

The Map Compilation and Reproduction Division prepares, draughts and reproduces maps, charts and plans for lithographic printing in multicolour. The work includes the preparation and photo-reproduction of air chart bases, the reproduction and printing of air information for aeronautical charts, the preparation and printing of topographical maps and the reproduction and printing of hydrographic charts.

The Branch had 18 geodetic, 25 topographic, 12 legal survey and 18 hydrographic parties in the field in 1955.

*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, accompanied as a rule 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 reports, dealing in a comprehensive way with mineral deposits of a particular type. Coloured geological maps are issued on various scales from one inch equalling a few hundred feet to one inch equalling eight or more miles, the common standard scales being one inch to one mile and one inch to four miles. Preliminary maps showing the geology in pattern are issued shortly after the field season ends for those areas where the search for metals or minerals is active.

In 1955 the Geological Survey had 70 parties in the field, 17 fewer than in 1954. However the increased use of aircraft will result in coverage of an area greatly exceeding that of any previous year and will almost complete the geological reconnaissance of the Canadian Shield in the Northwest Territories south of latitude 66°. The work undertaken included a helicopter reconnaissance of the geology of the Queen Elizabeth Islands in Canada's far north. This project, known as *Operation Franklin*, was the largest of its kind ever attempted.

The Precambrian Division is responsible for mapping and studying the rocks of the Canadian Shield and of the Arctic Islands and the Post Precambrian Division for mapping and studying the rocks of the Appalachian and Cordilleran regions and the unconsolidated materials that mantle the bedrock throughout Canada. These studies help to establish the geological history and structure of the regions and the information is used as a guide in the search for mineral deposits.

The Stratigraphy Division includes stratigraphic palaeontology, the geology of fuels (oil, natural gas and coal), ground water and engineering geology, subsurface geology and research on coal. Its function is to establish the character, age, thickness and correlation of both exposed and concealed sedimentary formations and to map the distribution and structure of these formations with the object of determining the economic possibilities of prospective oil, gas and coal bearing areas of Canada.

The Mineralogy Division makes mineralogical, geochemical and petrological studies of Canadian mineral deposits and associated rocks. Laboratories provide mineral identifications for the public, supply officers of the Survey with mineralogical, geochemical and chronological data, and permit research on the genesis of ores, fuels and rocks. Systematic mineral collections are maintained and mineral and rock collections are prepared for use by prospectors and educational institutions.

The Mineral Deposits Division conducts special field studies of mineral deposits with particular regard to economic possibilities, origin and the establishment of clues for prospecting for similar deposits. Reports and other information on Canadian mineral deposits are compiled and coded and special reports on deposits and prospecting published. The Division acts as official agent of the Atomic Energy Control Board in conducting research