FINAL DISTRIBUTION

MADE JUN 3 1958

U. S. DEPARTMENT OF THE INTERIOR
U. S. DEPARTMENT OF MINES
REGION III

Administrative Audit Difference Statement

American Smelting & Refining Co.
Post Office Box J
Crested Butte, Colorado

Date: June 2, 1958
Payee's Reference: April 1958

Upon examination of the above Payee's Reference a difference was found which made it necessary to suspend your account accordingly:

Amount Claimed $ 5,560.00

Difference $

Amount Approved $ 5,560.00

The reason for the difference was due to:

Withheld the amount of $500.00 pending resumption of work.

OFFICIAL FILE COPY
DMEA
RECEIVED JUN 5 1958

DATE		
6/5	C	220
"	[illegible]	110
6/6	[illegible]	500

Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

RRC

Randel R. Cooper
Fiscal Officer, Region III

R-III-B & F Form No. 4
4-15-52 D

224 New Customhouse
Denver 2, Colorado

May 29, 1958

Memorandum

To: T. A. Christensen

From: Alternate Acting Executive Officer, DMEA Field Team, Reg. III

Subject: Docket No. DMEA 3866 (Lead-Zinc-Copper) Contract No. Idm-N903
American Smelting and Refining Company (Keystone mine)
Gunnison County, Colorado - Operator's Monthly Progress
Report for the Month of April, 1958.

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Operator's Narrative Report, and Engineer's Report for the above period.

We consider that the Operator has complied with the intent of the contract, and the work for which payment is recommended is acceptable to the Government. All of the work for the period was performed at "Fixed Unit Costs" under the short form contract on Form MF-200A; therefore, documentation of the costs is not required. We recommend that payment be made to the Operator for 50 percent of the amount reported on Form MF-104, subject to your verification of applicable rates and arithmetical accuracy within the report, except for the following deductions:

Withhold an amount of $500.00 pending resumption of work. Project work has been suspended and the Operator has submitted a request for an amendment to provide for the suspension of operations and extension of the completion date.

Remarks:

Date of Report - - - - - - - - - - - - - - May 8, 1958
Date Received in Field Office- - - - - May 26, 1958
Date Received in Region Office - - - - May 28, 1958

Original signed by
J. W. TOWNSEND

J. W. Townsend

Enclosures
JDC:bh
cc: Chmn. Op. Comm. (2)
DMEA/RFC
MF-104 File, Reg. III
Harshman) with copy of
Townsend) Engineer's report
Chron.

DMEA
DEPARTMENT OF THE INTERIOR

REGION III

MAY 28 1958
REGION III
DENVER COLORADO

Building 20
Denver Federal Center
Denver 2, Colorado
May 27, 1958

Memorandum

To: Acting Executive Officer, DMEA Field Team, Region III

From: Edward W. Buel

Subject: DMEA 3866 (Lead-zinc-copper) Idm-E903, American Smelting and Refining Company (Negatone mine) Gunnison County, Colo. -- Progress report for April 1958

An inspection was made of the DMEA work progress on May 5, 1958, in company with Howard Bloomfield, A. S. R. engineer.

A measurement of the DMEA drift driven under Stage II on the 2000-level along the Union vein showed a total advance of 1373 feet. This total is in agreement with that of the operator's as shown in his MF-104's for April 1958. In addition to the drifting, the operator completed three diamond drill holes of which two were authorized by the contract. The results of the drilling are given in the operator's monthly narrative report. A total of 781 feet of diamond drilling was performed of which 600 feet is allowable under the contract.

It is recommended that all work units claimed by the operator be approved for payment. Total reimbursement is $5,560.00 of which the Government's contribution at 50 percent is $2,780.00.

It was learned that the operator has suspended operations until an evaluation can be made of the DMEA exploratory work. It is recommended that a reasonable amount be withheld from the reimbursement pending resumption of the work.

Edward W. Buel

Edward W. Buel
Mining Engineer

EWB/ew cc: 6
Idm-E903 chron

Form MP-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of April, 1958 Docket No. DMEA 3666 Contract No. Idm-E903
Operator's Name American Smelting and Refining Company Minerals Pb, Cu, Zn
Address 120 Broadway - New York 5, New York
Contract Amount, $107,220.00 Government Participation: 50% Amount, $53,610.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
[redacted]						
[redacted] Raising		7,605.00	7,605.00	7/9/58	[illegible]	
[redacted]						
[redacted]						
Drifting & XCutting	2,800.00	61,005.00	63,805.00			
Drift & XCut Timber						
[redacted]						
[redacted]						
[redacted]						
[redacted]						
[redacted]						
[redacted]						
[redacted] Core Drilling	2,760.00	4,209.00	6,969.00			
[redacted]						
Drill Hole Casing						
Drill Hole Cementing						
[redacted]						
[redacted]						
[redacted]						
[redacted]						
[redacted]						
[redacted]:						
[redacted]						
[redacted]						
[redacted]						
[redacted]						
Drill Station		400.00	400.00			
Assays		666.00	666.00			
[redacted]						
TOTALS	5,560.00	73,885.00	79,445.00	5,560.00	73,885.00	79,445.00

I certify that the above bill is correct and just and that payment therefor has not been received.
Date May 8, 1958 *Payee American Smelting and Refining Co.
Per Nolan Robst Title Supt.
Nolan Robst

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 2 280 00

Signature RRO
(Authorized Certifying Officer)

Date 6-2-58 Vou. No. DMA-58-127
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Adm-E903 in accordance with the terms of the contract.

Signature Edward W. Buel #2780 Title Mining Engr. Date 5/27/58

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE Checked for Engineering Allowability

Signature J. W. Tomsend Title Alternate Acting Executive Officer Date MAY 29 1958

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED JUN 5 1958

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of April, 1958 Docket No. DMEA 3866 Contract No. Idm-3903
Operator's Name American Smelting and Refining Company Minerals Pb, Cu, Zn
Address 120 Broadway - New York 5, New York

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
			STAGE I					
Drifting & XCutting	ft.			15,750.00	450	35.00	450	35.00
Timbering	ft.			0.00	0	6.00	45	6.00
Raising	ft.			7,605.00	195	39.00	200	39.00
Assaying	Spl.			312.00	104	3.00	104	3.00
			STAGE II					
Drift & XCut	ft	2,800.00	80	48,055.00	1373	35.00	2000	35.00
Timbering	ft.			0.00	0	6.00	200	6.00
Diamond Drill	ft.	2,760.00	600	6,969.00	1515	4.60	2000	4.60
Ream & Case	ft.			0.00	0	2.00	200	2.00
Cement-ReDrill	ft.			0.00	0	2.00	200	2.00
Drill Sta	Sta.			400.00	4	100.00	10	100.00
Assaying	Spl.			354.00	118	3.00	296	3.00
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		5,560.00		79,445.00				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

REMARKS:

Date May 8, 1958 Operator American Smelting & Refining Co.

Per Milan Robst Title Supt.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

Edward W. Buel (Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

K-7.7.
DMEA

AMERICAN SMELTING AND REFINING COMPANY
KEYSTONE UNIT
P. O. BOX J. CRESTED BUTTE, COLO.

May 8, 1958

DMEA
DEPARTMENT OF THE INTERIOR
MAY 23 1958
REGION III
DENVER, COLORADO

Executive Officer, DMEA, Field Team
Region III, 222 New Custom House
Denver 2, Colorado

Re: Docket DMEA-3866
Contract Idm-E903
April - 1958

Gentlemen:

General Remarks:

During April 80 ft. of drifting was completed on the 2000 Union Vein.

Three diamond drill holes were completed during the month to the following depths and bearing.

Hole No.	Bearing	Lat.	Dep.	Depth
20-11	N 55° E	13307.5	7395.8	356
20-12	S 55° W	13277.7	7348.0	250
20-13	S 79° 38 W	13279.9	7347.7	175

Hole No. 20-11 drilled into the footwall exposed little mineralization. Pyritization and pyrite on the joints was extensive throughout the hole. The wall rock was primarily fine grained sandstones and bleached shales. No vein structure of importance was encountered.

Hole No. 20-12 drilled into the hangingwall cut strong water courses at 4, 26, 187 and 207 ft. Slight mineralization was found at the 4 and 26 ft. depths. At 145 feet 1 ft. of Pb, Zn sulfides was cored. This being the best mineralization encountered.

Hole No. 20-13 was drilled to intersect the structure about 70 ft. north westerly on the strike. At 160 feet hole No. 20-13 encountered much water, and minor traces of Zn from 155 to 163 ft. A definite change of wall rock occurred at this point. Tracing this structure southerly by long hole drilling it is thought the intersection would be made with the drift near survey station No. 2067. This particular structure appeared to be the strongest encountered in the drilling.

General Geology:

Drifting on the 2000 Union Vein was discontinued April 22nd until the diamond and long hole drilling currently underway could be evaluated.

The present drift face is following a relatively weak structure with occasional small lenses of lead, zinc sulfides. Pyritization is strong in the wall rock which is primarily gray to light brown siltstone.

Very truly yours,

Nolan Probst, Supt.

NP/wmc
Encls: Form MF-104 (5)
Form MF-104A (5)
Progress Map (5)
cc: John F. Shaw, w/1 set encls.
JFFrost, w/1 set encls.
File, w/1 set encls.

FINAL DISTRIBUTION

MADE APR 30 1958

RECEIVED 5 1958

DATE 5/5 C 220
FED 110
5/6 546

224 New Customhouse
Denver 2, Colorado
April 28, 1958

Memorandum

To: T. A. Christensen

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA 3866 (Lead-Zinc-Copper) Contract Idm-E903, American Smelting and Refining Company (Keystone mine) Gunnison County, Colorado - Operator's Monthly Progress Report for the month of March, 1958

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Operator's Narrative Report, and Engineer's Report for the above period.

We consider that the Operator has complied with the intent of the contract, and the work for which payment is recommended is acceptable to the Government. All of the work was performed at "Fixed Unit Costs" under the short form contract on Form MF-200A, therefore documentation of the costs is not required. We recommend that payment be made to the Operator for 50 percent of the amount reported on Form MF-104, subject to your verification of applicable rates and arithmetical accuracy within the report.

Remarks:

Date of Report----------April 7, 1958
Date Received in Field Office-------April 25, 1958
Date Received in Region Office------April 28, 1958

Original signed by
E. N. HARSHMAN

E. N. Harshman

Enclosures

JDC:hmh

cc: Chmn. Op. Comm. (2)
DMEA/DFC

MF-104 file, Reg. III
Harshman - w/copy of Engr's report
Chron

REGION III

DMEA
DEPARTMENT OF THE INTERIOR
APR 28 1958
REGION III
DENVER, COLORADO

Building 20
Denver Federal Center
Denver 2, Colorado
April 25, 1958

Memorandum

To: Acting Executive Officer, DMEA Field Team, Region III

From: Edward W. Buel

Subject: Docket DMEA 3866 (Lead, zinc, and copper) Contract Idm-E903, American Smelting and Refining Company (Keystone mine) Gunnison County, Colorado -- Progress report for March 1958

An inspection was made of the DMEA work program on the 2000-level of the Keystone mine. The inspection was made on April 14, 1958. The writer was accompanied by H. Bloomfield, A. S. R. engineer.

A measurement of the DMEA drift showed a total advance of 1,334 feet driven along the Union vein structure. The operator's MF-104's for March 1958 show a total drift advance of 1,293 feet. The footage claimed by the operator is well within the verified footage of drift. In addition to the drifting, the operator cut two diamond drill stations and completed one horizontal hole (number 20-11) for a distance of 356 feet to the northeast. This hole did not encounter anything but insignificant sporadic sulphide mineralization. At the time of the inspection hole 20-12 was being drilled and had been drilled to a depth of 30 feet.

All items claimed by the operator were verified and are recommended for payment. Total reimbursement is $3,910.00 of which the Government's share at 50 percent is $1,955.00.

Edward W. Buel

Edward W. Buel
Mining Engineer

EWB/mw
cc: 6
Idm-E903
chron

K-7.7.
DMEA

AMERICAN SMELTING AND REFINING COMPANY
KEYSTONE UNIT
P. O. BOX J. CRESTED BUTTE, COLO.

April 7, 1958

DMEA
DEPARTMENT OF THE INTERIOR
APR 24 1958
REGION III
DENVER, COLORADO

Executive Officer, DMEA, Field Team
Region III, 222 New Custom House
Denver 2, Colorado

Re: Docket DMEA-3866
Contract Idm-E903
March - 1958

Gentlemen:

General Remarks:

One hundred and six (106) ft. advance and two diamond drill stations were completed on the 2000 Union Vein during March. A core drill is now testing the footwall near survey station 2077 + 30 ft. Bearing of the hole is N 55° E with dip -2°. To date no important structure has been encountered in the drilling.

General Geology:

The bearing of the last 100 ft. of drift has been approximately N 25° E. This bearing has been maintained to intersect the major Union Vein structure which is thought to exist in the footwall side of the drift. Since assuming this drift bearing no major structure has been encountered, however, an occasional northerly trending veinlet has been cut. A few of these veinlets carry zinc and lead sulfides.

The wall rock is still gray to greenish cast, fine grained sandstones.

Very truly yours,

Nolan Probst, Supt.

NP/wmc
Encls: Form MF-104 (5)
Form MF-104A (5)
Progress Map (5)
cc: John F. Shaw, w/1 set encls.
JFFrost, w/1 set encls.
File, w/1 set encls.

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

RECEIVED MAR 5 D.M.E.A.

Month of March, 1958 Docket No. DMEA 3866 Contract No. Idm-E903
Operator's Name American Smelting and Refining Company Minerals Pb, Cu, Zn
Address 120 Broadway - New York 5, New York
Contract Amount, $107,220.00 Government Participation: 50% Amount, $53,610.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
Raising		7,605.00	7,605.00	5/9/58		
Drifting & XCutting	3,710.00	57,295.00	61,005.00			
Drift & XCut Timber						
Core Drilling		4,209.00	4,209.00			
Drill Hole Casing						
Drill Hole Cementing						
Drill Station	200.00	200.00	400.00			
Assays		666.00	666.00			
TOTALS	3,910.00	69,975.00	73,885.00	3910.00	69,975.00	73,885.00

I certify that the above bill is correct and just and that payment therefor has not been received.

Date April 7, 1958 *Payee American Smelting and Refining Co.

Per Nolan Trost Title Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 1955.00

Signature RRC
(Authorized Certifying Officer)

Date 4/29/58 Vou. No. DMA-58-117
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-8903 in accordance with the terms of the contract.

Signature Edward W. Buel $1955.00 Title Mining Engr. Date 4/25/58

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: Checked for Engineering Allowability

Signature E. M. Hendrickson Title acting Executive Officer Date APR 28 1958

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

RECEIVED MAY 8

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of March, 1958 Docket No. DMEA 3866 Contract No. Idm-E903
Operator's Name American Smelting and Refining Company Minerals Pb, Cu, Zn
Address 120 Broadway - New York 5, New York

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
			STAGE I					
Drifting & XCutting	ft.			15,750.00	450	35.00	450	35.00
Timbering	ft.			0.00	0	6.00	45	6.00
Raising	ft.			7,605.00	195	39.00	200	39.00
Assaying	Spl.			312.00	104	3.00	104	3.00
			STAGE II					
Drift. &XCut.	ft.	3,710.00	106	45,255.00	1293	35.00	2000	35.00
Timbering	ft.			0.00	0	6.00	200	6.00
Diamond Drill	ft.			4,209.00	915	4.60	200	4.60
Ream & Case	ft.			0.00	0	2.00	200	2.00
Cement-Re-Drill	ft.			0.00	0	2.00	200	2.00
Drill Sta.	Sta.	200.00	2	400.00	4	100.00	10	100.00
Assaying	Spl.			354.00	118	3.00	296	3.00
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		3,910.00		73,885.00				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

REMARKS:

Date April 7, 1958 Operator American Smelting & Refining Co.

Per Nolan Probst Title Supt.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

Edward W. Buel

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION III

FINAL DISTRIBUTION
MADE MAR 17 195

Administrative Audit Difference Statement

[redacted]

Date: [redacted]
Payee's Reference: [redacted]

[redacted]

RECEIVED MAR 19 1956

DATE	INITIALS	
3/19	C	220
3/20	[illegible]	110
3/21	[illegible]	500
	Ray.	

Upon examination of the above Payee's Reference a difference was found which made it necessary to suspend your account accordingly:

Amount Claimed $ [redacted]

Difference $ [redacted]

Amount Approved $ [redacted]

3866

The reason for the difference was due to:

[redacted]

[redacted]

Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

N. E. Stokes
Audit Section

R-III-B & F Form No. 4
4-15-52 D

224 New Customhouse
Denver 2, Colorado
March 13, 1958

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA 3866 (Lead-Zinc-Copper) Contract Idm-E903, American Smelting and Refining Company, (Keystone mine) Gunnison County, Colorado - Operator's Monthly Progress Report for the month of February, 1958

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Operator's Narrative Report, and Engineer's Report for the above period.

We consider that the Operator has complied with the intent of the contract, and the work for which payment is recommended is acceptable to the government.

All of the work was performed at "Fixed Unit Costs" under the short form contract on Form MF-200A, therefore documentation of the costs is not required.

Reinstatement, Drifting and Crosscutting

During inspection of the January 1958, progress an error was made in measuring the drift advance, resulting in disallowance of the reported cost for two feet of drifting. All of the reported drifting for January 1958, has now been confirmed; therefore, the reported cost for two feet of drifting is to be reinstated.

Reinstate reported cost for two feet drifting at $35.00 per foot----------$70.00

Please inform the Operator of the reinstatement by means of an Administrative Audit Difference Statement.

Reconciliation with Amount Reported by the Operator on
Form MF-104 for February, 1958

Amount reported on Form MF-104, for February, 1958	$3,780.00
Amount to be reinstated	70.00
Total accepted cost	3,850.00

Government participation at 50 percent ---------- $1,925.00

Remarks:

Date of Report ---------- March 5, 1958
Date Received in Field Office ---------- March 11, 1958
Date Received in Region Office ---------- March 13, 1958

Original signed by
W H KING
W. H. King

Enclosures

JDC:hmh

cc: Chmn. Op. Comm. (2)
DMEA/DFC
MF-104 file, Reg. III
Harshman) w/copy of
Townsend) Engr's report
Chron

DMEA
DEPARTMENT OF THE INTERIOR

REGION III

MAR 13 1958
REGION III
DENVER, COLORADO

Building 20
Denver Federal Center
Denver 2, Colorado
March 12, 1958

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: Edward W. Buel

Subject: Docket DMEA 3866 (Lead, zinc, copper) Contract Idm-E903, American Smelting and Refining Company (Keystone mine) Gunnison County, Colorado -- Progress report for February 1958

In company with H. Bloomfield, A. S. R. engineer, an inspection was made of the recent DMEA work progress. The inspection was made on March 3, 1958. Work progress was also discussed with N. Probst, general manager.

DMEA drifting on the 2000-level of the Union vein measured a total advance of more than 1,195 feet as authorized under Stage II.

The results of the work as described in the operator's narrative report are verified.

The operator asks reimbursement for 108 feet of drifting and crosscutting. Since the last inspection on February 3, 1958, the drift was extended more than 115 feet. Therefore the 108 feet as claimed by the operator is within the measured limits of the interim period. Payment for 108 feet of drifting and crosscutting is recommended for payment.

During the last inspection, it was learned that an error in measurement was made and that the 2 feet disallowed for drifting on the January 104's should be reinstated. It is noted that the operator on his February 104's did not make the disallowance reported to him. Therefore, his current MF-104's do not reflect any recent disallowances. It is recommended that the costs of 2 feet of drifting be reimbursed.

The cost of the reimbursement for 108 feet of drifting and crosscutting is $3,780.00 of which the Government's share at 50% is $1,890.00. An additional 2 feet of drifting, previously disallowed, is also recommended for reimbursement at $35.00. Total reimbursement is $1,925.00.

Edward W. Buel

Edward W. Buel
Mining Engineer

EWB/mw
cc: 6 Idm-E903 chron

MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of February, 1958 Docket No. DMEA 3866 Contract No. Am-E903
Operator's Name American Smelting and Refining Company Minerals Pb, Cu, Zn
Address 120 Broadway - New York 5, New York
Contract Amount, $107,220.00 Government Participation: 50 % Amount, $53,610.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
Raising		7,605.00	7,605.00	5/9/58		
Drifting & XCutting	3,780.00	53,515.00	57,295.00			
Drill & XCut Timber						
Core Drilling		4,209.00	4,209.00			
Drill Hole Casing						
Drill Hole Cementing						
Drill Station		200.00	200.00			
Assays		666.00	666.00			
TOTALS	3,780.00	66,195.00	69,975.00	3850.00	66,195.00	69,975.00

I certify that the above bill is correct and just and that payment therefor has not been received.

Date March 5,1958 *Payee American Smelting and Refining Co.

Per Nolan Probst Title Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$1925.00

Signature
(Authorized Certifying Officer)

Date 3/14/58 Vou. No. DMA 58-98

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Adm-8903 in accordance with the terms of the contract.

Signature Edward W. Buel $1925.00 Title Mining Engr. Date 3/12/58

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: Checked for Engineering Allowability

Signature W. H. King Title Executive Officer Date MAR 13 1958

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(*a*) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(*b*) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(*c*) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S UNIT COST AND PROGRESS REPORT

RECEIVED MAR 19

Month of February, 1958 Docket No. DMEA 3866 Contract No. Idm-E903
Operator's Name American Smelting and Refining Company Minerals Pb, Cu, Zn
Address 120 Broadway - New York 5, New York

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
			STAGE I					
Drifting & XCutting	ft.			15,750.00	450	35.00	450	35.00
Timbering	ft.			0.00	0	6.00	45	6.00
Raising	ft.			7,605.00	195	39.00	200	39.00
Assaying	Spl.			312.00	104	3.00	104	3.00
			STAGE II					
Drift & XCut	ft	3,780.00	108	41,545.00	1187	35.00	2000	35.00
Timbering	ft.			0.00	0	6.00	200	6.00
Diamond Drill	ft.			4,209.00	915	4.60	2000	4.60
Ream & Case	ft.			0.00	0	2.00	200	2.00
Cement-ReDrill	ft.			0.00	0	2.00	200	2.00
Drill Sta	Sta.			200.00	2	100.00	10	100.00
Assaying	Spl.			354.00	118	3.00	296	3.00
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		3,780.00		69,975.00				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

REMARKS:

Date March 5, 1958 Operator American Smelting & Refining Co.

Per Nolan Frobst Title Supt.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

Edward W. Buel

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

AMERICAN SMELTING AND REFINING COMPANY
KEYSTONE UNIT
P. O. BOX J. CRESTED BUTTE, COLO.

DMEA
DEPARTMENT OF THE INTERIOR
MAR 10 1958
REGION III
DENVER, COLORADO

March 5, 1958

Executive Officer, DMEA, Field Team
Region III, 222 New Custom House
Denver 2, Colorado

Re: Docket DMEA-3866
Contract Idm-E903
February - 1958

Gentlemen:

General Remarks:

One hundred and eight feet of advance was made on the 2000 Union vein during the month. Core drill stations are being cut at survey station 2077 + 20 ft. Bearing of these stations will be N 55° E and S 55° W.

General Geology:

The drift has been turned into the footwall to intersect the projected structure encountered near survey station 2072, near which point the heavy inflow of water forced us to leave and drift parallel to the vein structure.

The present drift face has a pattern of northerly trending quartz veinlets with minor amounts of Pb-Zn sulfides. The wall rock is fine grained, hard, gray to greenish cast sand stone.

Very truly yours,

Nolan Probst, Supt.

NP/wmc
Encls: Form MF-104 (5)
Form MF-104A (5)
Progress Map (5)
cc: John F. Shaw, w/1 set encls.
JFFrost, w/1 set encls.
File, w/1 set encls.

OFFICIAL FILE COPY DMEA RECEIVED FEB 24 1958		
DATE	INITIALS	CODE
2/24	C	220
2/24	[illegible]	800
2/25	[illegible]	500

224 New Customhouse
Denver 2, Colorado
February 19, 1958

Mr. Nolan Probst, Superintendent
American Smelting and Refining Company
Box J
Crested Butte, Colorado

Re: Docket No. DMEA 3866
(Lead-Zinc-Copper)
Contract Idm-2903
American Smelting and Refining Company
(Keystone mine)
Gunnison County, Colorado

Dear Mr Probst:

Form MF-104, Operator's Monthly Report and Voucher for January 1958, has been received in this office and is being processed for payment.

The reported cost for 2 feet of drifting is disallowed. Payment was requested for 98 feet of drifting, making a grand total of 1078 feet of drifting in Stage II. A measurement of the drift by the examining engineer showed a total advance of only 1077 feet.

You will be further advised of the disallowance by means of an Administrative Audit Difference Statement, which will be forwarded to you by the Finance Office, Region III.

Yours very truly,

Original signed by
W. H. KING

W. H. King
Executive Officer, DMEA
Field Team, Region III

MHM:hmh

cc: Chmn Op Comm (2)
DMEA/DFC
Harshman
Townsend
Corres.file, Reg. III
Chron

FINAL DISTRIBUTION

MADE FEB 20 1958

3866

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION III

Administrative Audit Difference Statement

American Smelting and Refining Co.
P. O. Box J
Crested Butte, Colorado

Date: February 19, 1958
Payee's Reference: January 1958

Gentlemen:

Upon examination of the above Payee's Reference a difference was found which made it necessary to suspend your account accordingly:

Amount Claimed	$	3,185.00
Difference	$	70.00
Amount Approved	$	3,115.00

The reason for the difference was due to:
Disallowance, Drifting

Reported cost for 91 feet of drifting at $35.00 per foot	$3,185.00
Acceptable costs, 89 feet of drifting at $35.00 per foot	3,115.00
Total amount disallowed	70.00

Payment for 91 feet of drifting was requested, making a total of 1,079 feet for drifting in Stage II. A measurement of the drift showed a total advance of only 1,077 feet.

Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

N. E. Stokes
Audit Section

DATE		CODE
2/24	C	220
"	Reg	110
2/24	Reg.	500

R-III-B & F Form No. 4
4-15-52 D

224 New Customhouse
Denver 2, Colorado
February 18, 1958

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA 3866 (Lead-Zinc-Copper) Contract Idm-E903, American Smelting and Refining Company (Keystone mine) Gunnison County, Colorado - Operator's Monthly Progress Report for the month of January, 1958

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Operator's Narrative Report and Engineer's Report for the above period.

Stage II drifting completed during the period along the vein in the hanging wall is considered within the intent of the contract.

Except as otherwise indicated below, we consider that the Operator has complied with the intent of the contract, and the work for which payment is recommended is acceptable to the Government. All of the work was performed at "Fixed Unit Costs" under the short form contract on Form MF-200A, therefore documentation of the costs is not required. We recommend that payment be made to the Operator on the following basis, contingent on your verification of applicable rates and arithmetical accuracy within the report.

The Operator requests payment for 91 feet of drifting making a grand total of 1,079 feet for drifting in Stage II. A measurement of the drift showed a total advance of only 1,077 feet. Therefore, it is recommended that 2 feet of drifting be disallowed from that total requested by the Operator on his MF-104's for January 1958.

<u>Disallowance, Drifting:</u>

Reported cost for 91 feet of drifting at $35.00 per foot	$3,185.00
Acceptable costs, 89 feet of drifting at $35.00 per foot	3,115.00
Total amount to be disallowed	$ 70.00

Reconciliation with Amount Reported by the Operator on Form MF-104 for January 1958

Amount reported on Form MF-104 for January, 1958----------	$3,185.00
Amount to be disallowed----------	70.00
Acceptable cost for January, 1958----------	3,115.00

Government participation at 50 percent----------$1,557.50

Remarks:

Date of Report----------February 4, 1958
Date Received in Field Office----------February 13, 1958
Date Received in Region Office---------February 14, 1958

Original signed by
W. H. KING
W. H. King

Enclosures

MHM:hmh

cc: Chmn. Op. Comm. (2)
DMEA/DFC
MF-104 File, Region III
Harshman) w/copy of
Townsend) Engr's report
Chron

DMEA
DEPARTMENT OF THE INTERIOR

FEB 14 1958
REGION III
DENVER, COLORADO

REGION III

Memorandum

Building 20
Denver Federal Center
Denver 2, Colorado
February 13, 1958

To: Executive Officer, DMEA Field Team, Region III

From: Edward W. Buel

Subject: Docket DMEA 3866 (Lead-zinc-copper) Contract Idm-E903, American Smelting and Refining Company (Keystone mine) Gunnison County, Colorado -- Progress report for January 1958

An examination was made of the property on February 3, 1958. Work progress under the contract was discussed with Messrs. N. Probst, general manager, and H. Bloomfield, engineer.

Along the 2000-level on the Union vein the DMEA drift measured 1077 feet under Stage II authorized work. An appreciable quantity of water, 500 - 600 gallons per minute, continues to cover the track in the drift from a new fissure some 24 feet beyond the old "water-course" fissure.

The operator's narrative report adequately describes the work progress results and conditions.

The operator requests payment for 91 feet of drifting making a grand total of 1079 feet for drifting in Stage II. A measurement of the drift showed a total advance of only 1077 feet. Therefore, it is recommended that 2 feet of drifting be disallowed from that total requested by the operator on his MP-104's for January 1958. A total of 89 feet of drifting is recommended for payment, costing $3,110.00 of which the Government's share at 50 percent is $1,555.00.

Edward W Buel

Edward W. Buel
Mining Engineer

EWB/mw
cc: 6
Idm-E903
chron

AMERICAN SMELTING AND REFINING COMPANY
KEYSTONE UNIT
P. O. BOX J. CRESTED BUTTE, COLO.

February 4, 1958

DMEA
DEPARTMENT OF THE INTERIOR
FEB 11 1958
REGION III
DENVER, COLORADO

Executive Officer, DMEA, Field Team
Region III, 222 New Custom House
Denver 2, Colorado

Re: Docket DMEA-3866
Contract Idm-E903
January - 1958

Gentlemen:

General Remarks:

Ninety one feet of advance was made in the 2000 Union drift during January. All advance was in waste. The water encountered and mentioned in last months narrative has diminished slightly but is still slowing the drift advance. To improve the advance the drift was turned into the hanging-wall, however, another pattern of fracturing was encountered.

General Geology:

The last 30 ft. of drifting has been in badly broken ground with minor amounts of Pb, Zn sulfides scattered at random on the joints. The stronger fractures carry small kidneys of Pb, Zn sulfides.

Very truly yours,

Nolan Probst

Nolan Probst, Supt.

NP/wmc
Encls: Form MF-104 (5)
Form MF-104A (5)
Progress Map (5)
cc: John F. Shaw, w/1 set encls.
JFFrost, w/1 set encls.
File, w/1 set encls.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

RECEIVED FEB 3 1958 D.M.E.A.

Month of January, 1958 Docket No. DMEA 3866 Contract No. Idm-E903
Operator's Name American Smelting and Refining Company Minerals Pb, Cu, Zn
Address 120 Broadway - New York 5, New York

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
			STAGE I					
Drifting & XCutting	ft.			15,750.00	450	35.00	450	35.00
Timbering	ft.			0.00	0		45	6.00
Raising	ft.			7,605.00	195	39.00	200	39.00
Assaying	Spl.			312.00	104	3.00	104	3.00
Winzes								
Drilling, Core			STAGE II					
Drift & XCut	ft.	3,185.00	91	37,765.00	1079	35.00	2000	35.00
Timbering	ft.			0.00	0	6.00	200	6.00
Diamond Drill	ft.	3,115.00	89	4,209.00	915	4.60	2000	4.60
Ream & Case	ft.			0.00	0	2.00	200	2.00
Cement-ReDrill	ft.			0.00	0	2.00	200	2.00
Drill Sta.	Sta.			200.00	2	100.00	10	100.00
Assaying	Spl.			354.00	118	3.00	296	3.00
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		3,185.00		66,195.00				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

REMARKS:

Date Feb. 4, 1958 Operator American Smelting & Refining Co.

Per Nolan Probst Title Supt.

Nolan Probst

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

Edward W. Buel

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

RECEIVED 1958 D.M.E.A.

Month of January, 1958 Docket No. DMEA 3866 Contract No. Idm-E903
Operator's Name American Smelting and Refining Company Minerals Pb, Cu, Zn
Address 120 Broadway - New York 5, New York
Contract Amount, $107,220.00 Government Participation: 50 % Amount, $53,610.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
Raising		7,605.00	7,605.00	3/17/58		
Drifting & XCutting	3,185.00	50,330.00	53,515.00			
Drift & XCut Timber						
Core Drilling		4,209.00	4,209.00			
Drill Hole Casing						
Drill Hole Cementing						
Drill Station		200.00	200.00			
Assays		666.00	666.00			
TOTALS	3,185.00	63,010.00	66,195.00	3,185.00	63,010.00	66,195.00

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Feb. 4, 1958 *Payee American Smelting and Refining Co.

Per Nolan Probst Title Supt.

Nolan Probst

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 1,557.50

Signature
(Authorized Certifying Officer)

Date 2/19/58 Voucher DMA 58-90
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. DMA-E903 in accordance with the terms of the contract.

Signature Edward W. Buel $1555.00 Title Mining Engr. Date 2/13/58

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE

Checked for Engineering Allowability

Signature W S King Title Executive Officer Date FEB 17 1958

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(*a*) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(*b*) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(*c*) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

FINAL DISTRIBUTION

MADE JAN 21 1958

224 New Customhouse
Denver 2, Colorado

January 17, 1958

Official

EXTRA COPY
DMEA
RECEIVED 1958

DATE	INITIALS	CODE
1/24	[illegible]	110
1/24	[illegible]	500

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA 3366 (Lead-Zinc-Copper) Contract Idm-E903, American Smelting and Refining Co., (Keystone mine) Gunnison County, Colorado - Operator's Monthly Progress report for the month of December, 1957

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Operator's Narrative Report, and Engineer's Report for the above period.

We consider that the Operator has complied with the intent of the contract, and the work for which payment is recommended is acceptable to the Government. All of the work was performed at "Fixed Unit Costs" under the short form contract on Form MF-200A, therefore documentation of the costs is not required. We recommend that payment be made to the Operator for 50 percent of the amount reported on Form MF-104, subject to your verification of applicable rates and arithmetical accuracy within the report.

Remarks:

Date of Report----------January 6, 1958
Date Received in Field Office----January 14, 1958
Date Received in Region Office---January 15, 1958

Original signed by
W. H. KING
W. H. King

Enclosures

JDC:hmh

cc: Chmn. Op. Comm. (2)
DMEA/DFC
MF-104 file, Reg. III
Harshman - w/copy Engr's report
Chron

K-7.7.
DMEA

DMEA
DEPARTMENT OF THE INTERIOR
JAN 10 1958
REGION III
DENVER, COLORADO

AMERICAN SMELTING AND REFINING COMPANY
KEYSTONE UNIT
P. O. BOX J. CRESTED BUTTE, COLO.

January 6, 1958

Executive Officer, DMEA, Field Team
Region III, 222 New Custom House
Denver 2, Colorado

Re: Docket DMEA-3866
Contract Idm-E903

Gentlemen:

General Remarks:

Eighty three feet of advance was made under the above contract during December. Considerable water was encountered which has slowed the advance appreciably.

General Geology:

In the present face the fissure has widened to 3 ft. with considerable crushed quartz carrying scattered zinc and lead sulfides. Approximately 600 gal. water/min. is coming from the fissure. The country rock is light to dark grey, fine grained and moderately hard.

Very truly yours,

Nolan Probst

Nolan Probst, Supt.

NP/wmc
Encls: Form MF-104 (5)
Form MF-104A (5)
Progress Map (5)
cc: John F. Shaw, w/1 set encls.
JFFrost, w/1 set encls.
File, w/1 set encl.

DMEA
DEPARTMENT OF THE INTERIOR
JAN 15 1958
REGION III
DENVER, COLORADO

REGION III

Building 20
Denver Federal Center
Denver 2, Colorado
January 15, 1958

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: Edward W. Buel

Subject: Docket DMEA 3866 (Lead, zinc, and copper) Contract Idm-E903, American Smelting and Refining Co. (Keystone mine) Gunnison County, Colorado -- Progress report for December 1957

Stage II work progress was inspected on January 8, 1958. The work progress was discussed with Mr. W. Probst, general manager, and Messrs. Bloomfield and Perrin, A. S. & R. engineers.

Along the 3000-level on the Union vein the DMEA drift has been advanced for a total length of about 1,003 feet under Stage II. A considerable amount of water, estimated at 500 to 600 gallons per minute, was seen coming from a small cavernous area in the drift face. Considerable delay in advancing the drift was experienced by the operator because of the water flow. The operator was preparing to bypass the cavernous area at the time of the inspection. Significant sulfide mineralization was again encountered in the last 10 feet, or so, of the drift.

The operator requests payment for 83 feet of drifting for December 1957. The amount of drifting claimed by the operator was verified. A total of $2,905.00 is claimed by the operator. Of this amount, the Government's share at 50 percent is $1,452.50.

Edward W. Buel

Edward W. Buel
Mining Engineer

EWB/mw
cc: 6
Idm-E903
chron

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of December, 1957 Docket No. DMEA 3866 Contract No. Idm-E903
Operator's Name American Smelting and Refining Company Minerals Pb, Cu, Zn
Address 120 Broadway - New York 5, New York
Contract Amount, $ 107,220.00 Government Participation: 50 % Amount, $ 53,610.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
~~(1) Operating Costs:~~						
~~Stoping~~ Raising		7605.00	7605.00	3/17/58		
~~[illegible]~~						
~~[illegible]~~						
Drifting & XCutting	2905.00	47425.00	50330.00			
Drift & XCut Timber						
~~(2) [illegible]~~						
~~[illegible]~~						
~~Supervision~~						
~~[illegible]~~						
~~(3) Operating Materials~~						
~~Timber~~						
~~Explosives~~						
~~[illegible]~~ Core Drilling		4209.00	4209.00			
~~[illegible]~~						
Drill Hole Casing						
Drill Hole Cementing						
~~(4) Operating Equipment~~						
~~Rental~~						
~~Purchase~~						
~~Depreciation~~						
~~(5) Initial Rehabilitation and Repair~~						
~~(6) New Bridges, Improvements, etc.~~						
~~(7) Miscellaneous~~						
~~Repairs to Equipment~~						
~~Sampling and Analysis~~						
~~Payroll Taxes~~						
~~[illegible]~~						
Drill Station		200.00	200.00			
Assays		666.00	666.00			
~~(8) Contingencies (specify):~~						
TOTALS	2905.00	60105.00	63010.00	2905.00	60105.00	63,010.00

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Jan. 6, 1958 *Payee American Smelting and Refining Co.

Per Nolan Probst Title Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

→ NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$1452.50

Signature [illegible]
(Authorized Certifying Officer)

Date 1/21/58 Voucher DMA 58-81

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Ddm-8903 in accordance with the terms of the contract.

Signature Edward W. Buel $1452.50 Title Mining Engr. Date 1/15/58

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W H King Title Executive Officer Date JAN 17 1958

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of December, 1957 Docket No. DMEA 3866 Contract No. Idm-5903

Operator's Name American Smelting and Refining Company Minerals Pb, Cu, Zn

Address 120 Broadway - New York 5, New York

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
			STAGE I					
Drifting & Cutting	ft.			15750.00	450	35.00	450	35.00
Timbering	ft.			0.00	0		45	6.00
Raising	ft.			7605.00	195	39.00	200	39.00
Assaying	Spl.			312.00	104	3.00	104	3.00
			STAGE II					
Drift & Cut	ft.	2905.00	83	34580.00	988	35.00	2000	35.00
Timbering	ft.			0.00	0		200	6.00
Diamond Drill	ft.			4209.00	915	4.60	2000	4.60
Ream & Case	ft.			0.00	0		200	2.00
Cement-Redrill	ft.			0.00	0		200	2.00
Drill Sta.	Sta.			200.00	2	100.00	10	100.00
Assaying	Spl.			354.00	118	3.00	296	3.00
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		2905.00		63010.00				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

REMARKS:

Date Jan. 6, 1958 Operator American Smelting & Refining Co.

Per Nolan Probst Title Supt.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

Edward W. Buel

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

FINAL DISTRIBUTION

OFFICIAL FILE COPY
MADE BY DMEA

RECEIVED DEC 20 1957

DATE	INITIALS	CODE
12/20	gb	220
		~~140~~
12/20	Klug.	300

224 New Customhouse
Denver 2, Colorado

December 13, 1957

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-3866 (Lead-Zinc-Copper) Contract Idm-E903, American Smelting and Refining Co. (Keystone mine) Gunnison County, Colorado - Operator's Monthly Progress Report for the month of November 1957

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Operator's Narrative Report, and Engineer's Report for the above period.

We consider that the Operator has complied with the intent of the contract, and the work for which payment is recommended is acceptable to the Government. All of the work was performed at "Fixed Unit Costs" under the short form contract on Form MF-200A, therefore documentation of the costs is not required. We recommend that payment be made to the Operator for 50 percent of the amount reported on Form MF-104, subject to your verification of applicable rates and arithmetical accuracy within the report.

REMARKS:

Date of Report ----------December 3, 1957
Date Received in Field Office ----------December 10, 1957
Date Received in Region Office ----------December 11, 1957

Original signed by
W. H. KING

W. H. King

Enclosures

JDC:jy
cc: Chm.Op.Comm.-2)
DMEA,DFC) w/complete rpt.
MF-104 file)
Harshman w/copy of engr's. rpt.
Chron.

DMEA
DEPARTMENT OF THE INTERIOR

REGION III

DEC 11 1957
REGION III
DENVER, COLORADO

Building 20
Denver Federal Center
Denver 2, Colorado
Dec. 10,1957

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: Edward W. Buel

Subject: Docket DMRA 3866 (Lead, zinc, copper) Contract Idm-E903, American Smelting and Refining Co. (Keystone mine) Gunnison County, Colorado -- Progress report for November 1957

Work progress under Stage II of the contract was inspected on December 4, 1957. Messrs. N. Probst, general manager, and G. H. Bloomfield, engineer, were contacted during the visit to the property.

An examination of the Stage II drifting along the 2000 - level Union vein showed a total advance of about 910 feet. The vein structure as exposed in the face showed a tight structure with very little gouge and no appreciable sulfide mineralization. Mr. Probst stated that the Union vein structure has been poorly mineralized for several hundred feet. The operator has requested approval for an additional 500 feet of drifting along the 2000 - level Union vein.

The operator requests payment for 125 feet of drifting, costing $4,375.00 of which $2,187.50, at the Government's share of 50 percent, is recommended for payment.

Edward W. Buel

Edward W. Buel
Mining Engineer

EWB/mw
cc: 6
Idm-E903
chron

K-7.7.
DMEA

AMERICAN SMELTING AND REFINING COMPANY
KEYSTONE UNIT
P. O. BOX J. CRESTED BUTTE, COLO.

December 3, 1957

DMEA
DEPARTMENT OF THE INTERIOR
DEC 9 - 1957
REGION III
DENVER, COLORADO

DMEA
DEPARTMENT OF THE INTERIOR
DEC 11 1957
DENVER, COLORADO

Executive Officer, DMEA, Field Team
Region III, 222 New Custom House
Denver 2, Colorado

Re: Docket DMEA-3866
Contract Idm-E903

Gentlemen:

General Remarks:

One hundred and twenty five feet of advance was made on the 2000 Union Vein during November.

General Geology:

During the month the fissure remained tight with very little mineralization present. The wall rock remains essentially brown to greenish cast shales.

Very truly yours,

Nolan Probst, Supt.

NP/wmc
Encls: Form MF-104 (5)
Form MF-104A (5)
Progress Map (5)
cc: John F. Shaw, w/1 set encls.
WRLandwehr, w/1 set encls.
File, w/1 set encls.

F-104 (Rev.)
1952)

Budget Bureau No. 42-R1036.5

RECEIVED
DEC 20 1957
D.M.E.A.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of November, 1957 Docket No. DMEA 3866 Contract No. Idm-E903
Operator's Name American Smelting and Refining Company Minerals Pb, Cu, Zn
Address 120 Broadway - New York 5, New York
Contract Amount, $107,220.00 Government Participation: 50 % Amount, $53,610.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) ~~Exploration~~ ~~Costs~~:						
~~Shafts~~ ~~Work~~ Raising		7605.00	7605.00	12/26/57	7605 PK	
~~Exploration~~						
~~Development~~						
Drifting & XCutting	4375.00	43050.00	47425.00			
Drift & XCut Timber						
(2) ~~Development~~						
~~Labor~~						
~~Equipment~~						
~~Contracts~~						
~~(3) Operating Equipment~~						
~~Labor~~						
~~Expense~~						
~~Exp.~~ Core Drilling		4209.00	4209.00			
~~Exp.~~						
Drill Hole Casing						
Drill Hole Cementing						
~~(4) Operating Equipment~~						
~~Labor~~						
~~Expense~~						
~~Depreciation~~						
~~(5) Maintenance~~ ~~Expense~~						
~~(6) New Bldgs., Improvements, etc.~~						
~~(7) Miscellaneous~~						
~~Supplies~~						
~~Sampling and Analysis~~						
~~Payroll Taxes~~						
~~Liability Insurance~~						
Drill Station		200.00	200.00			
Assays		666.00	666.00			
~~(8) Contingencies (specify)~~						
						66,105.00
TOTALS	4375.00	55730.00	60105.00	4,375.00	55,730.00	66,105.00

I certify that the above bill is correct and just and that payment therefor has not been received.
Date Dec. 3, 1957 *Payee American Smelting and Refining Co.
Per Nolan Probst Title Supt.
Nolan Probst

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

→ NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:
$2,187.50
Signature [signature]
(Authorized Certifying Officer)
Date 12/14/57 Voucher DMA 9 58-70
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Sdm-E903 in accordance with the terms of the contract.

Signature Edward W. Buel $2187.50 Title Mining Engr. Date 12/10/57

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W. D. Kemp Title Executive Officer Date DEC 13 1957

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED DEC 20 1957 D.M.E.A.

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of November, 1957 Docket No. DMEA 3866 Contract No. Idm-E903

Operator's Name American Smelting and Refining Company Minerals Pb, Cu, Zn

Address 120 Broadway - New York 5, New York

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
			STAGE I					
Drifting & XCutting	Ft.			15750.00	450	35.00	450	35.00
Timbering	Ft.			0.00	0		45	6.00
Raising	Ft.			7605.00	195	39.00	200	39.00
Assaying	Spl.			312.00	104	3.00	104	3.00
			STAGE II					
Drift & XCut	Ft.	4375.00	125	31675.00	905	35.00	2000	35.00
Timbering	Ft.			0.00	0		200	6.00
Diamond Drill	Ft.			4209.00	915	4.60	2000	4.60
Ream & Case	Ft.			0.00	0		200	2.00
Cement-Redrill	Ft.			0.00	0		200	2.00
Drill Sta	Sta.			200.00	2	100.00	10	100.00
Assaying	Spl.			354.00	118	3.00	296	3.00
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		4375.00		60105.00				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

REMARKS:

Date Dec. 3, 1957 Operator American Smelting & Refining Co.

Per Nolan Probst Title Supt.

Nolan Probst

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

Edward W. Buel

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

58-64

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION III
[illegible]

FINAL DISTRIBUTION
MADE NOV 26 1957

Administrative Audit Difference Statement

[illegible]

Date: [illegible]
Payee's Reference: [illegible]

Docket DMEA-3866

Contract Idm-E903

[illegible]

Upon examination of the above Payee's Reference a difference was found which made it necessary to suspend your account accordingly:

Amount Claimed $ [illegible]

Difference $ [illegible]

Amount Approved $ [illegible]

The reason for the difference was due to:

[illegible]

EXTRA COPY
DMEA
RECEIVED DEC 2 1957

DATE	INITIALS	CODE
12/2	Fg	110
12/3	Klug	500

Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

RRC

[illegible]
N. E. Stokes
Audit Section

[illegible]

R-III-B & F Form No. 4
4-15-52 D

58-64

224 New Customhouse
Denver 2, Colorado

November 21, 1957

Memorandum

To: T. A. Christensen

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-3866 (Lead-Zinc-Copper) Contract Idm-E903, American Smelting and Refining Co. (Keystone mine) Gunnison County, Colorado - Operator's Monthly Progress Report for the month of October 1957

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Operator's Narrative Report, and Engineer's Report for the above period.

We consider that the Operator has complied with the intent of the contract, and the work for which payment is recommended is acceptable to the Government. All of the work was performed at "Fixed Unit Costs" under the short form contract on Form MF-200A, therefore documentation of the costs is not required. We recommend that payment be made to the Operator for 50 percent of the amount reported on Form MF-104, subject to your verification of applicable rates and arithmetical accuracy within the report. In addition, the following reinstatement is to be made:

Reinstate the amount of $500.00 which was withheld from the August 1957 voucher pending performance of additional work. The project has been resumed. Please inform the Operator of the reinstatement by means of an Administrative Audit Difference Statement.

REMARKS:

Date of Report ---------- November 6, 1957
Date Received in Field Office --------- November 18, 1957
Date Received in Region Office -------- November 20, 1957

Original signed by
E. N. HARSHMAN

E. N. Harshman

Enclosures
MHM:jy
cc: Chm. Op. Comm. (2)
DMEA,DFC
MF-104 file
Harshman } w/copy of Engr's. report
Townsend }
Chron.

DMEA
DEPARTMENT OF THE INTERIOR

NOV 20 1957
REGION III
DENVER, COLORADO

REGION III

Memorandum

Building 20
Denver Federal Center
Denver 2, Colorado
November 18, 1957

To: Acting Executive Officer, DMEA Field Team, Region III

From: Edward W. Buel

Subject: Docket DMEA 3866 (Lead-zinc-copper), Contract Idm-E903, American Smelting and Refining Co. (Keystone mine) Gunnison County, Colorado---Progress report for October 1957.

An examination of the DMEA work program along the Union vein on the 2000-level was made on November 7, 1957. The examining engineer was accompanied by Messrs. D. H. Richter, U. S. Geological Survey and J. Papastamatiou, Ass't. Director Geological Survey of Greece. Work progress was discussed with Mr. Bloomfield, A. S. R. engineer.

A measurement of the DMEA drift on the 2000-level Union vein showed a total advance of 798 feet. The operator claims reimbursement for 104 feet of drifting, totaling 780 feet. The amount of drifting claimed by the operator is recommended for payment.

The operator requests payment for $3,640.00 of which $1,820.00 represents the Government participation at 50 percent.

Edward W. Buel

Edward W. Buel
Mining Engineer

EWB:ss
cc: 6/orig
Idm-E903
Chron

AMERICAN SMELTING AND REFINING COMPANY
KEYSTONE UNIT
P. O. BOX J. CRESTED BUTTE, COLO.

DMEA
DEPARTMENT OF THE INTERIOR
NOV 14 1957
REGION III
DENVER, COLORADO

November 6, 1957

Executive Officer, DMEA, Field Team
Region III, 222 New Custom House
Denver 2, Colorado

Re: Docket DMEA-3866
Contract Idm-E903

Gentlemen:

General Remarks:

One hundred and four feet of drifting was completed during October on the 2000 Union Vein.

General Geology:

The fissure averages 6 inches to 18 inches in width. Two to three inches of gouge is present. Occasional stringers of quartz, 1 to 2 inches wide appear but do not persist. Mineralization is almost entirely pyrite in the form of filling on the joints. The wall rock is bleached shales and mudstones.

Very truly yours,

Nolan Probst, Supt.

Np/wmc
Encls: Form MF-104 (5)
Form MF-104A (5)
Progress Map (5)
cc: John F. Shaw, w/1 set encls.
WRLandwehr, w/1 set encls.
File, w/1 set encls.

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

RECEIVED DEC 2 1957

Month of October, 1957 Docket No. DMEA 3866 Contract No. Idm-E903
Operator's Name American Smelting and Refining Company Minerals Pb, Cu, Zn
Address 120 Broadway - New York 5, New York
Contract Amount, $ 107,220.00 Government Participation: 50% Amount, $ 53,610.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) ~~Independent~~ ~~Contractor~~ ~~Contract~~:						
~~Development~~ Raising		7605.00	7605.00	12/26/57		
~~Exploration~~						
~~Construction~~						
Drifting & XCutting	3640.00	39410.00	43050.00			
Drift & XCUt Timber						
(2) ~~Exploration Development~~						
~~Core~~						
~~Exploration~~						
~~Development Drilling~~						
(3) ~~Operating Mining and Surface~~:						
~~Timber~~						
~~Explosives~~						
~~Expl~~ Core Drilling		4209.00	4209.00			
~~Tools~~						
Drill Hole Casing						
Drill Hole Cementing						
(4) ~~Operating Equipment~~						
~~Rental~~						
~~Repairs~~						
~~Depreciation~~						
(5) ~~Transportation and Repairs~~						
(6) ~~Buildings, Improvements, etc.~~						
(7) ~~Miscellaneous~~:						
~~Repairs to Equipment~~						
~~Supplies and Tools~~						
~~Power Costs~~						
~~Labor Burden~~						
Drill Station		200.00	200.00			
Assays		666.00	666.00			
(8) ~~Postage Miscellaneous~~						
TOTALS	3640.00	52090.00	55730.00			

DMEA
DEPARTMENT OF THE INTERIOR
NOV 14 1957
REGION III
DENVER, COLORADO

I certify that the above bill is correct and just and that payment therefor has not been received.

Date 11/6/57 *Payee American Smelting and Refining Co.

Per Nolan Probst Title Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

→ NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 2320.00

Signature RRC
(Authorized Certifying Officer)

Date 11/22/57 Vou. No. DMA-58-64
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. dm-E903 in accordance with the terms of the contract.

Signature Elmer W. Buel #1820.00 Title Mining Engr. Date 11/15/57

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title for Acting Executive Officer Date NOV 21 1957

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

RECEIVED DEC 2 1957 DMEA

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of October, 1957 Docket No. DMEA 3866 Contract No. Idm-E903
Operator's Name American Smelting and Refining Company Minerals Pb, Cu, Zn
Address 120 Broadway - New York 5, New York

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
			STAGE I					
Drifting & XCutting	Ft.			15750.00	450	35.00	450	35.00
Timbering	Ft.			0.00	0		45	6.00
Raising	Ft.			7605.00	195	39.00	200	39.00
Assaying	Spl.			312.00	104	3.00	104	3.00
			STAGE II					
Drift & XCut	Ft.	3640.00	104	27300.00	780	35.00	2000	35.00
Timbering	Ft.			0.00	0		200	6.00
Diamond Drill	Ft.			4209.00	915	4.60	2000	4.60
Ream & Case	Ft.			0.00	0		200	2.00
Cement-Redrill	Ft.			0.00	0		200	2.00
Drill Sta	Sta.			200.00	2	100.00	10	100.00
Assaying	Spl.			354.00	118	3.00	296	3.00
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		3640.00		55730.00				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date 11/6/57 Operator American Smelting & Refining Co.

Per Nolan Probst Title Supt.
Nolan Probst

REMARKS:

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

Edward W. Buel

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

224 New Customhouse
Denver 2, Colorado

November 18, 1957

OFFICIAL FILE COPY
DMEA
RECEIVED NOV 21 1957
CODE
11/21 220
11/25 100

Memorandum

To: Chairman, Operating Committee, DMEA

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3866 (Lead-Zinc-Copper), Contract Idm-E903, American Smelting and Refining Company (Keystone mine) Gunnison County, Colorado - INTERIM GEOLOGIC REPORT

Enclosed are four copies of an interim geologic report dated November 15, 1957, by D. H. Richter, Geologist, U. S. Geological Survey, covering work under the subject contract through November 7, 1957.

E. N. Harshman

E. N. Harshman

Enclosures

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA
DEPARTMENT OF THE INTERIOR
NOV 15 1957
REGION III
DENVER, COLORADO

Defense Minerals Exploration Administration
Denver Federal Center
Denver, Colorado

OFFICIAL FILE COPY
DMEA
RECEIVED NOV 21 1957

DATE	INITIALS	CODE

November 15, 1957

Memorandum

To: Executive Officer, DMEA Field Team, Region III
Through: E. N. Harshman

From: D. H. Richter

Subject: DMEA Docket 3866 (Lead-zinc-copper), Contract ~~Iam-I 903~~, American Smelting and Refining Company (Keystone mine), Gunnison County, Colorado

An interim examination of the Keystone mine was made on November 7, 1957, in company with E. W. Buel, U. S. Bureau of Mines, and Mr. J. Papastamatiou, Assistant Director of the Geological Survey of Greece.

The DMEA drift along the Union vein on the 2,000 level has been advanced 123 feet, since the last examination on June 4, 1957, for a total of 798 feet under the provisions of Stage II.

The vein and structure exposed along the last 50 feet of drift is thin and relatively barren. At the face the vein, which consists of a 2- to 3-inch seam filled with clay gouge and thin bands of quartz, occupies the center of a narrow, 2-foot wide fractured zone in Mesa Verde sandstone. Only a few scattered crystals of sphalerite and pyrite were observed. The vein, at the face, strikes N 20 W and dips vertically.

The two DMEA authorized drill holes (No. 20-9 and 20-10) drilled from a station on the 2,000 level Union vein, approximately 1,110 feet northwest of Keystone-Union crosscut, have been completed. One hole, 20-9, was drilled horizontally southwest, into the hanging wall of the Union vein, a distance of 418 feet and only a minor showing of quartz and pyrite at 270 and 400 feet was encountered. The other hole, 20-10, drilled horizontally northeast, a distance of 624 feet, encountered a wide, weakly mineralized sulfide and quartz zone in the interval from 185 to 200 feet. Analyses of split core from this section are as follows:

Interval (feet)	Percent			Oz/ton
	Pb	Zn	Cu	Ag
185.0 - 187.5	0	0.5	0.1	0.8
187.5 - 190.0	0	0.3	0.3	0.4
190.0 - 192.5	0	0.2	0.2	0
192.5 - 195.8	0.7	2.4	0.3	0.8
195.8 - 197.7	0	0.2	0.05	0
197.7 - 200.0	0.7	0.1	0.1	0.6

This weak mineralized zone in hole 20-10 probably represents the northwest extension of the Keystone vein.

D. H. Richter

D. H. Richter, Geologist

DHRichter:arh

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RECEIVED OCT 21 1957

DATE	INITIALS	CODE
10/21	GB	220
10/21	[illegible]	800
10/21	[illegible]	500

DMEA
DEPARTMENT OF THE INTERIOR
OCT 15 1957
REGION III
DENVER, COLORADO

REGION III

Building 20
Denver Federal Center
Denver 2, Colorado
October 15, 1957

Memorandum

To: Acting Executive Officer, DMEA Field Team, Region III

From: E. W. Buel

Subject: Docket DMEA 3866 (Lead-zinc-copper) Contract Idm-E903, American Smelting and Refining Company (Keystone mine) Gunnison County, Colorado -- Progress report for September 1957

A visit was made on October 8, 1957, to the subject property by Frank Moore, Geological Survey, and the writer. During the visit, it was learned from Nelan Probst, general manager, that no work under the contract had been performed during the reporting period. Therefore, no inspection was made of the underground workings.

Edward W. Buel
Edward W. Buel
Mining Engineer

EWB/mr
cc: 6
Idm-E903
chron

10-17-57
Copies Distributed to:
Chron. op. comm (2)
Harshman
Dmea/dfc
Townsend
Corres. file, Reg. III
MF-104 file - Reg. III

Repts

EXTRA COPY
DMEA
RECEIVED OCT 14 1957

DATE		CODE
10/14		110
10/14		500

224 New Customhouse
Denver 2, Colorado
October 11, 1957

Memorandum

To: Chairman, Operating Committee, DMEA

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-3866 (Lead-Zinc-Copper) Contract Idm-E903
American Smelting and Refining Company (Keystone mine)
Gunnison County, Colorado

Enclosed are two copies of a letter dated October 5, 1957, from the subject Operator, and attached map, showing stope progress during September, 1957, in the DMEA project area. No work was performed under the contract during September, 1957, therefore Voucher and Accounting Forms MF-104 and MF-104A were not submitted by the Operator.

R. W. Harshman

Enclosures

JDC:hmh
cc: Harshman)
DMEA, DFC) w/copy of
Townsend) Operator's
MF-104 file, Reg. III) letter of
Corres. file, Reg. III) 10/5/57
Royalty file, Reg. III)
Chron

Rpt

AMERICAN SMELTING AND REFINING COMPANY
KEYSTONE UNIT
P. O. BOX J. CRESTED BUTTE, COLO.

DMEA
DEPARTMENT OF THE INTERIOR
OCT 10 1957
REGION III
DENVER, COLORADO

October 5, 1957

Executive Officer, DMEA, Field Team
Region III, 222 New Custom House
Denver 2, Colorado

Re: Docket DMEA-3866
Contract Idm-E903

Gentlemen:

No work was performed under Stage II in the project area during September.

Under our own exploration program the 20-56-1 Raise was completed from the 2000 Level to 1850 Level, Union Vein.

Since there was no advance in the 2000 Union Drift face or additional core drilling, Forms 104 and 104A will not be submitted this month. The included map shows advance in the 20-56-1 Raise and its connection with the 1850 Level.

Following is a correction on the collar coordinates of Diamond Drill Hole No. 20-10 drilled during August:-

Collar Coordinates N12670.0 E7613.9

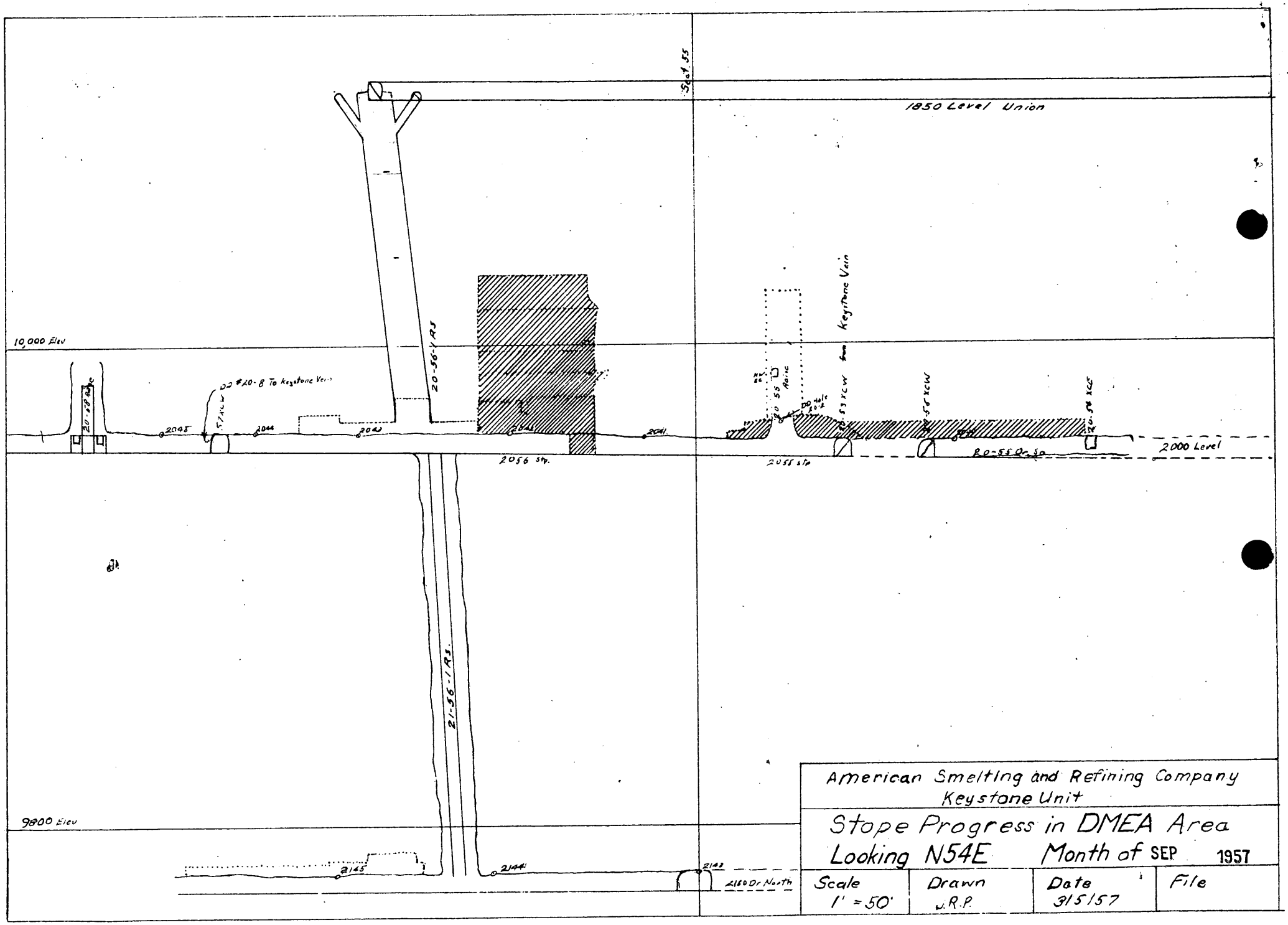
Please note and make correction on the September 6th cover letter.

Very truly yours,

Nolan Probst

Nolan Probst, Supt.

NP/wmc
Encl: Progress Map (5)
cc: John F. Shaw, w/ Progress Map
WRLandwehr, w/ Progress Map
File, w/ Progress Map



American Smelting and Refining Company
Keystone Unit

Stope Progress in DMEA Area
Looking N54E Month of SEP 1957

Scale	Drawn	Date	File
1" = 50'	J.R.P.	3/5/57	

EXTRA COPY
D M E A
RECEIVED OCT 14 1957

DATE	INITIALS	CODE

OFFICIAL FILE COPY
DMEA
RECEIVED OCT 7 1957

DATE	INITIALS	CODE
10/7	C	220
10/7	[illegible]	800
10/7	[illegible]	500

224 New Customhouse
Denver 2, Colorado
October 3, 1957

Mr. Nolan Probst, Superintendent
American Smelting and Refining Company
Box J
Crested Butte, Colorado

Re: Docket DMEA-3855 (Lead-Zinc-Copper)
Contract Idm-E903
American Smelting and Refining
Company
(Keystone mine)
Gunnison County, Colorado

Dear Mr. Probst:

Form MF-104, Operator's Monthly Report and Voucher, and Form MF-104A, Operator's Unit Cost and Progress Report, for the month of August, 1957, have been received in this office and are being processed for payment.

Work under the contract was not in progress at the time of the last inspection by DMEA personnel, therefore an amount of $500.00 is withheld, pending resumption of the work. The amount of $500.00 will be reinstated in conjunction with processing the next Form MF-104, Operator's Monthly Report and Voucher, submitted to this office after resumption of the work.

Enclosed is a sample copy of Form MF-104A, Operator's Unit Cost and Progress Report, which illustrates the most acceptable method of reporting on this form. It will be greatly appreciated if you pattern your future reports on Form MF-104A after the sample form. No change is required in the method of reporting on Form MF-104, Operator's Monthly Report and Voucher.

Yours very truly,

Original signed by
E. N. HARSHMAN

E. N. Harshman
Acting Executive Officer
DMEA Field Team, Region III

Enclosures
JDC:hmh
cc: Chmn. Op. Comm. (2)
Harshman
DMEA, DFC
Townsend
Corres.file,Reg.III
Chron
) w/copy of Form MF-104A

cc: Mr. F. V. Richard, Manager
600 Crandall Bldg.,
Salt Lake City, Utah

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

SAMPLE

SAMPLE

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of August 1957 Docket No. DMEA 366 Contract No. [illegible]
Operator's Name American Smelting and Refining Company Minerals Pb, Cu, Zn
Address 120 Broadway, New York 5, New York

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
			PAGE I					
Drifting	Ft			15,750.00	450	35.00	450	35.00
~~Crosscutting Timbering~~	~~Ft~~			0.00	0	--	45	6.00
Raising	Ft			7,605.00	387	19.00	200	19.00
~~Shafts Assaying~~	~~Spl~~			312.00	104	3.00	104	3.00
~~[illegible]~~								
~~[illegible]~~			PAGE II					
~~Churndrill & X cut~~	~~Ft~~			23,660.00	676	35.00	2000	35.00
~~Raise Timbering~~	~~Ft~~			0.00	0	--	200	6.00
~~Stoping Diamond drill~~	~~Ft~~	2223.00	639	4,209.00	925	4.60	2000	4.60
~~Trenching Face & Case~~	~~Ft~~			0.00	0	--	200	2.00
~~Distillcement-Redrill~~	~~Ft~~			0.00	0	--	200	2.00
~~Roads and Trails Drill Sta~~	~~Sta~~			200.00	2	100.00	10	100.00
~~Assaying~~	~~Spl~~	64.00	20	354.00	120	3.00	200	3.00
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		2913.00		52,090.00				101,220.00

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date ..... Operator .....

Per ..... Title .....

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

REMARKS:

RECEIVED OCT 7 DMEA

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

FINAL DISTRIBUTION
MADE OCT 7 1957

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION III
[redacted]
Administrative Audit Difference Statement

[redacted]

Date: [redacted]
Payee's
Reference: [redacted]

Imelda - 3866

[redacted]

Upon examination of the above Payee's Reference a difference was found which made it necessary to suspend your account accordingly:

Amount Claimed $ [redacted]

Difference $

Amount Approved $ [redacted]

The reason for the difference was due to:

[redacted]

EXTRA COPY
D M E A
RECEIVED OCT 10 1957

DATE	INITIALS	CODE
10/10	JEG	110
10/10	[redacted]	500

Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

N. E. Stokes
Audit Section

R-III-B & F Form No. 4
4-15-52 D

224 New Customhouse
Denver 2, Colorado
October 3, 1957

Memorandum

To: T. A. Christensen

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3866 (Lead-Zinc-Copper) Contract Idm-E903, American Smelting and Refining Company (Keystone mine) Gunnison County, Colorado - Operator's Monthly Progress Report, for the month of August, 1957

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Operator's Narrative Report, and Engineer's Report for the above period.

We consider that the Operator has complied with the intent of the contract, and the work for which payment is recommended is acceptable to the Government. All of the work was performed at "Fixed Unit Costs" under the short form contract on Form MF-200A, therefore documentation of the costs is not required. We recommend that payment be made to the Operator for 50% of the amount reported on Form MF-104, subject to your verification of applicable rates and arithmetical accuracy within the report, except for the following deduction:

Withhold an amount of $500.00 from reimbursement to the Operator pending resumption of contract work. At the time of the last inspection by DMEA personnel, project work was temporarily suspended but was expected to resume in the near future.

Remarks: Date of Report----------September 6, 195
Date Received in Field Office---------September 20, 1957
Date Received in Region Office---------September 25, 195

JDC:hmh

Original signed by
E. N. HARSHMAN
E. N. Harshman

Enclosures

cc: Chmn. Op. Comm. (2))
DMEA, DFC)w/copy complete report
MF-104 file, Reg. III)
Harshman) w/copy
Townsend) Engr's report
Chron

DMEA
DEPARTMENT OF THE INTERIOR
SEP 25 1957
REGION III
DENVER, COLORADO

REGION III

Building 20
Denver Federal Center
Denver 2, Colorado
Sept. 25, 1957

Memorandum

To: Acting Executive Officer, DMEA Field Team, Region III

From: Edward W. Buel

Subject: DMEA Docket 3866 (Lead, zinc, and copper) Contract Idm-E903, American Smelting and Refining Company (Keystone mine) Gunnison County, Colorado -- Progress report for August 1957

An inspection was made at the Keystone mine on September 5, 1957. Mr. James Perrin, A. S. R. engineer was present during the inspection.

During the reporting period DMEA hole No. 20-10 was completed. Total length of the hole is 624 feet. As seen from the drill core, the Keystone vein structure may have been encountered. The drill core displayed significant lead-zinc sulphide mineralization.

Mr. Nolan Probst said that he hopes to resume drifting under the DMEA contract soon.

The operator in his MF-104's for August 1957 requests payment for 615 feet of core drilling and 28 chemical analyses. These claimed items are verified.

It is recommended that the operator be paid for the items claimed, costing $2,913.00 of which the Government's share is $1,456.50.

EXTRA COPY
DMEA
RECEIVED OCT 10 1957

DATE		CODE

Edward W. Buel

Edward W. Buel
Mining Engineer

EWB/mw
cc: 6
Idm-E903
chron

AMERICAN SMELTING AND REFINING COMPANY
WESTERN MINING DEPARTMENT

F. V. RICHARD, MANAGER
W. R. LANDWEHR, CHIEF GEOLOGIST
NORMAN WEISS, MILLING ENGINEER

600 CRANDALL BUILDING
SALT LAKE CITY 1, UTAH

September 16, 1957

DMEA
DEPARTMENT OF THE INTERIOR
SEP 1 4 1957
REGION III
DENVER, COLORADO

Executive Officer
DMEA Field Team
U. S. Bureau of Mines
224 New Custom House
Denver 2, Colorado

DOCKET No. DMEA 3866
Contract No. Idm-E903

Dear Sir:

Attached are five copies of Mr. Probst's letter of September 6th, Operator's Unit Cost and Progress Report, Operator's Monthly Report and Voucher, and Progress Maps covering the advance made during the month of August 1957.

Very truly yours,

W. R. Landwehr

W. R. Landwehr

WRL:bm
Encls.: Form MF-104 (5)
Form MF-104A (5)
Progress Map (5)
Long. Proj. (5) & D.D.Assays (5)
Letter to DMEA(5)
cc: John F. Shaw, w/1 set of encls.
N.Probst, no encls.

AMERICAN SMELTING AND REFINING COMPANY
KEYSTONE UNIT
P. O. BOX J CRESTED BUTTE, COLO.

EXTRA COPY
D M E A
RECEIVED OCT 10 1957

DATE	INITIALS	CODE

September 6, 1957

Executive Officer, DMEA, Field Team
Region III, 222 New Custom House
Denver 2, Colorado

Re: Docket DMEA-3866
Contract Idm-E903

Gentlemen:

General Remarks:

Diamond Drill Hole No. 20-10 was completed August 21, 1957.

Statistics of Hole No. 20-10

Location	2000 Union Vein
Bearing	N54°30'E
Collar Coord.	N12607.0, E7613.9
Depth of Hole	624 ft.
Angle	0°0'
Date Started	7/27/57

General Geology:

The core was composed of greenish to grey cast sandstone and bleached to dark colored shales. Sections of the core was hard and quartzitic in character. Evidence of vein structure was noted at 190-200 ft. which was presumed to be the Keystone Vein. Assaying of core sections and sludge throughout the hole shows nothing of consequence. The attached sheet lists the assays taken from the hole.

Very truly yours,

Nolan Probst

NP/wmc
Encls: Form MF-104 (5)
Form MF-104A(5)
Progress Map(5)
Long.Proj. (5)
cc: John F. Shaw, w/1 set of encls.
FVRichard, w/1 set of encls.
File, w/ 1 set of encls.

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 60-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

RECEIVED OCT 10 1957 DMEA

Month of August, 1957 Docket No. DMEA 3866 Contract No. Idm-L903
Operator's Name American Smelting and Refining Co. Minerals Pb, Cu, Zn
Address 120 Broadway, New York 5, N. Y.
Contract Amount, $107,220.00 Government Participation: 50 % Amount, $53,610.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) ~~Prospecting Contracts~~						
~~Raising~~ Raising		7605.00	7605.00	11/4/57		
~~Bulldozing~~						
~~Crosscutting~~						
Drifting & ~~X~~Cutting		39410.00	39410.00			
Drift & ~~X~~Cut Timber						
(2) ~~Mining Supplies~~						
~~Rock~~						
~~Equipment~~						
~~Technical Services~~						
(3) ~~Operating Materials and Supplies~~						
~~Timber~~						
~~Explosives~~						
~~Pipe~~ Core Drilling	2829.00	1380.00	4209.00			
~~Track~~						
Drill Hole Casing						
Drill Hole Cementing						
(4) ~~Operating Equipment~~						
~~Rental~~						
~~Purchase~~						
~~Depreciation~~						
(5) ~~Initial Rehabilitation and Repairs~~						
(6) ~~New Bldgs., Improvements, etc.~~						
(7) ~~Miscellaneous~~						
~~Repairs to Equipment~~						
~~Sampling and Analysis~~						
~~Payroll Taxes~~						
~~Liability Insurance~~						
Drill Station		200.00	200.00			
Assays	84.00	582.00	666.00			
(8) ~~Contingencies (specify)~~						
Totals	~~2913.00~~	~~49177.00~~	~~52090.00~~	2913.00	49177.00	52,090.00

DMEA
DEPARTMENT OF THE INTERIOR
SEP 19 1957
REGION III
DENVER, COLORADO

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 9/6/57 *Payee American Smelting and Refining Co.
Per [signature] Title Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:
$956.50
Signature [signature]
(Authorized Certifying Officer)
Date 10/4/57 Vou. No. Dma 58-42
(See other side)

Note: Withheld 500.00

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Ddm-E903 in accordance with the terms of the contract.

Signature Edward W. Buck #1456.50 Title Mining Eng. Date 9/24/57

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature E. M. Hanlman Title acting Executive Officer Date OCT 3 1957

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
DERA (1-1-1952)

DMEA
DEPARTMENT OF THE INTERIOR

SEP 19 1957
REGION III
DENVER, COLORADO

Budget Bureau No. 42-R1151.2

RECEIVED
OCT 10 1957
D.M.E.A.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of August, 1957 Docket No. DMEA 3866 Contract No. Idm-8903
Operator's Name American Smelting and Refining Co. Minerals Pb, Cu, Zn
Address 120 Broadway, New York 5, N. Y.

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting & XCutting	Ft.			39410.00	1126	35.00	2450	35.00
~~Prospecting~~								
Raising	Ft.			7605.00	195	39.00	200	39.00
~~Shaft~~ Drift & XCut								
~~Winze~~ Timbering	Ft.						245	6.00
Drilling: Core	Ft.	2829.00	615	4209.00	915	4.60	2000	4.60
~~Shaft~~ Casing	Ft.						200	2.00
~~Hole~~ Cementing	Ft.						200	2.00
~~Stripping~~ Drill Sta.	Ea.			200.00	2	100.00	10	100.00
~~Trenching~~								
~~Test Pits~~								
~~Roads and Trails~~								
Assaying	Ea.	84.00	28	666.00	222	3.00	400	3.00
TOTAL DISTRIBUTED COSTS		2913.00		52090.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		~~2913.00~~		~~52090.00~~				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date 9/6/57 Operator American Smelting & Refining Co.

Per [signature] Title Supt.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

REMARKS:

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

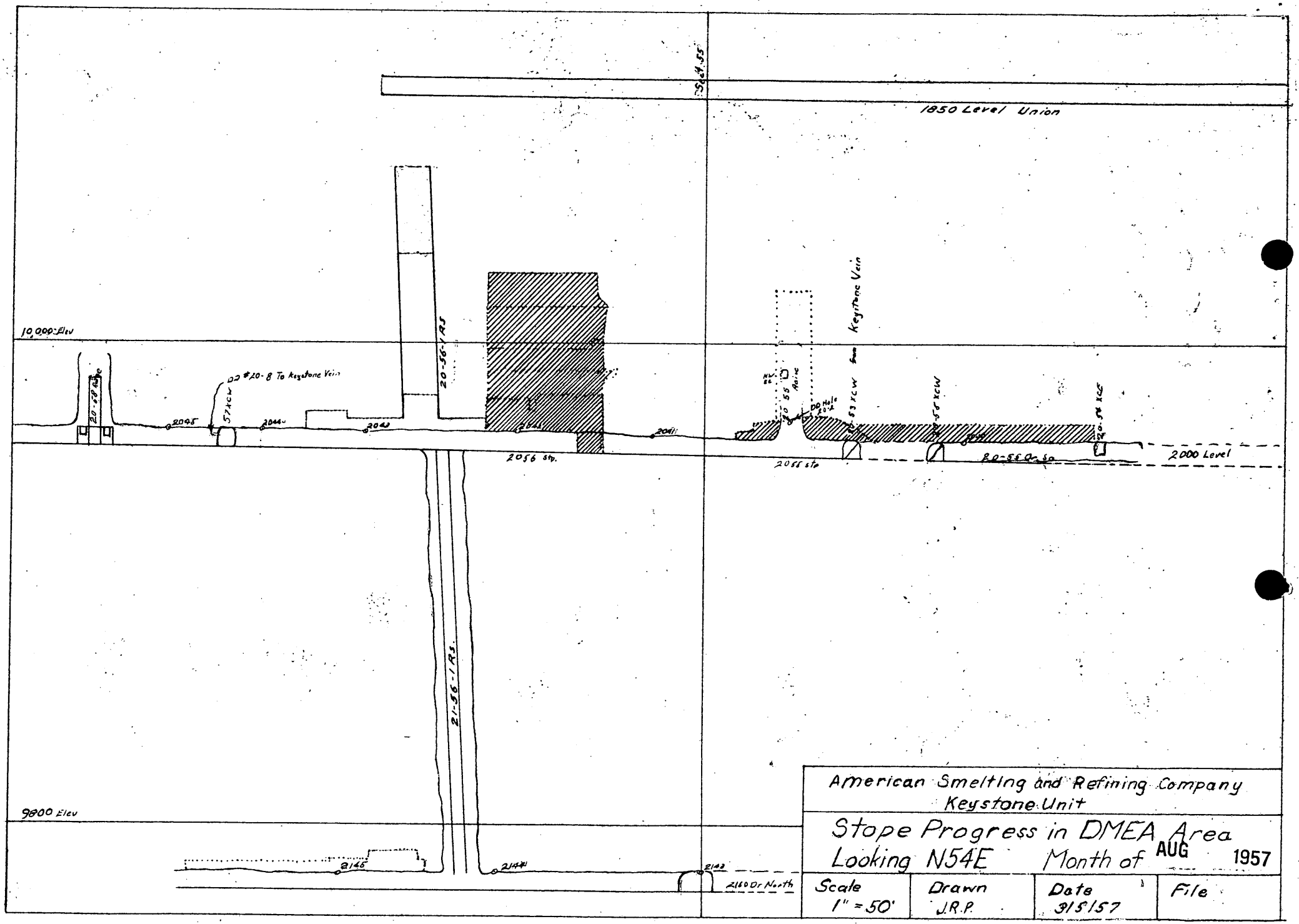
In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

AMERICAN SMELTING AND REFINING COMPANY
KEYSTONE UNIT
CRESTED BUTTE, COLO.

DIAMOND DRILLING ASSAYS

HOLE	ASSAY	FOOTAGE	AG(oz)	PB(%)	CU(%)	ZN(%)
20-10	Sludge	57-61	1.6	-	0.25	0.5
20-10	Sludge	190-200	2.4	0.5	0.4	3.6
20-10	Sludge	200-210	0.4	-	0.15	0.7
20-10	Sludge	378-387	0.2	-	0.1	-
20-10	Sludge	391-397	0.2	-	0.05	0.1
20-10	Sludge	401-417	0.2	-	0.05	0.7
20-10	Sludge	475-485	0.4	-	0.1	0.3
20-10	Sludge	485-491	1.0	-	0.2	3.0
20-10	Sludge	497-501	0.2	-	0.15	-
20-10	Sludge	503-509	-	-	0.1	0.4
20-10	Sludge	509-511	-	-	0.05	0.6
20-10	Sludge	511-515	0.4	-	0.05	0.2
20-10	Sludge	515-520	-	-	0.1	0.2
20-10	Sludge	520-522	1.2	1.1	0.2	1.7
20-10	Sludge	522-526	-	-	0.1	0.2
20-10	Sludge	526-529	-	-	0.1	0.2
20-10	Sludge	540-548	0.8	-	0.1	0.6
20-10	Sludge	565-568	2.8	-	0.2	0.3
20-10	Sludge	573-575	0.8	-	0.1	0.3
20-10	Sludge	579-582	0.2	-	0.1	0.2
20-10	Sludge	596-600*	0.2	-	0.15	0.2
*Sample tag illegible						
20-10	Split Core	185-187.5	0.8	-	0.1	0.5
20-10	Split Core	187.5-190	0.4	-	0.25	0.3
20-10	Split Core	190-192.5	-	-	0.2	0.2
20-10	Split Core	192.5-195.8	0.3	0.7	0.3	2.4
20-10	Split Core	195.8-197.7	-	-	0.05	0.2
20-10	Split Core	197.7-200	0.6	0.7	0.1	0.1
20-9	Sludge	269-272	1.2	-	0.9	4.3
20-9	Sludge	397-403	0.4	-	0.05	0.4


1850 Level Union
10,000 Elev
20-56-1 RS
DD #20-8 To Keystone Vein
57 XCW
2045
2044
2040
2056 Sta.
2041
Keystone Vein
2055 Sta
2000 Level
21-56-1 RS
9800 Elev
2145
2141
2142
2160 Dr North
American Smelting and Refining Company
Keystone Unit
Stope Progress in DMEA Area
Looking N54E
Month of AUG 1957
Scale 1" = 50'
Drawn J.R.P.
Date 9/5/57
File

EXTRA COPY
D M E A
RECEIVED OCT 10 1957

DATE	INITIALS	CODE

FINAL DISTRIBUTION

MADE AUG 27 1957

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION III
[illegible] Denver 2, Colorado
Administrative Audit Difference Statement

American Smelting & Refining Company
Keystone Unit
P. O. Box [illegible]
Crested Butte, Colorado

Date: August 26, 1957
Payee's Reference: July 1957

IMEA-3866

Gentlemen:

Upon examination of the above Payee's Reference a difference was found which made it necessary to suspend your account accordingly:

Amount Claimed	$	2,408.00
Difference	$	1,008.00
Amount Approved	$	1,300.00

The reason for the difference was due to:

Disallows:

118 ft excess drilling in hole 20-9 @ $4.60 per ft.	$542.80
112 ft. drilling in incomplete hole 20-10 @ $4.60 /ft.	$515.20
Total Amount to be disallowed.	1,058.00

Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

N. E. Stokes
Audit Section

COPY
RECEIVED AUG 30 1957

DATE	INITIALS	CODE
8/29	FJ	110
8/29	~~GPK~~	500

R-III-B & F Form No. 4
4-15-52 D

124 New Customhouse
Denver 2, Colorado

August 22, 1957

Memorandum

To: T. A. Christensen

From: Alternate Acting Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket-3066 (Lead-Zinc-Copper) Contract Idm-E903 American Smelting and Refining Company (Keystone mine) Gunnison County, Colorado - Operator's Monthly Progress Report, for the month of July, 1957

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Operator's Narrative Report, and Engineer's Report for the above period.

Except as otherwise indicated below, we consider that the Operator has complied with the intent of the contract, and the work for which payment is recommended is acceptable to the Government. All of the work was performed at "Fixed Unit Costs" under the short form contract on Form MF-200A, therefore documentation of the costs is not required. We recommend that payment be made to the Operator on the following basis, contingent on your verification of applicable rates and arithmetical accuracy within the report.

Hole No. 20-9 was drilled to a total length of 41[illegible] feet. The work approval dated March 20, 1957, stipulates that the hole shall be drilled for a length of 300 feet. The cost of the excess footage is to be disallowed.

At the end of July, 195[illegible], hole No. 20-10 had been drilled to a length of 112 feet and had not yet been completed. Payment for the reported drilling in hole 20-10 is to be disallowed pending completion of the hole, at which time the cost of the entire hole can be reported for payment.

Disallowance, Core Drilling

Disallow reported cost of 118 feet excess drilling in hole 20-9 at $4.60 per foot	$542.80
Disallow reported cost of 112 feet of drilling in incomplete hole 20-10 at $4.60 per foot	515.20
Total amount to be disallowed	1058.00

Reconciliation with Amount Reported by the Operator on Form MF-104 for July, 1957

Amount reported on Form MF-104 for July, 1957	$2,438.00
Amount to be disallowed	1,058.00
Acceptable cost for July, 1957	$1,380.00
Government participation at 50 percent	$ 690.00

Remarks

Date of Report---August 6, 1957
Date Received in Field Office---August 19, 1957
Date Received in Region Office---August 21, 1957

Original signed by
J. W. TOWNSEND

J. W. Townsend

Enclosures

JDC:hmh
cc: Chem. Op. Corm. (2)
DMEA, DFC
Harshman) w/copy Engr's report
Townsend) " "
MF-104 file, Reg. III
Chron

DMEA

ARTMENT OF THE INTERIOR

AUG 21 1957

REGION III
DENVER, COLORADO

REGION III

Memorandum

Building 80
Denver Federal Center
Denver 2, Colorado
August 21, 1957

To: Executive Officer, DMEA Field Team, Region III

From: Edward W. Buel

Subject: DMEA Docket 3866 (Lead, zinc, copper), Contract 16m-3903, American Smelting and Refining Company (Keystone mine), Gunnison County, Colorado -- Progress report for July 1957

The Keystone mine was visited on July 7, 1957. Data concerning the DMEA work progress were obtained from Mr. James Perrin, A. S. R. engineer.

The operator did not do any drifting under the contract during the reporting period. Diamond drilling was started from the 2160-level. The operator completed one hole (No. 20-9). This hole was drilled to the southeast and into the hanging wall of the Union vein structure. Total length of the hole is 418 feet. With exception of a superficial showing of quartz and pyrite at approximately 270 feet and 400 feet, the hole did not encounter any indications of possible ore mineralization. Another hole (20-10) is being drilled to the northeast to test the footwall of the Union vein structure and to intersect any possible extensions of the Keystone vein. At the time of the visit to the mine, the hole had been completed to about 200 feet. The projected intersection of the Keystone vein would involve a horizontal hole of at least 450 feet.

The amount of drilling claimed by the operator in his MF-104's for July 1957 has been verified. The operator, however, has overdrilled a total of 118 feet in hole 20-9. The operator was authorized by a DMEA Field Team letter, March 20, 1957, to do a maximum of 300 feet diamond drilling in an approximate S55° W direction from the Union 2000-level. The 530 feet of core drilling claimed by the operator includes 112 feet of an incompleted hole (20-10). It is recommended that reimbursement for 118 feet of incompleted hole 20-10 be withheld until the hole is completed. A total of 112 feet of incompleted hole and 118 feet of excess drilling is recommended for disallowance on the operator's MF-104's for July 1957. It is recommended that the operator be reimbursed for only 300 feet of drilling. Cost of the reimbursement is $1,380.00 of which the Government's share is $690.00

Edward W. Buel

Edward W. Buel, Mining Engineer

EWB:ss
cc: 6/orig
sub,chron

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of July, 1957 Docket No. DMEA 3866 Contract No. Idm-E903
Operator's Name American Smelting and Refining Co. Minerals Pb, Cu, Zn
Address 120 Broadway, New York 5, New York
Contract Amount, $ 107,220.00 Government Participation: 50 % Amount, $ 53,610.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) ~~Independent~~ ~~Short Form~~ ~~Contracts~~:						
~~Drilling~~ Raising		7605.00	7605.00	9/4/57 O.K.P.K.		
~~Bulldozing~~						
~~Crosscutting~~						
~~Drifting~~ &XCutting		39410.00	39410.00			
Drift & XCut Timber						
(2) ~~Labor and Supervision~~:						
~~Labor~~						
~~Supervision~~						
~~Technical Services~~						
(3) ~~Operating Mat'ls. and Supplies~~:						
~~Timber~~						
~~Explosives~~						
~~Pipe~~ Core Drilling	2438.00	0	2438.00			
~~Track~~ Drill Hole Casing						
Drill Hole Cementing						
(4) ~~Operating Equipment~~:						
~~Rental~~						
~~Purchase~~						
~~Depreciation~~						
(5) ~~Initial Rehabilitation and Repairs~~						
(6) ~~New Bldgs., Improvements, etc.~~						
(7) ~~Miscellaneous~~:						
~~Repairs to Equipment~~						
~~Sampling and Analysis~~						
~~Payroll Taxes~~						
~~Liability Insurance~~						
Drill Sta.		200.00	200.00			
Assays		582.00	582.00			
(8) ~~Contingencies (specify)~~:						
TOTALS	~~2438.00~~	~~47797.00~~	~~50235.00~~	1,380.00	47,797.00	49,177.00

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 8/6/57 *Payee American Smelting and Refining Co.
Per [signature] Title Supt.

RECEIVED AUG 29 1957 D.M.E.A.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 690.00

Signature [signature]
(Authorized Certifying Officer)

Date 8/26/57 Voucher 58-22

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Jdm-2903 in accordance with the terms of the contract.

Signature Edward W. Buel $964.40 690.60 EWB Title Mining Engr. Date 8/19/57

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title Alternate Acting Executive Officer Date AUG 22 1957

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of July 195 7 Docket No. DMEA 3866 Contract No. Idm-E903

Operator's Name American Smelting and Refining Company Minerals Pb, Cu, Zn

Address 120 Broadway, New York 6, N. Y.

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting & XCutting	FT.			39410.00	1126	35.00	2450	35.00
[redacted]	FT.			7605.00	195	39.00	200	39.00
Raising Drift & XCutting								
[redacted] Timbering	FT.						245	6.00
[redacted]	FT.	2438.00	530	2438.00	530	4.60	2000	4.60
Drilling: Core Casing	FT.						200	2.00
[redacted] Cementing	FT.						200	2.00
Drill Sta.	EA.			200.00	2	100.00	10	100.00
[redacted]								
[redacted]								
[redacted]								
[redacted]								
Assaying	EA.			582.00	194	3.00	400	3.00
TOTAL DISTRIBUTED COSTS		2438.00		50235.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		2438.00		50235.00				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

REMARKS:

Date 8/6/57 Operator American Smelting & Refining Co.

Per Wm. Probst Title Supt.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

Edward W. Buel

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

AMERICAN SMELTING AND REFINING COMPANY
KEYSTONE UNIT
P. O. BOX J CRESTED BUTTE, COLO.

DMEA
DEPARTMENT OF THE INTERIOR
AUG 16 1957
REGION III
DENVER, COLORADO

August 8, 1957

Executive Officer, DMEA Field Team
Region III, 222 New Custom House
Denver 2, Colorado.

Re: Docket DMEA-3866
Contract Idm-E903

Gentlemen:

General Remarks:
No advance was made during July in the 2000 Union Vein Drift. Stope preparation in the 20-56 co-ordinate prevented any drifting during the first week of July. Core drilling of the hanging wall in the 20-66 co-ordinate was started and a hole of 418 feet was completed. The footwall hole at the same location was started and a total of 112 feet completed during the month. The hanging wall hole showed minor veinlets of Pyrrohotite with some quartz at 269 to 272 and 397 to 402 ft. Assay of sludge from the two zones will be reported next month. The country rock noted in the core is composed of greenish to gray sandstone and dark shale with the formation relatively free of fracturing.

Mining and milling at the Keystone Unit was discontinued July 15. During the first two weeks of July a total of 512 tons were mined from the project area with the following metal content:

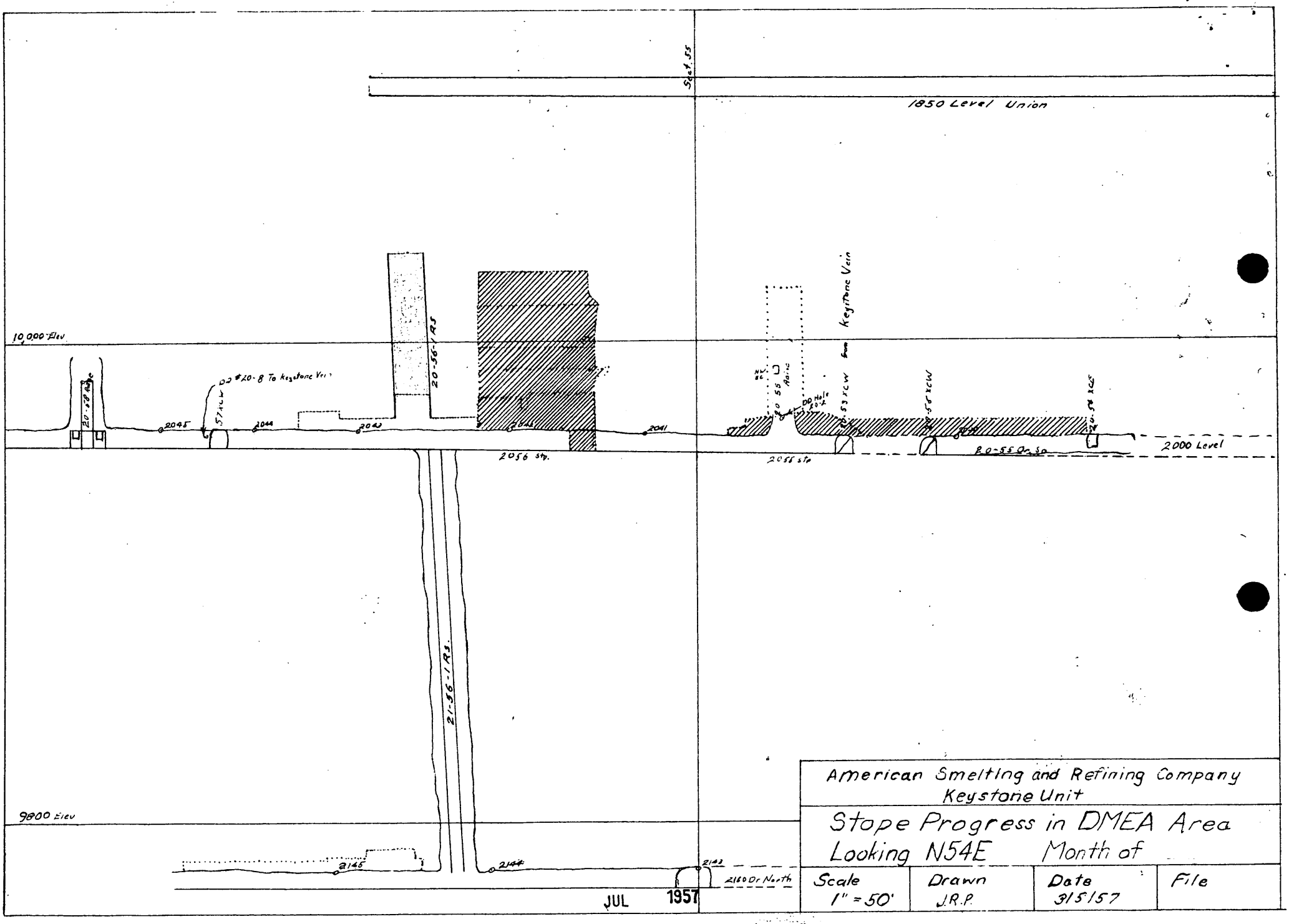
Working Place	Tons Ore-Waste	Metal Content Ag oz.	Pb %	Cu%	Zn%
20-55-1 Stope	206	2.8	2.4	0.5	3.8
20-56-1 Raise	306	3.3	3.2	0.6	9.7
TOTAL	512				

Very truly yours,

ORIGINAL SIGNED BY
NOLAN PROBST

Nolan Probst, Supt.

NP/skm


Sec 1.55
1850 Level Union
10,000 Elev
20-56-1 RS
Keystone Vein
2045
2044
2043
2041
2056 Sta.
2000 Level
21-56-1 RS.
9800 Elev
2145
2144
2142
2180 Dr North
JUL
1957
American Smelting and Refining Company
Keystone Unit
Stope Progress in DMEA Area
Looking N54E Month of
Scale 1" = 50'
Drawn J.R.P.
Date 3/5/57
File

FINAL DISTRIBUTION
MADE JUL 26 1957

Greenwald

224 New Customhouse
Denver 2, Colorado

July 24, 1957

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket-3866, (Lead-Zinc-Copper) Contract Idm-E903
American Smelting and Refining Company (Keystone mine)
Gunnison County, Colorado - Operator's Monthly
Progress Report, for the month of June, 1957

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Operator's Narrative Report, and Engineer's Report for the above period.

We consider that the Operator has complied with the intent of the contract and the work for which payment is recommended is acceptable to the Government. No documentation of costs is required for work performed under contracts prepared on Form MF-200A, therefore, we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks

Date of Report----------July 5, 1957
Date Received in Field Office----------July 22, 1957
Date Received in Region Office----------July 23, 1957

Original signed by
W. H. KING
W. H. KING

EXTRA COPY
DMEA
RECEIVED JUL 29 1957

DATE	INITIALS	CODE
7/29		110
		500

Enclosures
JDC:hmh
cc: Chmn. Op. Comm. (2)
DMEA, DFC
Harshman, w/copy of Engr's report
MF-104 file, Reg. III
Chron.

REGION III

DMEA
DEPARTMENT OF THE INTERIOR
JUL 23 1957
REGION III
DENVER, COLORADO

Building 20
Denver Federal Center
Denver 2, Colorado
July 23, 1957

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: Edward W. Buel

Subject: Docket DMEA 3866 (Lead, zinc, copper) Contract Idm-E903
American Smelting and Refining Company (Keystone mine)
Gunnison County, Colorado -- Progress report for June 1957

An examination was made of the DMEA work on July 8, 1957. The examining engineer was accompanied by Mr. Bloomfield, A. S. R. engineer.

Since the last inspection on June 4, 1957, the operator extended the drift on the Union vein for an additional 29 feet. Drifting under Stage II now totals approximately 676 feet.

No significant ore mineralization was seen in or nearby the present drift face.

At the time of the examination, the diamond drill crew had not arrived to do the drilling as authorized by the DMEA contract. It is believed that the crew arrived later in the day of the inspection.

The operator in his MF-104's for June 1957 requests reimbursement for 29 feet of drifting and 2 chemical assays. The amount of drifting and assays as given by the operator has been verified. It is recommended that the operator be reimbursed for $1021.00 of which the Government's participation at 50 percent is $510.50.

E. W. Buel
Edward W. Buel
Mining Engineer

EWB/mw
cc: 6
Idm-E903
chron

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D M E A
RECEIVED JUL 29 1957
DATE | INITIALS | CODE

Form MF-104 (Rev.)
(April 1952)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.5

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of June, 1957 Docket No. DMEA 3866 Contract No. Idm-E903
Operator's Name American Smelting and Refining Company Minerals Pb, Cu, Zn
Address 120 Broadway, New York 5, New York
Contract Amount, $107,220.00 Government Participation: 50 % Amount, $53,610.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) ~~Underground Contract Shaft Work~~						
Drilling Raising		7605.00	7605.00	8/12/57	W.P.K.	
~~Raising~~						
~~Crosscutting~~						
Drifting & XCutting	1015.00	38395.00	39410.00			
Drift & XCut Timber						
(2) ~~Labor and Supervision~~						
~~Labor~~						
~~Supervision~~						
~~Technical Services~~						
(3) ~~Operating Mat'ls and Supplies~~:						
~~Timber~~						
~~Explosives~~						
~~Rock~~ Core Drilling						
~~Steel~~						
Drill Hole Casing						
Drill Hole Cementing						
(4) ~~Operating Equipment~~						
~~Rental~~						
~~Purchase~~						
~~Depreciation~~						
(5) ~~Maintenance, Rehabilitation and Repairs~~						
(6) ~~New Bldgs, Improvements, etc~~						
(7) ~~Miscellaneous~~						
~~Repairs to Equipment~~						
~~Sampling and Analysis~~						
~~Payroll Taxes~~						
~~Liability Insurance~~						
Drill Sta		200.00	200.00			
Assays	6.00	576.00	582.00			
(8) ~~Contingencies (specify)~~						
TOTALS	1021.00	46776.00	47797.00	1021.00	46,776.00	47,797.00

RECEIVED JUL 29 1957 DMEA

I certify that the above bill is correct and just and that payment therefor has not been received.

Date July 5, 1957 *Payee American Smelting & Refining Co.

Per Nolan Probst ORIGINAL SIGNED BY NOLAN PROBST Title Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

→ NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$510.50

Signature (Authorized Certifying Officer)

Date 7/25/57 Vou. No. DMA 58-9

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. [illegible]-2703 in accordance with the terms of the contract.

Signature Edward W. Buel #510.50 Title Mining Engr. Date 7/22/57

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W H King Title Executive Officer Date JUL 24 1957

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of June 7, 1957 Docket No. DMEA 3866 Contract No. Idm-3903

Operator's Name American Smelting and Refining Company Minerals Pb, Cu, Zn.

Address 120 Broadway, New York 5, New York

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting and X Cutting	Ft	1015.00	29	39410.00	1126	35.00	2450	35.00
Crosscutting								
Raising Drift & X Cut	Ft			7605.00	195	39.00	200	39.00
Shaft Timbering	Ft						245	6.00
Winzes	Ft						2000	4.60
Drilling Core Casing	Ft						200	2.00
Cementing	Ft						200	2.00
Drill Sta	Ea			200.00	2	100.00	10	100.00
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Assaying	Ea	6.00	2	582.00	194	3.00	400	3.00
TOTAL DISTRIBUTED COSTS		1021.00		47797.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		1021.00		47797.00				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date July 5, 1957 Operator American Smelting & Refining Company

ORIGINAL SIGNED BY
Nolan Probst

Name Nolan Probst Title Supt.

REMARKS:

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

RECEIVED JUL 29 1957 D.M.E.A.

Edward W. Buel

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

AMERICAN SMELTING AND REFINING COMPANY
KEYSTONE UNIT
P. O. BOX J CRESTED BUTTE, COLO.

DMEA
DEPARTMENT OF THE INTERIOR
JUL 22 1957
REGION III
DENVER, COLORADO

July 16, 1957

Executive Officer, DMEA Field Team
Region 3,222 New Custom House
Denver 2, Colorado.

Re: Docket DMEA-3866
Contract Idm-E903

Gentlemen:

General Remarks:

Drifting on the 2000 Union Vein was stopped for a period the month while 20-56-1 Rse and 20-57-1 Stope Panel was started and cleared from the sill.

Following are the advances, tonnage and grade of ore in the project area:

Working Place	Advance	Tons Ore	Tons Waste	Metal Content Ag. oz	Pb%	Cu%	Zn%
2000 Union N.Dr.	29'	20	110	0.30	0.40	0.05	0.10
20-55-1 St.		307		4.30	5.20	1.0	9.80
20-56-1 St.		191		5.10	10.0	0.80	6.70
20-56-1 Rs.	15'	94		2.60	2.10	0.50	6.70
20-57-1 St.		271		1.40	1.20	0.20	2.20
21-57-St.		256		2.60	1.10	0.50	3.60
Total	44'	1139	110				

General Geology:

The fault structure has been very tight. Little gouge is noted. Mineralisation has been sparse with the vein structure only a few inches wide. The wall rock is mudstone and sandstone.

Very truly yours,

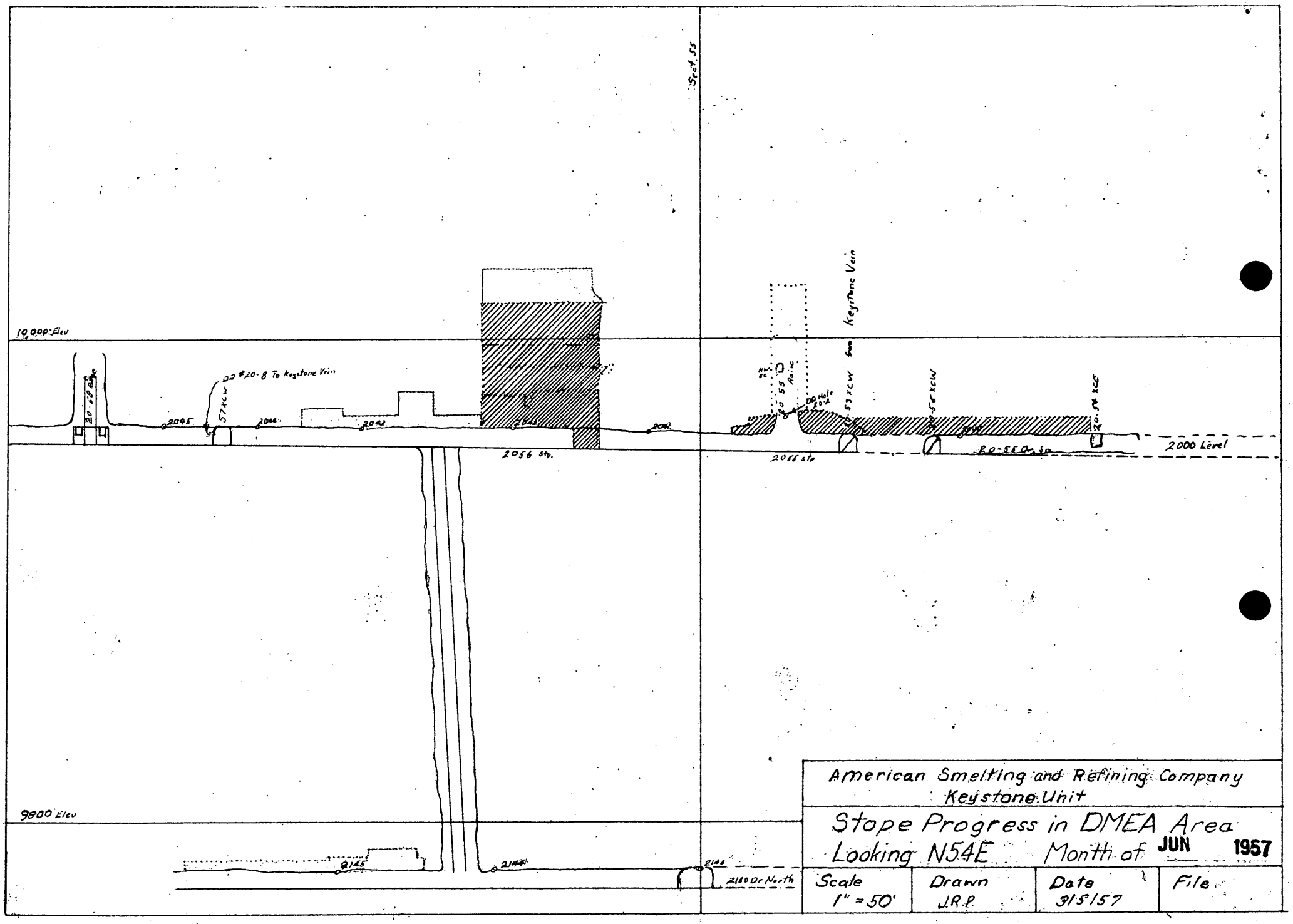
ORIGINAL SIGNED BY
NOLAN PROBST
Nolan Probst, Supt.

NP/skm

cc: FVRichard

EXTRA COPY
DMEA
RECEIVED JUL 22 1957

DATE	INITIALS	CODE



American Smelting and Refining Company
Keystone Unit

Stope Progress in DMEA Area
Looking N54E Month of JUN 1957

Scale	Drawn	Date	File
1" = 50'	J.R.P.	9/5/57	

EXTRA COPY
D M E A
RECEIVED JUL 29 1957

DATE	INITIALS	CODE

FINAL DISTRIBUTION
MADE JUN 28 1957

224 New Customhouse
Denver 2, Colorado

June 25, 1957

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket-3866, (Lead-Zinc-Copper) Contract Idm-E903
American Smelting and Refining Company (Keystone mine)
Gunnison County, Colorado - Operator's Monthly Progress
Report, for the month of May, 1957

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Operator's Narrative Report, and Engineer's Report for the above period.

We consider that the Operator has complied with the intent of the contract and the work for which payment is recommended is acceptable to the Government. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore, we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks:

Date of Report----------June 4, 1957
Date Received in Field Office----------June 19, 1957
Date Received in Region Office----------June 24, 1957

Original signed by
W. H. KING
W. H. King

Enclosures
JDC:hmh
cc: Chmn. Op. Comm. (2)
DMEA, DPC
Harshman - w/copy of Engr's report
MF-104 file, Reg. III
Chron.

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DMEA
RECEIVED 1 1957

DATE	INITIALS	CODE
7/1/57		110
7/3		500
	King	

DMEA
DEPARTMENT OF THE INTERIOR

JUN 24 1957
REGION III
DENVER, COLORADO

June 24, 1957

REGION III

Building 20
Denver Federal Center
Denver 2, Colorado

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: Edward W. Buel

Subject: Docket DMEA 3866 (Lead, zinc, copper) Contract Idm-E903, American Smelting and Refining Company (Keystone mine) Gunnison County, Colorado -- Progress report for May 1957

An inspection was made of the DMEA work progress on June 4, 1957.

Since the last inspection of May 3, 1957, the Union vein drift was extended an additional 77 feet. The drift, under Stage II, now totals approximately 647 feet.

An examination of the drift face showed a tight well-defined structure that did not contain any significant ore mineralization.

At the time of the inspection, the operator had not started to diamond drill from the drill stations excavated during the previous reporting period. Mr. Probst, superintendent, was informed that DMEA officials were desirous of beginning diamond drilling as soon as possible. Mr. Probst said that his superiors, in Salt Lake City, were informed of the diamond drilling and that to date he had not heard from them concerning the beginning of any diamond drilling. He expected to contact them within a day or two, if he did not receive any word by them.

The operator in his MF-104's for May 1957 requests reimbursement for 76 feet of drifting and one chemical assay. It is recommended that the operator be paid for all items as claimed. Total reimbursement is $2663.00, of which the Government's share at 50 percent is $1331.50.

Edward W. Buel

Edward W. Buel
Mining Engineer

EWB/mv
cc: 6
Idm-E903
chron

EXTRA COPY
DMEA
RECEIVED JUL 1 1957
DATE | INITIALS | CODE

DMEA
DEPARTMENT OF THE INTERIOR
JUN 18 1957
REGION III
DENVER, COLORADO

[illegible] MINING AND REFINING COMPANY
[illegible] UNIT
P. O. BOX J [illegible], COLO.

June 13, 1957

Executive Office, DMEA Field Team
Region 3, 222 New Custom House
Denver 2, Colorado.

Re: Docket DMEA -3866
Contract Idn -5903

Gentlemen:

DEVELOPMENT WORK:

Drifting on the 2000 Union vein was mostly in waste. However, about half the footage advance was shipped as developement ore. Drifting on the 1850 Union vein exposed a well defined structure but very little ore.

Following are the advances, tonnage and grade of ore in the project area.

Working Place	Advance	Tons Ore-Waste	Metal Content Ag oz	Pb%	Cu oz	Zn%
1850 Union Dr. N.	135 Ft.	42 407	7.15	10.49	1.05	4.29
2000 Union Dr. N.	76 Ft.	232 202	6.72	2.32	0.68	11.14
20-55-1 Stope		570	7.47	5.98	1.25	9.93
20-56-1 Stope		234	5.87	7.01	0.91	8.27
Totals	211	1078/609				

GENERAL GEOLOGY:

During May a small lenticular vein of approximately two foot width was exposed. No other mineralization of consequence was found. The fault structure remains strong with minor amounts of gouge and some open fissuring developed. The wall rock is essentially gray sandstone.

Very truly yours,

ORIGINAL SIGNED BY
NOLAN PROBST

Nolan Probst, Supt.

NP/ska

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DMEA
RECEIVED JUN 1 1957
DATE | [illegible] | [illegible]

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of May, 1957 Docket No. DMEA 3866 Contract No. Idm-3903
Operator's Name American Smelting and Refining Company Minerals Pb,Cu,Zn,
Address 120 Broadway, New York 5, New York
Contract Amount, $ 107,220.00 Government Participation: ____% Amount, $ 53,610.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) ~~Independent~~ ~~Contractor~~ ~~Sub-Contractor~~						
~~Raise~~ Raising		7605.00	7605.00			
~~Raiseboring~~						
~~Crosscutting~~						
Drifting & ~~R.~~ Cutting	2660.00	35735.00	38,395.00			
Drifting & ~~R.~~ Cuttimber						
(2) ~~Development~~:						
~~Station~~						
~~Supervision~~						
~~Technical Service~~						
(3) ~~Operating Materials and Supplies~~						
~~Timber~~						
~~Explosives~~						
~~Rig~~ Core Drilling						
~~Tracks~~						
Drill Hole Casing						
Drill Hole Cementing						
(4) ~~Operating Equipment~~						
~~Rental~~						
~~Purchase~~						
~~Depreciation~~						
(5) ~~Initial Rehabilitation and Repair~~						
(6) ~~Non-Bldg. Improvements~~						
(7) ~~Miscellaneous~~						
~~Repairs to Equipment~~						
~~Sampling and Analysis~~						
~~Payroll Taxes~~						
~~Liability Insurance~~						
Drill Sts.		200.00	200.00			
Assays	3.00	573.00	576.00			
(8) ~~Contingencies~~						
TOTALS	2663.00	44,113.00	46,776.00	2663.00	44,113.00	46,776.00

RECEIVED JUL 1 1957 D.M.E.A.

I certify that the above bill is correct and just and that payment therefor has not been received.

Date June 4, 1957 *Payee Amer. Smelt. & Ref. Co.

Per [signature] Title [signature]

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 1331.50

Signature [signature]
(Authorized Certifying Officer)

Date 6/27/57 Voucher DMEA 57-141

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E903 in accordance with the terms of the contract.

Signature Edward W. Buel #1331.50 Title Mining Engr. Date 6/24/57

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W. H. King Title Executive Officer Date JUN 25 1957

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of May, 1957 Docket No. DMEA 3066 Contract No. Ida-2903
Operator's Name American Smelting and Refining Company Minerals Pb,Cu,Zn
Address 120 Broadway, New York 5, New York

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting & X Cutting	Ft.	2660.00	76	38,395.00	1097	35.00	2450	35.00
~~Crosscutting~~								
Raising	Ft.			7,605.00	195	39.00	200	39.00
~~Shaft~~ Drift & X Cut								
~~Timber~~ Timbering	Ft.						245.	6.00
Drilling: Core	Ft.						2000.	4.60
~~Chum~~ Casing	Ft.						200	2.00
~~Auger~~ Cementing	Ft.						200	2.00
~~Stopping~~ Drill Steel	Ea.			200.00	2	100.00	10	100.00
~~Powder~~								
~~Fuse~~ Fuse								
~~Hand~~ Hand Tools								
Assaying	Ea.	3.00	1	576.00	192	3.00	400	3.00
Total Distributed Costs		2663.00		46,776.00				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		2663.00		46,776.00				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date June 4, 1957 Operator Amer. Smelt. & Ref. Co.

Per [signature] Title [signature]

Remarks:

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

Edward W. Buel

RECEIVED JUL 1 1957 D.M.E.A.

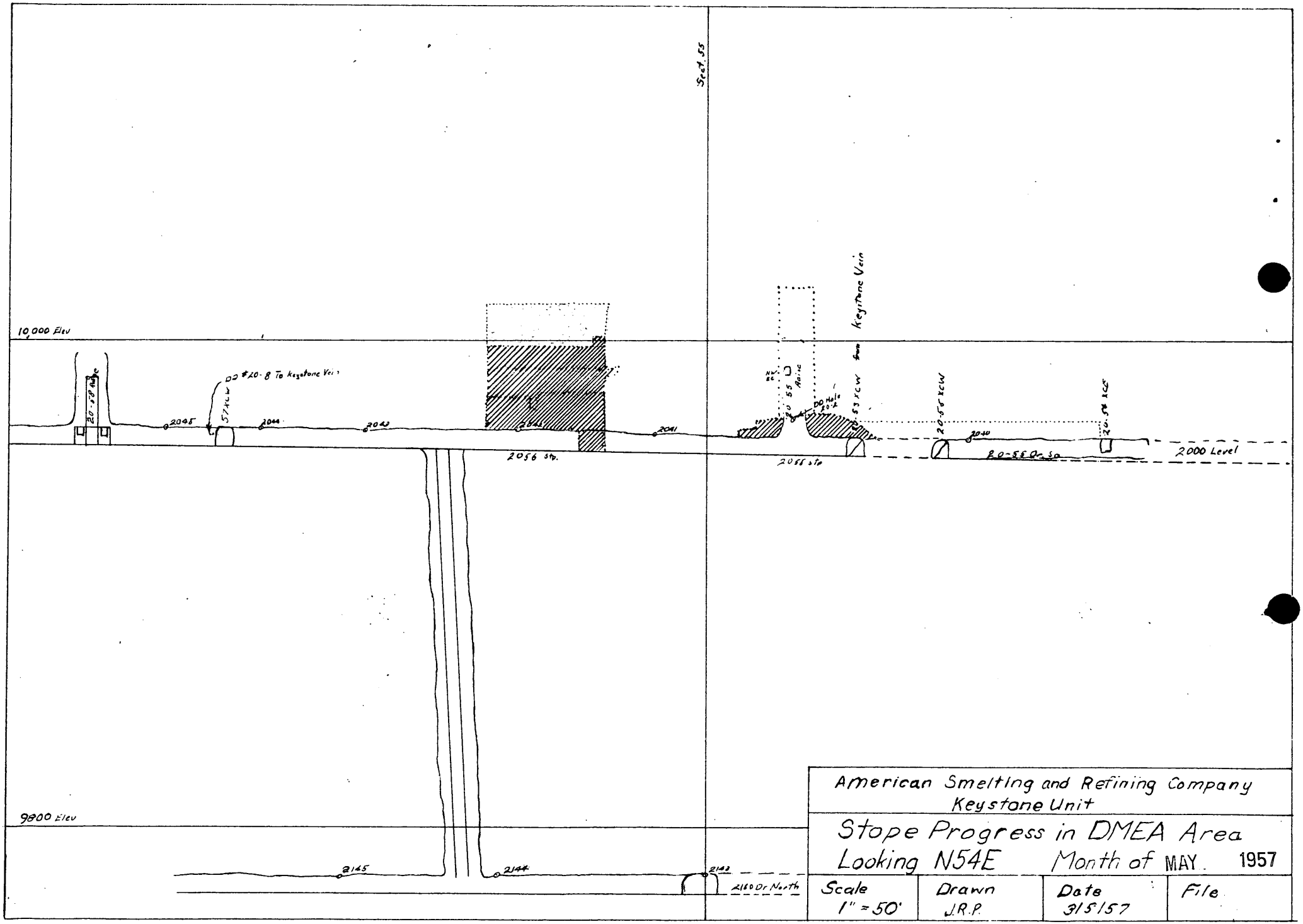
INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894



American Smelting and Refining Company
Keystone Unit

Stope Progress in DMEA Area
Looking N54E Month of MAY 1957

Scale	Drawn	Date	File
1" = 50'	J.R.P.	3/5/57	

EXTRA COPY
D M E A
RECEIVED JUL 1 1997
DATE INITIALS CODE

FINAL DISTRIBUTION
MADE JUN 4 1957

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION III

Administrative Audit Difference Statement

American Smelting & Refining Co.,
Keystone Unit, P. O. Box J,
Crested Butte, Colorado

Date: June 3, 1957
Payee's Reference: April 1957

Upon examination of the above Payee's Reference a difference was found which made it necessary to suspend your account accordingly:

Amount Claimed	$3,333.00
Difference	$ 6.00
Amount Approved	$3,339.00

The reason for the difference was due to:

Remarks: $6.00 the reported cost of two sample analyses @ $3.00 per sample, which was disallowed from the March 1957 voucher.

EXTRA COPY
D M E A
RECEIVED JUN 7 1957

DATE	INITIALS	COMMENTS

Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

N. E. Stokes
Audit Section

MF-104

R-III-B & F Form No. 4
4-15-52 D

224 New Customhouse
Denver 2, Colorado
May 28, 1957

EXTRA COPY
DMEA
RECEIVED JUN 7 1957

DATE	INITIALS	CODE

Memorandum

To: T. A. Christensen

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket-3866, (Lead-Zinc-Copper) Contract Idm-E903
American Smelting and Refining Company (Keystone mine)
Gunnison County, Colorado - Operator's Monthly Progress
Report, for the month of April, 1957

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Operator's Narrative Report, and Engineer's Report for the above period.

We consider that the Operator has complied with the intent of the contract and the work for which payment is recommended is acceptable to the Government. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore, we recommend that payment be made on the following basis, contingent on your verification of arithmetical accuracy within the report.

Reinstate an amount of $6.00, the reported cost of two sample analyses at $3.00 per sample, which was disallowed from the March, 1957, voucher. The Operator has deducted an amount of $6.00 from the April, 1957, voucher, in addition to the $6.00 previously disallowed.

Reconciliation with Amount Reported by the Operator on Form MF-104 for April, 1957

Amount reported on Form MF-104 for April, 1957----------	$3,333.00
Amount to be reinstated----------	6.00
Total accepted cost for April, 1957----------	$3,339.00
Government participation at 50 percent----------	$1,669.50

Remarks: Date of Report----------May 14, 1957
Date Received in Field Office---------May 22, 1957
Date Received in Region Office---------May 28, 1957

Enclosures
JDC:hmh
cc: Chmn. Op. Comm. (2)
Konselman
Harshman) w/copy of Engr's
Townsend) report
MF-104 file, Reg. III
Chron.

Original signed by
E. N. HARSHMAN
E. N. Harshman

REGION III

DMEA
DEPARTMENT OF THE INTERIOR
MAY 28 1957
REGION III
DENVER, COLORADO

Building 20
Denver Federal Center
Denver 2, Colorado
May 27, 1957

Memorandum

To: Acting Executive Officer, DMEA Field Team, Region III

Through: Albert S. Kronselman
Mining Engineer

From: Edward W. Buel

Subject: Docket DMEA 3866 (Lead-zinc-copper) Contract Idm-2903, American Smelting and Refining Company (Keystone mine) Gunnison County, Colorado -- Progress report for April 1957

An inspection was made of the Keystone mine on May 3, 1957. No company representatives were present during the inspection.

At the time of the inspection, the DMEA drift, driven along the Union vein, totalled about 570 feet completed under Stage II of the contract. The newly excavated drift does not require timbering.

At a location roughly N 12660 E7600 (see operator's 2160 Drift North map), two diamond drill stations were cut in preparation for drilling horizontal holes to the northeast and southwest. Each station measures approximately 9 by 14 feet with the longer dimension normal to the 6-foot-wide drift.

An examination of the face showed a well-defined structure which displays good sulfide mineralization, principally, an marmatite. Average width of the sulfide mineralization is about 1.5 feet. The mineralization is reported by the miners and Mr. Probst, general manager, as extending about 50 feet back from the drift face. The structure, near the face, strikes N. 40° W. and dips 80° SW. The miners reported that no pronounced sulfide mineralization was detected in the footwall adjoining the mineralized part of the Union vein.

The operator in his MF-104's for April requests reimbursement for 89 feet of drifting, 2 drill stations, and 6 chemical assays. It is recommended that the operator be paid for all items claimed. The cost of the project for April is $3,333.00 of which the Government's share at 50 percent is $1,666.50.

Edward W. Buel
Edward W. Buel
Mining Engineer

EWB/mr cc: 6 Idm-2903 chron

AMERICAN SMELTING AND REFINING COMPANY
WESTERN MINING DEPARTMENT

F. V. RICHARD, MANAGER
W. R. LANDWEHR, CHIEF GEOLOGIST
NORMAN WEISS, MILLING ENGINEER

600 CRANDALL BUILDING
SALT LAKE CITY 1, UTAH

May 20, 1957

DMEA
DEPARTMENT OF THE INTERIOR
MAY 21 1957
REGION III
DENVER, COLORADO

Executive Officer
DMEA Field Team
U. S. Bureau of Mines
224 New Custom House
Denver 2, Colorado

DOCKET NO. DMEA 3866
CONTRACT NO. Idm-E903

Dear Sir:

Attached are five copies of Mr. Probst's letter to your office of May 14, 1957, Operator's Unit Cost and Progress Report, Operator's Monthly Report and Voucher, and Progress Maps covering the advance made during the month of April 1957.

Very truly yours

ORIGINAL SIGNED BY
F. V. RICHARD

F. V. RICHARD

FVR:EH

Encl. Form MF-104 (5)
Form MF-104A (5)
Progress Map (5)
Longitudinal Proj. (5)
Letter to DMEA (5)

cc: John F. Shaw, w/ 1 set of enclosures
N. Probst, no encls.

AMERICAN SMELTING AND REFINING COMPANY
KEYSTONE UNIT
P. O. BOX J CRESTED BUTTE, COLO.

MAY 14, 1957

Executive Officer, DMEA Field Team
Region 3,222 New Customs House
Denver 2, Colorado

Re: Docket DMEA-3866
Contract Idm-E903

Gentlemen:

GENERAL REMARKS:

Two diamond drill stations were cut in conjunction with the drifting. Advance in the drift face was mostly in ore.

Following are the advances, tonnages and grade of ore in the project area.

Working Place:	Advance	Tons Ore	Tons Waste	Metal Content Ag Oz	Pb %	Cu %	Zn %
1850 Union Dr. N.	146 Ft.	0	432				
2000 Drill Stations	17 Ft.	0	50				
2000 Union Dr. N.	89 Ft.	270	70	14.88	3.32	0.60	11.76
20-55-1 Stope		722	0	6.88	3.69	1.16	8.29
20-56-1 Stope		133	0	5.55	7.60	0.87	8.60
Totals	252	~~1075~~ 1125	552				

GENERAL GEOLOGY:

The fault structure remains fairly strong with gouge and open fissuring present. Drifting has been mostly in ore with the vein averaging 2 to 4 Ft. in width. The wall rock is predominately greenish cast sandstone and dark shales.

Very truly yours,

ORIGINAL SIGNED BY
NOLAN PROBST

Nolan Probst, Supt.

CONTRACT COPY
DMEA
RECEIVED JUN 7
DATE | INITIALS | COPY

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of April, 1957 Docket No. DMEA 3866 Contract No. Idm - E903
Operator's Name American Smelting and Refining Company Minerals Pb, Cu, Zn.
Address 120 Broadway, New York 5, New York
Contract Amount, $ 107,220.00 Government Participation: 50 % Amount, $53,610.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) ~~Development~~ ~~Contract~~						
~~Drifting~~ Raising		7,605.00	7,605.00	8/12/57		
~~Raising~~						
~~Crosscutting~~						
Drifting & X Cutting	3115.00	32,620.00	35,735.00			
Drift & X Cut Timber						
(2) ~~Development Supervision~~:						
~~Labor~~						
~~Supervision~~						
~~Technical Services~~						
(3) ~~Operating Materials and Supplies~~:						
~~Timber~~						
~~Explosives~~						
~~Exp.~~ Core Drilling						
~~Steel~~						
Drill hole Casing						
Drill hole Cementing						
(4) ~~Operating Equipment~~:						
~~Power~~						
~~Pipe~~						
~~Depreciation~~						
(5) ~~Maintenance and Repair~~						
(6) ~~New Bldg. Improvements~~						
(7) ~~Miscellaneous~~:						
~~Expense Equipment~~						
~~Sampling and Analysis~~						
~~Payroll Taxes~~						
~~Liability Insurance~~						
Drill Stations	200.00	00.00	200.00			
Assays	18.00	555.00	573.00			
(8) Contingencies (specify):						
TOTALS	3333.00	40,780.00	44,113.00	3339.00	40,780.00	44,119.00
				6.00		6.00

I certify that the above bill is correct and just and that payment therefor has not been received.

Date May 14, 1957 *Payee Amer. Smel. & Ref. Co.

Per [signature] Title Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the ~~amount of~~ 40,774.00 44,113.00
$1669 50

Signature [signature]
(Authorized Certifying Officer)

Date 6/3/57 Voucher DMA 57-130

(See other side)

RECEIVED JUN 7 1957 D.M.E.A.

Previous Disallowance

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Sdm-E903 in accordance with the terms of the contract.

Signature Edward W. Buel $1,666.50 Title Mining Engr. Date 5/21/57

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title Acting Executive Officer Date MAY 28 1957

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of April, 195 7 Docket No. DMEA 3866 Contract No. Idm-E903
Operator's Name American Smelting and Refining Company Minerals Pb,Cu,Zn
Address 120 Broadway, New York 5, New York

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting & X Cutting	Ft.	3115.00	89	35,735.00	1021	35.00	2450	35.00
~~Prospecting~~								
Raising	Ft.			7,605.00	195	39.00	200	39.00
~~Shaft~~ Drift & X Cut								
~~Timber~~ Timbering	Ft.						245	6.00
Drilling: Core	Ft.						2000	4.60
~~Chain~~ Casing	Ft.						200	2.00
~~Auger~~ Cementing	Ft.						200	2.00
~~Supply~~ Drill Sta.	Ea.	200.00	2	200.00	2		10	100.00
~~Trenching~~								
~~Test Pits~~								
~~Roads and Trails~~								
Assaying	Ea.	*18.00	6 8	*573.00	191*		400	3.00
TOTAL DISTRIBUTED COSTS		3333.00		44,113.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		3333.00		44,113.00				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date May 14, 1957 Operator Amer. Smel. & Ref. Co.

Per Nolan Probst Title Supt.
Nolan Probst

REMARKS: In March report a total of 185 assays were reported-two assay were disallowed as duplications by letter of April, 29, 1957 From Mr. Harshman. Correction of Units to Date & Cost to date were made on this report. $6.00 was deducted from the assaying cost this month & costs to date.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

Edward W. Buel

RECEIVED JUN 7 1957 D.M.E.A.

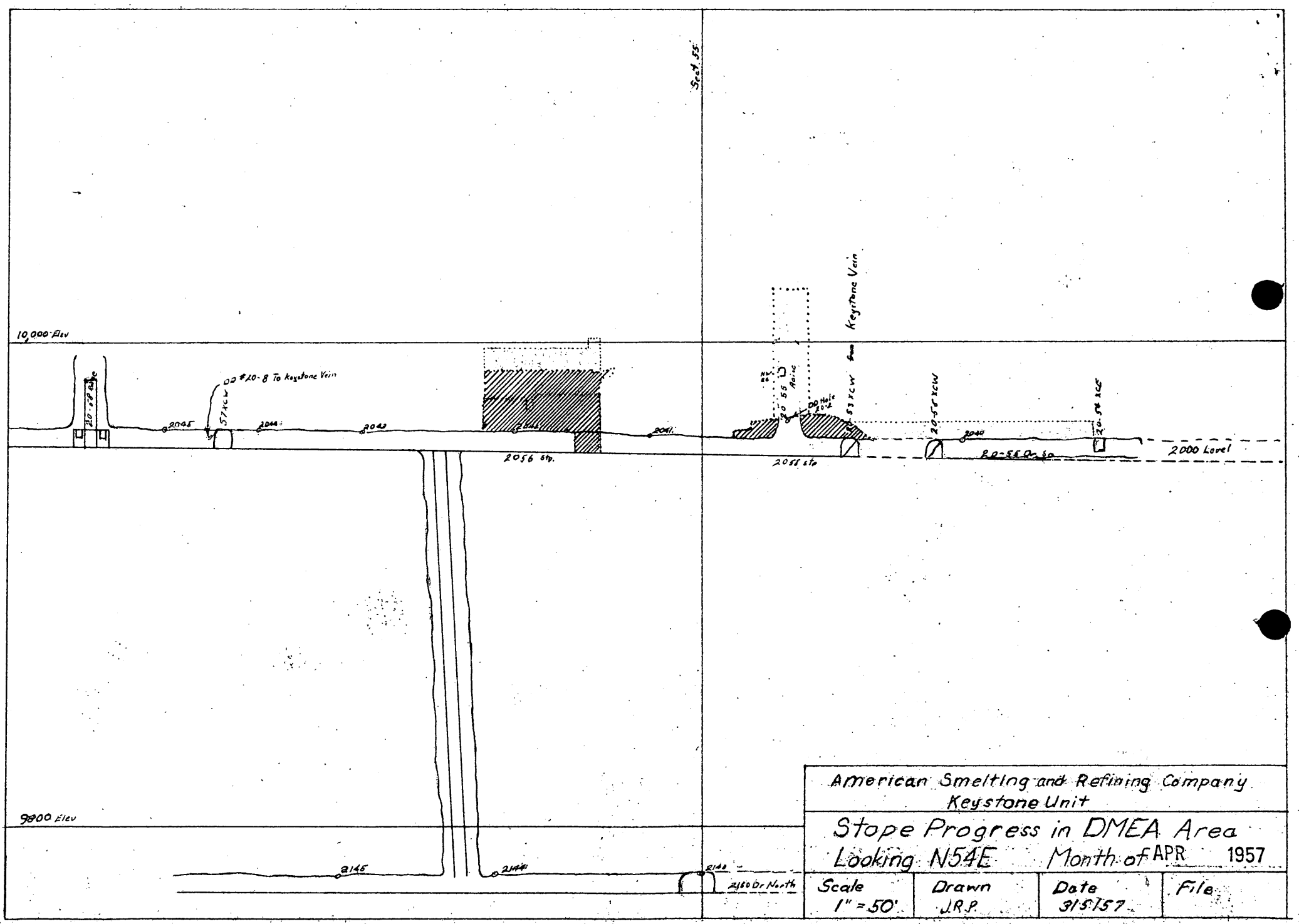
INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894



American Smelting and Refining Company
Keystone Unit

Stope Progress in DMEA Area
Looking N54E Month of APR 1957

Scale	Drawn	Date	File
1" = 50'	J.R.P.	31 5 1957	

EXTRA COPY
D M E A
RECEIVED JUN 7

DATE	INITIALS	CODE

FINAL DISTRIBUTION

MADE MAY 2 1957

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION III

Administrative Audit Difference Statement

[redacted]

Date: [redacted]
Payee's Reference: [redacted]

[redacted]

Upon examination of the above Payee's Reference a difference was found which made it necessary to suspend your account accordingly:

Amount Claimed $ [redacted]

Difference $ [redacted]

Amount Approved $ [redacted]

The reason for the difference was due to:

[redacted] 6.00

EXTRA COPY
D M E A
RECEIVED MAY 6 19

DATE	INITIALS	COD
5/6	[illegible]	110
5/6	[illegible]	500
	Klug.	

Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

N. E. Stokes
Audit Section

R-III-B & F Form No. 4
4-15-52 D

224 New Customhouse
Denver 2, Colorado

April 29, 1957

Memorandum

To: T. A. Christensen

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3866, (Lead-Zinc-Copper) Contract Idm-E903, American Smelting and Refining Company (Keystone mine) Gunnison County, Colorado - Operator's Monthly Progress Report, for the month of March, 1957

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Operator's Narrative Report, and Engineer's Report for the above period.

We consider that the Operator has complied with the intent of the contract and the work for which payment is recommended is acceptable to the Government. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore, we recommend that payment be made on the following basis, contingent on your verification of arithmetical accuracy within the report.

On checking our records we are unable to find the locations and results for two of the 27 assays reported for January 1957, therefore the cost of two assays is to be disallowed from the March, 1957 voucher.

<u>Disallow</u> the reported cost of two samples assayed for Lead, Zinc and Copper, at $3.00 per sample--------$6.00

Reconciliation with Amount Reported by the Operator on Form MF-104 for March, 1957

Amount reported on Form MF-104 for March, 1957	$2,305.00
Amount to be disallowed	6.00
Total accepted cost for March, 1957	$2,299.00
Government participation at 50 percent	$1,149.50

Remarks

Date of Report	April 4, 1957
Date Received in Field Office	April 24, 1957
Date Received in Region Office	April 26, 1957

Original signed by
E. N. HARSHMAN
E. N. Harshman

Enclosures

JDC:hh
cc: Chmn. Op. Comm. (2)
Konselman (2)
Harshman) w/copy of Engr's
Townsend) report
MF-104, Reg. III
Chron.

DMEA
DEPARTMENT OF THE INTERIOR
APR 26 1957
REGION III
DENVER, COLORADO

Building 20
Denver Federal Center
Denver 2, Colorado
April 25, 1957

REGION III

Memorandum

To: Acting Executive Officer, DMEA Field Team, Region III
Through: Albert S. Konselman ASK
Mining Engineer

From: Edward W. Buel

Subject: Docket DMEA 3866 (Lead-Zinc-Copper) Contract Idm-E903, American Smelting and Refining Company, (Keystone mine), Gunnison County, Colorado--Progress report for March, 1957.

The Keystone mine was inspected on April 1, 1957, by the writer and Mr. Stanley Kung, Point IV Trainee. Except for the miners engaged for the DMEA drifting, there were no company representatives present during the inspection.

The operator reports a drift advance of 65 feet for the reporting period. Total units of drifting completed under Stages I and II, as reported by the operator, is 932 feet. Of this amount 450 feet of drifting was completed under Stage I.

An examination of the face of the drift showed a tight structure, about 2" in width, that strikes N. 13° W. and dips S. 57° W. The face did not display any pronounced ore mineralization. At a point approximately 6 feet from the face the vein structure contained conspicuous sulfide mineralization. Some ore material was exposed by the recent drifting. Extent of ore material is discussed in the operator's narrative.

It was learned from Mr. Bloomfield, A.S.R. engineer, that a diamond-drill station will be cut in the DMEA drift at a point approximately N. 12700 and E. 7600 (see operator's map accompanying MP-104's).

In addition to the 65 feet of drifting reported by the operator, 10 chemical assays were obtained.

It is recommended that the operator be reimbursed for 65 feet of drifting and 10 chemical analyses. March's DMEA work total $2,305.00 of which the Government's share at 50 percent is $1,152.50.

Edward W. Buel

Edward W. Buel
Mining Engineer

EWB:jg
Enclosure

cc: 6 - Idm-E903 - Chron.

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

RECEIVED MAY 1957 D.M.E.A.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of March, 1957 Docket No. DMEA 3866 Contract No. Idm-3903
Operator's Name American Smelting & Refining Company Minerals Pb, Cu, Zn.
Address 120 Broadway, New York 5, New York
Contract Amount, $ 107,220.00 Government Participation: 50 % Amount, $ 53,610.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short-Form Contracts:						
Drilling		7,605.00	7,605.00	5/28/57		
Bulldozing						
Crosscutting						
Drifting & Cutting	2275.00	30,345.00	32,620.00			
Drift & Cut Timbering						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls and Supplies:						
Timber						
Explosives						
Diam Cor & Drilling						
Rock Cor & Drilling						
Drill Hole Casing						
Drill Hole Cementing						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
Drill Stations						
Assays	30.00	525.00	555.00			
(8) Contingencies (specify):						
TOTALS	2305.00	38,475.00	40,780.00	2299.00	38,475.00	40,774.00

DMEA
DEPARTMENT OF THE INTERIOR
APR 24 1957
REC'D
DENVER, COLORADO

I certify that the above bill is correct and just and that payment therefor has not been received.

Date 4-4-57 *Payee [illegible]

Per [illegible] Title Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 1149.50

Signature [illegible]
(Authorized Certifying Officer)

Date 5/2/57 Voucher DMEA 57-121

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. DMA-E-903 in accordance with the terms of the contract.

Signature Edward W. Buel $11,52.50 Title Mining Engr. Date 4/25/57

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature E. M. Hawkins Title acting Executive Officer Date APR 29 1957

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of March 195 7 Docket No. DMEA 3866 Contract No. Idm-2903
Operator's Name American Smelting and Refining Company Minerals Pb, Cu, Zn
Address 120 Broadway, New York 5, New York

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting & X Cutting	Ft.	2275.00	65	32,620.00	932	35.00	2450	35.00
~~Crosscutting~~								
Raising	Ft.			7,605.00	195	39.00	200	39.00
~~Shaft~~ Drift & X Cut								
~~Wooden~~ Timbering	Ft.						245	6.00
Drilling: Core	Ft.						2000	4.60
~~Chrome~~ Casing	Ft.						200	200
~~Auger~~ Cementing	Ft.						200	2.00
~~Stripping~~ Drill Sta.	Ea.						10	100.00
~~Trenching~~								
~~Test Pits~~								
~~Rhodes and Tools~~								
Assaying	Ea.	30.00	10	555.00	185.	3.00	400	3.00
TOTAL DISTRIBUTED COSTS		2305.00		40,780.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		2305.00		40,780.00				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

REMARKS:

Date April 4, 1957 Operator American Smelting & Ref. Co.

Per [signature] Title Supt.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

Edward W. Buel

RECEIVED MAY 6 1957 D.M.E.A.

DMEA DEPARTMENT OF THE INTERIOR APR 24 1957 REGION III DENVER, COLORADO

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

AMERICAN SMELTING AND REFINING COMPANY
KEY STONE UNIT
P. O. Box J CRESTED BUTTE, COLORADO

April 15, 1957

DMEA
DEPARTMENT OF THE INTERIOR
APR 24 1957
REGION III
DENVER, COLORADO

Executive Officer, DMEA Field Team
Region III, 224 New Custom House
Denver 2, Colorado

RE: Docket DMEA - 3866
Contract Idm-2903

Gentlemen:

General Remarks:

Drifting on the 2000 Level Union Vein was suspended for a short time during March when it became necessary to interrupt power to our ventilating fan to this drift face. Advance in the drift face was in ore & waste. Following are the advances, tonnage and grade of work in the project area.

Working Place	Advance	Tons Ore	Tons Waste	Metal Content Ag Oz	Pb %	Cu%	Zn%
18-53-1 X Cut.	85'		294				
1850 Union W Dr.	42'	87	35	0.99	0.32	0.07	0.80
2000 Union W Dr.	65'	122	159	6.76	1.22	0.70	6.49
20-55-1 Ms.	11'	125		1.08	1.29	0.09	1.72
20-55-1 St.		238		2.86	1.12	0.43	9.66
20-56-1 St.		85.		6.93	6.62	0.59	5.64
21-57-1 St.		137		2.55	0.09	0.45	3.00
Total	203	794	488				

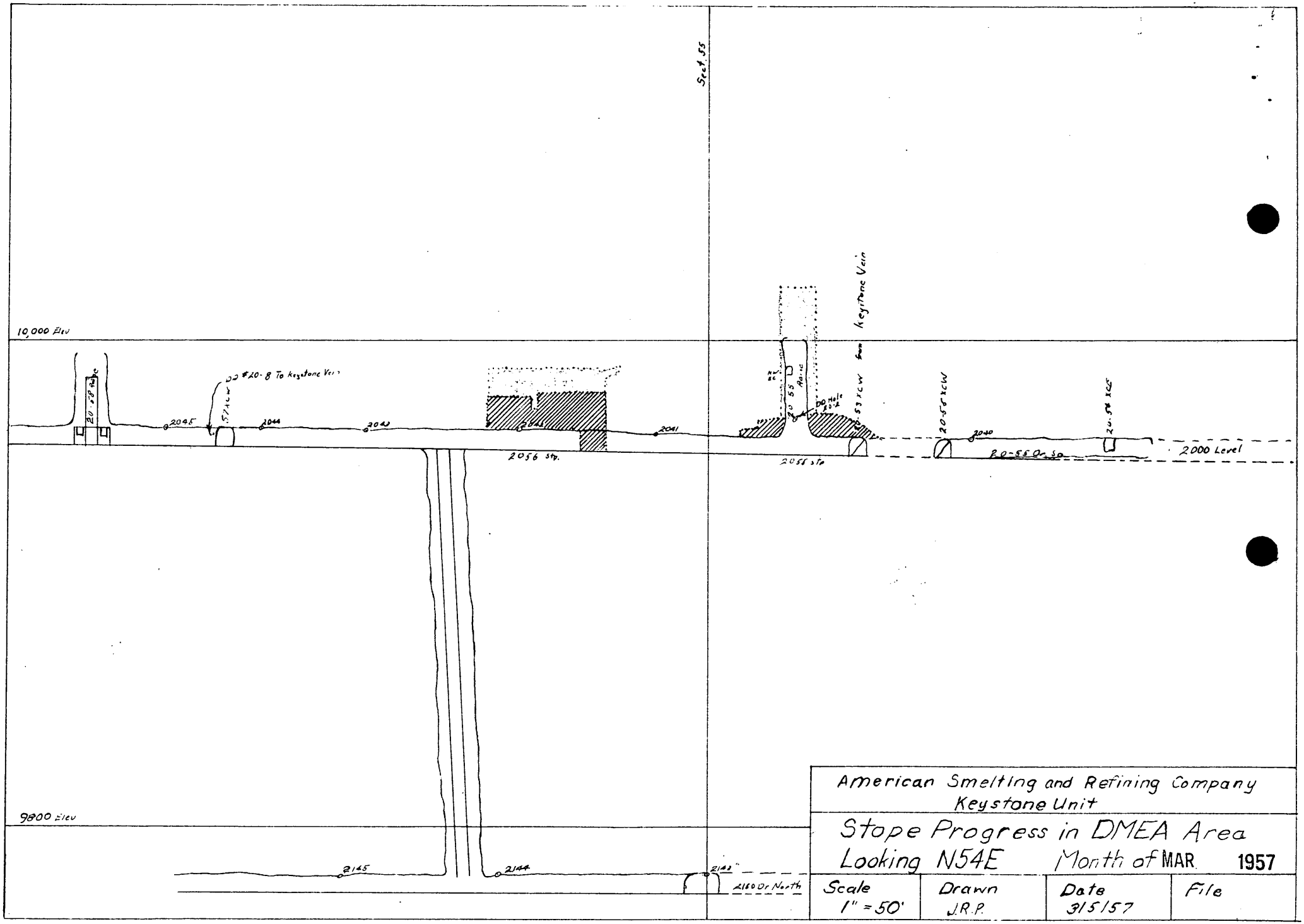
General Geology:

Drifting encountered a lense of ore which entered from the hanging wall. Within 20 Ft. of drifting the lense pinched to several inches. No drilling has been done in the hanging wall to determine the extent of the lense to the South. The Fault remains fairly strong with several inches to 1 foot of gouge developed. Mineralization is recently weak. Wall rock is predominately greenish quartz sand stone.

Very truly yours,

Nolan Krobst, Supt.

NK:bab
Encls:



American Smelting and Refining Company
Keystone Unit

Stope Progress in DMEA Area
Looking N54E Month of MAR. 1957

Scale	Drawn	Date	File
1" = 50'	J.R.P.	3/5/57	

224 New Customhouse
Denver 2, Colorado

March 28, 1957

FINAL DISTRIBUTION
APR 1 1957
MADE

Memorandum

To: E. A. Christensen

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket-3866, (Lead- inc-Copper) Contract Idm-E903, American Smelting and Refining Company (Keystone mine) Gunnison County, Colorado - Operator's Monthly Progress Report, for the month of February, 1957

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Operator's Narrative Report, and Engineer's Report for the above period.

All of the work was performed at "Fixed Unit Costs," as specified in the short form contract on Form MF-200A. No documentation is required, therefore we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks

Date of Report——————————March 18, 1957
Date Received in Field Office————March 27, 1957
Date Received in Region Office————March 28, 1957

Original signed by
E. N. HARSHMAN

E. N. Harshman

Enclosures
JDC:hh
cc: Chmn. Op. Comm. (2)
Shaw (2)
Harshman)w/copy of Engr's report
MF-104 File E903
Chron.

EXTRA COPY
DMEA
RECEIVED APR 8 1957

DATE	INITIALS	CODE
4/3/57	[illegible]	110
4/3	~~[illegible]~~	500
	Rlg.	

EXTRA COPY DMEA RECEIVED		
DATE	INITIALS	CODE

DMEA
DEPARTMENT OF THE INTERIOR
MAR 28 1957
REGION III
DENVER, COLORADO March 27, 1957

Memorandum

To: Executive Officer, DMEA Field Team, Region III
Through: John F. Shaw
Supervising Mining Engineer

From: E.W. Buel

Subject: Docket DMEA 3866, (Lead-Zinc-Copper) Contract Idm-E903, American Smelting and Refining Company, (Keystone mine), Gunnison County, Colorado--Progress Report for February, 1957.

The work progress under the DMEA contract was inspected on March 4, 1957, by the writer. There were no mine representatives present during the inspection, other than the miners engaged for the drifting.

The DMEA drift was driven 85 feet since the last inspection of February 11, 1957. Total length of the drift driven under Stage II of the DMEA contract measures 426.0 feet.

An examination of the face and back of the recently driven drift revealed that the vein is but superficially and erratically mineralized with lead, zinc, and copper sulphides.

It appears as though the mineralization is progressively becoming leaner as the drift is extended away from the DMEA raise area. 1/ The raise area has resulted in the production of ore-grade material.

The operator reports in his MF-104's for February, 1957, 117 feet of drifting and 14 chemical analyses. The operator's claims have been verified.

It is recommended that the operator be reimbursed for 117 feet of drifting and 14 chemical analyses. Total expenditures for February's DMEA work total $4,137.00 of which the Government's share at 50 percent is $2,068.50.

Edward W. Buel
Edward W. Buel
Mining Engineer

1/ A telephone call by the operator on March 11, revealed that the drift encountered a significant showing of ore mineralization.

EWB:jg
Enc.
cc: 6 - Idm-E903 - Chron.

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of February, 1957 Docket No. DMEA 3866 Contract No. Idn-5903
Operator's Name American Smelting and Refining Company Minerals Pb,Cu,Zn
Address 120 Broadway, New York 5, New York
Contract Amount, $107,220.00 Government Participation: 50 % Amount, $53,610.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) ~~Equipment~~ ~~Stockroom~~ ~~Contract~~						
~~Shaft~~ Raising		7,605.00	7,605.00	5/28/57		
~~Bulldozing~~						
~~Crosscutting~~						
Drifting & XCutting	4095.00	26,250.00	30,345.00			
Drift & XCut Timbering						
(2) ~~Mine Work Supervision~~						
~~Labor~~						
~~Supervision~~						
~~Technical Services~~						
(3) ~~Operating Materials and Supplies~~						
~~Explosives~~						
~~Pipe~~						
~~Track~~						
Drill Hole Casing						
Drill Hole Cementing						
(4) ~~Operating Equipment~~						
~~Rental~~						
~~Purchase~~						
~~Depreciation~~						
(5) ~~Maintenance and Repairs~~						
(6) ~~New Bldgs, Improvements, etc~~						
(7) ~~Miscellaneous~~						
~~Expense Equipment~~						
~~Sampling and Analysis~~						
~~Payroll Taxes~~						
~~Liability Insurance~~						
Drill Stations						
Assays	42.00	483.00	525.00			
(8) Contingencies (specify):						
TOTALS	4137.00	34,338.00	38,475.00	4137.00	34,338.00	38,475.00

RECEIVED APR 3 1957 DMEA

I certify that the above bill is correct and just and that payment therefor has not been received.
Date March 13, 1957 Payee American Smelting & Refining Co.
Keystone Unit
Per [signature] Title Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:
$2615.50
Signature [signature]
(Authorized Certifying Officer)
Date 3/29/57 Voucher No. Gamma 57-106
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Adm-E903 in accordance with the terms of the contract.

Signature Edward W. Buel $2068.50 Title Mining Engr. Date 3/27/57

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature E. M. Hausman Title Acting Executive Officer Date MAR 28 1957

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of February, 1957 Docket No. DMEA 3866 Contract No. Idm-E903
Operator's Name American Smelting & Refining Company Minerals Pb, Cu, Zn
Address 120 Broadway, New York 5, NewYork

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting & XCutting	Ft.	4095.00	117	30,345.00	867	35.00	2450	35.00
~~Exploring~~								
Raising	Ft.			7,605.00	195	39.00	200	39.00
~~Drifts or XCut~~								
~~Wood~~ Timbering	Ft.							6.00
Drilling: Core	Ft.							4.60
~~Wood~~ Casing	Ft.							2.00
~~Water~~ Cementing	Ft.							2.00
~~Equipment~~ Drill Sta.	Ea.							
~~Powder~~								
~~Petroleum~~								
~~Boards and Poles~~								
Assaying	Ea.	42.00	14	525.00	175	3.00	400	3.00
TOTAL DISTRIBUTED COSTS		4137.00		38,475.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		4137.00		38,475.00				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date March 18, 1957 Operator American Smelting & Ref.Co.

Per [signature] Title Supt.

REMARKS:

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

Edward W. Beal

RECEIVED APR 3 1957 D.M.E.A.

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

AMERICAN SMELTING AND REFINING COMPANY
KEYSTONE UNIT
P. O. BOX J CRESTED BUTTE, COLORADO

March 18, 1957

EXTRA COPY
DMEA
RECEIVED APR 3 1957

DATE	INITIALS	CODE

Mr. W. M. Traver, Executive Officer
U. S. Dept. of Interior
Defense Minerals Exploration Administration
224 New Custom Building
Denver 2, Colorado

RE: Docket DMEA - 3866
Contract Idm-E903

Dear Sir:

General Remarks:

Drifting on the 2000 Level Union Vein during the month was mostly in waste. Drifting was resumed for a short period on the 2160 Level Union Vein - this advance was in low grade ore. Stope preparations continued in the 2055, 2056 and 2157 Project Area ore blocks.

Working Place	Advance	Tons Ore	Tons Waste	Ag Oz	Metal Content Pb %	Cu%	Zn%
2000 Union Dr.	117 Ft.	133	354	4.8	3.0	0.4	6.2
2160 Union Dr.	60 Ft.	249		5.0	0.8	1.0	2.1
2055-1 Stope		570		1.8	1.4	0.3	3.9
2056-1 Stope		377		4.4	5.9	0.6	4.3
2157-1 Stope		26		2.6	0.9	0.4	2.6
	Total	1355	354				

General Geology:

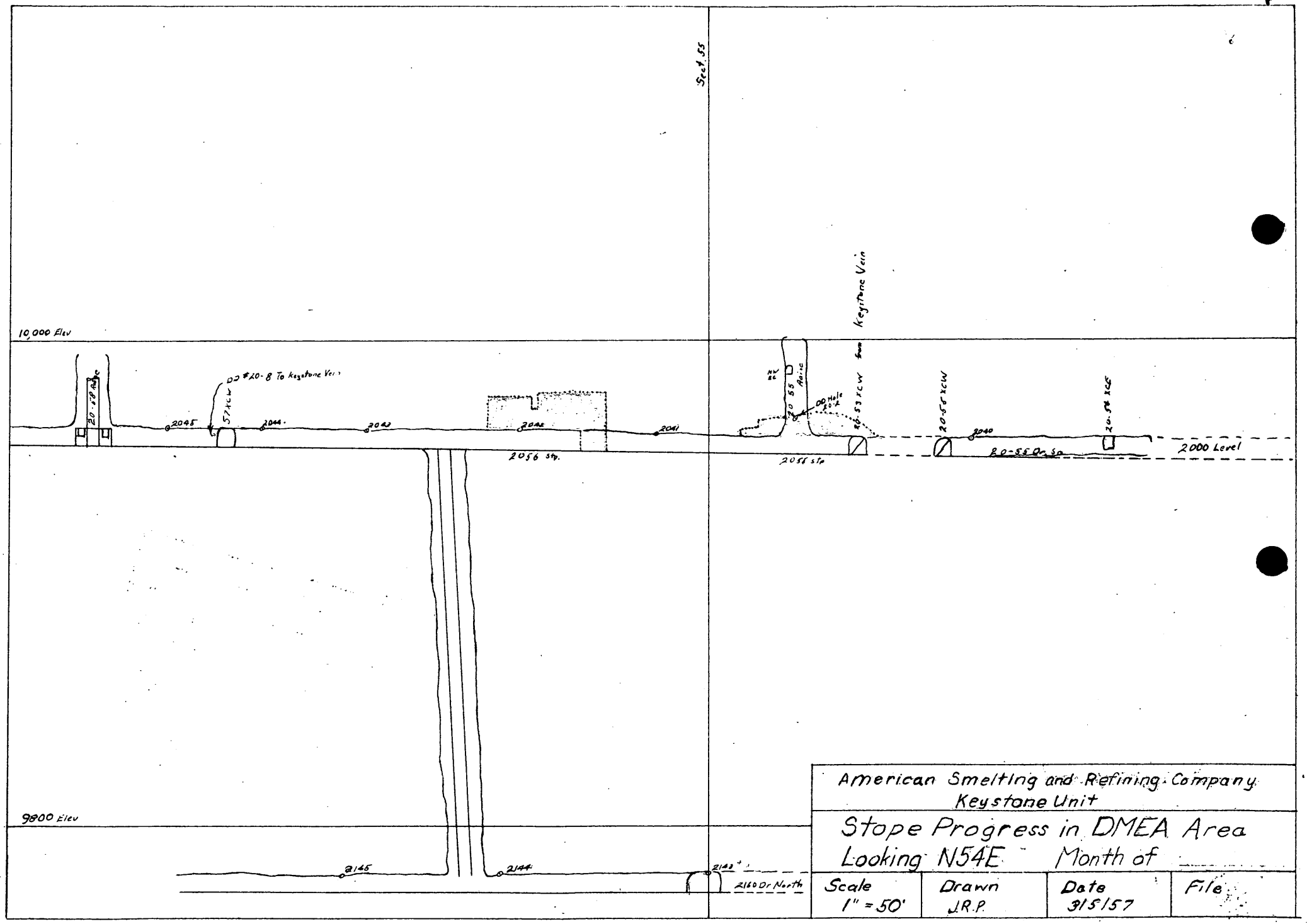
Little movement is evident on the 2000 Level Union Vein. The wall rock is fairly tight, selectification of the shales and sandstones is becoming more pronounced. SILICIFICATION (?)

Mineralization is sparse - that present is finely disseminated and lies near the fault.

Very truly yours,

Nolan Probst, Supt.

NP:rmc
Encls:


Sect. 55
10,000 Elev
20-28 Raise
DD #20-8 To Keystone Vein
57 XCW
2045
2044
2043
2042
2041
2056 Sta.
20-55 Raise
DD Hole 80'
20-53 XCW from Keystone Vein
2056 Sta
20-56 XCW
2040
20-54 XCS
2000 Level
9800 Elev
2145
2144
2143
2160 Dr North
American Smelting and Refining Company
Keystone Unit
Stope Progress in DMEA Area
Looking N54E Month of
Scale 1" = 50'
Drawn J.R.P.
Date 3/5/57
File

EXTRA COPY
D M E A
RECEIVED APR 3 1957

DATE	INITIALS	CODE

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

224 New Customhouse
Denver 2, Colorado

February 18, 1957

OFFICIAL FILE COPY
DMEA
RECEIVED FEB 21 1957

DATE	INITIALS	CODE
		225

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3866 (Lead-Zinc-Copper)
Contract Idm-E903, American Smelting and Refining Company (Keystone mine)
Gunnison County, Colorado

Enclosed are four copies of an interim Geologic report dated February 14, 1957, by Donald H. Richter, Geologist, U. S. Geological Survey, covering operations under the contract through February 11, 1957.

Wm. Traver

W. M. Traver

Enclosures
JDG:hh
cc:
Harshman)
Richter)
Shaw (2))w/copy interim
Townsend)report
Corres. E903)
Chron.)

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA
DEPARTMENT OF THE INTERIOR
FEB 15 1957
REGION III
DENVER, COLORADO

Defense Minerals Exploration Administration
Denver Federal Center
Denver, Colorado

February 14, 1957

Memorandum

To: Executive Officer, DMEA Field Team, Region III
Through: E. N. Harshman

From: Donald H. Richter

Subject: DMEA Docket 3866 (Lead-zinc-copper), Contract Idm-E 903, American Smelting and Refining Company (Keystone mine), Gunnison County, Colorado
INTERIM REPORT

An interim examination of the Keystone mine was made on February 11, 1957, in company with E. W. Buel, U. S. Bureau of Mines.

The DMEA drift on the 2,000 level has been advanced 156 feet, since the last examination on January 8, 1957, for a total of 341 feet since the start of the contract.

The vein and structure is apparently becoming thinner and the sulfide mineralization more spotty as the drift advances. At the face of the drift the vein consists of a 4- to 6-inch quartz and clay gouge zone in a 2- to 3-foot sheeted or shear zone. A few small spotty areas of sphalerite, galena, and pyrite were observed. The vein, for the last 100 feet of drift, strikes approximately N. 47° W. and at the face dips 66° SW.

Donald H. Richter
Donald H. Richter
Geologist

OFFICIAL FILE COPY
DMEA
RECEIVED FEB 21 1957

DATE	INITIALS	CODE

DHRichter:mp

OFFICIAL FILE COPY
DMEA
RECEIVED FEB 5 1957

DATE	INITIALS	CODE
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		~~500~~
		225

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

February 4, 1957

Re: DMEA 3866; Pb-Zn-Cu;
Contract Idm-E903
American Smelting & Ref. Co.
Keystone Mine
Gunnison County, Colo.

~~Memorandum~~

To: W. R. Griswold, DMEA

From: O. M. Bishop, Branch of Base Metals

Subject: Interim Report of January 14, by Walden P. Pratt on referenced property.

This Interim Report suggests the possibility that operators are not measuring, sampling and currently recording in map form the dimensions and grade of mineralized ground. Although the 2,000 level drift had been advanced 135 feet on the vein since the last inspection and the 150-foot DMEA raise from the 2,160 level to the 2,000 level had been completed the Interim Report gives no information that assays exist of these sections but rather describes the vein sulfide mineralization in the drift as erratic, and notes that the raise (also on the vein) was tightly lagged so that the walls could not be examined. Mr. Pratt writes, "The vein was still good ore in the floor of the 2,000 level; a grab specimen showed very good coarsely crystalline galena with interstitial chalcopyrite."

It can hardly be over-emphasized that the purpose of exploration is positive information in recorded form that can guide present and future actions. Often ore widths or grades submarginal with existing prices and technology cannot be evaluated at a future date because of failure to measure and sample or properly record such data.

I recommend that DMEA seek assurance that proper records of exploration results are being made as the work progresses.

O. M. Bishop.
O. M. Bishop

Copy to: Division of Minerals
Mr. Kiilsgaard
Mr. Lamb
Mr. Bishop
Files

224 New Customhouse
Denver 2, Colorado

FINAL DISTRIBUTION
MADE FEB 28 1957

February 25, 1957

Memorandum

To: T. A. Christensen

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3866, (Lead-Zinc-Copper) Contract Idm-E903
American Smelting and Refining Company (Keystone mine)
Gunnison County, Colorado - Operator's Monthly
Progress Report, for the month of January, 1957

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Operator's Narrative Report, and Engineer's Report for the above period.

We consider that the Operator has complied with the intent of the contract and the work for which payment is recommended is acceptable to the Government. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore, we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks

Date of Report——————————February 4, 1957
Date Received in Field: Office——————February 20, 1957
Date Received in Region Office——————February 21, 1957

Original signed by
E. N. HARSHMAN
E. N. Harshman

Enclosures

JDC:hh
cc: Chem. Op. Comm. (2)
Shaw (2)
Harshman) w/copy of engineer's report
MF-104 File E903
Chron.

DATE		CODE
3/4	C	270
"		110
3/4		500

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

REGION III

Building 20
Denver Federal Center
Denver 2, Colorado

DMEA
DEPARTMENT OF THE INTERIOR
FEB 21 1957
REGION III
DENVER, COLORADO

February 20, 1957

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw
Supervising Mining Engineer

From: Edward W. Buel

Subject: Docket DMEA 3866 (Lead-Zinc-Copper) Contract Idm-E903, American Smelting and Refining Company (Keystone mine), Gunnison County, Colorado - Progress report for January 1957

The subject property was inspected on February 11, 1957, by D. Richter, Geological Survey, and E. W. Buel, Bureau of Mines.

Since the last inspection of January 8, 1957, the drift was extended 156 feet, making a total of 341 feet driven under Stage II of the subject contract.

The operator reports in his MF-104's for January 1957, 138 feet of drifting and 27 chemical analyses. An examination of the DMEA workings and sample data verify the operator's reimbursement claims.

Reimbursement to the operator is recommended for 138 feet of drifting and 27 chemical analyses. Total cost of the DMEA work during January 1957 is $4,911.00 of which the Government's share at 50 percent is $2,455.50.

EXTRA COPY
DMEA
RECEIVED

DATE	INITIALS	CODE

Edward W. Buel
Edward W. Buel
Mining Engineer

cc 6
Idm-E903
Chron.

EWB:ph

AMERICAN SMELTING AND REFINING COMPANY
KEYSTONE UNIT
P. O. BOX J CRESTED BUTTE, COLO.

February 18, 1957

Mr. W. S. Traver, Executive Officer
U. S. Dept. of Interior
Defense Minerals ExplorationAdministration
224 New Custom Building
Denver 2, Colorado

RE: Docket DMEA - 3866
Contract Idm - E903

Dear Sir:

General Remarks:

A total of 138 Ft. of advance was made during the month of January. Nearly all drifting was in ore. A total of 567 tons was milled with a metal content of Ag 7.1 Oz, Pb 3.2 %, Cu 0.5 %, Zn 9.8 %. 27 tons was discarded as waste.

In stope block 2056 in the project area 236 tons of ore was mined with the following metal content Ag 3.7 Oz, Pb 5.0 %, Cu 0.5 %, Zn 4.0 %.

General Geology:

The drift vein has been irregular in width - varying from 2 to 5 ft. Little gouge has been developed as a rule the walls have been fairly tight. Wall rock is essentially hard, greenish cast sandstone.

Very truly yours,

ORIGINAL SIGNED BY
NOLAN PROBST

Nolan Probst, Supt.

567
236
2056

NP:rmc

Encls:

EXTRA COPY
D.M.E.A.
RECEIVED
DATE INITIALS CODE

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of January, 1957 Docket No. DMEA 3866 Contract No. Idm - 2903
Operator's Name American Smelting & Refining Company Minerals Pb, Cu, Zn
Address 120 Broadway, New York 5, New York
Contract Amount, $ 107,220.00 Government Participation: ____% Amount, $ 53,610.

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) ~~Development~~ Short Form ~~Contract~~						
~~Dump~~ Raising		7,605.00	7,605.00	5/3/57		
~~Dump~~						
~~Crosscutting~~						
Drifting & Crosscutting	4,830.00	21,420.00	26,250.00			
Drift & Cut Timbering						
(2) ~~Labor and Supervision~~						
~~Labor~~						
~~Supervision~~						
~~Technical Services~~						
(3) ~~Operating Materials and Supplies~~						
~~Timber~~						
~~Explosives~~						
~~Steel~~						
~~Wire~~						
Drill Hole Casing						
Drill Hole Cementing						
(4) ~~Operating Equipment~~						
~~Rental~~						
~~Purchase~~						
~~Depreciation~~						
(5) ~~Initial Rehabilitation and Repairs~~						
(6) ~~Buildings, Improvements, etc.~~						
(7) ~~Miscellaneous~~						
~~Repairs to Equipment~~						
~~Sampling and Analysis~~						
~~Payroll Taxes~~						
~~Liability Insurance~~						
Drill Stations						
Assays	81.00	402.00	483.00			
(8) ~~Contingencies (specify)~~:						
TOTALS	4,911.00	29,427.00	34,338.00	4,911.00	29,427.00	34,338.00

I certify that the above bill is correct and just and that payment therefor has not been received.
Date Feb. 4, 1957 *Payee American Smelting & Refining Co.

ORIGINAL SIGNED BY
Per NOLAN PROBST Title Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$2455.50

Signature
(Authorized Certifying Officer)

Date 2/27/57 Vou. No. DMA 57-74
(See other side)

RECEIVED MAR 4 1957 DMEA

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. DMA-2903 in accordance with the terms of the contract.

Signature Edward W. Buel $2,455.50 Title Mining Engr. Date 2/20/57

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature E. M. Hershman Title acting Executive Officer Date FEB 25 1957

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of January, 1957 Docket No. DMEA 3866 Contract No. Idu - 1903
Operator's Name American Smelting and Refining Company Minerals Pb, Cu, Zn
Address 120 Broadway, New York 5, New York

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting & Cutting	Ft.	4,830.00	138	26,250.00	750	35.00	2450	35.00
~~Horizontal~~								
Raising	Ft.			7,605.00	1 95	39.00	200	39.00
~~Shaft~~ Drifts or								
~~Winze~~ Cut Timbering	Ft.						245	6.00
Drilling: Core	Ft.						2000	4.60
~~Hole~~ Casing	Ft.						200	2.00
~~Hole~~ Cementing	Ft.						200	2.00
~~Scrapping~~ Drill Sta.	Ea.						10	100.00
~~Trenching~~								
~~Tests~~								
~~Roads and Trails~~								
Assaying	Ea.	81.00	27	483.00	161	3.00	400	3.00
TOTAL DISTRIBUTED COSTS		4,911.00		34,338.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		4,911.00		34,338.00				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

REMARKS:

Date Feb. 4, 1957 Operator American Smelting & Refining Co.

ORIGINAL SIGNED BY
NOLAN PROBST
Per Title Supt.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

Edward W. Buel

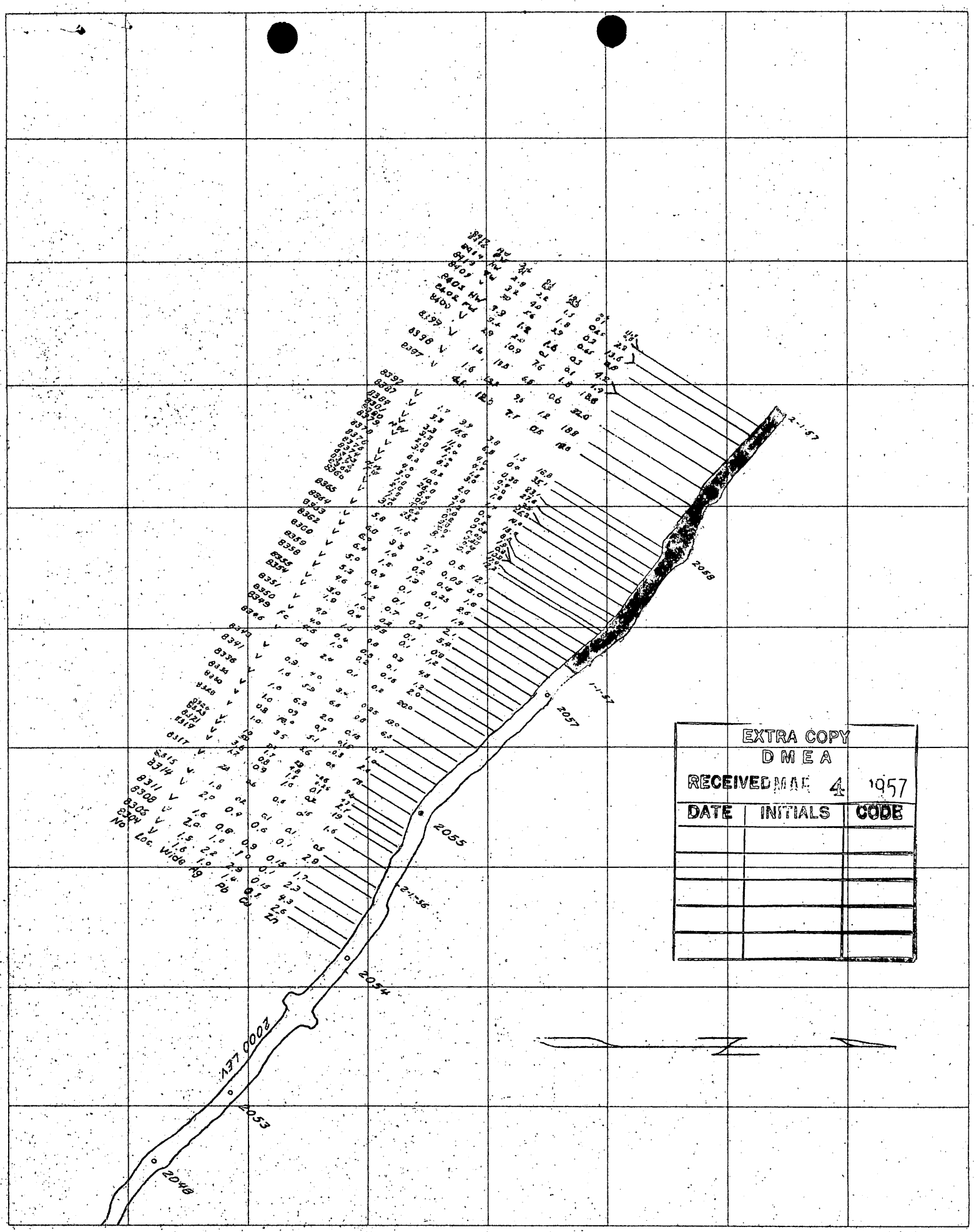
INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894



EXTRA COPY
D M E A
RECEIVED MAR 4 1957

DATE	INITIALS	CODE

MINE KEYSTONE LOCATION CRESTED BUTTE, COLO. LEVEL 2000

GEOLOGY BY SURVEY G.H.B. SCALE 1" = 50' DATE JAN 1957

3866

ACTION ON INTE[illegible]
OR FINAL FIELD TEAM REPORT
Date 1-28

Referred to:

1. ~~Mr. Mitendorf~~
2. ~~Mr. Johnson~~
3. ~~Mr. Chambers~~
4. ~~Docket Control Mails and Files~~
5. ~~Division~~
6. Docket Control Mails and Files

Note comments in report regarding:

1.

2.

3.

4.

and take appropriate action.

- - - - - - - - - - -

Action taken by Division:

Robert E. Adams

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

OFFICIAL FILE COPY
DMEA
RECEIVED JAN 25 1957

DATE	INITIALS	CODE
1-29	[illegible]	100

224 New Customhouse
Denver 2, Colorado

January 22, 1957

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3866 (Lead-Zinc-Copper) Contract Idm-E903, American Smelting and Refining Company (Keystone mine) Gunnison County, Colorado - INTERIM REPORT

Enclosed are ~~four~~ 2 copies of an interim report, dated January 14, 1957, from Walden P. Pratt, Geologist, U. S. Geological Survey, covering operations under the subject contract through January 8, 1957.

W. M. Traver

W. M. Traver

Enclosures

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Defense Minerals Exploration Administration
Denver Federal Center
Denver, Colorado

DMEA
DEPARTMENT OF THE INTERIOR
JAN 18 1957
REGION III
DENVER, COLORADO

January 14, 1957

Memorandum

To: Executive Officer, DMEA Field Team, Region III
Through: E. N. Harshman EWH

From: Walden P. Pratt

Subject: DMEA Docket 3866 (Lead-zinc-copper), Contract Idm-E903, American Smelting and Refining Company (Keystone mine), Gunnison County, Colorado. INTERIM REPORT

The Keystone mine was visited on January 8, 1957, by W. P. Pratt, U. S. Geological Survey, and E. W. Buel, U. S. Bureau of Mines, to inspect progress on the 2,000 level under DMEA contract.

The DMEA drift on the 2,000 level has been advanced 185 feet since the start of the contract, or 135 feet since the last inspection on December 5, 1956. The vein and adit trend about N 45° W for roughly the last 100 feet, and the vein dips 70° SW at the face. Sulfide mineralization is erratic: the face shows a 3-1/2-foot zone of quartz and chlorite with pyrite and spotty galena and sphalerite, but the operator stated that the material extracted for a length of about 15 feet, up to a point 10 feet back from the face, was hauled as ore. Assays on this section were not yet available in the company office.

The DMEA raise from the 2,160 level was completely cribbed and the walls could not be examined. Mr. Nolan Probst (manager) reported that the lower 100 feet of the 150-foot raise followed the vein and that at the top of this portion the vein was 1-1/2 feet thick and contained good sulfides; above this point the raise went into the footwall because of a surveying error on the lower level, and reached the 2,000 level about 8 feet out in the footwall. The vein was still good ore in the floor of the 2,000 level; a grab specimen showed very good coarsely crystalline galena with interstitial chalcopyrite.

OFFICIAL FILE COPY
DMEA
RECEIVED JAN 25 1957

DATE	INITIALS	CODE

W.P. Pratt
Walden P. Pratt
Geologist

WPPratt:mp

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

~~Amended~~
~~ABC~~
~~Klay~~
Betty

224 New Customhouse
Denver 2, Colorado

FINAL DISTRIBUTION MADE JAN 22 1957

January 17, 1957

RECEIVED JAN 25 1957 D.M.E.A.

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3866 (Lead-Zinc-Copper) Contract Idm-E903, American Smelting and Refining Company (Keystone mine) Gunnison County, Colorado - Operator's Monthly Progress Report for the month of December, 1956

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Operator's Narrative Report, and Engineer's Report for the above period.

We consider that the Operator has complied with the intent of the contract, and the work for which payment is recommended is acceptable to the Government. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks

Date of Report ----------January 11, 1957
Date Received in Field Office------January 15, 1957
Date Received in Region Office-----January 17, 1957

Original signed by
W. M. TRAVER

W. M. Traver

Enclosures
JDC:jy
cc: Chm. Op. Comm. (2)
Shaw (2)
Barnhman w/copy engr's report
MF-104 File E903
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DMEA
DEPARTMENT OF THE INTERIOR
JAN 17 1957
REGION III
DENVER, COLORADO

Building 20
Denver Federal Center
Denver 2, Colorado

January 16, 1957

RECEIVED
JAN 23 1957
DMEA

REGION III

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw
Supervising Mining Engineer

From: Edward W. Buel

Subject: Docket DMEA 3866 (Lead-Zinc-Copper) Contract Idm-E903, American Smelting and Refining Company, (Keystone Mine), Gunnison County, Colorado -- Progress report for December 1956

An inspection was made of the DMEA work on the subject property on January 8, 1957. The inspection was made by W. Pratt, Geological Survey, and E. W. Buel, Bureau of Mines. There was no company representative present during the inspection.

A measurement of the drift showed that the drift was driven for a total of 185 feet from the start of the contract under Stage II. The starting point under Stage II drifting was established at a point 69 feet beyond A.S.R. survey station No. 2053. The increase of drifting totals 135 feet since the last inspection.

The operator's narrative report and MF-104's are correct, except for Drill Station units and unit costs which were omitted on the MF-104A. It is recommended that the operator be paid for 121 feet of drifting and for 25 (map shows 30 samples) sample analyses. Reimbursement totals $4,310.00 of which the Government's participation at 50 percent is $2,155.00.

Edward W. Buel
Edward W. Buel
Mining Engineer

cc 6
Idm-E903
Chron.

EWB:ph

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of December, 1956 Docket No. DMEA 3866 Contract No. Idn - 5903
Operator's Name American Smelting and Refining Company Minerals Pb, Cu, Zn
Address 120 Broadway, New York 5, New York
Contract Amount, $107,220.00 Government Participation: 50% Amount, $ 53,610

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) ~~Independent~~ Short Form ~~Contract~~:						
~~Drilling~~ Raising		7,605.00	7,605.00	2/1/57	O.K.	
~~Bulldozing~~						
~~Sinking~~						
Drifting & ~~X~~Cutting	4,235.00	17,185.00	21,420.00			
Drift & ~~X~~Cut Timbering						
(2) ~~Labor and Supervision~~:						
~~Labor~~						
~~Supervision~~						
~~Technical Services~~						
(3) ~~Operating Matls and Supplies~~:						
~~Timber~~						
~~Explosives~~						
~~Pipe~~						
~~Rock~~						
Drill Hole Casing						
Drill Hole Cementing						
(4) ~~Operating Equipment~~						
~~Rental~~						
~~Purchase~~						
~~Depreciation~~						
(5) ~~Maintenance and Repairs~~						
(6) ~~Navigation Improvements, etc~~						
(7) ~~Miscellaneous~~						
~~Office Equipment~~						
~~Supplies and Analysis~~						
~~Payroll Taxes~~						
~~Liability Insurance~~						
Drill Stations						
Assaying	75.00	327.00	402.00			
(8) ~~Contingencies~~						
TOTALS	4,310.00	25,117.00	29,427.00	4,310.00	25,117.00	29,427.00

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Jan. 11, 1957 *Payee American Smelting and Refining Co.

ORIGINAL SIGNED BY NOLAN PROBST

Per _____ Title Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$2155.00

Signature _____
(Authorized Certifying Officer)

Date 1/28/57 Vou. No. 2070-57-78

(See other side)

RECEIVED JAN 25 1957 D.M.E.A.

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. dm-E903 in accordance with the terms of the contract.

Signature Edward W. Buel #2, 155.00 Title Mining Engr. Date 1/16/57

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE

Signature W. M. Dancy Title Executive Officer Date JAN 17 1957

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of December, 1956 Docket No. DMEA 3866 Contract No. Idm - 8903

Operator's Name American Smelting and Refining Company Minerals Pb, Cu, Zn

Address 120 Broadway, New York5, New York

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting & XCutting	Ft.	4235.00	121	21,420.00	612	35.00	2,450	35.00
~~Crosscutting~~								
Raising	Ft.			7,605.00	195	39.00	200	39.00
~~Stope~~ Drift or XCut								
~~Stope~~ Timbering	Ft.						245	6.00
Drilling: Core	Ft.						2,000	4.60
~~Chum~~	Ft.						200	2.00
~~Auger~~	Ft.						200	2.00
Stripping Drill Station	Ea.							
~~Grouting~~								
~~Test Pits~~								
~~Roads and Trails~~								
Assaying		75.00	25	402.00	134	3.00	400	3.00
TOTAL DISTRIBUTED COSTS		4310.00		29,427.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		4310.00		29,427.00				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

REMARKS:

Date Jan. 11, 1957 Operator American Smelting & Refining Co.

ORIGINAL SIGNED BY
Per NOLAN PROBST Title Supt.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

Edward W. Buel

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

AMERICAN SMELTING AND REFINING COMPANY
KEYSTONE UNIT
P.O. BOX J CRESTED BUTTE, COLO.

January 10, 1957

Mr. W. M. Traver, Executive Officer
U.S. Dept.of Interior
Defense Minerals Exploration Administration
224 New Custom Building
Denver 2,Colorado

Re: Docket DMEA - 3866
Contract Idm - 8903

Dear Sir:

General Remarks:

Drifting continued on the 2000 level Union Vein on a single shift basis. 121 ft. advance was made during December. All rock from the drift heading during December was waste. A total of 514 tons was discarded.

A stope block, designated as 2056 block, is being prepared for mining. This block adjoins and extends S.E. of the recently completed 2156 Union Veinraise. 500 tons of ore was mined from this block and contained the following metal content: Ag - 3.3 Oz, Pb - 2.3 %, Cu - 0.5%, Zn- 4.9 %.

General Geology:

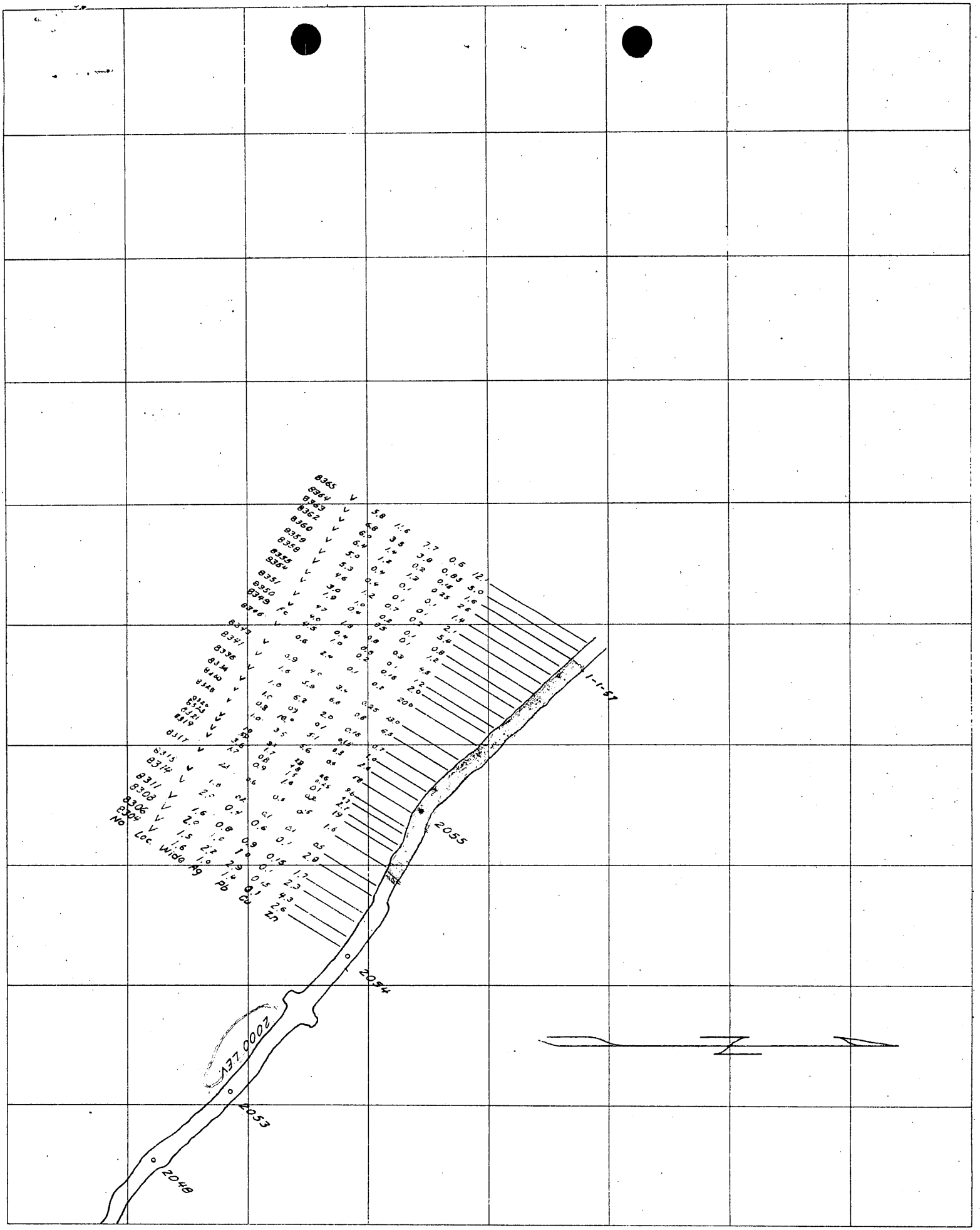
The fissure continued moderately strong. Scattered mineralization in a zone 2 to 4 ft. wide still persists. Development of gouge on either wall has been slight.

Very truly yours,

ORIGINAL SIGNED BY
NOLAN PROBST

Nolan Probst, Supt.

NP:rmc



MINE KEYSTONE LOCATION CRESTED BUTTE, COLO. LEVEL 2000

GEOLOGY BY SURVEY G.H.B. SCALE 1" = 50' DATE DEC 1956

RECEIVED
JAN 25 1957
D.M.E.A.

FINAL DISTRIBUTION MADE DEC 20 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

224 New Customhouse
Denver 2, Colorado

December 17, 1956

RECEIVED DEC 26 1956 D.M.E.A.

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket No. 3866, (Lead-Zinc-Copper), Contract No. Idm-E903, American Smelting and Refining Company, (Keystone Mine), Gunnison County, Colorado, Operator's Monthly Progress Report for the month of November, 1956

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Operator's Narrative Report, and Engineer's Report for the above period.

We consider that the Operator has complied with the intent of the contract, and the work for which payment is recommended is acceptable to the Government. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore, we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

REMARKS

Date of Report - - - - - - - - - - - - - - -	December 7, 1956
Date Received in Field Office - - - - - -	December 12, 1956
Date Received in Region Office - - - - -	December 13, 1956

Original signed by
W. M. TRAVER

W. M. Traver

Enclosures
MHM:ewa
cc: Chm. Op. Comm. (2)
Shaw (2)
Harshman, w/copy engr's report
Marshall
MF-104 File E903
Chron.

DMEA
DEPARTMENT OF THE INTERIOR
DEC 13 1956
REGION III
DENVER, COLORADO

RECEIVED
DEC 26 1956
DMEA

REGION III

Building 20
Denver Federal Center
Denver 2, Colorado
December 12, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw
Supervising Mining Engineer

From: Edward W. Buel

Subject: DMEA 3866 (Lead, zinc, copper) Contract Idm-2903,
American Smelting and Refining Company (Keystone mine)
Gunnison County, Colorado -- Progress report for November 1956

An examination was made of the Keystone mine on December 5, 1956, by the writer in company with G. H. Bloomquist, engineer.

The operator began work under Stage II of the DMEA contract. This work consisted in extending the 2000-level drift on the Union vein for a total distance of 50 feet. The drifting under Stage II did not require any timbering.

Starting point of the drift under Stage II is 112 feet beyond A. S. R. survey station #2048.

An examination of the drift heading indicated that the vein was not of commercial grade. The vein displays conspicuous lead-zinc sulphides, pyrite, and rhodochrosite.

The operator reports the analyses of 5 samples taken from the drift. Sample data are shown on the assay and progress map submitted by the operator to accompany the monthly narrative report.

The operator's MF-104's and narrative are correct, and the operator requests reimbursement for $1450.00, of which the Government's share at 50% is $725.00. It is recommended that the operator be reimbursed for the Government's share of $725.00.

Edward W. Buel
Edward W. Buel
Mining Engineer

EWB/mr
cc: 6
Idm-2903
Chron

Form ML-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of November, 1956 Docket No. DMEA 3866 Contract No. Idm-E903
Operator's Name American Smelting and Refining Company Minerals Pb, Cu, Zn
Address 120 Broadway, New York 5, N. Y.
Contract Amount, $ 107,220.00 Government Participation: ____% Amount, $ 53,610.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) ~~Development~~ Short Form ~~Expense~~						
~~Drifting~~ Raising		7605.00	7605.00	1/8/57 AWK		
~~Bulldozing~~						
~~Operating:~~						
Drifting & XCutting	1435.00	15,750.00	17,185.00			
Drift & Xcut Timber						
(2) ~~Labor and Supervision:~~						
~~Labor~~						
~~Supervision~~						
~~Technical Services~~						
(3) ~~Operating Materials and Supplies:~~						
~~Timber~~						
~~Explosives~~						
~~Pipe~~						
~~Wire~~						
Drill Hole Casing						
Drill Hole Cementing						
(4) ~~Operating Equipment:~~						
~~Rentals~~						
~~Purchase~~						
~~Depreciation~~						
(5) ~~Initial Rehabilitation and Repairs~~						
(6) ~~New Bldgs. Improvements, etc.~~						
(7) ~~Miscellaneous~~						
~~Rentals to Equipment~~						
~~Sampling and Analysis~~						
~~Payroll Taxes~~						
~~Liability Insurance~~						
Drill Stations						
Assaying	15.00	312.00	327.00			
(8) ~~Contingency~~						
TOTALS	1450.00	23,667.00	25,117.00	1450.00	23,667.00	25,117.00

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Dec. 1956 *Payee American Smelting & Refining Co.

ORIGINAL SIGNED BY
Per NOLAN PRESCOTT Title Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 725.00

Signature _____
(Authorized Certifying Officer)

Date 2/18/56 Vou. No. Emma 57-67

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Adm-E903 in accordance with the terms of the contract.

Signature Edwin W. Buel $725.00 Title Mining Engineer Date 12/12/56

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title Executive Officer Date DEC 17 1956

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of November, 1956 Docket No. DMEA 3866 Contract No. Idm-8903
Operator's Name American Smelting and Refining Company Minerals Pb, Cu, Zn
Address 120 Broadway, New York 5, N. Y.

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting & XCutting	Ft.	1435.00	41	17,185.00	491	35.00	2,450	35.00
~~Crosscutting~~								
Raising	Ft.			7,605.00	195	39.00	200	39.00
~~Xxxx~~ Drift or Xcut								
~~Xxxx~~ Timbering	Ft.						245	6.00
Drilling: Core	Ft.						2,000	4.60
~~Xxxx~~ Casing	Ft.						200	2.00
~~Xxxx~~ Cementing	Ft.						200	2.00
~~Xxxxxx~~ Drill Sta.	Ea.						10	100.00
~~Trenching~~								
~~Test Pits~~								
~~Roads and Roads~~								
Assaying	Ea.	15.00	5	327.00	109	3.00	400	3.00
TOTAL DISTRIBUTED COSTS		1450.00		25,117.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		1450.00		25,117.00				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

REMARKS:

Date Dec. 1956 Operator American Smelting & Refining Co.

ORIGINAL SIGNED BY
Per NOLAN PROBST Title Supt.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

Edward W. Buel

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

AMERICAN SMELTING AND REFINING COMPANY
KEYSTONE UNIT
P.O. BOX J CRESTED BUTTE, COLO.

December 7, 1956

Mr. W. M. Traver, Executive Officer
U.S. Dept. of Interior
Defense Minerals Exploration Administration
224 New Custom Building
Denver 2, Colorado

RE: Docket DMEA - 3866
Contract Idm-E903

Dear Sir:

General Remarks:

Drifting was resumed on the 2000 level Union Vein Nov. 15. Work was started and is still being carried on a single shift basis. Drift back is being taken down adjacent to the top of 2156 Rse. in preparation for stoping. Upon completion of this work drifting will be put on a two shift basis.

Forty one (41) ft. of advance was made during this period - no ore was produced in the drifting.

General Geology:

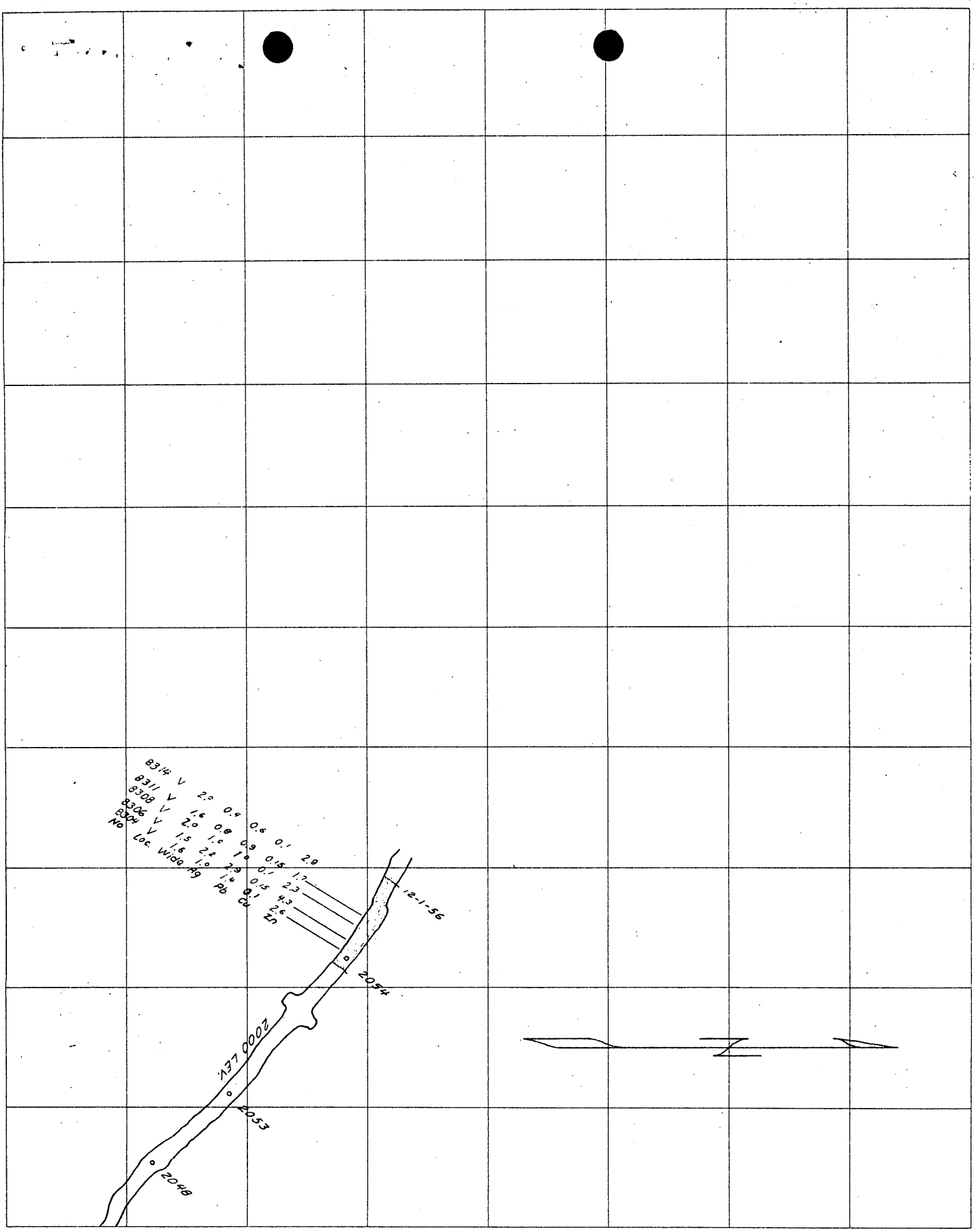
The fissure continues moderately strong. Some mineralization is present with the zone from one to three feet wide.

Very truly yours,

ORIGINAL SIGNED BY
NOLAN PROBST

Nolan Probst, Supt.

NP:rmc
Encl:



MINE KEYSTONE LOCATION CRESTED BUTTE, COLO. LEVEL 2000

GEOLOGY BY SURVEY G.H.B. SCALE 1" = 50' DATE NOV. 1956

RECEIVED
DEC 26 1956
Omaha

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

224 New Customhouse
Denver 2, Colorado

FINAL DISTRIBUTION

November 26, 1956

MAPE DEC 6 1956

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3866 (Lead-Zinc-Copper) Contract Idm-E903, American Smelting and Refining Company, (Keystone mine) Gunnison County, Colorado - Operator's Monthly Progress Report for the month of October, 1956

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Operator's Narrative Report, and Engineer's Report for the above period.

It is deemed that the Operator has complied with the intent of the contract, and the work for which payment is recommended is acceptable to the Government. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks

Date of Report - - - - - - - - - - - - November 5, 1956
Date Received in Field Office- - - November 16, 1956
Date Received in Region Office- - November 22, 1956

Original signed by
W. M. TRAVER

W. M. Traver

Enclosures
JDC:jy
cc: MF-104 File E903
Chm. Op. Comm. (2)
Shaw (2)
Harshman w/copy engr's report
Chron.

REGION III

Memorandum

Building 20
Denver Federal Center
Denver 2, Colorado
November 21, 1956

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shea
Supervising Mining Engineer

From: Edward W. Buel

Subject: DMEA 3866 (lead-zinc-copper) Contract Idm-8903, American Smelting and Refining Company (Keystone mine) Gunnison County, Colorado. —Progress report for October 1956.

An examination was made of the subject property on October 23, 1956. The purpose of the examination was to inspect the work progress on the raise and to determine the location of exploration drifting under stage II of the contract.

It is to be noted that September's progress report of October 26, 1956, states that the operator advanced the raise for a total of 165 feet. This statement should be changed to read "...for a total of 165 feet up until the end of the month, or for a total of 195 feet at the time of the inspection."

The operator reports an advance of the raise of 30 feet during October. An inspection of the raise verified the amount of raise. The operator's narrative and MF-104's are correct.

It is recommended that the operator be reimbursed for 30 feet of raising as given in his MF-104's. Total costs of the work performed during October were $1,170.00 of which the Government's share at 50 percent is $585.00.

Edward W. Buel

Edward W. Buel
Mining Engineer

EWB:sh
Enc.
cc: 6
Idm-8903
Chron

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of October, 1956 Docket No. DMEA 3066 Contract No. Ic - B 903
Operator's Name American Smelting and Refining Co. Minerals Pb-Cu-Zn
Address 120 Broadway, New York 5, New York
Contract Amount, $107,220.00 Government Participation: ____% Amount, $ 53,610.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) ~~Independent Contractor~~ Short Form						
~~Drilling~~ Raising	1170.00	6435.00	7605.00	12/18/56		
~~Diamond~~						
~~Churn~~						
Drifting & x Cutting		15,750.00	15,750.00			
Drift X-Cut timber						
(2) ~~Labor and Supervision~~						
~~Labor~~						
~~Supervision~~						
~~Technical Service~~						
(3) ~~Operating Matls. and Supplies~~						
~~Timber~~						
~~Explosives~~						
~~Fuel~~						
Drill Hole Casing						
Drill Hole Cementing						
(4) ~~Operating Equipment~~						
~~Rental~~						
~~Purchase~~						
~~Depreciation~~						
(5) ~~Initial Rehabilitation and Repairs~~						
(6) ~~New Bldgs., Improvements, etc.~~						
(7) ~~Miscellaneous~~						
~~Repairs to Equipment~~						
~~Sampling and Analysis~~						
~~Payroll Taxes~~						
~~Liability Insurance~~						
Drill Stations						
Assaying		312.00	312.00			
(8) ~~Contingencies (specify)~~						
TOTALS	~~1170.00~~	~~22,497.00~~	~~23,667.00~~	1170.00	22,497.00	23,667.00

RECEIVED DEC 1 1956

I certify that the above bill is correct and just and that payment therefor has not been received.
Date Nov. 5, 1956 *Payee American Smelting & Refining Co.

ORIGINAL SIGNED BY
Per NOLAN PROBST Title Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 585.00

Signature [illegible]
(Authorized Certifying Officer)

Date 11/30/56 Vou. No. DMA 57-60

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. DMA-E903 in accordance with the terms of the contract.

Signature Edward W. Buel #585 Title Mining Engr. Date Nov. 16, 1956

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W. M. Davey Title Executive Officer Date NOV 26 1956

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of October, 1956 Docket No. DMEA 3866 Contract No. Idm-E903
Operator's Name American Smelting and Refining Company Minerals Pb-Zn-Cu
Address 120 Broadway, New York 5, New York

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting &/or XCutting	Ft.			15,750.00	450	35.00	2,450	35.00
~~Crosscutting~~								
Raising	Ft.	1170.00	30	7,605.00	195	39.00	200	39.00
~~Stope~~ Drift or XCut	Ft.							
~~Winze~~ Timbering	Ft.						245	6.00
Drilling: Core	Ft.						2,000	4.60
~~Blast~~ Casing	Ft.						200	2.00
~~Auger~~ Cementing	Ft.						200	2.00
~~Scrapping~~ Drill Sta.	Ea.						10	100.00
~~Trenching~~								
~~Test Pits~~								
~~Roads and Trails~~								
Assaying	Ea.		0	312.00	104	3.00	400	3.00
TOTAL DISTRIBUTED COSTS		1170.00		23,667.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								None
Initial Rehabilitation and Repairs								"
New Buildings, Improvements, etc.								"
								"
TOTAL COSTS		1170.00		23,667.00				107,220

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

REMARKS:

Date November 5, 1956 Operator American Smelting and Refining Co.

ORIGINAL SIGNED BY
Per NOLAN PROBST Title Supt.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

RECEIVED DEC 10 1956 D.M.E.A.

Edward W. Buel

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

K-7.7

AMERICAN SMELTING AND REFINING COMPANY
KEYSTONE UNIT
P.O. BOX J CRESTED BUTTE, COLO.

November 7, 1956

RECEIVED
DEC 10 1956
D.M.E.A.

Mr. W. M. Traver, Executive Officer
U. S. Dept. of Interior
Defense Minerals Exploration Administration
224 New Custom Building
Denver 2, Colorado

RE: Docket DMEA - 3866
Contract Idm-E903

Dear Sir:

General Remarks:

Thirty feet of timbered advance was made in the Union Drift Raise during October. Connection was made with the 2000 level October 13. One hundred fifty-three tons of waste was extracted from the raise during the month. All advance was in waste during October.

General Geology:

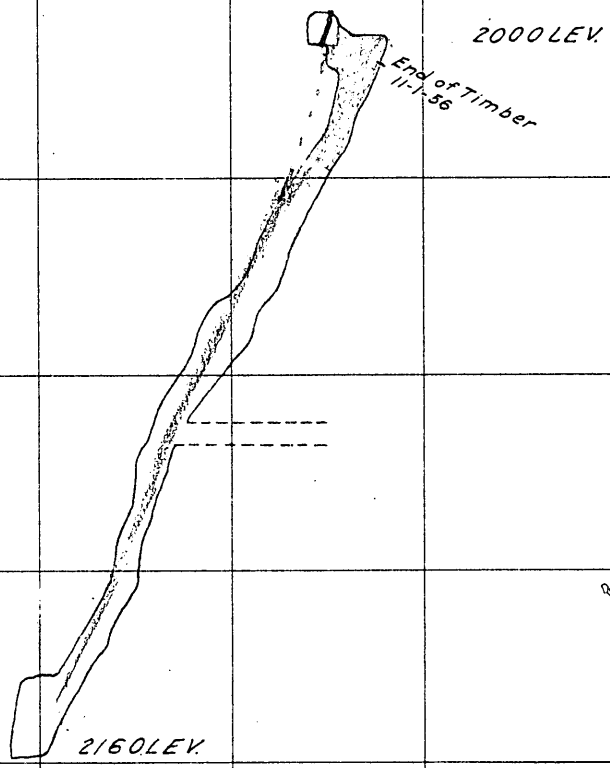
As mentioned in the last letter the raise was flattened in dip to connect with the 2000 level. Upon connection it was found our plotting of the dip to insure the connection was in error. An error inadvertently insurred in the survey of the 2160 Level Union Drift had thrown our plotting 15 ft. into the footwall. Had we followed the fissure a proper connection and a complete section of the vein would have been exposed between the 2160 and 2000 levels.

Very truly yours,

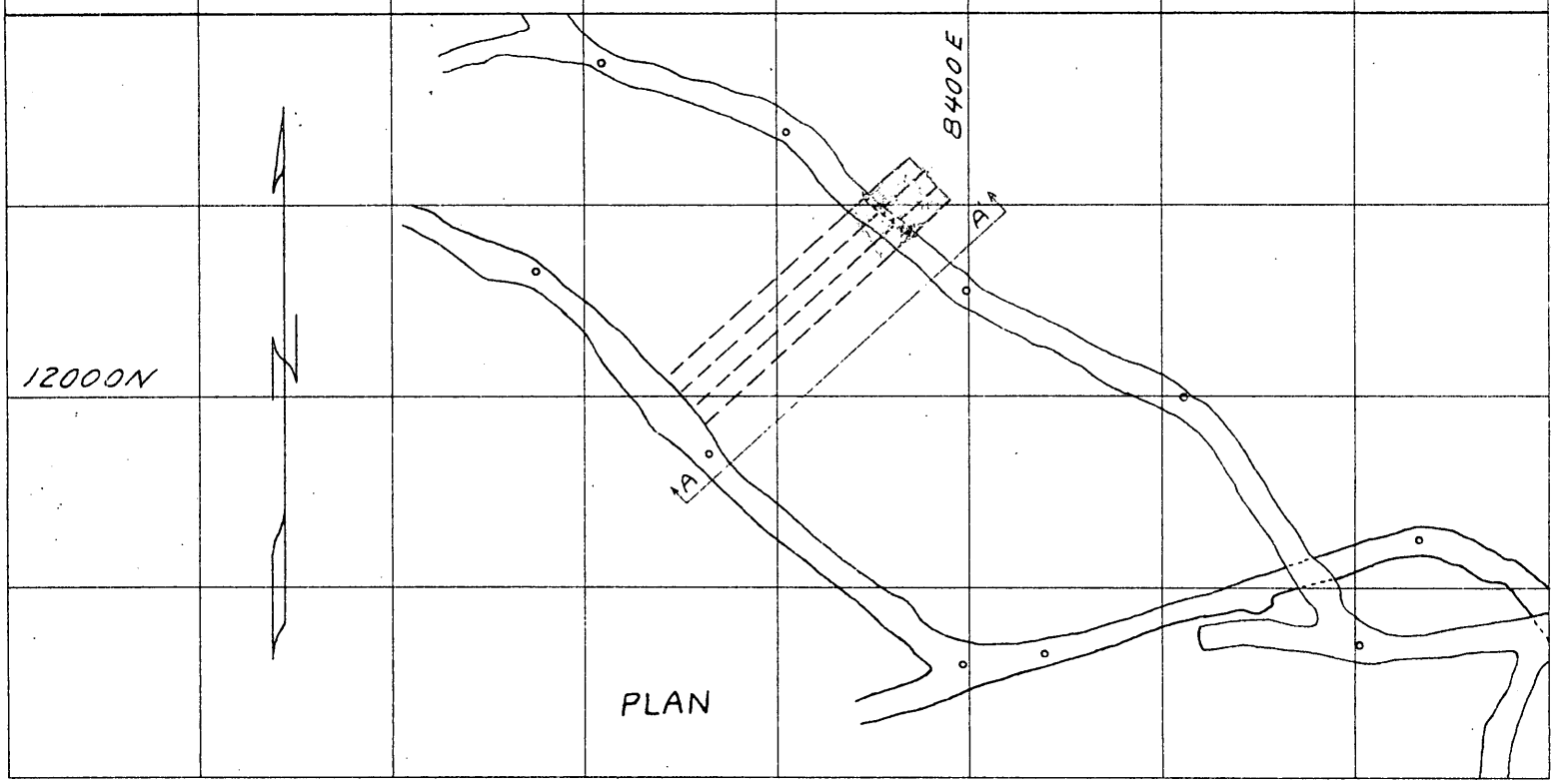
ORIGINAL SIGNED BY
NOLAN PROBST

Nolan Probst, Supt.

NP:rmc
Encls:



SECTION
A-A'



PLAN

MINE KEYSTONE LOCATION CRESTED BUTTE, COLO. LEVEL 21-56-1 RS.

GEOLOGY BY SURVEY G.H.B. SCALE 1" = 50' DATE OCT. 1956

RECEIVED
DEC 10 1956
D.M.E.A.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

224 New Customhouse
Denver 2, Colorado

October 31, 1956

FINAL DISTRIBUTION
NOV 6 1956

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3866 (Lead-Zinc-Copper) Contract Idm-E903, American Smelting and Refining Company, (Keystone Mine) Gunnison County, Colorado - Operator's Monthly Progress Report for the month of September, 1956

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Operator's Narrative Report, and Engineer's Report for the above period.

It is deemed that the Operator has complied with the intent of the contract, and the work for which payment is recommended is acceptable to the Government. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks

Date of Report - - - - - - - - - - - - - - - October 10, 1956
Date Received in Field Office- - - - - - October 15, 1956
Date Received in Region Office- - - - - October 29, 1956

Original signed by
W. M. TRAVER

W. M. Traver

Enclosures
JDC:jy
cc: MF-104 File E903
Chm. Op. Comm. (2)
Shaw (2)
Harshman w/copy engr's report
Chron.

RECEIVED
NOV 5 1956
DMEA

REGION III

Building 20
Denver Federal Center
Denver 2, Colorado
October 26, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw
Supervising Mining Engineer

From: Edward W. Buel

Subject: DMEA 3966 (Lead-zinc-copper) Contract Idm-2903,
American Smelting and Refining Company (Keystone mine)
Gunnison County, Colorado -- Progress report for September 1956

The operator completed 53 feet of raising during September under the subject contract. An inspection of the Keystone mine on October 23, 1956, verified the work advance.

The operator mined 93 tons of ore subject to Government royalty payments. The grade of the ore was not available.

The project raise has been advanced for a total of 165 feet. A total of 200 feet of raising is allowed under the contract. The raise is timbered for 165 feet.

The face of the 2000 level drift on the Union vein was inspected to determine the location and feasibility of the 2000 feet of drifting and crosscutting allowable under Stage II of the contract. It was decided by the operator and the examining team that drifting under Stage II should be conducted from the face of the 2000 level drift on the Union vein.

The operator reports the analyses for 13 samples taken from the raise during the advance for September. Sample data are shown on the assay and progress map submitted by the operator to accompany his monthly narrative report.

The project work completed during the subject period agrees with the specifications given in the contract. The $2,106.00 total costs reported on the MF-104's for September are approved. Reimbursement to the operator of 50 percent of the approved reported costs or $1,053.00, is recommended.

Edward W. Buel

Edward W. Buel
Mining Engineer

EWB/nw
Idm-2903 Chron cc: 6

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

RECEIVED NOV 8 1956 D.M.E.A.

Month of October, 1956 Docket No. DMEA 3266 Contract No. IC-[illegible]
Operator's Name American Smelting & Refining Company Minerals Pb, Zn, Cu
Address 120 Broadway, New York 5, New York
Contract Amount, $ 107,250.00 Government Participation: ____% Amount, $ 53,610.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Contracts: Short Form						
Drilling: Holeing	2097.00	4538.00	6635.00			
Bulldozing						
Crosscutting						
Drifting: Sub-Contracting		15,759.00	15,759.00			
Drift & Cut Timber						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Drill Hole Casing						
Drill Hole Cementing						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Supplies & Stockpiles						
Payroll Taxes						
Liability Insurance						
Drill Stations						
Assaying	99.00	873.00	972.00			
(8) Contingencies (specify):						
TOTALS	2,106.00	20,391.00	22,497.00	2,106.00	20,391.00	22,497.00

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Oct. 30, 1956 Payee American Smelting & Refining Co.

ORIGINAL SIGNED BY
Per NOLAN PROBST Title Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$1053.00

Signature [illegible]
(Authorized Certifying Officer)

Date 11/2/56 Vou. No. [illegible] 57-54

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. E-903 in accordance with the terms of the contract.

Signature Edward W. Buel #1053.00 Title Mining Engr. Date Oct. 25, 1956

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE.

Signature W. M. Inave Title Executive Officer Date OCT 31 1956

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(*a*) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(*b*) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(*c*) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of [illegible] 195[illegible] Docket No. DMEA [illegible] Contract No. [illegible]
Operator's Name [illegible] Minerals [illegible]
Address [illegible]

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Crosscutting								
Raising	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Shafts	[illegible]							
Winzes	[illegible]						[illegible]	[illegible]
Drilling: Core	[illegible]						[illegible]	[illegible]
Churn	[illegible]						[illegible]	[illegible]
Auger	[illegible]						[illegible]	[illegible]
Stripping	[illegible]						[illegible]	[illegible]
Trenching								
Test Pits								
Roads and Trails								
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TOTAL DISTRIBUTED COSTS		[illegible]		[illegible]				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								[illegible]
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		[illegible]		[illegible]				[illegible]

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date [illegible] Operator [illegible]

Per ORIGINAL SIGNED BY NOLAN PROBST Title [illegible]

REMARKS:

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

Edward W. Buel

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

AMERICAN SMELTING AND REFINING COMPANY
KEYSTONE UNIT
P.O.BOX J CRESTED BUTTE, COLO.

RECEIVED
NOV 8 1956
D.M.E.A.

October 10, 1956

Mr. W. M. Traver, Executive Officer
U. S. Dept. of Interior
Defense Minerals Exploration Administration
224 New Custom Building
Denver 2, Colorado

Re: Docket DMEA 3866
Contract Iom-2903

Dear Sir:

General Remarks:

Fifty-three (53) feet of timbered advance was made in the Union Drift Raise during September. Ninety-three tons of ore and 129 tons of waste was extracted during this period.

General Geology:

As mentioned in last months letter the raise was being flattened in dip to intersect the 2000 level above. At the point we left the hanging wall of the fissure 18 inches of ore was showing. The raise is being driven entirely in waste since our position on the fissure is between the hanging and foot wall ore veins.

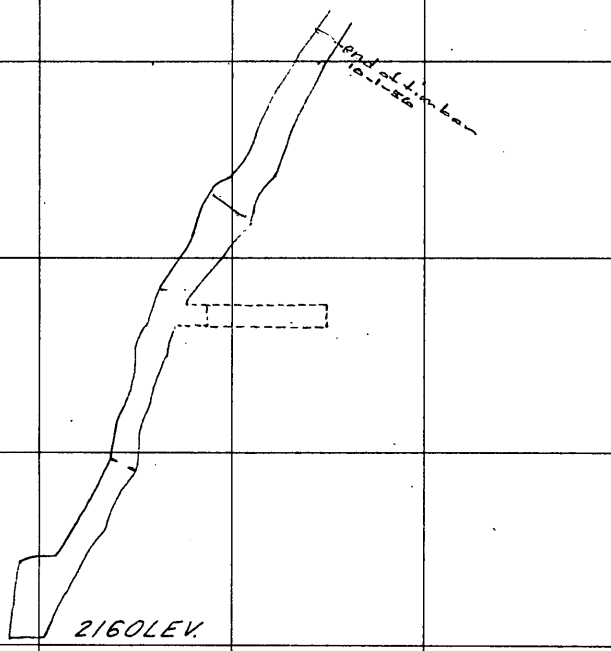
Very truly yours,

ORIGINAL SIGNED BY
NOLAN PROBST

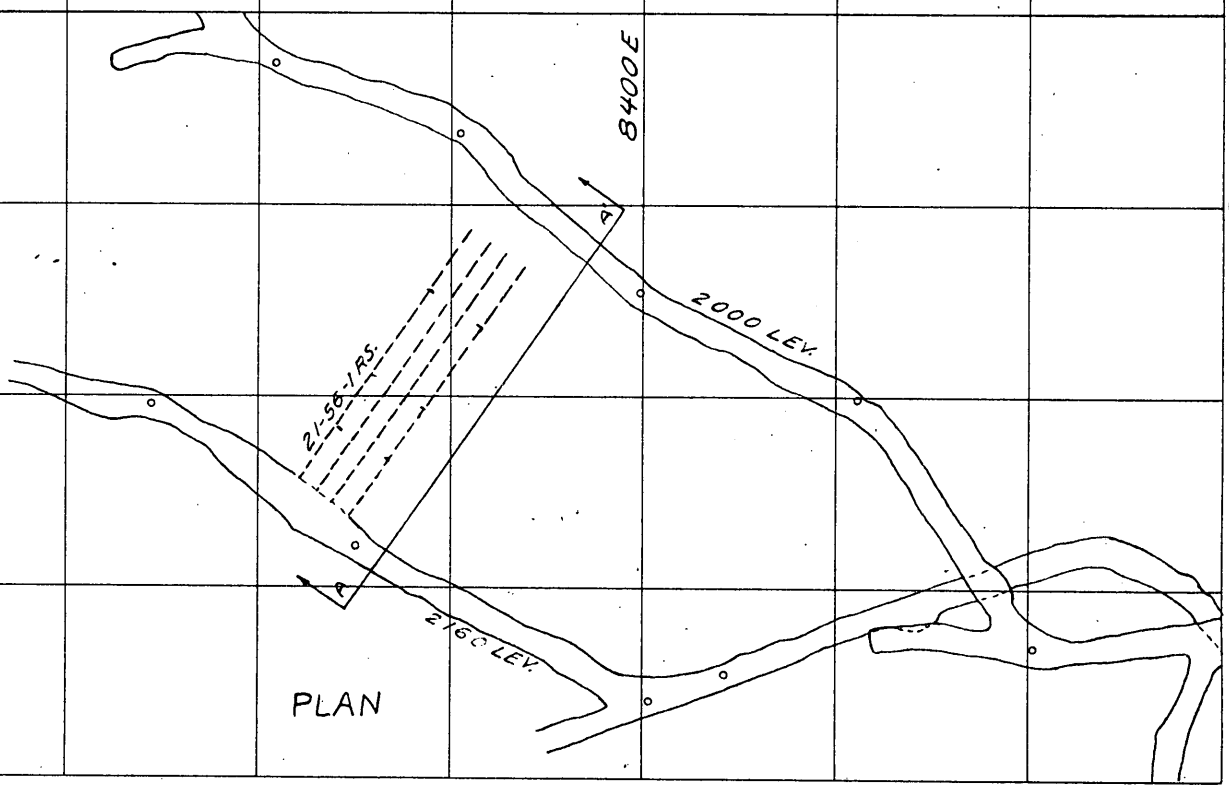
Nolan Probst, Supt.

N:rmc

Encls:



SECTION
A-A'



PLAN

MINE KEYSTONE LOCATION CRESTED BUTTE, COLO. LEVEL 21-56-1 RS.

GEOLOGY BY SURVEY G.H.B. SCALE 1" = 50' DATE Sept. 1956

	8248 HW-FW 5.2	0.05 0.05 0.05 0.05			0.05 0.05 0.1 0.05	5.4 HW-FW 8247		
	8242 HW-FW 5.0	0.05 0.05 0.1 0.05			0.05 0.05 0.05 0.05	6.0 HW-FW 8241		
					0.05 0.05 0.2 0.05	6.0 HW-FW 8240		
	8234 HW-FW 6.0	0.1 0.05 0.1 0.05			0.1 0.05 0.15 0.1	5.0 HW-FW 8235		
	8230 HW-FW 5.6	0.2 0.1 0.05 0.2			0.2 0.1 0.05 0.2	5.3 HW-FW 8231		
	8224 HW-FW 6.0	0.1 0.1 0.05 0.1			0.1 0.1 0.15 1.5	5.0 HW-FW 8225		
	8220 HW-FW 5.7	1.8 0.1 1.2 0.6			0.1 0.1 0.05 0.1	5.0 HW-FW 8221		
	8218 V 2.4	7.6 3.3 2.0 11.3			2.4 0.1 1.1 0.9	3.0 V 8217		
					3.2 3.4 0.6 5.3	1.5 V 8215		
	8214 V 1.8	12.9 16.6 1.1 8.4						
	8210 FW 4.7	0.9 0.1 0.15 1.2			0.9 0.1 0.15 1.8	2.0 V 8212		
	8209 V 2.1	7.0 8.6 0.7 10.3						
	8207 V 1.8	4.2 5.3 0.65 6.0			0.9 1.2 0.15 0.4	3.5 V 8211		
					3.4 0.8 0.2 0.1	2.9 V 8208		
					1.2 0.8 0.2 0.3	3.5 V 8205		
	8195 HW-FW 5.9	4.8 1.25 0.1 1.15			5.4 0.85 0.1 3.1	3.4 V 8194		
	8206 V 1.4	4.0 3.7 0.7 6.8						
					3.4 0.2 1.9 0.4	6.6 HW-FW 8163		
	8150 HW-FW 8.0	5.2 8.8 0.7 8.7			10.8 17.4 0.7 12.6	3.0 V 8148		
	8138 HW-FW 5.7	4.4 1.4 1.2 6.4			2.6 2.4 0.75 7.4	3.4 V 8143		
	8137 HW-FW 6.0	3.2 1.9 0.75 10.0						
	8154 V 3.0	4.0 2.6 1.15 7.5						
	8136 HW-FW 4.4	2.6 2.1 1.0 4.5			1.1 0.3 0.25 6.6	4.7 HW-FW 8135		
					0.9 0.2 0.25 5.8	6.0 HW-FW 8134		
					1.6 1.7 0.25 8.2	4.5 V 8133		
					1.9 0.4 0.6 6.2	4.6 V 8132		
	8129 HW-FW 6.0	2.2 1.0 0.5 2.2			1.6 2.2 0.9 7.0	4.0 HW-FW 8131		
	8128 HW-FW 5.3	0.7 1.8 0.3 3.8			2.4 3.6 0.65 3.7	5.7 HW-FW 8130		
	8125 V 4.0	1.3 0.8 0.35 5.6			1.6 2.3 0.35 15.3	5.0 V 8127		
	8126 V 4.0	1.0 1.8 0.2 4.0						
	No. Loc. Wide	Ag Pb. Cu. Zn			Ag Pb Cu Zn	Wide Loc. No.		

2160 LEVEL

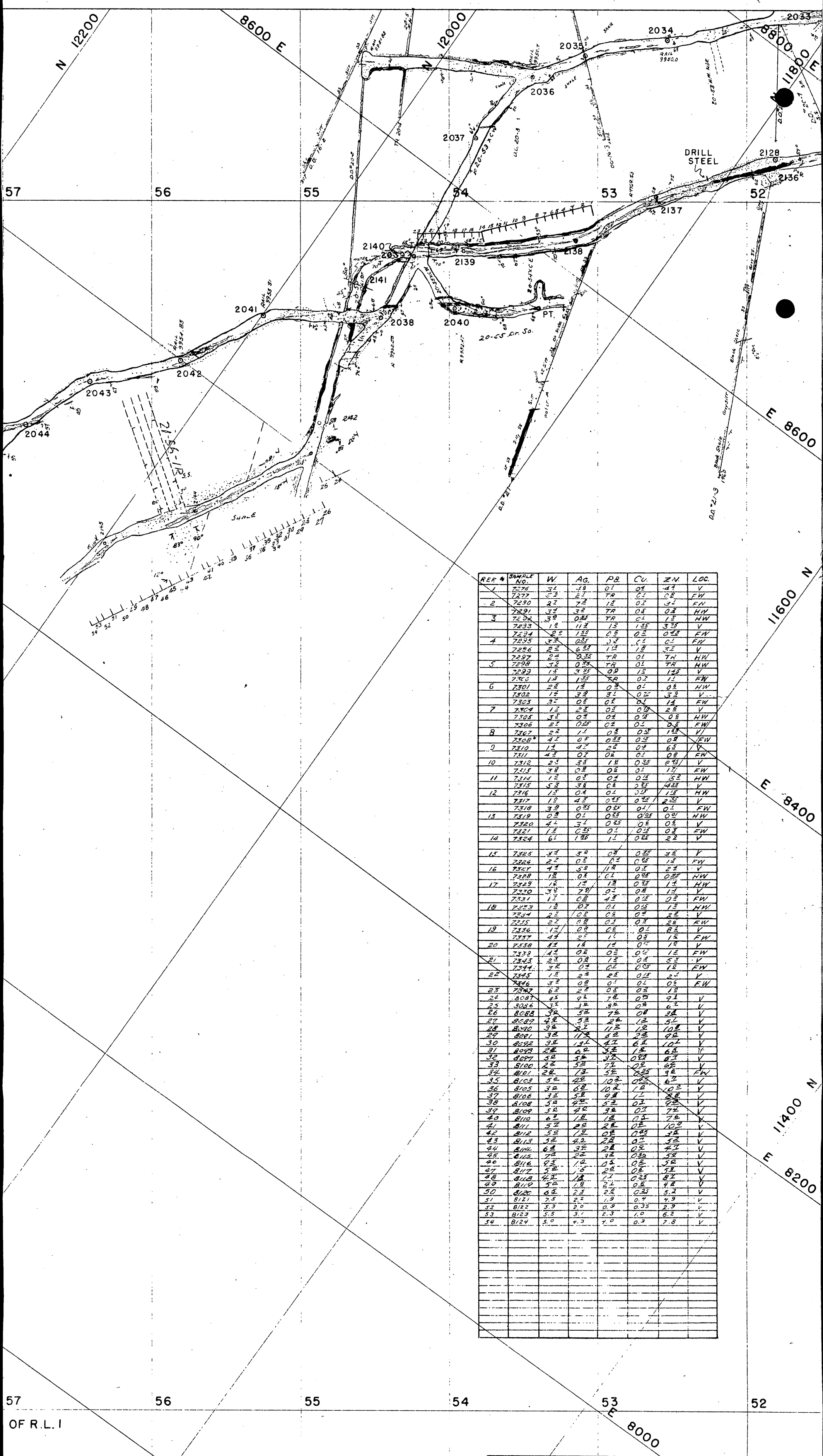
ASSAY MAP

LOOKING AT FOOTWALL

MINE KEYSTONE LOCATION CRESTED BUTTE, COLO. LEVEL 21-56-1 Rs.

GEOLOGY BY SURVEY G.H.B. SCALE 1" = 20' DATE Sept. 1956

RECEIVED
NOV 8 1956
D.M.E.A.



REF. #	SAMPLE NO.	W.	AG.	PB.	CU.	ZN.	LOC.
1	7276	3.1	.18	0.1	0.1	.41	V
	7277	5.8	2.1	TR	0.1	0.8	FW
2	7290	2.7	7.2	1.5	0.2	3.1	FW
	7291	3.4	3.2	TR	0.5	0.2	HW
3	7292	3.9	0.55	TR	0.1	1.5	HW
	7293	1.8	11.3	1.2	1.55	3.75	V
	7294	2.0	1.55	0.6	0.2	0.45	FW
4	7295	3.3	0.55	0.3	0.1	0.1	FW
	7296	2.2	6.83	1.15	1.8	3.2	V
	7297	2.4	0.35	TR	0.1	TR	HW
5	7298	3.2	0.33	TR	0.1	TR	HW
	7299	1.9	3.95	0.9	1.5	1.45	V
	7300	1.3	1.35	TR	0.2	1.1	FW
6	7301	2.5	1.4	0.8	0.1	0.6	HW
	7302	1.4	3.9	3.1	0.25	3.9	V
	7303	3.2	0.8	0.5	0.1	1.4	FW
7	7304	1.3	2.3	0.5	0.15	2.8	V
	7305	3.5	0.4	0.4	0.15	0.8	HW
	7306	2.7	0.35	0.2	0.1	0.5	FW
8	7307	2.2	1.1	0.3	0.15	1.65	V
	7308*	4.2	0.5	0.35	0.15	0.8	FW
9	7310	1.4	4.2	2.8	0.4	6.5	V
	7311	4.3	0.7	0.2	0.1	0.8	FW
10	7312	2.5	3.5	1.4	0.35	2.45	V
	7313	3.8	0.8	0.6	0.1	1.7	FW
11	7314	1.2	0.5	0.4	0.15	5.2	HW
	7315	5.3	3.8	0.8	0.25	4.55	V
12	7316	1.5	0.4	0.1	0.15	1.5	HW
	7317	1.9	4.3	0.45	0.45	2.35	V
	7318	3.8	0.35	0.25	0.1	0.1	FW
13	7319	0.8	0.1	0.25	0.05	0.01	HW
	7320	4.1	3.1	0.25	0.6	0.6	V
	7321	1.3	0.25	0.1	0.15	0.3	FW
14	7324	6.1	1.85	1.1	0.25	2.2	V
15	7325	3.4	3.2	0.4	0.35	3.6	V
	7326	2.7	0.2	0.1	0.25	1.3	FW
16	7327	4.4	5.2	1.2	0.3	2.4	V
	7328	1.8	0.6	0.1	0.08	0.35	HW
17	7329	1.6	1.4	1.3	0.25	1.4	HW
	7330	3.0	7.0	0.7	0.4	1.4	V
	7331	1.7	0.8	4.8	0.15	0.2	FW
18	7333	1.5	0.7	0.1	0.15	1.3	HW
	7334	2.5	0.2	0.9	0.3	2.2	V
	7335	2.2	0.8	0.3	0.3	2.2	FW
19	7336	1.4	0.8	0.6	0.1	8.2	V
	7337	4.4	2.2	1.1	0.3	1.8	FW
20	7338	1.4	1.8	1.4	0.15	1.9	V
	7339	4.4	0.2	0.2	0.15	1.2	FW
21	7343	2.3	0.8	1.2	0.2	5.3	V
	7344	3.2	0.4	0.1	0.05	1.9	FW
22	7345	1.5	2.3	2.3	0.15	2.1	V
	7346	3.3	0.8	0.1	0.1	0.6	FW
23	7347	6.2	2.2	0.5	0.2	1.9	
24	8087	4.5	9.2	7.2	0.25	9.3	V
25	8086	3.2	3.2	8.2	0.4	6.2	V
26	8088	3.2	5.2	7.6	0.8	3.2	V
27	8089	4.8	5.3	2.6	1.2	5.1	V
28	8090	3.2	8.7	11.2	1.9	10.8	V
29	8091	3.2	11.4	6.2	2.4	9.2	V
30	8092	3.2	13.1	4.7	6.2	10.1	V
31	8093	2.2	6.2	5.4	1.2	6.3	V
32	8097	5.2	5.6	3.7	0.23	8.7	V
33	8100	2.2	5.2	7.7	0.2	6.4	V
34	8101	2.2	1.3	5.4	0.25	3.2	FW
35	8103	5.2	4.4	10.2	0.45	6.7	V
36	8105	3.2	6.8	10.2	1.2	10.2	V
37	8106	3.5	5.8	9.8	1.1	8.8	V
38	8108	5.2	4.2	5.2	0.3	9.2	V
39	8109	5.2	4.2	3.6	0.7	7.4	V
40	8110	6.7	1.8	1.8	0.5	7.2	V
41	8111	5.7	2.0	2.2	0.2	10.2	V
42	8112	5.2	1.3	0.8	0.45	3.2	V
43	8113	5.2	4.2	2.8	0.7	5.2	V
44	8114	6.2	3.4	2.2	0.2	4.7	V
45	8115	7.2	2.2	3.2	0.32	5.2	V
46	8116	9.3	1.0	0.5	0.2	3.2	V
47	8117	5.2	1.5	2.2	0.2	5.2	V
48	8118	4.3	1.8	1.1	0.23	8.7	V
49	8119	5.0	1.8	2.1	0.6	4.2	V
50	8120	6.3	2.3	2.2	0.25	5.2	V
51	8121	7.5	2.2	1.9	0.4	4.9	V
52	8122	5.3	2.0	0.9	0.35	2.9	V
53	8123	5.5	3.1	2.3	1.0	6.2	V
54	8124	5.0	4.3	4.0	0.3	7.8	V

AMERICAN SMELTING & REFINING CO.
KEYSTONE UNIT

2160 DRIFT NORTH

PROGRESS, GEOLOGY & ASSAY MAP

SCALE	DR. W. PILL	DATE	FILE
1" = 50'	TR.	Sept. 1956	
	CH.		
	APP.		

RECEIVED
NOV 8 1956
D.M.E.A

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

ADMINISTRATIVE OFFICE
REGION III
SEP 28 1956
BUREAU OF MINES
DENVER, COLORADO

224 New Customhouse
Denver 2, Colorado

September 28, 1956

FINAL DISTRIBUTION
MADE OCT 5 1956

Memorandum

RECEIVED
OCT - 3 1956

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3866 (Lead-Zinc-Copper) Contract Idm-E 903, American Smelting and Refining Company (Keystone mine) Gunnison County, Colorado - Operator's Monthly Progress Report for the month of August, 1956

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Operator's Narrative Report, and Engineer's Report for the above period.

It is deemed that the Operator has complied with the intent of the contract, and the work for which payment is recommended is acceptable to the Government. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks

Date of Report----------September 10, 1956
Date Received in Field Office----------September 18, 1956
Date Received in Region Office---------September 27, 1956

W. M. TRAVER

W. M. Traver

Enclosures
JDC:jy
cc: MF-104 File E903
Sec. Op. Comm. (2)
Shaw (2)
Harshman)
Townsend) w/copy engr's report
Chron.

DEPARTMENT THE INTERIOR
SEP 27 1956
RECEIVED REG
DENVER, CO
OCT - 3 1956

REGION III

Building 20
Denver Federal Center
Denver 2, Colorado
September 26, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw
Supervising Mining Engineer

From: R. L. Bohmer

Subject: DMEA 3566 (Lead-zinc-copper) Contract Ldz-2903, American Smelting and Refining Co. (Keystone mine) Gunnison County, Colorado -- Progress report for August 1956

The progress reported this period under the subject short-form contract -- 32 feet of advance in the 21-56-1 Raise on the Union vein -- was verified during an inspection of the Keystone mine on Sept. 12, 1956.

On the date of inspection, the project raise had been advanced to a height of approximately 125 feet above the back of the 2160 level drift; 112 feet of this distance was timbered. The operator previously has reported and been reimbursed for 80 feet of the latter distance. The 32 feet of timbered raise that the operator reports for the August period, therefore, is valid and proper. The August advance is posted on the plan and section maps that accompany the operator's report.

The advance of the project raise was curtailed somewhat during the reporting period due to an unusually high turnover of the contract labor employed in this heading. The project heading was halted during the period while the operator completed a sublevel crosscut from the raise to locate the true footwall of the Union vein zone. The crosscut was extended 39 feet from the raise and a test hole was drilled some 7 feet beyond that point. A series of reverse-dipping mineralized shears were intersected by the crosscut but neither a major structure nor a definite footwall to the zone was encountered.

The operator reports the analyses for 14 samples taken from along the August advance of the project raise. The locations, chemical analyses, and other data for these new samples have been posted on the assay map that accompanies the operator's report.

During August, 282 tons of exploration ore from the 21-36-1 Raise -- averaging 2.2 oz. Ag, 1.4% Pb, 0.5% Cu, and 2.4% Zn -- was concentrated in the Keystone mill. This production is subject to Government royalty.

The project work completed during the August period conforms to the specifications stipulated in the contract. The $1,296.00 total costs reported on the operator's MF-104 form for this period -- equivalent to 32 feet of timbered raise at the agreed upon unit price of $39.00 per foot plus the analysis of 14 individual samples at $3.00 each -- are approved. Reimbursement to the operator of 50 percent of the approved reported costs, or $648.00, is recommended.

R. L. Bolmer

R. L. Bolmer
Mining Engineer

RLB/mr
cc: 6
Idm-3903
Chron

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
OCT - 8 1956

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of August, 1956 Docket No. DMEA [illegible] Contract No. [illegible]
Operator's Name [illegible] Minerals [illegible], Pb, Cu
Address [illegible]
Contract Amount, $ 107,220. Government Participation: ____% Amount, $ [illegible]

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling [illegible]	1,290	3,120.00	4,360.00	10/16/56	R.P.K.	
Bulldozing						
Crosscutting						
Drifting [illegible]		15,750.00	15,750.00			
[illegible]						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Drill [illegible]						
Drill [illegible]						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
Drill [illegible]						
[illegible]	62.00	211.00	273.00			
(8) Contingencies (specify):						
TOTALS	1,290.00	19,101	20,3[illegible]	1,290.00	19,101.00	20,391.00

[illegible]rtify that the above bill is correct and just and that payment therefor has not [illegible]ceived.

[illegible] Oct. 10, 1956 *Payee [illegible] Co.

ORIGINAL SIGNED BY
Per NOLAN PROBST Title [illegible]

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$645.00

Signature [illegible]
(Authorized Certifying Officer)

Date 10/3/56 Vou. No. DMEA 57-41

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. 6903 in accordance with the terms of the contract.

Signature R. R. Bolmer, $645.00 Title Mining Engineer Date SEP 20 1956

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W. M. Jarver Title Executive Officer Date SEP 28 1956

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
OCT - 8 1956

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of August, 1956 Docket No. DMEA [illegible] Contract No. [illegible]
Operator's Name [illegible] Minerals [illegible]
Address [illegible]

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Surveying	Ft.			15,750.00	450	35.00	2,450	35.00
Drifting								
Crosscutting								
Raising	Ft.	1,248	32	4,368.00	112	39.00	320	39.00
Shafts: Inch or Ft.								
Winze Sinking	Ft.						225	6.00
Drilling: Core	Ft.						2,000	4.60
Channel Sinking	Ft.						200	2.00
Trench Cleaning	Ft.						200	2.00
Exploration Pits	Ft.						10	100.00
Timbering								
Test Pits								
Roads and Trails								
Surveying	Ac.	48.00	16	273.00	91	3.00	400	3.00
Total Distributed Costs		1,296.00		20,391.00				Total Costs Authorized by Contract
Operating Equipment Purchased								None
Initial Rehabilitation and Repairs								0
New Buildings, Improvements, etc.								0
								0
Total Costs		1,296.00		20,391.00				107,200

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date Oct. 10, 1956 Operator [illegible] Co., Lightons Unit.

ORIGINAL SIGNED BY
Per NOLAN PROBST Title [illegible]

Remarks:

→ NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

R. G. Palmer

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported, with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

ATLANTIC REFINING AND MINING COMPANY
KEYSTONE UNIT
P.O. BOX J CRIPPLE BUTTE, COLO.

September 10, 1956

RECEIVED
OCT - 3 1956

Mr. W. A. Traver, Executive Officer
U. S. Dept. of Interior
Defense Minerals Exploration Administration
224 New Custom Bldg.
Denver 2, Colorado

RE: Docket DMEA 3866
Contract Idm-E903

Dear Sir:

General Remarks:

Thirty-two (32) ft. of advance was made in the Union Drift raise during August. In this period 282 tons of ore and 14 tons of waste was extracted.

General Geology:

39 ft. of footwall crosscut (mentioned in the previous letter) did not reveal any major footwall structure. A reverse dipping shear pattern was present thru the entire X-Cut. Mineralization was almost totally absent in the X-Cut.

The raise is being flattened in dip to intersect the ore shown on the level above.

Very truly yours,

ORIGINAL SIGNED BY
NOLAN PROBST

Nolan Probst, Supt.

NP:rmc

Encls:

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

RECEIVED SEP 13 1956

224 New Customhouse
Denver 2, Colorado

September 6, 1956

FINAL DISTRIBUTION
MADE SEP 11 1956

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3866 (Lead-Zinc-Copper) Contract Idm-E903, The American Smelting and Refining Company (Keystone mine) Gunnison County, Colorado - Operator's Monthly Progress Report for the month of July, 1956

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Operator's Narrative Report, and Engineer's Report for the above period.

It is deemed that the Operator has complied with the intent of the contract, and the work for which payment is recommended is acceptable to the Government. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore, we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks

Date of Report- - - - - - - - - - - - - - - August 4, 1956
Date Received in Field Office- - - - - - August 23, 1956
Date Received in Region Office- - - - - August 29, 1956

W. M. TRAVER

W. M. Traver

Enclosures
JDC:jy
cc: MF-104 File E903
Sec. Op. Comm. (2)
Shaw (2)
Chron.

REGION III

Building 20
Denver Federal Center
Denver 2, Colorado
August 29, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw JFS
Supervising Mining Engineer

From: R. L. Bolmer

Subject: DMEA 3866 (Lead-zinc-copper) Contract Ida-8903, American Smelting and Refining Co. (Keystone mine) Gunnison County, Colorado -- Progress report for July 1956

The progress reported this period under the subject short-form contract -- 45 feet of advance in the 21-56-1 Raise on the Union vein -- was verified during an inspection of the Keystone mine on August 7, 1956.

On the date of inspection, the 21-56-1 Raise had been advanced to a point approximately 90 feet above the back of the 2160 level drift; 80 feet of this distance was timbered. The operator previously has reported and been reimbursed for 35 feet of the latter distance. The 45 feet of timbered raise that the operator reports for the July period, therefore, is valid and proper. The July advance is posted on the plan and section maps that accompany the operator's report.

The project raise was started on a streak of high grade sulfide mineral which was believed to lie along the true footwall of the Union vein zone. In this vicinity, the zone is as much as 40 feet in width. The sulfide streak, as exposed during the July advance of the project raise, steepened considerably and deviated from a straight-line projection to a mineralized section of the vein opened along the 2000 level Union drift (see operator's current progress map and sections). The latter mineralization is known to lie along the true footwall of the zone. The operator has started a short sublevel crosscut into the footwall of the sulfide streak followed by the raise to determine, if possible, its true location within the zone. It is probable also that test holes will be drilled into the hanging wall of the sulfide streak before project raising is continued.

The operator reports the analyses for 12 samples taken from along the July advance of the project raise. The locations, analyses, and other data for these 12 new samples have been posted on the assay map that accompanies the operator's report.

During the month of July, 284 tons of exploration ore from the 21-56-1 Raise -- averaging 2.2% Ag, 2.2% Pb, 0.7% Cu, and 4.4% Zn -- was concentrated in the Keystone mill. This production is subject to Government royalty.

The project work completed during the July period conforms to the specifications stipulated in the contract. The $1,791.00 total costs reported on the operator's MF-104 forms for this period -- equivalent to 45 feet of timbered raise at the agreed upon unit price of $39.00 per foot plus the analysis of 12 individual samples at $3.00 each -- are approved. Reimbursement to the operator of 50 percent of the approved reported costs, or $895.50 is recommended.

R. L. Bolmer

R. L. Bolmer
Mining Engineer

RLB/mr
cc: 6
IAm-2903
Chron

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

RECEIVED
SEP 13 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of July, 1956 Docket No. DMEA 3066 Contract No. Idm-5903
Operator's Name American Smelting and Refining Co. Minerals Zinc, Lead, Copper
Address 120 Broadway, New York 5, New York
Contract Amount, $ 107,220. Government Participation: 50% Amount, $ 53,610.

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) [redacted] Short Form Contracts:						
[redacted] Raising	1,755.00	1,365.00	3,120.00	10/3/56	WPR	
[redacted]						
Cr[redacted]						
Drifting [redacted] &/or Kcutting		15,750.00	15,750.00			
Drift & Kcut Timbering						
(2) [redacted]						
[redacted]						
[redacted]						
Te[redacted]						
(3) O[redacted]						
Ti[redacted]						
E[redacted]						
P[redacted]						
T[redacted]						
Drill Hole Casing						
Drill Hole Cementing						
(4) O[redacted]						
R[redacted]						
[redacted]						
D[redacted]						
(5) In[redacted]						
(6) N[redacted]						
(7) [redacted]						
R[redacted]						
Sa[redacted]						
Pa[redacted]						
Li[redacted]						
Drill Sections						
Assaying	36.00	195.00	231.00			
(8) C[redacted]						
TOTALS	1,791.00	17,310.00	19,101.00	1,791.00	17,310.00	19,101.00

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Aug. 4, 1956 *Payee American Smelting & Refining Co.

ORIGINAL SIGNED BY
Per NOLAN PROFIT Title Superintendent

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 895-50

Signature [signature]
(Authorized Certifying Officer)

Date 9/7/56 Vou. No. DMA 57-30

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. 5903 in accordance with the terms of the contract.

Signature R. L. Palmer, $895.50 Title Mining Engineer Date AUG 28 1956

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W. M. Lowry Title Executive Officer Date SEP 6 1956

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
SEP 13 1956

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of July 1956 Docket No. DMEA 3006 Contract No. Idm-1903
Operator's Name American Smelting and Refining Co. Minerals Lead, Zinc, Copper
Address 120 Broadway, New York 5, New York

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting &/or crosscutting	Ft.			15,750	459	35.00	2,450	35.00
Crosscutting								
Raising	Ft.	1,755	45	3,120	80	39.00	200	39.00
Drift or Rcut								
Timbering	Ft.						245	6.00
Drilling: Core	Ft.						2,000	4.00
Casing	Ft.						200	2.00
Cementing	Ft.						200	2.00
Drill Sta.	Ea.						10	100.00
Trenching								
Test Pits								
Roads and Trails								
Assaying	Ea.	36.00	12	231	77	3.00	400	3.00
TOTAL DISTRIBUTED COSTS		1,791.00		19,101.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								None
Initial Rehabilitation and Repairs								"
New Buildings, Improvements, etc.								"
								"
TOTAL COSTS		1,791.00		19,101.00				107,320

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

REMARKS:

Date Aug. 4, 1956 Operator American Smelting & Refining Co.

ORIGINAL SIGNED BY
Per NOLAN PROBST Title Superintendent

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

R. L. Bolmer

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

K-7.7

RRB

AMERICAN SMELTING AND REFINING COMPANY
KEYSTONE UNIT
P.O. Box 3 CRESTED BUTTE, COLO.

RECEIVED
SEP 12 1956

August 8, 1956

Mr. W. A. Traver, Executive Officer
U. S. Dept. of Interior
Defense Minerals Exploration Administration
224 New Custom House
Denver 2, Colorado

Re: Docket DMEA 3866
Contract Idm-E903

Dear Sir:

General Remarks:

Forty-five (45) ft. of advance was made in the Union Drift Raise during July. In this period 264 tons of ore was extracted.

General Geology:

The raise has been driven to follow the best ore, this has gradually steepened the section until it appears we are now on the hangingwall of the fissure. During the last 10 ft. of advance the vein section has pinched to 12 inches.

At the point toward which we are driving on the 2000 Union Vein the ore lies on the footwall of the fissure. A projection between this point and the 2160 Level Union vein shows our present position in the raise to be well in the hanging-wall of the fissure.

A small cross cut is being driven in the footwall in an attempt to locate our position within the fissure.

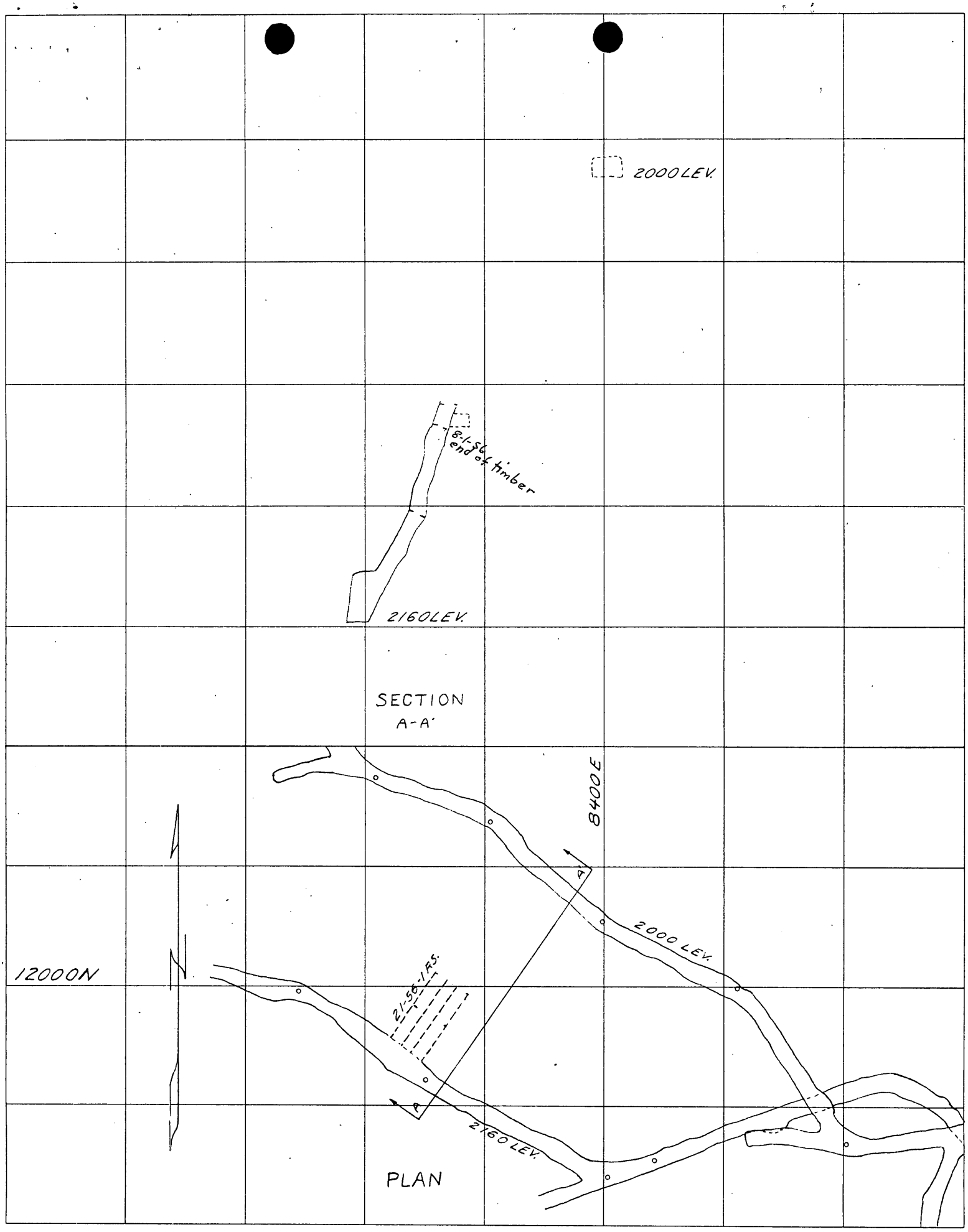
Very truly yours,

ORIGINAL SIGNED BY
NOLAN PROBST

Nolan Probst, Supt.

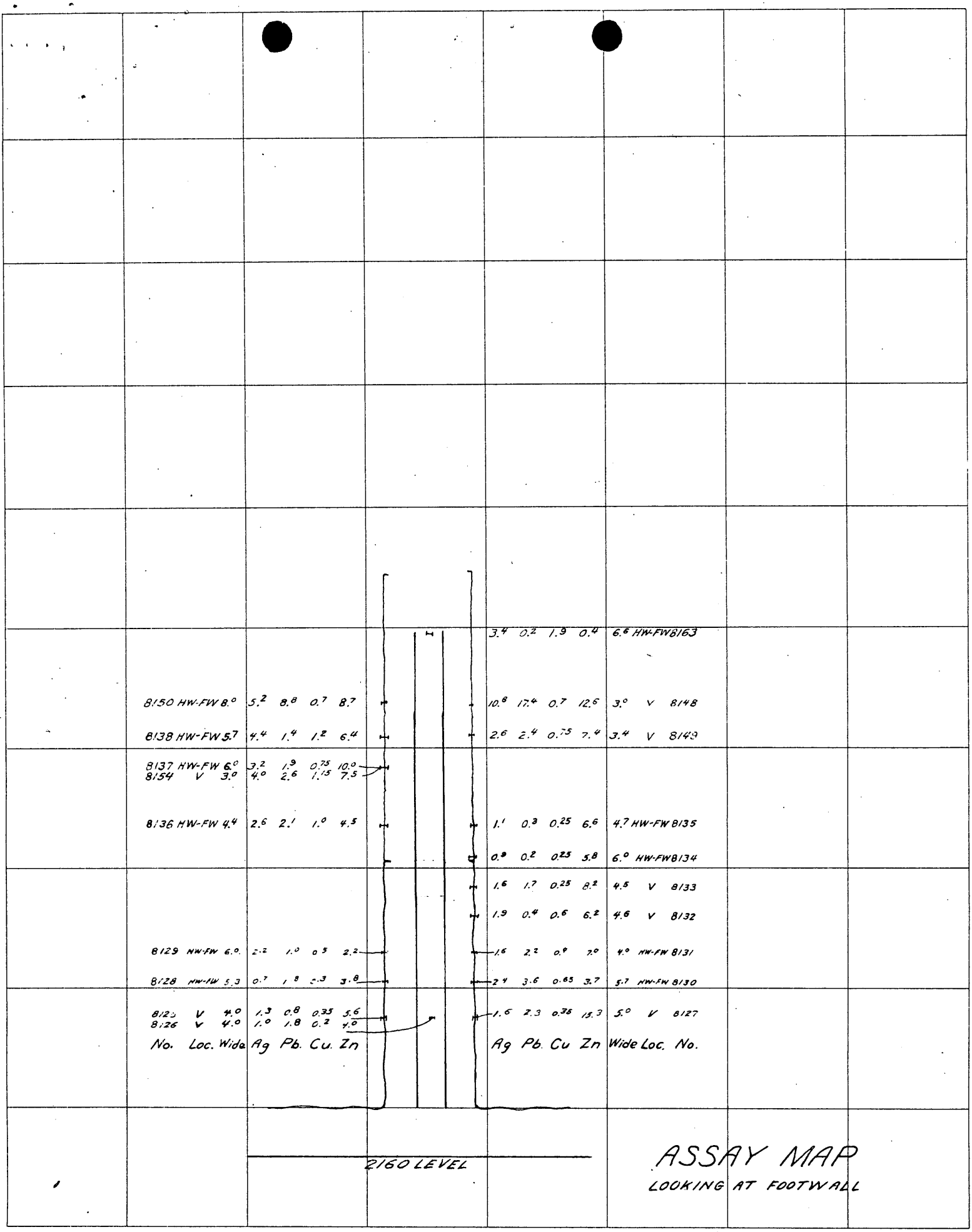
N:rmc

Encls.



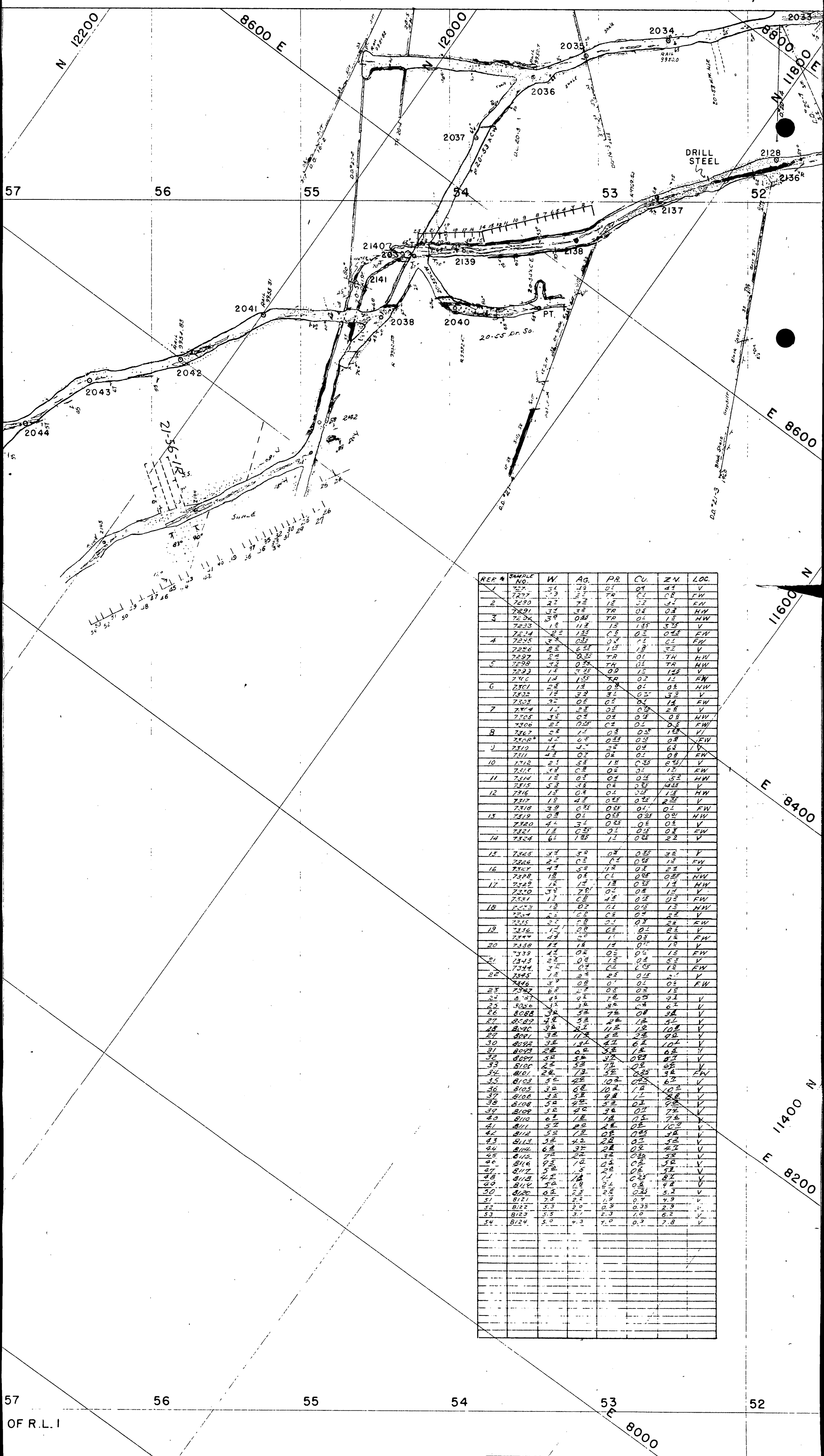
MINE KEYSTONE LOCATION CRESTED BUTTE, COLO. LEVEL 21-56-1 RS.

GEOLOGY BY SURVEY G.H.B. SCALE 1" = 50' DATE July 1956



MINE KEYSTONE LOCATION CRESTED BUTTE, COLO. LEVEL 21-56-1 Rs.

GEOLOGY BY SURVEY G.H.B. SCALE 1" = 20' DATE July 1956



REF #	SAMPLE NO.	W.	AG.	PB.	CU.	ZN.	LOC.
1	7277	3.1	.19	0.1	0.4	4.1	V
	7277	3.9	2.7	TR	0.1	0.8	FW
2	7290	2.7	7.2	1.5	0.2	3.1	FW
	7291	3.1	3.2	TR	0.5	0.2	HW
3	7292	3.9	0.35	TR	0.1	1.5	HW
	7293	1.8	11.3	1.2	1.35	3.75	V
	7294	2.9	1.35	0.6	0.2	0.45	FW
4	7295	3.3	0.35	0.1	0.1	0.1	FW
	7296	2.2	6.25	1.5	1.8	3.2	V
	7297	2.4	0.35	TR	0.1	TR	HW
5	7298	3.3	0.35	TR	0.1	TR	HW
	7299	1.5	3.35	0.9	1.5	1.25	V
	7300	1.3	1.35	TR	0.2	1.1	FW
6	7301	2.5	1.4	0.8	0.1	0.6	HW
	7302	1.4	3.2	3.1	0.3	3.9	V
	7303	2.2	0.6	0.2	0.1	1.4	FW
7	7304	1.1	2.3	0.5	0.19	2.6	V
	7305	3.5	0.4	0.1	0.15	0.8	HW
	7306	2.7	0.35	0.1	0.1	0.5	FW
8	7307	2.8	1.1	0.3	0.15	1.85	V
	7308	4.2	0.5	0.35	0.15	0.9	FW
9	7310	1.4	4.2	2.9	0.4	6.5	V
	7311	4.3	0.7	0.2	0.1	0.8	FW
10	7312	2.5	3.5	1.8	0.35	2.95	V
	7313	3.3	0.8	0.2	0.1	1.7	FW
11	7314	1.2	0.5	0.1	0.15	.52	HW
	7315	5.3	3.8	0.2	0.25	4.35	V
12	7316	1.5	0.3	0.1	0.15	1.5	HW
	7317	1.9	4.3	0.15	0.25	2.35	V
	7318	3.8	0.35	0.25	0.1	0.1	FW
13	7319	0.9	0.1	0.25	0.05	0.01	HW
	7320	4.1	3.1	0.25	0.6	0.6	V
	7321	1.3	0.25	0.1	0.15	0.3	FW
14	7324	6.1	1.85	1.1	0.25	2.2	V
15	7325	3.3	3.2	0.3	0.35	3.6	V
	7326	2.2	0.2	0.1	0.25	1.5	FW
16	7327	4.4	5.2	1.2	0.3	2.1	V
	7328	1.8	0.2	0.1	0.08	0.35	HW
17	7329	1.5	1.4	1.8	0.25	1.4	HW
	7330	3.9	7.0	0.1	0.2	1.4	V
	7331	1.7	0.8	4.8	0.15	0.2	FW
18	7333	1.3	0.7	0.1	0.15	1.3	HW
	7334	2.3	0.8	0.6	0.4	2.2	V
	7335	2.7	0.8	0.1	0.3	2.2	FW
19	7336	1.1	0.8	0.6	0.1	8.2	V
	7337	4.4	2.0	1.1	0.5	1.2	FW
20	7338	1.1	1.8	1.1	0.15	1.9	V
	7339	4.1	0.2	0.2	0.2	1.2	FW
21	7343	2.3	0.8	1.2	0.2	5.3	V
	7344	3.5	0.1	0.1	0.05	1.9	FW
22	7345	1.5	2.2	2.3	0.15	2.1	V
	7346	3.9	0.8	0.1	0.1	0.3	FW
23	7347	6.2	2.2	0.5	0.2	1.9	
24	8087	4.2	9.2	7.8	0.15	9.2	V
25	8090	3.2	3.6	3.0	0.4	6.2	V
26	8088	3.2	5.2	7.6	0.8	3.2	V
27	8089	4.2	5.2	2.6	1.2	5.1	V
28	8090	3.2	8.1	11.2	1.2	10.8	V
29	8091	3.2	11.4	5.2	2.4	9.2	V
30	8092	3.2	13.1	4.7	6.2	10.1	V
31	8093	2.8	6.2	5.4	1.2	6.5	V
32	8097	5.2	5.6	3.7	0.23	8.7	V
33	8100	2.2	5.2	7.1	0.2	6.4	V
34	8101	2.2	7.3	5.4	0.25	9.6	FW
35	8103	5.2	4.4	10.2	0.25	6.7	V
36	8105	3.2	6.8	10.2	1.2	10.2	V
37	8106	3.5	5.8	9.8	1.1	8.8	V
38	8108	5.2	4.2	5.2	0.3	9.2	V
39	8109	5.2	4.2	9.6	0.3	7.4	V
40	8110	6.8	1.8	1.8	0.5	7.6	V
41	8111	5.7	2.2	2.8	0.2	16.3	V
42	8112	5.2	1.3	0.4	0.25	3.8	V
43	8113	3.2	4.2	2.8	0.7	5.2	V
44	8114	6.8	3.4	2.8	0.9	4.7	V
45	8115	7.2	2.2	3.2	0.32	5.2	V
46	8116	9.5	1.2	0.5	0.2	5.2	V
47	8117	5.2	1.5	2.2	0.6	5.8	V
48	8118	4.3	1.8	1.1	0.25	8.7	V
49	8119	5.2	1.8	2.1	0.5	4.8	V
50	8120	6.5	2.5	2.8	0.25	5.3	V
51	8121	7.5	2.2	1.9	0.4	4.9	V
52	8122	5.3	2.0	0.9	0.35	2.9	V
53	8123	5.5	3.1	2.3	1.0	6.2	V
54	8124	5.0	4.3	1.0	0.3	7.8	V

AMERICAN SMELTING & REFINING CO.
KEYSTONE UNIT

2160 DRIFT NORTH

PROGRESS, GEOLOGY & ASSAY MAP

SCALE	DR. W. PILL TR. CH. APP.	DATE	FILE
1" = 50'		July 1956	

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D.C.

RECEIVED
AUG - 6 1956

234 New Customhouse
Denver 2, Colorado

July 26, 1956

FINAL DISTRIBUTION

MADE AUG 2 1956

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 1066 (Lead-Zinc-Copper) Contract Idm-E983, American Smelting and Refining Company (Keystone mine) Gunnison County, Colorado - Operator's Monthly Progress Report for the month of June, 1956

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Operator's Narrative Report, and Engineer's Report for the above period.

It is deemed that the Operator has complied with the intent of the contract, and the work for which payment is recommended is acceptable to the Government. No documentation is required for work performed under contracts prepared on Form MF-208A, therefore, we recommend that payment be made for 90 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks

Date of Report---------- July 2, 1956
Date Received in Field Office---------- July 19, 1956
Date Received in Region Office---------- July 24, 1956

W. M. TRAVER

W. M. Traver

Enclosures
JDC:jy
cc: MF-104 File E983
Sec. Op. Comm. (2)
Shaw (2)
Chron.

DMEA
Date Rec'd
JUL 24 1956
BUREAU OF MINES
Denver, Colorado

REGION III

Memorandum

Building 20
Denver Federal Center
Denver 2, Colorado
July 23, 1956

RECEIVED
AUG - 6 1956

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw for JFS
Supervising Mining Engineer

From: R. L. Bolmer

Subject: DMEA 3366 (Lead-zinc-copper), Contract Idm_E903, American Smelting and Refining Co. (Keystone-mine), Gunnison County, Colorado--Progress report for June 1956

The progress reported this period under the subject short-form contract--35 feet of raising on the Union vein from the 2160 level of the Keystone mine--was verified during an inspection of the property July 9, 1956.

The 21-53-1 project raise was started June 5, 1956 at a point along the 2160 level Union drift approximately 96 feet northwest of the 21-53 W. crosscut. On the date of inspection, the raise had been advanced 49 feet above the rail in the Union drift or 41 feet from the back of that drift. The raise had been timbered to a height of 35 feet above the back of the drift. This latter footage is the amount of raising progress that the operator correctly reports for the June period.

The raise was driven on the true footwall of the Union vein zone. It was excavated to an overall cross section of approximately 5 by 15 feet. The center of the excavated section was supported with 8- by 8-inch cribbing that had been preframed on the surface from creosoted railroad ties. This center compartment was approximately 52 by 42 inches in the clear inside the timber. It was provided with a ladderway, platforms, and a timber slide and served as access for water and compressed air lines. The outside of the cribbing on either end of the manway compartment was tightly covered with 3- by 8-inch lagging. The remainder of the excavated section of the raise to either side of central timbered manway was not otherwise supported and served as waste

pass compartments. Each of these outside compartments was approximately 5 by 5 feet in cross section and was provided with a draw chute at the drift level. Some 325 tons of ore averaging 2.9 oz/ton Ag., 2.7% Pb, 0.5% Cu, and 5.0% Zn, which had been recovered from the 41 feet of raise driven during the June period, was concentrated in the Keystone mill.

Also during the June period, the 2160 level Union drift was advanced an additional 32 feet on the operator's account to a point some 185 feet northwest of the 21-55 W. Crosscut. The initial 135 feet of this drift (to a point 39 feet beyond the raise) was completed under stage I of the contract. The vein, as exposed along the June advance of the Union drift, continued mineralized over widths ranging from 5 to 7.5 feet. During the month, some 186 tons of ore from this heading averaging 3.0 oz/ton Ag, 1.6% Pb, 0.4% Cu, and 3.3% Zn were concentrated in the Keystone mill.

The analyses of 11 additional samples (4 from the Union drift plus 7 from the 21-58-1 Raise) are posted on the operator's June progress maps bringing the total reported thus far to 92. This period the operator claims reimbursement for 12 analyses bringing the total number claimed thus far to 65.

The project work reported by the operator for the June period was completed according to the specifications stipulated in the contract. The $1,401.00 total costs reported for this period on the operator's MF-104 forms--equivalent to 35 feet of timbered raise at the agreed upon unit price of $39.00 per foot plus 12 chemical analyses at $3.00 each--are approved. Reimbursement to the operator of 50 percent of the approved reported costs, or $700.50, is recommended.

R. L. Bolmer

R. L. Bolmer
Mining Engineer

RLB:ah

cc: 6
Idm-E903
Chron.

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

RECEIVED
AUG - 6 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of June, 1956 Docket No. DMEA 3866 Contract No. Idm-E903
Operator's Name American Smelting & Refining Co. Minerals Lead, Zinc, Copper
Address 120 Broadway, New York 5, New York
Contract Amount, $ 107,220. Government Participation: 50 % Amount, $ 53,610.

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) ~~Long Form~~ Short Form Contracts:						
~~Rotary~~						
~~Churn~~ Raising	1,365.00	-	1,365.00	10/3/56	WPK	
~~Shooting~~						
Drifting &/or Xcutting		15,750.00	15,750.00			
Drift & Xcut Timber						
(2) ~~Long Hole Supplies~~:						
~~Rock~~						
~~Supplies~~						
~~Technical Service~~						
(3) ~~Operating Materials & Supplies~~						
~~Timber~~						
~~Explosives~~						
~~Fuse~~						
~~Tools~~						
Drill Hole Casing						
Drill Hole Cementing						
(4) ~~Operating Equipment~~						
~~Rails~~						
~~Buckets~~						
~~Equipment~~						
(5) ~~Installation of Operating Equipment~~						
(6) ~~Non-Operating Equipment, etc.~~						
(7) ~~Miscellaneous~~						
~~Repairs & Equipment~~						
~~Sampling & Assaying~~						
~~Engineering~~						
~~Liability Insurance~~						
Drill Stations						
Assaying	36.00	159.00	195.00			
(8) ~~Contingencies (Specify)~~						
TOTALS	1,401.00	15,909.00	17,310.00	1,401.00	15,909.00	17,310.00

I certify that the above bill is correct and just and that payment therefor has not been received.
Date July 2, 1956 *Payee American Smelting & Refining Co.
Per Nolan Probst Title Superintendent

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 700.50

Signature
(Authorized Certifying Officer)

Date 7/27/56 Vou. No. DMA 59-14

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. E 903 in accordance with the terms of the contract.

Signature R. P. Bolmer, $700.50 SWH for JFS Title Mining Engineer Date JUL 20 1956

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W. M. Weaver Title Executive Officer Date JUL 26 1956

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
AUG - 6 1956

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of June 1956 Docket No. DMEA 3866 Contract No. Idm-B903
Operator's Name American Smelting & Refining Co. Minerals Lead, Zinc, Copper
Address 120 Broadway, New York 5, New York

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting &/or Crosscutting	Ft.			15,750.00	450	35.00	2,450	35.00
~~Crosscutting~~								
Raising	Ft.	1,365.00	35	1,365.00	35	39.00	200	39.00
~~Shafts~~ Drift or Xcut								
~~Winzes~~ Timbering	Ft.						245	6.00
Drilling: Core	Ft.						2,000	4.60
~~Churn~~ Casing	Ft.						200	2.00
~~Auger~~ Cementing	Ft.						200	2.00
~~Stripping~~ Drill Sta.	Ea.						10	100.00
~~Trenching~~								
Test Pits								
Roads and Trails								
Assaying	Ea.	36.00	12	195.00	65	3.00	400	3.00
TOTAL DISTRIBUTED COSTS		1,401.00		17,310.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								None
Initial Rehabilitation and Repairs								"
New Buildings, Improvements, etc.								"
								"
TOTAL COSTS		1,401.00		17,310.00				107,220.00

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

REMARKS:

Date July 2, 1956 Operator American Smelting & Refining Co.

Per Nolan Probst for Title Supterintendent

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

R. L. Bolmer

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

K-7.7

RRB

AMERICAN SMELTING AND REFINING COMPANY
EASTERN UNIT
P. O. BOX [illegible] CRESTED BUTTE, COLO.

RECEIVED
AUG - 6 1956

July 13, 1956

Mr. L. M. Trover, Executive Officer
U. S. Dept. of Interior
Defense Minerals Exploration Administration
224 New Custom House
Denver 2, Colorado

RE: DOCKET DM A 3866
REPORT Idm-5903

Dear Sir:

General Remarks:

35 ft. of raise was driven on the Union Vein during June. 325 tons of ore was extracted from the raise during the month. During the same period 186 tons of ore was extracted from the drift which was advanced 32 ft. on our account.

General Geology:

The raise is located 8 ft. north west of survey station 5144. At this point a definite split in the vein was apparent, however, raising was started and has continued on the footwall split. Vein widths have been in excess of 4 ft. with numerous veinlets trending toward the hanging wall split.

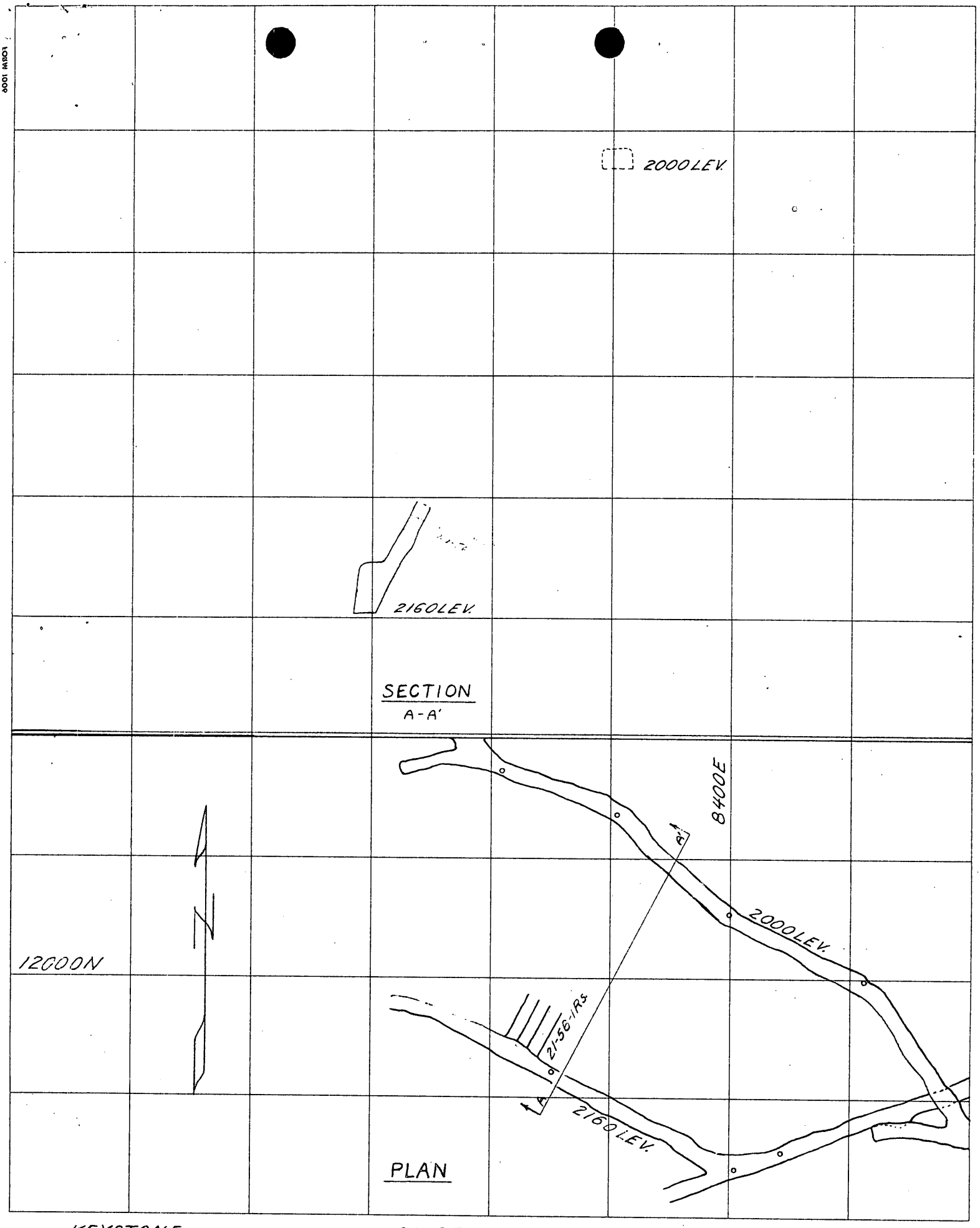
Very truly yours,

Nolan Probst, Supt.
By E. E. Pratt

325
186
511

Kright

Encls.



MINE KEYSTONE LOCATION CRESTED BUTTE, COLO. LEVEL 21-56-1 Rs.

GEOLOGY BY SURVEY G.H.B SCALE 1" = 50' DATE JUNE 1956

RECEIVED
AUG - 6 1956

FORM 1009

8129 NW-FW 6.0 2.2 1.0 0.5 2.2 — 1.6 2.2 0.9 7.0 4.0 NW-FW 8131

8128 NW-FW 5.3 0.7 1.8 0.3 3.8 — 2.4 3.6 0.65 3.7 5.7 NW-FW 8130

8125 V 4.0 1.3 0.8 0.35 5.6 — 1.6 2.3 0.38 15.3 5.0 V 8127
8126 V 4.0 1.0 1.8 0.2 4.0

No.	Loc.	Wide	Ag	Pb.	Cu.	Zn		Ag	Pb	Cu	Zn	Wide	Loc.	No.

2160 LEVEL

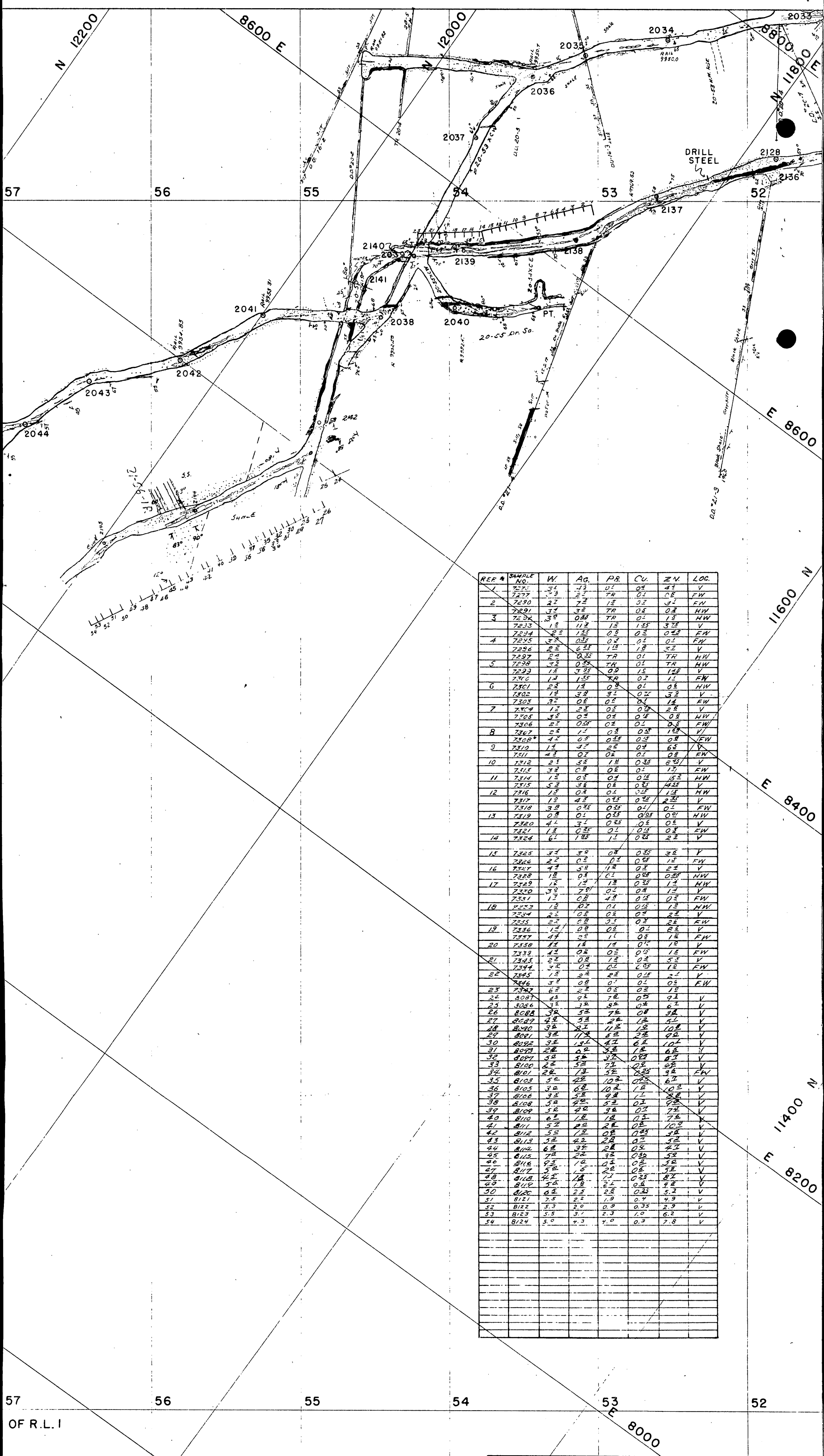
ASSAY MAP

LOOKING AT FOOTWALL

MINE KEYSTONE LOCATION CRESTED BUTTE, COLO. LEVEL 21-56-1 RS.

GEOLOGY BY SURVEY G.H.B. SCALE 1" = 20' DATE JUNE 1956

RECEIVED
AUG - 6 1956



REF #	SAMPLE NO.	W.	AG.	PB.	CU.	ZN.	LOC.
1	7276	3.1	1.3	0.1	0.4	4.1	V
	7277	7.9	2.7	TR	0.1	0.8	FW
2	7290	2.7	7.2	1.5	0.2	3.1	FW
	7291	3.4	3.2	TR	0.5	0.2	HW
3	7292	3.9	0.55	TR	0.1	1.5	HW
	7293	1.9	11.3	1.2	1.55	3.75	V
	7294	2.0	1.55	0.6	0.2	0.45	FW
4	7295	7.3	0.55	0.4	0.1	0.1	FW
	7296	2.2	6.23	1.13	1.8	3.7	V
	7297	2.4	0.35	TR	0.1	TR	HW
5	7298	3.5	0.55	TR	0.1	TR	HW
	7299	1.5	3.95	0.9	1.5	1.45	V
	7300	1.3	1.55	TR	0.2	1.1	FW
6	7301	2.5	1.4	0.8	0.1	0.6	HW
	7302	1.4	3.8	3.1	0.75	3.9	V
	7303	3.7	0.6	0.5	0.1	1.4	FW
7	7304	1.3	2.3	0.5	0.75	2.8	V
	7305	3.5	0.4	0.4	0.15	0.8	HW
	7306	2.7	0.55	0.4	0.1	0.5	FW
8	7307	2.2	1.1	0.5	0.35	1.55	V
	7308	4.7	0.5	0.55	0.15	0.8	FW
9	7310	1.4	4.7	2.2	0.4	6.5	V
	7311	4.3	0.7	0.2	0.1	0.8	FW
10	7312	2.3	3.5	1.8	0.35	8.45	V
	7313	3.3	0.8	0.6	0.1	1.7	FW
11	7314	1.2	0.3	0.4	0.15	15.2	HW
	7315	5.3	3.6	0.6	0.25	4.25	V
12	7316	1.5	0.2	0.1	0.15	1.5	HW
	7317	1.9	4.3	0.45	0.45	2.35	V
	7318	3.8	0.35	0.25	0.1	0.1	FW
13	7319	0.8	0.1	0.25	0.05	0.01	HW
	7320	4.1	3.1	0.25	0.6	0.6	V
	7321	1.3	0.25	0.1	0.15	0.3	FW
14	7324	6.1	1.85	1.1	0.25	2.2	V
15	7325	3.4	3.2	0.4	0.35	3.6	V
	7326	2.2	0.2	0.1	0.25	1.5	FW
16	7327	4.4	5.2	1.2	0.3	2.4	V
	7328	1.8	0.6	0.1	0.08	0.55	HW
17	7329	1.5	1.4	1.3	0.25	1.4	HW
	7330	3.9	7.01	0.7	0.8	1.4	V
	7331	1.7	0.8	4.8	0.15	0.2	FW
18	7333	1.5	1.07	0.1	0.15	1.2	HW
	7334	2.5	0.2	0.9	0.4	2.2	V
	7335	2.2	0.8	0.5	0.3	2.2	FW
19	7336	1.4	0.8	0.6	0.1	8.2	V
	7337	4.4	2.2	1.1	0.3	1.2	FW
20	7338	1.1	1.8	1.4	0.12	1.9	V
	7339	1.1	0.2	0.3	0.15	1.2	FW
21	7343	2.3	0.8	1.2	0.2	5.3	V
	7344	3.2	0.4	0.1	0.05	1.9	FW
22	7345	1.5	2.2	2.3	0.15	2.1	V
	7346	3.2	0.8	0.1	0.1	0.6	FW
23	7347	6.2	2.2	0.5	0.2	1.9	
24	8087	4.5	9.2	7.2	0.75	9.3	V
25	8086	3.2	3.2	8.2	0.4	6.7	V
26	8088	3.2	5.2	7.6	0.8	3.2	V
27	8089	4.2	5.3	2.6	1.2	5.1	V
28	8090	3.2	2.7	11.2	1.2	10.1	V
29	8091	3.2	11.2	6.2	2.4	9.2	V
30	8092	3.8	13.1	4.7	6.2	10.1	V
31	8093	2.2	6.2	5.4	1.2	6.5	V
32	8097	5.2	5.6	3.7	0.23	8.3	V
33	8100	2.2	5.2	7.7	0.8	6.4	V
34	8101	2.2	13	5.4	0.25	9.6	FW
35	8103	5.2	4.4	10.2	0.45	6.7	V
36	8105	3.2	6.8	10.2	1.2	10.2	V
37	8106	3.5	5.8	9.8	1.1	8.8	V
38	8108	5.2	4.2	5.2	0.3	9.2	V
39	8109	5.2	4.2	3.6	0.7	7.4	V
40	8110	6.7	1.8	1.8	0.5	7.6	V
41	8111	5.7	2.0	2.8	0.4	10.2	V
42	8112	5.2	1.3	0.4	0.45	3.2	V
43	8113	5.2	4.2	2.8	0.7	5.2	V
44	8114	6.2	3.4	2.8	0.2	4.7	V
45	8115	7.2	2.2	3.2	0.32	5.8	V
46	8116	9.5	1.0	0.5	0.2	5.2	V
47	8117	5.2	1.5	2.2	0.2	5.8	V
48	8118	4.5	1.8	1.1	0.25	8.7	V
49	8119	5.2	1.8	2.1	0.6	4.8	V
50	8120	6.5	2.5	2.8	0.35	5.3	V
51	8121	7.5	2.2	1.9	0.4	4.9	V
52	8122	5.3	2.0	0.9	0.35	2.9	V
53	8123	5.5	3.1	2.3	1.0	6.2	V
54	8124	5.0	4.3	4.0	0.3	7.8	V

AMERICAN SMELTING & REFINING CO.
KEYSTONE UNIT

2160 DRIFT NORTH

PROGRESS, GEOLOGY & ASSAY MAP

SCALE	DR. W. PILL TR. CH. APP.	DATE	FILE
1" = 50'		JUNE 1956	

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

RECEIVED
JUN 27 1956

224 New Customhouse
Denver 2, Colorado

FINAL DISTRIBUTION
MADE JUN 25 1956

June 20, 1956

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3866 (Lead, Zinc and Copper) Contract Idm-E903, American Smelting and Refining Company (Keystone Mine) Gunnison County, Colorado - Operator's Monthly Progress Report for the month of May, 1956

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Narrative Report, and Engineer's Report for the above period.

It is deemed that the Operator has complied with the intent of the contract, and the work for which payment is recommended is acceptable to the Government. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore, we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks

Date of Report----------June 5, 1956
Date Received in Field Office---------- June 14, 1956
Date Received in Region Office---------- June 19, 1956

W. M. TRAVER

W. M. Traver

Enclosures
JDC:jy
cc: MF-104 File E903
Sec. Op. Comm. (2)
Shaw (2)
Chron.

RECEIVED
JUN 27 1956

REGION III

Building 20
Denver Federal Center
Denver 2, Colorado
June 18, 1956

DMEA
Date Rec'd
JUN 19 1956
BUREAU OF MINES
Denver, Colorado

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw
Supervising Mining Engineer

From: R. L. Bolmer

Subject: DMEA 3866 (Lead-zinc-copper) Contract I&m-5903, American Smelting and Refining Co. (Keystone mine) Gunnison County, Colorado -- Progress report for May 1956

The progress reported for the May period under the subject short-form contract -- 119 feet of drifting northwesterly along the Union vein on the 2160 level of the Keystone mine -- was verified during an inspection of the property June 5, 1956.

At the close of the April period, the project drift along the Union vein extended 16 feet northwesterly from the 21-55 W. crosscut. On the date of the latest inspection, the breast of this heading had been advanced an additional 149 feet to a point 165 feet northwest of the crosscut. The 119 feet of drifting which the operator reports for the May period, therefore, is valid and proper. This footage completes the 450 feet of combined drifting and crosscutting authorized under Stage I of the contract. The final 30 feet of drifting along the Union vein was non-project work completed at the operator's own expense so as to provide the needed tail room for loading from the authorized Stage I raise on the Union vein. The raise will be started midway along the 2160 level project drift on the Union vein and will make connection with an existing 2000 level Union drift.

A revised summary of the project progress reported to date under Stage I of the contract is given below. Project drifting started February 6, 1956 from the then existing breast of the 2160 level north drift along the Keystone vein at a distance 82.5 feet inby the point designated "Drill Steel" on the operator's current progress map. Project drifting along the Union vein is measured from the north rib of the 21-55 W. crosscut.

Period	2160 N. Dr. on Keystone vein	21-55 W. xc to Union vein	S. Dr. on Union vein	Total reported advance
Feb. 56	78'			78'
Mar. 56	61'	49'		110'
Apr. 56		127'	16'	143'
May 56			119'	119'
Total	139'	176'	135'	450' *

(* Max. footage of combined drifting and crosscutting authorized under Stage I)

The Union vein exposed during this period remained strong and well mineralized. The single, 3- to 5-foot stretch of massive sulfide mineralization, which is exposed within the vein zone along the south-eastern sections of the project drift, continues for a distance of some 90 feet north of the 21-55 W. crosscut at which point it splits into narrower foot and hanging wall branches separated by a 4- to 6-foot horse of weakly mineralized sandstone. Only part of the hanging wall split is exposed within the northern limits of drift. The two branches of mineral apparently had begun to consolidate near the breast of the heading.

A total of 26 channel samples have been taken from along the mineralized portion of the Union vein zone as exposed to date on the 2160 level. The locations and analyses of these samples are posted on the operator's progress map. An unweighted average of the widths and analyses of these samples is given below.

Width	Grade			
4.8 feet	4.5 oz./ton Ag	4.8% Pb	1.0% Cu	7.0% Zn

The exploration ore, which was recovered from the 2160 level project headings on the Keystone and Union veins, is summarized below. This ore, which is subject to the Government's percentage royalty, was commingled and concentrated with the company's total production from the other sections of the mine.

Period	Weight* (tons)	Average Grade ** oz/ton Ag	%Pb	%Cu	%Zn
Feb. 56	256	3.5	0.4	0.5	2.5
Mar. 56	194	1.1	0.7	0.2	1.6
Apr. 56	100	2.2	1.4	0.3	2.7
May 56	779	3.4	3.3	0.8	5.1

* Based on adjusted ore factor

** Based on corrected grab sample assays

A preliminary metallurgical balance for the total tonnage of crude ore milled at the Keystone operations during the period May 1-31, 1956 is listed below. The 6,535 tons of crude ore concentrated during this period was derived from all the operating sections of the mine. It includes the 779 tons of exploration ore recovered during the period from the project drift on the Union vein.

Product	Dry Tons	Assay				% Recovery			
		Oz./ton Ag	%Pb	%Cu	%Zn	Ag	Pb	Cu	Zn
Heads	6535.0	5.50	2.25	0.87	5.48	100.0	100.0	100.0	100.0
Pb Concs.	379.8	79.62	33.30	11.26	6.87	84.2	91.2	74.9	7.3
Zn Concs.	608.7	3.32	0.22	1.84	51.87	3.6	0.9	11.1	87.2
Tails	5546.5	0.66	0.21	0.14	0.36	10.2	7.9	14.0	5.5

The project work reported by the operator for the May period was completed according to the specifications stipulated in the contract. The $4,225.00 total costs reported for this period on the operator's MF-104 Forms -- equivalent to 119 feet of drifting at the agreed upon unit price of $35.00 per foot plus 20 assays at $3.00 each -- are approved. Reimbursement to the operator of 50 percent of the reported approved costs, or $2,112.50, is recommended.

R. L. Bolmer

R. L. Bolmer
Mining Engineer

RLB/mr
cc: 6
Idm-1903
Chron

Form MF-104 (Rev.)
(April 1952)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.5

RECEIVED
JUN 27 1956

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of May, 1956 Docket No. DMEA 3866 Contract No. Idm-E903
Operator's Name American Smelting & Refining Company Minerals Lead, Zinc, Copper
Address 120 Broadway, New York 5, New York
Contract Amount, $ 107,220. Government Participation: 50 % Amount, $ 53,610.

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing Raising						
Crosscutting & or						
Drifting Crosscutting	4,165.00	11,585.00	15,750.00	7/12/56 WPK		
Drift or X Cut Timber						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Drill Hole Casing						
Drill Hole Cementing						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
Drill Stations						
Assaying	60.00	99.00	159.00			
(8) Contingencies (specify):						
TOTALS	4,225.00	11,684.00	15,909.00	4,225.00	11,684.00	15,909.00

I certify that the above bill is correct and just and that payment therefor has not been received.

Date June 5, 1956 *Payee American Smelting & Refining Co.

Per [signature] Title Superintendent

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 2,112.50

Signature [signature]
(Authorized Certifying Officer)

Date 6/22/56 Vou. No. DMA 56-123
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E903 in accordance with the terms of the contract.

Signature R. L. Palmer, $2,112.50 Title Mining Engineer Date JUN 15 1956

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W. M. Davey Title Executive Officer Date JUN 20 1956

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

RECEIVED
JUN 27 1956

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of May, 1956 Docket No. DMEA 3866 Contract No. Idm-E903

Operator's Name American Smelting & Refining Company Minerals Lead, Zinc, Copper

Address 120 Broadway, New York 5, New York

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting &/or Crosscutting	Ft.	4,165.00	119	15,750.00	450	35.00	2,450	35.00
~~Crosscutting~~								
Raising	Ft.						200	39.00
~~Shafts~~ Drifts or Cross-								
Winzes cut Timber	Ft.						245	6.00
Drilling: Core	Ft.						2,000	4.60
~~Churn~~ Casing	Ft.						200	2.00
~~Auger~~ Cementing	Ft.						200	2.00
~~Stripping~~ Drill Sta.	Ea.						10	100.00
~~Trenching~~								
~~Test Pits~~								
~~Roads and Trails~~								
Assaying	Ea.	60.00	20	159.00	53	3.00	400	3.00
TOTAL DISTRIBUTED COSTS		4,225.00		15,909.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								None
Initial Rehabilitation and Repairs								"
New Buildings, Improvements, etc.								"
								"
TOTAL COSTS		4,225.00		15,909.00				107,220.00

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

REMARKS:

Date June 5, 1956 Operator American Smelting & Refining Co.

Per [signature] Title Superintendent

→ NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

R. G. Palmer

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

AMERICAN SMELTING AND REFINING COMPANY
WESTERN MINING DEPARTMENT

F. V. RICHARD, MANAGER
W. R. LANDWEHR, CHIEF GEOLOGIST
NORMAN WEISS, MILLING ENGINEER

600 PACIFIC NATIONAL LIFE BUILDING
SALT LAKE CITY 1, UTAH

June 12, 1956

RECEIVED
JUN 14 1956
Div. of Mineral Technology
BUREAU OF MINES
Denver Experiment Station
Denver, Colorado

Mr. John F. Shea
U. S. Bureau of Mines
Room 137, Building 20
Denver Federal Center
Denver, Colorado

DOCKET NO. BMA 3666
CONTRACT NO. [illegible]

Dear Sir:

Attached are five copies each of Mr. Probst's letter to Mr. Traver of June 9th, Operator's Unit Cost and Progress Report, Operator's Monthly Report and Voucher, and Progress Maps covering the 2160 level development on the Union vein at the Keystone Mine for the month of May.

The following is the grade of the development ore produced for the month:

Zone	Au oz.	Pb %	Cu %	Zn %
[illegible]	1.4	3.3	0.9	5.1

Royalty payments on development ore production to date under this contract will be made shortly by separate letter.

Very truly yours,

F. V. RICHARD

FVR:ET
Encls. Form [illegible] (5)
[illegible] (5)
Progress Map (5)
Letter, UNIT [illegible] (5)
cc: T. Vrolik, [illegible]

K-7.7

R.R.B.

AMERICAN SMELTING AND REFINING COMPANY
KEYSTONE UNIT
P. O. BOX J CRESTED BUTTE, COLO.

June 9, 1956

RECEIVED
JUN 27 1956

Mr. W. H. Traver, Executive Officer
U. S. Dept. of Interior
Defense Minerals Exploration Administration
224 New Custom House
Denver 2, Colorado

RE: DOCKET DMEA 3866
CONTRACT Idm-E903

Dear Sir:

General Remarks:

119 ft. of drifting along the Union Vein was done during the month of May. This brings the total drifting and crosscutting to 450 ft., thereby completing the Stage I drifting. The 779 tons of rock taken from the drift during the month was sent to the mill as ore.

General Geology:

The vein generally became softer with a change of wall rock from shale to sandstone. During the last 50 ft. of drifting a horse of sandstone waste split the vein. In the split zone the hangingwall segment of the vein is near vertical in dip. The footwall portion of the vein retained its normal dip. In the present drift face the vein has consolidated.

Vein width has averaged about 4½ ft.

Very truly yours,

Nolan Probst

Nolan Probst, Supt.

NP:ghf

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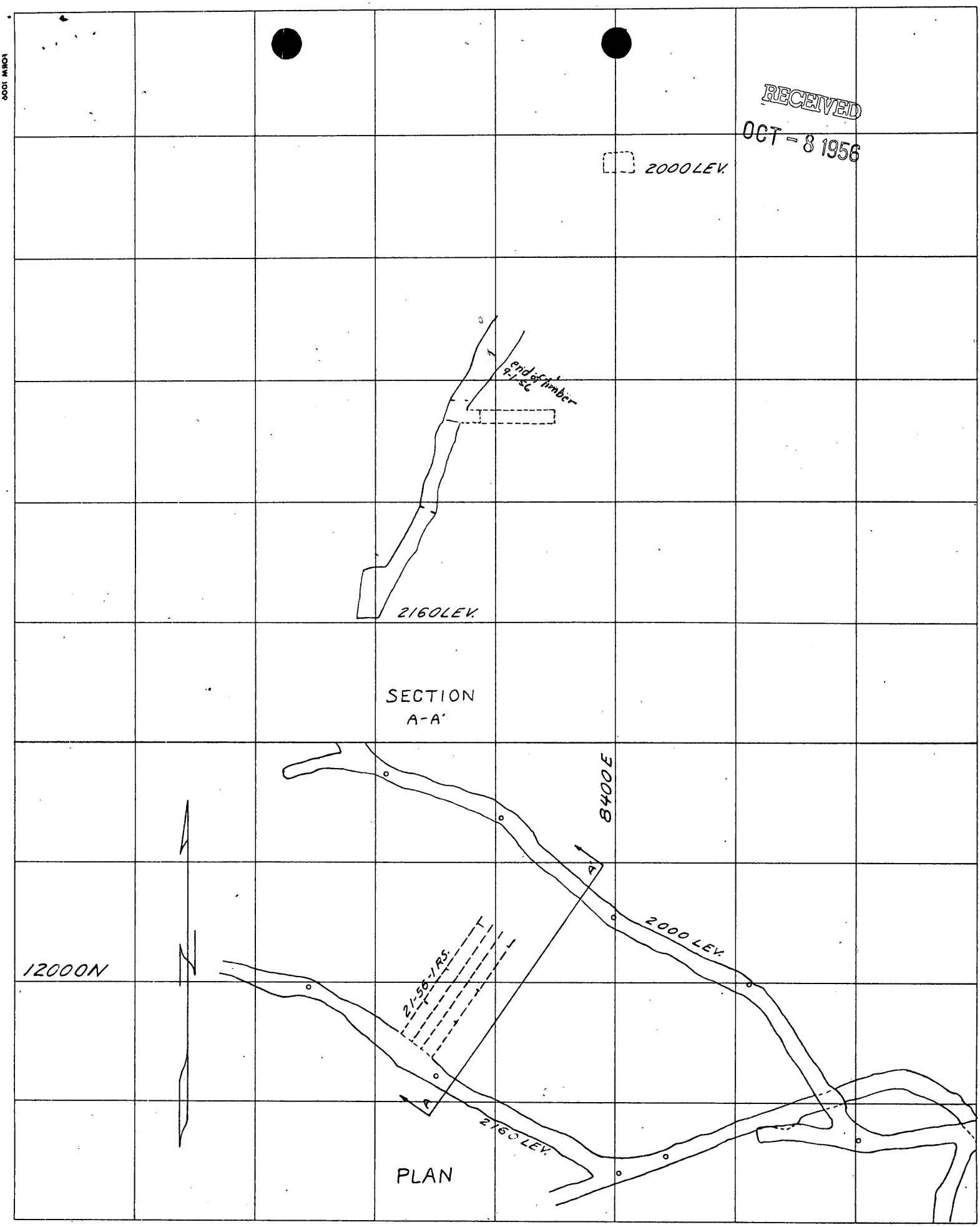
OCT - 8 1956



MINE KEYSTONE LOCATION CRESTED BUTTE, COLO. LEVEL 21-56-1 RS.

GEOLOGY BY SURVEY G.H.B. SCALE 1" = 50' DATE Aug. 1956

RECEIVED
OCT - 8 1956

No.	Loc.	Wide	Ag	Pb.	Cu.	Zn	Ag	Pb	Cu	Zn	Wide	Loc.	No.
8218	V	2.4	7.6	3.3	2.0	11.3	2.4	0.1	1.1	0.9	3.0	V	8217
							3.2	3.4	0.6	5.3	1.5	V	8215
8214	V	1.8	12.9	16.6	1.1	8.4							
8210	FW	4.7	0.9	0.1	0.15	1.2	0.9	0.1	0.15	1.8	2.0	V	8212
8209	V	2.1	7.0	8.6	0.7	10.3							
							0.9	1.2	0.15	0.4	3.5	V	8211
8207	V	1.8	4.2	5.3	0.65	6.0							
							3.4	0.8	0.2	0.1	2.9	V	8208
							1.2	0.8	0.2	0.3	3.5	V	8205
8195	HW-FW	5.9	4.8	1.25	0.1	1.15	5.4	0.85	0.1	3.1	3.4	V	8194
8206	V	1.4	4.0	3.7	0.7	6.8							
							3.4	0.2	1.9	0.4	6.6	HW-FW	8163
8150	HW-FW	8.0	5.2	8.8	0.7	8.7	10.8	17.4	0.7	12.6	3.0	V	8148
8138	HW-FW	5.7	4.4	1.4	1.2	6.4	2.6	2.4	0.75	7.4	3.4	V	8143
8137	HW-FW	6.0	3.2	1.9	0.75	10.0							
8154	V	3.0	4.0	2.6	1.15	7.5							
8136	HW-FW	4.4	2.6	2.1	1.0	4.5	1.1	0.3	0.25	6.6	4.7	HW-FW	8135
							0.9	0.2	0.25	5.8	6.0	HW-FW	8134
							1.6	1.7	0.25	8.2	4.5	V	8133
							1.9	0.4	0.6	6.2	4.6	V	8132
8129	HW-FW	6.0	2.2	1.0	0.5	2.2	1.6	2.2	0.9	7.0	4.0	HW-FW	8131
8128	HW-FW	5.3	0.7	1.8	0.3	3.8	2.4	3.6	0.65	3.7	5.7	HW-FW	8130
8125	V	4.0	1.3	0.8	0.35	5.6	1.6	2.3	0.35	15.3	5.0	V	8127
8126	V	4.0	1.0	1.8	0.2	4.0							

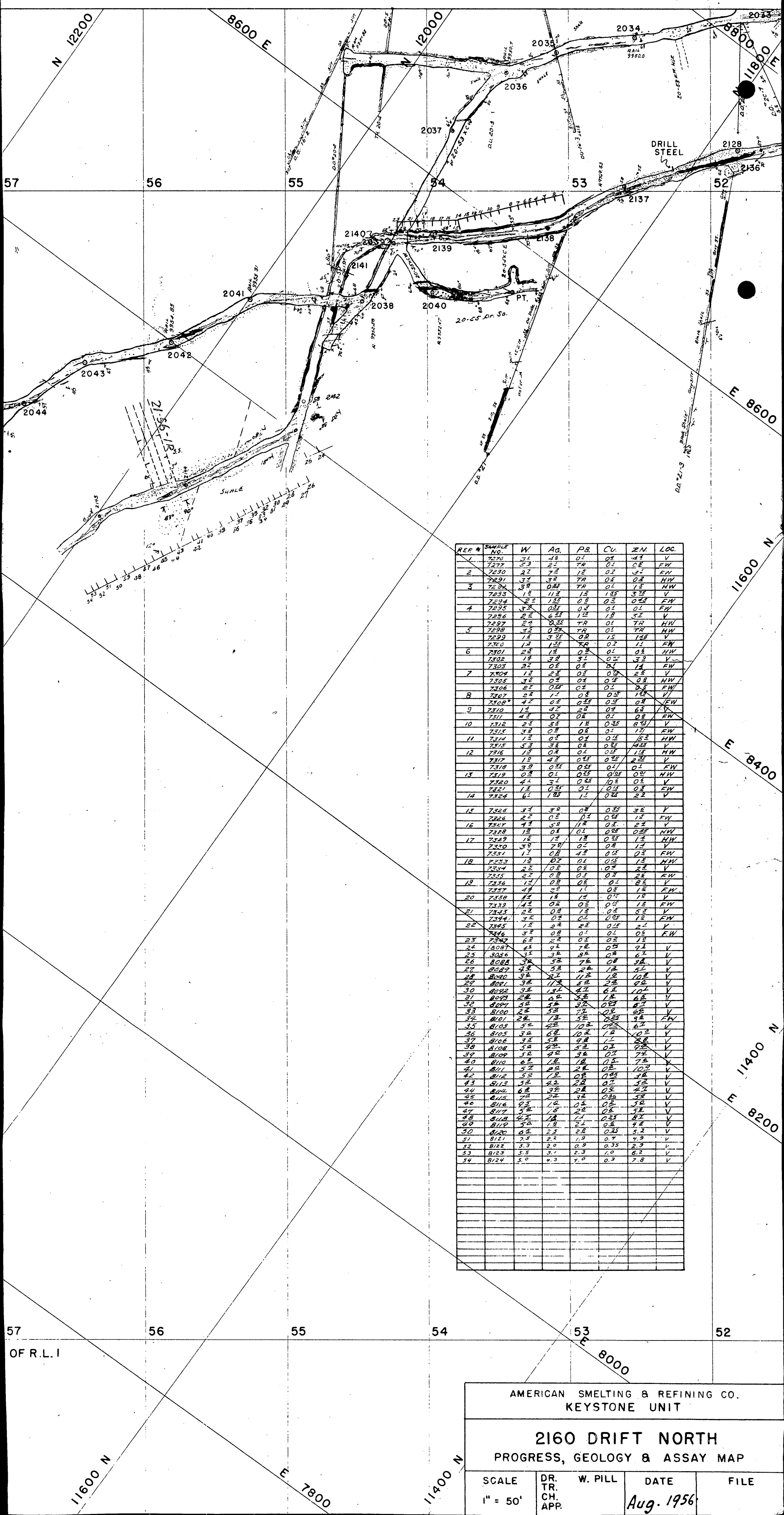
2160 LEVEL

ASSAY MAP

LOOKING AT FOOTWALL

MINE KEYSTONE LOCATION CRESTED BUTTE, COLO. LEVEL 21-56-1 RS.

GEOLOGY BY SURVEY G.H.B. SCALE 1" = 20' DATE Aug. 1956



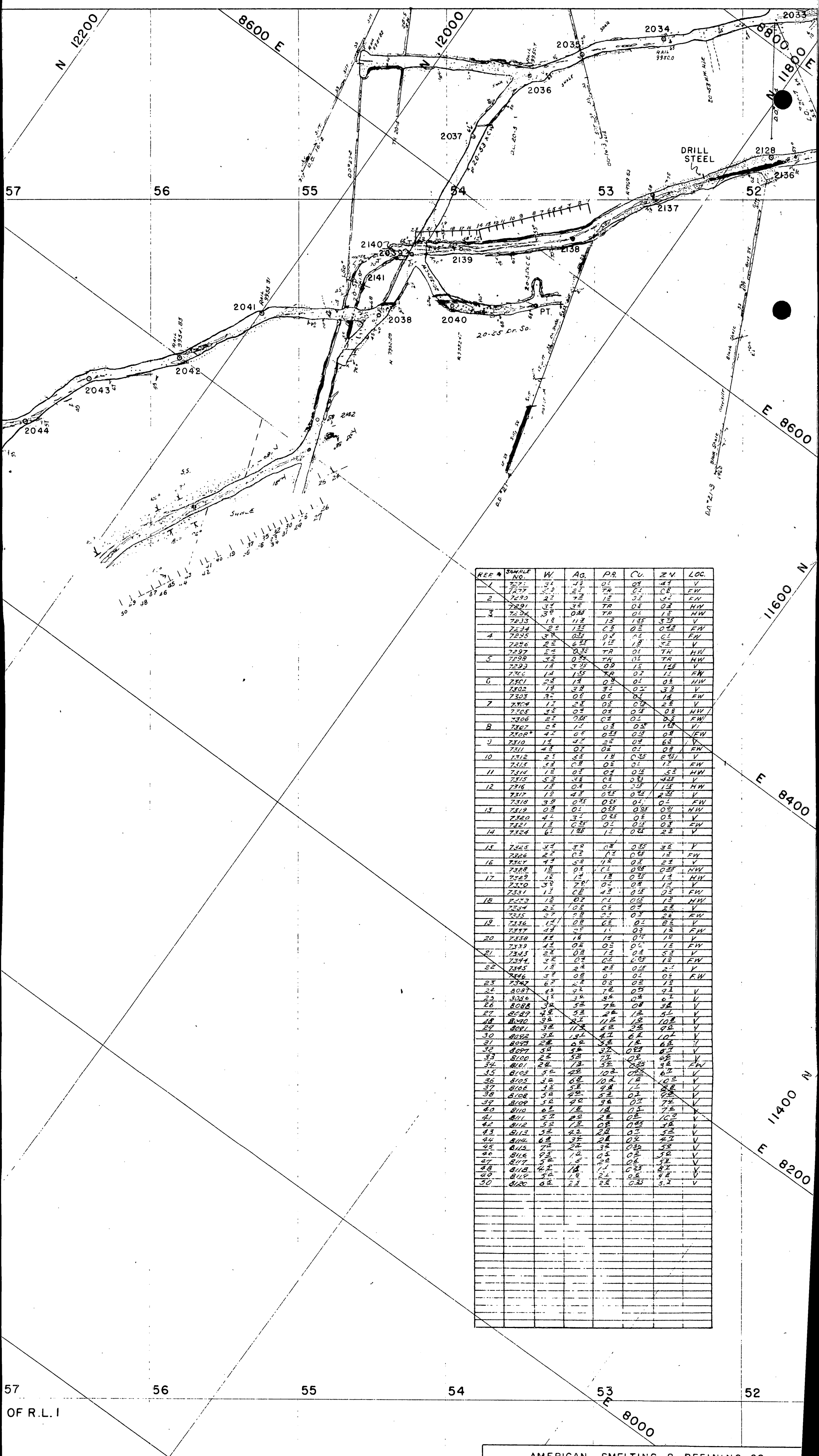
REF #	SAMPLE NO.	W.	AG.	PB.	CU.	ZN.	LOC.
1	7276	3.1	4.8	0.1	0.2	4.4	V
	7277	3.9	2.1	TR	0.1	0.8	FW
2	7290	2.7	7.2	1.5	0.2	3.1	FW
	7291	3.4	3.8	TR	0.5	0.2	HW
3	7292	3.9	0.55	TR	0.1	1.5	HW
	7293	1.8	11.3	1.2	1.35	3.75	V
	7294	2.0	1.35	0.8	0.2	0.45	FW
4	7295	3.3	0.55	0.3	0.1	0.1	FW
	7296	2.2	6.23	1.13	1.8	3.7	V
	7297	2.4	0.35	TR	0.1	TR	HW
5	7298	3.3	0.35	TR	0.1	TR	HW
	7299	1.5	3.95	0.9	1.9	1.45	V
	7300	1.3	1.35	TR	0.2	1.1	FW
6	7301	2.5	1.4	0.8	0.1	0.8	HW
	7302	1.4	3.8	3.1	0.35	3.2	V
	7303	2.7	0.8	0.8	0.1	1.4	FW
7	7304	1.3	2.3	0.5	0.13	2.6	V
	7305	3.5	0.4	0.1	0.15	0.8	HW
	7306	2.7	0.55	0.1	0.1	0.5	FW
8	7307	2.8	1.1	0.5	0.15	1.65	V
	7308*	4.7	0.5	0.55	0.15	0.8	FW
9	7310	1.4	4.7	2.8	0.4	6.5	V
	7311	4.5	0.7	0.8	0.1	0.8	FW
10	7312	2.5	3.5	1.8	0.35	8.45	V
	7313	3.3	0.8	0.8	0.1	1.7	FW
11	7314	1.2	0.5	0.1	0.15	6.2	HW
	7315	5.3	3.6	0.6	0.25	4.55	V
12	7316	1.5	0.2	0.1	0.15	1.5	HW
	7317	1.0	4.3	0.45	0.45	2.35	V
	7318	3.8	0.35	0.25	0.1	0.1	FW
13	7319	0.3	0.1	0.25	0.05	0.01	HW
	7320	4.1	3.1	0.25	10.6	0.6	V
	7321	1.3	0.25	0.1	0.15	0.3	FW
14	7324	6.1	1.85	1.1	0.25	2.2	V
15	7325	3.4	3.0	0.4	0.35	3.6	V
	7326	2.7	0.2	0.1	0.25	1.5	FW
16	7327	4.4	5.0	1.8	0.3	2.4	V
	7328	1.8	0.8	0.1	0.05	0.55	HW
17	7329	1.2	1.4	1.8	0.23	1.4	HW
	7330	3.0	7.0	0.1	0.2	1.4	V
	7331	1.7	0.8	4.8	0.15	0.2	FW
18	7333	1.5	0.7	0.1	0.15	1.2	HW
	7334	2.5	0.8	0.6	0.4	2.2	V
	7335	2.7	0.8	0.3	0.3	2.6	FW
19	7336	1.4	0.8	0.6	0.1	8.2	V
	7337	4.4	2.0	1.1	0.5	1.2	FW
20	7338	1.4	1.8	1.4	0.15	1.0	V
	7339	4.4	0.2	0.2	0.15	1.2	FW
21	7343	2.3	0.8	1.2	0.2	5.3	V
	7344	3.2	0.4	0.1	0.05	1.0	FW
22	7345	1.5	2.2	2.5	0.15	2.1	V
	7346	3.2	0.8	0.1	0.1	0.6	FW
23	7347	6.3	2.2	0.5	0.2	1.0	
24	18087	4.5	9.2	7.2	0.25	9.2	V
25	3086	3.2	3.6	8.0	0.4	6.7	V
26	8088	3.0	5.2	7.6	0.8	3.2	V
27	8089	4.2	5.2	2.6	1.2	5.1	V
28	8090	3.0	8.7	11.2	1.0	10.8	V
29	8091	3.2	11.2	6.0	2.4	9.0	V
30	8092	3.2	13.1	4.7	6.2	10.1	V
31	8093	2.8	6.0	3.4	1.2	6.5	V
32	8097	5.0	5.6	3.7	0.25	8.7	V
33	8100	2.2	5.2	7.7	0.2	6.4	V
34	8101	2.8	1.3	5.4	0.25	9.2	FW
35	8103	5.0	4.4	10.2	0.45	6.7	V
36	8105	3.0	6.8	10.2	1.0	10.0	V
37	8106	3.5	5.8	9.8	1.1	8.8	V
38	8108	5.0	4.4	5.2	0.3	9.0	V
39	8109	5.2	4.0	3.6	0.7	7.4	V
40	8110	6.1	1.8	1.8	0.5	7.6	V
41	8111	5.7	2.0	2.8	0.8	10.0	V
42	8112	5.0	1.3	0.8	0.45	3.6	V
43	8113	5.2	4.2	2.8	0.7	5.2	V
44	8114	6.8	3.4	2.8	0.8	4.7	V
45	8115	7.0	2.2	3.2	0.35	5.8	V
46	8116	9.5	1.0	0.5	0.2	5.0	V
47	8117	5.0	1.5	2.0	0.6	5.8	V
48	8118	4.7	1.8	1.1	0.25	8.7	V
49	8119	5.0	1.8	2.1	0.6	4.8	V
50	8120	6.5	2.3	2.8	0.25	5.3	V
51	8121	7.5	2.2	1.9	0.4	4.9	V
52	8122	5.3	2.0	0.9	0.35	2.9	V
53	8123	5.5	3.1	2.3	1.0	6.2	V
54	8124	5.0	4.3	4.0	0.3	7.8	V

AMERICAN SMELTING & REFINING CO.
KEYSTONE UNIT

2160 DRIFT NORTH

PROGRESS, GEOLOGY & ASSAY MAP

SCALE	DR. W. PILL TR. CH. APP.	DATE	FILE
1" = 50'		Aug. 1956	



REF #	SAMPLE NO.	W.	AG.	P.B.	CU.	ZN.	LOC.
1	7271	3.1	1.3	0.1	0.4	.4	V
	7277	3.9	2.7	TR	0.1	0.8	FW
2	7290	2.7	7.2	1.5	0.2	0.1	FW
	7291	3.4	3.8	TR	0.8	0.2	HW
3	7292	3.9	0.55	TR	0.1	1.5	HW
	7293	1.8	11.3	1.2	1.55	3.75	V
	7294	2.0	1.55	0.6	0.2	0.43	FW
4	7295	3.9	0.55	0.4	.1	0.1	FW
	7296	2.3	6.83	1.15	1.8	.2	V
	7297	2.4	0.35	TR	0.1	TR	HW
5	7298	3.5	0.35	TR	0.1	TR	HW
	7299	1.5	3.35	0.9	1.5	1.45	V
	7300	1.4	1.55	TR	0.2	1.1	FW
6	7301	2.5	1.4	0.8	0.1	0.6	HW
	7302	1.4	3.8	3.1	0.25	3.9	V
	7303	.2	0.6	0.8	0.1	1.4	FW
7	7304	1.7	2.3	0.5	0.75	2.8	V
	7305	3.5	0.4	0.4	0.15	0.8	HW
	7306	2.7	0.55	0.4	0.1	0.5	FW
8	7307	2.8	1.1	0.5	0.15	1.55	V
	7308	4.7	0.5	0.55	0.15	0.8	FW
9	7310	1.4	4.7	2.8	0.4	6.5	V
	7311	4.3	0.7	0.2	0.1	0.8	FW
10	7312	2.3	3.5	1.8	0.35	8.45	V
	7313	3.3	0.8	0.5	0.1	1.7	FW
11	7314	1.2	0.3	0.4	0.15	5.2	HW
	7315	5.3	3.8	0.6	0.25	4.25	V
12	7316	1.5	0.2	0.1	0.15	1.15	HW
	7317	1.9	4.3	0.25	0.25	2.35	V
	7318	3.8	0.35	0.25	0.1	0.1	FW
13	7319	0.8	0.1	0.25	0.05	0.01	HW
	7320	4.1	3.1	0.25	0.6	0.6	V
	7321	1.3	0.25	0.1	0.15	0.3	FW
14	7324	6.1	1.85	1.1	0.25	2.8	V
15	7325	3.4	3.2	0.4	0.35	3.6	V
	7326	2.2	0.2	0.1	0.25	1.2	FW
16	7327	4.4	5.2	1.8	0.3	2.4	V
	7328	1.8	0.6	0.1	0.08	0.35	HW
17	7329	1.5	1.4	1.8	0.25	1.4	HW
	7330	3.9	7.1	0.1	0.8	1.4	V
	7331	1.7	0.8	4.8	0.15	0.2	FW
18	7333	1.5	0.7	0.1	0.15	1.2	HW
	7334	2.5	1.8	0.9	0.4	2.8	V
	7335	3.7	0.8	0.1	0.3	2.8	FW
19	7336	1.4	0.8	0.6	0.1	8.2	V
	7337	4.4	2.9	1.0	0.3	1.2	FW
20	7338	1.1	1.8	1.4	0.17	1.9	V
	7339	4.1	0.2	0.3	0.1	1.2	FW
21	7343	2.3	0.8	1.2	0.2	5.5	V
	7344	3.2	0.4	0.1	0.05	1.9	FW
22	7345	1.5	2.2	2.3	0.15	2.1	V
	7346	3.9	0.8	0.1	0.1	0.6	FW
23	7347	6.2	2.2	0.5	0.2	1.9	
24	8087	4.2	9.2	7.2	0.25	9.3	V
25	8086	3.2	3.2	8.6	0.4	6.7	V
26	8088	3.2	5.2	7.6	0.8	3.2	V
27	8089	4.2	5.2	2.6	1.2	5.1	V
28	8090	3.2	8.7	11.2	1.9	10.2	V
29	8091	3.2	11.2	6.2	2.4	9.2	V
30	8092	3.2	13.1	4.7	6.2	10.1	V
31	8093	2.2	6.2	5.4	1.2	6.3	V
32	8097	3.2	5.6	3.7	0.25	8.7	V
33	8100	2.2	5.2	7.7	0.9	6.4	V
34	8101	2.2	1.3	5.4	0.25	9.6	FW
35	8103	5.2	4.4	10.2	0.45	6.7	V
36	8105	3.2	6.8	10.4	1.2	10.2	V
37	8106	3.3	5.2	9.8	1.1	8.8	V
38	8108	5.2	4.4	5.2	0.3	9.2	V
39	8109	5.2	4.2	3.6	0.7	7.4	V
40	8110	6.1	1.8	1.8	0.5	7.2	V
41	8111	5.7	2.0	2.6	0.4	10.2	V
42	8112	5.2	1.3	0.8	0.45	3.2	V
43	8113	5.2	4.2	2.8	0.7	5.2	V
44	8114	6.2	3.4	2.8	0.2	4.7	V
45	8115	7.2	2.2	3.2	0.3	5.2	V
46	8116	9.5	1.2	0.5	0.2	5.2	V
47	8117	5.2	1.5	2.0	0.6	5.2	V
48	8118	4.5	1.2	1.1	0.25	8.7	V
49	8119	5.2	1.8	2.1	0.6	4.2	V
50	8120	6.5	2.5	2.2	0.25	5.2	V

AMERICAN SMELTING & REFINING CO.
KEYSTONE UNIT

2160 DRIFT NORTH

PROGRESS, GEOLOGY & ASSAY MAP

SCALE	DR. W. PILL TR. CH. APP.	DATE	FILE
1" = 50'		May 1956	

Dma 56-118

FINAL DISTRIBUTION
JUN 7 1956
MADE

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

June 5, 1956

RECEIVED
JUN 11 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3866 (Lead-Zinc-Copper) Contract Idm-E903
American Smelting and Refining Company (Keystone Mine)
Gunnison County, Colorado--Operator's Monthly Progress
Report, for the month of April, 1956

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Narrative Report, and Engineer's Report for the above period.

It is deemed that the Operator has complied with the intent of the contract, and the work for which payment is recommended is acceptable to the Government. No documentation is required for work performed under contracts prepared on Form MF-400A, therefore, we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

REMARKS

Date of Report---------- May 5, 1956
Date Received in Field Office----------May 28, 1956
Date Received in Region Office----------June 5, 1956

W. M. TRAVER

W. M. Traver

Enclosures:

JHC:ab

cc: MF-104 file E903
Sec. Op. Comm. (2)
Show (2)

Chron.

DMEA
Date Rec'd.
JUN 5 1956
BUREAU OF MINES
Denver, Colorado

REGION III

Building 20
Denver Federal Center
Denver 2, Colorado
June 1, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw
Supervising Mining Engineer

From: N. L. Bolmer

Subject: DMEA 3866 (Lead-zinc-copper) Contract Idm-8903, American Smelting and Refining Co. (Keystone mine) Gunnison County, Colorado -- Progress report for April 1956

The progress reported for the April period under the subject short-form contract -- 143 feet of combined crosscutting and drifting on the 2160 level of the Keystone mine -- was verified during an inspection of the property May 8, 1956.

During the period, the 2160-55 W. crosscut was advanced 125 feet on a course of S.70°W. to and somewhat beyond its intersection with the Union vein. A drift started northwesterly along this vein had been advanced 18 feet from the crosscut by the end of the period.

The 2160-55 W. crosscut was driven in sandstone to Sta. 2141 + 90'. The final 99 feet of the heading was in black shale. Both the sandstone and shale are members of the Mesa Verde formation. The crosscut intersected the true footwall of the Union vein zone in the vacinity of Sta. 2142. The footwall section of the zone contained a series of narrow veinlets each containing from 2 to 5 inches of massive sulfides in a gangue of vuggy quartz. A wider, highly mineralized section of the zone was crosscut between Sta. 2142 + 18' and + 23'. It apparently forms the true hanging wall of the zone in this area. Although the crosscut was continued some 26 feet farther into the hanging wall, it encountered no additional mineralization.

The bedding adjacent to the Union vein strikes S. 65° W. (about parallel to the crosscut and dips 15° to 18° SE. The highly mineralized hangwall section of the Union structure strikes N. 55° - 60° W. and dips 58° to 64° SW. This section contains fairly massive patches of lead, zinc, copper and iron sulfides and bands of rhodochrosite. The gangue is similar to the black shale wall rock but contains numerous quartz veinlets. Post-mineral shearing along the structure has formed considerable clay gouge.

On the date of inspection the Union drift has been advanced to a point 30 feet beyond the ℄ of the crosscut. At this distance the mineralized streak had narrowed to about 3½ feet. Its sulfide content, however, appeared more massive. Lower grade mineralization extended for some distance into both walls. A check sample, HLB-139, taken across 3.2 feet of the main mineral streak exposed in the breast of the drift assayed 11.0 oz. Ag, 4.9% Pb, 9.8% Zn, and 2.8% Cu.

The project progress reported to date under Stage I of the exploration contract is summarized below. Project drifting started February 6, 1956 from the then existing breast of the #160 drift N. on the Keystone vein at a point 82.8 feet into the point designated "Drill Steel" on the operator's current progress map.

Period	Drifting along Keystone vein	Crosscutting to Union vein	Drifting along Union vein	Total reported advance
Feb. 1956	78'			78'
March 1956	66'	44'		110'
April 1956		125'	18'	143'
Totals	144'	169'	18'	331'

A metallurgical summary of the company's milling operations for the period April 1-30, 1956 is given below. The 3,308 tons of crude ore that was milled during this period was derived from all operating sections of the Keystone mine. It includes 100 tons of development ore averaging 11.2 oz. Ag, 1.4% Pb, 2.7% Zn, and 0.3% Cu which were recovered from the project headings on the Union vein and which are subject to Government royalty.

Product	Dry Tons	ASSAYS Ag-oz.	Pb%	Cu%	Zn%	METAL CONTENTS Ag-oz.	Pb-Tons	Cu-Tons	Zn-Tons	RECOVERIES - Per Cent Ag	Pb	Cu	Zn
Heads	5308.0000	7.27	2.34	1.15	5.81	38591	124.1368	60.8284	308.2973	100.00	100.00	100.00	100.00
Pb Concs.	323.6818	98.15	35.27	13.65	4.99	31765	114.1304	44.1665	16.1468	82.3	91.9	72.6	5.2
Zn Concs.	522.3870	4.33	.25	1.24	50.16	2264	1.3296	6.4638	262.0406	5.9	1.1	10.6	85.0
Tails	4461.9912	1.02	.19	.23	.67	4562	8.6748	10.1981	30.1099	11.8	7.0	16.8	9.8

The project work reported by the operator for the April period conforms with the provisions of the contract. The $5,023.00, total costs, reported for this period on the operator's MF-104 forms -- equivalent to the completed 143 feet of combined drifting and crosscutting at the agreed upon unit price of $35.00 per foot plus 6 assays at $3.00 each -- are approved. Reimbursement to the operator of 50 percent of the approved reported costs, or $2,511.50, is recommended.

This period, the operator reports and claims reimbursement for a total of 6 assays on its MF-104 forms; however, the location and analyses of only 2 new samples have been posted on the current progress map. During the last inspection, a number of additional new samples and assays from the project headings had been posted on the mine maps. The failure to post this data on the project progress maps probably was due to the recent change in engineering personnel at the mine and will be called to the operator's attention. To date, the operator actually has reported the analyses of 56 samples taken from along project headings but has claimed reimbursement for only 33.

R. L. Bolmer

R. L. Bolmer
Mining Engineer

RLB/mw
cc: 6
Idm-2903
Chron

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

RECEIVED
JUN 11 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of April, 1956 Docket No. DMEA 3866 Contract No. Idm-E903
Operator's Name American Smelting & Refining Co. Minerals Lead, Zinc, Copper
Address 120 Broadway, New York 5, New York
Contract Amount, $107,220. Government Participation: 50 % Amount, $53,610.

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) ~~Contractors~~ Short Form } Contracts:						
Drilling						
~~Contractors~~ Raising						
~~Contractors~~						
Drifting & Crosscutting						
Drift or X Cut Timber	5,005.00	6,580.00	11,585.00	7/21/56 OSPK		
(2) ~~Direct Supervision~~						
~~Labor~~						
~~Supervision~~						
~~Labor Service~~						
(3) ~~Operating Materials Supplies~~:						
~~Timber~~						
~~Explosives~~						
~~Fuse~~						
~~Stack~~						
Drill Hole Casing						
Drill Hole Cementing						
(4) ~~Operating Equipment~~:						
~~Rental~~						
~~Purchase~~						
~~Depreciation~~						
(5) ~~Miscellaneous Expense~~						
(6) ~~Non-Bidding Improvements~~						
(7) ~~Misc.~~						
~~Expense Equipment~~						
~~Insurance Costs~~						
~~Payroll Taxes~~						
~~Employee~~						
Drill Stations						
Assaying	18.00	81.00	99.00			
(8) Contingencies (specify):						
TOTALS	5,023.00	6,661.00	11,684.00	5,023.00	6,661.00	11,684.00

I certify that the above bill is correct and just and that payment therefor has not been received.

Date May 5, 1956 *Payee American Smelting & Refining Co.

Per [signature] Title Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 2511.50

Signature [signature]
(Authorized Certifying Officer)

Date 6-7-56 Vou. No. DMA-56-118

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. E 903 in accordance with the terms of the contract.

Signature R. L. Palmer 25 11.50 Title Mining Engineer Date MAY 31 1956

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W. M. Jarvis Title Executive Officer Date JUN 5 1956

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(*a*) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(*b*) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(*c*) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

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JUN 11 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of April, 1956 Docket No. DMEA 3866 Contract No. Idm-E903
Operator's Name American Smelting & Refining Co. Minerals Lead, Zinc, Copper
Address 120 Broadway, New York 5, New York

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting and/or Crosscutting	ft.	5,005.00	143	11,585.00	331	35.00	2,450	35.00
~~Crosscutting~~								
Raising	ft.						200	39.00
~~Shaft~~ Drift or cross-								
Winzes cut Timber	Ft.						245	6.00
Drilling: Core	Ft.						2,000	4.60
~~Churn~~ Casing	Ft.						200	2.00
~~Auger~~ Cementing	Ft.						200	2.00
~~Stripping~~ Drill Sta.	Ea.						10	100.00
~~Trenching~~								
~~Test Pits~~								
~~Roads and Trails~~								
Assaying	Ea.	18.00	6	99.00	33	3.00	400	3.00
TOTAL DISTRIBUTED COSTS		5,023.00		11,684.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								None
Initial Rehabilitation and Repairs								"
New Buildings, Improvements, etc.								"
								"
TOTAL COSTS		5,023.00		11,684.00				107,220.00

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date May 5, 1956 Operator American Smelting & Refining Co.

Per William Prestel Title Supt.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

REMARKS:

(Instructions on reverse)

(For Government use only)

R. L. Bolmer

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

AMERICAN SMELTING AND REFINING COMPANY
KEYSTONE UNIT
P. O. BOX J CRESTED BUTTE, COLO.

RECEIVED
JUN 11 1956

May 8, 1956

Mr. W. M. Traver, Executive Officer
U.S. Dept. of Interior
Defense Minerals Exploration Administeration
224 New Custom House
Denver 2, Colorado

RE: DOCKET DMEA 3866
CONTRACT Idm-8903

Dear Sir:

General Remarks:

143 ft. of drifting and crosscutting was done during the month of April. The Union vein was cut at a distance 120 ft. normal to the Keystone vein. 100/tons was sent to the mill as ore with 479 tons discarded as waste.

General Geology:

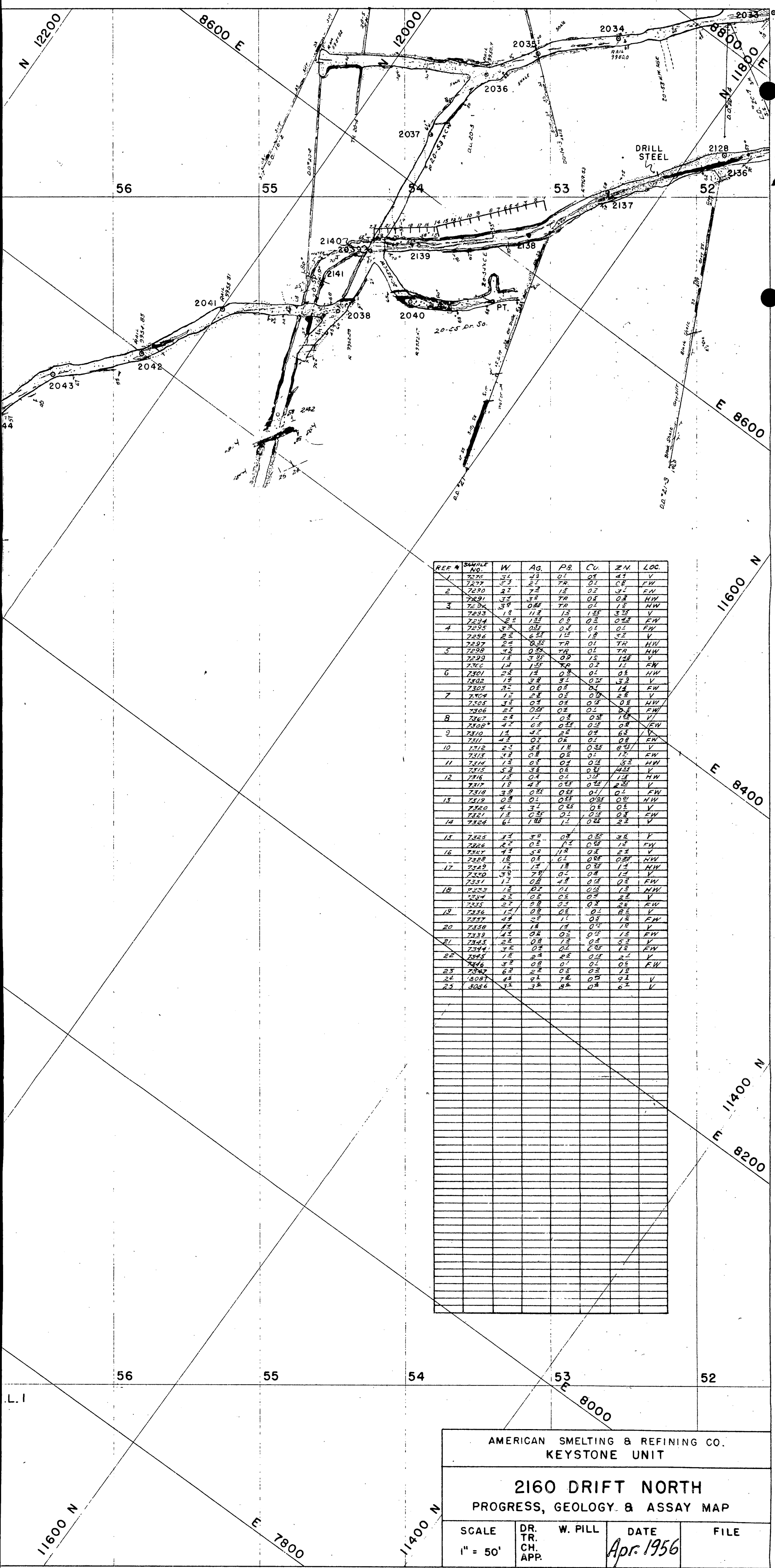
Vein width averages 3 to 4 ft. wide. Bearing and dip corresponds closely with the Union vein exposed on the level above. Numerous vertical and near vertical veinlets were cut in the 15 ft. preceeding the exposure of the Union vein.

Very truly yours,

ORIGINAL SIGNED BY
NOLAN PROBST

Nolan Probst, Supt.

NP:ghf



REF. #	SAMPLE NO.	W.	AG.	PB.	CU.	ZN.	LOC.
1	7276	3.1	4.3	0.1	0.4	4.1	V
	7277	3.3	2.1	TR.	0.1	0.8	FW
2	7290	2.7	7.2	1.5	0.2	3.1	FW
	7291	3.4	3.2	TR	0.5	0.2	HW
3	7292	3.9	0.55	TR	0.1	1.5	HW
	7293	1.8	11.3	1.2	1.35	3.75	V
	7294	2.0	1.35	0.6	0.2	0.45	FW
4	7295	3.9	0.55	0.3	0.1	0.1	FW
	7296	2.2	6.25	1.15	1.8	3.2	V
	7297	2.4	0.35	TR	0.1	TR	HW
5	7298	3.2	0.35	TR	0.1	TR	HW
	7299	1.5	3.95	0.9	1.5	1.45	V
	7300	1.3	1.35	TR	0.2	1.1	FW
6	7301	2.5	1.4	0.8	0.1	0.6	HW
	7302	1.4	3.8	3.1	0.35	3.2	V
	7303	2.7	0.8	0.8	0.1	1.4	FW
7	7304	1.2	2.5	0.5	0.15	2.6	V
	7305	3.5	0.4	0.4	0.15	0.8	HW
	7306	2.7	0.25	0.4	0.1	0.5	FW
8	7307	2.3	1.1	0.5	0.35	1.65	V
	7308*	4.7	0.5	0.35	0.15	0.8	FW
9	7310	1.4	4.7	2.8	0.4	6.5	V
	7311	4.3	0.7	0.2	0.1	0.8	FW
10	7312	2.3	3.5	1.8	0.35	8.45	V
	7313	3.3	0.8	0.6	0.1	1.7	FW
11	7314	1.2	0.3	0.4	0.15	5.2	HW
	7315	5.3	3.6	0.6	0.25	4.35	V
12	7316	1.5	0.2	0.1	0.15	1.15	HW
	7317	1.9	4.3	0.25	0.25	2.35	V
	7318	3.8	0.35	0.25	0.1	0.1	FW
13	7319	0.8	0.1	0.25	0.05	0.01	HW
	7320	4.1	3.1	0.25	0.6	0.6	V
	7321	1.3	0.25	0.1	0.15	0.3	FW
14	7324	6.1	1.85	1.1	0.25	2.2	V
15	7325	3.4	3.9	0.4	0.35	3.6	V
	7326	2.7	0.2	0.1	0.25	1.5	FW
16	7327	4.4	5.9	1.2	0.3	2.4	V
	7328	1.8	0.6	0.1	0.08	0.55	HW
17	7329	1.5	1.4	1.8	0.25	1.4	HW
	7330	3.0	7.0	0.1	0.4	1.4	V
	7331	1.7	0.8	4.8	0.15	0.2	FW
18	7333	1.5	0.7	0.1	0.15	1.2	HW
	7334	2.3	0.8	0.6	0.4	2.2	V
	7335	2.7	0.8	0.3	0.3	2.8	FW
19	7336	1.4	0.8	0.8	0.1	8.6	V
	7337	4.4	2.0	1.1	0.5	1.2	FW
20	7338	1.4	1.8	1.4	0.15	1.0	V
	7339	4.4	0.2	0.2	0.15	1.2	FW
21	7343	2.3	0.8	1.2	0.4	5.3	V
	7344	3.2	0.4	0.1	0.05	1.0	FW
22	7345	1.5	2.3	2.5	0.15	2.1	V
	7346	3.0	0.8	0.1	0.1	0.6	FW
23	7347	6.2	2.2	0.5	0.2	1.0	
24	8087	4.5	9.2	7.2	0.25	9.2	V
25	8086	3.2	3.6	8.0	0.4	6.7	V

AMERICAN SMELTING & REFINING CO.
KEYSTONE UNIT

2160 DRIFT NORTH

PROGRESS, GEOLOGY & ASSAY MAP

SCALE	DR. / TR. / CH. / APP.		DATE	FILE
1" = 50'		W. PILL	Apr. 1956	

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

ADMINISTRATIVE OFFICE REGION III
APR 27 1956
BUREAU OF MINES
DENVER, COLORADO

April 25, 1956

224 New Customhouse
Denver 2, Colorado

Griswold
~~Klingschmidt~~
Betty

FINAL DISTRIBUTION MADE APR 26 1956

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3866 (Lead-Zinc-Copper) Contract Idm-E903, American Smelting and Refining Company (Keystone Mine) Gunnison, County, Colorado - Operator's Monthly Progress Report for the period March 1956.

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Narrative Report, and Engineer's Report for the above period.

It is deemed that the Operator has complied with the intent of the contract, and the work for which payment is recommended is acceptable to the Government. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore, we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

REMARKS

Date of Report	April 4, 1956
Date Received in Field Office	April 18, 1956
Date Received in Region Office	April 20, 1956

W. M. TRAVER,

W. M. Traver

WMC:ab
cc: MF-104 File E903
Sec. Op. Comm. (2)
Shaw (2)
Chron.

RECEIVED
APR 30 1956

REGION III

DMEA
Date Rec'd.
APR 20 1956
BUREAU OF MINES
Denver, Colorado

Building 20
Denver Federal Center
Denver 2, Colorado
April 19, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shea
Supervising Mining Engineer

From: R. L. Delmar

Subject: DMEA 3866 (Lead-Zinc-Copper), Contract Idm-3903, American Smelting and Refining Co. (Keystone mine), Gunnison County, Colorado -- Progress report for March 1956

The progress reported for the March period under the subject short-term contract -- 110 feet of combined drifting and crosscutting on the 2160 level of the Keystone mine -- was verified during an inspection of the property April 9-10, 1956.

On the date of inspection, the 2160 adit level of the Keystone mine had been extended a total of 224 feet from its existing breast at the start of project operations. The initial 138 feet of this advance was as a drift (2160 N. Dr.) along the Keystone vein; the remainder was in a crosscut (2160-55 W. RC) directed toward the Union vein. A total of 188 feet of the above advance was completed through March 31, 1956, 78 feet of which has been reported previously (Feb. 1956) for reimbursement by the operator. The 110 feet of advance that the operator is reporting for the March period, therefore, is valid and proper.

The only other project work reported for reimbursement this period is the analysis of 18 samples taken from along the northwesterly exposures of the Keystone vein. Actually 19 individual samples were taken from 9 locations along the March advance of the project heading. These were assayed for silver, lead, copper, and zinc. The sample data and assay results are posted on the progress map that accompanies the operator's March report.

The Keystone vein weakened and its mineral content decreased along the northwesterly extension of the project drift. The operator's request to start the authorized crosscut to the Union vein earlier than stipulated in the contract was approved by the DGGA Field Team. The Union crosscut was turned from the Keystone drift in the vicinity of Survey Sta. 21-40 (see March progress map). At this point the main mineralized streak within the structure had narrowed to a width of about 8 inches. It was composed chiefly of quartz and contained minor amounts of sulfides. The turn-off for the Union crosscut exposed a number of parallel shears west of the main sulfide streak which probably represent the true hanging wall of the Keystone structure. These parallel shears were narrow and vuggy. Two of them contained a few inches of massive sulfides and, on the date of inspection, were still making appreciable amounts of water. The Union crosscut is being driven on a course of S. 72° W. The Union vein zone, as exposed directly above this section on the 2000 level of the mine, ranges up to 40 feet in width. The operator was advised to extend the 2160-55 W. crosscut through the full width of zone to the true hanging wall of the structure. The project heading then would be continued northwesterly as a drift along the most promising exposure within the zone.

The operator reports that 194 tons of rock broken during the March advance of the 2160 N. Dr. was milled as development ore and that 177 tons was discarded as waste. All of the 116 tons of rock excavated in the 2160-55 W. crosscut during March was discarded as waste. The development ore that was sent to the mill contained an adjusted metal content of 228.3 oz. silver, 1.4046 tons lead, 0.3814 tons copper, and 3.1943 tons zinc. The adjusted average grade of this material was 1.1 oz./ton Ag, 8.7% Pb, 0.8% Cu, and 1.6% Zn. The metal content of the development ore, after corrections to reflect the operator's average mill recovery for the March period, will be subject to Government royalty.

The $3,886.00 total costs reported for the period on the operator's MP-104 forms -- equivalent to the completed 110 feet of combined drifting and crosscutting at the agreed upon unit price of $35.00 per foot plus 12 assays at $3.00 each -- are approved. Reimbursement to the operator of 75 percent of the approved reported costs, or $1,943.00, is recommended.
50

R. L. Bolmer

R. L. Bolmer
Mining Engineer

RLB/mr
cc: 6
Idm-1903
Chron

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of March, 1956 Docket No. DMEA 3866 Contract No. Idm-E903
Operator's Name American Smelting & Refining Company Minerals Lead, Zinc, Copper
Address 120 Broadway, New York 5, New York
Contract Amount, $107,220 Government Participation: 50 % Amount, $53,610

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) [redacted] Short Form } Contracts:						
Drilling						
[redacted] Raising						
[redacted]						
Drifting &/or Crosscutting						
Drift or crosscut timber	3850.00	2730.00	6580.00	5/31/56 awpk		
(2) [redacted]						
[redacted]						
[redacted]						
[redacted]						
(3) [redacted]:						
[redacted]						
[redacted]						
[redacted]						
[redacted]						
Drill Hole Casing						
Drill Hole Cementing						
(4) [redacted]:						
[redacted]						
[redacted]						
[redacted]						
(5) [redacted]						
(6) [redacted]						
(7) [redacted]:						
[redacted]						
[redacted]						
[redacted]						
[redacted]						
Drilling Stations						
Assaying	36.00	45.00	81.00			
(8) [redacted]:						
TOTALS	3886.00	2775.00	6661.00	3886.00	2775.00	6661.00

I certify that the above bill is correct and just and that payment therefor has not been received.
Date April 4, 1956 Payee American Smelting & Refining Co.

Per Nolan Probst Title Superintendent

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

APR 30 1956

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$1943.00

Signature [illegible]
(Authorized Certifying Officer)

Date 4/26/56 Vou. No. DMA 56-102

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. DMA-E 903 in accordance with the terms of the contract.

Signature R. L. Palmer, $1,943.00 Title Mining Engineer Date APR 19 1956

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W. M. Shaver Title Executive Officer Date APR 25 1956

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of March, 1956 Docket No. DMEA 3866 Contract No. Idm-B903
Operator's Name American Smelting & Refining Company Minerals Lead, Zinc, Copper
Address 120 Broadway, New York 5, New York

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting&/or Crosscutting	Ft.	3850.00	110	6580.00	188	35.00	2,450	35.00
~~Crosscutting~~								
Raising	Ft.						200	39.00
~~Shaft Drift or Cross-~~								
~~Winze Cut Timbering~~	Ft.						245	6.00
Drilling: Core	Ft.						2,000	4.60
~~Churn Casing~~	Ft.						200	2.00
~~Auger Cementing~~	Ft.						200	2.00
~~Stripping Drill Sta~~	Ea.						10	100.00
~~Trenching~~								
~~Test Pits~~								
~~Roads and Trails~~								
Assaying	Ea.	36.00	12	81.00	27	~~0.43~~ 3.00	400	3.00
TOTAL DISTRIBUTED COSTS		3886.00		6661.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								None
Initial Rehabilitation and Repairs								"
New Buildings, Improvements, etc.								"
TOTAL COSTS		3886.00		6661.00				107,220.00

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

REMARKS:

Date April 4, 1956 Operator American Smelting & Refining Co.

Per Nolan Probst Title Superintendent

→ NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

RECEIVED
APR 30 1956

R. L. Bolmer

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In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

AMERICAN SMELTING AND REFINING COMPANY
KEYSTONE UNIT
P. O. BOX J CRESTED BUTTE, COLO.

April 9, 1956

Mr. John F. Shaw
U. S. Bureau of Mines
Room 137, Building 20
Denver Federal Center
Denver, Colorado

DOCKET NO. DMEA 3866
CONTRACT NO. Idm-E903

Dear Sir:

Attached find five copies each of Form MF-104A, Operator's Unit Cost and Progress Report; Form MF-104, Operator's Monthly Report and Voucher, and Progress Maps.

General Remarks:

During the month, 59 feet of drifting was done on the Keystone Vein and 51 feet of crosscutting toward the Union Vein.

From this drifting, 194 tons was sent to the mill as ore and 177 tons discarded as waste.

General Geology:

There was a gradual weakening of the Keystone Vein with continued drifting. At the point where crosscutting toward the union vein commenced, the Keystone Vein had narrowed to 8 inches which was predominately quartz with little sulfides present. The sandstone beds adjacent to the vein at this point were tight and quite hard.

Very truly yours,

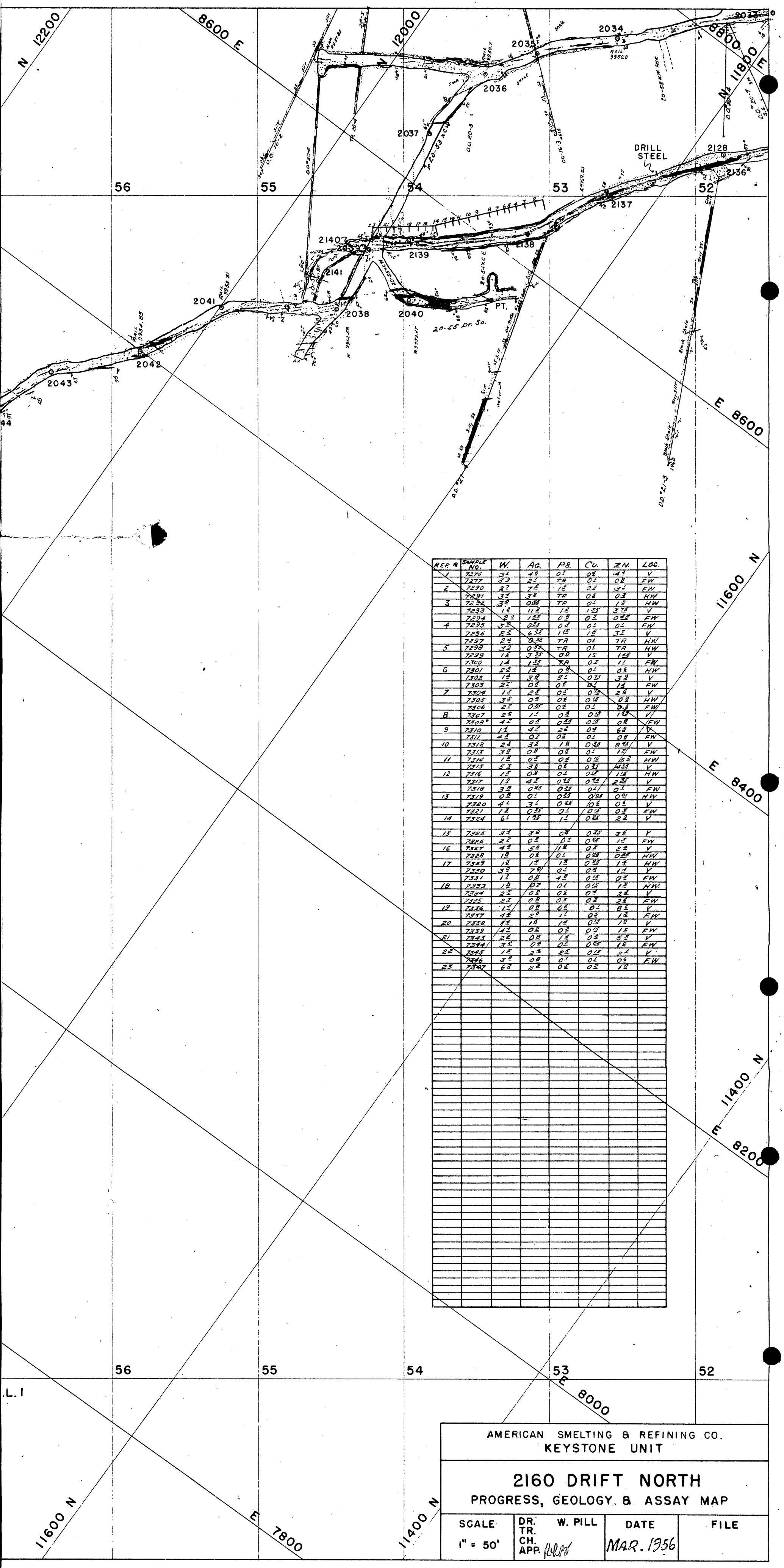
ORIGINAL SIGNED BY
NOLAN PROBST

Nolan Probst, Supt.

NP:ghf

Encls.

RBA



REF. #	SAMPLE NO.	W.	AG.	PB.	CU.	ZN.	LOC.
1	7276	3.1	4.8	0.1	0.1	14.1	V
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	7291	3.1	3.2	TR	0.5	0.3	HW
3	7292	3.9	0.55	TR	0.1	1.5	HW
	7293	1.8	11.3	1.2	1.35	3.75	V
	7294	2.0	1.55	0.8	0.2	0.15	FW
4	7295	3.8	0.35	0.3	0.1	0.1	FW
	7296	2.2	6.85	1.15	1.8	3.1	V
	7297	2.4	0.35	TR	0.1	TR	HW
5	7298	3.9	0.85	TR	0.1	TR	HW
	7299	1.5	3.95	0.9	1.5	1.45	V
	7300	1.3	1.35	TR	0.7	1.1	FW
6	7301	2.5	1.4	0.8	0.1	0.6	HW
	7302	1.4	3.8	3.1	0.75	3.9	V
	7303	2.7	0.6	0.8	0.1	1.4	FW
7	7304	1.3	2.3	0.5	0.15	2.6	V
	7305	3.5	0.4	0.1	0.15	0.8	HW
	7306	2.7	0.55	0.1	0.1	0.5	FW
8	7307	2.5	1.1	0.5	0.15	1.85	V
	7308*	4.2	0.5	0.55	0.15	0.8	FW
9	7310	1.4	4.7	2.2	0.4	6.5	V
	7311	4.5	0.7	0.2	0.1	0.8	FW
10	7312	2.5	3.5	1.8	0.35	8.45	V
	7313	3.8	0.8	0.6	0.1	1.7	FW
11	7314	1.2	0.5	0.4	0.15	15.2	HW
	7315	5.3	3.6	0.6	0.25	4.55	V
12	7316	1.5	0.2	0.1	0.15	1.15	HW
	7317	1.0	4.3	0.15	0.45	2.35	V
	7318	3.8	0.85	0.25	0.1	0.1	FW
13	7319	0.8	0.1	0.25	0.05	0.01	HW
	7320	4.1	3.1	0.25	0.6	0.6	V
	7321	1.3	0.25	0.1	0.15	0.3	FW
14	7324	6.1	1.85	1.1	0.25	2.2	V
15	7325	3.4	3.0	0.4	0.35	3.6	V
	7326	2.7	0.5	0.1	0.25	1.5	FW
16	7327	4.4	5.0	1.8	0.3	2.4	V
	7328	1.8	0.6	0.1	0.05	0.55	HW
17	7329	1.5	1.4	1.8	0.25	1.4	HW
	7330	3.0	7.0	0.1	0.2	1.4	V
	7331	1.7	0.8	4.8	0.15	0.2	FW
18	7333	1.3	0.7	0.1	0.15	1.2	HW.
	7334	2.5	0.2	0.6	0.4	2.2	V
	7335	2.7	0.8	0.3	0.3	2.6	FW
19	7336	1.4	0.8	0.6	0.1	6.2	V
	7337	4.4	2.0	1.1	0.5	1.2	FW
20	7338	1.4	1.6	1.4	0.15	1.0	V
	7339	4.4	0.2	0.2	0.15	1.2	FW
21	7343	2.4	0.8	1.2	0.2	5.3	V
	7344	3.2	0.4	0.1	0.05	1.0	FW
22	7345	1.5	2.4	2.5	0.15	2.1	V
	7346	3.0	0.8	0.1	0.1	0.6	FW
23	7347	6.8	2.2	0.5	0.2	1.0	

.L. I

AMERICAN SMELTING & REFINING CO.
KEYSTONE UNIT

2160 DRIFT NORTH

PROGRESS, GEOLOGY & ASSAY MAP

SCALE	DR. W. PILL TR. CH. APP. RLPd	DATE	FILE
1" = 50'		MAR. 1956	

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

RECEIVED
APR 1 0 1956

FINAL DISTRIBUTION
MADE APR 1 0 1956

224 New Customhouse
Denver 2, Colorado

April 5, 1956

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3866 (Lead-Zinc-Copper) Contract Idm-E903, American Smelting and Refining Company (Keystone Mine) Gunnison County, Colorado - Operator's Monthly Progress Report, for the period February, 1956

Enclosed are the original and four copies of Form MF-104 and MF-104A, Narrative Report, and Engineer's Report for the above period.

Work has been accomplished as authorized in the contract and payment is recommended for 50 percent of the amount as reported on Form MF-104, contingent on your verification of the correctness of applicable rates and arithmetical accuracy of computations.

The $2,775.00 total costs reported for the period on the Operator's MF-104 forms - equivalent to the completed 78 feet of drifting at the agreed unit price of $35.00 per foot plus 15 assays at $3.00 each are approved. Reimbursement to the Operator of 50 percent of the approved reported costs, or $1,387.50.

Remarks

Date of Report----------March 7, 1956
Date Received in Field Office---------- March 19, 1956
Date Received in Region Office---------- March 23, 1956

W. M. TRAVER

W. M. Traver

Enclosures
HMC:jy
cc: MF-104 File E903
Sec. Op. Comm. (2)
Shaw (2)
Chron.

DMEA
Date Rec'd.

MAR 23 1956

BUREAU OF MINES
Denver, Colorado

REGION III

Building 20
Denver Federal Center
Denver 2, Colorado
March 21, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

RECEIVED
APR 12 1956

Through: John F. Shaw
Supervising Mining Engineer

From: R. L. Belmer

Subject: DMEA 3866, Contract Idm-2903 (lead-zinc-copper), American Smelting and Refining Co. (Keystone mine), Gunnison County, Colorado - Progress report for February, 1956

The initial progress under the subject short-form contract was inspected on March 13, 1956. The inspection was made with Nolan Probst, superintendent of the Keystone Unit, and R. K. Kilpatrick, a staff geologist for the company.

The authorized starting point for Stage I exploration was the existing northwesterly breast of the 2160 adit level of the Keystone mine. A reference point (80d spike driven in final drift set) had been established at a point 62.5 feet outby this breast during an earlier inspection of the mine on January 19, 1956. Previous stope preparation work had left considerable debris in certain sections along the northwestern end of the level. It was necessary to clean up and rehabilitate these sections before the authorized extension of the level could commence. The necessary preparation work was started January 24, 1956. This date is considered the start of project operations. All of the preparatory work was performed at the operator's expense. In addition to rehabilitating the northwestern end of the level, the operator extended electrical power to this section of the mine and established a new transformer station. An electric fan was installed and ventilation pipe was extended to near the existing breast. The necessary preparation was completed and the authorized project drifting was started on February 6, 1956.

The progress reported by the operator for the February period - the northwesterly extension of the 2160 level for a distance of 78 feet as a drift along the Keystone vein - was verified during the latest inspection. On that date, the heading had been advanced a total of 113 feet. No timber support had been required within this distance. The advance during the month of February is indicated correctly on the MF-104 forms and on the other data comprising the operator's progress report for that period. The conditions

encountered during the period are described adequately in the operator's narrative. All of project work during the period was performed according to the specifications stipulated in the contract.

The only other work reported for reimbursement this period is the assaying of 15 channel samples taken along the project heading. Actually 34 individual samples were taken and assayed from 14 locations along the first 78 feet of the project drift. The general procedure was to sample the newly exposed breast of the heading after each succeeding round. The central or more highly mineralized zone within the exposed Keystone structure was sampled separately. The hanging and/or footwall of this central zone, when exposed in the drift, also were sampled individually. The 14 sample locations are indicated on the map that accompanies the operator's progress report. The 34 samples each were assayed for silver, lead, copper, and zinc. The assay results are posted on the operator's map. These results indicate that the mineralized zone within the structure ranged in width from 1.0 to 6.1 feet and averaged about 2.5 feet. At no point along the first 78 feet of the project drift did the mineralization approach ore grade.

The contract does not authorize the assaying of any samples under Stage I but does allow 400 assays under Stage II. The 650 feet of combined drifting, crosscutting, and raising to be performed under the first stage ordinarily would require the same proportionate amount of sampling and assaying as would the 2000 feet of combined drifting and crosscutting and the 2000 feet of core drilling allotted to the second stage. This inequity has been called to the attention of the Field Team who has agreed to allocate a proportionate number of the authorized assays to the Stage I work. The 15 assays reported for reimbursement this period are accepted contingent to such allocation by the Field Team.

In the first few rounds of the project heading, the Keystone vein continued on a northwesterly course toward its projected intersection with the Union vein. Beyond this point, however, it turned and followed a more northerly course. The final 100 feet of the vein exposed on the date of inspection strikes N. 40° W., a course essentially parallel to the 2000 level drifts on both the Keystone and Union veins directly above this location. It is unlikely that the two veins ever would junction on such a course and, in no event, within the 350-foot estimate stipulated in the contract. Recent reports indicate that the Keystone vein exposed in the project heading subsequent to the date of inspection has started to weaken as it did directly above this location on the 2000 level. The operator requested and was granted permission to start the authorized alternate crosscut to the Union vein from the present advance of about 140 feet in the project drift instead of from the 350-foot distance stipulated in the contract.

A total of 322 tons of rock were broken in the first 78 feet of the project heading; 256 tons of this material was milled as development "ore" and 66 tons was discarded as waste. A sample is taken of each car of rock removed from the heading. The total metal content in the heading

material is computed monthly on the basis of these car samples and an established car factor. This metal content is adjusted monthly so as to conform with the total input to the mill for the month from all sources in the mine as determined by mechanical sampling and weighing of the mill feed. The average mill recovery for the various metals also is computed each month. The Government's royalty will be based on the adjusted metal content in the material milled from the project heading, the average mill recoveries, and the average prices received for the various metals from the smelter. Generally there is considerable delay in the receipt of the smelter settlements. The royalty due on the concentrates recovered from the project heading will be computed and paid when all of the necessary data are available.

The $2,775.00 total costs reported for the period on the operator's MF-104 forms - equivalent to the completed 78 feet of drifting at the agreed unit price of $35.00 per foot plus 15 assays at $3.00 each - are approved. Reimbursement to the operator of 50 percent of the approved reported costs, or $1,387.50, is recommended.

R. L. Bolmer

R. L. Bolmer
Mining Engineer

RLB/mw
cc 6
Idm-E903
Chron

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

RECEIVED
APR 12 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of [illegible], 195[illegible] Docket No. DMEA [illegible] Contract No. [illegible]
Operator's Name [illegible] Minerals [illegible]
Address [illegible]
Contract Amount, $[illegible] Government Participation: [illegible]% Amount, $[illegible]

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing						
Crosscutting						
Drifting				4/18/56	WPR	
[illegible]						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
[illegible]						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
[illegible]						
(8) Contingencies (specify):						
TOTALS	[illegible]		[illegible]	2,775.00		2,775.00

I certify that the above bill is correct and just and that payment therefor has not been received.

Date 3/7/56 *Payee [illegible]

Per [illegible] Title [illegible]

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

→ NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$1387.50

Signature [illegible]
(Authorized Certifying Officer)

Date 4/10/56 Vou. No. DMEA 56-91

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E903 in accordance with the terms of the contract.

Signature K. L. Bolmer, $1,387.50 Title Mining Engineer Date MAR 20 1956

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W. M. Lamey Title Executive Officer Date APR 5 1956

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

RECEIVED
APR 12 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of February, 1956 Docket No. DMEA 3866 Contract No. Idm-E903
Operator's Name American Smelting & Refining Co. Minerals Lead, Zinc, Copper
Address 120 Broadway New York 5, New York

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting and/or crosscutting	Ft.	2730.00	78	2730.00	78	35.00	2,450	$35.00
Raising	Ft.						200	39.00
Drift or cross-cut timbering	Ft.						245	6.00
Drilling: Core	Ft.						2,000	4.60
Casing	Ft.						200	2.00
Cementing	Ft.						200	2.00
Drill stas.	Each						10	100.00
Assaying	Each	45.00	15	45.00	15	* 0.577	400	3.00
TOTAL DISTRIBUTED COSTS		2775.00		2775.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								None
Initial Rehabilitation and Repairs								"
New Buildings, Improvements, etc.								"
TOTAL COSTS		2775.00		2775.00				$107,220.00

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

REMARKS:

Date 3/7/56 Operator American Smelting & Refining Co.

Per [signature] Title [signature]

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

? * (should be $3.00)
R. L. Bolmer

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

X-7.7
R.L.B.

[illegible] MINING AND REFINING COMPANY
KEYSTONE UNIT
P. O. Box [illegible] Clifton [illegible], Colo.

RECEIVED
APR 12 1956

March 14, 1956

Mr. John F. Shaw
U. S. Bureau of Mines
Room 137, Building 20
Denver Federal Center
Denver, Colorado

PROJECT NO. [illegible] 3866
CONTRACT NO. [illegible]-2903

Dear Sir:

Attached you will find 5 copies of the Operators Unit Cost and Progress Report and 5 copies of the Operator's Monthly Report and Voucher. Under separate cover from our Salt Lake Office, you will receive in a few days, 5 copies of the progress map with assays.

General Remarks:

Advance of the 2160 level drift face on the Keystone Vein commenced February 6, 1956, at which date preliminary preparations were completed. Eighteen (18) feet of advance was made up to and inclusive of February 15, on which date a regular crew was assigned to the drift and a total of 76 ft. of advance was made for the month. A total of 322 tons of rock was handled from this heading of which 256 tons was sent to the mill as development ore and 66 tons discarded as waste.

Sampling Procedure and Weighing Procedure:

The face is cut sampled each round with separate cuts being made of the vein material and waste across the drift width. A composite grab sample is taken of each drift round by grab sampling each car. These samples are brought to the surface and assayed daily. A daily record is made of the car count from the face.

In keeping with general practice throughout the mine estimated car weights are adjusted to actual mill weightometer weights at the end of each month. All weights reported will be corrected weights. Likewise, the metal content of all mine grab samples are adjusted to actual metal content indicated by sample of mill heads by assigning factors each month to grab sample assays of each metal. All grab sample assays reported will therefore be corrected assays.

General Geology - Keystone Vein 2160 Level

At the outset of drifting it appeared the Keystone Vein was trending towards the Union Vein, however, after two rounds of advance, it assumed its regular attitude. Mineralization has been sparse and composed almost entirely

Mr. John F. Shaw March 14, 1956

of small veinlets of pyrite with scattered sulfides of Zn, Pb and Cu. The vein has been essentially tight with the wall rock firm and little gouge showing. Sympathetic veinlets of quartz and sulfides enter and leave the drift in several instances with definite pattern. Wall rock is predominately sandstone with minor interpolations of shale.

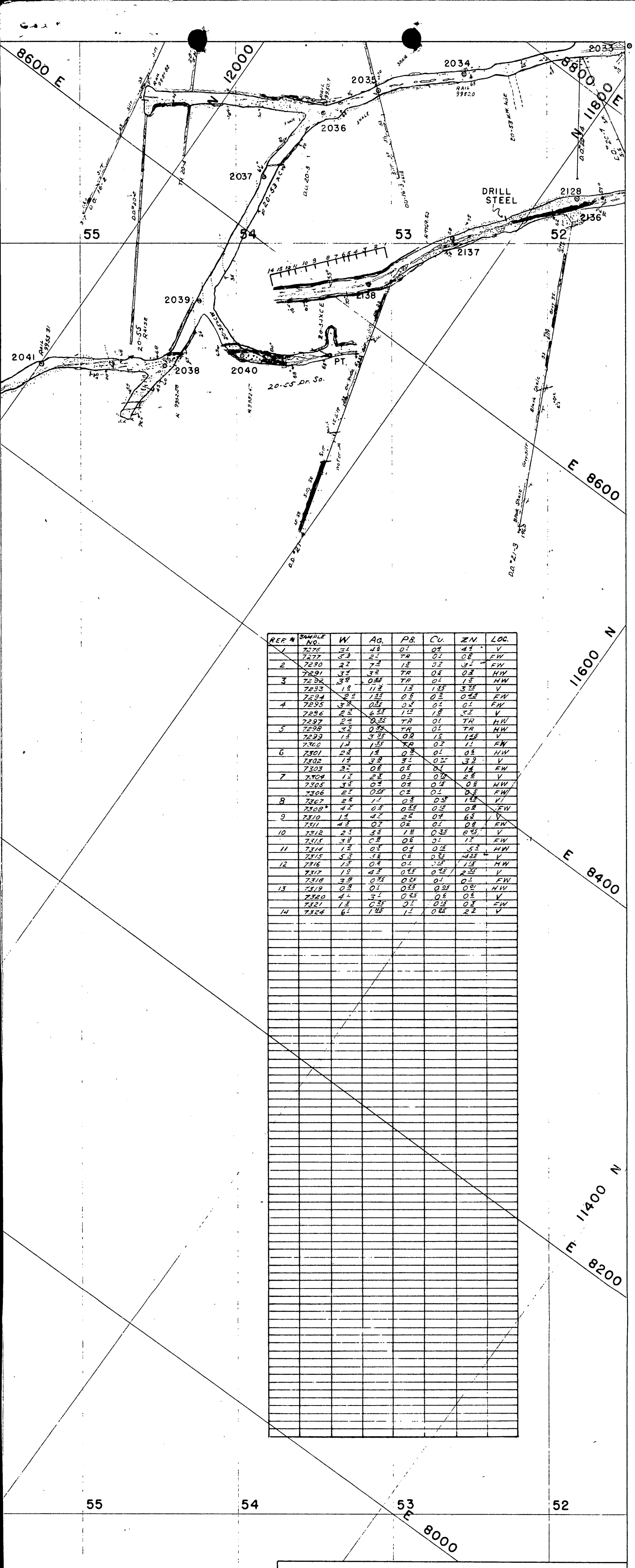
Very truly yours,

ORIGINAL SIGNED BY
NOLAN PROBST

Nolan Probst, Supt.

MWghf

Encls.



REF. #	SAMPLE NO.	W.	AG.	PB.	CU.	ZN.	LOC.
1	7276	3.1	4.6	0.1	0.4	4.4	V
	7277	3.9	2.1	TR	0.1	0.8	FW
2	7290	2.7	7.2	1.5	0.2	3.1	FW
	7291	3.4	3.2	TR	0.5	0.2	HW
3	7292	3.9	0.55	TR	0.1	1.5	HW
	7293	1.8	11.2	1.2	1.35	3.75	V
	7294	2.0	1.35	0.6	0.2	0.45	FW
4	7295	3.9	0.35	0.3	0.1	0.1	FW
	7296	2.2	6.23	1.19	1.8	3.7	V
	7297	2.4	0.35	TR	0.1	TR	HW
5	7298	3.2	0.35	TR	0.1	TR	HW
	7299	1.5	3.95	0.9	1.5	1.25	V
	7300	1.3	1.35	TR	0.2	1.1	FW
6	7301	2.5	1.4	0.8	0.1	0.6	HW
	7302	1.4	3.8	3.1	0.3	3.9	V
	7303	2.7	0.8	0.8	0.1	1.4	FW
7	7304	1.3	2.3	0.5	0.79	2.6	V
	7305	3.5	0.4	0.4	0.15	0.8	HW
	7306	2.7	0.25	0.1	0.1	0.5	FW
8	7307	2.8	1.1	0.5	0.35	1.63	V
	7308	4.2	0.5	0.55	0.15	0.8	FW
9	7310	1.4	4.7	2.8	0.4	6.5	V
	7311	4.3	0.7	0.2	0.1	0.8	FW
10	7312	2.3	3.5	1.8	0.35	8.45	V
	7313	3.8	0.8	0.6	0.1	1.7	FW
11	7314	1.2	0.5	0.4	0.15	5.2	HW
	7315	5.3	3.8	0.8	0.25	14.35	V
12	7316	1.5	0.2	0.1	0.15	1.15	HW
	7317	1.0	4.3	0.45	0.45	2.35	V
	7318	3.8	0.35	0.25	0.1	0.1	FW
13	7319	0.8	0.1	0.25	0.05	0.01	HW
	7320	4.1	3.1	0.25	0.6	0.6	V
	7321	1.3	0.25	0.1	0.15	0.3	FW
14	7324	6.1	1.25	1.1	0.25	2.2	V

AMERICAN SMELTING & REFINING CO.
KEYSTONE UNIT

2160 DRIFT NORTH

PROGRESS, GEOLOGY & ASSAY MAP

SCALE	DR. / TR. / CH. / APP.	DATE	FILE
1" = 50'	W. PILL	FEB. 56	

Ref	Sample	Width	Ag	Pb	Cu	Zn	Loc
72	14034	3.9	22.9	6.9	1.9	25.9	V
73	14038	4.6	34.1	10.3	1.3	16.8	V
74	14042	1.2	8.3	2.3	2.6	11.5	V
75	14048	5.5	11.8	3.7	1.2	16.6	V
76	14054	4.2	57.2	3.3	1.0	23.3	V
77	14055	3.5	36.6	6.9	1.4	21.2	HW
78	14056	3.4	1.8	Tr	0.1	2.1	FW
79	14061	2.6	21.2	5.8	0.7	26.2	V
80	14066	3.3	5.8	1.7	0.9	7.5	V
81	14073	4.4	1.6	1.3	0.2	1.7	Face
82	14091	3.2	0.3	0.1	0.1	0.3	Face
83		4' to 8'	1.2	0.9	0.2	3.1	
84		8' to 12'	10.0	6.6	0.2	9.8	
85		16' to 20'	7.8	5.4	0.3	9.1	
86		12' to 16'	12.3	8.4	1.3	18.5	
87		16' to 24'	2.9	2.1	0.3	2.9	
88		8' to 12'	7.4	4.1	0.8	25.9	
89		12' to 16'	4.4	3.3	0.2	3.4	

2000 LEVEL ASSAYS

Ref.	Sample	Width	Ag	Pb	Cu	Zn	Loc.
1	8304	1.6	1.0	1.4	0.1	2.6	V
2	8306	1.6	2.2	2.3	0.15	4.3	V
3	8308	2.0	1.0	1.0	0.1	2.3	V
4	8311	1.7	0.6	0.9	0.15	1.1	V
5	8314	2.0	0.4	0.6	0.1	2.9	V
6	8315	1.8	0.2	0.1	0.1	0.5	V
7	8317	2.3	0.6	0.5	0.15	1.5	V
8	8319	1.7	0.9	1.5	0.2	1.9	V
9	8321	3.6	0.8	1.5	0.1	2.7	V
10	8323	5.0	1.7	4.8	0.25	4.3	V
11	8326	1.0	3.1	7.3	0.6	9.6	V
12	8328	1.0	3.4	5.6	0.4	5.8	V
13	8330	0.8	18.0	5.1	0.3	2.4	V
14	8334	1.0	0.9	0.7	0.15	1.0	V
15	8336	1.0	6.2	2.0	0.15	0.7	V
16	8341	1.6	5.9	5.6	0.8	6.5	V
17	8343	0.9	4.0	3.4	0.25	13.0	V
18	8346	0.6	2.4	0.1	0.2	20.0	V
19	8349	4.5	1.0	0.2	0.15	2.0	Fc
20	8350	4.0	0.4	0.5	0.1	1.2	V
21	8351	4.7	1.3	0.8	0.3	4.5	V
22	8354	1.9	0.4	0.5	0.1	1.2	V
23	8355	3.0	1.0	0.2	0.1	0.8	V
24	8358	4.6	1.2	0.7	0.2	5.4	V
25	8359	5.3	0.4	0.1	0.1	2.1	V
26	8360	5.0	0.4	0.1	0.1	1.4	V
27	8362	6.4	1.2	1.3	0.25	3.8	V
28	8363	6.0	1.4	0.2	0.15	1.6	V
29	8364	6.8	9.5	3.8	0.85	5.0	V
30	8365	5.8	11.6	7.3	0.5	12.1	V
31	8366	3.0	23.2	3.1	0.6	12.4	V
32	8368	1.3	6.2	10.8	0.15	17.4	V
33	8372	1.5	18.0	9.8	0.36	10.3	V
	8373	2.5	0.8	0.2	0.05	0.8	FW
	8374	1.8	6.4	0.8	0.05	1.4	HW
34	8375	3.0	26.8	7.2	0.2	8.5	V
35	8376	4.0	10.0	6.3	3.4	15.6	V
36	8378	6.2	8.2	2.8	1.7	14.0	V
37	8379	3.6	8.2	3.0	1.8	26.2	V
	8380	2.9	1.4	1.5	0.2	3.5	HW
38	8381	3.2	12.4	4.7	0.4	27.6	V
39	8384	3.3	11.0	4.8	0.35	23.1	V
40	8387	3.3	15.6	6.5	0.4	35.1	V
41	8392	1.7	9.4	3.8	1.5	18.8	V
42	8397	4.1	12.0	7.7	0.6	19.8	V
43	8398	1.6	13.2	9.5	1.2	18.8	V
44	8399	1.6	15.8	6.5	0.6	32.0	V
45	8400	2.9	10.3	7.6	1.8	18.8	V
46	8402	3.4	2.0	0.1	0.1	1.9	V
	8403	3.3	1.2	1.6	0.3	4.2	HW
47	8409	3.0	5.6	3.9	0.65	12.8	V
48	8413	3.2	4.0	1.8	0.2	13.4	FW
	8414	2.8	2.2	1.5	0.25	2.9	HW
49	8416	4.1	6.2	2.3	0.1	6.5	FW
	8417	2.6	3.1	14.1	0.6	11.5	HW
	8415	3.2	2.0	3.3	0.25	4.7	HW
50	8422	2.6	8.2	8.5	0.7	10.8	V
51	8423	1.8	4.7	5.2	0.3	6.1	V
52	8425	2.3	3.8	8.1	0.6	2.3	V
53	8429	2.0	9.8	1.6	1.5	1.5	V
54	8431	0.9	1.4	1.0	0.1	2.7	V
55	8433	0.3	1.2	1.0	0.2	1.8	V
56	8439	1.3	0.4	0.4	0.1	1.5	V
57	8441	5.7	3.8	0.5	1.3	1.6	V
58	8445	1.6	0.2	0.1	0.1	0.1	V
59	8447	2.0	0.8	0.7	0.2	2.8	V
60	8451	5.0	0.4	0.2	0.2	0.9	V Fc
61	8453	1.8	1.6	0.1	0.1	1.0	V
62	8459	0.6	1.8	0.1	0.2	1.2	V
63	8469	0.5	0.6	0.1	0.1	0.4	V
64	8473	1.4	1.6	0.1	0.2	2.0	V
65	8476	2.3	9.3	2.6	0.5	31.4	V
66	8478	5.4	6.4	1.3	0.8	29.2	V
67	8482	2.5	6.6	1.6	0.9	16.1	V
	8484	2.1	18.6	4.2	1.4	26.1	V
68	8490	3.0	9.4	3.4	1.3	20.1	V
69	8491	1.5	7.8	2.1	0.4	7.5	V
70	8494	2.4	4.1	1.8	0.3	6.6	V
71	14006	2.5	3.4	0.4	0.2	1.3	V

2160 LEVEL ASSAYS

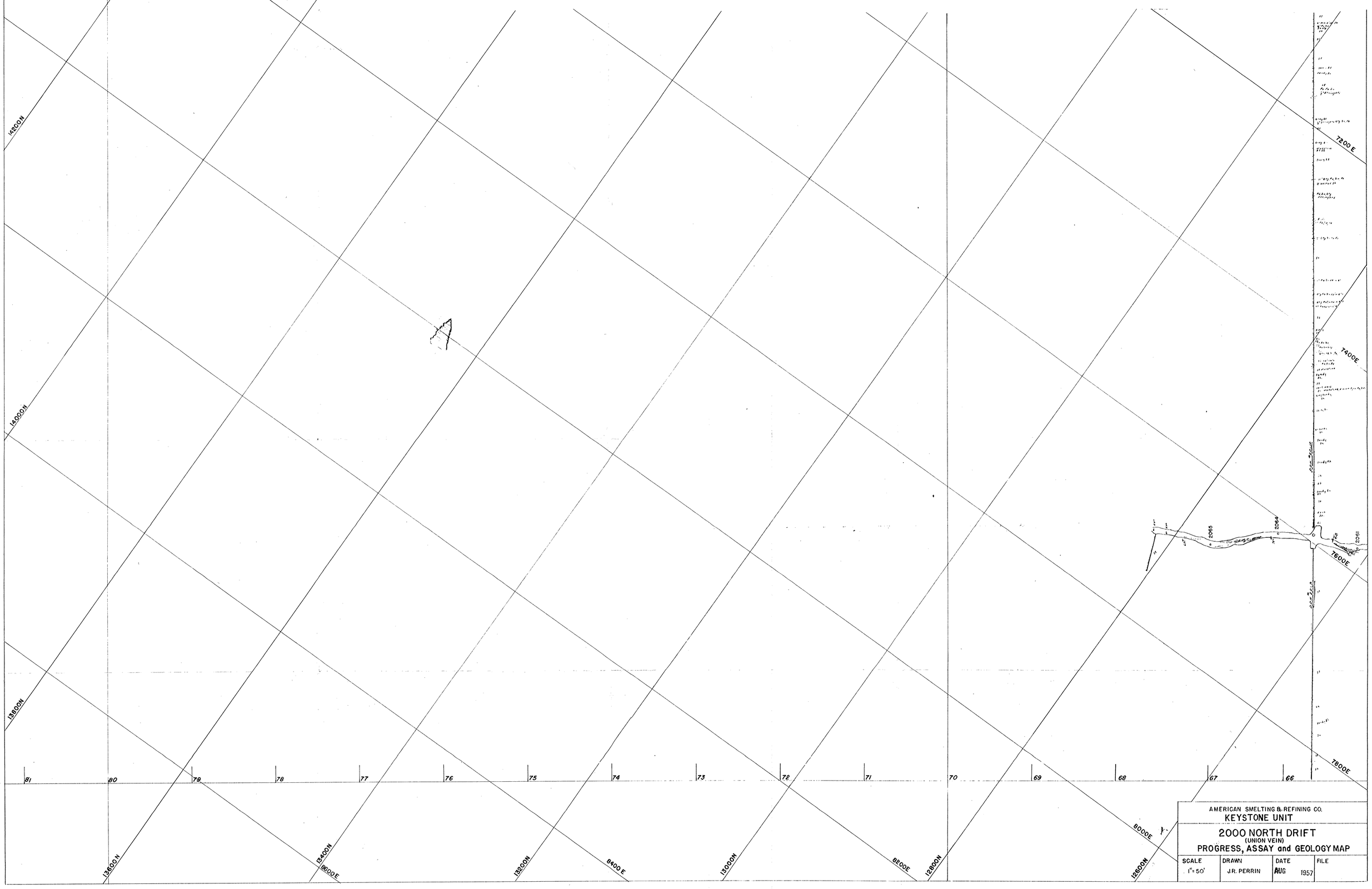
REF. #	SAMPLE NO.	W.	AG.	PB.	CU.	ZN.	LOC.
1	7276	3.1	4.3	0.1	0.4	4.4	V
	7277	3.4	2.1	TR	0.1	0.8	FW
2	7290	2.7	7.4	1.5	0.2	3.1	FW
	7291	3.1	3.2	TR	0.5	0.3	HW
3	7292	3.9	0.35	TR	0.1	1.5	HW
	7293	1.8	11.2	1.3	1.35	3.75	V
	7294	2.0	1.55	0.8	0.2	0.45	FW
4	7295	3.0	0.35	0.3	0.4	0.1	FW
	7296	2.2	6.85	1.15	1.8	3.8	V
	7297	12.4	0.35	TR	0.1	TR	HW
5	7298	3.3	0.35	TR	0.1	TR	HW
	7299	1.5	3.95	0.9	1.2	1.45	V
	7300	1.3	1.35	TR	0.2	1.1	FW
6	7301	2.4	1.4	0.9	0.1	0.6	HW
	7302	1.5	3.2	3.1	0.75	3.9	V
	7303	2.3	0.8	0.9	0.1	1.4	FW
7	7304	1.3	2.3	0.5	0.15	2.5	V
	7305	3.5	0.4	0.4	0.15	0.8	HW
	7306	2.7	0.35	0.2	0.1	0.5	FW
8	7307	2.5	1.1	0.9	0.15	1.65	V
	7308	4.2	0.5	3.35	0.15	0.8	FW
9	7310	1.1	4.7	2.4	0.4	6.5	V
	7311	4.3	0.7	0.8	0.1	0.8	FW
10	7312	2.5	3.5	1.8	0.35	8.45	V
	7313	3.4	0.8	0.5	0.1	1.7	FW
11	7314	1.2	0.5	0.4	0.15	5.2	HW
	7315	5.3	3.5	0.6	0.25	4.55	V
12	7316	1.5	0.4	0.1	0.15	1.15	HW
	7317	1.9	4.3	0.15	0.15	2.35	V
	7318	3.8	0.35	0.25	0.1	0.1	FW
13	7319	0.8	0.1	0.15	0.05	0.01	HW
	7320	4.1	3.1	0.25	0.6	0.6	V
	7321	1.3	0.25	0.1	0.15	0.3	FW
14	7324	6.1	1.95	1.1	0.25	2.2	V
15	7325	3.4	3.9	0.7	0.35	3.6	V
	7326	2.2	0.8	0.4	0.25	1.5	FW
16	7327	4.2	5.9	1.2	0.3	2.4	V
	7328	1.8	0.6	0.1	0.05	0.55	HW
17	7329	1.7	1.4	1.8	0.25	1.4	HW
	7330	3.9	7.9	0.1	0.4	1.4	V
	7331	1.7	0.8	4.8	0.15	0.2	FW
18	7333	1.3	0.7	0.1	0.15	1.3	HW
	7334	2.5	0.8	0.2	0.4	2.2	V
	7335	2.2	0.9	0.3	0.3	2.6	FW
19	7336	1.1	0.8	0.6	0.1	8.5	V
	7337	4.4	2.9	1.6	0.5	1.2	FW
20	7338	1.4	1.9	1.4	0.15	1.9	V
	7339	4.1	0.4	0.3	0.5	1.2	FW
21	7343	2.3	0.8	1.2	0.4	5.3	V
	7344	3.2	0.3	0.1	0.05	1.3	FW
22	7345	1.5	2.2	2.5	0.15	2.1	V
	7346	3.9	0.8	0.1	0.1	0.6	FW
23	7347	6.2	2.2	0.5	0.3	1.9	
24	8087	4.5	9.1	7.8	0.45	9.1	V
25	8086	3.1	3.6	8.4	0.4	6.7	V
26	8088	3.9	5.2	7.6	0.8	3.2	V
27	8089	4.9	3.2	2.6	1.2	3.1	V
28	8090	3.2	2.7	11.2	1.9	10.8	V
29	8091	3.2	11.2	6.9	2.4	9.9	V
30	8092	3.5	13.1	4.7	6.2	10.1	V
31	8093	2.8	6.9	5.4	1.2	6.5	V
32	8097	5.9	5.6	3.7	0.45	6.3	V
33	8100	2.2	5.2	7.2	0.2	6.2	V
34	8101	2.8	1.3	5.4	0.25	3.8	FW
35	8103	5.0	4.8	10.2	0.45	6.7	V
36	8105	3.9	6.8	10.4	1.9	10.9	V
37	8106	3.5	5.2	9.2	1.1	8.8	V
38	8108	5.9	4.0	5.2	0.2	9.9	V
39	8109	5.9	4.0	3.4	0.3	7.3	V
40	8110	6.1	1.8	1.8	0.5	7.6	V
41	8111	5.7	2.9	2.8	0.2	10.3	V
42	8112	5.0	1.3	0.8	0.45	3.2	V
43	8113	5.3	4.2	2.8	0.2	5.3	V
44	8114	6.4	3.4	2.8	0.9	4.7	V
45	8115	7.0	2.2	3.3	0.35	5.9	V
46	8116	9.5	1.9	0.5	0.2	3.9	V
47	8117	5.0	1.8	2.0	0.6	5.2	V
48	8118	4.5	1.8	1.1	0.25	8.7	V
49	8119	5.0	1.3	2.1	0.3	9.4	V
50	8120	6.5	2.3	2.8	0.25	5.7	V
51	8121	7.3	2.2	1.9	0.4	4.9	V
52	8122	5.3	2.0	0.9	0.35	2.9	V
53	8123	5.5	3.7	2.3	1.0	6.2	V
54	8124	3.0	4.3	4.0	0.3	7.8	V
55	8448	6.4	7.0	1.9	0.9	8.5	V
56	8452	2.0	5.3	3.9	0.9	8.5	V
57	8454	2.7	11.2	1.2	2.9	5.3	V
58	8460	2.8	11.6	0.6	2.2	1.7	HW
	8461	4.0	1.2	0.1	0.2	0.1	HW
59	8470	5.0	2.4	0.4	0.6	2.0	V
60	8472	3.0	2.6	2.7	0.3	3.2	FW

AMERICAN SMELTING & REFINING CO.
KEYSTONE UNIT

2160 DRIFT NORTH

PROGRESS, GEOLOGY, & ASSAY MAP

SCALE	DR. TR. CH. APP.	W. PILL	DATE	FILE
1" = 50'			JUL 1951	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AMERICAN SMELTING & REFINING CO.
KEYSTONE UNIT
2000 NORTH DRIFT
(UNION VEIN)
PROGRESS, ASSAY and GEOLOGY MAP
SCALE
1" = 50'
DRAWN
J.R. PERRIN
DATE
AUG 1957
FILE

2000 LEVEL ASSAYS

Ref.	Sample	Width	Ag	Pb	Cu	Zn	Loc.
1	8304	1.6	1.0	1.4	0.1	2.6	V
2	8306	1.6	2.2	2.9	0.15	4.3	V
3	8308	2.0	1.0	1.0	0.1	2.3	V
4	8311	1.7	0.6	0.9	0.15	1.1	V
5	8314	2.0	0.4	0.6	0.1	2.9	V
6	8315	1.8	0.2	0.1	0.1	0.5	V
7	8317	2.3	0.6	0.5	0.15	1.6	V
8	8319	1.7	0.9	1.6	0.2	1.9	V
9	8321	3.6	0.8	1.6	0.7	2.7	V
10	8323	5.0	1.7	4.8	0.25	4.3	V
11	8326	1.0	3.1	7.3	0.6	9.6	V
12	8328	1.0	3.4	5.6	0.4	6.8	V
13	8330	0.8	18.8	5.1	0.3	24	V
14	8334	1.0	0.9	0.7	0.15	1.0	V
15	8336	1.0	6.2	2.0	0.15	0.7	V
16	8341	1.6	5.9	6.6	0.8	6.6	V
17	8343	0.9	4.0	3.4	0.25	13.0	V
18	8346	0.6	2.4	0.1	0.2	20.0	V
19	8349	4.5	1.0	0.2	0.15	2.0	FW
20	8350	4.0	0.4	0.5	0.1	1.2	V
21	8351	4.7	1.3	0.8	0.3	4.5	V
22	8354	1.9	0.4	0.5	0.1	1.2	V
23	8355	3.0	1.0	0.2	0.1	0.8	V
24	8358	4.6	1.2	0.7	0.2	5.4	V
25	8359	5.3	0.4	0.1	0.1	2.1	V
26	8360	6.0	0.4	0.1	0.1	1.4	V
27	8362	6.4	1.2	1.3	0.25	2.6	V
28	8363	6.0	1.4	0.2	0.15	1.6	V
29	8364	6.8	5.5	3.8	0.85	6.0	V
30	8365	5.8	11.6	7.3	0.5	12.1	V
31	8366	3.0	23.2	8.7	0.6	12.4	V
32	8368	1.3	6.2	10.8	0.15	17.4	V
33	8372	1.5	18.0	9.8	0.36	10.3	V
	8373	2.6	0.8	0.2	0.05	0.8	FW
	8374	1.8	6.4	0.8	0.05	1.4	HW
34	8375	3.0	26.8	7.2	0.2	8.5	V
35	8376	4.0	10.0	6.9	0.2	15.6	V
36	8378	6.2	8.2	2.8	1.7	14.0	V
37	8379	3.6	8.2	3.0	1.8	26.2	V
	8380	2.9	1.4	1.5	0.2	2.5	HW
38	8381	3.2	12.6	4.7	0.4	27.6	V
39	8384	3.3	11.0	4.8	0.35	23.1	V
40	8387	3.3	15.6	6.5	0.6	36.1	V
41	8392	1.7	9.4	3.8	1.5	18.8	V
42	8397	4.1	12.0	7.7	0.5	19.8	V
43	8398	1.6	13.2	9.5	1.2	18.8	V
44	8399	1.6	15.8	6.5	0.6	32.0	V
45	8400	2.9	10.9	7.6	1.8	18.8	V
46	8402	3.4	2.0	0.1	0.1	1.9	V
	8403	3.3	1.2	1.6	0.3	4.2	HW
47	8409	3.0	5.6	3.9	0.65	12.8	V
48	8413	3.2	4.0	1.8	0.2	13.6	FW
	8414	2.8	2.2	1.5	0.25	2.3	HW
49	8416	4.1					FW
	8417	2.6	9.1	14.1	0.6	11.5	HW
	8418	3.2	2.0	3.3	0.25	4.7	HW
50	8420	3.6	8.4	8.5	0.7	10.8	V
51	8423	1.8	4.7	5.2	0.3	6.1	V
52	8426	2.3	3.8	3.1	0.4	2.3	V
53	8429	2.0	9.8	1.6	1.5	1.6	V
54	8432	0.9	1.4	1.0	0.1	2.7	V
55	8435	0.8	1.2	1.0	0.2	1.8	V
56	8438	1.3	0.4	0.4	0.1	1.5	V
57	8439	0.7	2.8	0.5	1.3	1.0	V
58	8445	1.6	0.2	0.1	0.1	0.1	V
59	8447	2.0	0.8	0.7	0.2	2.8	V
60	8451	5.0	0.4	0.2	0.2	0.9	VF
61	8453	1.8	1.6	0.1	0.1	1.0	V
62	8459	0.6	1.8	0.1	0.2	1.2	V
63	8469	0.8	0.6	0.1	0.1	0.4	V
64	8473	1.4	1.6	0.1	0.2	2.0	V
65	8476	2.9	9.3	2.6	0.5	31.4	V
66	8478	5.4	6.4	1.3	0.8	29.2	V
67	8482	2.5	6.6	1.6	0.9	16.7	V
	8485	2.7	16.6	4.2	1.4	26.7	V
68	8490	3.0	9.4	8.4	1.3	26.1	V
69	8491	1.5	7.8	2.1	0.4	9.5	V
70	8494	2.4	4.1	1.8	0.3	6.6	V
71	14006	2.5	3.4	0.4	0.2	1.3	V

2160 LEVEL ASSAYS

REF. #	SAMPLE NO.	W.	AG.	PB.	CU.	ZN.	LOC.
1	7276	3.1	4.8	0.1	0.4	4.1	V
	7277	3.2	2.1	TR	0.1	0.8	FW
2	7290	2.7	7.4	1.5	0.2	3.1	FW
	7291	3.1	3.8	TR	0.5	0.3	HW
3	7292	3.9	0.35	TR	0.1	1.5	HW
	7293	1.8	11.3	1.2	1.35	3.75	V
	7294	2.2	1.55	0.5	0.2	0.45	FW
4	7295	3.9	0.35	0.3	0.1	0.1	FW
	7296	2.2	6.25	1.15	1.8	3.2	V
	7297	2.4	0.35	TR	0.1	TR	HW
5	7298	3.2	0.35	TR	0.1	TR	HW
	7299	1.5	3.95	0.9	1.9	1.45	V
	7300	1.3	1.35	TR	0.2	1.1	FW
6	7301	2.5	1.4	0.8	0.1	0.6	HW
	7302	1.4	3.8	3.1	0.25	3.9	V
	7303	2.2	0.6	0.5	0.1	1.4	FW
7	7304	1.3	2.3	0.5	0.15	2.8	V
	7305	3.5	0.4	0.4	0.15	0.8	HW
	7306	2.7	0.55	0.2	0.1	0.5	FW
8	7307	2.8	1.1	0.3	0.15	1.65	V
	7308*	4.2	0.5	0.35	0.15	0.8	FW
9	7310	1.4	4.7	2.5	0.4	6.5	V
	7311	4.3	0.7	0.5	0.1	0.8	FW
10	7312	2.3	3.5	1.8	0.35	8.45	V
	7313	3.8	0.8	0.5	0.1	7.7	FW
11	7314	1.2	0.5	0.4	0.15	5.2	HW
	7315	5.3	3.5	0.8	0.25	4.55	V
12	7316	1.5	0.8	0.1	0.15	1.5	HW
	7317	1.9	4.3	0.45	0.45	2.35	V
	7318	3.8	0.35	0.25	0.1	0.1	FW
13	7319	0.8	0.1	0.25	0.05	0.01	HW
	7320	4.1	3.1	0.25	0.6	0.6	V
	7321	1.3	0.25	0.1	0.15	0.3	FW
14	7324	6.1	1.85	1.1	0.25	2.2	V
15	7325	3.4	3.9	0.8	0.35	3.6	V
	7326	2.2	0.5	0.1	0.25	1.5	FW
16	7327	4.4	5.9	1.2	0.3	2.4	V
	7328	1.8	0.6	0.1	0.05	0.35	HW
17	7329	1.5	1.4	1.3	0.35	1.4	HW
	7330	3.9	7.9	0.1	0.8	1.3	V
	7331	1.7	0.8	4.8	0.15	0.2	FW
18	7333	1.3	0.7	0.1	0.15	1.2	HW
	7334	2.3	0.2	0.6	0.4	2.2	V
	7335	2.7	0.8	0.3	0.2	2.8	FW
19	7336	1.4	0.8	0.6	0.1	8.6	V
	7337	4.4	2.9	1.1	0.5	1.8	FW
20	7338	1.4	1.6	1.4	0.15	1.9	V
	7339	4.1	0.6	0.3	0.15	1.2	FW
21	7343	2.3	0.8	1.2	0.2	5.3	V
	7344	3.5	0.7	0.1	0.05	1.2	FW
22	7345	1.5	2.2	2.5	0.15	2.1	V
	7346	3.9	0.8	0.1	0.1	0.6	FW
23	7347	6.2	2.2	0.5	0.2	1.9	
24	8087	4.5	9.2	7.8	0.3	9.2	V
25	8086	3.1	3.9	8.6	0.4	6.1	V
26	8088	3.9	5.5	7.6	0.8	3.6	V
27	8089	4.9	5.3	2.6	1.3	5.1	V
28	8090	3.6	2.1	11.3	1.9	10.6	V
29	8091	3.8	11.4	6.9	2.4	9.9	V
30	8092	3.5	13.1	4.1	6.1	10.1	V
31	8093	2.8	6.9	5.5	1.8	6.6	V
32	8097	5.9	5.6	3.7	0.45	5.7	V
33	8100	2.5	5.3	7.2	0.9	6.4	V
34	8101	2.8	1.3	5.4	0.25	3.6	FW
35	8103	5.9	4.4	10.2	0.45	6.1	V
36	8105	3.9	6.8	10.2	1.9	10.2	V
37	8106	3.5	5.8	9.8	1.1	2.8	V
38	8108	5.9	4.9	5.2	0.3	9.2	V
39	8109	5.2	4.9	3.6	0.7	7.4	V
40	8110	6.1	1.8	1.8	0.5	7.6	V
41	8111	5.7	2.9	2.6	0.8	10.9	V
42	8112	5.9	1.9	0.8	0.45	3.6	V
43	8113	5.2	4.2	2.8	0.7	5.2	V
44	8114	6.8	3.4	2.8	0.9	4.7	V
45	8115	7.0	2.2	3.2	0.35	5.9	V
46	8116	9.5	1.9	0.5	0.2	5.9	V
47	8117	5.9	1.6	2.9	0.6	5.8	V
48	8118	4.5	1.8	1.1	0.25	8.7	V
49	8119	5.0	1.9	2.1	0.6	4.8	V
50	8120	6.5	2.5	2.8	0.25	5.2	V
51	8121	7.5	2.2	1.9	0.4	4.9	V
52	8122	5.3	2.0	0.9	0.35	2.9	V
53	8123	5.5	3.1	2.3	1.0	6.2	V
54	8124	5.0	4.3	4.0	0.3	7.8	V
55	8448	6.4	7.0	1.9	0.9	8.5	V
56	8452	2.0	5.3	3.9	0.9	8.5	V
57	8454	2.7	11.2	1.2	2.9	5.3	V
58	8460	2.8	11.6	0.6	2.2	1.7	FW V
	8461	4.0	1.2	0.1	0.2	0.1	HW
59	8470	5.0	8.4	0.4	0.6	2.0	V
60	8477	3.0	2.6	2.7	0.2	3.2	FW

AMERICAN SMELTING & REFINING CO.
KEYSTONE UNIT

2160 DRIFT NORTH

PROGRESS, GEOLOGY & ASSAY MAP

SCALE	DR. TR. CH. APP.	W. PILL	DATE	FILE
1" = 50'			MAR 1957	

REF. NO.	SAMPLE NO.	WIDTH	Ag	Pb	Cu	Zn	LOCATION
1	LH 20-7	20-21.5'	Tr	Tr	0.1	0.5	
2	"	21.5-23'	1.6	0.05	0.12	5.2	
3	"	24.5'-26'	2.4	Tr	0.1	0.8	
4	"	32'-35'	0.4	Tr	0	Tr	
5	"	37-39'	0.7	0.08	0.15	0.3	
6	14217	2.4	0.8	Tr	0.15	4.3	✓

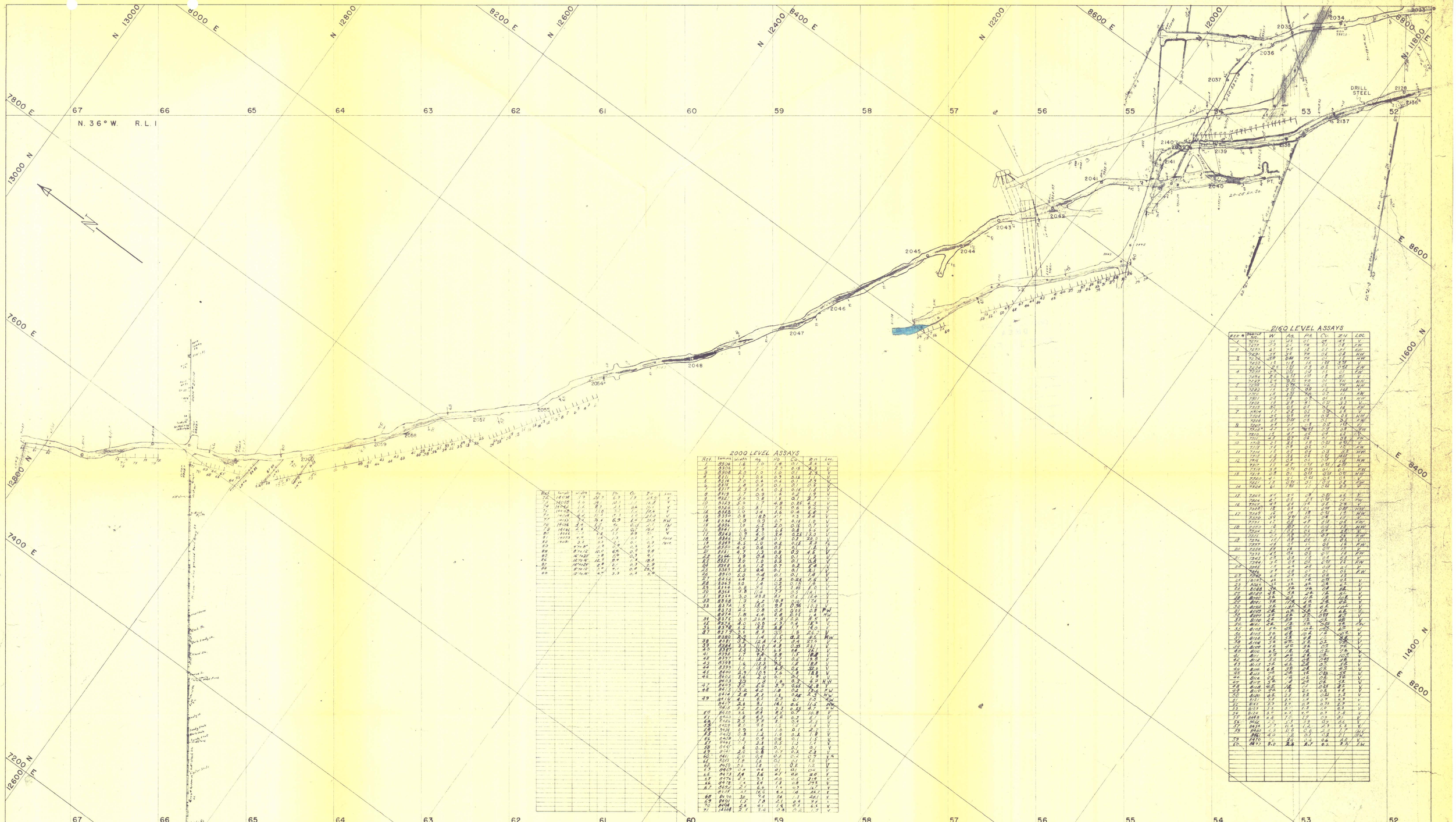
AMERICAN SMELTING & REFINING CO.

KEYSTONE UNIT

2000 NORTH DRIFT
(UNION VEIN)

PROGRESS, ASSAY and GEOLOGY MAP

SCALE	DRAWN	DATE	FILE
1" = 50'	J.R. PERRIN	APR 1958	



2160 LEVEL ASSAYS

REF #	SAMPLE NO.	W	Au	Pb	Cu	Zn	LOC
1	7225	.35	.15	.01	.04	.41	V
	7226	.35	.13	.01	.02	.08	FW
2	7230	.47	.45	.12	.02	.04	HW
	7231	.38	.07	.04	.02	.08	HW
3	7232	.38	.040	.02	.01	.15	HW
	7233	.1	.14	.13	.10	.038	V
4	7234	.25	.12	.13	.03	.038	FW
	7235	.20	.10	.13	.1	.01	FW
	7236	.25	.011	.13	.18	.02	V
5	7237	.25	.016	.03	.01	.04	HW
	7238	.2	.016	.04	.01	.02	HW
	7239	.15	.011	.03	.12	.148	V
6	7300	.1	.13	.06	.02	.11	FW
	7301	.05	.15	.03	.01	.03	HW
	7302	.2	.08	.01	.02	.03	V
	7303	.02	.01	.01	.01	.14	FW
7	7304	.1	.04	.01	.03	.03	V
	7305	.25	.07	.04	.03	.03	HW
	7306	.25	.08	.1	.02	.03	FW
8	7307	.25	.11	.1	.03	.10	FW
	7308	.25	.04	.011	.03	.03	HW
9	7310	.4	.01	.01	.07	.03	V
	7311	.4	.01	.01	.01	.04	FW
10	7312	.3	.01	.01	.03	.011	FW
	7313	.25	.08	.02	.01	.12	FW
11	7314	.25	.01	.01	.03	.03	HW
	7315	.25	.01	.01	.01	.011	V
12	7316	.25	.01	.01	.01	.01	V
	7317	.13	.01	.01	.01	.011	V
13	7318	.08	.01	.01	.01	.01	FW
	7319	.08	.01	.01	.01	.01	HW
	7320	.4	.01	.01	.01	.01	V
14	7321	.13	.01	.01	.01	.01	V
	7324	.61	.18	.01	.03	.3	V
15	7325	.25	.01	.08	.03	.03	V
	7326	.25	.01	.02	.02	.13	FW
16	7327	.25	.01	.01	.03	.03	V
	7328	.25	.01	.01	.01	.08	HW
17	7329	.25	.01	.01	.01	.13	HW
	7330	.25	.01	.01	.01	.04	V
	7331	.13	.01	.01	.01	.03	FW
18	7332	.13	.01	.01	.01	.13	HW
	7333	.13	.01	.01	.01	.03	FW
19	7334	.13	.01	.01	.01	.03	FW
	7335	.13	.01	.01	.01	.03	V
20	7336	.13	.01	.01	.01	.13	V
	7337	.13	.01	.01	.01	.13	FW
21	7338	.13	.01	.01	.01	.13	V
	7339	.25	.01	.01	.01	.13	FW
22	7340	.25	.01	.01	.01	.13	V
	7341	.25	.01	.01	.01	.13	FW
23	7342	.25	.01	.01	.01	.13	V
24	8321	.25	.01	.18	.08	.13	V
25	8322	.38	.18	.46	.04	.38	V
26	8323	.38	.28	.28	.12	.21	V
27	8324	.38	.28	.28	.12	.21	V
28	8325	.38	.28	.28	.12	.21	V
29	8326	.38	.28	.28	.12	.21	V
30	8327	.38	.28	.28	.12	.21	V
31	8328	.38	.28	.28	.12	.21	V
32	8329	.38	.28	.28	.12	.21	V
33	8330	.38	.28	.28	.12	.21	V
34	8331	.38	.28	.28	.12	.21	V
35	8332	.38	.28	.28	.12	.21	V
36	8333	.38	.28	.28	.12	.21	V
37	8334	.38	.28	.28	.12	.21	V
38	8335	.38	.28	.28	.12	.21	V
39	8336	.38	.28	.28	.12	.21	V
40	8337	.38	.28	.28	.12	.21	V
41	8338	.38	.28	.28	.12	.21	V
42	8339	.38	.28	.28	.12	.21	V
43	8340	.38	.28	.28	.12	.21	V
44	8341	.38	.28	.28	.12	.21	V
45	8342	.38	.28	.28	.12	.21	V
46	8343	.38	.28	.28	.12	.21	V
47	8344	.38	.28	.28	.12	.21	V
48	8345	.38	.28	.28	.12	.21	V
49	8346	.38	.28	.28	.12	.21	V
50	8347	.38	.28	.28	.12	.21	V
51	8348	.38	.28	.28	.12	.21	V
52	8349	.38	.28	.28	.12	.21	V
53	8350	.38	.28	.28	.12	.21	V
54	8351	.38	.28	.28	.12	.21	V
55	8352	.38	.28	.28	.12	.21	V
56	8353	.38	.28	.28	.12	.21	V
57	8354	.38	.28	.28	.12	.21	V
58	8355	.38	.28	.28	.12	.21	V
59	8356	.38	.28	.28	.12	.21	V
60	8357	.38	.28	.28	.12	.21	V
61	8358	.38	.28	.28	.12	.21	V
62	8359	.38	.28	.28	.12	.21	V
63	8360	.38	.28	.28	.12	.21	V
64	8361	.38	.28	.28	.12	.21	V
65	8362	.38	.28	.28	.12	.21	V
66	8363	.38	.28	.28	.12	.21	V
67	8364	.38	.28	.28	.12	.21	V
68	8365	.38	.28	.28	.12	.21	V
69	8366	.38	.28	.28	.12	.21	V
70	8367	.38	.28	.28	.12	.21	V
71	8368	.38	.28	.28	.12	.21	V

2000 LEVEL ASSAYS

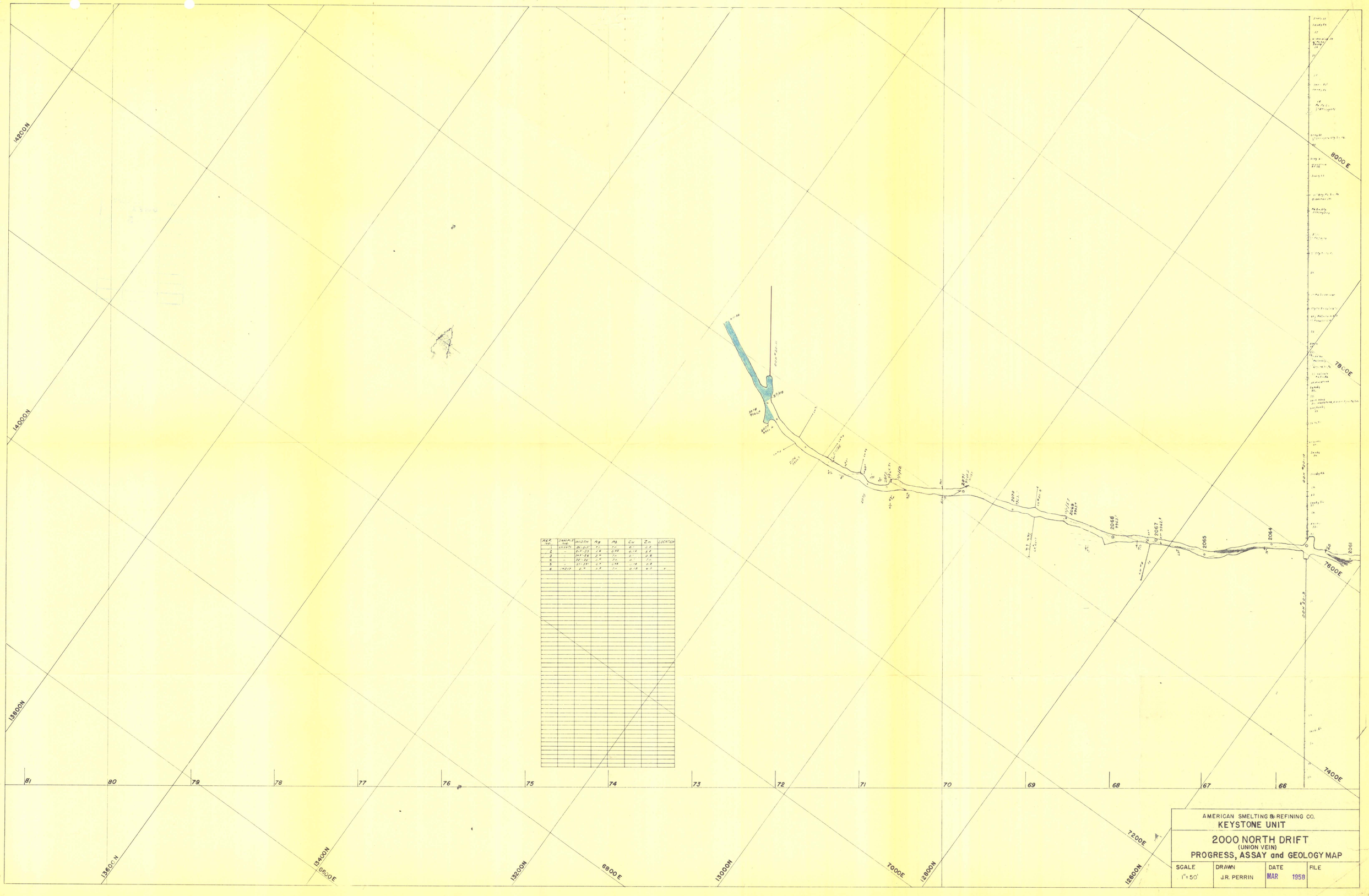
REF	SAMPLE NO.	WIDTH	Au	Pb	Cu	Zn	LOC
1	8304	.16	1.0	1.4	0.1	3.5	V
2	8306	.20	.8	.8	0.1	2.5	V
3	8308	2.0	1.0	1.0	0.1	4.5	V
4	8311	.3	0.6	0.3	0.14	1.5	V
5	8314	.3	0.4	0.4	0.1	1.5	V
6	8315	.3	0.5	0.3	0.1	0.3	V
7	8317	2.3	0.6	0.3	0.15	1.3	V
8	8319	2.0	0.9	1.6	.3	1.5	V
9	8322	3.0	3.8	1.5	0.1	2.5	V
10	8323	5.0	1.7	4.8	0.26	4.5	V
11	8324	1.0	.5	1.3	0.6	3.5	V
12	8325	1.0	3.4	1.6	0.4	5.0	V
13	8330	0.8	.82	.5	.3	2.0	V
14	8334	1.0	0.3	0.7	0.15	1.0	V
15	8335	1.0	0.2	0.20	0.15	0.7	V
16	8340	1.6	2.3	1.5	0.8	5.5	V
17	8342	0.3	4.3	3.2	0.24	3.0	V
18	8345	0.6	2.6	0.1	0.1	20.0	V
19	8349	4.3	1.0	0.2	0.15	1.5	V
20	8350	4.0	3.6	0.8	.3	1.5	V
21	8351	4.3	.3	0.8	0.3	4.5	V
22	8354	1.0	0.4	0.3	0.1	1.3	V
23	8355	2.0	1.0	0.2	0.1	0.3	V
24	8358	5.6	1.2	0.7	0.2	1.5	V
25	8359	5.3	0.4	0.1	0.1	.1	V
26	8360	2.0	0.4	0.1	0.1	1.4	V
27	8362	3.4	1.2	.3	0.25	1.5	V
28	8363	3.0	.5	0.3	0.1	1.5	V
29	8364	5.8	.5	0.3	0.15	1.0	V
30	8365	.3	.3	.3	.3	1.0	V
31	8366	3.0	233	.7	0.5	1.5	V
32	8368	1.3	.2	10.0	.1	.1	V
33	8371	.5	10.0	0.8	0.36	10.5	V
	8373	.5	0.8	0.2	0.05	0.8	FW
	8372	1.8	4.4	1.2	0.15	1.4	HW
34	8375	3.0	20.0	1.3	0.2	.5	V
35	8376	4.0	10.0	1.3	.3	15.5	V
36	8378	4.2	.32	2.4	.3	14.0	V
37	8379	3.0	8.2	3.0	.8	20.0	V
	8380	2.0	1.4	4.5	0.2	.95	HW
38	8381	3.3	14.4	4.5	0.4	21.5	V
39	8384	3.3	0.6	4.8	0.35	2.5	V
40	8387	2.3	15.1	6.5	.4	.5	V
41	8391	.7	7.2	2.8	.3	10.5	V
42	8393	4.1	14.0	.7	0.6	19.0	V
43	8398	1.6	12.2	0.5	1.2	18.0	V
44	8399	1.5	16.0	4.5	.4	.5	V
45	8400	2.9	10.3	.5	.3	1.5	V
46	8402	3.0	4.0	0.1	0.1	1.5	V
	8403	3.0	.5	.5	0.3	1.5	HW
47	8403	3.0	0.5	4.5	0.35	4.5	V
48	8412	3.2	4.0	1.0	0.2	3.5	FW
	8413	2.0	5.5	.5	0.4	2.5	HW
49	8416	4.1	6.1	5.3	0.1	0.5	FW
	8417	3.4	5.1	14.1	0.6	11.4	HW
	8416	3.2	2.0	3.3	0.45	4.7	HW
50	8420	1.0	0.4	0.3	0.1	10.8	V
51	8423	2.0	4.2	1.8	0.3	6.5	V
52	8424	2.3	4.2	.1	0.3	1.5	V
53	8428	2.0	9.1	.5	0.4	7.5	V
54	8431	0.3	.4	1.0	0.1	1.5	V
55	8432	3.3	1.2	1.6	0.4	1.5	V
56	8433	1.3	0.9	0.4	0.1	1.5	V
57	8440	1.2	3.1	0.3	1.3	1.5	V
58	8441	.6	0.2	0.1	0.1	0.1	V
59	8441	2.0	0.8	0.7	0.3	2.5	V
60	8442	6.0	0.4	0.2	0.2	0.7	V
61	8443	1.0	.4	0.1	0.1	1.5	V
62	8450	0.2	.4	0.1	0.1	1.5	V
63	8469	0.5	.4	.1	0.1	0.4	V
64	8472	.4	.6	.1	0.2	2.0	V
65	8474	.3	3.1	2.0	.1	3.5	V
66	8478	.3	.4	.1	0.3	1.5	V
67	8479	.3	6.6	.1	0.3	16.5	V
	8479	.3	16.0	6.2	.1	26.5	V
68	8478	3.0	.4	.1	.1	2.5	V
69	8481	1.3	1.8	.1	0.4	.5	V
70	8484	2.4	.1	.1	0.3	6.5	V
71	8488	3.1	1.2	.1	0.2	1.5	V

AMERICAN SMELTING & REFINING CO.
KEYSTONE UNIT

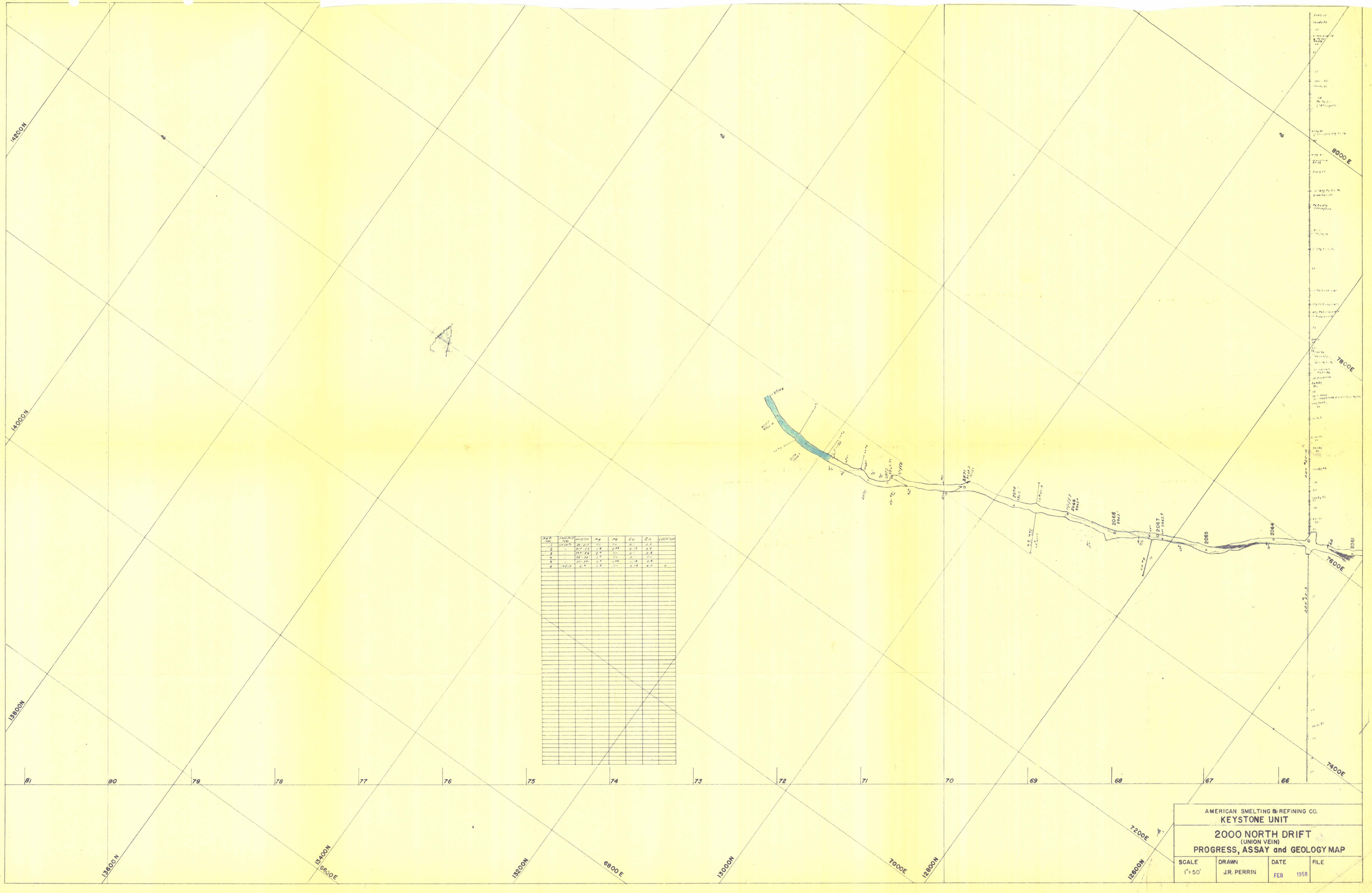
2160 DRIFT NORTH

PROGRESS, GEOLOGY & ASSAY MAP

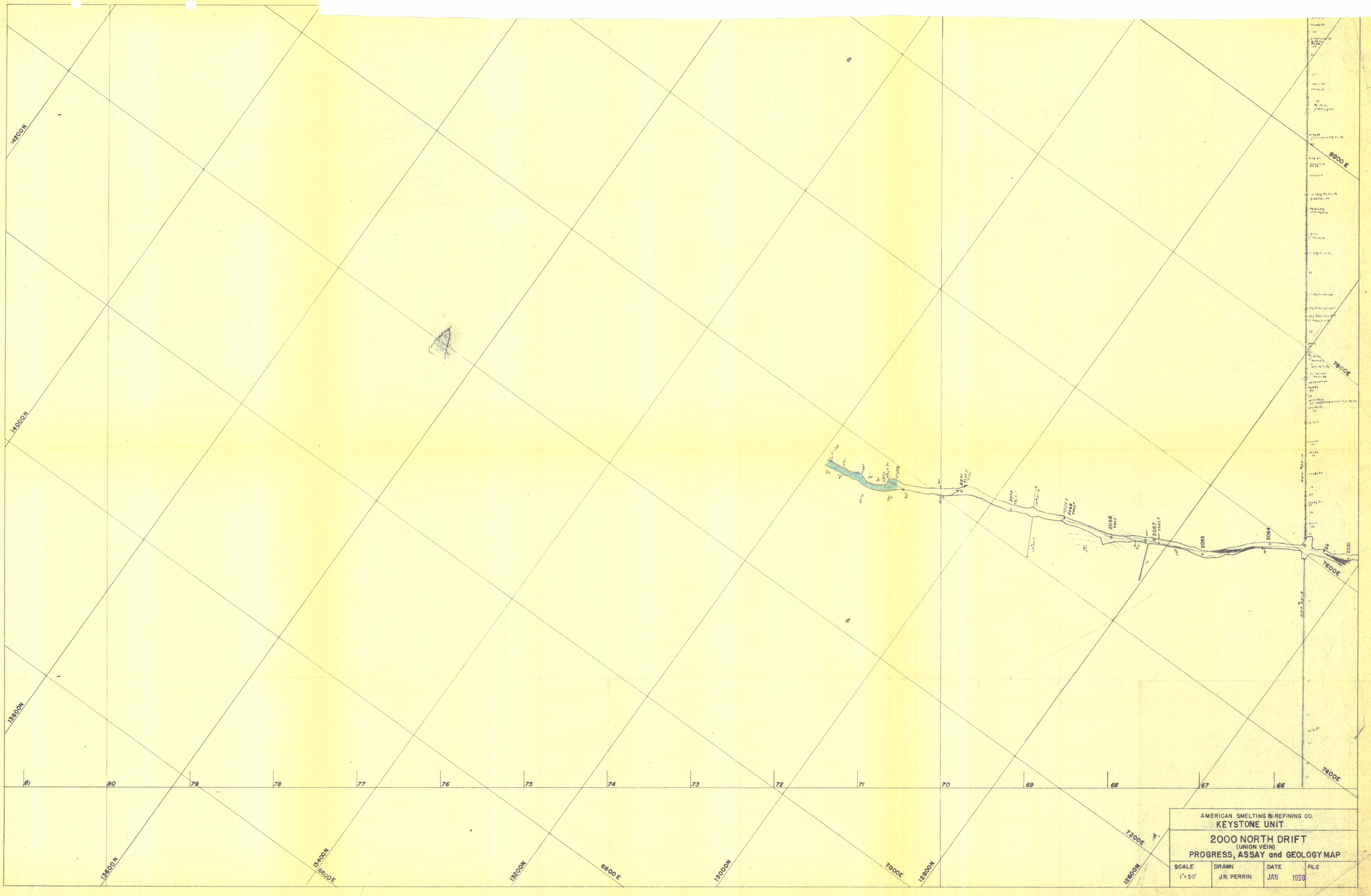
SCALE	DR. TR. CH. APP.	W. PILL	DATE	FILE
1" = 50'			APR 1958	



REF. NO.	STATION-FT. NO.	WIDTH	Ag	Pb	Cu	Zn	LOCATION
1	2068-70	20-23	.7	.7	.0	.2	
2		21-22	1.6	0.93	0.12	.5	
3		24-26	2.9	.7	0.	0.8	
4		22-23	.9	.7	.0	.7	
5		27-29	0.7	1.99	.14	0.9	
6	2067	2.4	3.8	.7	0.12	4.2	



REF. NO.	SAMPLE NO.	WIDTH	Ag	Pb	Cu	Zn	LOCATION
	(CHUTE)	30-33	Tr	Tr	0	0.1	
2		31-33	1.4	0.09	0.15	5.5	
3		34-36	0.8	Tr	0	0.8	
4		32-33	0.4	Tr	0	1.1	
5		32-33	0.7	1.94	0.4	0.4	
6	(CHUTE)	2.4	0.8	Tr	0.15	4.3	Y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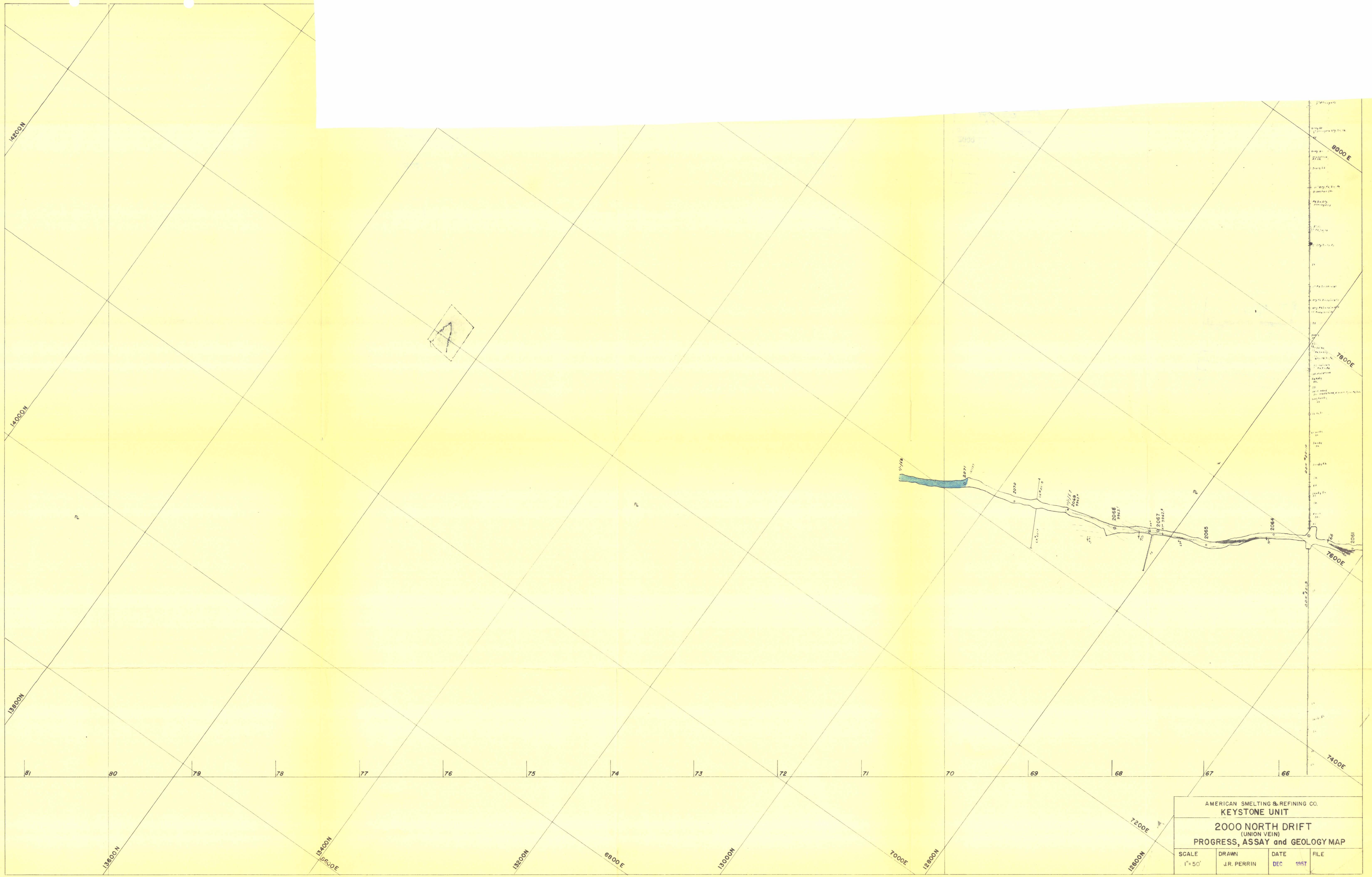
AMERICAN SMELTING & REFINING CO.
KEYSTONE UNIT
2000 NORTH DRIFT
(UNION VEIN)
PROGRESS, ASSAY and GEOLOGY MAP
SCALE
1"=50'
DRAWN
J.R. PERRIN
DATE
JAN 1958
FILE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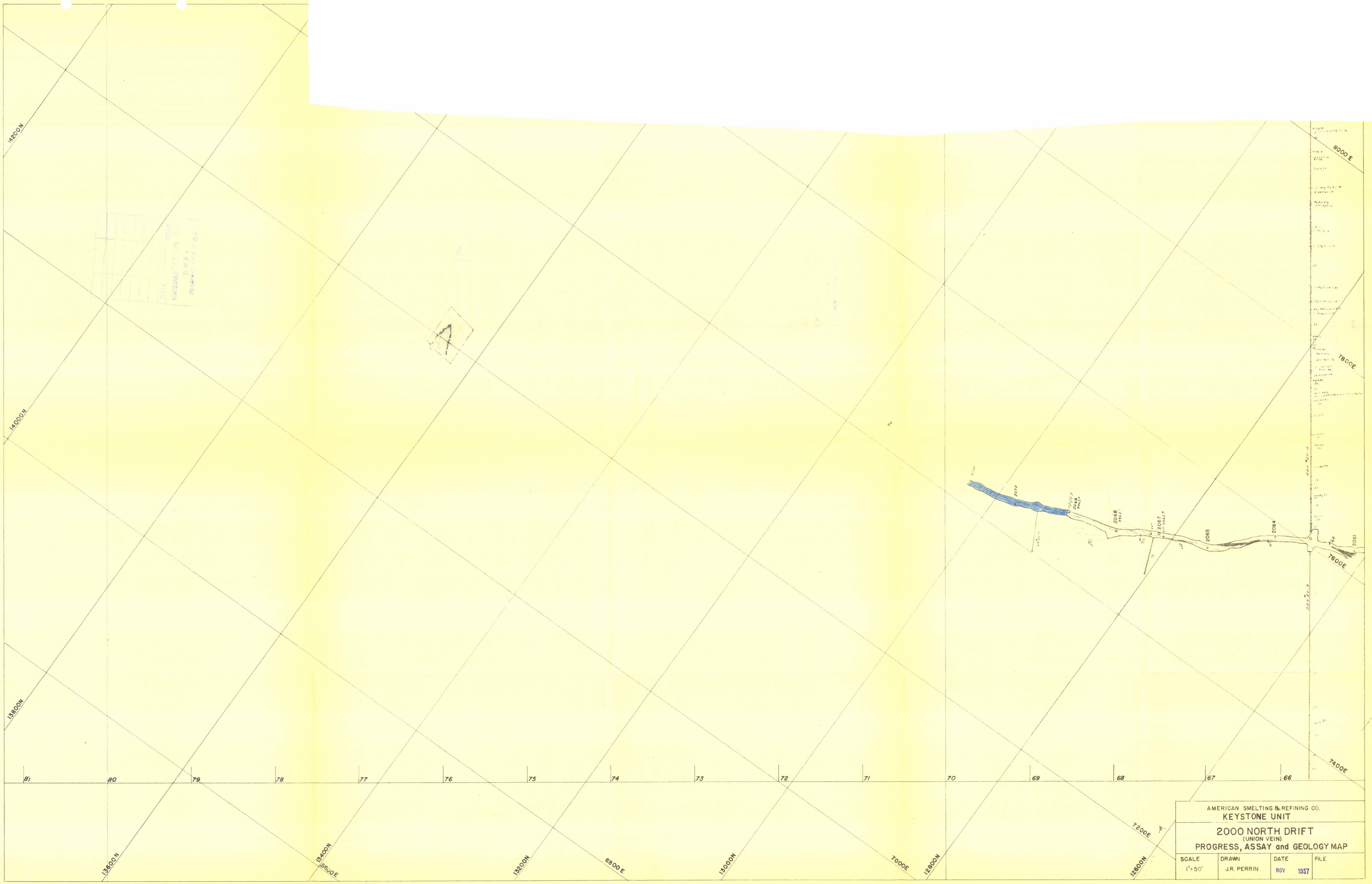
AMERICAN SMELTING & REFINING CO.
KEYSTONE UNIT
2000 NORTH DRIFT
(UNION VEIN)
PROGRESS, ASSAY and GEOLOGY MAP
SCALE
1"=50'
DRAWN
J.R. PERRIN
DATE
DEC 1957
FILE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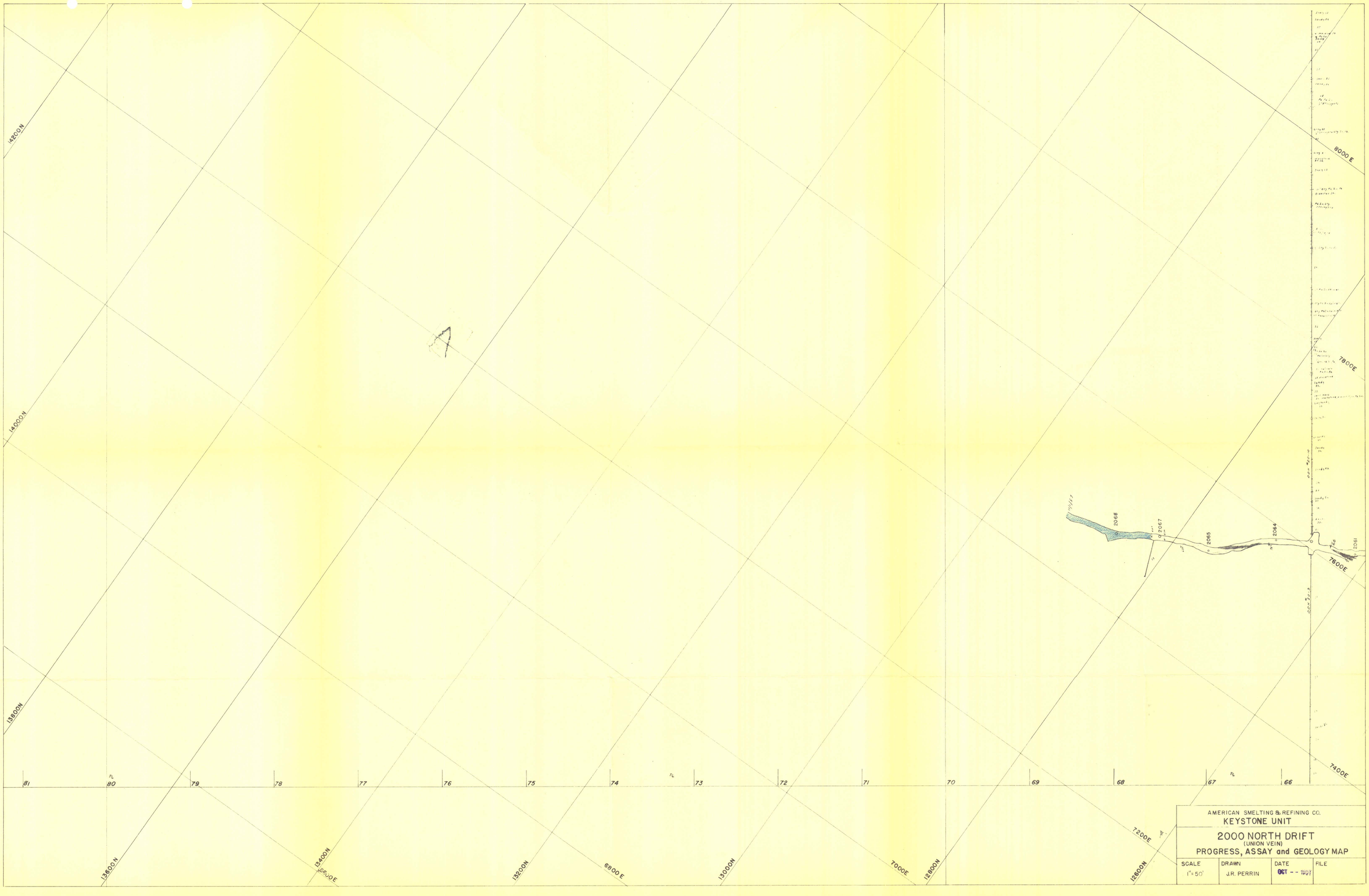
AMERICAN SMELTING & REFINING CO.
KEYSTONE UNIT
2000 NORTH DRIFT
(UNION VEIN)
PROGRESS, ASSAY and GEOLOGY MAP
SCALE
1" = 50'
DRAWN
J.R. PERRIN
DATE
NOV 1957
FILE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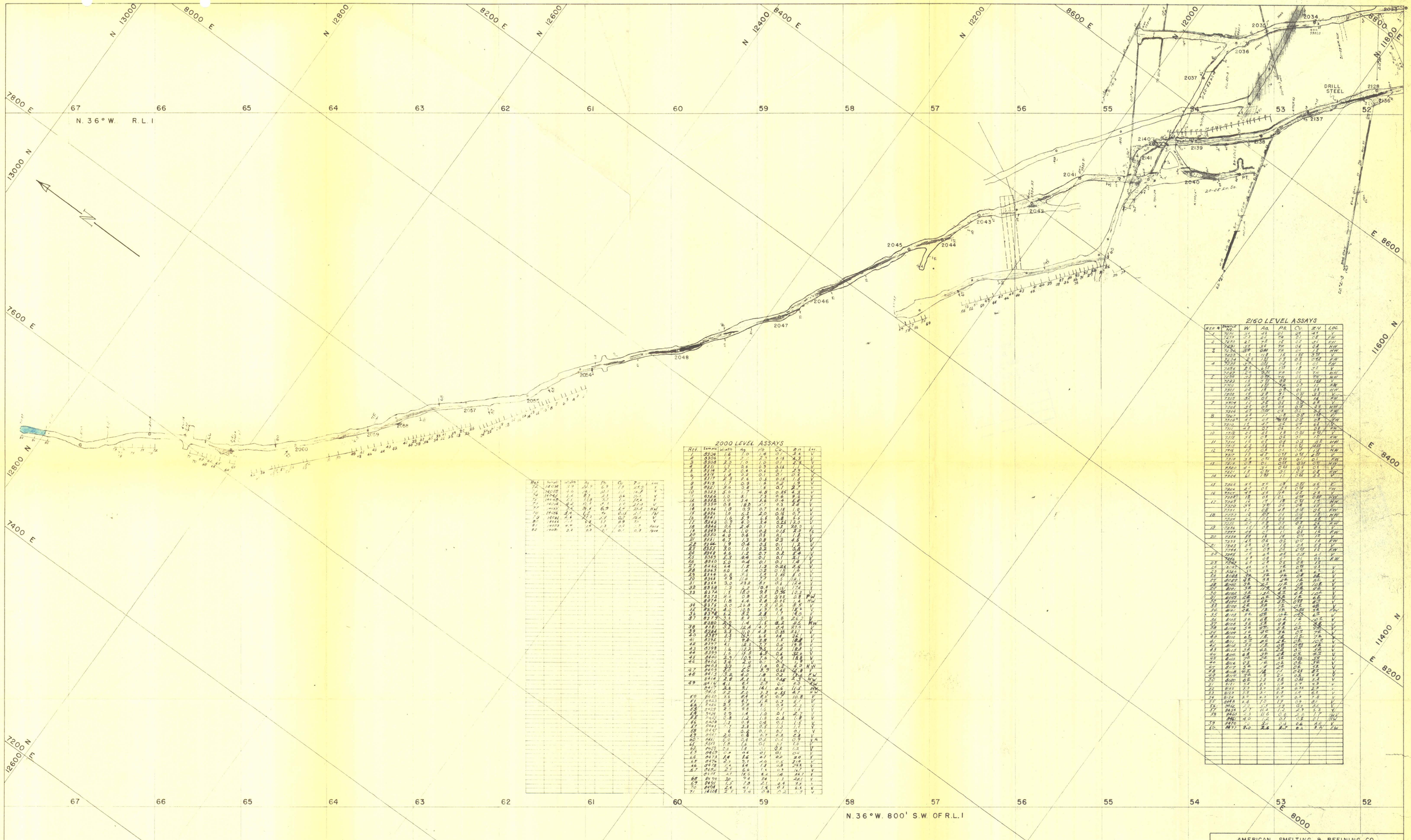
AMERICAN SMELTING & REFINING CO.
KEYSTONE UNIT
2000 NORTH DRIFT
(UNION VEIN)
PROGRESS, ASSAY and GEOLOGY MAP
SCALE
1" = 50'
DRAWN
J.R. PERRIN
DATE
OCT - - 1957
FILE



2160 LEVEL ASSAYS

REF #	SAMPLE NO.	W.	AG.	PB.	CU.	ZN	LOC.
1	7229	.31	.23	.01	.07	.43	V
	7230	.23	.21	.19	.01	.08	FW
2	7230	.27	.22	.12	.07	.41	FW
	7231	.39	.32	.19	.04	.08	HW
3	7232	.39	.284	.19	.01	.12	HW
	7233	.15	.113	.13	.113	.579	V
4	7234	.24	.181	.12	.03	.054	FW
	7235	.24	.201	.13	.03	.01	FW
	7236	.24	.201	.13	.18	.07	V
5	7237	.24	.201	.19	.01	.19	HW
	7238	.13	.096	.09	.01	.14	HW
	7239	.13	.101	.09	.13	.11	FW
6	7240	.18	.18	.22	.01	.03	HW
	7241	.18	.18	.22	.01	.03	V
	7242	.18	.01	.26	.02	.14	FW
7	7243	.15	.26	.01	.02	.03	V
	7244	.27	.01	.02	.02	.03	HW
	7245	.27	.110	.02	.02	.04	FW
8	7246	.27	.11	.02	.03	.15	V
	7247	.27	.11	.02	.02	.03	FW
9	7248	.17	.27	.02	.04	.03	V
	7249	.17	.23	.18	.01	.03	FW
10	7250	.43	.01	.18	.03	.01	V
	7251	.43	.01	.18	.01	.15	FW
11	7252	.43	.01	.02	.03	.03	HW
	7253	.43	.01	.01	.02	.48	V
12	7254	.13	.01	.01	.01	.03	HW
	7255	.13	.47	.01	.01	.03	V
	7256	.13	.47	.01	.01	.03	FW
13	7257	.13	.47	.01	.01	.03	V
	7258	.08	.01	.02	.03	.03	HW
	7259	.08	.01	.02	.01	.01	V
	7260	.13	.01	.01	.01	.03	FW
14	7261	.13	.01	.01	.01	.03	V
	7262	.13	.01	.01	.01	.03	FW
15	7263	.15	.15	.18	.01	.15	V
	7264	.15	.15	.18	.01	.15	FW
16	7265	.43	.01	.18	.01	.03	V
	7266	.43	.01	.18	.01	.03	FW
17	7267	.18	.01	.01	.01	.03	HW
	7268	.13	.01	.01	.01	.03	V
	7269	.13	.01	.01	.01	.03	FW
18	7270	.13	.01	.01	.01	.03	V
	7271	.13	.01	.01	.01	.03	FW
19	7272	.13	.01	.01	.01	.03	V
	7273	.13	.01	.01	.01	.03	FW
20	7274	.13	.01	.01	.01	.03	V
	7275	.13	.01	.01	.01	.03	FW
21	7276	.13	.01	.01	.01	.03	V
	7277	.13	.01	.01	.01	.03	FW
22	7278	.13	.01	.01	.01	.03	V
	7279	.13	.01	.01	.01	.03	FW
23	7280	.13	.01	.01	.01	.03	V
	7281	.13	.01	.01	.01	.03	FW
24	8047	.15	.15	.18	.09	.03	V
25	8048	.15	.18	.18	.09	.03	V
26	8082	.38	.38	.38	.09	.08	V
27	8083	.38	.38	.38	.09	.08	V
28	8080	.38	.38	.38	.09	.08	V
29	8081	.38	.38	.38	.09	.08	V
30	8085	.38	.38	.38	.09	.08	V
31	8084	.38	.38	.38	.09	.08	V
32	8097	.38	.38	.38	.09	.08	V
33	8100	.38	.38	.38	.09	.08	V
34	8101	.38	.38	.38	.09	.08	V
35	8102	.38	.38	.38	.09	.08	V
36	8103	.38	.38	.38	.09	.08	V
37	8104	.38	.38	.38	.09	.08	V
38	8105	.38	.38	.38	.09	.08	V
39	8106	.38	.38	.38	.09	.08	V
40	8107	.38	.38	.38	.09	.08	V
41	8108	.38	.38	.38	.09	.08	V
42	8109	.38	.38	.38	.09	.08	V
43	8110	.38	.38	.38	.09	.08	V
44	8111	.38	.38	.38	.09	.08	V
45	8112	.38	.38	.38	.09	.08	V
46	8113	.38	.38	.38	.09	.08	V
47	8114	.38	.38	.38	.09	.08	V
48	8115	.38	.38	.38	.09	.08	V
49	8116	.38	.38	.38	.09	.08	V
50	8117	.38	.38	.38	.09	.08	V
51	8118	.38	.38	.38	.09	.08	V
52	8119	.38	.38	.38	.09	.08	V
53	8120	.38	.38	.38	.09	.08	V
54	8121	.38	.38	.38	.09	.08	V
55	8122	.38	.38	.38	.09	.08	V
56	8123	.38	.38	.38	.09	.08	V
57	8124	.38	.38	.38	.09	.08	V
58	8125	.38	.38	.38	.09	.08	V
59	8126	.38	.38	.38	.09	.08	V
60	8127	.38	.38	.38	.09	.08	V

2000 LEVEL ASSAYS

Ref	Sample	Width	Ag	Pb	Cu	Zn	Loc
1	8304	1.6	1.0	1.4	0.1	2.4	V
2	8306	1.5	1.5	1.5	0.18	4.3	V
3	8308	2.0	1.5	1.0	0.1	2.3	V
4	8311	1.0	0.5	0.3	0.14	1.0	V
5	8314	3.0	0.4	0.4	0.1	2.3	V
6	8315	4	0.2	0.1	0.1	2.3	V
7	8317	2.3	2.6	0.4	0.18	1.4	V
8	8319	1.0	0.2	1.8	0.2	1.9	V
9	8321	3.0	0.8	1.5	0.1	2.3	V
10	8323	8.0	1.7	4.8	0.15	5.3	V
11	8326	1.0	3.4	1.4	0.4	5.8	V
12	8328	1.0	3.4	1.4	0.4	5.8	V
13	8330	0.8	1.8	0.3	0.3	2.3	V
14	8334	1.0	0.3	0.1	0.18	1.0	V
15	8335	1.0	0.4	2.0	0.1	1.0	V
16	8341	1.6	3.3	3.4	0.8	5.6	V
17	8343	0.3	4.0	3.4	0.24	10.0	V
18	8345	0.5	2.6	0.1	0.3	20.0	V
19	8349	4.2	1.0	0.2	0.14	0.1	V
20	8350	4.0	0.6	0.1	0.1	1.2	V
21	8351	4.7	1.3	0.8	0.3	4.5	V
22	8356	1.9	0.4	0.3	0.1	1.3	V
23	8357	3.0	1.0	0.2	0.1	0.8	V
24	8358	5.6	1.2	0.7	0.3	5.8	V
25	8363	5.3	0.4	0.1	0.1	3.1	V
26	8360	5.0	0.4	0.1	0.1	1.4	V
27	8362	4.4	1.2	1.3	0.26	3.6	V
28	8363	5.2	1.4	1.2	0.15	1.9	V
29	8364	0.8	0.5	3.3	1.18	3.0	V
30	8365	4.8	11.6	17.5	0.5	12.4	V
31	8366	3.0	23.3	17	0.1	12.4	V
32	8368	1.3	2	0.4	0.1	1.4	V
33	8372	4.5	180	9.1	0.36	10.3	
	8373	4.5	0.8	0.2	0.03	0.8	FW
	8371	1.8	1.4	0.4	0.01	1.4	FW
34	8375	3.0	2.6	1.3	0.2	3.5	V
35	8376	4.0	12.3	1.3	1.1	15.4	V
36	8378	4.2	3.2	2.4	1.7	4.0	V
37	8379	3.1	8.7	300	8	26.1	V
	8380	3.0	1.4	1.6	0.2	3.5	HW
38	8381	3.3	12.4	4.7	2.4	27.9	V
39	8384	3.3	11.0	4.8	0.35	21.1	V
40	8385	3.3	12.5	6.5	1.8	26.1	V
41	8386	1.1	7.2	0.8	1.5	10.8	V
42	8387	4.1	12.3	1.2	0.6	19.7	V
43	8388	1.6	10.3	1.2	1.8	18.0	V
44	8389	1.5	10.5	6.3	0.4	30.9	V
45	8390	2.3	10.3	1.6	1.8	18.8	V
46	8392	3.8	2.0	0.1	0.1	1.9	V
	8393	3.0	1.2	1.0	0.2	2.9	HW
47	8403	3.0	0.6	3.9	0.62	4.8	I
48	8411	3.2	4.4	1.8	0.4	7.6	FW
	8414	2.8	5.4	1.2	0.48	2.3	HW
49	8415	4.1	6.5	2.3	0.1	2.5	FW
	8416	2.6	9.1	14.1	0.6	11.2	HW
	8417	9.2	2.0	2.3	0.42	4.7	HW
50	8425	3.5	0.4	0.3	0.7	10.8	V
51	8423	2	4.9	1.6	0.3	5.1	V
52	8424	2.8	1.8	0.1	0.1	2.1	V
53	8426	2	9.1	1.0	0.1	1.1	V
54	8431	5.9	1.4	1.0	0.1	2.4	V
55	8432	0.8	1.2	1.6	0.4	1.8	V
56	8439	1.1	0.4	0.4	0.1	1.5	V
57	8441	1.1	3.3	0.3	1.3	1.7	V
58	8442	1.6	0.2	0.1	0.1	0.1	V
59	8443	2.0	0.8	0.7	0.2	2.6	V
60	8444	4.0	0.4	0.2	0.1	0.9	V.A.
61	8447	1.9	1.6	0.1	0.1	1.0	V
62	8450	0.6	1.8		0.8	1.2	V
63	8469	0.4	0.4	0.1	0.1	0.4	V
64	8473	1.4	1.6	0.1	0.2	2.0	V
65	8472	2.7	3.1	1.0	0.5	2.8	V
66	8478	0.4	1.4	1.3	0.8	2.5	V
67	8475	2.1	6.6	1.1	0.3	16.7	V
	8479	1.7	16.0	4.2	.8	26.1	V
68	8470	3.0	5.4	.74	.1	26.1	V
69	8461	1.2	1.8	.1	.05	7.1	V
70	8462	2.5	4.1	.5	.0	6.3	V
71	14008	2.1	1.2	0.4	0.2	1.3	V

AMERICAN SMELTING & REFINING CO.
KEYSTONE UNIT

2160 DRIFT NORTH

PROGRESS, GEOLOGY, & ASSAY MAP

SCALE	DR. W. PILL	DATE	FILE
1" = 50'	TR.	JUN 1957	
	CH.		
	APP.		

2000 LEVEL ASSAYS

Ref.	Sample	Width	Ag	Pb	Cu	Zn	Loc.
1	8304	1.6	1.0	1.4	0.1	2.6	V
2	8306	1.6	2.2	2.9	0.15	4.3	V
3	8308	2.0	1.0	1.0	0.1	2.3	V
4	8311	1.7	0.6	0.9	0.15	1.1	V
5	8314	2.0	0.4	0.6	0.1	2.9	V
6	8315	1.8	0.2	0.1	0.1	0.5	V
7	8317	2.3	0.6	0.5	0.15	1.6	V
8	8319	1.7	0.9	1.6	0.2	1.9	V
9	8321	3.6	0.8	1.6	0.1	2.7	V
10	8323	5.0	1.7	4.8	0.25	4.3	V
11	8326	1.0	3.1	7.3	0.6	9.6	V
12	8328	1.0	3.4	5.6	0.4	6.8	V
13	8330	0.8	18.8	5.1	0.3	2.4	V
14	8334	1.0	0.9	0.7	0.15	1.0	V
15	8336	1.0	6.2	2.0	0.15	0.7	V
16	8341	1.6	5.9	6.6	0.8	6.6	V
17	8343	0.9	4.0	3.4	0.25	13.0	V
18	8346	0.6	2.4	0.1	0.2	20.0	V
19	8349	4.5	1.0	0.2	0.15	2.0	FW
20	8350	4.0	0.4	0.5	0.1	1.2	V
21	8351	4.7	1.3	0.8	0.9	4.5	V
22	8354	1.9	0.4	0.5	0.1	1.2	V
23	8355	2.0	1.0	0.2	0.1	0.8	V
24	8358	4.6	1.2	0.7	0.2	5.4	V
25	8359	5.3	0.4	0.1	0.1	2.1	V
26	8360	5.0	0.4	0.1	0.1	1.4	V
27	8362	6.4	1.2	1.3	0.26	2.6	V
28	8363	6.0	1.4	0.2	0.15	1.6	V
29	8364	6.8	9.5	3.8	0.85	6.0	V
30	8365	5.8	11.6	7.3	0.5	12.1	V
31	8366	3.0	23.2	8.1	0.6	12.4	V
32	8368	1.3	6.2	10.5	0.15	17.4	V
33	8372	1.5	18.0	9.8	0.36	10.3	V
	8373	2.6	0.8	0.2	0.05	0.8	FW
	8374	1.8	6.4	0.8	0.05	1.4	HW
34	8375	3.0	26.8	7.2	0.2	8.5	V
35	8376	4.0	10.0	5.9	0.4	15.6	V
36	8378	6.2	8.2	2.8	1.7	14.0	V
37	8379	3.6	8.2	3.0	1.8	26.2	V
	8380	2.9	1.4	1.5	0.2	2.5	HW
38	8381	3.2	12.4	4.7	0.4	27.6	V
39	8384	3.3	11.0	4.8	0.35	23.1	V
40	8387	3.3	15.5	6.5	0.4	36.1	V
41	8392	1.7	9.4	3.8	1.5	18.8	V
42	8397	4.1	12.0	7.7	0.6	19.8	V
43	8398	1.6	13.2	9.5	1.2	18.8	V
44	8399	1.6	15.8	6.5	0.6	32.0	V
45	8400	2.9	10.9	7.6	1.8	18.8	V
46	8402	3.4	2.0	0.1	0.1	1.9	V
	8403	3.3	1.2	1.6	0.3	4.7	HW
47	8409	3.0	5.6	3.9	0.65	12.8	V
48	8413	3.2	4.0	1.8	0.2	15.6	FW
	8414	2.8	2.2	1.5	0.25	2.9	HW
49	8416	4.1	6.2	2.3	0.1	6.5	FW
	8417	2.6	9.1	14.1	0.6	11.5	HW
	8418	3.2	2.0	3.3	0.25	4.7	HW
50	8420	3.6	8.4	8.3	0.7	10.8	V
51	8423	1.8	4.7	5.2	0.3	6.1	V
52	8426	2.3	3.8	3.1	0.4	2.3	V
53	8429	2.0	9.8	1.6	1.5	1.5	V
54	8434	0.9	1.4	1.0	0.1	2.7	V
55	8435	0.8	1.2	1.0	0.2	1.8	V
56	8438	1.3	0.4	0.4	0.1	1.5	V
57	8441	0.7	3.8	0.5	1.3	1.0	V
58	8445	1.6	0.2	0.1	0.1	0.1	V
59	8447	2.0	0.8	0.7	0.2	2.8	V
60	8451	5.0	0.4	0.2	0.2	0.9	V Fc
61	8453	1.8	1.6	0.1	0.1	1.0	V
62	8459	0.6	1.8	0.1	0.2	1.2	V
63	8469	0.8	0.6	0.1	0.1	0.4	V
64	8473	1.4	1.6	0.1	0.2	2.0	V
65	8476	2.9	9.3	2.6	0.5	31.4	V
66	8478	5.4	6.4	1.3	0.8	29.2	V
67	8482	2.5	6.6	1.6	0.9	16.7	V
	8485	2.7	18.6	4.2	1.4	26.7	V
68	8490	3.0	9.4	3.4	1.3	28.1	V
69	8491	1.5	7.8	2.1	0.4	9.5	V
70	8494	2.4	4.1	1.4	0.3	6.6	V
71	14006	2.5	3.4	0.4	0.2	1.3	V

Ref	Sample	Width	Ag	Pb	Cu	Zn	Loc
72	14034	3.9	22.9	6.9	1.9	25.9	V
73	14038	4.6	34.1	10.3	1.3	16.8	V
74	14042	1.2	8.9	2.3	0.6	11.5	V
75	14048	5.5	13.8	3.7	1.2	18.6	V
76	14054	4.2	57.2	8.3	1.0	23.3	V
77	14055	3.6	36.6	6.9	1.4	21.2	HW
78	14056	3.4	1.8	Tr	0.15	2.1	FW
79	14061	2.6	27.2	5.8	0.7	26.2	V
80	14066	3.3	6.8	1.7	6.9	7.5	V

2160 LEVEL ASSAYS

REF. #	SAMPLE NO.	W.	AG.	PB.	CU.	ZN.	LOC.
1	7276	3.1	4.5	0.1	0.5	4.7	V
	7277	3.2	2.1	TR	0.1	0.8	FW
2	7290	2.7	7.5	1.5	0.2	3.1	FW
	7291	3.4	3.6	TR	0.5	0.2	HW
3	7292	3.9	0.85	TR	0.1	1.5	HW
	7293	1.8	11.2	1.2	1.35	3.35	V
	7294	2.2	1.35	0.3	0.2	0.45	FW
4	7295	3.5	0.35	0.2	0.1	0.1	FW
	7296	2.5	6.35	1.5	1.8	3.2	V
	7297	2.4	0.35	TR	0.1	TR	HW
5	7298	3.2	0.35	TR	0.1	TR	HW
	7299	1.4	3.95	0.9	1.0	14.5	V
	7300	1.8	1.35	TR	0.2	1.1	FW
6	7301	2.8	1.5	0.2	0.2	0.5	HW
	7302	1.4	3.8	3.1	0.5	3.3	V
	7303	2.1	0.5	0.5	0.1	1.4	FW
7	7304	1.3	2.8	0.2	0.2	2.8	V
	7305	3.5	0.3	0.1	0.2	0.3	HW
	7306	2.5	0.35	0.2	0.1	0.3	FW
8	7307	2.8	1.1	0.3	0.5	1.5	V
	7308*	4.7	0.5	0.35	0.2	0.2	FW
9	7310	1.4	4.2	2.5	0.4	6.8	V
	7311	4.5	0.7	0.2	0.1	0.9	FW
10	7312	2.3	3.5	1.8	0.35	8.5	V
	7313	3.8	0.8	0.5	0.1	1.7	FW
11	7314	1.2	0.3	0.2	0.1	15.2	HW
	7315	5.2	3.8	0.8	0.35	14.5	V
12	7316	1.3	0.2	0.2	0.2	1.5	HW
	7317	1.2	4.2	0.15	0.3	2.35	V
	7318	3.8	0.35	0.25	0.1	0.1	FW
13	7319	0.8	0.1	0.35	0.05	0.1	HW
	7320	4.1	3.1	0.25	0.2	0.3	V
	7321	1.3	0.35	0.1	0.2	0.2	FW
14	7324	6.1	1.85	1.1	0.35	2.2	V
15	7325	3.7	3.0	0.8	0.35	3.6	V
	7326	2.7	0.2	0.1	0.3	1.3	FW
16	7327	4.7	5.8	11.2	0.2	2.3	V
	7328	1.8	0.6	0.1	0.4	0.35	HW
17	7329	1.5	1.4	1.3	0.35	1.3	HW
	7330	3.9	7.9	0.2	0.3	1.1	V
	7331	1.2	0.8	4.3	0.3	0.5	FW
18	7333	1.3	10.2	0.1	0.5	1.3	HW
	7334	2.3	0.8	0.5	0.7	2.2	V
	7335	2.7	0.8	0.3	0.3	2.8	FW
19	7336	1.3	0.8	0.1	0.1	6.2	V
	7337	4.5	2.1	1.1	0.5	1.2	FW
20	7338	1.2	1.6	1.6	0.5	1.2	V
	7339	4.7	0.6	0.5	0.5	1.5	FW
21	7343	2.7	0.8	1.3	0.3	5.3	V
	7344	3.2	0.2	0.1	0.5	1.2	FW
22	7345	1.5	2.8	2.5	0.5	2.1	V
	7346	3.2	0.8	0.1	0.1	0.5	FW
23	7347	6.2	2.2	0.5	0.3	1.3	
24	8087	4.5	9.2	7.8	0.5	9.3	V
25	8086	3.5	3.9	8.0	0.4	6.1	V
26	8088	3.0	5.2	7.6	0.8	3.2	V
27	8089	4.2	3.5	2.4	1.3	5.1	V
28	8090	3.0	2.7	11.3	1.2	10.8	V
29	8091	3.8	11.5	6.2	2.4	9.2	V
30	8092	3.5	13.1	4.7	6.1	10.1	V
31	8093	2.8	6.2	5.5	1.5	6.5	V
32	8094	5.2	5.4	3.7	0.45	6.3	V
33	8100	2.5	5.2	7.3	0.2	6.5	V
34	8101	2.8	1.3	5.4	0.25	3.2	FW
35	8103	5.2	4.2	10.5	0.5	6.2	V
36	8105	3.2	6.8	10.2	1.2	10.3	V
37	8106	3.5	5.8	9.2	1.1	8.8	V
38	8108	5.0	4.7	5.2	0.1	9.8	V
39	8109	5.0	4.0	3.6	0.3	7.4	V
40	8110	6.8	1.8	1.8	0.5	7.0	V
41	8111	5.7	2.0	2.6	0.5	10.3	V
42	8112	5.0	1.8	0.8	0.45	3.6	V
43	8113	5.2	4.2	2.8	0.7	5.2	V
44	8114	6.8	3.4	2.8	0.4	4.7	V
45	8115	7.0	2.0	3.6	0.35	5.4	V
46	8116	9.5	1.0	0.5	0.5	5.0	V
47	8117	5.0	1.6	2.0	0.5	5.7	V
48	8118	4.7	1.8	1.1	0.25	8.7	V
49	8119	5.0	1.8	2.1	0.5	4.8	V
50	8120	6.5	2.5	2.8	0.35	5.2	V
51	8121	7.5	2.2	1.9	0.4	4.9	V
52	8122	5.3	2.0	0.9	0.35	2.9	V
53	8123	5.5	3.1	2.3	1.0	6.2	V
54	8124	5.0	4.3	4.0	0.3	7.8	V
55	8448	6.4	7.0	1.9	0.9	8.5	V
56	8452	2.0	5.3	3.9	0.9	8.5	V
57	8454	2.7	11.2	1.2	2.9	5.3	V
58	8460	2.8	11.6	0.6	2.2	1.7	FW
	8461	4.0	1.2	0.1	0.2	0.1	HW
59	8470	5.0	2.4	0.4	0.6	2.0	V
60	8477	3.0	2.6	2.7	0.2	3.2	FW

AMERICAN SMELTING & REFINING CO.
KEYSTONE UNIT

2160 DRIFT NORTH

PROGRESS, GEOLOGY & ASSAY MAP

SCALE	DR. TR. CH. APP.	W. PILL	DATE	FILE
1" = 50'			MAY 1957	

Ref	Sample	Width	Ag	Pb	Cu	Zn	Loc
72	14034	3.9	22.9	6.9	1.9	25.9	V
73	14038	4.6	34.1	10.3	1.3	16.8	V
74	14042	1.2	8.9	2.3	0.6	11.5	V
75	14048	5.5	13.8	3.7	1.2	18.6	V
76	14054	4.2	51.2	8.3	1.0	23.3	V
77	14055	3.5	36.6	6.9	1.4	21.2	HW
78	14056	3.4	1.8	Tr	0.15	2.1	FW
79	14061	2.6	21.2	5.8	0.7	26.2	V

2000 LEVEL ASSAYS

Ref.	Sample	Width	Ag	Pb	Cu	Zn	Loc.
1	8304	1.6	1.0	1.4	0.1	2.6	V
2	8306	1.6	2.2	2.9	0.15	4.3	V
3	8308	2.0	1.0	1.0	0.1	2.3	V
4	8311	1.7	0.6	0.9	0.15	1.1	V
5	8314	2.0	0.4	0.6	0.1	2.9	V
6	8315	1.8	0.2	0.1	0.1	0.5	V
7	8317	2.3	0.6	0.5	0.15	1.5	V
8	8319	1.7	0.9	1.6	0.2	1.9	V
9	8321	3.6	0.8	1.5	0.1	2.7	V
10	8323	5.0	1.7	4.8	0.25	4.3	V
11	8326	1.0	3.1	7.3	0.6	9.6	V
12	8328	1.0	3.4	5.6	0.4	6.8	V
13	8330	0.8	18.0	5.1	0.3	2.4	V
14	8334	1.0	0.9	0.7	0.15	1.0	V
15	8336	1.0	6.2	2.0	0.15	0.7	V
16	8341	1.6	5.9	6.6	0.8	6.6	V
17	8343	0.9	4.0	3.4	0.25	13.0	V
18	8346	0.6	2.4	0.1	0.2	20.0	V
19	8349	4.5	1.0	0.2	0.15	2.0	Fc
20	8350	4.0	0.4	0.5	0.1	1.2	V
21	8351	4.7	1.3	0.8	0.3	4.5	V
22	8354	1.9	0.4	0.5	0.1	1.2	V
23	8355	2.0	1.0	0.2	0.1	0.8	V
24	8358	4.6	1.2	0.7	0.2	5.4	V
25	8359	5.3	0.4	0.1	0.1	2.1	V
26	8360	5.0	0.4	0.1	0.1	1.4	V
27	8362	6.4	1.2	1.3	0.26	2.6	V
28	8363	6.0	1.4	0.2	0.15	1.6	V
29	8364	6.8	9.5	3.8	0.85	5.0	V
30	8365	5.8	11.6	7.7	0.5	12.1	V
31	8366	3.0	23.2	8.1	0.6	12.4	V
32	8368	1.3	6.2	10.8	0.18	17.4	V
33	8372	1.5	18.0	9.8	0.36	10.3	V
	8373	2.6	0.8	0.2	0.05	0.8	FW
	8374	1.8	6.4	0.8	0.05	1.4	HW
34	8375	3.0	26.8	7.2	0.2	8.5	V
35	8376	4.0	10.0	5.9	0.4	15.6	V
36	8378	6.2	8.2	2.8	1.7	14.0	V
37	8379	3.6	8.2	3.0	1.8	26.2	V
	8380	2.9	1.4	1.5	0.2	3.5	HW
38	8381	3.2	12.4	4.7	0.4	27.6	V
39	8384	3.3	11.0	4.8	0.35	23.1	V
40	8387	3.3	15.6	6.5	0.4	36.1	V
41	8392	1.7	9.4	3.8	1.5	18.4	V
42	8397	4.1	12.0	7.7	0.6	19.8	V
43	8398	1.6	13.2	9.5	1.2	18.8	V
44	8399	1.6	15.8	6.5	0.6	32.0	V
45	8400	2.9	10.9	7.6	1.8	18.8	V
46	8402	3.4	2.0	0.1	0.1	1.9	V
	8403	3.3	1.2	1.6	0.3	4.3	HW
47	8409	3.0	5.6	3.9	0.65	12.8	V
48	8413	3.2	4.0	1.0	0.2	13.6	FW
	8414	2.8	2.2	1.5	0.25	2.3	HW
49	8416	4.1	6.2	2.9	0.1	6.5	FW
	8417	2.6	9.1	14.1	0.6	11.5	HW
	8415	3.2	2.0	3.3	0.25	4.7	HW
50	8420	3.6	8.4	8.5	0.7	10.8	V
51	8423	1.8	4.7	5.2	0.3	6.1	V
52	8426	2.3	3.8	3.1	0.4	2.3	V
53	8429	2.0	9.8	1.6	1.5	1.6	V
54	8434	0.9	1.4	1.0	0.1	2.7	V
55	8435	0.8	1.2	1.0	0.2	1.8	V
56	8438	1.3	0.4	0.4	0.1	1.5	V
57	8441	0.7	3.8	0.5	1.3	1.0	V
58	8445	1.6	0.2	0.1	0.1	0.1	V
59	8447	2.0	0.8	0.7	0.2	2.8	V
60	8451	5.0	0.4	0.2	0.2	0.9	V Fc
61	8453	1.8	1.6	0.1	0.1	1.0	V
62	8459	0.6	1.8	0.1	0.2	1.2	V
63	8469	0.8	0.6	0.1	0.1	0.4	V
64	8473	1.4	1.6	0.1	0.2	2.0	V
65	8476	2.9	9.3	2.6	0.5	31.4	V
66	8478	5.4	6.4	1.8	0.8	29.2	V
67	8482	2.5	6.6	1.6	0.9	16.7	V
	8485	2.7	15.6	4.2	1.4	26.7	V
68	8490	3.0	9.4	3.4	1.3	28.1	V
69	8491	1.5	7.8	2.1	0.4	9.5	V
70	8494	2.4	4.1	1.4	0.3	6.6	V
71	14008	2.5	3.4	0.4	0.2	1.3	V

2160 LEVEL ASSAYS

REF. #	SAMPLE NO.	W.	AG.	PB.	CU.	ZN.	LOC.
1	7276	3.1	4.5	0.1	0.4	4.4	V
	7277	3.3	2.1	TR	0.1	0.8	FW
2	7290	2.7	7.8	1.5	0.3	3.1	FW
	7291	3.3	3.8	TR	0.5	0.3	HW
3	7292	3.9	0.25	TR	0.1	1.5	HW
	7293	1.8	11.8	1.3	1.35	3.75	V
	7294	2.2	1.55	0.5	0.3	0.45	FW
4	7295	3.9	0.35	0.3	0.1	0.1	FW
	7296	2.2	6.25	1.15	1.8	3.7	V
	7297	2.4	0.35	TR	0.1	TR	HW
5	7298	3.9	0.35	TR	0.1	TR	HW
	7299	1.5	3.95	0.9	1.9	1.45	V
	7300	1.9	1.35	TR	0.7	1.1	FW
6	7301	2.5	1.4	0.9	0.1	0.6	HW
	7302	1.4	3.8	3.1	0.25	3.9	V
	7303	2.7	0.6	0.6	0.1	1.4	FW
7	7304	1.3	2.3	0.5	0.15	2.6	V
	7305	3.5	0.4	0.4	0.15	0.8	HW
	7306	2.7	0.35	0.4	0.1	0.5	FW
8	7307	2.8	1.1	0.5	0.5	1.65	V
	7308*	4.7	0.5	0.35	0.3	0.9	FW
9	7310	1.4	4.7	2.5	0.4	6.5	V
	7311	4.5	0.7	0.6	0.1	0.8	FW
10	7312	2.3	3.5	1.8	0.35	8.45	V
	7313	3.9	0.8	0.6	0.1	1.7	FW
11	7314	1.2	0.5	0.4	0.15	5.2	HW
	7315	5.3	3.5	0.6	0.25	4.25	V
12	7316	1.5	0.4	0.1	0.15	1.5	HW
	7317	1.9	4.3	0.45	0.75	2.35	V
	7318	3.8	0.35	0.35	0.1	0.1	FW
13	7319	0.8	0.1	0.25	0.05	0.01	HW
	7320	4.1	3.1	0.25	0.6	0.6	V
	7321	1.3	0.25	0.1	0.15	0.3	FW
14	7324	6.1	1.85	1.1	0.25	2.2	V
15	7325	3.4	3.9	0.8	0.35	3.6	V
	7326	2.7	0.8	0.4	0.15	1.3	FW
16	7327	4.4	5.9	1.8	0.3	2.4	V
	7328	1.8	0.6	0.1	0.05	0.5	HW
17	7329	1.5	1.4	1.8	0.35	1.4	HW
	7330	3.9	7.9	0.1	0.8	1.1	V
	7331	1.7	0.8	4.6	0.15	0.5	FW
18	7333	1.5	0.7	0.1	0.15	1.3	HW
	7334	2.3	0.2	0.6	0.4	2.2	V
	7335	2.7	0.8	0.3	0.3	2.6	FW
19	7336	1.4	0.8	0.6	0.1	8.5	V
	7337	4.4	2.9	1.1	0.5	1.6	FW
20	7338	1.4	1.6	1.6	0.15	1.9	V
	7339	4.1	0.6	0.3	0.15	1.6	FW
21	7343	2.8	0.8	1.2	0.2	5.5	V
	7344	3.2	0.4	0.1	0.05	1.9	FW
22	7345	1.5	2.4	2.5	0.15	2.1	V
	7346	3.9	0.8	0.1	0.1	0.6	FW
23	7347	6.2	2.2	0.5	0.3	1.9	
24	8087	4.5	9.3	7.2	0.3	9.3	V
25	8086	3.2	3.9	8.6	0.4	6.1	V
26	8088	3.9	5.2	7.6	0.8	3.2	V
27	8089	4.9	5.3	2.6	1.6	5.1	V
28	8090	3.9	8.1	11.3	1.9	10.8	V
29	8091	3.2	11.2	6.9	2.4	9.9	V
30	8092	3.9	13.1	4.1	6.2	10.1	V
31	8093	2.2	6.9	5.4	1.2	6.5	V
32	8097	5.9	5.6	3.7	0.22	5.3	V
33	8100	2.6	5.8	7.1	0.9	6.6	V
34	8101	2.4	1.3	5.4	0.25	3.6	FW
35	8103	5.9	4.4	10.3	0.45	6.7	V
36	8105	3.9	6.8	10.2	1.9	10.9	V
37	8106	3.5	5.8	9.8	1.1	8.6	V
38	8108	5.9	4.9	5.2	0.3	9.9	V
39	8109	5.9	4.9	3.6	0.7	7.4	V
40	8110	6.1	1.6	1.2	0.5	7.9	V
41	8111	5.7	2.9	2.6	0.6	10.9	V
42	8112	5.9	1.3	0.8	0.45	3.6	V
43	8113	5.2	4.2	2.2	0.7	5.2	V
44	8114	6.8	3.4	2.8	0.9	4.7	V
45	8115	7.9	2.2	3.2	0.35	5.9	V
40	8116	9.5	1.9	0.5	0.2	5.9	V
47	8117	5.9	1.6	2.9	0.6	5.8	V
48	8118	4.5	1.8	1.1	0.25	8.7	V
49	8119	5.0	1.8	2.1	0.6	4.8	V
50	8120	6.5	2.3	2.8	0.25	5.3	V
51	8121	7.5	2.2	1.9	0.4	4.9	V
52	8122	5.3	2.0	0.9	0.35	2.9	V
53	8123	5.5	3.1	2.3	1.0	6.2	V
54	8124	5.0	4.3	4.0	0.3	7.8	V
55	8448	6.4	7.0	1.9	0.9	8.5	V
56	8452	2.0	5.3	3.9	0.9	8.5	V
57	8454	2.7	11.2	1.2	2.9	5.3	V
58	8460	2.8	11.6	0.6	2.2	1.7	FW V
	8461	4.0	1.2	0.1	0.2	0.1	HW
59	8470	5.0	8.4	0.4	0.6	2.0	V
60	8477	3.0	2.6	2.7	0.3	3.2	FW

AMERICAN SMELTING & REFINING CO.
KEYSTONE UNIT

2160 DRIFT NORTH

PROGRESS, GEOLOGY & ASSAY MAP

SCALE	DR. TR. CH. APP.	W. PILL	DATE	FILE
1" = 50'			APR 1957	

2000 LEVEL ASSAYS

Ref.	Sample	Width	Ag	Pb	Cu	Zn	Loc.
1	8304	1.6	1.0	1.4	0.1	2.6	V
2	8306	1.8	2.2	2.9	0.15	4.3	V
3	8308	2.0	1.0	1.0	0.1	2.3	V
4	8311	1.7	0.6	0.9	0.15	1.1	V
5	8314	2.0	0.4	0.6	0.1	2.9	V
6	8315	1.8	0.2	0.1	0.1	0.5	V
7	8317	2.3	0.6	0.5	0.15	1.5	V
8	8319	1.7	0.9	1.6	0.2	1.9	V
9	8321	3.6	0.8	1.5	0.1	2.7	V
10	8323	5.0	1.7	4.8	0.25	4.3	V
11	8326	1.0	3.1	7.3	0.6	9.6	V
12	8328	1.0	3.4	5.6	0.4	6.8	V
13	8330	0.8	18.8	5.1	0.3	2.4	V
14	8334	1.0	0.9	0.7	0.15	1.0	V
15	8336	1.0	6.2	2.0	0.15	0.7	V
16	8341	1.6	5.9	6.5	0.8	6.5	V
17	8343	0.9	4.0	3.4	0.25	13.0	V
18	8346	0.6	2.4	0.1	0.2	20.0	V
19	8349	4.5	1.0	0.2	0.15	2.0	Fc
20	8350	4.0	0.4	0.5	0.1	1.2	V
21	8351	4.7	1.3	0.8	0.3	4.5	V
22	8354	1.9	0.4	0.5	0.1	1.2	V
23	8355	3.0	1.0	0.2	0.1	0.8	V
24	8358	4.6	1.2	0.7	0.2	5.4	V
25	8359	5.3	0.4	0.1	0.1	2.1	V
26	8360	5.0	0.4	0.1	0.1	1.4	V
27	8362	6.4	1.2	1.3	0.25	2.6	V
28	8363	6.0	1.4	0.2	0.15	1.6	V
29	8364	6.8	9.5	3.8	0.85	5.0	V
30	8365	5.8	11.6	7.7	0.5	12.1	V
31	8366	3.0	23.2	8.1	0.6	12.4	V
32	8368	1.3	6.2	10.8	0.15	17.4	V
33	8372	1.5	18.0	9.8	0.36	10.3	V
	8373	2.6	0.8	0.2	0.05	0.8	FW
	8374	1.8	6.4	0.8	0.05	1.4	HW
34	8375	3.0	26.8	7.2	0.2	8.5	V
35	8376	4.0	10.0	5.9	0.4	15.6	V
36	8378	6.2	8.2	2.8	1.7	14.0	V
37	8379	3.6	8.2	3.0	1.8	26.2	V
	8380	2.9	1.4	1.5	0.2	3.5	HW
38	8381	3.2	12.4	4.7	0.4	27.6	V
39	8384	3.3	11.0	4.8	0.35	23.1	V
40	8387	3.3	15.6	6.5	0.4	36.1	V
41	8392	1.7	9.4	3.8	1.5	18.8	V
42	8397	4.1	12.0	7.7	0.6	19.8	V
43	8398	1.6	13.2	9.5	1.2	18.8	V
44	8399	1.6	15.8	6.5	0.6	32.0	V
45	8400	2.9	10.9	7.6	1.8	18.8	V
46	8402	3.4	2.0	0.1	0.1	1.9	V
	8403	3.3	1.2	1.6	0.3	4.7	HW
47	8409	3.0	5.6	3.9	0.65	12.8	V
48	8413	3.2	4.0	1.8	0.2	13.6	FW
	8414	2.8	2.2	1.5	0.25	2.3	HW
49	8416	4.1					FW
	8417	2.6	9.1	14.1	0.6	11.5	HW
	8415	3.2	2.0	3.3	0.25	4.7	HW
50	8420	3.6	8.4	8.5	0.7	10.8	V
51	8423	1.8	4.7	5.2	0.3	6.1	V
52	8426	2.3	3.8	3.1	0.4	2.3	V
53	8429	2.0	9.8	1.6	1.5	1.5	V
54	8432	0.9	1.4	1.0	0.1	2.7	V
55	8435	0.8	1.2	1.0	0.2	1.8	V
56	8438	1.3	0.4	0.4	0.1	1.5	V
57	8438	0.7	3.8	0.5	1.3	1.0	V
58	8445	1.6	0.2	0.1	0.1	0.1	V
59	8447	2.0	0.8	0.7	0.2	2.8	V
60	8451	5.0	0.4	0.2	0.2	0.9	VF
61	8453	1.8	1.6	0.1	0.1	1.0	V
62	8459	0.6	1.8	0.1	0.2	1.2	V

2160 LEVEL ASSAYS

REF. #	SAMPLE NO.	W.	AG.	PB.	CU.	ZN.	LOC.
1	7276	3.1	4.8	0.1	0.4	4.1	V
	7277	3.3	2.1	TR	0.1	0.8	FW
2	7290	2.7	7.3	1.5	0.2	3.1	FW
	7291	3.1	3.8	TR	0.5	0.3	HW
3	7292	3.9	0.35	TR	0.1	1.5	HW
	7293	1.8	11.3	1.3	1.35	3.75	V
	7294	2.2	1.35	0.6	0.2	0.45	FW
4	7295	3.9	0.55	0.3	0.1	0.1	FW
	7296	2.2	6.25	1.15	1.8	3.7	V
	7297	2.4	0.35	TR	0.1	TR	HW
5	7298	3.2	0.35	TR	0.1	TR	HW
	7299	1.5	3.95	0.9	1.2	1.45	V
	7300	1.3	1.35	TR	0.2	1.1	FW
6	7301	2.5	1.4	0.9	0.1	0.6	HW
	7302	1.4	3.8	3.1	0.35	3.2	V
	7303	2.7	0.8	0.6	0.1	1.4	FW
7	7304	1.7	2.3	0.5	0.15	2.6	V
	7305	3.5	0.4	0.1	0.15	0.8	HW
	7306	2.7	0.35	0.4	0.1	0.5	FW
8	7307	2.8	1.1	0.5	0.55	1.65	V
	7308	4.7	0.5	0.35	0.15	0.9	FW
9	7310	1.4	4.7	2.2	0.4	6.5	V
	7311	4.5	0.7	0.6	0.1	0.8	FW
10	7312	2.3	3.5	1.8	0.35	8.45	V
	7313	3.8	0.8	0.6	0.1	1.7	FW
11	7314	1.2	0.5	0.4	0.15	5.2	HW
	7315	5.3	3.6	0.6	0.35	4.25	V
12	7316	1.5	0.8	0.1	0.15	1.5	HW
	7317	1.9	4.3	0.45	0.45	2.35	V
	7318	3.8	0.35	0.25	0.1	0.1	FW
13	7319	0.9	0.1	0.35	0.05	0.01	HW
	7320	4.1	3.1	0.25	0.6	0.6	V
	7321	1.3	0.25	0.1	0.15	0.3	FW
14	7324	6.1	1.85	1.1	0.25	2.2	V
15	7325	3.1	3.9	0.7	0.35	3.6	V
	7326	2.2	0.5	0.1	0.25	1.5	FW
16	7327	4.1	5.9	1.2	0.3	2.4	V
	7328	1.8	0.6	0.1	0.05	0.55	HW
17	7329	1.5	1.4	1.3	0.35	1.4	HW
	7330	3.9	7.9	0.1	0.8	1.4	V
	7331	1.7	0.8	4.8	0.15	0.2	FW
18	7333	1.5	0.7	0.1	0.15	1.3	HW
	7334	2.3	0.9	0.6	0.4	2.8	V
	7335	2.7	0.8	0.3	0.3	2.6	FW
19	7336	1.4	0.8	0.6	0.1	8.6	V
	7337	4.4	2.9	1.1	0.5	1.6	FW
20	7338	1.4	1.6	1.4	0.15	1.9	V
	7339	4.1	0.6	0.5	0.15	1.2	FW
21	7343	2.8	0.8	1.2	0.2	5.3	V
	7344	3.2	0.4	0.1	0.05	1.9	FW
22	7345	1.5	2.3	2.5	0.15	2.1	V
	7346	3.9	0.8	0.1	0.1	0.6	FW
23	7347	6.2	2.2	0.5	0.3	1.9	
24	8087	4.8	9.3	7.8	0.45	9.1	V
25	8086	3.5	3.9	8.6	0.4	6.7	V
26	8088	3.9	5.3	7.6	0.8	3.8	V
27	8089	4.9	5.3	2.6	1.3	5.1	V
28	8090	3.6	2.7	11.8	1.9	10.8	V
29	8091	3.8	11.4	6.9	2.4	9.9	V
30	8092	3.8	13.1	4.7	6.8	10.1	V
31	8093	2.8	6.9	5.4	1.8	6.5	V
32	8097	5.9	5.6	3.7	0.97	5.7	V
33	8100	2.2	5.3	7.1	0.9	6.4	V
34	8101	2.8	1.3	5.4	0.25	3.6	FW
35	8103	5.9	4.4	10.3	0.45	6.7	V
36	8105	3.9	6.8	10.4	1.9	10.9	V
37	8106	3.5	5.3	9.8	1.1	8.6	V
38	8108	5.9	4.4	5.3	0.3	9.9	V
39	8109	5.9	4.9	9.6	0.7	7.4	V
40	8110	6.1	1.8	1.8	0.5	7.6	V
41	8111	5.7	2.9	2.6	0.8	10.3	V
42	8112	5.9	1.3	0.8	0.45	3.6	V
43	8113	5.3	4.2	2.8	0.7	5.2	V
44	8114	6.4	3.4	2.8	0.9	4.7	V
45	8115	7.9	2.6	3.6	0.35	5.9	V
46	8116	9.5	1.9	0.5	0.3	5.9	V
47	8117	5.9	1.5	2.9	0.6	5.8	V
48	8118	4.5	1.8	1.1	0.25	8.7	V
49	8119	5.9	1.8	2.1	0.6	4.8	V
50	8120	6.5	2.5	2.8	0.25	5.3	V
51	8121	7.5	2.2	1.9	0.4	4.9	V
52	8122	5.3	2.0	0.9	0.35	2.9	V
53	8123	5.5	3.1	2.3	1.0	6.2	V
54	8124	5.0	4.3	4.0	0.3	7.8	V
55	8448	6.4	7.0	1.9	0.9	8.5	V
56	8452	2.0	5.3	3.9	0.9	8.5	V
57	8454	2.7	11.2	1.2	2.9	5.3	V
58	8460	2.8	11.6	0.6	2.2	1.7	HW V
	8461	4.0	1.2	0.1	0.2	0.1	HW

AMERICAN SMELTING & REFINING CO.
KEYSTONE UNIT

2160 DRIFT NORTH

PROGRESS, GEOLOGY & ASSAY MAP

SCALE	DR. TR. CH. APP.	W. PILL	DATE	FILE
1" = 50'			FEB 1957	