

Surveyors on Horseback

Like the Royal Engineers, their predecessors in Canada during the colonial period, the Canadian Military Engineers have made major contributions to the development of the nation through their surveying and mapping work. One of the largest such undertakings was the 20-year post-WW II plan to map Canada – with priority to the mapping of northern and sub-arctic Canada.



Demobilization at the end of WW II had seen several hundred talented Army Survey personnel returning to Canada. The skills that they had perfected in areas of survey, photogrammetry, photography, cartography and printing were invaluable. Some Army Survey visionaries saw that an ambitious mapping program would contribute to both national development and the defence of Canada.

There was a strong defence commitment to the mapping of northern Canada. A joint subcommittee of the Canada-US Permanent Board on Defence Priorities was formed to advise the Permanent Board on a plan to address the mapping needs. Among the priorities they established for the North American mapping needs was the area of the Northwest Highway System in British Columbia and the Yukon. The Army Survey Establishment (ASE) launched a post-war survey programme to map Canada to a 1:250,000 scale.

Army Survey has continually adopted the latest in map making techniques and is recognized as a leader in their field. To construct a map, there is a need for a series of 'control points' that are accurately located on the earth's surface. It was necessary for each control point to be seen from two other points to permit verification by triangulation. Readings taken had to be to a high degree of accuracy before the field work was completed. During the winter months the crew would transfer these readings onto a map sheet and then aerial photography flown by the RCAF was used to fill in details of the terrain to produce a usable map.

In 1947, ASE sent out 14 survey crews, mounted on horseback, to establish these points in the Yukon. The preferred locations for these control points were on selected mountain peaks that demanded a great physical effort by the survey crews. Movement between these control points was initially by horseback – assisted by fixed wing aircraft for their resupply. In 1949 helicopters started moving surveyors from station to station.

By 1955 the wide use of helicopters had significantly opened the North to surveyors. In addition, the development of a precise electronic short-range navigation system (SHORAN) helped to facilitate the establishing of a network of survey stations over the sub-arctic. These advances helped to complete this ambitious mapping program in 1970.