

THE ANACONDA COMPANY
GREAT FALLS REDUCTION DEPARTMENT
GREAT FALLS, MONTANA

*Mr. Carlomagno,
Roberts*

MEMORANDUM - June 23, 1971

To --- - Mr. M. J. Villeneuve

FROM - J. Owings

SUBJECT --- DISPOSAL OF EAST HELENA BAG HOUSE FUME
DURING A POSSIBLE STRIKE SHUT DOWN

American chemet has agreed to accept on a previously agreed to hold procedure, the last two(2) days of our fume production from our Bag House. This fume, which will be pulled from the Bag House after the furnace shut-down, will be loaded into rail equipment that will be under lease to American Chemet.

J0-ps

cc: Messrs. Roberts
Calvert
Wm. Porter, American Chemet
File

*Final
CJ*

PNYC 00012206

N11173

INTERNATIONAL SMELTING AND REFINING COMPANY

TOOELE PLANT - TOOELE, UTAH

JULY 1948

REPORT ON AUDIT OF THE COPPER PLANT, LEAD PLANT, SLAG TREATMENT PLANT, AND SULPHIDE CONCENTRATOR PLANT
OF THE INTERNATIONAL SMELTING AND REFINING COMPANY, TOOELE, UTAH FOR JULY 1948

TIME REQUIRED FOR AUDIT

E. C. Jacobson

August 23, 1948 to October 31, 1948, Inclusive

BOOKS AND RECORDS CHECKED

PART I - COPPER PLANT

METALLURGICAL WORK PAPERS

SHIPMENTS - COPPER PLANT

Reverberatory Furnace Bottoms to American Smelting and Refining Company

Bill of Lading

Checked car number and weight (for freight) to Settlement.

American Smelting and Refining Company Assay Report

Checked assays to Tooele Assay Report.

Umpire Assay Report

Checked umpire assays to Tooele Assay Report.

Tooele Assay Report

Checked assays from American Smelting and Refining Company Assay Report.

Checked umpire assays from Umpire Assay Report.

Checked calculation of settlement assays.

Checked settlement assays to Settlement.

Settlement

Checked freight weight from Bill of Lading.

Checked settlement assays from Tooele Assay Report.

Checked assays and other applicable data to metallurgical report "Reverberatory Furnace Bottoms Settled for by American Smelting and Refining Company," page 3.

Checked settlement complete as to contract terms, footings and extensions.

Metallurgical Report "Reverberatory Furnace Bottoms Settled for by American Smelting and Refining Company," page 3

Checked assays and other applicable data from settlement.

Calculated metal content.

Checked segregation of settlement data into metals paid for, revenues and treatment charges.

Footed all columns.

Checked dry pounds and metal content to Statement of Cost, Treatment, Production and Losses, page 6.

Checked total revenue to Journal.

Journal

Checked entry amount from metallurgical report "Reverberatory Furnace Bottoms Settled for by American Smelting and Refining Company," page 3.

Checked postings to Ledger.

Ledger

Checked postings from Journal.

Footings in Ledger are verified during course of Salt Lake Office audit by other Independent Copper Mining Company internal auditors.

Reverberatory Flue Dust and Furnace Bottoms to Lead Plant

Detail of Books and Records checked is same as that included in audit of Copper Plant under "Reverberatory Furnace Bottoms to American Smelting and Refining Company."

Lead Plant - Reverberatory Flue Dust and Furnace Bottoms from Copper Plant

PNYC 00012207

BOOKS AND RECORDS CHECKED

PART I - COPPER PLANT (CONTINUED)

METALLURGICAL WORK SHEETS

Reverberatory Smelting Plant Statement of Treatment, Production and Losses

Checked inventories of July 1, 1948, from prior months work sheet.
Checked shipment of furnace bottoms from metallurgical report, "Reverberatory Furnace Bottoms Settled for by American Smelting and Refining Company," page 3.
Checked shipments of furnace bottoms to Blast Furnace and Flue Dust to Sintering Plant from Settlement on Inter Plant Transfer.
Footed all columns to inventory July 31, 1948.
Checked furnace bottom and flue dust inventories to metallurgical report "Ore, etc., on Hand," page 4.

Work Sheet on Value of Material on Hand

Checked July 1, 1948 inventories from prior months work sheet.
Checked dry weight and metal content of secondaries on hand July 31, 1948 from metallurgical report "Ore, etc., on Hand," page 4.
Calculated July 31, 1948 inventory values at schedule terms provided by the management.
Footed all columns.
Checked reclaiming cost from Work Sheet on Cost of Reclaiming Reverberatory Bottoms and Flue Dust.
Checked all applicable data to metallurgical report "Value of Material on Hand," page 5.

Interplant Transfer Settlement

Checked all books and records as outlined under Lead Plant Books and Records Checked as "Receipts - Lead Plant, Reverberatory Flue Dust and Furnace Bottoms from Copper Plant."
Checked shipments to Reverberatory Smelting Plant Statement of Treatment, Production and Losses.
Checked dry weight and metal content to "Statement of Cost, Treatment, Production and Losses," page 6.

Work Sheet on Cost of Reclaiming Reverberatory Bottoms and Flue Dust

Checked July 1, 1948 inventory from prior months work sheet.
Checked July 1948 cost of reclaiming from monthly cost book.
Checked tons shipped from metallurgical report page 3 and interplant transfer settlement.
Checked calculation of charge-outs on previously established costs.
Footed all columns to inventory July 31, 1948.
Checked inventory cost to Work Sheet on Value of Material on Hand.

METALLURGICAL REPORT

Reverberatory Furnace Bottoms Settled For by American Smelting and Refining Company, Tacoma, Washington. Page 3.

Books and Records checked are same as those under shipment section.

Ore etc., on Hand - Page 4

Checked Reverberatory Furnace Bottoms and Flue Dust from Reverberatory Smelting Plant Statement of Treatment, Production and Losses.
Checked calcine and McDougall flue dust from prior months metallurgical report (no change).
Checked inventory of finished converter copper on hand from Inventory Work Sheet (See under Books and Records, Lead Plant, Inventories, Converter Copper).
Footed all columns.
Checked dry weight and metal content of secondaries to Work Sheet on Value of Material on Hand.

Value of Material on Hand - Page 5

Checked all data from Work Sheet on Value of Material on Hand.
Checked dry weight, metal content and cost of July 31, 1948 inventory to Statement of Cost, Treatment, Production and Losses - Page 6.

Statement of Cost, Treatment, Production and Losses - Page 6

Dry Weight and Metal Content
Checked July 1, 1948 inventory from prior months statement.
Checked July 31, 1948 inventory from metallurgical report "Value of Material on Hand," page 5.
Checked shipment of furnace bottoms to Tacoma, Washington, from metallurgical report "Furnace Bottoms Settled for by American Smelting and Refining Company," page 3.
Checked shipments of by-products from interplant transfer settlement.
Footed all columns to treatment and production.

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PART I - COPPER PLANT (CONTINUED)

METALLURGICAL REPORT (Continued)

Statement of Cost, Treatment, Production and Losses - Page 6 (Continued)

Costs

Checked July 1, 1948 inventory from prior months statement.
 Checked July 31, 1948 inventory from metallurgical report "Value of Material on Hand," page 5.
 Checked expenses from monthly cost book.
 Footed all columns.

PART II - LEAD PLANT

METALLURGICAL WORK PAPERS

RECEIPTS - LEAD PLANT

Combined Metals Reduction Company Crude Ore and Concentrates

Scale Tickets

Checked deduction of tare weight from gross weight.
 Checked all weights to Record of Lead Ore Received.

Moisture Reports

Checked moisture percentages to Record of Lead Ore Received.

Record of Lead Ore Received

Checked gross, tare and net weights from Scale Tickets.
 Footed gross, tare, and net weight columns.
 Checked moisture percentages from Moisture Reports.
 Calculated dry weights and average moisture percentages on multiple car lots.
 Checked wet weights and average moisture percentages to Abstracts of Ore and Concentrates Received.

Shipper's Assay Reports, Including Repeats (In Salt Lake Office)

Checked assays to Settlements.

Toole's Assay Reports, Including Repeats (In Salt Lake Office)

Checked assays to Settlements.

Umpire Assay Certificates (In Salt Lake Office)

Checked assays to Settlements.

Settlements

Checked shipper's assays from Shipper's Assay Reports.
 Checked Toole's assays from Toole's Assay Reports.
 Checked umpire assays from Umpire Certificates.
 Checked use of contractual splitting limits.
 Checked calculation of average assays, or use of umpire assays to arrive at settlement assays.
 Checked weights, moistures, assays, contract terms, footings and extensions complete on 23 settlements representing 42% of total, plus monthly tonnage and sine penalty settlements.
 Checked assays to Abstracts of Ore Received.
 Checked costs to Ore Purchase Adjustment Record (at Salt Lake Office).

Ore Purchase Adjustment Record (At Salt Lake Office)

Checked purchase costs from settlements.
 Prepared work sheet to arrive at monthly total cost of lots.
 Checked monthly cost to Abstracts of Ore and Concentrates Received.
 Grand total cost of all ore received is footed, checked to Journal Entry and General Books during course of Salt Lake Office audit by other Anaconda Copper Mining Company Internal Auditors.

Abstracts of Ore and Concentrates Received

Checked wet weights and average moisture percentages from Record of Lead Ore Received.
 Checked assays from Settlements.
 Calculated dry weights and metal contents.
 Checked total cost of ore and concentrates from work sheet prepared from Ore Purchase Adjustment Record.
 Footed all columns.
 Checked total receipts and cost to Statement of Custom Material Received, Metallurgical Report, Page 9.

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BOOKS AND RECORDS CHECKED

PART II - LEAD PLANT (CONTINUED)

METALLURGICAL WORK PAPERS (Continued)

RECEIPTS - LEAD PLANT (Continued)

American Zinc Company of Illinois Zinc Residue

Checked receipt of residue per books and records as outlined above for ores from Combined Metals Reduction Company.
Checked weights, moistures, assays, contract terms, footings and extensions complete on 3 settlements (50%) included in July 1948 accounts.

Anaconda Corser Mining Company, Darwin Mines - Crude Ore and Concentrates

Checked receipt of crude ore and concentrates as per books and records as outlined above for ores from Combined Metals Reduction Co., except that Tooele assays are final, no Shipper's assay reports or umpire certificates being necessary.
Checked weights, moistures, assays, contract terms, footings and extensions complete on 6 settlements (100%) included in July 1948 accounts.

Anaconda Copper Mining Company Arsenic Plant Residue

Checked receipts of residue as per books and records as outlined above for ores from Combined Metals Reduction Company.
Checked weights, moistures, assays, contract terms, footings and extensions complete on single lot (100%) included in July 1948 accounts.

Lead Fume from Slag Treating Plant

Record of Deliveries Between Plants
Checked weight of fume transferred, adjusted by inventories, to settlement.

Record of Material Sampled
Checked moisture percentage to Settlement.

Smelter Monthly Assay Report
Checked monthly assays to Settlement.

Settlement
Checked weight from Record of Deliveries Between Plants.
Checked moisture percentage from Record of Material Sampled.
Checked assays from Smelter Monthly Assay Report.
Calculated metal content.
Checked extensions and footings using schedule provided by management and monthly Engineering and Mining Journal quotations.
Checked weights, metal content and transfer cost to Abstract of Ore Received.

Abstract of Ore Received
Checked weights, metal content and transfer cost from Settlement.
Checked dry weight metal content and transfer cost to metallurgical report "Statement of Custom Material Received."
Checked transfer cost to Journal (Salt Lake Office).

Journal (Salt Lake Office)
Checked transfer cost from Abstract of Ore Received.
Checked postings to Ledger

Ledger (Salt Lake Office)
Checked postings from Journal
Footings in Ledger are verified during course of Salt Lake Office audit by other Anaconda Copper Mining Company Internal Auditors.

Reverberatory Flue Dust and Furnace Bottoms from Copper Plant

Record of Deliveries Between Plants
Checked weight of transfers, adjusted by inventories, to settlement.

Record of Material Sampled
Checked moisture percentage to settlement.

PNYC 00012210

BOOKS AND RECORDS CHECKED

PART II - LEAD PLANT (CONTINUED)

METALLURGICAL WORK PAPERS (Continued)

RECEIPTS - LEAD PLANT (Continued)

Reverberatory Flue Dust and Furnace Bottoms from Copper Plant (Continued)

Smelter Monthly Assay Report
Checked monthly assays to Settlement.
Settlement on Interplant Transfer
Checked weights from Record of Deliveries Between Plants.
Checked moisture percentage from Record of Material Sampled.
Checked assays from Smelter Monthly Assay Report.
Calculated metal content.
Checked extensions and footings using schedule provided by management, and monthly Engineering and Mining Journal quotations.
Checked weights, metal content and transfer cost to Abstract of Ore Received.
Abstract of Ore Received
Checked weights, metal content and transfer cost from Settlement.
Checked dry weight, metal content and transfer cost to metallurgical report "Statement of Custom Material Received."
Checked transfer cost to Journal (Salt Lake Office).
Journal (Salt Lake Office)
Checked transfer cost from Abstract of Ore Received.
Checked postings to Ledger.
Ledger (Salt Lake Office)
Checked postings from Journal.
Footings in Ledger are verified during course of Salt Lake Office audit by other Anaconda Copper Mining Company Internal Auditors.

Blast Furnace Slag (Not used as an original or retreated receipt)

Record of Deliveries Between Plants
Checked total weight of deliveries for month to Work Sheet on Slag Put Into Process.
Smelter Monthly Assay Report
Checked monthly slag assays to Work Sheet on Slag Put Into Process.
Work Sheet on Slag Put Into Process
Checked July 1, 1948 inventory from prior months work sheet.
Checked July 31, 1948 inventory from Bin Inventory Work Sheet and calculated metal content on monthly slag assays.
Checked weight of deliveries from Record of Deliveries Between Plants.
Checked assays on deliveries from Smelter Monthly Assay Report.
Calculated metal content of deliveries.
Footed all columns to quantity put into process (receipts).

SHIPMENTS - LEAD PLANT

Lead Bullion Deliveries to American Smelting and Refining Company, Omaha, Nebraska. (Audited May 1948 final data taken into July 1948 statements.)

Statements of Tooele Bullion Received at Omaha (A.S. & R. Co. Report)
Footed individual car weights in refinery lots.
Checked refinery lot weight to Statement of Receipts of Lead Bullion from International Smelting and Refining Company (A.S. & R. Co. Report).
Omaha Plant Assay Reports (both for individual lots and monthly composites)
Checked silver and gold assays by lots to Work Sheet on Comparison of Assays.
Checked miscellaneous monthly assays to Tooele Plant Assay Report on Monthly Assays.
Umpire Assay Reports
Checked monthly miscellaneous assays to Tooele Plant Assay Report on Monthly Assays.
Checked silver and gold umpires to Work Sheet on Comparison of Assays.
Tooele Plant Assay Reports (on Individual Lots)
Checked silver and gold assays by lots to Work Sheet on Comparison of Assays.

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BOOKS AND RECORDS CHECKED

PART II - LEAD PLANT (CONTINUED)

METALLURGICAL WORK PAPERS (Continued)

SHIPMENTS - LEAD PLANT (Continued)

Lead Bullion Deliveries to American Smelting and Refining Company, Omaha, Nebraska (Continued)

Tooele Plant Assay Report on Monthly Assays

Checked miscellaneous monthly assays from Omaha Plant Assay Report.
Checked umpire assays from Umpire Assay Reports.
Compared assays to verify if within splitting limits and calculated average assays for settlement purposes.

Checked composite assays to Statement of Receipts of Lead Bullion from International Smelting and Refining Company (A.S. & R. Co., Statement).

Work Sheet on Comparison of Assays

Checked silver and gold assays from Omaha Plant Assay Reports.
Checked silver and gold assays from Tooele Plant Assay Reports.
Compared assays to verify if within splitting limits.
Checked umpire assays from Umpire Assay Reports.
Verified settlement assays.
Checked settlement assays to Statement of Receipts of Lead Bullion from International Smelting and Refining Company (A.S. & R. Co., Statement).

Statement of Receipts of Lead Bullion from International Smelting and Refining Company (A.S. & R. Co., Statement)

Checked refinery weights from Statements of Tooele Bullion Received at Omaha (A.S. & R. Co., Reports).
Checked composite monthly assays from Tooele Plant Assay Report on Monthly Assays.
Checked silver and gold assays from Tooele Plant Assay Reports (on Individual Lots).
Calculated gold content, gold payable, silver content and returnable silver, lead content and returnable lead and bismuth content and returnable bismuth.

Footed all columns.

Checked returnable dates on lead, silver and bismuth.

Checked following data to metallurgical report "Lead Bullion Production," page 20:

Weight of bullion.

Lead content and returnable pounds lead.

Bismuth content and returnable pounds bismuth.

Silver content (returnable 100%).

Gold content and ounces paid for.

Settlement (included on Statement of Receipts of Lead Bullion preceding)

Checked all tonnages and metal quantities, and all charges and credits per contract terms.

Checked all footings and extensions.

Settlement with the American Smelting and Refining Company is made by the New York Office, no book-keeping entries being made on the western books.

Blast Bag House Fume to Anaconda Copper Mining Co., Great Falls, Montana

Bills of Lading

Checked car numbers shipped to Great Falls Letter of Receipt

Great Falls Letters of Receipt

Checked car numbers from Bills of Lading

Checked weights to Abstract of Blast Bag House Fume Shipped.

Great Falls General Laboratory Assay Certificates

Checked assays to Settlements.

Tooele Plant Assay Certificates

Checked assays to Settlements.

Abstract of Blast Bag House Fume Shipped

Checked weights from Great Falls Letters of Receipt

Checked final assays from settlements.

Calculated metal content of all lots.

Footed all columns.

Checked shipment to Statement of Cost, Treatment and Production - Page 25.

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BOOKS AND RECORDS CHECKED

PART II - LEAD PLANT (CONTINUED)

METALLURGICAL WORK PAPERS (Continued)

SHIPMENTS - LEAD PLANT (Continued)

Blast Bag House Fume to Anaconda Copper Mining Co., Great Falls, Montana (Continued)

Settlements

Checked assays from Great Falls General Laboratory Assay Certificates.
Checked assays from Tooele Plant Assay Certificates.
Calculated average assays.
Checked assays to Abstract of Blast Bag House Fume Shipped.
Checked weights, moisture, assays, contract terms, footings and extensions complete on all settlements (2).
Checked total net amounts received to Journal (Salt Lake Office).

Journal (Salt Lake Office)

Checked net amount from Settlements.
Checked postings to Ledger (Salt Lake Office).

Ledger (Salt Lake Office)

Checked postings from Journal.
Footings in Ledger are verified during course of Salt Lake Office audit by other Anaconda Copper Mining Company Internal Auditors.

Converter Copper to Raritan Copper Works

Tooele Plant Assay Certificate

Checked Tooele assays to Raritan Settlement.

Raritan Settlement (Preliminary)

Checked Tooele assays from Tooele Plant Assay Certificate.
Checked calculation of dry weight, metal content and returnable pounds copper. (Raritan weight and Tooele assays used for preliminary settlement).
Checked total weight and metal content to metallurgical statement "Statement of Treatment, Production and Losses - Converter Plant."

INVENTORIES - LEAD PLANT

Ore in Stock Piles

Daily Car Report (Dumps)

Checked car numbers dumped at stock pile to Record of Lead Ore Received to obtain lot number.

Record of Lead Ore Received

Checked car numbers from Daily Car Report.
Checked lot numbers to Abstracts of Ore Received.

Abstracts of Ore Received

Checked lot numbers of ore dumped to stock pile from Record of Lead Ore Received.
Footed weight and metal content of stock pile receipts by shippers.
Checked weight and metal content of stock pile receipts by shippers to Disposition of Stock Pile Ores by Shippers.

Record of Deliveries Between Departments

Checked weight of removals to Work Sheet on Stock Pile Removals.

Monthly Moisture Reports

Checked moisture percentages of removals to Work Sheet on Stock Pile Removals.

Laboratory Assay Reports

Checked assays of removals to Work Sheet on Stock Pile Removals.

Disposition of Stock Pile Ore by Shippers

Checked stock pile receipts from Abstracts of Ore Received.
Footed all columns.
Checked totals to Record of Stock Pile Ore.

Work Sheet on Stock Pile Removals

Checked weight of removals from Record of Deliveries Between Departments.
Calculated dry weights using moisture percentages from Monthly Moisture Reports.
Checked assays from Laboratory Assay Reports.
Calculated metal content.
Checked dry weight and metal content of removals to Record of Stock Pile Ores by Piles.

PNYC 00012213

BOOKS AND RECORDS CHECKED

PART II - LEAD PLANT (CONTINUED)

MINERAL MEDICAL WORK SHEETS (Continued)

INVENTORIES - LEAD PLANT (Continued)

Ore in Stock Piles (Continued)

Record of Stock Pile Ore
Checked receipts from Disposition of Stock Pile Ore by Shippers.
Checked removals from Work Sheet on Stock Pile Removals.
Faced all columns to July 31, 1948 Inventory.
Checked inventories by piles to Recapitulation of Stock Pile Ores.
Recapitulation of Stock Pile Ores
Checked inventories by piles from Record of Stock Pile Ore by Piles.
Checked total to metallurgical report "Ore, etc., on Hand," Page 21.
Checked total dry weight and metal content by classes as required to Statement of Cost, Treatment, Production and Losses - Page 23.

Ore in Bins

Observed inventory taking at September 1, 1948.

Bin Measurement Book No. 1 (Lead Plant)

Checked bin measurements to Work Sheets on Bin Inventories.
Checked car numbers as per Sample Mill black board to Work Sheets on Bin Inventories.

Volume Tables

Checked cubic feet volume for various empty depths to Work Sheets on Bin Inventories.

Letters on Weight of Material per Cubic Foot

Checked weights per cubic foot to Work Sheets on Bin Inventories.

Work Sheets on Bin Inventories (Green Sheets)

Checked bin measurements from Bin Measurement Book No. 1.
Checked volumes from Volume Tables.
Checked weights per cubic foot from Letters on Weight of Material per Cubic Foot.
Multiplied cubic feet by weight per cubic foot to arrive at weight of various inventories in bins.
Checked car numbers as per Sample Mill black board from Bin Measurement Book No. 1.
Checked deduction of lots included in bin inventories but not taken into receipts until August 1948, using settlement weights.
Checked inclusion of unmeasured receiving bin inventories using settlement weights.
Checked identification of inventories by reference to Sintering Plant Daily Bin Report Record of Lead Ore Received and Abstracts of Ore Received.
Checked weights and lot numbers applicable to Abstract of Ore on Hand in Bins.
Checked copying of Tooele Valley Railroad cars from Switch List.
Checked applicable weights to Abstract of Ore on Hand in Bins.

Abstract of Ore on Hand in Bins

Checked weights and lot numbers from Work Sheets on Bin Inventories.
Checked moisture percentages, dry weights and assays from ore settlements where applicable, or calculated metal content of part lots or Tooele Valley cars.
Checked all subtotals and footings.
Checked subtotals to metallurgical report "Ore, etc., on Hand," page 21.
Checked detail by lots to statement "Value of Ore in Bins."
Checked Darwin and Shoshone inventories to Statement of Cost, Treatment, Production and Losses.

Sinter

Work Sheets on Bin Inventories (Green Sheets)

Observed inventory taking at September 1, 1948.
Checked calculation of bin tonnages same as on Ore in Bins.
Checked bin tonnages to Abstract Work Sheet.
Checked copying of Tooele Valley Railroad cars from Switch List.
Checked applicable weights to Abstract Work Sheet.

Monthly Laboratory Assay Report

Checked monthly assays to Abstract Work Sheet.

Abstract Work Sheet

Checked bin and car weights from Work Sheets on Bin Inventories (Green Sheets).
Checked assays from Monthly Laboratory Assay Report.
Calculated dry weight using fixed moisture percentage of .75.
Calculated metal content at Laboratory assays.
Checked inventory to metallurgical statement "Ore, etc., on Hand July 31st, 1948," Page 21.

PNYC 00012214

BOOKS AND RECORDS CHECKED

PART II - LEAD PLANT (CONTINUED)

METALLURGICAL WORK PAPERS (Continued)

INVENTORIES - LEAD PLANT (Continued)

Calcine

Monthly Laboratory Assay Report
Checked assays on stock pile receipts to Abstract Work Sheet.
Work Sheets on Bin Inventories (Green Sheets)
Checked calculation of bin tonnages same as on Ore in Bins
Checked bin inventory tonnages to Record of Deliveries Between Departments.
Record of Deliveries Between Departments
Checked July 1, 1948 bin inventory from prior months record.
Checked July 31, 1948 bin inventory from Work Sheets on Bin Inventories.
Adjusted weight of stock pile removals by bin inventories to arrive at net treatment at Sintering Plant.
Checked net treatment (ship-out) to Abstract Work Sheet.
Checked stock pile receipts to Abstract Work Sheet (No receipts during July 1948)
Abstract Work Sheet
Checked July 1, 1948 inventory from prior months statement.
Checked stock pile receipts from Record of Deliveries Between Departments.
Checked assays on receipts from Monthly Laboratory Assay Report.
Calculated metal content of receipts.
Checked net weight of removals from Record of Deliveries Between Departments.
Calculated dry weight and metal content of removals on basis of calcine to account for.
Footed all columns to inventory July 31, 1948.
Checked total inventory to metallurgical report "Ore, etc., on Hand July 31, 1948," page 21.

Sintering Plant Cleanings, etc.

(1) Prerocast

Work Sheets on Bin Inventories (Green Sheets)
Checked calculation of tonnages same as on ore in bins.
Checked bin inventory tonnages to Abstract Work Sheet.
Monthly Laboratory Assay Report
Checked monthly assays to Abstract Work Sheet.
Abstract Work Sheet
Checked bin tonnages from Work Sheets on Bin Inventories.
Footed all bin tonnages.
Checked assays from Monthly Laboratory Assay Report.
Calculated metal content.
Combined total inventory with other inventories below, to arrive at grand total.
Checked grand total to metallurgical report "Ore, etc., on Hand," page 21.

(2) Flue Dust

Work Sheets on Bin Inventories (Green Sheets)
Checked calculation of tonnages same as on ore in bins.
Checked bin and car inventories to Abstract Work Sheet.
Monthly Laboratory Assay Report and Moisture Report
Checked applicable assays to Abstract Work Sheet.
Abstract Work Sheet
Checked fixed tonnages and assays from prior months work sheet.
Checked car and bin inventories from Work Sheets on Bin Inventories.
Checked assays from Monthly Laboratory Assay Report and Moisture Report.
Calculated metal content.
Footed all columns.
Combined total inventory with other inventories below, to arrive at grand total.
Checked grand total to metallurgical report "Ore, etc., on Hand," page 21.

PNYC 00012215

PART II - LEAD PLANT (CONTINUED)

METALLURGICAL WORK PAPERS (Continued)

INVENTORIES - LEAD PLANT (Continued)

Sintering Plant Cleanings, etc.

(3) Pond Cleanings on Stock Pile

- Record of Deliveries Between Departments
- Checked weight of removals to Abstract Work Sheet.
- Hauler's Bill for Transferring Cleanings to Stock Pile
- Checked tonnage to stock pile to Abstract Work Sheet.
- Monthly Moisture Report
- Checked moisture percentage to Abstract Work Sheet.
- Monthly Laboratory Assay Report
- Checked assays to Abstract Work Sheet.

Abstract Work Sheet

- Checked weight of stock pile removals from Record of Deliveries Between Departments.
- Checked weight of storages from Hauler's Bill for Transferring Cleanings to Stock Pile.
- Checked July 1, 1948 inventory from prior months Abstract Work Sheet.
- Footed weight to July 31, 1948 inventory.
- Checked moisture percentage from Monthly Moisture Report.
- Checked assays from Monthly Laboratory Assay Report.
- Calculated dry weight and metal content.
- Combined inventory with other inventories below to arrive at grand total.
- Checked grand total to metallurgical report "Ore, etc., on Hand," page 21.

(4) Belt Cleanings

- Work Sheets on Bin Inventories (Green Sheets)
- Checked calculation of tonnages same as on ore in bins.
- Checked tonnages to Abstract Work Sheet.

Monthly Report of Material Sampled

- Checked moisture percentage to Abstract Work Sheet.

Monthly Laboratory Assay Report

- Checked monthly assays to Abstract Work Sheet.

Abstract Work Sheet

- Checked tonnages from Work Sheets on Bin Inventories
- Checked moisture percentage from Monthly Report of Material Sampled.
- Checked assays from Monthly Laboratory Assay Report.
- Calculated dry weight and metal content.
- Combined total inventory with other inventories below, to arrive at grand total.
- Checked grand total to metallurgical report "Ore, etc., on Hand," page 21.

(5) Yard Cleanings

- Books and Records checked are same as for Belt Cleanings.

Lead Dress

Work Sheets on Bin Inventories

- Checked car weights to Abstract Work Sheet.

Bin Measurement Book No. 1

- Observed inventory taking at September 1, 1948.

- Checked July 31, 1948 storage inventory to Abstract Work Sheet.

Monthly Laboratory Assay Report

- Checked monthly assays to Abstract Work Sheet.

Abstract Work Sheet

- Checked car weights from Work Sheets on Bin Inventories.
- Checked storage inventory from Bin Measurement Book No. 1.
- Footed weights.
- Checked assays from Monthly Laboratory Assay Report.
- Calculated metal content.
- Checked total inventory to metallurgical report "Ore, etc., on Hand," page 21.

PNYC 00012216

PART II - LEAD PLANT (CONTINUED)

METALLURGICAL WORK PAPERS (Continued)

INVENTORIES - LEAD PLANT (Continued)

Blast Matte (Gross Reverberatory Matte)

Work Sheets on Bin Inventories

- Checked calculation of tonnages same as on ore bins.
- Checked tonnages to Abstract Work Sheet.
- Checked car weights to Abstract Work Sheet.

Bills of Lading

- Checked weights of cars shipped to American Smelting and Refining Co., but not settled for to Abstract Work Sheet.

Monthly and Daily Laboratory Assay Reports

- Checked monthly inventory assays, and assays on cars shipped to Abstract Work Sheet.

Abstract Work Sheet

- Checked bin tonnages and car weights from Work Sheets on Bin Inventories.
- Checked weights of cars in transit to American Smelting and Refining Company from Bills of Lading.
- Checked assays from monthly and daily Laboratory Assay Reports.
- Calculated metal content.
- Footed all columns.
- Checked total inventory to metallurgical report "Ore, etc., on Hand" page 21.

Lead Residue "Spiss"

Work Sheets on Bin Inventories

- Checked weight of Tooele Valley Railroad cars on hand to Abstract Work Sheet.

Bin Measurement Book

- Checked tonnage on hand in converter ladles to Abstract Work Sheet.

Record of Deliveries Between Departments

- Checked weight of cars to and from stock piles to Abstract Work Sheet.

Monthly Moisture Report

- Checked moisture percentages to Abstract Work Sheet.

Monthly Laboratory Assay Report

- Checked monthly assays to Abstract Work Sheet.

Abstract Work Sheet

- Checked weight of Tooele Valley Railroad cars on hand from Work Sheets on Bin Inventories.
- Checked tonnage on hand in converter ladles from Bin Measurement Book.
- Checked weight of cars to and from stock piles from Record of Deliveries Between Departments.
- Checked moisture percentages from Monthly Moisture Report.
- Checked assays from Monthly Laboratory Assay Report.
- Calculated dry weights and metal content.
- Checked all subtotals and footings.
- Checked grand total inventory to metallurgical report "Ore, etc., on Hand," page 21.

Blast Cleanings

Work Sheets on Bin Inventories

- Checked calculation of tonnages same as on ore bins.
- Checked tonnages to Abstract Work Sheet.
- Checked car weights to Abstract Work Sheet.

Monthly Laboratory Assay Report

- Checked monthly assays to Abstract Work Sheet.

Abstract Work Sheet

- Checked car weights and tonnages from Work Sheets on Bin Inventories.
- Checked assays from Monthly Laboratory Assay Report.
- Calculated metal content.
- Footed all columns.
- Checked total inventory to metallurgical report "Ore, etc., on Hand," page 21.

PNYC 00012217

BOOKS AND RECORDS CHECKED

PART II - LEAD PLANT (CONTINUED)

METALLURGICAL WORK PAPERS (Continued)

INVENTORIES - LEAD PLANT (Continued)

Forehearth Material

Work Sheets on Bin Inventories
Checked calculation of tonnages same as on ore bins.
Checked tonnages to Abstract Work Sheet.
Bin Measurement Book
Checked estimated tonnages to Abstract Work Sheet.
Monthly Laboratory Assay Report
Checked monthly assays to Abstract Work Sheet.
Abstract Work Sheet
Checked tonnages from Work Sheets on Bin Inventories.
Checked estimated tonnages from Bin Measurement Book.
Footed weights.
Checked assays from Monthly Laboratory Assay Report.
Calculated metal content.
Checked total inventory to metallurgical report "Ore, etc., on Hand," page 21.

Blast Fine Dust

Work Sheets on Bin Inventories
Checked calculation of tonnages same as on ore in bins.
Checked tonnages and car weights to Abstract Work Sheet.
Monthly Laboratory Assay Report
Checked monthly assays to Abstract Work Sheet.
Monthly Moisture Report
Checked monthly moisture percentage to Abstract Work Sheet.
Abstract Work Sheet
Checked bin tonnages and car weights from Work Sheets on Bin Inventories.
Checked assays from Monthly Laboratory Assay Report.
Checked moisture percentage from Monthly Moisture Report.
Calculated dry weight and metal content of bin and car inventories.
Checked July 1, 1948 stock pile inventory from prior months Abstract Work Sheet.
Accepted July 1948 truck weight on additions to pile (no removals).
Footed stock pile weights.
Calculated metal content of stock pile inventory on old fixed assays.
Footed all columns to arrive at grand total inventory.
Checked grand total inventory to metallurgical report "Ore, etc., on Hand," page 21.

Blast Bag House Fume

Work Sheets on Bin Inventories
Checked calculation of tonnages same as on ore bins.
Checked tonnages and car weights to Abstract Work Sheet.
Monthly Moisture Report
Checked monthly moisture percentage to Abstract Work Sheet.
Monthly Laboratory Assay Report
Checked monthly assays to Abstract Work Sheet.
Abstract Work Sheet
Checked bin tonnages and car weights from Work Sheets on Bin Inventories.
Accepted pit inventory of 215 tons (phoned in by superintendent).
Checked fixed inventory (50 tons) from prior months Abstract Work Sheet.
Checked moisture percentage from Monthly Moisture Report.
Checked assays from Monthly Laboratory Assay Report.
Footed wet weight of all inventories.
Calculated dry weight and metal content.
Checked grand total inventory to metallurgical report "Ore, etc., on Hand," page 21.

PNYC 00012218

PART II - LEAD PLANT (CONTINUED)

METALLURGICAL WORK PAPERS (Continued)

INVENTORIES - LEAD PLANT (Continued)

Converter Cleanings

Work Sheets on Bin Inventories
 Checked calculation of tonnages same as on ore bins.
 Checked tonnages and car weights to Abstract Work Sheet.

Bin Measurement Book
 Checked tonnage estimates to Abstract Work Sheet.

Abstract Work Sheet
 Checked July 31, 1946 stock pile inventory from prior months Abstract Work Sheet - No change.
 Checked July 31, 1948 car and bin inventory from prior months Abstract Work Sheet. No change. Tonnages substantially verified from July 31, 1948 Work Sheets on Bin Inventories and Bin Measurement Book.
 Accepted superintendent's estimate of stock inventory (45 tons).
 Footed all columns.
 Checked inventory to metallurgical report "Ore, etc., on Hand," page 21.

Converter Bag House Fume

Testing Engineer's Bulletins Nos. 13 and 14
 Checked weights and assays of fume on hand to Abstract Work Sheet.

Abstract Work Sheet
 Checked weights and assays of fume on hand in pits from Testing Engineer's Bulletins Nos. 13 and 14.
 Calculated metal content of fume in pits.
 Checked stock pile inventory from prior months Abstract Work Sheet (no change).
 Footed all columns.
 Checked total inventory to metallurgical report "Ore, etc., on Hand," page 21.

Lead Bullion

At Tooele (Estimate)
 Inventory Record Book
 Checked tonnages in kettles, on converter floor, in dross reverberatory and in walls to Inventory Work Sheet on Lead Bullion on Hand and in Transit.

Tooele Plant Assay Certificates and Assay Calculation Data
 Checked applicable assays to Inventory Work Sheet.

Inventory Work Sheet on Lead Bullion on Hand and in Transit
 Checked tonnages from Inventory Record Book.
 Checked assays from Tooele Plant Assay Certificates and Assay Calculation Data.
 Calculated metal content.
 Checked total inventory to metallurgical report "Lead Bullion Production."

In Transit to Omaha (Estimate)
 Bills of Lading
 Checked car numbers and weight of cars shipped to Work Sheet on Shipments.

Statements of Tooele Bullion Received at Omaha (A.S. & R. Co. Reports)
 Checked car numbers received at Omaha to Work Sheet on Shipments.

Work Sheet on Shipments
 Checked car numbers and Tooele weight of cars shipped but not received at Omaha to Inventory Work Sheet on Lead Bullion on Hand and in Transit.

Tooele Plant Assay Certificates
 Checked Tooele monthly assays to Assay Calculation Data.
 Checked bismuth, silver and gold assays to Inventory Work Sheet.

Assay Calculation Data (On Inventory Work Sheet)
 Checked monthly assays from Tooele Plant Assay Certificates.
 Calculated lead assays of inventory at Tooele and in transit.
 Checked lead assays to Inventory Work Sheet.
 Checked calculation of refining charge per ton as per contract terms.
 Checked refining charge per ton to metallurgical report "Lead Bullion Production," page 20.

PNYC 00012219

BOOKS AND RECORDS CHECKED

PART II - LEAD PLANT (CONTINUED)

METALLURGICAL WORK PAPERS (Continued)

INVENTORIES - LEAD PLANT (Continued)

Lead Bullion (Continued)

In Transit to Omaha (Estimated) (Continued)

Inventory Work Sheet on Lead Bullion on Hand and in Transit
Checked weight of cars in transit from Work Sheet on Shipments.
Checked lead assays from Assay Calculation Data.
Checked tismuth, silver and gold assays from Tooele Plant Assay Certificates.
Calculated metal contents.
Checked metal content to metallurgical report "Lead Bullion Production," page 20.
Combined in transit inventory with inventory at plant and checked total to metallurgical report
"Cars, etc., on Hand," page 21.

Converter Copper

On Hand at Tooele

Inventory Work Sheet
Checked July 1, 1940 inventory from prior months work sheet.
Checked mold inventory additions or deductions using average weight of molds, deducting used molds
at average metal content and adding new molds at current assays per laboratory reports.
Checked inventory to Statement of Converter Copper Produced and Shipped - Page 14.

On Hand in Transit to Raritan Copper Works

Raritan Metal Statement
Checked cars received to Tooele Bills of Lading.
Tooele Bills of Lading
Checked cars received at Raritan from Raritan Metal Statement.
Checked numbers of cars shipped but not received at Raritan (in transit) to Inventory Work Sheet.

Scale Tickets
Checked deduction of tare weights from gross weights.
Checked weights to Inventory Work Sheet.

Laboratory Assay Reports
Checked Assays to Inventory Work Sheet

Inventory Work Sheet
Checked car numbers or lots of cars in transit from Tooele Bills of Lading.
Checked weights from Scale Tickets.
Checked assays from Laboratory Assay Reports.
Calculated metal content.
Footed all columns.
Checked inventory to metallurgical report "Statement of Converter Copper Produced and Shipped," page 14.

Blasat Furnace Slag (Reclaimed)

Memo Book on Bin Measurements
Checked empty depth to Bin Inventory Work Sheet.
Tables on Cubic Feet Volume per Foot Empty Depth
Checked cubic feet to Bin Inventory Work Sheet.
Bin Inventory Work Sheet
Checked empty depth from Memo Book on Bin Measurements.
Checked cubic feet from Tables on Cubic Feet Volume per Foot Empty Depth.
Checked weight of bin inventory using weights per cubic foot previously determined.
Checked tonnages to Work Sheet on Slag Put into Process.
Inventory is in same status as that on dump and does not enter metallurgical report.

PNYC 00012220

BOOKS AND RECORDS CHECKED

PART II - LEAD PLANT (CONTINUED)

METALLURGICAL WORK PAPERS (Continued)

VALUATION OF INVENTORIES - LEAD PLANT

Valuation of Ore in Stock Piles

Disposition of Stock Pile Ore by Shippers

Checked following settlement detail on 11 lots of 25 (44%) which went to storage:
Metal content and metals paid for, except gold paid for.
Value of lead, copper and zinc paid for at settlement price.
Value of silver at \$4.75 per ounce.
Value of gold paid for, adjusted by calculated ounces paid for at \$34.91 per ounce, repriced at \$34.00 per ounce.
Treatment charges per settlement.
Footed all columns.
Checked data to Record of Stock Pile Ore.

Record of Stock Pile Ore

Checked settlement data on additions from Disposition of Stock Pile Ore by Shippers.
Checked metal content, value and treatment charges on 5 of 9 stock pile removals (67%) at average of quantities to account for, except lead and zinc which were removed on last-in, first-out basis.
Footed all columns.
Checked inventories by piles to Recapitulation of Stock Pile Ores.

Recapitulation of Stock Pile Ores

Checked inventories from Record of Stock Pile Ore.
Checked inventories to Work Sheet on Value of Material on Hand.

Valuation of Ore, Concentrates, Residues, etc., in Bins

Abstract of Ore on Hand in Bins

Checked dry weight and metal content of all material on hand by settlement lot numbers to statement "Value of Ore in Bins - Lead Plant - July 31, 1948."

Statement "Value of Ore in Bins - Lead Plant"

Checked dry weight and metal content of all material on hand in bins from Abstract of Ore on Hand in Bins.

Checked following settlement detail on 10 lots of 40 (25%) which were on hand:

Metal content and metals paid for, except gold paid for.
Value of lead, copper and zinc paid for at settlement price.
Value of silver at \$4.75 per ounce.
Value of gold paid for, adjusted by calculated ounces paid for at \$34.91 per ounce, repriced at \$34.00 per ounce.
Treatment charges per settlement.

Footed all columns.

Checked data to Work Sheet on Value of Material at Lead Plant.

Checked metal content and value direct to metallurgical statement "Value of Material on Hand July 31, 1948," page 22, combined value of zinc with lead value, and assessing lead with all treatment charges.

Checked value of Darwin and Shoshone mines ore to Statement of Cost, Treatment, Production and Losses, Page 23, adjusting silver to 90¢ and gold to \$34.91 per ounce.

METALLURGICAL WORK SHEETS

VALUATION OF INVENTORIES - LEAD PLANT

Work Sheet on Valuation of By-Product Equivalent and Physical Inventories

Checked dry weight and metal content of equivalent and physical by-product inventory from Work Sheet on By-Product Equivalents (below).

Checked old normal inventories of lead and copper in pounds and price used from prior months work sheet. Calculated silver and gold at \$4.75 and \$34.00 per ounce respectively, using Inter Plant Schedule to determine quantities paid for.

Calculated balance of content at Inter Plant Transfer Schedule terms.

Footed all columns.

Combined settlement segregation with that on Special Speiss and checked all data to Work Sheet on Value of Material on Hand at Lead Plant.

Calculated increments on lead and copper at current quotations.

PNYC 00012221

PART II - LEAD PLANT (CONTINUED)

METALLURGICAL WORK SHEETS (Continued)

VALUATION OF INVENTORIES - LEAD PLANT

Work Sheet on Valuation of Special Speiss

Checked dry weight and metal content from Abstract Work Sheet on inventories.
 Calculated lead and copper valuation at Inter Plant Transfer Schedule using current metal quotations.
 Calculated silver and gold at \$34.75 and \$34.00 per ounce respectively, using Inter Plant Transfer Schedule for quantities paid for.
 Calculated balance of content at Inter Plant Transfer Schedule terms.
 Footed all columns.
 Combined settlement segregation with that on By-Product Equivalent and Physical Inventories and checked all data to Work Sheet on Value of Material on Hand at Lead Plant.

WORKED BACK INVENTORY

Sinter Plant

Checked sinter inventory from metallurgical report "Ore, etc., on Hand," page 21.
 Checked Sintering Plant recoveries from Statement of Treatment, Production and Losses, metallurgical report page 16 for July 1948.
 Calculated sinter inventory to original material equivalent using July 1948 recoveries and average lead assay on treatment.
 Checked segregation of lead equivalent on basis of lead pounds treated at Sintering Plant for July 1948.
 Worked back to dry weight by classes of material on basis of Sintering Plant treatment lead assays for July 1948.
 Worked forward by average assays of treatment to arrive at copper, silver and gold in equivalent material by classes.
 Calculated sintering cost using standard or fixed cost per ton.

Calcining Plant

Checked calcine inventory from metallurgical report "Ore, etc., on Hand," page 21.
 Calculated calcine inventory to original material equivalent using fixed recovery percentages.
 Worked back to dry weight on fixed assay.
 Calculated segregation of lead pounds equivalent between custom ore and by-products on basis of fixed percentages.
 Worked back to dry weight on custom material using fixed lead assay, by-products taking balance of dry weight.
 Worked forward by fixed assays to arrive at copper, silver and gold content of custom material, by-products taking remainder.
 Calculated calcining cost using standard or fixed cost per ton.

Sampling Mill

Checked stock pile ore from metallurgical report "Ore, etc., on Hand," page 21.
 Checked original material at Sintering Plant and Blast Furnace Smelting Plant from metallurgical report "Ore, etc., on Hand," page 21.
 Checked ore equivalents of sinter and calcine from respective worked back inventory sections.
 Calculated sampling cost using standard or fixed cost per ton. (No sampling cost carried against stock pile ore).
 Footed all columns.

Other Data

Calculated cost to finish lead in wells.
 Prepared statement to balance worked back inventory.
 Checked by-product equivalents to Work Sheet on By-Product Equivalents.
 Footed equivalent dry weight and metals of custom ore from sinter and calcine and checked total as "Ore in Process" to Work Sheet on Value of Materials on Hand at Lead Plant.
 Checked dry weight and metal content of by-product equivalent inventory to Work Sheet on By-Product Equivalents.
 Checked reduction cost to Work Sheet on Value of Material on Hand at Lead Plant.
 Checked cost of finishing lead in wells to Work Sheet on Value of Material on Hand at Lead Plant.
 Checked grand total inventory to Statement of Cost, Treatment, Production and Losses.
 Checked reduction costs to Statement of Cost, Treatment, Production and Losses.
 Checked "worked back" losses to reconciliation on Statement of Cost, Treatment, Production and Losses.

PNYC 00012222

PART II - LEAD PLANT (CONTINUED)

METALLURGICAL WORK SHEETS (Continued)

WORK SHEET ON BY-PRODUCT EQUIVALENTS (Clerk used pen copy of metallurgical report "Ore, etc., on Hand" as a work sheet).

Checked Special Speiss inventory from Abstract Work Sheets on inventory. Deducted dry weight and metal content of Special Speiss (valued separately) from grand total of by-products in inventory.

Checked addition of dry weight and metal content of by-product equivalents, as per Worked Back Inventory, to by-product inventory after deduction of Special Speiss to arrive at total equivalent by-product inventory for valuation.

Checked dry weight and metal content of equivalent by-product inventory, excluding Special Speiss, to Work Sheet on Valuation of By-Product Equivalent and Physical Inventories.

Checked dry weight and metal content of by-product equivalent inventory from Worked Back Inventory.

Checked total weight and metal content of physical and equivalent by-product inventory to Work Sheet on Value of Material on Hand at Lead Plant.

DETAIL OF ORE PURCHASES (AT SALT LAKE OFFICE)

Checked calculation of average metal prices on metals paid for.

Compared average metal prices on metals paid for with monthly Engineering and Mining Journal quotations to verify if within reasonable limits.

Checked paid for metals on ore received to Work Sheet on Value of Material on Hand at Lead Plant.

WORK SHEET ON VALUE OF MATERIAL ON HAND AT LEAD PLANT

Checked all July 1, 1948 inventories from prior months work sheet.

Checked metal content of all receipts from Statement of Custom Material Received.

Checked paid for metals on ores received from Salt Lake Office Detail of Ore Purchases.

Checked paid for metals on interplant transfers from settlements.

Checked July 31, 1948 stock pile inventory from Recapitulation of Stock Pile Ores.

Checked July 31, 1948 bin inventory from statement "Value of Ore in Bins" Lead Plant.

Footed statement to "Material Put into Process."

Applied average lead and copper costs of material received to those metals treated and arrived at July 31, 1948 inventories in stock pile by deduction (last-in, first-out method applied directly to treatment).

Checked stock pile ore inventory and cost at July 31, 1948 to metallurgical report "Value of Material on Hand July 31, 1948" page 22.

Checked equivalent dry weight and metal content of custom ore from sinter and calcine (Ore in Process July 31, 1948) from Worked Back Inventory.

Checked calculation of metals paid for, value of metals paid for, and freight and refining costs on total Ore in Process July 31, 1948 on average of Material Put into Process, except silver and gold which are valued at \$4.75¢ and \$34.00 respectively.

Footed and crossfooted Ore in Process Inventories to show increase or decrease between July 1, 1948 and July 31, 1948.

Checked dry weight and metal content of physical and equivalent by-product inventories at July 31, 1948 from Work Sheet on By-Product Equivalents.

Checked metals paid for, value of metals paid for, freight and refining cost, and treatment cost on by-product physical and equivalent inventories at July 31, 1948 from Work Sheet on Valuation of By-Product Equivalent and Physical Inventories and Valuation of Special Speiss.

Footed and crossfooted By-Products on Hand to show increase or decrease between July 1, 1948 and July 31, 1948.

Footed all columns to total treatment.

Checked recapitulation of all inventories.

Checked reduction cost from Worked Back Inventory.

Checked cost of finishing lead in walls from Worked Back Inventory.

Checked reconciliation of physical inventory with equivalent inventory.

Checked dry weight, metal content and value of by-products to Statement of Cost, Treatment, Production and Losses.

Checked total value of stock pile ores to Statement of Cost, Treatment, Production and Losses.

Checked all applicable data to metallurgical report "Value of Material on Hand" page 22.

PNYC 00012223

METALLURGICAL REPORT - LEAD PLANTSTATEMENT OF CUSTOM MATERIAL RECEIVED - PAGE 9

Checked dry weights, metal content, average assays and cost of ore by shippers from Abstracts of Ore by shippers from Abstracts of Ore and Concentrates Received.
 Footed all columns.
 Checked dry weight, metal content and costs to Statement of Cost, Treatment, Production and Losses by classes as required.

BLAST BAG HOUSE FUME SETTLED FOR BY ANACONDA COPPER MINING COMPANY (PAGE 13)

Checked weight and metal content from Abstract of Blast Bag House Fume Shipped.
 Checked detail of contents, contents paid for, charges and credits from settlements.

STATEMENT OF TREATMENT, PRODUCTION AND LOSSES, CONVERTER PLANT - PAGE 14

Checked shipment to Haritan from Haritan Settlement.
 Checked July 1, 1948 inventory from prior months report.
 Checked July 31, 1948 inventories from Inventory Work Sheet.
 Footed statement to production.

STATEMENT "LEAD BULLION PRODUCTION" PAGE 20

Checked July 1, 1948 inventory from prior months statement.
 Checked dry weight and metal content of July 31, 1948 inventories at plant and in transit from Inventory Work Sheet on Lead Bullion on Hand and in transit.
 Calculated returnable metals, ounces gold paid for and value of gold on July 31, 1948 inventory as per contract provisions.
 Checked treatment cost per ton of lead on July 31, 1948 inventory from Assay Calculation Data on Inventory Work Sheet.
 Calculated treatment cost of lead on July 31, 1948 inventory.
 Calculated treatment cost of bismuth on July 31, 1948 inventory at contract price of 50¢ per pound, returnable.
 Calculated estimated freight on July 1948 receipts at Omaha and on July 31, 1948 inventories at \$14.25 per ton bullion plus 3% transportation tax.
 Checked the following data on final settlement of May 1948 deliveries from Statement of Receipts of Lead Bullion from International Smelting and Refining Company (A.S. & R. Co. Statement):
 Weight of bullion.
 Lead content and returnable pounds lead.
 Bismuth content and returnable pounds bismuth.
 Silver content (returnable 100%)
 Gold content and ounces paid for.
 Checked all treatment charges on May 1948 delivery from settlement.
 Checked May 1948 estimate from statement for that month.
 Checked Tooele weight of July 1948 deliveries from Work Sheet on Shipments.
 Checked Omaha weight of July 1948 deliveries (estimate) from statements of Tooele Bullion Received at Omaha (A.S. & R. Co. report).
 Checked lead and bismuth assays on July 1948 deliveries (estimate) from Tooele Assay Report on Monthly Composites.
 Checked silver and gold assays on July 1948 deliveries (estimate) from abstract showing metal content calculated on Omaha weights using Tooele assays. (Omaha assays not available).
 Checked lead treatment charge on July 1948 deliveries from Assay Calculation Data.
 Calculated metal content.
 Calculated returnable metals, treatment costs (50¢ per returnable pound bismuth and gold paid for with value thereof).
 Footed all columns to production.
 Checked division of production between estimate and adjustment.
 Combined division of production with cumulative for six months ending June 30, 1948 to arrive at cumulative for seven months ending July 31, 1948
 Checked dry weight and metal content of July 1948 production to metallurgical report "Lead Bullion Production" page 20.

PNYC 00012224

BOOKS AND RECORDS CHECKED

PART II - LEAD PLANT (CONTINUED)

METALLURGICAL REPORT - LEAD PLANT (Continued)

ORE, ETC., ON HAND - PAGE 21

Checked ore in stock piles from statement "Recapitulation of Stock Pile Ores".
Checked Sintering Plant and Blast Furnace Smelting Plant Ores from Abstract of Ore on Hand in Bins.
Checked all Sinter, Calcine and By-Product inventories from Abstract Work Sheets.
Checked Lead Bullion and Converter Copper inventories from respective Inventory Work Sheets.
Footed all columns to grand total inventory.
Checked sinter and calcine inventories to Worked Back Inventory.
Checked stock pile ore inventory to Worked Back Inventory.
Checked Sintering Plant and Blast Furnace Ores to Worked Back Inventory.

VALUE OF MATERIAL ON HAND - PAGE 22

Checked all data from Work Sheet on Value of Material on Hand at Lead Plant.

STATEMENT OF COST, TREATMENT, PRODUCTION AND LOSSES - PAGE 23

Dry Weight and Metal Content:

Checked July 1, 1948 inventories from prior month's statement.
Checked receipts of material from Statement of Custom Material Received.
Checked July 31, 1948 inventory of ore in stock pile from Recapitulation of Stock Pile Ores, classifying Darwin and Shoshone separately and taking up balance as custom ore.
Checked by-products inventory at plant from Work Sheet on Value of Material on Hand at Lead Plant.
Checked Darwin Mines from Abstract of Ore on Hand in Bins.
Checked grand total inventory from Worked Back Inventory and arrived at "Ore in Plant - Custom" by deduction.
Checked bullion production from metallurgical report "Lead Bullion Production," page 20.
Checked shipment of slag to Slag Treatment Plant from metallurgical report "Blast Furnace Smelting Plant," page 17.
Checked shipment of Blast Bag House Fume to Great Falls from Abstract of Blast Bag House Fume Shipped.
Footed all columns to treatment and production totals, including segregation into custom, Darwin and Shoshone.
Checked segregation of production into custom, Darwin and Shoshone from Work Sheet on Slag Losses.
Checked calculation of percent savings on all classes of ore.
Checked deferred losses from Worked Back Inventory.
Footed all columns in Reconciliation of Losses.
Checked total losses from Balance Sheet.

Costs:

Checked July 1, 1948 inventories from prior month's statement.
Checked purchase cost of ores received from Statement of Custom Material Received.
Checked total reduction works expense from Monthly Cost Book.
Checked total value of ore in stock pile from Work Sheet on Value of Material on Hand at Lead Plant, adjusting Darwin and Shoshone ores to 90¢ silver and \$34.91 gold, taking up balance of cost against custom ore.
Checked value of by-products from Work Sheet on Value of Material on Hand at Lead Plant.
Checked value of Darwin ore from Statement "Value of Ore in Bins - Lead Plant" adjusting silver and gold to 90¢ and \$34.91 per ounce respectively.
Checked reduction costs against inventories from Worked Back Inventory.
Footed columns to cost of treatment, including segregation of purchase cost to custom, Darwin and Shoshone.
Deducted from total reduction cost \$5 per ton of cold slag treated to obtain cost per ton against total tons treated which does not include cold slag.
Calculated treatment cost of Darwin and Shoshone ores using average cost per ton treatment as calculated above.
Checked converting cost from Monthly Cost Book.
Checked reduction expense on custom ore by deduction.
Checked calculation of reduction cost per ton.
Checked calculation of reduction cost per pound lead omitting converting cost from total.

PNYC 00012225

PART III - SLAG TREATMENT PLANT

METALLURGICAL WORK PAPERS

RECEIPTS - SLAG TREATING PLANT

Blast Furnace Slag from Dump

Record of Deliveries Between Plants
 Checked total weight of deliveries for month to Work Sheet on Slag Put Into Process.
 Smelter Monthly Assay Report
 Checked monthly slag assays to Work Sheet on Slag Put Into Process.
 Work Sheet on Slag Put Into Process (Same as Metallurgical Report - Page 27)
 Checked July 1, 1948 inventory from prior months work sheet.
 Checked July 31, 1948 inventory from Bin Inventory Work Sheet and calculated metal content on monthly slag assays.
 Checked weight of deliveries from Record of Deliveries Between Plants.
 Checked assays on deliveries from Smelter Monthly Assay Report.
 Calculated metal content of deliveries.
 Footed all columns to quantity put into process (receipts).
 Checked receipt to Preliminary Statement of Treatment, Production and Losses.

Hot Slag From Blast Furnace

Smelter Monthly Assay Report
 Checked monthly slag assays to Blast Furnace Smelting Plant Statement of Treatment, Production and Losses.
 Blast Furnace Smelting Plant Statement of Treatment, Production and Losses
 Checked monthly slag assays from Smelter Monthly Assay Report.
 Deducted iron and manganese content of production from iron and manganese content of material introduced to arrive at quantity of iron and manganese making slag.
 Calculated dry tons of slag on basis of iron and manganese assays.
 Calculated remaining metal content by applying monthly assays to dry tons as calculated.
 Checked dry pounds and metal content to Preliminary Statement of Treatment, Production and Losses.

SHIPMENTS - SLAG TREATING PLANT

Deleaded Zinc Fume to International Minerals and Metals Corporation

Freight Bills
 Checked deduction of tare weight from gross weight.
 Checked net weights to Assay and Weight Certificate (Bartlesville report).
 Checked freight cost to Settlements.
 Assay and Weight Certificates (Bartlesville report)
 Checked net weights from Freight Bills.
 Calculated dry weights.
 Checked dry weights to Settlements.
 Checked assays to Tooele Plant Assay Certificates.
 Tooele Plant Assay Certificates for Settlements
 Checked assays from Assay and Weight Certificates (Bartlesville Report).
 Compared zinc assays to verify if within splitting limit (.4%).
 Checked average zinc assays only to settlements.
 Tooele Plant Daily Assay Reports
 Checked lead, copper and silver assays to abstract of Deleaded Zinc Fume Settled for by International Minerals and Metals Corporation.
 Settlements
 Checked freight costs from Freight Bills.
 Checked dry weights from Assay and Weight Certificates.
 Checked average zinc assays from Tooele Plant Assay Certificates for Settlements.
 Checked contract terms, footings and extensions complete on all settlements.
 Checked lot numbers, dry weights, zinc assays, and grand total amount due to abstract of Deleaded Zinc Fume Settled for by International Minerals and Metals Corporation.
 Checked grand total amount due to Statement of Cost, Treatment and Production.
 Checked grand total amount due to Journal (Salt Lake).

PNYC 00012226

PART III - SLAG TREATMENT PLANT (CONTINUED)

METALLURGICAL WORK PAPERS (Continued)

SHIPMENTS - SLAG TREATING PLANT (Continued)

Deleaded Zinc Fume to International Minerals and Metals Corporation (Continued)

Abstract of Deleaded Zinc Fume Settled for by International Mineral and Metals Corporation.
 Checked lot numbers, dry weights, zinc assays and grand total amount due from Settlements.
 Checked lead, copper and silver assays from Toole Plant Daily Assay Reports.
 Calculated metal content
 Footed all columns.
 Checked detail of contents, contents paid for, charges and credits from settlements.
 Checked dry weight and metal contents to Preliminary Statement of Treatment Production and Losses.

Journal (Salt Lake)

Checked amount due from settlements.
 Checked postings to Ledger.

Ledger (Salt Lake)

Checked postings from Journal.
 Footings in Ledger are verified during course of Salt Lake Office audit by other Anaconda Copper Mining Company Internal Auditors.

Leaded Zinc Oxide Sold to Paint Companies*Scale Tickets

Checked weights to Invoices and Freight Bills.
 Checked weights to Abstract of Leaded Zinc Oxide Sold to Paint Companies.

Consignees' Letters on Consigned Stocks

Checked pounds consignment sales to Abstract of "Leaded Zinc Oxide Sold to Paint Companies."

*Freight Bills

Checked weights from scale tickets or count of 100 pound bags.
 Checked extensions.
 Checked freight cost to Abstract of Leaded Zinc Oxide Sold to Paint Companies.

Invoices

Checked weights from scale tickets.
 Checked price per pound from selling order of International Smelting and Refining Company, Pigment Department, East Chicago, Indiana.
 Checked extensions and footings.
 Checked entry amounts on sales and commissions to Memo Voucher.

Memo Vouchers

Checked entry amounts on sales and commissions from Invoices.
 Checked extensions on freight on consigned stocks.
 Checked freight on consigned stocks to Abstract of Leaded Zinc Oxide Sold to Paint Companies.
 Checked entries to Record of Audited Vouchers.
 Record of Audited Vouchers is footed and checked to Ledger during course of Salt Lake Office audit by other Anaconda Copper Mining Company internal auditors.

Assay Certificates

Checked assays to Abstract of Leaded Zinc Oxide Sold to Paint Companies.

Abstract of Leaded Zinc Oxide Sold to Paint Companies

Checked weights from scale tickets or Consignees' Letters.
 Checked assays from Assay Certificates.
 Calculated metal content.
 Checked freight cost on direct sales from freight bills and on consignment sales from Memo Vouchers.
 Checked total sales price and commission on direct sales from invoices.
 Checked gross sales price and commissions on consignment sales from Cash Book and consignees' letters on consignment stocks.
 Footed all columns.
 Checked dry weight and metal content of total shipment to Preliminary Statement of Treatment, Production and Losses.
 Checked net revenue to Statement of Cost, Treatment and Production.

* No scale tickets were available on July 1948 shipment from plant. Weight was obtained by Operating Department by actual count of 100 pound bags.

PNYC 0001227

BOOKS AND RECORDS CHECKED

PART III - SLAG TREATMENT PLANT (CONTINUED)

METALLURGICAL WORK PAPERS (Continued)

SHIPMENTS - SLAG TREATING PLANT

Deleaded Zinc Fume Returned to American Zinc Company of Illinois

Scale Tickets

- Checked deduction of tare weights from gross weights.
- Checked all weights to Record of Lead Ore Received (form used lends itself to tabulation desired).

Report of Material Sampled

- Checked moisture percentage to Record of Lead Ore Received.

Record of Lead Ore Received

- Checked gross, tare and net weights from scale tickets.
- Checked moisture percentage from Report of Material Sampled.
- Checked moisture and net weight to Abstract of Deleaded Zinc Fume Returned to American Zinc Company.
- (Pen Copy).

Daily Tooele Assay Reports (not for settlements)

- Checked assays to Abstract of Deleaded Zinc Fume Returned to American Zinc Company.

Tooele Assay Certificates (for settlement)

- Checked Tooele assays to Weight and Assay Certificate of American Zinc Company of Illinois.

Umpire Assay Certificates

- Checked umpire assays to Weight and Assay Certificate of American Zinc Company of Illinois.

Weight and Assay Certificate of American Zinc Company of Illinois

- Checked Tooele assays from Tooele Assay Certificates.
- Checked umpire assays from Umpire Assay Certificates.
- Checked calculation of average settlement assay or use of umpire assays.
- Calculated dry weight and zinc content.
- Checked dry weights and zinc content to Statement on Comparison of Tooele and Settlement Dry Weights and Zinc Content.

Statement on Comparison of Tooele and Settlement Dry Weights and Zinc Content

- Checked dry weights and zinc content from Abstract of Deleaded Zinc Fume Returned to American Zinc Company.
- Checked dry weights and zinc content from Weight and Assay Certificates of American Zinc Company of Illinois.
- Checked difference between Tooele data and settlement data.
- Footed all columns.
- Checked difference or "adjustment" to Abstract of Deleaded Zinc Fume Returned to American Zinc Company.

Abstract of Deleaded Zinc Fume Returned to American Zinc Company

- Checked wet weights and moisture percentages from Record of Lead Ore Received.
- Checked assays from Daily Tooele Assay Reports.
- Calculated dry weights and metal content.
- Checked adjustment from Statement on Comparison of Tooele and Settlement Dry Weights and Zinc Content.
- Footed all columns.
- Checked inventory of Deleaded Zinc Fume belonging to American Zinc Company of Illinois from Work Sheet on Shipments and Inventories.
- Checked dry weight and metal content to Preliminary Statement of Treatment, Production and Losses.

INVENTORIES - SLAG TREATING PLANT

Deleaded Zinc Fume

In Transit to International Minerals and Metals Corporation

Bills of Lading

- Checked car numbers and weights of fume shipped to Work Sheet on Shipments and Inventories.

Metallurgical Statement on Deleaded Fume Settled For

- Checked lots received at Bartlesville to Work Sheet on Shipments and Inventories.

Tooele Plant Daily Assay Reports

- Checked assays to Work Sheet on Shipments and Inventories.

PNYC 00012228

BOOKS AND RECORDS CHECKED

PART III - SLAG TREATMENT PLANT (CONTINUED)

METALLURGICAL WORK PAPERS (Continued)

INVENTORIES - SLAG TREATING PLANT (Continued)

Deleaded Zinc Furnace (Continued)

In Transit to International Minerals and Metals Corporation (Continued)

Record of Bartlesville Shipments (Record of Lead Ore Received Form)
Checked moisture percentages to Work Sheet on Shipments and Inventories.
Work Sheet on Shipments and Inventories
Checked car numbers and weights of cars shipped but not received at Bartlesville.
Checked assays from Tooele Plant Daily Assay Reports.
Checked moisture percentages from Record of Bartlesville Shipments.
Calculated dry weights and metal content.
Footed all columns.
Checked inventory to metallurgical report to Preliminary Statement of Treatment, Production and Losses.

At Plant

Inventory Record Book
Checked tonnages to Work Sheet on Shipments and Inventories.
Monthly Report of Material Sampled
Checked moisture percentage to Work Sheet on Shipments and Inventories.
Monthly Tooele Assay Report
Checked monthly assays to Work Sheet on Shipments and Inventories.
Work Sheet on Shipments and Inventories
Checked tonnages from Inventory Record Book.
Checked moisture percentage from Monthly Report of Material Sampled.
Checked assays from Monthly Tooele Assay Report.
Calculated dry weight and metal content.
Deducted inventory of American Zinc Co., and checked to Preliminary Statement of Treatment, Production and Losses.

Due American Zinc Company of Illinois

Work Sheet on Treatment of Residue
Checked July 1, 1948 inventories from prior months report.
Checked receipts from Statement of Custom Material Received.
Checked July 31, 1948 inventories from detail of ore on hand in bins and stock pile.
Footed statement to treatment.
Calculated zinc content treated at 80%, added zinc due July 1, 1948, and deducted zinc content of
furns shipped in July 1948 to arrive at quantity of zinc due American Zinc Company, July 31, 1948.
Checked zinc content due to Work Sheet on Shipments and Inventories.
Work Sheet on Shipments and Inventories
Checked zinc content due from Work Sheet on Treatment of Residue.
Worked zinc content back to dry weight on basis of zinc assay on barrings inventory.
Calculated remaining metal content on barrings assays.
Checked inventory to Preliminary Statement of Treatment, Production and Losses.

Leaded Zinc Oxide on Consignment to Paint Companies

Consignees' Letters on Stocks Held
Checked pounds inventory to Inventory Work Sheet.
Laboratory Assay Certificates
Checked assays to Inventory Work Sheets.
Inventory Work Sheet
Checked pounds inventory from Consignees' Letters on Stocks Held.
Checked assays from Laboratory Assay Certificates.
Calculated metal content.
Footed all columns
Checked total inventory to Preliminary Statement of Treatment, Production and Losses.

PNYC 00012229

PART III - SLAG TREATMENT PLANT (CONTINUED)

METALLURGICAL WORK PAPERS (Continued)

INVENTORIES - SLAG TREATING PLANT (Continued)

Lead Zinc Oxide on Hand at Toole Plant

Memo Book on Monthly Inventory
 Checked tonnages to Work Sheet on Inventory Net Weights.

Superintendents Monthly Plant Inventory Statement
 Checked tonnages to Work Sheet on Inventory Net Weights.
 Checked tonnages to Preliminary Statement of Treatment, Production and Loss.

Work Sheet on Inventory Net Weights
 Checked tonnages from Memo Book on Monthly Inventory.
 Checked tonnages from Superintendents Monthly Plant Inventory Statement.
 Checked tonnages direct to Preliminary Statement of Treatment, Production and Loss where applicable.
 Checked tonnages to Statement of Value of Lead Fume on hand at Toole Slag Treating Plant where applicable.

Statement of Value of Lead Fume on Hand (Inventory Work Sheet)
 Checked tonnages from Work Sheet on Inventory Net Weights.
 Checked metal content of consignment inventory from Inventory Work Sheet.
 Calculated metal content of plant inventory at monthly assay.
 Calculated metal content of storage inventory at prior months assays.
 Footed all columns.
 Checked consignment inventory separately, and plant and storage inventory as one total to Preliminary Statement of Treatment, Production and Loss.
 See separate work program for valuation of inventory.

Blast Furnace Slag (Reclaimed)

Memo Book on Bin Measurements
 Checked empty depth to Bin Inventory Work Sheet.

Tables on Cubic Feet Volume per Foot Empty Depth
 Checked cubic feet to Bin Inventory Work Sheet.

Bin Inventory Work Sheet
 Checked empty depth from Memo Book on Bin Measurements.
 Checked cubic feet from Tables on Cubic Feet Volume per Foot Empty Depth.
 Checked weight of bin inventory using weights per cubic foot previously determined.
 Checked tonnages to Work Sheet on Slag Put into Process.
 Inventory is in same status as that on dump and does not enter metallurgical report.

METALLURGICAL WORK SHEETPRELIMINARY STATEMENT OF TREATMENT, PRODUCTION AND LOSSESReceived Section

Checked receipt of dump slag from Work Sheet on Slag Put Into Process.

Checked receipt of molten slag from Blast Furnace Smelting Plant Statement of Treatment, Production and Losses.
 Footed total receipts (treatment).
 Checked receipts to Statement of Cost, Treatment and Production.

Inventory July 1, 1948

Checked all inventories from prior months statement.

Inventory July 31, 1948

Checked tonnages where applicable from Memo Book on Monthly Inventory.

Checked tonnages where applicable from Superintendents' Monthly Plant Inventory Statement.

Checked tonnages where applicable from Work Sheet on Inventory Net Weights.

Checked all deleaded zinc fume inventories, dry weight and metal content from Work Sheet on Shipments and Inventories.

Checked all leaded zinc oxide inventories, dry weight and metal content from Statement of Value of Lead Fume on Hand (Inventory Work Sheet).

Calculated metal content of inventories where necessary on basis of current or fixed assays.

Checked all inventory items to metallurgical report "Ore, etc., on Hand and Value," Page 32.

Checked all inventories to Statement of Cost, Treatment and Production.

Footed all inventory columns.

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PART III - SLAG TREATING PLANT (CONTINUED)

METALLURGICAL WORK SHEET (Continued)

PRELIMINARY STATEMENT OF TREATMENT, PRODUCTION AND LOSSES (Continued)

Shipments

Checked shipment of deleded zinc fume to International Minerals and Metals Corporation from Metallurgical Report - Page 28.
 Checked shipment of lead fume to lead plant from Abstract of Lead Fume Transferred to Focals Lead Plant. See Lead Plant Books and Records Checked for detail.
 Checked shipments of deleded zinc oxide to paint companies from Abstract of Deleded Zinc Oxide Sold to Paint Companies.
 Checked shipments of deleded zinc fume to American Zinc Company from Abstract of Deleded Zinc Fume Returned to American Zinc Company.
 Combined shipments with July 31, 1948 inventory and deducted July 1, 1948 inventory to arrive at production.
 Checked all applicable data to statement "Slag Treating Plant Final" which eliminates sales losses.
 Checked all shipments to Statement of Cost, Treatment and Production.

FINAL STATEMENT OF TREATMENT, PRODUCTION AND LOSSES (ELIMINATES SALES LOSSES)

Checked treatment from preliminary statement.
 Checked items of production by adjusting shipments by inventories as shown on preliminary statement, segregating sales losses on each item of production.
 Footed all columns of treatment and production, omitting sales losses.
 Checked deduction of production from treatment to arrive at losses.

STATEMENT SHOWING SETTLEMENT FOR SALE OF LEAD FUME TO LEAD PLANT

Checked extensions and footings using schedule provided by management and monthly Engineering and Mining Journal quotations.
 Checked revenue to Statement of Cost, Treatment and Production.

STATEMENTS SHOWING VALUATION OF INVENTORIES OF FINISHED PRODUCTS

Leaded Zinc Oxide

Checked calculation of settlement complete, using schedule provided by the management for transfer of products between plants.
 Checked value of inventory to metallurgical statement "Ore, etc., on Hand and Value" - Page 32.
 Checked value of inventory to Statement of Cost, Treatment and Production.

Deleded Zinc Fume

Checked calculation of settlement complete, using contract terms between the International Smelting and Refining Company and the International Minerals and Metals Corporation.
 Checked value of inventory to Statement of Cost, Treatment and Production.
 Checked value of inventory to metallurgical report "Ore, etc., on Hand and Value" - Page 32.

STATEMENT SHOWING SETTLEMENT FOR PURCHASE OF GOLD AND MOLTEN SLAG

Checked extensions and footings using schedule provided by the management.
 Checked cost to Statement of Cost, Treatment and Production.

METALLURGICAL REPORT - SLAG TREATING PLANT

BLAST FURNACE SLAG RECLAIMED FROM DUMP AND PUT INTO PROCESS - PAGE 27

Included under Receipts - Slag Treating Plant - Blast Furnace Slag from Dump as Work Sheet on Slag Put into Process."

DELEADED ZINC FUME SETTLED FOR BY INTERNATIONAL MINERALS AND METALS CORPORATION - PAGE 28

Included under Shipments - Slag Treating Plant - Deleded Zinc Fume to International Minerals and Metals Corporation as "Abstract of Deleded Zinc Fume Settled for by International Minerals and Metals Corporation."

PNYC 00012231

PART III - SLAG TREATMENT PLANT (CONTINUED)

METALLURGICAL REPORT - SLAG TREATING PLANT (Continued)LEADED ZINC OXIDE SOLD TO PAINT COMPANIES - PAGE 29

- Included under Shipments - Slag Treating Plant - Leaded Zinc Oxide Sold to Paint Companies as "Abstract of Leaded Zinc Oxide Sold to Paint Companies."

DELEADED ZINC FUME RETURNED TO AMERICAN ZINC COMPANY OF ILLINOIS - PAGE 30

- Included under Shipments - Slag Treating Plant - Deleaded Zinc Fume Returned to American Zinc Company of Illinois as "Abstract of Deleaded Zinc Fume Returned to American Zinc Company."

ORE, ETC., ON HAND AND VALUE - PAGE 32

- Checked dry weight and metal content of all inventories from Preliminary Statement of Treatment, Production and Losses.
- Footed all inventory columns.
- Checked inventory value of by-products from Statement of Cost, Treatment and Production.
- Checked valuation of leaded zinc oxide and deleaded zinc fume from Statements Showing Valuation of Inventories of Finished Products.

STATEMENT OF COST, TREATMENT, PRODUCTION AND LOSSES -
VALUE OF PRODUCTION - PROFIT AND LOSS - PAGE 33

- Checked dry weight and metal content of treatment from Preliminary Statement of Treatment, Production and Losses.
- Checked all July 1, 1948, inventories from prior months report.
- Checked all July 31, 1948, inventories from Preliminary Statement of Treatment, Production and Losses.
- Checked dry weight and metal content of all shipments from Preliminary Statement of Treatment, Production and Losses.
- Footed dry weight and metal contents to finished production.
- Adjusted finished production by by-product inventories to arrive at total production.
- Checked revenue from sale of lead fume to Lead Plant from Statement Showing Settlement for Sale of Lead Fume to Lead Plant.
- Checked revenue from sales to paint companies and to International Minerals and Metals Company from respective Abstracts.
- Checked valuations of leaded zinc oxide and deleaded zinc fume from respective Statements Showing Valuation of Inventories of Finished Products.
- Checked cost of cold and hot slag from Statement Showing Settlement for Purchase of Cold and Molten Slag.
- Checked Slag Treatment Plant monthly cost and Deleaded Plant monthly cost from Cost Book for July, 1948.
- Checked calculation of July 31, 1948 in process inventory (fuming plant cost only) on cost of production basis.
- Footed and crossfooted all cost columns to arrive at profit.
- Checked inventory value of by-products to metallurgical report "Ore, etc., On Hand and Value" page 32.

PART IV - SULPHIDE CONCENTRATOR PLANTMETALLURGICAL WORK PAPERSRECEIPTS - SULPHIDE CONCENTRATORPark Utah Consolidated Mines Company Crude Ore - Park City and Keetley, Utah

- Weight and Moisture Certificate of Utah Ore Sampling Company (In Salt Lake Office)
- Checked deduction of tare weights from gross weights.
- Checked calculation of dry weights.
- Footed all columns.
- Checked car number, wet weight, moisture percentage and dry weights to Notice of Shipment (Prepared at Salt Lake Office and mailed to Tooele Office).
- Notice of Shipment (Prepared at Salt Lake Office)
- Checked car numbers, wet weights, moisture percentages and dry weights from Weight and Moisture Certificates of Utah Ore Sampling Company.
- Checked weights and moistures to Abstract of Ore Received.

PNYC 00012232

PART IV - SULPHIDE CONCENTRATOR PLANT (CONTINUED)

METALLURGICAL WORK PAPERS (Continued)RECEIPTS - SULPHIDE CONCENTRATOR (Continued)Park Utah Consolidated Mines Company Crude Ore - Park City and Keetley, Utah (Continued)

Shipper's Assay Reports (In Salt Lake Office)
Checked assays to Settlements.

Tooele Assay Reports (In Salt Lake Office)
Checked assays to Settlements.

Umpire Assay Certificates (In Salt Lake Office)
Checked assays to Settlements.

Settlements

Checked wet and dry weights and sampling cost from Weight and Moisture Certificate of Utah Ore Sampling Company.

Checked shipper's assays from Shipper's Assay Reports.

Checked Tooele assays from Tooele Assay Reports.

Checked umpire assays from Umpire Certificates.

Checked use of contractual splitting limits.

Checked calculation of average assays, or use of umpire assays to arrive at settlement assays.

Checked weights, moistures, contract terms, footings and extensions complete on 7 settlements (50%).

Checked assays to Abstract of Ore Received.

Checked costs to Ore Purchase Adjustment Record (at Salt Lake Office).

Ore Purchase Adjustment Record (At Salt Lake Office)

Checked purchase costs from settlements.

Prepared work sheet to arrive at monthly total cost of lots.

Checked monthly cost to Abstracts of Ore Received.

Grand total cost of all ore is footed, checked to Journal Entry and General Books during course of Salt Lake Office audit by other Anaconda Copper Mining Company Internal Auditors.

Abstracts of Ore Received

Checked wet weights, percent moisture and dry weights from Notice of Shipment (Prepared at Salt Lake Office).

Checked assays from settlements.

Calculated metal content.

Checked total cost of ore from work sheet prepared from Ore Purchase Adjustment Record.

Footed all columns.

Checked total receipts and cost to Statement of Custom Material Received (Metallurgical Report, Page 37).

National Tunnel and Mines Company (Bullard Lease)

Checked receipt of crude ore as per books and records as outlined above for ores from Combined Metals Reduction Company (Lead Plant).

Checked weights, moistures, assays, contract terms, footings and extensions complete on 4 settlements (100%) included in July 1948 accounts.

SHIPMENTS - SULPHIDE CONCENTRATOR PLANTZinc Concentrates Shipped to Anaconda Copper Mining Company, Anaconda, MontanaAnaconda Letter of Transmittal on Sample with Accompanying Weights

Checked dry weight of cars received at Anaconda to Metallurgical Report "Zinc Concentrates Settled For by Anaconda Copper Mining Company," Page 39.

Tooele Plant Assay Certificate

Checked assays to Settlement.

Settlement

Checked assays from Tooele Plant Assay Certificate.

Checked average of Anaconda and Tooele assays.

Checked assays to Metallurgical Report "Zinc Concentrates Settled for by Anaconda Copper Mining Company," Page 39.

Checked final June 1948 settlement to obtain adjustment amount due to use of preliminary in June 1948 account, and checked preliminary July 1948 settlement, all according to terms of contract and as to footings and extensions.

Checked total revenue to Metallurgical Report "Zinc Concentrates Settled for by Anaconda Copper Mining Company," Page 39.

PNYC 00012233

PART IV - SULPHIDE CONCENTRATOR PLANT (CONTINUED)

METALLURGICAL WORK PAPERS (Continued)

SHIPMENTS - SULPHIDE CONCENTRATOR PLANT (Continued)

Zinc Concentrates Shipped to Anaconda Copper Mining Company, Anaconda, Montana (Continued)

Metallurgical Report "Zinc Concentrates Settled for by Anaconda Copper Mining Company," Page 39
 Checked dry weight from Anaconda Letter of Transmittal.
 Checked assays from settlement.
 Checked total settlement amount from final June 1948 settlement adjustment and July 1948 preliminary settlement.
 Calculated metal content.
 Checked paid for contents for June 1948 adjustment and on July 1948 preliminary data.
 Footed all columns.
 Checked total revenue to Journal.
 Checked dry pounds, metal content on revenue to metallurgical report "Statement of Cost, Treatment, Production and Losses," Page 45.

Journal

Checked entry amount from metallurgical report "Zinc Concentrates Settled for by Anaconda Copper Mining Company," Page 39.
 Checked postings to Ledger.

Ledger

Checked postings from Journal.
 Footings in Ledger are verified during course of Salt Lake Office audit by other Anaconda Copper Mining Company internal auditors.

Zinc Concentrates Lost in Transit between International, Utah, and Anaconda, Montana

Butte Traffic Department Claim (on file at Salt Lake Office)

Checked dry weight loss and claim to Metallurgical Report "Value of Zinc Concentrates Lost in Transit," Page 40.

Anaconda Monthly Settlement

Checked assays to Metallurgical Report "Value of Zinc Concentrates Lost in Transit," Page 40.

Metallurgical Report "Value of Zinc Concentrates Lost in Transit," Page 40.

Checked dry weight and amount of claim from Butte Traffic Department Claim.
 Checked assays from Washoe Sampler monthly settlement.
 Calculated metal content.
 Calculated detail of metals paid for and value thereof at contract terms, adjusting same by treatment charge to agree with total claim.
 Checked claim amount to Memo Voucher.
 Checked tonnage, metal content and revenue to metallurgical report "Statement of Cost, Treatment, Production and Losses," Page 45.

Memo Voucher

Checked claim amount from metallurgical report or claim.
 Checked entries to Record of Audited Vouchers.
 Record of Audited Vouchers is footed and checked to Ledger during course of Salt Lake Office audit by other Anaconda Copper Mining Company internal auditors.

INVENTORIES - SULPHIDE CONCENTRATOR PLANT

Ore in Stock Piles

Daily Car Report (Dumps)

Checked car numbers dumped at stock piles to Record of Milling Ore Received to obtain lot numbers.

Record of Milling Ore Received

Checked car numbers from Daily Car Report.
 Checked lot numbers to Abstracts of Ore Received.

Abstracts of Ore Received

Checked lot numbers of ore dumped to stock pile from Record of Milling Ore Received.
 Checked weight and metal content of stock pile receipts by shippers to Disposition of Ores Received.

Record of Deliveries Between Departments

Checked weight of removals to Record of Stock Pile Ore.

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METALLURGICAL WORK PAPERS (Continued)INVENTORIES - SULPHIDE CONCENTRATOR PLANT (Continued)Ore in Stock Piles (Continued)Disposition of Ore Received

Checked weight and metal content of stock pile receipts from Abstracts of Ore Received.
 Checked weight and metal content of stock pile receipts to Record of Stock Pile Ore.

Record of Stock Pile Ore

Checked weight and metal content of stock pile receipts from Disposition of Ore Received.
 Checked weight of removals from stock pile from Record of Deliveries Between Departments.
 Checked percentage of removal to prior on hand and applied same to arrive at dry weight and metal content removed (ore is not sampled and assayed upon removal).
 Footed all columns to inventory at July 31, 1948.
 Checked inventories by piles to Recapitulation of Stock Pile Ores.

Recapitulation of Stock Pile Ores

Checked inventories by piles from Record of Stock Pile Ore.
 Footed all columns.
 Checked total to metallurgical report "Ore, etc., on Hand," Page 42.

Ore in Bins (Bin measurement data excluded as all inventories in bin were determined on basis of full lots and settlement data thereon)Abstracts of Ore Received

Checked bin lots by shippers to Abstract of Ore on Hand in Bins.

Abstract of Ore on Hand in Bins

Checked inventory lots of July 1, 1948 still on hand from prior months abstract.
 Checked weight and metal content of bin lots by shippers from Abstract of Ore Received (Plant did not operate and all lots dumped into bins were on hand July 31, 1948).
 Footed all columns.
 Checked total inventory to metallurgical report "Ore, etc., on Hand," Page 42.
 Checked total inventory to statement "Value of Ore in Bins, Sulphide Concentrator."

Zinc Concentrates on Hand at PlantSuperintendent's Monthly Letter on Concentrator Treatment

Checked tonnage of zinc concentrates on hand to Abstract of Zinc Concentrates on Hand.

Abstract of Zinc Concentrates on Hand

Checked tonnage from Superintendent's Monthly Letter.
 Calculated dry weight and metal content on best available assays.
 Combined inventory with in transit inventories and checked total to metallurgical report "Ore, etc., on Hand," Page 42.

Zinc Concentrates in Transit to Anaconda and Great Falls, MontanaAnaconda and Great Falls Letters of Transmittal on Cars Received

Checked car numbers received against Tooele Bills of Lading.

Tooele Bills of Lading

Checked car numbers from Anaconda and Great Falls Letters of Transmittal on Cars Received.
 Checked numbers and weights of cars shipped from Tooele, but not received in Montana to Abstract of Zinc Concentrates on Hand. (None in transit July 31, 1948)

Moisture Reports

Checked applicable moisture percentages to Abstract of Zinc Concentrates on Hand.

Laboratory Assay Report

Checked applicable assays to Abstract of Zinc Concentrates on Hand.

Abstract of Zinc Concentrates on Hand

Checked numbers and weights of cars shipped from Tooele but not received in Montana from Tooele Bills of Lading.
 Checked moisture percentages from Moisture Reports.
 Checked assays from Laboratory Assay Report.
 Calculated dry weights and metal content.
 Combined in transit inventory with plant inventories.
 Checked total inventory to metallurgical report "Ore, etc., on Hand."
 Checked total inventory to metallurgical report "Value of Zinc Concentrates on Hand and in Transit."

PNYC 00012235

PART IV - SULPHIDE CONCENTRATOR PLANT (CONTINUED)

METALLURGICAL WORK PAPERS (Continued)

VALUATION OF INVENTORIES - SULPHIDE CONCENTRATOR PLANT

Valuation of Ore in Stock Piles

Statement Showing Value of Ores Put Into Stock Piles
 Checked lot numbers, weights and metal content by lots from Abstract of Ores.
 Checked following detail on all lots:
 Metal content and metals paid for, except gold paid for.
 Value of lead, copper and zinc paid for at settlement price.
 Value of silver at 34.75¢ per ounce.
 Value of gold paid for, adjusted by calculated ounces paid for at \$34.91 per ounce, repriced at \$34.00 per ounce.
 Treatment charges per settlement.
 Footed all columns.
 Checked data to Record of Stock Pile Ore.
 Record of Stock Pile Ore
 Checked settlement data on additions from Statement Showing Value of Ores Put Into Stock Piles.
 Checked calculation of removals at average of "to account for" (No removals during July 1948).
 Footed all columns to inventory at July 31, 1948.
 Checked inventories by piles to Recapitulation of Stock Pile Ores.
 Recapitulation of Stock Pile Ores
 Checked inventories from Record of Stock Pile Ore.
 Checked inventories to Work Sheet on Value of Material on Hand

Valuation of Ore in Bins

*Statement "Value of Ore in Bins - Sulphide Concentrator"
 Checked dry weight and metal content of all material on hand in bins from Abstract of Ore on Hand in Bins.
 Checked following settlement detail on lots which were on hand:
 Metal content and metals paid for, except gold paid for.
 Value of lead, copper and zinc paid for at settlement price.
 Value of silver at 34.75¢ per ounce.
 Value of gold paid for, adjusted by calculated ounces paid for at \$34.91 per ounce, repriced at \$34.00 per ounce.
 Treatment charges per settlement.
 Footed all columns.
 Checked data to Work Sheet on Value of Material at Sulphide Concentrator
 * Above statement was not prepared at July 31, 1948 as values were arrived at by shorter method as follows:
 Checked inventory on value of ore on hand in bins July 1, 1948 from prior months statement.
 Checked receipts segregated into metals paid for, revenue and treatment charges from Salt Lake Statement of Receipts, changing values of silver and gold to 34.75¢ and \$34.00 per ounce respectively.
 Checked stock pile inventory segregated into metals paid for, revenue and treatment charges from Statement Showing Value of Ores Put Into Stock Piles.
 Footed statement to value of ore on hand in bins.
 Checked data to Work Sheet on Value of Material at Sulphide Concentrator.

Valuation of Zinc Concentrates on Hand and in Transit

Same as metallurgical report "Value of Zinc Concentrates on Hand and in Transit July 31, 1948," Page 43.

METALLURGICAL WORK SHEETS

DETAIL OF ORE PURCHASES (AT SALT LAKE OFFICE)

Checked calculation of average metal prices on metals paid for.
 Compared average metal prices on metals paid for with monthly Engineering and Mining Journal quotations to verify if within reasonable limits.
 Checked paid for metals on ore received to Work Sheet on Value of Material on Hand at Lead Plant.

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PART IV - SULPHIDE CONCENTRATOR PLANT (CONTINUED)

METALLURGICAL WORK SHEETS (Continued)WORK SHEET ON VALUE OF MATERIAL ON HAND AT SULPHIDE CONCENTRATOR

Checked all July 1, 1948 inventories from prior months work sheet.
 Checked metal content of all receipts from Statement of Custom Material Received.
 Checked paid for metals on ores received from Salt Lake Office Detail of Ore Purchases.
 Checked paid for metals on interplant transfers from settlements. (None during July 1948).
 Checked July 31, 1948 stock pile inventory from Recapitulation of Stock Pile Ores.
 Checked July 31, 1948 bin inventory from Statement "Value of Ore in Bins - Sulphide Concentrator."
 Footed statement to "Material Put Into Process."
 Checked recapitulation of all inventories.
 Checked reduction expenses (sampling bin inventories) from Worked Back Inventory.
 Checked value of zinc concentrates from metallurgical report "Value of Zinc Concentrates on Hand and in Transit July 31, 1948," page 43.
 Checked all applicable data to metallurgical report "Value of Material on Hand," page 44.

WORKED BACK INVENTORY

Checked all inventories from metallurgical report "Ore, etc., on Hand," page 42.
 Worked back process inventories (none at July 31, 1948).
 Calculated sampling cost on ore in bins on fixed cost per ton.
 Checked sampling cost to Work Sheet on Value of Material on Hand at Sulphide Concentrator.

METALLURGICAL REPORT - SULPHIDE CONCENTRATORSTATEMENT OF CUSTOM MATERIAL RECEIVED - PAGE 37

Checked dry weights, metal content, and average assays and cost of ores by shippers from Abstracts of Ore Received.
 Footed all columns.
 Checked metal content of all receipts to Work Sheet on Value of Material on Hand at Sulphide Concentrator.
 Checked total metal content and cost of receipts to metallurgical report "Statement of Cost, Treatment, Production and Losses," page 45.

ZINC CONCENTRATES SETTLED FOR BY ANACONDA COPPER MINING COMPANY, ANACONDA, MONTANA - PAGE 39

Included under Shipments - Sulphide Concentrator Plant - Zinc Concentrates Shipped to Anaconda Copper Mining Company, Anaconda, Montana.

VALUE OF ZINC CONCENTRATES LOST IN TRANSIT FROM INTERNATIONAL, UTAH AND ANACONDA, MONTANA - PAGE 40

Included under Shipments - Sulphide Concentrator Plant - Zinc Concentrates Lost in Transit between International, Utah and Anaconda, Montana.

ORE, ETC., ON HAND - PAGE 42

Checked ore in stock pile from Recapitulation of Stock Pile Ores.
 Checked ore in bins from Abstract of Ore on Hand in Bins.
 Checked concentrates on hand and in transit from Abstract of Zinc Concentrates on Hand.
 Footed all columns.
 Checked stock pile and bin inventories to Worked Back Inventories.
 Checked zinc concentrate inventory to metallurgical report "Value of Zinc Concentrates on Hand and in Transit," page 43.

VALUE OF ZINC CONCENTRATES ON HAND AND IN TRANSIT JULY 31, 1948, PAGE 43

Checked dry weight and metal content from metallurgical report "Ore, etc., on Hand," page 42.
 Checked settlement on valuation, calculated on basis of contract with Anaconda Copper Mining Company.
 Checked value to Work Sheet on Value of Material on Hand at Sulphide Concentrator.
 Checked tonnage to Statement of Cost, Treatment, Production and Losses, page 44.

VALUE OF MATERIAL ON HAND - PAGE 44

Checked all data from Work Sheet on Value of Material on Hand at Sulphide Concentrator.
 Checked all inventory dry weights, metal content and values to Statement of Cost, Treatment, Production and Losses.

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PART IV - SULPHIDE CONCENTRATOR PLANT (CONTINUED)

METALLURGICAL REPORT - SULPHIDE CONCENTRATOR (Continued)

STATEMENT OF COST, TREATMENT, PRODUCTION AND LOSSES, PAGE 45

Dry Weight and Metal Content

Checked July 1, 1948 inventories from prior months statement.
Checked receipts of material from Statement of Custom Material Received.
Checked July 31, 1948 inventories from metallurgical report "Value of Material on Hand," page 44, except tonnage and metal content of zinc concentrates on hand which was from statement "Value of Zinc Concentrates on Hand and in Transit," page 43.
Checked sale of zinc concentrates to Anaconda from metallurgical report "Zinc Concentrates Settled for by Anaconda," page 39.
Checked zinc concentrates lost in transit from metallurgical report "Value of Zinc Concentrates Lost in Transit, etc.," page 40.
Footed all columns to treatment, production and losses.

Costs

Checked July 1, 1948 inventories from prior months statement.
Checked purchase cost of ores received from Statement of Custom Material Received.
Checked concentrating costs from monthly cost book.
Checked July 31, 1948 inventories from metallurgical report "Value of Material on Hand," page 44.
Checked sale of zinc concentrates to Anaconda from metallurgical report "Zinc Concentrates Settled for by Anaconda," page 39.
Checked value of Zinc Concentrates lost in transit from metallurgical report "Value of Zinc Concentrates Lost in Transit, etc.," page 40.
Footed all columns to cost of treatment, value of production and profit before depreciation.

PNYC 00012238