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	The Bureau of Mines report gives				
PRODUCTION IRON AND STEEL, 1902 TO 1906.					
Schedule.	1902	1903	1904	1905	1906
Ontario ore smelted..... tons	92,883	48,092	50,423	61,960	101,569
Foreign ore smelted..... "	94,079	103,137	173,182	383,459	396,463
Limestone for flux..... "	58,885	49,426	61,566	121,052	153,702
Coke..... "	111,390	96,540	135,108	262,415	304,676
Charcoal..... bush.	968,623	932,630	1,821,270	3,387,869	811,926
Pig iron..... tons	112,687	87,004	127,845	256,704	275,558
Value of pig iron.....	\$1,683,051	\$1,491,696	\$1,811,664	\$3,909,527	\$4,554,247
Steel..... tons	68,802	15,229	51,002	138,387	167,026
Value of steel.....	\$1,610,031	\$304,580	\$1,188,349	\$3,321,884	\$4,202,278

NICKEL PRODUCTION.

The output of the nickel mines of the province, 10,936 tons, was the largest yet recorded, being 1,433 tons in excess of the production of 1905, which was the greatest up to that time. Of this 160 tons was derived from the silver-cobalt mines of the Cobalt district, in which nickel occurs in the mineral niccolite, or nickelite, the remainder being from the nickeliferous pyrrhotite mines of Sudbury.

The producing companies in Sudbury district are the Canadian Copper Co., and the Mond Nickel Co. The former raised 219,220 tons of ore from the Creighton mine, and 70,515 tons from Copper Cliff No. 2. The ore extracted by the Mond Co. came entirely from Victoria mine No. 1.

The works of both of these companies are thoroughly well equipped, and furnish excellent examples both of mining and smelting practice. The ore is first roasted in open-air heaps to expel the sulphur and then smelted into matte, which is treated in Bessemer converters and raised in metallic contents of nickel and copper to about 80 per cent. In this form it is shipped for final separation of the metals by the Canadian Copper Co., to Constable Hook, New Jersey, and by the Mond Nickel Co., to Clydach, Wales. The number of workmen employed in the nickel-copper mines and works in 1906 was 1,417, and the amount of money paid out in wages was the large sum of \$1,117,420. The nickel mining industry continues to play, as it has long played a highly effective part in the development of that part of northern Ontario in which it has its seat.

Following are particulars of the nickel-copper industry for 1906 and the four preceding years:

NICKEL-COPPER MINING 1902 TO 1906.					
Schedule.	1902	1903	1904	1905	1906
Ore raised..... tons	269,538	152,940	203,388	284,090	343,814
Ore smelted..... "	233,388	220,937	102,844	257,745	340,059
Ordinary matte produced.... "	24,691	30,416	19,123
High grade matte produced.... "	13,332	14,419	6,926	*17,388	*20,364
Nickel contents..... "	5,945	6,998	4,743	9,503	10,776
Copper contents..... "	4,066	4,005	2,163	4,525	5,260
Value of nickel.....	\$2,210,961	\$2,499,068	\$1,516,747	\$3,354,934	\$3,839,419
Value of copper.....	\$616,763	\$553,646	\$297,126	\$688,993	\$806,413
Wages paid.....	\$835,050	\$746,147	\$570,901	\$833,822	\$1,117,420
Men employed.....No.	1,445	1,277	1,063	1,176	1,417

* Bessemer matte.

In 1906, 26,741 cords of wood, valued at \$61,571, were used, principally in roasting the green ore, and 59,868 tons of coke, worth \$380,732 for smelting the ore. The nickel contents of the ore smelted last year, as estimated on the quantity of Bessemer matte produced, and making no allowance for loss in roasting or smelting, were 3.16 per cent., and copper 1.51 per cent.

in detail the history of the remarkable Cobalt discoveries and the subsequent development of silver and silver mining, as shown in the first statistical table herewith.

PORTLAND CEMENT.

In the non-metallic class the record for expansion is held by Portland cement. Beginning in 1891 the production has increased from 2,033 barrels valued at \$5,082 to 1,598,815 barrels in 1906, valued at \$2,381,014 and the number of cement works increased from one to twelve. The raw materials, marl and clay, are abundant and the demand for cement has been, and still is, very active. In consequence of this demand the increase in production has been accompanied by an advance in price, the average cost per barrel at the factory having risen from \$1.42 in 1905 to \$1.48 in 1906. It seems in every way likely that the production and sale of cement will show a corresponding increase in 1907.

Nearly all of the Portland cement manufacturing hitherto established in Ontario have made use of marl as one of the ingredients, but there is a tendency towards substitution of solid limestone, where this can be obtained of suitable composition, as it is believed the cost of production can in this way be lessened. The limestone beds at Point Ann on the Bay of Quinte are utilized by the Belleville Portland Cement Co., but all the other plants in the list given above use marl.

The Portland cement plants which were in operation during 1906 were the following: Imperial Cement Co., Owen Sound. Belleville Portland Cement Co., Point Ann. Lakefield Portland Cement Co., Lakefield. Canadian Portland Cement Co., Marlbank. National Portland Cement Co., Durham.

Hanover Portland Cement Co., Hanover. Two plants, those of the Colonial Portland Cement Co., Warton and the Superior Portland Cement Co., Orangeville, had not been completed at the close of 1906. The production since 1891 has been as follows:

PRODUCTION OF PORTLAND CEMENT, 1891 TO 1906.		
Year.	Bbl.	Value.
1891.....	2,033	\$5,082
1892.....	20,247	47,417
1893.....	31,924	63,848
1894.....	30,580	61,060
1895.....	58,699	114,332
1896.....	77,760	138,230
1897.....	96,825	170,392
1898.....	153,348	302,096
1899.....	222,550	444,228
1900.....	306,726	598,021
1901.....	350,660	563,255
1902.....	522,899	916,221
1903.....	695,260	1,182,799
1904.....	880,871	1,239,971
1905.....	1,254,360	1,783,451
1906.....	1,598,815	2,381,014

BRICK, TILE AND SEWER PIPE.

The output of common brick, according to returns to the Bureau, was 300 million worth \$2,157,000, as compared with 250 million valued at \$1,937,500 in 1905. Pressed brick rose from 26,000,000 worth \$234,000 in 1905 to 39,860,000 worth \$337,795 in 1906. The brick yards in and around Toronto have for several years had difficulty in meeting the demand, and prices in that market have increased in consequence. Taking the province as a whole, however, there has been a slight fall in the average price of bricks as compared with 1905, the value having gone back practically to the level of 1904. The tendency to higher prices for bricks has been manifest for a series of years, as the following figures show, 1906 being the first year in which this tendency has been suspended.

Year.	Price per M.
1901.....	\$5 73
1902.....	6 41
1903.....	6 78
1904.....	7 15
1905.....	7 75
1906.....	7 19

The advancing prices have beyond doubt been due to the increasing cost of labor, fuel and plant, as the raw material is of comparatively little monetary value, and the supply is practically inexhaustible and distributed throughout the whole province.

There are three factories for the production of sewer pipe, namely those of the Toronto and Hamilton Sewer Pipe Co., at Hamilton, the Ontario Sewer Pipe Co., at Mimico, and the Dominion Sewer Pipe Co., at Swansea. The first named plant was burned down in April, 1906, but new buildings were erected and the works again put in operation about the beginning of December.

SALT.

From the salt wells of the province, 50,414 tons of salt were raised in 1906, having value of \$367,738. The bulk of the salt made in Ontario comes from the wells of the Canadian Salt Co., Windsor; the other producers being the Exeter Salt Co., Exeter; Gray, Young & Sparling, Limited, Wingham; R. & J. Ransford, Clinton and Stapleton; Ontario People's Salt & Soda Co., Kincardine, and the Parkhill Salt Co., Parkhill. The