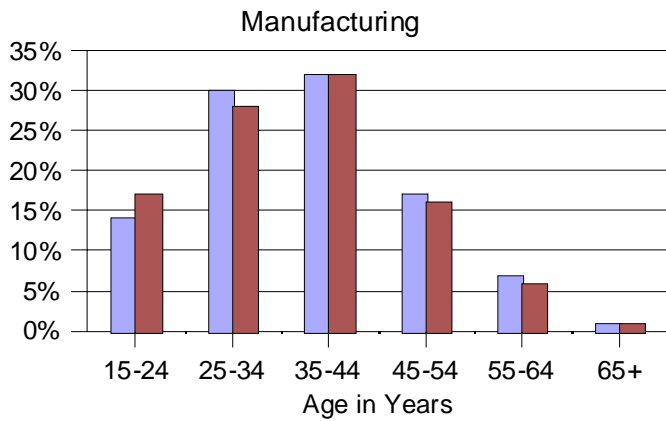
*Age Levels by Industry (Continued)*



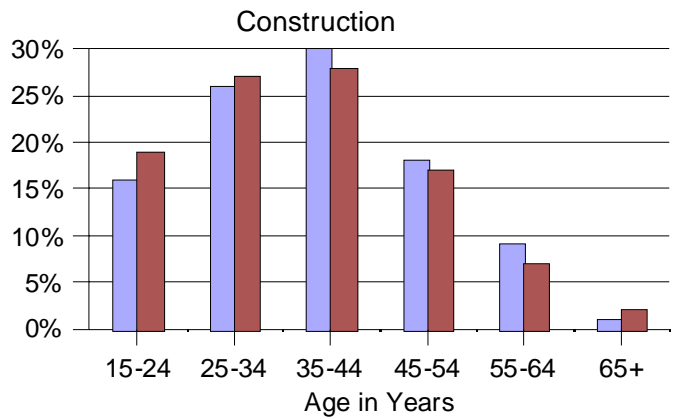
■ All Alberta  
■ Northern Alberta



■ All Alberta  
■ Northern Alberta

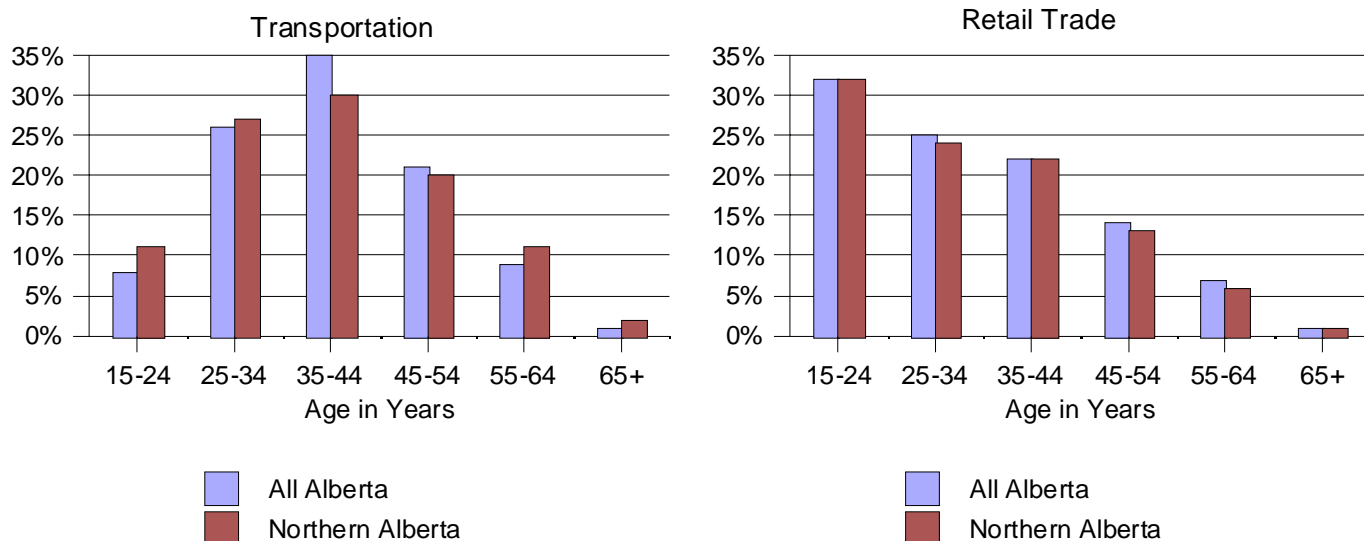


■ All Alberta  
■ Northern Alberta



■ All Alberta  
■ Northern Alberta

*Age Levels by Industry (Continued)*



***Education Levels by Occupation and Geography***

*“How educated are the sales people in my town?”*

Using the same geographies as Table 1, Table 2 displays the percentages of sales & service employees with various education levels. The table shows that, in most areas, close to half of sales & service workers have less than a grade 12 education. It is interesting to note that High Prairie, the town with the highest percentage of sales & service workers with less than grade 12, also has the highest percentage with graduate degrees.

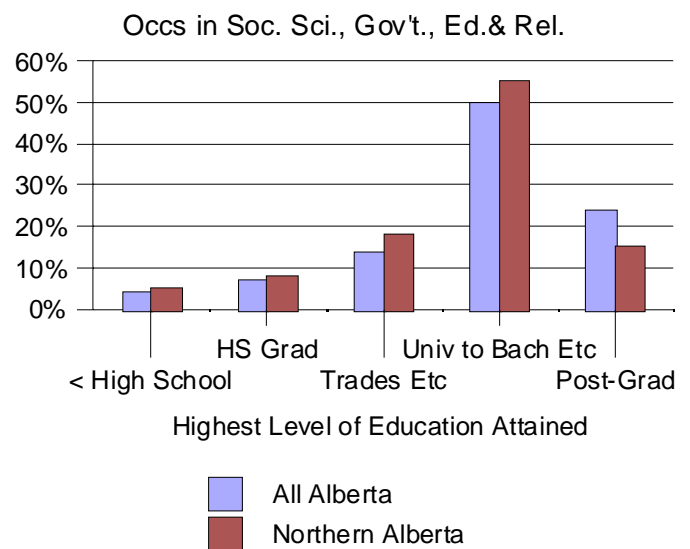
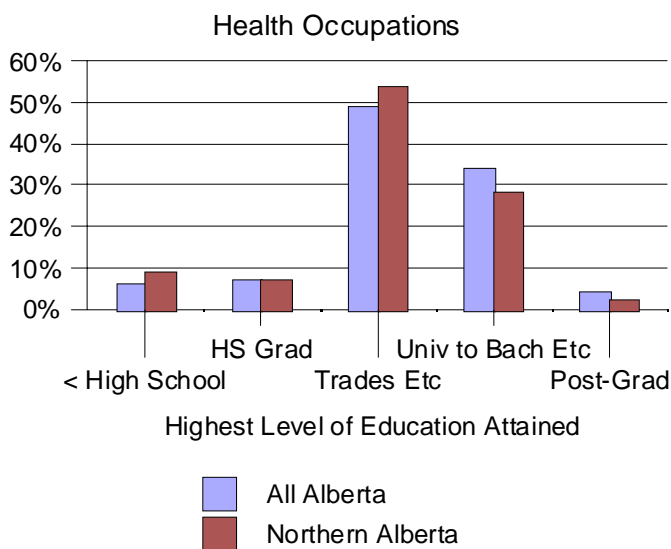
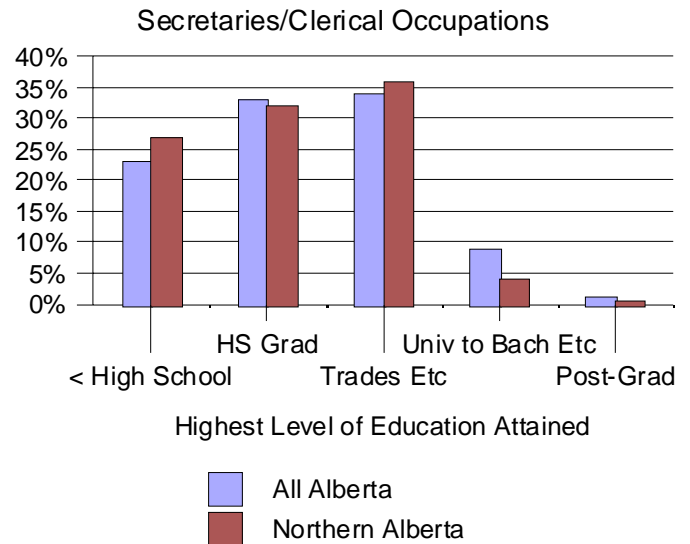
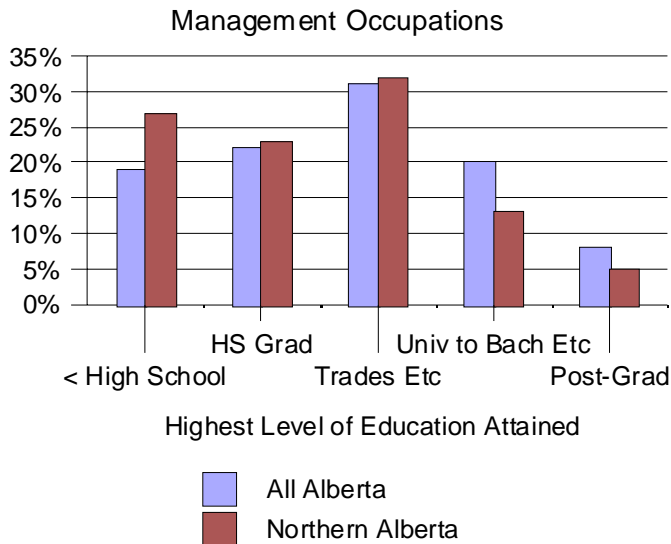
**Table 2 Percentage of Sales & Service Employees by Highest Education Level**

Education Level	Grande Prairie	Peace River	High Prairie	Slave Lake	Cold Lake	Wood Buffalo
< High School	44	45	58	50	30	45
HS Grad	29	22	15	25	33	28
Trades Etc.	23	29	18	21	33	24
Univ. to Bach., etc.	3	4	4	3	5	4
Post-grad.	0.5	1	2	0	1	0
Total #	5455	1065	425	1040	875	5240

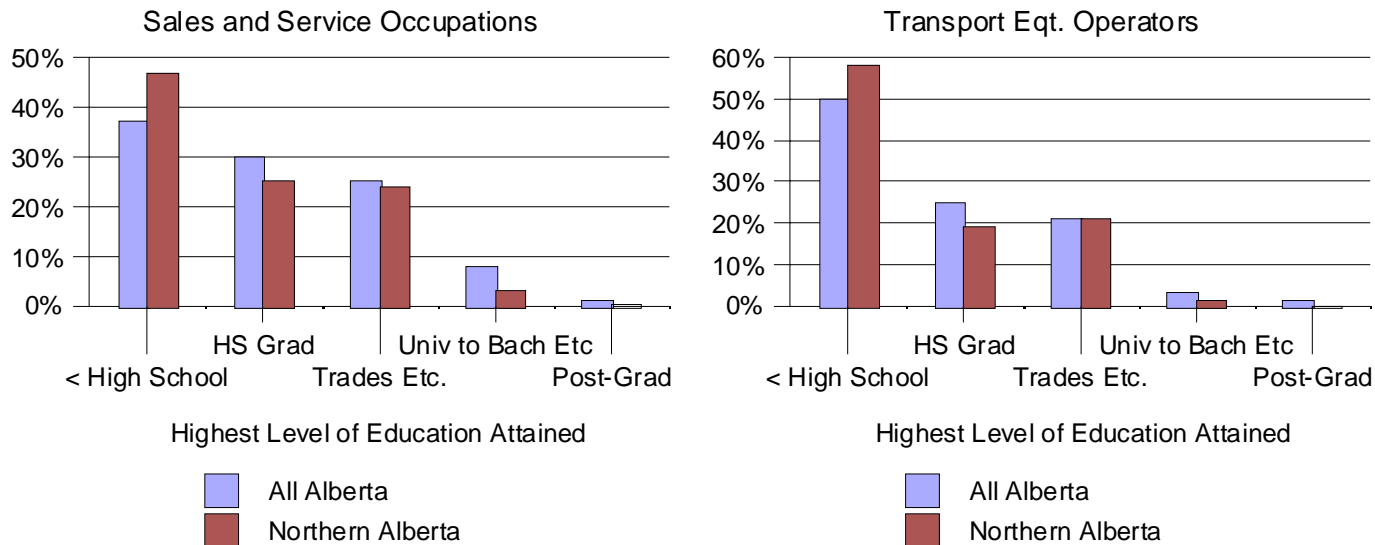
## Education Levels by Occupation

“What education levels do people have in this occupation in northern Alberta?”

This set of graphs shows the percentage of workers in six different occupations who have achieved particular levels of education. Sales & service workers are the least likely to have finished high school. Workers in social sciences, government, education & religion are the most likely to have a university degree.



## Education by Occupation (Continued)



Note on Education Levels:

< High School = Not graduated from high school

HS Grad = Graduated from high school, with no further programs completed

Trades Etc. = Trades or other non-university certificate

Univ to Bach Etc. = University diploma below bachelor's, Bachelor's degree, MD, DDS, DVM

Post-Grad = Diploma above Bachelor's or Master's or earned Doctorate degree.

## Distribution of Occupations Among Industries

*"How many of the region's clerical personnel work in government?"*

This section looks at secretaries and clerical occupations to demonstrate how the data can be used to track the number of people in a particular occupation across different industries. Secretaries and those in clerical Occupations seem to be fairly evenly spread out most industries in northern Alberta. In particular:

- government service industries head the list with 11% of the region's secretaries and clerical workers
- retail trade, finance & insurance industries and health & social service industries each have 10%
- The rest are spread among: educational service industries (9%); communications and utilities industries (8%); wholesale trade industries and business service industries (7% each); mining, quarrying & oil well industries, manufacturing and other service Industries (5% each); construction industries and transportation & storage industries (4% each); real estate operators & insurance agency industries (2%); and agriculture & related industries, logging & forestry industries and accommodation, food & beverage industries (1% each).

## ***Education levels and Age Groups***

*“Are older workers more likely to have left school before graduating?”*

The following table looks at the percentage of all workers in given age cohorts, with various levels of education. This data does suggest that older workers are more likely to have less than a full high school education. This may result from those with less education may not being able to afford to retire as early as those with at least a high school diploma.

This set of data can be pulled for any of the occupations on the spreadsheet.

**Table 3 Percentage of All Northern Alberta Workers In Age Cohorts, by Education Level.**

<b>Ages</b>	<b>Less than High School</b>	<b>High School Grad</b>	<b>Trades or Other Non-U. Cert.</b>	<b>University up to Bach., MD, Etc.</b>	<b>Post-Graduate</b>	<b>Total #</b>
All Adults	37	21	32	8	2	201,155
15-24	49	31	15	4	0.1	35,710
25-34	28	22	38	10	1	49,775
35-44	29	22	38	9	2	55,505
45-54	36	15	35	10	3	35,950
55-64	57	11	24	6	2	17,880
65+	69	8	17	5	1	6,315

### **Summary**

As with the earlier Clearinghouse Census Data Summaries, this report only provides a sample of the information that can be pulled from the data at hand. The information in this data set will be used in other Clearinghouse reports. Its best use however, will be to answer questions from Clearinghouse partners who need data on specific occupations, industries and geographies. Please contact the Research Coordinator with your information requests

### **Source**

Statistics Canada, 1996 Census of Canada. Custom tabulation.