

used extensively. It is also now known that some geology in the Arctic Islands is favourable for oil, and it will only be a matter of time before the area is fully explored with seismological methods.

97. Of all the branches in the department this one has been the exception. Apart from the airborne magnetometer work a satisfactory situation in staff, space and funds has existed.

98. One of the most disturbing features of the evidence, however, is that budgetary restrictions have been placed on the airborne magnetic work of the branch. This should not be permitted to continue having regard to the important contribution which is made by aeromagnetic surveys to the discovery of new mineral resources.

### POLAR CONTINENTAL SHELF PROJECT

99. The Arctic Archipelago, the polar ice cap and Arctic waters are of vital economic and military significance. Large areas of sea-ice may be used as air fields and semi-permanent bases for scientific or military purposes. Submarines are capable of surfacing through the polar ice-cap and in open leads without detection. Similarly, the same possibility exists regarding Hudson Bay and other such areas.

100. Canada's development above the 60th parallel and particularly in the Arctic has seriously lagged over many years. The disregard of the development of these northern areas of Canada over the years has been compounded to the extent that the situation now confronting the government will require emergency measures if it is to be rectified.

101. By contrast, development of similar latitudes in Russia shows a marked advance; so much so that the Canadian government is placed in the position of obtaining most of its Arctic scientific knowledge from information supplied to us from time to time by the Russians.

102. Suggested personnel additions for this work are discussed under Hydrographic Division.

103. A scientific group has now been sent to the Polar Continental Shelf to study hydrography, oceanography, geology and other geophysical characteristics of the shelf and adjacent land areas. The expedition this year is in the nature of a reconnaissance. Because of the vital nature of the work being undertaken it is essential that this group be expanded by at least four times next year with steady increases thereafter.

104. The scientific work on the Arctic Ocean Continental Shelf should be a continuing effort until the mineral potential and major physical features of the area are known.

105. In a rapidly shrinking world our sovereignty in the north must be continually reviewed and strengthened. There is no more effective way, no means less costly, and no method intrinsically more useful, of strengthening our sovereignty in the north than by the conduct of thorough scientific field research programs and the publication of their results. The Polar Continental Shelf Project is one of such programs.