Mineral Springs.—R. T. Elworthy[2] describes the results of investigations made on the Radium hot springs in Kootenay park, the Fairmont hot springs in the Columbia valley, the Halcyon hot springs on the Upper Arrow lake, and Harrison hot springs on Harrison lake, British Columbia. Determinations were made of the temperature, the mineral content, and the radioactivity. Some of the hot springs of British Columbia are known to have therapeutic value and to compare favourably with European and American waters of similar character. They are admirably situated from the tourist point of view. The Radium hot springs and Fairmont springs compare favourably in radioactivity with the most radioactive waters known in the United States.

According to an investigation by P. S. Warren[1] into the variation in the rate of flow of the Upper Hot spring at Banff it is pointed out that "taking for granted the meteoric origin of the spring the intermittency of this spring may be easily explained. The water at the source will accumulate only during the summer months, as the supply is derived from rain and the melting snow and ice. During the winter months the supply is not replenished and the level of the water in the reservoir will be lowered in response to the continual drainage of water to the springs. . . . . The Upper Hot Spring having the highest altitude would be most easily affected by the lowering of the water supply . . . According to our explanation it was the exceptionally light precipitation during the year 1922 which was responsible for the failure of the spring during the following winter."

Hot springs are reported by W. A. Johnston[1] in the Liard valley near the mouth of Smith river and at intervals along the Liard to the head of the Grand canyon; by F. A. Kerr[1], around the base of volcanic cones south of Telegraph creek; and by J. R. Marshall[1], at the southeast corner of Lakelse lake. The springs at Lakelse lake are reported to contain sufficient lithium salts and sulphur to be of medicinal value.

Petroleum.—On account of the intense interest that is being taken in the oil possibilities of Alberta and Saskatchewan and particularly in the oil possibilities of the foothills of Alberta, the Geological Survey is making a careful study of the sedimentary formations of these two provinces and of the structural conditions that influence the accumulation of petroleum and natural gas. G. S. Hume[1] reports on the geology and structural features of the Turner Valley oil field. He describes the petroleum as occurring in the Blairmore and Kootenay formations of Cretaceous age and in a dolomitic limestone of pre-Fernie age. The intense folding and faulting within the foothills makes the determination of the structure exceedingly difficult. W. S. Dyer[1] and P. S. Warren[1] present descriptions of the geology of parts of southern Saskatchewan and remark on the oil possibilities. From rock exposures and from the logs of certain wells, G. S. Hume has succeeded in determining an anticlinal structure at the Alberta-Saskatchewan boundary near Battle river.

Attention has, from time to time, been directed to the oil possibilities of the Lake Ainslie area, Cape Breton island. The subject is discussed by W. A. Bell[1] in his description of the geology of this area.

In an admirable paper published in the bulletin of the American Association of Petroleum Geologists, F. H. McLearn and G. S. Hume describe the geology of the province of Alberta from the point of view of the petroleum geologist, and give correlated sections measured in different parts of the province.

G. S. Hume[5] after discussing the carbon ratios of coal as an indication of oil possibilities, and after giving details of analyses of Alberta coals, concludes that