

Canadair's contract coup creates 900 new jobs

Canadair of Montreal has just signed a contract with Boeing Aerospace Ltd. of Seattle, Washington to build the rear section of its next passenger jet, the *Boeing 767*. Three hundred of the sections have been ordered for the first phase of the project, according to *The Gazette*.

"We estimate that the life of this contract is 15 to 20 years," said company president Fred Kearns. "In the initial stages, we will employ about 400 people on the project. This will rise to about 900 as it progresses."

The Boeing project is reportedly worth more to Canadair than the *Challenger* executive jet credited with restoring the company's prospects recently (see *Canada Weekly*, dated January 24, 1979,

Page 5). Although not free to disclose the terms of the agreement with the U.S. firm, Mr. Kearns said, "you can guess from the number of sets ordered, the amount is huge".

The *Boeing 767*, which offers fuel economy and reduced airport noise, can carry more than 200 passengers in comfort over trans-continental but not inter-continental distances.

The section being built by Canadair — which looks like an ice cream cone with the small end cut off — contains much of the rear stabilization for the aircraft and the pressure dome bulkhead.

The first of the sets will be delivered in September 1980. The aircraft itself will be delivered in mid-1982.

Showing the way — from compass to "autosurveyor"

One of the longest serving units in Canadian military history is the Mapping and Charting Establishment (MCE), located in Ottawa. Last summer MCE turned 75.

MCE traces its beginnings to the mapping section of the intelligence branch in the Department of Militia and Defence, formed in 1903. Since then, the establishment progressed from packhorse and canoe expeditions to a reliance on helicopters and satellites. During that time, the cartographers have built a reputation for producing some of the best maps in the world. Today, MCE functions both in Canada and abroad, sending survey teams to the Middle East and training teams to less developed countries in Africa.

Work in the North

Mapping and charting the Arctic is a major MCE activity. Since the mid-Fifties survey, parties have moved from Ottawa into the North to work as long as the weather and the constant daylight permitted. Summer snowfalls are not uncommon, and "whiteouts" are an ever present threat. As well, conventional aids are of little help against the distorting effect of the magnetic North Pole.

Last summer, surveyors were based outside the small community of Nanisivik to continue the survey of Baffin Island. The temperature in Nanisivik is a constant minus 12 degrees Celsius below ground, where miners dig out 2,000 tons of lead and zinc-bearing ore each day.

Unpredictable weather, long distances, and the possibility of being stranded all make Arctic survey a tricky business at the best of times. In the field, surveyors live and work in teams of two, leap-frogging over one another by helicopter to establish permanent monuments in the rocky countryside.

Every surveyor must be prepared to face the possibility of being stranded alone. Most of them head for the field with their survey equipment, emergency supplies and a book. One surveyor, returned by helicopter after three days alone on the fog-shrouded tundra. He had only one complaint. His emergency tent had been a foot shorter than he was.

Variety of tasks

Mapping the Arctic is only one of the establishment's many tasks. MCE prepared the detailed maps of Montreal, Bromont and other Olympic sites for the 1976 Games. It updates military city maps and training area maps, and performs runway alignments regularly. Its mobile map reproduction section has gone into the field with troops from Mobile Command on many occasions to provide rapid mapping services.

The production of a map is a labour-intensive undertaking that only begins with the surveyor. The photogrammetrist takes over next, identifying each survey point on the aerial photographs, followed by the reproduction technicians who

Mexico/Canada swap prisoners

Canada and Mexico exchanged instruments of ratification in Mexico on February 27 on the Treaty on the Execution of Penal Sentences, which was signed at Ottawa on November 22, 1977.

Under the treaty, nationals who so desire would serve their sentences in their countries of origin. The transfer of persons under sentence would take place only after all rights of appeal had been exhausted in the sentencing country.

Under the provisions of the accord, transfers would be initiated only with the consent of the individual concerned and would be subject to approval by both countries.

At present there are 13 Canadians incarcerated in Mexican prisons.

handle the drafting, plate-making and the actual printing of the maps.

The establishment uses advanced photogrammetric and survey equipment. Scribing, a form of engraving, has largely replaced pen and ink draughting, and lithography has replaced copper engraving.

MCE also uses laser distance measurement and the "autosurveyor", a refined inertial surveying system based on the navigation systems used in aircraft and missiles.

Mapping methods have changed enormously over the past 75 years. Surveying is now based on the U.S. navigational satellites using the Doppler principle, and a thematic mapping satellite will soon reach the operational stage. A three-metre space telescope/camera will undoubtedly bring about greater changes in the future.

Computers, first used in map-making to compute the results of field surveys, have become indispensable survey tools. Surveyors can now cover an area previously considered impossible in one season. Work which once took ten months to complete can now be done in about four hours.

But the more things change, the more things remain the same. In the Arctic, where MCE surveyors return year after year, the weather and the lonely land still present challenges that dwarf even the most advanced technology.

(From articles by Lieutenant Wendy Tighe and Sergeant Bruce Hynes, published in *Sentinel*, 1978/6.)