

LEAD INDUSTRIES ASSOCIATION

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LEAD PRODUCTION IN MEXICO, AUSTRALIA AND NEWFOUNDLAND*

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- QUESTIONS:
1. To what extent will the current combined metal price of 24-1/2¢ per lb. affect lead and zinc production in your area?
 2. What, if any, reduction in U.S.I. mine production tonnage of lead in 1952 in your area was due solely to the drop in the price of pig lead?
 3. Do you believe that a continuation of the present level of lead, that is to say 13-14¢, over 1953 will result in a serious drop in lead production in your area? If so, when in your opinion will a substantial curtailment in lead become apparent?

My comments relative to the three questions for consideration before this panel, apply to lead and zinc production in Mexico, Australia and Newfoundland.

Since the subject of Australian production will be covered in more detail by another speaker, I will refer only broadly to operations with which I am particularly familiar namely; at Mt. Isa and West Australia.

Question 1 pertains to the effect of the current combined metal price of 24-1/2¢ (per pound domestic) upon production. In general, it appears that this price will not cause an important drop in production.

Almost all Mexican properties contain an important credit in gold and silver, while both the Mt. Isa and Buchans ores are not only above average grade, but each carries an important copper metal credit.

In all probability the gold and silver credits will hold without change in Mexico, but at both Mt. Isa and Buchans, a softening in the copper price would remove some of the cushion that helps to carry the load at these properties. It is also important to note that taxes decrease as profits fall, and this also helps to keep up production on a marginal market.

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Nevertheless, the margin of profit in all of these cases obviously will be affected by a continuation of low metal prices, and while there is no incentive to long continue production on a marginal profit basis, the alternative of closing down a mine is avoided as long as possible because of shut-down costs, scattering of personnel, and other things. These conditions usually lead to greater selectivity toward stopping higher grade ore reserves, and cutting down development work. This practice, which is injurious to most mines, usually results as a human factor, without a declaration of policy. These adjustments automatically reduce the labor requirements and are likely to be accompanied by a tendency to defer replacement of separations, wherever this is possible. Under these conditions, improved efficiency, both in labor and use of materials, may be expected. The net overall result of all these factors is a probable gradual tapering off of output.

In answer to Question 2, there was no significant drop in lead production during 1952, in Mexico, Australia or Newfoundland.

Question 3 pertains to whether or not long continuation of current prices will precipitate a serious drop in lead production. I believe this question was answered under Question 1 above, wherein only a modest decrease is anticipated which will become effective gradually and perhaps not exceed an overall 10% reduction in lead output in the areas considered. This trend is already noticeable and the full extent of production decrease should be apparent within the next two or three months.

Oppositely, it might be observed that had the early 1952 prices continued, it is probable that production in these areas would have been very substantially expanded by this time.

QUESTION: 4 Which metal carries the greatest effect on overall metal production? For example, if lead should improve in price and zinc decline further, and yet combined metals stay at the same level, would this be apt to increase or decrease production?

This question pertains to the relative worth of lead and zinc to a miner of complex ore containing these metals. The answer is tied to a comparison of the economic return on these metals. As a starting basis, the net value to a producer f.o.b. smelters, at 10¢ per pound for each metal in an assumed average concentrate, indicates that the zinc return is approximately 37% of the combined metal return. At 12-1/2¢ per pound for each metal, the zinc return is 39% of the total, and at 15¢, the zinc return is 40% of the total return. These ratios are based on average open settlement schedules of a number of lead smelters and several types of zinc smelters. Since the metal content in the average zinc concentrate is less than that in an average lead concentrate, the effect of freight and other handling costs of the concentrates will be proportionately greater on zinc than lead, and this causes a further spread in the economic return of the two metals. With this general basic fact in mind, the variations which fit any individual case may be visualized. As an example, if an ore contains an equal amount of zinc and lead, and the recoveries are approximately the same, and zero cost of handling concentrate to smelters is assumed, with lead at 15¢ and zinc at 10¢, the zinc worth would be about 25.6% of the combined metal value. This combined value is only slightly greater (0.45¢) than the combined return when both metals are priced at 12-1/2¢. Therefore, price variance within this range would have little effect on production.

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Obviously, the broad general conclusion is that the economic worth of zinc in a complex ore is far less per unit than lead. However, difference in the price of the two metals; difference in the metal content of the ores; difference in mill recoveries and difference in the handling cost of concentrates to smelters, all have a bearing upon the relative net worth. In this respect it may be interesting to note that world mine production of zinc is considerably greater than world mine production of lead today - in other words, there are more mines in which zinc output exceeds lead than those in which lead output exceeds zinc.

I am not prepared to discuss the causes of the basic variations defined above, other than to point out that the refining and marketing of zinc involves lower efficiency (recoveries) and greater costs than are obtained in refining and marketing lead.