

Sudbury.—The nickel-bearing rocks of the Sudbury district, with a width of about two and one-half miles, form a wide ellipse 36 miles long and 13 miles broad. The ores consist mainly of a mixture of pyrrhotite and chalcopyrite intimately associated with more or less country rock. The nickel occurs in the pyrrhotite as pentlandite and varies somewhat in amount. The ore deposits are of three main types — marginal deposits, offset deposits and vein-like deposits — the marginal having proved the most productive. The Creighton mine, which may be called the greatest nickel mine in the world, is an example of a marginal deposit. The Copper Cliff mine is an example of an offset deposit, while the Vermilion mine is probably the best example of a vein-like deposit, probably formed by hot, circulating waters. The ore mined in the district varies considerably in richness, the average metal content being about 2 to 3 p.c. of nickel, $1\frac{1}{2}$ to 2 p.c. of copper and 45 p.c. of iron. Cobalt, gold, silver, platinum and palladium are nearly always present in very small quantities. The matte produced by the International Nickel Co. averages about 54 to 56 p.c. of nickel and about 24 p.c. of copper, while that of the Mond Nickel Co. contains about 41 p.c. each of nickel and of copper.

World's Production.—The world's production of nickel was about 40,632 short tons in 1925, of which output 90.0 p.c. was Canadian in origin, while about 10.0 p.c. was derived from the oxidized ores of New Caledonia. The proved deposits of nickel ore in Canada are estimated to contain 2,000,000 tons of nickel, and there are at present large reserves undeveloped.

24.—Quantity and Value of Nickel Produced in Canada during the calendar years 1889-1926.

Years.	Quantity.	Value.	Years.	Quantity.	Value.	Years.	Quantity.	Value.
	lb.	\$		lb.	\$		lb.	\$
1889.....	830,477	498,286	1901...	9,189,047	4,594,528	1913...	49,676,772	14,903,032
1890.....	1,435,742	933,232	1902...	10,693,410	5,025,903	1914...	45,517,937	13,655,381
1891.....	4,035,347	2,421,208	1903...	12,505,510	5,002,204	1915...	68,308,657	20,492,597
1892.....	2,413,717	1,399,956	1904...	10,547,882	4,219,153	1916...	82,958,564	29,035,498
1893.....	3,982,982	2,071,151	1905...	18,876,315	7,550,526	1917...	82,330,280	33,732,112
1894.....	4,907,430	1,870,958	1906...	21,490,955	8,948,834	1918...	92,507,293	37,002,917
1895.....	3,888,525	1,360,984	1907...	21,189,793	9,535,407	1919...	44,544,883	17,817,953
1896.....	3,397,113	1,188,990	1908...	19,143,111	8,231,538	1920...	61,335,706	24,534,282
1897.....	3,997,647	1,399,176	1909...	26,282,991	9,461,877	1921...	19,293,060	6,752,571
1898.....	5,517,690	1,820,838	1910...	37,271,033	11,181,310	1922...	17,597,123	6,158,998
1899.....	5,744,000	2,067,840	1911...	34,098,744	10,229,623	1923...	62,453,843	18,332,077
1900.....	7,080,227	3,327,707	1912...	44,841,542	13,452,463	1924...	69,536,350	12,126,739 ¹
						1925...	73,857,114	15,946,672 ¹
						1926...	65,714,294	14,374,163 ¹

¹A change in the method of computing the value of nickel produced accounts for the drop in value after 1923. ²Preliminary figures.

6.—Cobalt.

The major portion of the world's supply of cobalt has for almost two decades been derived from the silver-cobalt-nickel arsenides of the Cobalt district, the silver refineries at Thorold and Deloro in Ontario having practically controlled the world's production in recent years. Large deposits of cobalt-bearing ores are known to occur in South Africa, but up to the end of 1925 production from this field did not seem to have affected the market for Canada's products.

The ore bodies at Cobalt, discovered in 1902, carry silver, cobalt, nickel and arsenic. About 82 p.c. of the productive veins occur in the Cobalt series (con-