LEAD INDUSTRIES ASSOCIATION

420 LEXINGTON AVENUE
NEW YORK 17, N. Y.

METALLIC LEAD PRODUCTS DIVISION

August 22, 1952

CHEMICAL BULLETIN NO. 50

SUBJECT: "THE DEPENDABILITY OF FUTURE LEAD SUPPLIES"

To Members of the Metallic Lead Products Divisions

The enclosed leaflet has been prepared to explain briefly why consumers of lead may depend on adequate supplies in the future and the reasons for last year's temporary shortage. The booklet answers with reassuring facts and pictorial charts based on these facts some of the misleading or misunderstood statements made about our lead supplies and reserves in recent years.

While this leaflet will be given as broad circulation as possible by the Association itself, we feel that members can use it to good advantage in reassuring their customers about the future.

Believing that the widest possible circulation of this leaflet will benefit both producers and consumers of lead, the Association will supply members with copies in quantity for their own distribution as long as the supply lasts.

Sincerely yours,

Robert L. Gregg
Secretary.

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The
Dependability
of
FUTURE
LEAD
SUPPLIES

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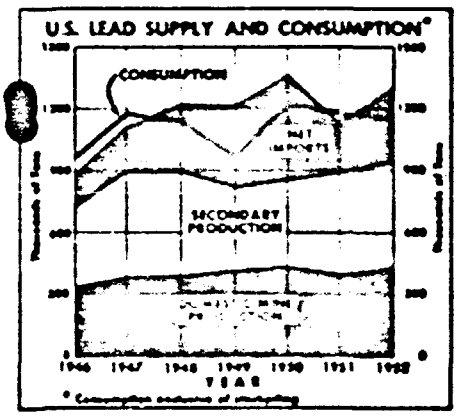
The Dependability of
FUTURE LEAD SUPPLIES

Lead was the first of the major metals for which the National Production Authority revoked all its controls, permitting lead to be employed in any amount for any purpose. This freedom of action with respect to lead results from increased supplies currently available to American consumers.

It is now obvious that the apparent shortage of lead plaguing consumers in 1951 resulted from a short term view of the situation. Removal by the Government of restrictions on the use of lead is an indication that the basic facts of the lead supply situation are now realized.

However, every lead consumer is interested in the long term outlook as well, in whether he can depend upon the supplies of lead in the years to come. It is



important not merely to accept the fact that lead is again in free supply but to try to understand why the things that happened in the lead market did happen. Only in that way can the future be appraised. An understanding the facts, it is apparent that there is little to fear about future availability of lead except for those brief periods when the balance is upset by temporary extraordinary economic or political conditions or by artificial controls which nullify the normal workings of the law of supply and demand. Certainly the fact that the lead situation corrected itself more quickly than did the situation in other common metals augurs well for its future.

WHY LEAD SUPPLIES WERE SHORT IN THE UNITED STATES IN 1951

Lead is a world commodity. The lead market in this country cannot operate, whether government controlled or not, independently of the world market without disrupting normal distribution.

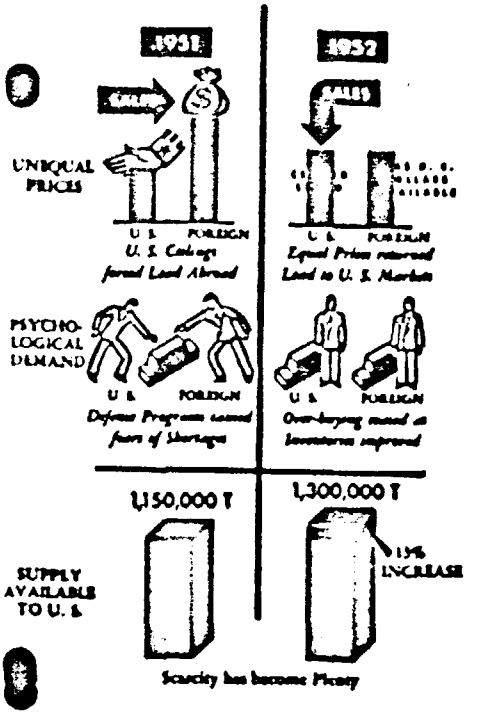
In recent years American consumers have derived their lead from three sources, each supplying about a third of the total, with minor variations from year to year. These three sources are mines in the United States, scrap, and imports.

In 1951 the United States Government imposed ceiling prices on lead which were unrealistically below the world market. As a consequence, foreign buyers were able to pay several cents a pound above the American ceiling and attract lead, which, under a free market, would have flowed to the United States.

This occurred at a time when demand, both here and abroad, was artificially inflated by defense programs. No one knew just what defense requirements would be and everyone felt the need of protecting himself against possible shortages.

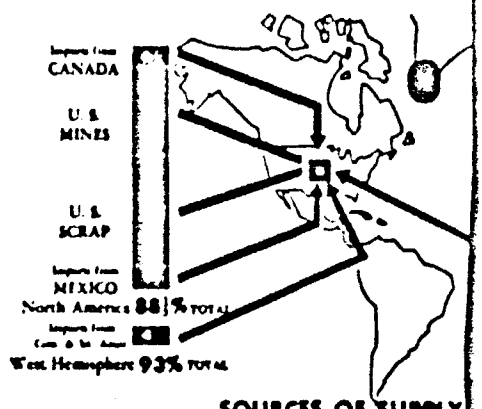
Lead is not a war metal to the same extent as many other metals. Its defense applications follow closely the pattern of its peace-time usage. Consequently, it didn't take long for foreign buyers to find themselves in an over bought position and also faced with currency difficulties that precluded further heavy buying.

Meanwhile, in the fall of 1951 the Government took a more realistic position on the ceiling price and



permitted an advance here of 2¢ per pound, bringing the domestic price closer to the world market. This was followed early in 1952 by Congressional suspension of the lead tariff. Also, in the fall of 1951 the Government released some 30,000 tons of lead from the stockpile for industrial use as an emergency measure, since strikes had interfered with domestic production.

With lead readily available in foreign markets and inventory positions of foreign consumers improved, buying was limited to current requirements. Coincidentally the dollar position of these foreign consum-



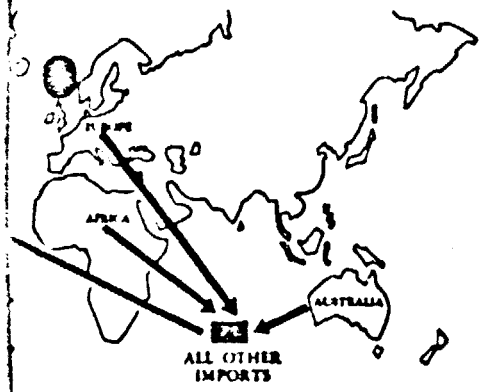
SOURCES OF SUPPLY

ers deteriorated so that dollars were not readily available for continued large volume purchases. As a result of these factors, foreign demand eased somewhat and the price declined to a point where American consumers could buy it at the new ceiling price. The lead that during 1951 had been diverted abroad again began to enter the domestic market which passed from a position of scarcity to plenty in a period of only a few weeks.

It is now estimated that more than 1,300,000 tons of lead will be available for consumption in this country in 1952. This is greater than the industrial consumption of this country in any past year—peace or war—and is some 150,000 tons more than were consumed in 1951.

Obviously the lead market was never so much out of balance as temporary conditions indicated. The lead was there but psychology and controls upset its normal distribution.

For the last several months every consumer in the United States has been able to buy all the lead he wants. And, in addition, it is reported that some 100,000 tons have been purchased for the stockpile.



FOR U. S. CONSUMPTION
(total supply 1946-51 incl.)

This more than replaces the 30,000 tons that were authorized to be removed from it, of which only about 17,000 tons actually were ever allocated to industry.

WHY THE LONG-TERM OUTLOOK FOR LEAD IN THE UNITED STATES IS ENCOURAGING

Ore reserves of any metal are difficult to estimate and figures on reserves must be used with the greatest caution or they may be dangerously misleading. For economic reasons, it is not generally practical for a mining company to block out its reserves for more than a few years ahead of its mining operations. The usual practice is to try to find through new development work each year enough reserves to replace the amount extracted.

Furthermore, reserves change from time to time with changes in economic and technological conditions. For example, a favorable economic climate may add considerable amounts of low grade material to

reserves and vice versa. This does not change the amount of metal content actually in the ground but merely what may be profitably extracted under any given set of economic conditions.

Also, technology may add large amounts of ore to reserves either through better recovery or lowering costs. An example was the development of flotation some years ago. This process enabled operators to claim as reserves large tonnages of material from which metal could not previously have been profitably extracted. No doubt other improved processes will be developed. Right at the moment a great amount of development work is being expended on chemical processes of metal refining to replace, at a saving, fire refining processes or make recoverable metals not previously recoverable. So far these have only been applied commercially to a few metals but there is always the possibility that lead may eventually benefit from new techniques.

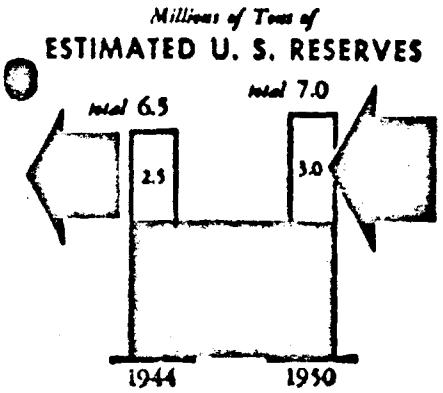
With the qualifications enumerated above, known world reserves of lead contained in ore have been estimated in the neighborhood of 50,000,000 tons. That is about 25 to 30 times annual consumption.

Important Canadian producers recently estimated increased potential production of some 10 percent largely as a result of opening three new properties and discovery of an important new ore body by an existing large producer. Opening of new properties in Mexico is also expected by producers there to aid in maintaining Mexican production at high levels.

New properties in Peru, together with enlarged smelter capacity, are expected to add some 20 percent to that country's potential production. Important additions are also expected from Africa with increases coming from Morocco, Southwest Africa and East Africa, and possibly from an entirely new property now undergoing development in Nigeria.

In Australia over the next few years a sizable increase, perhaps 20 percent, in potential production is anticipated. In fact, Australian producers estimate that based only on the tremendous reserves of the existing mines, they will be producing at the end of the century, and the country is large and still little prospected.

In this country the search for new ore has been spurred by favorable prices. A couple of new mines



have been found in Missouri, in Idaho activity has been particularly notable with discovery of new ore bodies and important extensions of old ones. Lead as a by-product of new zinc mines also will be an appreciable source of metal in the future. Only a shortage of labor seems to be a deterrent to considerably increased production but that does not affect reserves. In fact, new labor saving methods have already added thousands of tons of low-grade reserves.

Of great importance is the fact that new reserves this country are being added each year at a rate replace or even exceed the lead actually extracted. ues of reserves are estimated 5 to 10 years hence, they will probably not differ much from today, just as estimates 5 to 10 years ago were not greatly different.

For instance in 1947 hearings before the Subcommittee on Investigation of National Resources of the Senate Committee on Public Lands were published. In these hearings representatives of the U. S. Bureau of Mines and the U. S. Geological Survey estimated recoverable lead contained in reserves in the ground at about 6,500,000 tons in 1944, or about 15 times the average 1935-1944 rate of production.

However, in the report of the President's Materials Policy Commission, published in June, 1952, reserves are estimated at about 7,000,000 tons in 1950, or about

16 times 1950 production. Thus estimated reserves were somewhat higher in 1950 than in 1944 despite the fact that nearly 2,500,000 tons of lead had been mined from United States mines in the intervening six years. Both reports admit that the reserve figures given are minima. This clearly indicates the danger of using reserve figures as of any particular date as a guide to the life of the reserves because they cannot of necessity take into account the new reserves opened up each year.

There is a further consideration to bear in mind. While reserves of lead contained in ore have apparently increased some 500,000 tons or 8 percent in the six years under discussion, industrial consumption of primary lead, has actually been less in each of the years since 1944 than it was in 1944, due to the ever increasing importance of scrap as a source of supply.

Also, there need be little concern about the fact that in periods of good business we need sizable amounts of foreign lead to piece out our domestic supply. Most of our imports come from Mexico and Canada, our neighbors on the North American Continent. Those two countries have accounted for about 60 percent of our imports since the war.

It should be borne in mind that over the last four or five years, viewed as a whole rather than looking at the years separately, world lead supply and demand were in balance, even though our Government in that period was accumulating a substantial stockpile.