

Canadian Mining Institute Holds Annual Meeting

Central Body Needed to Take Command and Organize Our Industries to make Headway Against Present Unpreparedness

The Canadian Mining Institute held its nineteenth Annual Meeting at the Ritz-Carlton Hotel, Montreal, March 7th, 8th and 9th.

In the presidential address at the opening meeting, Mr. Arthur A. Cole spoke in retrospect of a year which had been one of the most satisfactory in the history of the mining and metallurgical industries in Canada. The abnormally high prices of metals had increased profits and stimulated output so that the year 1916 established a new high level record for production. Even silver, the market for which was depressed during the first eighteen months of the war to the lowest price ever received, had reacted to a price higher than any received in the past twenty years. The threatened shortage of cyanide from Great Britain had been averted by the influence of the institute, thus aiding in the establishment of that commodity on such a basis in Canada that the Dominion is now guaranteed ample cyanide at a lower price than anywhere else in the world.

Mr. Cole also said that there was a crying need in Canada for some strong, central organization to take command and organize our industries, to bring about concerted action and to make headway against our present appalling unpreparedness. The information and the valuable men in Government departments and universities should be made more generally available for the interests of the whole country. Societies such as the institute, corporations and individuals ready to assist should gather around such a re-organized Government department or war industrial council.

Iron and Steel in Canada's Future.

The future of the iron and steel industry in Canada was the subject of a symposium at the morning session on Thursday. What has been accomplished to date was made the basis for remarks as to the prospects for the future.

Mr. Corbett F. Whitton led the discussion by a paper which named all the various companies which are interested in the iron and steel industry in Canada. At present the iron and steel industry of Canada is dependent almost entirely on supplies of iron ore from foreign sources. On the Eastern Coast the supplies come from Newfoundland, while the Algoma Steel Company and the Steel Corporation of Canada get their supplies from the United States. On account of the cheap water transportation from Newfoundland, and the coal readily available from the mine, the companies in Nova Scotia could assemble their iron ore easily. Metallurgical coke for smelting purposes was the essential thing in the iron industry, and with both these advantages at Sydney, the Nova Scotia Steel and Coal Company and the Dominion Iron and Steel Company should be able to produce iron just as cheaply as anywhere in the world. The Algoma Steel Company was formed primarily for the purpose of manufacturing steel rails at the Soo where iron ore and coke could be assembled from American ports by reason of the cheap lake transportation, and where the company would be favorably situated to command markets both East and West in Canada.

On account of changing conditions in Canada and the possibility that there will not be railway construction as in the past, the Algoma Company is going into the manufacture of rolled steel sections, and extensions to the present plant for rolling structural steel for building bridges and other purposes up to 24 or 36 inches, are contemplated. The speaker had little doubt but that other companies were considering similar extensions. The Steel Corporation of Canada had the advantage of being located in the greatest Canadian market. He concluded by a discussion of the cost of production of the various steel products.

Magnetite Ores.

Mr. R. R. Hedley, from British Columbia, said that his province had no iron and steel industry, but that there was a large market there for iron and steel products. The drawback against establishing an industry there was the uncertainty of getting a supply of suitable iron ores. There were large magnetite deposits, but no large hematite deposits. The magnetite deposits, however, sometimes contained as high as 1½ per cent of copper. It would be possible by the electro-magnetic separation of the iron from the copper to recover both. That should be profitable, especially in consideration of the fact that the Van-

couver Island coals were suitable for the manufacture of metallurgical coke. Already 3,000 tons are produced monthly to be used in connection with the smelting of copper in British Columbia. Everything possible should be done, in his opinion, to encourage the industry in British Columbia.

One speaker, in the general discussion, said that he did not want to talk politics, but that he did not think that the Government had fully protected the iron and steel industry, on account of the fact that the tariff was not made general, but particular in character. As an example he said that plates for ships, construction and boilers were practically admitted free while there was a duty on other plates. One of the essentials in the manufacture of iron and steel products was a large output, and if certain steel plates came in free it reduced the market of Canadian companies for steel plates.

A speaker from Deseronto said that in Deseronto the problem was to get suitable ores. The ores which the Deseronto concern used or experimented with came from the Moose Mountain district in Northern Ontario, and were magnetites. The present methods of treating magnetite were too costly, and he thought that the Government should carry on investigations so that the iron and steel industry could be established on the basis of using Canadian ores.

Mr. Ellis described the widespread deposits of bituminous sands in Northern Alberta, saying that these contained 15 per cent of asphalt. The railways are now practically up to them, so that they can be utilized for paving and making sidewalks and building throughout Western Canada. In the United States such deposits only contain 4 per cent of asphalt.

The work of the Honorary Advisory Council for scientific and industrial research was explained by Dr. Frank D. Adams, F.R.S., further reference to whose address will be made next week.

Mining and War.

Some surprising figures regarding the relative importance of the mining industry of Canada were given the Canadian Club on Monday by Mr. Arthur A. Cole, president. From the railroad point of view, Mr. Cole said that reports showed that in 1913 the products of agriculture handled by the railways amounted to 16 per cent of their total freight, while the products of the mine amounted to 38 per cent, or more than twice as much, while manufactures only came to 14.8 per cent. In the United States the proportion was even more striking, amounting to about six times that of agricultural products.

Canada's mineral production amounted to some \$175,000,000 annually. Her coal resources were among the greatest in the world; the Quebec asbestos mines supplied 85 per cent of the world's needs; she had the greatest nickel deposits in the world at Sudbury, while Ontario had the largest talc deposits on the continent at Madoc and very important discoveries of molybdenite had recently been made north of Ottawa. In addition to this, there were the Cobalt and Porcupine fields with their silver and gold, while the former had produced more refined cobalt than all the rest of the world together.

Mr. Cole dealt a good deal with the influence of the war on mining, and vice versa. The outbreak of hostilities, he said, had found the Canadian mining industries woefully unprepared. Much had since been done, but much more remained to be done, especially to increase the production of coal and iron.

Germany, he said, with its usual thoroughness, had looked into the mineral relation to war. After the Franco-Prussian War they had seized the best iron lands of Alsace and Lorraine. Immediately on their start of the present war they had made a point of occupying the best mineral sections of both Belgium and France, thus doubling their supply of iron and steel, to be used as shells against the former owners of the mines. To lose these mines, he said, would mean the annihilation of Germany's military power.

The war, he said, should bring about more co-operation between the manufacturer and miner, and stop the exportation of large quantities of raw minerals which could be advantageously worked up in Canada. It cost \$7,000,000 a year to run the Cobalt mines, and most of this money eventually found its way to Toronto and Montreal, and with the geological formations he saw no reasons why these mineral workings should not be indefinitely extended, both in Ontario and Quebec.

There were vast possibilities for men who went in for mining as a business, not as a gamble, he said. Anyone who a dozen years ago had predicted that the Cobalt wilds would be paying out \$20,000,000 a year, and greater dividends than all the chartered banks of Canada together, would have been laughed at, but that had been achieved, and with sane development there was no reason why that should not continue.

Other Addresses.

Other interesting addresses were given by Mr. Arthur D. Little on "The Organization of Industrial Research," and Mr. C. V. Corless on "A Plea for Definite Training for Social Responsibility by Means of Our Educational Institutions." Dr. David H. Browne gave a paper on "The Amelioration of Industrial Relations," and Mr. H. E. Howe on "Electro-Chemical and Metallurgical Possibilities in Canada."

Canadian magnesite was the centre of a lively discussion in the afternoon session, following papers by Mr. H. J. Roast, and Mr. H. J. Ross. These speakers explained how the war had allowed the Canadian product to take the place of the Grecian and Austrian magnesite, which formerly went to the United States, and how an old prejudice against the Canadian article because of the presence of lime was being dispelled. Instead of the prejudice, enthusiastic advocates were finding that it was better in many ways for lining furnaces, for flooring and other purposes.

Mr. C. W. Dury gave a comprehensive paper on "Potash, Its Production and Uses," taking a bird's-eye view not only of Canadian possibilities in this direction, but of world activities and possibilities.

Canadian molybdenite also engaged the attention of experts, Mr. H. H. Claudet telling of its concentration and marketing. Mr. J. W. Evans of its utilization, and Mr. G. P. Grant, giving, through Mr. Claudet, notes on the Orilla Molybdenum Company's concentrator and refinery. Mr. J. S. Coffin gave a paper on "Pulverized Fuel for Locomotives," and Mr. Allan Greenwell, on "Canada in Relation to the Coal Trade of the Empire."

Honor Montreal Man.

Signal honor was paid Mr. Edward P. Mathewson, by the Mining and Metallurgical Institute of America in sending Mr. W. R. Ingalls to make a presentation to him of a gold medal "For distinguished services," the institute choosing for this ceremony the city of his birth where he graduated from McGill University 32 years ago. Mr. Ingalls read the long list of important contributions to mining knowledge and mining lore made by Mr. Mathewson in the course of a varied and ever progressing career in Montana, Mexico, Chili, Canada, and other places. In 1911 he had been given the gold medal of the Institute of Mining and Metallurgy of Great Britain. As Mr. Ingalls presented the medal seven other distinguished visitors from south of the border rose to their feet to signify that they were present to lend force to this ceremony. The first man to be given this gold medal was Herbert C. Hoover, who has since won fame in another direction.

Following are the officers elected by the Canadian Mining Institute: President, Arthur A. Cole; vice-presidents, Charles Fergie, Thos. W. Gibson, D. B. Dowling, M. E. Purcell; councillors, Nova Scotia, F. W. Sexton; Quebec, L. D. Adams, T. Denis, and Dr. A. Stansfield; Ontario, E. P. Mathewson, R. E. Hore, N. R. Fisher Stovel, Clifford E. Smith, Summerhayes, E. E. Segsworth, W. J. Dick, G. C. Mackenzie, and R. B. Baker; Alberta, W. A. Davidson, W. F. McNeill, and N. A. Pitcher; British Columbia, G. P. Jones, E. E. Campbell, and Thomas Graham; and secretary, H. Mortimer-Lamb.

CANADA'S MINERAL PRODUCTION.

The mineral production of Canada for 1916 is estimated at \$107,040,035 for metallics; \$53,015,963 for non-metallics and structural materials, and clay products \$17,301,726 making a grand total of \$117,357,454.

WAR COSTS MILLION A DAY.

Canada's total revenue for the fiscal year ending March 31st is estimated at \$225,000,000. Customs and miscellaneous revenue, including the business tax, were the principal sources of increase. Expenditures on current account in the eleven months were \$113,161,357, on capital \$239,597,008. War outlays in eleven months were \$217,590,670. This is almost double the war expenditure for 1916. It is now about \$1,000,000 a day.

The whole net debt is now \$765,661,893, which is an increase of nineteen millions in the past month. The fiscal year ends this month, and a \$50,000,000 increase is in prospect. For the eleven months the revenue aggregated \$205,317,039, as against \$154,438,809, for the corresponding period. February revenue alone was \$17,513,473.