

The Tunnel.

If the vein exposed on the hill above the tunnel that has been driven on the property extends downwards, the lead should be cut by the extension of the crosscut a few feet from the present face. In the event of the vein being cut by this tunnel, I would recommend that a level be driven along the vein in either direction from the tunnel to determine by systematic sampling and assaying, the limits and value of the pay chute, if any, on this vein, and that the pay ore be then developed in the usual way.

Plant Recommended.

For sinking the shaft at No. 1 Pit to the depth of 200 feet, I would recommend that a steam hoist, with self-dumping steel bucket of about half a ton capacity (a ship or cage can be substituted at a later stage), and a steam machine drill (either "Ingersoll Sergeant," or "Rand") be employed. For use with the steam drill, I have found it necessary that a good exhaust box, about 12 inches by 12 inches, should be carried down the shaft. The exhaust hose should be carried well up the exhaust box. The exhaust box greatly helps ventilation, besides carrying off the exhaust steam. The steam pipe and boiler should be covered by flaked mica covering, or some other good non-conductor, for economy in the use of fuel and to prevent condensation of steam. I have not found it economical to drive long levels with steam drills, as in a close tunnel the air becomes hot and stuffy by their use, and the miners will loaf, not so much from laziness as from sheer exhaustion. Levels can, however, be driven economically for a short distance by steam drills, but if there is no air compressor available, hand drilling should be substituted for the steam drill in driving levels when the atmosphere is made very hot by it. I may say here that I have always found it cheaper in the end, in western Ontario and elsewhere, to sink shafts and drive levels by contract rather than by miners working on "Company's Account." For sinking and driving beyond the 200 foot level, an air compressor should be obtained.

Hoists, Machine Drills, Boilers, and Self-Dumping Buckets and Ships, of standard make, can be obtained if desired in Canada, of such engineers as the Jenckes Machine Co., Sherbrook, Que., etc. In ordering a boiler for present use I would suggest that a boiler of larger capacity (horsepower) than is now absolutely necessary, be purchased, both for present economy in the use of fuel, and from the point of view of possible use with an enlarged plant hereafter. I am also in favor of spending a reasonable sum in providing "Economics" and other power-saving appliances to lessen the ultimate cost of a steam plant. The extravagant and wasteful use of power is unfortunately a very common fault in the operation of mines.

In conclusion, I would say that in my opinion, your property is the best of the many gold mining prospects I have seen in Western Ontario, but that at the