

### Development.

There are now three working shafts, situated near the southerly end of the property. No. 1 and No. 2—approximately 650 ft. apart—are connected by a drift on vein "F" at the first, or 50 ft. level. No. 2 and No. 3 shafts—110 ft. apart—are connected at the second level, which is 140 ft. below the collar of No. 2 shaft. No. 3 shaft has been sunk to a depth of over 200 ft., where a third level is being run east to the Nipissing boundary and west towards and under No. 2 shaft.

The total amount of shaft sinking, upraising, drifting and cross-cutting in these workings is over 4,500 ft.

Several thousand feet of surface work has been done, consisting of trenching, open cutting, and sinking prospecting shafts on veins and fissures occurring towards the northerly end of the property, but owing to the geological conditions there existing these operations failed to disclose any ore bodies of economic value. It has been demonstrated that the veins in that locality, with one exception, namely, the discovery vein on the Temiskaming & Hudson Bay location, do not carry values until considerable depth is reached, which confirms the experience already gained by this Company and referred to in the last Annual Report. By arrangement with the Temiskaming & Hudson Bay Company, a tunnel was run from the workings at their 100 ft. level towards and across the Trethewey north line, where the apex of a rich silver vein was encountered. This is now being developed from the 150 ft. level of the neighboring property, and from present indications should prove to be an important source of additional revenue to this Company. When sufficient development work has been done at the north end it is the intention of the management to sink a working shaft near the centre of the location. This will enable operations to be conducted from a central point and render it feasible to undertake systematic underground exploration of the property, which has as yet been developed within only a comparatively small portion of its area. There are numerous veins of no economic value showing at many places on the surface, some of which it is reasonable to assume may prove to occur under the same conditions as the north vein and be found to carry values at depth.

Diamond drilling operations were discontinued early in last year, after several veins had been located and important geological information gained, which has been turned to account in the conduct of mining operations.

Owing to the impossibility of accurately estimating the amount and value of ore placed technically in sight by development work on veins of the character existing in the camp, no attempt has been made to make such estimate, and the total cost of all exploratory and development work has been and will continue to be charged to operating expenses.

It is the intention of the Directors to continue an aggressive policy of development. Sinking will be resumed in the near future at No. 3 shaft, so as to carry on operations at greater depth on the various veins occurring in that locality. It is also intended to resume drifting from the lower level west from No. 1 shaft. This drift was abandoned in "Keewatin," where silver values had ceased to be found, although the vein remains strong and well-defined. Underlying the Keewatin a boss of diabase outcrops to the west, and the intention is to continue drifting through the Keewatin into the diabase in order to ascertain whether the silver values will re-occur when the vein enters the latter formation. In the event of this proving to be the case, sinking at No. 1 shaft may be resumed with confidence of reaching deeper ore deposits of value at that point.

### Concentrating.

The system of treating ores adopted at the mine is at present confined to crushing and hand sorting, followed by partial concentration in a double compartment Hartz jig, the hutch product from which is treated on a coarse concentrating table. By the above process the grade of ore formerly shipped as screenings, running from 100 to 200 oz. per ton, and carrying about

70 per cent. of country rock is made to produce a high-grade product running from 1,500 to 2,000 oz. per ton, thus saving a heavy expenditure for freight and treatment charges on the bulk of the material formerly shipped. These operations are exceedingly satisfactory, only a very low-grade ore being sent to the dump for future treatment.

The question of erecting a more elaborate concentrating plant has been deferred for many reasons, amongst them being the prospect of the establishment of a local reduction works for the complete treatment of Silver-Cobalt ores. The results obtained from actual practice in the concentrating plants already established in the camp show losses varying from 15 to 25 per cent. of the assay value of the ores dealt with, while the resultant product has to bear the existing high rates of freight and treatment charges before net returns are reached. If treated to a finish at local reduction works at the minimum of cost with a saving of 98 per cent. to 99 per cent. of the assay values, a large tonnage of low-grade ore will be rendered available for profitable treatment, which, more particularly at the present low price of silver, will barely stand the cost of existing methods.

A test run of low-grade ore is being made at the present time through the mill of the Northern Concentrator Company at Cobalt, the results of which will be reported at the Annual Meeting, at which there will also be produced maps and plans showing the position of underground workings as at 31st December, 1908.

ALEX. M. HAY, President.

Toronto, Jan. 16th, 1909.

Shareholders of Temiskaming have received the following circular:—

"Whereas the Pennsylvania-Cobalt Silver Mines, Limited, is a corporation with an authorized capital stock of \$1,000,000, divided into 1,000,000 shares of the par value of \$1.00 each;

"And whereas this company is the holder of 499,997 fully paid shares of the said capital stock, and 300 shares of the said capital stock are also held by the nominees of this company;

"And whereas the directors authorized and directed B. E. Cartwright and Alexander Faskin to negotiate for the purchase of 500,000 fully paid-up shares of Pennsylvania-Cobalt Silver Mines, Limited, at a price not exceeding \$100,000;

"And whereas on the 20th day of October, 1908, the said Cartwright purchased the said 500,000 shares, the price to be paid being 100,000 fully paid shares of the capital stock of this company;

"And whereas the said purchase by the said Cartwright has been confirmed by the directors of the company, and R. A. Cartwright has, at the request of the company, paid to the vendors the 100,000 fully paid shares of the capital stock of this company, being the purchase price of the said stock so purchased;

"Now be it enacted as a by-law of this company that upon the said 500,000 fully paid-up shares of the capital stock of Pennsylvania-Cobalt Silver Mines, Limited, being transferred to this company, 100,000 fully paid-up shares of the capital stock of this company be issued and allotted to the said R. A. Cartwright or to his nominees. And further that the said shares so to be allotted shall carry dividends as and from the said 20 day of October, 1908, and that the dividend declared payable on January 1st next, to shareholders of record at the close of business on the 18th day of December, 1908, to be paid to the said R. A. Cartwright on the said 100,000 shares so to be issued to him as aforesaid on the first day of January, 1909.

"Passed this 5th day of December, A.D. 1909."