

production has been increased. A new mill is being erected to replace the Eustis mill which was burned in August. Lead-zinc deposits at Notre Dame des Anges are being successfully worked. Four companies are operating magnesite properties.

The production of British Columbia in 1915 will be about \$30,375,000. This is an increase over 1914 though less than that of 1913, the record year. A great increase in production of copper has helped to swell the total. The value of the chief products is estimated as follows: Placer gold, \$680,000; lode gold, \$5,481,000; silver, \$1,812,000; lead, \$1,756,500; copper, \$9,978,500; zinc, \$1,395,000; coal, \$5,782,000; coke, \$1,490,500; miscellaneous, \$2,000,000.

Nova Scotia's chief mineral product is coal. The production for 1915 is estimated at 6,600,000 tons, or practically the same as that of 1914. The output in the last quarter of 1915 was considerably larger than for the corresponding period of 1914. The coaling of ocean ships has become quite a feature of the Nova Scotia coal trade.

In the Yukon gold production during 1915 was about \$4,750,000, a slight increase over that of 1914. The first machine for use on the Treadgold properties arrived during the year and will probably be in operation during 1916.

EDUCATION IN MINING

In a letter published in the January bulletin of the Canadian Mining Institute Mr. John A. Dresser makes some very interesting comments on education in mining. He says: "The highway to efficiency is education. The means of education vary widely in kind and degree, and man's time and ability to learn are inevitably limited. Consequently our methods of education in mining and metallurgy as well as in every other profession call for careful thought and closest scrutiny."

We should not be satisfied with our present methods of education. It is in the best interests of the mining industry to improve methods of preparing the young men who elect to make mining their profession. Every contribution to the discussion will help those who are responsible for the teaching of mining students.

It should be borne in mind that mining in Canada is increasing at a rate which is much greater than is generally appreciated. The public learns, for instance, that the Cobalt silver mining companies have passed their zenith as profit makers and jumps to the conclusion that mining is on the wane. As a matter of fact not only is production in other districts being increased, but in such districts as Cobalt there are many mining and metallurgical problems which will for years continue to make demands on the best technical talent available. The fact that lower grade ore must be treated in succeeding years means that profits will be smaller and that the necessity for efficiency will be more acute.

Mr. Dresser inclines to the belief that the number of students in mining will fluctuate with the demand for

graduates. No doubt it will, but it fluctuates in a way that those who are connected with mining colleges find it difficult to understand. At present there is a demand for mining graduates that Canadian colleges will scarcely be able to meet. Young men should be encouraged to enter the profession. But those who are engaged in mining owe it to these young men to use their efforts to make the years of preparation as profitable as possible.

At the meeting of the Canadian Mining Institute in March there will be, according to the January bulletin, consideration of the subject of mining education. It is to be hoped that those in charge of mining operations as well as those engaged in teaching will voice their opinions.

The price of silver is holding well around 56 cents and the prospects for larger profits in 1916 than in 1915 are very good. During a year of low prices the Cobalt district suffered considerably. However, most of the mines continued to yield large profits. The margin of profit was considerably lower during 1915 than in any previous year, and it was found advisable in some cases to restrict production, not because it was not profitable, but because larger profits from higher prices were expected to be available later. In some cases production was necessarily restricted owing to decrease in ore reserves. It is not to be expected that all the mines will make large production in the future, for a large part of the high grade ore has been worked out. There is still a lot of silver in the Cobalt district, however, and with higher prices available it may be expected that renewed activity will result. Already several old properties are being reopened.

There is a great deal of interest being shown in oil flotation methods in mining districts throughout Canada and the United States. Many Canadian metallurgists are experimenting. It will not be surprising if methods are devised for profitably treating the sand and slime piles at Cobalt which contain four to eight ounces of silver per ton and which might conceivably be treated at a cost of 50 cents per ton. That is perhaps too much to hope for; but it is a figure that has been suggested by one who has done a great deal of experimenting on Cobalt ores.

The Mond Nickel Company has carried out a number of experiments on flotation of nickel-copper ores and it is not improbable that the Sudbury district ores will be further tested. The results obtained so far are, however, not available for publication.

Hollinger made a new record in the four weeks ending Dec. 2, making a gross profit of \$210,588.52 on 29,448 tons ore treated. During 1915 the company distributed \$1,560,000 in dividends and spent about \$300,000 on additions to plant; but is nevertheless able to report an increase in surplus.