UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
ROOM 2-B POST OFFICE BLDG.
KNOXVILLE 2, TENN.

PAID ON VOUCHER & SCHEDULE
OF PAYMENTS K-46

February 3, 1959

EXTRA COPY
O. M. E.
RECEIVED FEB 16 1959

DATE	INITIALS	CODE

Memorandum

To: Finance Officer, Region V - OME - Norris, ~~Tennessee~~

From: Executive Officer, OME - Region V - Knoxville, Tenn.

Subject: DMEA-4746, Idm-E1100 (copper) Appalachian ~~Sulphides, Inc.~~
Elizabeth Mine Area, Orange County, Vermont

Enclosed is a letter from the Operator, forwarded from the Washington office with a request to process it for payment, claiming $213.50 as certified by a Report of Review dated January 20, 1958. The Field Team approves payment of this claim.

Robert A. Laurence

Robert A. Laurence

Amount: $ 213.50

Signature: Helen R. Miller

Date: FEB 13 1959 Vou. No.: 87

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
WASHINGTON 25, D. C.

EXTRA COPY O. M. E. RECEIVED FEB 16 1959		
DATE	INITIALS	CODE

JAN 30 1959

Mr. Robert A. Laurence
Executive Officer
OME Field Team, Region V
Room 2-B, Post Office Building
Knoxville 2, Tennessee

Re: Docket No. DMEA-4746 (Copper)
Appalachian Sulphides, Inc.
Elizabeth Mine Area
Orange County, Vermont
Contract No. Idm-E1100

Dear Mr. Laurence:

Enclosed is the original of a letter dated January 27, 1959, from the referenced Operator claiming the amount $213.50, which was certified by a Report of Review dated January 20, 1958, as payable if claimed.

It is requested that a voucher, using this letter as supporting documentation, be processed for payment.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Enclosures

APPROVED:

C. T. Barock

Member, Bureau of Mines

L. E. Nelson

Member, Geological Survey

RECEIVED
FEB - 2 1959
U. S. Geological Survey
Group Operation
Knoxville, Tenn.

APPALACHIAN SULPHIDES, INC.
SOUTH STRAFFORD
VERMONT

Telephone - So. Strafford 5-2411

EXTRA COPY
O. M. E.
RECEIVED FEB 16 1959

DATE	INITIALS	CODE

OFFICIAL FILE COPY
January 21, 1959
O. M. E.
RECEIVED JAN 30 1959

DATE	INITIALS	CODE
1/30	C	220

United States Department of the Interior
Defense Minerals Exploration Administration
Washington 25, D. C.

Dear Sirs:

According to our records there is an unpaid balance of $213.50 due from D. M. E. A. representing the Government's 50% share of certain additional accepted costs under DMEA #4746, Contract No. IdmE-11. We enclose a photocopy of the report or review by E. B. Talbot, auditor, dated January 20, 1958 in which this item was approved for payment if claimed by us. The amount was included in our amended final report which we filed after receipt of auditor's report or review.

In connection with our annual audit we shall appreciate your informing our accountants, Smith, Batchelder, Smith, Rugg and Darling, Norwich, Vermont, whether your records are in agreement and that the amount ultimately will be paid.

Very truly yours,

Clarence B Benson

Clarence B. Benson
Asst. Treasurer & Vt. Manager

CBb/bm

Encl.

cc: William C. Rugg, Norwich, Vermont

RECEIVED
FEB - 2 1959
U. S. Geological Survey
Geologic Division
Knoxville, Tenn.

OFFICIAL FILE COPY
O. M. E.
RECEIVED JAN 30 1959

DATE	INITIALS	CODE

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

Rec'd by the Company 1/30/59

EXTRA COPY
O. M. E.
RECEIVED FEB 16 1959

DATE	INITIALS	CODE

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

Appalachian Sulphides, Inc.

South Strafford, Vermont

pertaining to Exploration Project Contract No. Ide-21100, DMEA No. 4746, including Amendment No. 1, for the months of June 1957 to September 1957, inclusive, covering a project for the exploration of copper on property, known as the Elizabeth Mine Area located in Orange County, Vermont.

My review included an examination of the Monthly Reports (Forms MF-104) and supporting documents attached thereto, comparison of the costs claimed with the contract and pertinent schedules, verification of work performed by reference to Field Team reports and correspondence, and a determination of the reasonableness and propriety of the costs.

This review was made in lieu of a final audit of the Operator's accounts and records for the reasons given in the attachment to this report.

The review disclosed the following facts in regard to the amount paid or to be paid the Operator:

Total cost as billed by Operator		$45,537.45
Exceptions:		
Prior to this review	-0-	
Herewith	-0-	-0-
Total Accepted cost claimed		$45,537.45
Additional acceptable cost, if claimed, per schedule attached		427.00
Total acceptable cost, if claimed		$45,964.45

The contract calls for a 50 percent participation of exploration expenses by the United States Government. Therefore, payments to the Operator by the Government as follows are valid and proper:

On cost claimed	$22,768.72
On additional cost, if claimed	213.50
Total amount payable, if claimed	$22,982.22
Amount payable on audited claim	$22,768.72
Amount reimbursed	18,473.24
Balance Due Operator	$ 4,295.48
Additional payable, if claimed	$ 213.50

/s/ E. B. Talbert, Auditor

Jan 29, 1959

EXTRA COPY
O. M. E.
RECEIVED FEB 16 1959

DATE	INITIALS	CODE

Id-E1100 Appalachian Sulphides, Inc. DMEA-4746

Reasons for Report of Review in Lieu of a final audit:

(a) the Monthly Reports were supported by documentary proof of that portion ($37,216.45) of the costs which covered work performed at unit rates under independent contracts;

(b) the balance ($8,743.00) of the accepted costs was under a contract providing for payment by the Government on the basis of fixed unit costs of work actually performed; and

(c) the administrative cost to the Government of an audit would be excessive in relation to the estimated amount of possible further exceptions thereunder.

Additional acceptable costs, if claimed by Operator:

(a)	Drilling delays invoiced by drilling contractor and accepted by Field Team as reasonable	135 hrs. @ $6.00	$810.00	$
	Claimed by Operator	64 hrs. @ 6.00	384.00	426.00
(b)	Samples assayed per drill logs and confirmed by Field Team	145 ea. @ $1.00	$145.00	
	Claimed by Operator	144 ea. @ 1.00	144.00	$ 1.00
	Total			$427.00

RECEIVED
FEB - 5 1959

6-[redacted]

UNITED STATES
DEPARTMENT OF TH[redacted]TERIOR
BUREAU OF M[redacted]

REFERENCE SLIP

Route to:	Name	Room
1.	Jay L. Chambers, Office of Minerals Exploration,	
2.	Interior Bldg., Washington, D. C.	
3.		
4.		
5.		

For:

..... Action	..... Record of .....
..... Approval	..... Referring to .....
..... Comment	..... Reply for signature of .....
..... Conference	..... Rewriting
..... Consideration	..... See or call me
..... Filing	..... Signature
..... Initials	..... Suggestions
..... Instructions	..... Surname
..... Investigation	..... Your information
..... Mailing	
..... Note and return	
..... Previous correspondence	
..... Recommendation	

Remarks: Reference is made to attached correspondence - it will be necessary for your office to increase contract amount to cover this payment. Please expedite. Thanks.

From (Name) Helen Miller — Date 2-3-59

Division—Office—Address Norris, Tennessee — Ext: — Room:

☆ U. S. GOVERNMENT PRINTING OFFICE: 1957—O-416832

OFFICIAL FILE COPY
O. W. E.
RECEIVED FEB 6 1959

DATE	INITIALS	CODE
2/6	C	220
		800

Mr. Robert A. Laurence
Executive Officer
OME Field Team, Region 2
Room 2-b Post Office Building
Knoxville 2, Tennessee

Re: Docket No. DMEA-4746 (Copper)
Appalachian Sulphides, Inc.
Elizabeth Mine Area
Orange County, Vermont
Contract No. [illegible]

Dear Mr. Laurence:

[illegible] letter dated January 27, 1959, from the [illegible] operator claiming the amount $213.50, which was certified by a report of Review dated January 20, 1958, as payable [illegible].

It is requested that a voucher, using this letter as supporting documentation, be processed for payment.

Sincerely yours,

Chairman, Operating Committee

Enclosures

APPROVED:

Member, Bureau of Mines

Member, Geological Survey

FEB 3 1959

Smith, Batchelder, Smith, Rugg and Darling
Norwich, Vermont

Re: Docket No. DGA-4746 (Copper)
Appalachian Sulphides, Inc.
Contract No. Ldn-21100

Gentlemen:

As requested by letter of January 27, 1959, from the Appalachian Sulphides, Inc., you are advised that the records of this office confirm that a balance of $213.50 is due that company under the referenced contract.

The letter has been forwarded to the Executive Officer, CSE Field Team, Region V, Room 2-B, Post Office Building, Knoxville 2, Tennessee, with a request that the amount be paid.

Sincerely yours,

(signed) FRANK E. JOHNSON

Acting Director

EDTalbert/GMcC
February 2, 1959

cc: Docket
Director's Reading File
Mr. Chambers
Mr. Robert A. Laurence
Appalachian Sulphides, Inc.
Mr. Frank Johnson

JAN 30 1959

Mr. Robert J. Lawrence
Executive Officer
OSE Field Team, Region V
Room 2-8, Post Office Building
Knoxville 2, Tennessee

Re: Docket No. DMA-4746 (Copper)
Appalachian Sulphides, Inc.
Elizabeth Mine Area
Orange County, Vermont
Contract No. Idm-31100

Dear Mr. Lawrence:

Enclosed is the original of a letter dated January 27, 1959, from the referenced Operator claiming the amount $213.30, which was certified by a Report of Review dated January 20, 1958, as payable if claimed.

It is requested that a voucher, using this letter as supporting documentation, be processed for payment.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Enclosures

cc: Docket
Director's Reading File
Operating Committee
THKiilsgaard
ADMcMahon
Mr. Chambers
Mrs. Helen Miller
Appalachian Sulphides, Inc.
Smith, Batchelder, Smith, Rugg & Darling

APPROVED:

C. J. Lauch

Member, Bureau of Mines

N. E. Nelson

Member, Geological Survey

EDTalbert/GMcC
January 30, 1959

800

APPALACHIAN SULPHIDES, INC.
SOUTH STRAFFORD
VERMONT

Telephone - South Strafford 5-2411

January 27, 1959

United States Department of the Interior
Defense Minerals Exploration Administration
Washington 25, D. C.

Dear Sirs:

According to our records there is an unpaid balance of $233.50 due from D. M. E. A. representing the Government's 50% share of certain additional accepted costs under DMEA #1746, Contract No. IdMM-11. We enclose a photocopy of the report or review by E. S. Talbot, auditor, dated January 20, 1958 in which this item was approved for payment if claimed by us. The amount was included in our amended final report which we filed after receipt of auditor's report or review.

In connection with our annual audit we shall appreciate your informing our accountants, Smith, Batchelder, Smith, Rugg and Darling, Norwich, Vermont, whether your records are in agreement and that the amount ultimately will be paid.

Very truly yours,

Clarence B. Benson
Asst. Treasurer & Vt. Manager

CBB/hm

Encl.

cc: William C. Rugg, Norwich, Vermont

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REVISED REPORT OF REVIEW

I have reviewed the Monthly Reports of:

Appalachian Sulphides, Inc.

South Strafford, Vermont

pertaining to Exploration Project Contract No. Idm-1100, DMEA No. 4746, including Amendment No. 1, for June 1957 to September 1957, inclusive, covering a copper project in the Elizabeth Mine Area, Orange County, Vermont.

My review included an examination of the Monthly Reports (Forms MF-104) and supporting documents, comparison of the claimed costs with the contract and pertinent schedules, verification of work performed by reference to Field Team reports and correspondence, and a determination of the reasonableness and propriety of the costs.

This review was made in lieu of a final audit of the Operator's accounts and records for the reasons given in the attached schedule.

The findings of this review are stated in the following summary and the attached schedule:

Total cost billed by Operator		$45,716.97
Exceptions:		
Prior to this review	$ -0-	
Herewith	-0-	-0-
Accepted cost claimed by Operator		45,716.97
Acceptable costs not claimed		427.00
Total acceptable cost, if claimed		$46,143.97

The contract calls for a 50 percent contribution of the allowable costs by the Government. Therefore, if the project is otherwise accepted as having met the terms of the contract, payments as follows are valid and proper:

On cost claimed	$22,858.48
On additional cost, if claimed	213.50
Total payable, if claimed	$23,071.98
Payable on audited claim	$22,858.48
Paid to date	18,473.24
Balance due Operator	$ 4,385.24
Additional payable, if claimed	$ 213.50

E. D. Talbert

E. D. Talbert, Auditor

February 13, 1958

Reasons for Report of Review in lieu of a final audit:

(a) the Monthly Reports were supported by documentary proof of that portion ($37,377.10) of the costs which covered work performed at unit rates under independent contract;

(b) the balance ($8,766.87) of the costs was under a contract provision for payment by the Government at fixed unit costs for work performed; and

(c) the administrative cost to the Government of an audit would be excessive in relation to the estimated amount of possible disallowances.

Additional acceptable costs, if claimed by Operator:

(a)	Drilling delays invoiced by drilling contractor and accepted by Field Team as reasonable	135 hrs. @ $6.00	$810.00	
	Claimed by Operator	64 hrs. @ 6.00	384.00	$426.00
(b)	Samples assayed per drill logs and confirmed by Field Team	145 ea. @ $1.00	$145.00	
	Claimed by Operator	144 ea. @ 1.00	144.00	1.00
	Total			$427.00

1958

Mr. Robert A. Lawrence
Executive Officer
DGRA Field Team, Region V
Room 13, Post Office Building
Knoxville 2, Tennessee

Re: Docket No. DGRA-4746 (Copper)
Appalachian Sulphides, Inc.
Elizabeth Mine Area
Orange County, Vermont
Contract No. IAm-21100

Dear Mr. Lawrence:

As requested by your memoranda of February 11, 1958, a Revised Report of Review has been prepared. The original and three copies for normal distribution are enclosed.

The revised August 1957 and the final forms MF-104 submitted with your memoranda are enclosed.

Sincerely yours,

(Signed) J. L. Chambers (Signed) E. D. Talbert
(Signed) E. D. Talbert

for Jay L. Chambers, Director
Contract Administration
and Audit Division

Enclosures

EDTalbert/wb
February 13, 1958

Copy to: Docket
Admr. Reading File
Helen R. Miller
Mr. Chambers

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 13 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

OFFICIAL FILE COPY
DMEA
RECEIVED FEB 13 1958

DATE	INITIALS	CODE
2/13	C	220
		800

February 11, 1958

Memorandum

To: Jay L. Chambers, Director Contract Administration and Audit Division - DMEA

From: DMEA Field Team, Region V - Knoxville, Tennessee

Subject: Completion of DMEA-4746, Idm-E1100-copper. Appalachian Sulphides, Inc. Elizabeth Mine, Orange County, Vermont.

On December 26, 1957 we requested a Report of Review on the subject contract. In tabulating the number of feet of diamond drilling we did not include 51 feet which had been disallowed, but subsequently authorized by Amendment No. 1. The surface drilling would therefore amount to 7795 feet and total feet of diamond drilling would be 13,902 feet. We are enclosing a new request for a report of review.

There is also enclosed the Operator's Monthly Report and Voucher in which claim is made for payment for the 51 feet of drilling. He has not as yet requested payment for delays and sampling which amount to $426.00.

Robert A. Laurence

R. A. Laurence, Executive Officer
DMEA Field Team, Region V

V. J. Lynch

V. J. Lynch, Member
U. S. Bureau of Mines

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 13 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

OFFICIAL FILE COPY
DMEA
RECEIVED FEB 13 1958
DATE | INITIAL | CODE
2/13 | C | 220
800

February 11, 1958

Memorandum

To: Jay L. Chambers, Contract Administration - DMEA

From: Acting Executive Officer, DMEA - Region V - Knoxville

Subject: Completion of DMEA-4746, Idm-E1100(copper)
Appalachian Sulphides, Inc. South Strafford, Vt.
Elizabeth Mine, Orange County, Vermont.

Work on the subject contract has been terminated as of December 18, 1957. An amendment has been received which allows for drilling beyond 1500 feet. This is Amendment No. 1 dated December 18, 1957.

The following units of work have been acceptably performed:

1. A total of 54.5 hrs. of dozer work has been completed.

2. Diamond drilling has been completed as follows:

(a) Overburden drilling.....	23	feet
(b) Surface drilling	7795	"
(c) Underground drilling	6084	"
Total...	13902	"

3. A total of 145 assays were made (determined by counting sample numbers).

4. Delays amounting to 135 hrs, appears to be reasonable.

An acceptable final geological and engineering report has been received. A report of review is requested.

Robert A. Laurence
R. A. Laurence
Executive Officer, DMEA, Reg.5

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

Appalachian Sulphides, Inc.

South Strafford, Vermont

pertaining to Exploration Project Contract No. Idm-E1100, DMEA No. 4746, including Amendment No. 1, for the months of June 1957 to September 1957, inclusive, covering a project for the exploration of copper on property, known as the Elizabeth Mine Area located in Orange County, Vermont.

My review included an examination of the Monthly Reports (Forms MF-104) and supporting documents attached thereto, comparison of the costs claimed with the contract and pertinent schedules, verification of work performed by reference to Field Team reports and correspondence, and a determination of the reasonableness and propriety of the costs.

This review was made in lieu of a final audit of the Operator's accounts and records for the reasons given in the attachment to this report.

The review disclosed the following facts in regard to the amount paid or to be paid the Operator:

Total cost as billed by Operator		$45,537.45
Exceptions:		
Prior to this review	$ -0-	
Herewith	-0-	-0-
Total accepted cost claimed		45,537.45
Additional acceptable cost, if claimed, per schedule attached		427.00
Total acceptable cost, if claimed		$45,964.45

The contract calls for a 50 percent participation of exploration expenses by the United States Government. Therefore, payments to the Operator by the Government as follows are valid and proper:

On cost claimed	$22,768.72
On additional cost, if claimed	213.50
Total amount payable, if claimed	$22,982.22
Amount payable on audited claim	$22,768.72
Amount reimbursed	18,473.24
Balance due Operator	$ 4,295.48
Additional payable, if claimed	$ 213.50

E. D. Talbert

E. D. Talbert, Auditor

January 20, 1958

Reasons for Report of Review in lieu of a final audit:

(a) the Monthly Reports were supported by documentary proof of that portion ($37,216.45) of the costs which covered work performed at unit rates under independent contract;

(b) the balance ($8,748.00) of the accepted costs was under a contract provision for payment by the Government on the basis of fixed unit costs of work actually performed; and

(c) the administrative cost to the Government of an audit would be excessive in relation to the estimated amount of possible further exceptions thereunder.

Additional acceptable costs, if claimed by Operator:

(a) Drilling delays invoiced by drilling contractor and accepted by Field Team as reasonable	135 hrs. @ $6.00	$810.00		
Claimed by Operator	64 hrs. @ 6.00	384.00	$426.00	
(b) Samples assayed per drill logs and confirmed by Field Team	145 ea. @ $1.00	$145.00		
Claimed by Operator	144 ea. @ 1.00	144.00	1.00	
Total			$427.00	

Mr. Robert A. Laurence
Executive Officer
DMEA Field Team, Region V
Room 13, Post Office Building
Knoxville 2, Tennessee

Re: Docket No. DMEA-4746 (Copper)
Appalachian Sulphides, Inc.
Elizabeth Mine Area
Orange County, Vermont
Contract No. Idm-E1100

Dear Mr. Laurence:

There are enclosed an original and three copies of a Report of Review in lieu of a final audit of the referenced project.

If you concur with the facts stated in this Report of Review, the original and one copy should be released to the regional finance officer, one copy should be forwarded to the Operator, and one copy should be retained in your files. If for any reason you do not concur, please return the original and three copies to this Division with your comments.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Director
Contract Administration
and Audit Division

Enclosure

EDTalbert/wb
January 21, 1958

Copy to: Docket
Admr. Reading File
Helen R. Miller
Mr. Chambers

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 13 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

January 17, 1958

ORIGINAL FILE COPY
DMEA
RECEIVED JAN 20 1958
DATE INITIALS CODE
1/20 gb 220
800

Memorandum

TO; E. D. Talbert, Acting Director, Contract Admin. and Audit Division - DMEA

From: Field Team, Region V - Knoxville, Tennessee

Subject: DMEA-4746, Idm-E1100 (copper) Elizabeth Mine, Orange County, Vermont. Appalachian Sulphides, Inc.

This is with reference to your letter of January 8.

The Field Team believes that drilling delays amounting to 135 hours on a project the size of the subject contract is reasonable.

Robert A. Laurence
Robert A. Laurence
Executive Officer

V. J. Lynch
V. J. Lynch, Member
Bureau of Mines

JAN 8 1958

Mr. Robert A. Laurence
Executive Officer
DMEA Field Team, Region V
Room 13, Post Office Building
Knoxville 2, Tennessee

Re: Docket No. DMA-4746 (Copper)
Appalachian Sulphides, Inc.
Elizabeth Mine
Orange County, Vermont
Contract No. Idm-E1100

Dear Mr. Laurence:

By memorandum dated January 6, 1958, you have confirmed the units of work acceptably performed under the referenced contract and requested the issuance of a Report of Review in lieu of a final audit. However, before preparing the Report of Review clarification of one item is necessary.

Your memorandum states, in part, that the "Hours of delay amounts to 64, the maximum allowed by the contract", whereas neither Article 6 of the contract nor Exhibit "A" provide that the estimate of 64 hours for drilling delays is a maximum. It is to be noted that Article 6 (a) provides that any excess over any estimate, either as to requirement or related cost, not specified as a maximum shall be allowable within the estimated total allowable cost of the project provided that such excess is a direct, reasonable, and necessary cost of the work.

Although the Operator claimed only 64 hours of delays, apparently under the mistaken impression that such was the maximum allowed by the contract, the audit review disclosed that the drilling contractor incurred and charged the Operator for 135 hours. Accordingly, it appears that the Government possibly should contribute to the costs of delays in excess of 64 hours to the extent that the Field Team accepts such delays as being reasonable and necessary in connection with the acceptable drilling.

Your comments and recommendations would be appreciated.

Sincerely yours,

(Signed) E. D. Talbert

E. D. Talbert, Acting Director
Contract Administration
and Audit Division

EDTalbert/wb
January 8, 1958

Copy to: Docket
Admr. Reading File
Helen R. Miller
Mr. Chambers
Mr. Talbert

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 1505 FEDERAL BLDG.
KNOXVILLE 2, TENN.

OFFICE OF THE VICE PRESIDENT
DMEA
RECEIVED JAN 6 1958
1/8 gt 220 800

January 6, 1958

Memorandum

To: Jay L. Chambers, Director Contract Administration and Audit Division - DMEA - Washington

From: Acting Executive Officer, DMEA - Region V - Knoxville

Subject: Completion of DMEA-4746, Idm-E1100(copper)
Appalachian Sulphides, Inc. South Strafford, Vt.
Elizabeth Mine, Orange County, Vermont.

Work on the subject contract has been terminated as of December 18, 1957. An amendment has been received which allows for drilling beyond 1500 feet. This is amendment No. 1, dated December 18, 1957.

The following units of work have been acceptably performed:

1. A total of 54.5 hours of dozer work completed.

2. Diamond drilling has been completed as follows:
   (a) Overburden drilling.....23 feet
   (b) Surface drilling..... 7795* "
   (c) Underground drilling ..... 6084 "
   Total 13902 "

3. A total of 145 assays were made (determined by counting sample numbers).

4. Hours of delay amounts to 64, the maximum allowed by the contract.

An acceptable final geological and engineering report has been received. A report of review is requested.

* Surface drilling as shown here includes the 51 feet deducted previous to Amendment No. 1.

V. J. Lynch

Mrs. Helen R. Miller
Personal Assistant
Bureau of Mines, Region V
P. O. Box 217
Norris, Tennessee

Re: Docket No. DMEA-4746 (Copper)
Appalachian Sulphides, Inc.
Elizabeth Mine
Orange County, Vermont
Contract No. Idm-F1100

Dear Mrs. Miller:

By memorandum dated December 5, 1957, you submitted the enclosed final MF-104 (September 1957), together with copies of nine invoices applicable to prior vouchers of the referenced Operator, and requested a Report of Review in lieu of a final audit.

The review has been performed but preparation of the report is being held in abeyance pending:

(1) Possible amendment of the contract to permit payment of the 51 foot overage on hole No. 1008;

(2) Execution of a termination agreement now in preparation; and

(3) Receipt from the Executive Officer of the usual memorandum specifically confirming the number of units of the several items of contract work satisfactorily performed.

During the review it was noted that the drill records indicate assays of 145 samples applicable to contract footage, whereas the Operator has claimed costs for only 144 samples. The sample numbers applicable to contract footage appear to be:

Nos.	32501	through	32504
	32901	"	32920
	34001	"	34028
	34030	"	34100
	34578	"	34593
	34595	"	34600

The review also disclosed that the drilling contractor's invoices charged the Operator for 135 hours of delays applicable to the contract footage, whereas the Operator has claimed costs for only 64 hours. The difference of 71 hours pertains to drilling as follows:

Hole No. 708	July	8	hrs.
(various)	August	21	"
1025	September	23	"
1033	"	19	"

A copy of this letter is being sent to Mr. Laurence to advise him of these findings in order that he may incorporate in his confirmation memorandum his recommendations relative to these indicated additional costs.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Director
Contract Administration
and Audit Division

Enclosure

EDTalbert/wb
December 9, 1957

Copy to: Docket
Admr. Reading File
R. A. Laurence, Reg. V
Mr. Chambers
Mr. Talbert

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION V

ELECTROTECHNICAL
EXPERIMENT STATION

P. O. BOX 217
NORRIS, TENNESSEE

December 5, 1957

R E G I S T E R E D M A I L

Memorandum

To: Jay L. Chambers, Defense Minerals Exploration Administration, Interior Building, Washington 25, D. C.

From: Personal Assistant, Norris, Tennessee

Subject: Contract Idm-E1100 - Report of Review requested

A Report of Review in lieu of final audit is requested on contract Idm-E1100, Appalachian Sulphides, Incorporated, Docket No. DMEA-4746.

We are enclosing the final original copy of MF-104; 104A and attachments - also invoices (9) covering previously paid vouchers covering the above contract.

Helen Miller
Helen R. Miller

Attachments
/hbm
Copies to R. A. Laurence
V. J. Lynch
Norris files
Day files

OFFICIAL FILE COPY
DMEA
RECEIVED DEC 6 1957
DATE | CODE
12/6 | C | 220
800

Form MF-104 (Rev. April 1952)

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K- 42

August 1957 Disallowance - Allowable under Amendment No. 1

Month of August 1957 Docket No. DMEA 4746 Contract No. IdmE- 1100

Operator's Name Appalachian Sulphides, Inc. Minerals Copper

Address South Strafford, Vermont

Contract Amount $ 62,860.00 Government Participation: 50% Amount $ 31,430.00

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 Surface	160.65	20,852.85	21,013.50			
Drilling Underground		14,641.60	14,641.60			
Crosscutting						
Hole Surveys		912.00	912.00			
Delays		384.00	384.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes @ 2.00		1,068.00	1,068.00			
(4) Operating Equipment:						
Rental Dozer @ 8.50		463.25	463.25			
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis		144.00	144.00			
Payroll Taxes						
Liability Insurance						
Indidental Allowances						
(8) Contingencies (specify):						
Surface @ .37	18.87	2,873.79	2,892.66			
Underground @ .69		4,197.96	4,197.96			
TOTALS	179.52	45,537.45	45,716.97	179.52	45,537.45	45,716.97

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

Date Jan. 13, 1958 *Payee Appalachian Sulphides, Inc.

Per C B Benson Title Assistant Treasurer

*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:

$ 89.76

Signature Helen R Meller
(Authorized Certifying Officer)

Date FEB 25 1958 Vou. No. 134

(See other side)

5

89.76

(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-1100 in accordance with the terms of the contract.

Signature T. J. Lynch Title MINING ENGINEER U. S. BUREAU OF MINES Date FEB 18 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Laurence Title EXECUTIVE OFFICER DMEA FIELD TEAM REGION V Date FEB 18 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.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

RECEIVED FEB 27 1958 DMEA

RECEIVED FEB 13 1958

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

August 1957 Disallowance - Allowable under Amendment No. 1

Month of August 1957 Docket No. DMEA 4746 Contract No. Idm-E 1100

Operator's Name Appalachian Sulphides, Inc. Minerals Copper

Address South Strafford, Vermont

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 D.D. Overburden	foot			92.00	23	4.00	280	4.00
Crosscutting D.D. Surface	"			7,144.80	2,977	2.40	6220	2.40
Raising D.D. Surface	"			7,420.00	2,800	2.65	3900	2.65
Shafts D.D. Surface	"	160.65	51	6,356.70	2,018	3.15	1000	3.15
Winzes D.D. Underground	"			14,121.60	5,884	2.40	7500	2.40
Drilling: Core D.D. Undrgrnd.	"			520.00	2.00	2.60	300	2.60
Churn Survey	Hour			912.00	152	6.00	192	6.00
Auger Delays	"			384.00	64	6.00	64	6.00
Stripping Surface Incid.	Foot	18.87	51	2,892.66	7,818	0.37	11400	0.37
Trenching Undgrnd. Incid.	"			4,197.96	6,084	0.69	7800	0.69
Test Pits Bulldozing				463.25	54½	8.50	208	8.50
Roads and Trails Assays	1			144.00	144	1.00	203	1.00
Core Boxes	1			1,068.00	534	2.00	720	2.00
Total Distributed Costs		179.52		45,716.97				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		179.52		45,716.97				

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 Jan. 13, 1958 Operator Appalachian Sulphides, Inc.

Per C. B. Benson Title Assistant Treasurer

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)

V. J. Lynch

MINING ENGINEER
U. S. BUREAU OF MINES

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 83-38475

APPALACHIAN SULPHIDES, INC.
SOUTH STRAFFORD
VERMONT

Telephone - South Strafford 5-2411

January 13, 1958

OFFICIAL FILE COPY
Original
DMEA
RECEIVED FEB 13 1958

DATE	INITIALS	CODE

United States Department of the Interior
Executive Officer
Defense Minerals Exploration Administration
College Park, Maryland

DMEA Contract No. Idm-E 1100
Docket No. DMEA 4746

Gentlemen:

We enclose herewith five copies each of our FINAL Operator's Unit Cost and Progress Report and Monthly Report and Voucher, Forms MF 104 and MF 104 A, under the above contract.

Also endlosed are five (5) copies each of REVISED MF 104 and MF 104A forms for the Month of August 1957, amended to include the $179.52 which was disallowed on our original August Voucher and which we understand is now allowable under Amendment No. 1 to the contract.

The final report also includes the disallowed $179.52 on which we expect to receive the DMEA portion in due time.

Our FINAL Narrative Report, Diamond Drilling Summary, Hole Logs and Cross Sections were furnished some time ago.

Anything you can do to expedite payment to us of the Government's 50% participation in the $179.52 for August and $8,590.97 covered by our September Voucher will be appreciated, so that we can have our records complete for our annual audit.

Very truly yours,

Clarence B. Benson

Clarence B. Benson
Assistant General Manager

CBB:hw

Enclosure

RECEIVED
FEB 10 1958
U. S. BUREAU OF MINES
DEF. MIN. ADM.
Knoxville, Tennessee

Form MF-104 (Rev. April 1952)

RECEIVED JAN 31 '58 DMEA

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.5

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K- 39

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of September, 1957 Docket No. DMEA 4746 Contract No. Idm-E 1100

Operator's Name Appalachian Sulphides, Incorporated Minerals Copper

Address South Strafford, Vermont

Contract Amount, $ 62,860.00 Government Participation: 50 % Amount, $ 31,430.00

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: E.J.Longyear Co.						
Drilling Surface	3,097.15	17,755.70	20,852.85			
Drilling-Undgrnd	3,583.20	11,058.40	14,641.60			
Crosscutting						
Drifting Hole Surveys	186.00	726.00	912.00			
Delays		384.00	384.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes @ 2.00	190.00	878.00	1,068.00			
(4) Operating Equipment:						
Rental Dozer @ 8.50	17.00	446.25	463.25			
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	49.00	95.00	144.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify) Incidental Allowances						
Surface @ 0.37	438.45	2,435.34	2,873.79			
Undergrnd @ 0.69	1,030.17	3,167.79	4,197.96			
TOTALS	8,590.97	36,946.48	45,537.45	8590.97	36946.48	45537.45

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

Date Nov. 3, 1957 *Payee Appalachian Sulphides, Inc.

Per Clarence B. Benson Title Asst. Treasurer

*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:

$ 4295.48

Signature Helen R. Miller (Authorized Certifying Officer)

Date JAN 29 1958 Vou. No. 124

(See other side)

4295.48

(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 1100 in accordance with the terms of the contract.

Signature [illegible] Title Mining Engr. Date 11/26/57

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER DMEA REGION V Date JAN 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

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

Month of September 1957 Docket No. DMEA 4746 Contract No. Idm-E 1100
Operator's Name Appalachian Sulphides, Inc. Minerals Copper
Address South Strafford, Vermont

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 D.D. Overburden	foot	36.00	9	92.00	23	4.00	280	4.00
Crosscutting D.D. Surface	"	1,178.40	491	7,144.80	2,977	2.40	6220	2.40
Raising D.D. Surface	"	1,457.50	550	7,420.00	2,800	2.65	3900	2.65
Shafts D.D. Surface	"	425.25	135	6,196.05	1,967	3.15	1000	3.15
Winzes D.D. Underground	"	3,583.20	1,493	14,121.60	5,884	2.40	7500	2.40
Drilling: Core D.D. Undgrd.	"			520.00	200	2.60	300	2.60
Churn Survey	hour	186.00	31	912.00	152	6.00	192	6.00
Auger Delays	"			384.00	64	6.00	64	6.00
Stripping Surface Incid.	Foot	438.45	1,185	2,873.79	7,767	0.37	11400	0.37
Trenching Under. Incid.	"	1,030.17	1,493	4,197.96	6,084	0.69	7800	0.69
Test Pits Bulldozing	hour	17.00	2	463.25	54½	8.50	208	8.50
Roads and Trails Assays	1	49.00	49	144.00	144	1.00	203	1.00
Core Boxes	1	190.00	95	1,068.00	534	2.00	720	2.00
Total Distributed Costs		8,590.97		45,537.45				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		8,590.97		45,537.45				62,860.00

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 Nov. 8, 1957 Operator Appalachian Sulphides, Inc.

Per Clarence B. Benson Title Asst. Treasurer

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)

W. J. Burmeister 11/26/57

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

APPALACHIAN SULPHIDES, INC.
SOUTH STRAFFORD
VERMONT

Telephone - South Strafford 5-2411

November 8, 1957

United States Department of the Interior
Executive Officer
Defense Minerals Exploration Administration
College Park, Maryland

DMEA Contract No. Idm-E-1100
Docket No. DMEA 4746

Gentlemen:

We enclose herewith five (5) copies each of the following reports, covering diamond drilling for the Month of September 1957 under the above contract:

(a) Form MF 104, Operator's Monthly Report and Voucher.

(b) Form MF 104A, Operator's Unit Cost and Progress Report, including Supporting Detail Schedule Re Contract Drilling.

The diamond drilling narrative report, summary, hole logs and cross sections have been furnished previously, under date of October 11, 1957.

Very truly yours,

John F. Cowley

John F. Cowley
General Manager

JFC/th
Encl.

APPALACHIAN SULPHIDES, INC.

ELIZABETH MINE — SOUTH STRAFFORD, VERMONT

Supporting Details - Re: DMEA Form MF-104
Cost Item (1) - Independent Contracts
Period - September 1 - 30, 1957

CONTRACT DRILLING - September 1 - 30, 1957, Both dates inclusive
Per E. J. Longyear Company Invoice Nos. 105707 and 105708, Dated October 31, 1957

				DMEA Rates-Per Contract No. Idm-E-1100			Actual Rates Charged By Longyear-Per Final Drilling Agreement Dated 5/10/57		
Hole No.	From	To	Footage	Size Core	Rate	Amount	Size Core	Rate	Amount
SURFACE									
1025 S	750	1000	250	EX	2.65	$ 662.50	EX	2.65	$ 662.50
	1000	1135	135	EX	3.15	425.25	EX	3.15	425.25
1029 S	0	9	9	Ovb.	4.00	36.00	Ovb.	4.00	36.00
	9	20	11	BX-AX	2.40	26.40	BX-AX	2.65	29.15
	20	500	480	EX	2.40	1,152.00	EX	2.40	1,152.00
	500	800	300	EX	2.65	795.00	EX	2.65	795.00
Total-Surface			1,185			$3,097.15			$3,099.90
UNDERGROUND									
1028 U	130	302	172	EX	2.40	$ 412.80	EX	2.40	$ 412.80
1009 U	174	250	76	EX	2.40	182.40	EX	2.40	182.40
1031 U	0	250	250	EX	2.40	600.00	EX	3.40	850.00
1032 U	0	298	298	EX	2.40	715.20	EX	2.40	715.20
1030 U	0	349	349	EX	2.40	837.60	EX	2.40	837.60
1033 U	0	348	348	EX	2.40	835.20	EX	2.40	835.20
Totals-Underground			1,493			$3,583.20			$3,833.20
Totals-Surface & Ugrnd.			2,678			$6,680.35			$6,933.10

HOLE SURVEYS

Hole No.	Dates	Hours	Rate	Amount
SURFACE				
1025 S	9/19	3	$6.00	$ 18.00
1029 S	9/3-4-6-9-10-12	8	6.00	48.00
Total Surface Surveys		11		$ 66.00
UNDERGROUND				
1028 U	9/6	3	$6.00	$ 18.00
1009 U	9/4	2	6.00	12.00
1031 U	9/10	3	6.00	18.00
1032 U	9/19	4	6.00	24.00
1030 U	9/10-18	4	6.00	24.00
1033 U	9/25	4	6.00	24.00
Total Underground Surveys		20		$ 120.00
Total Surveys		31		$ 186.00

DELAYS — No Delay Time Allowable under Contract for September.

APPALACHIAN SULPHIDES, INC.
SOUTH STRAFFORD
VERMONT

Telephone - South Strafford 5-2411

To: Defense Minerals Exploration Administration
From: Appalachian Sulphides, Incorporated
Subject: Diamond Drilling, DMEA Contract No. Idm-E 1100
Docket No. 4746
September 1 - 30, 1957

GENERAL

Drilling under this program has been suspended pending completion of electromagnetic surveys of some of the holes. Unless promising anomalies are found, consideration should be given to terminating the drilling.

A hole at 14200N checked the locale of mineralization found west of the mine at 12100N, 12400N and 13100N. Nothing significant was intersected.

The drill hole E. M. indicated a conductor north of the main ore zone, and a hole was drilled at 18000N to check this anomaly. No significant mineralization was found.

To the far west of the mine, the structural picture remains uncertain. Further drilling which might outline the amphibolite horizons to the west seems unwarranted in view of the very poor mineralization encountered by the holes already drilled in this area.

Drilling for September is summarized below by sections, and a tabular summary of holes and footages is included with this report as are cross sections and brief logs of holes.

7442N

No drilling in this section during September. A breakdown of the drill hole F. M survey equipment has delayed completion of surveys in holes 1000S and 1002S.

8800N

No drilling or changes in this section during September.

10100N

No drilling or changes in this section during September.

APPALACHIAN SULPHIDES, INC.
SOUTH STRAFFORD
VERMONT

Telephone - South Strafford 5-2411

To: Defense Minerals Exploration Administration
From: Appalachian Sulphides, Incorporated
Subject: Diamond Drilling, DMEA Contract No. Idm-E 1100
Docket No. 4746
September 1 - 30, 1957

10900N

As no significant mineralization was encountered, DDH 1009U was drilled only to 250 ft. A lower hole, DDH 1030U was drilled to check the favorable area for mineralization 150 ft. west of the mine workings. No mineralization was found, and the results of drilling here and at 11600N, combined with information gained from old drilling at 10100N show that the mineralization west of the mine becomes weaker as followed south from 12100N. Further work does not seem adviseable on this zone.

Drilling of hole 1025S was continued to 1135 ft. No mineralization or amphibolites were encountered, and further extension of the hole seems unwarranted without some indication of mineralization or structure favorable to mineralization. The hole will be surveyed with the E. M. equipment.

11600N

Drilling in this section, which was not included in the July 1st proposal, totaled 850 ft. in three holes. DDH 1028U was completed to 302 ft. and intersected 66.2 ft. of mineralization from 74.8 ft. to 141.0 ft., of which 11.8 ft. (129.2 ft. to 141.0 ft.) ran 0.96% Cu. Holes 1031U and 1032U were drilled above and below No. 1028U to check this mineralization, and both were disappointing in extent and grade of sulphides encountered.

12100N

No drilling in this section during September. Minor changes in iferred structure will be noted on the October 1st cross section. New information being obtained has been plotted on a glass three dimensional model to a scale of 1 in. equals 40 ft., and structure has been worked out on this model.

12400N

No drilling or changes in this section during September.

13100N

No drilling or changes in this section during September. We do not now intend to complete holes 1014U and 1015U to the full depths proposed because of disappointing mineralization found in similar structural positions checked at 10900N and 14000N.

APPALACHIAN SULPHIDES, INC.
SOUTH STRAFFORD
VERMONT

Telephone - South Strafford 5-2411

To: Defense Minerals Exploration Administration
From: Appalachian Sulphides, Incorporated
Subject: Diamond Drilling, DMEA Contract No. Idm-E 1100
Docket No. 4746
September 1-30, 1957

14000N

DDH 1033U was drilled at 14200N to check the mineralized zone 150 ft. west of the mine, and is plotted on the 14000N cross section. This hole apparently ran right up the footwall amphibolite contact. Mineralization encountered was of very low grade, and no further drilling seems warranted.

15100N

No drilling or changes in this section during September.

18000N

Work with the drill hole E. M. survey unit in previously drilled holes at 17700N (plotted on the 18000N cross section as dotted lines) indicated a conductor approximately on strike from the main ore zone and north of 17700N. To check this anomaly, hole 1029S was drilled at 18000N. The hole did not flatten as much as have previous holes drilled by the present drilling contractor, and passed slightly below the projected location of the inferred conductor. No significant mineralization was encountered in hole 1029S, and no indication of any conductor was found when the hole was surveyed with the E. M. unit. Apparently the anomaly at 17700N was caused by the last remnants of the pinching main ore shoot, and not by a sizeable mineralized zone extending to the north.

Respectfully submitted,

Calvert Smith

Calvert Smith
Geologist

APPALACHIAN SULPHIDES, INC.
SOUTH STRAFFORD
VERMONT

Telephone - South Strafford 5-2411

November 8, 1957

United States Department of the Interior
Executive Officer
Defense Minerals Exploration Administration
College Park, Maryland

DMEA Contract No. Idm-E-1100
Docket No. DMEA 4746

Gentlemen:

We enclose herewith five (5) copies each of the following reports, covering diamond drilling for the Month of September 1957 under the above contract:

(a) Form MF 104, Operator's Monthly Report and Voucher.

(b) Form MF 104A, Operator's Unit Cost and Progress Report, including Supporting Detail Schedule Re Contract Drilling.

The diamond drilling narrative report, summary, hole logs and cross sections have been furnished previously, under date of October 11, 1957.

Very truly yours,

John F. Cowley

John F. Cowley
General Manager

JFC/th
Encl.

Form Mm-104 (Rev. April 1952)

RECEIVED OCT 9 1957 D.M.E.A.

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K-18

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of August, 1957 Docket No. DMEA 4746 Contract No. Idm-E 1100

Operator's Name Appalachian Sulphides, Incorporated Minerals Copper

Address South Strafford, Vermont

Contract Amount, $ 62,860.00 Government Participation: 50 % Amount, $ 31,430.00

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: E. J. Longyear Co. Short Form						
Drilling Surface	6,987.90	10,928.45	17,916.35			
Drilling Underground	4,400.80	6,657.60	11,058.40			
Crosscutting						
Hole Surveys	282.00	444.00	726.00			
Delays	120.00	264.00	384.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes-156 @ $2.00	312.00	566.00	878.00			
(4) Operating Equipment:						
Dozer Rental 25 Hrs. @ $8.50	212.50	233.75	446.25			
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	48.00	47.00	95.00			
Payroll Taxes						
Liability Insurance						
Incidental Allowances						
(8) Contingencies (Specify):						
2,551' Surface @ 37¢	943.87	1,510.34	2,454.21			
1,817' Undergrnd @ 69¢	1,253.73	1,914.06	3,167.79			
				14,351.28		36,946.48
TOTALS	14,560.80	22,565.20	37,126.00	~~14,560.80~~	22,565.20	37,126.00

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

Date Sept. 20, 1957 *Payee Appalachian Sulphides, Inc.

Per John Howley Title General Manager

*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:

$ ~~7280.40~~ 7190.64

Signature Helen R. Miller (Authorized Certifying Officer)

Date OCT 7 1957 Vou. No. 04

(See other side)

7280.40

(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. E1100 in accordance with the terms of the contract.

Signature H. L. Burmeister Title Mining Engr. Date 9/30/57

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Fenning EXECUTIVE OFFICER Title DMEA REGION V 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
(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 4 SEP 1957

Month of August 195 7 Docket No. DMEA 4746 Contract No. Idm-E-1100
Operator's Name Appalachian Sulphides, Incorporated Minerals Copper
Address South Strafford, Vermont

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 D.D.Overburden	foot			56.00	14	4.00	280	4.00
Crosscutting D.D.Surface	"	1,418.40	591	5,966.40	2,486	2.40	6220	2.40
Raising D.D.Surface	"	3,203.85	1,209	5,962.50	2,250	2.65	3900	2.65
Shafts D.D.Surface	"	2,365.65	751	5,931.45	1,883	3.15	1000	3.15
Winzes D.D.Undergrnd.	"	3,880.80	1,671	10,538.40	4,391	2.40	7500	2.40
Drilling: Core D.D.Undgrd.	"	520.00	200	520.00	200	2.60	300	2.60
Churn Survey	hour	282.00	47	726.00	121	6.00	192	6.00
Auger Delays	"	120.00	20	384.00	64	6.00	64	6.00
Stripping Surface Incid.	foot	943.87	2,551	2,454.21	6,633	0.37	11400	0.37
Trenching Under. Incid.	"	1,253.73	1,817	3,167.79	4,591	0.69	7800	0.69
Test Pits Bulldozing	hour	212.50	25	446.25	52½	8.50	208	8.50
Roads and Trails Assays	1	48.00	48	95.00	95	1.00	203	1.00
Core Boxes	1	312.00	156	878.00	439	2.00	720	2.00
Total Distributed Costs		14,560.80		37,126.00				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		14,560.80		37,126.00				62,860.00

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 Sept. 20, 1957 Operator Appalachian Sulphides, Inc.

Per John F Cowley Title General Manager

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)

The 4th figure under "Units this Month," should be 1617
H. L. Burmeister 9/30/57

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

APPALACHIAN SULPHIDES, INC.
SOUTH STRAFFORD
VERMONT

Telephone - South Strafford 5-2411

September 20, 1957

OFFICIAL FILE COPY
DMEA
RECEIVED OCT 9 1957

DATE	INITIALS	CODE

United States Department of the Interior
Executive Officer
Defense Minerals Exploration Administration
College Park, Maryland

DMEA Contract No. Idm-E-1100
Docket No. DMEA 4746

Gentlemen:

We enclose herewith five (5) copies each of the following reports, covering diamond drilling for the Month of August 1957 under the above contract:

(a) Form MF 104, Operator's Monthly Report and Voucher.

(b) Form MF 104A, Operator's Unit Cost and Progress Report, including Supporting Detail Schedule Re Contract Drilling.

The diamond drilling narrative report, summary, hole logs and cross sections have been furnished previously, under date of September 13, 1957.

Very truly yours,

John F. Cowley

John F. Cowley
General Manager

JFC:hw
Encl.

APPALACHIAN SULPHIDES, INC.

ELIZABETH MINE — SOUTH STRAFFORD, VERMONT

Supporting Details - Re: DMEA Form MF-104
Cost Item (1) - Independent Contracts
Period - August 1 - 31, 1957

CONTRACT DRILLING - August 1-31, 1957, Both Dates Inclusive
Per E. J. Longyear Company Invoice Nos. 85767 & 85768 - Dated Aug. 31, 1957

				DMEA Rates - Per Contract No. Idm-E-1100			Actual Rates Charged By Longyear-Per Final Drilling Agreement Dated 5/10/57		
Hole No.	From	To	Footage	Size Core	Rate	Amount	Size Core	Rate	Amount
SURFACE									
1008	541	1000	459	EX	2.65	$ 1,216.35	EX	2.65	$ 1,216.35
	1000	1500	500	EX	3.15	1,575.00	EX	3.15	1,575.00
	1500	1551	51	EX	3.15	160.65	EX	3.15	160.65
1019	409	500	91	EX	2.40	218.40	EX	2.40	218.40
	500	1000	500	EX	2.65	1,325.00	EX	2.65	1,325.00
	1000	1200	200	EX	3.15	630.00	EX	3.15	630.00
1025	0	20	20	EX	2.40	48.00	BX & AX	2.65	53.00
	20	500	480	EX	2.40	1,152.00	EX	2.40	1,152.00
	500	750	250	EX	2.65	662.50	EX	2.65	662.50
Total-Surface			2551			$ 6,987.90			$ 6,992.90
UNDERGROUND									
1010	390	750	360	EX	2.40	$ 864.00	EX(Flat Hole)	3.40	$ 1,224.00
	750	950	200	EX	2.60	520.00	EX (Flat Hole)	3.60	720.00
1009	0	174	174	EX	2.40	417.60	EX	2.40	417.60
1013	0	401	401	EX	2.40	962.40	EX	2.40	962.40
1027	0	552	552	EX	2.40	1,324.80	EX	2.40	1,324.80
1028	0	130	130	EX	2.40	312.00	EX	2.40	312.00
Total-Underground			1817			$ 4,400.80			$ 4,960.80
Totals - Surf. & Ugrd.			4368			$11,388.70			$11,953.70

HOLE SURVEYS

Hole No.	Dates	Hours	Rate	Amount
SURFACE				
1008	8/3-6-8-12-24-30	17	$6.00	$ 102.00
1019	8/1-3-6-15	7	6.00	42.00
1025	8/21-23-28	3	6.00	18.00
Total Surface Surveys		27		$ 162.00
UNDERGROUND				
1010	8/2-21	7	$6.00	$ 42.00
1013	8/7-10	7	6.00	42.00
1027	8/13-21	6	6.00	36.00
Total Underground Surveys		20		$ 120.00
Total Surveys		47		$ 282.00

HOLE DELAYS

Hole No.	Dates	Hours	Rate	Amount
SURFACE				
1008	8/1 - 2	18 ✓	$6.00	$ 108.00
UNDERGROUND				
1010	8/6 - 12	4 ✓	$6.00	$ 24.00
1027	8/14	2 ✓	6.00	12.00
		6		$ 36.00
Underground Moving				
1010 To 1009	8/24 - 26 - 27	13	$6.00	$ 78.00
1027 To 1028	8/28 - 29	4 ✓	6.00	24.00
		17		$ 102.00
Total Delays and Moving		41		$ 246.00
Less - Delays in Excess of Contract		21		126.00
Allowable Delays		20		$ 120.00

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DMEA
RECEIVED OCT 9 1957

DATE		CODE

October 7, 1957

Appalachian Sulphides, Incorporated

South Strafford, Vermont

Re: Contract Ida-F2100
Docket No. DMA-4746
Commodity: Copper

Gentlemen:

The following deductions are being made on your August Voucher:

1. Surface Drilling - 51 feet being disallowed (Hole No. 1008) - Contract calls for drill holes, "ranging in depth from 300 to 1500 feet".
   51 feet at $3.15/ft. = $160.65

2. Incidental Allowances, surface - 51 feet being disallowed (hole No. 1008) (See above)
   51 feet at $0.37/ft. 18.87

Total Disallowances . . . . $ 179.52

Your August Voucher is being processed in the amount of $7,190.64, which is 50% of the approved monthly total of $14,381.28.

Very truly yours,

Helen R. Miller
Personal Assistant

/hbm
Copies to R. A. Laurence
V. J. Lynch
Jay L. Chambers
Norris files
Day files

APPALACHIAN SULPHIDES, INC.
SOUTH STRAFFORD
VERMONT

Telephone - South Strafford 5-2411

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DMEA
RECEIVED OCT 8 1957
DATE | INITIALS | CODE

To: Defense Minerals Exploration Administration
From: Appalachian Sulphides, Incorporated
Subject: Diamond Drilling, DMEA Contract No. Idm-E 1100
Docket No. 4746
August 1 - 31, 1957

GENERAL

Surface drilling was completed at 14000 N and is continuing at 10900 N. Structure near the mine has been found as expected, but to the far west, amphibolites have not been located to fit the inferred structural picture.

Underground drilling continues to check the mineralized area 150' west of the mine workings. Drilling for this purpose has been completed at 12400 N, and has begun at 11600 N. New structural interpretations have been made from results obtained. At 10900 N, underground drilling to complete the structural picture continues.

Drilling for August is summarized below by sections, and a tabular summary of holes and footages is included with this report as are brief logs of holes and cross sections.

7442 N

No drilling in this section during August. Work with the drill hole electromagnetic survey unit was begun, and will be completed during September.

8800 N

No drilling in this section during August. It is felt that drilling proposed for this section in July will probably not be done because the areas to be checked were so poorly mineralized when encountered at 7442 N and 10900 N.

10100 N

No drilling in this section during August. Drilling outlined in the July 1st proposal will probably not be done, as information being found at 10900 N adequately fills in the structural picture.

10900 N

Completion of DDH 1008 S showed that the most easterly or "Mine" syncline does not extend below 500 ft. elevation at 10900 N. The two emphibolites intersected at 9950 W and 10100 W are inferred to be the east and west limbs of a deeper syncline to the west, as shown on the section. No significant mineralization was found within this syncline. Underground, DDH 1009 U has been started, and to date has passed through four amphibolites. By comparison with other sections, these amphibolites are interpreted as drags in one band as shown. Hole 1009 U was originally proposed for 1000 ft. in length, but will probably be drilled only to 300 ft. because poor mineralization found in the drilling west of 10200 W in other sections makes the possibility of finding ore in extended hole 1009 U remote.

APPALACHIAN SULPHIDES, INC.
SOUTH STRAFFORD
VERMONT

Telephone - South Strafford 5-2411

To: Defense Minerals Exploration Administration
From: Appalachian Sulphides, Incorporated
Subject: Diamond Drilling, DMEA Contract No. Idm-E 1100
Docket No. 4746
August 1 - 31, 1957

10900 N - Continued

Farther to the west a surface hole, No. 1025 S is being drilled to explore structure. It was felt that this hole would pass through an amphibolite anticline at 1100 ft. elevation, and a syncline to the west of this anticline, possibly favorable to mineralization. However, to date, no amphibolites have been found, and we are forced to conclude that the anticline (the same anticline found at 11300 W in the 14000 N section) has a south plunge and is below hole 1025 S.

11600 N

It was felt that mineralization found 150 ft. west of the mine at elevation 700 ft. should be traced to the south from 12100 N, accordingly, two or three holes are now planned at 11600 N which holes were not included in the revised proposal of July 1, 1957. During August, D.D.H. 1028 U was begun, and, to date, has intersected 68 ft. of scattered sulphides as shown on the attached cross section. In September, this hole will be completed to approximately 300 ft., a hole will be drilled above it, and possibly one will check below 1028 U.

12100 N

Completion of D.D.H. 1010 U inferred structure as shown on the cross section. A 6.5 ft. mineralized zone was encountered within the syncline to the west, but was low in grade of contained copper, 0.61% Cu. Within this zone was a bit of poorly defined amphibolite, possibly representing one of the two bands above the major band.

Comparison of the 12100 N section dated Sept. 1 with that dated Aug. 1 will show a change in the inferred structure, which change was based on information derived from the drilling at 12400 N. (See below for discussion)

12400 N

D.D.H. 1013 U was drilled as planned, and intersected 20.4 ft. assaying 1.59% Cu just below the 12.1 ft. of 1.74% Cu found in D.D.H. 708 U. The zone continues for another 27.6 ft. in hole 1013 U, but grades only 0.35% Cu.

To further check this zone, D.D.H. 1027 U was laid out at a -55° dip and drilled through the zone and on down to 552 ft. to also investigate the possibility that mineralization might be "leaking" down the west limb of the anticline (see cross section).

In trying to relate all the amphibolites intersected at 12400 N, it was found that structure became more logical with the addition of a third weak band of amphibolite. This third band has occasionally been seen in the main ore zone between the hanging and west wall amphibolites. It will also be noted that this structural interpretation reduces the mineralized intersections into four major

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VERMONT
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Subject: Diamond Drilling, DMEA Contract No. Idm-E 1100
Docket No. 4746
August 1 - 31, 1957

12400 N - Continued

horizons, one above the lowest amphibolite band on the west limb of the anticline, one underneath the middle band in the crest of the anticline, one above the middle band up the east limb and just over the crest of the anticline, and one just under the upper band on the east limb of the anticline.

This structural picture also seems to fit at 12100 N, and old drilling at this north coordinate is being replotted in order to confirm or rule out the third band. Results of this further work will be forthcoming in next month's report.

13100 N

No drilling in this section during August. Note that the third band of amphibolite has been added into the inferred structure for Sept. 1, and that the mineralized zones are again reduced to four horizons maintaining the same structural positions as at 12400 N.

14000 N

D.D.H. 1019 S was drilled beyond the originally proposed 1000 ft. depth in the effort to locate the west limb of the inferred syncline. This limb was not found, and it is impossible on the basis of existing information to make a very good guess as to what the structural picture is west of 11400 W. It is hoped that completion of D.D.H. 1025 S will help in filling in the picture at 10900 N, and, by projection, elsewhere. D.D.H.s 1022 S and 1019 S were run with the drill hole electromagnetic survey equipment, and no anomalies were found.

15100 N

No drilling or changes in this section during August.

Respectfully submitted,

Calvert Smith

Calvert Smith
Geologist

CS:hw

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

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K- 11

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of July, 1957 Docket No. DMEA 4746 Contract No. Idm-E 1100
Operator's Name Appalachian Sulphides, Incorporated Minerals Copper
Address South Strafford, Vermont
Contract Amount, $ 62,860.00 Government Participation: 50% Amount, $ 31,430.00

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: E.J. Longyear Co.						
Drilling Surface	8,734.30	4,742.40	13,476.70	7,357.25	3,571.20	10,928.25
Drilling-Undergrnd.	4,212.00	2,445.60	6,657.60	4,212.00	2,445.60	6,657.60
Crosscutting						
Hole Surveys	270.00	234.00	504.00	246.00	198.00	444.00
Delays	246.00	18.00	264.00	246.00	18.00	264.00
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes 181@2.00	362.00	204.00	566.00	362.00	204.00	566.00
(4) Operating Equipment:						
Dozer Rental 22½ Hrs.@8.50	191.25	42.50	233.75	191.25	42.50	233.75
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	47.00	-0-	47.00	47.00	—	47.00
Payroll Taxes						
Liability Insurance						
Incidental Allowances						
3,320' Surface @ 37¢	1,228.40	667.85	1,896.25	1,019.35	490.99	1,510.34
(8) ~~Exploration (specify)~~:						
1,755' Undergrnd. @ 69¢	1,210.95	703.11	1,914.06	1,210.95	703.11	1,914.06
Totals	16,501.90	9,057.46	25,559.36	14,891.80	7,673.40	22,565.20

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

Date Aug. 20, 1957 Payee Appalachian Sulphides, Inc.

Per C. B. Benson Title Asst. Treasurer

*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)

7,445.90

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

$ 7,445.90

Signature Helen R. Miller (Authorized Certifying Officer)

Date SEP 6 1957 Vou. No. 43

(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 1100 in accordance with the terms of the contract. See MF-104A

Signature [illegible] Title Mining Engr. Date 8/29/57

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

EXECUTIVE OFFICER
DMEA FIELD TEAM

Signature Robert A. Lawrence Title REGION V Date SEP 5 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 1957 Docket No. DMEA 4746 Contract No. Idm-E 1100

Operator's Name Appalachian Sulphides, Incorporated Minerals Copper

Address South Strafford, Vermont

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~~ D.D. Overburden	foot	12.00	3	128.00	32	4.00	280	4.00
~~Crosscutting~~ D.D. Surface	"	3794.40	1581	6852.00	2855	2.40	6220	2.40
~~Raising~~ D.D. Surface	"	2864.65	1081	2930.90	1106	2.65	3900	2.65
~~Stope~~ D.D. Surface	"	2063.25	655	3565.80	1132	3.15	1000	3.15
~~Winze~~ D.D. Undergrd.	"	4212.00	1755	6657.60	2774	2.40	7500	2.40
~~Drifting~~ D.D. Undgrd.		-	-	-	-		300	2.60
Hole ~~Check~~ Survey	hour	270.00	45	504.00	84	6.00	192	6.00
Drilling ~~Water~~ Delays	"	246.00	41	264.00	44	6.00	64	6.00
~~Stripping~~ Surf. Incid.	foot	1228.40	3320	1896.25	5125	0.37	11400	0.37
~~Trenching~~ Undgd. Incid.	"	1210.95	1755	1914.06	2774	0.69	7800	0.69
~~Bulldozing~~ Bulldozing	hour	191.25	22½	233.75	27½	8.50	208	8.50
~~Assays~~ Assays	1	47.00	47	47.00	47	1.00	203	1.00
Core Boxes	1	362.00	181	566.00	283	2.00	720	2.00
TOTAL DISTRIBUTED COSTS		16,501.90		25,559.36				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS								62,860.00

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 August 26, 1957 Operator Appalachian Sulphides, Inc.

Per C B Benson Title Asst. Treasurer

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)

Correct before possible adjustment for 3 abandoned holes and 132' overdrilled @ $3.15 per ft. See transmittal letter.

H A Burmeister

See copy of letter to operator dated 9/5/57

W A Beck

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

College Park, Maryland

August 29, 1957

Memorandum

To: V. J. Lynch, Bureau Member, DMEA Field Team, Region V

From: Mine Examination and Exploration Engineer

Subject: DMEA 1746, Contract Idm-E 1108, Appalachian Sulphides Elizabeth Mine, Orange County, Vermont

Enclosed are the original and three (3) copies of forms MF-104 and MF-104A for the Operator's July report together with attached copies of a letter from the Operator dated August 26, 1957. One copy of the F. J. Longyear invoices for June and July 1957 are attached to the original of the two forms.

This report required three partial transmittals to complete by the Operator and covered a transmittal period from August 15 to 28. The second section consisted for forms MF-104 and MF-104A but did not include the drilling contractor's invoice as requested by the engineer. None of these forms were signed and no distribution of the items made on MF-104A. All forms were returned to the Operator for signature and distribution of the 13 cost categories. A partially completed form was sent the Operator for guidance. One copy of MF-104A which was again returned unsigned is being retained for the College Park files.

It has previously been noted that surface hole S-1001 was abandoned at 295 feet and hole S-1007 was abandoned at 183 feet in June. In July hole S-1003 was abandoned at 565 feet and the contract maximum of 1000 feet at $3.15 per foot was exceeded by 132 feet. If the costs for drilling the 3 abandoned holes and the 132 feet of overdrilling are

disallowed, the total disallowance would be $2,964.05. Forms MF-104 and MF-104A have been reviewed and found to be correct if the above items are not disallowed.

Extra copies of this memorandum are enclosed for explanation purposes if you wish to use them.

H. L. Burmeister

Enclosures

1. PMAMbrose 2/ Station Files
   Mining
   DMEA

ELIZABETH MINE

APPALACHIAN SULPHIDES, INCORPORATED

SOUTH STRAFFORD, VERMONT

Supporting Details - Re DMEA Form MF-104
Cost Item (1) - Independent Contracts
Period - July 1 - 31, 1957

CONTRACT DRILLING - JULY 1 - 31, 1957, Both Dates Inclusive
Per E. J. Longyear Company Invoice No. 75749 & 75750 - Dated July 31, 1957

				DMEA Rates - Per Contract No. Idm-E-1100			Actual Rates Charged by Longyear-Per Final Drilling Agreement Dated 5/10/57		
Hole No.	From	To	Footage	Size Core	Rate	Amount	Size Core	Rate	Amount
SURFACE									
1002	325'	500'	175	EX	$2.40	$420.00	EX	$2.40	$420.00
	500'	1000'	500	EX	2.65	1,325.00	EX	2.65	1,325.00
	1000'	1450'	450	EX	3.15	1,417.50	EX	2.65	1,417.50
1008	525'	541'	16	EX	2.65	42.40	EX	2.65	42.40
1003	0'	3'	3	Ovb.	4.00	12.00	Ovb.	4.00	12.00
	3'	20'	17	EX	2.40	40.80	BX & AX	2.65	45.05
	20'	500'	480	EX	2.40	1,152.00	EX	2.40	1,152.00
	500'	565'	65	EX	2.65	172.25	EX	2.65	172.25
1022	0'	20'	20	EX	2.40	48.00	NX-BX-AX	2.65	53.00
	20'	500'	480	EX	2.40	1,152.00	EX	2.40	1,152.00
	500'	1000'	500	EX	2.65	1,325.00	EX	2.65	1,325.00
	1000'	1205'	205	EX	3.15	645.75	EX	3.15	645.75
1019	0'	17'	17	EX	2.40	40.80	BX & AX	2.65	45.05
	17'	409'	392	EX	2.40	940.80	EX	2.40	940.80
Total - Surface			3,320			$8,734.30			$8,747.80
UNDERGROUND									
1023	497'	702'	205	EX	2.40	$ 492.00	EX(Flat Hole)	3.40	$ 697.00
1010	0'	390'	390	EX	2.40	936.00	EX(Flat Hole)	3.40	1,326.00
1016	0'	300'	300	EX	2.40	720.00	EX	2.40	720.00
1026	0'	200'	200	EX	2.40	480.00	EX	2.40	480.00
708	120'	430'	310	EX	2.40	744.00	EX	2.40	744.00
1012	0'	350'	350	EX	2.40	840.00	EX(Flat Hole)	3.40	1,190.00
Total - Underground			1,755			$4,212.00			$5,157.00
Totals - Surf. & Ug.			5,075			$12,946.30			$13,904.80

HOLE SURVEYS

Hole No.	Dates	Hours	Rate	Amount
SURFACE				
1002	7/1-3-8-20-23	12	$6.00	$ 72.00
1003	7/27 & 31	4	6.00	24.00
1008	7/1	1	6.00	6.00
1022	7/3-5-7-10-19-23	9	6.00	54.00
Total Surface Surveys		26		$156.00
UNDERGROUND				
1015	7/1	4	$6.00	$ 24.00
1016	7/11	4	6.00	24.00
1026	7/15	1	6.00	6.00
708	7/25	2	6.00	12.00
1012	7/31	5	6.00	30.00
1023	7/10	3	6.00	18.00
Total Underground Surveys		19		$ 114.00
Total Surveys		45		$ 270.00
Drilling Delays - Underground				
Moving				
1026 to 708	7/16 - 19	21	$6.00	$ 126.00
1015 to 1016	7/1 - 2	8 ✓	6.00	48.00
1023 to 1010	7/11 - 12	6 ✓	6.00	36.00
Total Moving Delays		35		$ 210.00
Other Delays				
1016	7/3 - 10	4 ✓	$6.00	$ 24.00
708	7/20	2	6.00	12.00
Total Delays		41		$ 246.00

APPALACHIAN SULPHIDES, INC.
SOUTH STRAFFORD
VERMONT

Telephone - South Strafford 5-2411

August 26, 1957

U. S. Department of the Interior
Defense Minerals Exploration Administration
College Park, Maryland

Att: Mr. H. L. Burmeister

Re: DMEA 4746, Contract Idm-E 1100
Appalachian Sulphides, Inc.
Elizabeth Mine, Orange County, Vt.

Gentlemen:

We enclose herewith the five (5) copies of Form MF-104, which you returned to us for signature with your letter of August 23rd, together with five (5) copies of a revised Form MF-104A, showing the distribution of the total amount as you request.

We are embarrassed that the MF-104's were sent unsigned in our haste to get the reports in the mail. In checking with the accountant, I find that he assumed that only the total is required on the Form MF-104A, since that was the procedure followed in reporting on our previous DMEA contract.

In checking over again the enclosed MF-104A for July, I observe that the total surface hole footage (1132) at the $3.15 rate exceeds the 1,000 feet specified in our original application at that rate. As I assume you realize, we have eliminated some surface footage at the $2.65 rate at the expense of more footage than originally planned in the deeper holes.

Also enclosed are one copy each of the drill contractor's (Longyear) invoices for June and July drilling, which you requested.

Sincerely,

John F. Cowley

John F. Cowley
General Manager

JFC:hw
Encl.

APPALACHIAN SULPHIDES, INC.
SOUTH STRAFFORD
VERMONT

Telephone - South Strafford 5-2411

August 20, 1957

United States Department of the Interior
Executive Officer
Defense Minerals Exploration Administration
College Park, Maryland

DMEA Contract No. Idm-E 1100
Docket No. DMEA 4746

Gentlemen:

We enclose herewith five (5) copies each of the following reports, covering diamond drilling for the Month of July 1957 under the above contract:

(a) Form MF 104, Operator's Monthly Report and Voucher.

(b) Form MF 104A, Operator's Unit Cost and Progress Report, including Supporting Detail Schedule Re Contract Drilling.

The diamond drilling narrative report, summary, hole logs and cross sections have been furnished previously, under date of August 15, 1957.

Very truly yours,

John F. Cowley

John F. Cowley
General Manager

JFC:hw
Encl.

APPALACHIAN SULPHIDES, INC.
SOUTH STRAFFORD
VERMONT

Telephone - South Strafford 5-2411

August 16, 1957

United States Department of the Interior
Executive Officer
Defense Minerals Exploration Administration
College Park, Maryland

DMEA Contract No. Idm-E-1100
Docket No. DMEA-4746

Gentlemen:

Referring to the Form MF-104 which we have filed for the period June 13 - 30, 1957, we wish to call attention to certain minor clerical errors in the Supporting Detail schedule Re Contract Drilling attached thereto.

The footages drilled during the period are correctly shown in the schedule. However, the starting footage on four (4) holes is shown incorrectly.

Hole No.	Reads	Should Read	Feet Drilled
SURFACE			
1000	From 1001' to 1200'	From 1000' to & including 1200'	200
1006	From 1226' to 1502'	From 1225' to & including 1502'	277
UNDERGROUND			
1015	From 266' to 685'	From 265' to & including 685'	420
1018	From 561' to 662'	From 560' to & including 662'	102

The above was discussed with and checked by Mr. Harry Burmeister on his visit here today.

Very truly yours,

Clarence B. Benson

Clarence B. Benson
Assistant Treasurer

CBE:hw

APPALACHIAN SULPHIDES, INC.
SOUTH STRAFFORD
VERMONT

Telephone - South Strafford 5-2411

August 15, 1957

United States Department of the Interior
Executive Officer
Defense Minerals Exploration Administration
College Park, Maryland

Re: DMEA Contract No. Idm-E-1100
Docket No. DMEA-4746

Gentlemen:

We enclose herewith five (5) copies each of the following reports and maps relative to our Diamond Drilling Program for the MONTH OF JULY 1957:

Narrative Report on Diamond Drilling

Summary of Diamond Drilling

Diamond Drilling Record by Holes (Logs - showing assays, etc.)

100 Scale Diamond Drill Cross Sections (9 sections each)

The Operator's Monthly Report and Voucher Report will be forwarded later, being delayed until we receive the Diamond Drilling Contractor's invoice covering July drilling.

Sincerely yours,

Clarence B. Benson

Clarence B. Benson
Assistant General Manager

CBB:hw
Encl.

APPALACHIAN SULPHIDES, INC.
SOUTH STRAFFORD
VERMONT

Telephone - South Strafford 5-2411

To: Defense Minerals Exploration Administration
From: Appalachian Sulphides Inc.
Subject: Diamond Drilling, DMEA Contract No. Idm - E - 1100
Docket No. 4746

July 1 - 31, 1957

GENERAL

We are still troubled by excessive flattening of holes despite considerable research by both the drilling contractor and ourselves. During this month, one hole, DDH 1003, has had to be abandoned because of undue flattening. In this connection, it should be noted that DDH 1022, drilled at a steep initial dip, did not flatten excessively despite conditions apparently similar to those found where holes have flattened. No positive explanation for these occurrences is known at this time.

Significant mineralization has been found in only one location to date, that is, approximately 150 ft. west of the present mine workings at an approximate elevation of 650 ft. This mineralization was first encountered by two holes drilled at north coordinate 12100 in 1954, and was checked in this section by three additional holes in 1956.

In the current program, this favorable area has been checked by four holes at 13100 N and by two holes at 12400 N. The best intersection to date was in the extension of DDH 708 where 12.1 ft. assaying 1.74% Cu. was found from 156.5 to 168.6 ft.

The structure in this area is complex and difficult to interpret, but the mineralization apparently overlies the crumpled top of an anticline in the footwall amphibolite, and is in turn, overlain by the westwall band of amphibolite. Most of the intersections obtained have been of low copper content, and the few good intersections have been disconnected and small.

Drilling for July is summarized below by sections, and a tabular summary of holes is included with this report, as are cross sections and brief logs of holes.

7442 N

DDH 1002 was completed to a depth of 1450 ft., and found the amphibolites much as anticipated, except that intersections were very broad. This, it is felt, indicates that the west limb of the major syncline may be rising rather flatly, and hole 1002 probably passed rather near the bottom of the structure.

Hole 1003 would have checked this, but because of extreme flattening between 200 and 400 ft., (11° per 100 ft.), it had to be abandoned.

It has not been decided whether another hole should be drilled in the effort to reach the target intended for No. 1003.

APPALACHIAN SULPHIDES, INC.
SOUTH STRAFFORD
VERMONT
Telephone - South Strafford 5-2411

To: Defense Minerals Exploration Administration
From: Appalachian Sulphides, Inc.
Subject: Diamond Drilling, DMEA Contract No. Idm - E -1100
Docket No. 4746
July 1 - 31, 1957

8800 N

No drilling in this section during July.

10100 N

No drilling in this section during July.

10900 N

Drilling in this section was limited to 16 ft. in DDH 1008. This hole was suspended as noted in last month's report.

12100 N

DDH 1010 has been partially completed, and intersected amphibolite as expected. Mineralization found was insignificant. Minor changes in the interpretation of structure were made by comparison of this section with structure currently being outlined by drilling at 12400 N and 13100 N.

12400 N

Hole No. 708 was deepened as planned, and gave us our best intersection to date as mentioned earlier.

DDH 1012 passed through the same mineralized zone 30 ft. higher, and showed only 10.1 ft. of 0.34% Cu.

Hole No. 1013, to be drilled in August, will check the zone 20 to 30 ft. below DDH 708.

13100 N

Of the three holes intended to check mineralization found during June in DDH 1015, two were completed in July; DDH's 1016 and 1026. Proposed hole No. ~~1026~~ 1021 was not drilled because of the very low grade of mineralization encountered in hole 1016. Hole 1016 intersected 97 ft. of mineralization and 27 assays were taken. Of these, only 2, totalling 2.7 ft. gave 1% Cu. or better. (except within the main ore zone: note that 1016 and 1026 were drilled through a shaft pillar and both cross cut the main ore zone approximately 10 ft. from the collars)

Mineralization found in hole 1026 was of slightly better grade but in narrower intersections.

APPALACHIAN SULPHIDES, INC.
SOUTH STRAFFORD
VERMONT
Telephone - South Strafford 5-2411

(3)

To: Defense Minerals Exploration Administration
From: Appalachian Sulphides, Inc.
Subject: Diamond Drilling, DMEA Contract No. Idm - E - 1100
Docket No. 4746

July 1 - 31, 1957

14000 N

On the surface, DDH 1022 was drilled to a length of 1205 ft., and the rising west limb of the major amphibolite syncline was found. The inferred syncline to the west, shown on the cross sections dated July 1st, was not encountered, which would indicate that this syncline is not deep. Accordingly, DDH 1019 was changed in dip from -70° to -40° so as to be sure to intersect the west limb of the syncline to the west.

In drilling DDH 1019, a 270 ft. intersection of amphibolite has been encountered which should be the crest of an anticline, as shown. A 3 ft. zone of weak mineralization was encountered 35 ft. above the amphibolite, and this, plus weak mineralization in the amphibolite, was probably the cause of the broad magnetic anomaly found from 11100 to 11400 west. DDH 1019 will be continued to 1000 ft. in length.

A change in interpretation of amphibolite intersections in DDH 1018 will be noted on this month's cross section. This new interpretation places the mineralized zones more logically, and the structure fits more closely than indicated at 13100 N, 12400 N, and 12100 N, while still matching structure inferred at 15100 N.

The logical outcome of this comparison of sections would be to check the top of the footwall anticline, which is the locale of mineralization at 12100 N, 12400 N, and 13100 N, for mineralization at 14000 N. Probably proposed surface hole 1020 will be moved east and directed towards this target.

15100 N

Hole 1023 intersected only one band of amphibolite out to the west. This is inferred to be the bottom of the syncline of which both limbs were found at 14000 N in DDH 1018. No further drilling is planned in this section.

Respectfully submitted,

Calvert Smith

Calvert Smith
Geologist

EXTRA COPY
DMEA
RECEIVED DEC 4 1957
DATE | INITIALS | CODE

September 1, 1957

[illegible] Mining Co., Inc.
[illegible], Inc.
[illegible], Vermont

Re: Contract No. DMEA-475, Mine-[illegible] (copper)
Appalachian Exploration, Inc.
Elizabeth Mine, Orange County, Vt.

Dear Mr. Conley:

Your Operator's Monthly Report and Voucher and Operator's Unit Cost and Program Report for July 1957, has been reviewed in this office and is being sent to the Finance Officer today for processing.

Deductions amounting to $1,620.10 have been made on account of charges made on Hole S-1009. This hole was abandoned before reaching the target area.

The deductions are as follows:

Diamond Drilling -	3 ft overburden at $4.00/ft	$12.00
	497 ft drilling at $2.40/ft	$1,192.80
	65 ft drilling at 2.65/ft	172.25
Surveying -	4 hours at $6.00/hr.	24.00
Instantel -	565 ft at $0.37/ft	209.05
	Total deductions	$1,620.10

The above deductions and those previously made may be reclaimed if and when the abandoned holes are completed.

The breakdown of the various items in the contract as they should be as of August 1, is shown on the enclosed forms MF-1[illegible] and 10[illegible].

The terms of the contract do not make the total footage under each item of "Diamond drilling" in Category (1) maximum. The only maximums in this category are the estimated total amount ($[illegible],[illegible]9.00) and the estimated cost of each unit of work (see Article 6 of the contract form). It is, therefore, permissible to exceed the footage of 1000 feet at the $2.15/ft rate and the 1[illegible]7 feet is allowable.

We hope this reaches you before you have made out your August report, and that the enclosed forms will be helpful in making it out.

Very truly yours,

Robert A. Lawrence, Executive Officer
DMA Field Team, Region V

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K- 8

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of June 13 - 30, 1957 Docket No. DMEA-4746 (Copper) Contract No. Idm-E 1100
Operator's Name Appalachian Sulphides, Incorporated Minerals Copper
Address South Strafford, Vermont
Contract Amount, $ 62,860.00 Government Participation: 50 % Amount, $ 31,430.00

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:		None -		6016.80 ✓		6016.80
Drilling By Longyear	7,188.00	This is	7,188.00	~~6040.80~~		~~6040.80~~
Bulldozing 5 Hrs.@$8.50	42.50	initial	42.50	42.50		42.50
Crosscutting		report.				
Drifting				216.00 ✓		216.00
Hole Surveys&Drill. Delays	252.00		252.00	~~252.00~~		~~252.00~~
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes-Surf.65@$2.00	130.00		130.00	130.00		130.00
-Und. 37@$2.00	74.00		74.00	74.00		74.00
(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						
Incid. Allowances						
1805' Surface @ 37¢	667.85		667.85	490.99		490.99
~~(8) Contingencies (specify):~~ 1019' Undergr. @ 69¢	703.11		703.11	703.11		703.11
TOTALS	$9,057.46		$9,057.46	~~7723.40~~ 7673.40		~~7723.40~~ 7673.40

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 7/23/57 *Payee Appalachian Sulphides, Inc.
Per C. B. Benson Title Asst. Treasurer

*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:
$ 3836.70 ~~3866.70~~
Signature Helen R. Mueller (Authorized Certifying Officer)
Date AUG 28 1957 Vou. No. 38
(See other side)

3866.70

(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 1100 in accordance with the terms of the contract.

Signature H. S. Burmeister Title Mining Engr. Date 8/7/57

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature V. J. Lynch Title ACTING EXECUTIVE OFFICER DMEA - REGION V Date AUG 27 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.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of June 13-30, 1957 Docket No. DMEA-4746 (Copper) Contract No. Idm-E 1100
Operator's Name Appalachian Sulphides, Incorporated Minerals Copper
Address South Strafford, Vermont

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								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	Var.	$7,188.00	2,824	$7,188.00	2,824		19,200	Various
Surveys & Delays	$6/Hr	252.00	42	252.00	42		256	$6/Hr.
Incid. Allowances	Var.	1,370.96	2,824	1,370.96	2,824		19,200	Various
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Bulldozing	8.50/Hr	42.50	5 Hrs.	42.50	5 Hrs.		208	$8.50/Hr.
TOTAL DISTRIBUTED COSTS		$8,853.46		$8,853.46				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Core Boxes		204.00	102	204.00				$ 720.00
TOTAL COSTS		$9,057.46		$9,057.46				$62,860.00

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 7/23/57 Operator Appalachian Sulphides, Inc.

Per C B Benson Title Asst. Treasurer

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. F. Burmeister 8/7/57

478.0 feet of drilling @ $2.40/ft. was deducted because holes No. 1001 and 1007 were not completed. RB.

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 83-38475

APPALACHIAN SULPHIDES, INC.

ELIZABETH MINE — SOUTH STRAFFORD, VERMONT

Supporting Details - Re DMEA Form MF-104
Cost Item (1) - Independent Contracts
Period June 13 - 30, 1957

CONTRACT DRILLING - JUNE 13 - 30, 1957, Both Dates Inclusive
Per E. J. Longyear Company Invoice No. 65754 - Dated June 30, 1957

				DMEA Rates - Per Contract No. Idm-E 1100			Actual Rates Charged by Longyear-Per Final Drilling Agreement Dated 5/10/57		
Hole No.	From	To	Footage	Size Core	Rate	Amount	Size Core	Rate	Amount
SURFACE									
1000	1001'	1200'	200	EX	$3.15	$630.00	EX	$3.15	$630.00
1001	0'	2'	2	Ovb.	4.00	$ 8.00	Ovb.	4.00	$ 8.00
	3'	50'	48	EX	2.40	$115.20	BX & AX	2.65	$127.20
	51'	295'	245	EX	2.40	$588.00	EX	2.40	$588.00
1002	0'	2'	2	Ovb.	4.00	$ 8.00	Ovb.	4.00	$ 8.00
	3'	30'	28	EX	2.40	$ 67.20	BX & AX	2.65	$ 74.20
	31'	325'	295	EX	2.40	$708.00	EX	2.40	$708.00
1006	1226'	1502'	277	EX	3.15	$872.55	EX	3.15	$872.55
1007	0'	13'	13	Ovb.	4.00	$ 52.00	Ovb.	4.00	$ 52.00
	14'	165'	152	EX	2.40	$364.80	BX & AX	2.65	$402.80
	166'	183'	18	EX	2.40	$ 43.20	EX	2.40	$ 43.20
1008	0'	12'	12	Ovb.	4.00	$ 48.00	Ovb.	4.00	$ 48.00
	13'	95'	83	EX	2.40	$199.20	BX & AX	2.65	$219.95
	96'	500'	405	EX	2.40	$972.00	EX	2.40	$972.00
	501'	525'	25	EX	2.65	$ 66.25	EX	2.65	$ 66.25
Totals - Surface			1,805			$4,742.40			$4,820.15
UNDERGROUND									
1015	266'	685'	420	EX	2.40	$1,008.00	EX	2.40	$1,008.00
1018	561'	662'	102	EX	2.40	$ 244.80	EX(Flat Hole)	3.40	$ 346.80
1023	0'	11'	11	EX	2.40	$ 26.40	AX(Flat Hole)	3.65	$ 40.15
	12'	497'	486	EX	2.40	$1,166.40	EX(Flat Hole)	3.40	$1,652.40
Totals - Underground			1,019			$2,445.60			$3,047.35
Totals - Surf. & Ug.			2,824			$7,188.00			$7,867.50

HOLE SURVEYS

Hole No.	Dates	Hours	Rate	Amount
Surface				
1000	6/20	6	$6.00	$36.00
1001	6/25 & 6/26	4	$6.00	$24.00
1002	6/27-6/29	2	$6.00	$12.00
1006	6/19	6	$6.00	$36.00
1007	6/21	2	$6.00	$12.00
1008	6/22-6/27	6	$6.00	$36.00
Underground				
1015	6/14	6	$6.00	$36.00
1018	6/17	4	$6.00	$24.00
1023	6/28	3	$6.00	$18.00
	Totals	39		$234.00
Drilling Delays - Underground				
From 1018 to 1023	6/17 & 6/18	3	$6.00	$18.00
Total Surveys & Delays		42		$252.00

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

ROOM 13 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

August 27, 1957

Mr. C. D. Benson
Assistant Treasurer
Appalachian Sulphides, Inc.
South Strafford, Vermont

Re: Docket No. DMEA-4746 (Copper)
Appalachian Sulphides, Inc.
Elizabeth Mine
Orange County, Vermont
Contract Idm-E1100

Dear Mr. Benson:

The Operator's Monthly Report and Voucher and Operator's Unit Cost and Progress Report (Forms MF-104 and MF-104A) for June 1957 have been reviewed in this office.

Deductions amounting to $1324.06 have been made from the total costs claimed. This was done because diamond drill holes Nos. 1001 and 1007 were abandoned. Payment is based only on completed holes.

The deductions are as follows:

Diamond drilling			
D. D. Hole No. 1001	295 feet @ $2.40/ft	=	$708.00
D. D. Hole No. 1007	183 feet @ $2.40/ft	=	439.20
Incidentals			
Diamond drilling	478 feet @ $0.37/ft	=	176.86
Total deductions			$1,324.06

All deductions or disallowances are reviewed in the final audit which is made after completion of the contract.

A copy of the voucher as forwarded to our Finance Office is enclosed.

VJL/mg

cc - ~~Operating Committee (2)~~
Finance Office
Lynch
Laurence

Very truly yours,

V. J. Lynch
Acting Executive Officer

See Cert. Off. Ltr 8/28/57 correcting amount of deductions

APPALACHIAN SULPHIDES, INC.
SOUTH STRAFFORD
VERMONT

Telephone - South Strafford 5-2411

July 23, 1957

United States Department of the Interior
Executive Officer
Defense Minerals Exploration Administration
College Park, Maryland

DMEA Contract Idm-E 1100
Docket No. DMEA - 4746

Gentlemen:

Attached are five copies of:

(a) Form MF-104, Operators Monthly Report and Voucher.

(b) Form MF-104-A, Operators Unit Cost and Progress Report.

(c) Narrative - Includes general information, results of 4171 feet of diamond drilling on the project for Appalachian's account prior to execution of subject contract, revision of Exhibit A of contract based upon information not available when original Exhibit A was prepared.

(d) Summary of drilling completed and proposed, together with diamond drill logs and revised cross sections.

It will be noted that the total footage included in these revisions is in excess of the original total of 19,200 feet; however, it is quite probable that further revisions will be necessary and it is not our intent at the present time to request any additional footage over the total provided in the Contract.

Revisions of hole locations were of course expected and actually are described in the Contract as "tentative".

You will also note that the Longyear Company revised its drilling prices upward after we had submitted tentative rates in our original application to you. However, we are submitting our MF-104-A Operators Unit Cost and Progress Report on the basis of the Contract as executed.

Very truly yours,

John F. Cowley

John F. Cowley
General Manager

JFC:hw
Encl.

APPALACHIAN SULPHIDES, INC.
SOUTH STRAFFORD
VERMONT

Telephone - South Strafford 5-2411

To: Defense Minerals Exploration Administration
From: Appalachian Sulphides, Incorporated
Subject: Diamond Drilling, DMEA Contract No. Idm-E 1100
May 15 - June 30, 1957

GENERAL

Considerable difficulty has been experienced by the contractor with excessive flattening of holes. Reference to the sections will show this flattening, which has been found to be as much as 12° per 100 feet, in holes No. 1000, 1001, 1006, 1007 and 1008. Holes 1000 and 1006 were surveyed by the hydrofluoric acid etch method, while holes 1001 and 1007 were surveyed with the Tro-Pari Bore Hole Instrument. Future surveys in holes will be done with the Tro-Pari Instrument.

Holes 1006 and 1000, being the first holes drilled in their respective sections were allowed to continue despite the flattening, but Nos. 1001 and 1007, which were intended to check structure at least 300 feet below Nos. 1000 and 1006 respectively had to be abandoned as their courses were coming too close to the already drilled holes.

A tabular summary of holes, giving pertinent information and footages drilled is included with this report.

Brief logs of completed holes, including assays, are also enclosed.

Cross sections to a scale 1" = 100' are enclosed and show all holes drilled, drilling, or proposed, as well as mineralized zones and amphibolites.

Geologic results of drilling to date are summarized below by sections.

7442 N

Hole No. 1000 intersected several recognizable amphibolite horizons which are inferred to be two bands in folds as shown on the cross section. Favorable locales for mineralization were found to be only very weakly mineralized and intersections were narrow. The best zone at 978 Ft. gave only 2.1 Ft. of 0.21% Cu.

Hole No. 1001 was abandoned, as explained earlier.

Hole No. 1002 will be continued down to check the indicated synclines as shown.

10900 N

Hole No. 1006 intersected the foot and hanging wall amphibolites at approximately 650' Elevation, and two mineralized zones were found between the amphibolites. One, from 732.3 - 746.0 Ft. gave 13.7 Ft. averaging 0.28% Cu and included two stringers of massive Sulphides of intersected width 2.4' and 0.5' respectively, and running 0.40% and 1.08% Cu respectively. The second zone from 768.0 Ft. to 780.0 Ft. yielded 12 Ft. of 0.36% Cu.

Other amphibolite intersections in the hole are presently inferred to represent a structure as shown on the section.

It is fully expected that this interpretation of structure will have to be changed as information comes in from the drilling.

APPALACHIAN SULPHIDES, INC.
SOUTH STRAFFORD
VERMONT

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May 15, 1957 - June 30, 1957

10900 N - Continued

In this connection, it might be noted that all drilling, known geology and inferred structure is being continuously plotted on a three-dimensional glass model made to a scale of 1" = 100'. By doing this, sections can be compared with one another to aid in interpretation, and it is found that the inferred structures at 7442 N and at 10900 N are similar in major details.

At 10900 N, it is proposed that DDH 1008 be continued at a later date to check the depth of the indicated synclines and possible mineralization therein.

13100 N

Drilling at holes No. 1014 and 1015 has shown the footwall to be roughly 50 to 100 Ft. to the west of where it was previously thought to be at elevation 650', and a mineralized horizon at perhaps 10 Ft. in width apparently lies on the footwall amphibolite here. Grade is low across the 37 Ft. intersection obtained in DDH 1015 giving only 0.54% Cu with individual assays up to 1.71% Cu. (1.2Ft.). This hole apparently intersected the ore near the top of this horizon and the dip of the horizon appears to be rather flat, so that the 37 Ft. intersected may be far from a true width. The amphibolite intersections in the upper hole, No. 1014 are interpreted to be the westwall band which would overlie any mineralization.

Three holes are proposed to check the mineralized horizon at 50, 100, and 150 Ft. down dip. These are DDHs 1021, 1016, and 1026 respectively.

Holes No. 1014 and 1015 are scheduled for deepening as soon as the contractor makes available a heavier machine. The CP-55 machine presently in use has difficulty drilling beyond 500 Ft., and could not finish the holes. The extensions of these holes will check the position and possible mineralization on the west limb of the indicated syncline, which is believed to be the same syncline being checked by holes No. 1018 at 14,000 N and No. 1023 at 15,100 N.

14000 N and 15100 N

As no good drilling site was available at 14000 N, a site was picked at 14162 N and the hole directed to the southwest to intersect the indicated syncline between 14000 N and 14080 N. The hole as shown is projected into section.

No significant mineralization was found in DDH 1018, and mineralized zones do not fit the indicated structure well. At 15100 N, DDH 1023, which is still drilling, has intersected a very weak amphibolite horizon at 218 Ft. apparently coinciding with the amphibolite occuring in DDH 1018 from 151.5 Ft. to 174.5 Ft.

In Hole 1018, the broad intersection of amphibolite from 563 Ft. to 638 Ft. contained many repeating horizons, and is inferred to be the dragging east limb of a major syncline as shown. No mineralization was encountered within the syncline.

Respectfully submitted, July 1, 1957

Calvert Smith

Calvert Smith, Geologist

EXPLORATION PROJECT CONTRACT

APPALACHIAN SULPHIDES, INCORPORATED

DOCKET NO. DMEA 4746

REVISION, as of July 1, 1957

of

EXIBIT A

Description of the Work

The purpose of the project is to explore for ores of copper by diamond core drilling, from both surface and underground locations, with such overburden drilling as may be necessary.

It is estimated that twenty-nine drill holes will be drilled, ranging in depths from 183 to 1600 ft. the total combined footage for DMEA account not to exceed 19,200 ft. of hole. Drilling shall be done with EX size, or larger, coring bits.

The drilling shall be done along certain cross-sectional east-west planes related to the mine coordinate system, as follows:

North	Latitude	7442
"	"	8800
"	"	10084
"	"	10900
"	"	12100
"	"	12400
"	"	13100
"	"	14000
"	"	15100

Drill holes shall be reamed and cased or cemented and redrilled as necessary.

The tentative locations of the holes are shown on the attached "cross sections of the Elizabeth Mine, South Strafford, Vt., July 1, 1957" said cross sections representing the east-west planes along which drilling is to be done. The holes are tentatively delineated as shown on the attached "Summary of Diamond Drilling Completed and proposed for approval under DMEA Contract No. Idm-E 1100", and further explanations follow below.

Brief

In this revision of proposed Diamond Drilling under DMEA Contract No. Idm-E 1100, changes have been made from the original proposal for various reasons summarized below.

1. Geologic and geophysical work done after the date of original proposal has indicated new possible structure favorable to mineralization. This has made desireable the deepening of some holes, and the drilling of more holes to the west.

Brief - continued

2. Difficulty experienced with the extreme flattening of holes has necessitated the abandonment of two holes.

3. Detailed investigation done after date of original proposal showed the desireability of moving some drill sites in order to more cheaply or conveniently achieve the same ends. This meant changing some holes, leaving out others, and adding some new holes.

4. Some structural positions have been found to be further west than anticipated, requiring extension of some holes beyond their original proposed depths.

5. Holes have been left out to allow more footage for necessary changes noted above, and because structural positions they were to check are adequately checked by other drilling.

Changes are noted below in detail. The hole numbers referred to as "originally proposed" or appearing in the column under "original proposal" are those included in "Exhibit A", Docket No. DMEA - 4746, pages 1 and 2 and are here recorded as they appear in said "Exhibit A". These originally proposed holes are marked in red on the accompanying cross sections.

Hole Number	Location	Length	Dip
Plane N. 7442			
Original Proposal			
1002	Surface 9155W	1,200	-65°
1001	" 9390W	900	-65°
1000	" 9630W	600	-65°
Revision			
1000	Surface 9642W	1,200	-65°
1001	(Flattened abandoned) 9399W	295	-80°
1002	" 9398W	1,450	-90°
1003	" 9170W	1,550	-86°
1024	(Additional Hole) Surface 10700W	1,500	-75°

DDH 1000 was extended in length from 600 ft. to 1200 ft. because of geologic and geophysical work done west of the mine after the date of originally proposed drilling (1000 feet for Appalachian's account prior to date of Contract). Said work indicated the possibility of a syncline and anticline of amphibolites west of then known structures; this indicated structure was found in the extension of the hole.

Hole Number	Location	Length	Dip

DDH 1001 was begun as planned except for steepening the dip from -65° to -75° at the collar to allow for the flattening experienced in hole 1000. Despite this allowance, flattening was too great in hole 1001, and said hole was abandoned at a depth of 295 ft.

A second hole from the same site, DDH 1002, was collared at 90° in the attempt to hit the same target area intended for 1001, this hole (1002) is continuing and replaces the originally proposed DDH 1001. It is proposed to be drilled to 1450 ft. to check the indicated structure found in DDH 1000.

Originally proposed Hole No. 1002, the most easterly hole, is replaced in this revision by DDH 1003 which will be collared steeply enough to allow the hole to reach the target area despite flattening.

Hole No. 1024 is proposed to further check indicated structure to the west for mineralization.

Plane N. 8800

Original Proposal

1004	Surface	9275W	1,100 ft.	-65°
1003	"	9600W	700 ft.	-65°

Revision

1004	Surface	9600W	1,400	-72°
1005	"	9275W	1,600	-79°

DDH's 1004 and 1005 are proposed in this revision to replace originally proposed holes No. 1003 and 1004 respectively. Both holes are changed in dip at collar to allow for flattening; both holes are lengthened to check indicated structure to the west.

Plane No. 10084

796 Deepen existing hole 300 ft.

No change in this section.

Plane N. 10900

Original Proposal

1006	Surface	9250W	1,500 ft.	-65°
1005	Underground	9855W	600 ft.	-65°

Revision

1006	Surface	9225W	1,502 ft.	-65°
1007	"	9224W	183 ft.	-70°
1008	"	9224W	1,550 ft.	-80°
1009	Underground	9855W	1,000 ft.	-20°
1025	Surface	10700W	1,500 ft.	-75°

Hole No. 1006 was drilled as planned to 1502' (1225' for Appalachian's account prior to date of contract) but undue flattening caused it to check the area intended for originally proposed No. 1005. Thus originally proposed No. 1005 has been abandoned in this revision.

Hole Number	Location	Length	Dips

The flattening of hole 1006 also caused it to miss it's intended target, and this, coupled with the finding of mineralization in the hole, necessitated another hole to check the indicated structure at lower elevation. Accordingly DDH 1007 was begun to fulfill this purpose, but it too flattened unduly and had to be abandoned. DDH 1008 was begun with a dip at collar of -80°, and was drilled to 525 ft. It is proposed that this hole be continued at a later date when the drilling company perfects it's technique of drilling without undue flattening of the holes.

It is proposed to drill an underground hole DDH 1009 to check indicated structure to the west.

DDH 1025 is also proposed to check amphibolites and possible mineralization to the west of the mine area.

Plane N. 12100

Original Proposal

1008	Underground	9695W	650 ft.	-40°
1007	"	9695W	450 ft.	-13°

Revision

1010	Underground	9695W	950 ft.	-15°
1011	"	9695W	1,050 ft.	-40°

DDH's 1010 and 1011 are proposed in this revision to take the place of DDH's 1007 and 1008 respectively. Both holes are extended in depth to check further to the west.

Plane N. 12500

Original Proposal

1013	Underground	9730W	500 ft.	-17°
1012	"	9840W	450 ft.	-34°
1011	"	9840W	500 ft.	- 0°
1010	"	9840W	400 ft.	-30°
1009	"	9840W	300 ft.	- 0°

Subsequent to date of the original proposal it was found that suitable drilling sites were not available underground at coordinate 12500N, but that the section could be conveniently drilled at 12400N from two stations instead of three, and furthermore past drilling can take the place of at least one of the originally proposed holes.

Plane N. 12400

Revision

708	deepen existing hole 300 ft.			
1012	underground	9834W	350 ft.	-15°
1013	"	9834W	400 ft.	-40°

Original hole 1009 at 12400N is already drilled at 12400N; DDH 709 drilled in Dec. - Jan. 1953 - '54 by Vermont Copper Co..

Original hole 1010 at 12500N is already partially drilled at 12400N; DDH 708 drilled in Dec. 1953 by Vermont Copper Co.. If the collar is clear, it is proposed in this revision that hole 708 be deepened to 430 ft. thus fulfilling the purpose of originally proposed hole No. 1010.

Hole Number	Location	Length	Dip

Original hole 1011 at 12500N is replaced at 12400N by proposed hole No. 1012, which intersects the same structural target area intended for original No. 1011.

Original hole 1012 at 12500N is replaced at 12400N by DDH 1013 in this revision.

Original hole 1013 at 12500N is not proposed for drilling at 12400N in this revision.

Plane N. 13100

Original Holes

1017	Underground	9695	500 ft.	-68°
1016	"	9695	750 ft.	-36°
1015	"	9895	700 ft.	-53°
1014	"	9895	600 ft.	-40°

Revision

1014	Underground	9890W	850 ft.	-40°
1015	"	9889W	900 ft.	-60°
1016	"	9820W	300 ft.	-30°
1017	"	9695W	950 ft.	-35°
1021	"	9820W	230 ft.	-20°
1026	"	9820W	200 ft.	-50°

Original holes No. 1014 and 1015 were drilled as planned to depths of 552 ft. and 685 ft. respectively, with a small air operated machine. This machine was unable to finish the holes, and they are to be completed. as soon as the drilling contractor supplies a heavier machine. As neither hole intersected the inferred west limb of the major syncline to the west, it is proposed in this revision that holes 1014 and 1015 be extended by 150 ft. and 200 ft. respectively to check this limb.

Fair mineralization found in DDH 1015 at approximately 200 ft. requires further testing at lower elevation, hence, holes 1016, 1021 and 1026 are proposed in this revision to accomplish this purpose.

Original hole No. 1017 is not proposed for drilling in this revision.

Plane N. 14000

Original Holes

1018	Underground	9845W	550 ft.	-15°
1020	Surface	9980W	600 ft.	-62°
1019	"	10160W	800 ft.	-63°
1021	"	10480W	800 ft.	-63°
1022	"	10740W	600 ft.	-63°

Revision

1018	Underground	9933W	662 ft.	-15°
1019	Surface	11140W	1,000 ft.	-70°
1020	"	10480W	1,300 ft.	-80°
1022	"	10820W	1,200 ft.	-80°

Hole Number	Location	Length	Dip

DDH 1018 was drilled as planned, except that it had to be drilled from 14162N and in a southwesterly direction to intersect the target area near 14000N. It had to be extended in depth as the west limb of the inferred syncline had not been intersected by 550 ft.

Original holes 1019 and 1020 are not proposed for drilling in this revision.

Original hole 1021 is replaced in this revision by DDH 1020, and it is proposed that DDH 1020 be drilled 500 ft. deeper that originally planned, to check possible downward extension of the indicated syncline shown on the cross section.

Collar location of hole 1022 had to be changed as the site was inaccessible. It, like DDH 1020, should be extended beyond it's originally planned depth to check the indicated syncline.

Hole 1019 in this revision is proposed to check geologic and geophysical work recently completed. Said work indicates amphibolites, sulphides, and a fair magnetic anomaly between west coordinates 11100W and 11400W. It is proposed that this hole be extended to 1000 ft. in depth to check the indicated syncline.

It is the further intention that holes 1019 and 1022 in this revision will check structural positions at 14000N which we intended to check at 15100N with original holes 1024, 1025, and 1026. This would obviate the necessity for drilling these holes at 15100N.

Plane N. 15100

Original Holes

1023	Underground	9985W	700 ft.	-20°
1026	Surface	10450W	1,200 ft.	-45°
1025	"	10950W	800 ft.	-45°
1024	"	11305W	600 ft.	-45°

Revision

1023	Underground	9964W	700 ft.	-20°

DDH 1023 is being drilled as planned.

As previously noted, holes planned for the section 14000N adequately check structural positions which were to be intersected by original DDH's 1024, 1025, and 1026. Accordingly, these holes, original Nos. 1024, 1025, and 1026 are not proposed for drilling in this revision.

APPALACHIAN SULPHIDES, INC.

Summary of Diamond Drilling completed and proposed for approval under DMEA Contract No. Idm-E-110

Dated July 1, 1957

A	B	C	D	E	F	G	H	I	J	K	L
1000	S	7442N	9642W	1381	N90W	-65	1200	1000	1200	200	-
1001	S	7441N	9399W	1363	N90W	-80	295	-	295	295	-
1002	S	7441N	9398W	1363	N90W	-90	1450	-	325	325	1125
1003	S	7442N	9170W	1357	N90W	-86	1550	-	-	-	1550
1004	S	8800N	9600W	1390	N90W	-72	1400	-	-	-	1400
1005	S	8800N	9275W	1325	N90W	-79	1600	-	-	-	1600
1006	S	10901N	9225W	1146	N90W	-65	1502	1225	1502	277	-
1007	S	10901N	9224W	1146	N90W	-70	183	-	183	183	-
1008	S	10901N	9224W	1146	N90W	-80	1550	-	525	525	1025
1009	U	10900N	9855W	867	N90W	-20	1000	-	-	-	1000
1010	U	12100N	9695W	505	N90W	-15	950	-	-	-	950
1011	U	12100N	9695W	505	N90W	-40	1050	-	-	-	1050
1012	U	12374N	9834W	750	N90W	-15	350	-	-	-	350
1013	U	12374N	9834W	750	N90W	-40	400	-	-	-	400
1014	U	13105N	9890W	829	N90W	-40	850	552	552	-	298
1015	U	13105N	9889W	829	N90W	-60	900	265	685	420	215
1016	U	13132N	9820W	720	N90W	-30	300	-	-	-	300
1017	U	13100N	9695W	500	N90W	-35	950	-	-	-	950
1018	U	14162N	9933W	510	S75W	-15	662	560	662	102	-
1019	S	14000N	11140W	1170	N90W	-70	1000	-	-	-	1000
1020	S	14000N	10480W	1120	N90W	-80	1300	-	-	-	1300
1021	U	13132N	9820W	720	N90W	-20	230	-	-	-	230
1022	S	14000N	10820W	1175	N90W	-80	1200	-	-	-	1200
1023	U	15044N	9964W	510	N90W	-20	700	-	497	497	203
1024	S	7442N	10700W	1500	N90W	-75	1500	-	-	-	1500
1025	S	10900N	10700W	1500	N90W	-75	1500	-	-	-	1500
1026	U	13132N	9820W	720	N90W	-50	200	-	-	-	200
*708	U	12386N	9828W	752	N90W	-30	430	(130)	130	-	300
*796	U	10088N	9779W	868	N90W	-75	740	(439)	439	-	301
					TOTALS		26,942	4171	6995	2824	19,947

Explanation of Columns

A - Hole No.
B - Surface or Underground
C - North Coordinate
D - West Coordinate
E - Elevation of collar, feet
F - Bearing of hole
G - Dip of hole, degrees
H - Completed or proposed depth
I - Depth, June 12, 1957
J - Depth, June 30, 1957
K - Footage, June 12 - June 30, 1957
L - Footage proposed after June 30, 1957

*Holes 708 and 796 drilled prior to May 15, 1957. All other holes drilled since that date.

NOTES

1.) Column I represents drilling done by Appalachian Sulphides, Inc. prior to June 13th 1957 and not included in DMEA Contract.

2.) Column K represents footage drilled from June 13th 1957 to June 30th 1957; this footage is proposed for inclusion in DMEA Contract.

3.) Column L represents footage proposed for drilling starting at date of this summary, and hence proposed for inclusion in DMEA Contract.

RECEIVED
AUG 30 1957
D.M.E.A.

August 28, 1957

Appalachian Sulphides, Incorporated
South Strafford, Vermont

Re: Contract Idm-51100
Docket No. DMFA-4746
Commodity: Copper

Gentlemen:

Reference is made to your June voucher covering the above contract.

Your voucher is being processed for payment in the amount of $3836.70 which is 50% of the approved monthly total of $7673.40. The following deductions have been made:

Diamond Drilling

D.D. Hole No. 1001	2 ft. Ovb	at $4.00/ft.	=	$	8.00
" " "	48 ft. EX	at $2.40/ft.	=		115.20
" " "	245 ft. EX	at $2.40/ft.	=		588.00
D.D. Hole No. 1007	13 ft. Ovb	at $4.00/ft.	=		52.00
" " "	152 ft. EX	at $2.40/ft.	=		364.80
" " "	18 ft. EX	at $2.40/ft.	=		43.20

Hole Surveys

Hole No. 1001	4 hours at $6.00/hr.	=	24.00
Hole No. 1007	2 hours at $6.00/hr.	=	12.00

Incidental Surface Allowances

Hole No. 1001	295 feet at $0.37/ft.	=	109.15
Hole No. 1007	183 feet at $0.37/ft.	=	67.71

The above deductions have been made because diamond drill holes Nos. 1001 and 1007 were abandoned. Payment is based only on completed holes.

Very truly yours,

Helen R. Miller
Personal Assistant

/hbm
Copies to R. A. Laurence & V. J. Lynch
Jay L. Chambers
Norris files
Day files

Mr. Clarence S. Benson
Assistant Treasurer
Appalachian Sulphides, Inc.
South Strafford, Vermont

Re: Docket No. DMEA-4706 (Copper)
Appalachian Sulphides, Inc.
Elizabeth Mine Area
Orange County, Vermont
Contract No. Ion-21100

Dear Mr. Benson:

Reference is made to your terminated exploration contract with the Government.

We sincerely regret that the work performed did not result in a certification of discovery or development under the provisions of the contract. In the absence of such certification, the Government retains no claim or lien against the property subject to the contract or any future production therefrom. We, therefore, are closing our books and records on this project. Your attention, however, is called to the provisions of the contract which require the Operator to keep and preserve records for the period indicated.

Your interest in the Defense Minerals Exploration Administration exploration program and participation therein are fully appreciated.

Sincerely yours,

C. O. Mitterdorf

Administrator

WRGriswold/er 7/11/58
Copy to: Docket
Admr R File
Mr. Bishop, USBM
Mr. Killsgaard, USGS
Mr. Chambers, DMEA
Region V (2)
Chron

Mr. Chambers

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

Mr. Robert [illegible] Laurence
Executive Officer
DMA Field Team, Region V
Room 13, Post Office Building
Knoxville 2, Tennessee

JAN 24 1958

Re: Docket No. [illegible]-477 (Zinc-Lead-Copper)
The New Jersey Zinc Company
Sandbrook Area
Buckingham County, Virginia
Contract No. [illegible]-1103
and
Docket No. [illegible]-476 (Copper)
Appalachian Sulphides, Inc.
Elizabeth Mine
Orange County, Vermont
Contract No. [illegible]-1100

Dear Mr. Laurence:

Your memorandum of January 20, 1958, requests clarification of the meaning of the second paragraph of Article 6 (a) of contract form DF-200 (Revised June 1954). Your request is occasioned by the two, apparently to you, conflicting decisions on the referenced contracts as rendered by this Committee and the Contract Administration and Audit Division, respectively.

Actually there is no conflict. This Committee's letter of November 14, 1957, in reference to Docket [illegible]-477, pertains to the specifications of the work, as set forth in the "Description of the Work" portion of Exhibit "A", to be performed in accordance with Article 3 of the contract. The Division's letter of January 8, 1958, in reference to Docket [illegible]-476, deals with the "Estimated Costs of the Project" portion of Exhibit "A", which costs are defined and limited by Article 6 of the contract.

The work description under Contract No. [illegible]-1103, Docket [illegible]-477, provides that "A fence of 6 holes shall be drilled [illegible]." This was a definite specification. There was no authority, without amendment of the contract, for the Government to contribute to the costs of a seventh hole even though no maximum cost under Article 6 was exceeded.

On the other hand, the work description under Contract No. [illegible]-1100, Docket [illegible]-476, contained no specifications as to the number of hours of drilling delays, because such were not items of work but

costs incurred in connection with the performance of the drilling work. The 64 hours of delays, as estimated in the costs portion of Exhibit "A", were specified in neither Article 6 nor Exhibit "A" as a maximum, but the unit costs of the delays were maximums under Article 6.

Reference to Section III, pages 8-21 and the appendix following page 21, of the manual "Audit Procedure for Exploration Work under DMEA Exploration Contracts" may be of further assistance in clarification of this matter. Also, it is understood that a DMEA auditor will be visiting your office in the near future. He undoubtedly can help in resolving any additional questions you may have.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

APPROVED:

Frank D. Lamb

Member, Bureau of Mines

Thor H. Kiilsgaard

Member, Geological Survey

FDTalbert/wb
January 23, 1958

Copy to: Docket (2)
Admr. Reading File
Operating Committee
Mr. Bishop, USBM
Mr. McMahon, USBM
Mr. Kiilsgaard, USGS
Mr. Chambers
Helen R. Miller

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Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON XXXXXXXX~~
Room 13, Post Office Bldg.
Knoxville 2, Tenn.

January 20, 1958

Memorandum

To: Operating Committee, DMEA - Washington

From: DMEA Field Team, Region V - Knoxville, Tennessee

E 1100

Subject: Designation of "Maximums" in Contracts.

We need some clarification of the meaning of the second paragraph of Article 6 (a) of the long form contract, MF-200 (Revised June 1954). We are not sure what is meant by "to the extent specified" because of two apparently conflicting decisions.

In your letter of November 14, 1957 relative to DMEA-4674, Idm-E1103, you pointed out that "a fence of six holes" designates a maximum because it was not "a fence of approximately six holes." However, in a letter dated January 6, 1958, Mr. Talbert, referring to DMEA-4746, Idm-E1100, states that "neither Article 6 of the contract nor Exhibit 'A' provide that the estimate of 64 hours for drilling delays is a maximum." However, the wording in Exhibit 'A' is simply "Drilling delays, 64 hours @ $6.00/hr.", therefore we considered this to be a maximum and disallowed the excess over 64 even though the excess is considered reasonable and necessary. We do not find the word "approximately" used in connection with this item.

Please advise just what is necessary to interpret an item under actual costs as a maximum, and what wording implies that an item is not a maximum.

Robert A. Laurence
Executive Officer, DMEA
Region V

V. J. Lynch, Member
Bureau of Mines

RAL/zm
Lynch
Files

Audit copy

TERMINATION AGREEMENT

It is agreed this 18th day of December, 1957, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Appalachian Sulphides, Inc., hereinafter called the "Operator," parties to that certain Exploration Project Contract Idm-E1100, (Docket No. DMEA-4746), dated June 13, 1957, hereinafter called the "Contract," that:

1. Effective November 1, 1957, the Contract and all obligations of the parties thereunder, except as otherwise herein expressly provided, shall be and are hereby terminated.

2. The Government shall contribute only to the fixed unit costs of work performed prior to said effective date.

3. The Operator shall promptly perform all winding-up and settlement actions provided for in the Contract, including the rendering of the final report and final account.

4. All rights of the Government respecting certification of discovery or development, percentage royalty and liens to secure the payment thereof, reports (including preservation of Operator's records), audits, accounts, and the right to recover any overpayment are hereby preserved.

5. The Operator hereby releases and agrees to save the Government harmless from all claims or demands under or arising out of said Contract except as otherwise provided for in this Termination Agreement.

IN WITNESS WHEREOF, these parties have executed this agreement as of the day and year first above written.

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DATE | INITIALS | CODE
800

THE UNITED STATES OF AMERICA

By C. D. Mitendorf
Administrator, Defense Minerals
Exploration Administration

APPALACHIAN SULPHIDES, INC.

By John F. Cowley

Title General Manager

Audit copy

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EXPLORATION PROJECT CONTRACT
APPALACHIAN SULPHIDES, INC.
DOCKET NO. DMEA 4746

AMENDMENT NO. 1

It is agreed this 18th day of December, 1957, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and Appalachian Sulphides, Inc., that Exploration Project Contract No. Idm-E1100 (Docket No. DMEA-4746), dated June 13, 1957, is amended as follows:

In Exhibit "A" under "Estimated Costs of the Contract," the last item on page 3 is revised to read as follows:

"Depths in excess of 1,000 feet, 1,000 feet @ $3.15/ft. $3,150.00"

This Amendment shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may be required to contribute, the amount of any item designated as "maximum," nor the fixed unit cost of any item of work.

Executed in quintuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By C. Mitchell Dow
Administrator, Defense Minerals Exploration Administration

APPALACHIAN SULPHIDES, INC.

By John F. Cowley
Title General Manager

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 13 POST OFFICE BLDG.
WASHINGTON 25, D.C.
KNOXVILLE 2, TENN.

December 2, 1957

Air Mail

Memorandum

To: Operating Committee, DMEA, Washington, D. C.

From: Executive Officer, DMEA Field Team, Region [illegible]

Subject: [illegible] (Copper)
Appalachian Sulphides, Inc., South Strafford, Vermont
Elizabeth Mine, Orange County, Vermont

Reference is made to my letter of September 5, 1957 to the Operator, two copies of which were sent to you on December 2. By some oversight, copies were not sent to you at the time.

At the time, I studied the contract carefully and decided that the "1000 feet" referred to was not specified as a maximum, and therefore I authorized drilling in excess of the 1000 feet in that particular depth group. In the light of other recent contracts, I now realize this may have been a wrong interpretation and I may have exceeded my authority. The excess over 1000 feet has not yet been paid for, but it has been drilled, and is claimed on the Operator's final voucher, which we forwarded this week to Mr. Chambers for final audit.

It is the Field Team's opinion that this drilling was justified and we recommend approval of it, and preparation of an amendment if you consider one to be required.

Robert A. Lawrence

RAL/mg
cc - Operating Committee (2)
Mr. Jay L. Chambers
Mr. W. J. Lynch
Mr. W. F. Turmeister
File

MME Form 14
Sept. 1958

Contract No. Idm-E) 1300
~~14-23~~)

Docket No. DMEA) 4746
MME)

Date of Action 1/30/59

DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

Reobligation

OBLIGATION DOCUMENT

To: Chief, Accounts Section, Finance Branch, Bureau of Mines

From: Director, Division of Operations Control and Statistics

Please enter the amounts shown below on the accounts of the Office of Minerals Exploration.

Name and Address of Contractor: Appalachian Sulphides, Inc.
South Strafford
Vermont

Date of Contract	Region	State	Commodity
June 13, 1957	V	Vermont	Copper
	Reserve		Obligation
Prior Amount	0		22,858.48
Increase	0		213.50
Decrease	0		0
Revised Amount	0		23,071.98

Remarks:

cc: 800
210

43244

DMEA Form 14

Contract No. Idm-E 1100

Docket No. 4746

DEPARTMENT OF THE INTERIOR

Additional release

DEFENSE MINERALS EXPLORATION ADMINISTRATION

Obligation Document

TO: Chief, Finance Section, Budget and Finance Branch, Bureau of Mines

Please make the following entry on the records of the Defense Minerals Exploration Administration under the Strategic and Critical Minerals Exploration Program.

Date of Contract	Region	State	Commodity
June 13, 1957	V	Vermont	Copper

Name and Address of Operator: Appalachian Sulphides, Inc.
South Strafford
Vermont

	Reserve	Obligation
Prior Amount	0	23,071.98
Increase	0	0
Decrease	0	213.50
Revised Amount	0	22,858.48

Remarks:

(Name)
Allen S. Dukang, Chief
Operations Control and
Statistics Division
(Title)

Date delivered to Bureau of Mines, Washington 8/8/58

22845

DMEA Form 14

Contract No. Idm-E 1100

Docket No. ~~4746~~

DEPARTMENT OF THE INTERIOR

Reobligation

DEFENSE MINERALS EXPLORATION ADMINISTRATION

Obligation Document

TO: Chief, Finance Section, Budget and Finance Branch, Bureau of Mines

Please make the following entry on the records of the Defense Minerals Exploration Administration under the Strategic and Critical Minerals Exploration Program.

Date of Contract	Region	State	Commodity
June 13, 1957	V	Vermont	Copper

Name and Address of Operator: Appalachian Sulphides, Inc.
South Strafford
Vermont

	Reserve	Obligation
Prior Amount	0	22,982.22
Increase	89.76	89.76
Decrease	~~89.76~~	~~0~~
Revised Amount	0	23,071.98

Remarks:

(Name)
Allen S. Baken, Chief
Operations Control and
Statistics Division
(Title)

Date delivered to Bureau of Mines, Washington 2/21/58

22845

DMEA Form 14

Contract No. Idm-E1100

Docket No. 4746

DEPARTMENT OF THE INTERIOR

Terminated contract

DEFENSE MINERALS EXPLORATION ADMINISTRATION

Obligation Document

TO: Chief, Finance Section, Budget and Finance Branch, Bureau of Mines

Please make the following entry on the records of the Defense Minerals Exploration Administration under the Strategic and Critical Minerals Exploration Program.

Date of Contract	Region	State	Commodity
June 13, 1957	V	Vermont	Copper

Name and Address of Operator: Appalachian Sulphides, Inc.
South Strafford
Vermont

	Reserve	Obligation
Prior Amount	0	31,430.00
Increase	0	0
Decrease	0	8,447.78
Revised Amount	0	22,982.22

Remarks:

(Name)
Allen S. Baken, Chief
Operations Control and
Statistics Division
(Title)

Date delivered to Bureau of Mines, Washington 1/30/59

22845

DMEA Form 14

Contract No. Idm-E 1100

Docket No. 4746

Executed ~~Approved~~ contract

DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

Obligation Document

TO: Chief, Finance Section, Budget and Finance Branch, Bureau of Mines

Please make the following entry on the records of the Defense Minerals Exploration Administration under the Strategic and Critical Minerals Exploration Program.

Date of Contract	Region	State	Commodity
June 13, 1957	V	Vermont	Copper

Name and Address of Operator: Appalachian Sulphides, Inc.
South Strafford
Vermont

	Reserve	Obligation
Prior Amount	$31,430.00	0
Increase	0	$31,430.00
Decrease	$31,430.00	0
Revised Amount	0	$31,430.00

Remarks:

ALLEN S. DAKAN
(Name)

Allen S. Dakan, Chief
Operations Control and
Statistics Division
(Title)

Date Delivered to Bureau of Mines, Washington 7/2/57

16416

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DMEA
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MF-200
(Revised June 1954)

Docket No. DMEA 4749

Commodity Copper

Contract No. Idm-E 1100

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

EXPLORATION PROJECT CONTRACT[1]

It is agreed this 13 JUN 1957 day of ....., 195..., between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and [2] APPALACHIAN SULPHUR, INC., a Delaware Corporation, whose mailing address is South Strafford, Vermont, hereinafter called the "Operator," as follows:

ARTICLE 1. *This contract* is entered into under the authority of the Defense Production Act of 1950, as amended. It consists of this form (MF-200), the attached Exhibit "A," Annex I, and two maps.

The Operator shall not transfer or assign this contract or any right thereunder without the written consent of the Government.

ARTICLE 2. *Operator's property rights.*—(a) The land which is the subject of this contract (hereinafter called "the land") is in the State of Vermont, County of Orange, and is described in Annex I.[3]

(b) The Operator represents and undertakes that:

(1) The Operator is the [4] owner of [5] entire interest in the land, in possession and entitled to possession for all of the purposes of this contract, under and by virtue of a [6] ....., [7] ....recorded in Book ....., page ....., official records of said County; and

(2) The Operator's right, title, or interest (whether as owner, lessee, or otherwise) is subject only to the following claims, liens, or encumbrances: none

(c) The Subordination Agreement of the holder of any claim, lien, or encumbrance listed above, and (if the Operator does not hold the legal title) the Consent to Lien of any holder of the legal title

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] Insert name, and if an organization, its nature (corporation and place of incorporation, partnership with names of partners, etc.).
[3] State on a separate sheet marked "Annex I" the legal description or enough to identify the property, particularly excluding any areas from which the production is not to be subject to the Government's percentage royalty.
[4] Insert "owner," "lessee," "contract purchaser," "locator," etc.
[5] Insert "the entire interest," "the mineral rights," "an undivided one-third," etc.
[6] Insert "deed," "lease," "contract," "location notice," "patent," etc.
[7] If not recorded, so indicate by inserting "un."

of the land (lessor, seller, optionor, etc.), are attached, as follows: None

(d) The Operator shall preserve and maintain his right, title, and interest in the land and his right to the possession thereof for the purposes of this contract, and shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of this contract. Until the lapse of the time within which the Government may make a certification of discovery or development without any such certification having been made, and after any such certification has been made, the Operator shall neither transfer, convey, nor surrender the land nor any right, title, or interest therein, nor permit nor suffer any claim, lien, or encumbrance thereon, without expressly referring to and providing in the instrument of conveyance, lien, or encumbrance for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof. If the Government makes no certification of discovery or development within the time limited in Article 8, it shall thereafter have no claim against the land or any production therefrom except for any production referred to in Article 8(b)(1).

ARTICLE 3. *The exploration project.*—The project is a search for indicated or undeveloped deposits of copper. The work to be performed is described in Exhibit "A." The Operator on or before July 15, 1957 shall commence the work, and on or before July 15, 1958 (unless the Operator's obligation to prosecute the work is terminated—see Article 10) shall either have completed the work or shall have incurred allowable costs [redacted] in a sum not less than the estimated total allowable cost set forth in [redacted] See Article 13.

ARTICLE 4. *Performance of the work.*—(a) *Operator's responsibility.*—The work shall be performed with reasonable diligence, efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for liability insurance covering employment; and with suitable and adequate equipment, facilities, materials, supplies, and labor, to bring it to completion within the time fixed.

(b) *Independent contracts.*—To the extent that the allowable costs are estimated in Exhibit "A" with express reference to performance by independent contractors on a unit-price basis (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations), the work may be so performed; but if the reference in Exhibit "A" to any such independent contract requires the Government's approval thereof, payments under such contract will not be allowable costs unless the Government gives its written approval of the contract. Any such independent contract shall refer to some specific and identifiable part of the work, and shall be subject to all of the pertinent terms and conditions of this exploration contract; but the Government shall not be considered a party thereto, and its rights under this contract, including the right to terminate its contributions, shall not be affected thereby. Regardless of the provisions of any such independent contract and regardless of the Government's approval thereof, the Government will participate in payments to the independent contractor only on account of work performed in accordance with the provisions of this exploration project contract, and only to the extent that the Government deems the unit prices for the work under the independent contract to be reasonable.

(c) *Government may inspect.*—The Operator shall consult with and inform the Government on all phases of the work as it progresses. The Government may enter at all reasonable times to inspect the work under the contract, and also after a certification of discovery or development to inspect production operations and underground workings. The operator shall provide the Government with all reasonable means of access for such inspections.

ARTICLE 5. *Contribution by the Government.*—The estimated total allowable cost of the project, set forth in Exhibit "A," is the sum of $62,860.00. The Government shall contribute ..... percent of the allowable costs as they are incurred in a total sum not in excess of $31,430.00: *Provided,* That until the Operator has rendered to the Government his final report, and any final auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last

voucher or vouchers such sums as it sees fit not in excess of 10 percent of the estimated total cost of the work or not in excess of the amount of the Government's contribution to the cost of property which is or may become subject to disposal as provided in Article 9(c), whichever is greater. The Government will make its contribution on the basis of the monthly vouchers referred to in Article 7(b), but all payments by the Government are provisional only, subject to audit, until the account between the Operator and the Government is finally audited and settled. "Costs incurred" mean costs that have been paid or have become due and payable, or that in the opinion of the Government have become an obligation. The Government may make payments directly to independent contractors and suppliers for the account of the Operator rather than to the Operator.

ARTICLE 6. *Estimated costs.*—(a) *Categories of costs.*—The allowable costs of the work to which the Government shall contribute are limited to those that are direct, reasonable, necessary, and that are estimated in Exhibit "A" by categories as specified in this article. If any category or subcategory is omitted from the estimate of costs, or if the word "none" is annexed to the listing thereof, costs under such category or subcategory are not allowable. Any excess over any estimate which is indicated as the maximum of any category, subcategory, or item, either as to requirement or related cost, and any excess over the estimated total allowable cost of the work, shall not be allowable. Any excess over the estimate of any category, subcategory, or item, either as to requirement or related cost, not indicated as a maximum shall be allowable within the limit of the estimated total allowable cost of the work. To the extent that excesses over maximums other than the estimated total allowable cost of the work may be necessary for the performance of the work, the Operator shall incur such excesses for his own account without contribution by the Government; [redacted] See Article 13.

To the extent specified in this article or in Exhibit "A" the following categories, subcategories, and elements thereof are maximums; but if not so specified either here or in Exhibit "A" they are not maximums, and may be exceeded within the limit of the estimated total allowable cost of the work:

CATEGORY (1)—INDEPENDENT CONTRACTS.—Work to be performed under independent contracts (see Article 4(b)). The estimated total amount of this category and the estimated cost of each unit of work for performance under an independent contract are maximums. See Article 13.

CATEGORY (2)—PERSONAL SERVICES.

Subcategory (a)—Supervision.—All elements of this subcategory (number of supervisors, periods of employment, rates of pay, and total) are maximums.

Subcategory (b)—Technical services.—All elements of this subcategory (number of technicians, periods of employment, rates of pay, and total) are maximums.

Subcategory (c)—Labor.

CATEGORY (3)—OPERATING MATERIALS AND SUPPLIES.—Includes such items as drill bits and steel, explosives, fuel, pipe, power, small tools costing less than $50 each, timber, track.

CATEGORY (4)—OPERATING EQUIPMENT.

Subcategory (a)—Rental.—The number of each object to be rented [6 mine cars, 1 truck], the rate of rental [$100 per month, $5 per hour], and the total of this subcategory are maximums.

Subcategory (b)—Purchases.—The estimated total of this subcategory is a maximum.

Subcategory (c)—Depreciation.—All elements of this subcategory (time periods, rate of depreciation, and subcategory total) are maximums.

CATEGORY (5)—INITIAL REHABILITATION AND REPAIRS.—Estimates under this category include all requirements and related costs, such as labor, materials and supplies, and supervision at a rate not higher than provided for in Category (2), and shall not be duplicated under any other category. The estimated total of this category is a maximum.

Subcategory (a)—Initial rehabilitation and repairs of existing buildings, fixtures, and installations (exclusive of mine workings).—The estimated total of this subcategory is a maximum.

Subcategory (b)—Initial rehabilitation and repairs of operating equipment.—The estimated total of this subcategory is a maximum.

CATEGORY (6)—NEW BUILDINGS, FIXTURES, AND INSTALLATIONS (EXCLUSIVE OF MINE WORKINGS).—Estimates under this category include all requirements and related costs, such as labor, materials and supplies, and supervision at a rate not higher than provided for in Category (2), and shall not be duplicated under any other category. The estimated total of this category is a maximum.

CATEGORY (7)—MISCELLANEOUS.—Repairs and maintenance (other than initial) of operating equipment, analytical work, prints and other reproductions, accounting, Operator's share of payroll taxes, liability insurance covering employment, travel, communications, and any other items of requirement or cost that do not fall within any of the first 6 categories.

THE ESTIMATED TOTAL ALLOWABLE COST of the work is a maximum.

(b) *Nonallowable costs.*—The following costs are not allowable for contribution by the Government:

(1) *Costs of the land,* such as rental, depreciation, depletion, or other cost of acquiring, owning, or holding possession;

(2) *Indirect costs,* such as general overhead, corporate management, interest, taxes (other than payroll and sales taxes), insurance (other than liability insurance covering employment), damages to persons, damages to property (other than necessary repairs or replacements of equipment or other property used in the work);

(3) *Previous work* performed or costs incurred before the date of this contract; and

(4) *Deferred payments.*—Any costs incurred by the Operator under any rental-purchase agreement, installment-purchase agreement, or any agreement for the purchase of goods under the provisions of which payment of the full purchase price is deferred more than 90 days from the delivery of the goods; unless the purchase agreement is approved by the Government in writing.

(c) *Reductions in costs.*—The Operator shall account for and give the Government credit for any incidental benefits, credits, or money received in the ordinary course of business in prosecuting the work (as by salvage or sale of materials or equipment, furnishing of room or board, furnishing of power or services to third persons, rebates or discounts on purchases, etc.), in the same ratio in which the Government contributes to costs; and such amounts shall be treated as a reduction in costs incurred so that they are available for use within the limit of the original estimated total cost. This provision does not apply to receipts from production which are subject to the Government's percentage royalty under the provisions of Article 8. See Article 13.

ARTICLE 7. *Reports, accounts, audits.*—(a) *Operator's records.*—The Operator shall keep suitable records and accounts of the work performed and of any production in which the Government may have an interest; and shall preserve those with respect to work performed for at least three years after final payment by the Government, and those with respect to production for at least three years after any obligation to pay royalties to the Government has terminated. The Government may inspect and audit said records and accounts at any time, either by itself or by a certified public accountant. If the Government elects to audit said records and accounts relating to the exploration work by certified public accountant, it may do so as a cost of the work to which the Operator shall contribute. The Comptroller General of the United States or his representative, until the expiration of said three-year periods, shall have access to and the right to examine any pertinent books, documents, papers, and records of the Operator. All of the Operator's vouchers and records and accounts relating thereto and the Government's payments thereof remain subject to adjustment until final audit by the Government. If work under this contract is carried on in conjunction with any other operations, or if labor, supervision, services, materials, supplies, equipment, facilities, or other requirements for carrying on the work are also used in connection with other operations, the costs shall be segregated and accounted for on a basis and by methods and accounts that are satisfactory to and approved by the Government.

(b) *Progress reports and vouchers.*—The Operator shall provide the Government with five copies of monthly progress reports in three sections as follows: (1) Operator's Monthly Report and Voucher showing detailed costs incurred during the reporting period; (2) Operator's Unit Cost and Progress Report showing the various types of work performed during the reporting period and costs incurred for each type of work; and (3) a Narrative Report of the work performed during the reporting period including adequate engineering-geological maps or sketches, drill hole logs and locations, and assay reports on samples taken concurrently with advance in mineralized ground. (Forms for reporting under (1) and (2) above will be provided by the Government.)

(c) *Final report.*—Upon completion of the work or termination of the Government's obligation to contribute to costs, the Operator shall furnish the Government with five copies of a final report (in addition to the final progress report and voucher). This final report shall include a geological and engineering evaluation of the results of the work performed under the contract with an estimate of the ore reserves resulting from such work, complete assay data, adequate geological and engineering maps or sketches, and a summary of the work performed and related costs incurred.

(d) *Report of sales.*—The Operator shall provide the Government with suitable accounting and documentary evidence covering all production to which the Government's percentage royalty relates, such as copies of smelter or concentrator settlement sheets, and certified accounts of production and sale or other disposition of production.

(e) *Compliance with requirements.*—If in the opinion of the Government any of the Operator's reports, records, or accounts are insufficient or incomplete, or if the Operator fails to make them, the Government may procure the making or completion of such with suitable attachments as an expense of the work to which the Operator shall contribute. The Government may withhold approval and payment of any vouchers relating to insufficient or incomplete reports, records, or accounts.

ARTICLE 8. *Repayment by Operator.*—(a) *Certification.*—If the Government considers that a discovery or development from which production may be made has resulted from the work, the Government, at any time not later than six months after a sufficient final report and final account (see Article 7) has been rendered, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development.

(b) *Royalty on production.*—The Operator, as principal if the Operator is the producer, or as surety if the Operator is not the producer, shall pay to the Government a royalty on all minerals mined or produced from the land, as follows: (1) regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first; or (2) if the Government makes a certification of discovery or development, within a period of ten years from the date of the contract, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first.

(c) *Basis for computation.*—The Government's royalty shall be a percentage of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrates, metal, or equivalent), at the point of delivery (the f. o. b. point); *except,* that charges of *the buyer* arising in the regular course of business, and shown as deductions on the buyer's settlement sheets, on account of the cost of treatment processes performed by *the buyer,* sampling and assaying to determine the value of the production sold, and freight paid by *the buyer* to a carrier (not the Operator), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. Any costs of treatment processes, sampling or assaying, or transportation, performed or paid by the Operator or by anyone other than the buyer, are not deductible in arriving at the "gross proceeds" as that term is here used. The term "treatment processes," as here used, means those processes (such as milling, concentrating, smelting, refining, or equivalent) applied to the crude ore or other production after it is extracted from the ground, to put it into a commercially marketable form; excluding fabricating or manufacturing.

(d) *Unsold production.*—If any production (ore, concentrates, metal, or equivalent), after the lapse of six months from the date the ore was extracted from the ground, remains neither sold nor used by the Operator in integrated manufacturing or fabricating operations (for instance, if it is stockpiled), the Government, at its option, as long as it so remains, may require the computation and payment of its royalty on the value of such production in the form (ore, concentrates, metal, or equivalent) it is in when the Government elects to require computation and payment. If any production is used by the Operator in integrated manufacturing or fabricating operations before the Government makes its election, the Government's royalty on such production shall be computed on the value therof in the form in which and at the time when it is so used. "Value" as here used means what is or would be gross income from mining operations for percentage depletion purposes in Federal income tax determination, or the market value, whichever is greater.

(e) *Percentages of royalty.*—The percentages of the Government's royalty shall be as follows:

One and one-half (1½) percent of amounts ("gross proceeds" or "value") not in excess of eight dollars ($8.00) per ton of production in the form in which sold, held, or used, plus one-half (½)

percent for each additional full fifty cents ($0.50) by which such amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) percent of such amounts.

(For instance: the royalty on an amount of five dollars ($5.00) per ton would be one and one-half (1½) percent; on an amount of ten dollars ($10.00) per ton, three and one-half (3½) percent.)

(f) *Time for computation and payment.*—The Government's royalty shall be computed and paid currently upon each lot sold, held, or used in integrated operations, as the case may be, as above provided in this article.

(g) *Lien for payment.*—To secure the payment of its percentage royalty, there is hereby granted to the Government a lien upon the land or the Operator's interest in the land and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

(h) *Notice to purchasers.*—The Operator shall give notice of the Government's claim for royalty to any purchaser of the production, and shall authorize and direct such purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets. If the records of any production and sales or other disposition of production, whether the production is by the Operator or by others, are not made available to the Government, the amount of the royalty may be estimated by the Administrator, Defense Minerals Exploration Administration, or his successor, and his estimate thereof shall be final and binding upon the Operator.

(i) *No obligation to produce.*—Nothing in this contract is to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any production operations.

(j) *Government not obligated to buy.*—Nothing in this contract shall be construed as imposing any obligation on the Government to purchase any minerals mined or produced from the land.

ARTICLE 9. *Interests in purchased property.*—(a) *Title and ownership.*—All costs under this contract shall be incurred by the Operator in the Operator's own name and for the Operator's own account; but any property acquired to the cost of which the Government contributes shall belong to the Operator and the Government jointly in proportion to their respective contributions, although title thereto shall be taken in the name of the Operator.

(b) *Preservation of property.*—Until the final disposal of any property in which the Government has an interest the Operator shall preserve and protect same for the best interest of the Government, any reasonable and necessary costs thereof to be treated as an allowable cost of the project. After the completion of the work or termination of the Government's obligation to contribute, or when such property is not in use for or needed for the work, the Operator shall neither use it without the written consent of the Government nor without paying a reasonable rental to be fixed by the Government for its interest.

(c) *Disposal of property.*—Upon the completion of the work or termination of the Government's obligation to contribute to costs, or when the property is no longer needed for the work, the Operator shall promptly dispose of salable or salvageable property in which the Government has an interest for the joint account of the Government and the Operator, either by return to the vendor, by sale to others, or purchase by the Operator or the Government at a price at least as high as could be obtained from others, unless the Government in writing waives its interest in any such property. Without advance approval of the sales price by the Government the Operator shall not sell at any price any item of property the cost of which was more than $500, and shall not sell at less than 25 percent of the purchase price any item of property which cost $500 or less. The Government, in lieu of approving the sales price for any such item, may itself purchase the item at the best price which the Operator is able to obtain or himself cares to give. Property remaining upon any termination of the work shall be considered in groups or categories (such as drill steel, or explosives, or pipe, or rails), and if the original cost of the remaining unexpended portion of any such group or category is less than $50, the Government waives its interest therein. If necessary to accomplish the disposal of any item the Operator shall dismantle and sever it from the land, the cost thereof to be treated as a cost of the project.

(d) *Default of the Operator re disposal.*—If within 90 days after the completion of the work or termination of the Government's obligation to contribute to costs, or after the property is no longer needed for the work, or after such further time as the Government may in writing allow, the Operator has failed to sell or otherwise liquidate or dispose of any property in which the Government has an interest, the Government, at any time prior to final settlement under the contract, may pursue one of the following two courses: (1) the Government, by written notice to the Operator, may place upon such property what in its opinion is a fair valuation thereof, not in excess of the cost less 1.66 percent per month from the

date such property was purchased under this contract to the termination of said 90-day period; and such property shall thereupon be considered and accounted for as having been purchased by the Operator at the valuation so fixed by the Government; or (2) the Government may enter and take possession of such property wherever it may be found, and remove and dispose of it for the joint account of the parties.

ARTICLE 10. *Termination of the Government's obligations.*—(a) If in the opinion of the Government operations at any time have failed to achieve anticipated results that indicate the probability of making a worthwhile discovery, and in the opinion of the Government further operations are not justified, the Government may give the Operator written notice thereof, and thereupon: (1) the Government shall be free of all obligation to contribute to costs not then incurred other than such as may be allowable under the provisions of the contract as necessary and incidental to winding up, reporting, and accounting; and (2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting.

(b) If in the opinion of the Government the Operator is in any manner in default under the terms of the contract, the Government may give the Operator written notice of such default with a specification of reasonable time within which the default must be cured; and if the Operator fails to cure such default as required, thereupon: (1) the Government shall be relieved of all obligation to contribute to costs not incurred when the notice was given, other than such as may be allowable by the provisions of the contract as necessary and incidental to winding up, reporting, and accounting; and (2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting. The remedy provided for the Government in this paragraph "(b)" is in addition to any other remedy provided in this contract, and in addition to any other remedy the law may provide for breach of contract.

(c) The giving of any notice by the Government under the provisions of this Article 10 shall not affect the Government's rights as provided for in the contract with respect to a percentage royalty, and such rights shall be fully preserved.

ARTICLE 11. *Notices to be given by the Government* may be delivered to the Operator, or may be sent by registered mail addressed to the Operator at his mailing address stated in this contract. If mailed, notices are deemed to have been delivered five days after the date of mailing.

ARTICLE 12. *Officials not to benefit.*—No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 13. *Changes and added provisions.*—

(a) In Article 3, the words following the reference to Article 10 are deleted, and the following words are substituted: "shall have completed the work."

(b) In Article 6(a), that part of the last sentence in the first paragraph beginning after the semicolon is deleted.

(c) Categories (2) through (7) of Article 6(a) are deleted.

(d) In Article 6(c), the words "Article 9" are changed to "Article 8."

(e) In addition to the costs of work estimated in Exhibit "A" by categories of actual costs, the costs of work requirements specified in Exhibit "A" as "Fixed Unit Costs" are allowable costs of the project. The Government will contribute to the fixed unit costs as work units are performed. A "Fixed Unit Cost" is an agreed price for each unit of work to be performed regardless of costs incurred by the Operator. Costs set forth in Exhibit "A" include all allowable costs of the work to be performed under the contract.

(f) Notwithstanding any other provision of the contract, the allowable unit cost per foot of a drilling item is the average unit cost per foot computed on the basis of all the actual unit costs of said drilling item incurred by the Operator: Provided, That the Government will not contribute to any portion of an average unit cost of a drilling item that exceeds the estimated unit cost of said item set forth in the contract.

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By O. P. Mitchendorf

Administrator, Defense Minerals Exploration Administration

APPALACHIAN SULPHIDES INCORPORATED
(Operator)

By J. M. Cunningham-Dunlop

Title President

I, FRANK C. SULLIVAN, certify that I am the Assistant Secretary of the corporation named as Operator herein; that J. M. CUNNINGHAM-DUNLOP who signed this contract on behalf of the Operator, was then President of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

F. C. Sullivan

Assistant Secretary

[CORPORATE SEAL]

U. S. GOVERNMENT PRINTING OFFICE 16—70617-1

EXPLORATION PROJECT CONTRACT
APPALACHIAN SULPHIDES, INCORPORATED
DOCKET NO. DMEA-4746

ANNEX I

The land referred to in Article 2 of the contract is shown outlined on the attached map entitled "Plan of Elizabeth Mine Area, South Strafford, Vermont," and is described as follows:

That area of land lying in the Township of Strafford, Orange County, Vermont, and bounded as follows:

Starting at the center of the highway leading from Strafford to Norwich at a point opposite an iron pipe set in a stone wall on the South side of the highway. Thence south 66° west 306 feet to an iron pipe set in a pile of stones. Thence south 8° 15' west 2700 feet to an iron pipe in the line of J. W. Tyson. Thence south 63° 30' east 1154 feet to an iron pipe set in a stone wall on the east side of the highway leading from Strafford to Norwich. Thence south 64° east 1625 feet to an iron pipe set in a stone wall. Thence south 31° west 3561 feet to an iron pipe. Thence south 84° 45' east 2850 feet along coordinate 7000 north. Thence north 5° 15' east 8500 feet along coordinate 9200 west. Thence north 84° 45' west 2990 feet along coordinate 15,300 north to a point on the highway leading from Route 132 to the mine. Thence along the line of said highway 460 feet to an iron pipe set at the end of a stone wall on the south side of the highway. Thence south 84° 45' west 1602 feet to an iron pipe at the intersection of two fences on the east side of a brook. Thence north 60° 45' west 1038 feet to an iron pipe set in the fence corner on the north side of the highway. Thence 23 feet to a point in the highway opposite the last-mentioned iron pipe. Thence 400 feet along the line of the highway to the starting point.

EXCLUDED LAND

Ore bodies known to exist as of the date of this contract are excepted from the land described above and are shown in color (red, blue, and green) on the attached map entitled "Longitudinal Section, The Elizabeth Mine, Appalachian Sulphides, Inc., South Strafford, Vt."

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DMEA
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DATE | SUBJECT | CODE

EXPLORATION PROJECT CONTRACT
APPALACHIAN SULPHIDES, INCORPORATED
DOCKET NO. DMEA-4746

EXHIBIT A

Description of the Work

The purpose of the project is to explore for ores of copper by diamond core drilling, from both surface and underground locations, with such overburden drilling as may be necessary.

It is estimated that twenty-eight drill holes will be drilled, ranging in depths from 300 to 1500 feet, the total combined footage not to exceed 19,200 feet of hole. Drilling shall be done with EX size, or larger, coring bits.

The drilling shall be done along certain cross-sectional east-west planes related to the mine coordinate system, as follows:

North	latitude	7442
"	"	8800
"	"	10084
"	"	10900
"	"	12100
"	"	12500
"	"	13100
"	"	14000
"	"	15100

Drill holes shall be reamed and cased or cemented and redrilled as necessary.

The tentative locations of the holes are shown on the attached map entitled "Plan of Elizabeth Mine Area, South Strafford, Vermont", and the holes are tentatively delineated as follows:

Number	Location	Length	Angle
Plane N. 7442			
1002	Surface 9155 W	1,200 ft.	-65°
1001	" 9390 W	900 ft.	-65°
1000	" 9630 W	600 ft.	-65°

Number	Location	Length	Angle
Plane N. 8800			
1004	Surface 9275 W	1,100 ft.	-65°
1003	" 9600 W	700 ft.	-65°
Plane N. 10084			
796	Deepen existing hole	300 ft.	
Plane N. 10900			
1006	Surface 9250 W	1,500 ft.	-65°
1005	Underground 9855 W	600 ft.	-65°
Plane N. 12100			
1008	Underground 9695 W	650 ft.	-40°
1007	" " 9695 W	450 ft.	-13°
Plane N. 12500			
1013	Underground 9730 W	500 ft.	-17°
1012	" " 9840 W	450 ft.	-34°
1011	" " 9840 W	350 ft.	0°
1010	" " 9840 W	400 ft.	-30°
1009	" " 9840 W	300 ft.	0°
Plane N. 13100			
1017	Underground 9695 W	500 ft.	-68°
1016	" " 9695 W	750 ft.	-36°
1015	" " 9895 W	700 ft.	-53°
1014	" " 9895 W	600 ft.	-40°
Plane N. 14000			
1018	Underground 9845 W	550 ft.	-15°
1020	Surface 9980 W	600 ft.	-62°
1019	" 10160 W	800 ft.	-63°
1021	" 10480 W	800 ft.	-63°
1022	" 10740 W	600 ft.	-63°
Plane N. 15100			
1023	Underground 9985 W	700 ft.	-20°
1026	Surface 10540 W	1,200 ft.	-45°
1025	" 10950 W	800 ft.	-45°
1024	" 11305 W	600 ft.	-45°

All locations, lengths and angles of inclination are approximate. All hole directions are westerly, with respect to the mine grid north. The actual locations, directions, inclinations, and depths of all holes are subject to prior Government approval.

All drill holes shall be logged and all drill core shall be properly stored and made available to the Government for examination. All significantly mineralized core shall be split and one half thereof shall be properly sampled and assayed for copper. The remaining half of all significantly mineralized core samples shall be furnished to the Government upon request.

As required by Article 7(b) of the contract, assay reports shall be submitted monthly to the Government, together with drill logs and adequate engineering-geological plan maps and sections, showing the progress of the work and sample locations.

All work of drilling and sample preparation shall be properly supervised by competent engineers or geologists.

Bulldozing shall be performed with a D-6 or equivalent unit.

Estimated Costs of the Project

Actual Costs

Category (1) Independent Contracts

Drilling from surface

Overburden drilling, 280 feet @ $4.00/ft.	$ 1,120.00	
Diamond drilling		
0- to 500-foot depth 6,220 feet @ $2.40/ft.	14,928.00	
500- to 1000-foot depth 3,900 feet @ $2.65/ft.	10,335.00	
1000- to 1500-foot depth 1,000 feet @ $3.15/ft.	3,150.00	$29,533.00

Underground diamond core drilling

0- to 750-foot depth 7,500 feet @ $2.40/ft.	$18,000.00	
750- to 1000-foot depth 300 feet @ $2.60/ft.	780.00	$18,780.00
Tro-pari and/or acid surveys 192 hours @ $6.00/hr.	1,152.00	
Drilling delays 64 hours @ $6.00/hr.	384.00	1,536.00
		$49,649.00

Categories (2) through (7) None

Fixed Unit Costs (See Article 13 of the contract)

Incidental allowance 1/ for each foot of surface drilling completed 11,400 feet @ $0.37/ft.	4,218.00	
Incidental allowance 1/ for each foot of underground drilling completed 7,800 feet @ $0.69/ft.	5,382.00	
720 core boxes @ $2.00/each	1,440.00	
208 hours bulldozing @ $8.50/hr., including operator and all bulldozing costs whatsoever	1,768.00	
203 samples assayed @ $1.00/sample	203.00	13,011.00

SUMMARY

Total Independent Contracts	$49,649.00	
Total Fixed Unit Costs	13,011.00	
Estimated Total Cost of Project		$62,860.00
Government Participation @ 50%		$31,430.00

1/ Includes all costs of the work that might have been estimated and allowed under Categories (1) through (7), except those costs for which estimates are made in Exhibit "A".

DMEA Form 14

Contract No. Idm-E 1100

Docket No. 4746

DEPARTMENT OF THE INTERIOR

Approved contract

DEFENSE MINERALS EXPLORATION ADMINISTRATION

Obligation Document

TO: Chief, Finance Section, Budget and Finance Branch, Bureau of Mines

Please make the following entry on the records of the Defense Minerals Exploration Administration under the Strategic and Critical Minerals Exploration Program.

Date of Contract	Region	State	Commodity
June 13, 1957	V	Vermont	Copper

Name and Address of Operator: Appalachian Sulphides, Inc.
South Strafford
Vermont

	Reserve	Obligation
Prior Amount	0	0
Increase	$31,430.00	0
Decrease	0	0
Revised Amount	$31,430.00	0

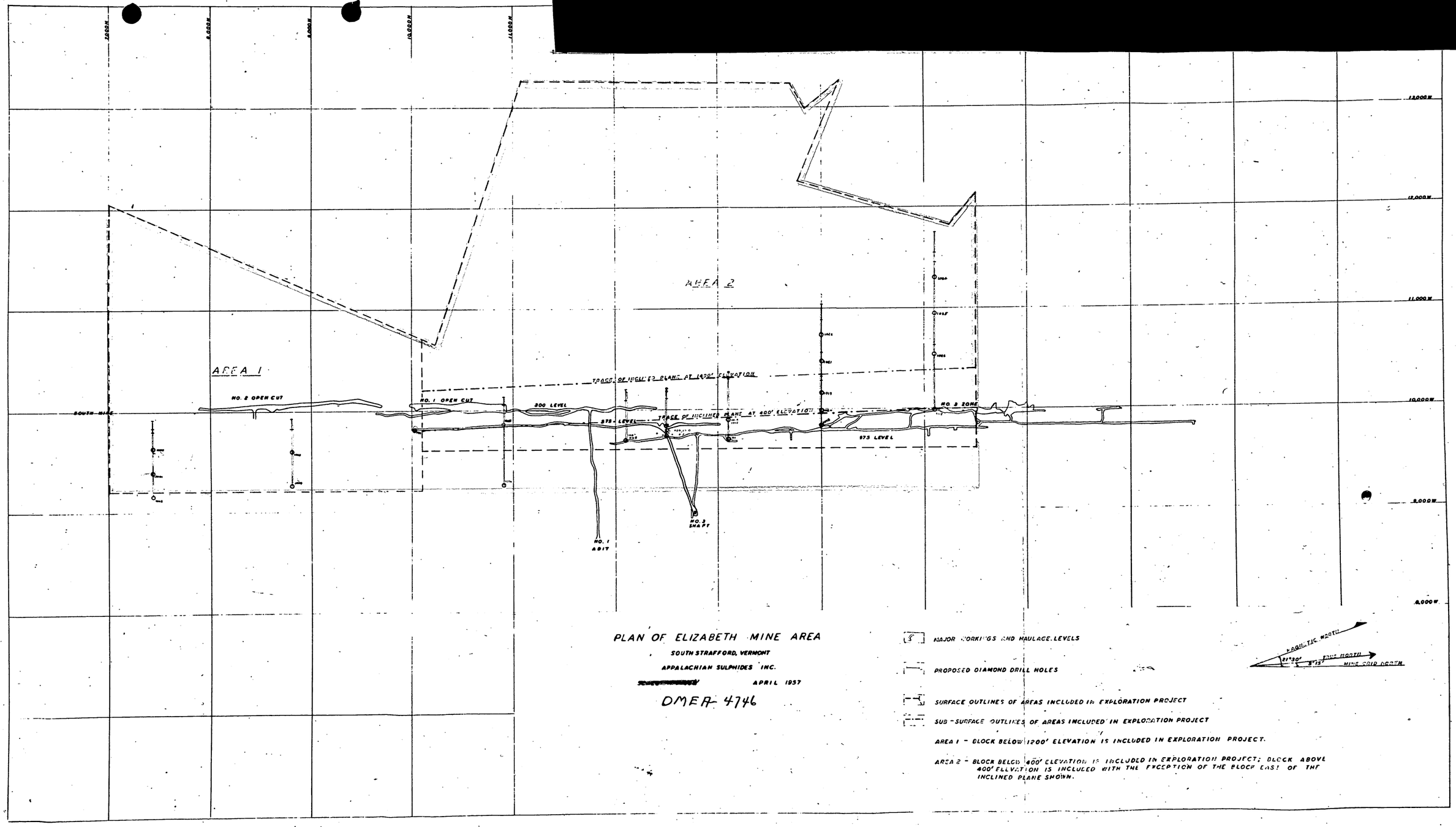
Remarks:

ALLEN S. DAKAN
(Name)

Allen S. Dakan, Chief
Operations Control and
Statistics Division
(Title)

Date Delivered to Bureau of Mines, Washington 6/13/57

16416



PLAN OF ELIZABETH MINE AREA

SOUTH STRAFFORD, VERMONT

APPALACHIAN SULPHIDES INC.

[redacted] APRIL 1957

OMEA 4746

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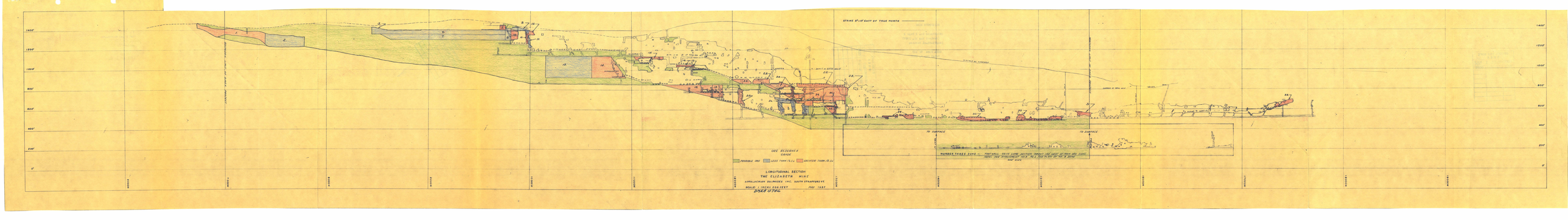
RECEIVED JUL 1 1957

DATE	[illegible]	CODE


STRIKE 5°-10° EAST OF TRUE NORTH
1400'
1200'
1000'
800'
600'
400'
200'
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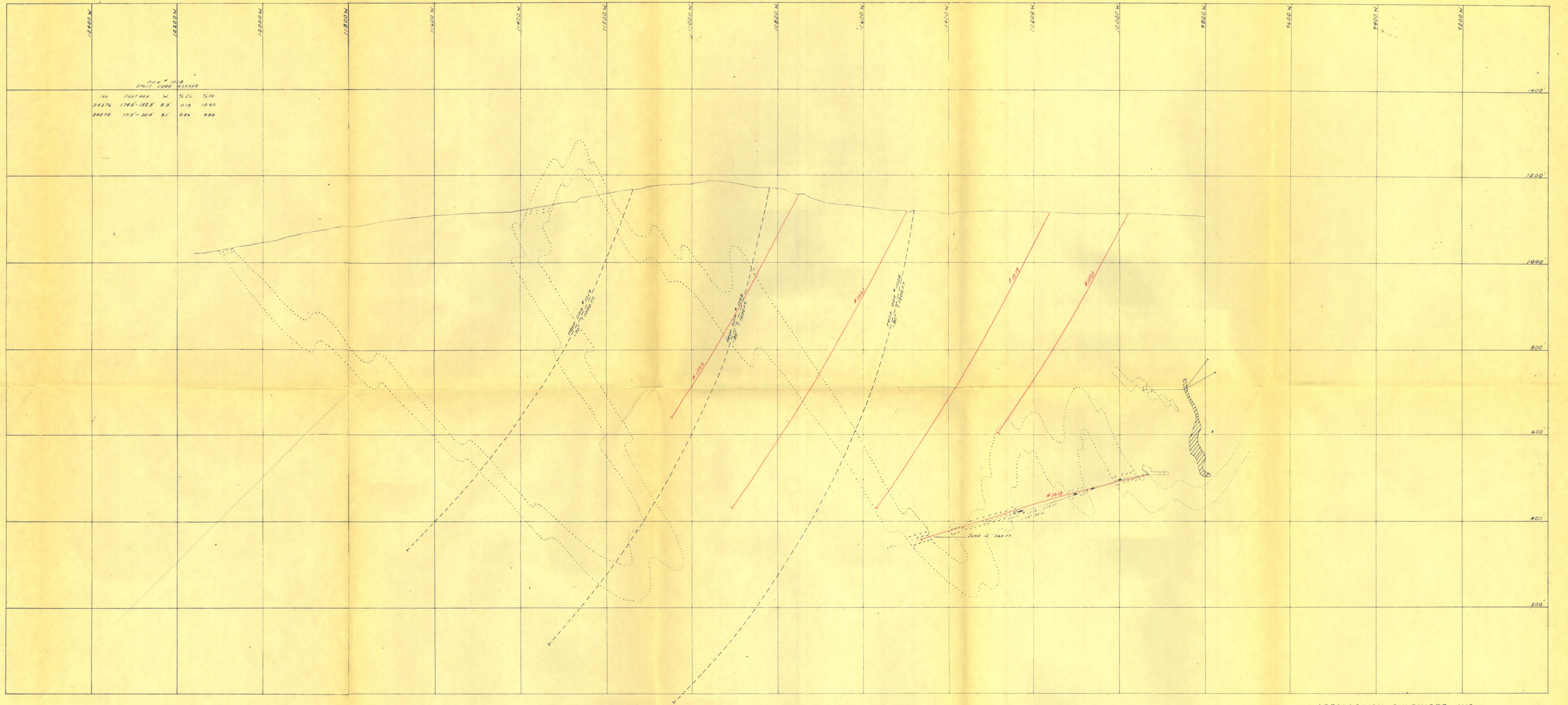
ORE RESERVES
GRADE
PROBABLE ORE
LESS THAN .5% Cu
GREATER THAN .5% Cu
LONGITUDINAL SECTION
THE ELIZABETH MINE
APPALACHIAN SULPHIDES INC. SOUTH STRAFFORD VT.
SCALE: 1 INCH EQUALS 100 FEET
MAY 1981
DRAFT 4/84
NUMBER THREE ZONE
FOR SURFACE
FOR SURFACE



SURFACE OUTLINE, UNDERGROUND WORKINGS

EXISTING DIAMOND DRILL HOLES PERTINENT TO STRUCTURAL INTERPRETATION

MINED OUT AREA

KNOWN ORE, MINERALIZED HORIZON

KNOWN AMPHIBOLITE HORIZON

PROJECTED OR INFERRED ORE OR MINERALIZED HORIZON

PROJECTED OR INFERRED AMPHIBOLITE HORIZON

PROPOSED DIAMOND DRILL HOLE

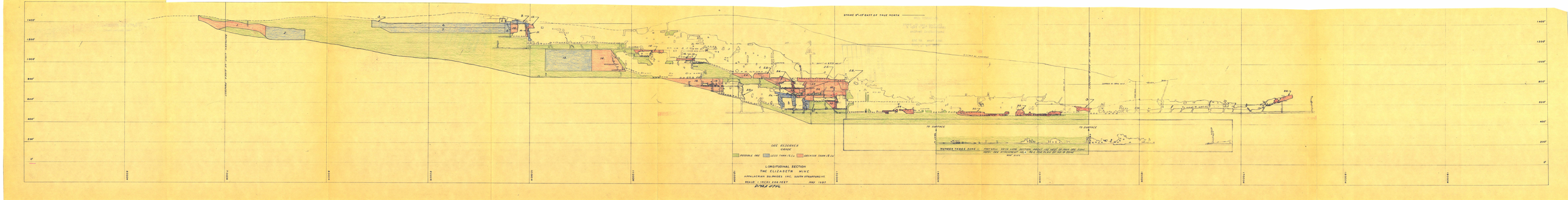
RED LINES AND NUMBERS INDICATE ORIGINALLY PROPOSED DIAMOND DRILL HOLES

APPALACHIAN SULPHIDES INC.
ELIZABETH MINE SOUTH STRAFFORD, VT.

CROSS SECTION 14,000 NORTH

SCALE: 1" = 100'

July 4, 1957


STRIKE 5°-10° EAST OF TRUE NORTH
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LONGITUDINAL SECTION
THE ELIZABETH MINE
APPALACHIAN SULPHIDES INC. SOUTH STRAFFORD VT.
SCALE: 1 INCH= 200 FEET
MAY 1987
D-7A3 #7F6