tration of cobaltite with high gold content. The cobaltite is found in masses as large as walnuts mixed with magnetite and chalcopyrite. Gold values amounting to several ounces a ton are associated with this shoot. Bismuth and bismuthinite appear to be related to the localization of gold in or near the cobaltite. Lodestone carrying much free gold occurs abundantly near the surface.

Among the other important reports and articles are those by F. L. Finley[2] on the Kamiskotia gold area, by Ellis Thomson,[1] C. W. MacLeod and George S. Cowie[6] on the Goudreau area, by G. Vibert Douglas[3] on the Whiskey Lake area, by T. L. Gledhill[3] on the Lightning River area, and by Edward H. Orser[6] on Kirkland Lake gold district.

**Gypsum.**—The character of the gypsum deposits of Ontario, the uses of gypsum and the extent of the gypsum industry are described by George E. Cole.[3] The gypsum beds, which are found in the Salina formation along Grand river from one mile northeast of Paris to four miles southeast of Cayuga, vary in number from place to place and range in thickness from several inches to eleven feet. They are not continuous but form a series of lenticular masses varying in length from 100 yards to over half a mile. In the mine of the Ontario Gypsum Co. at Caledonia a bed has been worked for a length of 4,000 feet and a width of 3,000 feet with no signs of thinning.

The distribution of the gypsum deposits in Ontario, their geology and the theory of their origin, are described by Dr. W. S. Dyer[3], and an estimate of the available commercial gypsum of Moose River basin, Northern Ontario, is presented by J. Lanning[4].

**Iron.**—Considerable work has been done on the iron formations of Ontario in recent years with a view to determining their economic possibilities. Drs. W. H. Collins and T. T. Quirke[1], in describing the Michipicoten area, Ontario, point out that instead of a single iron formation repeated by folding, many formations exist and are interstratified with the Keewatin volcanics at several horizons throughout a thickness of thousands of feet. Where most fully developed they consist from top to bottom of:—(1) A banded silica member overlain sharply by a volcanic formation prevalently of basic composition, (2) a pyrite member or zone which grades downward into (3), a siderite zone which passes gradationally downward into a volcanic formation usually of acid composition and usually pyroclastic. A theory of the origin is presented. It has been estimated that the ore-body of the Helen range contains between 69,000,000 and 100,000,000 tons of ore in a depth of 1,700 feet, 11,000,000 tons of this lying above the level of the adit. Large bodies of pyrite are found and have been mined to a considerable extent.

A description of the Mississagi Reserve and Goulet river iron ranges is presented by Dr. E. S. Moore[5]. The iron formation occurs in intimately interbedded series of ellipsoidal greenstones, conglomerate and greywacke, and is associated with both sediments and lavas. There is very little ore exposed as yet in this area that would not require beneficiation for commercial treatment under present conditions.

The results of an examination by J. E. Gill[1] of a number of points in the Gunflint iron formation which extends southwestward from Loon lake at the head of Thunder bay across the International boundary at Gunflint lake, show that the formation is similar to the iron-bearing formation of the Mesabi iron mining district in the United States. The theory of the origin of the concentrations of merchantable ore is considered and suggestions are given as to localities that might be examined for the occurrence of bodies of limonite and hematite. No single bed or