

silver veins will pass through the Archean strata and probably will be, in places, valuable lodes. The results of the developments of the lately discovered silver at Pays Plant will go far in deciding this matter.

In the paper I wrote on *Silver Mines of Thunder Bay* last year, I gave my reasons for supposing a deep original source for the silver of the Thunder Bay mines—the source from which the immense quantities of the native copper rocks were ejected. The silver veins are true fissures and adjacent to the great Lake Superior trough. They intersect the Animikie and Archean rocks and show practically no gold in either. The ores of iron, copper, lead and zinc, seem common to both the silver and gold veins of the district. It does appear that the real silver veins here are only to be found in the vicinity of the great basic eruptions of the Keweenawan age, while the real gold veins are found generally, if not always, in the vicinity of certain granitic eruptions of the Archean age. It seems probable that fissures formed in the vicinity of these eruptions did descend to their sources or liquid pools, and that they received their metallic contents largely from the same.

The silver discovery above referred to was made last fall in Archean rocks, near the mouth of the Pays Plant river. It is similar in kind to the Thunder Bay silver veins—the gangue being mostly spar with the silver both native and sulphide, with galena and iron pyrites, etc., through it. The rich samples, that yield several hundred ounces of silver to the ton, resemble the bonanza ores of the Animikie veins very much. According to the reports of reliable parties, it is large, well defined, and continuous for a long way. It can reasonably be expected to continue its character downwards on account of the enclosing formation. It has been the general belief that the silver in the Thunder Bay veins was due to lateral infiltration and that only in the Animikie rocks need a search be made for silver, notwithstanding several outside veins showed favorable indications. This last discovery in the outside or Archean rocks near the great Lake Superior trough is additional proof in favor of the showing that the silver in these veins has been derived from a deeper source than the Animikie strata.

The splendid showing of the deeper mining of the gold veins of late, as that of the Sultana, Regina, and Shoal Lake mines, is strong