DMEA Form 18
Feb. 58

DEFENSE MINERALS EXPLORATION ADMINISTRATION

ANALYSIS OF SEMIANNUAL REPORT OF CERTIFIED PROJECT

Prepare in duplicate. File original in Official Docket. Send copy

To: Statistics Branch (Code 210)

From: Division of Minerals

Report Period: year 1959

DMEA No.	Operator	Contract No.
2746	Coronado Copper & Zinc Co	E 522

ORE ESTIMATES

	Tons	Analysis
DMEA	62,300	2.5% Cu, 8.5% Zn.
Operator to date		
Total		
Production to date	33,582	
DMEA Ore in ground	28718	

INVESTMENT

Type	Size		Feet	Cost
Shafts				
Winzes				
Drifts and Crosscuts				
Raises				
Drilling	Type			
Rehabilitation	Description			

FACILITIES

Mine Plant		
Mill		
Roads		

REMARKS Under lease to McFarland & Hullinger, presently in operation.

Prepared by W P Fraunfelder Date 7/15/60

31398

DMEA Form 18
Feb. 58

DEFENSE MINERALS EXPLORATION ADMINISTRATION

ANALYSIS OF SEMIANNUAL REPORT OF CERTIFIED PROJECT

Prepare in duplicate. File original in Official Docket. Send copy

To: Statistics Branch (Code 210)

From: Division of Base Metals

Report Period 7/1/57 - 12/31/57

DMEA No.	Operator	Contract No.
2746	Coronado Copper & Zinc Company	Idm-E522

ORE ESTIMATES

	Tons	Analysis
DMEA	62,300	
Operator to date	5,310	
Total	67,610	
Production to date	31,795	
Ore in ground	35,815	

INVESTMENT

Type	Size	Feet	Cost
Shafts			
Winzes			
Drifts and Crosscuts	6' x 7'	270	$10,800.00
Raises	5' x 11'	250	15,000.00
Drilling	Type		
Rehabilitation	Description		

FACILITIES

Mine Plant		
Mill		
Roads		

REMARKS

Mining and milling suspended August 15, 1957.

Shafts being pumped out and some diamond drilling being done in unsubordianted areas.

Prepared by W. R. Griswold Date 3/17/58

31398

DEFENSE MINERALS EXPLORATION ADMINISTRATION
For the period January 1 - June 30, 1957

Base Metals Division Date **October 15, 1957**

Semi-Annual Report - Certified Project Date **August 12, 1957**

DMEA No. **2746** Operator **Coronada Copper & Zinc Company** Contract No. Idm-E**522**

Ore Reserves

Ore Estimates	Tons	Analysis
Original (DMEA)		
Increase (Operator)	4476	
Total	66776	
Decrease (Production) **(For Period)** ~~5,207.37~~	30187	~~2.74% Cu., 9.20% Zn~~
Net Available	36590	

Investment

Shafts			Winzes			Drifts & Crosscuts		
Size	Feet	Cost	Size	Feet	Cost	Size	Feet	Cost

Raises			Drilling			Rehabilitation	
Size	Feet	Cost	Type & Size	Feet	Cost	Description	Cost

Facilities

Mine Plant		Mill		Roads	
Description	Cost	Description	Cost	Description	Cost

Remarks

J. W. Alt/er

J. W. Alt/er

100338

DEFENSE MINERALS EXPLORATION ADMINISTRATION

For the Period July 1 - December 31, 1956

Base Metals Division Date February 20, 1957

Semi-Annual Report - Certified Project Date January 25, 1957

DMEA No. 2746 Operator Corohado Copper and Zinc Company Contract No. Idm-E 522

Ore Reserves

Ore Estimates	Tons	Analysis
Original (DMEA)		
Increase (Operator)	4,476	2.1 - 2.7% Cu., 7.0-7.4 Zn
Total		
Decrease (Production)	24,980	
Net Available		

Investment

Shafts

Size	Feet	Cost

Winzes

Size	Feet	Cost

Drifts & Crosscuts

Size	Feet	Cost
6'x7'	270	$10,800.00

Raises

Size	Feet	Cost
5'x11'	250	$15,000.00

Drilling

Type & Size	Feet	Cost

Rehabilitation

Description	Cost

Facilities

Mine Plant

Description	Cost

Mill

Description	Cost

Roads

Description	Cost

Remarks

Present reserves in DMEA area are 17,650 tons of which 4,027 tons, in one block, is too low grade for mining at this time.

Investment data is total in DMEA area for development in waste rock.

J. W. Alt/er
3/26/57

100338

DEFENSE MINERALS EXPLORATION ADMINISTRATION

For the Period January 1, 1956 thru June 31, 1956

Base Metals Division Date October 24, 1956

Semi-Annual Report - Certified Project Date September 26, 1956

DMEA No. 2746 Operator Coronado Copper and Zinc Company Contract No. Idm-E 522

Ore Reserves

Ore Estimates	Tons	Analysis
Original (DMEA)		
Increase (Operator)	2,251	
Total		
Decrease (Production)	5,361.92	
Net Available		

Investment

Shafts			Winzes			Drifts & Crosscuts		
Size	Feet	Cost	Size	Feet	Cost	Size	Feet	Cost

Raises			Drilling			Rehabilitation	
Size	Feet	Cost	Type & Size	Feet	Cost	Description	Cost

Facilities

Mine Plant		Mill		Roads	
Description	Cost	Description	Cost	Description	Cost

Remarks

Since initiation of DMEA production, a total of 213,893.2 tons have been mined and milled. Of this tonnage, 20,305.55 tons, or 9.5 per cent, came from development headings and 6 stopes in the subordinated area.

At the present time, 210 tons of ore is being milled daily and 149 persons are on the payroll. About 10 percent of the ore is produced from the subordinated area.

J. W. Alt/er

100338

OFFICIAL FILE COPY
O. M. E.
RECEIVED OCT 31 1962

DATE	INITIALS	CODE
10/31	[illegible]	800
		~~120~~
	Assigned	~~500~~
		220

OFFICE OF MINERALS EXPLORATION

REGION III

Statement in Lieu of Interim Report of Certified Project

Reporting Period January 1, 1960 to October 11, 1962

Docket and Contract Number DMEA-2746 Idm-E522

Operator Coronado Copper and Zinc Co. (Copper-Zinc)

The project has been inactive during the reporting period ☐

Pertinent data relative to the subject contract has remained unchanged since the last report ☐

Remarks: I visited the subject property October 5, 1962, but could not make a planned inspection of the active project. According to Dennis Long, bookkeeper for McFarland and Hullenger, Mr. G. H. Stauffer, mine foreman, who maintains all mine records and maps, was on vacation. Also, that all operations would cease not later than Dec. 31, 1962. In Tucson, that evening, I contacted Mr. W. D. Nelson, Supt. of the lessee's Ariz. operations, and scheduled the inspection for Oct. 11, 1962.

The inspection was made on schedule in the company of Mr. Nelson, and Mr. Stauffer, and the following information was obtained. The lessee's total production of DMEA ore to Apr. 3, 1962, when the area's ore reserves were depleted, was 10,393 tons containing about 2.93% Cu and 7.1% Zn. The DMEA and Operator's ore was co-mingled and milled, and royalties were paid the Government by the lessor. Sub-marginal ore remaining in the DMEA area is an estimated 4265 tons, in 2 blocks, containing about 1.78% Cu and 6.95% Zn.

The mining and milling of solely non-DMEA ore will continue until either the reserves are depleted, or until Dec. 31, 1962 when all operations will be terminated because the cost of moving a 6-mile water line to the property in compliance with a State Highway Department order, would greatly exceed the potential earnings from exploitation of any ore remaining.

cc Chief, Division of Field Operations, OME (Orig & 1)

Signed T M Romslo
T. M. Romslo

Date Oct. 29, 1962

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

OFFICIAL FILE COPY
O. M. E.
RECEIVED JUN 6 1960

DATE	INITIALS	CODE
6 6	gad	VVO
6/6	[illegible]	110
6/6	EET	800
6/7	[illegible]	500
		225
7/15/60	Review	Attached

June 3, 1960

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: Report of Certified Project for the period
January 1, 1959 to December 31, 1959

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

Enclosed are the original and one copy of the subject report.

Hugh M. Connors

Hugh M. Connors

Enclosure

Interim Report of Certified Projects

Reporting Period	January 1, 1959 through December 31, 1959
Docket and Contract Number	DMEA-2746 Idm-E522
Operator	Coronado Copper and Zinc Company
Commodity	Copper and Zinc
Mine Name	Republic
County and State	Cochise County, Arizona

Date of Contract	May 18, 1953
Date of Certification	February 2, 1956
Expiration Date of Royalty Payments	May 18, 1963
Date of Examination for this Report	May 20, 1960

Total Amount of Contract	$ 99,050.00
Total Expenditures under Contract	$ 87,045.00
Amount of Government Participation at 50 %	$ 43,522.50

Royalty Payments this Period	$ 6,189.33
Previous Royalty Payments	$ 24,177.15
Total Royalty Payments to Date	$ 30,366.48
% Loan Repayment Completed	$ 69.77

Amount of Royalty Due	none
Royalty Remarks	

62,300

	Tons	Percent Analysis Cu	Zn
Original Estimate of DMEA Reserve (Field Team Final Report) Mines [ ] Survey [ ] Joint [X]	38,154	2.5	8.5
Revised Estimate of DMEA Reserves (Field Team) Mines [ ] Survey [ ] Joint [ ]			
Increase of Reserves by work performed subsequent to DMEA project work			
		Approx.	
Production DMEA ore (This period)	1,793.20	3.6	10.1
(Previous)	31,788.42	2.3	7.0
(To Date)	33,581.62	2.4	7.2
" Operator's ore (This period)	12,590.00	2.5	6.9
found subsequent (Previous)	237,860.00	2.3	7.0
to DMEA work (To Date)	250,450.00	2.3	7.0

Percent Revised Reserves Mined _____

(For Uranium Ores Only)

Initial Production Bonus:

Status of Operator: Ineligible [ ] Applied for [ ] Rec'ing pmt [ ] Paid up [ ]

Pounds U_3O_8 produced this period eligible for Bonus _____

Amount of Bonus paid to Operator this period $_____

Total pounds U_3O_8 produced to date eligible for Bonus _____

Total amount of Bonus paid to Operator to date $_____

Bonus Royalty Paid $_____

Bonus Royalty Due $_____

Investment Data (none this period)

Shafts Size	Feet	Cost	Winzes Size	Feet	Cost	Drifts & Crosscuts Size	Feet	Cost

Raises Size	Feet	Cost	Drilling Type & Size	Feet	Cost	Rehabilitation Description	Cost

Facilities

Mine Plant Description	Cost	Mill Description	Cost	Roads Description	Cost

Remarks

Mine reopened in September '59 by McFarland & Hullinger, lessee. Ore milled at lessee's concentrator at Sahuarita, Ariz. to 3/1/60. Milling operations then transferred to Operators' mill at Republic mine. Present daily production about 220 tons of comingled ore. Total of 37 men employed. Daily operations: 1 shift mining and 2 shifts milling.

Signed D M Wessels (Engineer)

OME, REGION III

Statement in Lieu of Semiannual Report

Reporting Period July 1, 1958 - December 31, 1958
Docket and Contract Number DMEA 2746 - Idm-E522 (Cu-Zn)
Operator Coronado Copper & Zinc Co.

The project has been inactive during the reporting period [X]

Pertinent data relative to the subject contract has remained unchanged since the last report [X]

Remarks:

FILE COPY
O. M. E.
RECEIVED APR 9 1959

DATE	INITIALS	CODE
4-9	C	220
"	HY	110
"	BEB	800
4-10	WMB	500

Original signed by

Signed T. M. Romslo

Date April 2, 1959

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration
224 New Customhouse
Denver 2, Colorado

February 25, 1958

OFFICIAL FILE COPY
DMEA
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DATE	INITIALS	CODE
2/27	C	220
3/3	CBM	100
3/10	FEJ	110
3/11	LEP	800
	A	500

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Semiannual Report of Certified Project for the period July 1, 1957 through December 31, 1957

DMEA Docket 2746 (Copper-Zinc)
Contract Idm-E 522, Coronado Copper and Zinc Company
(Republic mine) Cochise County, Arizona

Enclosed are the original and three copies of the subject report prepared in conformance with instructions contained in memorandum of January 6, 1956 from this office, Memorandum 29, and Special Notice in Minutes of Operating Committee Meeting No. 692.

W S King
Executive Officer, DMEA
Field Team, Region III

Enclosures

MHM:jy
cc: Semiannual Report File E 522
Emerick
DMEA, TUC
Chron.

Semiannual Report of Certified Projects

Reporting Period July 1, 1957 through December 31, 1957

Docket and Contract Number DMEA 2746 Idm-E522

Operator Coronado Copper and Zinc Company

Commodity Copper and Zinc

Mine Name Republic

County and State Cochise County, Arizona

Date of Contract May 18, 1953

Date of Certification February 2, 1956

Expiration Date of Royalty Payments May 18, 1963

Date of Examination for this Report January 9, 1958

Total Amount of Contract $99,050.00

Total Expenditures under Contract $87,045.00

Amount of Government Participation at 50 % $43,522.50

Royalty Payments this Period None

Previous Royalty Payments $24,177.15

Total Royalty Payments to Date $24,177.15

% Loan Repayment Completed 55.55%

Amount of Royalty Due Not Determined

Royalty Remarks Royalties and settlement sheets on unreported production requested by our letter, dated February 24, 1958.

DMEA-2746, Idm-E522
Coronado Copper and Zinc Co.
Period: 7-1 to 12-31-57

	Tons	Approx. Percent Analysis
Original Estimate of DMEA Reserves (Field Team Final Report) Mines ☐ Survey ☐ Joint ☐	62,347.56	2.41 Cu 8.0 Zn
Revised Estimate of DMEA Reserves (Field Team) Mines ☐ Survey ☐ Joint ☐		
Increase of Reserves by work performed subsequent to DMEA project work		

Company records show present reserves in DMEA area are 35,815 tons after production of 31,795 ton. Grade estimated at 2.1-2.7% Cu and 7.0-7.4% Zn.

		Tons	Cu	Zn
Production DMEA ore	(This period)	*1,088.6	28.4	53.6
	(Previous)	7,401.5	28.6	54.0
	(To date Production from 31,795 ton of ore Found before and since DMEA work)	8,490.1	28.6	53.9
" Operator's ore found subsequent to DMEA work	(This period)	1,608	2.3	7.0
	(Previous)	236,252	2.3	7.0
	(To date) (Revised)	237,860	2.3	7.0

*Subject to royalty payments according to data of attached sheet.
Percent Revised Reserves Mines _____

(For Uranium Ores Only)

Initial Production Bonus:
Status of Operator: Ineligible ☐ Applied for ☐ Rec'ing pmt ☐ Paid up ☐
Pounds U_3O_8 produced this period eligible for Bonus _____
Amount of Bonus paid to Operator this period $_____
Total pounds U_3O_8 produced to date eligible for Bonus _____
Total amount of Bonus paid to Operator to date $_____
Bonus Royalty Paid $_____
Bonus Royalty Due $_____

Investment Data (None in DMEA area for this period)

Shafts Size	Feet	Cost	Winzes Size	Feet	Cost	Drifts & Crosscuts Size	Feet	Cost

Raises Size	Feet	Cost	Drilling Type & Size	Feet	Cost	Rehabilitation Description	Cost

Facilities

Mine Plant Description	Cost	Mill Description	Cost	Roads Description	Cost

Remarks

Mining and milling suspended 8-15-57. Production and reserve data for 7-1-57 to 8-15-57, requested by me during previous inspection, was received in a letter of 8-23-57 from Charles K. Platt, mine engineer. Fred E. Gray, manager, verified the production data duringmy recent inspection of 1-22-57. He also reported that operations since 8-15-57 have consisted of diamond drilling in unsubordinated areas and the pumping of water from the Moore and Republic shafts.

Signed M Romolo (Engineer)

Copper and zinc concentrates produced from ore mined in subordinated area and shipped during 1957.

Copper Concentrates

Date 1957	Tons	Percent Cu	Percent Zn
*Jan.	39.16	28.33	11.35
Feb.	51.00	28.76	10.62
*Mar.	65.78	28.53	11.06
Apr.	84.05	27.64	12.30
May	112.68	27.54	12.69
June	64.68	27.87	11.47
July	108.76	28.30	11.18
Aug.	20.67	27.01	13.52
	546.78		

Zinc Concentrates

Date 1957	Tons	Percent Cu	Percent Zn
*Jan.	45.43	2.25	53.74
*Feb.	68.96	2.15	53.75
Mar.	90.59	2.00	53.69
April	117.03	2.01	53.39
May	164.70	1.93	52.70
June	88.18	1.86	54.03
July	159.53	1.99	54.43
Aug.	26.77	2.42	52.53
	761.19		

*Available records show royalty payments to the Government on 1957 production have been made only on the indicated 4 lots of concentrates totalling 219.33 tons. Mr. Gray said that the company probably had completed marketing of all concentrates and that payment of royalty possibly has been overlooked.

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration
224 New Customhouse
Denver 2, Colorado

September 16, 1957

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DMEA
RECEIVED SEP 18 1957

		CODE
9-18	C	220
9/24	Jwa	500

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Semiannual Report of Certified Project for the period January 1, 1957 through June 30, 1957
DMEA Docket 2746 (Copper-Zinc)
Contract Idm-E 522, Coronado Copper and Zinc Company (Republic Mine-Johnson Camp), Cochise County, Arizona

Enclosed are the original and three copies of the subject report prepared in conformance with instructions contained in memorandum of January 6, 1956 from this office, Memorandum 29, and Special Notice in Minutes of Operating Committee Meeting No. 692.

E. M. Harshman

Acting Executive Officer
DMEA Field Team, Region III

Enclosures
vj

cc: Semiannual Report File E 522
DMEA/TUC
Harshman
Emerick
Chron.

Semiannual Report of Certified Projects

Reporting Period	January 1, 1957 through June 30, 1957
Docket and Contract Number	DMEA 2746 - Idm-E522
Operator	Coronado Copper and Zinc Company
Commodity	Copper and Zinc
Mine Name	Republic Mine (Johnson Camp)
County and State	Cochise County, Arizona
Date of Contract	May 18, 1953
Date of Certification	February 2, 1956
Expiration Date of Royalty Payments	May 18, 1963
Date of Examination for this Report	August 12, 1957
Total Amount of Contract	$99,050.00
Total Expenditures under Contract	87,045.00
Amount of Government Participation at 50 %	$43,522.50
Royalty Payments this Period	$7,362.72
Previous Royalty Payments	16,814.43
Total Royalty Payments to Date	24,177.15
% Loan Repayment Completed	55.55%
Amount of Royalty Due	None
Royalty Remarks	

	Tons	Approx.% Analysis
Original Estimate of DMEA Reserves (Field Team Final Report) Mines [X] Survey [X] Joint [ ]	62,347.56	2.41 Cu 8.0 Zn
Revised Estimate of DMEA Reserves (Field Team) Mines [ ] Survey [ ] Joint [ ]		
Increase of Reserves by work performed subsequent to DMEA project work		

			Tons	Cu	Zn
Production DMEA ~~xxxx~~ Conc.	(This period)		* 219.33	28.6	54.2
	(Previous)		7,182.17	28.6	54.0
	(To date		7,401.50	28.6	54.0
" Operator's ore ~~found subsequent to DMEA work~~	(This period)	Found before and since DMEA work	30,838	Appr.2.3	7.0
	(Previous)		226,268	2.3	7.0
	(To date)		257,106	2.3	7.0

* Zn includes Jan.,Feb. & Mar.1957
Cu includes Jan. 1957

Percent Revised Reserves Mines _____

(For Uranium Ores Only)

Initial Production Bonus:
Status of Operator: Ineligible [ ] Applied for [ ] Rec'ing pmt [ ] Paid up [ ]
Pounds U_3O_8 produced this period eligible for Bonus _____
Amount of Bonus paid to Operator this period $_____
Total pounds U_3O_8 produced to date eligible for Bonus _____
Total amount of Bonus paid to Operator to date $_____
Bonus Royalty Paid $_____
Bonus Royalty Due $_____

Investment Data - None

Shafts Size	Feet	Cost	Winzes Size	Feet	Cost	Drifts & Crosscuts Size	Feet	Cost

Raises Size	Feet	Cost	Drilling Type & Size	Feet	Cost	Rehabilitation Description	Cost

Facilities

Mine Plant Description	Cost	Mill Description	Cost	Roads Description	Cost

Remarks

* Produced from 5207.37 tons crude ore with 2.74% Cu and 9.20% Zn assay.

Signed T M Canale (Engineer)

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration
Washington 25, D. C.

224 New Customhouse
Denver 2, Colorado

Date: February 12, 1957

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Semiannual Report of Certified Project for the period July 1, 1956 through December 31, 1956
DMEA Docket 2746 (Copper & Zinc)
Contract Idm-E 522, Coronado Copper & Zinc Company (Republic or Johnson Camp Mine), Cochise County, Arizona

Enclosed are the original and three copies of the subject report prepared in conformance with instructions contained in memorandum of January 6, 1956 from this office and Memorandum 29.

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

Enclosures
MHM/vj
cc: Semiannual Report File E 522
W. R. Storms
Harshman
Chron.

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DMEA
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DATE	INITIALS	CODE
2/27	C	220
		225

DMEA
DEPARTMENT OF THE INTERIOR
FEB 7 1957
REGION III
DENVER, COLORADO

February 4, 1957

Memorandum

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

From : Superintendent, Southwest Experiment Station

Subject : Semi-Annual Report of Certified Project, July 1 - December 31, 1956, Docket DMEA-2746 (Copper-Zinc), Contract Ldm-8512, Cerrosale Copper & Zinc Co. (Republic or Johnson Camp mine), Cochise County, Ariz.

Enclosed are original and 8 copies of the above report by T. M. Ramale of the Bureau of Mines.

Signed by Walter R. Storms

Walter R. Storms

CC W. M. Traver (8)
DMEA-2746
Cert. File
WF

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DMEA
RECEIVED FEB 18 1957

DATE	INITIALS	CODE

WRStorms:frj

Semiannual Report of Certified Projects

Reporting Period	July 1 to December 31, 1956
Docket and Contract Number	DMEA-2746, Idm-E522
Operator	Coronado Copper & Zinc Co.
Commodity	Copper and Zinc
Mine Name	Republic (Johnson Camp)
County and State	Cochise County, Ariz.
Date of Contract	May 18, 1953
Date of Certification	February 2, 1956
Expiration Date of Royalty Payments	May 18, 1963
Date of Examination for this Report	January 25, 1957
Total Amount of Contract	$99,050.00
Total Expenditures under Contract	$87,045.00
Amount of Government Participation at 50 %	$43,522.50
Royalty Payments this Period	0.00
Previous Royalty Payments	$16,814.43
Total Royalty Payments to Date	$16,814.43
% Loan Repayment Completed	38.63
Amount of Royalty Due	Not determined

Royalty Remarks Company reportedly made payment of $765.11 late in December 1956 and was preparing data for payment of balance due.

OFFICIAL FILE COPY
DMEA
RECEIVED FEB 18 1957

DATE	INITIALS	CODE

		Tons	Analysis Percent
Original Estimate of DMEA Reserves (Field Team Final Report) Mines [ ] Survey [ ] Joint [ ]	DMEA area	38,154	2.5 Cu, 8.5 Zn
Revised Estimate of DMEA Reserves (Field Team) Mines [ ] Survey [ ] Joint [ ]			
Increase of Reserves by work performed subsequent to DMEA project work	DMEA area	4,476	2.1-2.7, 7.0-7.4
Production DMEA ore (This period)		4,675	Approx. 2.3Cu, 7.0Zn
(Previous)		20,305	
(To date)		24,980	
" Operator's ore (This period)	Found before	32,680	
~~xxxxxxxxxxxxxxxx~~ (Previous)	and since	193,588	
~~xxxDMEAxxxxxx~~ (To date)	DMEA work	226,268	

Percent Revised DMEA Reserves mined $\frac{24,980}{38,154 + 4,476} = 58.6$

(For Uranium Ores Only)

Initial Production Bonus:

Status of Operator: Ineligible [ ] Applied for [ ] Rec'ing pmt [ ] Pd up ____

Pounds U_3O_8 produced this period eligible for Bonus ____

Amount of Bonus paid to Operator this period $____

Total pounds U_3O_8 produced to date eligible for Bonus ____

Total amount of Bonus paid to Operator to date $____

Bonus Royalty Paid $____

Bonus Royalty Due $____

Investment Data

Shafts Size	Shafts Feet	Shafts Cost	Winzes Size	Winzes Feet	Winzes Cost	Drifts & Crosscuts Size	Drifts & Crosscuts Feet	Drifts & Crosscuts Cost
						6'x7'	270	$10,800 ✓

Raises Size	Raises Feet	Raises Cost	Drilling Type & Size	Drilling Feet	Drilling Cost	Rehabilitation Description	Rehabilitation Cost
5'x11'	250	$15,000 ✓					

Facilities

Mine Plant Description	Mine Plant Cost	Mill Description	Mill Cost	Roads Description	Roads Cost

Remarks

Present reserves in DMEA area are 17,650 tons of which 4,027 tons, in one block, is too low grade for mining at this time.
Investment data is total in DMEA area for development in waste rock.

Signed T M Romslo (Engineer)
T. M. Romslo

2746

ACTION ON [illegible]
ON FINAL FIELD TEAM REPORT

Date 10-15

Referred to:

1. ~~Mr. Mittendorf~~
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. Reserve tonnage up slightly — grade down
2.
3.
4.

and take appropriate action.

- - - - - - - -

Action taken by Division:

Robert W Adams

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration
Washington 25, D. C.

RECEIVED
OCT 15 1956

224 New Customhouse
Denver 2, Colorado

Date: October 10, 1956

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Semiannual Report of Certified Project for the period January 1, 1956 through June 30, 1956
DMEA Docket 2746 (Copper-Zinc)
Contract Idm-E522, Coronado Copper & Zinc Company (Republic Mine), Cochise County, Arizona

Enclosed are the original and three copies of the subject report prepared in conformance with instructions contained in memorandum of January 6, 1956 from this office, and Memorandum 29, and Special Notice in Minutes of Operating Committee Meeting No. 692.

E. N. Harshman

~~XXXXXXXXXXXX~~
Acting Executive Officer, DMEA
Field Team, Region III

MHM/vj
Enclosures

cc: Semiannual Report File E 522
W. R. Storms
E. N. Harshman
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
BOX 4097
TUCSON 5, ARIZONA

DMEA
DEPARTMENT OF THE INTERIOR
OCT 8 1956
REGION III
DENVER, COLORADO

Oct. 3, 1956

RECEIVED
OCT 15 1956

Memorandum

T: W. M. Traver, Executive Officer, DMEA Field Team

From: Superintendent, Southwest Experiment Station

Subject: Semiannual Report of Certified Project, Docket DMEA-2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper & Zinc Co. (Republic Mine), Cochise County, Ariz. Jan.1-June 30, 1956.

Enclosed are original and 8 copies of the above report by T. M. Romslo of the Bureau of Mines. I believe this completes all semiannual inspections of certified projects in this area.

Walter R. Storms

Walter R. Storms

Cc: W.M.Traver (8)
DMEA-2746
Cert. file
DF

Semi-Annual Report of Certified Projects

Reporting Period	January 1 to June 30, 1956
Docket and Contract Number	DMEA-2746, Idm-E522
Operator	Coronado Copper & Zinc Co.
Commodity	Copper and Zinc
Mine Name	Republic (Johnson Camp)
County and State	Cochise County, Arizona

RECEIVED OCT 1 5 1956

Date of Contract	May 18, 1953
Date of Certification	February 2, 1956
Expiration Date of Royalty Payments	May 18, 1963
Date of Examination for this Report	September 26, 1956

Total Amount of Contract	$99,050.00
Total Expenditures under Contract	$87,045.00
Amount of Government Participation at 50 %	$43,522.50

Royalty Payments this Period	$ 6,507.21
Previous Royalty Payments	$10,307.22
Total Royalty Payments to Date	$16,814.43
% Loan Repayment Completed	38.63

Amount of Royalty Due	None

Royalty Remarks Payments are based on proration of receipts from concentrates of ore from subordinated and non-subordinated zones. DMEA portion is based on corrected weights of counted mine cars of ore and average grade of co-mingled ore. A cursory examination of mine production reports indicates ore from 2 zones is of about the same grade.

RECEIVED
OCT 15 1958

Original Estimate of Reserves
(from Final Engr.-Geol. Report): 38,154 tons, 2.5% copper & 8.5% zinc

Increase of Reserves by work performed subsequent to expiration or termination of contract: 2,251 tons

Revised Estimate of Reserves: 40,405 tons, 2.1-2.7% copper, 5.5-6.1% zinc

	Tons
Production this Period (Ore or Concentrates)	5,361.92
Amount of Previous Production (since date of contract)	14,943.63
Total DMEA Production to date	20,305.55
% of Revised Reserves Mined	50.25

Production Remarks:

Note: On Uranium projects check with AEC to assure that our records are in agreement with theirs.

Since initiation of DMEA production, a total of 213,893.2 tons have been mined and milled. Of this tonnage, 20,305.55 tons, or 9.5 percent, came from development headings and 6 stopes in the subordinated area.

At the present time, 210 tons of ore is being milled daily and 149 persons are on the payroll. About 10 percent of the ore is produced from the subordinated area.

Other Remarks:

An inspection of mine maps indicated that production and reserve data obtained from R. E. Bergman, geologist, and C. K. Platt, mining engineer, are acceptable. Underground workings were not visited. A Bureau of Mines Information Circular on this mine recently was accepted for publication.

Signed TMRomslo (Engineer)

T. M. Romslo, Mining Engineer

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

MPM/vj

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

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

RECEIVED
APR 4 - 1956

224 New Customhouse
Denver 2, Colorado

March 30, 1956

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

In compliance with your request of February 13, 1956, we are enclosing the original and three copies of a joint memorandum report, dated March 23, 1956, from J. N. Faick, Geologist, Geological Survey, and W. R. Storms, Superintendent, Southwest Experiment Station, Bureau of Mines, wherein they provide an analysis of the surface drilling as requested in your letter of February 13, which supplements the final engineering and geologic report forwarded by our memoranda of January 18, 1956, and February 3, 1956.

W. M. Traver

W. M. Traver

Enclosures

see opt file for memo
3/23 by Tracks and [illegible]

MINERAL DEPOSITS
DMEA
RECEIVED
MAR 26 1956
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Box 4126 University Station
Tucson, Arizona

RECEIVED
APR 4 - 1956

DMEA
Date Rec'd.
MAR 27 1956
BUREAU OF MINES
Denver, Colorado

March 23, 1956

MEMORANDUM

To: Executive Officer, DMEA Field Team, Region III

From: J. N. Faick
W. R. Storms

Through: E. N. Harshman

SUBJECT: Supplemental memorandum, Final Report, DMEA 2746 (Copper-Zinc) Contract Idm E-522, Coronado Copper and Zinc Company, Republic Copper-Zinc Mine, Cochise County, Arizona

We have been requested to explain in greater detail the results of diamond drilling 8,204 feet of holes in Area II of the above exploration project. When the final report was submitted we did not consider these drilling results especially favorable and the results were so greatly overshadowed by the results of exploration in Area I that not much attention was given to the results of drilling in Area II. In this area 14 holes were drilled to an average depth of 586 feet. That these exploration holes were well justified is indicated by the fact that in the favorable limestone beds all holes penetrated garnet and tactite, the type of alteration with which ore is associated in the Johnson Camp area. Only 7 mineralized zones worthy of sampling and analyses were penetrated. For convenience the assays are repeated here:

DMEA No.	Company No.	Depth of Intercept	Length of Intercept (in ft.)	Analyses Cu.	Zn.	Mo.
4	109	441.0 - 461.0	20.0	0.07	0.32	0.19
		499.0 - 507.0	8.0	0.06	1.02	0.13
		507.0 - 514.5	7.5	0.02	0.26	0.89
5	110	458.0 - 462.0	4.0	0.06	5.2	
		507.8 - 512.0	4.2	0.30	3.5	
11	113	564.0 - 571.6	7.6	0.20	2.2	
		622.0 - 622.8	0.8	2.53	5.95	
16	117	624.0 - 628.5	4.5	0.20	2.1	
		628.5 - 634.0	5.5.	0.20	4.5	

The above analyses are taken from the operator's progress reports and are shown slightly generalized on the Section, figure 4, of the final Geological report. Drill cores were split and analyzed wherever sulfide minerals were concentrated in appreciable amounts, and the absence of assays is indicative of the general absence of metals. Normally molybdenum is present only in amounts that are too small to justify sampling and assaying. It occurs in ore bodies and in non-commercial stringers not associated with ore. The ore at Johnson Camp, Arizona contains small amounts of molybdenum, and also scheelite, but neither of these metals is recovered because it is not economically feasible.

The 7.5 foot intersection of 0.89 percent molybdenum in hole No. 4, as mentioned in Mr. Selfridge's letter to Mr. Traver under date of February 13, 1956, is shown on the operator's log for hole No. 4. This hole contains appreciable amounts of molybdenum as shown in the above analyses. The presence of molybdenum of this grade is surprising but not completely unexpected. We regard the molybdenum in hole No. 4 as an unusual erratic occurrence of no particular significance by itself.

The drilling in area II has not been entirely unsuccessful, although it failed to find minable ore. The holes were drilled primarily to seek down-dip extensions of the Copper Chief ore bodies in zones that were considered favorable for the occurrence of ore because of the presence of favorable limestones that presumably are cut by fault zones of possible pre-mineral age. These holes in area II proved that the favorable limestone beds were intensely altered to garnet and tactite and that these contained scattered or erratic bunches of protore. The evidence of mineralization in the cores in area II is believed to represent small, sporadic pods of low-grade materials of little significance, and by themselves do not constitute guides for future exploration.

Failure of the holes to penetrate minable ore is not regarded as conclusive proof that area 2 does not contain ore, but at least indicates that geologic controls are not sufficiently precise to successfully guide exploration from the surface. The average depth of the hole is 586 feet, which approaches the limit to which it is feasible to explore for ore bodies like those at Johnson Camp; however, some other method of exploration of Area II might be considered. The best method to explore it would be by drifting from the Republic mine. This plan often has been considered by the Company, but has not been executed because of the high cost. It is doubtful if DMEA would be justified in participating in a drift or other exploration in Area II on the basis of presently available data. At present the only exploration we might consider in the area is the drilling of another hole within the triangle formed by holes 4, 5 and 11, where there appears to be a minor concentration of metal.

The DMEA project has been certified on the basis of discoveries made in Area I, and it is presumed that Area II is included with the certified project, as it was also included in the contract.

John N. Faick
J. N. Faick

Walter R. Storms
W. R. Storms

JNF:ms

cc: Harshman (8)
Storms

C

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

RECEIVED
JAN 26 1956

224 New Customhouse
Denver 2, Colorado

January 24, 1956

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 a memorandum Preliminary Final Geologic Report from John N. Faick, Geologist, U. S. Geological Survey, dated January 19, 1956.

The enclosed material is forwarded for your information relative to the certification of discovery or development which must be issued prior to February 17, 1956.

The regular final geologic report is in preparation and will be forwarded as soon as available.

W. M. Traver

W. M. Traver

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
2-1-56
(date)

IN REPLY REFER TO:
MINERAL DEPOSITS

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA
RECEIVED
JAN 23 1956
RECEIVED
JAN 26 1956
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

Box 4126 University Station
Tucson, Arizona

January 19, 1956

DMEA
Date Rec'd.
JAN 24 1956
BUREAU OF MINES
Denver, Colorado

MEMORANDUM

To: Mr. E. N. Harshman EMH

From: John N. Faick

Subject: Preliminary Final Geological Report, DMEA-2746
Contract Idm-E522, Coronado Copper and Zinc Company's
Republic Mine, Johnson Camp, Cochise County, Arizona

The brief report which follows summarizes the data which is to be presented in the final geological report of the Republic Mine's exploration project in which the Defense Minerals Exploration Administration participated at a cost to the Government of nearly $50,000. The final report is in preparation.

At the Republic mine zinc-copper sulfide ores occur as replacement bodies in favorable limestone beds in Cambrian formations. The ores are of the pyrometasomatic type and are genetically related to intrusions of quartz monzonite. The principal minerals in the ore are pyrite, sphalerite and chalcopyrite, which occur in a gangue of garnet and pyroxene or amphibole. The limestone has been extensively replaced by the silicate minerals. The ore bodies occur in close proximity to zones of silicated limestone, and are localized in the favorable beds where these have been cut by faults.

Reviewed by
OPERATING COMMITTEE
2-1-56
(date)

Exploration contract No. Idm-E522 was signed May 18, 1953 to provide for Government participation in two areas of the Republic Mine at Johnson Camp, Cochise County, Arizona. Exploration costs of $99,050.00 were allowed by the contract; 50 percent of this amount to be furnished by the Government. Under terms of this contract a

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

As a result of the exploration work done under this contract two small ore bodies were discovered on the 400 level, and a third ore body was discovered on the 500 level, all in the Moore shaft area, in the northwestern part of the Republic Mine property. These discoveries 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 be a pipe-like body lying in the hanging wall side of the East 90 fault. 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 various drill holes which the operator drilled at its own expense. More than 2000 tons of ore averaging 2.55 percent copper and 8.5 percent zinc were mined from this ore body since its discovery.

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 distance of 75 feet along this drift. A 90-foot raise proved the extension of the ore, and about 3200 tons of ore containing 1.60 percent copper and 6.50 percent zinc were subsequently mined.

3. 400 L W 80 Ore Body The DMEA drift on 400 level was extended 152 feet northwesterly and DMEA drill holes Nos. 20 and 21 cut ore above this drift, at a point where ore was expected as was previously indicated by Company holes Nos. 65 and 66. 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 ore shoot.

The projects resulted in the discovery of substantial amounts of ore as indicated in the table given below.

Orebody	Mined	Measured	Indicated	Inferred	TOTAL
500 L-W320	2,153.95	3,000	15,000	18,000	38,153.95
400-W-200	3,193.61	1,000	5,000	5,000	14,193.61
400-LW-80	---	---	---	10,000	10,000.00
Grand Total					62,347.56

In addition to the above discoveries there is at least one other zone in the subordinated area that deserves exploration. This is about 200 feet west of the Moore shaft, where the Mammoth fault crosses the favorable limestone beds. This zone was not explored at the time of the writer's last visit to the property because practical drill sites were not available. An area that appears extremely favorable for future exploration lies northwest of the area explored by DMEA, and ore in this DMEA area may extend northwesterly beyond the limits of the subordinated area into the favorable ground.

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 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 the project should be certified. Royalty payments from the ore discovered should be sufficient to repay the Government loan.

John N. Faick

John N. Faick
Geologist

JNF:ms

cc: Harshman (8)
Storms

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

RECEIVED
SEP - 6 1955

224 New Customhouse
Denver 2, Colorado

August 31, 1955

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 2746 (Copper-Zinc), Contract Idm-E522 Coronado Copper and Zinc Co., Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Arizona - FINAL PAYMENT.

Enclosed are two copies of a memorandum to T. A. Christensen, dated August 26, 1955, relative to final payment under the terms of the subject contract.

W. M. Traver

W. M. Traver

Enclosures

jy

cc: MF-104 File Idm-E522
Storms
Townsend
Chron.

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

RECEIVED
SEP - 6 1955

224 New Customhouse
Denver 2, Colorado

August 26, 1955

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Co., Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Arizona - FINAL PAYMENT.

Reference is made to our memorandum of May 27, 1955 whereby we transmitted the final Form MF-104, Operator's Monthly Progress Report and Voucher for the period of April 1955, and instructed you to withhold the amount of $250.00 from reimbursement to the operator pending receipt of the Operator's final report and release of the Final Report of Review by the Contract Administration and Audit Division

We now recommend that final payment to the operator be made on the following basis which is in Conformance with the Report of Review by the Contract Administration and Audit Division released to this office on August 18, 1955.

Basis for Final Payment

Total accepted cost as per Report of Review	$87,045.00
Government partisipation at 50 percent	43,522.50
Total prior payments	43,272.50
Balance due the Operator	$ 250.00

W. M. TRAVER,

W. M. Traver

$250.00
Schedule 56-21
8/29/55
M Stokes

WLD:jy

cc: Sec. Op. Comm. (2)
Storms
Townsend
MF 104 File Idm-E522
Chron.

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

RECEIVED
JUN 15 1955

224 New Customhouse
Denver 2, Colorado

June 13, 1955

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region III

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

Enclosed are two copies of the Operator's Monthly Progress Report, Form MF-104 and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data pertaining to work under the subject contract for the month of April, 1955.

W. M. TRAVER

W. M. Traver

Enclosures

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

RECEIVED
JUN 15 1955

Administrative Audit Difference Statement

Date: June 1, 1955
Payee's Reference: April 1955

Coronado Copper & Zinc Co.
1206 Pacific Mutual Bldg.
523 W. 6th St.
Los Angeles, Calif.

Dear Sir:

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

Amount Claimed	$ 1,020.00
Difference	$
Amount Approved	$ *1,020.00

The reason for the difference was due to:

* $250.00 Withheld pending receipt of the Operator's Final Report

$500.00 Withheld from payment on March 1955 report is reinstated.

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

Very sincerely yours,

N. E. Stokes
Audit Section

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

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

RECEIVED
JUN 15 1955

224 New Customhouse
Denver 2, Colorado

May 27, 1955

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Co., Republic Copper-Zinc mine, Johnson Camp, Cochise County, Arizona - Operator's Monthly Progress Report for the month of April, 1955

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

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

The amount of $500.00 which was withheld from payment on the March, 1955 report is to be reinstated. An amount of $250.00 is to be withheld from the payment due the Operator on this April, 1955 report pending receipt of the Operator's Final Report and release of the Final Report of Review by the Contract Administration and Audit Division.

Remarks:

Date of Report.....May 21, 1955
Date Received in Field Office.....May 23, 1955
Date Received in Region Office.....May 27, 1955

W. M. Traver

Enclosures

RDB:sr

cc Sec. Op. Comm. (2)
Subject
Chron
Storms
Townsend w/copy Engrs. Report

DMEA
Date Rec'd.

RECEIVED
JUN 15 1956

MAY 27 1955
5
BUREAU OF MINES
Denver, Colorado

May 25, 1955

Memorandum

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

From: Superintendent, Southwest Experiment Station, Tucson, Ariz.

Subject: April 1955 Progress Report, DMEA Contract Idm-X322, Docket DMEA-2746, Coronado Copper & Zinc Co.'s Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Arizona

Enclosed in quintuplicate are the following:

(1) Bureau of Mines engineer's report;
(2) Operator's narrative report with map and drill hole logs;
(3) Forms MF-104 and MF-104A.

Also enclosed are 4 extra copies of our engineer's report.

All work is in accordance with the terms of the contract and its amendments. However, as all contract work has been completed, I recommend that the customary amount be withheld until a final report has been received from the operator.

Walter R. Storms

Walter R. Storms

cc - Traver (8)
DMEA-2746
DF
WRStorms/ts

RECEIVED
JUN 15 1955

May 25, 1955

Memorandum

To: Walter R. Storms, Supt., Southwest Experiment Station, Tucson

From: William R. Hardwick, Mining Engineer, Tucson, Ariz.

Subject: Progress Report for April 1955, Docket DMEA-2746, Contract Idm-852Z, Coronado Copper and Zinc Co.'s Republic Copper-Zinc Mine, Cochise County, Arizona

The Republic mine was visited on May 16, 1955. Mr. Fred E. Gray, manager, was not at the mine. Results of the exploration program were discussed briefly with R. E. Burgman, geologist. However, Burgman did not know what the company's plans were. As the time limit of the contract expired on May 18, 1955, it is assumed that the operator will terminate the contract and submit a final report.

During April 1955, three underground diamond drill holes were completed from the 500-level for a total of 255 feet. These holes cut ore and proved the existence of a small pipe-like ore body along the hanging wall side of the E. 90 fault. The indicated diameter of this ore body is approximately 25 feet. This is much smaller than had been inferred; the grade indicated is 2.2 percent copper and 6.7 percent zinc.

The operator has presented Forms MP-104, claiming reimbursement for the Government's agreed part of the cost of the 255 feet of underground diamond drill hole that was completed in April. This work was in accordance with the terms of the contract, as amended, and is approved. However, as this is the last voucher, it is recommended that no payment be made to the operator until it has submitted a final report on the project.

The status of this contract as of May 18 is as follows:

	April 1955	Total
Drifting and crosscutting	-	$52,440.00
Surface drilling	-	31,423.00
Underground drilling	$1,026.00	3,742.00
Total	$1,026.00	$87,605.00
Less amount disallowed	-	560.00
Total	$1,026.00	$87,045.00
Government's part (30%)	$ 310.00	$43,522.50

The total estimated cost of this project was $99,050.00. The actual expenditure is the total shown above. Attention is directed to the fact that the operator's reports have not been corrected to reflect the deduction of an amount of $560.00 that was disallowed in its January voucher.

William R. Hardwick
William R. Hardwick

cc - Traver (3)(w orig.)
DMEA-2746

RECEIVED
JUN 15 1955

May 21, 1955

Mr. Walter R. Storms, Chief
U. S. Bureau of Mines
P. O. Box 4097
University Station
Tucson, Arizona

Re: Docket No. DMEA-2746
Contract Idm E522

Dear Mr. Storms:

Following is the report to accompany forms 104 and 104-A in connection with the work done under Contract Idm E522 for the full month of April.

DRIFTING. No drifting or crosscutting was done during the month under the DMEA contract. During April, 841.07 tons of ore averaging 2.87% Cu, 6.78% Zn were milled from the 370 WF Sub-Level Drift, 500 Level WF 320 stope, 500 Level WF 370 stope and 400 Level W 260 stope (tonnage and grade corrected to mill heads from car counts and grab samples).

DIAMOND DRILLING. (See sections and logs) Three underground diamond drill holes were drilled during the month of April. Diamond drill hole MU 170 A (DMEA # 23) was completed at a depth of 85'. Diamond drill hole MU 170 B (DMEA # 24) was completed at a depth of 72'. Diamond drill hole MU 170 C (DMEA # 25) was completed at a depth of 115'. Accompanying this report are sections showing assays and formations encountered in the drill holes.

Very truly yours,

CORONADO COPPER & ZINC CO.

By Fred E. Gray
Fred E. Gray
Mine Manager

FEG:k

4ccs to Mr. W. R. Storms
1 cc Mr. George D. Dub
1 cc Mine Office

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
JUN 15 1955

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of April 1955 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper & Zinc Co. Minerals Cu - Zn
Address P. O. Box 44 Dragoon, Arizona

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting	feet			$41,820.00	1045.5	$40.00	1520	$40.00
Crosscutting	"			10,620.00	265.5	"		
Raising					1311.0			
Shafts								
Winzes								
Drilling: Core AX	"			12,190.50	2709.0		9060	4.50
Churn EX	"			19,232.50	5495.0			3.50
Auger EX Underground					8204.			
Stripping	"	$1020.00	255	3,742.00	935.5			4.00
Trenching					9139.5			
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		$1020.00		$87,605.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		$1020.00		$87,605.00				

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

Date May 21, 1955 Operator Coronado Copper & Zinc Co.

Per Fred E. Gray Title Mine Manager

Fred E. Gray

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

REMARKS:

(Instructions on reverse)

(For Government use only)

Total of $87,605.00 should be reduced $560.00, cost of 14 ft. of drifting that was disallowed on January 1955 voucher - otherwise correct.
William R. Hardwick

INSTRUCTIONS

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

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

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

GPO 872894

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.5

RECEIVED
JUN 15 1955

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of April, 1955 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper & Zinc Co. Minerals Cu - Zn
Address P. O. Box 44 Dragoon, Arizona
Contract Amount, $99,050.00 Government Participation: 50 % Amount, $49,525.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						6/27/55 [illegible]
Drilling Surface		$31,423.00	$31,423.00			6/22/55 J.W.G.
Bulldozing Underground	$1020.00	2,722.00	3,742.00			
Crosscutting		10,620.00	10,620.00			
Drifting		41,820.00	41,820.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
Totals	$1020.00	$86,585.00	$87,605.00	** 1020.00	86,585.00	87,605.00
					* 560.00	560.00
					86,025.00	87,045.00

I certify that the above bill is correct and just and that payment therefor has not been received.
Date May 21, 1955 *Payee Coronado Copper & Zinc Co.
Per [signature] Title Mine Manager

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

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

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:
$ 760.00
Signature Randell R. Cooper
(Authorized Certifying Officer)
Date 6/1/55 Vou. No. DMA-55-94
(See other side)

* Giving disallowance
** Withheld $250.00 Reinstate $500.00

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. DMA-E 522 in accordance with the terms of the contract.

Signature William R. Hardinge Title Mining Engineer Date 5/27/55

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: Clerk, Executive Officer

Signature W. M. Inaver Title Date MAY 27 1955

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

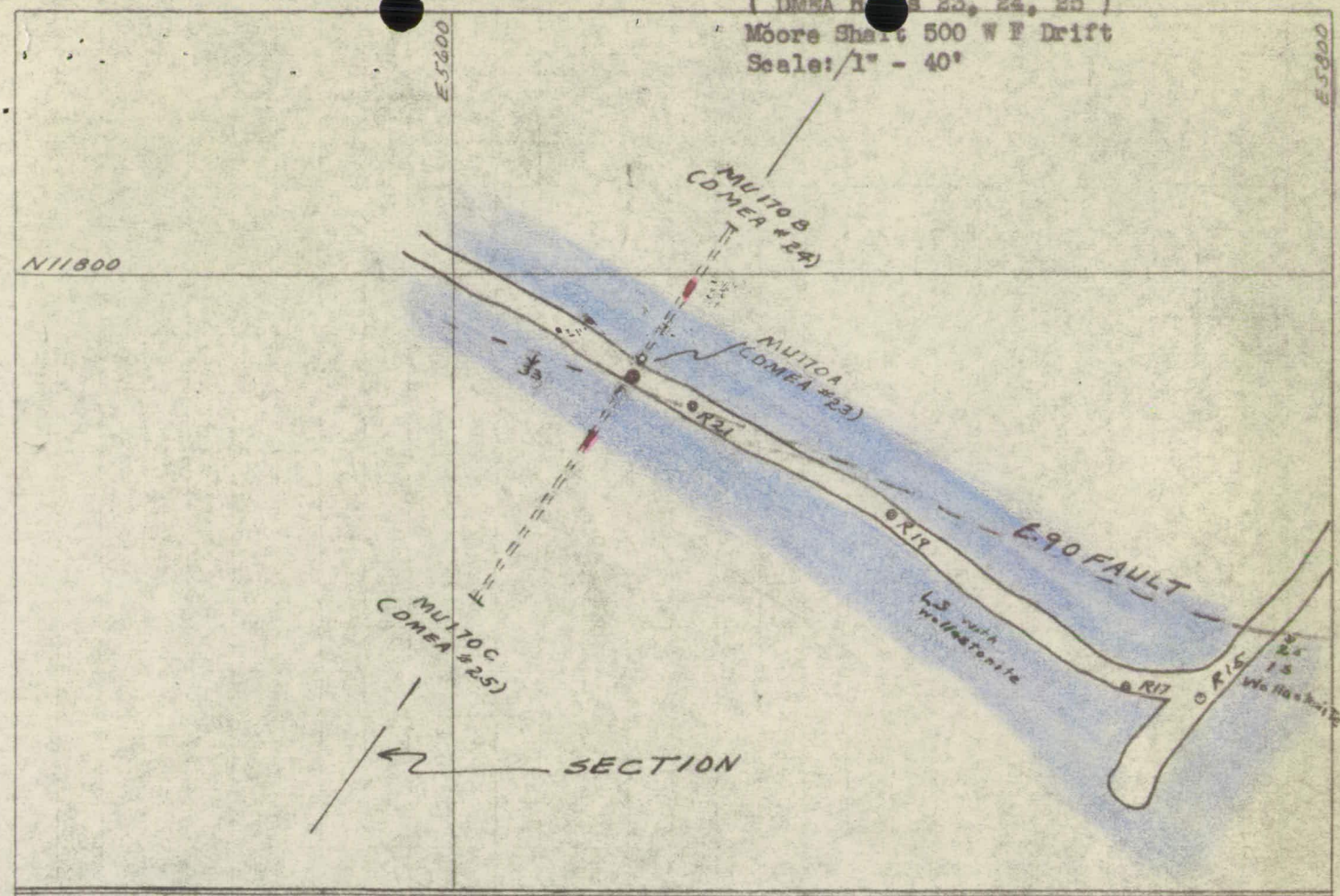
Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported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

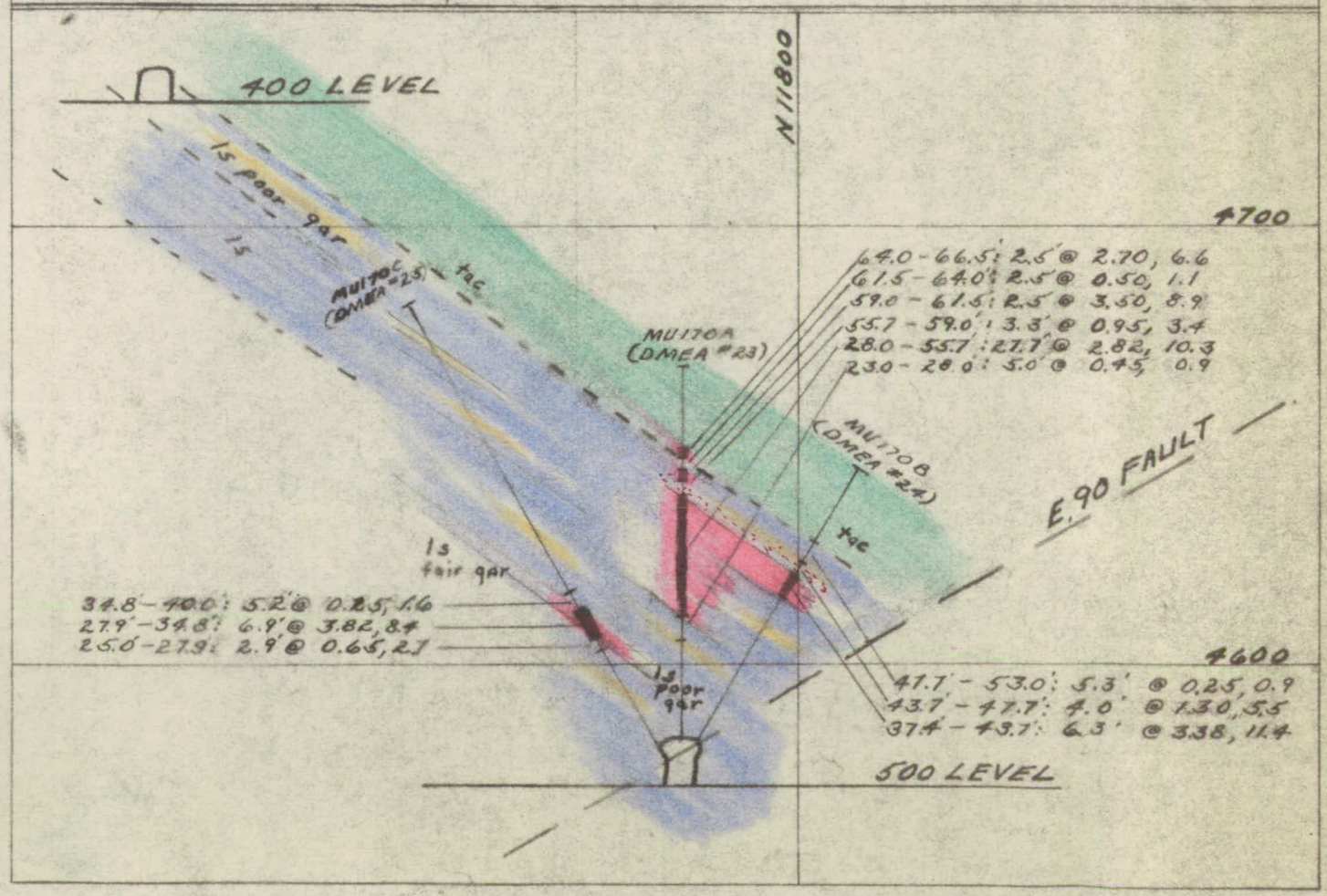
Item (8) includes any unforeseen costs not included in the other seven categories.

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

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

D. D. Holes MU 170 A, 170 B, 170 C
(DMEA Holes 23, 24, 25)
Moore Shaft 500 W F Drift
Scale: 1" - 40'





Collar Location

Level: 500 W F Drift
N: 11777
E: 5641
Elevation: 4583
Bearing: None
Angle: plus 90

Length: 85.0'
Hor: 0.0'
Vert: 85.0'
Logged by: R.E.B.

Date: 4/26/55

D. D. HOLE NO. MU 170 A (DMRA #23)

Date Started: 3/31/55
Date Finished: 4/4/55
Size: EX

Casing: None

Objective:

Results:

Footage			Assays		Core recovery	Log	Description and Averages
From	To	Interval	Cu%	Zn%			
0.0	23.0	23.0			94%		Limestone, poor garnet, some wollastonit, occasional hnf bands. No wollastonite after 17', increase in garnet.
23.0	28.0	5.0	0.45	0.9	100		Limestone poor garnet, some diopside.
28.0	33.0	5.0	2.45	15.2	100		
33.0	38.0	5.0	3.75	10.0	100		28.0' - 55.7': 27.7' @ 2.82, 10.3
38.0	39.5	1.5	0.30	3.2	100		Fair garnet.
39.5	45.0	5.5	3.70	11.7	100		Diopside.
45.0	49.0	4.0	3.05	10.9	100		Hnf band @ 47'.
49.0	53.5	4.5	2.20	7.4	69		
53.5	55.7	2.2	1.90	6.6	69		
55.7	59.0	3.3	0.95	3.4	72		
59.0	61.5	2.5	3.50	8.9	72		
61.5	64.0	2.5	0.50	1.1	90		Partly tactitized, poor garnet.
64.0	66.5	2.5	2.70	6.6	100		Poor tactite, mineralized.
66.5	85.0	18.5			89		Tactite

Collar Location

Level: 500 W F Drift
N: 11781
E: 5645
Elevation: 4582
Bearing: N 35 E
Angle: plus 60

Length: 72.0'
Hor: 36.0'
Vert: 62.4'
Logged by: REB

Date: 4/27/55

D. D. HOLE NO. MU 170 B (DMEA #24)

Date Started: 4/5/55
Date Finished: 4/7/55
Size: EX

Casing: None

Objective:

Results:

Footage			Assays		Core recovery	Log	Description and Averages
From	To	Interval	Cu%	Zn%			
0.0	19.0	19.0			79%		Limestone, poor garnet, some wollastonite, occasional hnf bands.
19.0	32.0	13.0			88		Limestone poor garnet (banded). Hnf bands after 27', some diopside.
32.0	37.4	5.4			91		
37.4	41.0	3.6	4.60	14.1	92		No hnf bands.
41.0	43.7	2.7	1.75	7.7	74		37.4 - 43.7: 6.3' @ 3.38, 11.4
43.7	47.7	4.0	1.30	5.5	70		Fault 43.7' - 45.7', calcite, some breccia, light iron stain.
47.7	53.0	5.3	0.25	0.9	94		Limestone poor garnet.
53.0	60.0	7.0			100		Tactite, occasional hnf bands, weak mineralization.
60.0	72.0	12.0			91		No hnf bands.

Collar Location

Level: 500 W F Drift
N: 11773
E: 5638
Elevation: 4582
Bearing: S 35 W
Angle: plus 60

Length: 115.0'
Hor: 57.5'
Vert: 99.6'
Logged by: R.E.B.

Date: 4/28/55

D. D. HOLE NO. MU 170 C (DMEA #2

Date Started: 4/8/55
Date Finished: 4/13/55
Size: EX

Casing: None

RECEIVED
JUN 15 1955

Objective:

Results:

Footage			Assays		Core recovery	Log	Description and Averages
From	To	Interval	Cu%	Zn%			
0.0	25.0	25.0			70%		Limestone poor garnet, some wollastonite hnf bands. Badly broken 22.0' - 25.0'.
25.0	27.9	2.9	0.65	2.7	76		Limestone fair garnet, a few hnf bands.
27.9	30.3	2.4	2.45	8.3	71		
30.3	34.8	4.5	4.55	8.4	98		27.9' - 34.8': 6.9' @ 3.82, 8.4
34.8	40.0	5.2	0.25	1.6	94		
40.0	68.0	28.0			75		Limestone fair garnet, a little sphalerite.
68.0	70.0	2.0			100		Limestone, some calcite to 70'.
70.0	80.0	10.0			100		Grey xls
80.0	82.0	2.0			100		Ls poor to fair garnet.
82.0	94.0	12.0			100		Some wollastonite
94.0	102.0	8.0			100		Grey xls
102.0	105.0	3.0			95		Ls poor garnet, with hnf bands.
105.0	115.0	10.0			100		Grey xls with hnf bands.

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

224 New Customhouse
Denver 2, Colorado

Defense Minerals Administration
RECEIVED
APR 11 1955

April 8, 1955

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

Enclosed for your records are four copies of an interim report from J. N. Faick, Geologist, U.S. Geological Survey, dated April 1, 1955, and transmittal thereof from E.N. Harshman dated April 4, 1955, which are relative to operations under the subject contract.

W. M. Traver

W. M Traver

Enclosures

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Defense Minerals Exploration Administration
Denver Federal Center
Denver, Colorado

DMEA
Data Rec'd
1955
Denver, Colorado

April 4, 1955

Defense Minerals Administration
RECEIVED
APR 11 1955

Memorandum

To: Field Team, Region III

From: E. N. Harshman

Subject: Interim Examination DMEA Docket 2746 (Copper-zinc), Contract Idm-E 522, Coronado Copper and Zinc Company, Republic Copper-Zinc Mine, Cochise County, Arizona

Enclosed are the original and 8 copies of an interim report by J. N. Faick, U. S. Geological Survey, covering work completed under the subject contract.

Ore has been discovered by the Government assisted exploration.

Four copies of the report should be sent to the DMEA Operating Committee for information purposes.

E. N. Harshman

E. N. Harshman
Member, Field Team

Enclosures (9)

ENHarshman:arh

MINERAL DEPOSITS
DATA
RECEIVED

GEOLOGICAL SURVEY
DENVER, COLORADO

Box 4126 University Station
Tucson, Arizona

April 1, 1955

MEMORANDUM

TO: Mr. E. N. Harshman

FROM: J. N. Faick

SUBJECT: Interim Examination IMEA Docket 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Company, Republic Copper-Zinc Mine, Cochise County, Arizona

On March 24, 1955 this writer and W. H. Hardwick, Engineer, U. S. Bureau of Mines, made a brief examination of the above exploration contract, and found that the work was being prosecuted vigorously and was meeting with a reasonable degree of success.

Under the last contract amendment (see Fig. A, attached to amendment), effective December 27, 1954, the 500 WF drift has been driven the allowed 150 feet and preparations are being made to drill the first 3 diamond drill holes allowed by the amendment.

At their own expense the operators drilled a series of 4 holes and drove a raise into the new ore body from the 500 WF drift, at a point 43 feet from the starting point, and the 320 stope was advanced to the new raise. This work proved the existence of a minable ore body which apparently is about 60 feet wide and is a maximum of about 20 feet thick in cross section. The operators will continue to explore and develop this ore body to the northwest limit of the subordinated area No. 1, and will bear most of the cost of the additional work.

Also in subordinated area No. 1 a raise has been put up 70 feet to test ore previously found by diamond drill holes 65 and 66. This raise had barely penetrated the ore at the time of this visit and nothing could be learned regarding its size, shape, or grade. It is hoped that this ore is an extension of the Mammoth west winze ore body, which lies about 250 feet west of the drill holes and raise.

J. N. Faick
John N. Faick

JNF:ms
cc. Mr. Harshman (3)

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

MAY 23 1955

224 New Customhouse
Denver 2, Colorado

May 17, 1955

Olt
~~[illegible]~~
Belly

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper & Zinc Company's Republic Copper-Zinc mine, Cochise County, Arizona - Operator's Monthly Progress Report for the month of March, 1955

Enclosed are two copies of the Operator's Monthly Progress Report, Form MF-104 and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data pertaining to work under the subject contract for the month of March, 1955.

W. M. TRAVER,

Enclosures

W. M. Traver

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

Administrative Audit Difference Statement

Date: May 2, 1955
Payee's Reference: March 1955

Coronado Copper & Zinc Co.
1206 Pacific Mutual Bldg.
523 W. 6th Street
Los Angeles, Calif.

Dear Sir:

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

Amount Claimed $ 2,960.00

Difference $

Amount Approved $ *2,960.00

The reason for the difference was due to:

* $500.00 withheld pending receipt of final report.

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

Very sincerely yours,

N. E. Stokes
Audit Section

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

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

224 New Customhouse
Denver 2, Colorado

April 26, 1955

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper & Zinc Company's Republic Copper-Zinc Mine, Cochise County, Arizona - Operator's Monthly Progress Report for the month of March, 1955

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

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

An amount of $500.00 is to be withheld from the payment due the Operator pending receipt of the Operator's Final Report and release of the Final Report of Review by the Contract Administration and Audit Division.

Remarks:

Date of Report.....April 19, 1955
Date Received in Field Office.....April 21, 1955
Date Received in Region Office.....April 25, 1955

W. M. TRAVER,

W. M. Traver

Enclosures

RDB:sr

cc Subject
Chron
Secretary Op. Comm. (2)
Townsend
Storms

DMEA
Date Rec'd.
APR 25 1955
BUREAU OF MINES
Denver, Colorado

April 22, 1955

Memorandum

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

From : Superintendent, Southwest Experiment Station

Subject : March 1955 Progress Report, DMEA Contract Idm-2522, Docket DMEA-2746, Coronado Copper & Zinc Co.'s Republic Copper-Zinc Mine, Cochise County, Ariz.

Enclosed in quintuplicate are the following:

(1) Bureau of Mines engineer's report;
(2) Operator's narrative report with map;
(3) Forms MF-104 and MF-104A.

Also enclosed are 4 extra copies of our engineer's report.

All work is in accordance with terms of the contract and its amendments. As all work under terms of the contract and its amendments had been completed by April 21, I recommend that an appropriate amount be withheld until the operator's final report has been received. If any funds remain after this deduction, I recommend that they be paid the operator if all royalty payments are up to date.

Walter R. Storms

Walter R. Storms

CC W. M. Trauer (3)
DMEA-2746
MF

WRStorms:fr;

April 22, 1955

Memorandum

To : Walter R. Storms, Superintendent, Southwest Experiment Station, Region III

From : William H. Hardwick, Mining Engineer, Tucson, Ariz.

Subject : Progress Report for March 1955, Docket DMEA-2746, Contract Ido-5521, Cornucopia Copper and Zinc Co.'s Republic Copper-Zinc Mine, Cochise County, Ariz.

The Republic mine was visited on April 20, 1955. Mr. R. S. Bergman, Geologist for the company, assisted in examining the progress for March 1955.

On April 20, the 300 level W. F. drift had been advanced to a point 215 feet west of the starting point and three drill holes had been fanned upward through the ore zone at a point designated in Amendment No. 4.

The operator has presented Form MF-104, claiming reimbursement for the Government's agreed part of 72.5 feet of drift and 17 feet of underground diamond drill hole that were completed in March. This work was in accordance with the terms of the contract as amended and is approved. The status of this contract on March 31 was as follows:

	March 1955	Total
Drilling & crosscutting	$2,[illegible].00	$[illegible],440.00
Surface drilling	-	31,423.00
Underground drilling	[illegible].00	2,732.00
Total	$3,[illegible].00	$[illegible],[illegible].00
Government's part	$1,404.00	$43,302.50

During March, 547.79 tons of ore, averaging 3.97 percent copper and 7.22 percent zinc were reported from the 300 level W.F. 320 and 370 stopes in the DMEA participation area by the operator.

CC W. M. Trayer (orig. & 3)
DMEA-2746
WF

WHHardwick:frj

As of March 31, only a small amount of underground drilling remained to be completed under this contract unless additional work was requested. When the property was visited on April 20, this work had been completed. Government's part of the cost of this additional work will be approximately $300.00. If this is considered sufficient to assure a final engineering and geological report, then it is recommended that the operator be paid all of the amount due him for March.

The time limit of this contract is May 18, 1965.

William R. Hardwick

William R. Hardwick
Mining Engineer
Tucson, Arizona

April 19, 1955

Mr. Walter R. Storms, Chief
U. S. Bureau of Mines
P. O. Box 4097
University Station
Tucson, Arizona

Re: Docket No. DMEA-2746
Contract Idm E522

Dear Mr. Storms:

Following is the report to accompany forms 104 and 104-A in connection with the work done under Contract Idm E522 for the full month of March.

DRIFTING. (See progress map) During the month, the 500 Level W F Drift was advanced under the DMEA contract 72.5 ft. to Station 505 R 21 plus 22.0 feet. Drifting was in limestone. The East 90 Fault was encountered on the North wall of the drift at Station 505 R 19 plus 22.0 ft. striking N 65° W and dipping 30 to 35 degrees to the SW. During March, 547.79 tons of ore averaging 2.97% Cu, 7.22% Zn were milled from the 500 Level W F 320 and 370 stopes in the DMEA participation area (tonnage and grade corrected from mill heads from car counts and grab samples).

DIAMOND DRILLING. Underground diamond drill hole MU 170 A (DMEA #23) drilled from the 500 Level W F Drift 15.5 feet N 55° W from Station 505 R 21, plus 90 degrees, cut limestone poor garnet to the present bottom at 17.0 feet. No other diamond drilling was done under the DMEA contract during the month of March.

EXPLANATION: No change has been made in our "to-date" figures shown on MF 104A and MF 104 to correct the footage or money shown on your "Audit Difference Statement" of March 25, 1955. We have not changed our figures as we fear that by so doing, we might complicate things further.

Very truly yours,

CORONADO COPPER & ZINC CO.

By Fred E. Gray
Fred E. Gray
Mine Manager

FEG:k

4 ccs to Mr. W. R. Storms
1 cc Mr. George D. Dub
1 cc Mine Office

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

Budget Bureau No. 42-R1036.5

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

Month of March, 1955 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper & Zinc Co. Minerals Cu - Zn
Address Box 44 Dragoon, Arizona
Contract Amount, $99,050.00 Government Participation: 50 % Amount, $49,525.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						6/27/55
Drilling Surface		$31,423.00	$31,423.00			
Bulldozing Underground	$ 68.00	2,654.00	2,722.00			
Crosscutting		10,620.00	10,620.00			
Drifting	2900.00	38,920.00	41,820.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$2968.00	$83,617.00	$86,585.00 *	2968.00	83,617.00	86,585.00
					560.00	560.00
					83,057.00	86,025.00
					$984.00	

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

Date 4-19-55 *Payee Coronado Copper & Zinc Company

Per [signature] Title Mine Manager

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

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

(Instructions on reverse)

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

Signature Randell R. Cooper
(Authorized Certifying Officer)

Date 4/28/55 Vou. No. DMA-55-87
(See other side)

*Previous disallowance
**$500.00 Withheld

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. 1m-A522 in accordance with the terms of the contract.

Signature William R. Hardwick Title Mining Engineer Date 4/22/55

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W. M. Shaney Title Executive Officer Date APR 26 1955

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Defense Minerals Administration
RECEIVED
MAY 20 1955

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of March 195 5 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper & Zinc Company Minerals Cu - Zn
Address Box 44 Dragoon, Arizona

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting	feet	$2900.00	72.5	$41,820.00	1045.5	$40.00	1520	$40.00
Crosscutting				10,620.00	265.5	"		
Raising								
Shafts								
Winzes								
Drilling: Core AX	"			12,190.50	2709.0			4.50
Churn EX	"			19,232.50	5495.0		9060	3.50
Auger EX Under-								
Stripping ground	"	68.00	17	2,722.00	680.5			4.00
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		$2968.00		$86,585.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		$2968.00		$86,585.00				

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

Date April 19, 1955 Operator Coronado Copper & Zinc Co.

Per Fred E. Gray Title Mine Manager
Fred E. Gray

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

REMARKS:

(Instructions on reverse)

(For Government use only)
Checked with MF 104
William R Hardinge

INSTRUCTIONS

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

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

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

GPO 872894

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

224 New Customhouse
Denver 2, Colorado

April 8, 1955

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Co., Republic Copper-Zinc Mine, Johnson's Camp, Cochise County, Arizona

Enclosed are two copies of the Operator's Monthly Progress Report, form MF-104 and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data pertaining to work under the subject contract for the month of February, 1955.

W. M. Traver

W. M. Traver

Enclosures

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

224 New Customhouse
Denver 2, Colorado

March 30, 1955

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Co., Republic Copper-Zinc Mine, Johnson's Camp, Cochise County, Arizona - Operator's Monthly Progress Report for the period February, 1955

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

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks:

Date of Report.....March 17, 1955
Date Received in Field Office.....March 21, 1955
Date Received in Region Office....March 28, 1955

W. M. Traver

W. M. Traver

Enclosures

RDB:sr

cc Subject
Chron
Sec. to Op. Comm. (2)
Storms

March 25, 1955

Memorandum

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

From : Superintendent, Southwest Exp. Station, Region III

Subject : February 1955 Progress Report, DMEA Contract Idm-E522, Docket DMEA-2746, Coronado Copper & Zinc Co.'s Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Ariz.

Enclosed in quintuplicate are the following:

(1) Bureau of Mines engineer's report;
(2) Operator's narrative report with map;
(3) Forms MF-104 and MF-104A.

Also enclosed are 4 extra copies of our engineer's report.

All work is in accordance with terms of the contract and its amendments. If all royalty payments are up-to-date, I recommend that the Government's share of these costs be paid.

Walter R. Storms

Walter R. Storms

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

WRStorms:frj

DMEA
Date Rec'd
MAR 28 1955
BUREAU OF MINES
Denver, Colorado

March 25, 1955

Memorandum

To : Walter R. Storms, Superintendent, Southwest Experiment Station, Region III

From : William R. Hardwick, Mining Engineer, Tucson, Ariz.

Subject : Progress Report for February 1955, Docket BMEA-2746, Contract I&M-E322, Coronado Copper and Zinc Co.'s Republic Copper-Zinc Mine, Cochise County, Ariz.

The Republic mine was visited on March 23, 1955 by John N. Faick, Geologist, U. S. Geological Survey and the undersigned engineer. Fred E. Grey, mine manager, was at the mine. The 500 level west footwall drift was measured and the 500 level west footwall 320 stope was examined.

During February 1955, the 500 level west footwall drift was advanced 24.5 feet. This advance is in accordance with the provisions of amendment No. 4 to the contract and is approved. The status of this contract as of February 28, 1955 is as follows:

	February	Total
Drifting and crosscutting	$980.00	$40,540.00
Surface drilling	—	31,423.00
Underground drilling	—	2,654.00
Total	$980.00	$83,617.00
Government's part (50%)	$490.00	$41,808.50

During February, 303.55 tons of ore was mined from the 500 level W.F. 320 stope. The grade, (3.1% copper and 6.18% Zinc) is much better than were previously mined from this stope.

On March 23, Mr. Grey stated that the company would complete the additional 150 feet of drifting that had been requested but was not allowed in amendment No. 4. This work will be done at company expense.

CC W. M. Traver (Orig. & 8)
BMEA-2746
DF

WRHardwick:frj

The contract provides that the Government will participate to the extent of 50 percent of the agreed estimated cost of $40.00 per feet for drifting. It is recommended that the operator be paid the Government's agreed part of the cost of the work completed in February after all royalty due the Government has been paid.

The time limit of this contract is May 18, 1955.

William R. Hardwick

William R. Hardwick
Mining Engineer
Region III

March 17, 1955

Mr. Walter R. Storms, Chief
U. S. Bureau of Mines
P. O. Box 4097
University Station
Tucson, Arizona

Re: Docket No. DMEA-2746
Contract Idm E522

Dear Mr. Storms:

Following is the report to accompany Forms 104 and 104-A in connection with the work done under Contract Idm E522 for the full month of February.

DRIFTING. (See progress map) During the month, the 500 Level W F Drift was advanced 24.5 ft. to Station 505R-17 plus 66.5 ft. All of this advance was in the DMEA participation area. Drifting continued in limestone with wollastenite. During February, 503.55 tons of ore averaging 3.10% Cu, 6.15% Zn were milled from the 500 Level W F 320 Stope, 370 Raise, and 370 Stope in the participation area (tonnage and grade corrected to mill heads from car counts and grab samples).

DIAMOND DRILLING. No diamond drilling was done under the DMEA contract during the month of February.

Very truly yours,

CORONADO COPPER & ZINC CO.

By Fred E. Gray
Fred E. Gray
Mine Manager

FEG:rk

4 cos to Mr. W. R. Storms
1 co Mr. George D. Dub
1 co Mine Office

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

Budget Bureau No. 42-R1036.5

Defense Minerals Administration
RECEIVED
APR 14 1955

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of February, 1955 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper & Zinc Co. Minerals Cu - Zn
Address Dragoon, Arizona
Contract Amount, $99,050.00 Government Participation: 50 % Amount, $49,525.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						4/27/55 J.W.L.
Drilling Surface		$31,423.00	$31,423.00			
Bulldozing Underground		2,654.00	2,654.00			
Crosscutting		10,620.00	10,620.00			
Drifting	$980.00	37,940.00	38,920.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
		incorrect	incorrect			
TOTALS	$980.00	$82,637.00	$83,617.00	490.00	82,637.00	83,617.00
				previous deduction 560.00		560.00
					82,077.00	83,057.00

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

Date March 17, 1955 *Payee Coronado Copper & Zinc Co.

Per [signature] Title Mine Manager

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

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

(Instructions on reverse)

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

$ 490.00

Signature [signature]
(Authorized Certifying Officer)

Date 4/1/55 Vou. No. DMA 55-76

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. DMEA 522 in accordance with the terms of the contract.

Signature William R. Hardwick Title Mining Engr Date 3/25/55

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: Berk. D

Signature W. M. Graves Title Executive Officer Date MAR 30 1955

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 14 1955

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of February 1955 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper & Zinc Co. Minerals Cu - Zn
Address Dragoon, Arizona

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
				$38,360.00	959			
Drifting	Feet	$980.00	24.5	$38,920.00	973.0	$40.00	1520	$40.00
Crosscutting				10,620.00	265.5	"		
Raising								
Shafts								
Winzes								
Drilling: Core AX				12,190.50	2709.0			$ 4.50
Churn EX				19,232.50	5495.0		9060	3.50
Auger EX Under ground								
Stripping				2,654.00	663.5			4.00
Trenching								
Test Pits								
Roads and Trails								
				incorrect				
TOTAL DISTRIBUTED COSTS		$980.00		$83,617.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.				incorrect				
TOTAL COSTS		$980.00		$83,617.00				

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

Date March 17, 1955 Operator Coronado Copper & Zinc Co.

Per [signature] Title Mine Manager

REMARKS:

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

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

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

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

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

GPO 872894

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

Defense Minerals Administration
RECEIVED
APR 14 1955

224 New Customhouse
Denver 2, Colorado

April 8, 1955

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

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

Enclosed are two copies of the Operator's Monthly Progress Report, form MF-104 and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data pertaining to work under the subject contract for the period of December, 1954 through January, 1955.

W. M. Traver

W. M. Traver

Enclosures

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
APR 14 1955

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

Administrative Audit Difference Statement

Coronado Copper & Zinc Co.
1206 Pacific Mutual Bldg.
523 North 6th Street
Los Angeles, California

Date: March 25, 1955
Payee's Reference: January 1955

Gentlemen:

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

Amount Claimed	$ 2,728.00	
Difference	$ 560.00	14 feet at 040.00 per foot
Amount Approved	$ 2,168.00	

The reason for the difference was due to:
Since the amount of advance during the period from Dec. 13 to Jan. 31 cannot be broken down from the records to reflect the exact amount of drifting completed in that period before the effective date (Dec. 27) of the amendment, the total footage completed is divided according to the number of working days between Dec. 13, 1954 and Jan. 13, 1955. Payment is made for the part of the drifting that was completed after Dec. 27 according to the following computation.

Number of working days before Dec. 27	-	11
Number of working days after Dec. 27	-	30
Total	-	41
Total number of feet drifted	-	53

Number of feet of drift completed before Dec. 27 = 11/41 X 53 = 14 ft.
Number of feet of drift completed after Dec. 27 = 30/41 X 53 = 39 ft.

The above suspension is subject to reconsideration in the event evidence can be produced to show that the work was completed after the effective date of the contract amendment. Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

N. E. Stokes
Audit Section

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

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 14 1955

224 New Customhouse
Denver 2, Colorado

March 23, 1955

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Company, Cochise County, Arizona -- Operator's Monthly Progress Report for the period of December 1954 through January 1955

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

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200(A), therefore we recommend that payment be made for 50 percent of the amount reported by the operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report, except for the following deduction:

14 feet of drifting at $40.00 a foot.....$560.00
(Basis for deduction detailed in engineer's report)

The inspecting engineer recommends withholding payment of the enclosed report pending payment by the operator of royalties presently due the Government. However, the operator has paid royalties on production through the month of October 1954 and at the present time royalty payments are outstanding on only a relatively small tonnage of ore produced during the months of November and December 1954. Therefore, payment of the enclosed report is recommended.

Remarks:
Date of operator's report..... 2/7/55
Date report received in DMEA Field Office..... 2/14/55
Date report received in Regional Office..... 3/21/55

W. M. TRAVER

W. M. Traver

Enclosures

JWT:jp
cc Subject
Chron
Sec. to Op. Comm. (2)
Storms

Memorandum March 16, 1955

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

From : Superintendent, Southwest Exp. Station, Region III

Subject : December 1954 - January 1955 Progress Report, DMEA Contract Idm-E522, Docket DMEA-2746, Coronado Copper & Zinc Co.'s Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Ariz.

Enclosed in quintuplicate are the following:

(1) Bureau of Mines engineer's report;
(2) Operator's narrative report with maps and drill hole logs;
(3) Forms MF-104 and MF-104A.

Also enclosed are 4 extra copies of our engineer's report.

As you will note, the operator's report was received on February 14. However, as Amendment No. 4 was dated December 27, 1954 and as the company's manager stated in his narrative report that some of the drifting had been done prior to that date, we spent some time trying to resolve this matter. As the manager had no records to show the amount of footage driven before December 27, we finally had to try to prorate the total footage as shown in Hardwick's report. It had been our understanding that drifting on the 300-foot level would start on December 27, therefore Hardwick recommended that date in his memorandum of January 3, 1955. However, Gray states that drifting actually started before that date.

I believe that the company acted in good faith and probably understood that the amendment would be dated December 24. As it was dated December 27, Hardwick has deducted 14 feet from the total and recommends approval of the remaining 39 feet. I concur with this recommendation, but suggest that no payment of the Government's share of the December-January costs be made until all royalty settlements have been made.

Walter R. Storms

Walter R. Storms

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

WRStorms:frj

March 16, 1955

Memorandum

To : Walter R. Storms, Superintendent, Southwest Experiment Station, Tucson, Ariz.

From : William R. Hardwick, Mining Engineer, Tucson, Ariz.

Subject : Progress Report for December 1954 and January 1955, Docket DMEA-2746, Contract Idm-E522, Coronado Copper and Zinc Co.'s Republic Copper-Zinc Mine, Cochise County, Ariz.

The Republic mine was visited on December 13, 1954 and again on January 18 and February 25, 1955. The cores from diamond drill holes No. DMEA-21 and DMEA-22 were examined on January 18, and the advance in the 500-level west footwall drift was measured on February 25, 1955.

On December 13, 1954, Fred E. Gray, Mine Manager, discussed the results of some drilling in the northwestern part of DMEA Area No. 1. This drilling had disclosed indications of an ore body and Gray inquired about Government assistance to explore this area. Gray was told that he should prepare a request for an amendment to the contract that would authorize this work and he should submit this request to the Field Team.

On December 27, 1954, Gray and George D. Dub, president of Coronado Copper and Zinc Co., visited the Tucson office of the U. S. Bureau of Mines, bringing with them a letter dated December 24, 1954 that requested an amendment to cover this work. A paragraph in this letter stated:

"While awaiting your approval we expect to drive the drift approximately 50 feet northwest of the 500 W. 320 X-cut as we need it for switching room for our motor haulage. We will be pleased if the amendment will include the cost of this 50 feet.

"We wish to get started on this work as soon as possible and, therefore, ask that you give us your answer on this request as soon as possible."

CC W. M. Traver (Orig. & 8)
DMEA-2746
DF

WRHardwick:frj

On December 27, 1954, when Mr. Gray and Mr. Dub were in the Tucson office to present the application for an amendment, Gray again urged that he be informed as soon as possible as to whether the amendment would be approved or disapproved. In discussing a starting date, Gray said that preparations were already under way and that the drift would be started "probably today". In the memorandum report in which I recommended approval of this amendment, I also recommended that the effective date be December 27, 1954, as I did not feel justified in recommending an effective date prior to the date of the request. However, it was my understanding that no drifting had been done prior to December 27, 1954.

It now develops that Gray has discovered that some drifting was started before December 27, 1954. No drifting had been accomplished when the property was visited by me on December 13, 1954.

In his narrative report for December and January, Gray states, "I wish to call your attention, however, to the fact that a part of this footage was driven before December 27th. ——— As we had no means of knowing what the effective date of the amendment would be and we do not measure our drifts daily, we cannot advise you of the amount driven before the 27th, nor after the 27th of December - -".

The effective date of amendment No. 4 is December 27, 1954, or the date on which the operator requested the additional exploration. As the exact footage before and after December 27 is not known and as some drifting prior to the effective date of the contract is admitted by the operator, it is recommended that the total footage be prorated according to the number of working days between December 13, the last date that the property was visited, December 27, the effective date of the contract, and January 31, the end of the period.

When the mine was visited on February 25, 1955 the drift measured 68.9 feet from the survey station 305 A 15. Of this advance the operator reports that 53 feet were completed before January 31, 1955. An undetermined part of this was completed before December 27, 1954, the effective date of amendment No. 4. Other than meeting the time provision of the amendment this drifting is in accordance with the provisions of the amendment and is approved.

As the operator states that the amount of advance during the period cannot be broken down from the records to reflect the exact amount of drifting completed in that part of the period before the effective date of the amendment, it is recommended that the total footage completed be divided according to the number of working

days between December 13 and January 31, 1954. It is recommended that the operator be paid for the Government's agreed part of the drifting that was completed after the effective date of the contract according to this computation. The recommended division of the footage based on a six working day week, but excluding Christmas and New Years is as follows:

Number of working days before Dec. 27 ———	11
Number of days after December 27 ———	30
Total number of working days ———	41
Total number of feet of drift ———	53

Number of feet of drift completed before December 27

11/41 times 53 = 14 feet

Number of feet of drift completed after December 27

30/41 times 53 = 39 feet

The contract provides for Government participation in the costs of drifting to the extent of 50 percent of an agreed estimated cost of $40.00 per foot. The cost of the 39 feet that were believed to be completed in the period December 27, 1954 to January 31, 1955 as determined by the above analysis, was $1,560.00.

In addition to the drifting, two diamond drill holes were completed on the 400 level. The logs of these holes are included with the operator's report. One hole, BMEA No. 21, cut some low-grade copper-zinc ore. The other hole, BMEA No. 22, cut only small scattered spots of sulfide mineral. These two holes, totaling 152 feet, were in accordance with the provisions of the contract and amendments, and are approved.

During January 1955 the operator mined a small amount of ore from the 330 West footwall stope on the 500-level and in the subordinated area.

The status of the drifting on the 500 level drift is as follows:

No. of ft. recommended for approval	39,	Cost	$1,560.00
No. of ft. recommended for denial	14,	"	560.00
No. of ft. requested by operator	53,	"	$2,120.00

It is recommended that denial of the above footage be "without prejudice" and subject to reconsideration should the operator present evidence that the work was completed after the effective date of the contract amendment.

The status of this contract as of January 31, 1955 and assuming that the drifting is prorated as above is as follows:

	December 1954 January 1955	Total
Drifting and crosscuting (39 ft.)	$1,560.00	$48,000.00
Surface drilling ———	——	31,423.00
Underground drilling ——	608.00	2,654.00
Total	$2,168.00	$82,077.00
Government's Part (50%)	$1,084.00	$41,038.50

This operator has been slow in paying royalty due the Government.

It is believed that the operator is reliable and will eventually pay all royalty due. However, as the end of the contemplated work under the contract is approaching, it is recommended that procedures pertaining to royalty payments be resolved before the operator is paid the Government's agreed part of the costs of this work.

The time limit in this contract is May 18, 1955.

William R Hardwick

William R. Hardwick
Mining Engineer
Region III

February 7, 1955

Mr. Walter R. Storms, Chief
U . S. Bureau of Mines
P. O. Box 4097
University Station
Tucson, Arizona

Re: Docket No. DMEA-2746
Contract Idm E522

Dear Mr. Storms:

Following is the report to accompany Forms 104 and 104-A in connection with the work done under Contract Idm E522 for the full months of December, 1954 and January, 1955.

DRIFTING. (See progress map) The 500 Level WF Drift was started off the 500 Level WF 320 X-cut 7 feet west of Station 505R7-15 and driven to its present face at Station 505R7-15 plus 60 feet. Total advance of the 500 Level WF Drift was 53 feet. Drifting was in limestone with wallastonite.

The footage of drifting reported is the total driven in December and January, and is a part of that approved in amendment No. 4 to our contract. I wish to call your attention, however, to the fact that a part of this footage was driven before December 27th. It is our opinion that the intent of the amendment was for the government to participate in all of the drift from the 500 WF 320 F/W X-cut as requested by us in our letter of December 24th regarding the amendment. As we had no means of knowing what the effective date of the amendment would be and we do not measure our drifts daily, we cannot advise you of the amount driven before the 27th, nor after the 27th of December, but do advise that none of it was driven before December.

During the month of December 150.37 tons of ore averaging 1.39 Cu, 6.22 Zn were milled from the 400 level 240 Raise in the participation area (tonnage and grade corrected from mill heads from car counts and grab samples). During the month of January, there was no ore mined from the participation area.

DIAMOND DRILLING. (See sections and logs) Two underground holes were drilled during the month of December. Diamond drill hole MU 163 (DMEA #21) was completed at a depth of 87 feet. Diamond drill hole MU 164 (DMEA #22) was completed at a depth of 65 feet.

Very truly yours,

CORONADO COPPER & ZINC CO.

By Fred E. Gray
Fred E. Gray, Mine Manager

FEG:rk

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.5

OPERATOR'S MONTHLY REPORT AND VOUCHER

APR 14 1955

Month of Dec., 1954 / Jan., 1955, 195 Docket No. DMEA 2746 Contract No. Ida 2522
Operator's Name Coronado Copper & Zinc Co. Minerals Copper & Zinc
Address Dragoon, Arizona
Contract Amount, $99,050.00 Government Participation: 50 % Amount, $49,525.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling: Surface	XXX	$31,423.00	$31,423.00			4/27/55 - J.W.G.
Bulldozing: Underground	$ 608.00	2,046.00	2,654.00			
Crosscutting		10,620.00	10,620.00			
Drifting	$2,120.00	35,820.00	37,940.00			
(2) Labor and Supervision:	Corrected to 1560.00					
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):	To be Reduced by $160.00		Correct to be	Corrected		
TOTALS	$2,728.00	$79,909.00	$82,637.00	2168.00	79,909.00	82,637.00

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 2-7-55 *Payee Coronado Copper & Zinc Co.
Per [signature] Title Mine Manager

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

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

(Instructions on reverse)

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

$1084.00

Signature [signature] (Authorized Certifying Officer)
Date 3/25/55 Vou. No. 55-75
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. fdm E 522 in accordance with the terms of the contract.

Signature William R. Hardwick Title Mining Engineer Date 3/16/55

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W. M. Frazier Title Executive Officer Date MAR 23 1955

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration

APR 14 1955

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of Dec., 1954 / Jan., 1955 195..... Docket No. DMEA 2746 Contract No. Idm E522

Operator's Name Coronado Copper & Zinc Co. Minerals Copper & Zinc

Address Dragoon, Arizona

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting	feet	$ 2,120.00	53.0	$37,940.00	948.5	$40.00	1520	$40.00
Crosscutting				10,620.00	265.5	"		
Raising								
Shafts								
Winzes								
Drilling: Core EX	"			12,190.50	2709.0			$ 4.50
Churn EX	"			19,232.50	5495.0		9060	3.50
Auger EX Under-Ground		608.00	152					
Stripping	"			2,654.00	663.5			4.00
Trenching								
Test Pits								
Roads and Trails								
Total Distributed Costs		$2,728.00		$82,637.00				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		$2,728.00		$82,637.00				

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

Date February 7, 1955 Operator Coronado Copper & Zinc Co.

Per Fred E. Gray Title Mine Manager

Fred E. Gray

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

Remarks:

(Instructions on reverse)

(For Government use only)

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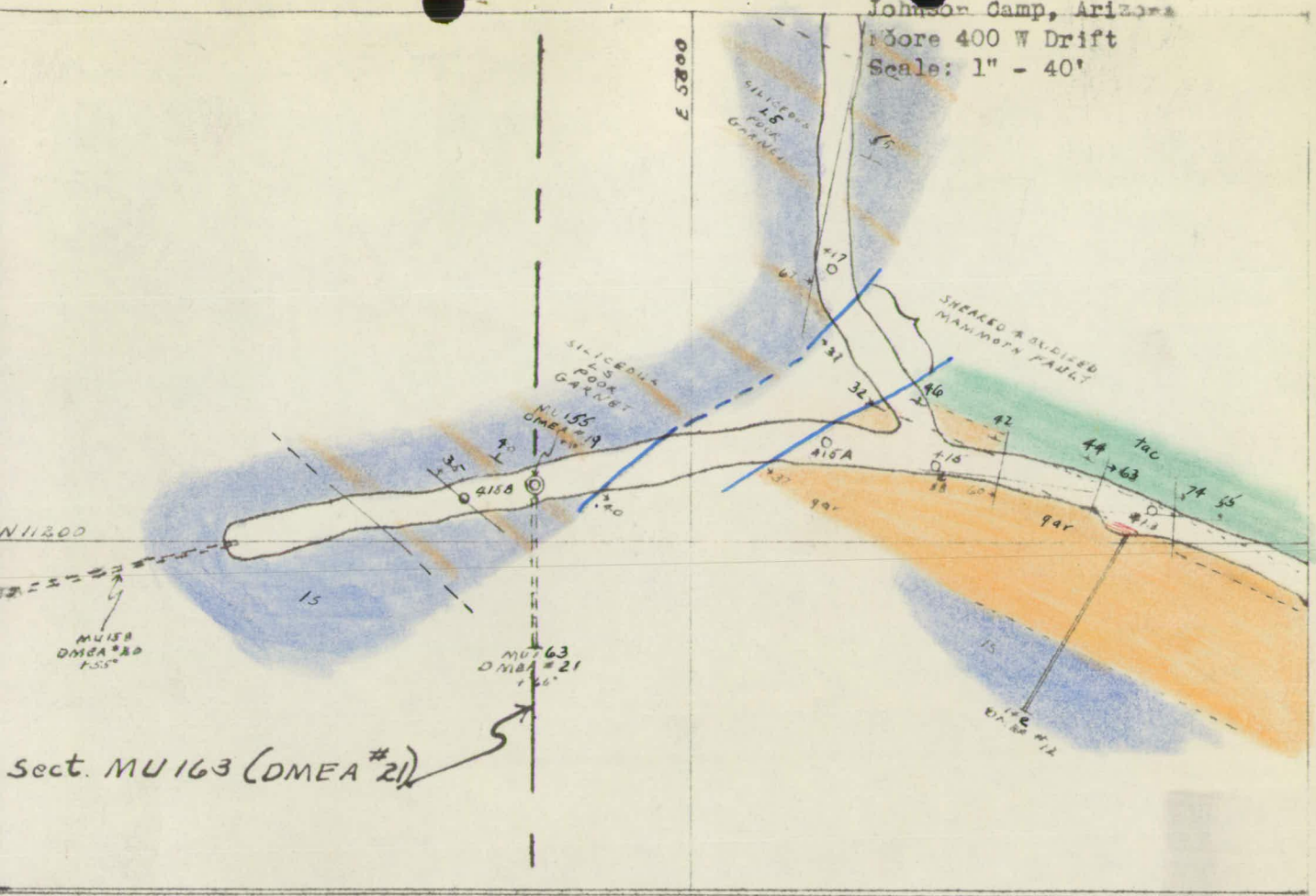
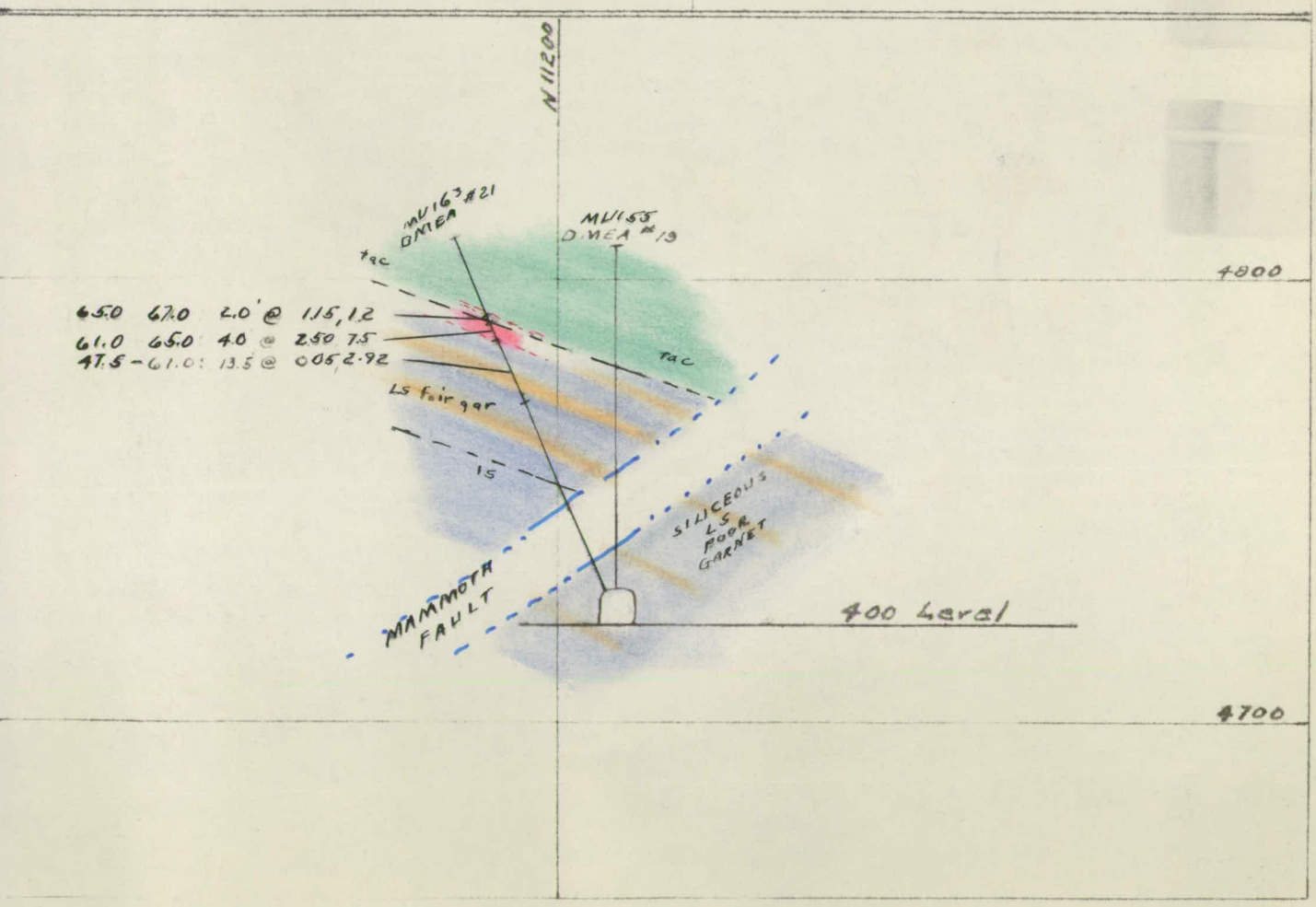
Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

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

GPO 872894

D. [illegible] Hole MU 163 (DMEA #21)
Johnson Camp, Arizona
Moore 400 W Drift
Scale: 1" - 40'





Collar Location:

Level: 400 W Drift
N: 11211
E: 5765
Elevation: 4730
Bearing: Due South
Angle: +66

Length: 87'
Hor: 35'
Vert: 79.5'
Logged by: R.E.B.
Date: 1/15/55

D. D. HOLE NO. MU 163 (DMRA #21)

Date Started: 12/4/54
Date Finished: 12/9/54
Size: EX
Casing: None

Objective: To test for downward extension of ore in DDH 65 and DDH 66.

Results: Some ore (?).

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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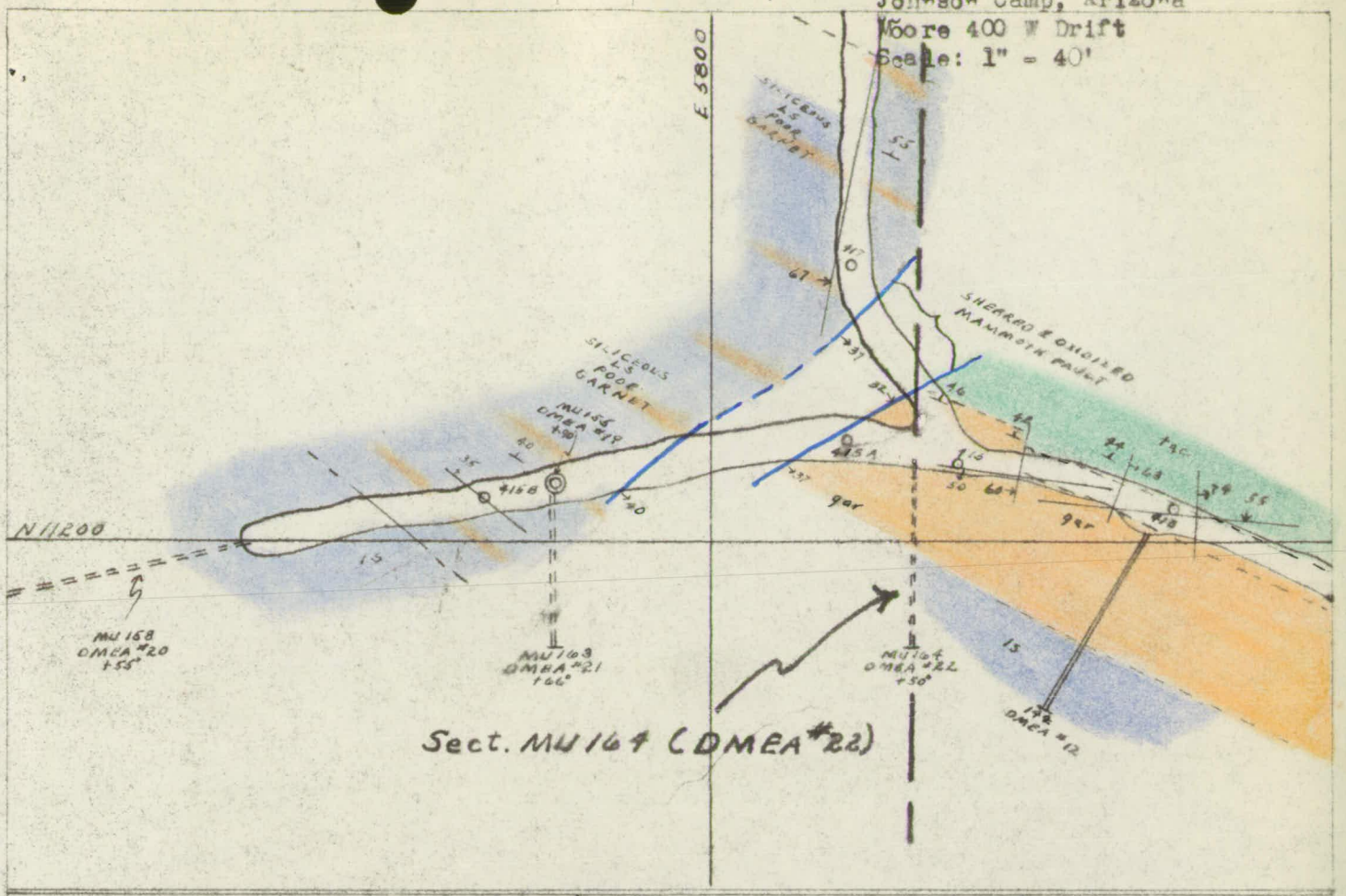
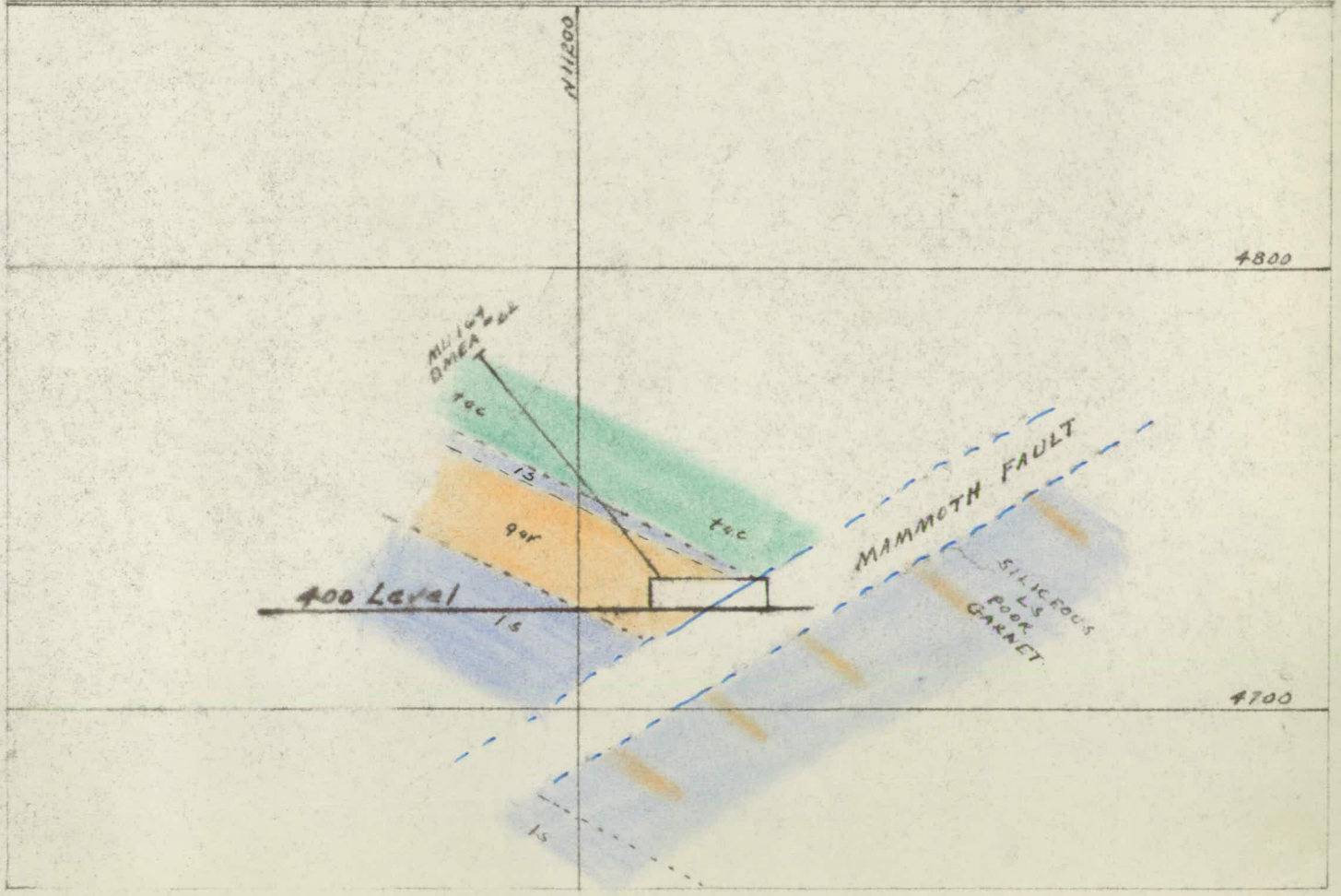
APR 14 1955

Footage			Assays		Core recovery	Log	Description and Averages
From	To	Interval	Cu%	Zn%			
00.0	5.0	5.0			100%		Siliceous limestone poor garnet.
5.0	8.0	3.0			100		Strand of the Mammoth Fault, broken and sheared, some calcite, some Mn (?) and Fe stain.
8.0	19.0	11.0			100		Siliceous limestone poor garnet, sheared.
19.0	21.0	2.0			100		Strand of the Mammoth Fault, oxidized.
21.0	26.0	5.0			100		Limestone, grey.
26.0	47.5	21.5			100		
47.5	51.0	3.5	0.05	2.7	100		
51.0	56.0	5.0	0.05	4.9	100		47.5' - 61.0': 13.5' @ 0.05, 2.0
56.0	61.0	5.0	0.05	1.1	100		
61.0	65.0	4.0	2.50	7.5	100		61.0' - 67.0': 6.0' @ 2.05, 5.4
65.0	67.0	2.0	1.15	1.2	100	Tac	
67.0	87.0	20.0			70		Tactite with hmf bands. Spots of sulfides.

D7 Hole MU 164 (DMEA #22)
Johnson Camp, Arizona
Moore 400 W Drift
Scale: 1" = 40'





Collar Location:

Level: 400 W Drift
N: 11217
E: 5848
Elevation: 4729
Bearing: Due South
Angle: + 50

Length:
Hor: 65'
Vert: 42'
50'
Logged by: R.E.B.

Date: 1/15/55

D. D. HOLE NO. MU 164 (DMEA # 2)

Date Started:
Date Finished: 12/11/54
12/14/54
Size: EX

Casing: None

DEPARTMENT OF THE INTERIOR
Bureau of Mines Minerals Administration
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APR 1 4 1955

Objective: To test for downward extension of ore in DDH 65 and DDH 66.

Results: No ore.

Footage			Assays		Core recovery	Log	Description and Averages
From	To	Interval	Cu%	Zn%			
0.0	13.0	13.0			74%		Garnet
13.0	22.0	9.0			95		Limestone, grey.
22.0	65.0	43.0			100		Tactite with hnf bands. Few spots of sulfides.

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

224 New Customhouse
Denver 2, Colorado

April 8, 1955

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Co., Cochise County, Arizona

Enclosed are two copies of the Operator's Monthly Progress Report, form MF-104 and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data pertaining to work under the subject contract for the month of November, 1954.

W. M. Traver

W. M. Traver

Enclosures

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

Defense Minerals Administration
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APR 14 1955

224 New Customhouse
Denver 2, Colorado

March 23, 1955

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper & Zinc Company, Cochise County, Arizona -- Operator's Monthly Progress Report for the month of November 1954

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

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF 104, contingent on your verification of arithmetical accuracy within the report.

Remarks:

Date of Operator's report.....12-16-54
Date received in DMEA field office.12-20-54
Date received in regional office...1-5-55

The report has been deferred from processing pending resolution of matters relative to royalty payments and additional work to be performed.

W. M. TRAVER

W. M. Traver

Enclosures
JWT:jp
cc Subject
Chron
Sec. to Op. Comm. (2)
Storms

January 3, 1955

Memorandum

To : W. H. King, Executive Officer, DMEA Field Team

From : Superintendent, Southwest Experiment Station, Tucson, Ariz.

Subject : November 1954 Progress Report, DMEA Contract Bm-E522, Docket DMEA-2746, Coronado Copper & Zinc Co.'s Republic Copper-Zinc Mine, Cochise County, Ariz.

Enclosed in quintuplicate are the following:

(1) Bureau of Mines engineer's report;

(2) Operator's narrative report;

(3) Forms MF-104 and MF-104A.

Also enclosed are 4 extra copies of our engineer's report.

As all work is in accordance with terms of the contract and its amendments, I recommend that the Government's share of the costs be paid, as soon as all royalty payments have been settled.

Walter R. Storms

Walter R. Storms

CC W. H. King (8)
DMEA-2746
MF

WRS:terms:fvj

December 23, 1954

Memorandum

To : Walter R. Storms, Chief, Mining Methods Br., Mining Div., Region IV, Tucson, Ariz.

From : William R. Hardwick, Mining Engineer, Tucson, Ariz.

Subject : Progress Report for November 1954, Docket BMKA-2746, Contract Nbr-8508, Cornucopia Copper and Zinc Co.'s Republic Copper-Zinc Mine, Cochise County, Ariz.

The Republic Mine was visited on December 13, 1954. John N. Faick, geologist, U. S. Geological Survey, accompanied the undersigned engineer. Fred F. Grey, Mine Manager, was at the mine and the progress was discussed with him.

During November, 103 feet of underground diamond drill hole was completed. This hole showed 13.5 feet of low-grade ore.

Mr. Grey stated that the company had done some exploration work at its own expense on the 800 level and would probably ask for an amendment to the contract to provide for some work under the contract on this level.

The status of this contract as of November 30, 1954 is as follows:

	November	Total
Drifting and crosscutting	-	$46,440.00
Surface diamond drilling	-	31,423.00
Underground diamond drilling	$412.00	2,046.00
Total	$412.00	$79,909.00
Government's part	206.00	39,954.50

CC W. H. King (Orig. & 3)
BMKA-2746
DF

WRHardwick:frj

The 103 feet of underground diamond drill hole, that was completed in November, is in accordance with the provisions of the contract as amended, and is approved. It is recommended that the operator be paid.

This contract will terminate on May 18, 1955.

William R. Hardwick

William R. Hardwick, Mining Engineer
Mining Methods Branch
Mining Division, Region IV

December 16, 1954

Mr. Walter R. Storms, Chief
U.S. Bureau of Mines
P. O. Box 4097
University Station
Tucson, Arizona

Re; Docket No. DMEA-2746
Contract Idm E522

Dear Mr. Storms:

Following is the report to accompany Forms 104 and 104-A in connection with the work done under Contract Idm E522 for the full month of November.

DRIFTING. No drifting or crosscutting was done during the month under the DMEA contract. During November 11.17 tons of ore averaging 1.46% Cu, 6.38% Zn were milled from the 400 Level W 200 Stope (tonnage and grade corrected to mill heads from car counts and grab samples).

DIAMOND DRILLING. Diamond drill hole MU 168 (DMEA No. 20) was completed at a depth of 167'. Log and section was enclosed with letter of November 24, 1954.

Very truly yours,

CORONADO COPPER AND ZINC COMPANY

By Fred E. Gray
Fred E. Gray
Mine Manager

FEG-o

4 ccs to Mr. W. R. Storms
1 cc Mr. George Dub
1 cc Mine Office

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.5

RECEIVED
APR 14 1955

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of Nov., 1954 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper & Zinc Company Minerals Cu & Zn
Address Box 44, Dragoon, Arizona
Contract Amount, $ 99,050.00 Government Participation: 50 % Amount, $ 49,525.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling Surface		$31,423.00	$31,423.00			4/27/55 J.W.W.
~~Bulldozing~~ Underground	$412.00	1,634.00	2,046.00			
Crosscutting		10,620.00	10,620.00			
Drifting		35,820.00	35,820.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$412.00	$79,497.00	$79,909.00	206.00	79,497.00	79,909.00

I certify that the above bill is correct and just and that payment therefor has not been received.
Date Dec. 16, 1954 *Payee Coronado Copper & Zinc Co.
Per [signature] Title Mine Manager

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

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

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:
$206.00
Signature [signature]
(Authorized Certifying Officer)
Date 3/25/55 Vou. No. 55-75
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. DMF-572 in accordance with the terms of the contract.

Signature William R. Hardwick Title Mining Engineer Date 12/23/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W. M. Shaver Title Executive Officer Date MAR 23 1955

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Defense Minerals Administration
RECEIVED
APR 14 1955

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of Nov. 195 4 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper & Zinc Company Minerals Copper & Zinc
Address Dragoon, Arizona

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting	Feet			$35,820.00	895.5	$40.00	1520	$40.00
Crosscutting	"			10,620.00	265.5	40.00		
Raising								
Shafts								
Winzes								
Drilling: Core AX	"			12,190.50	2709.0		9060	4.50
Churn EX	"			19,232.50	5497.0			3.50
Auger EX Underground	"	$412.00	103.	2,046.00	511.5			4.00
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		$412.00		$79,909.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		$412.00		$79,909.00				

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

Date Dec. 16, 1954 Operator Coronado Copper & Zinc Co.

Per [signature] Title Mine Manager

REMARKS:

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

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

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

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

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

GPO 872894

224 New Customhouse
Denver 2, Colorado

January 27, 1955

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA 1954 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Co's. Republic Copper-Zinc Mine, Cochise County, Arizona

Enclosed are two copies of the Operator's Monthly Progress Report, Form MF-104 and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data pertaining to work under the subject contract for the month of October, 1954.

W. M. Traver

W. M. Traver

Enclosures

pw

224 New Customhouse
Denver 2, Colorado

January 18, 1955

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 1954 (Copper-Zinc), Contract Idm-X522. Coronado Copper and Zinc Co's. Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Arizona-Operator's Monthly Progress Report for the period October, 1954

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

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 50 per cent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks:

Date of Report.....Nov. 20, 1954
Date received in Field Office.....Nov. 24, 1954
Date received in Region Office.....Dec. 1, 1954

Held in Region Office pending receipt of royalty settlement.

W. M. TRAVER
W. M. Traver

WMT:pw

ADMINISTRATIVE OFFICE REGION III
JAN 18 1955
BUREAU OF MINES DENVER, COLORADO

cc: Subject
Chron
Sec. Op. Comm.(2)
Storms

November 29, 1954

Memorandum

To : W. H. King, Chief, Mining Division, Region IV

From : Chief, Mining Methods Br., Mining Div., Region IV

Subject : October 1954 Progress Report, DMEA Contract Idm-6522, Docket DMEA-2746, Cerrosuelo Copper & Zinc Co.'s Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Ariz.

Enclosed in quintuplicate are the following:

(1) Bureau of Mines engineer's report;

(2) Operator's Narrative report with 2 maps and drill hole log;

(3) Forms MF-104 and MF-104A.

Also enclosed are 4 extra copies of our engineer's report.

As all work was in accordance with terms of the contract and its amendments, I recommend that the Government's share of the costs be paid.

Walter R. Storms

Walter R. Storms

CC W. H. King (8)
DMEA-2746
DF

WRStorms:frj

November 28, 1954

Memorandum

To : Walter R. Stenan, Chief, Mining Methods Br., Mining Div., Region IV, Tucson, Ariz.

From : William R. Hardwick, Mining Engineer, Tucson, Ariz.

Subject : Progress Report for October 1954, Docket DMSA-2746, Contract Ibn-4202, Cornucopia Copper and Zinc Co.'s Republic Copper-Zinc Mine, Cochise County, Ariz.

The Republic mine was visited on November 15, 1954. Fred E. Gray was not at the mine but the progress was measured with the assistance of his staff.

The operator reports 38.5 feet of drifting on the 400 level. One diamond drill hole (No. 19) was completed and the second (No. 20) was partly completed for a total of 141.5 feet of EX underground diamond drill holes. The drift and the core from the drill holes were examined on November 15, 1954. They are in accordance with the terms of the contract, including Amendment No. 3.

The status of the contract as of October 31, 1954 is as follows:

	October	Total
Drifting and crosscutting	$1,430.00	$46,440.00
Surface diamond drilling	——	31,433.00
Underground diamond drilling	556.00	1,534.00
Total	$1,986.00	$79,407.00
Government's part	$993.00	$39,748.50

No ore was discovered in October. A total of 533.62 tons of ore was reported to have been mined from the project area during October.

Mr. Gray has requested authorization to drill two additional short holes underground. This will complete the project insofar as presently authorized by the contract.

This contract will expire on May 18, 1955.

William R. Hardwick
William R. Hardwick, Mining Engineer
Mining Methods Branch
Mining Division, Region IV

CC W. H. King (orig.& 8)
DMSA-2746
MF

WRHardwick:fr

November 19, 1954

Mr. Walter R. Storms, Chief
U.S. Bureau of Mines
P. O. Box 4097
University Station
Tucson, Arizona

Re: Docket No. DMEA-2746
Contract Idm E522

Dear Mr. Storms:

Following is the report to accompany Forms 104 and 104-A in connection with the work done under Contract Idm E522 for the full month of October.

DRIFTING. (See progress map). During the month the 400 Level West Drift was advanced 35.5' to Station 415 B plus 56.5. All of this advance was in the DMEA participation area. Drifting was continued in siliceous limestone to a bedding fault at Station 415 B plus 23'. Displacement of this fault is unknown, but it is probably minor. West of this fault, to the face at the end of the month (Station 415 B plus 56.5'), was limestone. During October 533.62 tons of ore averaging 2.00% Cu, 6.95% Zn were milled from the 400 West 200 and 500 WF 320 Stopes in the participation area (tonnage and grade corrected to mill heads from car counts and grab samples).

DIAMOND DRILLING. Two underground holes, MU 155 and MU 158 (DMEA Nos. 19 and 20) were drilled during the month. Hole No. 155 (DMEA 19) cut siliceous limestone poor garnet to 17', limestone fair garnet to 26', limestone with bands of fair garnet to 39', some hornfels bands to 50' and tactite to the end of the hole at 77.5'. Hole No. 158 (DMEA 20) cut shaley limestone to 26' and limestone to the present bottom at 64'.

Very truly yours,

CORONADO COPPER AND ZINC COMPANY,

By Fred E. Gray
Fred E. Gray
Mine Manager

FEG-o

4 ccs to Mr. W. R. Storms
1 cc Mr. George Dub
1 cc Mine Office

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

Budget Bureau No. 42-R1036.5

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

Month of October, 1954 Docket No. DMEA 2746 Contract No. IDM E-522
Operator's Name Coronado Copper & Zinc Company Minerals Copper & Zinc
Address Box 44 Dragoon, Arizona
Contract Amount, $99,050.00 Government Participation: 50% Amount, $49,525.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling Surface		31,423.00	31,423.00			2/3/55 J.W.L.
Bulldozing Underground	566.00	1068.00	1,634.00			
Crosscutting		10,620.00	10,620.00			
Drifting	1420.00	34,400.00	35,820.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$1986.00	77,511.00	79497.00	1986.00	77,511.00	79497.00

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

Date Nov. 20, 1954 Payee Coronado Copper & Zinc Co

Per [signature] Title Mine Manager

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

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

(Instructions on reverse)

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

$993.00

Signature Randell R. Cooper
(Authorized Certifying Officer)

Date 1-19-55 Vou. No. DMEA-55-56

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. 1dm-E577 in accordance with the terms of the contract.

Signature William R. Hardwick Title Mining Engineer Date 11/29/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: Deck

Signature W. M. Graves Title Executive Officer Date JAN 18 1955

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A.
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Department of the Interior
Defense Minerals Administration
RECEIVED

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of October 1954 Docket No. DMEA 2746 Contract No. IDM E 522
Operator's Name Coronado Copper & Zinc Company Minerals Copper & Zinc
Address Box 44 Dragoon, Arizona

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting	Feet	1420.00	35.5	35,820.00	895.5	$40.00	1520	$40.00
Crosscutting	Feet			10,620.00	265.5	40.00		
Raising								
Shafts								
Winzes								
Drilling: Core AX	Feet			12,190.50	2709		9060	4.50
Churn EX	Feet			19,232.50	5497			3.50
Auger EX-under ground	Feet	566.00	141.5	1634.00	408.5			4.00
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		$1986.00		79497.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		1986.00		79,497.00				

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

Date Nov. 20, 1954 Operator Coronado Copper & Zinc

Per [signature] Title Mine Manager

REMARKS:

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

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

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

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

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

GPO 872894

D. D. HOLE NO. MU 155 (DME #19)

Collar Location:
Level: 400 W. Drift
N: 11213
E: 5765
Elevation: 4730
Bearing: None
Angle: 90

Length: 77.5'
Hor: 0.0'
Vert: 77.5'
Logged by: R.E.B.
Date: 11/4/54

Date Started: 10/16/54
Date Finished: 10/27/54
Size: EX
Casing: None

Objective: Test, for ore in ore horizon east of DDH 65 and DDH 66.

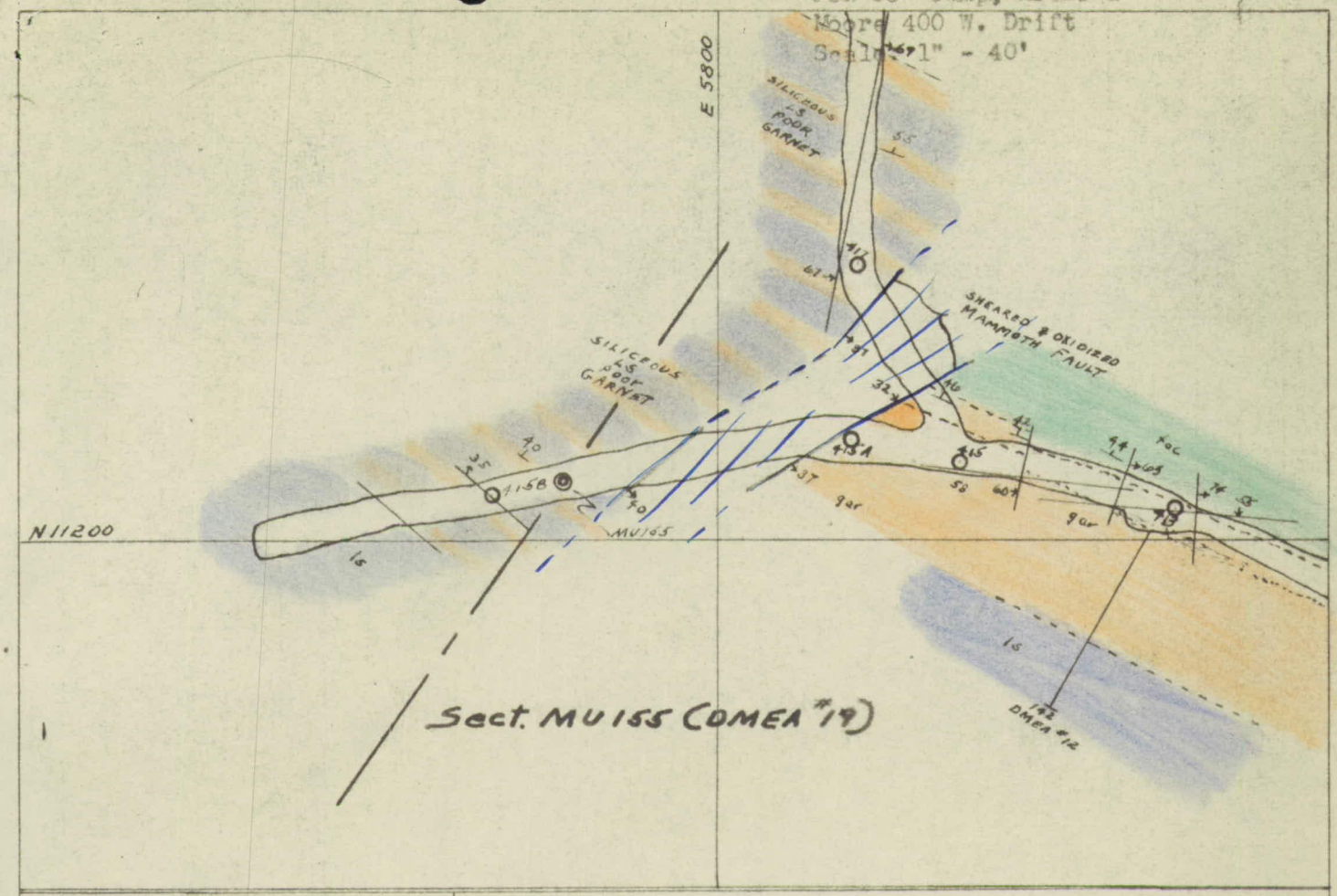
Results: No ore.

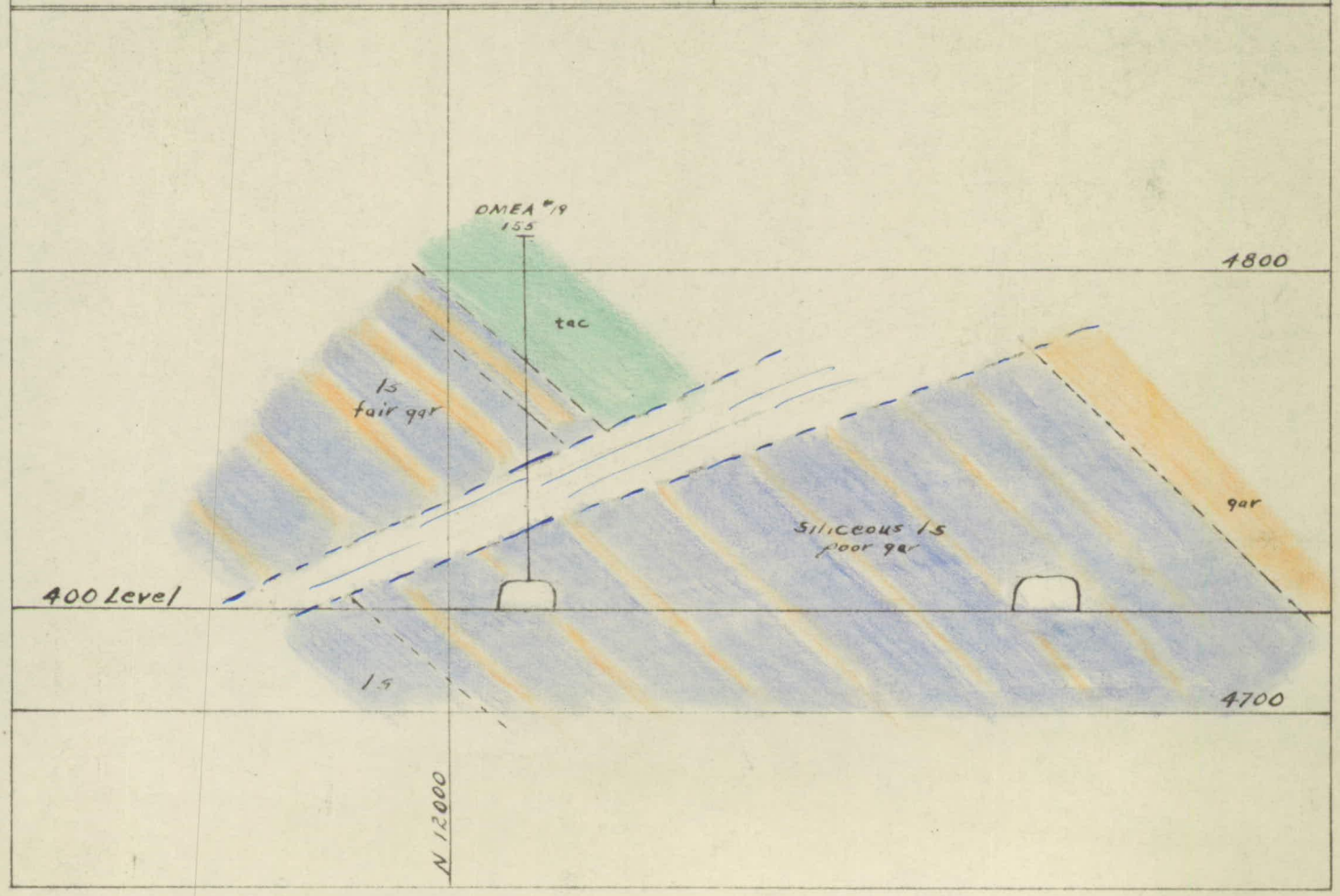
DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 3 1 1955

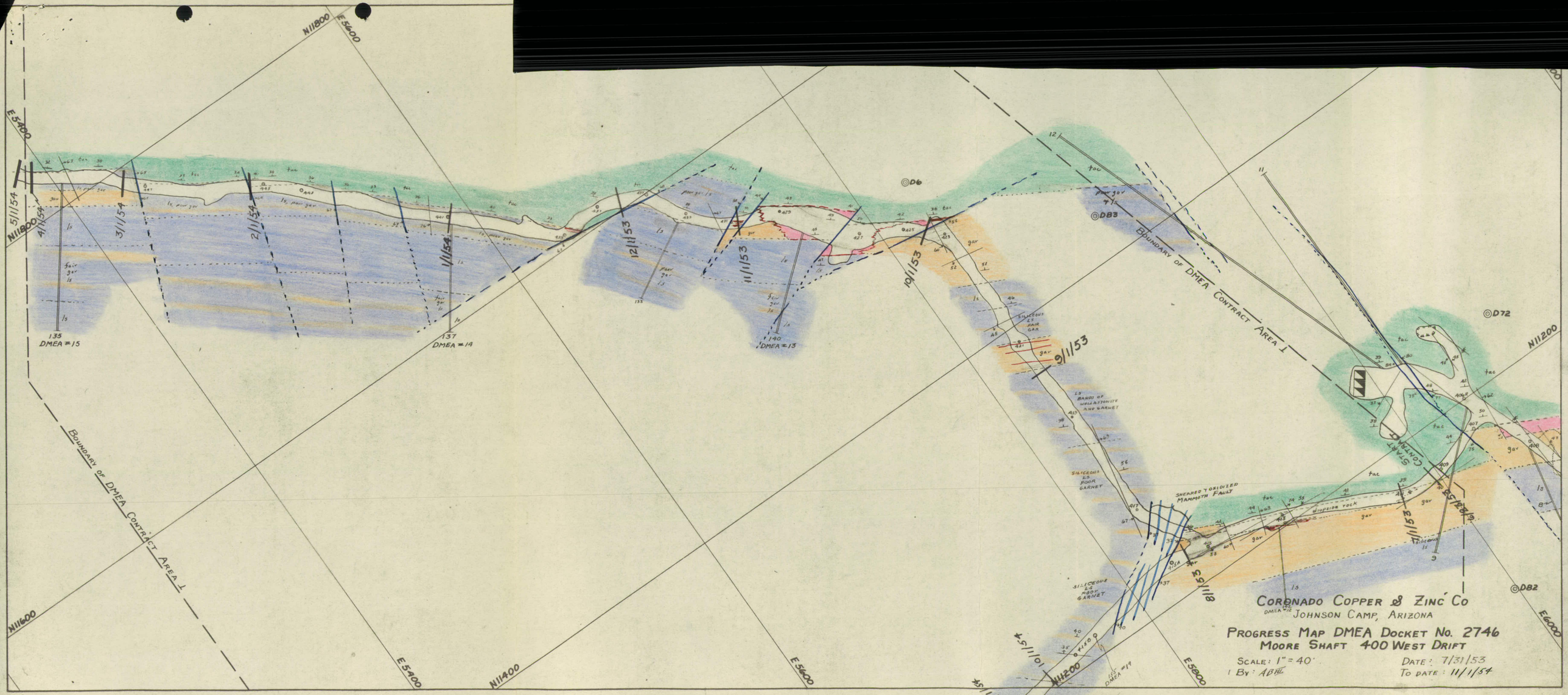
Footage			Assays		Core recovery	Log	Description and Averages
From	To	Interval	Cu%	Zn%			
0.0	7.0	7.0					No core.
7.0	9.5	2.5			80		Siliceous limestone poor garnet, iron stained.
9.5	10.0	0.5			77		Strongly sheared, iron stained, strand of the Mammoth Fault.
10.0	17.0	7.0			77		
17.0	26.0	9.0			100		Limestone fair garnet.
26.0	27.0	1.0			100		Strand of the Mammoth Fault, brecciated, much brown Mn(?) stain, thin calcite stringers.
27.0	39.0	12.0			79		Limestone with bands of fair garnet.
39.0	50.0	11.0			95		Some hmf bands.
50.0	77.5	27.5			92		Tactite, occasional hmf bands, few spots of sulfides.

U. S. BUREAU OF MINES
MINING DIVISION
NOV 24 1954
TUCSON, ARIZONA

D. D. Ho[illegible] MU 155 (DMEA)#19)
Johnson Camp, Arizona
Moore 400 W. Drift
Scale: 1" - 40'






CORONADO COPPER & ZINC CO
DMEA #12
JOHNSON CAMP, ARIZONA
PROGRESS MAP DMEA DOCKET NO. 2746
MOORE SHAFT 400 WEST DRIFT
SCALE: 1" = 40'
DATE: 7/31/53
BY: ABW
TO DATE: 11/1/54
BOUNDARY OF DMEA CONTRACT AREA I
SHEARED & OXIDIZED MAMMOTH FAULT
SHAFT CONTRACT
N11800
N11600
N11400
N11200
N11200
E5400
E5600
E5800
E6000
5/1/54
4/1/54
3/1/54
2/1/54
1/1/54
12/1/53
11/1/53
10/1/53
9/1/53
8/1/53
7/1/53
6/1/53
5/1/53
4/1/53
135
DMEA #15
137
DMEA #14
140
DMEA #13
DMEA #19
D6
DB3
D72
DB2
tac
gar
poor gar
SILICEOUS LS POOR GARNET
LS BANDS OF WOLLASTONITE AND GARNET
SILICEOUS LS POOR GARNET
SILICEOUS LS FAIR GAR
HIDEIDE ROCK

U.S. Bureau of Mines Administration
RECEIVED
FEB 21 1955

January 25, 1955

Memorandum

To : Walter R. Stearns, Superintendent, Southwest Experiment Station, Region III

From : William R. Hardwick, Mining Engineer, Tucson, Ariz.

Subject : Interim Report, Project DMEA-2746, Contract Idm-8501, Coronado Copper and Zinc Co.'s Republic Copper-Zinc mine Cochise County, Ariz.

On December 13, 1954, T. H. Brading, DMEA auditor, and John T. Shaw, suggested that a recapitulation of the production records at the Republic mine should be made to show the total quantity of ore that has been produced on which royalty should be paid to the Government. Accordingly the mine was visited on January 18, 1955. Mr. Fred E. Gray, manager, was at the mine.

The weight of ore in tons is obtained by counting the number of cars of ore that are mined from the subordinated ground. Then the number of cars is multiplied by a factor that is obtained by dividing the total number of tons of ore produced from the mine in a month by the total number of cars. In a similar manner a factor for grade correction is derived by dividing the pounds of metal produced by the tons of ore produced and then dividing this value by the weighted average assay for the month resulting from samples taken from the cars of ore as mined.

All ore that is mined from the Republic mine is concentrated in the Coronado Copper and Zinc Co.'s plant at Johnson Camp to produce a copper concentrate which is sold to the El Paso plant of the American Smelting & Refining Company, and a zinc concentrate which is shipped to the Bartlesville plant of National Zinc Co.

Using the number of cars of ore mined from the subordinated area and the factors derived by the method above, the Coronado Copper and Zinc Co. reports the production shown

CC W. M. Traver (Orig. & 8)
DMEA-2746
RF

WRHardwick:fr

in Table I. On several regular inspection visits to the mine the stopes and working places from which this ore was produced were examined. The amount of ore reported by the operator is believed to be correct.

The first production of ore discovered by this contract was in October 1953. Detailed schedules reflecting the calculated weights assays and metal content of the ore mined in October 1953 were included with the operator's first royalty payment on December 18, 1953. Subsequent production has been calculated by the same method.

William R. Hardwick

William R. Hardwick
Mining Engineer
Tucson, Arizona

TABLE I. Production subject to royalty.

Date	Ore Tons	Copper Concentrate Tons	Copper Concentrate Percent Copper	Copper Concentrate Percent Zinc	Zinc Concentrate Tons	Zinc Concentrate Percent Copper	Zinc Concentrate Percent Zinc
Oct. 1953	439.31	23.24	28.300	11.740	34.94	1.373	54.080
Nov. 1953	214.02	10.71	29.300	14.500	21.25	1.682	53.940
Dec. 1953	197.24	8.44	28.090	13.312	15.77	0.956	55.200
Jan. 1954	204.53	18.53	30.340	9.481	25.58	1.405	56.520
Feb. 1954	194.57	13.84	28.870	13.106	22.64	1.312	54.810
Mar. 1954	401.18	20.03	28.800	15.725	42.66	1.947	55.754
Apr. 1954	174.84	6.78	28.400	17.759	15.97	0.906	56.460
May 1954	380.32	18.03	25.080	19.346	38.74	1.140	53.120
June 1954	159.32	7.97	28.270	17.480	14.95	1.413	55.320
July 1954	286.45	11.46	29.640	16.987	23.39	0.857	54.680
Aug. 1954	263.87	13.00	30.120	12.326	21.89	1.365	54.130
Sept. 1954	244.97	18.81	25.520	12.506	21.87	1.280	54.710
Oct. 1954	533.62	33.35	28.530	12.877	53.85	1.327	54.850
Nov. 1954	11.17	0.80	29.120	14.083	1.46	0.938	55.464
Dec. 1954	138.37	6.30	29.400	13.614	13.61	1.056	54.480
Total	3,944.86						

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

RECEIVED
DEC 6 1954

224 New Customhouse
Denver 2, Colorado

December 1, 1954

Memorandum

To: Secretary to the Operating Committee
Defense Minerals Explbration Administration

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Company, Cochise County, Arizona - Operator's Monthly Progress Report for the month of September 1954

Enclosed are two copies of the Operator's Monthly Progress Report, Form MF-104 and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data pertaining to work under the subject contract for the month of September, 1954.

W. H. KING

W. H. King

Enclosures

Copy to: W. R. Storms, w/copy of report

sub
chron

ld

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

224 New Customhouse
Denver 2, Colorado

November 3, 1954

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Company, Cochise County, Arizona - Operator's Monthly Progress Report for the month of September 1954

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

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 50 percent of the amount reported by the operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

In addition reference is made to our memorandum of July 26, 1954 whereby we forwarded the Operator's Monthly Progress Report for the month of June 1954 and instructed you to withhold from reimbursement to the operator the amount of $500.00 pending resumption of operations or until all requirements relative to closing of the account had been accomplished. Work has been resumed under the contract, therefore we now recommend that the $500.00 withheld from reimbursement to the operator be reinstated and included with the reimbursement on the subject report.

Remarks:

Date of operator's report..... 10-19-54
Date report received in B.O.M. Branch Office.. 10-22-54
Date report received in Regional Office..... 11-3-54

Enclosures

John T. Shaw
for W. H. King

JWT:jp
cc Subject
Chron
Sec. to Oper. Comm. (2)
WRStorms
JWTownsend

November 1, 1954

Memorandum

To : Walter R. Storms, Chief, Mining Methods Branch, Mining Division, Region IV, Tucson, Ariz.

From : William R. Hardwick, Mining Engineer, Tucson, Ariz.

Subject : Progress Report for September 1954, Docket DMEA-2746, Contract Dm-KMR2, Cornucopia Copper and Zinc Co.'s Republic Copper-Zinc Mine, Cochise County, Ariz.

The Republic mine was visited on October 4, 1954. Fred E. Gray, Mine Manager, was at the mine and the progress was discussed with him.

This contract was inactive during the latter part of July and all of August 1954. The operator requested permission to do additional drifting and underground diamond drilling on the 400 level and this request was approved by the DMEA Field Team, Region IV.

The additional work was started on September 7, 1954 and when the drift was measured on October 4, 1954, it had been advanced 135 feet. The operator states that 116.5 feet of this advance was completed in September. No other work was completed on the contract during September 1954.

The status of the contract as of September 30 is as follows:

	September	Total
Drifting & crosscutting	$4,660.00	$45,020.00
Surface diamond drilling	—	31,423.00
Underground diamond drilling	—	1,068.00
Total	$4,660.00	$77,511.00
Government's part	$2,330.00	$38,755.50

CC W. H. King (Orig. & 8)
DMEA-2746
RF

WRHardwick:frj

November 1, 1954

Memorandum

To : W. H. King, Chief, Mining Division, Region IV

From : Chief, Mining Methods Br., Mining Div., Region IV

Subject : September 1954 Progress Report, DMEA Contract Dme-8822, Docket DMEA-3746, Coronado Copper & Zinc Co.'s Republic Mine, Johnson Camp, Cochise County, Ariz.

Enclosed in quintuplicate are the following:

(1) Bureau of Mines engineer's report;

(2) Operator's narrative report with map;

(3) Forms MF-104 and MF-104A.

Also enclosed are 4 extra copies of our engineer's report.

As all work is in accordance with the terms of the contract and its amendments, I recommend that the Government's share be paid; also any funds that have been withheld pending receipt of a final report.

This report was held up while W. R. Hardwick was on other work.

Walter R. Storms

Walter R. Storms

CC W. H. King (8)
DMEA-3746
MF

WRStorms:frj

No ore was discovered in September. A total of 344.87 tons of ore was mined from the project area during September.

On October 4, 1954, Mr. Grey stated that he expected to complete the 150 feet of drift and start diamond drilling during October.

An amount of $500.00 was withheld from the June voucher. The voucher for July indicates $52.50 due the operator. The total amount due the operator is as follows:

Withheld from June voucher	$500.00
Due on July voucher	52.50
Due on September voucher	2,330.00
Total due operator	$2,882.50

It is recommended that the operator be paid this amount.

William R. Hardwick

William R. Hardwick, Mining Engineer
Mining Methods Branch
Mining Division, Region IV

October 20, 1954

Mr. Walter R. Storms, Chief
U.S. Bureau of Mines
P. O. Box 4097
University Station
Tucson, Arizona

Re: Docket No. DMEA-2746
Contract Idm E522

Dear Mr. Storms:

Following is the report to accompany Forms 104 and 104-A in connection with the work done under Contract Idm E522 for the full month of September:

DRIFTING: (See progress map). During the month the 400 Level West Drift was advanced 116.5', to Station 415 B plus 21.0'. All of this advance was in the DMEA participation area. Drifting was continued in garnetite to Station 415-A plus 3', where the Mammoth Fault was encountered. The Mammoth Fault Zone in the west drift was strongly sheared and oxidized, no mineralization. The footwall zone was N 61 E, dipping 35 S, and the hangingwall N 50 E, dipping 40 S. West of the fault, to the face at the end of the month (Station 415-B plus 21'), was siliceous limestone with small masses and thin beds of garnetite. This part of the drift had a bedding fault, which probably had little displacement. During September 344.87 tons of ore averaging 1.81% Cu, 6.26% Zn were milled from the 400 West 200 and 500 WF 320 Stopes in the participation area (tonnage and grade corrected to mill heads from car counts and grab samples).

DIAMOND DRILLING. No diamond drilling was done under the DMEA contract during the month.

Very truly yours,

CORONADO COPPER AND ZINC COMPANY,

By Fred E. Gray
Fred E. Gray
Mine Manager

FEG-o

4 cos to Mr. W. R. Storms
1 co Mr. George Dub
1 co Mine Office

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 6 1954

Month of September 1954 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper and Zinc Company Minerals Copper & Zinc
Address P.O. Box 44, Dragoon, Arizona

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting	Feet	$4,660.00	116.5	$34,400.00	860.0	$40.00	1520	$40.00
Crosscutting	"			10,620.00	265.5	40.00		
Raising								
Shafts								
Winzes								
Drilling: Core AX	"			12,190.50	2709	$ 4.50	8500	4.50
Churn EX	"			19,232.50	5495	3.50		3.50
Auger EX (Underground)	"			1,068.00	267	4.00		4.00
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS	$	$4,660.00		$77,511.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		$4,660.00		$77,511.00				

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

Date Oct. 19, 1954 Operator Coronado Copper & Zinc Co.

Per [signature] Title Mine Manager

REMARKS:

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

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

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

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

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

GPO 872894

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.
Defense Minerals Administration
RECEIVED
DEC - 6 1954

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of September, 1954 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper and Zinc Company Minerals Copper & Zinc
Address P. O. Box 44, Dragoon, Arizona
Contract Amount, $99,050.00 Government Participation: 50 % Amount, $49,525.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						12/8/54 J.W.G.
Drilling Surface		$31,423.00	$31,423.00			
~~Bulldozing~~ Underground		1,068.00	1,068.00			
Crosscutting		10,620.00	10,620.00			
Drifting	$4660.00	29,740.00	34,400.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$4660.00	72851.00	$77,511.00	* 46600	72851.00	77511.00

I certify that the above bill is correct and just and that payment therefor has not been received.
Date Oct. 19, 1954 Payee Coronado Copper & Zinc Co.
Per [signature] Title Mine Manager

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

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

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:
$2830.00
Signature Randell R. Cooper (Authorized Certifying Officer)
Date 11/9/54 Vou. No. DMA-55-32
(See other side)

*Less $500.00 withheld on June voucher

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. DMEA 5-22 in accordance with the terms of the contract.

Signature William R. Hardwick Title Mining Engineer Date 11/1/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature John T. Shaw for W. H. King Title Executive Officer Date NOV 3 1954

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

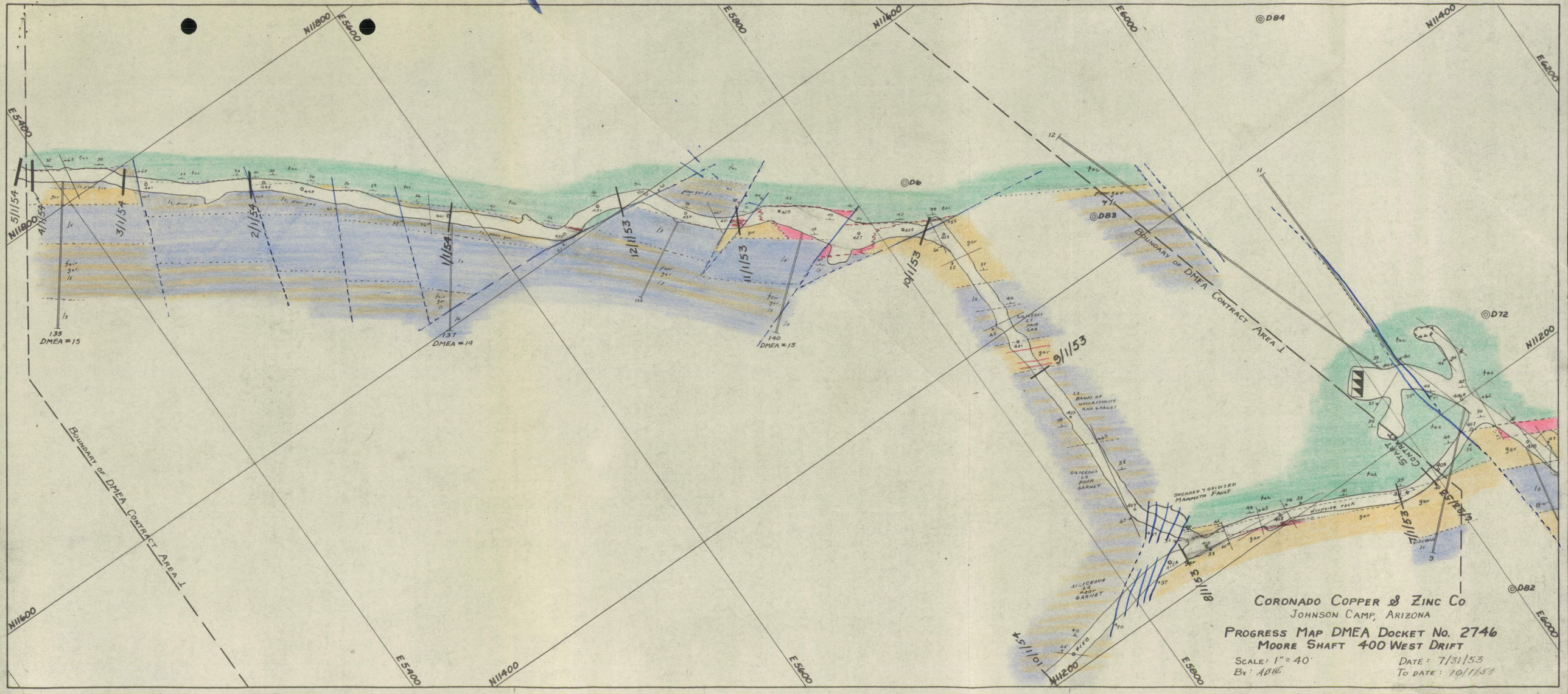
Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported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

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

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

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

GPO 83-38476


CORONADO COPPER & ZINC CO
JOHNSON CAMP, ARIZONA
PROGRESS MAP DMEA DOCKET NO. 2746
MOORE SHAFT 400 WEST DRIFT
SCALE: 1" = 40'
BY: ADW
DATE: 7/31/53
TO DATE: 10/1/54
BOUNDARY OF DMEA CONTRACT AREA I
START CONTRACT
SHEARED & OXIDIZED MAMMOTH FAULT
DIOPSIDE ROCK
SILICEOUS LS POOR GARNET
SILICEOUS LS FAIR GAR
LS RAMPS OF WOLLASTONITE AND GARNET
SILICEOUS LS POOR GARNET
N11800
N11600
N11400
N11200
E5400
E5600
E5800
E6000
E6200
D84
D6
D83
D72
D82
5/1/54
4/1/54
3/1/54
2/1/54
1/1/54
12/1/53
11/1/53
10/1/53
9/1/53
8/1/53
7/1/53
6/1/53
5/1/53
135
DMEA #15
137
DMEA #14
140
DMEA #13

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

224 New Customhouse
Denver 2, Colorado

September 14, 1954

Wes
Betty

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper & Zinc Co.'s Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Arizona.

Enclosed are two copies of the Operator's Monthly Progress Report, Form MF-104 and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data pertaining to work under the subject contract for the month of July, 1954.

John F. Shaw
John F. Shaw
For W. H. King

Enclosures

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

224 New Customhouse
Denver 2, Colorado

August 24, 1954.

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 2746 (Copper-Zinc), Contract No. Idm-E522, Coronado Copper & Zinc Co.'s Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Arizona - Operator's Monthly Progress Report for the period July 1954.

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

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 50 per cent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

The amount of $500.00 was withheld from payment from the June 1954 report. This is considered sufficient to insure receipt of the Operator's Final Report and 50 per cent of the amount claimed for July 1954 may be paid.

Remarks:

Date of Report	August 11, 1954
Date Received in Field Office	August 16, 1954
Date Received in Regional Office	August 23, 1954

W. H. King

W. H. King

Enclosures

RDB:cwm
cc: Contract
Secretary to the Oper. Comm. (2)
WRStorms
Chron.

August 19, 1954

Memorandum

To : W. H. King, Chief, Mining Division, Region IV

From : Chief, Mining Methods Br., Mining Div., Region IV

Subject : July 1954 Progress Report, Docket DMEA-2746, Contract Idm-8522, Coronado Copper & Zinc Co.'s Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Ariz.

Enclosed in quintuplicate are the following:

(1) Bureau of Mines engineer's report;

(2) Operator's narrative report with map, section and drill log;

(3) Forms MF-104 and MF-104A.

Also enclosed are 3 extra copies of our engineer's report.

All work is in accordance with terms of the contract. As $500 was withheld from the June account, pending termination or additional work under terms of the contract, I recommend that the Government's share of the July costs be paid.

Walter R. Storms

Walter R. Storms

CC W. H. King (7)
DMEA-2746
DF

WRStorms:frj

August 19, 1954

Memorandum

To : Walter R. Storms, Chief, Mining Methods Br., Mining Div., Region IV, Tucson, Ariz.

From : William R. Hardwick, Mining Engineer, Tucson, Ariz.

Subject : Progress Report for July 1954, Docket DMSA-2746, Contract Ldm-8522, Cananea Copper and Zinc Co.'s Republic Copper-Zinc Mine, Cochise County, Ariz.

The Republic Mine was visited on August 9, 1954. Arthur Baker III, geologist, assisted in measuring the progress for July and a proposed amendment was discussed with Mr. Fred E. Gray, manager.

During July, surface diamond drill hole No. 18 was completed from a depth of 660 feet to a depth of 690 feet. This completes the currently authorized surface drilling. The 30 feet of prospect drill hole that was completed in July was EX size for which the contract provides an agreed estimated cost of $3.50 per foot.

The costs of the contract are as follows:

	July	Total
Drifting and crosscutting	—	$40,350.00
Surface diamond drilling	$105.00	31,423.00
Underground diamond drilling	—	1,958.00
Total	$105.00	$71,731.00
Government's part	$52.50	$35,425.50

No ore was discovered in July. The bottom 30 feet of drill hole No. DMSA-18 was in garnetized rectite, but showed no ore.

During July the operator mined 256.45 tons of ore from a small ore body that was discovered by the project in the 400 level drift.

CC W. H. King (Orig. & 7)
DMSA-2746
DF

WRHardwick:frj

The ore mined to date is as follows:

Month	Tons	Percent Copper	Percent Zinc	Royalty paid
Oct. 1953	458.93	1.68	4.97	$254.95
Nov.	230.00	1.65	6.43	127.87
Dec.	197.24	1.38	5.44	100.28
Jan. 1954	248.53	2.68	7.63	210.73
Feb.	194.57	2.31	7.74	149.75
Mar.	401.18	1.63	7.11	—
Apr.	174.04	1.30	6.20	—
May	390.31	1.47	6.61	—
Jun.	150.31	1.73	7.07	—
July	256.45	1.43	4.11	—
Total	2,683.56	1.70	6.41	$843.68

An amount of $500.00 was withheld from the June voucher. The operator has requested authority to do additional work on the project under the contract. If the additional work is authorized, it is recommended that the operator be paid the amount due for July in addition to the $500.00 that was withheld in June after additional work has been started.

William R. Hardwick

William R. Hardwick, Mining Engineer
Mining Methods Branch
Mining Division, Region IV

August 11, 1954

Mr. Walter R. Storms, Chief
U. S. Bureau of Mines
P. O. Box 4097
University Station
Tucson, Arizona

Re: Docket No. DMEA 2746
Contract Idm E522

Dear Mr. Storms:

Following is the report to accompany Forms 104 and 104-A in connection with the work done under Contract Idm E522 for the full month of July:

DRIFTING. No drifting or crosscutting was done this month. 256.45 tons of ore averaging 1.42% Cu, 6.11% Zn were milled from the 400 W 200 stope in the ore near Station 427 (tonnage and grade corrected to mill heads from car counts and car grab samples.

DIAMOND DRILLING. Surface DDH 119 (DMEA No. 18) was completed at a depth of 690'. The 30' drilled this month were in fairly-well garnetized siliceous limestone. This hole finished the drilling presently authorized under the DMEA contract.

Very truly yours,

CORONADO COPPER & ZINC CO.

By Fred E. Gray
Fred E. Gray
Mine Manager

FEG:rk

4 cos to Mr. W. R. Storms
1 co Mr. George D. Dub
1 co Mine Office

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
SEP 17 1954

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of July 1954 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper & Zinc Co. Minerals Copper & Zinc
Address Dragoon, Arizona

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting	Feet			$29,740.00	743.5	$40.00	1520	$40.00
Crosscutting	"			10,620.00	265.5	40.00		
Raising								
Shafts								
Winzes								
Drilling: Core AX	Feet			12,190.50	2709	4.50	8500	4.50
Churn EX	"	$105.00	30	19,232.50	5495	3.50		3.50
Auger EX (Underground)				$21,453.00				
Stripping	"			1,068.00	267	4.00		4.00
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		$105.00		$72,851.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		$105.00		$72,851.00				

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

Date August 11, 1954 Operator Coronado Copper & Zinc Co.

Per [signature] Title Mine Manager

REMARKS:

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

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

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

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

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GPO 83-38475

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

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Received
SEP 17 1954

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of July, 1954 Docket No. DMEA 2746 Contract No. Idm E 522
Operator's Name Coronado Copper & Zinc Co. Minerals Copper & Zinc
Address Dragoon, Arizona
Contract Amount, $ 99,050.00 Government Participation: 50 % Amount, $ 49,525.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
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(2) Labor and Supervision:						
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Purchase						
Depreciation						
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(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$105.00	$72,746.00	$72,851.00	105.00	71,746.00	72,851.00

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

Date Aug. 11, 1954 *Payee Coronado Copper & Zinc Co.

Per [signature] Title Mine Manager

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

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(Instructions on reverse)

* 500.00 Withheld

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

$ 52.50

Signature Randell R. Cooper
(Authorized Certifying Officer)

Date 8-27-54 Vou. No. DMA-55-15
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. 16/Ann-F572 in accordance with the terms of the contract.

Signature William R. Hardwick Title Mining Engineer Date 8/19/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W. H. Ring Title Executive Officer Date AUG 24 1954

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

GPO 83-38476

Collar Location:

Level: Surface
N: 10206.10
E: 7541.35
Elevation: 4989.28
Bearing: —
Angle: - 90°

Length: 690.0
Hor: 0.0
Vert: 690.0
Logged by: ABIII
Date: 7/29/54

D.D. HOLE NO. 119 (DDH #18)

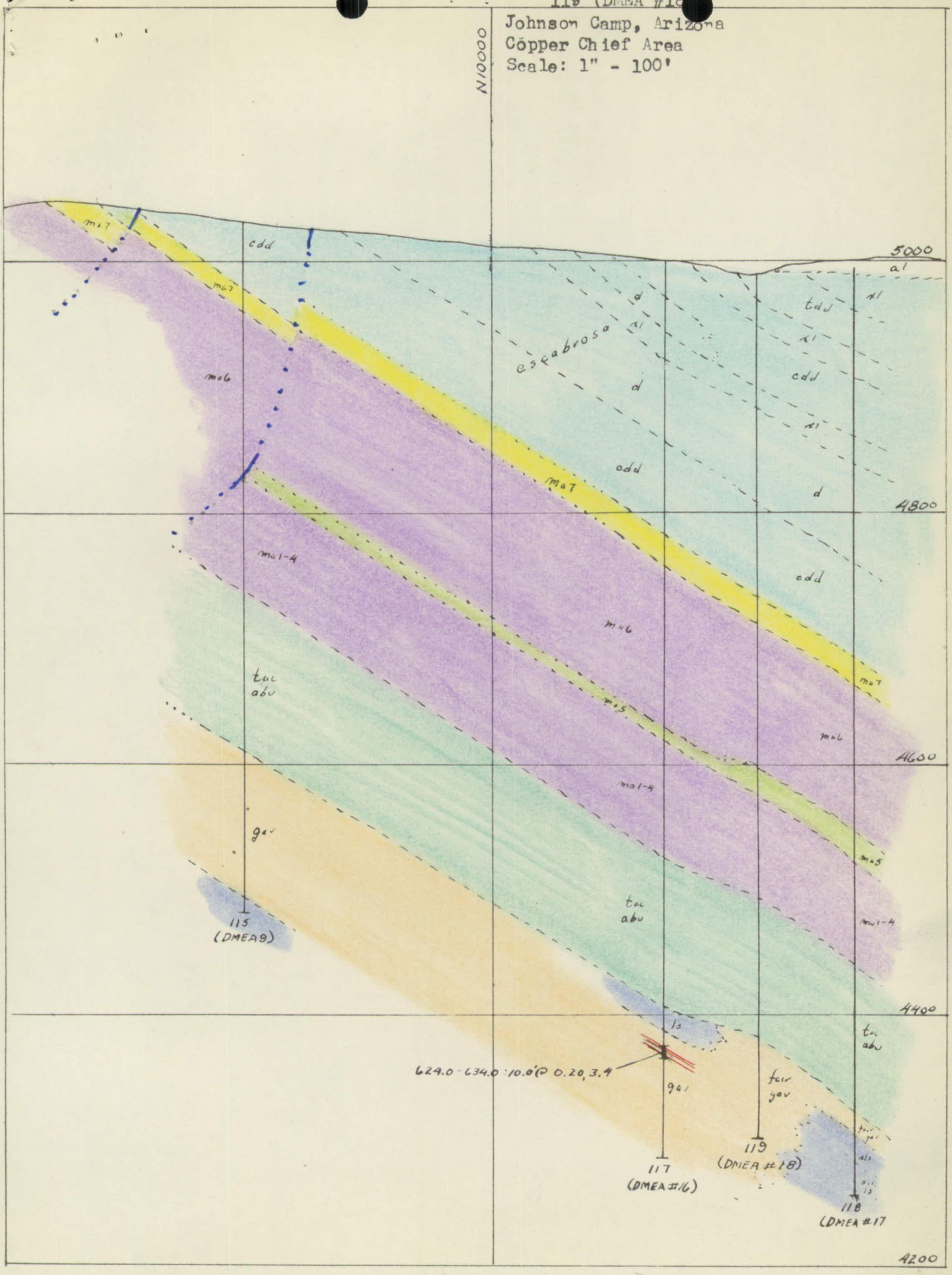
Date Started: 6/17/54
Date Finished: 7/1/54
Size: AX to 170', EX thereafter.
Casing: 170' (pulled)

Objective: Test edge of garnetite mass between DDH's 117 and 118.

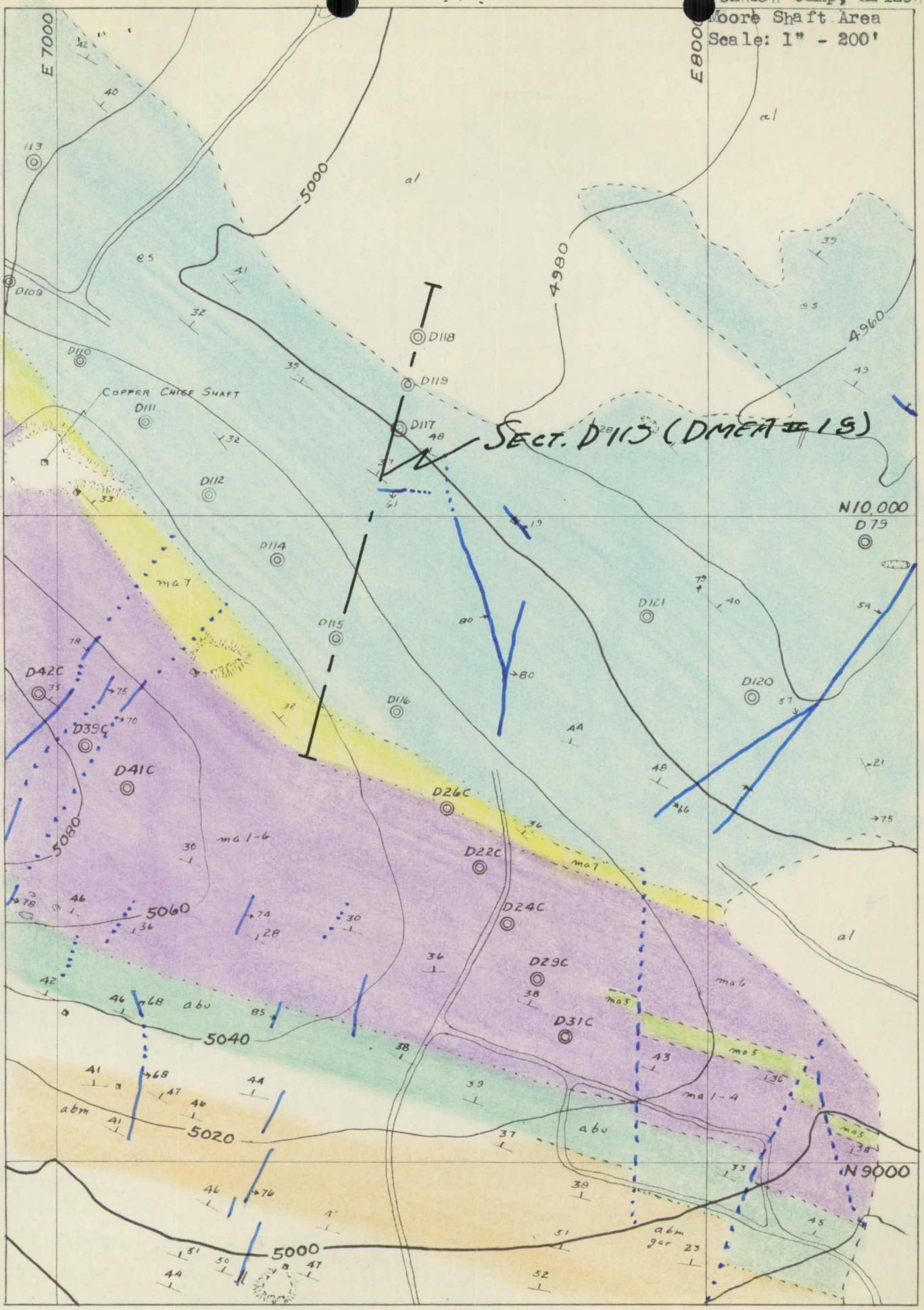
Results: Thick garnetite but no ore.

Footage From	Footage To	Footage Interval	Assays Cu%	Assays Zn%	Core recovery	Log	Description and Averages
0.0	12.0	12.0			—		Grey limy col
12.0	23.0	11.0			82		Grey limy dol (cdd)
23.0	47.0	24.0			79		White xl. @35' cu stn'd fracture.
47.0	56.0	9.0			100		Grey dol, slightly limy. @53 and 56 fe stn'd fractures.
56.0	90.0	34.0			94		Limy dol, locally some tremolite @63, 69, 81, 83 fe stn'd fractures.
90.0	105.0	15.0			100		White xl. @90 and 105, fe stn'd fractures.
105.0	183.0	78.0			73		Grey dolomite. @110. 112, 118, 124, 127, 138, 141, 146, 149, 156, 161, 169 calcite and fe stn'd fractures.
183.0	258.0	75.0			55		Limy dol. @191, 219, 238, 249, 256 calcite and fe stn'd fractures.
258.0	282.0	24.0			25		Martin 7 hornstone. Very rare fine py.
282.0	291.0	9.0			44		Limy dol, light hematite stain.
291.0	291.3	0.3			100		Fault @ 30° to core axis. 1/2" silicified zone, slight shear.
291.3	392.0	100.7			20		Hard light grey dol. @302 fe and cal.
392.0	408.0	16.0			50		Tactite. Upper part of Ma 5 member.
408.0	413.0	5.0			30		Serpentine ls. Lower part of Ma 5.
413.0	460.0	47.0			47		Tactite. @422, 440, 449, 457 calcite and fe stn'd fractures.
460.0	473.0	13.0			35		Quartzite marker. Much fine pyrite.
473.0	492.0	19.0			68		Limy dol.
492.0	496.0	4.0			45		Fault. Porous, no shear, much brown stn.
496.0	527.0	31.0			65		Tactite. @502, 516 fe stn'd fractures.
527.0	535.0	8.0			100		Serpentine ls.
535.0	580.0	45.0			82		Stacite. @544, 554, 556, 560 fe fractures
580.0	608.0	28.0			96		Tactite with hnf bands. Broken and fe stn'd throughout. Some quartz stringers. At bottom quartz vein @30° to core axis.
608.0	644.0	36.0			100		Siliceous ls, fair garnet. Some sphalerit
644.0	663.0	19.0			89		Siliceous ls, fair garnet. Much broken and fe stn'd. Locally porous, some calcite. Little shearing.
663.0	690.0	27.0			96		Siliceous ls, fair garnet. Scattered spots sphalerite.

D. D. Holes 117 (DMEA #16), 118 (DMEA #17)
119 (DMEA #18)



D. D. Hole 119 (DMEA #18)
Johnson Camp, Arizona
Moore Shaft Area
Scale: 1" - 200'



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

224 New Customhouse
Denver 2, Colorado

August 4, 1954.

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region IV

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

Enclosed are two copies of the Operator's Monthly Progress Report, Form MF-104 and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data pertaining to work under the subject contract for the month of June 1954.

W. H. King

W. H. King

Enclosures

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

AUG 9 - 1954

Administrative Audit Difference Statement

Date: July 30, 1954
Payee's Reference: Progress Report June, 1954

Coronado Copper & Zinc Co.
c/o R. W. Moore, President
1206 Pacific Mutual Bldg.
523 W. 6th Street
Los Angeles, Calif.

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

Amount Claimed	$ 4495.00
50% Reimbursable	
Difference	$ 2248.00
* See below -	500.00
Amount Approved	$ 1748.00

The reason for the difference was due to:

* $500.00 withheld pending resumption of operations.

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

Very sincerely yours,

N. E. Stokes
Audit Section

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

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

224 New Customhouse
Denver 2, Colorado

July 26, 1954.

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Company, Cochise County, Arizona. Operator's Monthly Progress Report for the month of June 1954.

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

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report, <u>except as follows:</u>

Please withhold from reimbursement to the Operator the amount of $500.00 pending resumption of operations or until all requirements relative to closing the account have been accomplished.

Remarks:

Date of the Operator's Report	July 15, 1954.
Date Report received in Bureau of Mines Branch Office	July 19, 1954.
Date Report received in Regional Office	July 26, 1954.

W. H. King

Enclosures

JWT:cwm

cc: Contract
Secretary to the Oper. Comm. (2)
WRStorms
Chron.
JWTownsend

July 23, 1954

Memorandum

To : W. H. King, Chief, Mining Division, Region IV

From : Chief, Mining Methods Br., Mining Div., Region IV

Subject : June 1954 Progress Report, DMEA Contract Idm-E522, Docket DMEA-2746, Coronado Copper & Zinc Co.'s Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Ariz.

Enclosed in quintuplicate are the following:

(1) Bureau of Mines engineers report;
(2) Operator's narrative report with drill log and 2 maps;
(3) Forms MF-104 and MF-104A.

Also enclosed are 3 extra copies of our engineer's report.

All work is in accordance with terms of the contract and its amendments. As only a small amount of work was done under the contract in July and as that work may be the last done under the contract, I recommend that the usual sum be withheld until a final report is received and the remainder of the June amount be paid the company.

Walter R. Storms

Walter R. Storms

CC W. H. King (7)
DMEA-2746
DF

WRStorms:frj

July 23, 1954

Memorandum

To : Walter R. Storms, Chief, Mining Methods Br., Mining Div., Region IV, Tucson, Ariz.

From : William R. Hardwick, Mining Engineer, Tucson, Ariz.

Subject : Progress Report for June 1954, Docket DMEA-2746, Contract Idm-R522, Coronado Copper and Zinc Co.'s Republic Copper-Zinc Mine, Cochise County, Ariz.

The Republic mine was visited on July 15, 1954. Arthur Baker, III, geologist for the company, assisted in measuring the progress for June.

During June, surface diamond drill hole DMEA No. 17 (company No. 118) was completed from a depth of 161 feet to a depth of 737 feet. Hole No. 18 (company No. 119) was started and had reached a depth of 660 feet on June 30, 1954. Surface drilling in June is summarized as follows:

Hole No.	AX	BX	Total
DMEA 17 (118)	-	576 ft.	576 ft.
DMEA 18 (119)	170 ft.	490 ft.	660 ft.
Total	170 ft.	1,066 ft.	1,236 ft.
Cost	$765.00	$3,731.00	$4,496.00

No ore was discovered in June. During that month, 150.31 tons of ore averaging 1.73 percent copper and 7.07 percent zinc was mined from the 400 N. 200 stope. The total ore mined from ore bodies discovered by the project is as follows:

CC W. H. King (orig. & 7)
DMEA-2746
DF

WRHardwick:frj

Month	Tons	PERCENT COPPER	PERCENT ZINC	KNOWN ROYALTY PAID
Oct. 1953	458.93	1.68	4.97	$154.96
Nov.	220.00	1.65	6.43	127.97
Dec.	197.24	1.38	5.44	100.28
Jan. 1954	248.53	2.65	7.63	210.73
Feb.	194.57	2.31	7.74	149.75
March	401.18	1.63	7.11	—
April	174.04	1.30	6.29	—
May	380.31	1.47	6.61	—
June	130.31	1.73	7.07	—
Total	2,427.11	1.73	6.48	$843.68

When the Republic mine was visited on July 15, 1954, Diamond drill hole number 18 had been completed. This completes all of the exploration program originally contemplated under contract Idm-8522. Actually only 30 feet of NX drill hole ($85.00) will be presented on form MF-104 for July. The costs of the contract are as follows:

	June	To date
Drifting and crosscutting	—	$40,360.00
Surface diamond drilling	$4,485.00	31,318.00
Underground diamond drilling		1,068.00
Total	$4,485.00	$72,746.00
Government's part	$2,242.50	$36,373.00

Baker was told that payment of a part of this voucher probably would be withheld until a final report is submitted. Fred E. Grey indicated that Coronado Copper and Zinc Co. would do some additional exploration work at its own expense and might then ask for additional Government assistance. Grey was advised that for a recess until the company had decided this issue and then to ask for an amendment to the current contract rather than to present a complete new application if additional work were contemplated.

In view of the fact that this will be the last significant reimbursement check to the operator it is recommended that the customary amount be withheld until a final report has been presented by the operator.

William R. Hardwick

William R. Hardwick, Mining Engineer
Mining Methods Branch
Mining Division, Region IV

July 15, 1954

Mr. Walter R. Storms, Chief
U.S. Bureau of Mines
P. O. Box 4097
University Station
Tucson, Arizona

Re: Docket No. DMEA 2746
Contract Idm E522

Dear Mr. Storms:

Following is the report to accompany Forms 104 and 104-A in connection with the work done under Contract Idm E522 for the full month of June:

DRIFTING. No drifting or crosscutting was done this month. 150.31 tons of ore averaging 1.73% Cu, 7.07% Zn were milled from the 400 W 200 Stope in the ore neat Station 427 (tonnage and grade corrected to mill heads from car counts and car grab samples).

DIAMOND DRILLING. Surface DDH 118 (DMEA No. 17) was completed at a depth of 737', and DDH 119 (DMEA No. 18) reached a depth of 660'. DDH 118 (DMEA No. 17) reached the favorable beds at 671', cut 19' of garnetite between 671 and 690, and continued in limestone to the bottom at 737'. DDH 119 (DMEA No. 18) reached the favorable beds at 608', and drilled garnetite to 660'. This hole was not completed on July 1st.

Very truly yours,

CORONADO COPPER & ZINC CO.

By Fred E. Gray
Fred E. Gray
Mine Manager

FEG:rk

4 ccs to Mr. W. R. Storms
1 cc Mr. George D. Dub
1 cc Mine Office

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

Defense Minerals Administration
RECEIVED
AUG 9 - 1954

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of June 1954 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper & Zinc Co. Minerals Copper & Zinc
Address Dragoon, Arizona

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting	Feet			$29,740.00	743.5	$40.00	1520	$40.00
Crosscutting	"			10,620.00	265.5	40.00		
Raising								
Shafts								
Winzes								
Drilling: Core AX	Feet	$ 765.00	170	12,190.50	2709	4.50	8500	4.50
Churn Ex	"	3731.00	1066	19,127.50	5465	3.50		3.50
Auger Ex (Underground)								
Stripping	"			1,068.00	267	4.00		4.00
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		$4496.00		$72,746.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		$4496.00		$72,746.00				

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

Date July 15, 1954 Operator Coronado Copper & Zinc Co.

Per [signature] Title Mine Manager

REMARKS:

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

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

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

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

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

GPO 83-38475

Form MF-104 (Rev.)
(April 1962)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

Defense Minerals Administration
RECEIVED
AUG 9 - 1954

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of June, 1954 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper & Zinc Co. Minerals Copper & Zinc
Address Dragoon, Arizona
Contract Amount, $ 99,050.00 Government Participation: 50 % Amount, $ 49,525.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling Surface	$4496.00	$26,822.00	$31,318.00			
Underground		1,068.00	1,068.00			
Crosscutting		10,620.00	10,620.00			
Drifting		29,740.00	29,740.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$4496.00	$68,250.00	$72,746.00			

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

Date July 15, 1954 Payee Coronado Copper & Zinc co.

Per M. E. Gray Title Mine Manager

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

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

(Instructions on reverse)

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

$ 1748.00

Signature Randel R. Cooper
(Authorized Certifying Officer)

Date 7-30-54 Vou. No. DMA-55-10
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. DMA F 522 in accordance with the terms of the contract.

Signature William P. Hardwick Title Mining Engineer Date 7/22/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W H King Title Executive Officer Date JUL 26 1954

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

GPO 83-38476

Collar Location:

Level: Surface.
N: 10278.54
E: 7557.68
Elevation: 4992.11
Bearing: --
Angle: - 90°

Length: 737.0
Hor: 0.0
Vert: 737.0
Logged by: ABIII

Date: 7/1/54

D. HOLE NO. 118 (DMEA #17)

Date Started: 5/30/54
Date Finished: 6/16/54
Size: AX to 150'; EX thereafter

Casing: 150' (pulled)
(15' of AX casing thru gravel left in hole.)

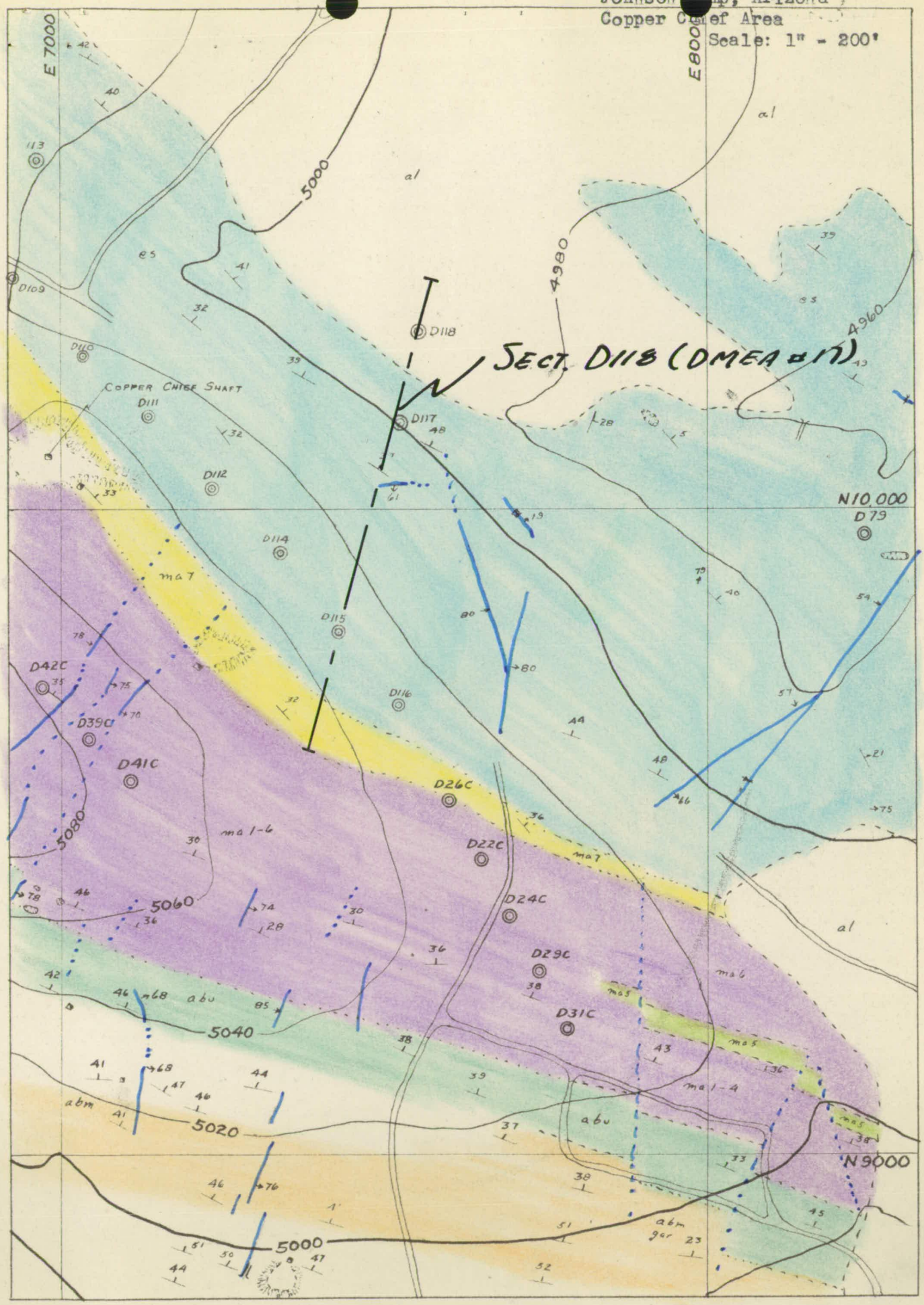
Objective: Test for ore and edge of garnetite.

Results: Neither garnetite no ore; edge of garnetite lies between this hole and D 117.

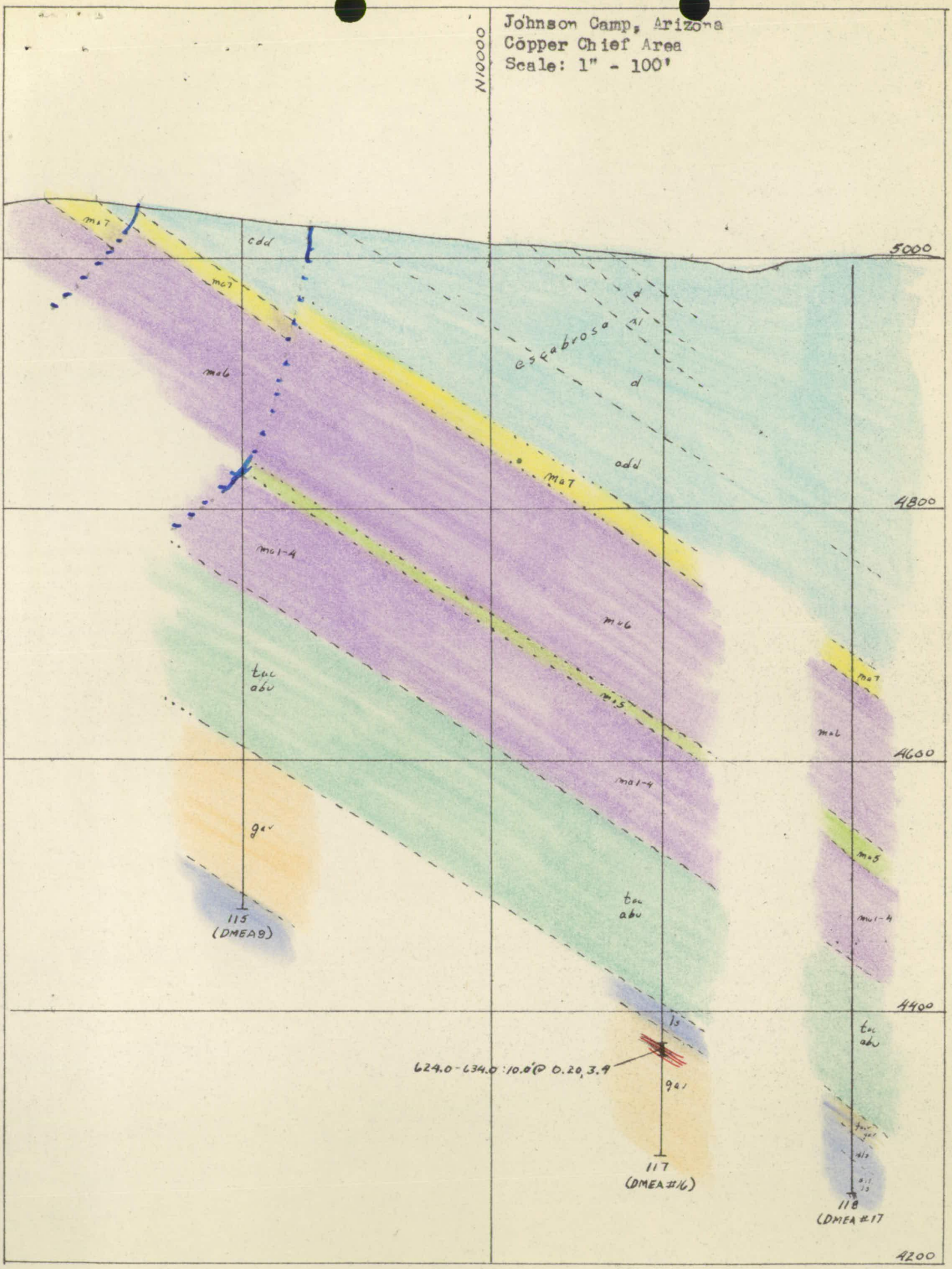
U.S. DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 9 - 1954

Footage From	Footage To	Footage Interval	Assays Cu%	Assays Zn%	Core recovery	Log	Description and Averages
0.0	12.0	12.0			00		Overburden; no core.
12.0	37.0	25.0			68		Xl.
37.0	72.0	35.0			100		Grey and white tremolite dedoll 48@50 fe-stn and calcite fractures.
72.0	92.0	20.0			75		White xl; much tremolite in last 2'.
92.0	127.0	35.0			91		Tremolite dedol, locally xl with trem. @98' fractured, very light fe stain.
127.0	139.0	12.0			67		Dolomite.
139.0	163.0	24.0			83		White xl. @151 and 162 fractures with calcite.
163.0	169.0	6.0			75		Dedolomite; some diopside?
169.0	231.0	62.0			29		Dolomite. @202, 217, 222 cal and fe-stn fractures.
~~231x0~~							
231.0	310.0	79.0			48		Limy dol -- cdd @245, 250, 309 cal and fe-stn fractures.
310.0	328.0	18.0			56		Martin 7, little pyrite.
328.0	447.0	119.0			28		Dolomite, locally slightly limy; no sign of chlorite dedol or stylolites. 337-338 strong fractures with cal, mn stain, some silica. @342, 351, 362, 372, 378, 380, 391, 394, 401, 406, 412, 415, 432, 438 fe-stn and cal fractures.
447.0	465.0	18.0			39		Tac, upper part of ma5. @450, 456 fe-stn fractures.
465.0	471.0	6.0			38		Ma5; serpentine ls, some bands tactite.
471.0	510.0	39.0			41		Tac.489-495 gougy, porous, light fe-stn.
510.0	521.0	11.0			9		Quartzite marker. No pyrite.
521.0	554.0	33.0			23		Grey dol, locally limy. Ma 1. @540, 545 steep cal fe-stn fractures.
554.0	640.0	86.0			63		Tactite. Very rare sulfides, mostly py. 570-579 Major fault? fe-stn, cal, some mn stn. 30° to core axis. @552, 560, 582, 595, 591 cal fe-stn.
640.0	671.0	31.0			52		Tactite with hnf bands.
671.0	690.0	19.0			100		Fair garnet with 35% xls and bands hnf.
690.0	712.0	22.0			82		Poor garnet, xls with no hnf bands.
712.0	737.0	25.0			87		Poor garnet siliceous ls.

D. D. Hole 118 (DMEA #17)
Johnson Camp, Arizona
Copper Chief Area
Scale: 1" - 200'



D. D. Holes 117 (DMEA #16), 118 (DMEA #17)



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

224 New Customhouse
Denver 2, Colorado

June 16, 1954.

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Co.'s Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Arizona.

Enclosed are two copies of the Operator's Monthly Progress Report, Form MF-104 and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data pertaining to work under the subject contract for the month of May 1954.

W. H. King

W. H. King

Enclosures

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

224 New Customhouse
Denver 2, Colorado

June 11, 1954.

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Co.'s Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Arizona. Operator's Monthly Progress Report for the month of May 1954.

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

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 50 per cent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks:

Date of Report	June 5, 1954
Date Received in Field Office	June 7, 1954
Date Received in Region Office	June 11, 1954

W. H. King

W. H. King

Enclosures

RDB:cwm

cc: Contract
Secretary to the Oper. Comm. (2)
WRStorms
Chron.

June 9, 1954

Memorandum

To : W. H. King, Chief, Mining Division, Region IV

From : Chief, Mining Methods Br., Mining Div., Region IV

Subject : May 1954 Progress Report, Contract Idm-E522, Docket DMEA-2746, Coronado Copper & Zinc Co.'s Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Ariz.

Enclosed in quintuplicate are the following:

(1) Bureau of Mines engineer's report;

(2) Operator's narrative report with drill logs and maps;

(3) Forms MF-104 and MF-104A.

Also enclosed are 2 extra copies of our engineer's report.

As all work is in accordance with the contract and its amendments, I recommend that the Government's share of the costs be paid.

Walter R. Storms

Walter R. Storms

CC W. H. King (6)
DMEA-2746
DF

WRStorms:frj

June 8, 1954

Memorandum

To : Walter R. Storms, Chief, Mining Methods Br., Mining Div., Region IV, Tucson, Ariz.

From : William R. Hardwick, Mining Engineer, Tucson, Ariz.

Subject : Progress Report for May 1954, Docket DMEA-2746, Contract Ida-R522, Coronado Copper and Zinc Co.'s Republic Copper-Zinc Mine, Cochise County, Ariz.

The Republic Mine was visited on June 4, 1954. Mr. Arthur Baker, III, geologist for the company, assisted in measuring the progress for May. A possible amendment was discussed with Mr. Fred E. Grey, Manager.

No drifting was done in May. Of the four underground diamond drill holes that were authorized, three were completed in April and the fourth or final hole was completed to a depth of 46 feet in May. This completes the drifting and underground drilling that has been authorized.

Permission was received by the operator from the DMEA Field Team to drill three additional surface drill holes. One of these holes was completed to a depth of 712 feet and a second had reached a depth of 161 feet on June 1, 1954. Surface drilling in May is summarized as follows:

Hole No.	AX	EX	Total feet
16 (117)	120 ft.	592 ft.	712 ft.
17 (118)	150 ft.	11 ft.	161 ft.
Total	270 ft.	603 ft.	873 ft.
Cost	$1,215.00	$2,110.50	$3,325.50

No ore was discovered by either the underground hole or the surface holes. Ten feet of the surface hole was mineralized. This core was split and half was assayed for copper and zinc. The core ran 0.20 percent copper and 3.4 percent zinc.

CC W. H. King (Orig. & 6)
DMEA-2746
DF

WRHardwick:frj.

In addition to the hole which the operator is now drilling, it contemplates a third hole from the surface. The operator estimates that there will remain approximately 500 feet of allowable drill hole footage under the present contract when the present hole is completed, and estimates that at least 700 feet will be required to reach the objective which the third hole should explore. Mr. Grey was advised to submit a request for an amendment to cover the additional 200 feet that will be required to complete the hole.

The costs of the contract are as follows:

	May	To date
Drifting and crosscutting	—	$40,360.00
Surface diamond drilling	$3,325.50	26,822.00
Underground diamond drilling	184.00	1,068.00
Total	$3,509.50	$68,250.00
Government's part	$1,754.75	$34,125.00

During May the operator mined 390.31 tons of ore which averaged 1.47 percent copper and 6.61 percent zinc. The total ore mined from ore bodies discovered by the DMEA project is as follows:

Month	Tons	Percent copper	Percent zinc
Oct. 1953	458.93	1.68	4.97
Nov.	220.00	1.65	6.43
Dec.	187.24	1.38	5.44
Jan. 1954	240.53	2.65	7.63
Feb.	194.57	2.31	7.74
Mar.	401.18	1.63	7.11
Apr.	174.04	1.30	6.20
May	390.31	1.47	6.61
Total	2,276.80	1.73	6.40

Records at the Tucson office of the U. S. Bureau of Mines indicate that Coronado Copper and Zinc Co. has made one royalty payment in the amount of $135.38.

The 46 feet of underground diamond drill hole, 270 feet of AX surface diamond drill hole, and 603 feet of EX surface diamond drill hole are in accordance with the provisions of the contract and are approved. It is recommended that the operator be paid the Government's agreed part as provided by the contract.

William R. Hardwick
William R. Hardwick, Mining Engineer
Mining Methods Branch
Mining Division, Region IV

CC W.H.King (Orig. & 6)
DMEA-2746
DF

WRHardwick:frj

June 5, 1954

Mr. Walter R. Storms, Chief
U.S. Bureau of Mines
P. O. Box 4097
University Station
Tucson, Arizona

Re: Docket No. DMEA 2746
Contract Idm E522

Dear Mr. Storms:

Following is the report to accompany Forms 104 and 104-A in connection with the work done under Contract Idm E522 for the full month of May:

DRIFTING. No drifting or crosscutting was done this month. 390.31 tons of ore averaging 1.47% Cu, 6.61% Zn were milled from the 400 W 200 Stope in the ore near Station 427 (tonnage and grade corrected to mill heads from car counts and car grab samples).

DIAMOND DRILLING. One underground hole, MU 142 (DMEA No. 12) was drilled during the month. This hole cut garnetite to 29' and limestone to the bottom at 46'. This completed the underground drilling.

Surface diamond drilling was resumed. One hole, DDH 117 (DMEA No. 16) was completed at a depth of 712', and DDH 118 (DMEA No. 17) reached a depth of 161'. DDH 117 (DMEA No. 16) reached the favorable beds at 595', and cut limestone to 615' and garnetite from there to the bottom at 712'. Ten feet of core between 624' and 634' assayed 0.20% Cu, 3.4% Zn.

Very truly yours,

CORONADO COPPER & ZINC CO.

By Fred E. Gray
Fred E. Gray
Mine Manager

FEG--c

4 cos to Mr. W. R. Storms
1 co Mr. George Dub
1 co Mine Office

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

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of May 1954 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper and Zinc Company Minerals Copper & Zinc
Address Dragoon, Arizona
Contract Amount, $ 99,050.00 Government Participation: 50 % Amount, $ 49,525.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling Surface	$3325.50	$23,496.50	$26,822.00			
Bulldozing Underground	184.00	884.00	1,068.00			
Crosscutting		10,620.00	10,620.00			
Drifting		29,740.00	29,740.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$3509.50	$64,740.50	$68,250.00	3509.50	64,740.50	68,250.00

I certify that the above bill is correct and just and that payment therefor has not been received.
Date June 5, 1954 *Payee Coronado Copper & Zinc Co.
Per [signature] Title Mine Manager

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

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

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:
$ 1754.75
Signature [signature] (Authorized Certifying Officer)
Date 6/14/54 Vou. No. DMA 54-134
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. dm E-522 in accordance with the terms of the contract.

Signature William R. Hardwick WRH Title Mining Engineer Date 6/8/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: R. D. B.

Signature W H Kung Title Executive Officer Date JUN 11 1954

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

JUN 21 1954

Month of May 195 4 Docket No. DMEA 2746 Contract No. Ida E522
Operator's Name Coronado Copper and Zinc Company Minerals Copper & Zinc
Address Dragoon, Arizona

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting	Feet			$29,740.00	743.5	$40.00	1520	$40.00
Crosscutting	"			10,620.00	265.5	40.00		[illegible]
Raising								
Shafts								
Winzes								
Drilling: Core Ax	"	$1215.00	270	11,425.50	2539	4.50	8500	4.50
Churn Ex	"	2110.50	603	15,396.50	4399	3.50		3.50
Auger Ex (Underground)	"	184.00	46	1,068.00	267	4.00		4.00
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		$3509.50		$68,250.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		$3509.50		$68,250.00				

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

Date May 5, 1954 Operator Coronado Copper & Zinc Co.

Per [signature] Title Mine Manager

REMARKS:

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

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

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

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

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

GPO 83-38475

CORONADO COPPER AND ZINC CO.
Johnson Camp Unit
SURFACE DIAMOND DRILLING FOR
THE MONTH OF MAY, 1954
(Under DMEA Contract No. IDM-E 522)

DDH #117	5/14							Rig arrived
	5/15					1	shift	Setting up (3 men)
	5/16	Sunday						
	5/17	00	to	51	51	1	"	0-20 AX, remainder EX. Two crews.
	5/18	51	"	124	73	2	"	Cemented
	5/19					2	"	6 hrs drilling cement, 10 hrs reaming AX to 120'.
	5/20	124	"	191	67	2	"	5 hrs casing to 120'
	5/21	191	"	271	80	2	"	
	5/22	271	"	366	95	2	"	
	5/23	366	"	396	30	1	"	
	5/24	396	"	468	72	2	"	
	5/25	468	"	538	70	2	"	
	5/26	538	"	591	53	2	"	
	5/27	591	"	656	65	2	"	
	5/28	656	"	708	52	2	"	
	5/29	708	"	712	4	2	"	Finished Moving and setting up.
DDH #118	5/30	00	"	41	41	1	"	
	5/31	41	"	161	120	2	"	Cased to 150'. AX to 150', EX remainder.

Month footage 873 28 shifts

270' drilled AX
603' drilled EX
21 hours Coronado lost time

Arthur Baker III
June 2, 1954

orig - L.A.
1 cc - Continental
1 cc - M.H.
1 cc - F.E.G.
1 cc - engr.
5 cc - DMEA

Collar Location:

Level: 400 W. Drift
N: 11201
E: 8898
Elevation: 4724
Bearing: S 30° W
Angle: Horiz.

Length: 46.0
Hor: 46.0
Vert: 0.0
Logged by: ABIII

Date: 5/31/54

D.D. HOLE NO. MU 142 (DMEA #15)

Date Started: 5/4/54
Date Finished: 5/7/54
Size: EX

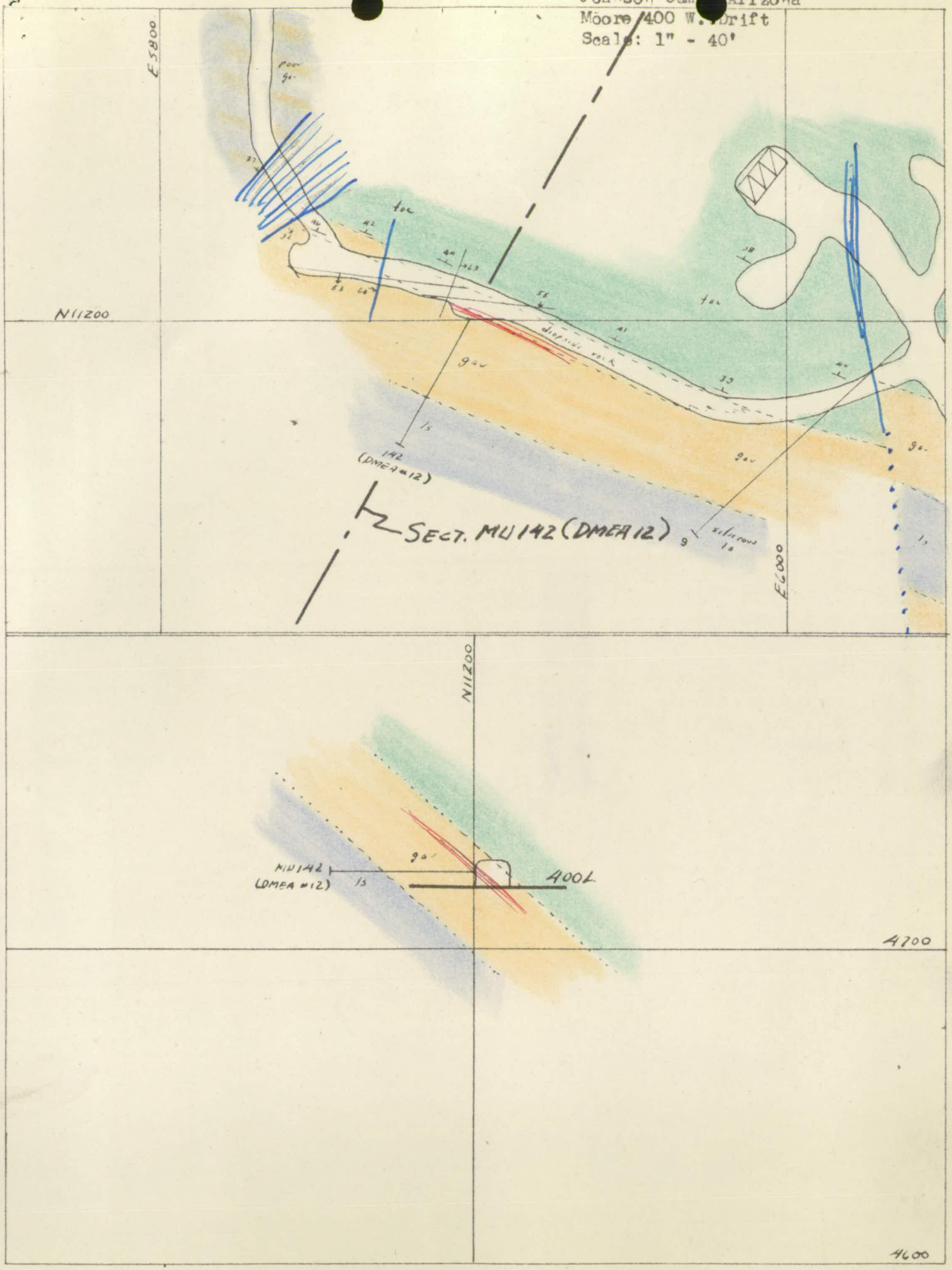
Casing: None

Objective: Test footwall of drift opposite mineralization in wall.

Results: No ore.

Footage			Assays		Core recovery	Log	Description and Averages
From	To	Interval	Cu%	Zn%			
0.0	29.0	29.0			93		Garnet.
29.0	46.0	17.0			88		Grey xls, a couplè of 2" bands garnet.

D. D. Hole MU 142 (DMEA #12)
Johnson Cam[illegible] Arizona
Moore 400 W. Drift
Scale: 1" - 40'



Collar Location:

Level: Surface
N: 10135.04
E: 7527.08
Elevation: 4997.19
Bearing: --
Angle: - 90°

Length: 712.0
Hor: 712.0
Vert: 0.0
Logged by: ABIII

Date: 6/1/54

D.D. HOLE NO. 117 (DMEA #16)

Date Started: 5/15/54
Date Finished: 5/29/54
Size: EX

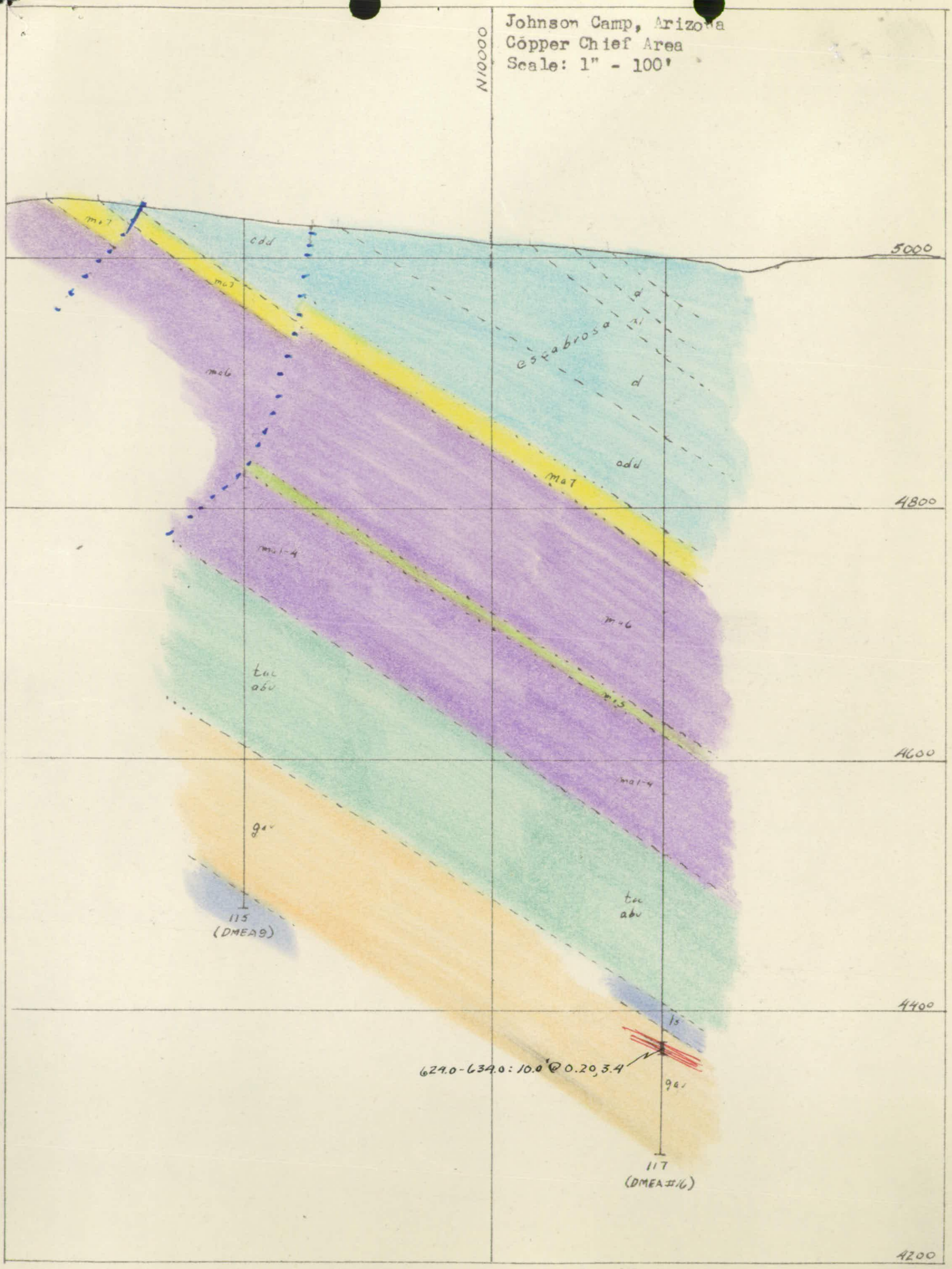
Casing: 120' (pulled)

Objective: North edge of DMEA garnetite shoot.

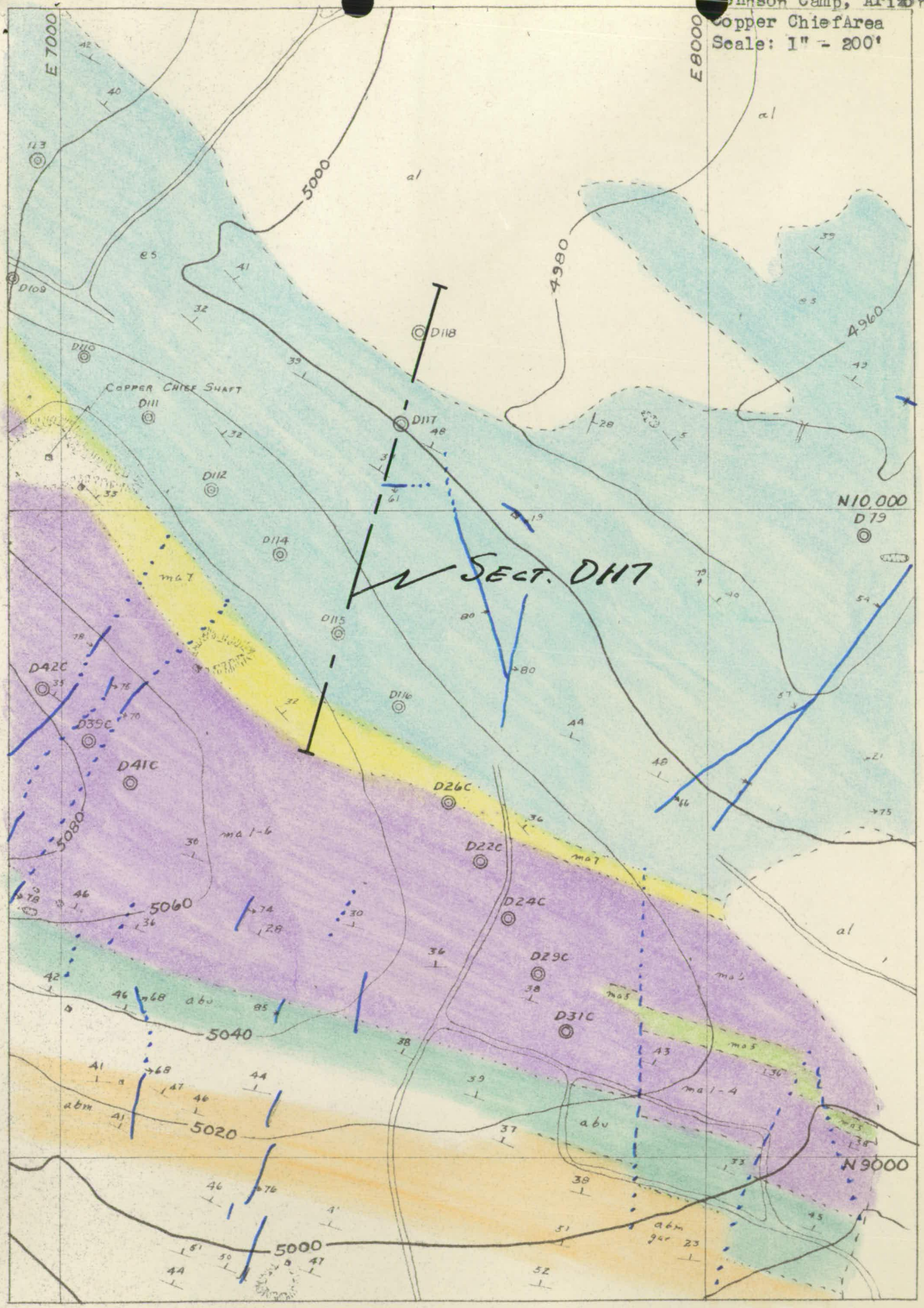
Results: Thick garnetite, 10' of low-grade mineralization.

Footage			Assays		Core recovery	Log	Description and Averages
From	To	Interval	Cu%	Zn%			
0.0	10.0	10.0			--		No core.
10.0	27.0	17.0			100		Tremolite dedolomite.
							20-25 light hematite stain.
27.0	57.0	30.0			73		Grey dolomite.
57.0	78.0	21.0			55		White xls.
78.0	142.0	66.0			27		Grey dolomite. @95' slight slip.
142.0	218.0	76.0			67		Slightly dedolomitized (cdd).
218.0	242.0	24.0			54		Ma 7. A little very fine pirite.
242.0	281.0	39.0			62		Upper Ma6. Chloritized dedolomitized with stylolites.
							@250' hematite-stained fracture.
281.0	372.0	89.0			34		Lower ma6. Hard grey dol.
							336-346 Fault. Mn stn, some quartz.
372.0	382.0	10.0			100		Ma5 serpentine.
382.0	427.0	45.0			62		Tactite.
							@ 405' 1" vuggy calcite vein 30° to core
							409' ditto with light fe stain.
427.0	441.0	14.0			42		Quartzite marker.
441.0	477.0	36.0			64		Grey limy dol.
477.0	488.0	11.0			91		Tactite.
488.0	497.0	9.0			100		Serpentine ls.
497.0	570.0	73.0			82		Tactite. @ 549, 554, 567 cal. veinlets.
570.0	594.0	24.0			92		Tac with hnf bands. Many minor fe-stain fractures, some with calcite.
594.0	615.0	21.0			90		Grey xls. Fractures with light fe stain throughout. @606 & 612 breccia, vuggy calcite, brown fe stain.
615.0	616.0	1.0			65		Fault like at 606' and 612'. Minor.
616.0	624.0	8.0			100		Garnet. @623' calcite veinlet, fe stain, parallel to core.
624.0	628.5	4.5	0.20	2.1	100		624.0 - 634.0: 10.0' @ 0.20, 3.4
628.5	634.0	5.5	0.20	4.5	100		Garnet.
634.0	647.0	13.0			92		Garnet. @636' breccia, fe stain.
647.0	664.0	17.0			88		Soft altered garnet-ls. Muchhwollastonite
664.0	712.0	48.0			88		Garnet.
							@ 680' minor fault -- breccia, vuggy cal, little mn stain.

D. D. Hole 117 (DMEA #16)



D. D. Hole 117 (DMEA #16)
Johnson Camp, Arizona
Copper Chief Area
Scale: 1" = 200'



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

224 New Customhouse
Denver 2, Colorado

May 21, 1954.

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper-Zinc Co.'s Republic Copper-Zinc Mine, Cochise County, Arizona.

Enclosed are two copies of the Operator's Monthly Progress Report, Form MF-104 and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data pertaining to work under the subject contract for the month of April 1954.

W. H. King

Enclosures

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

224 New Customhouse
Denver 2, Colorado

May 20, 1954.

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper-Zinc Co.'s Republic Copper-Zinc Mine, Cochise County, Arizona. Operator's Monthly Progress Report for the period April 1954.

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

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 50 per cent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks:

Date of Report	May 10, 1954.
Date Received in Field Office	May 13, 1954.
Date Received in Region Office	May 20, 1954.

W H King
W. H. King

Enclosures

RDB:cwm

cc: Contract
Secretary to the Operating Comm. (2)
WRStorms
Chron.

May 17, 1954

Memorandum

To : W. H. King, Chief, Mining Division, Region IV

From : Chief, Mining Methods Br., Mining Div., Region IV

Subject : April 1954 Progress Report, DMEA Contract Idm-E522, Docket DMEA-2746, Coronado Copper & Zinc Co.'s Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Ariz.

Enclosed in quintuplicate are the following:

(1) Bureau of Mines engineer's report;

(2) Operator's narrative report with drill hole logs and maps.

(3) Forms MF-104 and MF-104A.

Also enclosed are 2 extra copies of our engineer's report.

As all work is in accordance with the terms of the contract, I recommend that the Government's share of the costs be paid.

Walter R. Storms

Walter R. Storms

CC W. H. King (6)
DMEA-2746
DF

WRStorms:frj

Memorandum

May 17, 1954

To : Walter R. Storms, Chief, Mining Methods Br., Mining Div., Region IV, Tucson, Ariz.

From : William R. Hardwick, Mining Engineer, Tucson, Ariz.

Subject : Progress Report for April 1954, Docket DMEA-2746, Contract Idm-E522, Coronado Copper & Zinc Co.'s Republic Copper-Zinc Mine, Cochise County, Ariz.

The Republic Mine was visited on May 5, 1954. Mr. Arthur Baker III, geologist for the company, assisted in measuring the progress for April.

The west 400 hanging wall drift was advanced 4 feet in April to the boundary of the DMEA project. With this advance the total drifting and crosscutting to date is as follows:

	Drift	Crosscut	Total	Cost
To March 31, 1954	739.5 ft.	265.5 ft.	1,005.0 ft.	$40,200.00
April advance	4.0	—	4.0	160.00
To April 30	743.5 ft.	265.5 ft.	1,009.0 ft.	$40,360.00

In March, the Operators request for permission to drill four underground diamond drill holes was approved, and in April three of these holes were completed as follows:

Hole No.	Depth	Cost
DMEA-13	64	$256.00
DMEA-14	66	264.00
DMEA-15	91	364.00
Total	221	$884.00

In addition to underground drilling, the contract provided for surface diamond drilling. A total of 6,065 feet of surface diamond drilling has been completed at a cost of $23,496.50.

The total costs of the project to date are as follows:

CC W. H. King (Orig. & 6)
DMEA-2746
DF

WRHardwick:frj

	April	To date
Drifting and crosscutting	$160.00	$40,360.00
Surface diamond drilling	-	23,496.50
Underground diamond drilling	884.00	884.00
Total	$1,044.00	$64,740.50
Government's part	$522.00	$32,370.25

No ore was discovered during April by the drift or underground drill holes. Mr. Grey stated that he does not expect to do any further drifting on the 400 level.

During April, the Operator reported mining 174.04 tons of ore that averaged 1.30 percent copper and 6.20 percent zinc from the 400 west 200 stope. The ore discovered under the contract and mined to date is listed below by months:

	Tons	Percent Copper	Percent Zinc
October 1953	458.93	1.68	4.97
November	220.00	1.65	6.43
December	197.24	1.38	5.44
January 1954	240.53	2.65	7.63
February	194.57	2.31	7.74
March	401.18	1.63	7.11
April	174.04	1.30	6.20
Total	1,886.49	1.79	6.32

Records at the Tucson office of the U. S. Bureau of Mines indicate that Coronado Copper and Zinc Co. has made one royalty payment in the amount of $135.39.

The operator has presented forms MF-104 and MF-104A, together with a progress map and narrative report. Payment has been requested for the Government's agreed part, or 50 percent of the costs of the 4 feet of drift and 221 feet of underground diamond drill hole that was completed in April. This work was in accordance with the terms of the project and is approved. It is recommended that the operator be paid as provided by the contract.

William R. Hardwick

William R. Hardwick, Mining Engineer
Mining Methods Branch
Mining Division, Region IV

May 10, 1954

Mr. Walter R. Storms, Chief
U.S. Bureau of Mines
P.O. Box 4097
University Station
Tucson, Arizona

Re: Docket No. DMEA-2746
Contract Idm E522

Dear Mr. Storms:

Following is the report to accompany Forms 104 and 104-A in connection with the work done under Contract Idm E522 for the full month of April:

DRIFTING. During the month the 400 W HW. Drift was advanced 7', to Station 449 plus 39.5'. Only 4' of this advance was in the DMEA participation area. There was no change in the rock. The drifting and crosscutting under Stage I of the DMEA contract is now completed. During April 174.04 tons of ore averaging 1.30% Cu, 6.20% Zn were milled from the 400 West 200S stope in the ore near Station 427 (tonnage and grade corrected to mill heads from car counts and car grab samples.

DIAMOND DRILLING. Three under ground holes, MU 135, 137 and 140 (DMEA Nos. 15, 14 and 13) were drilled during the month. Hole No. MU 135 (DMEA 15) cut garnetite to 22' and limestone and fair garnetite to the bottom at 91'. Hole No. MU 137 (DMEA 14) cut limestone and poor to fair garnetite to the bottom at 66'. Hole No. MU 140 (DMEA 13) cut low-grade ore to 9' and limestone and fair garnetite to the bottom at 64'.

Very truly yours,

CORONADO COPPER & ZINC CO.

By Fred E. Gray
Fred E. Gray
Mine Manager

FEG-c

4 cos to Mr. W. R. Storms
1 co Mr. George Dub
1 co Mine Office

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

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

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

Month of April, 1954 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper & Zinc Co. Minerals Copper & Zinc
Address Dragoon, Arizona
Contract Amount, $ 99,050.00 Government Participation: 50 % Amount, $ 49,525.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling Ax & Ex		$23,496.50	$23,496.50			5/25/54 J.W.A.
Bulldozing Ex (under-	$ 884.00		884.00			
Crosscutting ground)		10,620.00	10,620.00			
Drifting	160.00	29,580.00	29,740.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$1044.00	$63,696.50	$64,740.50	1044.00	63,696.50	64,740.50

I certify that the above bill is correct and just and that payment therefor has not been received.
Date May 10, 1954 *Payee Coronado Copper & Zinc Co.
Per [signature] Title Mine Manager

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

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

(Instructions on reverse)

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

$522.00

Signature Randell R. Cooper
(Authorized Certifying Officer)

Date 5-21-54 Vou. No. DMA-54-127
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. 1dnx E 522 in accordance with the terms of the contract.

Signature William R. Hardwick WRH Title Mining Engineer Date 5/17/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: L.D.B.

Signature W H King Title Executive Officer Date MAY 20 1954

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

GPO 83-38476

Form MF-104A
(April 1952)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of April 1954 Docket No. DMEA 2746 Contract No. Idm R522
Operator's Name Coronado Copper & Zinc Co. Minerals Copper & Zinc
Address Dragoon, Arizona

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting	Feet	$ 160.00	4	$29,740.00	743.5	$40.00	1520	$40.00
Crosscutting	Feet			10,620.00	265.5	40.00		
Raising								
Shafts								
Winzes								
Drilling: Core AX	Feet			10,210.50	2269	4.50	8500	4.50
Churn Ex	"			13,286.00	3796	3.50		3.50
Auger Ex (underground)	"	884.00	221	884.00	221	4.00		4.00
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Total Distributed Costs		$1,044.00		$64,740.50				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		~~$1,044.00~~		~~$64,740.50~~				

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

Date May 10, 1954 Operator Coronado Copper & Zinc Co.

Per [signature] Title Mine Manager

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

(Instructions on reverse)

REMARKS:

(For Government use only)

INSTRUCTIONS

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

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

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

GPO 83-38475

Collar Location:

Level: 400 W. NW Drift
N: 11525
E: 5762
Elevation: 4730
Bearing: S 50° W
Angle: + 3°

Length: 64.0
Hor: 63.9
Vert: 3.4
Logged by: ABIII

Date: 5/1/54

D. D. HOLE NO. MU 140 (DMEA #13)

Date Started: 4/26/54
Date Finished: 4/30/54
Size: EX

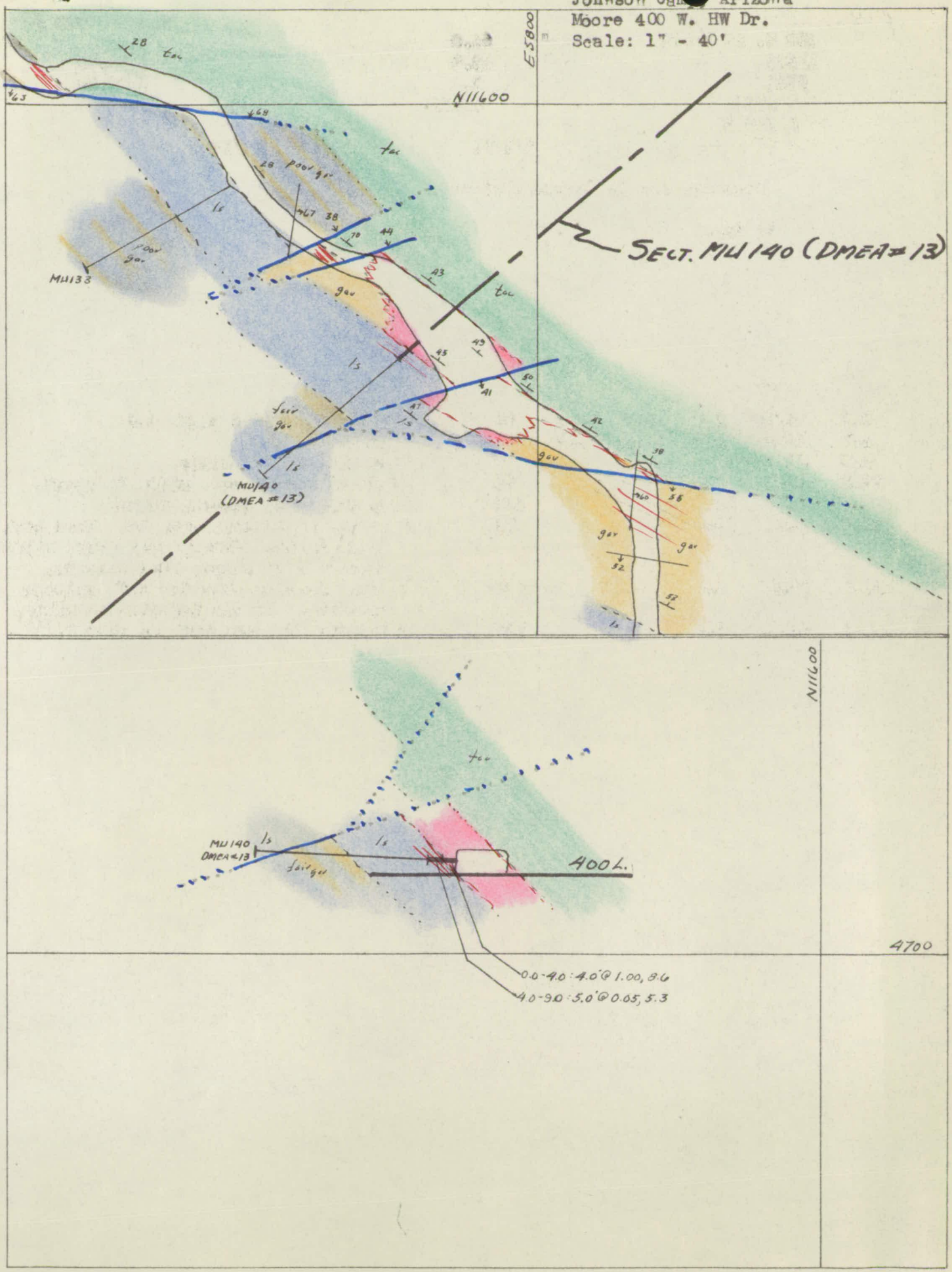
Casing: None

Objective: Test for ore in footwall of known orebody.

Results: No ore.

Footage			Assays		Core recovery	Log	Description and Averages
From	To	Interval	Cu%	Zn%			
0.0	4.0	4.0	1.00	8.6	88		0.0 - 9.0: 9.0' @ 0.47, 6.8
4.0	9.0	5.0	0.05	5.3	100		Garnet.
9.0	22.0	13.0			77		Grey xls, no hnf bands.
22.0	22.5	0.5			60		Fault. Slight shear, minor fe stain.
22.5	34.0	11.5			100		Grey xls, poor garnet, no hnf.
34.0	54.0	20.0			90		Fair garnet in siliceous ls. Rare hnf. 45-46 fault. Shear, open vugs, light hematite on slips; some calcite.
54.0	55.0	1.0			70		Fault. Massive chlorite with calcite veinlets. Little hematite on slips.
55.0	64.0	9.0			100		Siliceous ls, some hnf, no garnet.

D. D. Hole MU 140 (DMEA #13)
Johnson Ca[illegible] Arizona
Moore 400 W. HW Dr.
Scale: 1" - 40'



Collar Location:
Level: 400 W. HW Drift
N: 11813
E: 5404
Elevation: 4730
Bearing: S 37° W
Angle: + 3°

Length: 91.0
Hor: 90.0
Vert: 4.8
Logged by: ABIII

Date: 4/30/54

D. D. HOLE NO. MU 135 (DMEA #15)

Date Started: 4/14/54
Date Finished: 4/19/54
Size: EX

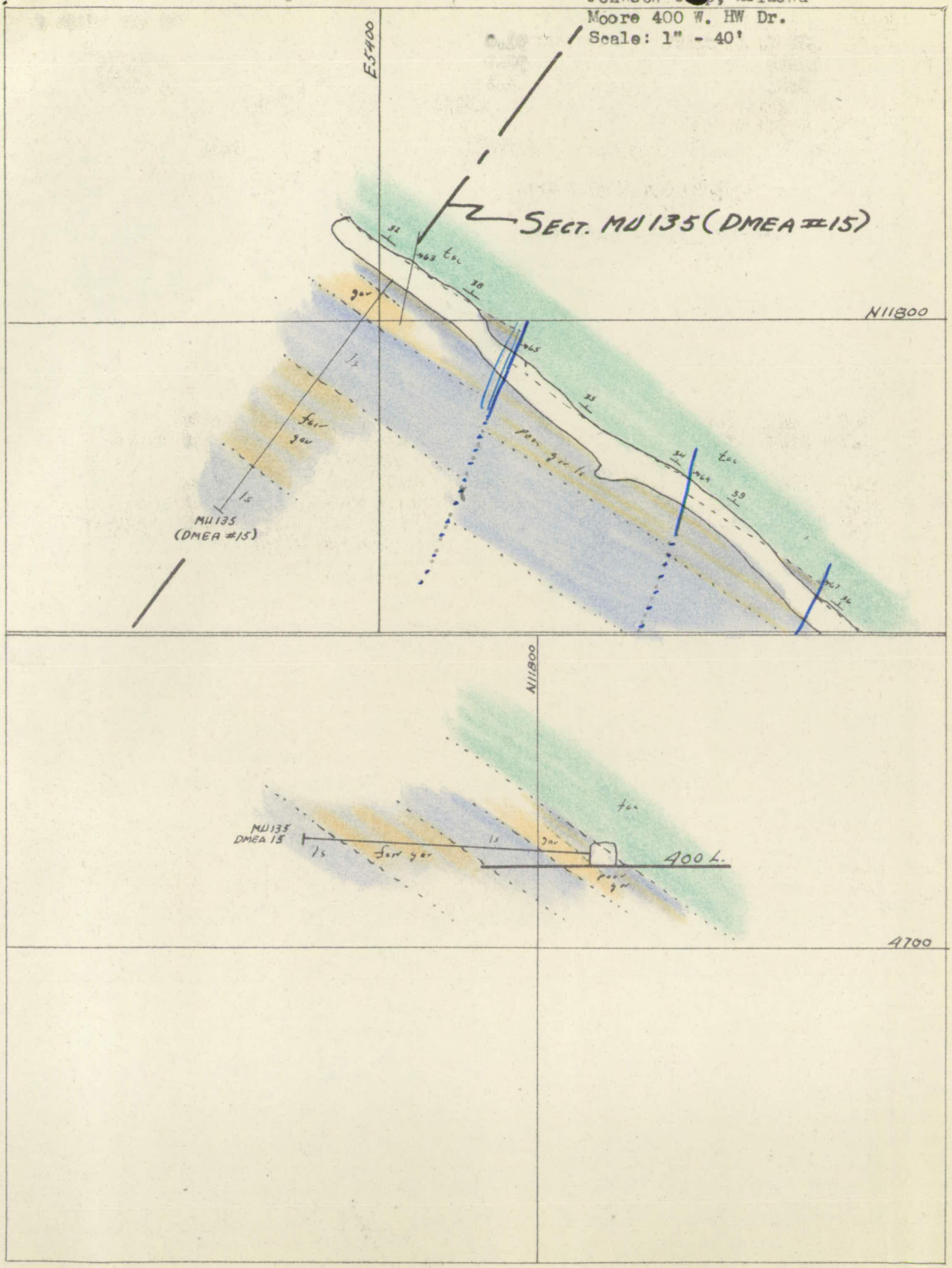
Casing: None

Objective: Test footwall of drift.

Results: No ore, little garnetite

Footage			Assays		Core recovery	Log	Description and Averages
From	To	Interval	Cu%	Zn%			
0.0	4.0	4.0			100		Poor garnetite limestone
4.0	22.0	18.0			66		Garnetite with much hnf bands. Scattered sulfides.
22.0	40.0	18.0			100		Grey xls, no hnf bands.
40.0	79.0	39.0			100		Fair garnet, rare sulfides.
79.0	91.0	12.0			100		Limestone, a little wollastonite, rare hnf bands.

D. D. Hole MU 135 (DMEA #15)
Johnson Camp, Arizona
Moore 400 W. HW Dr.
Scale: 1" - 40'



Collar Location:

Level: 400 W. HW Drift
N: 11653
E: 5585
Elevation: 4730
Bearing: S 36° W
Angle: horiz.

Length: 66.0
Hor: 66.0
Vert: 0.0
Logged by: ABIII

Date: 4/30/54

DDH. HOLE NO. MU 137 (DMEA #14)

Date Started: 4/20/54
Date Finished: 4/26/54
Size: EX

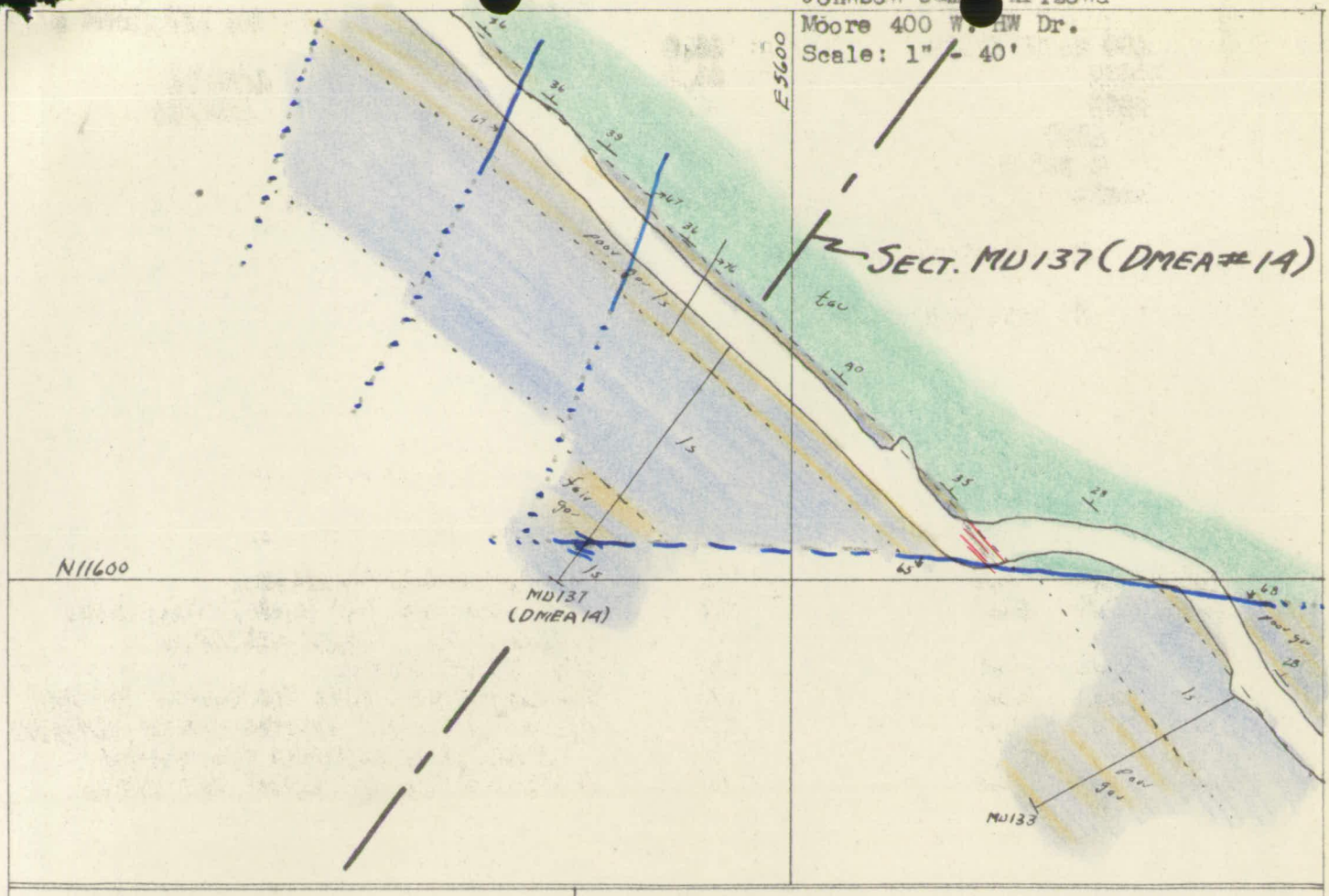
Casing: None

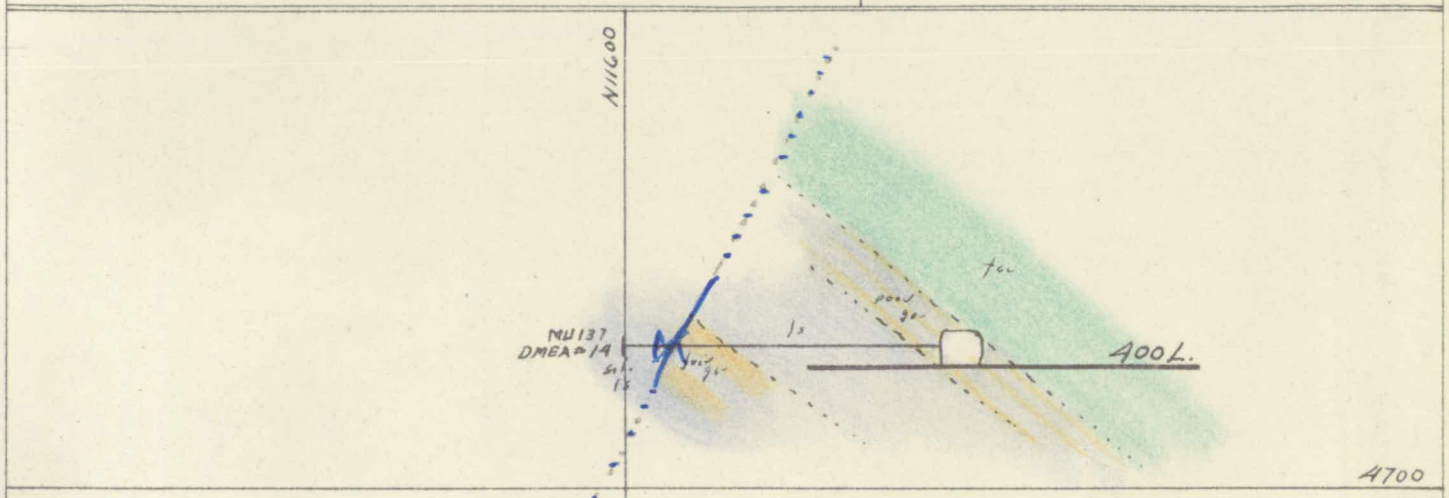
Objective: Test footwall of drift.

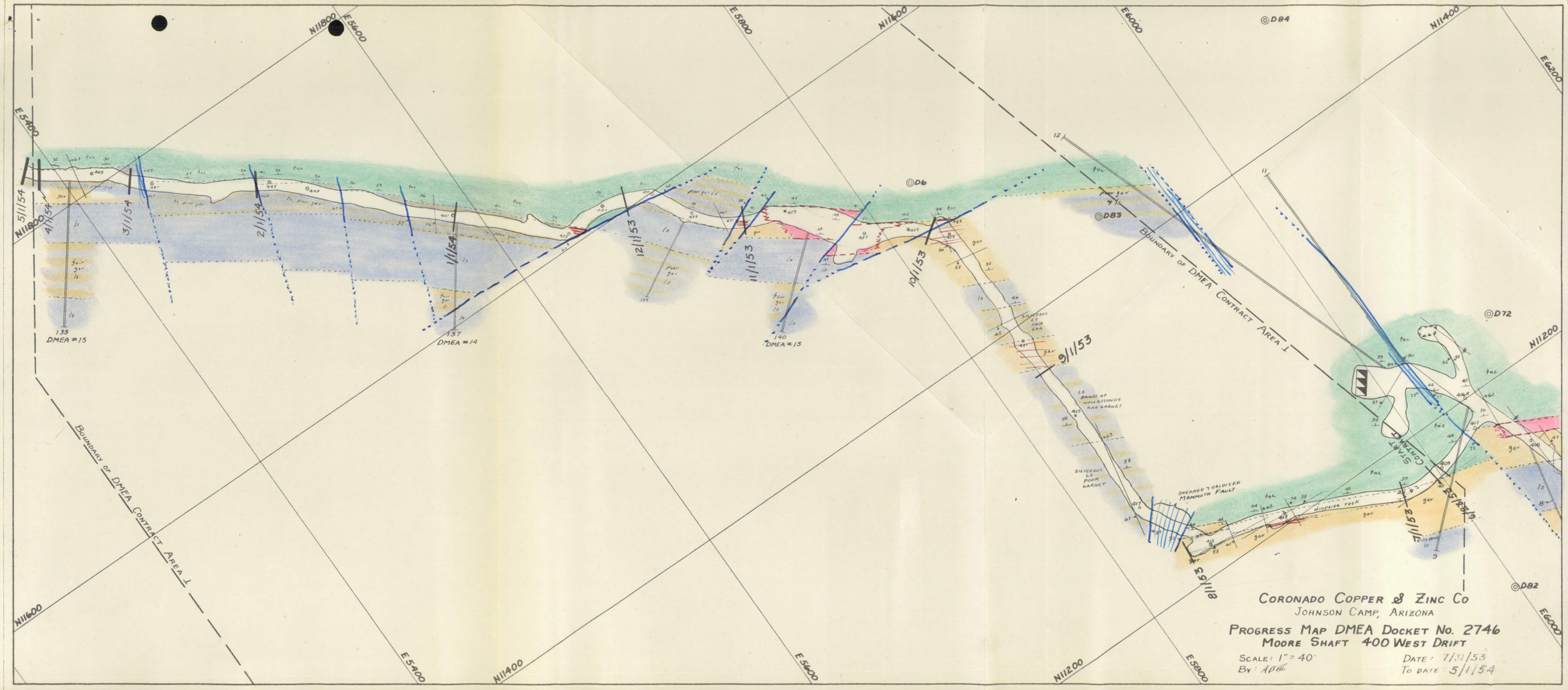
Results: No ore, poor garnetite.

Footage			Assays		Core recovery	Log	Description and Averages
From	To	Interval	Cu%	Zn%			
0.0	6.0	6.0			100		Poor garnetite limestone.
6.0	38.0	32.0			100		Limestone with hnf bands. Very rare garnetite. Traces sulfides.
38.0	43.0	5.0			100		Xls, no hnf bands.
43.0	54.0	11.0			100		Fair garnetite with xls bands. No hnf.
54.0	59.0	5.0			100		Fault. Strongly sheared, heavy limonite stain, some chlorite and quartz.
59.0	66.0	7.0			86		Siliceous ls, occasional hnf bands.

D. D. Hole MU 137 (DMEA #14)
Johnson Camp, Arizona
Moore 400 W. HW Dr.
Scale: 1" = 40'






CORONADO COPPER & ZINC CO
JOHNSON CAMP, ARIZONA
PROGRESS MAP DMEA DOCKET NO. 2746
MOORE SHAFT 400 WEST DRIFT
SCALE: 1" = 40'
BY: ABW
DATE: 7/31/53
TO DATE: 5/1/54
BOUNDARY OF DMEA CONTRACT AREA I
BOUNDARY OF DMEA CONTRACT AREA I
START CONTRACT
SHEARED & OXIDIZED MAMMOTH FAULT
DIOPSIDE ROCK
SILICEOUS LS POOR GARNET
LS BANDS OF WOLLASTONITE AND GARNET
SILICEOUS LS FAIR GAR
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UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

224 New Customhouse
Denver 2, Colorado

April 22, 1954.

Ok
Betty

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket No. 2746 (Copper-Zinc), Contract No. Idm-E522, Coronado Copper and Zinc Co.'s Republic Copper-Zinc Mine, Johnson's Camp, Cochise County, Arizona.

Enclosed are two copies of the Operator's Monthly Progress Report, Form MF-104 and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data pertaining to work under the subject contract for the month of March 1954.

W H King
W. H. King

Enclosures

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

224 New Customhouse
Denver 2, Colorado

April 19, 1954.

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Co.'s Republic Copper-Zinc Mine, Johnson's Camp, Cochise County, Arizona. Operator's Monthly Progress Report for the period March 1954.

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

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 50 per cent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks:

Date of Report	April 12, 1954.
Date Received in Field Office	April 14, 1954.
Date Received in Region Office	April 16, 1954.

W. H. King

W. H. King

Enclosures

RDB:cwm

cc: Contract
Secretary to the Oper. Comm. (2)
WRStorms
Chron.

April 14, 1954

Memorandum

To : W. H. King, Chief, Mining Division, Region IV

From : Chief, Mining Methods Br., Mining Div., Region IV

Subject : March 1954 Progress Report, DMEA Contract Idm-E522, Docket DMEA-2746, Coronado Copper & Zinc Co.'s Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Ariz.

Enclosed in quintuplicate are

(1) Bureau of Mines engineer's report;
(2) Operator's narrative report with map;
(3) Forms MF-104 and MF-104A.

Also enclosed are 2 extra copies of our engineer's report.

As all work is in accordance with the terms of the contract, I recommend that the Government's share of the costs be paid.

Walter R. Storms

Walter R. Storms

CC W. H. King (6)
DMEA-2746
DF

WRStorms:frj

April 14, 1954

Memorandum

To : Walter R. Storms, Chief, Mining Methods Br., Mining Div., Region IV, Tucson, Ariz.

From : William R. Hardwick, Mining Engineer, Tucson, Ariz.

Subject : Progress Report for March 1954, Docket DMEA-2746, Contract Idm-K522, Cerenado Copper and Zinc Co.'s Republic Copper-Zinc Mine, Cochise County, Ariz.

The Republic mine was visited on April 9, 1954. Mr. Arthur Baker, III, Geologist for the company, assisted in measuring the progress for March.

The 400 west hanging wall drift was advanced 60.5 feet during the month of March under the DMEA contract. No diamond drilling was done under the contract in March.

On March 17, Mr. Fred K. Grey, manager of the company, requested authorization to drill four holes from the 400 west hanging wall drift. This request was approved by the Field Team, Region IV, on March 29, and Mr. Baker stated that the company would probably start this work in April.

With the advance of 60.5 feet during March, the total drifting and crosscutting to date is as follows:

	Drift	Crosscut	Total	Cost
To February 28, 1954	679.0 ft.	265.5 ft.	944.5	$37,780.00
March	60.5	—	60.5	2,420.00
To March 31, 1954	739.5	265.5	1,005.0	40,200.00

In addition to underground work the contract provided for surface diamond drilling. A total of 6,065 feet of surface drilling has been completed at a cost of $23,496.50.

The total costs to date are as follows:

	February	To Date
Drifting and crosscutting	$2,420.00	$40,200.00
Surface diamond drilling	—	23,496.50
Underground diamond drilling	—	—
Total	$2,420.00	$63,696.50
Government's part	$1,210.00	$31,848.25

CC W. H. King (Orig. & 6)
DMEA-2746
DF

WRHardwick:fri

No ore was discovered by the drifting during March. The operator continued to work in the 400 west 300 stope and has started a new raise. During March the operator reports 401.18 tons of ore with a grade of 1.63 percent copper and 7.11 percent zinc. The ore discovered under the contract and mined to date is listed below by months:

	Tons	Percent Copper	Percent Zinc
October 1953	438.93	1.68	4.97
November	220.00	1.65	6.43
December	197.24	1.38	5.44
January 1954	240.53	2.65	7.63
February	194.57	2.31	7.74
March	401.18	1.63	7.11
Total	1,712.45	1.84	6.38

Records at the Tucson office of the U. S. Bureau of Mines indicate that Coronado Copper and Zinc Co. has made one royalty payment in the amount of $135.38.

The operator has presented Forms MF-104 and MF-104A, together with a map and narrative report for the month of March. Payment has been requested for the Government's agreed part or 50 percent of the cost of the 60.5 feet of drift, that was completed in March, at the agreed unit cost of $40.00 per foot. The 60.5 feet of drifting was in accordance with the provisions of the contract and is approved. The total cost of the 60.5 feet of drift was $2,420.00 and the Government's agreed part is $1,210.00. It is recommended that the operator be paid this amount as provided by the contract.

William R. Hardwick

William R. Hardwick, Mining Engineer
Mining Methods Branch
Mining Division, Region IV

April 12, 1954

Mr. Walter R. Storms, Chief
U. S. Bureau of Mines
P. O. Box 4097
University Station
Tucson, Arizona

Re: Docket No. IMEA-2746
Contract Idm E522

Dear Mr. Storms:

Following is the report to accompany Forms 104 and 104-A in connection with the work done under Contract Idm E522 for the full month of March:

DRIFTING. (See progress map). The 400 Level West Hanging Wall Drift was continued, but various difficulties slowed the advance. The white tactite-garnetite contact was offset about 10' by a fault in the last few feet of last month's drifting. The drift was turned to reach the contact again, and then followed the contact as usual. Total advance for the month was 60.5', with the face on April 1st being at station 449 plus 32.5'. During March 401.18 tons of ore averaging 1.63% Cu, 7.11% Zn were milled from the 400 West 200 Stope in the ore near Station 427 (tonnage and grade corrected to mill heads from car counts and car grab samples).

DIAMOND DRILLING. No diamond drilling was done under the IMEA contract during the month.

Very truly yours,

CORONADO COPPER & ZINC CO.

By Fred E. Gray
Fred E. Gray
Mine Manager

FEG:rk

4 cos to Mr. W. R. Storms
1 cc Mr. George Dub
1 cc Mine Office

U. S. BUREAU OF MINES
MINING DIVISION
APR 1 2 1954
TUCSON, ARIZONA

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

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of March 1954 Docket No. DMEA 2746 Contract No. Idm 3522
Operator's Name Coronado Copper & Zinc Company Minerals Copper & Zinc
Address Dragoon, Arizona
Contract Amount, $ 99,050.00 Government Participation: 50 % Amount, $ 49525.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) ~~Independent~~ Contracts: Short Form AI EI						
Drilling		23,496.50	23,496.50			
Bulldozing		10,620.00	10,620.00			
Crosscutting	2420.00	27,160.00	29,580.00			
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$2420.00	$61276.50	$63696.50			

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

Date April 12, 1954 *Payee Coronado Copper & Zinc Co.

Per [signature] Title Mine Manager

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

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

(Instructions on reverse)

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

$ 12.10 00

Signature [signature]
(Authorized Certifying Officer)

Date 4/20/54 Vou. No. 54-111

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. dm P-512 in accordance with the terms of the contract.

Signature William R. Hardwick WRH Title Mining Engineer Date 4/14/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: K. DZB

Signature W. H. King Title Executive Officer Date APR 19 1954

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

GPO 83-38476

Form MF-104A
(April 1952)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of March 195 54 Docket No. DMEA 2746 Contract No. Ida 1522

Operator's Name Coronado Copper & Zinc Company Minerals Copper & Zinc

Address Bragson, Arizona

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting	Feet	$2420.00	60.5	$29,580.00	739.5	$40.00	1520	$40.00
Crosscutting				10,620.00	265.5	40.00		
Raising								
Shafts								
Winzes								
Drilling: Core AX	Feet			10,210.50	2269	4.50	8500	4.50
Churn XX	"			13,286.00	3796	3.50		3.50
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
								TOTAL COSTS AUTHORIZED BY CONTRACT
TOTAL DISTRIBUTED COSTS		$2420.00		$63,696.50				
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		$2420.00		$63,696.50				

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

Date April 12, 1954 Operator Coronado Copper & Zinc Co.

Per [signature] Title Mine Manager

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

REMARKS:

(Instructions on reverse)

(For Government use only)

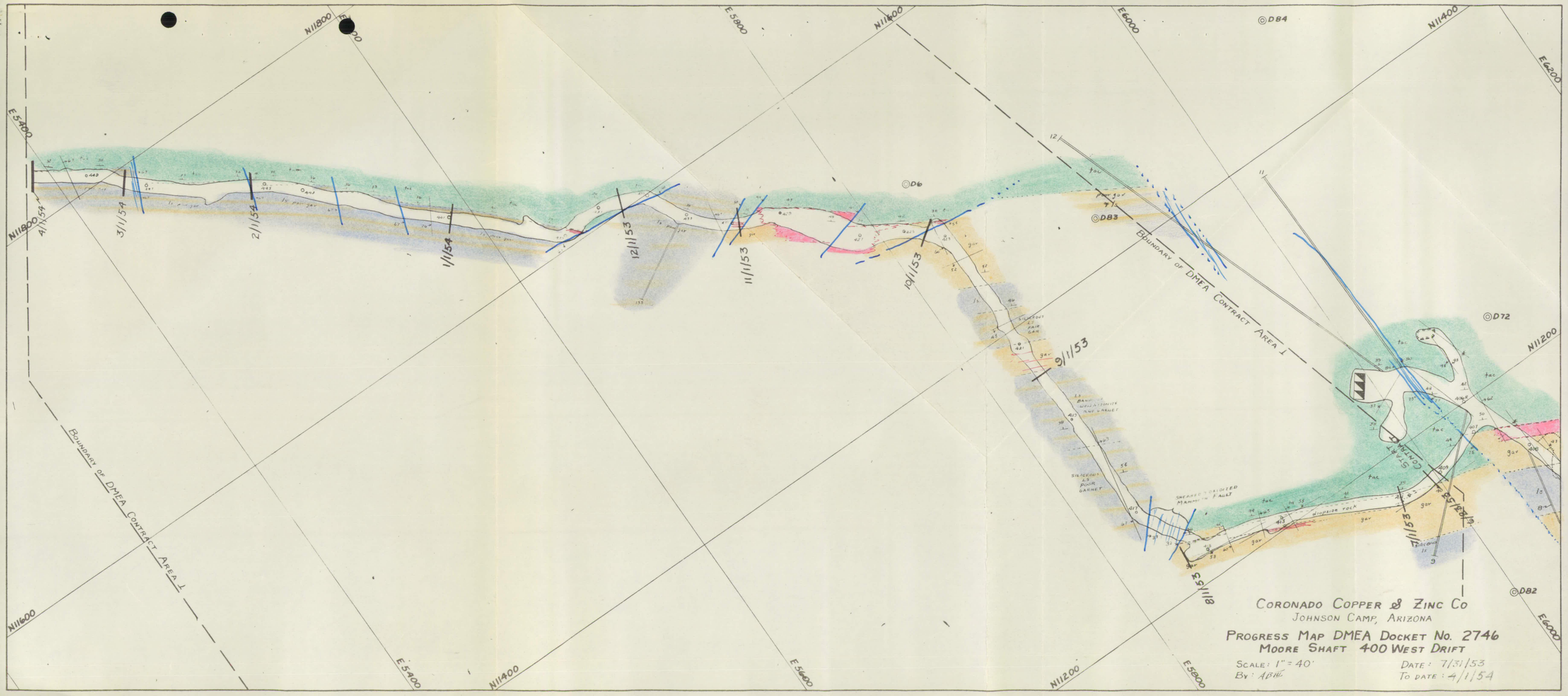
INSTRUCTIONS

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

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

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

GPO 83-38475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CORONADO COPPER & ZINC CO
JOHNSON CAMP, ARIZONA
PROGRESS MAP DMEA DOCKET NO. 2746
MOORE SHAFT 400 WEST DRIFT
SCALE: 1" = 40'
BY: ABW
DATE: 7/31/53
TO DATE: 4/1/54

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

224 New Customhouse
Denver 2, Colorado

March 24, 1954

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region IV

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

Enclosed are two copies of the Operator's Monthly Progress Report, Form MF-104 and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data pertaining to work under the subject contract for the month of February 1954.

John F. Shaw
For W. H. King

Enclosures

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

224 New Customhouse
Denver 2, Colorado

March 22, 1954.

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Company's Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Arizona. Operator's Monthly Progress Report for the period February 1954.

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

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for per cent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks:

Date of Report	March 9, 1954.
Date Received in Field Office	March 12, 1954.
Date Received in Region Office	March 22, 1954.

John F. Shaw
For W. H. King

Enclosures

RDB:cwm

cc: Contract
Secretary to the Oper. Comm. (2)
WRStorms
Chron.

March 18, 1954

Memorandum

To : W. H. King, Chief, Mining Division, Region IV

From : Chief, Mining Methods Br., Mining Div., Region IV

Subject : February 1954 Progress Report, Contract Idm-2522, Docket DMEA-2746, Coronado Copper & Zinc Co.'s Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Ariz.

Enclosed in quintuplicate are the following:

(1) Bureau of Mines engineers report;

(2) Operator's narrative report with map;

(3) Forms MF-104 and MF-104A.

Also enclosed are 2 extra copies of our engineer's report.

As all work is in accordance with the terms of the contract, I recommend that the Government's share of the costs be paid.

Walter R. Storms

Walter R. Storms

CC W. H. King (6)
DMEA-2746
DF

WRStorms:fr;

March 18, 1954

Memorandum

To : Walter R. Storms, Chief, Mining Methods Br., Mining Div., Region IV, Tucson, Ariz.

From : William M. Hardwick, Mining Engineer, Tucson, Ariz.

Subject : Progress Report for February 1954, Docket DMEA-2746, Contract Ida-E322, Coronado Copper and Zinc Co.'s Republic Copper-Zinc Mine, Cochise County, Ariz.

John M. Faick, Geologist, U. S. Geological Survey, and the undersigned visited the Republic Mine on March 17, 1954. Royalty payments, an amendment to the contract to authorize additional surface drilling, and underground drilling authorized by Stage II of the contract were discussed with Mr. Fred E. Grey, mine manager, and Mr. Arthur Baker III, Geologist for the company. Mr. Baker assisted in measuring the progress for February and examining the 400 W. 200 Raise which is in ore that was discovered by the project.

This contract provides for underground crosscutting and drifting and surface diamond drilling.

Surface Diamond Drilling

Stage I of the contract provides for "11 EX or AX size drill holes totaling approximately 6,500 feet but averaging 590 feet per hole". In November 1953, the operator had completed 11 holes for a total of 6,065 feet at a cost of $23,496.30. No ore was discovered by this drilling but subsurface geological features were found that appeared to have a possible significance on ore deposition. Mr. Arthur Baker is making a detailed geological survey. Although not yet complete, this survey has developed information that indicates two, or possibly three additional drill holes from the surface might be successful in finding ore. Mr. Grey was advised to submit a request for an amendment to the contract to allow these holes. As the work now stands it appears that this amendment will not increase the initial total estimated cost of the project.

CC W. H. King (Orig. & 6)
DMEA-2746
DF

WMHardwick:frj

In addition to the above surface drilling, Mr. Grey proposed some underground drilling which is authorized under Stage II of the contract. He was advised to submit a request for approval to start this work.

No diamond drilling was done in February.

Drifting and Crosscutting

During February, the 400 level west hanging wall drift was advanced a total of 74.5 feet. The total drifting and crosscutting to date is as follows:

	Drift	Crosscut	Total	Cost
To January 31,1954	604.5 ft.	265.5 ft.	870.0 ft.	$34,800.00
February 1954	74.5 ft.	-	74.5 ft.	2,980.00
To February 28,1954	679.0 ft.	265.5	944.5	$37,780.00

The total costs for the month of February are:

	February	To Date
Drifting and crosscutting	$2,980.00	$37,780.00
Diamond drilling	—	23,496.50
Total	$2,980.00	$61,276.50
Government's part	$1,490.00	$30,638.25

During the month of February, the operator continued work in the 400 W. 200 raise at its own expense in ore discovered by the project. The total ore mined to date is as follows:

	Tons	Percent copper	Percent zinc
October	458.93	1.68	4.97
November	220.00	1.65	6.43
December	197.24	1.38	5.44
January	240.53	2.65	7.63
February	194.57	2.31	7.73
Total	1,311.27	1.90	6.15

Records at the Tucson office of the U. S. Bureau of Mines indicate that the Coronado Copper & Zinc Co. has made one royalty payment in the amount of $135.38. Royalty payments were discussed with Mr. Grey on March 17 and he stated that he was cognizant of the fact that the company was behind with respect to royalty payments, but that things came under the direction of Mr. C. W. Six, treasurer of the company, who had been very busy in connection with income tax work and who very soon would be able to get the royalty payments straightened out.

The operator has presented Forms MF-104 and MF104A, together with a map and narrative report for the month of February. Payment is requested for the Government's agreed part, or 50 percent of the cost of the 74.5 feet of drift that were completed in February. The total cost of this work was $2,980.00 and the Government's part is $1,490.00. This drifting was in accordance with the terms of the contract and is approved. It is recommended that the operator be paid $1,480.00.

William R. Hardwick

William R. Hardwick, Mining Engineer
Mining Methods Branch
Mining Division, Region IV

March 9, 1954

Mr. Walter R. Storms, Chief
U.S. Bureau of Mines
P. O. Box 4097
University Station
Tucson, Arizona

Re: Docket No. DMEA-2746
Contract Idm E522

Dear Mr. Storms:

Following is the report to accompany Forms 104 and 104-A in connection with the work done under Contract Idm E522 for the full month of February:

DRIFTING. (See progress map). The 400 Level West Hanging Wall Drift was continued on a one shift per day basis, following the contact between white tactite and garnetite. The contact was offset about three feet by a small fault at Station 445 plus 9 feet, and again at Station 447 plus 5 feet. Total advance for the month was 74.5 feet, with the face on March 1st being at Station 447 plus 13 feet. During the month 194.57 tons of ore averaging 2.31% Cu, 7.73% Zn were milled from the 400 W 200 Raise in the ore near Station 427 (tonnages and grade corrected to mill heads from car counts and car grab samples).

DIAMOND DRILLING. No diamond drilling was done under the DMEA contract during the month.

Very truly yours,

CORONADO COPPER AND ZINC COMPANY

By Fred E. Gray
Fred E. Gray - Mine Manager

FEG-o

4 cos to Mr. W. R. Storms
1 co Mr. George Dub
1 co Mine Office

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

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

RECEIVED
MAR 29 1954

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

Month of February, 1954 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper and Zinc Company Minerals Copper & Zinc
Address Dragoon, Arizona
Contract Amount, $ 99,050.00 Government Participation: 50 % Amount, $ 49,525.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						4/5/54 J.W.A.O.
Drilling Ax & Ex		$23,496.50	$23,496.50			
Bulldozing						
Crosscutting		10,620.00	10,620.00			
Drifting	$2980.00	24,180.00	27,160.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$2980.00	$58,296.50	$61,276.50	2980.00	58,296.50	61,276.50

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

Date March 9 *Payee Coronado Copper & Zinc Co.

Per Mel M. Gray Title Mine Manager

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

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

(Instructions on reverse)

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

$ 1490.00

Signature (Authorized Certifying Officer)

Date 3/24/54 Vou. No. 54-96

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. dmE 522 in accordance with the terms of the contract.

Signature William R. Hardwick Title Mining Engineer Date 3/18/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: E.D.B.

Signature John F. Shaw for W. H. King Title Executive Officer Date MAR 22 1954

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 29 1954

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of February 195 4 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper & Zinc Company Minerals Copper & Zinc
Address Dragoon, Arizona

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
	Feet	$2,980.00	74.5	$27,160.00	679.0	$40.00)	1520	$40.00
Drifting				10,620.00	265.5	40.00)		
Crosscutting								
Raising								
Shafts								
Winzes Ax	Feet			10,210.50	2269	4.50)	8500	4.50
Drilling: Core Ex	Feet			13,286.00	3796	3.50)		3.50
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Total Distributed Costs		$2,980.00	74.5	$61,276.50				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		$2,980.00		$61,276.50				

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

Date March 9, 1954 Operator Coronado Copper & Zinc Co.

Per Ralph E. Gray Title Mine Manager

Remarks:

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

(Instructions on reverse)

(For Government use only)

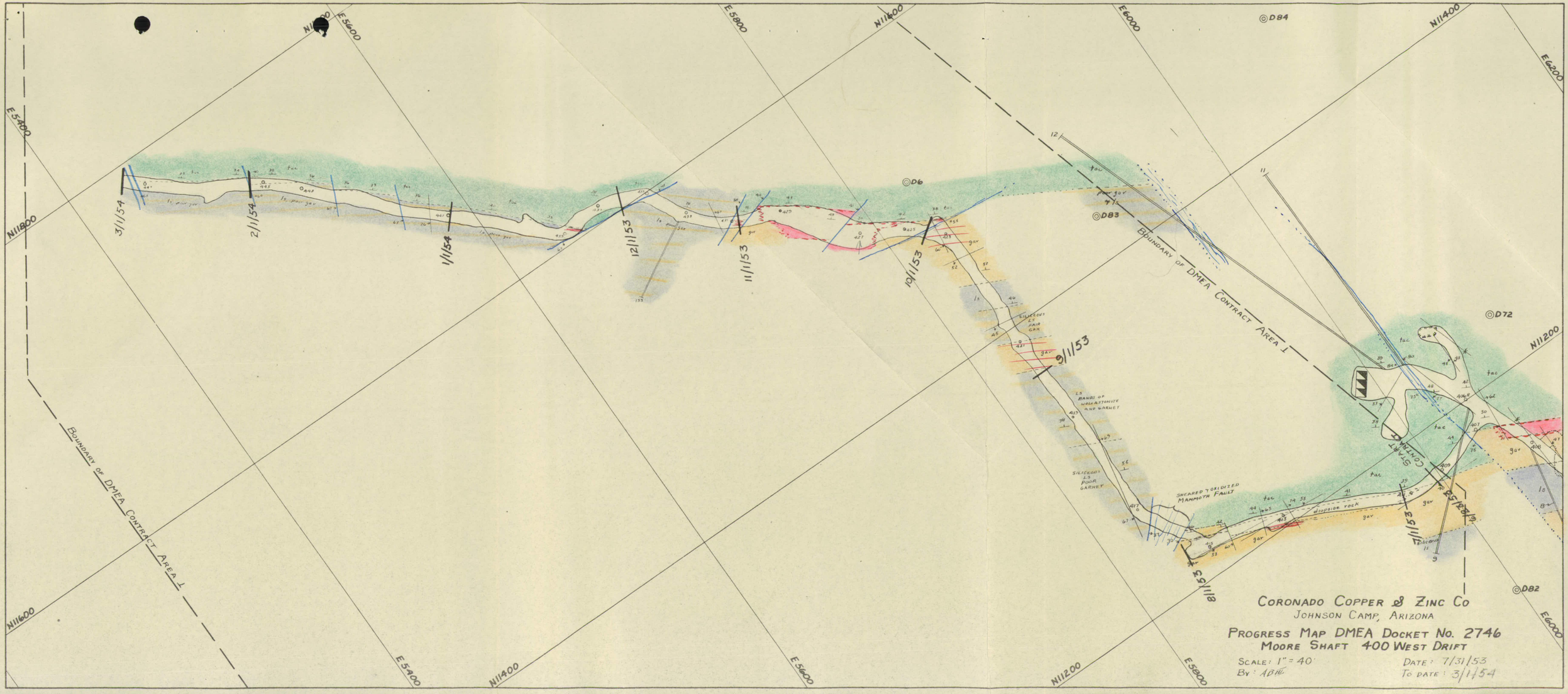
INSTRUCTIONS

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

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

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

GPO 83-38475


CORONADO COPPER & ZINC CO
JOHNSON CAMP, ARIZONA
PROGRESS MAP DMEA DOCKET NO. 2746
MOORE SHAFT 400 WEST DRIFT
SCALE: 1" = 40'
BY: ABH
DATE: 7/31/53
TO DATE: 3/1/54
BOUNDARY OF DMEA CONTRACT AREA I
BOUNDARY OF DMEA CONTRACT AREA I
START CONTACT
SHEARED & OXIDIZED MAMMOTH FAULT
diopside rock
SILICEOUS LS FAIR GAR
LS BANDS OF WOLLASTONITE AND GARNET
SILICEOUS LS POOR GARNET
3/1/54
2/1/54
1/1/54
12/1/53
11/1/53
10/1/53
9/1/53
7/1/53
5/1/18
N11800
N11600
N11400
N11200
N11000
E5400
E5600
E5800
E6000
E6200
D84
D83
D6
D72
D82

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

RECEIVED
MAR 8 1954

224 New Customhouse
Denver 2, Colorado

March 3, 1954.

Betty

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Co.'s Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Arizona.

Enclosed are two copies of the Operator's Monthly Progress Report, Form MF-104 and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data pertaining to work under the subject contract for the month of January 1954.

W. H. King

Enclosures

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

224 New Customhouse
Denver 2, Colorado

February 15, 1954.

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Co.'s Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Arizona. Operator's Monthly Progress Report for the period January 1954.

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

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 50 per cent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks:

Date of Report	February 6, 1954.
Date Received in Field Office	February 10, 1954.
Date Received in Region Office	February 15, 1954.

W. H. King

W. H. King

Enclosures

RDB:cwm

cc: Contract
Secretary to the Oper. Comm. (2)
WRStorms
Chron.

February 11, 1954

Memorandum

To : W. H. King, Chief, Mining Division, Region IV

From : Chief, Mining Methods Br., Mining Div., Region IV

Subject : January 1954 Progress Report, Contract Idm-E522, Docket DMEA-2746, Coronado Copper & Zinc Co.'s Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Ariz.

Enclosed in quintuplicate are the following:

(1) Bureau of Mines engineer's report;

(2) Operator's narrative report with map;

(3) Forms MF-104 and MF-104A.

Also enclosed are 2 extra copies of our engineer's report.

As all work is in accordance with the terms of the contract, I recommend that the Government's share of the costs be paid.

Walter R. Storms

Walter R. Storms

CC W. H. King (6)
DMEA-2746
DF

WRStorms:frj

February 11, 1954

Memorandum

To : Walter R. Stearns, Chief, Mining Methods Br., Mining Div., Region IV, Tucson, Ariz.

From : William R. Hardwick, Mining Engineer, Tucson, Ariz.

Subject : Progress Report for January 1954, Docket DMEA-2746, Contract Idm-8522, Coronado Copper and Zinc Co.'s Republic Copper-Zinc Mine, Cochise County, Ariz.

The Republic mine was visited on February 3, 1954. Mr. Joe Sierakoski, Mine Engineer, assisted in measuring the progress for the month.

The 400 level west hanging wall drift was advanced 124.5 feet during the month of January 1954. The favorable beds were followed and were slightly mineralized, but not to the extent that they could be called ore.

The status of the drifting and crosscutting under the contract is shown by the following tabulation:

	Drift	Crosscut	Total	Cost
To December 31, 1953	480.0 ft.	265.5 ft.	745.5 ft.	$29,820.00
January 1954	124.5 ft.	-	124.5 ft.	4,980.00
To January 31, 1954	604.5 ft.	265.5 ft.	870.0 ft.	34,800.00

No diamond drilling was done during January. To date, 5,965 feet of diamond drill hole have been completed at a cost of $23,496.50.

The total costs for the month of January are:

	January	To Date
Drifting and crosscutting	$4,980.00	$34,800.00
Diamond drilling	-	23,496.50
Total	$4,980.00	$58,296.50
Government's part	$2,490.00	$29,148.25

CC W. H. King (Orig. & 6)
DMEA-2746
MF

WRHardwick:frj

During the month of January the operator continued the 400-W 200 raise at its own expense in the ore discovered by the project. The total ore mined to date is as follows:

	Tons	Percent Copper	Percent Zinc
October	458.93	1.68	4.97
November	220.00	1.65	6.43
December	197.24	1.38	5.44
January 1954	240.53	2.65	7.63
Total	1,116.70	1.83	5.88

Records of the Tucson office of the U. S. Bureau of Mines indicate that the Coronado Copper and Zinc Co. has made one royalty payment in the amount of $135.38.

The Operator has presented a voucher, Form MF-104, on which it claims reimbursement for the Government's agreed portion of the costs of the 124.5 feet of drifting that were completed in January 1954. An acceptable narrative report, map, and completed Form MF-104A accompany the voucher. The 124.5 feet of drifting are in accordance with the provisions of the contract and are approved. The contract provides that the Government will reimburse the Operator to the amount of 50 percent of an agreed estimated cost of $40.00 per foot of drifting. The total cost of the 124.5 feet of drifting that were completed in January was $4,980.00, and the Government's part of this is $2,490.00. It is recommended that the operator be paid this amount as provided by the contract.

William R. Hardwick

William R. Hardwick, Mining Engineer
Mining Methods Branch
Mining Division, Region IV

February 6, 1954

Mr. Walter R. Storms, Chief
U.S. Bureau of Mines
P. O. Box 4097
University Station
Tucson, Arizona

Re: Docket No. DMEA-2746
Contract IDM 8522

Dear Mr. Storms:

Following is the report to accompany Forms 104 and 104-A in connection with the work done under Contract Idm 8522 for the full month of January:

DRIFTING. (See progress map). The 400 Level West Hanging Wall Drift was continued along the contact between white tactite and poorly garnetized limestone, offset about three feet by two small faults. Total advance for the month was 124.5', with the face on February 1st being at Station 445 plus 8'. During the month 240.53 tons of ore averaging 2.65% Cu, 7.63% Zn were milled from the 400 W 200 Raise in the ore near Station 427 (tonnage and grade corrected to mill heads from car counts and car grab samples).

DIAMOND DRILLING. No diamond drilling was done under the DMEA contract during the month.

Very truly yours,

CORONADO COPPER AND ZINC COMPANY

By Fred E. Gray
Fred E. Gray - Mine Manager

FEG-c

4 ccs to Mr. W. R. Storms
1 cc Mr. George Dub
1 cc Mine Office

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of January, 1954 Docket No. DMEA 2746 Contract No. Idm E 522
Operator's Name Coronado Copper and Zinc Company Minerals Copper & Zinc
Address Dragoon, Arizona
Contract Amount, $ 99,050.00 Government Participation: 50 % Amount, $ 49,525.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling Ax & Ex		$23,496.50	$23,496.50			3/17/54 J.W.A.
Bulldozing						
Crosscutting		10,620.00	10,620.00			
Drifting	$4980.00	19,200.00	24,180.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$4980.00	$53,316.50	$58,296.50	4980.00	53316.50	58,296.50

I certify that the above bill is correct and just and that payment therefor has not been received.
Date Feb. 6, 1954 *Payee Coronado Copper and Zinc Co.
Per [signature] Title Mine Manager

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

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

(Instructions on reverse)

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

$2490.00

Signature [signature]
(Authorized Certifying Officer)
Date 2/26/54 Voucher 54-84
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. DMEA 572 in accordance with the terms of the contract.

Signature William R. Hardwick Title Mining Engineer Date 2/11/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: R.D.B.

Signature W. H. King Title Executive Officer Date FEB 15 1954

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
Received
FEB 8 - 1954

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of Jan. 1954 Docket No. DMEA 2746 Contract No. Idm E 522
Operator's Name Coronado Copper and Zinc Company Minerals Copper & Zinc
Address Dragoon, Arizona

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting	Feet	$4980.00	124.5	$24,180.00	604.5	$40.00)	1520	$40.00
Crosscutting				10,620.00	265.5	40.00)		
Raising								
Shafts								
Winzes								
Drilling: Core Ax	Feet			10,210.50	2269	4.50)	8500	4.50
Churn Ex	Feet			13,286.00	3796	3.50)		3.50
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		$4980.00	124.5	$58,296.50				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		$4980.00		$58,296.50				

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

REMARKS:

Date Feb.6 1954 Operator Coronado Copper and Zinc Co.

Per [signature] Title Mine Manager

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

(Instructions on reverse)

(For Government use only)

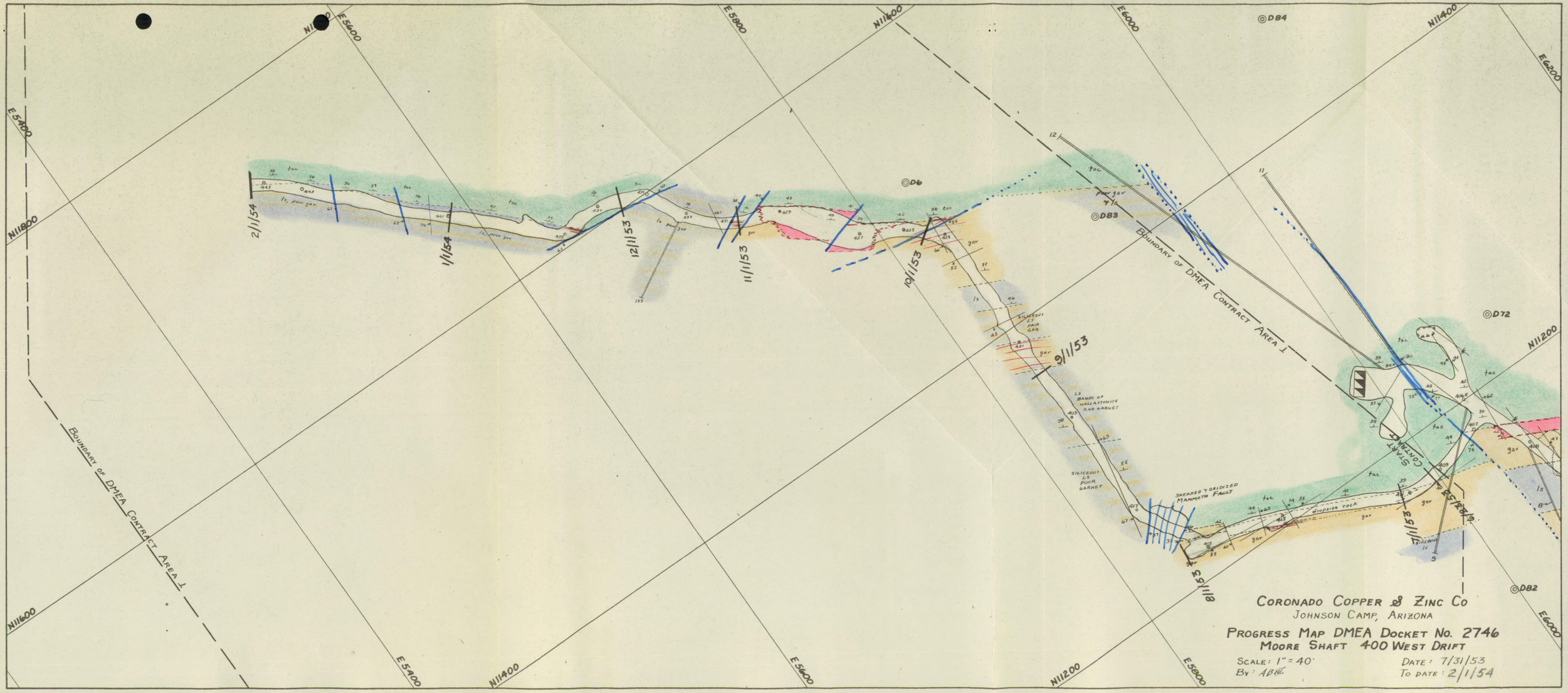
INSTRUCTIONS

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

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

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

GPO 83-38475


CORONADO COPPER & ZINC CO
JOHNSON CAMP, ARIZONA
PROGRESS MAP DMEA DOCKET NO. 2746
MOORE SHAFT 400 WEST DRIFT
SCALE: 1" = 40'
BY: ABW
DATE: 7/31/53
TO DATE: 2/1/54
BOUNDARY OF DMEA CONTRACT AREA I
SHEARED & OXIDIZED MAMMOTH FAULT
SILICEOUS LS FAIR GAR
LS BANDS OF WOLLASTONITE AND GARNET
SILICEOUS LS POOR GARNET
MOORE SHAFT CONTINUED
N11400
N11200
N11600
N11800
E5400
E5600
E5800
E6000
E6200
D84
D6
D83
D72
D82
2/1/54
1/1/54
12/1/53
11/1/53
10/1/53
9/1/53
8/1/53
7/1/53

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 4 1954

2/5/54 - Received by J. W. L.

224 New Customhouse
Denver 2, Colorado

February 1, 1954.

alt
Betty

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Co.'s Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Arizona.

Enclosed are two copies of the Operator's Monthly Progress Report, Form MF-104 and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data pertaining to work under the subject contract for the month of December 1953.

W. H. King

Enclosures

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

224 New Customhouse
Denver 2, Colorado

January 20, 1954.

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Co.'s Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Arizona. Operator's Monthly Progress Report for the period December 1953.

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

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks:

Date of Report	January 9, 1954.
Date Received in Field Office	January 13, 1954.
Date Received in Region Office	January 18, 1954.

W. H. King

Enclosures

RDB:cwm

cc: Contract
Secretary to the Oper. Comm. (2)
WRStorms
Chron.

January 14, 1954

Memorandum

To : W. H. King, Chief, Mining Division, Region IV

From : Chief, Mining Methods Br., Mining Div., Region IV

Subject : December 1953 Progress Report, Contract Idm-E522, Docket DMEA-2746, Coronado Copper & Zinc Co.'s Republic Copper-Zinc Mine, Johnson Camp, Cochise County, Ariz.

Enclosed in quintuplicate are the following:

(1) Bureau of Mines engineer's report;

(2) Operator's narrative report with map;

(3) Forms MF-104 and MF-104A.

Also enclosed are 2 extra copies of our engineer's report.

As all work is in accordance with the terms of the contract, I recommend that the Government's share of the costs be paid.

Walter R. Storms

Walter R. Storms

CC W. H. King (6)
DMEA-2746
DF

WRStorms:frj

January 14, 1954

Memorandum

To : Walter R. Storms, Chief, Mining Methods Br., Mining Div., Region IV, Tucson, Ariz.

From : William R. Hardwick, Mining Engineer, Tucson, Ariz.

Subject : Progress Report for December 1953 Docket DMEA-2746, Contract Idm-E522, Coronado Copper and Zinc Co.'s Republic copper-zinc mine, Cochise County, Ariz.

The Coronado Copper&Zinc Co.'s Republic Mine was visited on January 7, 1954. Mr. Joe Sierakoski, Mine Engineer, assisted in measuring the progress for the month.

In the month of December 1953, the 400 level west hanging wall drift was advanced 113 feet. The favorable beds, which had been displaced by a N. 80° W. fault, again were encountered and followed although no ore was found.

The status of the drifting and crosscutting under the contract is shown by the following tabulation:

	Drift	Crosscut	Total	Cost
Completed by November 30	367 ft.	265.5 ft.	632.5 ft.	$25,300.00
Advance in December	113 ft.	—	113. ft.	4,520.00
Completed to December 31	480 ft.	265.5 ft.	745.5 ft.	$29,820.00

No diamond drilling was done in December. The company geologist is making an extensive surface survey to aid in the location of future prospect drilling. To date, 3,965 feet of diamond drill hole have been completed at a cost of $23,496.50.

The total costs for the month of December are as follows:

	December	To date
Diamond drilling	———	$23,496.50
Drifting	$4,520.00	29,820.00
Total	4,520.00	53,316.50
Government's part	$2,260.00	$26,658.25

CC W. M. King (Orig. & 6)
DMEA-2740
DF

WRHardwick:frj

During the month of December, the operator started a raise and mined 197.24 tons of ore from the area on the 400-level where ore had been discovered in October. No ore was discovered by the drifting in December.

The ore mined to date is as follows:

	Tons	Percent Copper	Percent Zinc
October	458.93	1.68	4.97
November	220.00	1.65	6.43
December	197.24	1.38	5.44
Total	876.17	1.60	5.40

The Coronado Copper and Zinc Company has made one royalty payment in the amount of $135.38. This royalty payment was intended to cover the royalty due the Government on the ore that was mined in October. However, the royalty was computed on the value of the ore as mined and not on the value of the concentrate as sold. The correct method of computing the royalty was explained to Mr. Fred E. Grey, Mine Manager, on January 7, 1954.

The Operator has presented a Form MF-104 on which it claims reimbursement for the Government's agreed portion of the costs of the 113 feet of drifting that were completed in December 1953. An acceptable narrative report and map accompany the voucher. The 113 feet of drifting are in accordance with the provisions of the contract and are approved. The contract provides that the Government reimburse the Operator to the amount of 50 percent of an agreed estimated cost of $40.00 per foot of drifting. The total cost of the 113 feet of drifting that were completed in December, was $4,520.00, and the Government's part of this is $2,260.00. It is recommended that the operator be paid this amount as provided by the contract.

William R. Hardwick

William R. Hardwick, Mining Engineer
Mining Methods Branch
Mining Division, Region IV

January 9, 1954

Mr. Walter R. Storms, Chief
U.S. Bureau of Mines
P. O. Box 4097
University Station
Tucson 5, Arizona

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

Dear Mr. Storms:

Following is the report to accompany Forms 104 and 104-A in connection with the work done under Contract Idm-E522 for the full month of December:

DRIFTING. (See progress map). The 400 Level West Hanging Wall Drift was continued making a total advance for the month of 113'. For the first 35' the drift continued in white tactite, crosscutting at a small angle toward the favorable bed. At Station 437 plus 21' the hanging wall of the favorable bed was reached, at its intersection with the N 80° W Fault encountered last month. A two-foot band of sulfides extended out along the hanging wall about six feet from this intersection, but no farther. The drift was turned to follow the hanging wall and by the end of the month had been driven 72' (to Station 439 plus 71.5') in limestone with very little garnetite. During the month 197.24 tons of ore averaging 1.38% Cu, 5.25% Zn, were milled from slabbing and raising in the ore near Station 427 (tonnage and grade corrected to mill heads from car counts and car grab samples).

DIAMOND DRILLING. No diamond drilling was done under the DMEA contract during the month.

Very truly yours,

CORONADO COPPER AND ZINC COMPANY

By FEG
Fred E. Gray - Mine Manager

FEG-o

4 ccs to Mr. W. R. Storms
1 cc Mr. George Dub
1 cc Mine Office

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

DEPARTMENT OF THE INTERIOR
Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53
RECEIVED
FEB 4 1954

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

Month of December, 1953 Docket No. DMEA 2746 Contract No. Idm E 522
Operator's Name Coronado Copper and Zinc Company Minerals Copper & Zinc
Address Dragoon, Arizona
Contract Amount, $ 99,050.00 Government Participation: 50 % Amount, $ 49,525.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling Ax & Ex		$23,496.50	$23,496.50			
Bulldozing						
Crosscutting		10,620.00	10,620.00			
Drifting	$4,520.00	14,680.00	19,200.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$4,520.00	$48,796.50	$53,316.50	4,520.00	48,796.50	53,316.50

I certify that the above bill is correct and just and that payment therefor has not been received.
Date Jan. 9, 1954 *Payee Coronado Copper & Zinc Company
Per [signature] Title Mine Manager

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

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

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:
$2260.00
Signature [signature]
(Authorized Certifying Officer)
Date 1/25/54 Vou. No. DMA 54-74
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. dmE 522 in accordance with the terms of the contract.

Signature William R. Hardwick WRH Title Mining Engineer Date 1/14/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: L.D.B.

Signature W. H. King Title Executive Officer Date JAN 20 1954

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

DEPARTMENT OF THE INTERIOR
Defense Minera
RE
FEB - 4 1954

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of December 1953 Docket No. DMEA 2746 Contract No. Idm E 522
Operator's Name Coronado Copper and Zinc Company Minerals Copper & Zinc
Address Dragoon, Arizona

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting	Feet	$4520.00	113	$19,200.00	480	$40.00)	1520	$40.00
Crosscutting				10,620.00	265.5	40.00)		
Raising								
Shafts								
Winzes								
Drilling: Core Ax	Feet			10,210.50	2269	4.50)	8500	4.50
Churn Ex	Feet			13,286.00	3796	3.50)		3.50
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		$4520.00	113	$53,316.50				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc								
TOTAL COSTS		$4520.00		$53,316.50				

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

Date Jan. 9, 1954 Operator Coronado Copper & Zinc Co.

Per [signature] Title Mine Manager

REMARKS:

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

(Instructions on reverse)

(For Government use only)

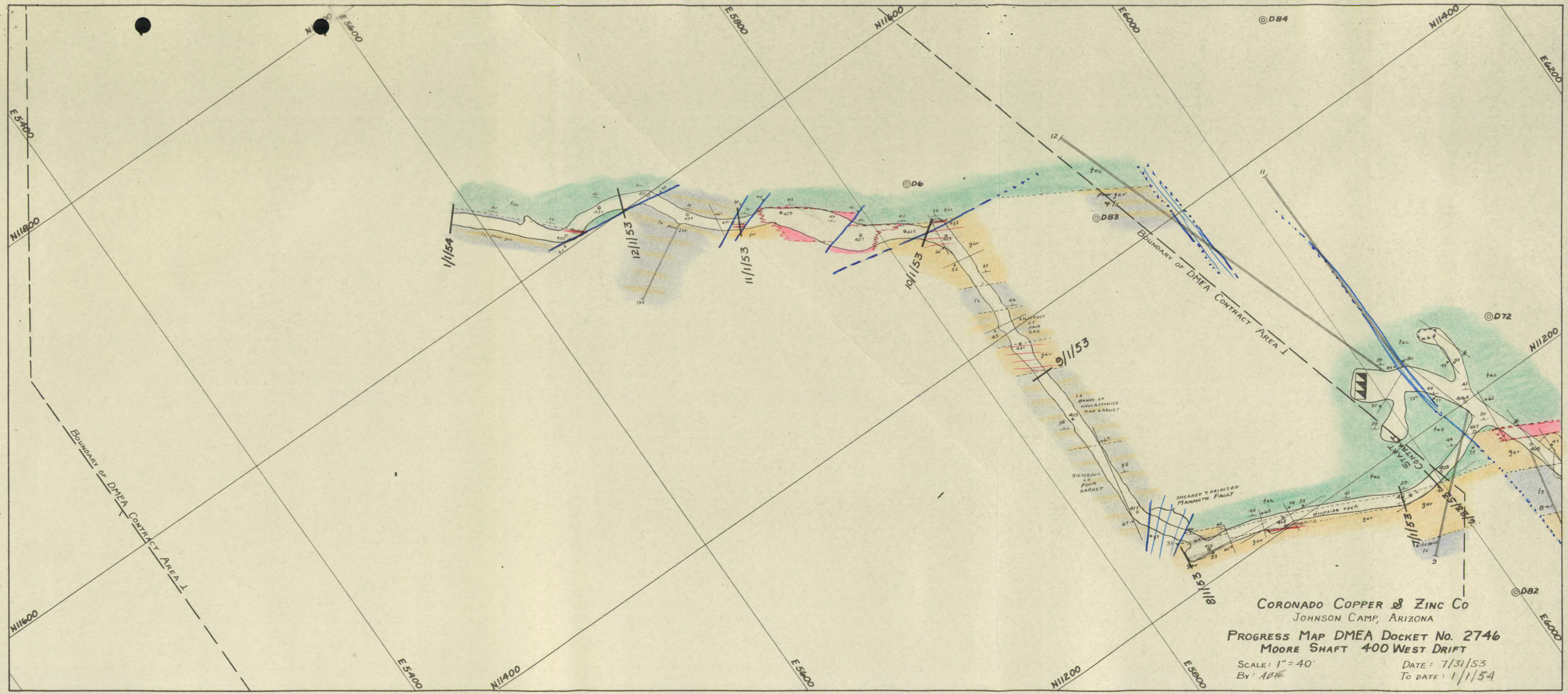
INSTRUCTIONS

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

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

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

GPO 83-38475


CORONADO COPPER & ZINC CO
JOHNSON CAMP, ARIZONA
PROGRESS MAP DMEA DOCKET NO. 2746
MOORE SHAFT 400 WEST DRIFT
SCALE: 1" = 40'
BY: ABH
DATE: 7/31/53
TO DATE: 1/1/54
BOUNDARY OF DMEA CONTRACT AREA
SHEARED & OXIDIZED MAMMOTH FAULT
DIOPSIDE ROCK
SILICEOUS LS POOR GARNET
LS BANDS OF WOLLASTONITE AND GARNET
SILICEOUS LS FAIR GAR
SHAFT CONTINUE
1/1/54
12/1/53
11/1/53
10/1/53
9/1/53
8/1/53
7/31/53
D84
D83
D72
D82
N11400
N11200
N11600
N11800
E5400
E5600
E5800
E6000
E6200

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

221 New Customhouse
Denver 2, Colorado

January 4, 1954

Memorandum

To: Secretary to the Operating Committee
Defense Minerals Exploration Administration

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 2746, Contract Dm-522 (Copper-Zinc) Coronado Copper and Zinc Co., Republic Copper-Zinc Mine, Cochise County, Arizona - Operator's Monthly Progress Report for the period November, 1953

Enclosed are two copies of Operator's Monthly Progress Report Form DF-104 and 104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data pertaining to Docket DMEA 2746, Contract Dm-522, Coronado Copper and Zinc Co., for the period November, 1953.

W. H. King
W. H. King

Enclosures

24

Stress w/copy of report
SAC
Carson

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

224 New Customhouse
Denver 2, Colorado

December 17, 1953.

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 2746 (Copper-Zinc), Contract Idm-E522, Coronado Copper and Zinc Co.'s Republic Copper-Zinc Mine, Cochise County, Arizona - Operator's Monthly Progress Report for the period November 1953.

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

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks:

Date of Report	December 8, 1953.
Date Received in Field Office	December 11, 1953.
Date Received in Region Office	December 16, 1953.

W H King
W. H. King

Enclosures

RDB:cwm

cc: Contract
Secretary to the Oper. Comm. (2)
WRStorms
Chron.

December 14, 1953

Memorandum

To : W.H. King, Chief Mining Division, Region IV

From : Chief, Mining Methods Branch, Tucson, Arizona

Subject : November 1953 Progress Report, Contract Idm-8522, Docket DMEA-2746, Coronado Copper & Zinc Co's. Johnson Camp Republic Copper-Zinc Mine, Cochise County, Arizona

Enclosed in quintuplicate are the following:

(1) Bureau of Mines engineer's report;
(2) Operator's narrative report with maps and drill hole logs;
(3) Forms MP-104 and MP-104A.

Also enclosed are two extra copies of our engineer's report.

As all work is in accordance with the terms of the contract, I recommend that the Government's share of the costs be paid.

Walter R. Storms

Walter R. Storms

cc: King (6)

MINING DIVISION
REGION IV

December 14, 1953

Memorandum

To : Walter R. Sterns, Chief, Mining Methods Branch, Mining Division, Region IV, Tucson, Ariz.

From : William R. Hardwick, Mining Engineer, Tucson, Ariz.

Subject : Progress Report for November, 1953, Docket DMEA-2746, Contract Idm-2522, Coronado Copper & Zinc Co's Republic Copper-Zinc Mine, Cochise County, Ariz.

The Coronado Copper & Zinc Company's Republic Mine at Johnson Camp was visited on December 2, 1953. Joe Zierzeski, mine engineer, assisted in measuring the advance.

On December 2, the face of the 400 level drift was found to be 21 feet west of survey station 435. This gives a total advance of 80 feet of which the operator states 76 feet were completed in November.

The status of the drifting under the contract is shown by the following tabulation:

	Drift	Crosscut	Total	Cost
Completed by October 31	281	265.5	556.5	$ 22,260.00
Advance in November	76	-	76	3,040.00
Completed to November 30	357	265.5	632.5	25,300.00
Government's part				12,650.00

None of the drifting completed in November discovered ore. However, the drift was enlarged in the area where ore had previously been discovered and from this work 220 tons of ore, averaging 1.65 percent copper and 6.43 percent zinc, was mined.

The ore mined to date is as follows:

Month	Tons	Percent Copper	Percent Zinc
October	458.93	1.68	4.97
November	220.00	1.65	6.43
Total	678.93	1.67	5.44

Two diamond drill core holes were completed during the month. They were DHKA No. 9 which was started and reached a depth of 306 feet in October and completed to a depth of 548 feet in November; and DHKA No. 10 which was started in November and completed to a depth of 486 feet. This work completes stage 1 of the drilling program. The footage and costs of the Diamond Drilling in November are as follows:

Hole No.	Ax	Bx	Total feet
9 (115)	-	242	242
10 (116)	241	245	486
Total	241	487	728
Cost	$ 1,084.50	$ 1,704.50	$ 2,789.00

Stage I of the surface diamond drilling program is now complete. The footage and costs are as follows:

	Ax	Bx	Total	Cost
Completed to October 31	2,028	3,209	5,237	$ 20,707.50
November	241	487	728	2,789.00
Total Stage I	2,269	3,696	5,965	$ 23,496.50

No ore was discovered by the drilling program. The operator has requested a drilling recess to allow time for further surface geological work.

The total costs for the month of November are as follows:

	November	To date
Diamond Drilling	$ 2,789.00	$ 23,496.50
Drifting	3,040.00	25,300.00
Total	5,829.00	48,796.50
Government's part	$ 2,914.50	$ 24,398.25

All of the 728 feet of diamond drill hole and the 76 feet of drifting are in accordance with the contract and are approved. The government's agreed part of the cost is $2,914.50 as shown. It is recommended that the operator be paid this amount as provided by the contract.

William R Hardwick

William R. Hardwick
Mining Engineer, Mining Methods Branch,
Mining Division, Region IV

cc: King (5)

December 8, 1953

Mr. W. R. Storms
U.S. Bureau of Mines
P. O. Box 4097
University Station
Tucson 5, Arizona

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

Dear Mr. Storms:

Following is the report to accompany Forms 104 and 104-A in connection with the work done under Contract Idm-E522 for the full month of November::

Drifting. (See Progress Map). The 400 Level west Hanging Wall Drift was continued on a one shift per day basis, the second shift being used to widen the part of the drift in ore to lay a double track. Total advance of the drift for the month was 76'. At Station 431 a fault was encountered which moved the hanging wall of the favorable beds an unknown distance to the right. For the next 53', to Station 433 plus 24' the drift was in slightly garnetized limestone and was turned to the right to crosscut somewhat toward the hanging wall. Advance was stopped two days to test the footwall with diamond drill hole MU 133, which cut only rock similar to that in the walls of the drift. This hole was not charged against the DMEA contract. At Station 433 plus 24' a fault with the attitude N 80° W, 68° S was encountered, and beyond this fault hanging wall tactite was found. The drift was turned left to follow along the fault; this direction crosscuts the beds at a small angle toward the footwall, so that eventually the intersection of the fault and the favorable beds will be reached, and it will be possible to resume drifting along the favorable beds. At the end of the month the face was at Station 435 plus 17', still in hanging wall tactite. During the month 220 tons of ore averaging 1.65% Cu, 6.43% Zn were milled from the slabbing (tonnage and grade corrected to mill heads from car counts and car grab samples).

Diamond Drilling. (See Logs and Sections). Two holes, Coronado Nos. 115 and 116 (DMEA Nos. 9 and 10) were completed during the month. Hole No. 115 (No. 9) reached the favorable beds at 418' and cut 118' of garnetite from that point to 536'. From 536' to the end at 548' was bleached limestone with some garnet and wollastonite. There was no mineralization. Hole No. 116 (No. 10) reached the favorable beds at 385' and cut 85' of garnetite with some limestone from there to 470'. From 470' to the end at 486' was chiefly wollastonite rock with some garnet. There was no mineralization. This completed Stage 1 of the surface diamond drilling. Application has been made for a recess in the drilling, to allow time for further surface geologic work before laying out new holes.

Very truly yours,
CORONADO COPPER & ZINC CO,

By _____
Fred E. Gray - Mine Manager

FEG-o
4 ccs to Mr. W. R. Storms
1 cc Mr. George Dub,
1 cc Mine Office

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

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

Defense Minerals Administration
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DEC 8 1953

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

Month of November 1953 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper and Zinc Company Minerals Copper & Zinc
Address Dragoon, Arizona
Contract Amount, $ 99,050.00 Government Participation: 50 % Amount, $ 49,525.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling AX & EX	$2789.00	$20,707.50	$23,496.50			
Bulldozing						
Crosscutting		10,620.00	10,620.00			
Drifting	3040.00	11,640.00	14,680.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$5829.00	$42,967.50	$48,796.50	5829.00	42,967.50	48,796.50

I certify that the above bill is correct and just and that payment therefor has not been received.
Date Dec. 8, 1953 *Payee Coronado Copper and Zinc Company
Per [signature] Title Mine Manager

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

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

(Instructions on reverse)

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

$ 2914.50

Signature [signature]
(Authorized Certifying Officer)

Date 12/18/53 Vou. No. 54-61
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Nam E 522 in accordance with the terms of the contract.

Signature William R. Hardwick Title Mining Engineer Date 12/14/53

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: R.D.B.

Signature W. H. Kung Title Executive Officer Date DEC 17 1953

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

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

Month of November 1953 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper and Zinc Company Minerals Copper & Zinc
Address Dragoon, Arizona

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting	Feet	$3040.00	76	$14,680.00	367	$40.00)	1520	$40.00
Crosscutting				10,620.00	265.5	40.00)		
Raising								
Shafts								
Winzes								
Drilling: Core AX	Feet	1084.50	241	10,210.50	2269	4.50)	8500	4.50
Churn EX	Feet	1704.50	487	13,286.00	3796	3.50)		3.50
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		5829.00	804	48,796.50				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		5829.00		48,796.50				

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

REMARKS:

Date Dec. 8, 1953 Operator Coronado Copper and Zinc Co.

Per Wm. E. Gray Title Mine Manager

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

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

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

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

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

GPO 83-38475

Collar Location:
Level: Surface
N: 9809.39
E: 7430.58
Elevation: 5032.70
Bearing: --
Angle: - 90°

Length: 548.0
Hor: 0.0
Vert: 548.0
Logged by: ABIII
Date: 12/2/53

D. D. HOLE NO. 115 (DMEA ~~116~~) #9
Date Started: 10/26/53
Date Finished: 11/4/53
Size: EX
Casing: 244' (pulled)

Objective: Continue fence down-dip from Copper Chief Orebody.

Results: No ore.

Footage From	Footage To	Footage Interval	Assays Cu%	Assays Zn%	Core recovery	Log	Description and Averages
0.0	10.0	10.0			--		No core.
10.0	52.0	42.0			71		White slightly limy dol. 10-21 fractured, fe stain, calcite veins.
	70.0	18.0					@50' slight cu stain.
52.0	~~25x2~~	~~23x2~~			83		Ma 7. Hard grey hmf, little pyrite.
70.0	78.0	8.0			100		Tactite with he and cu stain.
78.0	85.0	7.0			100		Reddish coarse limy dol. @84' 1/4" shear with calcite @20° to core
85.0	106.0	21.0			100		Limy col with chlorite partings. @95' vuggy calcite fracture.
106.0	123.0	17.0			78		Grey limy dolomite.
123.0	169.0	46.0			43		Grey dolomite.
169.0	213.0	44.0			73		White limy dolomite, soft. @171, 174, 179, 182, 192, 204, 205, 209 calcite-gouge fractures @20-70° @203' siliceous veinlet @70° to core.
213.0	230.0	17.0			100		Soft white tac, slightly limy. @214, 218, 224, 220, 222, 225 calcite-gouge fractures @20-70° to core axis
230.0	256.0	26.0			88		Hard white tac, very slightly limy
256.0	264.0	8.0			100		Quartzite marker: hard fine silt; no py.
264.0	269.0	5.0			100		Dense fine-grained grey tac (?).
269.0	283.0	24.0			88		Grey ls or very limy dol. Much altered and fe stained. 283-287 strongly sheared, heavy fe stn.
293.0	305.0	12.0			66		Indistinguishable material. Strongly sheared, porous, gougy, fe stain.
305.0	384.0	79.0			95		Tactite, slight oxidation on fractures. 327-329 shears @45°, gouge, cal, fe stn. 347-349 porous, much vuggy cal, mn and fe stain, little shear. 368-369 Much vuggy cal, no shear. Fe stn. @310, 315, 322, 331, 337, 350, 355, 374 minor fe stn and cal fractures. No shear
384.0	418.0	34.0			97		Tac, occasional hmf bands. Minor oxid. 402-403 gougy, porous, some fe stn.
418.0	536.0	118.0			75		Garnet. Porous and slightly oxid. at: 419, 436, 441, 443, 448, 452, 457, 463, 480-482, 490, 505, 508, 520.
536.0	548.0	12.0			75		Bleached white ls with some garnet and wollastonite.

Collar Location:
Level: Surface
N: 9697.79
E: 7525.69
Elevation: 5029.99
Bearing: --
Angle: - 90°

Length: 486.0
Hor: 0.0
Vert: 486.0
Logged by: ABIII

Date: 12/2/53

D. D. HOLE NO. 116 (DMEA ~~#11~~ #10

Date Started: 11/5/53
Date Finished: 11/16/53
Size: EX

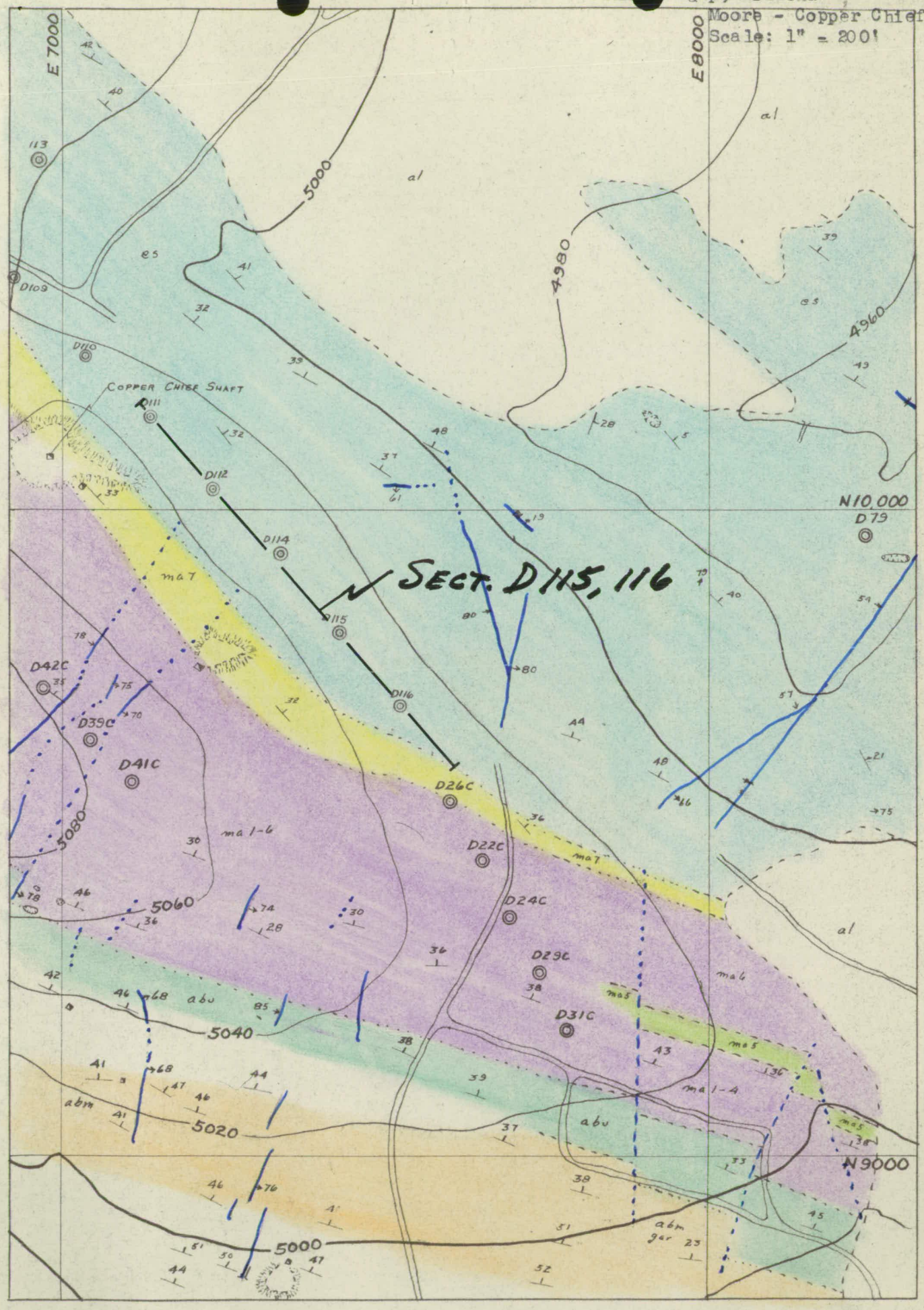
Casing: 241' (Pulled)

Objective: Complete fence down-dip from Copper Chief Orebody.

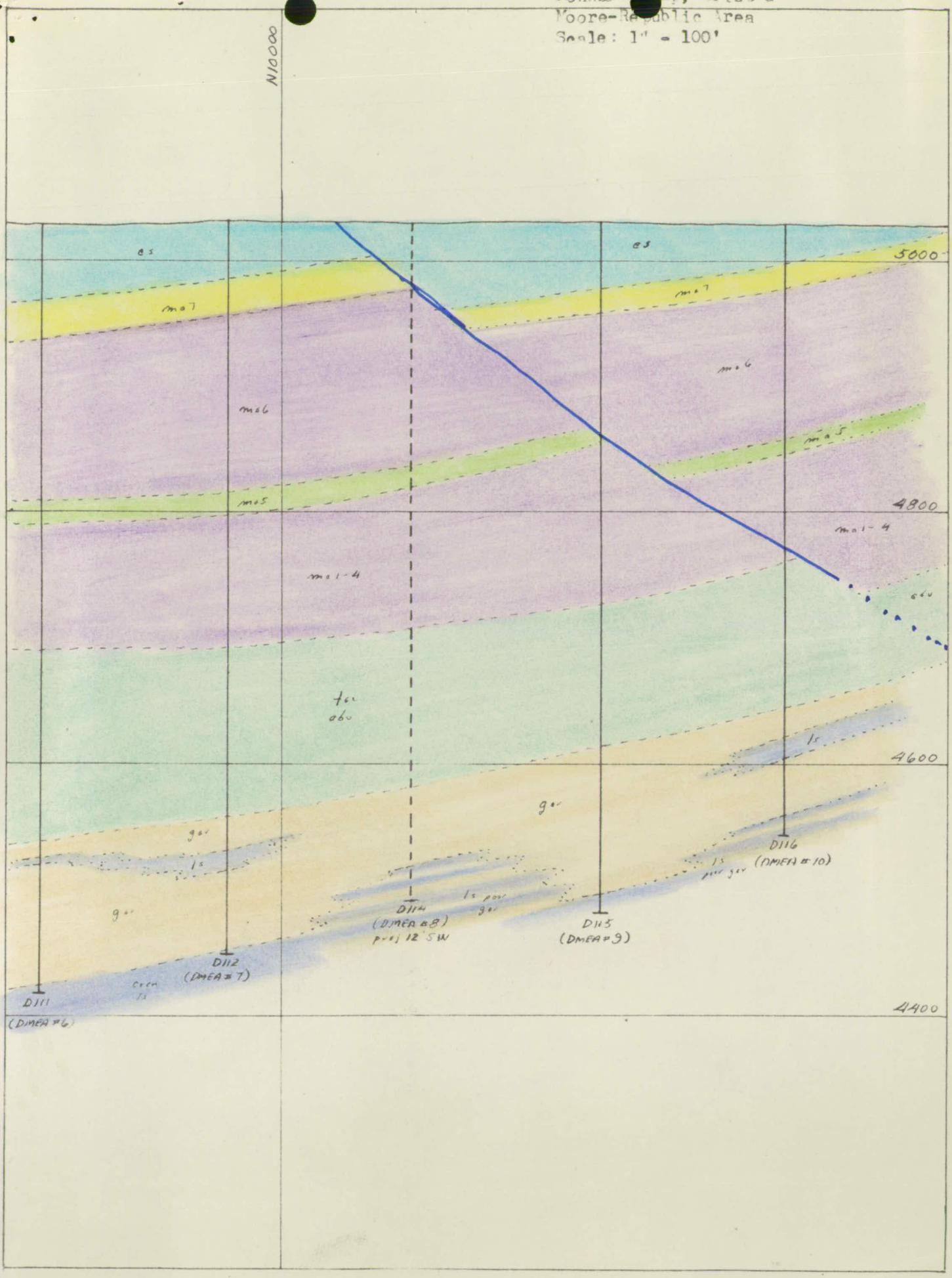
Results: No ore.

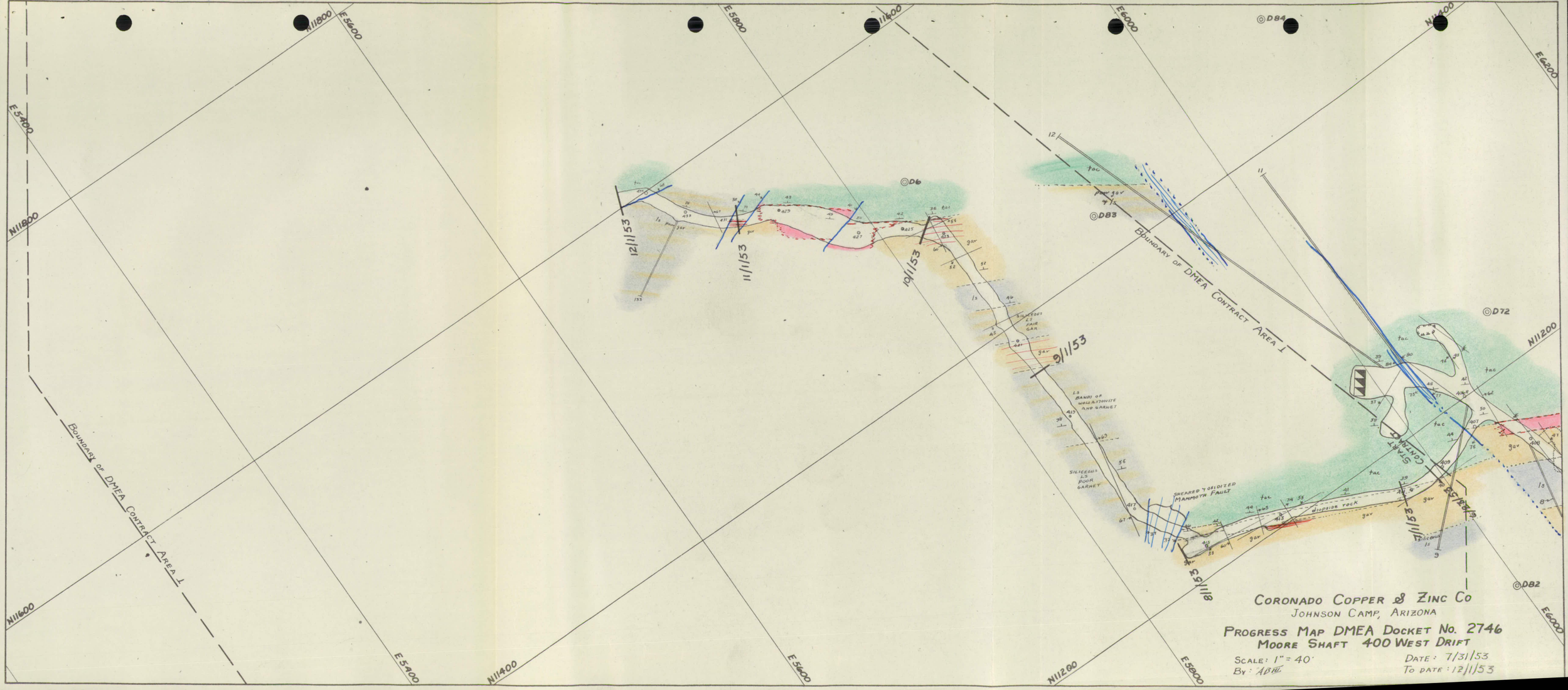
Footage From	Footage To	Footage Interval	Assays Cu%	Assays Zn%	Core recovery	Log	Description and Averages
0.0	10.0	10.0			--		No core.
10.0	26.0	16.0			94		Grey fine very limy dol, locally soft and altered. Some fine serpentine?
26.0	30.0	4.0			75		Soft brown-white altered material.
30.0	52.0	22.0			77		Ma 7. Mostly yellowish soft altered, local remnants hnf. Limonite after py. @45' 2" grey qtz, slightly vuggy. 45-49 cu stain.
52.0	68.0	16.0			100		White-grey tac. Locally limonite after p @53' steep 1/4" calcite veinlets.
68.0	70.0	2.0			100		Altered brown-white banded; minor fractur
70.0	88.0	18.0			100		Limy dol with stylolite partings. @80' fe stn breccia - minor fracture.
88.0	127.0	39.0			36		Grey hard fine dol. 88, 93, 118 fe stn fractures. @96' 2" silicified zone @20° to core.
127.0	138.0	11.0			73		Hard grey medium-grained dol. @136' fe-stn fracture.
138.0	172.0	34.0			88		Buff slightly limy dol. @166' 1" veinlet residual limonite @20°
172.0	182.0	10.0			100		Ma 5 serpentine ls. @175' 3" cal vein with resid. limonite.
182.0	240.0	58.0			98		Fair-poor tac. 200-202 breccia, brown stain; 237-239 shear, some cal, trace cu stain; @193, 195, 197, 205, 207, 210, 21 225, 227, 234 fe stn fractures @ 70° @236' cu stn fracture @30°
240.0	258.0	18.0			94		Tactite.
258.0	260.0	2.0			100		Fault. Chloritized, little cal, no shears.
260.0	267.0	7.0			100		Grey mdol. @262' ½" residual cu stn @45° @265, steep cu stn, some residual cp.
267.0	317.0	50.0			98		Fine dense hard tac. @294' ¼" cu stn veinlet @70° to core axis.
317.0	320.0	3.0			100		Ls with a little serpentine.
320.0	355.0	35.0			100		Tac. @338' fe stn, slight shear.
355.0	385.0	30.0			80		Tac with hnf bands. 364-371 fractures, fe stn, calcite.
385.0	404.0	19.0			96		Garnet.
404.0	425.0	21.0			100		Xls with about 20% garnet in bands.
425.0	470.0	45.0			93		Garnet.
470.0	486.0	16.0			100		White wollastonite-diopside rock, little garnet.

D. D. Holes 115, 116 (DMEA #9, 10)
John[illegible] Camp, Arizona
Moore - Copper Chief Area
Scale: 1" = 200'



D. D. Holes 115, 116 (DMEA No.s 9, 10)
Johnson Camp, Arizona
Moore-Republic Area
Scale: 1" = 100'





Coronado Copper & Zinc Co
Johnson Camp, Arizona

Progress Map DMEA Docket No. 2746
Moore Shaft 400 West Drift

Scale: 1" = 40'
By: ABH

Date: 7/31/53
To date: 12/1/53

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 21 1953

Keating
Betty

224 New Customhouse
Denver 2, Colorado

December 16, 1953.

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 2746, Contract Idm-E522 (Copper-Zinc), Coronado Copper and Zinc Co.'s Johnson Camp Republic Copper-Zinc Mine, Cochise County, Arizona.

Enclosed are two copies of the Operator's Monthly Progress Report, Form MF-104 and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data pertaining to work under the subject contract for the month of October 1953.

John F. Shaw
for W. H. King

Enclosures

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 21 1953

224 New Customhouse
Denver 2, Colorado

November 27, 1953.

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 2746, Contract Idm-E522 (Copper-Zinc), Coronado Copper and Zinc Co.'s Johnson Camp Republic Copper-Zinc Mine, Cochise County, Arizona. Operator's Monthly Progress Report for the period October 1953.

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

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 50 per cent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks:

Date of Report	November 11, 1953.
Date Received in Field Office	November 17, 1953.
Date Received in Region Office	November 25, 1953.

W H King
W. H. King

Enclosures

RDB:cwm

cc: Contract
Secretary to the Oper. Comm. (2)
WRStorms
Chron.

November 23, 1953

Memorandum

To: W.H. King, Chief, Mining Division, Region IV, Denver, Colorado

From: Chief, Mining Methods Branch, Mining Division, Region IV, Tucson, Arizona

Subject: October 1953 Progress Report, Contract Idm-E 523, Docket DMEA-2746, Serenade Copper & Zinc Co.'s Johnson Camp Republic Copper-Zinc Mine, Cochise County, Arizona

Enclosed in quintuplicate are the following:

1. Bureau of Mines engineer's report;
2. Operator's narrative report with drill hole logs and maps;
3. Forms MF-104 and MF-104a.

Also enclosed are two extra copies of our engineer's report.

As all work is in accordance with the terms of the contract, I recommend that the government's share of the costs be paid.

Walter R. Storms

Walter R. Storms

cc: WHKing (6).

November 23, 1953

Memorandum

To: Walter R. Storms, Chief, Mining Methods Branch, Mining Division, Region IV, Tucson, Arizona

From: William R. Hardwick, Mining Engineer, Tucson, Arizona

Subject: Progress Report for October, 1953 Docket DMEA-2746, Contract Idm-E 522, Coronado Copper & Zinc Company's Republic Mine, Cochise County, Arizona

The Coronado Copper and Zinc Company's Republic mine at Johnson Camp was visited on November 5, 1953. The drill core for the month of October was inspected and the underground advance was measured.

Drifting and Crosscutting

On the 400 level of the Moore shaft, the drift on the favorable beds was advanced 121 feet.

The status of the underground work is shown by the following tabulation:

	Drift	Crosscut	Total	Cost
Completed by September 30	170 ft.	265.5 ft.	435.5	$ 17,420.00
Advance in October	121 "	-	121.0	4,840.00
Completed to October 31	291 "	265.5 "	556.5	22,260.00
Government's part				$ 11,130.00

Of the 121 feet of drift completed during October, 75 feet were in ore and the operator mined 458.93 tons of ore which averaged 1.68 percent copper and 4.97 percent zinc. The drift was in waste on November 5 when the mine was visited but small masses of sulfides were reported.

Diamond Drilling

Two diamond drill holes were completed during the month. They were DMEA Holes Numbers 8 and 11. A third hole, DMEA No. 9, was started and at the end of the month had reached a depth of 306 feet. The operator requested and received from the Government, prior approval to drill hole number 11 at a point 70 feet southwest of the location originally proposed. The other holes were drilled as indicated in the original plan.

The status of the drilling program is summarized as follows:

Hole No.	Diamond Drill Holes in October AK	EX	Total feet
8 (114)	221 ft.	318 ft.	539
11 (113)	281 "	402 "	683
9 (115)	232 "	74 "	306
Total	734 ft.	794 ft.	1,528
Cost	$3,303.00	$2,779.00	$6,082.00

All Diamond Drill Holes to Date	AK	EX	Total	Cost
Completed by September 30	1,194	2,415	3,609	$ 14,623.50
October	734	794	1,528	6,082.00
Total to date	2,928	3,209	5,137	$ 20,707.50
Government's part				$ 10,353.75

The total costs for the month of October and of the Contract to date are:

	October	To date
Diamond drilling	$ 6,082.00	$ 20,707.50
Drifting and Crosscutting	4,840.00	22,260.00
Total	$10,922.00	$ 42,967.50
Government's part	$ 5,461.00	$ 21,483.75

All of the 1,528 feet of diamond drill hole and the 121 feet of drifting for October are in accordance with the terms of the contract and are approved. The Government's agreed part of the cost is $5,461.00 as shown. It is recommended that the operator be paid this amount as provided by the contract.

William R. Hardwick
William R. Hardwick

cc: WRKing (6)

November 13, 1953

Mr. W. R. Storms
U.S. Bureau of Mines
P. O. Box 4097
University Station
Tucson 5, Arizona

Re: Docket No. BMRA-2746
Contract Idm-X522

Dear Mr. Storms:

Following is the report to accompany Forms 104 and 104-A in connection with the work done under Contract Idm X522 for the full month of October:

Drifting. (See Progress Map). The 400 Level West Hanging Wall Drift was continued along the hanging wall of the favorable beds; total advance for the month was 121'. At Station 423 plus 20', a thin band of sulfides was encountered at the hanging wall, and this continued to Station 423 plus 42', where it widened so that the entire drift was in ore. The true thickness of ore exposed is 13' but the footwall is not yet known, so the full thickness is not known. The drift continued in ore to Station 429 plus 13', a total length in ore of 75'. From the end of the ore to the face at the end of the month (Station 429 plus 29') the drift was in waste with occasional small masses of sulfides and some oxidation. On October 26th slabbing of the footwall side of the drift was begun near Station 427, to widen the drift enough to lay a double passing track. While this slabbing is being done, the drift will be advanced only one shift per day. During the month 458.93 tons of ore averaging 1.68% Cu, 4.97% Zn were milled from the drift and slabbing (tonnage and grade corrected to mill heads from car counts and car grab samples).

Diamond Drilling. (See logs and sections). Two holes, Coronado Nos. 113 and 114 (BMRA Nos. 11 and 8) were completed during the month, and a third hole Coronado No. 115 (BMRA No. 9) was started. Hole No. 113 (No. 11) was drilled AX and cased to 281' and continued EX to the bottom at 683'. Hole No. 114 (No. 8) was drilled AX and cased to 221' and continued EX to the bottom at 539'. Hole No. 115 (No. 9) was drilled AX and cased to 232' and continued EX. At 244' in Hole No. 115 (No. 9) the bit was broken off and lost and four shifts were spent reaming and fishing for it. This reaming was done at the driller's expense. The hole was 306' deep at the end of the month. With Mr. Storm's permission, Hole No. 113 (No. 11) was drilled 70' southwest of the location originally proposed, to test a fractured zone that was found in surface mapping. The hole reached the favorable beds at 561' and cut garnetite from that point to 576'. From 576' to 648' was limestone with some garnetite, and from 648' to the end at 683' was limestone. Two mineralized zones were assayed: 564.0 - 571.6: 7.6' @ 0.20% Cu, 2.2% Zn, and 622.0 - 622.8: 0.8' @ 2.53% Cu, 5.95% Zn. In Hole No. 114 (No. 8) which continued the fence begun in August, the favorable beds were reached at 461'. The hole is garnetite from this point to 523' and in limestone from 523' to the end at 539'. No mineralization was encountered. At the end of the month, Hole No. 115 (No. 9) was still 150' short of the favorable beds.

Very truly yours,
CORONADO COPPER & ZINC CO.

By Fred E. Gray
Fred E. Gray - Mine Manager

FEG-c
4 cc to Mr. W. R. Storms
1 cc Mr. R. W. Moore 1 cc Mine Office

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

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of October 1953 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper and Zinc Company Minerals Copper & Zinc
Address Dragoon, Arizona
Contract Amount, $ 99,050.00 Government Participation: 50 % Amount, $ 49,525.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling AX & EX	6,082.00	14,625.50	20,707.50			
Bulldozing						
Crosscutting		10,620.00	10,620.00			
Drifting	4,840.00	6,800.00	11,640.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	10,922.00	32,045.50	42,967.50	10,922.00	32,045.50	42,967.50

I certify that the above bill is correct and just and that payment therefor has not been received.
Date Nov. 11, 1953 *Payee Coronado Copper and Zinc Co.
Per [signature] Title Mine Manager

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

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

(Instructions on reverse)

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

$5461.00

Signature [signature]
(Authorized Certifying Officer)
Date 12/1/53 Vou. No. DMA 54-53

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. dmE-522 in accordance with the terms of the contract.

WRH Signature William R. Hardwick Title Mining Engineer Date 11-17-53

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: R. DB.

Signature W H King Title Executive Officer Date NOV 27 1953

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

GPO 83-38476

Form MF-104A
(April 1952)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of October 1953 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper and Zinc Company Minerals Copper & Zinc
Address Dragoon, Arizona

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting	Feet	4,840.00	121	11,640.00	291.0	$40.00	1520	$ 40.00
Crosscutting				10,620.00	265.5	40.00		
Raising								
Shafts								
Winzes								
Drilling: Core AX	Feet	3,303.00	734	9,126.00	2028	4.50	8500	4.50
Churn EX	Feet	2,779.00	794	11,581.50	3309	3.50		3.50
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		10,922.00	1649	42,967.50				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		10,922.00		42,967.50				

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

Date Nov. 11, 1953 Operator Coronado Copper and Zinc Co.

Per [signature] Title Mine Manager

REMARKS:

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

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

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

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

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

GPO 83-38475

Collar Location:

Level: Surface
N: 10543.21
E: 6963.43
Elevation: 5020.57
Bearing: --
Angle: - 90°

Length: 683.0
Hor: 0.0
Vert: 683.0
Logged by: ABIII
Date: 10/26/53

D. D. HOLE NO. 113 (DMMA #11)

Date Started: 10/1/53
Date Finished: 10/14/53
Size: NX
Casing: 281' (pulled)

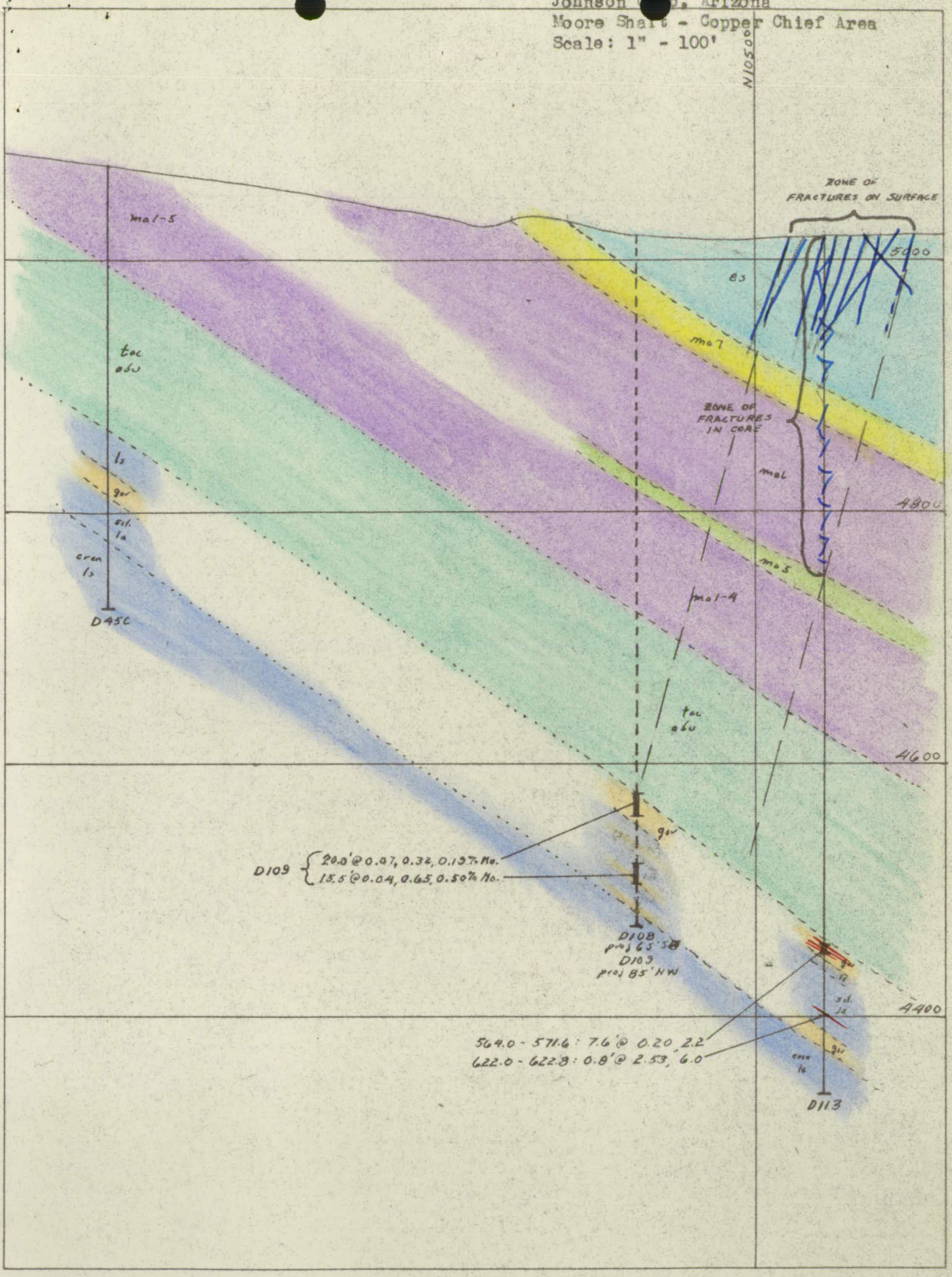
Objective: Test ore beds below fracture complex on surface

Results: To ore. Hole porbably too farm north to cut intersection of fracture complex with ore beds. See section.

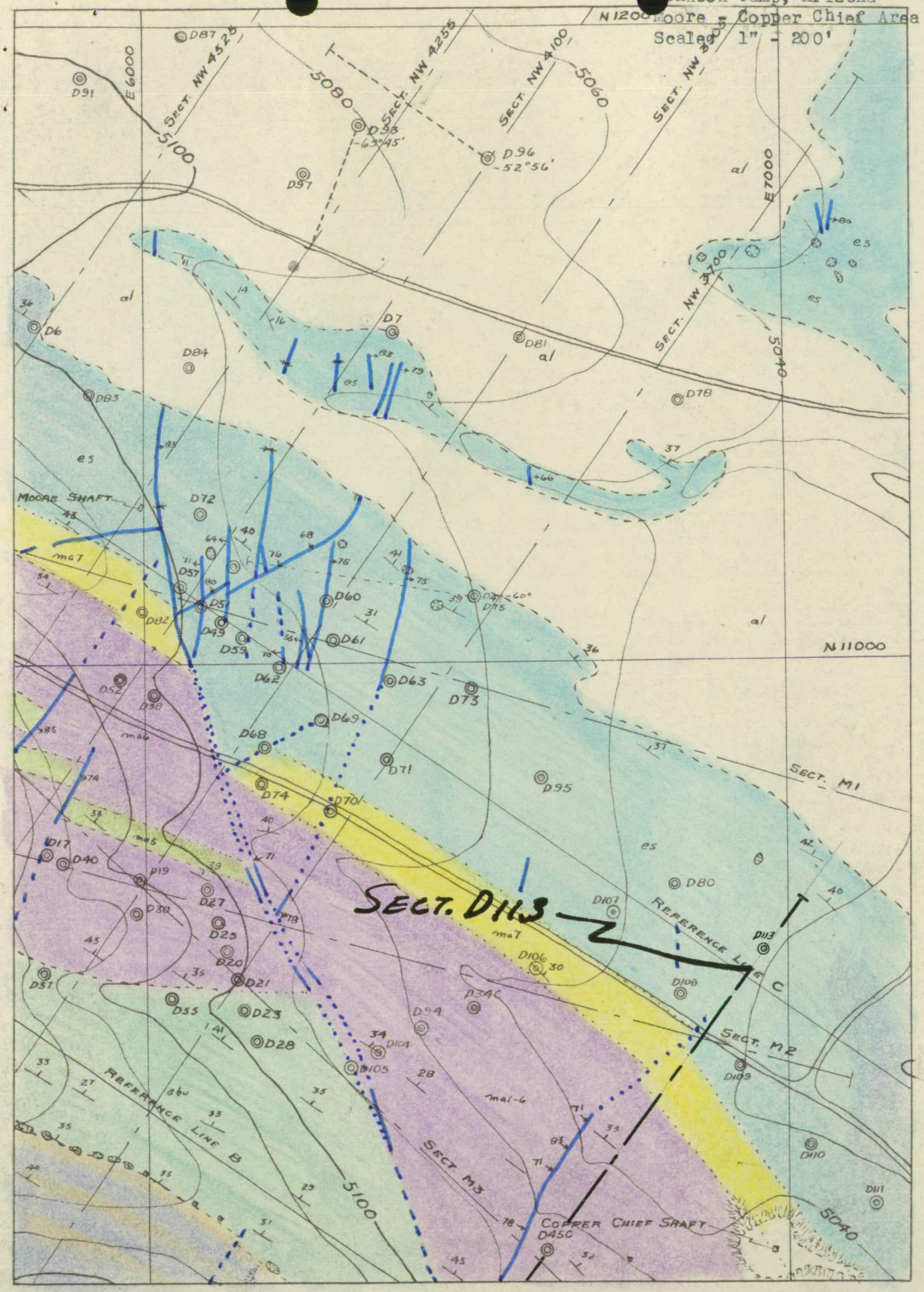
DEPARTMENT OF THE INTERIOR
Bureau of Mines Administration
RECEIVED
DEC 21 1953

Footage From	Footage To	Footage Interval	Assays Cu%	Assays Zn%	Core recovery	Log	Description and Averages
0.0	10.0	10.0			--		No core.
10.0	45.0	35.0			46		Grey dol, much broken.
45.0	123.0	78.0			81		White to whitish grey slightly limy dol. Last 1' has clots of sulfides.
123.0	152.0	29.0			83		Ma 7 hornstone. A little pyrite in upper half. Lower 2' light cu stain.
152.0	195.0	43.0			84		Ma 6 limy dedolomite. Much broken. Several zones soft, light fe stain.
195.0	218.0	23.0			65		Grey dol, slightly limy, with occasional greenish ~~xxxx~~ chl(?) partings -- shale or stylolites.
218.0	273.0	55.0			35		Grey dol, much broken, with occasional fe stained fractures.
273.0	295.0	22.0			100		Ma 5 serpentine ls.
295.0	349.0	54.0			99		Tactite with occasional spots sulfides and/or fe-cu stain.
349.0	357.0	8.0			75		White quartzite.
357.0	361.0	4.0			50		Quartzite marker, no pyrite.
361.0	398.0	37.0			86		Grey-white ~~xxxxx~~ dolomite, locally tac.
398.0	422.0	24.0			88		Tac, very rare sulfieds, no fracturing.
422.0	447.0	25.0			96		Serpentine ls.
447.0	523.0	76.0			86		Tactite. Occasional sulfides. Lower 5' has much dark green material with pyrite.
523.0	561.0	38.0			84		Tac with hnf bands. Much epidote (?) and occasional sulfides in upper 15'.
561.0	564.0	3.0			63		Garnet.
564.0	571.6	7.6	0.20	2.2	76		Garnet.
571.6	576.0	4.4			100		Garnet.
576.0	585.0	9.0			100		Grey crenulated ls.
585.0	622.0	37.0			62		Poor garnet siliceous ls.
622.0	622.8	0.8	2.53	5.95	65		Poor garnet.
622.8	635.0	12.2			98		Poor garnet siliceous ls.
635.0	648.0	13.0			77		Fair garnet siliceous ls.
648.0	683.0	35.0			89		Crenulated ls. 675-680 soft and altered.

D. D. Hole 113
Johnson Camp, Arizona
Moore Shaft - Copper Chief Area
Scale: 1" - 100'



D. D
D. D. Hole 113 (DMEA #11)
Johnson Camp, Arizona
Moore - Copper Chief Area
Scale: 1" - 200'



Collar Location:

Level: Surface
N: 9931.31
E: 7340.79
Elevation: 5029.29
Bearing: --
Angle: - 90°

Length: 539.0
Hor: 0.0
Vert: 539.0
Logged by: ABIII
Date: 10/30/53

D. D. HOLE NO. 114 (DMEA #8)

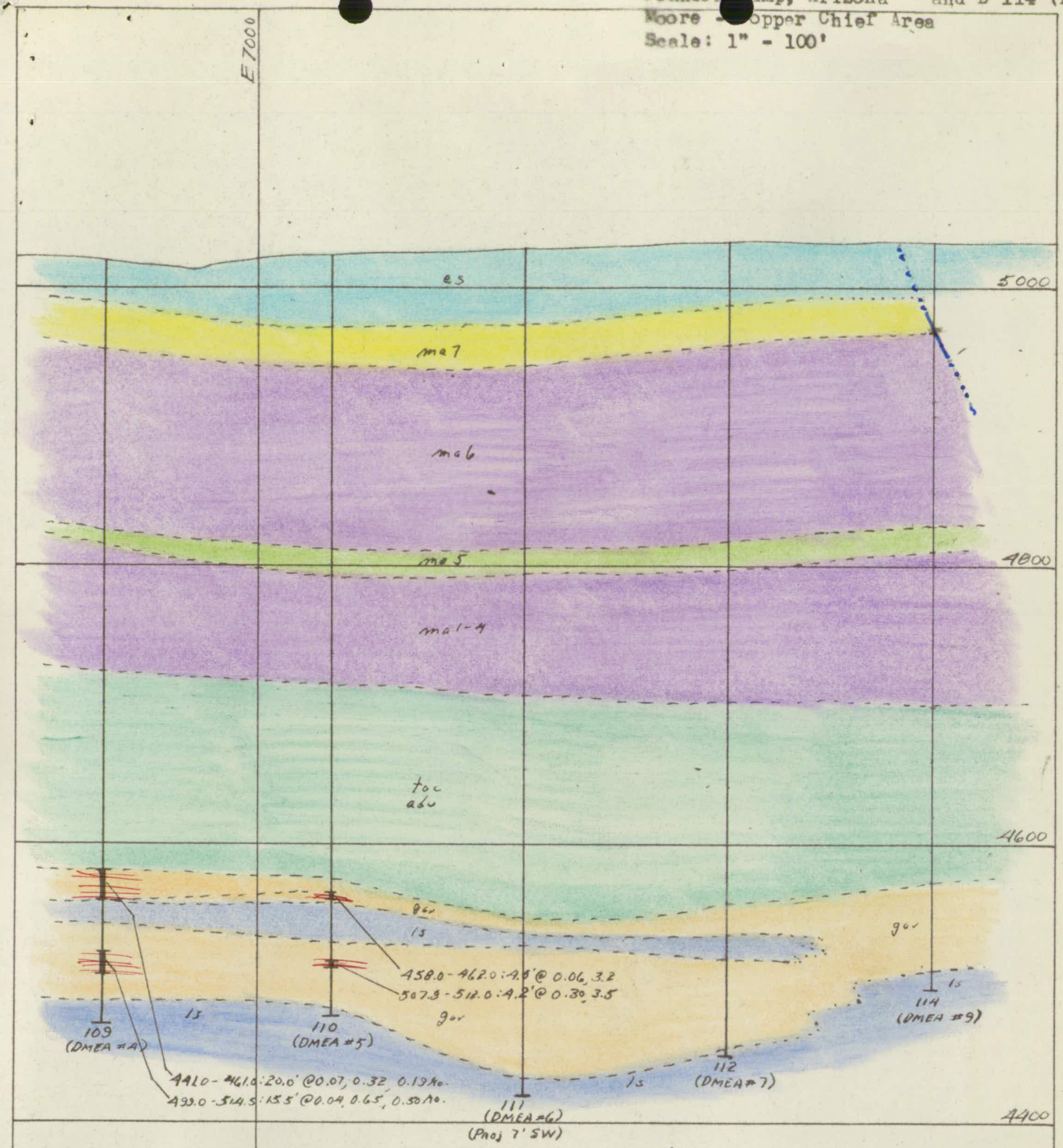
Date Started: 10/15/53
Date Finished: 10/23/53
Size: EX
Casing: 221' (pulled)

Objective: Continue fence down-dip from Copper Chief Orebody.

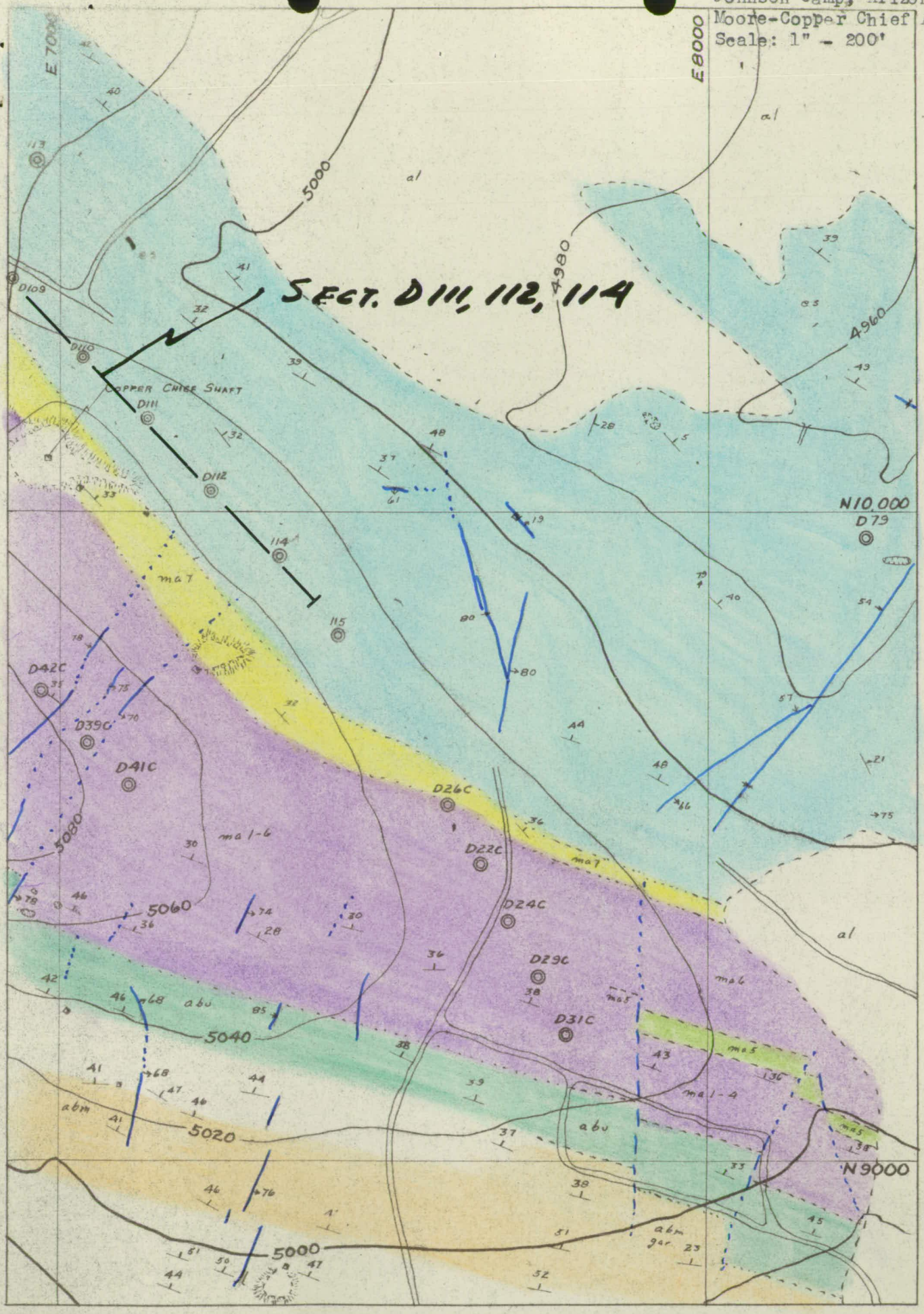
Results: No ore. Thick garnetite.

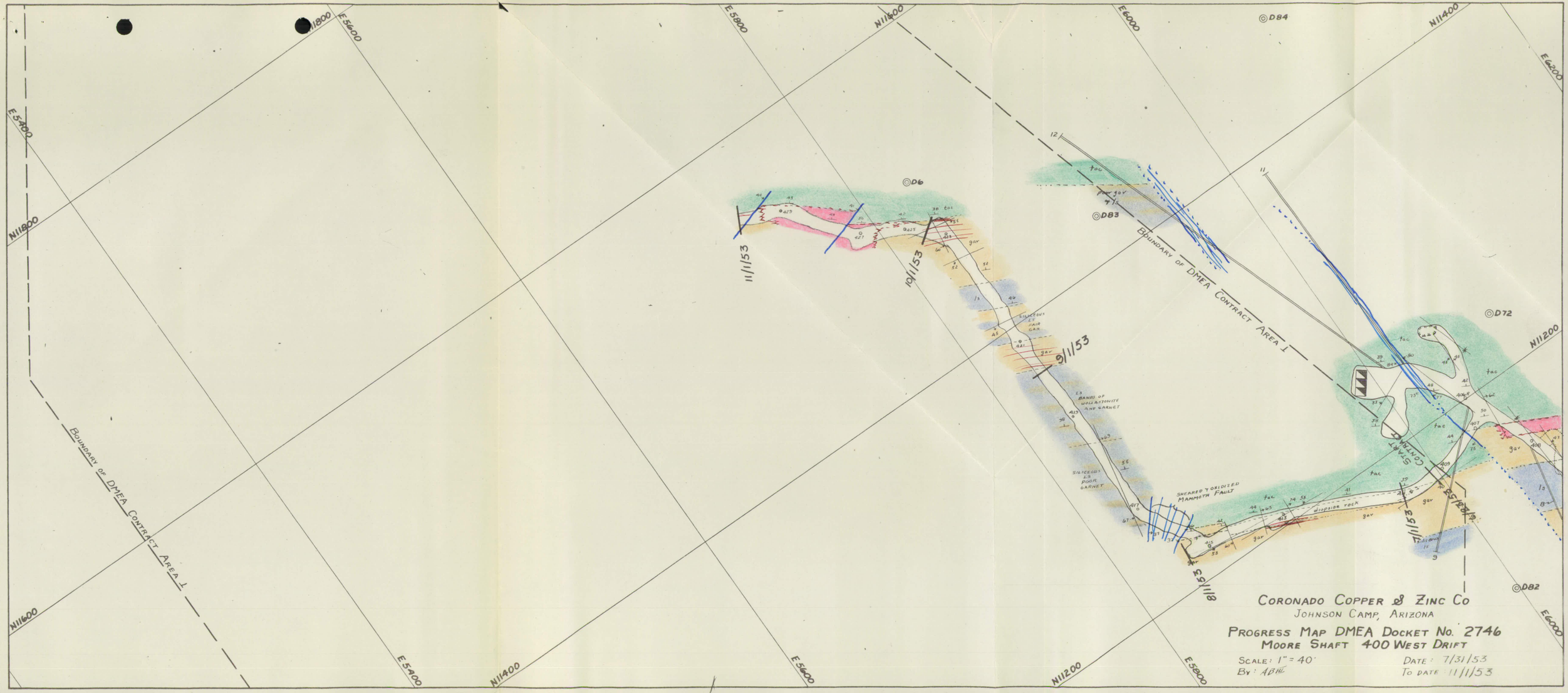
Footage From	Footage To	Footage Interval	Assays Cu%	Assays Zn%	Core recovery	Log	Description and Averages
0.0	10.0	10.0			--		No core.
10.0	62.0	52.0			96		Soft slightly limy white-grey dol. 32-37 and 50' small fe-stn fractures.
62.0	65.0	3.0			33		Fault? Only recovery fragments of hard grey hnf (?) with pyrite. Na ??
65.0	66.0	1.0			100		Bleached rock with fine fe-stn fractures and light cu stain throughout.
66.0	77.0	11.0			73		Soft yellowish-cream altered rock with occasional spots fe-stain.
77.0	114.0	37.0			81		Slightly limy grey dol with shale (?) partings. @110' 3" vuggy cal. veinlet.
114.0	126.0	12.0			75		Slightly limy dol. @126' slightly fe-stain fracture.
126.0	204.0	78.0			58		Grey dol, locally poor core. @131, 171, 178 fractures with clear vuggy calcite, some fe stain.
204.0	221.0	17.0			82		Dedolomite, partly dark grey, some greenish (serpentine?) some white tac. @208' 1" gouge.
221.0	275.0	54.0			100		Tactite. @224, 234, 237, 242, 244-250 gougy fractures.
275.0	286.0	11.0			55		Quartzite marker with pyrite.
286.0	333.0	47.0			60		Buff dol, partially tactitized. @317' fe-stn fracture.
333.0	351.0	18.0			83		Tactite. @335' gougy fe-stn fracture.
351.0	360.0	9.0			89		Serpentine ls.
360.0	461.0	101.0			81		Tactite. @439' 1/2" hnf band, otherwise no hnf recognizable. @368, 371, 396, 428, 433 fe-stn fracture 445-461 broken and altered but little fe stain. Some vuggy cal stringers.
461.0	523.0	62.0			73		Garnet. Fractured with brown mn(?) stain at close intervals throughout.
523.0	539.0	16.0			69		Bleached ls with some garnet and wollastonite.

D. D. Holes 111 and 112 (DMEA #6 and #7)
Johnson Camp, Arizona and D 114 (DMEA #9)
Moore - Copper Chief Area
Scale: 1" - 100'



D. D. Hole 114 (DMEA #8)
Johnson Camp, Arizona
Moore-Copper Chief Area
Scale: 1" = 200'




CORONADO COPPER & ZINC CO
JOHNSON CAMP, ARIZONA
PROGRESS MAP DMEA DOCKET NO. 2746
MOORE SHAFT 400 WEST DRIFT
SCALE: 1" = 40'
BY: ABW
DATE: 7/31/53
TO DATE: 11/1/53
BOUNDARY OF DMEA CONTRACT AREA I
BOUNDARY OF DMEA CONTRACT AREA I
SHEARED & OXIDIZED MAMMOTH FAULT
MOORE SHAFT
DIORITE ROCK
SILICEOUS LS FAIR GAR
LS BANDS OF WOLLASTONITE AND GARNET
SILICEOUS LS POOR GARNET
11/1/53
10/1/53
9/1/53
8/1/53
7/1/53
D6
D83
D84
D72
D82
N11800
N11600
N11400
N11200
N11200
E5400
E5600
E5800
E6000
E6200
E6000

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 30 1953

224 New Customhouse
Denver 2, Colorado

October 27, 1953.

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region IV

Subject: Form MF-104 - DMEA Docket 2746, Contract Idm-E522 (Copper-Zinc), Coronado Copper and Zinc Co.'s Johnson Camp Republic Copper-Zinc Mine, Cochise County, Arizona.

Enclosed are two copies of the Operator's Monthly Progress Report, Form MF-104 and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data for the month of September 1953, pertaining to DMEA Docket 2746, Contract Idm-E522 (Copper-Zinc), Coronado Copper and Zinc Co.'s Johnson Camp Republic Copper-Zinc Mine, Cochise County, Arizona.

W. H. King

W. H. King

Enclosures

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 30 1953

224 New Customhouse
Denver 2, Colorado

October 20, 1953.

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 2746, Contract Idm-R522 (Copper-Zinc), Coronado Copper and Zinc Co.'s Johnson Camp Republic Copper-Zinc Mine, Cochise County, Arizona. Operator's Monthly Progress Report for the period September 1953.

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

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks:

Date of Report	October 8, 1953.
Date Received in Field Office	October 12, 1953.
Date Received in Region Office	October 19, 1953.

John F. Shaw
For W. H. King

Enclosures

RDB:cwm

cc: Contract
Secretary to the Oper. Comm. (2)
WRStorms
Chron.

DEPARTMENT OF THE INTERIOR
RECEIVED
OCT 30 1953

MINING DIVISION
REGION IV

October 13, 1953

Memorandum

To : W. H. King, Chief, Mining Division, Region IV

From : Chief, Mining Methods Br., Mining Div., Region IV

Subject : September 1953 Progress Report, Contract Idm-2522, Docket DMEA-2746, Coronado Copper & Zinc Co.'s Johnson Camp Republic Copper-Zinc Mine, Cochise County, Ariz.

Enclosed in quintuplicate are the following:

(1) Bureau of Mines engineer's report;

(2) Operator's narrative report with drill logs and maps;

(3) Forms MF-104 and MF-104A.

Also enclosed are two extra copies of our engineer's report.

As all work is in accordance with the terms of the contract, I recommend that the Government's share of the costs be paid.

Walter R. Storms

Walter R. Storms

CC W. H. King (6)
DMEA-2746
DF

WRStorms:frj

MINING DIVISION
REGION IV

September 28, 1953

Mr. Fred S. Gray
Mine Manager
Johnson Camp Unit
Coronado Copper & Zinc Co.
Dragoon, Ariz.

Re: Contract Idm-E522,
Docket DMEA-2746,
Republic Copper-Zinc Mine,
Cochise County, Ariz.

My dear Mr. Gray:

Recently you telephoned this office to request that you be allowed to slightly change the location of the site of drill hole No. 11, and I, as the local Defense Minerals Exploration Administration representative for the Bureau of Mines, granted this request. Recent geological work had shown that a site some 75 feet from the original proposed location, seemed more favorable than the original site.

This letter merely is to confirm in writing the fact that you formally requested a change in the location of drill hole No. 11, and that this request was granted.

Sincerely yours,

Walter R. Storms

Walter R. Storms, Chief
Mining Methods Branch
Mining Division, Region IV

CC W. H. King (5)
DMEA-2746
DF

WRStorms:frj

MINING DIVISION
REGION IV

October 13, 1953

Memorandum

To : Walter A. Storms, Chief, Mining Methods Br., Mining Div., Region IV, Tucson, Ariz.

From : William R. Hardwick, Mining Engineer, Tucson, Ariz.

Subject : Progress Report for September 1953, Docket DMEA-2746, Contract Idm-E522, Coronado Copper and Zinc Company's Republic Mine, Cochise County, Arizona.

The Coronado Copper and Zinc Company's Republic mine at Johnson Camp was visited on October 7, 1953. The progress for the month of September was measured with the assistance of Mr. Arthur Baker, geologist for the company. The exploration contract provides for underground drifting and crosscutting, and surface diamond drilling.

Drifting and Crosscutting

On the 400 level of the Moore shaft the crosscut authorized by the contract and named by the operator the "West 150 North Crosscut", was continued for a distance of 116.5 feet, where the tactite hanging wall, or favorable beds were reached. A drift was started to the west along the favorable beds. This drift had advanced a distance of 30.2 feet when the property was visited. The operator stated that 6 feet of this work was completed in September.

The status of the underground work to date is shown by the following tabulation:

	Feet			
	Drift	Crosscut	TOTAL	Cost
Completed by August 31 --------	164	149	313	$12,520.00
Advance in September ----------	6	116.5	122.5	4,900.00
Completed to September 30 -----	170	265.5	435.5	17,420.00
Government's part ----------				8,710.00

When the crosscut reached the tactite hanging wall a narrow band of ore was discovered. However, this ore was less than one foot wide and was not considered wide enough to mine. The operator is drifting on this ore with the hope that it will widen to a minable width.

CC W. H. King (Orig. & 6)
DMEA-2746
DF

WRHardwick:frj

Diamond Drilling

A study of the Moore ore body by Mr. Baker with relation to surface structures indicated a possible relation between that ore body and a series of small faults and joints exposed on the surface. A similar surface structure is exposed near the location of Hole No. 11, and on Mr. Baker's recommendation, Mr. Fred E. Grey, Mine Manager, requested permission from the Tucson Office of the U. S. Bureau of Mines to move this hole 75 feet to the southwest. This permission was granted. This move would place the hole in the same relative position with respect to the surface structure near it, as the Moore ore body with respect to a similar structure. Hole No. 11 will be started in October.

Two Diamond Drill holes were completed during the month. They were holes 6 and 7. Both penetrated the favorable beds but found no ore. The footage and cost of these holes is shown in the following tabulation:

Diamond Drill Holes in September

Hole No.	AX	EX	Total Feet	Cost
6 (111)	201	408	609	
7 (112)	76	508	584	
Total	277	916	1,193	$4,452.50

Total diamond drill work to date is summarized in the following tabulation:

		AX	EX	Total	Cost
Completed by August 31.		1,017	1,599	2,616	$10,173.00
	September	277	916	1,193	4,452.50
Total	To date	1,294	2,415	3,809	$14,625.50
Government's part					7,312.75

The total costs for the month of September and for the contract to date are:

	September	To date
Diamond drilling ----------	$4,452.50	14,625.50
Drifting and crosscutting ----	4,900.00	17,420.00
Total	$9,352.50	32,045.50
Government's part	4,676.25	16,022.75

All of the 1,193 feet of diamond drill hole and the 122.5 feet of drift and crosscut was in accordance with the provisions of the

contract and is approved. The Government's agreed part is $4,676.25 as shown. It is recommended that the operator be paid this amount as provided by the contract.

William R. Hardwick

William R. Hardwick, Mining Engineer
Mining Methods Branch, Mining Division
Region IV, Tucson, Ariz.

October 8, 1953

Mr. W. R. Storms
U.S. Bureau of Mines
P. O. Box 4097
University Station
Tucson 5, Arizona

Dear Mr. Storms:

Following is the report to accompany Forms 104 and 104-A in connection with the work done under Contract Idm E522 for the full month of September:

Drifting & Crosscutting (See Progress Map) The 400 Level West 150 North Crosscut was continued. From Station 419 plus 35' to Station 419 plus 55' (Station 421) slightly mineralized garnet averaging 0.1% Cu, o.2% Zn was encountered. Beyond this, to Station 421 plus 43' was limestone and siliceous limestone with a little garnetite. From Station 421 plus 90' (Station 423 plus 10') was garnetite with some mineralization in the last 15'; car grabs in this last 15' assayed 0.15% Cu, o.5% Zn. At Station 421 plus 90' (Station 423 plus 10') the tactite hanging wall was reached, so the crosscut was stopped at Station 423 plus 12', and the 400 Level West Hanging Wall Drift was begun to the westward. Little advance was made in this heading before the month ended; all of the work was in garnetite.

Diamond Drilling (See Logs and Sections). Two holes were drilled during the month: Coronado Nos. 111 and 112 (DMEA Nos. 6 and 7). These holes continued the fence begun last month. Hole No. 111 (No. 6) was drilled AX and cased to 201' and continued EX to the bottom at 609'. Hole No. 112 (No. 7) was drilled AX and cased to 76' and continued EX to the bottom at 584'; this hole was finished on the last day of the month. In Hole No. 111 (No. 6) the favorable beds were reached at 490' and the hole was in garnetite from that point to 605', at which point it passed into footwall limestone and continued in that rock to the bottom at 609'. In Hole No. 112 (No. 7) the favorable beds were reached at 474' and the hole was garnetite to 570' except for 16' of limestone between 499' and 515'. From 570' to 580' was partially oxidized material, which may be a fault, or may be simply oxidiztion of the footwall of the garnetite, a not uncommon feature. From 580' to the end at 584' was footwall limestone. With the permission of Mr. Storms, the Tucson representative of the U.S. Bureau of Mines, proposed Hole No.11 will be drilled next in a new location 75' southwest of the original location. The decision to drill this hole next and to change its location, was based on the discovery of a very favorable-looking geologic structure on the surface at this point.

Yours very truly,

CORONADO COPPER & ZINC CO.

By Fred E. Gray
Fred E. Gray
Mine Manager

FEG-o
4 ccs Mr. W. R. Storms
1 cc Mr. R. W. Moore 1 cc Mine Office

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

RECEIVED

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of Sept., 1953 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper and Zinc Company Minerals Copper & Zinc
Address Dragoon, Arizona
Contract Amount, $ 99,050.00 Government Participation: 50 % Amount, $49,525.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling AX & EX	4452.50	10,173.00	14625.50			11/3/53 K
Bulldozing						
Crosscutting	$4,660.00	$5960.00	$ 10620.00			
Drifting	240.00	6560.00	6800.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	9352.50	22693.00	32045.50	9352.50	22,693.00	32,045.50

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 10/8/53 *Payee Coronado Copper & Zinc Co.
Per [signature] Title Mine Manager

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

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

(Instructions on reverse)

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

$ 4676.25

Signature [signature]
(Authorized Certifying Officer)

Date Vou. No.
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. 1 dmE-521 in accordance with the terms of the contract.

Signature William R Hardwick Title Mining Engineer Date October 13, 1953

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature John F. Shea for W. H. KING Title Executive Officer Date OCT 20 1953

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 30 1953

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of Sept. 1953 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper and Zinc Company Minerals Copper & Zinc
Address Dragoon, Arizona

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting	Feet	$ 240.00	6.0	$6800.00	170.0	$ 40.00	1520	$ 40.00
Crosscutting	Feet	4660.00	116.5	10620.00	265.5	40.00		
Raising								
Shafts								
Winzes								
Drilling: Core AX	Feet	1246.50	277.0	5823.00	1294.0	4.50	8500	4.50
Drilling: Core EX	Feet	3206.00	916.0	8802.50	2515.0	3.50		3.50
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		9352.50	1315.50	32045.50				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		9352.50		32045.50				99050.00

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

Date 10/8/53 Operator Coronado Copper & Zinc Co.

Per Fred E. Gray Title Mine Manager

REMARKS:

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

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

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

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

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

GPO 83-38475

Collar Location:
Level: Surface
N: 10145.85
E: 7137.17
Elevation: 5027.59
Bearing: --
Angle: - 90°

Length: 609.0
Hor: 0.0
Vert: 609.0
Logged by: ABIII
Date: 10/1/53

D. D. HOLE NO. 111 (DMEA #6)
Date Started: 9/1/53
Date Finished: 9/16/53
Size: EX
Casing: 201' (pulled)

Objective: Continuing fence down-dip from Copper Chief Orebody.

Results: No ore. Thick garnetite.

Footage			Assays		Core recovery	Log	Description and Averages
From	To	Interval	Cu%	Zn%			
0.0	10.0	10.0			--		No core
10.0	51.0	41.0			32		Limy dolomite.
							@33' minor fault -- fe stain.
51.0	58.0	7.0			86		Mottled yellowish tac (?) with sulfide spots.
58.0	90.0	32.0			84		Ma 7. hornstone with py cubes. Lower 8' has bands limy dolomite.
9010	120.0	30.0			80		Limy (chloritic?) dedol.
							@117' minor fault -- shears, calcite at 50° to core axis, slight fe stain.
120.0	136.0	16.0			88		Dolomite with shale partings.
136.0	220.0	84.0			60		Dolomite, poor core.
							@142' minor fault at 60° to axis; light fe stain.
							@149' ditto at 30°, some vuggy calcite.
							@174' chunks massive limonite up to 2 cm.
220.0	239.0	19.0			100		Ma 5 serpentine ls.
239.0	296.0	57.0			95		Fair to poor tactte.
296.0	305.0	9.0			90		Quartzite marker, with pyrite cubes.
305.0	328.0	23.0			96		Dolomite, partially altered.
328.0	339.0	11.0			32		Fault. Breccia, some shears at 45° to core axis, light overall fe stain.
339.0	364.0	25.0			84		Fair tactite.
364.0	370.0	6.0			100		Serpentine ls.
370.0	393.0	23.0			96		Fair tactite.
393.0	395.0	2.00			100		Serpentine ls.
395.0	457.0	63.0			97		Tactite.
457.0	490.0	33.0			95		Tactite with hnf bands.
490.0	496.0	6.0			95		Garnet-diopside rock, somewhat broken and sheared at all angles. Little fe stain.
496.0	501.0	5.0			90		Dark brown garnet.
501.0	506.0	5.0			80		Grey xls, no hnf, partially fractured.
506.0	543.0	37.0			81		Garnet.
543.0	551.0	8.0			100		Garnet with much wollastonite in bands.
551.0	605.0	54.0			87		Garnet with occasional fractured or porous zones.
605.0	609.0	4.0			63		Cre. ls with some wollastonite bands.

Collar Location:
Level: Surface
N: 10031.11
E: 7233.30
Elevation: 5032.56
Bearing: --
Angle: - 90°

Length: 584.0
Hor: 0.0
Vert: ~~xxxx~~ 584
Logged by: ABIII
Date: 10/1/53

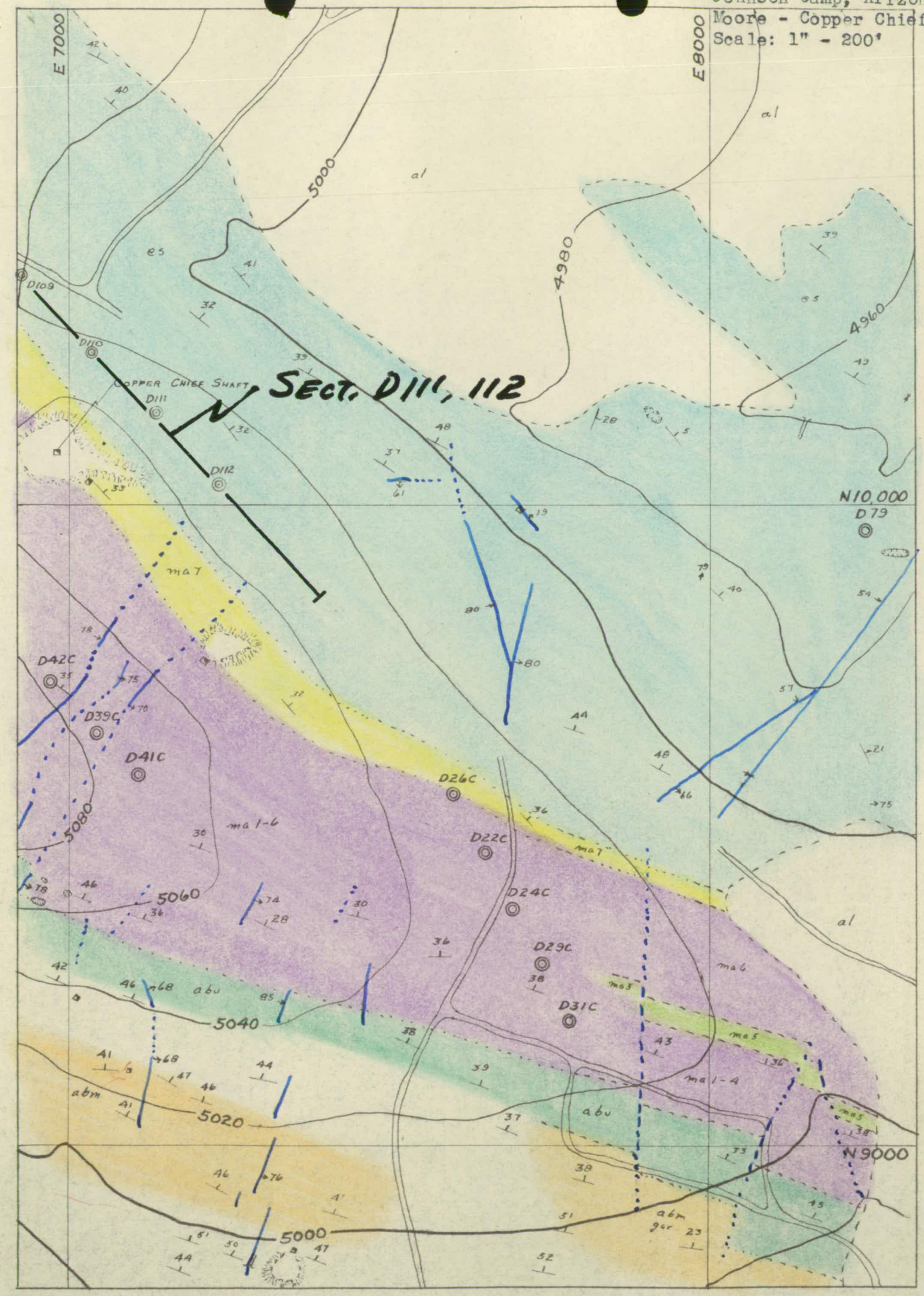
D. D. HOLE NO. 112 (DMEA #7)
Date Started: 9/17/53
Date Finished: 9/30/53
Size: EX
Casing: 76' (pulled)

Objective: Continue fence down-dip from Copper Chief Orebody.

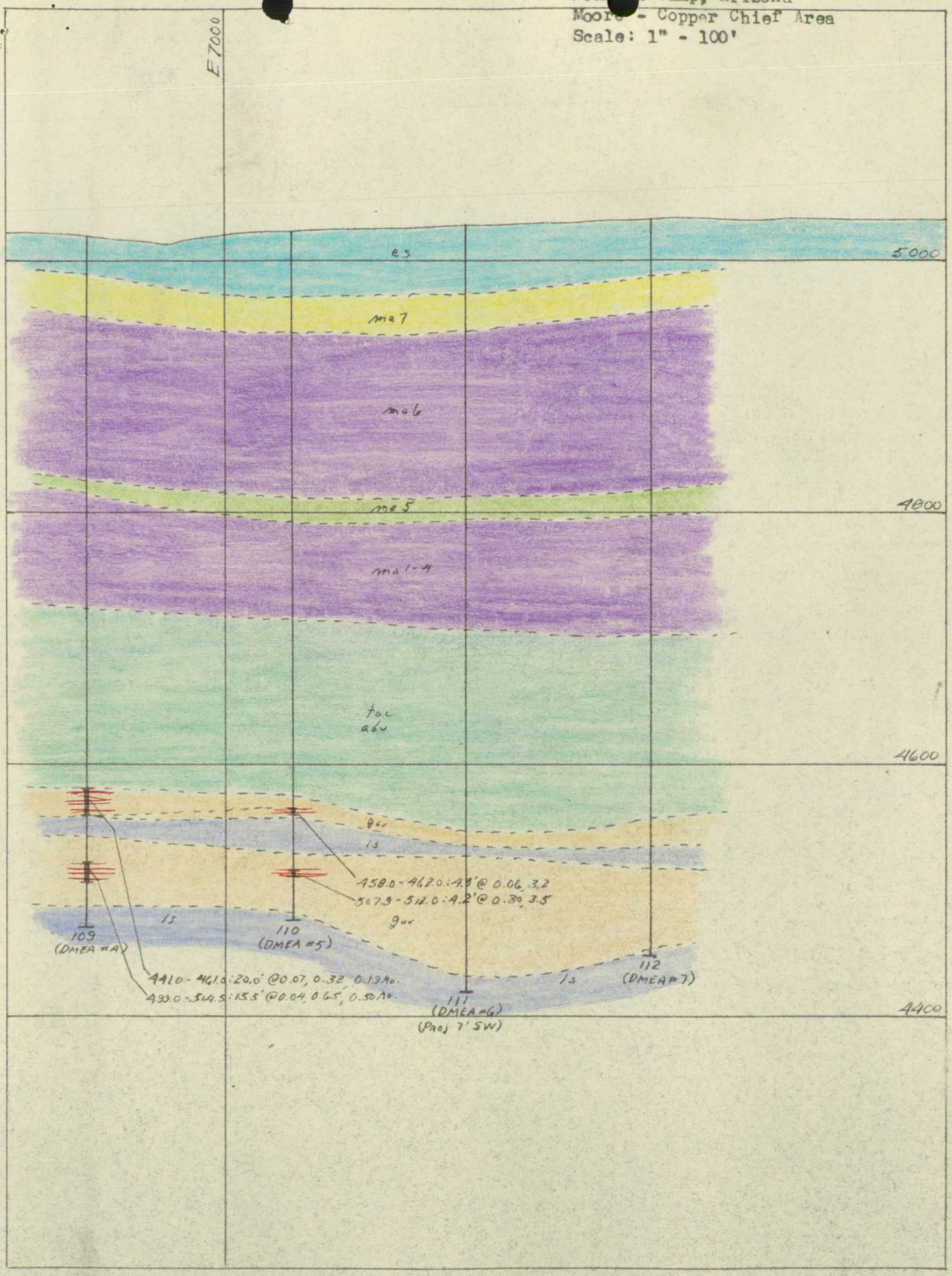
Results: No ore. Thick garnetite.

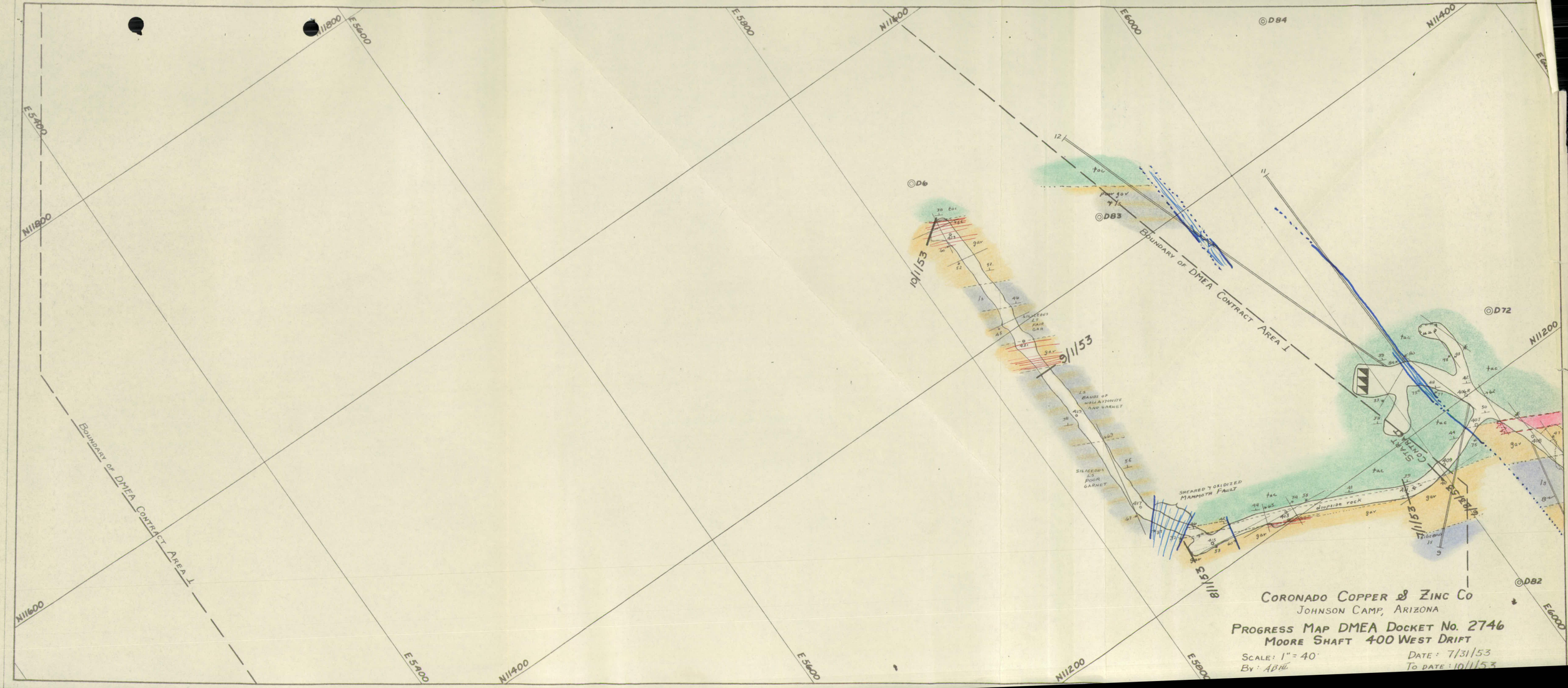
Footage From	Footage To	Footage Interval	Assays Cu%	Assays Zn%	Core recovery	Log	Description and Averages
0.0	10.0	1000			--		No core.
10.0	20.0	10.0			60		Slightly limy dol.
20.0	45.0	25.0			72		Very limy dedol with some tremodite or ~~xxxxxx~~ talc. Local slight fe stain.
						xxx	24-27 fe stain and shears.
45.0	76.0	31.0			68		Ma 7 with some pyrite. Lower 2' light cu stain and fe stain -- fault?
76.0	103.0	27.0			66		Reddish limy dol.
103.0	141.0	38.0			74		Slightly limy dedol, some shale partings.
141.0	216.0	75.0			64		Dolomite
216.0	236.0	20.0			95		Ma 5 serpentine ls. 223-230 tactite.
236.0	292.0	56.0			100		Fair to poor tactite.
292.0	301.0	9.0			100		Quartzite marker, with pyrite.
301.0	311.0	10.0			80		Grey dolomite.
311.0	322.0	11.0			100		Buff dolomite.
322.0	333.0	1110			82		Grey dolomite.
333.0	340.0	7.0			57		Partially tactitized grey dol.
340.0	365.0	25.0			84		Fair tactite.
						xxx	343-348 soft and bleached, possibly fault
365.0	370.0	5.0			100		Serpentine ls.
370.0	445.0	75.0			89		Tactite.
						xxx	@435' narrow calcite veinlet at 10° to core axis.
						xxx	@443' fracture at 40°, light fe stain.
445.0	474.0	29.0			66		Tactite with hnf bands.
474.0	499.0	25.0			88		Garnet.
499.0	515.0	16.0			88		Grey xls, no hnf. Abot 15% gar in bands.
515.0	570.0	55.0			76		Garnet, no sulfides.
570.0	580.0	10.0			70	? ? ?	Fault? Gar and ls with much brown stain in bedding-plane stringers. Some cal, little gouge, no fe stain. Probably not fault, but footwall oxidation.
580.0	584.0	4.0			75		Crenulated ls.

D.D. Holes 111, 112 (DMEA 6&7)
Johnson Camp, Arizona
Moore - Copper Chief Area
Scale: 1" - 200'



D. D. Holes 111 and 112 (DMEA #6 and #7)
John[illegible]n Camp, Arizona
Moore - Copper Chief Area
Scale: 1" - 100'





CORONADO COPPER & ZINC CO
JOHNSON CAMP, ARIZONA

PROGRESS MAP DMEA DOCKET No. 2746
MOORE SHAFT 400 WEST DRIFT

SCALE: 1" = 40'
BY: ABHL

DATE: 7/31/53
TO DATE: 10/1/53

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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224 New Customhouse
Denver 2, Colorado

September 28, 1953

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Form MF-104, DMEA Docket 2746, Contract Idm-E522 (Copper-Zinc), Coronado Copper and Zinc Co.'s Johnson Camp Republic Copper-Zinc Mine, Cochise County, Arizona

Enclosed are two copies of the Operator's Monthly Progress Report Form MF-104 and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data for the period of August 1953, pertaining to DMEA Docket 2746, Contract Idm-E522, Coronado Copper and Zinc Co.'s Johnson Camp Republic Copper-Zinc Mine, Cochise County, Arizona.

W. H. King

W. H. King

Enclosures

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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OCT - 2 1953

224 New Customhouse
Denver 2, Colorado

September 18, 1953.

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 2746, Contract Idm-E522 (Copper-Zinc), Coronado Copper and Zinc Co.'s Johnson Camp Republic Copper-Zinc Mine, Cochise County, Arizona. Operator's Monthly Progress Report for the period August 1953.

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

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Remarks:

Date of Report	September 11, 1953.
Date Received in Field Office	September 14, 1953.
Date Received in Region Office	September 17, 1953.

W. H. King
W. H. King

Enclosures

RDB:cwm

cc: Contract
Secretary to the Oper. Comm. (2)
WRStorms
Chron.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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MINING DIVISION
REGION IV

September 15, 1953

Memorandum

To : W. H. King, Chief, Mining Division, Region IV

From : Chief, Mining Methods Br., Mining Div., Region IV

Subject : August 1953 Progress Report, Contract Idm-E522, Docket DMEA-2746, Coronado Copper & Zinc Co.'s Johnson Camp Republic Copper-Zinc Mine, Cochise County, Ariz.

Enclosed in quintuplicate are the following:

(1) Bureau of Mines engineer's report;

(2) Operator's Narrative report with maps and drill hole logs;

(3) Forms MF-104 and MF-104A.

Also enclosed are two extra copies of our engineer's report.

As all work is in accordance with terms of the contract, I recommend that the Government's share of the costs be paid.

Walter R. Storms

Walter R. Storms

CC W. H. King (6)
DMEA-2746
DF

WRStorms:frj

MINING DIVISION
REGION IV

September 14, 1953

Memorandum

To : Walter R. Storms, Chief, Mining Methods Branch, Mining Div., Region IV, Tucson, Arizona

From : William R. Hardwick, Mining Engineer, Tucson, Ariz.

Subject : Progress Report for August 1953, Docket DMEA-2746, Contract Idm-E522, Coronado Copper and Zinc Company's Republic Mine, Dragoon, Arizona.

The Coronado Copper and Zinc Company's Republic Mine at Johnson Camp was visited on September 8, 1953. The progress for the month of August was measured with the assistance of Joe Sierakoski, Engineer, and the geology was discussed with Arthur Baker, geologist, for the company. The exploration contract provides for underground drifting and crosscutting and surface diamond drilling.

The 400 level drift had reached a point 164 feet from the starting point on the first of August. A short exploration crosscut was started to the north near the end of the drift which at a distance of 18 feet encountered the Mammoth Fault. This crosscut then was extended northward toward the area in which the favorable beds were presumed to be located and at the time of the visit had reached a point 180 feet northwest of its starting point.

In the drilling program three diamond drill holes were completed. The depths and breakdown as to size of these holes are shown below:

Hole No.	AX	EX	Drilled last month	Total Depth
108	39	344	146	529
109	191	360	---	551
110	76	471	---	547
Total	306	1,175	146	1,627

Of the holes drilled to date two have cut mineralized ground for a short distance. The assay value of these holes is low as shown by the narrative report of the operator, and it is questionable as to whether any material cut is ore. Of interest is the molybdenum assay for hole No. 109 which for 15.5 feet assayed 0.50 percent molybdenum.

CC W. H. King (Orig. & 6)
DMEA-2746
DF

WRHardwick:frj

Of the 180 feet of crosscut measured when the property was visited, the operator states that 149 feet were completed in August. This crosscut is in accordance with the provisions of the contract and is approved.

During August, 306 feet of AX and 1,175 feet of EX drill hole were completed in accordance with the terms of the contract and are approved.

All work completed on the contract during August is listed below with the contract price.

Item	Feet completed	Price per foot	Total cost
Crosscut	149	$40.00	$5,960.00
AX drill hole	306	4.50	1,377.00
EX drill hole	1,175	3.50	4,112.50
Total			$11,449.50

Of the total estimated cost of $11,449.50, the contract provides that the Government will provide 50 percent or $5,724.75. It is recommended that the operator be paid this amount in accordance with the terms of the contract.

William R. Hardwick

William R. Hardwick, Mining Engineer
Mining Methods Branch
Mining Division, Region IV

September 11, 1953

Mr. W. R. Storms
U.S. Bureau of Mines
P. O. Box 4097
University Station
Tucson 5, Arizona

Dear Mr. Storms:

Following is the report to accompany Forms 104 and 104-A in connection with the work done under Contract Idm 8522 for the full month of August:

Drifting (See Progress Map). On the first of the month, the 400 Level West 150 North Crosscut was started from the 400 Level West Drift at Station 415. It was intended to drive the crosscut 15 or 20 feet to check the offset on a small fault at Station 413 plus 36', and then drive both the crosscut and the drift on opposite shifts. However, at 18' in the crosscut the Mammoth Fault was encountered, so no more work was done in the drift, as it would reach the projected location of the Mammoth Fault in about 15'. The Mammoth Fault zone in the crosscut was a strongly sheared and oxidized zone 24' wide; there was no mineralization. The footwall of the zone was N 60°E dipping 32° S, and the hanging wall N 40° E dipping 37° S. North of the fault, to Station 415 plus 100', was siliceous limestone with small masses and thin beds of garnetite; this part of the crosscut also had a minor Northeaster fault, which probably had little displacement. From Station 415 plus 100' to the face at the end of the month (Station 419 plus 34.5') was limestone, partially bleached, with occasional bands of garnetite and wollastenite rock.

Diamond Drilling (See Logs and Sections). Three holes were completed during the month - Coronado Nos. 108, 109 and 110 (DMEA Nos. 3, 4 and 5). These holes form the beginning of a fence extending southeasterly from the fence completed by Holes No. 106 and 107 (DMEA 1 and 2) which were drilled last month. Hole No. 108 (No. 3) which was 146' deep at the beginning of the month, was drilled EX to the bottom at 529' but because of caving ground was reamed and cased to 185'. Hole No. 109 (No. 4) was drilled AX and cased to 191', and drilled EX to the bottom at 551'. Hole No. 110 (No. 5) was drilled AX and cased to 76' and EX to the bottom at 547'; this hole was finished on the last day of the month. In Hole No. 108 (No. 3) the favorable beds were reached at 453'; from 453' to 475' was garnetite, and from 475' to the bottom at 529' was limestone with a little garnetite. There was no mineralization. In Hole No. 109 (No. 4), the favorable beds were reached at 441'; the twenty feet from 441' to 461' were garnetite assaying .07% Cu, .32% Zn and .19% Mo; from 461 to 480 was limestone with a little garnetite; from 480' to 533' was garnetite with the 15.5' between 499.0' and 514.5' assaying .04% CU, .65% Zn, and .50% Mo), the remainder of the hole, from 533' to 551' was limestone. In Hole No. 110 (No. 5) the favorable beds were reached at 449'; from 449' to 462' was garnetite, with the 4' between 458 to 462' assaying .06% Cu and 5.2% Zn; from 462 to 494 was limestone; from 494 to 543' was garnetite, with the 4.2' between 507.8 to 512.0' assaying .30% Cu, 3.5% Zn; from 543' to the end at 547' was limestone with much wollastenite. In this hole a few small spots of molybdenite were noted, but these were so few that no assay for molybdenum was made. Molybdenite is not uncommon in the district, although no commercially workable deposits have been found. Molybdenite usually occurs associated with copper and zinc sulfides,

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both in orebodies and in non-commercial stringers not associated with orebodies.

Yours very truly,

CORONADO COPPER & ZINC CO.

By Fred E. Gray
Fred E. Gray
Mine Manager

FEG-c

4 ccs Mr. W. R. Storms
1 cc Mr. R. W. Moore
1 cc Mine Office

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

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of August, 1953 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper and Zinc Company Minerals Copper & Zinc
Address Dragoon, Arizona
Contract Amount, $99,050.00 Government Participation: ____% Amount, $49,525.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling Ax & Ex	$5489.50	4683.50	10,173.00			
Bulldozing						
Crosscutting	5960.00	-	5,960.00			
Drifting	-	6560.00	6,560.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$11449.50	11243.50	22693.00	11449.50	11243.50	22693.00

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 9/11/53 *Payee Coronado Copper & Zinc Co.
Per Ind E. Gray Title Mine Manager

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

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

(Instructions on reverse)

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

$ 5,724.75

Signature [illegible]
(Authorized Certifying Officer)

Date 9/24/53 Vou. No. DMA 54-31
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. DMEF 572 in accordance with the terms of the contract.

Signature William R. Hardwick Title Mining Engineer Date Sept 14, 1953

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W. H. King Title Executive Officer Date SEP 18 1953

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

GPO 83-38476

Form MF-104A
(April 1952)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

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OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of August 1953 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper and Zinc Company Minerals Copper & Zinc
Address Dragoon, Arizona

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting	Feet	$5960.00	149	$12,520.00	313	$40.00	1520	$40.00
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core AX	Feet	1377.00	306	4,576.50	1017	4.50	8500	4.50
Churn EX	Feet	4112.50	1175	5,596.50	1599	3.50		3.50
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		$11449.50	1630	$22,693.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS								$99050.00

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

Date 9/11/53 Operator Coronado Copper & Zinc Co.

Per Fred E. Gray Title Mine Manager

Fred E. Gray

REMARKS:

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

(Instructions on reverse)

(For Government use only)

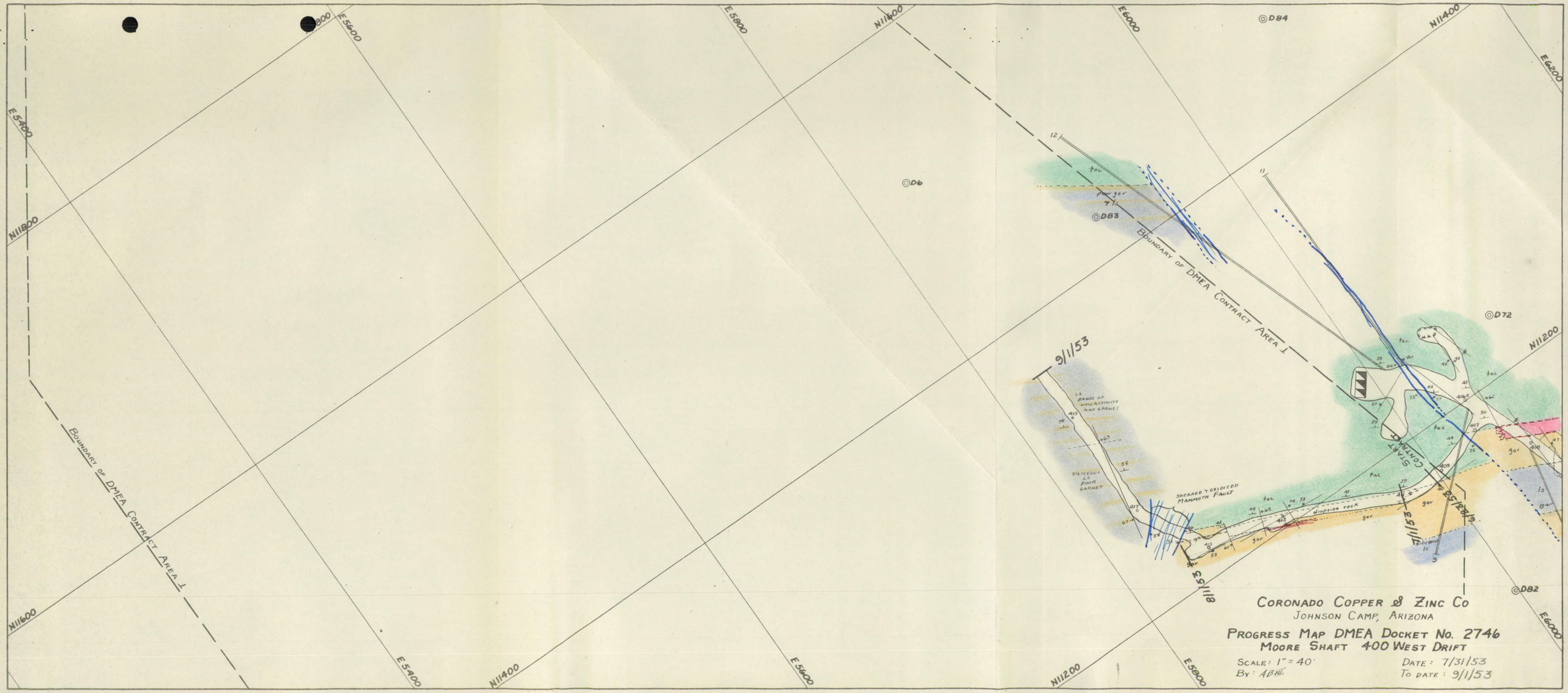
INSTRUCTIONS

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

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

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

GPO 83-38475


E 5400
E 5600
E 5800
E 6000
E 6200
N 11800
N 11600
N 11400
N 11200
D6
D83
D84
D72
D82
Boundary of DMEA Contract Area I
Boundary of DMEA Contract Area I
9/1/53
7/31/53
8/31/53
Start Contract
Sheared & oxidized Mammoth Fault
diopside rock
Coronado Copper & Zinc Co
Johnson Camp, Arizona
Progress Map DMEA Docket No. 2746
Moore Shaft 400 West Drift
Scale: 1" = 40'
By: ABH
Date: 7/31/53
To date: 9/1/53

Collar Location:

Level: Surface
N: 10476.22
E: 6831.14
Elevation: 5026.17
Bearing: --
Angle: -90°

Length: 529.0
Hor: 0.0
Vert: 529.0
Logged by: ABIII
Date: 8/31/53

D. D. HOLE NO. 108 (DMEA #3)

Date Started: 7/30/53
Date Finished: 8/12/53
Size: AX to 188', EX to end.
Casing: 188' (pulled)

Objective: Test for ore down-dip extension of Copper Chief orebody.

Results: No ore.

Footage From	Footage To	Footage Interval	Assays Cu%	Assays Zn%	Core recovery	Log	Description and Averages
0.0	10.0	10.0			--		No core
10.0	36.0	26.0			92		Limy dolomite; in last 1', some cu stain.
36.0	66.0	30.0			70		Ma 7 hornstone; rare pyrite cubes.
66.0	99.0	33.0			70		Dolomite, partially chloritized.
99.0	127.0	28.0			96		Grey dol, thin shale partings.
127.0	188.0	61.0			25		Hard grey dol, poor core. No shale.
188.0	194.5	6.5			100		Grey-shite slightly limy dol.
194.5	203.0	8.5			94		Ma 5 serpentine ls.
203.0	223.0	20.0			70		Chloritic limy tactite.
223.0	241.0	18.0			72		Fault. Iron stain throughout, variable intensity. Occasional calcite veinlets. @235' 1" cu stain.
241.0	248.0	7.0			71.0		Quartzite marker? Fine dense white-green fairly soft. No pyrite.
248.0	268.0	20.0			95		Grey limy dol-poor tac; locally chlorite.
268.0	289.0	21.0			100		White limy dol-poor tac.
289.0	311.0	22.0			55		Whitish limy dol-poor tac with red spots 2-10 mm. dia. Begin fisheye serpentine? @299' 6" gougy breccia, no fe stain.
311.0	341.5	30.5			90		Serpentine ls.
341.5	418.0	76.5			98		Gray fair tactite. No sulfides. @364' & 390' small spots serpentine(?).
418.0	453.0	35.0			80		Fair tactite with hnf bands.
453.0	475.0	22.0			82		Fair garnet with many hnf bands and rare grey xls bands. Rare sulfides.
475.0	496.0	21.0			62		Grey xls with about 15% gar in bands.
496.0	529.0	33.0			88		Poor garnet siliceous ls, rare sulfides.

Collar Location:
Level: Surface
N: 10359.58
E: 6925.35
Elevation: 5020.05
Bearing: --
Angle: - 90°

Length: 551.0
Hor: 0.0
Vert: 551.0
Logged by: ABIII
Date: 9/2/53

D. D. HOLE NO. 109 (DMEA #4)
Date Started: 8/13/53
Date Finished: 8/21/53
Size: EX
Casing: 191' (pulled)

Objective: Test ore horizond down-dip from Copper Chief Orebody.

Results: Some mineralization: low-grade copper and zinc, relatively high molybdenum.

Footage			Assays		Core recovery	Log	Description and Averages
From	To	Interval	Cu%	Zn%			
0.0	20.0	20.0			--		No core.
20.0	32.0	12.0			83		Limy dolomite.
32.0	66.0	34.0			35		Martin 7 siltstone. Little pyrite. At top and bottom a little cu stain.
66.0	96.0	30.0			70		Chloritic dedolomite.
96.0	124.0	28.0			100		Grey dol with thin shale partins.
124.0	169.0	45.0			47		Grey dol, no shale. Poor core.
169.0	182.0	13.0			100		Grey dol, no shale. Good core.
182.0	196.0	14.0			71		Limy dol with some chlorite.
196.0	204.0	8.0			94		Martin 5 serpentine ls.
204.0	260.0	56.0			89		Fair tactite, rare sulfides.
260.0	272.0	12.0			92		Quartzite marker, no pyrite.
272.0	298.0	26.0			85		Grey dol, much altered.
298.0	304.0	6.0			66		Fault. Soft friable gouge, some calcite, light fe stain. Shears @ 40° - 60° to core axis.
304.0	308.0	4.0			100		Limy tactite; possibly top of fisheye.
308.0	328.0	20.0			90		Fisheye serpentine ls.
328.0	373.0	45.0			93		Fair tactite, no sulfides.
373.0	378.0	5.0			40		Minor (?) fault. About 2" quartz with galena. Shears, light fe stain throughout.
378.0	410.0	32.0			75		Fair tactite, no sulfides.
410.0	441.0	31.0			97	%Mo.	Fair tactite with hnf bands. No sulfides
441.0	448.0	7.0	0.12	0.82	100	0.05	441.0 - 461.0: 20.0' @ 0.07, 0.32, 0.19Mo.
448.0	451.5	3.5	0.03	0.06	100	0.36	Garnet with some pyrite.
451.5	461.0	9.5	0.05	0;04	95	0.23	
461.0	463.0	2.0			100		Garnet.
463.0	480.0	17.0			88		Grey xls, 10% garnet in bands.
480.0	499.0	19.0			42		Garnet, some grey xls bands.
499.0	507.0	8.0	0.06	1.02	94	0.13	499.0 - 514.5: 15.5' @ 0.04, 0.65, 0.50Mo.
507.0	514.5	7.5	0.02	0.26	87	0.89	Garnet in siliceous ls.
514.5	533.0	18.5			81		Garnet, rare spots sphalerite.
533.0	551.0	18.0			33		Ls with some garnet and much wollastonite

Note: in samples assayed, no Pb detected in 5 gm. samples.

Collar Location:

D. D. HOLE NO. 110 (DMEA #5)

Level: Surface
N: 10239.66
E: 7034.02
Elevation: 5022.91
Bearing: --
Angle: - 90°

Length: 547.0
Hor: 0.0
Vert: 547.0
Logged by: ABIII
Date: 9/2/53

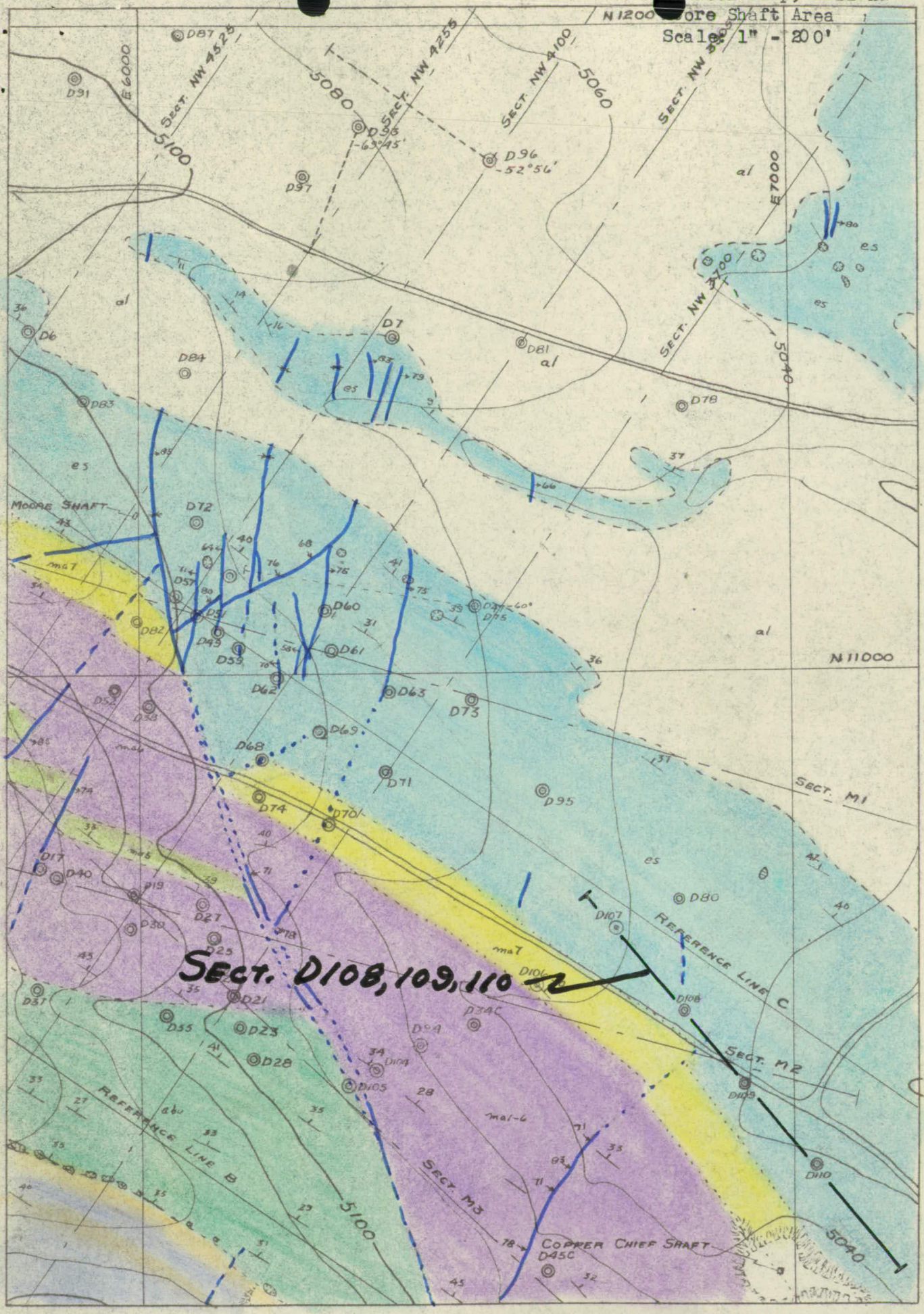
Date Started: 8/22/53
Date Finished: 8/31/53
Size: EX
Casing: 76' (pulled)

Objective: Test ore horizon down-dip from Copper Chief Orebody.

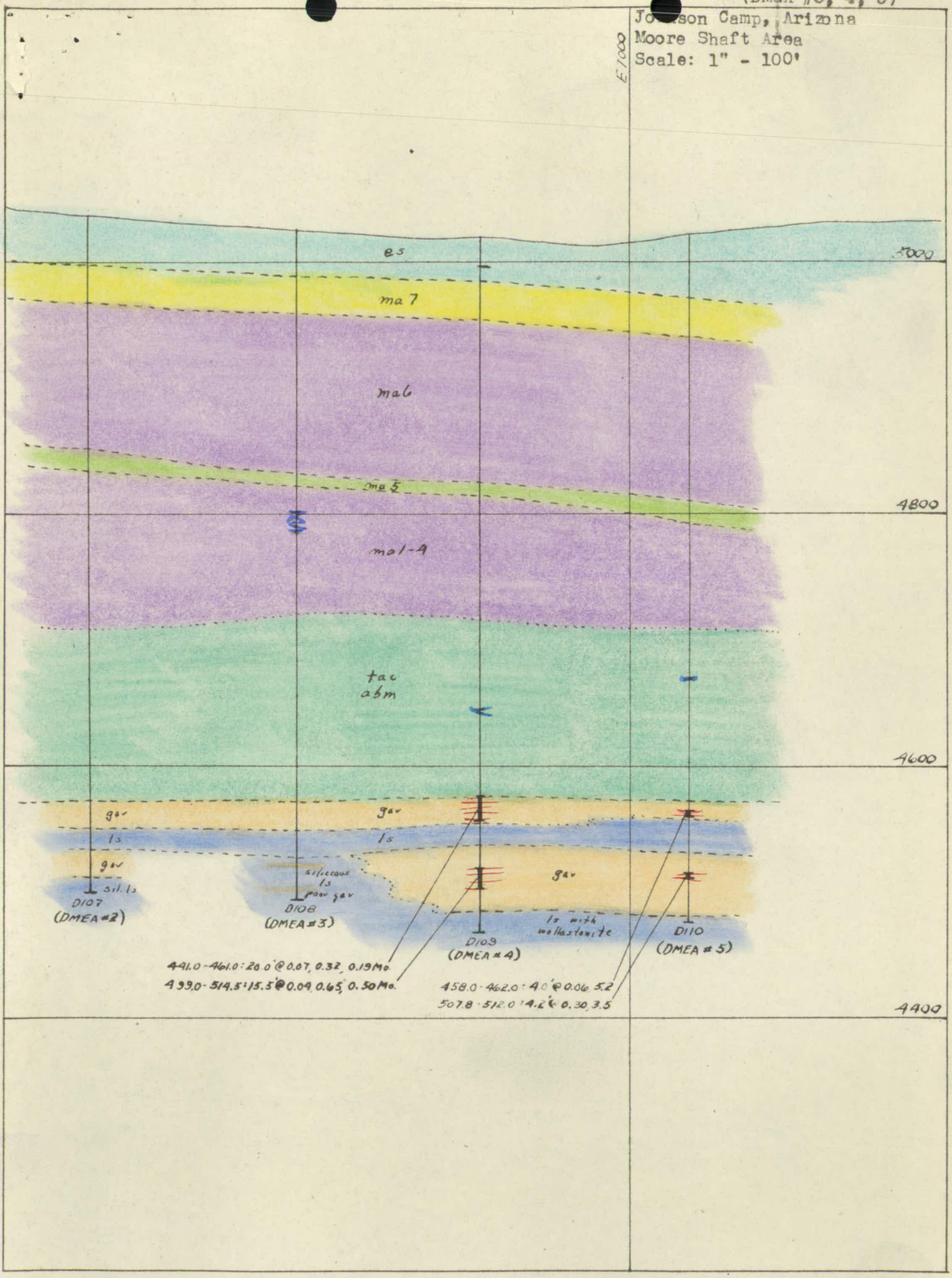
Results: Two narrow strands of low-grade ore.

Footage			Assays		Core recovery	Log	Description and Averages
From	To	Interval	Cu%	Zn%			
0.0	10.0	10.0			--		No core
10.0	51.0	41.0			73		Limy dol; light cu stain in last 2'.
51.0	81.0	30.0			43		Martin 7 siltstone; pyrite in upper 10'.
81.0	141.0	60.0			78		Dedolomite with occasional chlorite.
141.0	146.0	5.0			100		Grey-white dolomite.
146.0	147.0	1.0			100		Minor fault. Bleached, light fe stain, little calcite.
147.0	212.0	65.0			34		White-grey to salmon dol.
212.0	231.0	19.0			63		Martin 5 serpentine ls; clots are probably olivine, not serpentine.
231.0	277.0	46.0			87		Tactite, very rare sulfides.
277.0	286.0	9.0			87		Quartzite marker, some pyrite.
286.0	308.0	22.0			82		Grey mdol.
308.0	331.0	23.0			46		Partially tactitized dol.
331.0	332.0	1.0			100		Serpentine ls.
332.0	355.0	23.0			96		Tactite; in top 15' spots of sulfides.
355.0	356.0	1.0			100		Fault. Chloritic gouge, shears @ 30° to core axis. No fe stain.
356.0	418.0	63.0			86		Tactite.
418.0	449.0	31.0			87		Tactite with hnf bands.
449.0	458.0	9.0			92		Fair garnet in xls, rare sulfides.
458.0	462.0	4.0	0.06	5.2	92		Garnet.
462.0	494.0	32.0			84		Grey xls with about 10% garnet in bands.
494.0	507.8	13.8			80		Garnet.
507.8	512.0	4.2	0.30	3.5	95		Garnet.
512.0	543.0	31.0			90		Garnet.
543.0	547.0	4.0			50		Ls with a little garnet, very much wollastonite.

D. D. Holes 108, 109, 110 (DMEA #3, 4, 5)
Johnson Camp, Arizona
Core Shaft Area
Scale: 1" - 200'



D. D. Holes 108, 109, 110
(DMEA #3, 4, 5)



CORONADO COPPER AND ZINC CO.
Johnson Camp Unit

SURFACE DIAMOND DRILLING FOR
THE MONTH OF AUGUST, 1953
(Under DMEA Contract No. IDM-E 522)

DDH #108	8/1	146	to	188	42	2	shifts	8 hrs reaming to 182'
	8/2	188	"	195	7	1	"	5 hrs reaming to 185' and casing.
	8/3	195	"	223	28	2	"	Repairing machine
	8/4							Waiting for machine parts
	8/5							Waiting for machine parts
	8/6							Waiting for machine parts
	8/7	223	"	241	18	1	"	Repairing machine
	8/8	241	"	341	100	2	"	
	8/9	Sunday						
	8/10	341	to	416	75	2	"	Repairing machine
	8/11	416	"	487	71	2	"	
	8/12	487	"	529	42	2	"	Finished 2 1/2 hrs pulling casing
DDH #109	8/13	00	"	20	20	2	"	2 1/2 hrs casing. BX hole to 10'
	8/14	20	"	46	26	2	"	11 hrs casing and cementing
	8/15	46	"	135	89	2	"	2 hrs drilling cement
	8/16	135	"	169	34	1	"	
	8/17	169	"	236	67	2	"	AX to 191, EX thereafter. 3 hrs casing
	8/18	236	"	316	80	2	"	
	8/19	316	"	411	95	2	"	
	8/20	411	"	486	75	2	"	
	8/21	486	"	551	65	2	"	Finished 1 1/2 hrs pulling casing
DDH #110	8/22					1	"	Moving and setting up
	8/23	Sunday						
	8/24	00	to	61	61	2	"	1 hr casing. AX to 56', EX thereafter
	8/25	61	"	131	70	2	"	2 1/2 hrs reaming and casing to 76'
	8/26	131	"	211	80	2	"	
	8/27	211	"	291	80	2	"	
	8/28	291	"	371	80	2	"	
	8/29	371	"	451	80	2	"	
	8/30	Sunday						
	8/31	451	to	547	96	2	"	Finished

Month footage 1481 46 shifts

306' drilled AX or reamed to AX or larger
1175' drilled EX
39 hours Coronado lost time

Arthur Baker III
September 4, 1953

1 cc - Continental
1 cc - A.R.
1 cc - F.E.G.
1 cc - engr
5 cc - DMEA

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 3 - 1953

Keating

224 New Customhouse
Denver 2, Colorado

August 31, 1953

Memorandum

To: Secretary to the Operating Committee
Defense Minerals Exploration Administration

From: Executive Officer, DMEA Field Team, Region IV

Subject: Form MF-104, DMEA Docket 2746, Contract Idm-E522 (Copper-Zinc), Coronado Copper and Zinc Company, Cochise County, Arizona.

Enclosed are two copies of the Operator's Monthly Progress Report Form MF-104 and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data for the period of June 23, 1953 to July 31, 1953, pertaining to DMEA Docket 2746, Contract Idm-E522, Coronado Copper and Zinc Company, Cochise County, Arizona.

W. H. King
W. H. King

Enclosures

mdt

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

224 New Customhouse
Denver 2, Colorado

August 14, 1953.

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 2746, Contract Idm-E522 (Copper-Zinc), Coronado Copper and Zinc Company, Cochise County, Arizona. Operator's Monthly Progress Report for the period from June 23, 1953 to July 31, 1953.

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

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

Date of Operator's Report	August 8, 1953
Date Report received in Field Office	August 10, 1953
Date Report received in Regional Office	August 14, 1953

for John T. Shaw
W. H. King

Enclosures

JWT:cwm

cc: Contract
WRStorms
Secretary to the Oper. Comm. (2)
Chron.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 3 - 1953

MINING DIVISION
REGION IV

August 12, 1953

Memorandum

To : W. H. King, Chief, Mining Division, Region IV

From : Chief, Mining Methods Br., Mining Div., Region IV

Subject : Progress Report, June 23-July 31, 1953, Contract Idm-E522, Docket DMEA-2746, Coronado Copper & Zinc Co's. Johnson Camp Republic Copper-Zinc Mine, Cochise County, Ariz.

Enclosed in quintuplicate are the following:

(1) Bureau of Mines engineer's report;

(2) Operator's narrative report with 3 maps and 2 drill hole logs;

(3) Forms MF-104 and MF-104A.

Also enclosed are two extra copies of our engineer's report.

As all work is in accordance with the terms of the contract, I recommend that the Government's share of the costs be paid.

Walter R. Storms

Walter R. Storms

CC W. H. King (6)
DMEA-2746
DF

WRStorms:frj

MINING DIVISION
REGION IV

August 11, 1953

Memorandum

To : Walter R. Storms, Chief, Mining Methods Br., Mining Div., Region IV, Tucson, Ariz.

From : William R. Hardwick, Mining Engineer, Tucson, Ariz.

Subject : Progress Report for the Period June 23 to July 31, 1953 Docket DMEA-2746, Contract Idm-E522, Coronado Copper and Zinc Co.'s Republic Mine, Johnson Camp, Cochise County, Ariz.

Johnson camp was visited on August 11, 1953 and the advance in the exploration drift on the 400 level of the Moore shaft was measured. Mr. Arthur Baker, Geologist, assisted, and the measurements were discussed with Fred E. Gray, manager.

A part of the exploration program consists of diamond drilling. This part was started on July 10, 1953. By July 31, two holes had been completed and a third hole had been started. The core from these holes was examined.

No ore has been discovered.

The progress for the period was found to consist of the following:

Drifting, 164 feet @ $40.00	$6,560.00
Diamond drill hole, AX, 711 feet @ $4.50	3,199.50
Diamond drill hole, EX, 424 feet @ $3.50	1,484.00
Total	$11,243.50

All drifting and diamond drill holes were in accordance with the terms of the contract and are approved. It is recommended that the contractor be paid in accordance with the terms of the contract for the above work.

William R. Hardwick
William R. Hardwick, Mining Engineer
Mining Methods Branch
Mining Division, Region IV

CC W. H. King (Orig. & 6)
DMEA-2746
DF

WRStorms:frj

August 8, 1953

Mr. W. R. Storms
U.S. Bureau of Mines
P. O. Box 4097
University Station
Tucson 5, Arizona.

Dear Mr. Storms:

Following is the report to accompany Forms 104 and 104-A in connection with the work done under Contract Idm-E522 for the last few days of June and the full month of July:

Drifting (See Progress Map.) At the contract starting point, the face was mostly tactite waste, with the hanging wall of the garnetite, the favorable bed, near the right side. The drift was continued westerly, crosscutting the beds at a slight angle to 20 feet from starting point at which point the hanging wall was in the upper right corner of the drift. The topmost 6' of the favorable beds here were converted to diopside rock, rather than the usual garnetite, and the top of the garnetite was low on the left wall. The drift was turned to about N 65° W, to carry the true hanging wall in the upper right corner and the top of the garnetite in the left wall. At 77' a little mineralization was encountered in the topmost garnetite, and this continued to about 107'. A slab into this mineralized ground showed that it was only about 2' thick. A test hole into the mineralized garnetite at 100' assayed 0.12%Cu and 2.6% Zn. At 115' the drift was turned to about N 80° W to expose the garnetite better and continued in this direction to 164' at the end of July. At 134' a small cross-fault was encountered which offset the hanging wall of the garnetite northward, so that the garnetite hanging wall was exposed in the upper right corner of the drift.

Diamond Drilling. (See logs and sections). Two holes (Coronado Nos. 106 and 107, DMEA Nos. 1 and 2) were completed and a third, Coronado No. 108 (DMEA No. 3) was begun. When the drill rig arrived it was equipped only for drilling AX hole, so hole No. 106, (No. 1) was drilled AX to its bottom at 453'. Hole No. 107 (No. 2) was drilled AX to 39' and EX to the bottom at 536', but because of caving ground it was necessary to ream and case to 159'. Hole No. 108 (No. 3) was drilled AX to 99' and EX thereafter to 146', the bottom at the end of the month. In hole No. 106 (No. 1) the favorable beds were reached at 355'; several marker beds were recognizable above this horizon. At the top of the favorable beds was 20' of garnetite, underlain by limestone and slightly garnetized siliceous limestone. Only very rare specks of sulfide were found. Hole No. 107 (No.2) reached the favorable beds at 464', after cutting several marker beds. Like Hole No.106 (No. 1) this hole had 20' of garnetite at the top of the favorable beds, underlain by limestone. From 503 to 525 was garnetite again, underlain by siliceous limestone. Only very rare specks of sulfide were found. At the end of the month Hole No. 108 (No.3) at 146' was still in dolomite about 300' above the favorable beds.

4 ccs: Mr. W. R. Storms
1 cc Mr. R. W. Moore
1 cc Mine Office

Yours very truly,
CORONADO COPPER AND ZINC COMPANY

By FEG
Fred E. Gray - Mine Manager

FEG-o

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Approval expires 6-30-53.
Budget Bureau No. 42-R1036.3.
RECEIVED
SEP 3 - 1953

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

Month of July, 1953 Docket No. DMEA 2746 Contract No. Idm E522
Operator's Name Coronado Copper and Zinc Company Minerals Copper & Zinc
Address Dragoon, Arizona
Contract Amount, $ 99,050.00 Government Participation: 50 % Amount, $ 49,525.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) ~~Independent~~ Short Form Contracts:						
Drilling AX & EX	$4683.50	-	$4683.50			9/14/53 K
Bulldozing						
Crosscutting						
Drifting	6560.00	-	6560.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$11,243.50	-	$11,243.50	11243.50	--	11,243.50

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 8-8-53 *Payee Coronado Copper and Zinc Company
Per [signature] Title Mine Manager

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

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

(Instructions on reverse)

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

$ 5621.75

Signature [signature]
(Authorized Certifying Officer)
Date 8/24/53 Vou. No. DMA 54-19
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. DMEA E522 in accordance with the terms of the contract. WRH

Signature William R. Hardwick Title Mining Engineer Date 8/11/53

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature John F. Shaw Jr. W.H. Kang Title Executive Officer Date AUG 14 1953

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

GPO 83-38476

Form MF-104A
(April 1952)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 3 - 1953

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of July 1953 Docket No. DMEA 2746 Contract No. Idm 8522
Operator's Name Coronado Copper and Zinc Company Minerals Copper & Zinc
Address Dragoon, Arizona

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting	Feet	6560.00	164	$6560.00	164	40.00	1520	40.00
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core AX	Feet	3199.50	711	3199.50	711	4.50)	8500	4.50
Churn EX	Feet	1484.00	424	1484.00	424	3.50)		3.50
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Total Distributed Costs		$11,243.50	1299	$11,243.50				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		$11,243.50	1299	$11,243.50				$99,050.00

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

Date 8-8-53 Operator Coronado Copper & Zinc Co

Per Fred E. Gray Title Mine Manager

Fred E. Gray

Remarks:

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

(Instructions on reverse)

(For Government use only)

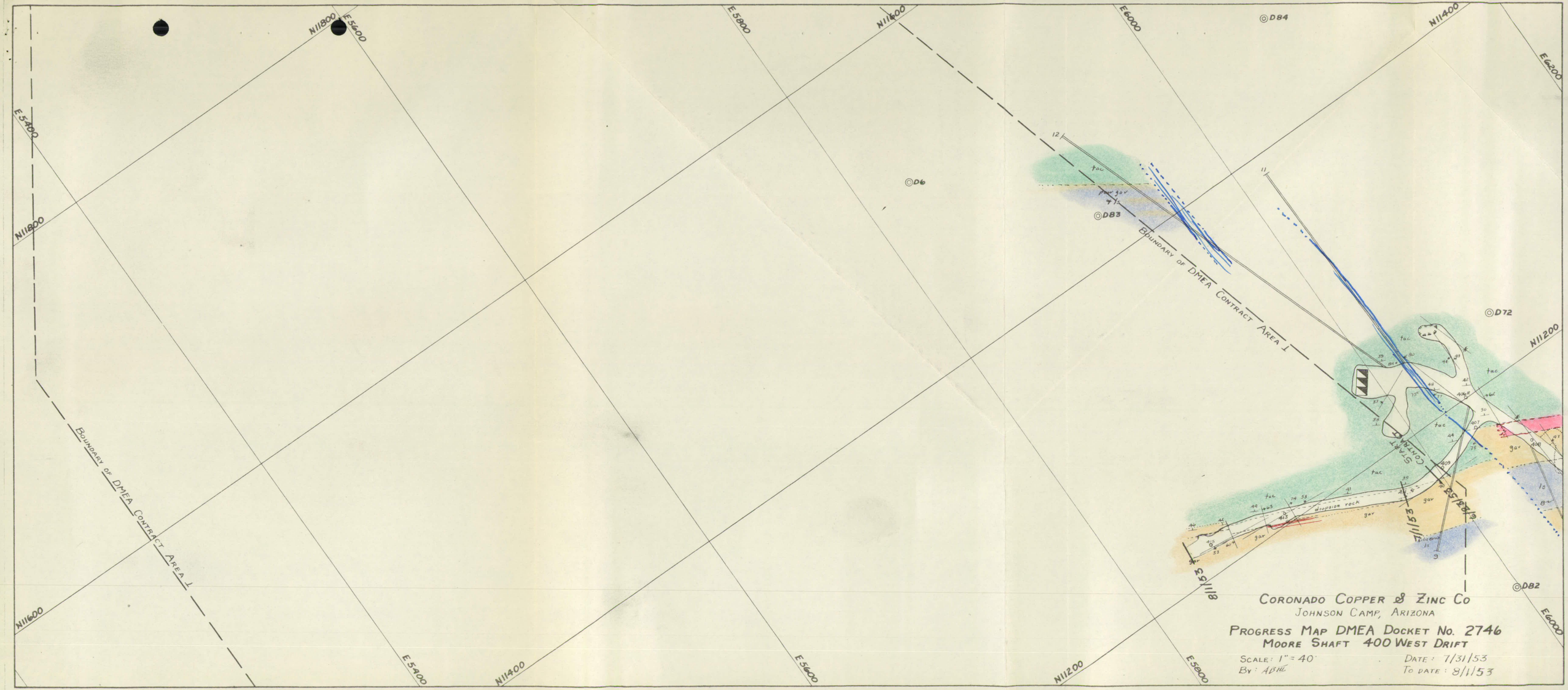
INSTRUCTIONS

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

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

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

GPO 83-38475


N11800
E5600
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N11200
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D84
D6
D83
D72
D82
Boundary of DMEA Contract Area 1
Boundary of DMEA Contract Area 1
Start of Contract
8/1/53
8/1/53
diopside rock
tac
gar
Coronado Copper & Zinc Co
Johnson Camp, Arizona
Progress Map DMEA Docket No. 2746
Moore Shaft 400 West Drift
Scale: 1" = 40'
By: ABHC
Date: 7/31/53
To date: 8/1/53

Collar Location:
Level: Surface
N: 10515.74
E: 6613.48
Elevation: 5040.79
Bearing: --
Angle: - 90°

Length: 453.0
Hor: 0.0
Vert: 453.0
Logged by: ABIII
Date: 8/1/53

D. D. HOLE NO. 106 (DMEA # 1)
Date Started: 7/11/53
Date Finished: 7/18/53
Size: AX
Casing: 40' (pulled)

Objective: Ore crossing D 340 Fence. Downward extension of Copper Chief Orebody.

Results: No ore.

Footage From	Footage To	Footage Interval	Assays Cu%	Assays Zn%	Core recovery	Log	Description and Averages
0.0	40.0	40.0			--		Core discarded.
40.0	52.0	12.0			83		Grey partially dedolomitized rock; thin brown streaks. Equivalent of chloritized ~~xx~~ upper part of Ma 6.
52.0	95.0	43.0			65		Grey mdol; moor core.
95.0	112.0	17.0			88		Ma 5 serpentine ls; about 60% tactite.
112.0	161.0	49.0			100		Fair-poor tactite with bands dol.
161.0	167.5	6.5			100		White quartzite; grains about 1.5 mm.
167.5	171.0	3.5			100		Black siltstone, pyrite cubes; quartzite marker.
171.0	198.0	27.0			85		Poor tactite; much limy dol.
198.0	202.5	4.5			44		White xls, 3 mm. grains.
202.5	233.0	30.5			85		Poor tactite grey dol. @ 227', 6" with spots sulfides.
233.0	312.0	79.0			98		Fair tactite, quite uniform. @ top, a little serpentine.
312.0	355.0 375.0	43.0			100		Poor tactite with hnf bands. Some 1' beds dolomite.
355.0	~~322.0~~	20.0			90		Garnet. Rare bands up to 1' of grey xls.
375.0	398.0	23.0			100		Grey xls. About 20% garnet in bands up to 2' thick.
398.0	447.0	49.0			90		Poor garnet siliceous ls. @ top 3" band with chalcopyrite specks. 435-436 occasional spots sphalerite.
447.0	453.0	6.0			100		Siliceous ls with some wollastonite bands.

Collar Location:

Level: Surface
N: 10602.65
E: 6736.58
Elevation: 5037.51
Bearing: --
Angle: - 90°

Length: 536.0
Hor: 0.0
Vert: 536.0
Logged by: ABIII
Date: 8/1/53

D. D. HOLE NO. 107 (DMEA # 2)

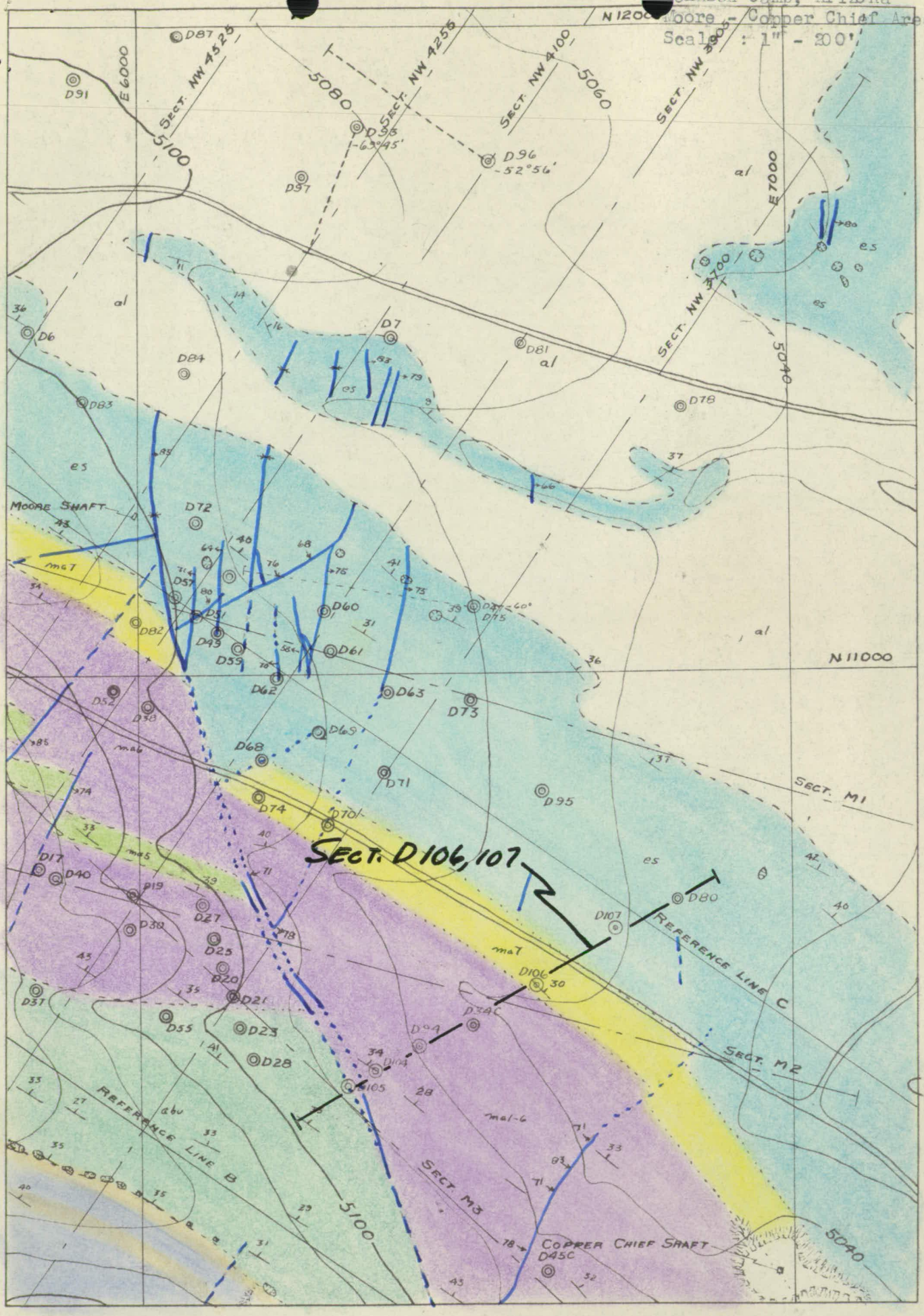
Date Started: 7/19/53
Date Finished: 7/28/53
Size: EX
Casing: 159' (pulled)

Objective: Ore crossing D 340 Fence. Downward extension of Copper Chief Orebody.

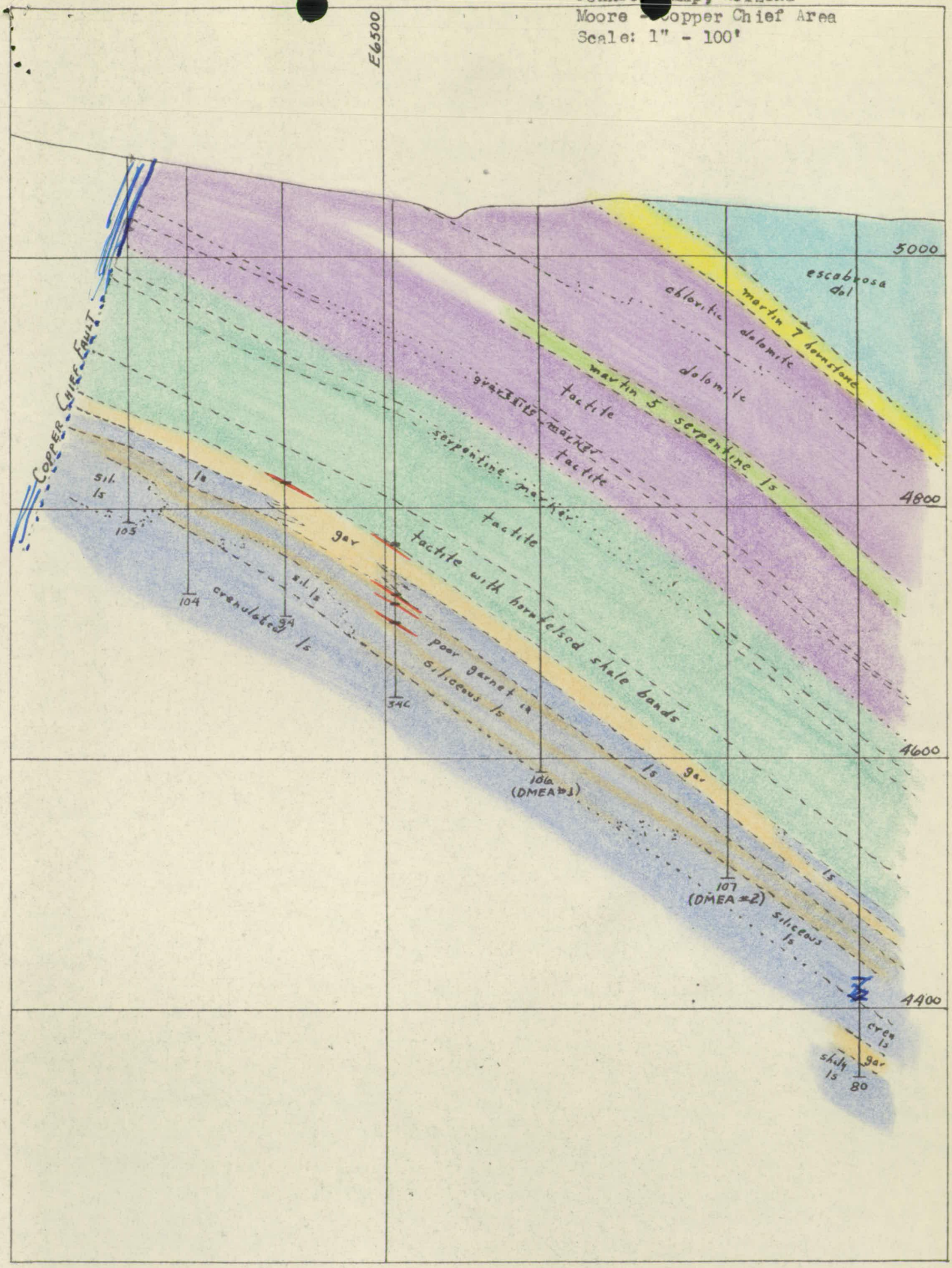
Results: No ore.

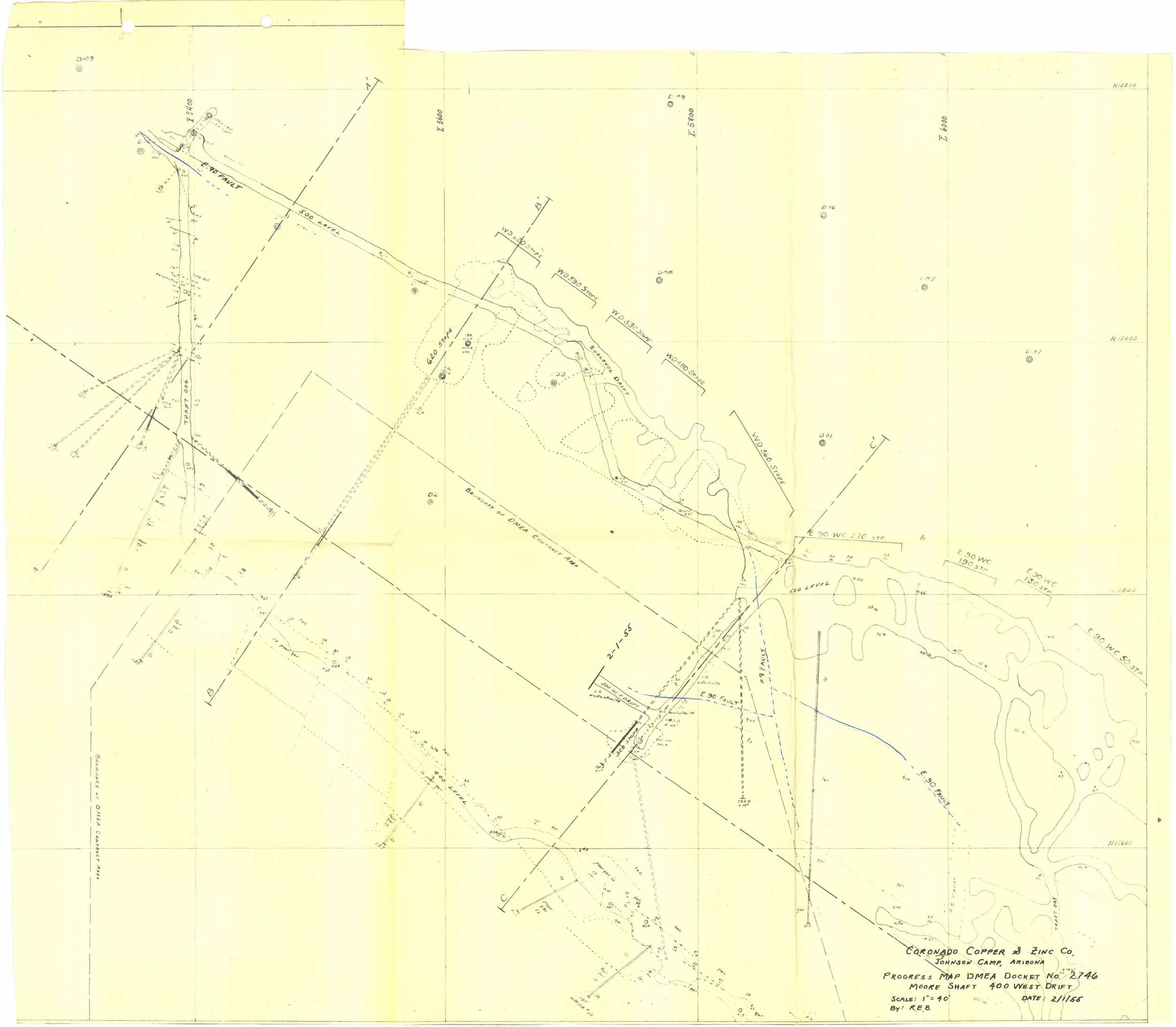
Footage			Assays		Core recovery	Log	Description and Averages
From	To	Interval	Cu%	Zn%			
0.0	20.0	20.0			--		Core discarded.
20.0	39.0	19.0			95		Limy fine dol, partially tactitized.
39.0	69.0	30.0			43		Ma 7 hornstone. In upper 10' rare pyrite
69.0	120.0	51.0			69		Limy dol, little chlorite.
120.0	185.0	65.0			43		Grey mdol, poor core. Locally much broken before drilling, with open crack
185.0	202.0	17.0			100		Ma 5 serpentine ls. About 30' poor tac.
202.0	265.0	63.0			90		Fair tactite. 240-249 rare spots sulfides.
265.0	278.0	13.0			46		Soft dark siltstone, no pyrite. Probably quartzite marker.
278.0	338.0	60.0			60		Tactite. Very rare spots sulfides.
338.0	347.0	9.0			100		Serpentine ls. About 50% tactite.
347.0	430.0	83.0			87		Tactite, no sulfides.
430.0	464.0	34.0			100		Tactite with occasional hnf bands.
464.0	484.0	20.0			80		Fair-poor garnet in grey xls.
484.0	503.0	19.0			58		Grey xls, occasional garnet bands.
503.0	525.0	22.0			86		Fair garnet, rare sulfides.
525.0	536.0	11.0			73		Siliceous ls, some wollastonite and some garnet.

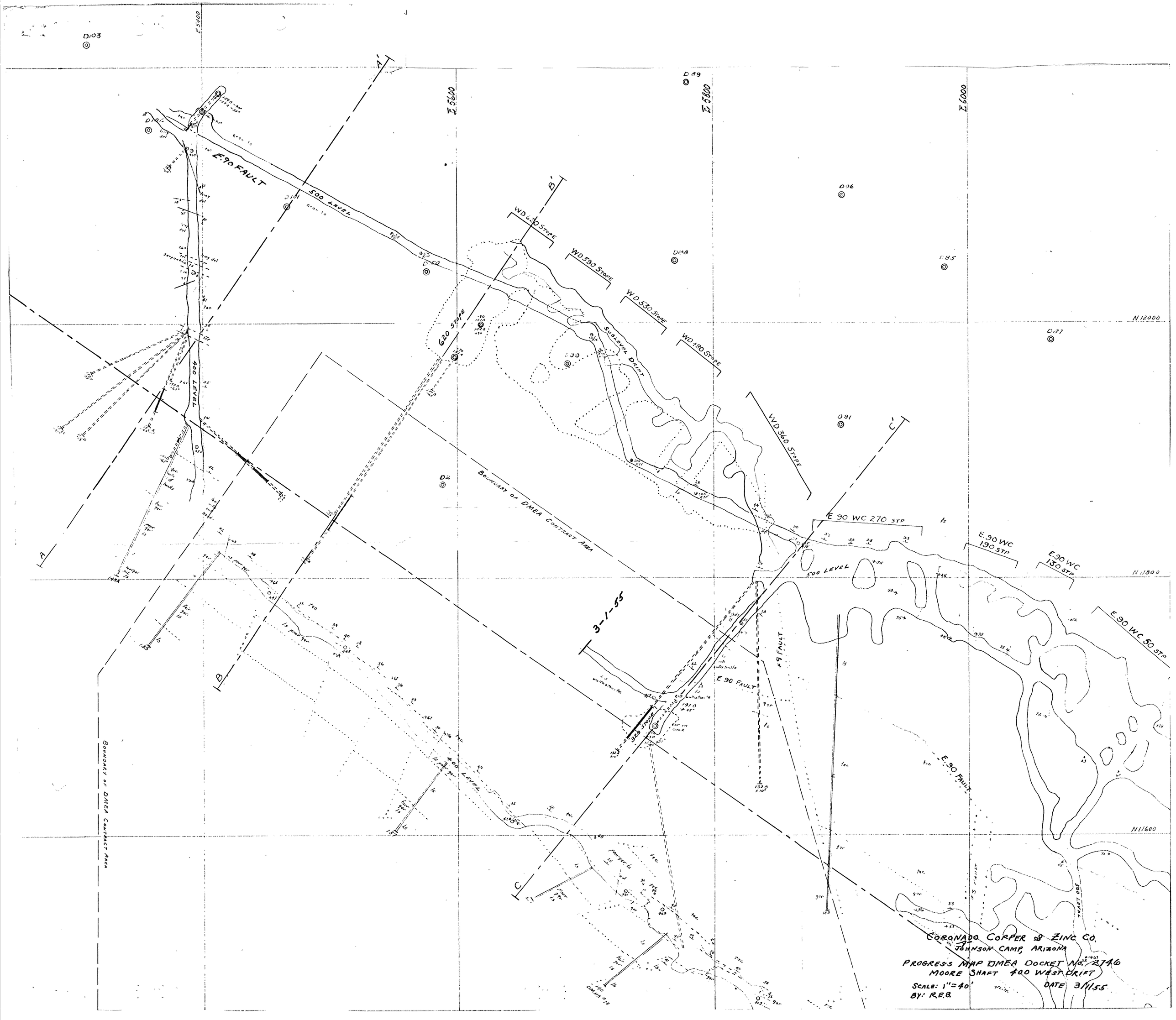
D. D. Holes 106 & 107 (DMEA 1 & 2)
Johnson Camp, Arizona
Moore - Copper Chief Area
Scale : 1" - 200'



D. D. Holes 106 & 107 (DMEA #1 & #2)
Johnson Camp, Arizona
Moore - Copper Chief Area
Scale: 1" - 100'



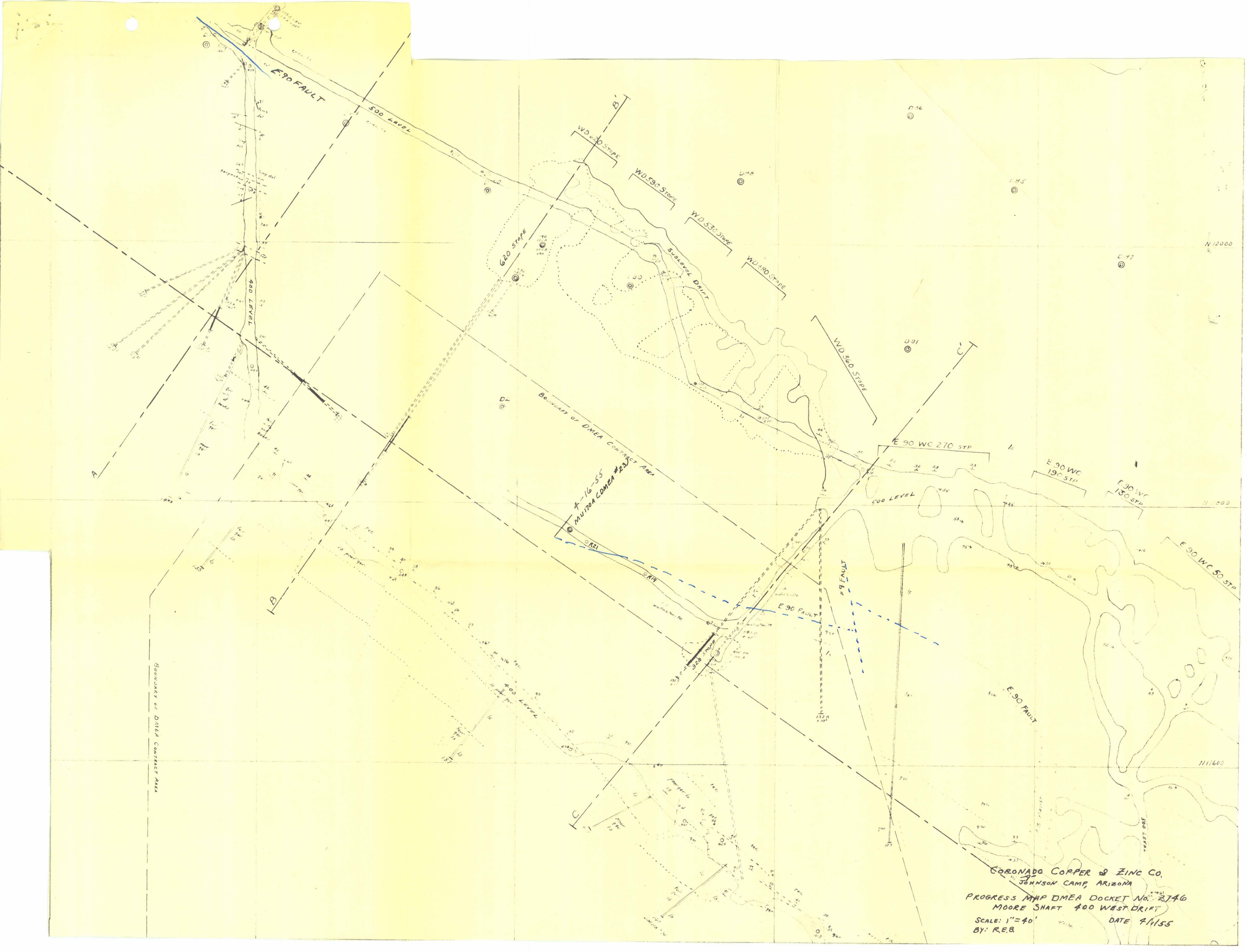

E 90 FAULT
500 LEVEL
400 LEVEL
600 LEVEL
620 STOPE
WD 610 STOPE
WD 590 STOPE
WD 530 STOPE
WD 480 STOPE
WD 360 STOPE
SUBLEVEL DRIFT
E 90 WC 270 STP
E 90 WC 190 STP
E 90 WC 130 STP
E 90 WC 50 STP
#9 FAULT
2-1-55
500 WEST DRIFT
328 STOPE
BOUNDARY OF DMEA CONTRACT AREA
I 5400
I 5600
I 5800
I 6000
N 12200
N 12000
N 11800
N 11600
CORONADO COPPER & ZINC CO.
JOHNSON CAMP, ARIZONA
PROGRESS MAP DMEA DOCKET NO. 2746
MOORE SHAFT 400 WEST DRIFT
SCALE: 1" = 40'
DATE: 2/1/55
BY: R.E.B.



CORONADO COPPER & ZINC CO.
JOHNSON CAMP, ARIZONA

PROGRESS MAP DMEA DOCKET No. 2146
MOORE SHAFT 400 WEST DRIFT

SCALE: 1" = 40'
BY: R.E.B.
DATE 3/1/55


E 90 FAULT
500 LEVEL
400 LEVEL
WD 630 STOPE
WD 590 STOPE
WD 530 STOPE
WD 480 STOPE
620 STOPE
SUBLEVEL DRIFT
WD 360 STOPE
BOUNDARY OF DMEA CONTRACT AREA
4-16-55
MULTOA (DMEA #23)
E 90 WC 270 STP
E 90 WC 190 STP
E 90 WC 130 STP
E 90 WC 50 STP
500 LEVEL
#9 FAULT
E 90 FAULT
328 STOPE
400 LEVEL
BOUNDARY OF DMEA CONTRACT AREA
N 12000
N 11800
N 11600
A
A'
B
B'
C
C'
CORONADO COPPER & ZINC CO.
JOHNSON CAMP, ARIZONA
PROGRESS MAP DMEA DOCKET No. 2146
MOORE SHAFT 400 WEST DRIFT
SCALE: 1"=40'
DATE 4/1/55
BY: R.E.B.