

To show clearly the benefit derived from the creation of this storage, the power-percentage of time curve, shown herewith, has been plotted. The curve indicates that the minimum continuous capacity of the Eugenia Falls site is about 1,200 h.p., while under the conditions existing as a result of the present scheme of development, the continuous capacity available will be about 3,130 h.p., a capacity which, under natural conditions, would only be available for 73 days in each year. This curve shows that an additional 50 per cent. of power is derived from the impounded water, while the continuous capacity of the stream is increased to nearly three times its natural minimum capacity.

The accompanying storage-power curve indicates that with a reasonable deduction for evaporation and seepage, a commercial load of 6,000 e.h.p. can be carried with an annual load factor of 53 per cent., or a commercial load of 8,000 e.h.p., with an annual load factor of 38 per cent. It also indicates that sufficient capacity has been provided in the present storage reservoir to equalize the flow of the river for all ordinary years.

When the full capacity of the plant has been reached, operating conditions may indicate the desirability of providing additional storage as insurance against the possibility of three abnormally dry years coming in succession. In such event the additional storage necessary can be obtained a few miles up the river near the village of Feversham, when 300 million cubic feet of storage can be secured at reasonable expense. The creation of this additional storage would provide sufficient protection against any scarcity of water arising from an abnormally protracted period of light precipitation, although there is little likelihood of a condition ever arising that will necessitate additional storage at Eugenia.

MOVING TRANSMISSION TOWERS ON WELLAND CANAL SITE.

Some very interesting notes appear in the recent report (for 1914) of the Hydro-Electric Power Commission of Ontario relative to the moving of several steel towers belonging to the high-tension transmission system that crosses the site of the new Welland Ship Canal. On account of the extent of excavation and construction work on the Canal it was found necessary to lengthen the transmission spans across it from 407 to 532 ft. To do this, one standard tower was removed from the transmission line, one anchor tower was moved 45 ft. and the two high towers supporting the Canal crossing span were moved, one 63 ft. and the other 62 ft.

The important part of this construction was the moving of the two latter towers. Each weighed twenty-five tons, and each was supported on a heavy reinforced concrete footing. The overall height was 168 feet. For many reasons it was decided to move these towers standing, and for this purpose heavy timber skidways were built, the towers well guyed, and then pulled along the skidways to the new concrete foundations.

In order to ensure continuous power during this work, two temporary lines were built, one on the north-erly side of the crossing to carry circuit No. 1 and the other on the southerly side for circuit No. 2. These two crossings were made far enough apart to allow room for the largest lake vessel, and by this means a boat could pass through with very little delay and without having a complete shut-down on the power circuits.

ONTARIO MINERAL INDUSTRY IN 1914.

THE growth which marked the output of the mining industry of Ontario during the previous decade underwent a decided check in 1914, according to the latest report of the Department of Lands, Forests and Mines. The value of the production was \$46,632,105, as compared with \$53,232,311 in 1913—a decrease of \$6,600,206, or 12.3 per cent. It fell below the level of 1912 by \$1,641,406, but considerably exceeded that of any preceding year. The decrease was somewhat greater in amount in the metallic than in the non-metallic products, being \$3,638,438, as compared with \$2,961,768. The causes of this diminution were the general depression in business which became apparent early in the year, and the outbreak of hostilities in Europe.

Of gold the production was the largest in the history of the province, 268,942 ounces, worth \$5,529,767. Much the greater part came from Porcupine, the Hollinger mine being the leading producer. The Dome, Porcupine Crown and McIntyre Porcupine mines also contributed largely. There were in all 608,200 tons of ore crushed, the average yield being \$9.14 per ton.

The output of silver in 1914 was 25,999,374 fine ounces, being a decrease, as compared with 1913, of 3,725,557 ounces, or 12.5 per cent., or 17.4 per cent. as compared with 1911, when the Cobalt mines were at their maximum and produced 31,507,791 ounces. The return to mining companies was \$13,209,726, an average of 50.807 cents per ounce. The production by camps was as follows:—

	Ounces.	Value.
Cobalt proper	24,940,613	\$12,678,181
Casey township	499,643	236,298
South Lorrain	104,665	54,310
Gowganda	399,300	211,184
	25,944,221	\$13,179,973
Silver recovered from auriferous ores	55,153	29,753
Total	25,999,374	\$13,209,726

Since the opening of the mines at Cobalt the production of silver has amounted to over 211 million ounces, having a value of more than 111 million dollars.

Nickel was produced to the extent of 22,760 tons, and copper 14,453 tons. The source of these metals was the nickel-copper ore of the Sudbury district, of which there was raised 1,072,207 tons and smelted 947,053 tons. Some 79,825 tons of similar ore came from the Alexo mine in Dundonald township. The nickel contents of the matte were less than 1913 by 2,178 tons, and the copper contents more by 1,512 tons.

Iron ore, including concentrates, was shipped from the mines and works to the extent of 240,059 tons, valued at \$531,379.

The production of pig iron fell from 648,899 tons worth \$8,719,892 in 1913 to 556,112 tons worth \$7,041,079 in 1914. Four blast furnace plants were in operation, namely, at Sault Ste. Marie, Hamilton, Port Colborne and Deseronto.

Motor transportation is being rapidly developed and utilized by the farmers. By this means greater distances can be covered, and farmers at a considerable distance from markets, with the advent of better roads, will be able to bring their produce to the consumer in larger quantities and at less expense.