

production increased continually in trend to 92,500,000 lb. in 1918, constituting a record. After a slump to 19,293,000 lb. and 17,597,000 lb. in 1921 and 1922 respectively, there was an increase to 73,857,114 lb. in 1925, followed by a drop to 65,714,294 lb. in 1926 and 66,798,717 lb. in 1927.

With the exception of three war years 1916-18, 1925 had the largest production in the history of the industry. Naturally the requirements for munitions and armament during the war created high prices and a very active demand for nickel, stimulating a large production. With the coming of peace this war market vanished and the nickel industry suffered particularly severely in the general depression that followed. However, the producing companies and especially the International Nickel Co. instituted researches to find new peace-time uses for the metal. The success attending their efforts in that direction accounts very largely for the marked recovery in production during the past three years. The automobile industry, electrical machinery, new submarine cables and various nickel alloys are all helping to absorb this increased production.

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, 1½ to 2 p.c. of copper and 45 p.c. 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 1889-1927.

Years.	Quantity.	Value.	Years.	Quantity.	Value.	Years.	Quantity.	Value.
	lb.	\$		lb.	\$		lb.	\$
1889.....	830,477	498,296	1902...	10,693,410	5,025,903	1915...	68,308,657	20,492,597
1890.....	1,435,742	933,232	1903...	12,505,510	6,002,204	1916...	82,958,564	29,035,498
1891.....	4,035,347	2,421,208	1904...	10,547,883	4,219,153	1917...	82,330,280	33,732,112
1892.....	2,413,717	1,399,956	1905...	18,576,315	7,550,526	1918...	92,507,293	37,002,917
1893.....	3,962,982	2,071,151	1906...	21,490,955	8,948,834	1919...	44,544,883	17,817,953
1894.....	4,907,430	1,870,988	1907...	21,189,793	9,535,407	1920...	61,335,706	24,534,282
1895.....	3,838,525	1,360,984	1908...	19,143,111	8,231,538	1921...	19,293,060	6,752,571
1896.....	3,397,113	1,158,990	1909...	26,282,991	9,461,877	1922...	17,597,123	6,158,993
1897.....	3,997,647	1,399,176	1910...	37,271,033	11,181,310	1923...	62,453,843	18,332,077
1898.....	5,517,690	1,820,838	1911...	34,098,744	10,229,628	1924...	69,536,350	12,126,739 ¹
1899.....	5,744,000	2,097,840	1912...	44,841,842	13,452,463	1925...	73,857,114	15,946,672 ¹
1900.....	7,080,227	3,327,707	1913...	49,676,772	14,963,032	1926...	65,714,294	14,374,163 ¹
1901.....	9,189,047	4,694,823	1914...	45,517,937	13,655,381	1927*...	66,798,717	15,262,171 ¹

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