

on uranium deposits and in receiving and compiling reports from companies operating under exploration and mining permits from the Board, and maintains a laboratory for checking radiometric assays and identifications of radioactive minerals.

The Geophysics Division gathers, studies and compiles geophysical data throughout Canada, particularly those relating to the existence of orebodies. Fundamental research is carried out in some phases of geophysical work and all electronic equipment of the Geological Survey is maintained by this Division.

*Mines Branch.*—The Branch is concerned in the main with the technological problems of the mineral industry and maintains well equipped ore testing, mineral dressing, fuel research, ceramic, radioactivity, industrial minerals and physical metallurgical laboratories.

The Mineral Dressing and Process Metallurgy Division serves Canada's mineral industry through tests, investigations and research on all types of Canadian ores. The main purposes of these activities are to devise economic and efficient methods of processing ores—a service of special benefit to new mining ventures and particularly to those developing low grade or complex deposits—and to assist mine operators in solving problems encountered in mill practice.

The Radioactivity Division is concerned with investigations of radioactive ores, particularly with the development and application of methods whereby marketable concentrates may be produced from individual uranium ores. The primary purposes of the Division's technical services and laboratory facilities are to help bring new properties into production by determining methods suitable for treatment of particular ores and to encourage the search for uranium deposits. Extensive experimental and development work is conducted on the treatment of ores and products from the properties of Eldorado Mining and Refining Limited, a Crown company.

The work of the Industrial Minerals Division consists of tests, research and investigative work on industrial minerals, including water used for industrial purposes. The Division makes field studies of deposits, examines industrial processes utilizing them and conducts research into methods of beneficiating minerals from deposits of marginal and submarginal quality to bring them to the standards demanded by modern industry.

The Fuels Division studies the type, quality and uses of all fuels. It makes studies of production methods largely for the purpose of devising cheaper and more efficient methods of mining, preparing, processing and utilizing coals. Work in the field or laboratories includes: the investigation of methods of mining, particularly of rock pressures in relation to the economical mining of coal at depth, and of coal preparation such as the cleaning and utilization of the low grade finer sizes of bituminous coal which predominate in Canadian mining operations; investigations into the making of coke for foundry and other metallurgical uses and into the increased use of Canadian coal in domestic stokers; high pressure hydrogenation tests on coal for the production of synthetic liquid fuel and hydrogenation as applied to the refining of oil from the bituminous sands of Alberta; and analyses of crude oils and natural gas products.

The Physical Metallurgy Division aids the metal industries through the development of new alloys, new manufacturing techniques and new applications and in activities aimed toward improving present practices in metal fabrication. It serves the Department of National Defence by extensive research and investigative work concerned broadly with the development of defence materials and prototype equipment and with the metallurgical problems of that Department. The Division also handles the metallurgical problems of the atomic energy project at Chalk River, Ont.

The Mineral Resources Division provides a mineral information service that is freely used by government departments, mining and allied industries, and others interested in mining or its significance in the Canadian economy. A mineral resources index inventory is maintained of all known occurrences and of mines, both active and potential. The Division makes economic studies of different phases of the mining industry. It gives technical advice as required for the administration of the Emergency Gold Mining Assistance Act and prepares reports on request to aid in the administration of such