

## THE RELATION OF HYDROGRAPHY TO NAVIGATION AND THE WAR RECORD OF THE HYDROGRAPHIC AND MAP SERVICE

Two closely related Dominion Government Units operating as one Service are involved in this record. The normal peacetime function of the *Hydrographic Service* is the production and distribution of hydrographic aids to navigation. Its nautical publications consist of the official navigation charts of Canada, the volumes of Pilots and Sailing Directions describing Canada's coastal and inland navigable waters, the Standard Tide Tables for the Atlantic and Pacific Coasts, and also the Water Level Bulletins covering the St. Lawrence-Great Lakes Waterway. The navigational aids supplied by the Hydrographic Service contribute to the protection of life and property at sea, to the lowering of marine insurance rates and, in consequence, to the development of Canadian mercantile trade.

The *Legal and Map Service* conducts all legal surveys required by Government Departments, including those on Indian reserves, airports, national parks, ordnance lands, and all surface and mineral rights in Yukon and the Northwest Territories. It compiles and distributes a wide variety of air-charts, electoral maps, general maps for use of the various Government Departments, natural resources and railway maps and general maps of Canada and maintains a lithographic office for the reproduction of hydrographic charts and other maps prepared by the Department, within the capacity of the presses installed. It maintains a central office for indexing, filing, and recording survey returns and plans, and distributes all topographical and general maps of Canada.

The combined activities of the Hydrographic and Map Service during the war years were of vital importance and contributed appreciably toward the achievement of victory, although, from the very nature of the work, the story could not be told earlier. With the outbreak of war, the enormous expansion of the Navy, Merchant Marine and Air Force, and the constantly gathering momentum of sea and air warfare, were reflected in corresponding increases in demands for the marine, air-navigation and special charts and maps. The close contact maintained between the Service and the Defence Forces permitted these needs to be anticipated to a remarkable degree, and all available facilities for nautical charting, air-mapping and other technical operations were operated under pressure throughout the war years.

A broad summary of actual operations conducted during the War is given in the following paragraphs.

**Hydrographic Service.**—The work of the Hydrographic Service became progressively more extensive in scope as the War advanced. While the standard nautical charts, "Pilots" and related hydrographic publications, provided the primary aids-to-navigation to the Navy and Merchant Marine, the strategic charts produced for use at Naval and Air Force Headquarters facilitated the carrying-out of important fleet and convoy movements. Throughout the whole period of hostilities, hydrographic surveys and special field examinations were required in widely separated parts of Canada's seaboard. In order to avoid the hazards of war, vessels were obliged to navigate off the usual sea-lanes and, in consequence, navigation was more than ever dependent upon the nautical chart. Many small harbours, previously used only for local trade, became of significant war-importance and detailed charts of these were produced for Canadian and Allied war-shipping authorities.