# LEAD INDUSTRIES ASSOCIATION

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## SOME ASPECTS OF THE LEAD INDUSTRY IN CANADA*

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It is indeed a privilege and a pleasure to be given the opportunity to bring you greetings from the lead producers and consumers of your northern neighbour and to speak to you about the part which Canada plays in the production of lead. I know that some of you already have a very intimate knowledge of this subject, not only from personal visits but also from financial interests in producing mines and potential Canadian producers. However, for the benefit of those of you who are not so familiar with this subject I should like to discuss briefly the production of lead in my country and perhaps one or two problems which we must face and resolve.

Although I realise that statistics are boring, any consideration of the future picture must be based on the production, consumption and export figures for previous years. According to the latest figures supplied by the Dominion Bureau of Statistics the production of lead in bullion plus recoverable lead in Canadian ores and concentrates shipped for export in 1948 and 1949 was 167,251 tons and 160,491 tons respectively. The production of refined lead from all sources, i.e. including amounts recovered from foreign ores treated in Canadian smelters totalled 146,149 tons in 1949 compared with 160,025 tons in the year 1948. With the single exception of the year 1944, the output for these two years is lower than for any other year during the last decade. Canada's peak production of 256,000 odd tons, in all forms, was achieved in 1942 under the stimulus of war. I might add that, from the standpoint of world production, Canada now ranks fourth; being surpassed by the United States, Australia and Mexico in that order. At times Canada has ranked third ahead of Mexico. Briefly, let us examine the reasons for this reduced output. During the early '40's, as you can appreciate, the needs of war placed the emphasis on production. As a result, during the last few years much more time has been devoted to doing a considerable amount of so-called dead work and development, which necessarily was postponed during the war years. Therefore, one should not view this reduction in Canadian output during the last couple of years with alarm as it merely represents a return to a more normal and orderly production. During this time, even with

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somewhat enlarged working crews, a larger part than usual of the endeavours of most of the Canadian producers has been devoted to additional development and to getting our mines back into good orderly shape. Undoubtedly, the higher prices of lead which prevailed in 1948 and 1949 greatly assisted in performing these much needed chores in a much shorter time than would otherwise have been the case.

Turning to consumption, the Canadian consumption of primary refined lead during 1949 was about 45,000 tons as compared with approximately 55,000 tons in 1948. While neither was a peak year, this rate is still more than double the normal consumption of Canadian industry prior to the war. Here again the increase is due in large part to the great industrial growth which took place in Canada under the stimulus of war. As usual, this industrial growth was accompanied by an equivalent expansion in the metal fabricating industry. It will be readily apparent from the figures just quoted that our production greatly exceeds our consumption. The difference of 100,000 tons or more must of necessity be exported if our Canadian lead mining industry is to remain in a healthy condition. In this respect the United Kingdom has in the past always been our chief export market for lead, as well as for the other non-ferrous metals, zinc and copper. Special efforts have been, and are being made, to hold this market and I shall revert to this problem later. Perhaps the most interesting development, however, during the past several years has been the marked increase in exports of refined lead to the United States. Because of high freight rates, the lead concentrate productions of several of the Eastern Canadian mines have always gone to the United States for treatment. The export of refined lead to United States markets is, however, a comparatively new development and I would not be surprised if, when the export figures for 1949 are released, they will show the United States to have surpassed the United Kingdom as a market for Canadian produced lead.

Generally speaking, lead ores seldom occur as such in Canada, but are usually associated with other base metals such as zinc and copper. The former being the most prevalent associated mineral. More or less silver is also usually associated with our lead ores and in many of the smaller properties, particularly in British Columbia and the Yukon, silver is the predominate metal value of the deposit. Significant amounts of gold are also found in some deposits. As a result, practically all Canadian lead ores have the added advantage of other metal credits.

Occurrences of lead in Canada are found in the provinces of Nova Scotia, New Brunswick, Quebec, Ontario, British Columbia, the Yukon and North West Territories and, in addition, in our recently acquired tenth province, Newfoundland. Production is, however, largely confined to British Columbia, Quebec, and Newfoundland; with the first-mentioned province accounting for over 95% of the total lead produced from Canadian ores. I might say at this point that the estimated value of the lead production in British Columbia for 1949 is $45,000,000 out of a total value of $1[illegible]0,000,000 for all mining within the province. This compares with a value for lead of better than $60,000,000 out of a total of $152,500,000 for all mine production in British Columbia in 1948. The prime factor in the predominance of British Columbia in Canadian production is the Sullivan Mine situated at Kimberley. This mine, as most of you know, is owned and operated by The Consolidated Mining and Smelting Company of Canada, Limited, whose Lead Smelter and Refinery, as well as other Metallurgical and Chemical works, are located at Trail, British Columbia. Trail is on the Columbia River about 15 miles north of the United States border and is about 200 miles by rail west of Kimberly. Virtually, 100% of the refined lead production of Canada is produced at the Trail lead smelter. This smelter not only treats all the lead concentrates from the Sullivan Mine, but also most of the lead ores and concentrates produced in other parts of the province as well as the productions from several Quebec mines. In addition, the Trail smelter is treating increasing tonnages of imported lead ores and concentrates. For your information the base bullion from the smelter is all refined electrolytically by the Betts process to produce corroding grade lead and the refinery has a capacity in excess of 700 tons per day.

Now a word or two about the future. The known lead reserves of Canada have been estimated at between 6-1/2 & 7 million tons of recoverable metal which includes some marginal ore. By far the largest deposit contributing to this total is, of course, the Sullivan Mine at Kimberley. There have been no substantial recent finds of lead ore in Canada and generally speaking the older properties show declining lead-zinc ratios at depth. Higher prices for base metals have, of course, greatly stimulated prospecting and the search for new lead deposits, as well as promoting the development of known and older deposits. This applies in general to Canada as a whole. Speaking particularly of British Columbia, there is considerably increased activity in the not too well known northern areas of the province, as well as in the Kootenay district, which has produced the largest portion of Canada's total lead output to date. Interesting occurrences have recently been discovered in that vast, unexplored, untracked, northland of ours known as the North West Territories. Intensive prospecting, particularly for base metals, is a comparatively recent development in this area and nobody knows definitely what, or how much, metal values are locked up in this tremendous area of rock and water. Transportation is, and probably always will be, a major difficulty in the future development of this vast untracked wilderness.

In Canada, as with the lead industry throughout the rest of the world, no major developments in process are in sight other than improved materials handling, more mechanization, and general betterment of working conditions. Although talk of construction of a lead smelter in Eastern Canada is revived from time to time, I know of no concrete proposal for any substantial increase in lead reduction plant capacity in Canada.

Now for a brief survey of some of the problems confronting the lead industry in Canada. Most of these are not confined to the industry in my country alone, but are common to all of us. First, there is the question of supply. Geologists have estimated, on the basis of known deposits and with world consumption at a rate of 1,600,000 tons per year, the average level over the past 25 years, that there is only between 30 and 35 years supply in sight. At first glance that is not a very bright picture. However, we in Canada, and I am sure all of you here, have a much more optimistic outlook. In the first place the known lead ore reserves of 10 - 15 years ago were substantially the same as the figure just stated and probably will still be about the same 10 - 15 years from now. Further, although there have been no new large finds of lead in recent years, undoubtedly new occurrences will be found. Additional supplies may also be obtained at depths greater than are presently being mined and materials now classed as waste may eventually be profitably converted into metal. To think otherwise would greatly under-estimate the ability and ingenuity of our exploration staffs, mining engineers and metallurgists.

Turning now to markets for lead, we face a problem at the moment peculiar to Canadian producers. Ever since Canada became an important lead producer we could count on selling a substantial part of our production to the United Kingdom. This market now, however, shows very definite signs of slipping mainly because of currency restrictions. Recent developments indicate that, notwithstanding the devaluation which occurred last fall, Britain's monetary difficulties are far from being solved. In fact, it is felt in some quarters that her position, if anything, is gradually deteriorating. In this connection I came across an item recently which interested me and which, I am sure, will be of interest to you. Last year Great Britain exported chiefly to Egypt and India something in the neighbourhood of a billion dollars worth of goods for which she received no payment. This means that the productive capacity of the country to that extent was withheld from dollar earning channels and from channels of investment which might later earn dollars.

In the face of this, our reaction naturally is to look to United States markets. I do not need to tell you that your country is no longer self-sufficient with regard to the supply of lead and other base metals. From a long term point of view, your present normal demand can probably no longer be met from domestic sources and undoubtedly the demand for lead will increase and parallel your continued upward trend in population and industrial expansion. Consequently, being adjacent to you and with excellent transportation facilities connecting our two countries, we, in Canada, feel that we can fill a portion of this gap between your demand and supply with substantial advantages to both. Among other obstacles to be overcome, of course, is your tariff. This, I realise, is a very contentious point and I am in no position to say what your tariff policy should or should not be. However, I would like to leave this thought with you - to be assured that your industrial demands for lead are fulfilled on terms and conditions not less favourable to your own consumers than to consumers in other countries, seems to us to rely to a great extent on your support of a policy of fair international trade conditions. In other words, we believe that from a long term view of lead supply and demand, you have less to fear from offerings of cheap foreign lead than you have from an inability to satisfy the probably increasing demands of your consuming industry.

No discussion of problems confronting our industry would be complete without some reference to taxation. While I am not familiar with your United States mining tax laws and regulations I believe that the present Canadian tax laws are somewhat more favourable to the mining industry than is the case in your country. In the first place, our regulations provide for a deduction of one-third of the taxable income attributable to mining on account of depletion. While this is a handsome and most welcome allowance you can readily see from the mere mechanics of the calculation that it provides much greater assistance to the operator with a large margin of profit than it does to the higher cost producer. Similarily, as in your country, some political interests not too familiar with problems peculiar to metal mining are critisizing this allowance as extending too great a benefit to the industry. In recent years Canadian tax laws have also permitted a deduction from taxable income of all expenses incurred during a taxation year in exploration and prospecting. Further, all new mines, base metal as well as gold, are exempt from Federal Income Tax for a period of three years from the day on which they are deemed to come into commercial production of ore or concentrates. During this period pre-production expenses not written off and depreciation can be deferred until later with the result that in most cases one hundred percent of these write-offs can be claimed against subsequent taxable income. In addition, shareholders of mining companies are allowed to deduct as depletion 10%, 15% or 20% of the dividends received depending on the proportion of the income derived from mining included in the corporations' total income. Further, in an attempt to reduce double taxation on corporate profits, a recent amendment permits shareholders to deduct 10% of the net dividends received from any corporation - mining or otherwise. Even with these generous allowances, however, a combined Provincial and Federal Income Tax rate of 38% on taxable income imposes a heavy burden on the mining industry; particularly when added to increasing property taxes and provincial taxes on mine output.

For the past 20 years or more, corporate profits have been the target of many politicians. Perhaps part of this is due to an improper appreciation of economic facts - much more likely it is due to the ease with which such profits can be taxed plus the fact that "soak the corporations" has been and still is a politically popular theme. Any study of economics and business definitely indicates that corporate income tax is a real handicap to progress. The law of diminishing returns applies to taxation just as much as it does to the pricing of goods - perhaps more so since there is less chance for an early correction. When a product is priced out of the market natural incentives in a free and competitive enterprise tend to produce an early correction. However, when governments overprice the cost of their services the problem becomes more complex and the effects may be compounded because they are masked for a time. Too high a tax burden tends to destroy its own sources by penalizing business success and removing incentives for new ventures and the growth of established industry. Often this will become apparent too late, since, by that time, not only have tax receipts diminished but the industrial economy may have been seriously and irreparably damaged.

However, because of revenue needs, both in your country as well as mine, complete abandonment of corporate tax with its double taxation feature does not appear feasible at this time. Our major goal for the immediate future should, therefore, be continued education of governments and the public with the problems peculiar to the mining industry and a constant endeavour to co-ordinate corporate income tax with personal income tax so that they can be regarded as complimentary parts of our tax structures not separate entities as at present.

In the latter part of the foregoing I have attempted to outline briefly some of the problems confronting the lead producing industry in Canada. Most of those, with variations of course, are common to the United States lead mining industry as well. In both countries the more difficult problems are closely intertwined with other national and international problems and policies. In view of this there is an increasing tendency in some quarters of both your country and mine to feel that these problems should be solved by increased government participation and in some cases perhaps even a resumption of some form of governmental controls. On the other hand, we, in the lead industry in Canada feel, and I am sure that all of you here will agree, that our problems can best be solved by individual and collective action within the industry itself working in a free and competitive economy.