

INTRODUCTORY LETTER

*To the Honourable F. COCHRANE,
Minister of Lands, Forests and Mines.*

SIR,—The need for a consolidated or General Index of the Reports of the Bureau of Mines has been apparent for some time, and is being more and more felt as the reports increase in number. The Bureau's annual volumes, beginning with its establishment in 1891, have chronicled the progress of the mining industry in Ontario; have recorded the discovery and development of the mineral fields which have successively claimed attention; have embodied the results obtained by competent investigators into the geology and mineralogy of the newer and less-known portions of the Province, and have, from year to year, endeavoured to correlate the mineral arts of Ontario with the steady advances everywhere being made in knowledge and in practice.

It has been the aim of the Bureau to carry on its work in such a way as to fulfil the object for which it was created, which, in the language of the Statute of 1891,* is "to aid in promoting the mining interests of the Province."

Necessarily, the methods adopted by the Bureau to this end have been both varied and practical in their nature. Working out the geology and defining the limits of mineral-bearing districts; ascertaining the extent and characteristics of the formations found to carry ores or mineral substances of any useful kind, and describing them so as to enable men unskilled in technical terms, as well as trained geologists, to recognize them in the field; collecting statistics of output and value of the mineral production; investigating problems of treatment and the possibility of utilizing neglected or waste materials; these and similar means have been employed as occasion called for, in the hope of obtaining results that would subserve the mineral industries of the Province and be of use to the prospector, the miner, and the investor. But no hard and fast line can be drawn between the "practical" and the "scientific." The practical is but the scientific put into use, and it often happens that knowledge won for its own sake, without hope or expectation of reward, and which does not appear to have any immediate economic bearing, proves sooner or later to be intrinsically utilitarian.

Accordingly, the Bureau has believed it advisable not to neglect certain of its functions, which may perhaps be regarded as less severely practical than those already mentioned. The geology of a great part of Ontario, for instance, is of pre-Cambrian age. Fossiliferous evidence being absent, and lithological characteristics often of uncertain interpretation, the determination and classification of the various formations and the ascertaining of their relationships to one another present many difficulties. Yet the successful decipherment of the geological record may shed much light upon questions arising in the actual exploitation of mineral deposits, and may provide or suggest a solution of problems often perplexing to the mining engineer. An instance in point is afforded by the Cobalt mining district. The interpretation of the geological phenomena of that region by Professor W. G. Miller, the Provincial Geologist, and his assistant, Mr. Cyril W. Knight, during the short period of the field season of 1904, involving, as it did, a revision of the work and conclusions of previous observers in districts containing the same rocks, provided a basis for working the deposits of that unique field which has proven of the utmost service in actual

*54 Vict., chap. 8, sec. 9.