## HALF-YEARLY REPORT OF ONTARIO BUREAU OF MINES.

A CCORDING to the report of the Ontario Bureau of Mines the returns of products for the first six months of 1916 shows a material increase in value of all metals over that for the first six months of 1915, with the single exception of iron ore.

So far as gold is concerned, if the present rate of production is maintained, Ontario should reach the \$10,000,000 mark for 1916, as compared with \$8,500,000 for 1915. Of the total yield, the Porcupine camp contributed all, with the exception of \$545,434 produced by the Croesus in Munro township, the Rognon near Dryden, the Tough-Oakes at Kirkland Lake and the



Fig. 11.—Type of Steel Castings Used for Bottom Pins, Bloor Street Viaduct. (See opposite page.)

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Canadian Exploration Company at Long Lake, near Sudbury.

Since the beginning of 1916 the price of silver has advanced considerably, the average being  $62\frac{1}{2}$  cents per ounce, low  $56\frac{1}{2}$  and high  $77\frac{1}{4}$  cents. As a result, production has been stimulated, and the value as compared with 1915 figures shows a considerable increase.

With the outbreak of war the European market for cobalt oxide was suddenly cut off. However, new markets and new uses for metallic cobalt have improved the situation. High-grade steels are now produced from cobalt alloys. Metallic cobalt production is greatly in excess of last year.

The output of metallic nickel shows an increase over the 1915 production, which was not marketed during the six months' period.

Apart from the nickel-copper deposits of Sudbury, there has been a revival of copper ore mining in Ontario, partly due to the high price of the metal.

The smelters of the Canadian Copper Company at Copper Cliff and the Mond Nickel Company at Coniston

are turning out nickel-copper matte at an unprecedented rate. The production, as compared with the first six months of 1915, shows an increase of nearly 40 per cent. The valuation of the metallic contents of the matte has been made on a basis of 10 cents per pound for copper and 25 cents for nickel. The figures given for metallic copper and nickel separately show that the prices were over 18 and 42 cents per pound, respectively.

Molybdenite occurs widely in Ontario, but is mined chiefly in Renfrew county. It is wanted at the present time for use in the manufacture of high-speed tool steel, and for this purpose molybdenum will probably replace tungsten to some extent. The demand for molybdenum steel to be used in munition factories comes largely from the allied nations, Britain, France and Russia. Molybdenite concentrates containing 85 per cent. or more of  $MoS_2$  are worth about \$1 per pound. Ferro-molybdenum is now (September) being manufactured for the first time in Canada by the Orillia Molybdenum Company at Orillia, and the Tivani Electric Steel Company at Belleville.

The only shipments of iron ore were from the Magpie mine, operated by the Algoma Steel Corporation of Sault Ste. Marie. Although iron ore production shows a decrease as compared with the same period in 1915; that of pig iron shows a material increase, both in tonnage and value.

QUANTITY			VALUE	
1915		1916	1915	1916
The Line	- 11	11212	8	\$
173,021	oz.	235,060	3,570,072	4,822,740
1.101.909	1	10,267,743	5,188,763	6,188,269
	Ibs.	77,795		14,368
		121.817		103,677
and the state	23,26	13,933		5.899
		-12.631		13.075
141 500		401.408	56,812	204,638
8 523	tons	11.4261	1.704.600	2.285.096
15 182	com	20.651	7 591 000	10 325 766
124 077		80,698	288 296	243.268
225,940	**	295,349	2,856,040	4,424,496
	1915 173,021 1,101,909  141,500 8,523 15,182 134,077 225,940	1915 173.021 oz. 1,101.909 11,101.909 141.50 8,523 tons 15,182 134.077 225,940	1915 1916   173,021 oz. 235,060   1,101,909 , 10,267,743    ibs. 77,795    ibs. 77,795    i13,933    141,500 , 401,408 8,523   8,523 tons 1,4264   15,182 , 20,6514 134,077   225,940 , 295,349	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

## ASPHALT PRODUCTION IN UNITED STATES.

The total amount of natural asphalt produced in the United States during 1915 was 75,751 tons. The yearly production was small until 1888. Since that year it has ranged from 40,000 to 100,000 tons. In 1915, 21,739 tons came from Utah, 19,311 tons from Kentucky, 17,794 tons from California, and 16,907 tons from Oklahoma. There was also a small amount from Texas, which is included with Kentucky in the above figures. In the same year, 138,248 tons of natural asphalt was imported, 101,502 tons of which was from Trinidad and Tobago, and 32,098 tons from Venezuela. This is rather less than the average amount imported during the past five years. The reason for the decreasing consumption of natural asphalt in the face of the increased demand for asphalt products is the growing importance of the manufactured asphalt industry. In 1902, 20,826 tons of asphalt was manufactured from domestic petroleum, while in 1915. 664,503 tons was produced from the same source. In addition, asphalt made from Mexican petroleum, which was negligible in amount until recently, amounted to 388,318 tons in 1915.

Great Britain has purchased the entire supply of synthetic nitrate in Norway, thereby preventing exportation of this requisite in the manufacture of ammunition by Germany, according to a statement made at San Francisco, Cal., recently, by J. M. Humphreys, manager of a large British nitrate corporation, who was in that city en route to Chile. Mr. Humphreys stated that he plans to put into operation at the nitrate fields of his company in Chile a new process for extracting and elaborating nitrate that will cut the cost of production in half.