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CONTENTS OF THIS NUMBER:

RECENT DEVELOPMENT OF MINING IN ONTARIO.

THE GOLD FIELDS.

Dr. A. P. Coleman, geologist and mineralogist of the Ontario Bureau of Mines, has prepared a preliminary report of his work during the past summer in the gold fields of Western Ontario. The details will be published in the next Report of the Bureau of Mines. Gold is found in Ontario, Dr. Coleman reports, in a territory nine hundred miles in extent, stretching from Hastings county in the east to the Manitoba boundary in the west. The gold of the eastern section, as at Deloro, has been known for thirty years, but could not be profitably worked under the old processes. The successful working of the Empress mine on the south shore of Lake Superior, in a series of bedded or lenticular quartz veins enclosed in green Huronian schist, near an outcrop of granite, is described. A very complete ten-stamp mill has been at work here for some months, and several bricks of gold have been obtained. The ore is not high in gold and is rather refractory, so that not more than 40 or 45 per cent. is extracted by the stamps.

"Attention is, however, specially directed at present to the main gold region of Ontario, which extends for more than two hundred and fifty miles from Moss Township westward, the preliminary report says, and has been proved to be at least one hundred and thirty miles wide, between the Little America mine, just south of the international boundary in Minnesota, and Lake Minnietakie, twenty miles north of the Canadian Pacific Railway. Here the number of locations, usually of forty acres each, taken up for gold mining purposes within the last four years, runs into the hundreds. Many of these will, of course, not prove workable mines; but, on the other hand, new finds are constantly being made, sometimes in quite new localities, sometimes in regions supposed to have been well explored years ago. In general the gold-bearing veins occur in green chloritic and hornblendic schist, probably of Huronian (Keewatin) age, and are of a bedded or lenticular kind; but sometimes they are found in masses of eruptive granite or gneiss which have pushed their way up through the Huronian schists. In the latter case the veins are commonly true fissures, and may be followed for considerable distances. In either case the contact of an eruptive rock with schist seems of importance, since the best veins are found within a mile or two of such a contact. In addition to gold-bearing veins there are deposits of other kinds which are worthy of attention, such as fahlbands, wide bands of schist heavily charged with sulphides, and showing a considerable amount of free gold; and dykes of felsite or quartz porphyry containing pyrites and gold; though up to the present none of these have been mined sufficiently to prove their value."

From Savanne, on the C.P.R., to Rat Portage the party traveled seven hundred miles by canoe and examined a large number of properties.

On Reserve Island, Seine River, H. B. Proudfoot was opening up a number of veins, but at the time of the visit development was not sufficiently advanced to admit of estimating the value of the location.

The Sawbill Lake mine occurs in a formation mapped by the Geological Survey as biotite-granite gneiss of the Laurentian, so that gold appears in satisfactory amounts in a rock hitherto looked on as barren.

The Harold Lake mine, on the Seine below Steep Rock Lake, owned by Wiley & Gibbs, has several veins, of which one small one is exceedingly rich. The country rock here is quite varied, granite of the greenish altered kind, often called protogine, piercing green and yellowish rocks of the Huronion.

"Shoal Lake may be looked on as the focal point of the Seine River and Rainy Lake gold region, hundreds of locations having been taken up during the last three years within a radius of ten miles of this small lake, and a very considerable amount of work has been done on several of the properties. Up to the present the most important mines have been found in an area of protogine granite about six miles in length from northeast to southwest and about a mile in width, lying between Shoal Lake and Bad Vermilion Lake. The whole granite area has been located, and scores of veins have been found, varying greatly in gold contents, but generally true fissure veins, with well-defined walls of slickensided talc or sericite schist."

In this district there are a number of very fine properties. The Ontario Gold Mine Co. owns the Foley mine. On one of their veins, the Bonanza, one shaft had been sunk to 210 feet and another 1,200 feet away to a depth of 113 feet, and more than 300 feet of drifting had been done at various levels at the time of our visit, July 17. The vein proves very uniform in