

Coast Range granodiorite and derivatives occupy the Gun Creek area. The important metals discovered so far are low grade copper-gold deposits situated in the batholith along the contact. A high grade copper and two gold deposits also occur in the area. The ore bodies of Copper mountain are situated along the contact of a stock composed of gabbro, diorite and other related rocks, thrust up through a series of steeply folded andesite and basaltic breccias. Large white felsite and quartz porphyry dykes cut the stock, breccias and ore bodies. The metallic content of the ore is believed to have originated in the magma of the stock. The deposit is low grade and of the contact metamorphic type. The ores, consisting of chalcopyrite and bornite in a gangue of andesite and basaltic breccia, are refractory.

H. T. James made a comprehensive report upon the Britannia Beach map-area,¹ Howe Sound, Vancouver mining division, British Columbia. The area is situated upon the western flank of the Coast Range batholith. Mesozoic sediments and volcanics are intruded by Jurassic sills, the Coast Range batholith, later basic and acidic dykes and finally by Tertiary basaltic dykes. The Mesozoic succession is represented by residual "roof pendants" In a shear zone about five miles long and 2,000 feet wide extending southeast from Tunnel camp to the batholith at Seymour creek, the only economic deposits are found. The principal minerals are pyrite, chalcopyrite and quartz, with subsidiary amounts in places of sphalerite, barite, anhydrite and galena.

Carl Lausen made a geological reconnaissance of the east end of Great Slave lake.⁵ Precambrian rocks consisting of greenstones, granite gneiss, granite, syenite, diabase and sediments were noted. Copper mineralization was observed at different places, but no showings encountered would justify expenditure of money for development.

Copper-Nickel-Platinum.—C. V. Corless submitted a few suggestions relative to the origin of the Frood ore deposit.⁵ Viewed broadly, this deposit, as far as developed, shows a steady diminution in rock matter and increase in sulphide content with depth, passing from "spotted norite" or "spotted diorite" in the upper levels, to practically clean sulphides at about 3,000 feet. To a depth of 2,000 feet the copper content is fairly uniform; below this depth, an increase is noted until at about 3,000 feet the chalcopyrite constitutes about 65 p.c. of the ore. Gold, silver and platinoids increase somewhat beyond the proportionate increase in base metals. It is pointed out that the above phenomena may probably result from a relatively sudden injection of a large body of fluid magma very rich in sulphides of iron, nickel and copper forced into the earth's crust along some local, not too far from vertical, plane of weakness. Such a body heavily loaded with sulphides encased between walls of rather low conductivity would probably remain fluid for sufficient time to effect the differentiation with depth which is being revealed by development.

A. P. Coleman, E. S. Moore and T. L. Walker present, in the University of Toronto Studies, the results of numerous chemical analyses of samples of rock, taken along several transverse sections across the Sudbury norite-micropegmatite intrusive, to prove that the two types of rock are resultant from magmatic differentiation and are not two separate intrusives, as is maintained by T. C. Phemister in a report published by the Ontario Department of Mines a few years ago. The authors also sum up the evidence that has from time to