

tion, Timiskaming sediments and volcanics, and Algonian acidic and basic intrusions. The veins are closely related to fissuring produced by fault movements and consist of sheared and brecciated rocks partially replaced by secondary minerals such as quartz carbonates, sericite and chlorite. Irregular masses of quartz fill openings through the crushed rock in the veins and the gold, accompanied by tellurides and sulphides, occurs in streaks and minute fractures in the masses of secondary minerals. Where the country rock is porphyry or red syenite, the structure consists of angular blocks of these rocks cemented together with gold-bearing quartz.

A revision of "Gold Fields of Nova Scotia"<sup>1</sup> was made by Wyatt Malcolm, bringing available information upon development of these gold deposits strictly up to date. Revival of interest in this field lends particular importance to the appearance of this work.

**Placer Gold.**—The history and future possibilities of placer mining in the Atlin district, British Columbia, was outlined by C. L. Monroe.<sup>5</sup> A number of creeks of known possibilities still remain unprospected. E. C. Annes and N. C. Stines, in the *British Columbia Miner*, describe the geology and operations in connection with the re-opening of the Bullion mine, Quesnel mining division, Cariboo district, British Columbia. The placer ground is located in a pre-glacial channel of the south fork of Quesnel river.

**Lead-Zinc-Copper-Silver-Gold.**—Recent developments in northern Quebec; the Sudbury district, Ontario; northern Manitoba and other areas have revived interest in the base metal possibilities of Canada and diverted prospecting effort to the search for these metals, with the result that important discoveries have been made. Pursuant to this increased activity, examinations of areas containing base metals have been made as follows:—

In British Columbia—Taku,<sup>5</sup> Tulsequah,<sup>5</sup> and Stikine<sup>1</sup> Rivers areas, by F. A. Kerr; Stewart-Bear River<sup>1</sup> and Alice Arm areas<sup>1</sup> by George Hanson; Topley map area<sup>1</sup> by George Hanson and T. C. Phemister; Finlay River area<sup>1</sup> by V. Dolmage; Slocan-Upper Arrow Lakes area<sup>1</sup> by C. E. Cairnes, and H. C. Gunning; Big Bend area<sup>1</sup> by H. C. Gunning; and Kootenay Lake area<sup>1</sup> by J. F. Walker; in the Northwest Territories—Pine Point area,<sup>5</sup> Great Slave Lake district, by J. Mackintosh Bell; in Manitoba—Sherritt-Gordon properties, by J. F. Wright,<sup>1</sup> E. L. Bruce<sup>7,6</sup> and R. C. Rowe<sup>4</sup>; in Ontario—Ben Nevis, Kamiskotia, Boston Creek and other areas<sup>3</sup> in Cochrane and Timiskaming districts, by T. L. Gledhill; Ranger Lake, Garden River and other areas<sup>3</sup> in the vicinity of Goudreau and Sault Ste. Marie, Algoma district, by M. E. Hurst; Woman River-Ridout area,<sup>1</sup> by R. C. Emmons and Ellis Thomson; in Quebec—Central Gaspé area,<sup>1</sup> by F. J. Alcock; and in Nova Scotia—the Sterling mines,<sup>5</sup> Richmond Co., by R. E. Legg.

Kerr found in the Stikine River area, pre-Permian metamorphosed sediments and volcanics, and later sediments and volcanics reaching to the Pleistocene. Part of the series is intruded by a composite batholith which was active from early Triassic through the greater part of the Mesozoic. Mineral deposits of great diversity in type occur in different horizons approximate to the granite intrusion. Important discoveries of silver-lead-zinc, with some copper-gold and placer gold, were made.