

operates a fleet of ships and launches, including some chartered vessels; this fleet is being modernized and two new ships are to be launched in 1967. Five of the major ships operate out of the Bedford Institute and four out of Victoria and one chartered vessel is based in the Great Lakes. Land-based parties, equipped with launches, operate on coastal and inland waters. Branch activities are planned to meet the needs of commerce, industry, fisheries, maritime defence, and weather and ice forecasting, and to provide general coastal charts for fishermen and recreational boating in the inland waters. In 1966, 953 navigational charts were on issue, of which 78 were first editions that year, and over a quarter of a million navigational charts were distributed.

Geological surveys provide an inventory of the potential mineral resources of Canada, aid in the discovery of mineral deposits, and assist 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 increasingly given to more fundamental research. Approximately 350,000 copies of maps and reports on geological surveys and research are distributed each year.

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. Considerable progress was made in 1966 in the preparation of a new earthquake zoning map for Canada for National Building Code purposes, in defining earthquake loads. This information is gathered primarily by a network of 23 first-order seismograph stations, and supplemented by temporary, local studies. In geomagnetism, Observatories staff has been working on the reduction and interpretation of data from the joint Canadian-Scandinavian three-component airborne survey carried out at the end of 1965. Preliminary results have been sent to the five Nordic countries participating. In gravity mapping, the emphasis continued to be placed on the measurement of the gravity field within Canada.

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 are 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.

Section 4.—Archaeology in Canada*

Introduction

Archaeology is taken here to mean the study of prehistory, that period preceding written documentation; in this context, written records mark the period historical and its study, history. Consequently, no reference is made to the lively field of historic sites archaeology which some consider a misnomer since they construe it to be the study of historic buildings, fortresses, houses, trading posts, etc., by the traditional research methods of historians augmented by the techniques of the archaeologist. For this review, prehistory is the subject matter and archaeology its scientific study. This imperfect dichotomy of history and prehistory would be still less applicable to many places outside the Western

* Prepared by scientists of the Human History Branch of the National Museum of Canada as follows: the Introduction and the section on Canadian Eskimo Archaeology by Dr. W. E. Taylor, Jr., Director of the Museum of Human History; the section on Prehistory of Eastern Canada by Dr. J. V. Wright, Chief of the Archaeology Division; and the section on Prehistory of Western Canada by Roscoe Wilmeth and W. N. Irving.