

consist of Precambrian volcanics, sediments, and acid and basic intrusives. Deposits of chalcopyrite and bornite occur as fissure fillings and as replacement deposits along a shatter zone in quartz-gabbro and older volcanics. The ore occurs as roughly parallel lenses.

**Fluorspar.**—In an article entitled *Fluorspar in Canada*,<sup>1</sup> M. E. Wilson affords a concise résumé of the geology of fluorspar occurrences and economic deposits in the Dominion. A short review of the fluorspar of the world is also given. The Rock Candy vein, West Kootenay District, and the Birch Island deposit, North Thompson river, British Columbia, and the Madoc deposits, Hastings County, Ontario, are the most important in Canada.

**Gold Placer.**—In the report of the British Columbia Bureau of Mines, Herbert Carmichael, C. D. Moore and John D. Galloway compiled available information regarding the history, geology and statistics of placer gold mining in the province, with special reports upon Atlin, Queen Charlotte, Cariboo, Quesnel and Omineca mining divisions.

**Gold.**—C. E. Cairnes made a report upon the serpentine belt of Coquihalla area, Yale District, British Columbia.<sup>1</sup> Palæozoic volcanics and sediments, Jurassic slates and Cretaceous intrusives including peridotite, diorite, gabbro and some acidic dykes, are found in the area. The serpentine was developed from the peridotitic rocks. Most of the gold occurrences are of scientific interest rather than of commercial importance. The results obtained at the Aurum mine afford reasonable encouragement for further development. The richest values are associated with a heavy concentration of arsenopyrite in a talcose shear zone.

H. S. Bostock described the geology and ore deposit of Nickel Plate mountain, Hedley, B.C.<sup>1</sup> Triassic sediments and volcanics are intruded by a diorite-gabbro stock, sills and dykes, granodiorite and granite. Gold-bearing arsenopyrite in a gangue of metamorphic silicates occurs in a group of sedimentary rocks amongst which a nearly equal volume of igneous rock has been intruded in the form of sheets. The deposit is of the contact metamorphic type.

The geology of the area between Favourable and Sandy lakes, Patricia District, Ontario, was studied by M. E. Hurst.<sup>2</sup> Precambrian volcanics, sediments, basic intrusives and granite are found in the area. Mineralization is confined to belts of Keewatin-Timiskaming rocks. A gold-quartz vein containing galena and other sulphides was observed filling a fracture within gabbro-diorite. Molybdenite was found at a silicified granite-greenstone contact and in greenstone within a short distance from the granite.

In the Pickle Lake-Crow River area, Patricia District, Ontario,<sup>5</sup> M. E. Hurst found Precambrian greenstones, schists, iron formation and basic and granitic intrusives. Gold-bearing quartz veins occur in fracture zones intersecting Keewatin greenstones and iron formation.

The Caviar Lake gold area, Kenora District,<sup>4</sup> and the Fort Hope gold area, Patricia District, Ontario,<sup>3</sup> were studied by E. M. Burwash. In the Caviar Lake area, Precambrian volcanics, sediments, and intrusive granites and basic dykes are found. In the Fort Hope area, Precambrian volcanics, sediments, granite, gneiss and dykes and stocks of diabase are to be observed. In the Caviar Lake area, gold-quartz veins occur in granite, greenstone, basic rocks and in shear zones in quartz porphyry; in the Fort Hope area, gold-quartz veins are found in volcanics and sediments.