ANACONDA COPPER MINING COMPANY

DRAWER 1961

K. B. FRAZER
Assistant Secretary
and
Assistant Treasurer

ANACONDA

BUTTE, MONTANA

May 4, 1950

Mr. E. S. McGlone, Vice President
Anaconda Copper Mining Company
Hennessy Building
Butte

Dear Sir:

Herewith, copy of report of Mr. E. C. Jacobson, Metallurgical Auditor, covering audit of the metallurgical operations of the Slag Treating Plant - East Helena, Montana, for the month of February 1950.

Copies of my letters to Mr. W. K. Daly, Comptroller, and Mr. W. P. Snaddon, Chief Clerk, are also enclosed.

Yours very truly,

KB Frazer

WJF*JS
Enc.
cc - Mr. W. K. Daly

PNYC 00012345

ANACONDA COPPER MINING COMPANY

DRAWER 1961

K. B. FRAZER
Assistant Secretary
and
Assistant Treasurer

BUTTE, MONTANA

May 4, 1950

Mr. W. P. Sneddon, Chief Clerk
Great Falls Reduction Department
Great Falls, Montana

Dear Sir:

Herewith, three copies of report of Mr. E. C. Jacobson, Metallurgical Auditor, covering audit of the metallurgical operations of the Slag Treating Plant - East Helena, Montana, for the month of February 1950.

One copy of the report is for Mr. Caples and one is for your files. The other copy is for use of anyone who may find it advantageous to review it.

In conclusion, on page 4 the Auditor comments that with the exception of the omission of 10,000 pounds of fume shipment to the Great Falls Zinc Plant, all clerical work was in good order. Adoption of the uniform tare weight on trucks and pots in the opinion of the Auditor has been and will continue to be a very worthwhile saving in time and effort on the part of personnel involved. Paring down of work involved might also result in money saving where jobs may be combined.

Yours very truly,

WJF*JS
Enc.
cc - Mr. E. S. McGlone
- Mr. W. E. Daly
- Pogson, Peloubet & Company

PNYC 00012346

N13394.01

Mr. W. K. Daly

RECEIVED
MAY 8 - 1950
W. K. DALY

Books

ANACONDA COPPER MINING COMPANY

SLAG TREATING PLANT

REPORT ON AUDIT OF SLAG TREATING PLANT - EAST HELENA, MONTANA

MONTH OF FEBRUARY 1950

TIME REQUIRED FOR AUDIT

E. C. Jacobson April 14th, 1950 to April 25th, 1950, inclusive

Audit of the Slag Treating Plant, East Helena, Montana, embraced examination of records for the montl
y 1950 as outlined in "Books and Records Checked".

Audit of slag receipts included tracing of scale ticket weights for 7 days (approximately 25%) to
reports. All daily totals from the scalemen's reports were then traced to summaries of slag receive
per buyer's and seller's certificates were compared for adherence to checking limit, averages were
and use of average or umpire assays was reviewed. Settlement was calculated as per schedules provided
contract.

Scale tickets, assays, bills of lading or any other records pertaining to shipments of fume to outsid
were audited in detail, some data being available at East Helena and the balance at Great Falls. As t
fume at Great Falls constitutes shipment from East Helena and receipts at the former plant are audite
o further audit was currently made.

All records pertaining to inventories were reviewed to determine correctness of plant and in transit
. No inventory observations were made as no predetermined plans were formulated to make the audit. T
re of the audit permitted completion before the Auditor expected to leave for an assignment at Miami,

The report includes comment only on new features or changes since prior audit covering June 1949. In
ort is as follows:

E. C. Jacobson, Metallurgical Auditor
April 25th, 1950

mck

PNYC 00012347

N13394.02

ANACONDA COPPER MINING COMPANY

SLAG TREATING PLANT - EAST HELENA, MONTANA

MONTH OF FEBRUARY 1950

ANT OPERATION

physical plant remains substantially the same as previously reported. However, an additional ghouse is under construction. There are presently four units, the new unit to increase the number matic bag shakers will be used in the new unit and present plans anticipate installation of such ers in the old units. Slightly shorter bags will be used in the new unit.

l Slag

luded in audit of June 1949 was considerable detail on weighing practice used in arriving at king settlement with the American Smelting and Refining Company for slag purchased. In that audit f pot and truck weights was made showing the fairly uniform poundage of most pot weights and airly uniform poundage of most truck weights. A table was in use showing combined pot and truck r any possible combination. It was noted that the use of the table required considerable time; siderable time on the part of various scalemen and the assistant superintendent was necessary in ons of tare weights. The Auditors therefore suggested that sufficient weight be added to all cks and pots to arrive at a uniform weight for all. By balancing the scale to the weight of truck le, the content of the full ladle could thereby be obtained without deduction of tare weight.

Auditors' recommendation has been substantially carried out. A uniform weight of 6,500 pounds has ed for all trucks. This entailed adding iron rods to those which did not weigh that amount. The d in place to insure constant weight. In addition, iron plate has been built on some trucks in shape to divert all falling slag, thereby keeping trucks clean. Compressed air is also used to an.

the addition of weight to pots presented a more difficult problem, decision was made to use an t on all pots except one. The odd pot weighed 5,200 pounds, the others about 7,600 to 8,000 pounds. ts of the latter pots during separate weeks in February 1950 were as follows:

February 7, 1950	7,700 pounds
February 14, 1950	7,680 pounds
February 21, 1950	7,690 pounds
February 28, 1950	7,690 pounds

om this it is apparent that a beam weight of 14,200 pounds (6,500 for truck, 7,700 for pot) or the tare weight of most loads of slag. As the odd pot weighs 5,200 pounds a compensating balance 500 plus 5,200) pounds is used. Each week the pots are weighed to check the average. In case of nted for by repairs or other cause, the compensating beam weight may be changed by addition to or all washers which may be enclosed in it.

mparisons are frequently made by Mr. Baldwin to determine the accuracy of the uniform tares as thus In one instance the actual tares for one day totalled 871,700 pounds as against 873,200 using the for a difference of 1,500 pounds. Another comparison showed a difference of 2,180 pounds. In both uniform tares were the larger. However, it is possible to have compensating differences.

r. Baldwin, Mr. Thompson, and several scalemen were questioned by the Auditor concerning the results se of the method. All agreed that it has saved hours of work and were enthusiastic about the

uring prior audit it was noted that scale tickets were not available for slag skulls returned to the sheet also showed only net weight, no record having been kept of gross and tare weights. At that dwin agreed to make arrangements to save the tickets, upon which all data would be recorded. Current d that all data was fully available. Two trucks used to haul skulls to dump each have a tare weight nds.

t was also noted in prior audit that scale tickets were not available on cold dump slag treated. s were now available with full detail. On "hats" audited the tare weights were uniformly 3,000 pounds er hats weighed 2,800, 2,900 and 3,200 pounds. Correct tares are used as occasion requires.

lag is purchased under terms of contract written for a 10 year period originally scheduled to termin- l, 1951. However, under "Force Majeure" provisions the contract has been extended to April 25, 1951. is extension was included in letter of Mr. R. B. Caples to Mr. Frederick Laist, June 17, 1947 wherein tates "The total extension of the contract, because of the operation of the Force Majeure clause, is ne year beyond December 31, 1950. The 1946 strike uses up 115 days of this period, bringing the ate of the contract to April 25, 1951, and leaves a total of 250 days additional time for which the be extended through operation of the Force Majeure clause." No further correspondence was noted ation of contract.

PNYC 00012348

Cold Slag (Continued)

Auditor checked hot and cold slag settlements according to contract schedules "a", "b" and "c", the ...ing used officially as the most beneficial to the American Smelting and Refining Company. No discrep...re noted. In computing schedule "a" clerk adjusted slag payment directly by deduction due to wage and ...o increases. As contract provides for additions to base charge due to such increases it was recommend... form provide a section dealing entirely with base charge including additions or deductions thereto. ...eed to revise his form at the next opportunity. Other suggestions were also made and agreed upon conc... poration of more contract data on forms used in computing settlements.

All letters pertaining to cost of labor have been properly reported to the American Smelting and Ref...

...e Fume

Shipments of baghouse fume during February 1950 were made to the Great Falls Electrolytic Zinc Plant ...can Chemet Corporation, the Eagle Picher Company, the Ozark Smelting and Mining Company and to local ...s. The latter included shipments to the Anaconda and Great Falls Purchasing Departments.

No change has been made in accounting procedure relative to shipments to the Great Falls Electrolyti...t. Receipts at that plant consist of cars dumped and inventories in transit are for the account of th... ting Plant.

The American Chemet Corporation still maintains its plant on ground adjacent to the Slag Treating Pl...s of fume are made in fully loaded railroad cars. As the Chemet Company has bagging facilities it bag... shipment to other Anaconda Copper Mining Company consignees, the charge usually being $5.00 or more pe...pments to the Chemet Company are made under terms of original letter agreement of June 7, 1948 which ... for delivery of a maximum of 100 tons per month during period from July 1, 1948 to July 1, 1949. This ...quently extended for an indefinate period beyond June 30, 1949, subject to cancellation by either part...ving of thirty days notice. No cancellation is yet on record. Original agreement, as noted above ... 100 tons per month. It was noted that February 1950 shipments equalled 180 tons. Mr. Baldwin stated ...ad received verbal orders from Mr. Caples to make this tonnage concession. In letter of February 8, 1... W. Shropshire, President of American Chemet Company, Mr. Caples stated "------ our zinc concentrate ... appears to requirethat we limit you to a maximum of 100 tons per month, beginning with the month of M...am further assuming that your February requirements will not exceed a maximum of 150 tons.". Reference ...) metallurgical report showed that deliveries to the Chemet Corporation were 103.25 dry tons, indicati... Caples' agreement was substantially being carried out. Payments for sales made to the Chemet Corporati...itted to the East Helena Office which in turn forwarded them to the Great Falls Office.

Shipment of 7 cars of baghouse fume was made to the Eagle Picher Company during February 1950. Audi...48 gives a synopsis of letter agreement of June 19, 1947 with the Eagle Picher Company which expired o... 1948. Considerable correspondence was reviewed by the Auditor to verify terms of current sales. Perti...noted in letter of February 5, 1948 from Mr. R. B. Caples to Mr. Frederick Laist in which Mr. Caples ... would further propose that we contract with Eagle Picher for 200 tons of fume per month for a period ...following July 1, 1948, under present purchase terms, assuming that they will want to continue the pre...it." No such contract was found in the files, sales since July 1, 1949 having evidently been made on ...orders, terms having been arranged with the New York Office. For example, one February 1950 order fro... Picher Company for 3 cars specified "confirming arrangements made with you by our Cincinnati Office." ... of correspondence between Messrs. R. B. Caples and F. O. Case indicate that sale of fume is dependent ...upon the available receipts of concentrate at the Great Falls Electrolytic Zinc Plant. Sales terms ...are dependent upon relative profits as between sales and treatment. While original letter agreement ...for splitting limits on zinc and lead, present sales are based wholly upon Anaconda Copper Mining Comp...naconda's weights likewise are final. Terms of the original agreement regarding prices for zinc and ...n the same and, for review, are here quoted:

> Zinc: When the quoted price is 6¢ per pound, or lower, the cost of the zinc content shall be 4¢ per pound, to which there shall be added 90¢ prorata, for each 1¢ that the quoted price is above 6¢ per pound.
>
> Lead: No charge will be made for the lead content until the quoted price goes above 6.50¢ per pound. For each 1¢ and fraction in proportion, that the quoted price is above 6.50¢ per pound the cost will be 80¢ per pound.

Falls laboratory makes the assay determinations and the Anaconda Sales Company prepares the invoices. ...ion of $1.00 per ton for the combined zinc and lead content is charged by the Anaconda Sales Company. ...can Chemet Corporation had agreed to bag the shipments for $8.60 per ton. This cost, paid by the ...ls Office is charged to "Operating Expenses" and is in turn offset by a similar credit when entry is ...ing the Anaconda Sales Company for proceeds and bagging cost. The bagging cost changes from time to ...ndent upon costs at the Chemet Company.

(Continued)

Fume (Continued)

Eight cars of baghouse fume were shipped during February 1950 to The Ozark Smelting and Mining Company le, Kansas. This company is a subsidiary of the Sherwin-Williams Company. Terms of sale are as per noted in letter of Mr. F. O. Case to Mr. R. B. Caples on August 29, 1949 as follows: "In our discussi communications you had from Mr. Hurless, you know that our sales of East Helena fume to Sherwin-Willia n the basis of the Eagle Picher price formula. This also includes arrangements whereby your weights are to govern." In the same letter Mr. Case details proposal by Sherwin-Williams Company to use the ights and moisture determinations and also proposal to establish splitting limits on assays and use ssayers. In reply of September 1, 1949 Mr. Caples stated that the fume was sold on a break-even with Great Falls and that he would not accept the proposals. He did, however, suggest the use of a rep- by the Sherwin-Williams Company when samples were taken and car was weighed. In conclusion he states can establish some discrepancy in results, I think that we should insist on continuing the present ." All data reviewed by the Auditor was in conformance with Mr. Caples desires and pricing was that used on Eagle Picher shipments. Cars were loaded in bulk, however, instead of in bags. The les Company also received its commission of $1.00 per ton of combined zinc and lead content.

No errors or discrepancies were noted on either the shipments to Eagle Picher or Ozark Smelting and ny.

Both the Anaconda and Great Falls Purchasing Departments ordered 10,000 pounds of fume during February orders were bagged by the American Chemet Company whose charge of $5.00 per ton for bagging was charge Falls Office. That office in turn bills the Purchasing Departments for combined cost of fume, on and bagging cost. In prior audit it was noted that average assays of high grade fume shipped to lls Zinc Plant were used in arriving at metal content of fume shipped to Purchasing Departments and on was made to use assays pertaining to cars from which fume was bagged. In preference to Auditor's on the Slag Plant now assays local fume sales and reports such assays to the Great Falls Office for ring metallurgical report. The Northern Pacific Transport Company and the Consolidated Freightways me to Anaconda and Great Falls respectively, both "collect". Two hundred bags were included in each rice for fume has been determined by the management at 2¢ less than current market price.

or errors and omissions in accounting for local shipments see under "Errors and Discrepancies."

ness throughout Plant

change has been made in the method of arriving at the inventory of fume throughout the plant. The erintendent adds his calculated production to the inventory on hand at first of month from which he uantities shipped during the month, to arrive at an overall inventory at the plant. Further calcula- le to convert the zinc content of the inventory to equivalent 55% and 70% fumes, a portion of the tory being visually observed and identifiable as to grade. No discrepancies were noted in the cal-

nsit to Great Falls

rs shipped from East Helena which have not been dumped at Great Falls are classified as in transit. g East Helena for Great Falls the Auditor arrived at the cars in transit by comparing bills of lading f cars dumped at Great Falls. By this method car G. N. 73238 with bill of lading dated 2/28/50 d to be included with the in transit cars. In auditing the Great Falls records this car was not he in transits. Investigation revealed that Mr. Holland used a daily report issued by the Slag Treat- his basis for determining last lot shipped instead of using bills of lading. Under heading "To Be listed the cars leaving the East Helena Plant. Car number 73238 was designated "To Be Shipped March ascertain whether or not this car was omitted from inventory the Auditor again called at the East . It was there found that the bill of lading dates were not used as official shipment record dates car in question was included in the Assistant Superintendent's inventory.

cts obtained from Mr. Walter Schmitz, Cashier, were as follows: Mr. Coughlin of the Traffic Departmen t completion of loading constituted release of car for shipment, although car was sprinkled the next event loss in transit. The latter operation was presumably for the railroad's benefit in minimizing s not a part of the loading procedure. By this interpretation the bills of lading were dated when ded, usually one day prior to date "To Be Shipped". The date "To Be Shipped" was placed upon the repo ions of Mr. Weimer to assist him in determining when cars would arrive at Great Falls for treatment. sing loading date for bill of lading date minimizes demurrage charges, as benefit of one full day is een time car is received and shipped per bill of lading date.

thod presently used is contrary to procedure used on all other company shipments where bill of lading ial shipment date and in transit inventories are calculated therefrom. Change in the bill of lading with date "To Be Shipped" might result in costly demurrage charges. Change in daily report to read ng Date" would eliminate date desired by Mr. Weimer.

PNYC 00012350

ontinued)

it to Great Falls (Continued)

tional bill of lading date on daily report would enable Mr. Holland to make proper in transit
If this procedure were used Mr. Thompson at East Helena would be required to use official bill of
arriving at his shipments and calculated inventory at plant.

Auditor recommends that Mr. Sneddon, Chief Clerk at Great Falls, weigh the relative advantages
of any change and be guided accordingly. Use of the present method presupposes acquaintance
l with the method. Change to orthodox method would eliminate any confusion such as experienced

TIONS

hange has been made since last audit in method of inventory valuation. The fume inventory is
t-in, first-out basis on pounds of zinc content. Total cost of slag purchased and total cost of
ivided by pounds zinc produced to arrive at respective purchase and treatment costs per pound
oint for the last-in, first-out method of valuation is December 31, 1943. There was no increment
at February 28, 1950, inventory being built up of previous costs.

REPANCIES

"To Local Sales"

shipment of 10,000 pounds fume was made to the Purchasing Department at Anaconda and another ship-
pounds was made to the Great Falls Purchasing Department. The latter shipment was erroneously
metallurgical report, shorting the February 1950 recovery by 7,340 pounds zinc and 24.70 ounces
it was, however, included in March 1950 report.

reviously mentioned prior practice had been to use average assays of monthly shipments to the Great
to arrive at metal content of sales to Purchasing Departments. Auditor recommended in prior audit
ars from which local sales were made be used in preference to average assays for the month. The
it has gone further in that it now samples and assays local fume sales. It was noted, however,
ruary 1950 assays on Zinc Plant receipts rather than local sale assays were used on the February
er from the East Helena Office reporting assays was apparently lost or misplaced. Proper assays
er, on 10,000 pounds taken into March 1950 account. Comparison of February 1950 average assays
ual assays is as follows:

	% Zinc	O/T Silver
Averages for February 1950	72.111	5.982
Actual	72.6	5.19

the exception of the omission of the 10,000 pound fume shipment to the Great Falls Zinc Plant
k was in good order. Adoption of the uniform tare weight on trucks and pots in the opinion of
been and will continue to be a very worthwhile saving in time and effort on the part of personnel
g down of work involved might also effect money saving where jobs may be combined.

g perusal of Great Falls correspondence concerning shipments to Eagle Picher and Ozark Mining Company
ples was noted recommending that negotiations through the New York Office be discontinued and all
handled through the Great Falls Office. No reply was found in files but after Auditor paged through
ndence it was apparent that there was much lost motion between Mr. Caples and the New York Office
ately decided by Mr. Caples dependent upon his plant operation. The Auditor believes that any
f the procedure would be desirable.