MINING IN ONTARIO IN 1915

Ontario made a good record in 1915, showing very large increase in production of gold, nickel and copper and some increase in lesser metallic products. Against these increases were considerable decrease in silver output and a falling off in demand for structural materials.

Porcupine shows an increase of over $2,500,000 in gold production. The Hollinger mill was treating 7,034 tons per week in November as against 5,706 tons in January, and making a gross profit of $46,192 per week as compared with $37,746. The average value of the ore varies but little from month to month. It began in January at $11.10 per ton and in November was $10.34. The total output for the year was about $3,000,000. The Hollinger, which is paying 4 per cent. dividend every four weeks, or 52 per cent. per annum on its capitalization of $3,000,000, has a claim to be ranked among the great gold mines of the world. Its veins are numerous and persistent in depth, and some of them are large. A number of new and valuable veins have recently been found in underground exploration. A six-compartment central shaft is being steadily pushed down, and it is intended to operate the adjoining Acme claims, controlled by the same interests, in conjunction with the Hollinger. The Acme ore is treated in the Hollinger mill, but the returns are kept separate. The yield from the Acme for the twelve months was over $900,000.

During 1915 $300,000 was spent on increasing plant at the Hollinger and $1,560,000 was paid in dividends; but, nevertheless, the balance sheet at the end of the year showed an increase in surplus.

Further increase in milling capacity is under consideration. The metallurgy at the Hollinger mill has not been changed; it is still making use of the modified system of counter-current decantation, together with filtration of part of the residue. Stamp crushing has always been considered satisfactory at the Hollinger, and no change has been made in it.

The Dome mine also shows an improved position as compared with the beginning of the year. Exploration at the fourth and fifth levels has revealed the existence of much better ore than the mixed material on which the mill operated in 1914, and in consequence the average contents have risen in value from $4.25 per ton to $5.50. At this rate the production of the Dome in 1916 should be nearly equal to that of the Hollinger. In 1915 the gross return was about $1,325,000. Opened on a mass of quartz that showed remarkable value in spots, the Dome speedily took on the character of a low-grade mine. The richer ore, resembling that of the original Dome, has materially improved the Dome's prospects. The mill is being enlarged and is expected to be in shape next March to treat about 55,000 tons of ore per month.

No change in the metallurgy is under consideration, the system continuing to be stamp crushing, regrinding in tube mills and separate treatment of sand and slime.

McIntyre-Porcupine Mines, Ltd., produced about $750.000 in 1915. This company has greatly enlarged its sphere of operations by securing control of adjoining property, formerly held by the Jupiter and Pearl Lake companies. This section of Porcupine will now be developed more energetically and the production will be much larger when the plans for working the three properties jointly have been carried out.

Porcupine-Crown's operations during 1915 yielded about $600,000. The Porcupine-Vipond took out about $265,000, and Dome Lake about $105,000. The Schumacher mill began to obtain bullion in November. The outlook at Porcupine for the incoming year is undoubtedly good.

Of the other gold mining areas, Kirkland Lake is perhaps the most advanced. Here the new mill at the Tough-Oakes mines began to run shortly after the beginning of the year and has done excellent work. The veins of this mine though narrow are rich, and the ore treated averaged about $19.00 per ton, some $450,000 having been obtained altogether.

The Tough-Oakes mill, completed in 1915, is a highly developed cyanide plant for handling rich gold ore. It is referred to by Mr. Herbert A. Megraw in the following terms: "This is probably the most important plant finished and operated during the year. It certainly embodies the results of the most advanced technical study. The Tough-Oakes is a 100-ton all-slime cyanide plant, in which a ball mill replaces stamps. In this case a ball mill of the Hardinge type is installed, the product of which goes to two Dorr classifiers, each operating in closed circuit with a 5 x 20 ft. tube mill. Provision is made for the introduction of copper amalgamating plates should that at any time be considered necessary. The slimes from the Dorr classifiers go to a thickener, the overflow of which is clarified and precipitated. The pulp is sent to Dorr agitators and a series of continuous counter-current thickeners. Transfers of thickened pulp are effected by diaphragm pumps. From the final tank the thickened pulp is discharged by a spigot into a launder, whence it runs through a mechanical-sampling device and then to waste. It will be noticed that in this plant the newest developments of cyanide metallurgy are incorporated. The elimination of stamps from the metallurgical lay-out is a feature that is becoming increasingly frequent during the last few years, and one that will probably become the rule in the future. Continuous pulp-flow and automatic transfer of pulp in solution is another feature of the mill. The elimination of the slime filter for the tailings is a feature of importance. The mill design was under charge of the Butters-Johnston Engineering Syndicate."

Of other properties at Kirkland Lake, the Teck-Hughes has been acquired by Buffalo Mines, Limited, and the latter is building a large mill for treating the ore. Beaver Consolidated is another Cobalt company which has interested itself at Kirkland Lake, having late in the year taken an option on the stock of the Kirkland Lake Gold Mines, one of which company's claims, known as the McKane, adjoins the Teck-Hughes, and is said to carry high values. The Lake Shore is another company engaged in developing promising showings in the same neighborhood.

Several other districts have contributed to Ontario's gold production in 1915. The Canadian Exploration Co., at Long lake, near Sudbury, won about $260,000. In Munro township, quartz of phenomenal value was found in the Dobie-Leyson claim, now known as the Croesus mine. From 800 pounds of rock $40.000 in gold was recovered by hand, and in a shaft 125 feet deep, with a little drifting and crosscutting, it is re-