

*Marine Sciences Branch.*—On Apr. 1, 1962, the Department established a Marine Sciences Branch to combine hydrographic surveys and research in oceanography, marine geology and the geophysical sciences of the seas. The function of the Branch is to carry out hydrographic and other oceanic surveys and to conduct oceanographic research in the nearby oceans, in Canada's coastal and inland waters, and on the underlying seabeds for the threefold purpose of assisting navigation, with particular reference to Arctic waters; of ascertaining the resource potential of the country's continental shelf; and of undertaking the extensive program of oceanographic research required for military and civilian purposes. The resultant information will also greatly assist the commercial fisheries.

The Branch comprises the Canadian Hydrographic Service, the Division of Oceanographic Research and a Ship Division. The Canadian Hydrographic Service is responsible for the charting of the coastal and inland navigable waters of Canada, the analyses of tides and tidal current phenomena and the investigation of water-surface elevations of the St. Lawrence–Great Lakes waterway. The resultant data are published in the form of official navigation charts, volumes of Sailing Directions, Tide Tables and Water Level Bulletins.

The Division of Oceanographic Research has charge of the extensive program of oceanographic research assigned to the Department in 1960 by the Canadian Committee on Oceanography, an interdepartmental body co-ordinating all oceanographic research in Canada. The Division is responsible for meeting the increasing federal needs for oceanographic information in waters of Canadian interest, mainly for defence, transport and resource assessment purposes. This includes an intensive study of oceanography in the Arctic and the extension of Canadian studies farther out to sea to examine the special problems of the deep ocean. In addition, the Division contributes to international oceanographic studies in which Canada is involved. Hydrographic and oceanographic activity on the Atlantic Coast and in the Arctic is centred in the recently completed Bedford Institute of Oceanography located on the Atlantic Coast near Halifax, N.S. The Institute comprises a modern office and laboratory building, equipment and ships' depot, machine woodworking and electrical shops for minor repairs to the ships and the construction of special equipment, and ships' berthing facilities capable of accommodating ten ships. A similar centre is planned for 1965 on the Pacific Coast but, meanwhile, functions on the West Coast are centred in a hydrographic establishment at Victoria, B.C. The Inland Waters Section works out of Ottawa.

The Ship Division was organized in 1962 to be responsible for the management of the fleet of ships and launches which the Branch uses in its work. The majority of these craft are for hydrographic survey; others are multi-purpose ships which are also employed on oceanographic research. Replacement of old and obsolete craft is being provided under a long-range shipbuilding program. The most recent addition to the fleet, CSS *Hudson*, was accepted from the builder in 1963. She is an icebreaker of 4,600 tons displacement with the capability for oceanographic research in any waters of the world, as well as for the latest methods of hydrographic surveying.

*Geological Survey of Canada.*—The primary function of the Geological Survey is to obtain information on the geology of Canada that will be of assistance in the search for and development of mineral deposits. The results of its activities also provide a basis for the appraisal and conservation of Canada's mineral resources generally (including water supplies), for soil surveys and for the solution of geological problems that frequently arise in construction projects. Reports issued by the Geological Survey include: memoirs with fairly complete descriptive accounts of the geology of particular areas, usually accompanied by geological maps; bulletins dealing with problems rather than areas; papers issued as soon as possible after the close of the field season, treating separately of each area and summarizing the information acquired; and the Economic Geology Series dealing in a comprehensive way with mineral deposits of a particular type. Information circulars, issued in advance of the more detailed reports, contain data of immediate interest to prospectors. Coloured geological maps are issued on various scales from one inch equalling