

PHYSICAL CHARACTERISTICS OF CANADA.

river. For persons desiring the available information regarding the economic resources of this little known portion of Canada, "The Unexploited West" is an acceptable volume.

To review, even briefly, all the important publications that treat of the economic geology of the country is quite beyond the scope of this paper. Among these the following may be mentioned: (1) Report on the Copper Deposits of the Eastern Townships of the province of Quebec, by J. A. Bancroft; (2) Report on the Building and Ornamental Stones of Canada, Volume 3, Province of Quebec, by W. A. Parks; (3) Preliminary Report on the Clay and Shale Deposits of the Province of Quebec, by J. Keele; (4) Oil and Gas Fields of Ontario and Quebec, by Wyatt Malcolm; (5) Rainy River District, Ontario, Surficial Geology and Soils, by W. A. Johnston; (6) Clay and Shale Deposits of the Western Provinces, by Ries and Keele; (7) Preliminary Report on the Bituminous Sands of Northern Alberta, by S. C. Ells; (8) Coal Fields of British Columbia, by D. B. Dowling; (9) Geology of the Cranbrook Map-Area, British Columbia, by S. J. Schofield; (10) Geology of Franklin Mining Camp, British Columbia, by C. W. Drysdale; (11) Ore Deposits of the Beaverdell Map-Area, by L. Reinecke; (12) Texada Island, B.C., by R. G. McConnell; (13) Upper White River District, Yukon, by D. D. Cairnes; (14) A List of Canadian Mineral Occurrences, by Robt. A. A. Johnston; (15) Report on the Salt Deposits of Canada and the Salt Industry, by L. H. Cole. Nos. 3-6 and 8-14 were published by the Geological Survey, Nos. 2, 7, and 15 by the Mines Branch, Ottawa, and No. 1 by the Department of Colonization, Mines and Fisheries of Quebec.

Important contributions appear in the Summary Reports of the Geological Survey and of the Mines Branch of the Department of Mines, and in the publications of the Mining Departments of the various provinces, more particularly those of Quebec, Ontario, and British Columbia, where competent geologists and mining engineers have been employed to carry on original investigations.

A number of short papers have been published that are worthy of notice. The paper by Willet G. Miller and Cyril W. Knight, entitled Metallogenetic Epochs in the Pre-Cambrian of Ontario presents an age classification of the various ore deposits found in the Pre-Cambrian formations of Ontario, and points out the relative importance of the different geological epochs from the point of view of the mineral industry. J. B. Tyrrell in his paper on the Pre-Cambrian Goldfields of Central Canada, after describing the numerous gold deposits of the Canadian Shield, states that the veins are pre-Huronian in age and that they are generally associated with porphyritic rocks that may be regarded as apophyses from batholithic granitic intrusions of Laurentian and Algomian age. It is believed that most, if not all, of the auriferous veins were formed in the Algomian period. In a paper on the Oil, Gas and Water Content of Dakota Sand in Canada and United States, L. G. Huntley sets forth his reasons for thinking that the prospects for the discovery of natural reservoirs of petroleum in the Dakota sandstone are in general not good. The most promising portions of the formation in Canada are those in which the sandstone begins to play out and