

Touching on Future of Canada's Gold Industry

Value of Dominion's Gold Production Steadily Increasing. Hon. T. A. Crerar Looks for Continued Increase. Interesting Address in First of Series by Dominion Minister of Mines and Resources.

Last year Hon. T. A. Crerar, Minister of Mines and Resources in the Ottawa Government, gave a series of addresses on the mining industry, all of which were reported in full in The Advance on account of their general information and value. This year he is giving another series, the first of which is presented below:

In the previous series of talks on mining I stressed the increasing national importance of the industry to Canada, and emphasized how it was directly and indirectly benefiting every branch of Canadian activity. To fully appreciate its growth it is only necessary to mention that, while in 1935 the industry had set a new record by producing metals and minerals to the value of more than \$312,000,000, this record was exceeded in 1936 by almost \$50,000,000, and this in turn was again exceeded in 1937 by almost \$90,000,000, thus bringing the value of mineral production for the past year up to a total of more than \$452,000,000, a gain of almost 45 per cent over that of 1936. Although this gain was partly due to the increase in the price of certain of the metals, the volume of output of most of the minerals was much higher than in 1936.

To-night, however, I propose to confine my remarks to that part of the industry which has to do with the mining of gold. An analysis of the returns for 1937 shows that gold was again the greatest single contributor to the output, its production being valued at nearly one hundred and forty-two million dollars, a gain of 8 per cent over 1936, the previous record year. The value of Canada's gold output has been increasing steadily since 1924, while the number of fine ounces has increased every year since then, with the exception of 1933. This growth has not been confined to any one province, as an examination of the records of the past several years shows an annual increase for practically every gold producing province.

Are we justified in assuming that this growth is likely to continue? While the answer to this question cannot be definitely determined owing to the many economic and international aspects to be considered, nevertheless a consideration of the more important features bearing on the outlook should establish a basis for certain conclusions.

Returns over a number of years show that some 78 per cent of Canada's gold production is obtained from what are known as lode gold deposits, and that from fifteen to twenty per cent is recovered as a by-product of base metal operations. The remainder is recovered from alluvial, or placer gold deposits. As these percentages show little change from year to year it may be assumed that lode gold deposits will continue to be the main source of the metal in Canada.

At present the older mines are contributing about 45 per cent of the lode gold output, and the younger mines about 44 per cent. As the total production has been increasing steadily for several years, it is therefore evident that the older mines are maintaining their ore reserves. Moreover, there appears to be every likelihood that these mines will be capable of maintaining their operations on the present scale for many more years, as, owing to the increased price of gold, low-grade ore from the older workings is now being milled. One mine alone reports that in 1935 and in 1936 it was drawing 37 per cent of the total ore milled from material formerly regarded as waste rock.

Production returns from the younger mines indicate that they are responding favourably to development. They are already contributing a substantial proportion of the total output, which will be further increased by mills being erected and beginning production in 1938.

In Quebec, two new mills are under construction, one at Sladen-Malartic and the other at Pan-Canadian, which are expected to be in operation early in 1938, and the construction of at least five others is planned. In Ontario, seven mills were under construction, two of which, on the Raven River and Sand River properties, came into operation in November and December. The others are Kerr-Addison, McLeod-Cockshutt, Hard Rock, Tombill and Moneta, all of which will be in operation early in the new year, and construction on at least five other mills is expected to start early in 1938.

In Manitoba a new mill came into production at the Gurney mine near Cranberry Portage. In Saskatchewan, at Goldfields, on the north shore of Lake Athabasca, Consolidated Mining and Smelting Company is erecting a 1,000-ton mill; and in the Northwest Territories, near Yellowknife Bay on Great Slave Lake, the same company is erecting a 100-ton mill. At Gordon Lake, 50 miles northeast of Yellowknife Bay, Mining Corporation of Canada is erecting a mill on its property. In British Columbia, Consolidated Mining and Smelting Company is erecting a large mill on the Bif Missouri property in the Portland Canal area. This mill is unique in the history of Canadian gold mining inasmuch as it is to be built entirely underground. A mill has been built and put into operation on the Whitewater property in the Taku district, an area from which production has not previously been recorded. In the southern part of the province three mills are under construction, and the erection of two others is planned.

This makes a proposed total of 30 new mills with a combined daily capacity of approximately 5,000 tons of ore for the year 1938.

At the close of 1937 there were 128 milling plants with a total daily capacity of 42,000 tons. The new installation will bring this total up to about 47,000 tons without taking into account possible increases in already existing mills.

It is evident from the foregoing that, for the immediate future at least, our production will not only be maintained, but will be increased.

However, it must be realized that ore once mined cannot be replaced. The richest and largest mine must eventually become exhausted. At present the ore from our known gold deposits is being depleted at the rate of approximately 42,000 tons every 24 hours. Therefore, our gold production cannot continue to increase indefinitely unless we continue to discover new sources of the metal, and at the same time regulate costs to price, so that already known sources of low grade ore can be made available for mining. Fortunately, owing to the large number of first class prospectors in Canada, the search for gold is carried out as efficiently as in any other country, with the result that it has been more successful than in most countries. The value of more intensive and scientific prospecting of areas in Ontario and elsewhere that have been explored for years is shown in the promising new discoveries that have been made in the Larder Lake, Kirkland Lake, and Porcupine areas. Then again, until recently, prospectors and exploration companies gave their chief attention to areas throughout the Dominion within 150 miles of rail transportation. Now, as a result of development of airplane transportation, sections along the Mackenzie River system in the Northwest Territories, particularly the Gordon Lake, Yellowknife River, and Outpost Island areas, as well as areas in the more northern parts of Ontario, Manitoba, and Quebec, are receiving widespread attention. Although it will take time before definite information is available on the possibilities of these far northern regions, the exploratory work so far carried out justifies reasonable hopes of making new finds.

Notwithstanding the large areas in Canada which are favourable to the occurrence of mineral deposits, and the limited extent to which they have been explored, the question of exhaustion of mineral resources is always before us. The advantages, therefore, of prolonging to the utmost the life of our gold mining industry is of great importance from the point of view of our national welfare.

The finding of new mines is not the only way by which gold production can be maintained and increased, as the history of gold mining shows. For example, gold increased almost four times in value between 1300 and 1717. In the latter year it was fixed at the equivalent of \$20.67 an ounce. This was purely an arbitrary figure, but it was sufficient then to bring forth a requisite volume of production. However, in 1930, the International Geological Congress and the League of Nations' Committee drew attention to estimates by mining experts who predicted a steady decline in the world production of gold. This predicted decline was based upon the fact that the deeper the workings and the leaner the ore treated, the higher the cost of production becomes. At that time the world's average cost of producing an ounce of gold was about \$15. Last year, the average cost has been variously estimated at from \$22 to \$24 per ounce. This increase would indicate that more low grade ore is being mined, because, other conditions being equal, mining and milling costs per ton are about the same regardless of the grade of ore. It becomes evident then, that the mining of the lower grade ore today is made possible largely by the increase in the price of gold. It should be remembered that an ore which was worth only \$4.00 a ton under the old price is now worth \$7.00.

There is still another way whereby our present rate of production may be maintained and that is through the lowering of costs per ton of ore treated. This is being brought about by the improvement in mining and metallurgical methods that have made possible the gradual lowering of the grade of ore milled, as well as permitting the mining of gold ores that could not formerly be treated. If today we had to use the same methods as those employed in 1890, it would cost two to two and a half times as much to recover an ounce of gold from ore similar in grade to that treated fifty years ago.

Chemical research workers have brought about a vast improvement in explosives; mechanical engineers have devised hoists capable of handling 10,000 tons of ore a day and of travelling at the rate of more than 3,000 feet a minute. New systems of underground mining have been developed, and underground transportation methods have been improved. Drilling machinery has become increasingly more efficient, and better working conditions have brought about higher individual production. All these things have in the past helped to prolong the life of our mines by lowering costs and should continue to do so.

Let us now see what improvements in the metallurgical treatment of gold ores have done to create new ore reserves and thus extend the life of our known mines. I am going to take you back to 1893—and in passing it may perhaps be worth while to refer to conditions at that time—the world was then in the midst of a depression very

similar to the one we have just passed through. The rich gold fields of the Rand in South Africa were petering out, and mine after mine was closing down; that is, the richer free-milling types of ore had been exhausted and there was no known process for the treatment of the huge bodies of refractory and low grade ores even then known to exist. This condition was world-wide and the output of gold was lagging behind the needs of expanding world credit. At this time, the process that was to revolutionize all ideas of gold milling was developed by three zealous experimenters in a poorly equipped laboratory in Glasgow, Scotland. To S. S. MacArthur, a metallurgical chemist, and to R. W. Forrest, and W. Forrest, doctors of medicine, the cyanide process for gold extraction owes its origin.

By application of the cyanide process, material which had been regarded as worthless rock was converted into ore, and by 1896, only three years later, the world's gold production had been doubled without the discovery of new mines. In ten more years, it had again doubled. Since then, many improvements in the metallurgy of gold have been made, all tending to make workable lower grade and refractory ores.

There is still, however, a great field for metallurgy. The efforts to mine and mill the lower grade ore must be continued. For therein lies our greatest hope of converting otherwise waste material into assets which can be utilized with profit to the industry and to the community alike.

You will agree, I think, that gold mining was one of the principal mainstays during the depression years. However, the industry's contribution was made at the expense of capital assets, and to the extent that these have been depleted the industry will be that much less able to carry us through any

LISTEN... on Friday Night "CANADA-1938" IMPERIAL TOBACCO'S INSPIRING PROGRAM FRIDAY 10 P.M. E.S.T. STATION GKCB

possible future depressions, unless new deposits are continuously opened up. It is necessarily, then, to take stock of our known gold and base metal deposits; to study ways and means of extending the life of our mines. Our geologists must continue to locate favourable areas for prospecting; and we must continue to encourage the search for new deposits. Our metallurgists must devise cheap methods of treating the ore the prospectors find. Attention must be given to providing cheap transportation to remote areas, and to the development of hydro-electric power, and methods of mine taxation must be carefully studied. All this must be done if costs are to be kept at a point that will insure continuity of production.

In conclusion may I remind you that mining is making an important contribution to our welfare. We must not, therefore, in any way relax our efforts to maintain the place the industry now holds in the national economy.

Omaha World-Herald:—We Americans can't be bothered now with helping to save other countries. The year 1940 is just around a couple of corners, and we must prepare for the quadrennial saving of our own country.

Bartender of League of Nations Given Transfer

(From Globe and Mail) The League of Nations gets another jolt from Italy. The League's bartender, capable and popular with international figures, has been obliged to take off his apron and throw up his job. His name is Carlo. Poor Carlo! It will not be nice to go back to Italy, and perhaps do ordinary and uninteresting work. The artist cannot turn readily to mental labour that any one can undertake. But apparently Carlo was subject to the recall; and he has been recalled.

Unimaginative persons may think this is a trivial matter; but why has news of Carlo's resignation been cabled around the world? Let them answer that. He has been behind the mahogany ever since the bar was established; a fixture, as it were; a stable feature of the League. He held a concession, granted by the leagued nations of the world. That's how important he was. Stories or Carlo no doubt have been told in select circles throughout the world. His mastery of the "shaker" would be recalled; also his familiarity with the ingredients of beverages demanded by fastidious patrons. These would endear him to gentlemen sojourners in Geneva.

Through all the ups and downs of the League it was Carlo's duty to remain at his post, calm and unshaken at the core of a jittery world; and he did. He knew how to comfort the despairing and rejoice with the exuberant. He held the key that released varying emotions. He was a diplomat among diplomats. Carlo, the bartender.

And now he's gone. A country unfriendly to the League saw another way of hurting it, and it struck through Carlo. What has Fate in store for this

SIMMS, HOOKER & DREW

INSURANCE IN ALL BRANCHES

REAL ESTATE

Houses and Lots for Sale on Terms

DOMINION BANK BUILDING

Opposite Goldfields Hotel Block

PHONE 113 Residence—PHONE 138

artistic dispenser of thirst-quenchers. He may be needed elsewhere. Things are not going too well in Ethiopia, and possibly there is opportunity there for a man with an understanding of human nature and the medicine that soothes or arouses fickle moods.

But Carlo's influential friends throughout the world should intervene. Not Ethiopia, where there cannot be really discriminating drinking. From Geneva to Addis Ababa is too much. However, it seems that Carlo must do what he is told, so it may be unwise just now to raise a new issue for the League. After all, it has other serious problems to solve—and without Carlo.

Gives Striking Sample of German Frightfulness

Writing in The Toronto Telegram on Monday of this week, Thomas Richard Henry says:—

We have before us another example of German "frightfulness."

It is a paper on German mining.

The first article, according to our interpreter is called "Up-to-date Pit-coal Drilling Plans."

The German paper calls it "Neuzeitliche Verfahren in der Steinkohlen-

aufbereitung."

That stopped us right there. We will never find out what the German paper was going to tell us about "Steinkohlenaufbereitung."

We repeat that word to annoy a typesetter upstairs, who doesn't like us much.

A young friend of ours has a small dog that barks vigorously at everybody. It is practically impossible to lead the dog because it always wants to go in the wrong direction.

We do not know whether our young friend knows how Harold Ickes pronounces his name or not, but in any event he calls his dog "Icky" to rhyme with Micky.

Washington papers please copy. Elmer Rice in a rather tiresome book says one of his characters spoke with a "faint Canadian accent."

Maybe a Canadian accent is one that pronounces "b-i-r-d" as "bird" instead of "boird."

Or maybe Elmer has heard a Canadian say, "I 'lunk by gar," or "Me heap big injun."

The financial page of the London Daily Mail reports a meeting of "Cow and Gate" Limited.

It sounds a little like milking time.

Styling as different as it is beautiful, for this bigger-looking, better-looking, low-priced Chevrolet.

Smooth—powerful—positive... the safe, self-energizing brakes for modern travel... giving maximum motorizing protection.

(WITH SHOCK-PROOF STEERING) So safe—so comfortable—so different... "the world's finest ride". On Master De Luxe Models.

(WITH SAFETY GLASS ALL AROUND) Larger interiors—lighter, brighter colors—and Unisteel construction, making each body a fortress of safety.

Giving the most efficient combination of power, economy and dependability.

Giving protection against drafts, smoke, windshield clouding and assuring each passenger individually controlled ventilation.

A simple, efficient, single diaphragm spring replaces the conventional multiple-coil springs—for easier, tiptoe-pressure operation. Minimizes wear; never requires lubrication.

MODERN MODE STYLING

PERFECTED HYDRAULIC BRAKES

GENUINE KNEE-ACTION

ROOMIER ALL-SILENT ALL-STEEL BODIES

VALVE-IN-HEAD ENGINE

FISHER NO-DRAFT VENTILATION

NEW TIPTOE-MATIC CLUTCH

You'll be ahead with a CHEVROLET!

Buy it Now, and Put Yourself Ahead in Style and Savings... in Winter-driving Safety and Dependability

COME to our showrooms—take a look at the new Chevrolet—and you'll agree it's the smartest, most attractive of all the lowest-priced cars for 1938.

Get behind the wheel—feel the power and dash of that 85-horsepower Valve-in-Head Engine—and you'll thrill to a new performance "high".

But don't stop with that. Check the advantages of buying your new Chevrolet right now, as thousands are doing. For example... you can face bad weather conditions confidently with this great new car—no starting troubles, no repair expense... You'll get the priceless safety of perfected Hydraulic Brakes, new tire treads for sure grip on slippery roads, the protection of the All-Steel Turret Top Body by Fisher with Safety glass in every window... And not to be overlooked is the fact that by buying now you save depreciation and costly upkeep on your present car.

Chevrolet puts you ahead in everything... ahead in style, ahead in comfort, ahead in safety... and ahead in the little it costs you to buy your Chevrolet now!

PRICED FROM \$820 (2 Pass. Master Business Coupe)

MASTER DELUXE MODELS FROM \$892 Delivered at factory, Oshawa, Ont., Government tax, freight and license extra. (Prices subject to change without notice.) Monthly payments to suit your purse on the General Motors Instalment Plan.

Illustrated—Master Special 3-Pass. Sedan with trunk.



CHEVROLET THE CAR THAT IS COMPLETE

THE SYMBOL OF SAVINGS

TIMMINS GARAGE CO. LIMITED - TIMMINS