

in this small part of this vein alone, from 60,000 to 75,000 tons of ore, must be considered very moderate. These estimates and some much higher have been made by a number of experts of large experience.

Perhaps the question of greatest interest is the average gold contents of the ore; and as this has been determined in a very thorough manner under my own supervision, I shall enter somewhat into the detail of the work, as showing what is considered essential in determining with safety the average value of a gold ore and of a mine.

Some three or four thousand tons of ore have been mined upon this property, and of this about a half has been milled or treated in a variety of ways, and the remainder is now on the dumps. The first tests of these ores were made from samples selected by various experts who have from time to time examined the property. Some of the results were as follows:

Twenty assays, made at the laboratory of the Geological Survey of Canada, of samples from the Marmora mines, gave an average of 1.6367 ounces of gold, equal to \$33.81 per ton of 2000 pounds. Twelve of these samples were from the Gatling mines, and gave an average of 1.9107 ounces of gold, or \$39.47 per ton.

Professor E. J. Chapman, of the University College, Toronto, says: "I have made assays of its ores from time to time, and I have never failed to obtain from any sample (mispickel), as a minimum value, at least \$50 per ton." "The following results were obtained from samples collected very carefully, with a view to obtain the average amount of precious metal held by the undressed ore: No. 1, or East Vein—Gold, \$73.50; silver,  $\frac{1}{4}$  ounce. No. 3, or Middle Vein—Gold, \$69.86; silver,  $\frac{1}{4}$  ounce. O'Neil Shaft, middle vein—Gold, \$60.26; silver,  $\frac{1}{4}$  ounce. On a former occasion, I obtained from a small sample of the Gatling ore \$112, and from pure mispickel \$156 per ton."

Mr. James Douglas, Jr., Mining Engineer, says: "A sample taken as fairly as possible from the ore-piles on the Gatling Company's property, the five-acre lot and the Hawkeye lot, gives me in gold 1 oz. 5 dwts., value, 25.84 per ton of 2000 pounds."

Professor W. T. Rickard, of London, says: "I took samples from the various shafts and openings on each claim, and ground them together. . . . I picked out a large quantity of pure mispickel, crushed and sampled, and assayed the same. . . . I deducted the estimated amount of quartz, associated with the mispickel, and then