

new Act is a wonderful and almost unique encouragement to outside investors. All Canada will rejoice if Nova Scotia progresses in proportion to her resources.

CONCENTRATING AND SMELTING COBALT ORES.

The annual report of Mr. A. A. Cole, mining engineer to the Temiskaming and Northern Ontario Railway Commission, has just been received. An abstract of this instructive pamphlet appears elsewhere in this issue. It will be noticed that detailed information concerning smelting rates has been gathered by Mr. Cole. One or two points call for notice.

During the year 1908, ten reduction companies treated ores from Cobalt. Four of these were Canadian concerns. To these four smelters 7,401.14 tons of high-grade ore were shipped. This quantity was equivalent to 29.18 per cent. of the total tonnage of the camp. In value the ore treated in Canada largely exceeded that of all the ore shipped out of the country. The great bulk of foreign shipments were low-grade.

Comparison of Canadian with foreign tariff rates does not reflect unfavorably upon the former. The most liberal smelting tariff is that of a Canadian enterprise. Apparently the metallurgical methods (carefully guarded secrets) of our own smelters are quite as effective as those of other countries.

This is all very satisfactory. But is there any just and sufficient reason why all the ore that comes from Cobalt should not be smelted in Canada?

Six concentrating mills are now in operation in Cobalt. Four more are under construction and will be running before the end of the current year. The flow-sheets of the mills that are now working indicate that the methods of comminution and preliminary concentration are becoming standardized. In three of these plants crushers, rolls, trommels, and jigs constitute the first four units. In five plants jigs are installed. In three mills (not including the McKinley-Darragh, which is nearing completion) stamps follow the jigs. Only one flow-sheet includes the Chilian mill.

It would appear that the probable arrangement of units in mills yet to be designed will conform to the following scheme: Crushers, rolls, trommels, jigs, stamps. The treatment of the stamp products after classification will always vary within certain limits. The choice of tables for sands and slimes depends largely upon the experience and predilections of the mill superintendent.

Two tube mills and one cyanide plant are in use. The future will see a large increase in these units.

THE EIGHT HOURS DAY.

English, Welsh, and Scotch colliery operators are looking forward with misgivings to July 1st, the day on which the coal miners' Eight Hours Act becomes operative. The operators believe that an immediate

reduction in output will be the first effect of this limitation of working hours below ground. They contend that this reduction will amount to at least 10 per cent. and, in many instances, 20 per cent. The argument advanced by the supporters of the Act, to the effect that shorter hours will inspire the miners to keener and more continuous effort, is met by the assertion that in a vast majority of the collieries a maximum of work is already obtained and that, in any case, the miners' expenditure of energy cannot be intensified by an Act of Parliament.

The extent to which existing plants will require to be modified in order to meet the demand for speedier haulage, winding, and coal-winning, is a serious question. It appears probable that not a few mines, especially those whose equipment is antiquated, will not survive the change.

One clause of the Act is to be a storm centre. Section 3, clause 1, permits an addition of one hour to the working day on sixty days of the year. The questions as to how these nine-hour days are to be distributed, and as to whether the extra hour will be considered as overtime or not, have yet to be discussed.

Meanwhile the Miners' Federation has declared itself ready to fight to the last ditch against any reduction in wages.

As July 1 approaches, new difficulties crop up with disturbing rapidity. The most encouraging feature of the situation is the fact that the leaders of the Miners' Federation are capable and earnest men, not mere demagogues. Moreover, in Great Britain, as in most other parts of the British Empire, arbitration is becoming a habit.

We shall venture upon no prophecy. But we shall await, not without trepidation, the introduction of the eight hours day.

PETROLEUM AND OILS.

Mr. Eugene Coste has constituted himself champion of the inorganic origin of petroleum. This implies not a small amount of moral courage. But Mr. Coste is courageous if nothing else.

Somehow we are led to believe that there may be a faint adumbration of truth in what Mr. Coste tells us. This is rank heresy; we only talk it in confidence. But it is obvious to the amateur that all advocates of the organic origin of petroleum must be apologists. Mr. Coste is not an apologist. He is an out and out enthusiast. His facts and arguments are set forth in battle array. He is afraid of no man.

GOLD MINING IN RHODESIA IN 1908.

Fourteen years ago, Rhodesia contributed nothing to the world's production of gold. Now it ranks sixth amongst gold-producing countries. Last year its gold yield was 606,962 fine ounces, valued at £2,526,007. This exceeded the yield for 1907 by 15.4 per cent. The