OTHER KINDS OF MINING IN ONTARIO.

Some Facts about Mineral Development in the Province outside the Temiskaming District.

The wide range covered by Ontario's mineral production is manifested by the inclusion of ten metallic and eight non-metallic substances in the recorded output of 1904, which were lacking in 1895:—

Metals.	1895.	1904.	Non-Metals.	1895.	1904.
	$	$		$	$
Silver	nil	111,887	Actinolite	nil	102
Platinum	nil	10,452	Arsenic	nil	903
Palladium	nil	18,564	Carbide of Calcium	nil	152,295
Cobalt	nil	30,620	Corundum	nil	150,645
Iron Ore	nil	108,068	Feldspar	nil	21,966
Pig Iron	nil	1,811,664	Graphite	nil	4,700
Steel	nil	1,188,349	Iron Pyrites	nil	43,716
Lead Ore	nil	11,000	Talc	nil	2,919
Pig Lead	nil	2,500			
Zinc Ore	nil	3,700			

Before the Cobalt discoveries almost all the silver of Ontario came from the Lake Superior region. The "Silver Islet" mine found on a rock in the lake only eighty feet across, by Thos. Macfarlane in 1868 yielded about $3,500,000 worth of silver. The assemblage of minerals in that and other mines west of Port Arthur seems to be very similar to that in the Temiskaming district, though to a less rich extent.

In association with the nickel-copper ores of the Sudbury region occurs that highly valuable metal, platinum. Altogether in the years 1902, 1903 and 1904, the quantity of platinum produced in that district was 4,62[illegible] ounces valued at $90,109.

Palladium, another metal similar in some respects to platinum; and even more rare, also occurs at Sudbury. The Oxford Copper Company produced in 1902-04 8,540 ounces, valued at $166,530.

Before Temiskaming Discovery.

Previous to 1904 the last reported production of Cobalt in Ontario was in 1894, when the return was 3¼ tons, valued at $1,500. Up to and including 1894 the production had been 30¾ tons, valued at $14,613. A yield of 29 tons in 1904, worth $36,620 came from the nickel-bearing ores of Sudbury and the silver-cobalt-nickel-arsenides of Coleman township. Through recent changes in treating processes at Sudbury no cobalt has been produced there during the last year or two.

A feature of the nickel production of the Canadian Copper Company's Creighton mine, which is the most important in that line in the Sudbury district, is the fact that the average value of the ore has steadily risen. In 1901 for instance, the average nickel contents of the ore averaged 1.64 per cent.; in 1902 it was 2.54 per cent., and in 1904, it was 4.58 per cent.

The production of iron in Ontario is probably of greater volume than popularly supposed. In 1904, shipments were 128,253 tons, while the output in 1903 was 208,154 tons. The chief mine is the "Helen" in Michipicoten. But the probabilities are that deposits are scattered way through a large area east of that district, perhaps all the way to Temagami, as referred to further on.

Among the minor mineral resources of Ontario, corundum should not be forgotten. The production of the mines at Raglan (Renfrew County) and Carlow township (Hastings County) in 1904 was 1,665 tons, worth $150,645, compared with 1,119 tons and $87,600 in 1903.

The following particularizes some of the chief mineralized districts.

Gold is Not Plentiful.

Mining in Western Ontario for gold has been disappointing, perhaps because capital has been dispersed among a great many small companies working on more or less unlikely veins, instead of being concentrated in strong hands on a few good prospects. There are exceptions of course. One is the "Sultana" mine, where the main shaft at last report was down 560 feet. The perseverance of the management has been rewarded by the discovery of more pay ore.

The forthcoming erection of a blast furnace at Port Arthur to reduce the ores from Loon Lake is an indication that the importance of these deposits is becoming recognized.

In this region too is situated the Williams mine where stripes of high-grade Bessemer hematite have been made, which are smelted at the Lake Superior Corporation's furnaces at the Soo. The "Helen" mine, also, resumed opererations, when the position of the Lake Superior Corporation became more settled. It has been shipping at the rate of 1,000 tons a day.

Considerable attention has been given during the last year or two to copper. The results of concentration by the oil process are being watched with interest, as should it prove successful, it will bring several low-grade prospects into the market.

Since the Canadian Copper Company's smelter plant was started and the re-opening of the Mond Nickel Company's mines and smelter at Victoria mines, the Sudbury nickel mines have shown a busy scene. The Canadian Copper Company has been active in adopting the most economical modern ideas in all parts of their works, and many improvements are visible,

Loon Lake East of Port Arthur.

A good deal of exploratory work has been done in the Animikie iron-bearing areas near Loon Lake, east of Port Arthur. There was considerable production of silver also forty years ago, but the interest chiefly centres on iron. Geologists say there has been a continuous period of deposition, and it is believed that the general processes and agencies which produced the iron-bearing formations here are analogous to those which produced those of the ranges on the south shore of Lake Superior.

The localities in which the greatest concentration of iron has so far been proven are in the area four miles west, two south and one mile east of Loon Lake Station. Two main types of structural conditions are visible. In one case, the lower iron-bearing horizon is found lying on the south slopes of the hills, with a flat dip to the south. In such,

Auction Sale of Town Lots at White River, North of Cobalt, in a Rich Farming and Timber Country, Opened up this Summer.

exploratory work has been done by test-pitting and diamond drilling, and results show that often the lower iron horizon has been extensively altered to iron oxide, while there is present considerable lean silicious material.

The average sample is low-grade. The other type of structural condition is where there has been severe local deformation. In these areas the diamond drill has been put down, but the main work has been by test-pitting and driving short drifts into the iron formation on the hill sides. The important question, as in the other type of formation, is the economic separation of the lean from the commercial grade material.

Iron Ranges of Michipicoten West.

This area lies on the north shore of Lake Superior, encircling Michipicoten Bay. Its eastern part is comparatively well known, as it contains the working mine, "Helen," the Josephine prospect and the old mine on Gros Cap, worked nearly thirty-five years ago. The whole area is a region of hills and valleys, rivers and lakes. The timber is usually evergreen, but, growing on rocky or light, sandy soil, is not particularly healthy or luxuriant. Little of the land is adapted to cultivation. Most of the rocks in the formation similar to that in which the Helen mine is located are of a hard, resistant nature, and are fractured and jointed rather than cleaved.

A striking feature in all large ore bodies in regions like the Michipicoten is the usual presence of an impervious basin beneath the ore, formed either of igneous schist, sedimentary slate or eruptive rock. At Iron Lake the conditions are ideal for the development of ore bodies, in conformity with the most recent geological theories.