

Supply—Mines and Technical Surveys

(Text):

In our departmental administration we plan to provide additional services vital to these intensified programs. We will make more use of electronic data processing equipment to handle the countless repetitive computations that are necessarily a part of survey and scientific work. I might add that thanks to our computer programming an increasing number of projects can now be speeded or channelled into promising new avenues of research.

We have also allowed in our administrative vote for the purchase of camp and field equipment and other items commonly used by our branches. These have been pooled in one central vote to simplify their purchase, handling and maintenance and thereby effect savings in costs. In our mineral resources division more funds are needed for the publication of reports. During the fiscal year its officers will be engaged in a number of valuable fact-gathering projects and will take part in several conferences of utmost concern to our mineral industry.

For the surveys and mapping branch, Mr. Chairman, we are asking \$19,047,454. This is to carry forward an intense survey program calling for geodetic work in almost every province and the territories, topographical surveys aimed at completing the initial medium scale map coverage of Canada by 1966, and hydrographic charting and related projects involving large segments of our coastal and inland waterways.

Time does not permit further analysis of the branch's current field projects, but I should mention that a number of parties will be working in the Yukon, the district of Mackenzie and the Arctic islands, and the cost of fielding personnel in northern or remote regions is necessarily high.

Let me stress, however, that our technical men are constantly testing, developing and making use of new instruments and methods that will do much to speed the work and, in the long run, will bring about considerable savings. At this point I am pleased to announce that the surveys and mapping branch has completed the move to its new building on Booth street and has the additional space and improved facilities it so badly needs. The official opening will probably take place early next year, at which time I will be pleased to welcome my honourable colleagues. With the addition of this new building our Booth street science centre, if I may call it such, is now virtually complete, but the estimates provide for a number of equipment items which could not be purchased until the buildings were ready.

This brings me to our oceanographic polar continental shelf programs, and here I repeat what I have said on a number of occasions.

These are projects of far-reaching significance, affecting our economic and scientific progress and, to some extent, our national sovereignty.

The 1961-62 estimates call for a program of ship construction including the C.G.S. *Hudson* which will be, in essence, a floating laboratory for hydrographic and oceanographic research; and for the replacement of three vessels of the Canadian hydrographic service. It is our hope that the *Hudson* will be commissioned next year. I am pleased to report that construction of the Bedford institute of oceanography near Halifax is going ahead on schedule. The docking facilities and depot will be in operation by September, and the laboratory building will probably be ready by July of next year. When fully staffed the institute will have a working force of 300 oceanographers, hydrographers, marine biologists, submarine geologists and other specialists. I should add, however, that people trained in these fields are very scarce, and we are conducting a vigorous recruiting and training program in conjunction with three universities and various federal agencies.

This summer we will be undertaking a broad oceanographic survey of Hudson bay with special emphasis on submarine geology, bottom sampling and photography, gravity, magnetic and seismic measurements and other related scientific observations. In the polar basin 70 men, supported by three fixed wing aircraft, four helicopters and 700 tons of equipment are working on the polar icecap over a large area of the polar continental shelf. They are conducting investigations in submarine geology, seismology, gravity, magnetism, geography, hydrography and other fields. In these projects we have drawn on the experience and knowledge of men in all corners of our department and from other federal agencies and Canadian universities. Our oceanographic program is co-ordinated and planned by the Canadian committee on oceanography under the chairmanship of our director general of scientific services.

Mr. Chairman, I do not think I need dwell on the importance of this work, beyond saying that in our oceanographic and polar projects we are laying the foundation for the development of our resources in these relatively unknown areas; we are paving the way for transportation and travel in Arctic waterways, both below and on the surface; and we are gathering information essential to the defence of this country. We are also making an important contribution to the progress of science.

The 1961-62 estimates also reflect the intensified task of the geological survey of Canada, which this year is sending to the field the largest work force of its 119 year history. One hundred and two parties—a total