

Computer map creates a new vision of Canada

Governor General Edward Schreyer recently unveiled a new map of Canada produced by the National Film Board (NFB). The large, rectangular-shaped map measuring 480 centimetres by 80 centimetres is a computer-generated outline of Canada, hand-painted to provide a bird's-eye view of the country in late summer.

Unlike conventional maps which emphasize borders, cities and highways, the multi-coloured Canadian map depicts only the landforms, bodies of water and vegetation of the country. Locations of major cities are indicated by reddish-brown spots — as they would appear if seen from far out in space.

The idea for the Canadian map came from Geoff Goodship, a teacher with the Campbell River School District in British Columbia who felt educators needed a teaching tool that would graphically show students that Canada, covering almost ten million square kilometres, is the second-largest country in the world. He envisaged a map that would provide a satellite view of Canada. He took his idea to the NFB because of its experience in providing educators with support material and because he felt the map would be an ideal complement to NFB films and multi-media productions already widely used in schools.

The map outline was drawn by Dr. T.K. Poiker of Simon Fraser University (SFU), an authority on computerized cartography techniques, and Wayne Lus-

combe, a former graduate student in geography at SFU, currently working with the cartography branch of the World Bank in Washington, D.C. Their task, to create a satellite view of Canada within a rectangular format 480 centimetres by 80 centimetres (considered ideal for classroom display), was difficult to fulfil because Canada is almost the same size from north to south as it is from east to west. In addition, from a fixed point in space the extremities of the country would not be visible due to the curvature of the earth.

To show the full breadth of the country, they "lifted" the eastern and western coasts and compressed the north-south dimension, allowing northern Canada to drop away toward the horizon along the entire length of the map. To produce the outline, they created a modified version of the Mollweide projection, invented by the German cartographer, Karl B. Mollweide. They also used two sets of computer-ready data obtained from satellites which provided over 700 000 points of reference for Canada's borders, lakes, rivers and coastlines.

A modified FORTRAN computer program called SUPERMAP enabled the cartographers to convert longitude and latitude points into map co-ordinates. The map outline was hand-painted with acrylic paints by Lorne and Ann Kask, graphic artists from Quadra Island, British

Columbia, who spent almost a year researching and depicting Canada's landforms and vegetation.

In explaining why the NFB, traditionally a film production agency, has produced the map, Paul Fortin, acting chairman of the NFB's Board of Trustees, said that the new map is intended to complement the use of NFB films and multi-media teaching aids in schools.

"Our mandate is to interpret Canada to Canadians and to other nations," he said. "The education of Canadian children has always been a priority for the NFB and we are always seeking new ways of meeting teachers' and students' needs. We hope that the NFB Canada Map, a new vision of our country, achieved through modern technology, will add a new dimension to that education process."

Arctic energy study

Ottawa has moved to reassure investors that the federal government is still committed to energy development in the North.

The government will spend \$130 million over the next seven years to prepare for commercial development of oil and gas in the North, Northern Development Minister John Munro said recently.

Mr. Munro said the planning and research program, called the Northern Oil and Gas Action Program (NOGAP), is the "cornerstone" of Canada's northern energy development strategy and will ensure that commercial development can begin as soon as it becomes economically and technically feasible.

Mr. Munro acknowledged low oil prices and falling consumption have forced the federal government to revise its initial "optimistic" expectation that commercial development would begin in 1986.

He said the government is now aiming at commercial start-up some time in the early 1990s.

NOGAP studies, which will involve several federal governments and the two territorial governments, will determine the environmental and socio-economic impact of northern energy production and two possible transportation alternatives.

NOGAP studies should clear up potential problems that could delay commercial production and establish guidelines under which production could safely proceed once feasible, Mr. Munro said.



Standing in front of the Canada Map at its recent unveiling at Government House in Ottawa, are (from left to right): Paul Fortin, acting chairman of the NFB's Board of Trustees, graphic artists Ann and Lorne Kask and Geoff Goodship, who conceived the idea.