LEAD INDUSTRIES ASSOCIATION
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# NEW LEAD MINE DEVELOPMENTS AND LEAD PRODUCTION IN ARIZONA, NEW MEXICO AND THE TRI-STATE DISTRICT OF OKLAHOMA, KANSAS AND MISSOURI*

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We have contacted all of the large producers of these areas and, at this time, I wish to thank each of them for his immediate response to our query.

In Arizona, it develops that this state accounted for approximately 6% of the domestic recoverable lead production in 1950, amounting to 26,383 tons and in 1951 they produced 17,300 tons, or a reduction of approximately 34%. This reduction was due mainly to the decline in the production of the Copper Queen Mine of Phelps-Dodge at Bisbee. In 1951 production of this mine was only 20% of the 1950 production, and the ore reserve is rapidly being depleted. Key producers of the state, in the order of production were: Mammoth-St. Anthony at Tiger, Iron King at Humboldt, San Xavier at Sahuarita, Trench at Patagonia, Copper Queen at Bisbee and Aravipa at Klondike.

The anticipated production for 1952, at today's market, is practically the same as for 1951 with no new major ore developments of any consequence in sight.

In New Mexico, this state accounted for approximately 1% of domestic recoverable lead production in 1950, amounting to 4,150 tons compared to 5,600 tons for 1951, or a 10% increase. The chief producers indicate that their 1950 production, at the present price, will be approximately the same as in 1951.

The Tri-State District. In 1950 this area accounted for 7.2% of domestic lead production amounting to 31,157 tons of recoverable lead. While in 1951 this production dropped to 27,834 tons, or a decrease of approximately 10%. The major producers, in order of their importance, were: The Eagle-Picher Co., Nellie B. Mine, now the American Zinc Co., National Lead Co., Potter-Sims Co., Beck Mining Co. and the Dines Mining Co.

In the past year a considerable amount of development work has been carried on in the Webb City Area of Missouri, with the result that several new sizeable operations are being started there. However, none of these operations will be lead producers of any consequence, since their ores contain little or no lead, but a substantial tonnage of zinc is expected.

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Since the ratio of the production of zinc to lead in the Tri-State field is approximately 3 to 1, with no precious metal values, the price of zinc has a most important effect upon the lead production.

The recovery of the field last year was 1.54% zinc or roughly, 30 lbs. of zinc metal was recovered from each ton of ore mined. The recovery of lead was .48% or a little over 9 lbs. of lead was recovered from each ton of ore mined. From these recovery figures you will probably get the impression that the ore in the Tri-State District is slightly low grade, and should be considered as definitely marginal ore even at these prices.

Much has been accomplished in the Tri-State District during the last decade to give it a new life. The mineralized area of the Picher field is definitely amenable to large capacity mechanized mining, and on this theory the operators of the field have been spending thousands of dollars in recent years.

As the development of centralized milling in the '30's gave the district new life, the development of "quarring" underground is giving the district new hopes today. It has been the close cooperation of the landowners, management and labor that is bringing about this condition.

The landowner has cooperated by allowing commingling operations between various mines, so that today a number of leases can be operated as a unit which allows many mining economies, that would not be possible if each lease had to be mined by itself.

Also, labor has cooperated in that they are working on a sliding wage scale arrangement tied to the market price of zinc.

With the landowner and labor cooperating, management is making every effort to develop the necessary equipment and methods to mine these low grade ores as cheaply as possible.

Today in place of the tripod mounted drills, the hand scoop shovel and the small ore bucket transported on a narrow gauge railroad, you will find many new innovations.

In place of the small tripod mounted drilling machine, you will find large drilling machines mounted on heavy caterpillars or rubber tired jumbos. Some so constructed that the operator's platform is 65 ft. high.

The replacing of the hand scoop shovel proved to be the toughest job - consequently, you find a number of different types of loading equipment in these mines. Nevertheless, today all of the ore is loaded by mechanical shovels while it has only been a few years ago when it was all loaded by hand.

In place of the small railway hauling the string of small ore buckets with mules for motive power, you will find today 10 and 15 ton diesel trucks traveling at rates up to 30 miles per hour over regular highways underground. One company has 80 miles of such roads underground and the supervisory personnel makes their daily rounds in jeeps.

Incidentally, wage rates have more than doubled in the last ten years in the district, still the labor cost, per rock ton, is as low as it was ten years ago.

Consequently, with the improvements made in milling and mining in the district over the last 20 years, and with the anticipation of relatively high prices for zinc in the foreseeable future there is a feeling of optimism in the district. It is anticipated the production of lead in 1952 will be substantially as large as in 1951 with a feeling that this achievement can be duplicated for still a number of years at the present metal prices.