

INFORMATION FOR PROSPECTIVE SHIPPERS OF ARIZONA

COPPER-LEAD-ZINC ORES AND CONCENTRATES

August, 1958

The Arizona Department of Mineral Resources is pleased to present herewith information regarding the handling of Arizona copper, lead and zinc ores and concentrates by custom mills and smelters.

Prospective shippers of such ores and concentrates should first contact the ore purchasing department for each of these buyers, before making any ore shipments. They usually require a representative sample of the ore to be shipped, in order that they may determine whether they can handle the shipment. After assaying this sample, they will inform the potential shipper the treatment charges and details of metal settlement, etc.

The general details shown herewith are to give the potential shipper an idea of where to find the most logical plant to treat his particular ore.

AMERICAN SMELTING AND REFINING COMPANY  
Southwestern Ore Purchasing Department  
810 Valley Bank Bldg.,  
Tucson, Arizona

A. S. & R. CO., Hayden, Arizona

This copper smelter will, beginning in the Fall of 1958, purchase copper ores and concentrates, and copper fluxing ores.

EL PASO SMELTING WORKS, El Paso, Texas

Copper and lead plants handle custom ore and concentrate, and lead ore and concentrate.

A. S. & R. CO., Amarillo, Texas

Zinc smelter handles only high grade sulphide zinc concentrate.

A. S. & R. CO., Deming, New Mexico

This mill has not been operating since July, 1957

When operating it handles complex lead-zinc-copper ore (sulphide) delivered by rail in 50-ton minimum lots.

Each of the plants listed above performs a service to Arizona mine operators. Almost invariably metallurgical test work is required on each individual ore as a basis for quoting purchase terms, and to determine the receiving plant. Contact should first be made with the ore purchasing office at Tucson.

NASH - McFARLAND  
Patagonia, Ariz.

The Trench mill has been purchased from the American Smelting & Refining Co., and is presently operated by Nash-McFarland, treating complex lead-zinc sulphide milling ore. It is managed by Mr. E. W. McFarland, Beatus Estates, Nogales, Arizona, and prospective shippers are advised to contact him before shipping.

McFARLAND & HULLINGER  
Sahuarita, Ariz.

The Eagle-Picher Mill at Sahuarita is now operated by McFarland & Hullinger of Tooele, Utah. The mill superintendent is Mr. K. L. Erickson, P.O. Box 1102, Tucson, who should be contacted before shipping custom ore to the mill. The mill treats lead-zinc ores.

INTERNATIONAL SMELTING AND REFINING CO. Copper Smelter

Ore Purchasing Dept.  
P.O. Box 1265  
Miami, Ariz.

This smelter purchases ores and concentrates, paying for the copper, gold, and silver content only.

No penalties are applied for alumina, zinc, or other impurities.

Shipments are received by rail or truck, but permission to ship must first be arranged with the Ore Buyer.

Standard smelter minimum size lot is 10 tons, however, upon occasion, for the convenience of the shipper, smaller quantities are received, subject to a small sampling charge.

Usually, settlement in full is made in one week after receipt.

INTERNATIONAL SMELTING AND REFINING CO. - Tooele, Utah Plant  
815 Kearns Bldg.,  
Salt Lake City 1, Utah

Potential shippers should write to the Ore Purchasing Dept. at the above address for terms and shipping instructions.

1. Custom ores received at smelter are limited to lead ores and lead concentrates or mixtures of lead-zinc-copper ore and concentrate. Also handle custom sulphide lead-zinc ores in company's concentrator.
2. No specification or limitation on alumina or silica.
3. At present, iron content and MgO and arsenic content in smelting materials, are limited.
4. Accept multiple carload lots or truck lots. A ten dollar extra handling charge per lot is made when the lot contains less than ten tons.

MAGMA COPPER CO.    Coppersmelter  
Superior, Arizona

Following is a representative account of the way this smelter handles custom shipments of copper ore:

Magma Copper Company quotes the following treatment rates on ore when received in car load lots of 60,000 pound minimum; freight must be prepaid. Size of ore must be such that it will pass through a ten-inch grizzly.

The base treatment rate will be \$6.00 per ton when the total sum of metals paid for is \$15 per ton or less. For any increase in the sum of metals paid for there will be additional treatment charge of 10% of such increase until a total treatment rate of \$7.50 is obtained on ore of \$30 valuation. On ore where the sum of metals paid for exceeds \$30, there will be an additional treatment charge of 5% of the sum of metals paid for over \$30 until a total treatment rate of \$20 is obtained.

We will pay for 90% of the copper if the assay is over one percent copper with a minimum deduction of 10 pounds and a maximum deduction of 30 pounds per ton. Final settlement for copper will be at the Engineering and Mining Journal quotation on electrolytic copper for the average price of the week immediately preceding ninety days after receipt of shipment less 3.5 cents per pound. An advance of approximately 75% after deductions based on current price may be made pending final settlement.

We will pay for 95% of the silver if one ounce or over per ton. Settlement for silver shall be on the basis of the mint price subject to the condition that you shall furnish all certificates, affidavits, or other proofs as may be required to qualify the silver content of your ore for delivery to the United States Mint as specified by law. Provided, however, that if the above condition cannot be met or if other conditions for marketing silver take precedence, then settlement may be made on the market quotation of Handy and Harman for silver on the date of arrival of shipment at smelter.

We will pay for all the gold if 0.03 ounces or over per ton at 92% of the mint price.

CREDITS AND PENALTIES

Lime Ore: Ore carrying over 10% CaO and less than 40% silica and less than 10% alumina, a credit of 4 cents per ton will be allowed on the base rate for each unit of CaO over 10 up to a maximum of 25 units.

High Alumina Ore: For any ore carrying over 10% alumina a penalty will be charged at the rate of 25 cents per unit over 10.

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If you have no representative present to witness the sampling, our sampling will be considered final.

These rates do not apply to the product from any shipper unless the first shipment is made within 30 days of the date hereof, and subsequent shipments are made at intervals of not more than 30 days.

The above terms are subject to cancellation on 10 days' notice.

MAGMA COPPER COMPANY  
By General Manager

SAN MANUEL COPPER CORPORATION

Superior, Arizona

Mine, Mill and Smelter at San Manuel, Arizona

San Manuel Copper Corporation does not accept or buy custom ore or concentrates for treatment of any kind.

PHELPS DODGE CORPORATION

Douglas, Arizona

The three smelters belonging to Phelps Dodge Corporation in Arizona at Ajo, Douglas and Morenci, smelt copper ore and concentrates only, and do not handle lead and zinc.

Prospective shippers to any of these three smelters should first contact the ore purchasing department at the smelter involved, before shipping any material, as the quantities they can handle vary according to the smelter.

SHATTUCK DENN MINING CORPORATION

Mr. Dan M. Kentro, Mgr.

Humboldt, Arizona

IRON KING MINE

Concentrator makes a lead concentrate containing lead, zinc, copper, gold and silver and a zinc concentrate containing zinc, lead, copper, gold and silver. Will receive shipments only after prior arrangements are made.

Do not make a copper concentrate, and are not very successful in marketing copper in a lead concentrate.

No limitations as to alumina and silica, but limit customer receipts to lead-zinc ores amenable to milling process employed.

Payments based on metallurgical characteristics of ore received and current smelter contracts on lead and zinc concentrates.

UNITED STATES SMELTING, REFINING AND MINING COMPANY

P. O. Box 68

Midvale, Utah

This company is in a position to handle carload lots and truck lots, especially from shippers in the Prescott and Kingman-Chloride areas.

The following information is furnished by the company in this connection:

"We have a 1700 ton custom flotation mill at Midvale, Utah, for the treatment of lead-zinc sulphide ores and concentrates suitable for flotation treatment. The company's lead smelter has been shut down, but arrangements have been made for its smelting products to be processed at International, Utah. Accordingly we are continuing as



UNITED STATES SMELTING, REFINING AND MINING COMPANY Cont'd

in the past to purchase lead ores and concentrates and gold-silver ores and concentrates suitable for treatment in a lead smelter. Many shippers from the Kingman-Chloride area have shipped carload lots of ores and concentrates to us. We also handle cyanide precipitates.

Quotations for types of ores treated by us will be given upon receipt of representative hand samples. In the case of milling ores, we should have a 50-pound sample so that mill tests might be made. We do put some limitation on iron and MgO in smelting ores. We handle truckloads as well as carloads, but charge \$10.00 as a handling charge when any lot contains less than 10 tons.

The Utah Ore Sampling Company, located within three miles of our plant, is available for shippers who want to send their shipment through that facility. We pay part of the sampling charge.

The Salt Lake-Kanab Freight Lines has a franchise for hauling shipments by truck from the territory north of Phoenix and through the Prescott area. Their present rate is \$11.80 per ton based on a 20-ton minimum load."

HAYDEN COPPER SMELTER OF

KENNECOTT COPPER CORPORATION

Hayden, Arizona

The Kennecott Copper Corporation has just placed in operation, at Hayden, Arizona, a new smelter to handle the copper concentrate from the company's Hayden mill.

There have been no plans announced for handling outside ores.