Mr. W. C. Money

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ANACONDA COPPER MINING COMPANY

SLAG TREATING PLANT - EAST HELENA, MONTANA

REPORT ON AUDIT OF THE SLAG TREATING PLANT

MONTH OF FEBRUARY 1952

TIME REQUIRED FOR AUDIT

C. E. Rowan March 18th to 26th 1952, inclusive

C. E. Rowan, Metallurgical Auditor

March 26, 1952

ANACONDA COPPER MINING COMPANY

SLAG TREATING PLANT

MONTH OF FEBRUARY - 1952

Scale tickets, daily reports, assays and bills of lading were audited at East Helena following all
eipts and shipments into reports to Great Falls. At Great Falls, contracts and settlements were proved
ng reports from East Helena as well as Great Falls assays and weights on applicable fume shipments. All
allurgical Statements were checked using the East Helena and Great Falls figures.

No inventory observation was considered necessary, as the large portion of lead not available for
ervation. The computation of the February 29, 1952 inventory was checked in detail as outlined in the
port. The last-in, first-out valuation of the entire fume inventory was also reviewed and checked.

Index of the report is as follows:

SLAG TREATING PLANT - [illegible]

RECEIPTS - Continued

Hot Slag - Continued

Delivery

Seller shall deliver to the buyer at [illegible] all [illegible] weigh all material.

Cold Slag

Tonnage - Up to 250 tons per day. Buyer [illegible] remove slag for its own use.

Price - Base price of 7¢ per ton.

Zinc Assay - Add or subtract 20¢ per ton for each [illegible]

Zinc Price - Deduct 9/32 of 1¢ for each [illegible] under 6¢ per [illegible] over 6¢ up to and including 7.5¢ per pound. Add 13/32 of 1¢ for each [illegible] over 7.5¢ per pound [illegible] fractions [illegible] all price changes.

Labor Cost - Add or deduct 1¢ per ton for each [illegible] accordingly.

Coal Cost - Add or subtract 1.5¢ per ton for each [illegible] accordingly.

Minimum Price - $2.00 per ton if zinc assay [illegible] over 13%.

General - Hot and Cold Slag

Treatment - Only treated slag to be [illegible].

Produced Slag - Slag from Buyers furnace to be [illegible] property. All other products [illegible]

Weighing - All weighing to be done by [illegible]

Sampling and Weighing - Hot Slag sampled by [illegible]
- Cold Slag sampled [illegible]
- Both Slags assayed by [illegible] be used on zinc and [illegible]

Miscellaneous - The usual conditions and [illegible]

[illegible]PMENTS

The bill of lading date is now being used as the shipping date [illegible] [illegible]ission as occurred at the time of the previous audit. In February 1952 [illegible] [illegible] Zinc Plant at Great Falls, the American Chemet Corporation at [illegible] [illegible] Refining Company at East Helena.

The Zinc Plant shipments were made at cost [illegible]

The American Chemet Corporation sales are still [illegible] [illegible] indefinitely extended. The terms of this agreement [illegible] [illegible]tching order weights and Great Falls and Chemet assays are used [illegible] [illegible] by the American Chemet Corporation for the Slag Treating Plant since [illegible]

One truckload of fume for paint was sold to the American Smelting [illegible] [illegible], No. 52-207. The sales price per pound of fume was the current [illegible] [illegible] less 2¢ per pound and was verified by Mr. F. S. Weimer, General [illegible] [illegible] ticket was available to check the weight. The assay originated in East Helena.

SLAG TREATING PLANT - EAST HELENA, MONTANA

INVENTORIES

Fume at the Plant

As before, the fume inventory is computed by the Assistant Superintendent and reported to Great Falls in the monthly report. The zinc in fume produced is computed daily using the latest available weights and assays of slag received and treated, the computed weights of slag produced (by zinc and lead assay formula) and no loss of either metal. This assumes the balance of treatment less slag produced to be 100% volatilized into fume. All lead treated is recovered in fume and 100% of the zinc treated less that computed to be in the slag produced is recovered in fume. A loss in either metal is recognized only when the computed inventory looks unreasonable from past clean-up experience. The last clean-up of the flues and bag house was made in October 1951 and Mr. Thompson stated that the fume weighed out proved the book figure to be reasonable.

At February 29, 1952, there were 50 tons of low-grade fume reported outside the flue and two cars (about 80 tons) of high grade fume. The balance of the computed inventory was classed as high-grade fume in the flues and in the baghouse.

Fume In-Transit

Fume in-transit is derived from cars shipped from East Helena but not received at their destination. The February 29, 1952 inventory consisted of cars enroute to Great Falls. March 1952 weights and assays were used to compute weights and contents. All cars shipped in February were accounted for in the audit.

INVENTORY VALUATION

As reported before, valuation of inventories is computed on the last-in first-out basis on zinc content of the fume. The base for this system was December 31, 1943, and has been built up as follows to December 31, 1951:

	Zinc Pounds	Purchase Cost		Reduction Cost	
		Per Pound	Amount	Per Pound	Amount
December 1943	298,471	$ 1.2849	$ 3,835.05	$ .9333	$ 2,785.63
June 1943	98,937	1.2925	1,278.76	1.0160	1,005.20
December 1947	148,077	2.3110	3,422.06	1.4396	2,131.72
March 1948	315,449	3.1672	9,990.90	1.9448	6,134.85
Year 1949	111,766	3.1589	3,530.58	1.4695	1,642.40
	972,700		$ 22,077.35		$ 13,699.80

The February 29, 1952 inventory had decreased to 921,358 pounds of zinc and the last added cost was diminished accordingly. Before 1949 monthly costs were used for increments but in 1949 this was changed to yearly average costs.

After computing inventory values, the net cost of production is available by deduction and split to the various shipments on the basis of zinc content. In February 1952, retroactive wage payments necessitated almost $6,800.00 in credits to purchase costs because of the labor cost adjustment in the American Smelting and Refining Company slag contract. This credit was allocated entirely to Great Falls Zinc Plant shipments on request of Mr. Sneddon to avoid the allocation to various buyers over the past seven months. The Great Falls Zinc Plant receives over 95% of all fume shipped making this a reasonable decision.

ERRORS AND DISCREPANCIES

No errors of any consequence were found in the records of February 1952.

GENERAL REMARKS

As discussed in the report the new slag contract with the American Smelting and Refining Company is resulting in lower purchase prices. It is also more simplified in its schedules and terms. This new contract will hold until December 31, 1960.

A new form of monthly inventory report was drawn up and suggested for use. It follows the flow of the Superintendent's calculations more closely and would allow Great Falls to draw off its required figure without change. It will be presented to Mr. Baldwin upon his return to East Helena.

All past suggestions made in Metallurgical audits have been adopted and appear to have been appreciated. The uniform tare weights on pots and hats receipts and the uniform bill of lading [illegible] have both been accepted and have proven useful.