UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION 500
WASHINGTON 25, D. C.

RECEIVED
JUL 27 1956

PROJECT SUMMARY REPORT

By: J. W. ALT July 13, 1956

1. Docket No. DMEA-2746 (Copper-Zinc)
Contract No. Idm-E522
Property: Republic Copper & Zinc Mine
Cochise County, Arizona

Operator: Coronado Copper and Zinc Company
Johnson Camp
Cochise County, Arizona

Operator's Property Rights: Owner

2. Contract dated May 18, 1953. To complete - 2 years.

Work Authorized

STAGE I

Explore Area 1 by drifting and crosscutting 1220 feet in a northwesterly direction on the 400 level of the Moore shaft.

Explore Area 2 by diamond drilling from surface. Total drilling 6500 feet, EX or AX size.

STAGE II

2,000 feet of diamond drilling from underground or surface in Area 1 and/or Area 2. 300 feet of drifting in Area 1.

Agreed Unit Costs

STAGE I

Drift and/or crosscut 1220 feet @ $40.00/ft.	$48,800.00
Diamond drill 6500 feet @ $4.50/ft. per AX hole and $3.50/ft per EX hole	29,250.00
Total of Stage I	$78,050.00

STAGE II

Drift and/or crosscut 300 feet @ $40.00/ft.	$12,000.00
Diamond drill 2000 feet @ $4.50/ft. per AX hole, @ $3.50/ft. per EX hole, and $4.00/ft. of underground drilling	9,000.00
Total of Stage II	$21,000.00
Total Agreed Unit Costs of Project	$99,050.00
Government's participation @ 50%	$49,525.00

Amendments

No. 1 Effective date April 20, 1954.

To allow unexpended funds of Stage I to be used in Stage II at the established unit costs.

No. 2 Effective date July 15, 1954.

Recess work of project from July 15, 1954 to on or before January 15, 1955.

No. 3 Effective date August 27, 1954.

Unexpended balance from diamond drilling of Stages I and II to be used for 560 feet of additional drilling.

No. 4 Effective date December 27, 1954.

To allow the unexpended funds of the contract, amounting to $19,141.00, to be used for:

1. Drift northwesterly from the 500 WF drift a maximum of 150 feet.

2. Drill a maximum of 600 feet of drill holes from the drift under the above item.

Work Completed.

Stage I

Area 1

400-foot-level, 743.5 ft. drifting @ $40.00/ft.	$29,740.00
400-foot-level, 265.5 ft. crosscutting @ $40.00/ft.	10,620.00
	$40,360.00

Area 2

6,065 ft. surface diamond drilling @$4.50 & $3.50/ft.	$23,496.50
Total of Stage I	$63,856.50

Work Completed (continued)

Stage II

Area 1

400-ft. level, 267 ft. diamond drilling @ $4.00/ft.	$ 1,068.00
400-ft. level, 152 ft. drifting @ $40.00/ft.	6,080.00
400-ft. level, 396.5 ft. diamond drilling @$4.00/ft.	1,586.00
500-ft. level, 136 ft. drifting @ $4.00/ft.	5,440.00
500-ft. level, 272 ft. diamond drilling @ $ 4.00/ft.	1,088.00
Total of Area 1	$15,262.00

Area 2

2,139 ft. diamond drilling @ $4.50 & $3.50/ft.	$ 7,926.50
Total Stage II	$23,188.50
Total Expenditures	$87,045.00
Government's participation, 50%	$43,522.50

Work on the project was started on June 23, 1953.
The work was completed in April, 1955.

3. Audit Certificate (Report of Review), dated August 17, 1955.

Total Cost as billed by Contractor	$87,605.00
Exceptions	560.00
Total Accepted Cost	$87,045.00
Government's participation, 50%	$43,522.50

Operator's final report - August 12, 1955.
Field Team final report - July 1955 (Received January 23, 1956)

4. Certification date: February 2, 1956.

The discovery consisted of copper-zinc ores occurring as replacements in garnetized limestone rocks. The ore reserve resulting from such work was estimated to consist of 62,000 tons, with a grade of 2.18 per cent copper and 7.70 per cent zinc.

5. Comments

Operations under the terms of the contract were carried out in a very efficient and workmanlike manner by competent officials of the Coronado Copper & Zinc Company.

The Field Team states: "In conclusion it can be stated that two ore bodies of minable size and grade were found by the DMEA project and a third ore body was discovered which is expected to contain minable ore. A fourth ore body may yet be discovered in an area which the writer believes is not adequately explored. Ore is being mined from two ore bodies and royalty payments are being made on ore produced. It is reasonable to expect that production will be continued, and it is likely that the amount of the Government investment will be repaid out of royalties.

"The project was successful in nearly every respect, and as significant quantities of ore were discovered it is recommended that the project be certified as a discovery."

J. W. Alt

J. W. Alt

JWAlt/er 7/16/56

Copy to: Docket
Base Metals
Chron.

☒ Audited

☒ Certified 2/2/56.

W[redacted]K ANALYSIS SHEET - DMEA PROJECT[redacted]

Analysis as of 4/5/55.
Incl. Voucher for ~~Feb.~~ 1955.

☐ Actual Cost

☒ Agreed Unit Costs

Name CORONADO COPPER & ZINC COMPANY.

Docket No. 2,746

State ARIZONA

Commodity COPPER-ZINC.

Idm-E No. 522

OPERATION	AUTHORIZED Units	AUTHORIZED Cost	COMPLETED Units	COMPLETED Cost	NET COST
Drifting & Crosscutting	1,520.0' @ 40.00	$60,800.00	1297.0'	$51,880.00	$51,880.00
Raising					
Shafts					
Winzes					
Drilling (Specify) Diamond (AX or EX)	9320'	38,250.00	2,709' @ 4.50 5495' @ 3.50 935.5' @ 4.00	12,190.50 19,232.50 3,742.00	35,165.00
Sur[redacted]e Excavation					
Underground Excavation					
Roads and Trails					
Operating Equipment Purchased					
Surface Rehabilitation & Repairs					
Underground Rehabilitation					
New Building, Improvements, etc.					
Other (Specify)					
Totals		$99,050.00		$87,045.00	$87,045.00

Amend #4 Incorporated, Dated Feb 3, 1955. checks audit.
~~Total Royalties to~~ Jan 31, 1956: ~~13,078.40~~

Prepared by W. P. Hugenschmidt.

✓ Copied

71626

E-522

Coronado Copper & Gold Company - Arizona - 2746

Agreed Unit Costs.

Stage I

1220' Drifts & Crosscuts @ 40.00 (6'x8') $ 48,800.00

6500' D.D. @ 4.50 for AX and 3.50 for EX 29,250.00

Stage II

300' Drifts & Crosscuts @ 40.00 (6'x8') 12,000.00

[illegible]00' D.D. @ 4.50 for AX - 3.50 for EX 9,000.00
and 4.00 for Hedge.

Amend. #4. 8717.5' 600 1161 150 1,311 Total Drs + XCS.

Total D.D. 9317.5 max.

$ 99,050.00

Feb 1955. 1297.00' Spent 51,880.00

~~1224.50~~ ~~48,980.00~~

~~161.00'~~ Drs + XCS @ 40.00 X ~~$ 46,440.00~~

2709' AX @ 4.50 12,190.50

5497' EX @ 3.50 19,232.50

3742 ~~12,657.00~~

~~408.5'~~ EX @ 4.00 Hedge. ~~2,722.00~~ ~~1,634.00~~

~~663.5'~~

~~680.5~~ 87,045.00 $ 79,497.00

935.5 ~~83,617.00~~ ~~Operation~~ Total Expen. 83,052.00

Royalties

Oct. 1953 — Oct. 1954	$2,195.09
Nov. + Dec 1954 + Feb - May 1955	3,075.51
June 1955	1,278.00
July, Aug, Sept. 1955	3,107.35
Oct. 1955	651.27
Nov. 1955	874.17
Jan. 1956.	1,897.01
	$13,078.40

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
Building 20 - Federal Center
Denver 25, Colorado

OFFICIAL FILE COPY
O. M. E
RECEIVED MAY 6 1963

DATE		CODE
5/6		800
	Grubwell	500
		220

May 3, 1963

Memorandum

To: George C. Selfridge, Chief
Division of Field Operations, OME
Washington 25, D. C.

From: Acting Field Officer, OME, Region III

Subject: EXPIRATION OF DMEA CONTRACT PAYING ROYALTY
DMEA-2746 (Copper-Zinc)
Contract Idm-E522
Coronado Copper and Zinc Company
(Republic Copper-Zinc Mine)
Cochise County, Arizona

The OME audited the royalty account of the subject contract and found that the total royalty paid the Government to April 10, 1963, was $0.97 more than the amount due.

No change in the status of the royalty account to May 18, 1963, the expiration date of the contract, can be expected because the mine was closed, permanently according to the Operator, January 15, 1963.

I believe that all royalty due the Government has been paid and therefore recommend that the files of the subject contract be closed May 18, 1963.

Hugh M. Connors

Hugh M. Connors

Building 20 - Federal Center
Denver 25, Colorado

OFFICIAL FILE COPY
O. M. E.
RECEIVED MAY 3 1963
DATE
Original 500
May 2, 1963
220

Coronado Division, Cyprus Mines Corporation
1206 Pacific Mutual Building
523 West Sixth Street
Los Angeles 14, California

Re: [redacted]-2746 (Copper-Zinc)
Contract IDm-E522
Coronado Copper and Zinc Company
(Republic Copper-Zinc Mine)
Cochise County, Arizona

Gentlemen:

Enclosed is a copy of the Report of Royalty Review on the subject contract dated April 29, 1963 covering the period April 15, 1961, through April 10, 1963.

Sincerely yours,

Original signed by

Hugh M. Connors
Acting Field Officer, OME
Region III

Enclosure
cc McFarland and Hullinger
P. O. Box 238
Tooele, Utah
Chief, Division of Field Operations, OME
E. D. Talbert, Chief
Contract Administration and Audit Division
E522 Royalty Corres
Chron
HMC/lm

Building 20 - Federal Center
Denver 25, Colorado

May 2, 1963

Memorandum

To: Fiscal Section, Division of Administrative Services
Office of the Secretary, Department of the Interior
Washington 25, D. C.

From: Acting Field Officer, OME, Region III

Subject: EMMA-2746 (Copper-Zinc)
Contract Idm-E522
Coronado Copper and Zinc Company
(Republic Copper-Zinc Mine)
Cochise County, Arizona

Attached is the original Report of Royalty Review dated April 29, 1963 on the subject property covering the period April 15, 1961, through April 10, 1963.

Original signed by

Hugh M. Connors

Attachments

cc: Chief, Division of Field Operations, OME
E. D. Talbert, Acting Chief
Contract Administration and Audit Division
Royalty Corres. Idm-E522
Chron
HMC/lm

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
4/29	Fisher	800
		220

APR 29 1963

Memorandum

To: Acting Field Officer, Region III

From: E. D. Talbert, Chief (Signed) E. D. Talbert
Contract Administration and Audit Division

Subject: DMEA-2746 (Copper-Zinc)
Coronado Copper and Zinc Company
Republic Copper-Zinc Mine
Cochise County, Arizona
Contract Idm-E522

The original and three copies of a Royalty Audit Certificate and Royalty Audit Report covering the subject contract are enclosed. If you concur in the facts stated therein, please make the following distribution:

(a) Original to Fiscal Section, Division of Administrative Services, Office of the Secretary, Department of the Interior, Washington 25, D. C.;
(b) One copy for the Operator (Coronado Division, Cyprus Mines Corporation);
(c) One copy for the producer (McFarland & Mullinger); and
(d) One copy for your files.

As evidence of your concurrence, a copy of your letter transmitting the Operator's copy should be furnished this Division. If for any reason you do not concur, the original and all copies of the report should be returned to this Division with your comments.

Enclosures

CEFisher/ama 4-29-63

cc:
Docket
Director's Reading File
CA & A Division
Fiscal Section

43683

CYPRUS MINES CORPORATION
[illegible] WEST [illegible] STREET
LOS ANGELES 14, CALIFORNIA
TELEPHONE MADISON 6 [illegible] 31

January 31, 1963

OME
DEPARTMENT OF THE INTERIOR
FEB 27 1963
REGION III
DENVER, COLORADO

United States Department of the Interior
Office of Minerals Exploration
Building 20 - Federal Center
Denver 25, Colorado

OFFICIAL FILE COPY
O. M. E
RECEIVED MAR 1 1963

DATE	INITIALS	CODE
3/1	[illegible]	800
DMEA-2246	[illegible]	500
		220

Attention: Mr. J. W. Townsend

DMEA 2246

Re: Royalty Payments - Docket ~~DMEA-2240~~
Copper-Zinc Contract IDM-~~2522~~
Cyprus Mines Corporation,
Coronado Division
Cochise County, Arizona

Gentlemen:

Enclosed are four copies of our Report No. 68 comprising pages one through thirteen. The production and sales included in the report cover all DMEA ore milled in April 1962. Since April 1962, no ore has been removed from the 500 level project Johnson Camp mine. In January 1963 the mine was permanently closed.

Enclosed is our check in the amount of $28.83.

Yours very truly,

CYPRUS MINES CORPORATION

Richard R. Grantham

Richard R. Grantham
Assistant Comptroller

RRG/bt
Encl.

Mr Selfridge
It will now be unnecessary for Romsl
to contact Operator 3-8-63
- HMC

P. O. McFARLAND
TOOELE, UTAH
PHONE—TOOELE 122

McFARLAND AND HULLINGER

MINING • ORE HAULING • CONTRACTING

PHONE 219
P. O. BOX 238
TOOELE, UTAH

D. R. HULLINGER
TOOELE, UTAH
PHONE—TOOELE 1428

February 20, '63

E 522
DMEA-2746

OME
DEPARTMENT OF THE INTERIOR
OFFICIAL FILE COPY
FEB 25 1963
O. M. E.
REGION III
DENVER, COLORADO

RECEIVED 1963

DATE		
2/27		800
		120
	Griswold	500
		320

Office of Mineral Exploration
Denver Federal Center
Building 20
Denver, Colorado

Att'n: Mr. Hugh M. Connors
Acting Field Officer

Mr. Conners:

The last time that Mr. T. M. Romslo of your office was here, he asked if we would notify you on the effective date of our cessation of operations at Coronado Copper and Zinc Companies, Johnson Camp Mine, which you have under a DMEA loan.

Operation have been concluded and the shaft has been covered. We ceased operation and production on the 15th. of January 1963.

Sincerely

McFarland and Hullinger
Johnson Camp Mine

D. R. Long, Bookkeeper

cc: Tooele
Cyprus

Mr Selfridge:
Romslo will contact McFarland & Hullinger March 8, 1963.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

Building 20 - Federal Center
Denver 25, Colorado

OFFICIAL FILE COPY
O. M. E
RECEIVED MAY 18 1961

DATE	INITIALS	CODE
5/18	gad	NNO
5/18	[illegible]	800
"	[illegible]	500
		220

May 15, 1961

Memorandum

To: George C. Selfridge, Chief
Division of Field Operations, OME
Washington 25, D. C.

From: Hugh M. Connors, Acting Field Officer, OME, Region III

Subject: DMEA-2746 (Copper-Zinc)
Coronado Copper and Zinc Company
Republic Copper-Zinc Mine
Cochise County, Arizona
Contract Idm-E522

This has further reference to your memorandum of May 9, 1961, on the subject contract. Attached is copy of a letter dated March 31, 1961, which appears to answer all your questions.

A copy of this letter was forwarded you with the Operator's Report No. 52 on which he paid us $428.69 in royalty.

If the attached letter does not answer your questions, will you please advise and I will write the operator.

Hugh M. Connors

Hugh M. Connors

Attachment

CYPRUS MINES CORPORATION
-2? WEST SIXTH STREET
LOS ANGELES 14, CALIFORNIA
T' -HONE MADISON 6 3231

March 31, 1961

OFFICIAL FILE COPY
O. M. E.
RECEIVED MAY 18 1961

DATE	INITIALS	CODE

OME
DEPARTMENT OF THE INTERIOR
APR 10 1961
REGION III
DENVER, COLORADO

United States Department of the Interior
Office of Minerals Exploration
Building 20 - Federal Center
Denver 25, Colorado

Attention: Mr. J. W. Townsend

Re: Royalty Payments - Docket DMEA-2740
Copper-Zinc Contract IDM-2522
Cyprus Mines Corporation,
Coronado Division, formerly
Coronado Copper and Zinc Company
Cochise County, Arizona

Gentlemen:

Coronado Copper and Zinc Company was a wholly-owned subsidiary of Cyprus Mines Corporation. As of close of business December 31, 1960 it was dissolved and all of its assets and liabilities, regardless of the nature, were taken over by the parent, Cyprus Mines Corporation. It is now called Cyprus Mines Corporation, Coronado Division.

Enclosed are four copies of our Report No. 53 comprising pages one through fourteen. The production and sales included in the report cover all DMEA ore milled in January, 1961.

Enclosed is our check in the amount of $428.09.

Yours very truly,

CYPRUS MINES CORPORATION

Richard Grantham

Richard R. Grantham
Assistant Comptroller

RRG/ih
Encl.

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
5/9	Talbert	800
	Fresnell	500
5/9	GCS	130
"	Jones	110
5/9	gad	220

MAY 9 1961

Memorandum

To: Acting Field Officer, Region III

From: Chief, Division of Field Operations

Subject: DMEA-2746 (Copper-Zinc)
Coronado Copper and Zinc Company
Republic Copper-Zinc Mine
Cochise County, Arizona
Contract Idm-E522

Your Abstract of Remittances No. 61-5-2 includes royalty in the amount of $264.77 applicable to the subject contract. The remitter is shown as Cyprus Mines Corporation. The letter transmitting the check and supporting monthly Report No. 54 to you is on the letterhead of Cyprus Mines Corporation. The monthly report is headed Cyprus Mines Corporation, Coronado Division.

From these citations it appears that Coronado Copper and Zinc Company, which we understand has been controlled by Cyprus Mines Corporation, may have been abolished as a separate corporation and merged with the parent company. For record purposes please determine the Coronado Copper and Zinc Company's status and advise us accordingly.

/s/ George C. Selfridge (242)

EDTalbert/ama/hb (5/9/61)
Copy to: Docket
Director's Reading File
CA & A Division
Review Committee

43683

OFFICIAL FILE COPY
O. M. E.
RECEIVED APR 24 1961

DATE	INITIALS	CODE
4/24	gad	VVO
4/24	[illegible]	800
"	[illegible]	500
		220

Building 20 - Federal Center
Denver 25, Colorado

April 20, 1961

Coronado Copper and Zinc Company
1206 Pacific Mutual Building
523 West Sixth Street
Los Angeles 14, California

Re: DMEA-2746 (Copper-Zinc)
Contract Idm E522
Coronado Copper and Zinc Company
(Republic Copper-Zinc Mine)
Cochise County, Arizona

Gentlemen:

Enclosed is a copy of the Report of Royalty Review on the subject contract dated April 17, 1961 covering the period January 16, 1959, through April 14, 1961.

You will note that $13.28 is the amount of overpayment of royalty. If you submit a claim to us for that amount the overpayment in royalty will be refunded to you.

Yours very truly,

Original signed by

Hugh M. Connors
Acting Field Officer, OME
Region III

Enclosure

HMC/lm
cc Chief, Division of Field Operations, OME
E. D. Talbert, Acting Chief
Contract Administration and Audit Division
Royalty Corres. E522
Chron

Building 20 - Federal Center
Denver 25, Colorado

EXTRA COPY
O. M. E
RECEIVED APR
DATE | IN

April 20, 1961

Memorandum

To: Fiscal Section, Division of Administrative Services
Office of the Secretary, Department of the Interior
Washington 25, D.C.

From: Hugh M. Connors, Acting Field Officer, OME, Region III

Subject: DMEA-2746 (Copper-Zinc)
Contract Idm E522
Coronado Copper and Zinc Company
(Republic Copper-Zinc Mine)
Cochise County, Arizona

Attached is the original Report of Royalty Review on the subject property dated April 17, 1961 covering the period January 16, 1959, through April 14, 1961.

Original signed by

Hugh M. Connors

Attachments
HMC/lm
cc: Chief, Division of Field Operations, OME
E. D. Talbert, Acting Chief
Contract Administration and Audit Division
Royalty Corres. E522
Chron

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
4/17	gad	220

APR 17 1961

Memorandum

To: Acting Field Officer, Region III

From: E. D. Talbert, Acting Chief (Signed) E. D. Talbert
Contract Administration and Audit Division

Subject: DMEA-2746 (Copper-Zinc)
Coronado Copper and Zinc Company
Republic Copper-Zinc Mine
Cochise County, Arizona
Contract Idm-E522

The original and two copies of a Report of Royalty Review covering the subject contract are attached. If you concur in the facts stated therein, please make the following distribution:

(a) Original to the Fiscal Section, Division of Administrative Services, Office of the Secretary, Department of the Interior, Washington 25, D. C.;
(b) One copy to the Operator; and
(c) One copy for your files.

As evidence of your concurrence, a copy of your memorandum transmitting the original report to the Fiscal Section should be furnished this Division. If for any reason you do not concur, the original and both copies of the report should be returned to this Division with your comments.

Your courtesy in forwarding advance copies of the three additional monthly reports is sincerely appreciated. This action enabled us to prepare a more current Report of Royalty Review.

Attachments

EDTalbert/ama
April 17, 1961

Copy to: Docket
Director's Reading File
CA & A Division
Mr. Rothrock

43683

Building 20 - Federal Center
Denver 25, Colorado

OFFICIAL FILE COPY
O. M. E.
RECEIVED APR 5 1961

DATE	INITIALS	CODE
4-5	gad	000
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"	[illegible]	500
		220

April 3, 1961

Richard R. Grantham
Assistant Comptroller
Coronado Copper and Zinc Company
1206 Pacific Mutual Building
523 West Sixth Street
Los Angeles 14, California

Re: DMEA-2746 (Copper-Zinc)
Contract Idm E522
Coronado Copper and Zinc Company
(Republic Copper-Zinc Mine)
Cochise County, Arizona

Dear Mr. Grantham:

We have received no information from you regarding the captioned Contract since your Report No. 50 dated December 29, 1960. That Report covered the sales of DMEA ore milled in October 1960. There was no indication in the Report that a shutdown in operations was contemplated.

If operations have been discontinued, additional royalty is due the Government on final settlement on smelter lot Nos. 544, 554, 561, and 578, for which provisional settlement was included in the last payment of royalty. In addition, the last Report shows more copper concentrates and zinc concentrates remained on hand at the end of October.

Will you please advise.

Yours very truly,

Original signed by

Hugh M. Connors
Acting Field Officer, OME
Region III

HMC/lm
cc Chief, Division of Field Operations, OME
E. D. Talbert, Acting Chief,
Contract Administration and Audit Division

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
3/28	[illegible]	120
3/28	[illegible]	220
		225

MAR 2 8 1961

Memorandum

To: Acting Field Officer, Region III

From: E. D. Talbert, Acting Chief (Signed) E. D. Talbert
Contract Administration and Audit Division

Subject: DMEA-2746 (Copper-Zinc)
Coronado Copper and Zinc Company
Republic Copper-Zinc Mine
Cochise County, Arizona
Contract Idm-8522

The prompt submission with your March 20 memorandum of a photocopy of the subject Operator's Royalty Report No. 42, together with the original and one copy of MME Form 22, is appreciated. However, in order to properly complete our Report of Royalty Review, your comments as to the present status of operations by the lessee, McFarland & Hullinger, are solicited.

From the time that the lessees reactivated this property, royalty has been received on a monthly basis. There have been no payments, however, since the Operator's December 29, 1960, check in the amount of $353.83, which you submitted for deposit on Abstract of Remittances No. 1-1. This royalty payment was supported by the Operator's Royalty Report No. 50, which covers October 1960 production.

There is no indication in the October report of a shutdown in operations. Also, no mention was made by you on the MME Form 22 of any change in status. Furthermore, even if operations were discontinued, additional royalty is due the Government on final settlement of liquidations nos. 544, 554, 561, and 578, for which provisional settlement was included in the last payment of royalty. In addition, the last report states 25 to 30 tons of copper concentrates and 35-40 tons of zinc concentrates remained on hand at the end of October.

EDTalbert/ama
March 28, 1961

Copy to: Docket
Director's Reading File
CA & A Division
Mr. Talbert

43683

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
Building 20 - Federal Center
Denver 25, Colorado

OFFICIAL FILE COPY
O. M. E
RECEIVED MAR 22 1961

DATE	INITIALS	CODE
3-22	gad	220
3/22	[illegible]	800
3/22	[illegible]	500

March 20, 1961

Memorandum

To: E. D. Talbert, Acting Chief
Contract Administration and Audit Division
Washington 25, D.C.

From: Hugh M. Connors, Acting Field Officer, OME, Region III

Subject: DMEA-2746 (Copper-Zinc)
Contract Idm E522
Coronado Copper and Zinc Company
(Republic Copper-Zinc Mine)
Cochise County, Arizona

In response to your memorandum of March 16, 1961, attached are photocopies of the Royalty Report No. 42 and supporting settlement sheets, and the original and one copy of MME Form 22.

Hugh M. Connors

Hugh M. Connors

Attachments

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
3/16	Selbrede	2120
"	Johnson	220
3/16	gad	220

MAR 1 6 1961

Memorandum

To: Acting Field Officer, Region III

From: E. D. Talbert, Acting Chief (Signed) E. D. Talbert
Contract Administration and Audit Division

Subject: DMEA-2746 (Copper-Zinc)
Coronado Copper and Zinc Company
Republic Copper-Zinc Mine
Cochise County, Arizona
Contract Idm-E522

This Division is in the process of making a royalty review of the subject contract. Your submission of an original and one copy of MME Form 22, Check Sheet of Examining Engineer, is requested.

The Operator's statements of royalty payments and settlement sheets for production through January 1960 have been reviewed. At this point we are stymied. Royalty Report No. 42 and supporting settlement sheets on February 1960 production are missing from the Washington files and a thorough search has been unsuccessful.

In order that this review may be completed, your duplication and submission to this Division of a copy of the Operator's complete February 1960 Report No. 42, including all attachments, will be sincerely appreciated.

EDTalbert/ama
March 16, 1961

Copy to: Docket
Director's Reading File
CA & A Division

43683

CORONADO COPPER AND ZINC COMPANY
1206 PACIFIC MUTUAL BUILDING
523 WEST SIXTH STREET
LOS ANGELES 14, CALIFORNIA
TELEPHONE MADISON 6-3231

OFFICIAL FILE COPY

RECEIVED DEC 17 1959

DATE	INITIALS	CODE
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OME
DEPARTMENT OF THE INTERIOR
DEC 14 1959
REGION III
DENVER, COLORADO

December 11, 1959

United States Department of the Interior
c/o J. W. Townsend, Executive Officer, OME
Field Team, Region III
Building 20 - Federal Center
Denver 25, Colorado

Re: Docket No. DMEA 2746 (Copper-Zinc)
Contract No. Idm-E522
Coronado Copper & Zinc Company
Johnson Camp Unit
(Republic Copper-Zinc Mine)
Cochise County, Arizona

Dear Mr. Townsend:

In reply to your letter dated December 8, 1959, please be advised that we have leased our Johnson Camp mine to McFarland & Hullinger of Tooele, Utah. Our contract with them put them on notice that the mine includes certain ore covered by our DMEA contract, and requires them to furnish us with sufficient information to make possible our settlements with the DMEA.

The first few tons of DMEA ore was mined in September, 1959 by McFarland & Hullinger. This ore was not milled by them until October, 1959.

At the present time, the ore is being shipped from the Johnson Camp mine to McFarland & Hullinger's mill at Sahuarita. McFarland & Hullinger are not maintaining separate mill feeds for the DMEA tonnage; this represents no change from the practice at the Johnson Camp mill. We will compute the value of the DMEA ore in the same manner as was followed when the Johnson mill was in operation.

We have been in touch with McFarland & Hullinger in order to obtain all details which are required to meet our established reporting procedures with regard to settlements under our DMEA contract. We expect to have all of the necessary information as to the September and October results in time to complete our report and make the payment to DMEA by the week of December 21.

I trust this fully meets your requirements at the present time.

Yours very truly,

CORONADO COPPER AND ZINC COMPANY

Richard Grantham

R. R. Grantham
Assistant Comptroller

cc: Mr. Bill Stoffers
Mine Manager
McFarland & Hullinger
Johnson Camp Unit
Dragoon, Arizona

RRG:jw

12/14/59 Copy to
Chairman (2)
Royalty (orr. E522
Settlement sheet h/a E522

OFFICIAL FILE COPY O. M. F. RECEIVED DEC 11 1959		
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12-11	gad	220
12/11	[illegible]	800
"	[illegible]	500
		225

Building 20 - Federal Center
Denver 25, Colorado
December 8, 1959

CERTIFIED MAIL

Mr. R. R. Grantham
Assistant Comptroller
Coronado Copper & Zinc Company
1206 Pacific Mutual Building
523 West 6th Street
Los Angeles 14, California

Re: Docket No. DMEA 2746 (Copper-Zinc)
Contract No. Idm-E522
Coronado Copper & Zinc Company)
Johnson Camp Unit
(Republic Copper-Zinc mine)
Cochise County, Arizona

Dear Mr. Grantham:

The November issue of the Mining World Magazine contains an article wherein it is stated that McFarland and Hullinger have leased the referenced property and are making daily shipments of copper ore from the Moore shaft.

Since the Moore shaft is on or immediately adjacent to Area 1 of the land subordinated under Contract Idm-E522, your attention is directed to the following:

> The Government is entitled to royalty on any production from the land described under Article 2 of the contract which is further described in Annex I and shown on map Figure 2 which are made a part of the contract. In addition, royalty is due the Government on production in conformance with Article 6 of the contract as amended by recitation in Article 9 of the contract.

We will appreciate advice by return mail as to the status of operations and current production as concerns the Government in connection with the land subordinated under the contract.

Very truly yours,

Original signed by

J. W. Townsend
Executive Officer, OME
Field Team, Region III

JWT:ltm
cc: Chmn. Op. Comm. (2)
Roy. Corres. E522
Chron.

cc: Mr. Bill Stoffers
Mine Manager
McFarland & Hullinger
Johnson Camp Unit
Dragoon, Arizona

OFFICIAL FILE COPY O. M. E. RECEIVED MAR 20 1959		
DATE	INITIALS	CODE
3/20	C	220
3/23	ach	500

224 New Customhouse
Denver 2, Colorado

March 18, 1959

CERTIFIED MAIL

Mr. N. R. Grantham,
Assistant Comptroller
Cananea Copper & Zinc Company
1206 Pacific Mutual Building
523 West 6th Street
Los Angeles 14, California

Re: Docket No. MRRA 2746 (Copper-Zinc)
Contract Ida-E522 (Republic mine)
Cochise County, Arizona

Dear Mr. Grantham:

A report of royalty review was forwarded your company for February 2, 1959. This review shows a balance of royalties due the Government to be $266.03.

Will you please forward this office your check for $266.03 to clear the account.

Very truly yours,

Original signed by
J. W. TOWNSEND

J. W. Townsend
Executive Officer
Field Team, Region III

EMC/ff
cc: Chmn. Op. Comm. (2)
Harshman
Romslo
Royalty file E522
Chron.

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
1/27	[illegible]	800
1/27	C	220
1/27	alb	500

JAN 26 1959

Mr. Donald T. Finch
OME Auditor
224 New Customhouse
Denver 2, Colorado

Re: Docket No. DMEA-2746 (Copper-Zinc)
Coronado Copper and Zinc Company
Contract No. Idm-E522

Dear Mr. Finch:

Your Report of Royalty Review dated January 22, 1959, pertaining to the subject contract is acceptable and normal distribution is authorized.

It is appreciated that this review required considerably more study and effort on your part than is usual for a report of royalty review. I want to congratulate you on a very fine report.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers
Contract Administration
and Audit Division

CEFisher/GMcC
January 26, 1959

cc: Docket
Director's Reading File
Mr. Chambers

8623

OFFICIAL FILE COPY
O. M. E.
RECEIVED JAN 16 1959

DATE	INITIALS	CODE
1/16	C	220
1/19	[illegible]	500

224 New Customhouse
Denver 2, Colorado
January 12, 1959

Mr. R. R. Grantham,
Assistant Comptroller
Coronado Copper & Zinc Company
1206 Pacific Mutual Building
523 West Sixth Street
Los Angeles 14, California

Re: Docket DMRA 2740 (Copper-Zinc)
Contract Idm-E522
(Republic mine)
Cochise County, Arizona

Dear Mr. Grantham:

This will acknowledge receipt of your letter dated January 7, 1959, regarding your records of concentrates as reported for the months of May through September 1956.

Your letter has been forwarded to the Auditor and you will be advised at a later date.

Very truly yours,

Original signed by
E. N. HARSHMAN

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

HMC/ff
cc: Chairman, Op. Comm. (2)
Harshman
Romslo
Royalty File E-522
Finch
Chron.

CORONADO COPPER AND ZINC COMPANY
1206 PACIFIC MUTUAL BUILDING
523 WEST SIXTH STREET
LOS ANGELES 14, CALIFORNIA
TELEPHONE MADISON 6-3231

OFFICIAL FILE COPY
O. M. E.
RECEIVED JAN 16 1959
DATE | INITIALS | CODE
DEPARTMENT OF THE INTERIOR
JAN 8 1959
REGION III
DENVER, COLORADO

January 7, 1959

United States Department of the Interior
Office of Minerals Exploration
224 New Customhouse
Denver 2, Colorado

Re: Docket DMEA 2740 (Copper-Zinc)
Contract Idm-E522
(Republic mine)
Cochise County, Arizona

Dear Sirs:

Our engineers have reviewed our records supporting the mill recovery percentages of concentrates as reported to you for the months of May through September, 1956; they were unable to determine why the percentages reported to you for DMEA ore was different from the overall recovery, since, as you know separate mill feeds were not maintained. The change occurred at the time mining engineers were changed, which it must be admitted is little excuse, if any.

Trusting this will permit you to complete your royalty audit, I remain,

Yours very truly,

CORONADO COPPER AND ZINC COMPANY

R R Grantham

R. R. Grantham
Assistant Comptroller

RRG:jh

OFFICIAL FILE COPY
O. M. E.
RECEIVED NOV 20 1958

DATE	INITIALS	CODE
11-20	C	250
11-24	alb	500

OFFICE OF MINERALS EXPLORATION
224 New Customhouse
Denver 2, Colorado
November 17, 1958

CERTIFIED MAIL

Mr. R. R. Grantham,
Assistant Controller
Coronado Copper and Zinc Co.
1206 Pacific Mutual Building
523 W. 6th Street
Los Angeles 14, California

Re: Docket DMEA 2746 (Copper-Zinc)
Contract Idm-E522
(Republic mine)
Cochise County, Arizona

Dear Mr. Grantham:

Our letter to you dated July 1, 1958, requested analytical data supporting the results of your milling operations in the production of both copper and zinc concentrates. An analysis of mill recovery percentages of concentrates, as reported for the indicated months, follows:

	COPPER CONCENTRATES		ZINC CONCENTRATES	
	DMEA ORE	OTHER ORE	DMEA ORE	OTHER ORE
May	5.45%	7.15%	7.99%	6.12%
June	6.25%	6.33%	6.86%	6.93%
July	7.98%	6.90%	9.64%	6.81%
Aug.	7.12%	8.59%	8.09%	9.76%
Sept.	7.69%	9.28%	8.15%	9.84%

In view of this, please furnish adequate support to explain why DMEA ore showed a different mill percentage recovery from other company ore since it is understood that separate mill feeds were not maintained.

Your letters dated July 29, 1958 and August 28, 1958 stated that the requested information would be forthcoming. It is necessary that we receive the information in order to complete a royalty audit. Will you please, therefore, furnish immediately to this office the required analytical data.

Very truly yours,
Original signed by
J. W. TOWNSEND

J. W. Townsend
Executive Officer
OME Field Team, Region III

HMC/ff
cc: Chmn. Op. Comm. (2)
Harshman
Royalty File E-522
Finch Emerick
OME/TUC Chron.

224 New Customhouse
Denver 2, Colorado

October 17, 1958

OFFICIAL FILE COPY
O. M. E
RECEIVED OCT 20 1958

10/20
10/20
10/21

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WW
RLW

220
800
500

Mr. R. R. Grantham,
Assistant Controller
Coronado Copper and Zinc Co.
1206 Pacific Mutual Building
523 W. 6th Street
Los Angeles 14, California

2746

Re: Docket DMEA 2740 (Copper-Zinc)
Contract Idm-E522
(Republic mine)
Cochise County, Arizona

Dear Mr. Grantham:

Your letter of August 28, 1958 stated that the analytical data supporting the results of your milling operations had been referred to your engineering department for review.

We will be happy to receive the analytical data as soon as it is released by your engineering department.

Very truly yours,

Original signed by
E. N. HARSHMAN

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

HMC:jy

cc: Royalty File E522
Chm. Op. Comm. (2)
Finch
OME,TUC
Emerick
Chron.

CORONADO COPPER AND ZINC COMPANY
1206 PACIFIC MUTUAL BUILDING
523 WEST SIXTH STREET
LOS ANGELES 14, CALIFORNIA
TELEPHONE MADISON 6-3231

DMEA
DEPARTMENT OF THE INTERIOR
SEP 8- 1958
REGION III
DENVER, COLORADO

9/11 C 220
9/11 800
" 500

August 28, 1958.

Mr. J. W. Townsend
Alternate Acting Executive Officer
DMEA Field Team, Region III
224 New Customhouse
Denver 2, Colorado

Re: Docket DMEA 2740 (Copper - Zinc)
Contract No. Idm.-E522
Coronado Copper and Zinc Company
(Republic Mine)
Cochise County, Arizona

Dear Mr. Townsend:

As requested in your letter of July 1, 1958 we are enclosing copies of smelter liquidation settlement sheets covering concentrates shipped to smelters during the period November, 1954 through April, 1956.

Pages one through five summarize and identify by report number copper concentrates shipped during the subject period.

Pages six through seven summarize and identify by report number zinc concentrates shipped during the subject period.

The information requested in paragraph three of your letter regarding the mill recovery percentages on concentrates has been referred to our engineering department. They are in the process of reviewing these percentages, and upon receiving their results we will promptly furnish you with this information.

We hope this will meet with your satisfaction.

Yours very truly,

R R Grantham

R. R. Grantham
Assistant Controller.

P. ~~UNTOCK~~ TO
CHAIR CAR COMM-2
DMEA/TUC
EMERICK
FINCH-2

CORONADO COPPER AND ZINC COMPANY
2006 PACIFIC MUTUAL BUILDING
523 WEST SIXTH STREET
LOS ANGELES 14, CALIFORNIA
TELEPHONE MADISON 6-3231

July 29, 1958

DMEA
DEPARTMENT OF THE INTERIOR
JUL 31 1958
REGION III
DENVER, COLORADO

Mr. J. W. Townsend
Alternate Acting Executive Officer
DMEA Field Team, Region III
224 New Customhouse
Denver 2, Colorado

8/5 8/5 2.9. 225 800 500

RE: Docket DMEA 2740 (Copper-Zinc)
Contract No. Idm-E522
Coronado Copper and Zinc Company
(Republic Mine)
Cochise County, Arizona

Dear Mr. Townsend:

In response to your letter of July 1, 1958 we are gathering together the various documents requested by you in connection with the royalty audit of the above contract being made by your office. As a result of illness and vacations of personnel in this office, we have not yet completed the locating and copying of the required documents.

The purpose of this letter is to advise you that we will comply with your request as quickly as possible. I expect to have all of the documents and other requested information in your hands within the next thirty days.

I trust this will cause no inconvenience to your office.

Yours very truly,

Richard R Grantham

Richard R. Grantham

RRG/w

Rev to
WO-21
DMEA/TUC
Emerick
Finch-2
7/31/58

Royalty

OFFICIAL FILE COPY
DMEA
RECEIVED
DATE | | 1958
7/7 | C | CODE
7/9 | WRB | 226
| | 500

224 New Customhouse
Denver 2, Colorado

July 1, 1958

CERTIFIED MAIL

Mr. R. R. Grantham
Coronado Copper and Zinc Company
1206 Pacific Mutual Building
523 West Sixth Street
Los Angeles 14, California

Re: Docket DMEA 2740 (Copper-Zinc)
Contract No. Idm-2522
Coronado Copper and Zinc Co.
(Republic mine)
Cochise County, Arizona

Dear Mr. Grantham:

Audit analysis of records submitted with DMEA royalties on production from November 1, 1954 to date, shows that the Operator's reports Nos. 14 through 30 covering the period November, 1954 through April, 1956, were submitted without copies of smelter liquidation settlement sheets.

It is the understanding of all concerned that production reports and royalties submitted by Coronado Copper and Zinc Company would be supported by copies of applicable settlement sheets. This was confirmed by letters dated

March 17, 1954 from Coronado to this office,
December 31, 1954 from this office to Coronado, and
January 14, 1955 from Coronado to this office.

Accordingly, please provide this office with one copy of the pertinent settlement sheets identifying each according to report number.

The audit analysis also shows that during the months of May, 1956 through September, 1956, the Operator did not submit analytical data supporting the results of the company's milling operations in the production of both copper and zinc concentrates. An analysis of mill recovery percentages of concentrates as reported for the indicated months, follows: -

	COPPER CONCENTRATES		ZINC CONCENTRATES	
	DMEA ORE	OTHER ORE	DMEA ORE	OTHER ORE
May	5.45%	7.15%	7.99%	6.12%
June	6.24%	6.33%	6.86%	6.93%
July	7.98%	6.90%	9.64%	6.81%
Aug.	7.12%	8.59%	8.09%	9.76%
Sept.	7.69%	9.20%	8.15%	9.84%

In view of this, please furnish adequate support to explain why DMEA ore showed a different mill percentage recovery from the company's other ore, since it is understood that separate mill feeds were not maintained.

We would appreciate your providing this office at an early date with the necessary data so that we may proceed with the royalty audit now in progress.

Very truly yours,

Original signed by
J. W. TOWNSEND

J. W. Townsend
Alternate Acting Executive Officer,
DMEA Field Team, Region III

MHM:bh
cc: Roy. File E-522)w/copy of
Chmn. Op. Comm.(2))Finch's memo
DMEA/TUC)of June 23,
Emerick)1958.
Finch (2)
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

224 New Customhouse
Denver 2, Colorado

June 23, 1958

Memorandum

To: J. W. Townsend, Alternate Acting Executive Officer, DMEA Field Team, Region III

From: Donald T. Finch, DMEA Auditor

Subject: Docket No. DMEA 2740 (Copper-Zinc), Contract No. Idm-E522
Coronado Copper and Zinc Company (Republic Mine)
Cochise County, Arizona

Pursuant to request dated April 28, 1958, from E. N. Harshman, Acting Executive Officer, a second royalty analysis was started May 26, 1958.

The first royalty audit report for this company was dated April 15, 1955, and covered the period October 1, 1953 through October 31, 1954. At the time of this first audit report it was agreed by all concerned that the company would furnish, in addition to its monthly reports of DMEA production, copies of all smelter liquidation settlement sheets in order the sales of DMEA ore could be confirmed. See letter from Operator to King dated March 17, 1954. See also letter from King to Operator dated December 31, 1954 and Operator's reply dated January 14, 1955.

The present royalty analysis indicates the Operator's reports Nos. 14 through 30, covering the period November, 1954 through April, 1956 were tendered by the Operator and accepted without the agreed copies of smelter liquidation settlement sheets.

As explained in our conference June 11,1958, it is impossible to confirm the complete accuracy of the Operator's reports for the period in question without these settlement sheets.

During the period May, 1956 through August, 1957, the Operator changed its methods of disposing of copper. Copper concentrates were custom smelted and the refined copper was returned to the Operator which sold this copper metal through an appointed agent. During this period liquidation settlement sheets were submitted for both copper and zinc concentrates. In addition, sales invoices were submitted in support of the sale of all copper metal.

During the months of May, 1956 through September, 1956, the Operator did not submit analytical data supporting the results of the Company's milling operations in the production of both copper and zinc concentrates.

An analysis of mill recovery percentages of concentrates as reported for the indicated months, follows: -

	COPPER CONCENTRATES		ZINC CONCENTRATES	
	DMEA ORE	OTHER ORE	DMEA ORE	OTHER ORE
May	5.45%	7.15%	7.99%	6.12%
June	6.24%	6.33%	6.86%	6.93%
July	7.98%	6.90%	9.64%	6.81%
Aug.	7.12%	8.59%	8.09%	9.76%
Sept.	7.69%	9.28%	8.15%	9.84%

As discussed in our June 11th conference, it was agreed the Operator should be required to furnish adequate support to explain why DMEA ore showed a different mill percentage recovery from the company's other ore, since it is understood separate mill feeds are not maintained. In this connection, adequate support was furnished by the Operator for mill recovery percentages for the period October, 1956 through August, 1957. During this later period the mill recovery percentages were the same for both DMEA Ores and Other Ores.

It is understood your office desires to attempt to secure the missing liquidation settlement sheets and mill recovery data from the Operator.

Pending the outcome of your contact with the Operator concerning the missing support, the completion of the second royalty analysis will be deferred.

Donald T. Finch

Donald T. Finch, Auditor

OFFICIAL FILE COPY
DMEA

RECEIVED 5

5/5 C 220
5/5 860
5/6 500

224 New Customhouse
Denver 2, Colorado

April 30, 1958

Mr. R. R. Grantham
Coronado Copper and Zinc Company
1206 Pacific Mutual Building
523 West Sixth Street
Los Angeles 14, California

Re: Docket DMEA [illegible] (Copper-Zinc)
Contract Idm-R522
Coronado Copper and Zinc Co.
(Republic mine)
Cochise County, Arizona

Dear Mr. Grantham:

Thank you for your letter of April 25, 1958, enclosing your company's check for $1,699.60, as additional royalties due on production covered by Report No. 37.

We have tentatively scheduled an on-site royalty audit of the captioned contract. In this connection, please submit a copy of the following smelter contracts:

1. American Smelting & Refining Company
   Period: May 1, 1955 - December 31, 1957.
   Note: May have been superseded by International Smelting & Refining Company.

2. International Smelting & Refining Company
   Period: May 1, 1955 - December 31, 1957.

3. International Minerals & Metals Corporation
   Period: January 1, 1955 - December 31, 1957.

Very truly yours,

Original signed by
E. N. HARSHMAN

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

MHM:jy
cc: Royalty File R522)
Chm. Op. Comm. - 2) w/copy of
DMEA,TUC) referred to ltr.
Emerick)
Finch - 2)
Chron.

CORONADO COPPER AND ZINC COMPANY
1206 PACIFIC MUTUAL BUILDING
523 WEST SIXTH STREET
LOS ANGELES 14, CALIFORNIA
TELEPHONE MADISON 6-3231

April 25, 1958

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

United States Department of the Interior
Defense Minerals Exploration Administration
224 New Customhouse
Denver 2, Colorado

Attention: E. N. Harshman
Acting Executive Officer

Re: Royalty Payments - Docket DMEA-2740
Copper-Zinc Contract IDM-E 522
Coronado Copper and Zinc Company
Cochise County, Arizona

Gentlemen:

We have received your letter of April 22, 1958 regarding our Report No. 37 and our method employed in calculating the royalty payment.

In accordance with your request, we are enclosing our check no. 393 in the amount of $1,699.60. We wish to point out, however, that the method used by you in calculating the royalty due on DMEA copper concentrates is not in accordance with our interpretation of the contract, since the actual copper content of DMEA muck was in fact sold to the smelter in concentrate form. Our acquiescence to your demand is made only to avoid any lengthy series of correspondence at this time. Please be advised, however, that should the mine be reopened during the remaining term of our contract, I believe that we would have no alternative other than pursuing our position in this matter most vigorously.

Yours very truly,

CORONADO COPPER AND ZINC COMPANY

R R Grantham

R. R. Grantham

RRG:jw
Enclosure

Chief Opr Comm-2
DMEA/TU
Emerick

Royalty E 522

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 2 1958

224 New Customhouse
Denver 2, Colorado

April 28, 1958

Memorandum

To: T. H. Brading

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

Subject: Docket No. DMEA 2746 (Copper-Zinc), Contract No. Idm-E522 Coronado Copper and Zinc Company, (Republic Copper-Zinc Mine) Cochise County, Arizona

We would appreciate your placing the subject contract on schedule for a royalty audit.

Original signed by
E. N. HARSHMAN

E. N. Harshman

MHM:bh

cc: Sec. Op. Comm. (2)
Royalty File
Chron

DMEA
RECEIVED APR 24 1958

DATE	INIT.	
4/24	21.8.	220
4/24	[illegible]	800
4/25	[illegible]	308

224 New Customhouse
Denver 2, Colorado
April 22, 1958

CERTIFIED MAIL

Mr. R. R. Grantham
Coronado Copper and Zinc Co.
1206 Pacific Mutual Building
523 West Sixth Street
Los Angeles 14, California

Re: Docket No. DMEA 2746 (Copper-Zinc) Contract Idm-E522, Coronado Copper and Zinc Company (Republic Copper-Zinc Mine) Cochise County, Arizona

Dear Mr. Grantham:

We have received your letter of April 10, 1958, including your check for $3,631.42 and supporting data on production covered by Report No. 37 which also makes adjustments to certain royalties previously submitted to this office.

The method used in Report No. 37 to compute royalties on copper sales does not comply with the ruling contained in our letter of February 19, 1957, to Mr. James Reid of your accounting department.

Our calculation of royalty due on production covered by Report No. 37 based on the referenced ruling is as follows:

Zinc Concentrates
Net proceeds apportioned to 556.21 dry tons of DMEA zinc concentrates ---------- $22,606.66

Copper Metal
Net proceeds apportioned to 507.71 dry tons of DMEA copper (16.48% of $509,791.60) ---------- 84,013.66

Total value DMEA production ---------- $106,620.32

Royalty Due ----------	$ 5,331.02
Royalty Paid ----------	3,631.42
Balance Due ----------	$ 1,699.60

Your check in the amount of $1,699.60 should be made payable to the Defense Minerals Exploration Administration, and sent at once to the Executive Officer, DMEA Field Team, Region III, 224 New Customhouse, Denver 2, Colorado.

Very truly yours,

Original signed by
E. N. HARSHMAN

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

MHM:dp
cc: Royalty File E522
Sec. Op. Comm. (2)
DMEA/TUC.
Chron.

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DMEA
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DATE | INITIAL | CODE
4/7 | C | 220
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4/8 | WPR | 500

224 New Customhouse
Denver 2, Colorado
April 3, 1958

Mr. James Reid
Coronado Copper and Zinc Company
1206 Pacific Mutual Building
523 West Sixth Street
Los Angeles 14, California

Re: Royalty Payments, Docket DMEA 274
(Copper-Zinc) Contract Idm-E522
Coronado Copper and Zinc Company
(Republic Copper-Zinc Mine)
Cochise County, Arizona

Dear Mr. Reid:

Enclosed is a photo copy of our letter to you dated February 24, 1958 for which we have received no reply. Please give this matter you prompt attention.

Very truly yours,

Original signed by
E. N. HARSHMAN

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

MHM:dp

cc: Sec. Op. Comm. (2)
Royalty File E522
DMEA-Tuc.
Semiannual Report File E522
Chron.

DMEA
RECEIVED FEB 26 1958

DATE	INITIALS	CODE
2/26	C	220
2/26	[illegible]	800
2/27	[illegible]	500

224 New Customhouse
Denver 2, Colorado

February 24, 1958

CERTIFIED MAIL

Mr. James Reid
Coronado Copper and Zinc Company
1206 Pacific Mutual Building
523 West Sixth Street
Los Angeles 14, California

Re: Royalty Payments, Docket DMEA 2746
(Copper-Zinc), Contract Idm-E522
Coronado Copper and Zinc Company
(Republic Copper-Zinc Mine)
Cochise County, Arizona

Dear Mr. Reid:

We have recently been informed that production subordinated to the Government under the captioned contract was made from the Republic Copper-Zinc Mine, for which report and payment of royalties have not been received by this office.

The most recent report of production and royalty payment was received by your Report No. 36, dated June 6, 1957.

We will appreciate your prompt attention to bring this royalty account up to date.

Very truly yours,

Original signed by
W. H. KING

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

MHM:bh
cc: Sec., Op. Comm. (2)
Royalty File E-522
DMEA/TUC
Semiannual Report File E-522
Chron.

FILE COPY
DMEA
RECEIVED FEB 21 1957

DATE	INITIALS	CODE
2/21	C	220
2/25	EEF	800
		225

[illegible] Westernhouse
[illegible] 2, Colorado

February 19, 1957

Mr. James Reid
Coronado Copper and Zinc Company
1206 Pacific Mutual Building
523 West Sixth Street
Los Angeles 14, California

Re: Royalty Payments, Docket DMEA 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Company, Cochise County, Arizona

Dear Mr. Reid:

The Washington Office, DMEA, has reviewed the data submitted with your letter of January 15, 1957 and conclude that your method for computing and paying royalty on metallic copper sales is not in accord with the provisions of Article 6 of Contract Idm-E522.

As indicated by Article 6, the Government is due a percentage royalty on the net amounts realized from the sales of DMEA production. Hence, it follows that expenses incurred by or on behalf of your company prior to final disposition of production are process incurred costs to be absorbed by the Operator and not a deductible item in computing the amount of royalty due the Government.

It is noted that the amount of sales ($339,152.13) shown on Page 2, Schedule II of Report No. 32 represents the net amount received on various settlements made by The American Metal Company, Limited (your sales agent) after deduction of freight and insurance charges. Such items represent expenses incurred by or on your behalf prior to final disposition and hence are not deductible.

It is further noted on Page 2, Schedule II that from this erroneous amount, the net smelter charge is substracted to obtain the net basis for royalty payment. The net smelter charge in your case is an Operator incurred cost, so this deduction is likewise not justified.

It thus seems that your report of copper sales by Schedule II resolves itself into simply one of submitting four copies of each applicable invoice supplied by your sales agent, and paying royalty on the gross value prorated in the ratio of DMEA production to other production. Schedule I, incidentally, would not be affected by revision of Schedule II.

Proceeding on this, additional royalties are due on DMEA Johnson Camp copper production covered by 29 invoices submitted with Report Nos. 31 and 32 as follows:

	Report No. 31	Report No. 32
Sales	$52,848.72	$341,276.75
Prorated to DMEA	11,195.68	48,991.81
Royalty Due	$559.78	$2,449.59
Royalty Paid	514.56	2,059.68
Balance Royalty Due	$ 45.22	$ 389.91
Total Royalty Due	$435.13	

Your check for $435.13 made payable to Defense Minerals Exploration Administration should be mailed at once to the Executive Officer, DMEA Field Team, Region III, 224 New Customhouse, Denver 2, Colorado. Under the circumstances we will not request revised Reports 31 and 32, but you are requested to incorporate the foregoing with all subsequent reports.

Very truly yours,

Original signed by
W. M. TRAVER

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

MHM/vj

cc: Royalty File E522
Corres. File E522 w/cy Chair. ltr dtd 2/14/57
Chair. Opr. Comm (2)
W. R. Storms w/cy Chair. ltr dtd 2/14/57
Marshall
Chron.

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
2-7	Fisher	800
2/7	Talbert	800
	[illegible]	500
	Bridgeman	140
2/13	Selfridge	130
4	[illegible]	100
	[illegible]	100
2-15		220 225

FEB 14 1957

Mr. W. H. Traver
Executive Officer
DMEA Field Team, Region III
224 New Customhouse
Denver 2, Colorado

Re: Docket No. DMEA-2746 (Copper-Zinc)
Coronado Copper and Zinc Company
Republic Copper-Zinc Mine
Cochise County, Arizona
Contract No. Idm-E522

Dear Mr. Traver:

Your conclusion - the smelter charge is a process incurred cost absorbed by the Operator and not a deductible item in computing the amount of royalty due the Government - set forth in the penultimate paragraph of your memorandum dated January 25, 1957, is correct. Apparently you have based your conclusion on Section 10 (c), DMEA Order-1 Amended, March 19, 1954. This amended order was not in effect at the time the contract was executed, so the interpretation of the royalty provision would be based on DMEA Order-1, March 7, 1952, as amended by Amendment 2, May 15, 1953, and interpreted by DMEA Circular 32, Supplement No. 2, April 6, 1954. The Circular is for internal use only and is not to be quoted to Operators.

In reviewing the data which have been submitted it is noted that the amount of sales ($339,152.13) shown on Schedule II, Page No. 2, represents the net amount received on various settlements made by The American Metal Company, Limited (the Operator's agent), after deduction of freight and insurance charges. Such items also represent expenses incurred by or on behalf of Coronado Copper and Zinc Company and as such are not deductible from the gross proceeds from the sale of the copper.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

APPROVED:

Frank D. Lamb (FDL)

Member, Bureau of Mines

N. E. Nelson (NEN)

Member, Geological Survey

Copy to: Docket
Admr. Reading File
Operating Committee
Mr. Pennington
Mr. Kiilsgaard
Mr. Griswold
Mr. Chambers

CEFisher/wb
February 7, 1957

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
2-4	Fisher	800
2-4	Chambers	800
2-4	Gillette	500
		130
		110
		100
		225

Mr. W. M. Traver
Executive Officer
DMEA Field Team, Region III
224 New Customhouse
Denver 2, Colorado

Re: Docket No. DMEA-2746 (Copper-Zinc)
Coronado Copper and Zinc Company
Republic Copper-Zinc Mine
Cochise County, Arizona
Contract No. Idm-E522

Dear Mr. Traver:

Your interpretation of Section 10 (c) of DMEA Order-1 as set forth in the penultimate paragraph of your memorandum dated January 25, 1957, regarding royalty applicable to sales of copper by the subject Operator is correct.

In reviewing the data which have been submitted it is noted that the amount of sales ($339,152.13) shown on Schedule II, Page No. 2, represents the net amount received on various settlements made by The American Metal Company, Limited (the Operator's agent), after deduction of freight and insurance charges. Such items also represent expenses incurred by or on behalf of Coronado Copper and Zinc Company and as such are not deductible from the gross proceeds from the sale of the copper. ~~(See "The Rule" in DMEA Circular 32, Supplement No. 2, dated April 6, 1954.)~~

Sincerely yours,

Chairman, Operating Committee

APPROVED:

Member, Bureau of Mines

Member, Geological Survey

Copy to: Docket
Adrm. Reading File
Operating Committee
Mr. Pennington
Mr. Kiilsgaard
Mr. Griswold
Mr. Chambers

(Over)

CEFisher/wb
February 1, 1957

8623

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

OFFICIAL FILE COPY
DMEA
RECEIVED JAN 28 1957

DATE	INITIALS	CODE
1-28	C	220
1-28	GEP	800
		225

224 New Customhouse
Denver 2, Colorado

January 25, 1957

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Royalty payments, Docket DMEA 2740 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Company (Republic Copper-Zinc Mine), Cochise County, Arizona

Enclosed are two photocopies of a letter dated December 27, 1956 from the Operator, which gives notice of the change in sales form of copper production which is subject to DMEA royalty.

Also enclosed is your copy of the Operator's Report No. 32, which is the first to be computed under the new system.

There is no question about the report of zinc concentrates sales since it remains essentially the same as in past reports. We do have a question, however, which you are requested to rule on. It pertains to the report of royalty on the sale of metallic copper.

Page No. 1, Schedule II of Report No. 32 reports the basis for DMEA royalty (see page 1 of Report 32) on Net Amount Received. This net amount is a proration of the balance (see page 2, Schedule II) obtained from substracting the Net Smelter Change from Metallic Copper Sales.

As we understand the new system, Coronado now ships its copper concentrates to International Smelting & Refining Company. It then sells its copper product through a sales agent. In this light, it seems that Coronado should not be allowed to deduct the Net Smelter Charge made by International from the Sales value of the copper metal because such charge constitutes a treatment process not paid by the buyer. Hence, if we interpret Sec. 10 (c) of DMEA Order-1 correctly, the smelter charge is a process incurred cost absorbed by the Operator and in this instance not a deductable item.

An official ruling, however, as to whether or not the net smelter charge is a legitimate deductable item is requested.

W. M. Traver

OFFICIAL FILE COPY
DMEA
RECEIVED JAN 28 1957

DATE	INITIALS	CODE

CORONADO COPPER AND ZINC COMPANY
1206 PACIFIC MUTUAL BUILDING
523 WEST SIXTH STREET
LOS ANGELES 14, CALIFORNIA
TELEPHONE MADISON 6-3231

DMEA
DEPARTMENT OF THE INTERIOR
DEC 31 1956
REGION III
DENVER, COLORADO

December 27, 1956

DMEA
DEPARTMENT OF THE INTERIOR
DEC 31 1956
REGION III
DENVER, COLORADO

United States Department of the Interior
Defense Minerals Exploration Administration
224 New Customhouse
Denver 2, Colorado

Attention: W. M. Traver

Re: Royalty Payments-Docket DMEA 2740
(Copper-Zinc) Contract Idm E 522
Coronado Copper and Zinc Company
Cochise County, Arizona

Gentlemen:

This acknowledges receipt of your letter of December 20, 1956 regarding the above referred to contract.

We respectfully apologize for the delay in filing our reports. In prior reports we were selling our concentrates direct to the smelter. Had we continued, there would have been no lapse in our reporting. Beginning with May we began selling our product as copper through a sales agent. This delayed the sales and receipts for several months and created a problem as to how we should report. Then, our Mr. Westover who had been handling the accounting and reporting for several years left our employ. We believe that we have the reporting now under control and there should be no further delay.

Enclosed is report No. 31 on the above referred to contract for the month of May 1956.

Reports for subsequent months will be mailed in the near future.

Also enclosed is our check in the amount of $765.11.

Very truly yours,

James Reid
CORONADO COPPER AND ZINC COMPANY

JR:dm
encl.

E 522

~~1-2 C 800~~
1-2 ~~220~~ C 220
1-4 ~~800~~
1-4 C 220

CLASS OF SERVICE
This is a fast message unless its deferred character is indicated by the proper symbol.

WESTERN UNION
TELEGRAM

=(40). 1201

W. P. MARSHALL, PRESIDENT

SYMBOLS
DL = Day Letter
NL = Night Letter
LT = International Letter Telegram

The filing time shown in the date line on domestic telegrams is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination

LA390

1956 DEC 26 PM 6 46

L LLN238 PD=FAX LOS ANGELES CALIF 26 506PMP=
:U S DEPT OF THE INTERIOR, DEFENSE MINERALS
EXPLORATION ADMINISTRATION=
:224 NEW CUSTOMHOUSE DVR=

DMEA
DEPARTMENT OF THE INTERIOR
DEC 27 1956
REGION III
DENVER, COLORADO

:ATTN: W. M. TRAVER

REGARDING YOUR LETTER DECEMBER 20 DOCKET DMEA 2746 CONTRACT IDM-E522 STOP CHECK FOR MAY ROYALTY DUE YOU MAILED TODAY STOP ROYALTY CHECKS FOR SUBSEQUENT PERIODS BEING COMPUTED STOP EXPLANATORY LETTER FOLLOWS=
JIM REID CORONADO COPPER & ZINC CO=

PHOTO 2 TO: CORRESP. STORMS SEC OPR COMM(2)

Royalty File E 522

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

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

224 New Customhouse
Denver 2, Colorado

CERTIFIED MAIL

December 20, 1956

Mr. E. R. Westover, Chief Accountant
Coronado Copper and Zinc Company
1206 Pacific Mutual Building
523 West Sixth Street
Los Angeles 14, California

Re: Docket DMEA 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Company (Republic Copper-Zinc Mine), Cochise County, Ariz.

Dear Mr. Westover:

Our records indicate production is being made from land subordinated to the Government under Contract Idm-E522, but review of our files show no report of sale or royalties subsequent to the submitted report of concentrates sold to smelters during April, 1956. These sales are covered by your Report No. 30.

In a letter dated July 9, 1956, Mr. C. O. Mittendorf, Administrator, DMEA, advised you as to procedure to follow when reporting production under the new disposal schedule.

In view of foregoing, you are requested to furnish us with four (4) copies of each settlement sheet and applicable royalty for all production made subsequent to April, 1956.

Yours very truly,

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

MHM/vj

cc: Royalty File E522
Corres. File E522
Ser.Opr. Comm. (2)
W. R. Storms
Marshall
Chron.

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

RECEIVED
AUG - 3 1956

224 New Customhouse
Denver 2, Colorado

July 31, 1956

Memorandum

To: W. R. Storms

From: Executive Officer, DMEA Field Team, Region III

Subject: Royalty payments, Docket DMEA 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Company Republic Copper-Zinc Mine), Cochise County, Arizona

Enclosed is one photocopy of subject company's Royalty Report No. 16 for February 1955, requested by your memorandum dated July 27, 1956.

W. M. TRAVER

W. M. Traver

Enclosure

MMM/vj

cc: Royalty File E522
Correspondence File E522
Sec. Opr. Comm. (2)
Marshall
Chron.

File Copy
Surname
Griswold
Chamberlain
Mayer
F E Johnson

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

JUL 9 - 1956

Mr. E. R. Westover, Chief Accountant
Coronado Copper and Zinc Company
1206 Pacific Mutual Building
523 West Sixth Street
Los Angeles 14, California

Re: Docket No. DMEA-2746 (Copper-Zinc)
Coronado Copper and Zinc Company
Republic Copper-Zinc Mine
Cochise County, Arizona
Contract No. Idm-E522

Dear Mr. Westover:

Your letter of May 31, to Mr. W. M. Traver, has been referred to me for reply.

Regarding your inquiry as to the method for making payment for DMEA royalties, we have no objection to your making such payments when final settlements on metal sales are received by you.

Royalty payments should be accompanied by the necessary settlement sheets showing charges for transportation, smelting, refining, sales expense, etc.

Sincerely yours,

C. G. Mittendorf (fw)

Administrator

WRGriswold/er 6/27/56
Copy to: Docket
dmr R File
Op. Committee
Base Metals
Mr. Pennington, USBM
Mr. Kiilsgaard, USGS
Region III, (2)
Chron.

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

RECEIVED
JUN 28 1956

224 New Customhouse
Denver 2, Colorado

June 25, 1956

Memorandum

To: Secretary, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Company (Republic Copper and Zinc mine), Cochise County, Arizona

Enclosed herein is a photocopy of a letter dated June 19, 1956 from Mr. E. R. Westover, whereby correction is made to his letter of May 31, 1956 to this office.

W. M. Traver

W. M. Traver

Enclosure

DMEA
Date Rec'd.
JUN 22 1956
BUREAU OF MINES
Denver, Colorado

CORONADO COPPER AND ZINC COMPANY
1206 PACIFIC MUTUAL BUILDING
523 WEST SIXTH STREET
LOS ANGELES 14, CALIFORNIA
TELEPHONE MADISON 6-3231

June 19, 1956

RECEIVED
JUN 28 1956

Mr. W. M. Traver, Executive Officer
DMEA Field Team, Region III
U. S. Department of Interior
224 New Custonhouse
Denver 2, Colorado

Dear Mr. Traver:

It has been brought to my attention an error in fact existed in my letter of May 31, 1956. The first sentence which states "Effective May 1, 1956 we began shipping Johnson Camp concentrates to International Smelting and Refining Company". This letter is to correct this error.

Although our contract with International Smelting and Refining Company was effective May 1, 1956 we were committed to ship all of our copper concentrate production through May 8, 1956 to the American Smelting and Refining Company. Therefore, the first shipped to International Smelting and Refining Company was our Lot No. 832, bill of lading dated May 14, 1956.

Yours very truly,

E. R. Westover

ERW:mh

E. R. Westover, Chief Accountant
CORONADO COPPER AND ZINC COMPANY

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

RECEIVED
JUN 22 1956

June 20, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 2746 (Copper-Zinc) Contract Idm-E522, Coronado Copper and Zinc Company (Republic Copper and Zinc Mine), Cochise County, Arizona

Enclosed is one photocopy of the information Coronado Copper and Zinc Company submitted to our request of June 8, 1956, for a complete outline of the disposal schedule now employed by that company. We were informed of the new schedule in Mr. E. R. Westover's letter of May 31, 1956. Your office was furnished copies of the cited correspondence. We recommend approval of the submitted outline and refer the information to your office for action.

Further, we request that your office reply to the inquiry by Mr. Westover in his letter of May 31, as to the procedure we wish Coronado Copper and Zinc Company to follow when reporting production under the new disposal schedule.

W. M. Traver

W. M. Traver

Enclosure

MHM.

Pass to MO. with recommendations

CYPRUS MINES CORPORATION
523 WEST SIXTH STREET
LOS ANGELES 14, CALIFORNIA
TELEPHONE MADISON 6-3231

DMEA
Date Rec'd
JUN 18 1956
BUREAU OF MINES
Denver, Colorado

June 15, 1956

RECEIVED
JUN 22 1956

Mr. W. M. Traver
U.S. Department of Interior DMEA
224 New Customhouse
Denver 2, Colorado

Re: Royalty payments,
Docket DMEA 2746
Contract Idm-E522

Dear Mr. Traver:

Under our new contracts, International Smelting and Refining Company (hereafter referred to as Smelter) agrees to return to Coronado 97% of the copper content of the concentrates as determined by electrolytic assay, with a minimum deduction of 12 pounds per dry ton of concentrates. Smelter will pay us for 95% of silver content at market less 1.5% per ounce with a minimum deduction of o.5 ounces.

Treatment (smelting) charge is $11.00 per ton of concentrates as base. The base is subject to increase or decrease of 20¢ per ton for each variation of 1% in cu content over or under 25% concentrate, maximum base charge of $12.00 or minimum of $10.00.

To the treatment charge will be added or deducted any increase or decrease in labor. The base labor at the Miami plant for an 8 hour day is $18.60 per day. Increase or decrease 10¢ per each 25¢ increase or decrease in the average man shift. Labor costs include average rate plus all taxes Federal and State plus all fringe benefits.

In addition, Coronado will pay the Smelter a base refining charge of 3.6¢ per pound of returnable copper, or $72.00 per ton of copper. This charge is based on a freight rate on copper bullion from Miami, Arizona to Perth Amboy, New Jersey of $24.97 per ton or 1.2485¢ per pound of copper, and a base labor cost of $2.16 per hour at Rariton Copper Works.

The refining charge may increase or decrease 15¢ per ton of copper for each 1¢ increase or decrease in labor cost. Again, labor costs includes average rate plus all taxes, Federal and State, plus all fringe benefits on direct or indirect labor.

The Smelter has established a base fuel cost for both the smelting and refining. Any increase or decrease from the base natural gas (smelting) of 26¢ per million B.T.U., or any increase or decrease from the base fuel oil at the Rariton Copper Works of 6-43/100¢ per gallon f.o.b. Rariton. Any variation is for the account of Coronado.

Mr. W. M. Trevar
Re: Royalty payments
June 15, 1956

Coronado has a more favorable rail rate from Dragoon to Miami, Arizona. This rate is $2.65 plus 3% tax as against $3.40 plus 3% tax from Dragoon to El Paso, Texas.

Smelter agrees to deliver such returnable copper in the form of electrolytic refined copper in slabs, cakes, bars and/or ingots - shapes and dimensions which do not carry any premiums. Coronado's agent may take delivery f.o.b. cars Perth Amboy, New Jersey or f.o.b. cars piers or steamship within lighterage limits of New York harbor. Delivery to be made not more than 90 days after the date of receipt of concentrate at Miami, Arizona.

Ownership of the returnable copper rests with Coronado until turned over to a common carrier on the instructions of our agent. Returnable copper will be sold by our exclusive agent, The American Metals Company, Limited. Payments will be made direct to Coronado less a commission of one percent (1%) of the gross sale price.

This sets out, in brief, our new method of disposing of our concentrates from the Johnson Camp operation. Enclosed is a copy of the smelter's advice on charges for the May concentrates received during the month.

Yours very truly,

E. R. Westover, Chief Accountant
CORONADO COPPER AND ZINC COMPANY

ERW:mh
encl.

INTERNATIONAL SMELTING AND REFINING COMPANY
Miami Plant

June 8, 1956

Coronado Copper & Zinc Company
1206 Pacific Mutual Building
Los Angeles 14, California

RECEIVED
JUN 22 1956

Dear Sirs:

The adjustment of the base smelting charges for Coronado concentrates received during the month of May, 1956, is as follows:

Smelting Base		$ 11.00
Labor Variable - Smelter		
Base Daily Wage	$15.81	
Vacation Allowance	.5344	
Overtime	1.3175	
Paid Holiday	.3720	
Social Security & Unemployment Tax	.4959	
A. & H. Insurance	.1526	
Pensions	.0038	
Total	18.8862	
Base	18.6000	
Increase in Labor Variable	.0862	
40% of Increase		.0345
Smelting rate for May, 1956 (Subject to variation in copper percentage		11.0345

DMEA
Date Rec'd.
JUN 18 1956
BUREAU OF MINES
Denver, Colorado

The adjustment of transportation and refining charges for May, 1956, is as follows:

Freight and refining base - per ton returnable copper		$72.0000
Increase in freight ($26.4607 - 24.97)		1.4907
Labor Variable - refinery		
May labor rate	181.50¢	
Vacation Allowance	8.64	
Paid Holidays	4.81	
Shift differential	1.16	
Pensions	4.28	
Social Security Taxes	5.97	
Temporary disability	.86	
Employees services	8.34	
Total	215.56	
Base	216.00	
	(.44)@ 15¢	(.0660)
Fuel Oil Variables		
May fuel oil cost per gal.	6.43¢	
Base Rate	6.43¢	-
Transportation and refining rate for May, 1956		$73.4247

Yours very truly,

J. D. RAINEY
Assistant Chief Clerk

JDR:b
Enc.
cc: Johnson Camp
Dragoon, Arizona

Recd

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

RECEIVED
JUN 22 1956

June 20, 1956

224 New Customhouse
Denver 2, Colorado

Mr. E. E. Westover, Chief Accountant
Coronado Copper and Zinc Company
1206 Pacific Mutual Building
523 West Sixth Street
Los Angeles 14, California

Re: Docket DMEA 2746 (Copper-Zinc)
Contract Idm-8522, Coronado
Copper and Zinc Company (Republic
Copper and Zinc Mine) Cochise
County, Arizona

Dear Mr. Westover:

The information requested by our letter of June 8, 1956, has been received and forwarded to our Washington Office with recommendation for approval.

Their reply and advisal as to the proper procedure to follow when reporting production under the new schedule should be forthcoming in the near future.

Very truly yours,

W. M. TRAVER,

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

MEM:ab

cc: Roy. File E522
Sec. Op. Comm. (2)
W. R. Storms
Marshall
Chron.

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

RECEIVED
JUN 13 1956

224 New Customhouse
Denver 2, Colorado

June 8, 1956

Mr. E. R. Westover, Chief Accountant
Coronado Copper and Zinc Company
1206 Pacific Mutual Building
523 West Sixth Street
Los Angeles 14, California

Re: Royalty payments, Docket DMEA 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Company, (Republic Copper & Zinc mine), Cochise County, Arizona

Dear Mr. Westover;

In reply to your letter of May 31, 1956, you must submit a complete outline of the treatment processes, including all costs and charges by operator and buyer, for Johnson Camp copper concentrates to this office before we can advise you of the proper procedure to follow when reporting that portion of production subject to DMEA royalty.

The schedule submitted must reflect computation of royalty on the value per ton of refined metals marketed and at the rates provided in Article 6 of the contract.

Yours very truly,

W. M. TRAVER

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

MHM/vj

cc: Royalty File E522
Sec. Opr. Comm. (2) w/encls
W. R. Storms w/encl
Marshall
Chron.

CORONADO COPPER AND ZINC COMPANY
12[illegible]5 PACIFIC MUTUAL BUILDING
523 WEST SIXTH STREET
LOS ANGELES 14, CALIFORNIA
TELEPHONE MADISON 6-3231

May 31, 1956

RECEIVED
JUN 13 1956

DMEA
Date Rec'd.
[redacted] 3 1956
BUREAU OF MINES
Denver, Colorado

Mr. W. M. Traver, Executive Officer
DMEA Field Team, Region III
U.S. Department of Interior
224 New Customhouse
Denver 2, Colorado

Dear Mr. Traver:

See June 19, 56 letter from [illegible]

Effective May 1, 1956 we began shipping Johnson Camp copper concentrates to International Smelting and Refining Company. The smelter is to smelt the concentrates and return to us refined copper. We will then sell the refined copper through our agent. It appears there will be an approximate delay of three months between production and final settlement.

As to our royalty payments to DMEA, do you wish us to pay on a provisional basis monthly and adjust the calculation when final settlements are complete or shall we delay reporting until final settlements are received by us?

We would appreciate advise as to a procedure you desire us to follow in the future.

Yours very truly,

E. R. Westover, Chief Accountant
CORONADO COPPER AND ZINC COMPANY

ERW:mh

ROYALTY FILE E-522

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

RECEIVED
FEB 23 1956

224 New Customhouse
Denver 2, Colorado

February 20, 1956

E. R. Westover, Chief Accountant
Coronado Copper and Zinc Company
1206 Pacific Mutual Building
523 West Sixth Street
Los Angeles 14, California

Re: Royalty payments, DMEA Docket 2746 (Lead-Zinc), Contract Idm-E522, Coronado Copper and Zinc Company, Johnson Camp, Cochise County, Arizona

Dear Mr. Westover:

Your letter of February 16, 1956 regarding the payment of royalties under DMEA Contract Idm-E522 was received today.

Instructions contained in C. O. Mittendorf's letter of February 2, 1956 transmitting "Certification of Discovery" to your company do not apply under Coronado Copper and Zinc Company's present operating procedure. Please continue to prorate total monthly shipments and compute DMEA royalties on a month-by-month basis as has been your policy in the past.

Yours very truly,

W. M. TRAVER

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

RDB/vj

cc: Royalty File E522 w/orig. ltr
Sec. Opr. Comm. (2) w/copy (2)
W. R. Storms
Berkankotter
Chron.

DMB

DMEA
Date Rec'd.
FEB 20 1956

CORONADO COPPER AND ZINC COMPANY
1206 PACIFIC MUTUAL BUILDING
523 WEST SIXTH STREET
LOS ANGELES 14, CALIFORNIA
TELEPHONE MADISON 6-3231

February 16, 1956

BUREAU OF ...
Den...

RECEIVED
FEB 23 1956

Mr. W. M. Traver, Executive Officer
DMEA Field Team, Region III
New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA 2746
Contract No. Idm-E522

Dear Mr. Traver:

We received a letter from Mr. C. O. Mittendorf dated February 2, 1956 transmitting a copy of the certificate of discovery and setting out certain procedures to be followed on royalty payments.

One phase of the letter received from Mr. Mittendorf presents a problem. The sentence "The purchaser should be advised to deduct royalties from the amount due on each shipment and forward the checks to the executive office". By the nature of our operations DMEA ore is comingled with our own ore and processed together with it. There is no practical method for separating company ore from DMEA ore as commingling takes place at shaft collar bin. We have rendered 26 royalty reports and payment to Mr. W. H. King using a method which was approved by his office in 1954. A copy of Report No. 26, covering December 1955, is attached for your information.

Will this method be satisfactory for future reports? Please advise in order for our office to conform with your wishes.

Yours very truly,

E R Westover

E. R. Westover, Chief Accountant
CORONADO COPPER AND ZINC COMPANY

ERW:mh
encls.

File Copy
Surname

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION 500
WASHINGTON 25, D. C.

FEB 13 1956

Mr. W. M. Traver
Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-2746 (Copper-Zinc)
Coronado Copper and Zinc Company
Republic Copper-Zinc Mine
Cochise County, Arizona
Contract No. Idm-K522

Dear Mr. Traver:

As recommended in your memorandum of January 18, we have made the certification covering the cited contract. We have received the final engineering report on the project by William R. Hardwick and Walter R. Storms and also the final geologic report by John N. Faick.

In neither of these reports much attention is given to the 8,204 feet of core drilling from surface, other than the remarks "results of the drilling in Area 2 were chiefly negative" and "the holes penetrated considerable garnet and tactite but failed to find ore of minable grade or quantity in Area 2". We agree that the low grade material encountered in DMEA holes Nos. 4, 5, 11 and 16 would not be presently minable, though the 7.5 foot intersection of 0.89 per cent molybdenum in hole No. 4 would ordinarily be considered as being of ore grade. In cases where molybdenum values are not reported, we are not clear whether such values were not present or whether assays were not run for molybdenum.

In any event, since the indication of mineralization in "Area 2" is somewhat removed from the presently known ore bodies, we would appreciate having a supplemental paragraph touching upon this occurrence. Would you also advise us as to whether you consider it

of any significance, or whether you believe the drill intersections merely represent small and sporadic pods, of no value as indicators for possible future work.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (24B)

APPROVED:

/s/ Robert W. Geehan (24B)
Member, Bureau of Mines

Thor H. Kiilsgaard (24B)
Member, Geological Survey

WRGriswold/er 2/9/56

Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Pennington, USBM
Mr. Kiilsgaard, USGS
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

Mr. W. M. Traver
Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-2746 (Copper-Zinc)
Coronado Copper and Zinc Company
Republic Copper-Zinc Mine
Cochise County, Arizona
Contract No. Idm-E522

Dear Mr. Traver:

As recommended in your memorandum of January 18, we have made the certification covering the cited contract. We have received the final engineering report on the project by William R. Hardwick and Walter R. Storms and also the ~~preliminary~~ final geologic report by John N. Faick.

In neither of these reports much attention is given to the 8,204 feet of core drilling from surface, other than the remark "results of the drilling in Area 2 were chiefly negative". ~~We believe this subject should be amplified in the complete final geologic report. We are not clear as to what conclusions may be drawn from the low grade ores encountered. Perhaps this occurrence is of no great significance, but it should not be overlooked.~~

We note that DMEA hole 16 showed 0.20 per cent copper and 3.47 per cent zinc for ten feet of core. Molybdenum values were not reported. Other surface holes of some interest were DMEA holes 4, 5, and 11.

Sincerely yours,

Chairman, Operating Committee

APPROVED:

Member, Bureau of Mines

Member, Geological Survey

File Copy
Surname

Drummond
Dwyer
"Appd. Sol. Off."
Talbut
Geehan
Kilgaard
Selfridge
F. E. Johnson

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

FEB - 2 1956

Mr. George D. Dub, President
Coronado Copper and Zinc Company
1206 Pacific Mutual Building
523 West Sixth Street
Los Angeles, California

INTERIOR DEPT.
JAN 31 1956
SOLICITOR

Re: Docket No. DMEA-2746 (Copper-Zinc)
Coronado Copper and Zinc Company
Republic Copper-Zinc Mine
Cochise County, Arizona
Contract No. Idm-E522

Dear Mr. Dub:

Transmitted herewith is a certification of discovery or development related to the Exploration Project Contract No. Idm-E522, dated May 18, 1953, on the lands described in the contract.

By the terms of the Exploration Project Contract and of the Certification, all production from the land described in the contract after May 18, 1953, the date of the contract, is subject to the Government's percentage royalty as set forth in the said contract until the sum of $43,522.50, which the Government has advanced as its participating interest is repaid, or until May 18, 1963, whichever occurs first.

Payments should be made to Mr. W. M. Traver, Executive Officer, DMEA Field Team, Region III, 22½ New Customhouse Building, Denver 2, Colorado. Checks should be drawn in favor of the Defense Minerals Exploration Administration. The purchaser should be advised to deduct royalties from the amount due on each shipment and forward the checks to the Executive Officer.

Royalty payments to the Government should be accompanied by suitable evidence, such as copies of settlement sheets, showing quantity and grade of the products sold, the name of the purchaser, and the price and charges, certified to be correct by the purchaser.

You are requested to notify Mr. Traver of any changes in ownership and production rights that might affect the Government's right to its percentage royalty. Also, if production ceases at any time for an extended period please notify Mr. Traver at six-month intervals that such is the case.

Sincerely yours,

SIGNED

Administrator

Enclosure

WRGriswold/er (1/27/56)
Copy to: Docket
Mr. C. A. Fredell, Dr.,MD,EPS
Mr. Geehan, USBM
Mr. Kilsgaard, USGS
Admr R. File
Op. Committee
Base Metals
Region III (2)
Cont.Adm.&Audit Div.
Finance Office
Mr. F. E. Johnson
Mr. W. R. Griswold
Chron.

File Copy
Surname
Griswold
Dwyer
"Appd. Sol. Off."
Talbert
Geehan
Kiilsgaard
Selfridge
Johnson

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

FEB - 2 1956

Mr. Clarence A. Fredell, Acting Director
Materials Division
Emergency Procurement Service
General Services Adminstration
Washington 25, D. C.

Re: Docket No. DMEA-2746 (Copper-Zinc)
Coronado Copper and Zinc Company
Republic Copper-Zinc Mine
Cochise County, Arizona
Contract No. Idm-E522

Dear Mr. Fredell:

Enclosed is a copy of a certification of discovery or development related to Exploration Project Contract No. Idm-E522.

The contract was dated May 18, 1953, with the Government participating to the extent of 50 per cent in an exploration project estimated to cost $99,050.00. Actual expenditures were $87,045.00, with the Government's share being half of such amount, or $43,522.50.

The total amount of work provided for under the contract consisted of 1,670 feet of crosscutting and drifting and 9,660 feet of diamond drilling. Work actually done consisted of 1,297 feet of crosscutting and drifting and 9,140 feet of diamond drilling.

The discovery consisted of copper-zinc ores occurring as replacements in garnetized limestone rocks. The ore reserve resulting from such work was estimated to consist of 62,300 tons, with a grade of 2.18 per cent copper and 7.70 per cent zinc.

Sincerely yours,

D. O. Mittendorf

Administrator

Enclosure

WRGriswold/er (127/56)
Copy to: Docket
Mr. Geehan, USBM
Mr. Kiilsgaard, USGS
Admr R. File
Op. Committee
Base Metals
Region III (2)
Cont.Adm.&Audit Div.
F. E. Johnson
W. R. Griswold
Chron.

R.C.L.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

RECEIVED
JAN 27 1956

January 26, 1956

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: J. W. Pennington, Branch of Base Metals

Subject: Review of Final Engineering Report, DMEA Contract Idm-E522 Docket No. DMEA 2746, Coronado Copper and Zinc Company, Copper-Zinc mine, Johnson Camp, Cochise County, Arizona

The final engineering report on the above project by W. R. Hardwick and W. R. Storms, Bureau of Mines, has been reviewed.

According to the report, the exploration work completed consisted of 1,297 feet of drifting and crosscutting and 9,139.5 feet of diamond drilling. Two areas were explored under the terms of the contract and its amendments at an actual cost of $87,045.00. The work was conducted efficiently and satisfactorily.

Estimated grade and tonnage of ore discovered by the exploration consisted of 38,153.95 tons containing 2.55 percent copper and 8.3 percent zinc; 14,193.61 tons containing 1.60 percent copper and 6.50 percent zinc; and 10,000 tons of mineable grade.

On the basis of this information, I agree with the recommendation of the engineering report that a Certification of Discovery or Development be issued.

J. W. Pennington

Copy to: Division of Minerals
Branch of Base Metals
R. W. Geehan
J. W. Pennington
Thor Kiilsgaard, U.S.G.S.
F i l e s

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

RECEIVED
JAN 23 1956

January 18, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Company, Republic Copper-Zinc Mine, Cochise County, Arizona

Reference is made to your letter of January 16, 1956, wherein you request advice relative to the Field Team final report and our recommendations pertaining to certification of the subject property.

We are glad you brought this matter to our attention, as we had inadvertently overlooked the proximity of the expiration of the period within which the Government can make a certification. We have not received the geological report from the U. S. Geological Survey. However, the operator's and engineer's final reports will be forwarded to reach you the week of January 23 to 27.

The operator's final report was received in this office August 17, 1955. Therefore, a certification must be issued on or before February 17, 1956. The engineer's report details the extent of discovery and recommends certification, in which this office concurs.

W. M. Traver

W. M. Traver

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

RECEIVED
JAN 20 1956

224 New Customhouse
Denver 2, Colorado

January 18, 1956

Memorandum

To: Secretary to the Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: Docket DMEA 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Company, Republic Copper-Zinc mine, Johnson Camp, Cochise County, Arizona

Enclosed are the following final reports pertaining to work completed under the subject contract:

1. Original and one copy of the Operator's final report.

2. Original and three copies of the final engineering report by the Bureau of Mines.

The final geologic report by the U. S. Geological Survey is not presently available, but has been requested from the field and will be forwarded when received.

The reports under items 1 and 2 are forwarded for your consideration because of the necessity that the Contract be certified by February 17, as the Operator's report was received in this office August 17, 1955.

Final payment to the Operator was processed by this office August 26, 1955, in conformance with the Report of Review by the Contract Administration Audit Division, dated August 17, 1955.

The exploration work consisted of 1,297 feet of cross-cutting and drifting and 9,139.5 feet of diamond core drilling, at a total accepted cost of $87,045.00, in which the Government participated to the extent of 50%, or an amount of $43,522.50.

The exploration work resulted in a discovery of copper-zinc ore for which a certification of discovery or development is recommended. The engineering report under item 2 details the extent of the discovery.

W. M. Traver
W. M. Traver

E. N. Harshman
E. N. Harshman
DMEA Field Team, Region III

Enclosures

DMEA
Date Rec'd.

AUG 17 1955

BUREAU OF MINES
Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Box 4097
Tucson 5, Arizona

August 15, 1955

Memorandum

To : W. M. Traver, Executive Officer, DMEA Field Team, Region III

From : Superintendent, Southwest Experiment Station

Subject : Operator's Final Report, DMEA Contract Idm-E522, Docket DMEA-2746, Coronado Copper & Zinc Co.'s Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Ariz.

Enclosed are original and 4 copies of the operator's final report for work done under DMEA Exploration Project Contract No. Idm-E522. This report has been approved by J. N. Faick of the Geological Survey and me.

A copy of this report was not furnished this office, as Mr. Gray's letter indicates.

Walter R. Storms.

Walter R. Storms

CC W. M. Traver (8)
J. N. Faick
DMEA-2746
DF

WRStorms:frj

RECEIVED
JAN 23 1956
DMEA
Date Rec'd.
AUG 17 1955
BUREAU OF MINES
Denver, Colorado
REPLY TO
JOHNSON CAMP UNIT
DRAGOON, ARIZONA

CORONADO COPPER AND ZINC COMPANY
1206 PACIFIC MUTUAL BUILDING
523 WEST SIXTH STREET
LOS ANGELES 14, CALIFORNIA
TELEPHONE MADISON 6-3231

August 12, 1955

WZB

Mr. W. M. Traver
Executive Officer, DMEA
Field Team, Region III
224 New Customhouse
Denver 2, Colorado

Re: Docket DMEA 2746 (Copper-Zinc)

Dear Mr. Traver:

I am enclosing, herewith, the final report on work done under the above captioned contract. This report consists of a final geological report by our geologist, Mr. Richard Bergman, a statement showing footage and costs of drifting, crosscutting and diamond drilling both underground and on the surface, a statement of our estimate of ore reserves as of August 1st plus a description of the ore blocks, and two maps, one showing the blocks of ore in the ore reserve estimate, drifts, crosscuts and underground diamond drill holes, and the other showing the location of the surface diamond drill holes.

We trust that this report will give you all of the information that you will need.

Very truly yours,

CORONADO COPPER & ZINC CO.

By Fred E. Gray
Fred E. Gray
Mine Manager

FEG:k

Encl.

U. S. BUREAU OF MINES
SOUTHWEST EXPERIMENT STATION
AUG 15 1
TUCSON, ARIZONA

ccs ~~Mr. W. R. Storms~~
Mr. G. D. Dub
Mr. R. E. Bergman
Mine Office

CORONADO COPPER AND ZINC CO.
Johnson Camp Unit
DMEA FINAL GEOLOGIC REPORT
DMEA Contract No. Idm E 522
Docket No. 2746

RECEIVED
JAN 23 1956

Area 1: Moore 400 Level West Drift, West 150 North Crosscut, West Hanging Wall Drift, Extension of West Drift, Diamond Drill Holes MU 135, 137, 140, 142, 155, 158, 163 and 164 (DMEA No's. 15, 14, 13, 12, 19, 20, 21, 22 respectively).
Moore 500 Level West F Drift, Diamond Drill Holes MU 170 A, B, and C (DMEA Nos. 23, 24, 25 respectively).

The first 164' of drifting (the 400 Level West Drift) followed the hanging wall of the favorable beds. The beds were broken by a number of small Northeaster faults, none of which had displacements of more than three feet. The favorable beds were thoroughly garnetized, and near the middle of this section of drift one bed 2' thick contained low grade mineralization for a length of 25'. Diamond drill hole MU 142 (DMEA # 12) was drilled into the footwall at this location and no ore was found.

For 265.5' of crosscutting (the 400 Level West 150 North Crosscut) the heading crossed the beds to reach the hanging wall of the favorable beds, which were offset by the Mammoth Fault. The Mammoth Fault was reached at 18' from the beginning of the crosscut, striking N 50° E and dipping 35° southeast. Beyond the fault, the beds in the footwall were siliceous limestone poorly garnetized. A few places showed a little low grade mineralization. Where the crosscut reached the hanging wall a small pod of ore, too small to be of any economic importance, was found.

The next 581.5' of work (the 400 Level West Hanging Wall Drift) consisted of drifting along the hanging wall of the favorable beds. From 42' to 117' in this drift was found a small body of low grade ore ("H" orebody); to date 3474.66 tons of ore averaging 1.66% Cu, 6.47% Zn have been mined from this orebody. Beyond this orebody the drift continued in poorly garnetized limestone, following the hanging wall, which was cut by three easter faults with offset up to 80', and numerous north easter faults with offset no more than 10'. Three diamond drill holes, MU 135, 137, 140 (DMEA Nos. 15, 14, 13 respectively) were drilled to test the footwall of this drift; none of them found any indication of ore.

The 400 Level West Drift was then extended for 150'. Drifting was in garnetite to 18' where the Mammoth Fault was encountered. Beyond the fault, the beds in the footwall were siliceous limestone poorly garnetized for 58', then limestone to the end of the drift. Diamond drill holes MU 155, 158, 163 and 164 (DMEA Nos. 19, 20, 21, 22 respectively) were drilled from this drift, cutting the favorable beds near the hanging wall and bottoming in tactite. MU 158 cut 9.5' of 3.84% Cu, 4.75% Zn and MU 163 4.0' of 2.50% Cu, 7.5% Zn. MU 155 and 164 had no ore. On the basis of ore found in these two holes and ore located in surface diamond drill holes 48, 65 and 66 (company holes), the 260 Raise was driven off of the 400 Level West Drift to the ore ("J" orebody). To date, 673.42 tons of ore averaging 1.78% Cu, 2.94% Zn, has been mined with the prospect of better ore as the mining progresses to the west.

On the basis of the ore showing in the 400 Level West Hanging Wall Drift, two diamond drill holes, MU 132 A and B(company holes) were drilled in Area 1 from 500 Level workings and one of them found low grade ore similar to that on the 400 Level. The 500 WF 320 X-cut was driven and a raise (320 Raise) was

driven to the ore ("F" orebody). Low grade ore was mined for a short period from this stope (320 stope), then stopped because of deficient grade. Later, company drilling off of the 400 Level and from the 420 Sub-Level stopes in the "D" orebody showed a possible orebody extending to the west from the 320 stope. Drifting under DMEA contract off of the 500 Level West E 320 E/W X-cut started in foot wall limestone, crossed the E 90 Fault at 97' (striking N 67° W and dipping 30° southwest), and continued in foot wall limestone. From company drill holes and MU 170 A, B, C (DMEA Nos. 23, 24, 25 respectively) ore was located and is now being mined. To date, 5873.55 tons at 2.54% Cu, 6.57% Zn has been mined from this orebody.

Area 2: Diamond Drill Holes D 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119 (DMEA Nos. 1, 2, 3, 4, 5, 6, 7, 11, 8, 9, 10, 16, 17, 18 respectively) (see accompanying print of drawing No. JGA 9, Copper Chief Area Study Structure Contour Map).

Of the eleven holes originally laid out, ten were intended to form a fence down dip from the Copper Chief Orebody, to try and find an extension of the orebody. The eleventh hole was intended to test a geochemical anomaly a little north of the fence. None of these holes found ore. The holes forming the fence did show, however, that a large body of garnetite was present down dip from the Copper Chief Orebody, and that there was low grade mineralization a long the northern edge of this garnetite mass. The eleventh hole (D 113 - DMEA No. 11) was drilled when the fence was about half completed, but its location was changed slightly to test a fracture zone found in surface geologic mapping, which was being done concurrently with the drilling. The hole intersected some low grade mineralization.

Study of the results of all of this drilling and of the surface geologic mapping indicated that the northern edge of the garnetite body found in the fence could be traced by surface geologic features, and the presence of low grade mineralization made it seem worthwhile to test this edge. Three holes, D 117, 118 and 119 (DMEA Nos. 16, 17, 18 respectively) were drilled for this purpose; they located and thoroughly tested the edge of the garnetite mass, but found no ore. One hole, D 117 (DMEA No. 16) found some low grade mineralization similar to that in the other holes near the edge of the garnetite mass.

Richard E. Bergman

Richard E. Bergman
Geologist

RECEIVED
JAN 23 1956

THE FOLLOWING IS A FINAL ACCOUNT AND STATEMENT OF WORK

OPERATION	UNITS TO DATE 8-1-55	UNIT COST TO DATE 8-1-55	COSTS TO DATE 8-1-55
DRIFTING	1045.5	$ 40.00	$ 41820.00
CROSSCUTTING	265.5	40.00	10620.00
	1311.0		52440.00
(minus 14.0' disallowed in the 500 L WF Drift)	14.0	40.00	560.00
	1297.0		51880.00
DRILLING			
AX Surface	2709.0	4.50	12190.50
EX Surface	5495.0	3.50	19232.50
EX Underground	935.5	4.00	3742.00
	9139.5		35165.00
		TOTAL COST	$ 87045.00

Richard E. Bergman

Richard E. Bergman
Geologist

RECEIVED
JAN 23 1956

CORONADO COPPER AND ZINC CO.
Johnson Camp Unit

DMEA ORE RESERVES AS OF AUGUST 1, 1955

AREA I

ORE BLOCK NO. 1955	GROSS ORE 8-1-55 Tons	% Cu	% Zn	NET ORE 8-1-55 Tons	% Cu	% Zn
	PROVEN AND PROBABLE ORE					
F - 1	5,250	2.55	6.55	4,725	2.55	6.55
H - 1	1,222	1.82	7.03	1,000	1.82	7.03
H - 2	4,549	1.82	7.03	3,465	1.82	7.03
	Total Proven and Probable Ore -			9,190	2.20	6.78
	POSSIBLE ORE					
F - 2	10,500	2.55	6.55	9,450	2.55	6.55
J - 1	2,800	2.62	3.61	2,520	2.62	3.61
	Total Possible Ore -			11,970	2.56	5.93
				21,160	2.40	6.30

Richard E. Bergman

Richard E. Bergman
Geologist

RECEIVED
JAN 23 1956

CORONADO COPPER AND ZINC CO.
Johnson Camp Unit

DMEA ORE RESERVES AS OF AUGUST 1, 1955

DESCRIPTIONS OF ORE BLOCKS

(Dimensions of new blocks are shown on maps.
9 cu. ft. in place equal 1 ton)

PROVEN AND PROBABLE ORE

MOORE SHAFT

Block No. F - 1 includes the ore remaining in the 320, 370, and 470 stopes to 50' west of the 470 stope. The grade assigned is the average of that mined from the "F" orebody in 1954 and 1955.

B lock No. H- 1 is the ore remaining in the 400 W 200 Raise area projected 50' down dip. The grade assigned is that mined in 1954 in the 400 W 200 stope.

Block No. H - 2 is the ore remaining in the 400 W 200 stope. The grade assigned is that mined in 1954.

POSSIBLE ORE

Block No. F - 2 includes the ore in the "F" orebody 50' northwest of the 470 stope to the DMEA boundary line. The grade assigned is the average grade of that mined from the "F" orebody in 1954 and 1955.

Block No. J - 1 is the ore in the "J" orebody between surface diamond drill holes 65, 66 and 48. Grade assigned is that mined in 1955 and diamond drill hole MU 158 (DMEA # 20) less 10%.

Richard E Bergman

Richard E. Bergman
Geologist

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

RECEIVED
FEB - 6 1956

224 New Customhouse
Denver 2, Colorado

February 3, 1956

FINAL F.T. Geo. Rpt.

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Company, Republic Copper-Zinc mine, Cochise County, Arizona

Supplementing the data forwarded as a part of the Field Team report of January 18, 1956, we are enclosing the original and three copies of the Final Geologic Report by John N. Faick, Geologist, U. S. Geological Survey.

W. M. Traver

W. M. Traver

Enclosures

Maps in envelope in #1 Covers folder.

Reviewed by
DMEA OPERATING COMMITTEE
2-8-56
(date)

ACTION [illegible] 2746

Date 2-9-[illegible]

Referred to:

1. ~~Mr. Mittelsdorf~~
2. ~~Mr. Johnson~~
3. ~~Mr. Chambers~~
4. Docket Control Mails and Files
5. _____ Division
6. Docket Control Mails and Files

Note comments in report regarding:

1. Final USGS —
2. Ore reserves pg 7
3.
4.

and take appropriate action.

- - - - - -

Action taken by Divisions:

ROBERT E. ADAMS

Initials

RECEIVED
FEB - 3 1956

U. S. DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

DMEA
Date Rec'd.
FEB 2 1956
BUREAU OF MINES
Denver, Colorado

FIELD TEAM, REGION III

GEOLOGY

FINAL REPORT

DMEA 2746, Contract Idm-E522

CORONADO COPPER & ZINC COMPANY

REPUBLIC COPPER-ZINC MINE
JOHNSON CAMP

COCHISE COUNTY, ARIZONA

(Copper-Zinc)

By
John N. Faick
Geologist
U. S. Geological Survey

January 31, 1956

Reviewed by
DMEA OPERATING COMMITTEE
2-8-56
(date)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
FIELD TEAM III

RECEIVED
FEB - 6 1956

FINAL REPORT

DMEA 2746, Contract Idm-E522
CORONADO COPPER & ZINC COMPANY
REPUBLIC COPPER-ZINC MINE
JOHNSON CAMP
COCHISE COUNTY, ARIZONA
(Copper-Zinc)

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ILLUSTRATIONS

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Fig. 4 Sections showing results of exploration in Area 2	" "	7

RECEIVED
FEB - 6 1956

PROJECT SUMMARY

The significant events pertaining to the DMEA contract with Coronado Copper & Zinc Company are summarized below:

1. Application for exploration assistance at the Republic Mine, Johnson Camp, Arizona, was submitted October 1952 and docketed as DMEA 2746.

2. The property was examined January 21-22, 1953 by M. J. Elsing, U. S. Bureau of Mines, and J. N. Faick, U. S. Geological Survey, and a modified exploration program was recommended.

3. An exploration contract to cost $99,050 was signed May 18, 1953, to allow for exploration of 2 definitely defined areas in 2 stages. These are:

Stage 1, Area 1 -- Explore the 400-foot level of the Moore shaft area by 1220 feet of drifts.

Stage 1, Area 2 -- Explore by 6,500 feet of diamond drill holes from the surface.

Stage 2, Area 1 -- Allow an additional 300 feet of drifting or crosscutting.

Stage 2, Areas 1 and 2 -- Allow 2,000 feet of additional diamond drilling from either surface or underground in either area 1 or 2.

4. Work started under terms of the contract on June 23, 1953, and the project was completed by the end of April 1955. Changes in the original contract were allowed by 4 amendments.

5. The work completed under the project is as follows:

Area 1 -- 1161 feet of drifting and crosscutting and 663.5 feet of core drilling were done on the 400-foot level.

-- 136 feet of drifting and 272 feet of core drilling were done on the 500-foot level.

Area 2 -- 8204 feet of core drilling were done from the surface, in Area 2.

6. Minable ore was discovered in 3 places, and royalty payments are being received from production. There is little doubt but what the Government's share of the cost will be repaid out of royalties.

7. The project successfully accomplished the purpose for which it was intended; therefore a certificate of discovery should be issued.

GEOLOGY

At Johnson Camp pyrometasomatic replacement orebodies occur in limestone beds of the lower part of a thick Paleozoic section. The most productive part of the section is the middle member of the Abrigo formation of Cambrian age. The ore selectively replaced certain sedimentary layers of which the upper beds of the middle member of the Abrigo formation are the most favorable and contain all of the large ore bodies discovered to date. Outside of the mining area the middle member consists of about 240 feet of thin-bedded limestone interbedded with shale and calcareous sandstone. Within the mining area, these beds have been locally metamorphosed to garnetite, in contrast to beds of the upper member of the formation which have been extensively metamorphosed to diopside-rich tactite.

The beds strike northwesterly and dip about 40° NE. Minor flexures were superimposed on this regional dip. Many steep faults and a few flat faults complicate the structure. The rocks of the mining area are cut by a well defined set of faults and fractures striking N. 5° - 30° E. and dipping 60° - 80° SE, called the Northeasters; a less well defined but important set striking approximately E-W and dipping 30° or more S., called the Easters; and a rare group striking N. 10° - 45° W. and dipping over 65° SW or NE, called the Northwesters.

With a few exceptions, the faults are normal faults and the east or south sides are downthrown. The displacements range from almost nothing to a few tens of feet on most faults, but exceptionally exceed 100 feet for some faults. Nearly all the faults are pre-ore but there has been post-ore movement on many of them. The relative magnitude of pre-ore and post-ore movement is generally indeterminable. The apparent fault-offset of ore bodies is due in part to mineralization of the same beds after they were displaced.

ORE DEPOSITS

The primary ore consists of varying proportions of chalcopyrite, sphalerite, bornite and pyrite, with a little molybdenite and scheelite in a gangue of lime-silicates, potash feldspar, quartz, and calcite. The average grade of the ore, mined by the applicant, is about 2½ percent copper and about 6½ percent zinc. The minor metals are not recovered.

The ore bodies are localized along or near the intersection of mineralizing fractures with favorable beds and along anticlinal flexures

in these beds. Some bodies are tabular deposits parallel to the beds, irregular in outline, 3 to 15 feet thick and several hundred feet across. Much of the ore consists of sulfide-rich bands separated by bands of garnetite. The largest deposits are chimneys which are more or less oval in cross section and have the long axis and intermediate axis in the plane of the beds. The chimney is known as a manto if it has a flat rake at a large angle to the direction of dip of the beds. The largest ore body mined, the Main Manto at the Republic Mine, fig. 1, was 1500 feet long, 30 to 100 feet wide and 15 to 40 feet thick, with several large extensions of the bedded type; the down-dip extensions became chimney-like at greater depths. Smaller ore bodies of the chimney or bedded types have been mined at the Mammoth, Copper Chief, Peabody and other mines. A few very small ore bodies in the district were tabular deposits following fractures at a considerable angle to the beds. A new ore body, discovered late in 1952, northwest of the Moore Shaft ore body, is known to be at least 500 feet long and is estimated by the applicant to contain about 100,000 tons of ore.

COMPLETED EXPLORATION WORK

Area 1

In Area 1, figs. 1 and 2, 1161 feet of drifting and crosscutting and 663.5 feet of core drilling were done on the 400-foot level. On the 500 level 136 feet of drifting and 272 feet of core drilling were completed. This work is illustrated by figs. 1 and 2 and by the sections on fig. 3.

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In Area 1 the work done was intended to explore 2 blocks of ground, one above (south of) and the other below (north of) the south-dipping Mammoth fault. This exploration resulted in discovery of 3 ore bodies.

The block of ground above or south of the fault was explored because of ore showings in surface drill holes 65 and 66 (#65 - 5.0 feet assaying 7.5% Cu and 0.8% Zn; #66 - 5.0 feet assaying 1.9% Cu and 5.8% Zn), and because of ore showings in surface hole No. 48 (12.1 feet assaying 4.8% Cu and 2.8% Zn), and because ore had been mined from the bottom of a winze in the Mammoth Mine. These relations suggested that a chimney of ore having a small diameter and plunging eastward along the favorable beds, extended from the Mammoth ore shoot to the area penetrated by the exploration drift. Exploration done under the contract indicates that the above interpretation was correct.

The favorable beds below or north of the Mammoth fault were explored because an important ore body was known to exist on the 500 level and it was believed that other ore bodies might exist at shallower depth in the same block. In this block surface drill hole No. 2 previously cut 8 feet of 1.8% Cu and 0.7% Zn at the top of the middle member of the Abrigo and cut 5 feet of 1.75% Cu and 1.4% Zn 90 feet lower in the hole. The possibility that ore existed beneath the Mammoth fault subsequently was confirmed by DMEA exploration, which resulted in the discovery of 2 ore bodies. These are illustrated on figs. 2 and 3.

400 LW 200 ore body: After the DMEA drift on the 400 level crossed the Mammoth fault it was driven northward to penetrate the favorable hanging wall beds which were then followed along the strike to the limit of the subordinated area. This drift penetrated ore for 75 feet along the drift, and a 90 foot raise proved the extension of the ore. About 3200 tons of ore containing 1.6 percent copper and 6.5 percent zinc subsequently were mined. This ore body is designated as the 400 LW 200 Ore Body.

500 LWF 320 ore body: Another ore body was discovered in the north or footwall side of the Mammoth fault, in the subordinated area. The ore body is designated as the 500 LWF 320 Ore Body because it lies only about 20 feet above the 500 level and is the extension of the ore partly developed by the 320 stope. The initial discovery of this ore was actually made by the Company. This ore body is a pipe-like ore body lying in the hanging wall side of and parallel to the East 90 fault, figs. 2 and 3, to which it apparently is structurally related. This ore body, which has a cross section ranging from 15 to 30 feet across, and a length of a few hundred feet, was cut by project underground diamond drill holes Nos. 23, 24, and 25 and by several drill holes which the Company drilled at its own expense.

400 LW 80 ore body: Drill holes Nos. 20 and 21 cut ore above the 400 level drift at a point where ore was expected. The Company drove a raise into this ore above hole No. 20, but no ore has been mined. An ore body is inferred to extend upward along the favorable beds from the intercept of DMEA hole No. 20, through holes 65 and

66, to the bottom of the west winze stope of the Mammoth workings. About 10,000 tons of minable ore are inferred to be present in this oreshoot. The ore body is designated as 400 LW 80 Ore Body.

Area 2

In Area 2, figs. 1 and 4, 14 drill holes 1-11 and 16-18 were drilled from the surface to explore the favorable limestone beds between the Republic workings and Moore shaft area. The holes were drilled vertically, to reach the favorable limestone beds at depths ranging from about 300 feet to about 750 feet below the surface. In Area 2, 8,204 feet of drilling was completed. Results of this drilling is shown on sections X-X', Y-Y', Z-Z', fig. 4. The holes penetrated considerable garnet and tactite but failed to find ore of minable grade or quantity in Area 2.

ORE RESERVES

The ore bodies discovered as a result of exploration with DMEA participation resulted in a significant increase in ore reserves. These are shown in Table I, and locations of the ore bodies are shown on fig. 2.

TABLE I

Ore Body	Mined	Measured	Indicated	Inferred	Total	% Cu	% Zn
500 LWF 320	2,153.95	3,000	15,000	18,000	38,153.95	2.55	8.5
400 LW 200	3,193.61	1,000	5,000	5,000	14,193.61	1.81	6.65
400 LW 80	---	---	---	10,000	10,000.00	-	-
Grand Total					62,347.56		

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In addition to the above discoveries there is at least one other zone in the subordinated area that deserves exploration, namely the zone along the Mammoth fault west of the Moore shaft. This zone was not explored at the time of the writer's last visit to the property because practical drill sites were not available. Another area that appears extremely favorable for future exploration lies northwest of the area explored by DMEA, and ore in the DMEA #1 may extend northwesterly beyond the limits of the subordinated area into the favorable ground.

CONCLUSIONS AND RECOMMENDATIONS

In conclusion it can be stated that two ore bodies of minable size and grade were found by the DMEA project and a third ore body was discovered which is expected to contain minable ore. A fourth ore body may yet be discovered in an area which the writer believes is not yet adequately explored. Ore is being mined from two ore bodies and royalty payments are being made on the ore produced. It is reasonable to expect that production will be continued, and it is likely that the amount of the Government investment will be repaid out of royalties.

The project was successful in nearly every respect, and as significant quantities of ore were discovered it is recommended that the project be certified as a discovery.

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

224 New Customhouse
Denver 2, Colorado

January 18, 1956

Field Team Final Rpt ENC.

Memorandum

To: Secretary to the Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: Docket DMEA 2746 (Copper-Zinc), Contract Idm-2522, Coronado Copper and Zinc Company, Republic Copper-Zinc mine, Johnson Camp, Cochise County, Arizona

Enclosed are the following final reports pertaining to work completed under the subject contract:

1. Original and one copy of the Operator's final report.

2. Original and three copies of the final engineering report by the Bureau of Mines.

The final geologic report by the U. S. Geological Survey is not presently available, but has been requested from the field and will be forwarded when received.

The reports under items 1 and 2 are forwarded for your consideration because of the necessity that the Contract be certified by February 17, as the Operator's report was received in this office August 17, 1955.

Final payment to the Operator was processed by this office August 26, 1955, in conformance with the Report of Review by the Contract Administration Audit Division, dated August 17, 1955.

The exploration work consisted of 1,297 feet of cross-cutting and drifting and 9,139.5 feet of diamond core drilling, at a total accepted cost of $87,045.00, in which the Government participated to the extent of 50%, or an amount of $43,522.50.

The exploration work resulted in a discovery of copper-zinc ore for which a certification of discovery or development is recommended. The engineering report under item 2 details the extent of the discovery.

Reviewed by
DMEA OPERATING COMMITTEE
1-25-56
(date)

W. M. Traver
W. M. Traver

E. N. Harshman
E. N. Harshman
DMEA Field Team, Region III

Enclosures

DMEA
Date Rec'd.
JUL 14 1955
BUREAU OF MINES
Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

P. O. Box 4097
Tucson, Arizona
July 12, 1955

Southwest Experiment Station

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Memorandum

To : W. M. Traver, Executive Officer, DMEA Field Team, Region III

From : Superintendent, Southwest Experiment Station

Subject : Final Engineering Report, DMEA Contract Idm-E522, Docket DMEA-2746, Coronado Copper & Zinc Co.'s Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Ariz.

Enclosed are original and 8 copies of a final engineering report for the above project by W. R. Hardwick of the Bureau of Mines and the writer. A separate report on Geology will be submitted by the Geological Survey.

As ore was discovered by work done under terms of Exploration Project Contract No. Idm-E522 and its amendments, I recommend that a "Certification of Discovery or Development" be issued.

Walter R. Storms

Walter R. Storms

CC W. M. Traver (8)
J. N, Faick
DMEA-2746
DF

WRStorms:frj

Reviewed by
DMEA OPERATING COMMITTEE
1-25-56
(Date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

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DEFENSE MINERALS EXPLORATION ADMINISTRATION
REGION III

FINAL ENGINEERING REPORT

DMEA-2746, CONTRACT Idm-E522

Coronado Copper & Zinc Company

Republic Copper-Zinc Mine

Johnson Camp

Cochise County, Arizona

William R. Hardwick, Mining Engineer
and
Walter R. Storms, Supervising Mining Engineer
U. S. Bureau of Mines

July 1955

Reviewed by
DMEA OPERATING COMMITTEE
1-25-56
(date)

DMEA-2746, CONTRACT Idm-E522
CORONADO COPPER & ZINC COMPANY
REPUBLIC COPPER-ZINC MINE
JOHNSON CAMP
COCHISE COUNTY, ARIZONA

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SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

In October 1952, the Coronado Copper & Zinc Co. applied to the Defense Minerals Exploration Administration under the Defense Production Act of 1950, as amended, for Government assistance to explore three areas at its Republic copper-zinc mine at Johnson Camp, Cochise County, Ariz. for a total cost of $229,690.00. This application was docketed as DMEA-2746, then sent to the field for an examination and a report on the feasibility of the proposed exploratory work.

On January 21 and 22, 1953, Morris J. Elsing, mining engineer, Bureau of Mines, and John N. Faick, geologist, Geological Survey, examined the Republic mine and reviewed the proposed program with Fred E. Gray, mine manager, and Arthur Baker, geologist, Coronado Copper & Zinc.Co. The DMEA examiners suggested that a modified program might be more acceptable, so on February 6, 1953 an amended application was received at the Tucson office of the Bureau of Mines. This modified application proposed to explore only 2 areas, instead of three, by drifting and diamond drilling for a total cost of $99,640, instead of the original $229,690.

The Johnson Camp ore deposits consist of chalcopyrite, bornite, and sphalerite in garnetized zones in the Cambrian middle Abrigo limestone. The ore bodies are very irregular in size and shape, both vertically and horizontally, and may occur in tabular form, lens-shaped, or may be manto replacements of the limestone beds. They vary in width from 100 to 300 feet, in thickness from 8 to 70 feet, and in

length from 200 to 700 feet. Usually the larger ore bodies are localized at the crests of shallow anticlines. Some smaller bodies are localized by the intersection of the favorable beds with faults.[1/]

The ores at Johnson Camp probably first were mined in the 1880's when a small smelter was built at the Peabody mine. From 1900 to 1942, numerous attempts were made to produce from several small mines in the district, but these operations usually were unsuccessful. In 1942, the Coronado Copper & Zinc Co. purchased the property and in 1945, it constructed a flotation plant and started the production of copper and zinc. The Republic mine was developed by several inclined and vertical shafts, and many thousand feet of drifts, crosscuts, and raises.

Exploration Project Contract No. Idm-E522 was signed on May 18, 1953. It was for the amount of $99,050.00, the Government to furnish 50 percent, and was for the period of two years, work to start within 90 days from the contract date. Two definitely defined areas were to be explored in two stages: Under Stage I, area 1 was to be explored by 1,220 feet of drifts on the 400-foot level, and area 2 was to be explored by 6,500 feet of diamond drill holes from the surface. If this Stage I work were favorable, then 2,000 feet of additional core drilling could be done from the surface or from underground stations in areas 1 and/or 2, and 300 feet of additional drifting and/or

1/ Elsing, M. J. and Faick, J. N., DMEA-2746, Coronado Copper & Zinc Company's Johnson Camp, Cochise Mining District, Cochise County, Ariz., DMEA Report of Examination by Field Team, Region IV, Feb. 1953.

crosscutting could be done in area 1, under Stage II. Total cost of Stage I was $78,050.00; total cost of Stage II was $21,000.00.

Work under terms of the contract began on June 23, 1953 when the 400-foot level drift was started in area 1. On July 10, 1953, core drilling started from the surface in area 2. In April 1954, the drifting and crosscutting on the 400-foot level of area 1 under Stage I were completed with a total of 743.5 feet of drifting and 265.5 feet of crosscutting for a total cost of $40,360.00. Up to this time, 6,065 feet of surface diamond drill holes had been completed in area 2 for a total cost of $23,496.50. Later, 3 additional surface holes were drilled, totaling 2,139 feet for a cost of $8,926.50, and 4 underground holes were drilled from the 400-foot level drift, totaling 267 feet for a cost of $1,068.00. In September 1954, drifting again started on the 400-foot level under an amendment (No. 3) to the contract which provided for drifting and diamond drilling. One-hundred fifty-two feet of drift were driven and 396.5 feet of diamond drill holes were drilled under this amendment for a total cost of $7,666.00. Another amendment (No. 4) then was granted for drifting and drilling on the 500-foot level. One hundred thirty-six feet of drifting and 272 feet of diamond drilling were done under this amendment at a total cost of $6,528.00. This completed all work provided for under terms of the contract and its amendments.

A total of 1,297 feet of drifting and crosscutting was done on the 400- and 500-foot levels, 8,204 feet of surface diamond drill holes were drilled, and 935.5 feet of underground holes were drilled during

the life of the contract. Two small ore bodies were found on the 400-foot level by this work and several hundred tons of copper-zinc ore were mined from one of them. A small ore body also was found on the 500-foot level and ore stoped from it.

Because ore was discovered by work done under terms of the contract and its amendments, it is recommended that a "Certification of Discovery or Development" be issued.

INTRODUCTION

In October 1952, the Coronado Copper & Zinc Co. applied to the Defense Minerals Exploration Administration for Government aid to explore certain areas at its Republic copper-zinc mine at Johnson Camp, Cochise County, Ariz. This application was docketed as DMEA-2746, then sent to the field for an examination of the property. The original application proposed to explore 3 different areas by diamond drilling and drifting for a total cost of $229,690.

On January 21 and 22, 1953, M. J. Elsing of the Bureau of Mines and J. N. Faick of the Geological Survey visited the Republic mine and discussed the proposed work with company officials. The DMEA examiners suggested that a modified project might be more acceptable, so the company submitted an amended application in February 1953, which proposed drifting and drilling in only 2 areas for a total cost of only $99,640. The DMEA examiners then recommended such a modified

program and an Exploration Project Contract was signed on May 18, 1953. Actual exploratory work started on June 23, 1953 and was completed in April 1955.

LOCATION AND ACCESSIBILITY

The Republic copper-zinc mine is situated at Johnson Camp on the eastern side of the Little Dragoon Mountains, Cochise (or Johnson) Mining District, Cochise County, Ariz. in secs. 23, 24, 25, and 26, T. 15 S., R. 22 E. (figure 1). The mine can be reached from the west by traveling 17 miles on paved State Highway 84 from Benson toward Willcox, thence 2.5 miles north to Johnson Camp over a graveled side road. This turn-off is 19 miles west of Willcox. Dragoon, the shipping point on the Southern Pacific Railway, is 6 miles south of the mine by a good graveled road.

PHYSICAL FEATURES AND CLIMATE

Johnson Camp is situated in the low rolling hills on the eastern side of the Little Dragoon Mountains at an altitude of slightly over 5,000 feet above sea level. The area is covered with scattered grass and small desert shrubs.

The climate is mild with hot summers and fairly warm winters. The annual mean maximum temperature at Willcox, some 19 miles east of the mine at an altitude of 4,200 feet, is 76.0° F. and the mean minimum is 40.6° F. The highest temperature recorded at Willcox was 111° F. and the lowest was -2° F. Temperatures at Johnson Camp probably are slightly lower. The annual precipitation at Willcox is 11.6 inches,

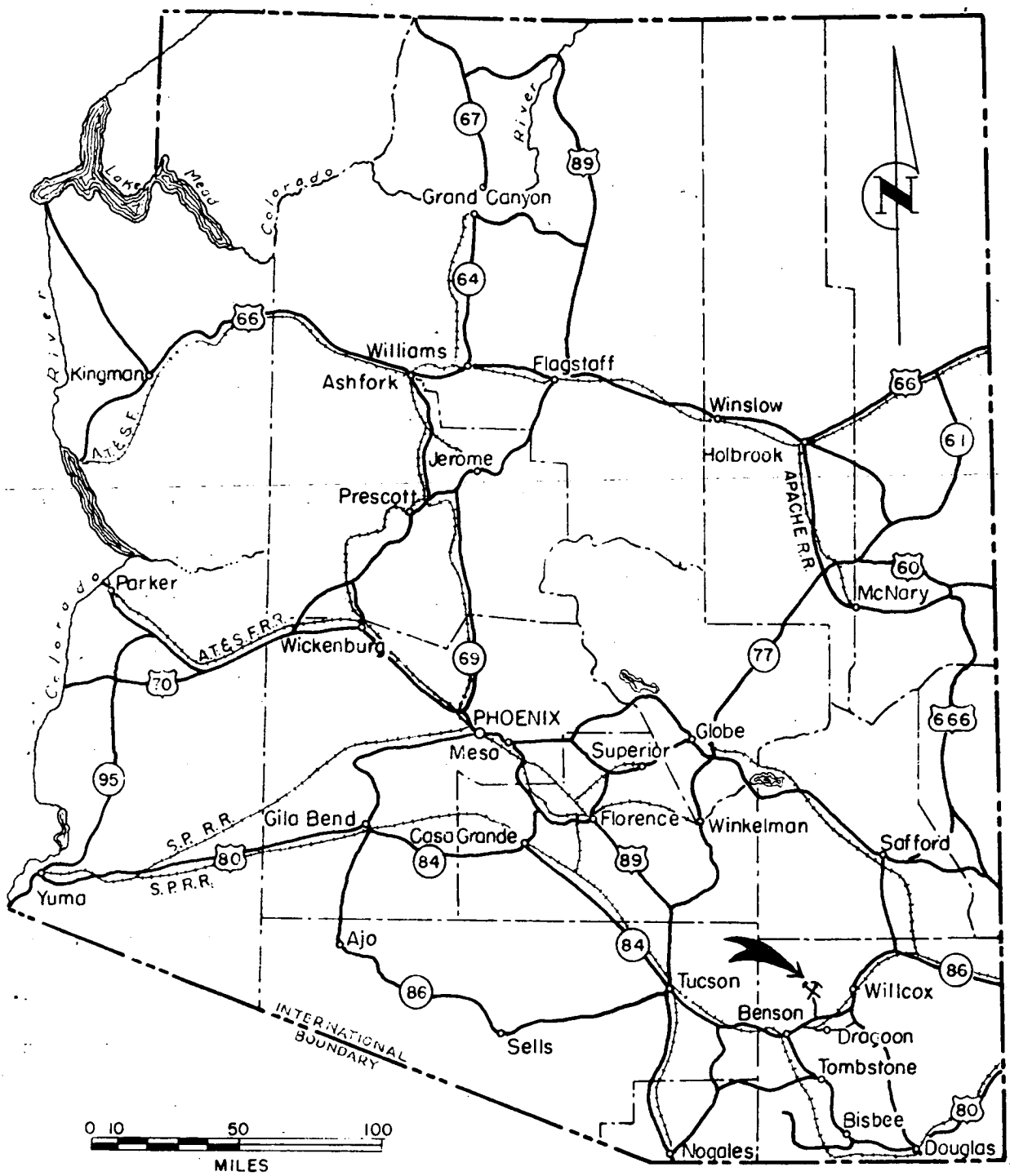

FIGURE I. LOCATION MAP DMEA 2746

CORONADO COPPER & ZINC COMPANY

COCHISE MINING DISTRICT COCHISE COUNTY, ARIZONA

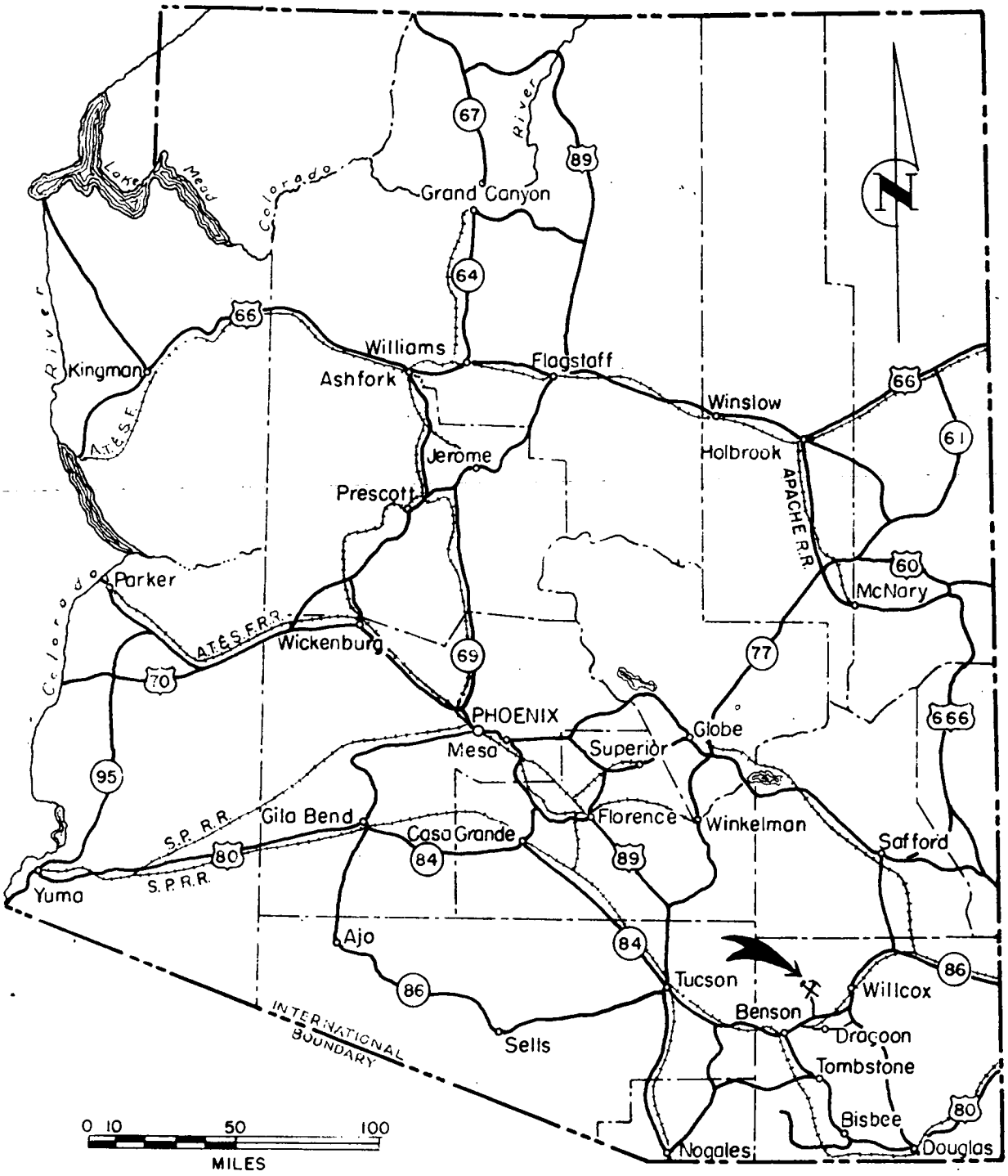

FIGURE 1. LOCATION MAP DMEA 2746

CORONADO COPPER & ZINC COMPANY

COCHISE MINING DISTRICT COCHISE COUNTY, ARIZONA

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mostly as rain in July, August and September, but with some snow during the winter. The average annual precipitation at the mine probably is slightly higher.

HISTORY AND PRODUCTION

Elsing[2/] states: "The history of Johnson Camp dates back to the early eighties when a small smelter was erected at the Peabody mine. From 1900 to 1942 numerous attempts were made to operate the Republic, Mammoth, Peabody, and Copper Chief mines. Considerable copper was produced but operations were unprofitable, except during short periods when the price of copper was high. In 1942, the Coronado Copper and Zinc Co. acquired the above mentioned mines, and in 1945 erected a selective flotation mill for the recovery of copper and zinc. The total production of Johnson Camp to the end of 1949 was approximately 36,500,000 pounds of copper and 25,000,000 pounds of zinc. The Coronado company is treating approximately 6,500 tons of ore per month containing an average of about 2.5 percent copper and 6.5 percent zinc."

Under terms of the Exploration Project Contract ore was discovered in October 1953 on the 400 level in the West Hanging Wall Drift. From October 1953 through October 1954, a total of 3,812 tons of ore containing 1.75 percent copper and 6.43 percent zinc were mined from the contract area. This ore was concentrated in the company's mill and the concentrates were sold. The copper concentrates went to the American Smelting & Refining Co.'s El Paso plant and the zinc

2/ Elsing, M. J., previously mentioned in footnote 1, Engineering Report, p. 3.

concentrates went to the International Minerals & Metals Corp.'s Bartlesville, Okla. smelter. During this same period, 83,742.5 tons of ore containing 2.61 percent copper and 6.13 percent zinc were milled from all areas of the mine.

GEOLOGY

Elsing[3/] describes the geology as follows:

"The Johnson Camp ore deposits consist of chalcopyrite, bornite, and sphalerite which occur in garnetite in the middle Abrigo limestone of Cambrian age. The ore bodies are exceedingly irregular in size and shape. They vary in width from 8 to 70 feet, and in length from 200 to 700 feet. The larger ore bodies are localized at the crests of shallow anticlines. A few smaller ore bodies, and offshoots of the larger ones, are localized by the intersection of the favorable beds with faults. The ore bodies are tabular or lenticular, or they may be replacements of the limestone as mantos. The most common characteristic is their association with garnet. The first step in exploration is to locate the garnetized limestone bed and then more intensive exploration is carried on to locate the ore body in the favorable beds."

A more complete description of the geology will be found in the Geological Survey's final report.

3/ Elsing, M. J., previously mentioned in footnotes 1 and 2.

ORE RESERVES

When the mine was visited by the DMEA examiners in January 1953, company officials estimated the ore reserves as of September 1, 1952 at 180,000 tons with an average content of 2.58 percent copper and 6.67 percent zinc.

Three small ore bodies were discovered by the DMEA project. They are discussed in the order of importance.

1. 500 W 320 Ore Body. Above the 500 level an ore body was discovered extending northwest from the W. F. 320 stope. This ore body is inferred to have a long pipe-shape and to range from 15 to 30 feet in diameter. It lies along the hanging wall side of the East 90 fault. This ore body was cut by project underground diamond drill holes Nos. 23, 24, 25 and by various drill holes which the operator drilled at its own expense. A sub-level drift has been started from the W.F. 320 stope and was being driven northwest in the ore on June 15, 1955. The ore is estimated as follows:

	Tons	Copper Percent	Zinc Percent
Mined to date	2,153.95	2.84	6.7
Measured ore	3,000	2.84	6.7
Indicated ore	15,000	2.36	10.2
Inferred ore	18,000	2.36	8.5
Total	38,153.95	2.55	8.5

2. 400 W. 200 Ore body. On the 400 level the DMEA project drift was driven along the west hanging wall of the favorable beds. Ore was discovered for a length of 75 feet along this drift. A 90-foot raise proved that the ore continued, but the grade was below average. The ore is estimated as follows:

	Tons	Copper, percent	Zinc, percent
Mined to date	3,193.61	1.81	6.65
Measured	1,000	1.81	6.65
Indicated	5,000	1.50	6.50
Inferred	5,000	1.50	6.50
Total	14,193.61	1.60	6.50

3. 400-L W 80 Ore Body. The 400 level west drift was extended 152 feet. Drill holes DMEA Nos. 20 and 21 cut ore above this drift. This ore, also cut by surface holes Nos. 65 and 66, is presumed to be a downward extension of the ore body that was mined in the west winze of the Mammoth incline.

On June 15, 1955 the Operator was driving a raise to explore the ore cut by DMEA underground drill hole No. 20. No ore has been mined from this ore body and no ore is considered measured or indicated. However, an ore body is inferred to extend upward along the favorable beds from the intercept of DMEA Drill Hole No. 20, through surface Drill Holes Nos. 65 and 66, to the bottom of the west winze stope of the Mamoth workings. This ore body is inferred to contain 10,000 tons of ore of minable grade.

The tons of ore discovered by the contract are as follows:

	Mined	Measured	Indicated	Inferred	TOTAL
500 L-W320	2,153.95	3,000	15,000	18,000.	38,153.95
400-L-WF200	3,193.61	1,000	5,000	5,000	14,193.61
400-L-W-80	—	—	—	10,000	10,000.00
Grand Total					62,347.56

WORK COMPLETED

Exploration Project Contract No. Idm-E522 provided for the following work:

"The objective of this project is the exploration of the areas designated on the map, Figure 2, as Area 1 and Area 2. As shown on the said map, the work is to be performed in 2 stages and is as follows:

"Stage I

"Area 1 is to be explored by drifting and crosscutting in cross section a minimum of 6 by 8 feet in the clear, approximately 1,220 feet in a northwesterly direction on the 400 level of the Moore shaft, to disclose the downward extensions of mineralization indicated by surface drill holes No. 65 and No. 66.

"Area 2 is to be explored to test an unexplored area between the Moore shaft area and the Republic mine area, by diamond drilling from the surface through the middle Abrigo formation 11 EX or AX size drill holes totaling approximately 6500 feet but averaging 590 feet per hole.

"The location of these drill holes is spotted on said map in regular pattern for convenience; but it is intended that information gained from any drill hole may dictate a change in the location, attitude, and extent of succeeding holes. All such changes shall be subject to prior approval of the Government.

"Stage II

"If, in the opinion of the Government, the work under Stage I is sufficiently favorable, then, in this stage, about 2,000 feet of additional diamond drilling, either from the surface or underground locations in Area 1 and/or Area 2, and 300 feet of additional drifting and/or crosscutting in Area 1 may be undertaken. This work may be done concurrently or consecutively.

"The location, direction, and extent of the diamond drilling and drifting or crosscutting shall be subject to the prior approval of the Government.

"Agreed Unit Costs

"Stage I

"Drift and/or crosscut 1220 feet @ $40.00/ft.	$48,800.00
Diamond drill 6500 feet @ $4.50/ft. per AX hole and $3.50/ft. per EX hole 1/	29,250.00
	$78,050.00

"Stage II

"Drift and/or crosscut 300 feet @ $40.00/ft.	$12,000.00
"Diamond drill 2000 feet @ $4.50/ft. per AX hole, @ $3.50/ft. per EX hole, and @ $4.00/ft. of underground drilling 1/	$ 9,000.00
	$21,000.00
"Total Agreed Unit Costs of Project	$99,050.00
"Government Participation at 50%	$49,525.00

"1/ As the amount of drilling of AX or EX sized holes, or of drilling underground, cannot be determined in advance, the total footage stated may be distributed between AX, EX, and underground drilling, as necessary, provided the total cost thereof here estimated is not exceeded,"

Work under terms of the contract was begun on June 23, 1953 when the 400-foot level drift was started in Area 1 (see figure 2). On July 10, 1953, diamond drilling started from the surface in Area 2. By April 1954, the drifting and crosscutting on the 400-foot level were completed as provided for in the contract, when 743.5 feet of drift and 265.5 feet of crosscut had been driven (figures 3 and 4). A total of 6,065 feet of surface diamond drill holes in Area 2 also had been completed during this period.

Amendment No. 1 to the contract was approved on May 10, 1954, so 3 additional holes were drilled from the surface in Area 2 for a total footage of 2,139 feet. Four underground holes also were drilled from the 400-foot level drift for a total of 267 feet.

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In September 1954, permission was granted for additional drifting on the 400-foot level (see figure 3). Amendment No. 3 also was signed, effective September 15, 1954, providing for additional drilling from this new drift (Amendment No. 2 merely provided a recess period). One hundred fifty-two feet of drift were driven and 396.5 feet of diamond drill holes were drilled from this drift under this Amendment No. 3.

In December 1954, the company requested another amendment to the contract so drifting and drilling could be done on the 500-foot level in Area 1. Amendment No. 4 was approved on February 3, 1955, providing for such work, and by the end of April 1955, 136 feet of drifting and 272 feet of diamond drilling had been done on this level. This completed all work as provided for by the contract and its amendments.

During the life of the contract, 1,161 feet of drifting and cross-cutting and 663.5 feet of core drilling were done on the 400-foot level in Area 1; 136 feet of drifting and 272 feet of core drilling were done on the 500-foot level in Area 1; and 8,204 feet of core drilling were done from the surface in Area 2. Two small ore bodies were

discovered by this work on the 400-foot level, and another on the 500-foot level. Results of the drilling in Area 2 were chiefly negative.

Prior to May 1, 1955, 5,347 tons of copper-zinc ore were produced from the ore bodies which had been discovered, this ore averaging 2.17 percent copper and 6.65 percent zinc.

The work done under terms of the contract and its amendments is shown on figures 2 and 3.

EXPENDITURES

Costs of exploration work allowed under the contract were as follows:

"Stage I

"Drift and/or crosscut 1220 feet @ $40.00/ft.	$48,800.00
"Diamond drill 6500 feet @ $4.50/ft. per AX hole and $3.50/ft. per EX Hole 1/	29,250.00
	$78,050.00

"Stage II

"Drift and/or crosscut 300 feet @ $40.00/ft.	$12,000.00
"Diamond drill 2,000 feet @ $4.50/ft. per AX hole, @ $3.50/ft. per EX hole, and @ $4.00/ft. of underground drilling 1/	$9,000.00
	$21,000.00

"Total Agreed Unit Costs of Project	$99,050.00
"Government Participation at 50%	$49,525.00

"1/ As the amount of drilling of AX or EX sized holes, or of drilling underground, cannot be determined in advance, the total footage stated may be distributed between AX, EX, and underground drilling, as necessary, provided the total cost thereof here estimated is not exceeded."

Actual expenditures under terms of the contract and its amendments were as follows:

Stage I - Area 1

400-ft. level, 743.5 ft. drifting @ $40.00/ft.	$29,740.00
400-ft. level, 265.5 ft. crosscutting @ $40.00/ft.	10,620.00
	$40,360.00

Stage I - Area 2.

6,065 ft. surface diamond drill hole @ $4.50 and $3.50/ft.	$23,496.50
Total Stage I	$63,856.50

Stage II - Area 1

400-ft. level, 267 ft. diamond drill holes @ $4.00/ft.	$1,068.00
400-ft. level, 152 ft. drifting @ $40.00/ft.	6,080.00
400-ft. level, 396.5 ft. diamond drill holes @ $4.00/ft.	1,586.00
500-ft. level, 136 ft. drifting @ $40.00/ft.	5,440.00
500-ft. level 272 ft. diamond drill holes @ $4.00/ft.	1,088.00
	$15,262.00

Stage II - Area 2

2,139 ft. diamond drill holes @ $4.50 and $3.50/ft.	$7,926.50
Total Stage II	$23,188.50
Total expenditures	$87,045.00
Government's share at 50%	$43,522.50
Total costs allowed	$99,050.00
Total Government participation	$49,525.00
Total unexpended	$12,005.00
Government's share unexpended	$ 6,002.50

Total royalty paid during the life of the contract was $2,195.09 on 3,812 tons of ore averaging 1.75 percent copper and 6.43 percent zinc. This royalty was paid on ore mined from October 1953 to November 1, 1954. According to the Tucson records of the U. S. Bureau of Mines, no royalty has been paid on production subsequent to that date (to June 1955).

EFFICIENCY OF OPERATIONS

Operations under DMEA Exploration Project Contract No. Idm-E522 were carried out in a very efficient and workmanlike manner by competent officials of the Coronado Copper & Zinc Co.

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Surname

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

Mr. W. M. Traver
Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-2746 (Copper-Zinc)
Coronado Copper and Zinc Company
Republic Copper-Zinc Mine
Cochise County, Arizona
Contract No. 1dm-8522

Dear Mr. Traver:

With reference to the cited completed contract, will you please advise us as to when we may expect to receive the final Operator's report and the final Field Team report.

As work on this project, under the terms of the contract and the amendments, was completed on April 21, 1955, we are anxious to close our files for this contract. From the information we have, we are of the opinion that this project can be certified.

Please advise us at your earliest convenience regarding these reports and your recommendations pertaining to certification of this property.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

APPROVED:

/s/ Robert W. Geehan

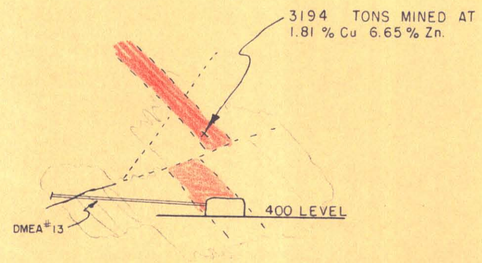
Member, Bureau of Mines

N. E. Nelson

Member, Geological Survey

JWAlt/bjl (1/12/56)

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Pennington
Mr. Kiilsgaard
Chron.



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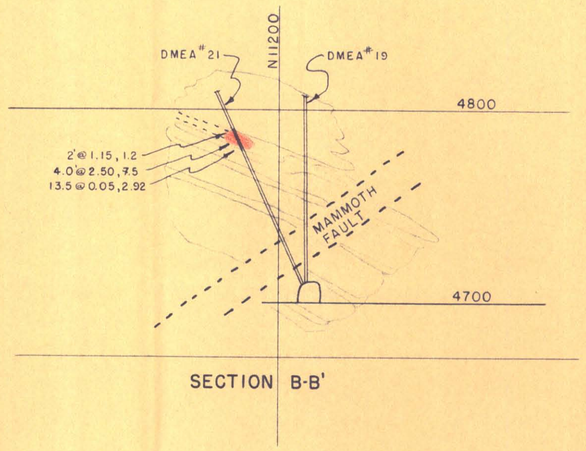

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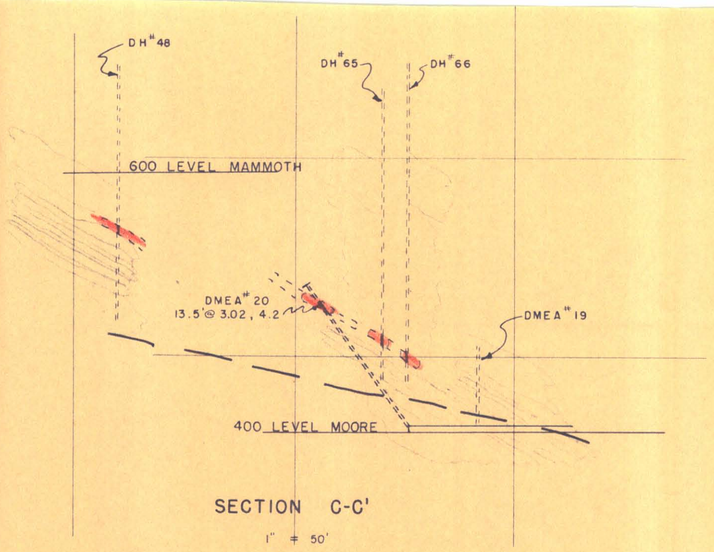
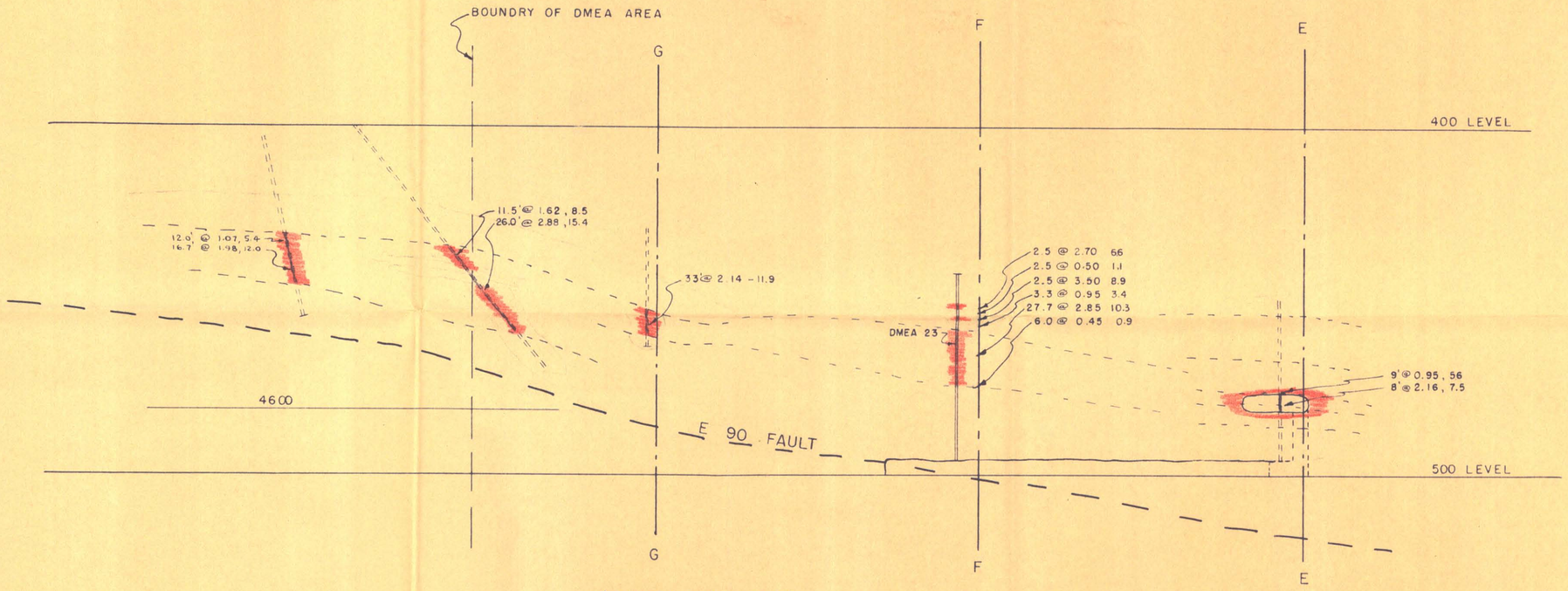


SECTION C-C'

1" = 50'



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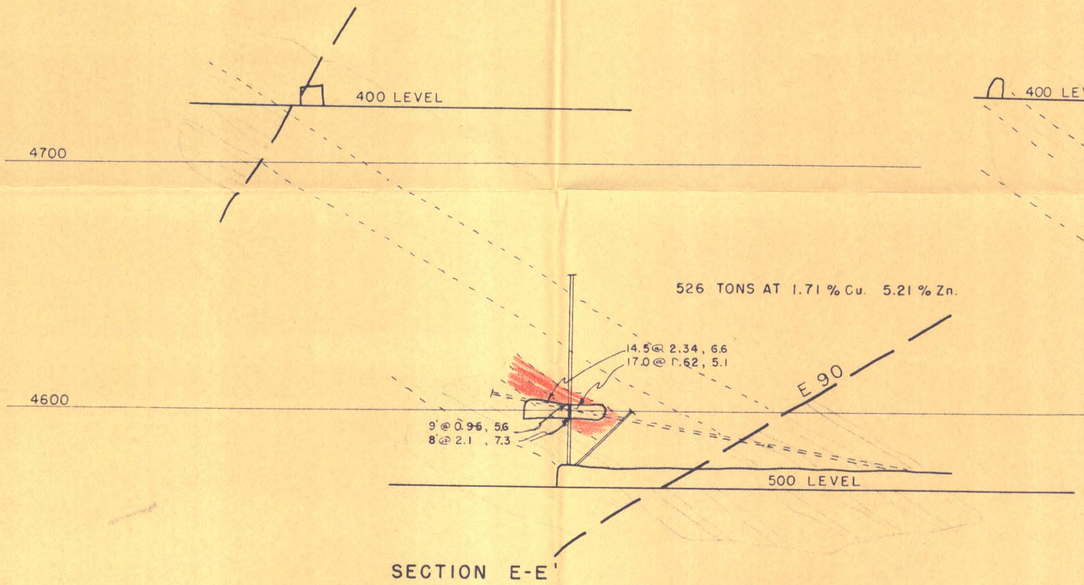
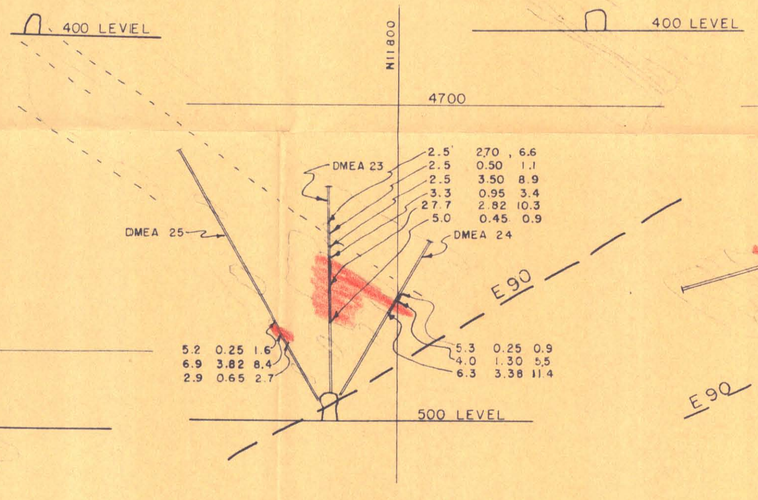
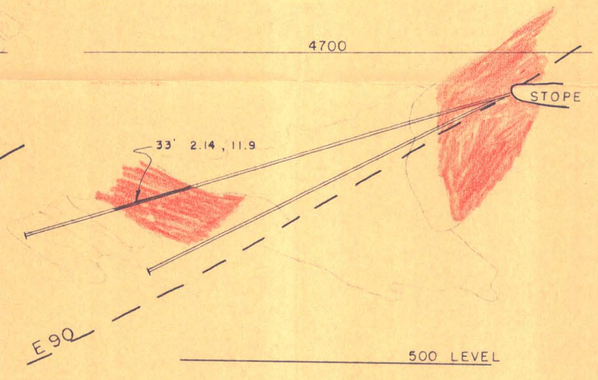


SECTION E-E'



SECTION F-F'



SECTION G-G'

FIG. 4
CORONADO COPPER & ZINC CO.
JOHNSON CAMP, ARIZONA
AREA I MAP, DMEA DOCKET NO. 2746
SECTIONS THROUGH ORE BODIES
DMEA 2746

SCALE 1" = 40' (UNLESS OTHERWISE NOTED) 2-1-55

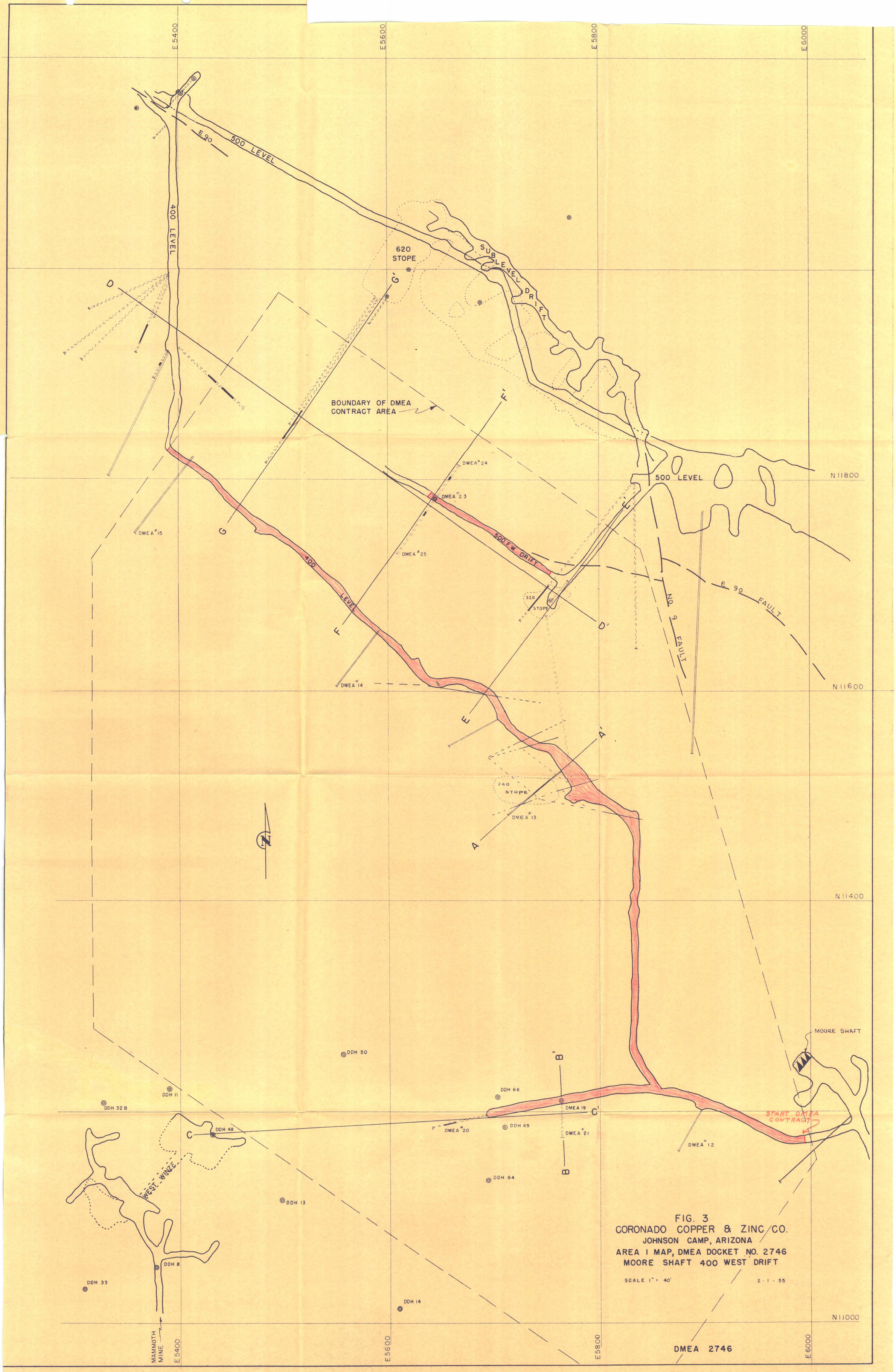
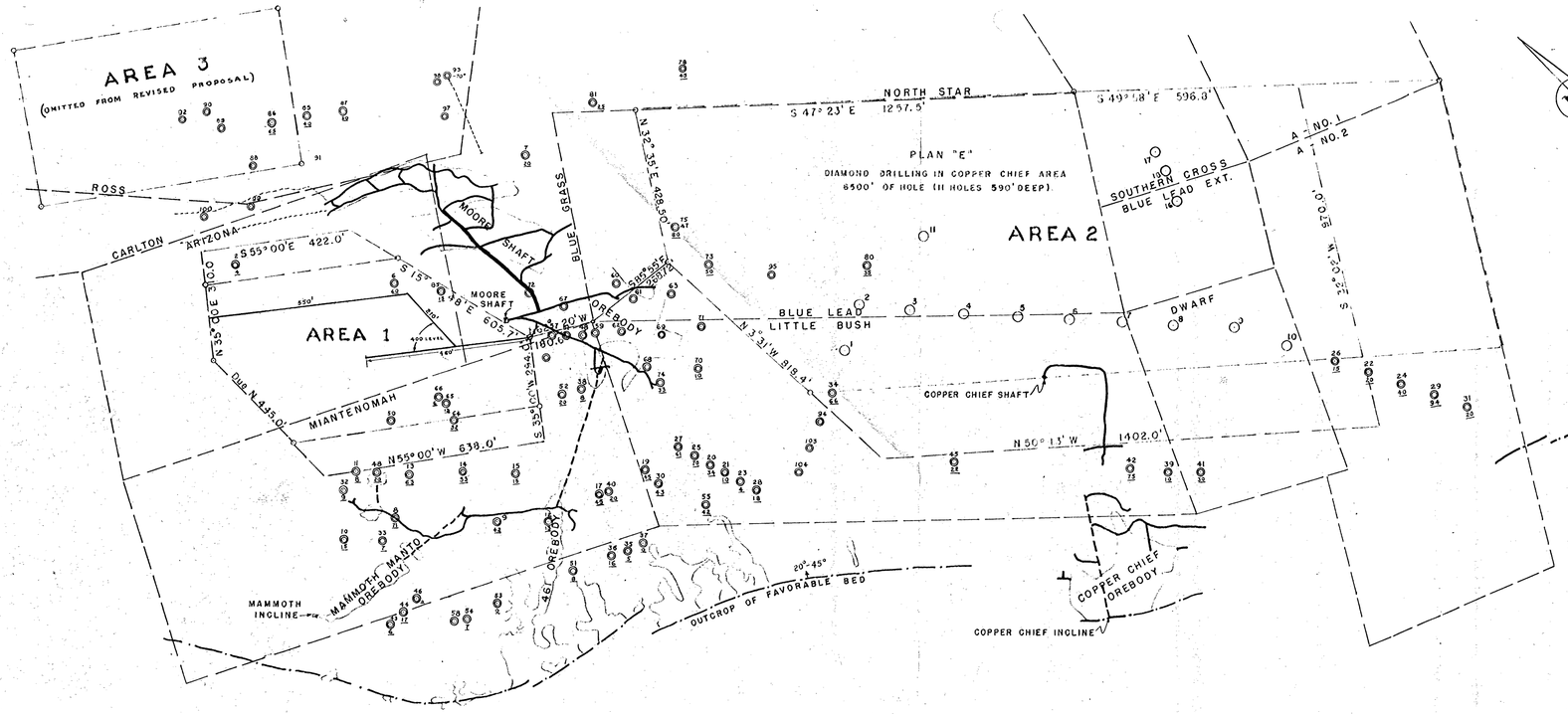
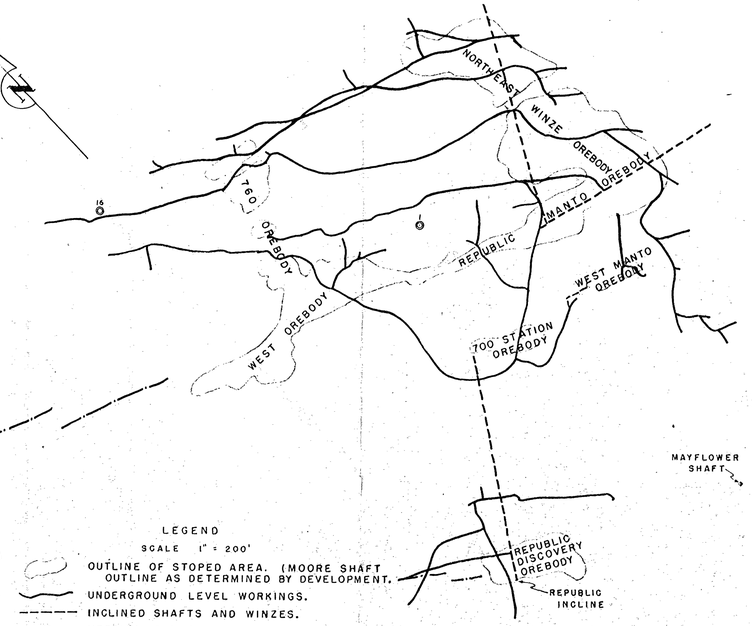


FIG. 3
CORONADO COPPER & ZINC CO.
JOHNSON CAMP, ARIZONA
AREA I MAP, DMEA DOCKET NO. 2746
MOORE SHAFT 400 WEST DRIFT

SCALE 1" = 40' 2-1-55

DMEA 2746





LEGEND

SCALE 1" = 200'

- OUTLINE OF STOPED AREA. (MOORE SHAFT OUTLINE AS DETERMINED BY DEVELOPMENT.
- UNDERGROUND LEVEL WORKINGS.
- INCLINED SHAFTS AND WINZES.
- VERTICAL DIAMOND DRILL HOLE. SUPERSCRIPT IS NUMBER OF HOLE; SUBSCRIPT IS VERTICAL THICKNESS OF GARNETITE ENCOUNTERED.

AREA SUBJECT TO LIEN:

- ORIGINAL 10-15-52
- REVISED 2-5-53
- PROPOSED WORK ON 400 LEVEL

FIGURE 2. OMEA 2746

HORIZONTAL PROJECTION OF MINE ... INGS
AND PROPOSED EXPLORATION
CORONADO COPPER & ZINC C MPANY
COCHISE MINING DISTR CT COCHISE COUNTY, ARIZONA
FEBRUARY 1953