

ton, or to about 1 oz. 17 dwts. per ton of galena. This amount is insufficient to defray the cost of its extraction, but the ore may prove richer at lower depths, or in other parts of the vein. I have also found a small amount of gold (3 to 4 dwts. per ton) in some samples of iron and arsenical pyrites taken from a narrow cross vein, which is cut at the shaft, and thrown 9 or 10 feet by the Galway lode. It would be advisable to have this pyrites vein occasionally tested, where cut by the drifts at different levels, as the amount of gold may be found to increase. The throw to which this cross vein has been subjected, shows the more recent origin of the baryta or galena veins; and surface indications observable in some of the surrounding lots, lead to the inference that these latter veins are not likely to be disturbed by slips or other interruptions. This, at least, may be safely predicted as far as regards the Galway and Peterborough lodes.

Drifting and stoping might be commenced at the present depth of the shaft on the Gulway lode, but this can scarcely be recommended. If the uncontrolled management of the works were under my charge. I would continue the sinking to another level of ten fathoms, and commence at the same time a second shaft about two hundred feet to the south-east of the present one. Owing to the fall of the ground, the new shaft at about 10 fathoms would reach the 20-fathom level of the other. The ore taken from these shafts ought to be at least sufficient to defray the cost of sinking. This second shaft would also fairly test the strength and richness of the lode: points known to us, at present, only by the 10-foot exposure in the shaft now being carried down. Until these works were completed, I would not think of erecting a dressing mill or putting up furnaces. A certain accumulation of ore, to feed these, should be on hand before starting, and also a certain amount of stoping ground under excavation, otherwise it will not be possible to keep the furnaces in constant blast.

The mill and furnaces ought to be near each other. A suitable spot for their erection might be found on the Company's ground; but a particularly desirable site, for works of this kind, occurs on a lot adjacent to the Bobeaygeon Road, within a short distance of the Company's property. The necessary ground, I understand, might be rented or easily secured. It is contiguous to a small creek issuing from Silver Lake. A dam could be placed on this creek at a little expense, and a good supply of water thus obtained. Timber for fuel and mining purposes occurs abundantly on the Company's location.

Notwithstanding the loss of metal entailed by its use, the Improved American, or Rossie Hearth, giving a blast heated by the combustion of the ore and fuel, will be found the most suitable furnace for the reduction of this ore. Pine or other wood is employed as fuel and very little is required, the heat being derived, in great part, from the combustion