

survey and demarcation of interprovincial and territorial boundaries; is responsible for the preparation of descriptions and diagrams of federal electoral districts; and is the sole agency in Canada for the preparation of aeronautical charts showing airports, airways, and radio and other aids necessary for air navigation. Much of the work in the latter type of mapping arises from the need to keep up with the flow of new aeronautical information and to present it in a form that may be easily interpreted by the pilot. As a service to map-makers and others interested in that field, the Department maintains the National Air Photo Library, a collection of all air photographs taken by or for the Federal Government.

Hydrographic and oceanographic surveys are carried out from the Department's fleet of ships and launches in the seas bordering Canada and in inland lakes and rivers. The Bedford Institute of Oceanography at Dartmouth, N.S., is the base for operations on the Atlantic Coast and in the Eastern Arctic, and the Pacific base is at Victoria, B.C. The final compilation of the marine charts is done at Ottawa.

Geological surveys are carried out mainly to provide an inventory of the potential mineral resources of Canada, to aid in the discovery of mineral deposits, and to help in other aspects of the national economy influenced by geological factors. Each year approximately 100 parties are placed in the field, about half of whom are engaged in reconnaissance mapping. The first systematic reconnaissance of the geology of Canada is approaching completion and attention is being increasingly given to more fundamental research. Both the Geological Survey and the Observatories Branch carry out geophysical surveys, resulting in maps showing such features as variations in terrestrial magnetism, gravity and seismicity. The geophysicists of the Geological Survey are interested mainly in outlining geological features and those of the Observatories aim at a better over-all knowledge of the earth. A network of 22 first-order seismic stations is maintained across Canada and earthquake-probability maps are published.

The Geographical Branch produces special maps showing actual land use—an important aid in economic planning; it surveys and maps land forms in the Arctic, where ice formation produces surface dislocations found in few other areas; and also acts as the executive arm of the Canadian Permanent Committee on Geographical Names.

In the drafting and printing of the maps, highly advanced techniques for the automatic transfer of terrain features from air photos to drafting sheets and precise lithographing have been combined to assure speedy processing of field data and the production of colourful, easily understood and relatively inexpensive maps for every type of user, from vacationer to town planner and from prospector to pilot. The Department operates a large modern plant to print the maps compiled by its several Branches as well as maps compiled by other government departments and agencies. The Surveys and Mapping Branch has a stock of almost 12,000,000 maps from which it distributes more than 1,000,000 annually. Each year the Geological Survey distributes about 350,000 maps and reports, the Marine Sciences Branch distributes about 250,000 charts, and other Branches distribute large numbers of their own maps and charts.

PART II.—PUBLIC LANDS, WILDLIFE AND FLORA*

Section 1.—Federal and Provincial Public Lands

In Table 1 classifying the area of Canada by tenure, items 2, 3, 4 and 5 are obtained from Federal Government sources and items 1, 6, 7 and 8 from provincial government sources.

* No information on the flora of Canada is given in this publication but the reader is referred to a detailed special article on the subject, prepared by Dr. Homer J. Soggan of the National Museum of Canada, which appears in the 1966 Year Book at pp. 35-61.