MME Form 9
Rev. Mar. 59

UNITED STATES
DEPARTMENT OF THE INTERIOR
Office of Minerals Exploration

OFFICIAL DOCKET FILE

Contract No. 14-23- 371 Docket No. MME-1303

Application
- [ ] Denied
- [ ] Withdrawn

Contract
- [ ] Terminated - Not Certified
- [ ] Terminated - Certified
- [ ] Cancelled
- [ ] Royalty Agreement

The records contained in this file are marked (x) and arranged in this order:

Folder No. 1:

Left Side

- [x] Royalty Audits
- [ ] Certification of Discovery
- [x] Closing Letter
- [ ] Cost Audits
- [ ] Termination Notice or Agreement
- [ ] Recision Notice
- [x] Assignment of Contract
- [x] Contract Amendments
- [x] Contract with all exhibits and annexes
- [ ] Owner's Consent to Lien and Subordination Agreement
- [x] Application and Attachments

Right Side

- [x] Project Summary (final)
- [x] Work Completed Analysis (final)
- All other material filed in chronological order including the following reports if checked:
- [x] Field Team Semiannual Report for Certified Project
- [x] Final Field Team Report (Tab)
- [x] Operator's Final Report (Tab)
- [x] Interim Field Team Reports
- [x] Operator's monthly reports and all attachments
- [x] On-site Exam. Report (Tab)
- [ ] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

Folders No. 2 : Reports
- [ ] Analysis of Semiannual Inspection Reports
- [ ] Project Summary (Interim) by MME Engineers

Right Side

- [x] Field Team Semiannual Report for Certified Project
- [x] Field Team Interim Reports
- [x] Operator's Monthly Reports with Transmittal, Narrative and Maps

Folders No. _____ : Maps (Use pocket folder or envelope)

Folders No. _____ : Settlement Sheets

Folders No. _____ : Drill Logs

Folders No. _____ : Royalty Material

52615

OFFICE OF MINERALS EXPLORATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF ROYALTY REVIEW

I have reviewed the files of the Washington office pertaining to Contract Idm-8571, Docket DMEA-1305X (lead-zinc), dated December 3, 1952, with

Yuma Metals, Inc.
c/o Luke Walker
Ventura Hotel
Ventura, California

for the purpose of determining the amount of royalty payable to the U. S. Government on sales of minerals from property referred to as the Red Cloud Mine located in Yuma County, Arizona, during the period June 11, 1959, through May 28, 1962.

In accordance with Amendment No. 3 and Annex I of the contract, royalty is payable on all minerals produced from the land described in Article 2 of the contract for a period of 11 years from the date of the contract or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first. A Report of Review dated April 21, 1955, indicated accepted costs under the exploration contract amounting to $38,578.97 with the Government's contribution on a 50 percent basis being $19,289.48.

The status of the project, the scope of review, and the reasons therefor are stated on page 2.

This review established no sales subject to the Government's royalty subsequent to the period covered by a prior Report of Royalty Review which also found no sales subject to the Government's royalty through June 10, 1959. The royalty account as of June 10, 1959, was:

Total Royalty Payable	$ -0-
Total Royalty Paid	-0-
Balance of Royalty Due	$ -0-

As of May 28, 1962, the royalty account of this project was found to be:

Total Royalty Payable	$ -0-
Total Royalty Paid	-0-
Balance of Royalty Due	$ -0-

E. D. Talbert Jr.
E. D. Talbert, OME Auditor

July 2, 1962

Idm-E371 Yuma Metals, Inc. DMEA-1303X

STATUS OF PROJECT, SCOPE OF REVIEW
AND REASONS THEREFOR

This contract, as amended, provides that the Operator, as principal if the producer or as surety if not the producer, shall pay to the Government a percentage royalty on all minerals produced from the Red Cloud patented mining claim located in secs. 2 and 11, T. 4 S., R. 23 W., Gila and Salt River Meridian. At the time this contract was executed the Operator was the owner of this claim in the Silver Mining District by virtue of purchase in 1950.

Exploration work under the contract ceased during May 1954. No ore was produced during the exploration work. Subsequent examinations of the property and inquiries addressed to the Operator have disclosed no evidence of production since cessation of the exploration work. A May 28, 1962, response by the Operator to a MME Form 63 inquiry indicates neither production nor change in property status.

This review was made in lieu of an on-site audit of the Operator's accounts and records for the following reasons:

(1) The files contain no evidence of production from the property under the contract during the period covered by this review; and

(2) The administrative cost to the Government of an on-site royalty audit at this time would be excessive in relation to the amount of possible royalty which might be disclosed.

OFFICE OF MINERALS EXPLORATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF ROYALTY REVIEW

I have reviewed the files of the Executive Officer, OME Field Team, Region III, Denver, Colorado pertaining to Contract Nbr-8371, Docket No. [illegible] 1503X, dated December 3, 1952, with

Yuma Metals, Inc.
Yuma, Arizona

for the purpose of determining the amount of royalties due the U. S. Government on the sales of Lead-Zinc, from property referred to as Red Cloud Mine, located in Yuma County, Arizona, during the period December 3, 1952 to June 10, 1959.

Pseudo Certification was effected by Amendment No. 3 to the contract and accordingly royalty is payable on all production from the land described in Article 2 of the contract for a maximum period of 11 years from the date of the contract. A Report of Review in lieu of final cost audit indicated accepted costs under the exploration contract amounting to $38,578.97, with the Government's contribution on a 50 percent basis being $19,289.48.

No royalty has been paid to the Government to date in connection with this contract.

This review was made in lieu of an on-site audit of the Operator's accounts and records for the following reasons:

(a) According to the Field Team's Semi-Annual Report of certified project for the period July 1, 1954 to December 31, 1954, operation ceased about May 11, 1954; no ore has been shipped since December 3, 1952, (the date of the exploration contract). Subsequent semi-annual reports of Field Team during period January 1, 1955 to December 31, 1958, indicate the property inactive and no operations or ore shipments are anticipated in 1959.

(b) The administrative costs to the Government of an on-site royalty audit at this time would be excessive in relation to the amount of possible royalty which might be disclosed.

June 10,1959

JUN 15 1959
O.M.E.

Donald T. Finch
Donald T. Finch
OME Auditor

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
12/4	Murphy	500
12/4	O'Neill	500
12/4	Talbert	800
	Selfridge	420
12/4	Johnson	110
	Fumich	100
		220

DEC 4 1963

Yuma Metals, Inc.
c/o Mr. Luke Walker
Secretary
Ventura Hotel
Ventura, California

Re: DMEA-1303 (Lead-Zinc)
Yuma Metals, Inc.
Red Cloud Mine
Yuma County, Arizona
Contract Idm-E371

Gentlemen:

By the terms of the subject Exploration Project Contract, as amended, and the provisions of Amendment No. 3, dated June 25, 1954, all minerals mined or produced from December 3, 1952, to December 3, 1963, were subject to the Government's royalty as set forth in said contract.

As the period during which production was subject to royalty has now expired, the Government according to its present records retains no claim or lien against the property subject to the contract or any future production therefrom. We, therefore, are closing our books and records on this contract. Your attention, however, is called to the provisions of the contract which require the Operator to keep and preserve certain records for the periods indicated.

Sincerely yours,

George Fumich, Jr.

Acting Director

FMMurphy/mm
12/4/63
cc: Director's Reading File
CA&A Division
Region III
Docket
Code 500

43683

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

Defense Minerals Administration
RECEIVED

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

Yuma Metals, Inc.
Yuma, Arizona

pertaining to Exploration Project Contract No. Lds-E371, Docket No. DMEA-1303X, including Amendments Nos. 1, 2, and 3, for the months of December, 1952, to May, 1954, inclusive, and subsequent property settlement dated April 20, 1955, covering a project for the exploration of Lead - Zinc on property known as Red Cloud Mine, located in Yuma County, Arizona.

My review included an examination of the Monthly Reports (Forms MF-104) and supporting documents attached thereto, comparison of the costs claimed with the contract and pertinent schedules, consultation with the Executive Officer, DMEA Field Team, and a determination of the reasonableness and propriety of the costs.

This review was made in lieu of a final audit of the Operator's accounts and records for the following reasons:

(a) the administrative costs to the Government of an audit would be excessive in relation to the amount of possible disallowances thereunder;
(b) the Monthly Reports were supported by documentary proof of the costs incurred under the contract provisions for contribution by the Government on the basis of actual costs incurred; and
(c) a major portion ($24,510.00) of the costs incurred were under a contract provision for payment by the Government on the basis of agreed estimated costs of units of work actually performed.

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

Total Cost as billed by Contractor	$38,728.97
Less: Proceeds from property disposition	150.00
Net Cost as claimed by Contractor	$38,578.97
Exceptions	-0-
Total Accepted Cost	$38,578.97

The contract calls for a 50 percent participation of exploration expenses by the United States Government. Therefore, payment to the Contractor by the Government in the amount of Nineteen thousand two hundred eighty-nine and 48/100 Dollars

"$19,289.48"

is considered valid and proper, provided that the Regional Executive Officer, the Administrator, or other competent official has accepted or will accept the project as having otherwise met the terms of the contract.

T. H. Bradley
T. H. Bradley, Auditor

April 21, 1955

cket copy

EXPLORATION PROJECT CONTRACT
YUMA METALS, INC.
DOCKET NO. DMEA-1303

AMENDMENT NO. 3

It is agreed this 25th day of June, 1954, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Yuma Metals, Inc., hereinafter called the "Operator," parties to that certain Exploration Project Contract Idm-E371 (Docket No. DMEA-1303), dated December 3, 1952, as amended, hereinafter called the "Contract," that:

1. In Article 3 of the Contract form, the period "one year and seven months," provided by Amendment No. 2, is deleted and the period "two years and one month" is added.

2. Annex I attached hereto is substituted for Article 9 of the Contract form.

3. a. Work under the Contract shall be suspended during the period beginning May 11, 1954, and ending not later than October 11, 1954.

b. No costs incurred by the Operator during the period of suspension shall be allowable for contribution by the Government, and the Government shall not contribute to any costs of rehabilitation or repair which in its opinion would not have occurred if there had been no suspension of the work.

c. The Operator at his own cost and expense, without contribution by the Government, during the period of suspension shall preserve and protect the project work and any property in which the Government has an interest.

4. It is of the essence of this Contract that work be resumed before the termination of the period here fixed for suspension; and if it is not so resumed in the manner required by the Contract, the following provisions shall become effective:

a. The Contract and all obligations of the parties thereunder, except as hereinafter otherwise expressly provided, shall be and are hereby terminated.

b. The Government shall contribute to allowable costs incurred prior to May 11, 1954, and to such allowable costs incurred subsequent to October 11, 1954, as may be necessary in performing winding-up and settlement actions provided for in the Contract, including the preservation and disposal of property to the cost of which the Government has contributed and including the making and rendering of reports and accounts.

c. The Operator shall promptly perform all winding-up and settlement actions provided for in the Contract, including the disposal of any facilities, buildings, fixtures, equipment, or other items to the cost of which the Government has contributed and including the rendering of the final report and final account.

d. The total net amount contributed by the Government shall be repayable in the form of a percentage royalty on any minerals mined or produced from the land described in Article 2 of the Contract, in the manner and amount provided in the Contract as amended by Annex I to this amendment, certification of discovery or development being hereby waived.

e. The maximum period for royalty and lien for the payment thereof provided for in the Contract is increased to eleven years.

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

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may be required to contribute, or the amount of any item designated as "allowable maximum."

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By O. Meredith Sutton
Administrator, Defense Minerals Exploration Administration
Sutton
Talbot

YUMA METALS, INC.

By Luke Walker
Secy

EXPLORATION PROJECT CONTRACT
YUMA METALS, INC.
DOCKET NO. DMEA-1303

ANNEX I

The following provisions are in lieu of Article 9 :

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

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

c. Basis for computation.--The Government's royalty shall be a percentage of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrates, metal, or equivalent), at the point of delivery (the f.o.b. point); except, that charges of the buyer arising in the regular course of business, and shown as deductions on the buyer's settlement sheets, on account of the cost of treatment processes performed by the buyer, sampling and assaying to determine the value of the production sold, and freight paid by the buyer to a carrier (not the Operator), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. Any costs of treatment processes, sampling or assaying, or transportation, performed or paid by the

* The period "eleven years" is substituted for the period "ten years."

Operator or by anyone other than the buyer, are not deductible in arriving at the "gross proceeds" as that term is here used. The term "treatment processes," as here used, means those processes (such as milling, concentrating, smelting, refining, or equivalent) applied to the raw ore or other production after it is extracted from the ground, to put it into a commercially marketable form; excluding fabricating or manufacturing.

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

e. Percentages of royalty.--The percentages of the Government's royalty shall be as follows:

> One and one-half ($1\frac{1}{2}$) percent of amounts ("gross proceeds" or "value") not in excess of eight dollars ($8.00) per ton of production in the form in which sold, held, or used, plus one-half ($\frac{1}{2}$) percent for each additional full fifty cents ($0.50) by which such amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) percent of such amounts.
>
> (For instance: the royalty on an amount of five dollars ($5.00) per ton, would be one and one-half ($1\frac{1}{2}$) percent; on an amount of ten dollars ($10.00) per ton, three and one-half ($3\frac{1}{2}$) percent.)

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

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

h. No obligation to produce.--Nothing in this contract is to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations.

i. Government not obligated to buy.--Nothing in this contract shall be construed as imposing any obligation on the Government to purchase any minerals mined or produced from the land.

June 11, 1954

Memorandum

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

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

Subject : Request for Recess, DMEA Contract Idm-E371, Docket DMA-1303X, Yuma Metals, Inc., Yuma County, Ariz.

Enclosed are original and 4 copies (one copy lacking) of a request from Yuma Metals, Inc. for a 4 month recess, evidently from date of the request, or June 7. I have talked to John N. Faick of the Geological Survey and we believe that a recess could be granted, but we probably wouldn't recommend further work at the end of the recess period. As the contract expires on July 3, the contract termination date also will have to be extended.

Walter R. Storms

CC W. H. King (5)
J. N. Faick
DMA-1303X
DF

WRStorms:frj

Yuma Metals, Inc.
Yuma, Arizona
June 7, 1954

Mr. W. R. Storms
Regional Manager
U S Bureau of Mines
Tusant, Arizona

Dear Mr. Storms: Re: Contract IIM*E 371 Docket DMEA 1303X

We respectfully request a 4 month recess at this time to evaluate our position and to have sufficient time to get additional geological study as to the advisability of further deep diamond drilling; or possibly, in lieu of the information and knowledge we have obtained from the project, we may ask for amendment to do some drifting in the oxide zone.

We have purchased a 100 ton flotation mill, and have at the present time over 50,000 tons of good milling grade oxide ore. We respectfully request this recess to grant us the necessary time for the above mentioned geological study and for our engineer to obtain facts and figures on costs of setting up our mill, as well as the cost of milling and all phases of the economics that pertain to the idea. Also the amount of drifting and costs to develop additional ore.

I believe that due to the fact our preparatory work has all been done and that most of the installation for extending the drifts are all in place, we will be able to show a very wise and prudent plan of developing a large oxide ore body at a very reasonable cost.

In any case this recess shall grant us the necessary time to make our survey.

Yours truly,

D L McDaniel

Yuma Metals, Inc.

D. L. Mc Daniel
Box 470
Oregon City, Oregon

dlmcd elw

Docket Copy

No. 2

AMENDMENT OF CONTRACT: No. Idm-2371

Contract Docket No. DMEA-1303I, dated December 3, 1952, between the United States of America and Yuma Metals, Inc., is hereby amended as follows, effective June 30, 1953:

Referring to "Article 3. Exploration Project" of Exploration Project Contract Form MF-200 (Revised Feb. 1952), delete "one year (1)" and in lieu thereof insert "one year and seven months".

Furthermore, the project work may be recessed beginning July 1, 1953, contingent on the following conditions:

1. The operator agrees to resume operations under the terms of Contract Idm-2371 on or before November 1, 1953.

2. The operator hereby releases and agrees to save harmless the Government from all claims and demands under the terms of Contract Idm-2371 during the period operations under the contract are recessed.

3. The operator further agrees to preserve and protect the Government's interest in the work performed to date from any and all causes as a result of the recess of operations, to the best interests of the parties concerned, without cost to the DMEA project.

4. Reimbursement to the operator, under the terms of the contract, for the amount of the Government's participation in the costs of work performed during the months of May and June 1953 will be deferred until normal operations have been resumed, or until the Government's interest in property acquired under the contract has been settled.

This amendment shall not be construed to increase the estimated total cost of the project, the amount of the Government's contribution, or any item of allowable cost which is expressly designated "allowable maximum".

Dated AUG 12 1953

YUMA METALS, INC.

By Luke Walker Perry

Seal

UNITED STATES OF AMERICA

By W. H. King

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

DOCKET COPY

EXPLORATION PROJECT CONTRACT
YUMA METALS, INC.
DOCKET NO. DMEA 1303X

AMENDMENT NO. 1

It is agreed this 14th day of May, 1953, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and Yuma Metals, Inc., each acting in consideration of the agreement of the other to the terms hereinafter set forth, that Exploration Project Contract Idm-X371, Docket No. DMEA-1303X, dated December 3, 1952, between the parties hereto be modified and amended as of said date, as follows:

1. On page 1 of Exhibit "A," under (A) Preparatory Work, at the end of the first sentence of Item 2, add the following: "and erect a building to provide for showers, change room, toilets, and wash rooms."

2. On page 2 of Exhibit "A," Item (1) Independent Contracts is hereby changed to read:

"Construct a washroom building 1/	$823.00*	
"Move buildings and house trailers from old campsite and install at mine 1/	560.00*	$1,383.00*

"1/ Payment due when work completed."

3. On page 3 of Exhibit "A," under Item (5) Rehabilitation and Repairs, the second item thereof and its cost of $700.00 is eliminated and the figure "$2,700.00*" is hereby changed to read "$2,000.00*."

4. On page 4 of Exhibit "A," under Item (8) Contingencies, the figure "$1,197.50*" is hereby changed to read "$514.50*."

5. This amendment shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may be required to contribute, nor the amount of any item designated as an "allowable maximum."

Executed in sextuplicate the day and year first above written.

YUMA METALS, INC.

By Luke Walker Secy

THE UNITED STATES OF AMERICA

By C. J. Mittendorf
Administrator, Defense Minerals Exploration Administration

Chandler

EXPLORATION PROJECT CONTRACT
YUMA METALS, INC.
DOCKET NO. DMEA 1303X

Extra Copy

AMENDMENT NO. 2

It is agreed this _____ day of _____, 1953, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and Yuma Metals, Inc., each acting in consideration of the agreement of the other to the terms hereinafter set forth, that Exploration Project Contract Idm E371, Docket No. DMEA-1303X, dated December 3, 1952, between the parties hereto be modified and amended as of said date, as follows:

1. On page 1 of Exhibit "A", under (A) Preparatory Work, at the end of the first sentence of Item 2, add the following: and erect a building to provide for showers, change room, toilets, and wash rooms.

2. On page 2 of Exhibit "A," Item (1) Independent Contracts is hereby changed to read:

Construct a washroom building 1/	$823.00*	
Move buildings and house trailers from old campsite and install at mine 1/	560.00*	$1,383.00*

1/ Payment due when work completed.

3. On page 3 of Exhibit "A," under Item (5) Rehabilitation and Repairs, the second item thereof and its cost of $700.00 is eliminated and the figure "$2,700.00*" is hereby changed to read "$2,000.00*".

4. On page 4 of Exhibit "A," under Item (8) Contingencies, the figure "$1,157.50*" is hereby changed to read "$514.50*."

5. This amendment shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may be required to contribute, nor the amount of any item designated as an allowable maximum.

Executed in sextuplicate the day and year first above written.

YUMA METALS, INC.

By _____

THE UNITED STATES OF AMERICA

By _____
Administrator, Defense Minerals Exploration Administration

MF-200
(June 1951)
(Revised Feb. 1952)

DOCKET NO. DMEA 1303

COMMODITY Lead-Zinc

Docket Copy
IDM-E 371

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 8 1953

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

EXPLORATION PROJECT CONTRACT [1]

IT IS AGREED this 3rd day of December, 1952 between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and [2] Yuma Metals, Inc., a corporation duly organized and existing under and by virtue of the laws of the State of Arizona, Yuma, Arizona

hereinafter called the "Operator," as follows:

ARTICLE 1. *Authority for contract.*—This agreement is entered into under the authority of the Defense Production Act of 1950, as amended, pursuant to DMEA Order 1 entitled "Government Aid in Defense Exploration Projects."

ARTICLE 2. *Operator's property rights.*—With respect to that certain land situated in the State of Arizona, County of Yuma, described as follows: [3] The mining claim the Red Cloud (Patented) in Sections 2 & 11 T. 4 S, R 23 W, Gila and Salt River Meridian. Recorded in Book 44 of Deeds, Page 331, at Yuma, Arizona.

the Operator represents and undertakes: [4]

(*a*) That the Operator is the owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached:

None

(*b*) ~~That the Operator is the owner, in possession and entitled to possession, and the Owner's Consent to Lien is attached.~~

The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof.

ARTICLE 3. *Exploration project.*—The Operator, within Sixty days from the date of this contract shall commence work on a project of exploration for [5]

in or upon the described land; and shall bring the project to completion within a period of one year (1) from the date of this contract. The work to be performed is more fully described in Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, are made a part of this contract. The Government will contribute to the cost of this work as hereafter provided.

ARTICLE 4. *Performance of the work.*—(*a*) *Operator's responsibility.* The work shall be performed efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for workmens' compensation and employers' liability insurance, with suitable and adequate equipment, materials, and labor, to bring the project to completion within the time fixed. To the extent specified in Exhibit "A," attached hereto, the work may be performed by independent contractor or contractors; and work not specified in Exhibit "A" for performance by independent contractor may nevertheless be so performed upon amendment of Exhibit "A," as agreed to by the parties, to state the work to be so performed and the estimated unit costs thereof, as provided hereafter.

(*b*) *Independent contracts.*—Any independent contract for the performance of work shall be on a unit-price basis (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved), or on some basis that will indicate the amount due for work performed at any stage of the work to be performed under such independent contract. The Government shall not be nor be considered to be a party to any such independent contract, and the Government's right to terminate the exploration project contract under any of its provisions shall not in any manner be affected by reason of any such independent contract. If the reference in Exhibit "A" to any such independent contract states that the Government's approval thereof is required, the Government may refuse to participate in the cost thereof unless and until it has given its written approval of the independent contract.

(*c*) *Government may inspect.*—The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

ARTICLE 5. *Estimated costs of the project.*—A statement of the estimated cost of the project is set forth in Exhibit "A," attached hereto. Except insofar as any item of requirement or the estimated cost thereof set forth in Exhibit "A" is there or elsewhere designated as an "allowable maximum," such items of requirement and of related cost are estimates only, and may be exceeded to the extent that the Government may from time to time approve for the most economic and beneficial performance of the work within the limitation of the total aggregate estimate of costs. The Government's approval of any such excess over the estimate for an item of requirement or related cost will be signified by its approval and payment of any invoice or voucher for payment which expressly calls attention to such excess. Items expressly designated in Exhibit "A" or elsewhere as "allowable maximum," and the total aggregate estimated cost are limitations, and any excess therein will be for the sole account of the Operator in which the Government will not participate.

ARTICLE 6. *Allowable costs of the project.*—(*a*) The costs of the project in which the Government will participate are limited to the following:

(1) *Independent contracts.*—Payments to independent contractors under independent contracts listed in Exhibit "A." The estimated cost of any work to be performed under an independent contract is or shall be included in the estimate of costs in Exhibit "A" in terms of the estimated numbers of units of work to be performed, the estimated amount to be paid per unit, and the estimated total amount to be paid to the independent contractor, and such estimates shall be allowable maximums above which the Government will not contribute. Regardless of the provisions of any such independent contract, the Government will participate in the payments to the independent contractor only on account of work actually performed and that conforms with the provisions of the exploration project contract, and only to the extent that the Government deems the unit prices for the work under the independent contract to be reasonable and necessary. No such independent contract shall have the effect of increasing the estimated total cost of the exploration project contract nor the maximum amount which the Government will pay as provided in the exploration project contract.

(2) *Labor, supervision, consultants.*—Labor, supervision and technical services (including engineering and geological consultants), a schedule of which is included in the estimate of costs set forth in Exhibit "A." The requirements and related estimated costs for supervision and technical services are allowable maximums.

(3) *Operating materials and supplies.*—Necessary materials and supplies including items of equipment costing less than $50.00 each, and power, water, and fuel, a schedule of which is included in the estimate of costs in Exhibit "A."

(4) *Operating equipment.*—Any operating equipment to be rented or purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or the allowable depreciation, as the case may be, a schedule of which is included in Exhibit "A." Any items listed as owned and to be furnished by the Operator, and related ~~initial~~ allowable depreciation, are allowable maximums.

(5) *Rehabilitation and repairs.*—Any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and to be devoted to the purposes of the exploration contract, a schedule of which is included in the estimate of costs set forth in Exhibit "A." These items are allowable maximums.

(6) *New buildings, improvements, installations.*—Any necessary buildings, fixed improvements, or installations to be purchased, installed, or constructed for the purposes of the exploration work, with the estimated cost of each, a schedule of which is included in the estimate of costs in Exhibit "A." All of these items are allowable maximums.

(7) *Miscellaneous.*—Repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance and payroll taxes.

(8) *Contingencies.*—Such other necessary, reasonable direct costs of performing the exploration work, within the limit of the total aggregate estimate of costs, whether or not included in any schedule of costs in Exhibit "A," as may be approved by the Government in the course of the work, as indicated by its approval and payment of invoices and vouchers.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property, particularly excluding any land or interest therein to which the Government's lien is not to attach or the production from which is not to be subject to the Government's percentage royalty.
[4] Strike out the provision not applicable.
[5] Name of mineral or minerals.

(*b*) The Government's payments in all cases will be based on actual, necessary costs (including contract unit prices) incurred not in excess of any "allowable maximum," and not in excess of the fixed percentage of the total aggregate estimated cost. Costs will be considered to be incurred only as they are or become due and payable.

(*c*) No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes) or any other indirect costs, or work performed or costs incurred before the date of this contract, shall be allowed as costs of the project in which the Government will participate.

ARTICLE 7. *Reports, accounts, audits.*—(*a*) *Progress reports.* The Operators shall provide the Government with monthly reports of work performed and costs (including contract unit prices) incurred under the contract, in quintuplicate (five copies), upon forms provided by the Government. These progress reports shall be certified by the Operator, and shall constitute both the Operator's invoice of costs incurred on the project during the period covered by the report and his voucher for repayment by the Government, unless the Government requires the use of a standard voucher form with invoice attached. Progress reports shall include surface and/or underground engineering-geological maps or sketches showing the progress of the exploration, with assay-reports on samples taken concurrently with the advance in mineralized ground.

(*b*) *Final report.*—Upon completion of the exploration work or termination of the contract the Operator shall provide the Government with an adequate geological and engineering report, in quintuplicate (five copies), including an estimate of ore reserves resulting from the exploration work.

(*c*) Compliance with requirements.—If, in the opinion of the Government, any of the Operator's reports are insufficient or incomplete, the Government may procure the making or completion of such reports and attachments as an expense of the exploration work; and the Government may withhold approval and payment of any vouchers depending upon insufficient or incomplete reports.

(*d*) *Accounts and audits.*—The Operator shall keep suitable records and accounts of operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract. Upon the completion of the project or termination of the contract the Operator shall render a final account as provided in Article 12.

ARTICLE 8. *Payments by the Government.*—(*a*) The Government will pay 50 percent of the allowable costs incurred, as they accrue, in an aggregate total amount not in excess of $37,500.00, which is 50 percent of $75,000.00, the agreed, estimated total cost of the project in which the Government will participate; *Provided,* that until the Operator's final report and final accounting have been rendered to the Government, and any final auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of ten (10) percent of the maximum total which the Government might have been called upon to pay under the terms of the contract.

(*b*) The Government may make any payment or payments direct to independent contractors and to suppliers, for the account of the Operator, rather than to the Operator.

ARTICLE 9. *Repayment by Operator.*—(*a*) If, at any time, the Government considers that a discovery or a development from which production may be made has resulted from the exploration work, the Government, at any time not later than 6 months after the Operator has rendered the required final report and final account, may so certify in writing to the Operator. The certification shall describe broadly or indicate the nature of the discovery or development. In the event of such certification, any minerals mined or produced from the land described in Article 2 within 10 years from the date of this contract, including any mined or produced before the certification, shall be subject to a percentage royalty which the Operator or his successor in interest shall pay to the Government, upon the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production, in whatever form disposed of, including ore, concentrates, or metal, until the total amount contributed by the Government, without interest, is fully repaid, or said 10 years have elapsed, whichever occurs first, as follows:

(1) One and one-half (1½) percent of any such net amounts not in excess of eight dollars ($8.00) per ton.

(2) One and one-half (1½) percent of any such net amounts, plus one-half (½) percent of such net amounts for each additional full fifty cents ($0.50) by which such net amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) percent of such net amounts.

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

(*b*) As here used, "net smelter returns," "net concentrator returns," and "other net amounts realized from the sale or other disposition," mean gross revenue from sales; or if not sold, the market value of the material after it is mined in the form in which and the place where it is held. In the case of integrated operations in which the material is not disposed of as such, these terms mean what is or would be gross income from mining operations for percentage depletion purposes in income-tax determination.

(*c*) To secure the payment of its percentage royalty, the Government shall have and is hereby granted a lien upon the land described in Article 2 and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

(*d*) This article is not to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations.

ARTICLE 10. *Assignment, transfer, or loss of Operator's interest.*—Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder. The Operator shall not make any voluntary nor permit any involuntary transfer or conveyance of the Operator's rights in the land described in Article 2, without making suitable provision for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof; *Provided,* that mere failure by the Operator to maintain the Operator's rights in the land, without any consideration running to the Operator other than relief from the cost of maintaining such rights (as by surrender of a leasehold, failure to perform assessment work, or failure to exercise an option), coupled with complete abandonment by the Operator of all interest in or operations on the land for a period of 10 years from the date of this contract, shall not constitute such a transfer or conveyance. Should the Operator make or permit any transfer or conveyance in violation of this provision, the Operator shall be and remain liable for payment to the Government of the same amounts, at the same times, as would have been paid under the terms of the percentage royalty on production. If for any reason the net smelter returns, net concentrator returns, or other net amounts realized from the sale or other disposition of such production are not available as a means of measuring the amount of the Operator's liability, the amount thereof shall be estimated as well as may be, and in the event of dispute as to such estimates, the determination thereof by the Administrator of Defense Minerals Exploration Administration or by his successor shall be final and binding upon the Operator.

ARTICLE 11. *Title to and disposition of property.*—All facilities, buildings, fixtures, equipment, or other items costing more than $50.00 each, paid for or purchased with funds contributed jointly by the Operator and the Government, although title may be taken in the name of the Operator, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the completion of the work or the termination of the contract shall be disposed of promptly by the Operator for the joint account of the Government and the Operator, either by return to the vendor, by sale to others, or purchase by the Operator at a price at least as high as could otherwise be obtained, as may appear to be for the best interest of the Government, unless the Government, in writing, waives its interest in any such item. If necessary to accomplish such disposition, the Operator shall dismantle, sever from the land, and remove any such item, the cost thereof to be for the joint account of the parties in proportion to their respective interests. If the Operator, within 90 days after the receipt of written notice from the Government, fails, neglects, or refuses to dispose of such property, the Government may itself enter upon the land, take possession of, and remove and dispose of any such property as above provided.

ARTICLE 12. *Termination and completion.*—The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worth while discovery and in the opinion of the Government further operations are not justified. Upon the completion of the project or any termination of the contract the Operator shall dispose of any remaining materials, supplies, facilities, buildings, fixtures, and equipment in which the Government has an interest, for the joint account of the Operator and the Government in the proportion of their respective interests; shall render to the Government a full and final accounting of his operations under the contract and his expenditures of money; and shall pay to the Government its pro rata share of any money remaining.

ARTICLE 13. *Changes and added provisions.* ____________

____

____

____

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By *Frank E. Johnson*

ACTING Administrator, Defense Minerals Exploration Administration

YUMA METALS, INC.
(Operator)

By *Lloyd C. White Mgr.*

I, *Luke Walker*, certify that I am the secretary of the corporation named as Operator herein; that *Lloyd C. White*, who signed this contract on behalf of the Operator, was then *Gen Manager* of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

Luke Walker

[CORPORATE SEAL]

EXPLORATION PROJECT CONTRACT
YUMA METALS, INC.
DOCKET NO. DMEA-1303

EXHIBIT "A"

Description of the Work

The purpose of this project is to explore by diamond drilling below the 500 level of the Red Cloud Mine for the downward continuation of the Red Cloud vein below the zone of oxidation. To do this drilling, the following work shall be done:

(A) Preparatory Work

1. Repair the road for the movement of housing, equipment, supplies and water.

2. Move mine buildings and trailers to the selected camp site, repair and adapt them for use as needed. Transport supplies and equipment to camp and repair and install latter as needed for the project. Rehabilitate shaft collar and headframe and install water tank and piping for domestic use.

3. Rehabilitate the underground workings only sufficiently to permit the safe passage of workmen to and from the diamond drill site, and the transportation of supplies and equipment for rehabilitation and diamond drilling. Install air and water lines, hoists and equipment and retrieve same on completion of the work.

(B) Diamond Drilling

Diamond drilling not to exceed 6,000 feet shall be done from D. D. Stations 1 and 2 on the 500 level, as shown on the drawing attached hereto and made a part hereof and entitled "Fig. 5 - Transverse Section A - A', Red Cloud mine, showing proposed drilling - DMA 1303X". The first holes shall be drilled from D. D. Station 1, in the direction and with the inclination shown on said drawing. Based upon the results of drilling from D. D. Station 1, the Government will determine whether the drilling should be continued from D. D. Station 2.

The location, direction, inclination and extent of all work, including the number of holes drilled, is subject to the approval of the Government.

The Operator shall obtain and furnish the Government accurate sludge samples of all drilling and obtain the maximum core recovery possible under existing conditions.

Estimated Costs of the Project
(*Indicates allowable maximum)

(A) **Preparatory Work**
(not to exceed three months)

(1) **Independent Contracts**

None - but may be entered into with the approval of the Government

(2) **Labor, Supervision, Consultants 1/**

1 Cook, 3 months @ $350.00/mo.	$1,050.00	
1 Truck driver and utility man, 3 months @ $372.50/mo.	1,117.50	
Supervision, accounting and engineering, 3 months @ $600.00/mo.*	1,800.00*	
Clean and repair incline shaft manway	500.00	
Clean and repair shaft stations	500.00	
Install air line and hoist cable and bucket in vertical shaft	200.00	
Timber and muck-out crosscut on the 500 level and prepare diamond drill stations	800.00	$ 5,967.50*

Page A-3

(3) **Operating Materials and Supplies**

Fuel and grease	300.00
Small tools and equipment	300.00
Pipe	350.00
Mine grade lumber	500.00

1/ Wage rates shall not exceed prevailing rate in the area for similar work and operator shall comply with all provisions of law with respect thereto.

Cable and bucket for shaft	$ 200.00	
Rails, ties, spikes, etc.	300.00	
Various supplies for mine repairs	400.00	$ 2,350.00*

(4) Operating Equipment

Depreciation on equipment owned by the Operator allowed as follows:

1 Compressor @ $125.00/mo.	375.00	
1 Hoist @ $100.00/mo.	300.00	
1 Jeep @ $50.00/mo.	150.00	
1 Truck @ $50.00/mo.	150.00	
3 House trailers @ $50.00/mo.	150.00	1,125.00*

This depreciation allowance is only for the actual time each item of equipment is being used on the preparatory work.

(5) Rehabilitation and Repairs 2/

Page (A) 1 Repair road	1,000.00	
Page A 2 Move buildings and house trailers from old camp site and install at mine	700.00	
" Repair and alter buildings	500.00	
" Repair headframe and shaft collar	500.00	2,700.00*

(6) New Buildings, Improvements, Installations 2/

Water tank, toilet and plumbing for domestic use	300.00	
Supplies and equipment for cook and bunk houses	500.00	800.00*

2/ These costs include the costs of all labor and supplies except the costs of the cook, truck driver and supervision, and the cost of the compressor and truck, which are itemized separately in items (2) and (4) respectively.

(7) Miscellaneous

Repairs to equipment	$ 250.00	
Workmen's compensation, Employer's Liability Insurance, and payroll taxes	610.00	$ 860.00*

(8) Contingencies

Unforeseen labor and supplies	1,197.50*
Total Cost of Preparatory Work	$15,000.00*

(B) Diamond Drilling

Agreed Unit Costs for Diamond Drilling

6000 ft. of diamond drilling @ $10.00/ft.*	$60,000.00*

AX size drilling equipment will be used for all drilling except under adverse conditions when EX size equipment may be used.

The Government will contribute to the cost of this diamond drilling on the basis of the above agreed unit costs, as they accrue, for units of work actually performed, in lieu of actual costs. These unit costs include all the costs of the diamond drilling, including cementing, reaming, sampling, assaying, supervision, labor, fuel, power, equipment depreciation, camp maintenance and payroll taxes. The Operator may, with the approval of the Government, enter into independent contracts with subcontractors for the performance of this work.

Total Cost of Preparatory Work	$15,000.00*	
Total Cost of Diamond Drilling	$60,000.00*	
Total Estimated Cost of Project		$75,000.00*
Government Participation @ 50%		$37,500.00*

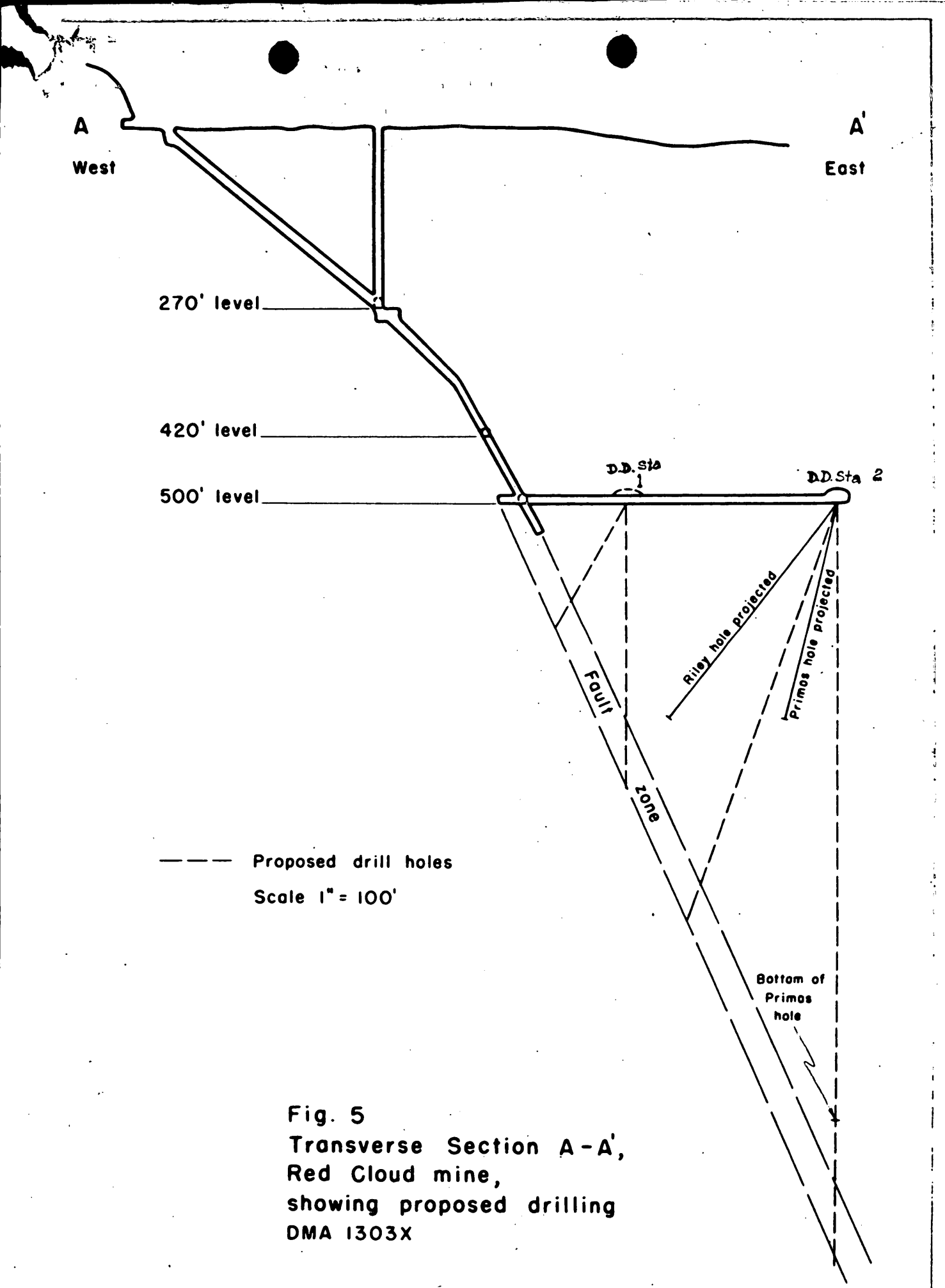

Fig. 5
Transverse Section A-A',
Red Cloud mine,
showing proposed drilling
DMA 1303X

In Support and Explanation of this New Schedule of

September 20, 1952

Every item connected with the drifting has been eliminated. Along with new figures are also shown old figures which were reduced by Field Team and agreed that each of them was the minimum each thing could be done for; also that each item came within the regulations and was the minimum rehabilitation and surface expense necessary to do the work.

None of the funds will be used for work prosecuted primarily for mining or preparation for mining. Especially is this true under this program. With the drifting cut out of our application we have abandoned plans for the oxidized mill at this time.

Each item in new schedule is quite low. Our original estimates added to $199,000.00. These were reduced by Field Team to $171,856.00 in December, 1951. However, we believe by good management we can reduce the over-all cost, and will agree to complete the work as scheduled and limit the loan to $50,000, leaving each item as is. Where (if we can) we can make this saving we do not know but will save everywhere we can and this offer assures it.

This offer is made also to encourage you to leave the drilling at 6,000 ft. This schedule is for 6,000 ft., which the geologists and engineers suggested who were on the grounds and examined the property and which we believe is essential and will cost less per foot.

However, if DMEA insist on only 5,000 ft. we will go along with that and hereby agree to it. In this case would like to have DMEA say what holes to eliminate or make a new drilling setup. All this we are agreeing to now so as to eliminate delays.

Anticipating we will be confronted with White's inquiry of September 3rd to Denver office, please let me say that was only an inquiry if Denver would operate promptly and was limited to "that we could be working in October." Also White mentioned items not agreed to by your Field Team, necessitating the long route from the beginning. Since this, the Directors have met and have agreed on program as per schedule attached.

Also, since White's letter, we have learned we cannot house men at Fisher Camp. Also have learned that the cave-in in drift leading to drill room has caved again and is entirely closed so this expense is going to be a great deal more. We cannot keep good men without comfortable housing.

ITEM BY ITEM

Construction Building: It is impractical to house men at Yuma. Roads are bad and men will have very little time to work. Tents are not satisfactory as it is too cold in winter and unbearable in tents in summer. This item is cut from $20,000 to $11,500 - the very minimum.

Rehabilitate Shaft: Have left this as originally estimated. If it can be done cheaper it will be and done at minimum expense to meet Mine Inspector's requirement.

Move Assay Office: Again, if we can move it for less it will be done.

Air Line: This is below cost as listed.

Drilling: Using figures as agreed upon, this item is $7.21 per foot or $43,299.67 for 6,000 feet. If you can re-arrange the holes so 5,000 ft if it will do the job, it is all right with us. This was scaled down to 6,000 by the U.S. Geologists and Field Team as being the proper footage to explore the sulfide zone.

Road Repairs: There is a possibility of not using all this. We will get by with as little as possible and again, if we can, we will save all that is possible.

Clean out Mine Levels: I do not think this item is nearly high enough. There is a bad cave-in on drift running to drillroom (we will drill from there) in a lot of muck. All this has to be timbered because this will be our first drillroom.

Purchase Equipment: Everything relative to drifting has been eliminated. Miscellaneous tools have been reduced from $5,000 to $2500. Mine cars have been reduced from three to one. Mine rails reduced to barely enough to clear the drift to Drillroom. Water pipe reduced from $700 to $600. Mine timber and ties have been left, the same until we remove the muck will not know timber needed. Timber also needed in incline shaft.

Assay, supplies and reagents reduced from $2,000 to $1,000.
Gas, diesel fuel, oil, repair parts reduced from $5,000 to $3,000.
Rental (depreciation) remain the same.
Supervision remains the same. As agreed, White will be engineer and under this program will have many other duties.
Cook remains the same.
Truck driver, mechanic - combined this with utility man.

Part time bookkeeper remains the same.

Utility man eliminated.

Labor remains the same.

Payroll taxes reduced $200.

Copy

See letter of 12 Sept. 19. 52.

ANSWERING YOUR QUESTIONS RELATIVE TO OUR EXPIRATION LOAN #DEMA-1303 :

1. Give history from inception of your application?

A At the Congretional hearing held in Phoenix, Arizona, relative to why the mineral program under the production act of September, 1950 was not progressing, the Expiration Loan Program was explained from the speaker's stand by the officials of D.M.A., they stated applications could and would be processed without delay, and it was indicated the Government was anxious to have applications on property such as ours. At this hearing the writer and Mr. Lloyd C. White, our General Manager, talked to Mr. Hoffman, attorney for D. M. A., particularly about our case and was encouraged to file an application for an Exploration Loan.

From what we were told by officials of D. M. A. at this time we were encouraged to and did file an application on May 22, 1951 for a total amount of $300,000.00. We received acknowledgment of application on May 31st. Thereafter we heard nothing from this application until we phoned long distance to Washington early in August, 1951. We then received a letter from Tom Lyons, and later we received two letters from T. P. Billings.

On September 12th we amended our application, cutting out some work and reducing the $300,000.00 amount to $199,150.00.

We heard nothing until in November when we phoned asking for Mr. Billings, and was informed he was no longer with the department. We did talk to a Mr. Johnson who informed us he would start our application on its way of being processed by sending it to the field team at Tucson and said it would eliminate considerable time if we would meet with the field team and agree with them on all items connected with the application, which we did, and he said that if we could agree with the field team he would recommend whatever the field team recommended.

I might mention here that more than a month passed after Mr. Johnson sent our application, before it reached Tucson.

On ~~June~~ Jan 30, 1952 the writer received the rough draft of proposed work from the Tucson office, which was as we had agreed on. Our Company immediately O. K'd the rough draft and returned it. However, it never reached Washington until early in May, 1952. From this point it was processed in good order. About May 10th the writer called long distance for Mr. MOULDS and was informed he was no longer there; that Mr. Corbett had taken his place. We talked to Mr. Corbett on June 9, 1952 and he informed me our loan

Is this Frame? Should be Pg 1 of 1

Wrong

had been approved and we should have the contract for us to sign in ten days or two weeks.

Two days later we received word from Mr. Willis of Phoenix that Mr. Broadgate in Washington had been informed our application had been approved and contract was being drawn by the Legal Department. We waited double the time indicated by Washington, then not hearing anything, or receiving the contract, we phoned Mr. Corbett in Washington as to its whereabouts, and was told the contract was written but had been cut to $32,500.00.

We asked that the contract be forwarded to us at once. This was about July 1, 1952.

We waited and waited, on August 20th we called Washington for Mr. Mittendorf; was informed he was in Washington but could not talk to us that day. We then talked to a Mr. Kellar, who told us they had sent the contract to Denver. We called Denver and asked them to send it to us, which they did.

2. Why was the amount of your loan reduced?

A We do not know. The letter of transmission with the contract was very short, stating no reason.

3. Why do you think your loan should be granted?

A (a) We own one of the largest properties in the entire country, have over 50,000 lineal feet of out-cropping, all unexplored.

(b) We have definitely the metallurgy worked out for recovery of lead and silver on the Red Cloud ore, also can depress 91.1 percent of the zinc, so the zinc can be stored in the tails. Most of the other ore is similar.

(c) This district in operation will open up the entire country from Fisher Camp to Ciabola Valley, not only helping Yuma County but the entire Southwest. This is a large country.

(d) The Government should know if there is as much lead and zinc ore in one place as it appears to be in this district.

(e) We think Southwest Arizona is entitled to a small exploration loan if it is sound and meets the requirements, and we believe our property meets the requirements.

4. Why is the contract submitted by Washington to ~~us~~ you not satisfactory?

A. (a) There is nothing allowed for road work, whithout which we can hardly set up to work, and only under great disadvantage move in supplies, repairs, etc. as well as take samples out and go after assay reports. The distance is about 50 miles, 19 of which is bad roads. (In this regard, since our application, we have done $3000.00 worth of Bulldozer work and the $2000.00 asked for in our application will put the road in good shape.)

(b) The contract lists rehabilitation of the 500-foot level - omits rehabilitation of drift leading to Diamond Drill room Both of which has considerable muck that must be removed. The contract makes no provisions for hoist, car, rail, etc. for this work.

(c) The contract uses $6.00 per foot for diamond drilling as set up in our application. This was with camp at the work, lights, water, etc. This cost would be several times higher if men have to commute from the closest available housing at Yuma, which would limit their active work to an hour or two each day.

wrong (d) Contract lists $26000.00 of preparatory work to be performed, but only allows $2500.00 for it, and omitted entirely many items such as hoist, air fan and pipe. The air is bad at the 500-foot level and men cannot work there without better air.

Besides the above there are many more minor objections too numerous to mention, but will say this: If we had a contract in the amount as agreed on, it would take care of most of them, and we could do a job that neither us nor the Government would be ashamed of, and the money would be well spent. The above amount of $171,587.00 has already been trimmed down to the bare bone. Anything less would impair the full effectiveness of the project.

5. <u>What kind of treatment has been accorded you by D.M.A. and D.E.M.A</u>?

MR MOULDS A I am glad to say that each and every gentleman (Mr. Lyons, Mr. Billings, Mr. Johnson and Mr. Corbett), who at different times handled our loan in Washington was very courteous and helpful, and was very much interested in it. The field team at Tucson was also the same, and I want to add that they are hard workers, have seen them work long hours a good many times, and I believe their judgment and integrity is beyond reproach.

We also appreciate Mr. Hoffman giving us some of his time at Phoenix when, believe me, he was very busy.

6. <u>Has the government showed interest in your application</u>?

A Yes. Every one whom we have contacted have shown considerable interest. In August, 1951 the government offered, by letter, to pay one-half up to $10,000.00 for detailed geological study of our properties, in connection with our application, which I believe showed an unusual interest. One courtesy not given us was that we asked to be notified if any changes were made in our application and that we would come to Washington. This was not done. We were assured that everything was O. K. and that there was no need for us to come to Washington.

7. <u>What are your future plans relative to the mining property in question</u>

A If our application is approved and we find more ore, which we certainly expect to find or we would not be putting $90,000.00 to $100,000.00 into it, we expect to build immediately a 100-ton floatation mill, or larger if it is justified.

8. Why, in your opinion, did it take from May, 1951 to September, 1952 to process your loan?

A The cause or causes we do not know. Our application was at the Denver office a long time. This was explained to us by Mr. King, that they had a great many callers and telephone calls to answer.

There was a delay in November, 1951 in Tucson. Their field team had to wait for a U. S. geologist to be made available to examine the property.

Most of the delay, we believe, was caused by the ever changing head of lead and zinc division of DMA and DEMA. When one man would just about get acquainted with our application, another man would replace him, then it seemed to slow it down until we would call up long distance and get acquainted with the new man.

YOU ASK FOR OUR COMMENTS ON THE PROPOSED CONTRACT OF $32,500.00

We understand the government was to participate 50%. From the above it would only anticipate a fraction of that. In the proposed contract it lists work that would cost $26,000.00, the contract allows only $2500.00 for this and it omitted entirely items amounting to several thousands that has to be put in before the work can even be started; it allows $6.00 per foot for diamond drilling, which is O. K. under favorable conditions, but under the proposed contract this figure would be several times greater, principally on account of the fact that the men could only work one or two hours a day.

Respectfully submitted,

YUMA METALS, INC.

By_____
Luke Walker, Secretary.

LW-m

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

DEFENSE MINERALS ADMINISTRATION
WASHINGTON D.C.
SEP 20 3 40 PM '51

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. 1303 X

Date received 9-20-51

Participation

Yuma Metals, Inc.
by Lloyd C. White, Gen. Mgr.
1005 Oxford St.
Berkeley 7, California

Name and address of applicant

Date Sept. 12, 1951

AMENDED APPLICATION

FILL IN THIS BLOCK

Date of application Original, May 1951

Estimated cost $200,000

Mineral or metal Molybdenum, lead, zinc, silver

Percentage of Government participation 50%

Location of mine Silver District about 25 miles north of Yuma, Arizona

Date of filing MF-100 May 1951

DMA Docket Number, if available DMA-1303 X

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation? See Supplement Sheet, Form MF-100

*2. If a partnership, state names and addresses of partners.

*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.

*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.

*5. Are you the owner or the lessee of the property?

6. If owner, state what claims, liens, or encumbrances, if any, are against the property.

7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.

9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)? (a) $100,000 (b) Will pay our part of venture 50%

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.

(*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled.

*16. History:

(*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.

(*b*) State briefly the known history and production of adjoining and neighboring properties.

(*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:

(*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)

(*a*) Describe the ore or mineral deposits briefly.

(*b*) Submit available maps and assay data.

(*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:

(*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.

(*b*) Supervisors, by numbers and positions, with salaries of each.

(*c*) Cost of necessary repairs to existing facilities, structures, and buildings.

(*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.

(*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.

(*f*) Cost of rental for equipment which the operator proposes to rent.

(*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.

(*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.

(*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

CERTIFICATION

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

Yuma Metals, Inc. (Name of company)

By Lloyd C. White. (Signature of authorized official)

Sept. 12, 1951 (Date)

General Manager (Title)

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.

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

Original Application filed in May, 1951.
Receipt acknowledged by DMA May 31, 1951.

Subject: DMA-1303X
Re: Exploration Loan - Old Red Cloud Mine.

Supplement Sheet to accompany Form MF-103 Amended Application.

Attention of Mr. T. P. Billings, Chief
Lead Zinc Branch

Reference is made to your letter of Sept. 5, 1951, and to Mr. Tom Lyon's letter of Aug. 15, 1951. In this amended application we have reduced the cost of our development program to $200,000 as stated in my letter to you of August 25, 1951.

Most of the work will be done on the Red Cloud patented claim. Reference is again made to the Oscar H. Hershey geologic map of May 1925, copies of which were submitted with our original application. This map gives the surface geology of the Red Cloud area in detail. The surface geology of the area is also shown on Plate 5 of Arizona Bureau of Mines, Bulletin No. 134, by Eldred D. Wilson. Plate 5 was sent to you together with my letter of August 25, 1951 and Bulletin No. 134 is enclosed with this amended application.

On pages 65, 66, and 67 of the bulletin there is a report on the Red Cloud Mine.

Mr. Hershey's detailed analysis of the formations and ore occurrance in the Red Cloud mine are set forth in his report of October 27, 1938 andhis statement that the throw on the Red Cloud fault was about 500 feet, is our basis for believing that a sulphide ore shoot will be found within that distance below the 385 foot level (water level) of the Red Cloud Mine. We already have developed on this level an ore shoot of oxidized zinc ore 200 feet long as shown on assay map of the Red Cloud, copies of which you have. We propose to drift 300 feet northerly and 300 feet southerly on this zinc ore shoot. It is unfortunate that the diamond drill holes started by others on the 385 foot level were not continued through the Red Cloud fault. These holes are shown on the Red Cloud East-West section map of January 25, 1951 by Lloyd C. White. We propose to extend two of these old diamond drill holes as indicated.

Amended Exploration

21. See above East-West Section Sketch

On 385 foot level - 503 X-Cut --

Drill Diamond Drill Hole No. 1 -- Incline 30°
Course S 90° W
Depth 150' at least

Drill Diamond Drill Hole No. 2 -- from same station
Vertical Hole
Depth 240' at least

Extend existing Riley-Holmes D.D.H. from face of 503 X-Cut--
Course N 67° W.
Inclindation minus 55°.
Extend 150 feet if necessary to cut Red Cloud fault and zinc ore shoot.

Based on results from above three holes--
Drill Hole No. 3 from face of 503 X-Cut on course West and inclination minus 70°. Depth 450' or until Red Cloud fault is intersected and zinc ore shoot.

Based on results from Hole No. 3, extend Primas Company vertical hole (at end of 503 X-cut) 250 feet. This hole did not intersect the Red Cloud fault nor did it encounter water. The Riley-Holmes hole was also dry, and did not encounter the Red Cloud fault.

The total maximum new footage on the above five diamond drill holes amounts to 1240 feet which can be drilled for $6.00 per foot or a total of approximately $7500. The above drilling program should locate the Red Cloud fault and also intersect the 200 foot zinc ore shoot already developed on the 385 foot level. This oxidized zinc ore shoot may have reached the sulphide zone in the lower holes.

Drifting on Vein in Red Cloud Mine

385 foot or bottom level

Drift 300 feet northerly on zinc vein.
Drift 300 feet southerly on zinc vein.

197 foot level

Drift 300 feet northerly along Red Cloud fault.
Drift 450 feet southerly along Red Cloud fault.

Other oxidized ore shoots may be encountered as suggested by Mr. Tom Lyon's letter of Aug. 15, 1951.

If all the above drifting is completed we have a total of 1350 feet at $20.00 per foot, equals $27,000.

Dives Claim - Diamond drilling. See Arizona Bureau Bulletin No. 134, page 62. We propose to drill six holes from the surface about as indicated on the enclosed sketch of Dives Claim by Lloyd C. White, Sept. 12, 1951.

North Geronimo Claim - See Arizona Bulletin, Bureau of Mines No. 134, enclosed. We propose to drill six holes from the surface about as indicated on the enclosed sketch of North Geronimo Claim by Lloyd C. White, Sept. 12, 1951.

22. Geological Report by Oscar H. Hershey
" " in Bulletin No. 134, Arizona Bureau of Mines, by Eldred D. Wilson.
All supporting maps filed with original application, but enclosed are four copies of East-West Section map of Red Cloud Mine of Jan. 25, 1951, by Lloyd C. White on which all of the above proposed work is indicated.

The Requirements and Costs

23. (a) 2 Miners at $12.00 per day
3 Muckers at $12.00 per day
3 Underground Diamond Drillers at $16.00 per day
2 Surface " " at $16.00 " "
1 Cook at $300 per month
1 Cook's Helper at $175 per month
1 Assayer at $300 per month
1 Bookkeeper $350 per month
1 Truck Driver at $300 per month
1 Top Laborer at $10 per day
1 Hoistman at $300 per month
1 Compressor man and mechanic at $350 per month

(b) 1 Working Foreman, $400.00 per month
1 Manager-Engineer, $500.00 per month

(c) Retimbering vertical shaft
Replacing ladders and skidway in inclined shaft
Rebuilding Headframe and ore dump pocket

$ 8500.

(d) Light frame structure buildings:

Combination boarding house, bunk house	$ 25,000	
Combination office and warehouse	10,000	
Compressor and Generator shed	5,000	
Hoist house	1,500	41500.
Furnishings for above buildings		8500.

(e)

Two ton electric driven hoist installed	4700.
Bucket and cable	425
Telephones, Hoist house to bottom levels	275
Mine pump installed with pipe	1600
Ventilating Fan with Ventube installed	1500
75 kw. Diesel Generator installed (2nd hand)	6000
Diesel Oil Storage tanks installed	1500
Water storage tank	1100
Mine track, pipe, cars	1800
Total (a) to (e) inclusive	$ 77,400

(f)

Rental of Underground Diamond drill	350 per month
Rental Rock Drills and hose	75 per month

(g)

Longyear Jr. Diamond Drill	150 per month
4X4 Chevrolet Truck equipped with boom and hoist	150 per month
Army Jeep	50 per month
Rental Sullivan Portable Compressor	150 per month
Rental Assay Office	100 per month
Rental on passenger automobile	100 per month

(h) Miscellaneous small tools, nails, hardware, rope, hospital supplies, stretcher 10,000

(i) Provided for above. Allowing a contingent estimate of 10,000

23. <u>Summary</u>

	Drifting (Red Cloud Mine) 1350 feet at $20.00	$ 27,000	
	Diamond Drilling (Red Cloud Mind) 1240 feet at $6.00, approx.	7,500	
	Diamond Drilling (Dives Claim) Surface - 2000 feet at $4.00	8,000	
	Diamond Drilling (North Geronimo) Surface - 2000 ft. at $4.00	8,000	
23-C		8,500	
23-d		50,000	
23-E		18,900	
			$ 127,900
23-f	Outside Rental 10 months @ $425.00		4,250
23-g	Rental Own Equipment 10 mos. @ $700.00		7,000
23-h			10,000
23-i			10,000
23-a	Average monthly payroll including 15% extra for Social Security, Insurance, Taxes, etc. $4,000 per month for 10 months		40,000
	Note: Diamond drillmen, Helpers, Miners, Muckers wages included in footage costs above.		
			$ 199,150

24. Completion of camp and facilities in two months after project is approved. Exploration will be completed not more than 12 months thereafter, depending, of course, on results. Should the first diamond drill holes expose commercial ore then the exploration program would be altered and shortened.

Form MF-103
(April 1951)

U. DEPARTMENT OF THE INTER
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. dma 1303X

Date received 5-28-51

Participation

Yuma Metals, Inc.
by Lloyd C. White, Gen. Mgr.
1005 Oxford St.,
Berkeley 7, Calif.

Name and address of applicant

Date May, 1951

FILL IN THIS BLOCK

Date of application May, 1951

Estimated cost $300,000

Mineral or metal Molybdenum, lead, zinc, and silver

Percentage of Government participation 50%

Location of mine Silver District about 25 miles north of Yuma, Arizona

Date of filing MF-100 May, 1951

DMA Docket Number, if available dma 1303X

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT See Supplement Sheet, Form MF-100

*1. Is applicant an individual, partnership, or corporation?
*2. If a partnership, state names and addresses of partners.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property. None
7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.
9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)? (a) $150,000. (b) Will pay our part of venture: 50%.

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.

(*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons. State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled.

*16. History:

(*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.

(*b*) State briefly the known history and production of adjoining and neighboring properties.

(*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:

(*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)

(*a*) Describe the ore or mineral deposits briefly.

(*b*) Submit available maps and assay data.

(*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:

(*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.

(*b*) Supervisors, by numbers and positions, with salaries of each.

(*c*) Cost of necessary repairs to existing facilities, structures, and buildings.

(*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.

(*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.

(*f*) Cost of rental for equipment which the operator proposes to rent.

(*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.

(*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.

(*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

CERTIFICATION

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

Yuma Metals, Inc.
(Name of company)

By Lloyd C. White
(Signature of authorized official)

May 1951
(Date)

General Manager
(Title)

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.

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

Supplement Sheet to accompany Form MF-103 (April 1951)

The Applicant

Questions answered in Supplement Sheets accompanying Form MF-100, enclosed.

The Property

10. (a) Applicant owns 60 mineral claims in Silver District as outlined on Claims Map of Yuma Metals Inc., May 1951, enclosed.

(b) Eighty per cent of exploration loan will be spent on diamond drilling drifts and cross cuts and camp equipment on Red Cloud Patented Claim, Lot No. 43A.

Surface diamond drilling will be done on favorable outcrops on the following claims: Silver Crown, Rino Nos. 1 and 2, New North Geronimo, New South Geronimo, New Dives, New Dives Nos. 2, 3, 4, and 5, New Manderin, New Manderin No. 2.

15. Ore resulting from exploration campaign would be concentrated at the Red Cloud claim area. The mill would be an all flotation plant. Concentrate would be trucked 40 miles to Blaisdell, a siding on the main line of the Southern Pacific R.R. near Yuma, Arizona. A loading ramp and truck dump bins are already in at Blaisdell. Water for the new camp and mill would be pumped from the Red Cloud mine. Power would be supplied by Diesel Engines, to start a milling operation until such time that development and ore reserves justified the bringing in of Hoover Dam electric power a distance of approximately 18 miles.

The Exploration

20. Deep ore bodies along the Red Cloud fault should be developed. This ore will ultimately be in the sulphide form of lead and zinc containing silver as an important by-product. Until the permanent sulphide zone is entered there will continue to be lead molybdate, galena, cerussite, zinc oxides, all containing silver.

21. Drifting and cross cutting on 385 foot level. Diamond drilling from this level to prospect for Red Cloud ore shoot in Sulphide zone.
Drifting on 200 foot level.
Surface diamond drilling along Red Cloud fault in Red Cloud Claim.
Time required to complete, 15 months.

22. Geological report of Oscar H. Hershey.

The Requirements and Costs

23. (a) 2 Miners at $12.00 per day
3 Muckers at $12.00 per day
3 Underground Diamond Drillers at $16.00 per day
2 Surface " " at $16.00 " "
1 Cook at $300 per month
1 Cook's Helper at $175 per month
1 Assayer at $300 per month
1 Bookkeeper $300 per month
1 Truck Driver at $300 per month.
1 Top Laborer at $10 per day
1 Hoistman at $300 per month
1 Compressor man and mechanic at $350 per month

(b) 1 Working Foreman, $400.00 per month
1 Manager-Engineer, $500.00 per month

(c) Retimbering vertical shaft
Replacing ladders and skidway in inclined shaft
Rebuilding headframe and ore dump pocket

$ 6,500.

(d) Light frame structure buildings

24' x 48'	Bearding House	$ 15,000	
	Bunk House	15,000	
	Office	6,000	
	Warehouse	6,000	
	Compressor Shed & Shop	6,000	
	Hoist House	3,000	
	Electric Generator Shed	2,000	
			53,000
Furnishings for above buildings			12,000

(e)

Two ton electric driven hoist installed	4,700
Bucket and cable	425
Telephones, Hoist house to bottom levels	275
Mine pump installed with pipe	1,600
Ventilating Fan with Ventube installed	1,500
75 kw. Diesel Generator installed (2d hand)	6,000
Diesel Oil Storage tanks installed	1,500
Water storage tank	1,100
Mine track, pipe, cars	1,800
	$18,900

(f) Rental on Sullivan Portable Compressor $150.00 per month
Rental on Rock Drills, Hose 75.00 per month
Rental on Underground Diamond Drill 350.00 per month
Rental on Assay Office, nine miles from Red Cloud Mine 100.00 per month
Rental on passenger automobile 100.00 per month

(g) Longyear Jr. Diamond Drill $150.00 per month
4x4 Chevrolet Truck equipped with boom and hoist 150.00 per month
Army Jeep 50.00 per month

(h) Miscellaneous small tools, nails, hardware, rope, hospital supplies, stretcher $7,500.00

(i) Provided for above. Allowing a contingent estimate of $ 10,000.00

24. Completion of camp and facilities in three months after project is approved. Exploration will be completed not more than twelve months thereafter, depending, of course, on results. Should the first diamond drill holes expose commercial ore then the exploration period would be shortened. As pointed out under the "Applicant" Item No. 9, Form MF-103, owners are prepared to spend $150,000 on venture. This sum plus an equal participation by the government should thoroughly prospect this area.

Received
L. F. Stickel
5-28-51

Form MF-100
(March 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA FOR USE UNDER THE DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. dma 1303X

Date received 5-08-51

Yuma Metals, Inc.
by Lloyd C. White, Gen. Manager
1005 Oxford Street
Berkeley 7, Calif.

Name and address of applicant

Date May, 1951

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) Necessity Certificate pursuant to the provisions of Sec. 124–A (Amortization Deduction) of Internal Revenue Code, 1950, (5) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (6) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA See attached sheets

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☐ Lessee.
   - ☐ Contractor.
5. Number of years in production _____

   If not in production or operation, estimated date when production will begin _____
6. Experience of operators:
   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation: Common (e)	Number of Shares Held in Applicant Corporation: Preferred (f)	Life Insurance Carried for Benefit of Applicant: Amount (g)	Life Insurance Carried for Benefit of Applicant: Net Cash Surrender Value After Loans (h)
Don S. McDaniel, Oregon City, Oregon	Pres. D	None	190,000	158,334	None	None	---
Otto Motejl Sandy, Oregon	Exec. Vice-Pres. D	"	350,000	158,334	"	"	---
Luke Walker, 798 Hope Ave., Santa Barbara, Calif.	Secty-Treas.	"	205,000	158,334	"	"	---
Lloyd C. White, 1095 Oxford St, Berkeley 7, Calif.	Gen. Mgr. & Engineer	"	101,500	25,000	"	"	---
Above group comprise all of the stockholders							
	Total	None	x x x x x	500,002	None	x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$1,000,000	$500,002	$ No par	None	None
Preferred stock	$400,000	$ None	$100.00	None	None

*Indicate period covered.

10. Production:

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)	None	None	None	None	None
2. Quantity of product processed (specify unit of measure and type of process)	"	"	"	"	"
3. Quantity and grade of product sold or shipped (specify units of measure)	"	"	"	"	"

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change. None until present program is carried out.

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves. Hershey Report. See Arizona Bureau of Mines Bulletin Vol. 4, No. 2, Feb. 15, 1933.

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve. 2 Maps of Red Cloud Mine

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)	32,000	6% Pb 10 oz. Ag.			
Indicated (probable)	Oxidized zinc ore not included.	1.7% MoO_3			

(*c*) If placer: Does not apply.

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

See attached sheet:

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

CERTIFICATION

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

Yuma Metals, Inc.
(Name of company)

By Floyd C. White
(Signature of authorized official)

May, 1951
(Date)

General Manager
(Title)

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.

U. S. GOVERNMENT PRINTING OFFICE 16—63792-1

Supplementary Sheet

Form MF-100
(March 1951)

General Technical Data

1. Materials produced:

   (a) No production at present. Mine has produced lead and silver. Can produce zinc. All above as a concentrate.

   (b) Byproduct in ore is molybdenum.

2. Old Red Cloud Mine in Silver District north of Yuma, Arizona on Colorado River. Underground workings. Both vertical and inclined shafts.

   (a) 450 feet shafts.
   (b) 1465 feet drift and crosscuts
   (c) Accessible open stopes approximately
   (d) 90,000 square feet.

   Mine is dry to water level which is approximately 385 feet below collar of vertical shaft.
   Shaft formerly made 250 gallons per minute which was sufficient for camp use and a 150 ton all flotation plant formerly treating dump ore.
   No pumping equipment in at present.

3. (a) Center of prospecting operations will be at the Red Cloud patented mineral claims.
   Distance to Yuma, Arizona, 54 miles.
   Distance to Blaisdell, a shipping point on the Southern Pacific R.R., is 40 miles.
   (b) Silver Mining district.
   (c) Applicant owns 60 lode mining claims in district located as follows:
   In Sections 25, 35 and 36 Township 3 South, Range 23 West
   In Sections 1, 2, 11 &12 Township 4 South, Range 23 West
   In Sections 6 and 7, Township 4 South, Range 22 West
   Meridian G&S. R. M.
   (d) Yuma County, Arizona.

4. (a) Property is not now in operation, although some surface diamond drilling was done during the early part of 1951. There was also considerable road work done during the same period.

   (b) We are developing the property as owners.

Form FM-100 (March 1951)

5. No production since 1941 and then only milling surface dumps by lessors who discontinued work and moved all equipment.

Proposed operation for exploration to be followed by ore extraction if exploration is successful.

6. (a) Officers of corporation have each had some mining experience. President D. S. McDaniel is a successful Real Estate operator and has an automobile distributor agency. Reference: U.S. National Bank, Oregon City, Oregon. Otto Motejl is in timber land and saw mill business. Has real estate mortgages and contracts. Reference: Bank of Sandy, Oregon. Luke Walker is semi-retired. He and wife have two trust accounts and operate farms and Real Estate in Southern California. Reference: Bank of America, Main Office, Los Angeles.

(b) Lloyd C. White, Mining Engineer, Member of A.I.M.& M.E. Registered engineer in California and Wisconsin. Forty years mining experience. Former member of firm of Burch, Hershey and White, Consulting Mining Engineers, San Francisco.
Manager of Yellow Pine Co., Stibnite, Idaho, 1928-1939. Opened quarry which later produced 40% of country's tungsten in World War II. Built mining and milling plants in Alaska, Canada, United States and Mexico. Sampled Red Cloud Mine in 1925.

7. (a) For history and previous development see accompanying maps and also Arizona Bureau of Mines Bulletin, Feb. 15, 1933.

(b) Above Bulletin gives production of district.

(c) Accompanying Hershey Report outlines proposed program for exploration by drifting and crosscutting on bottom level of Red Cloud mine and diamond drilling from these openings.

Basis of development and exploration will be the Red Cloud Claim which was patented in 1886.
This mine was examined and considerable sampling done by the Tucson office of the Bureau of Mines during later part of 1950 and early 1951, under direction of Mr. W. H. Storms.
Mr. Lincoln Stewart was the examining engineer.
Mr. J. Bruce Clemmer, Chief Metallurgist, U.S. Bureau of Mines, Tucson, has tested the oxidized ore.
Also the Arizona State Bureau of Mines has tested the ore under the direction of Mr. George Roseveare, Metallurgist. Mr. Eldred D. Wilson, Arizona State Geologist, has examined the property and district during the early part of 1951.

Corporation owns sixty mineral claims in district, several of which have ore outcrops and are worthy of developing. Applicant proposes to diamond drill at least five of the best outcrops.

Supplementary Sheet

Form MF-100
(March 1951)

13. Access Roads: Give road distances to shipping, supply, and residence points, stating kind and condition of roads.

To Yuma, Ariz., 54 miles.
Red Cloud to Blaisdell, S.P. Main line, 40 miles.
Paved highway, graded road and desert road.

14. Water Supply: State source and quantity of water available for operations and whether sufficient for all seasons of year.

Water in mine for 150 ton mill. Colorado River for unlimited water.

15. Power: State amount of power used, rate per hour, and source thereof.

Diesel Engines. Generator for diamond drilling, pumping. Portable compressor for driving exploration drifts and cross cuts. Not over 60 H.P. required.

16. Labor: State number and classes of men employed during a recent representative payroll period.

No labor except diamond drillers recently and road building.

17. Equipment and Facilities:

4 x 4 Chev. Truck. Longyear Jr. diamond drill.

No buildings on property.

Reviewed
B. F. Stockell
5-28-51

QUALIFICATIONS OF MR. LLOYD C. WHITE
AS TO HIS ABILITY AS MANAGER OF MINING
PROJECT.

- - - - - - - - - - -

In the period from 1919 to 1939 Mr. White maintained offices in San Francisco. During the early years of this period he was connected with the firm of Burch, Hershey & White, who did a general consulting Mining Engineering business. Among their chief clients was the late F. W. Bradley. Some other clients were:

Mexican Candelaria Co. of Semola, Mexico;
Primos Company, Philadelphia, Pennsylvania;
Mountain Copper Co., Ltd. of London, England;
Dunwell Mines, letd., Victoria, B. C.
Treadwell Yukon, Ltd., San Francisco, California.

Mr. White was manager for the Yellow Pine Company, which was at Stibnite, Idaho, from 1929 to 1939. This was owned by F. W. Bradley, W. H. Crocker (San Francisco Banker), and the late Secretary of Treasury, Ogden Mills.

The open pit mining on this property was opened up by Mr. White at beginning of World War II.

In cooperation with the Bureau of Mines, under Mr. S. H. Lorain, the above property was diamond drilled and the blind tungsten deposit was discovered, which was the country's chief tungsten supply during workd war II.

In 1942 Mr. White was President Project Engineer of the Hanna Ore Company of Cleveland, Ohio, who were agents for the government in the design and construction of the manganese ore plant near Los Vages, Nevada. This project was known as "Placer 402".

Prior to 1919 Mr. White had lots of experience operating mines and designing, building and operating mills, as well as some smelter experience.

Submitted by Luke Walker Dery
Yuma Metals Inc

Transcribed by Gale Warner Dean
Genealogy Website Inc

UNITED STATES
DEPARTMENT OF THE INTERIOR
Bureau of Mines

P. O. Drawer "B"

Boulder City, Nevada

July 3, 1951

Luke Walker
798 Hope Avenue
Santa Barbara, California

My dear Mr. Walker:

We have your letter of June 28 asking for the analysis and test results of the sample of ore from your Red Cloud Mine near Yuma, Arizona.

Mineralogical examination shows the mineral constituents to be willemite, calamine (minor), wulfenite, flurite (abundant), limonite, quarts, and calcite. Spectrographic analysis showed the following elements to be present: Fe, Zn, Ca, Si, Al, PB, Mo, Ba, Mn, Mg, Cu, Ag, As, Ti, Be, V. Chemical analysis of the main constituents in percent:

Zn.- 12.4	SiO_2 - 41.4	CO_2 - 1.7
Pb - 1.43	CaO - 22.4	Mo - 0.2
Fe - 3.26	MgO - 0.5	Al_2O_3 - 0.8

Leach tests of this ore, using 25-percent sodium hydroxide solution, gave recoveries of only 51 to 58 percent of the zinc. These results, while not conclusive, are indicative of the difficulty encountered in the extraction of zinc from this type of ore.

Lack of time and personnel have prevented any further investigation of this ore, but if you will send us 10 pounds or more of your concentrate, we will devote as much time as possible to this project.

We have found that extensive research and investigation is necessary in each individual ore and plant location for obtaining sufficient data to determine plant construction cost, and as this information is very meager on your ore, we have no basis for estimation at this time.

This process is very new and has never been reduced to commercial practice, but a large number of companies are interested in it. Only one company has done any pilot-plant work to date, and that was on Goodsprings (Nevada) ore which is a far different

type than yours. One man has worked on this process and who might be available for consultation at present is Mr. D. F. Zlatnik, 123 West Coronado, Phoenix, Arizona.

Sincerely yours,

/s/ C. T. Baroch, Acting for
R. R. Lloyd, Chief
Electrometallurgical Branch
Metallurgical Division
Region III.

UNITED STATES

DEPARTMENT OF THE INTERIOR

BUREAU OF MINES

Southwest Experiment Station
Box 4097
University Station

Tucson, Arizona

July 3, 1951

Mr. Luke Walker
798 Hope Ave.,
Santa Barbara, Calif.

Dear Mr. Walker:

I am glad to hear that you plan to incorporate flotation in your mill at the Red Cloud mine.

George Roseveare's tests indicated a reasonably good recovery of the lead and silver but it is doubtful that you can recover much of the oxidized zinc by convential methods.

It will also be very difficult to separate wulfenite and cerrusite by flotation. You may have to go to puromentallurgy as you suggested. Mammoth-St. Anthony, Ltd., followed that practice for several years at their plant at Tiger, Arizona, when milling oxide lead-molybdenum-vanadium ores.

Sincerely yours,

/s/ J. Bruce Clemmer, Chief
Southwest Experiment Station

AMERICAN CYANAMID COMPANY
Ore Dressing Laboratory

Microscopical Examination of a Flotation Sand Tailing Submitted by Penn Metals, Incorporated, Yuma, Arizona

Introduction:

A 350-gram sample of minus 200-mesh sand tailing, produced from a laboratory flotation test on ore from the subject company's Red Cloud Mine, was submitted to the Ore Dressing Laboratory by our Mr. J. L. Weaver. The samples was received at the Ore Dressing Laboratory in good condition.

Object of the investigation:

In his letter of April 21, 1941, Mr. Weaver requested us to examine the sample microscopically in order to identify the silver-bearing minerals and their mode of association.

Preparation of Material:

The sample, as received, was thoroughly mixed on a rolling cloth and a representative portion was riffled out for head sample assays for silver, lead and zinc.

Another portion of the sample was subjected to a combined Super-panner test and heavy liquid separation. The products from this test were assayed for lead, zinc and silver.

The remainder of the submitted sample was examined under a Greenough binocular microscope and a petrographic microscope in order to identify the mineral constituents.

Head Sample Assays:

The results of the head sample assays of the submitted tailing are given in Table I.

Table I

	Assays
Silver	5.85 Ag Oz./Ton
Lead	0.56 % Pb
Zinc	7.16 % Zn

Mineralogy:

The following mineral constituents were identified in the sand tailing:

quartz	willemite
carbonate (calcite or dolomite)	argentojarosite
hematite	limonite
flurite	chlorite
barite	biotite
crocoite	biotite

Quartz was the chief constituent of the tailings and carbonate was second in abundance. These two minerals were present largely as free grains. Hematite occurred in smaller quantities and was encountered both as free grains and as particles enclosed in other minerals constituents. Fluroite, barite, crocoite and willemite were all present in minor amounts, usually as free grains. Fine particles of argentojarpsite and limonite were also present in small amounts and a few grains of chlorite and biolite were also noted.

The silver-bearing minerals identified in the sample were argentojarosite, crocoite and willemite. Small amounts of crocoite and willemite, removed from the sample with a needle, each gave positive microchemical tests for silver. The fulk of each of the silver-bearing minerals occurred as apparently-free grains.

Combined Superpanner and Heavy Liquid Separation:

In order to determine the distribution of the silver, lead and zinc in the submitted tailing, a small charge was panned on the Superpanner. The panner concentrate, which contained chiefly crocoite and barite, was assayed for silver. The lead and zinc contents of the panner concentrate were calculated, as this produce was too small for direct assay. The panner tailing was dried and was then centrifuged in a heavy liquid having a specific gravity of 2.95. The heavy fraction, termed the heavy liquid concentrate, contained chiefly flurite, hematite, willemite, argentojarosite, limonite and some barite. The light fraction termed the tailing, contained mainly quartz, carbonate, chlorite and biotite. The heavy liquid fractions were each assayed for silver, lead and zinc. The resultant data from the combined Superpanner and heavy liquid separation have been compiled in Table II.

Table II.

Combined Superpanner and Heavy Liquid Separation

		Assays			% Distribution		
Product	% Wt.	Ag Oz/Ton	% Pb	% Zn	AG	PB	ZN
Panner concentrate	4.19	18.71	8.55*	0.00*	15.60	55.22	0.00
Heavy Liquid Conc.	41.28	8.57	0.33	16.87	71.32	24.32	97.26
Tailing	54.55	1.17	0.21	0.36	13.08	20.46	2.74
	100.00	4.9	0.56	7.16	100.00	100.00	

* Calculated

It will be noted that 55.22% of the lead, and 15.60% of the silver were contained in the panner concentrate, which composed only 4.19% of the total sample. The heavy liquid concentrate, constituting 41.28% of the sample, carried 71.32% of the silver and 97.76% of the zinc. The tailing, composing 54.53% of the sample, contained only 13.08% of the total silver, 20.46% of the lead and 2.74% of the zinc.

The silver in the manner concentrate was probably carried largely as crocoite, which that in the heavy liquid concentrate was chiefly carried by argentojarosite and willemite.

AMERICAN CYANAMID COMPANY
Ore dressing Laboratory

Summary:

1. The following mineral constituents were identified in the submitted sand tailing: Quartz, carbonate (calcite or dolomite), hematite, flurite, barite, crocoite, willemite, argentojarosite, limonite, chlorite and biotite.

2. The silver-beaming minerals identified in the sample were argentojarosite, crocoite, and willemite. Small amounts of crocoite and willemite, removed from the samples with a needle, each gave positive microchemical tests for silver. The bulk of each of the silver-bearing minerals occurred as apparently-free grains.

3. In the combined Superpanner and heavy liquid separation, the panner concentrate, comprising about 4% of the sample, contained about 15% of the silver and 55% of the lead. The heavy liquid concentrate, which composed approximately 41% of the sample, carried about 71% of the total silver and 97% of the zinc. The tailing, composing 54% of the sample, contained only 13% of the total silver, 20% of the lead and nearly 3% of the zinc.

AMERICAN CYANAMID COMPANY

/s/ D. W. Davis
Microscopical Department

June 24, 1941

Copies made at Tucson, Arizona 12.28/48
by Brent N. Rickard.

{From Am/ Smelting & Refining Co.
Tucson, Ariz, 12/16/40 }

E. LANSING JONES
Penn Metals, Inc.
314 Security Peoples Bldg
Erie, Pa.

REDCLOUD MINE (Lead)
Silver Mt. District
Yuma Co., Arizona

Outcome on concentrate from Test No. 5 Denver Equipment Co. Sample submitted to El Paso.

Assay

Au	Ag	Pb	Cu	Ins	Fe	CaO	Zn	S
.01 oz	57.9 oz	57.2%	0	12.8%	1.7%	4.4%	2.5%	1.7%

As	Sb	BI
.25%	.25%	0.0

Quotations Silver $0.70625 Lead $0.055

Payments

Gold	no pay	
Silver	per ton	$38.02
Lead		39.50
Total		$77.52

Deductions

Base charge	$2.50	
Credit Pb over 30%	2.57	
Credit	.07	
Insoluble over Fe	1.21	
Total		1.14
Fo.b. Smelter		$76.38
Hauling	1.50	
Freight (value 71.80)	6.90	
6% moisture	.55	
Total		8.95

Net at mine per ton Concentrate $67.43

" " " " " ore (10.3%) 6.95

(Ratio 9.7 : 1)

BRENT N. RICKARD
Mgr,

Tucson, Arizona
December 16, 1940

ASSOCIATED MINING COMPANY

Post Office Box 45

AGUILA, ARIZONA

March 7, 1951

Mr. D. L. ,cDaniel,
P. O. Box 470
Oregon City, Oregon.

Dear Mr. McDaniel:

In answer to your letter of Feb. 25th and to give you more specific detail concerning the test work performed on the sample of ore left by you on your last visit to Aguila.

This crude ore sample contained the following values:

Zinc	15.8%
Lead	3.7%
Silver	4.2 ozs.
Gold	.03 ozs.

It is assumed that this sample was representative of the ores found in that particular part of the property from which it was taken.

Several methods of concentration was tried, in order to determine the optimum recovery possible of each of the contained values, considered in each case only as a single product.

Much information was fained. Minimum particle sizing of grind to effect liberation of values. Reagent combinations that would give results in collection of values, as well as close study of materials to determine their true nature.

The test work, to date, has been very encouraging from the standpoint of recovery of all values as a whole. By the use of a combination of methods a consistent recovery of values has been accomplished as follows:

Zinc 78.6% with a product grade of 63%
Lead 89.4% " " " " 41%
Silver 82.8% (comb, 97.7% in Pb conct.) with 71.8 ozs.recovered.
Gold 88.2% (dist. between Pb. & Zn.) with .621 ozs.recovered.
(No commercial Vannadium found.)

Additional test work on these ores will eventually produce better results after more knowledge has been gained. Also, other ores of the deposit will have to be studied for particular characteristics, as you are no doubt familiar with the fact that ores of this nature and deposition have widely varying characteristics.

These are the facts that must be continually borne in mind when laying out a program of operation. From both an economic standpoint, as well as mechanical plant controls, and design, without undue complications.

The results as outlined above can be duplicated in actual plant operation easily and economically.

Please let me know what your future plans are concerning your proposed operations and if my services can be of benefit to you will be most happy to cooperate in any way possible.

Very truly yours,

/s/ Archie L. Poarch

UNIVERSITY OF ARIZONA
Arizona Bureau of Mines
Ore Testing Service

June 13, 1950

Mr. Luke Walker
798 Hope Ave.
Santa Barbara, Calif.

Ore Test: 1195

Dear Mr. Walker:

The four samples from Red Cloud were composited to make an ore test head sample. The per cent weights and assays of each sample are given in the following table used to make the composite mixture.

Sample No.	% Weight	Oz. Silver per ton	Lead per cent	Zinc per cent
1	27.6	5.3	1.9	6.2
2	21.9	9.2	6.55	14.9
3	25.9	3.5	1.0	8.6
4.	24.6	2.0	0.6	4.9
Composite	100.0	4.87*	2.43*	8.42*

*Calculated

A sample was stage ground in a ball mill to 28-mesh and the ground pulp tabled. The table tailing was treated by flotation after thickening as you suggested on your last visit to Tucson. The reagents used are given in table 1 and the results in table 2.

The table concentrate amounted to 3.3 tons per 100 tons of heads, assayed 25.5 oz. silver per ton and 24.3 per cent lead and contained 18.2 and 36.4 per cents of the total silver and lead, respectively.

The flotation concentrate amounted to 1.6 tons per 100 tons of heads, assayed 40.9 oz. silver per ton and 38.5 per cent lead and contained 14.5 and 28.5 per cents of the total silver and lead, respectively.

The combined concentrates amounted to 4.9 tons per 100 tons of heads. It assayed 30.0 oz. silver and 28.7 per cent lead and contained 33.7 and 64.9 per cents of the total silver and lead respectively.

The middling assayed 5.5 oz silver per ton and 4.1 per cent lead and the tailing 3.1 oz. silver and 0.7 per cent lead.

No assays were made for zinc as the oxides of zinc do not concentrate in the table or flotation concentrates.

The composite sample is too low grade to be commercial and the recovery of silver and lead is low using a coarse grind of minus 28-mesh followed by tabling and flotation.

The above flow sheet should be checked with a higher value in the heads to determine if better recoveries of silver and lead could be made.

Yours very truly,

/s/ George Roseveare
Metallurgist

6/30/50

UNIVERSITY OF ARIZONA
Arizona Bureau of Mines
Ore Testing Service

February 12, 1949

Mr. J. F. Dietrich,
Del Sol Hotel
Yuma, Arizona

Dear Mr. Dietrich:

The second sample of Red Cloud ore from Yuma county assayed 13.1 oz. silver per ton and 4.05 per cent lead which you delivered to the Arizona Bureau of Mines for a pilot plant test.

The ore was crushed to 10-mesh with rolls for feed for the pilot mill test. The ore was fed to the ball mill at the rate of 1½ pounds per minute and the ground pulp floated in four No. 5 Denver flotation cells to recover the silver minerals and then in six No. 7 Denver cells to recover the lead and the silver locked with the lead. The following results were obtained on the complete run:

	Tons per 100 tons Classifier overflow	oz silver per ton	Lead percent	Deduction percent silver	Deduction percent Lead
Classifier overthrow	100.0	10.87*	3.50	100.0	100.0
Concentrate No. 1	1.1	193.2	10.7	19.5	3.3
No. 2	7.4	35.9	36.8	24.4	77.9
Table concentrate	2.6	29.1	3.7	7.0	2.8
Tailing	88.9	6.0	0.63	49.1	16.0

THE UNIVERSITY OF ARIZONA
Arizona Bureau of Mines
Ore Testing Service

The reagents used and points and addition are as follows:

Soda ash - Ball mill - 5 pounds per ton

Aerofloat 15 - Ball mill - 0.08 pounds per ton

Xanthate 301 - Classifier 0.1 " " "

Reagent 425 - Conditioner 1.0 " " "

Xanthate 301 - Conditioner 0.5 " " "

Sodium sulphite cell 2, 4 & 5 - 1.0 " " "
2nd bank

Cresylic acid classifier overflow - 0.05 pounds per ton

The silver concentrate amounted to 1.1 tons per 100 tons of classifier overflow, assayed 193.2 oz, silver and 10.7 per cent lead and contained 19.5 per cent of the total silver and 3.3 per cent of the total lead.

The lead concentrate amounted to 7.4 tons per 100 tons of classifier overflow, assayed 35.9 oz. silver per ton and 36.8 per cent lead and contained 24.4 and 77.9 per cent of the total silver and lead, respectively.

The combined concentrates amounted to 8.5 tons per 100 tons of classifier overflow, assayed 56.2 oz. silver per ton and 33.4 per cent lead and contained 44.9 and 81.2 of the total silver and lead, respectively.

The table concentrate assayed 29.1 oz. silver and 3.7 per cent lead. This concentrate is of doubtful economic value but the table was placed in the circuit so as to observe results of the flotation operation.

The tailing assayed 6.0 oz. silber per ton and 0.63 per cent lead.

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Arizona Bureau of Mines
Ore Testing Service

After the flotation had been operating for several hours samples were cut during a period when the machines were operating good. The calculated recoveries were 52.9 and 84.1 per cent of the total silver and lead in the classifier overflow.

Conclusions

The recoveries of silver and lead from this ore were about 50 and 80 per cent respectively. The silver recovery will decrease as the silver assay decreases. The reagent cost was high for this sample of ore. The total cost, using 1946 prices, was about $0.76 per ton ore.

Yours very truly,

G. H. ROSEVEARE
Metallurgist

(Seal)

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ORE TESTING SERVICE

ORE No. 1130 — TEST No. 1

Conditions and Reagents

Point of Addition	CONDITIONS Time Mins.	% Solids	pH	REAGENTS POUNDS PER TON A-31	Z-5	MIBC	425	Na2S
Ball Mill	20	60		0.05				
Conditioner #1	5	25	7.8	0.05	0.05	0.08		
Rougher #1	5							
Reconditioner #2	2				0.5		1.0	
Rougher #2	12							1.0 stage additic
Cleaner	5							

Remarks:

METALLURGICAL PRODUCTS

PRODUCT	Tons in 100 Tons Feed	oz. per ton ASSAYS Silver	Lead	% OF TOTAL Silver	Lead
Heads	100.0	16.8*	4.14*	100.0	100.0
Concentrate #1	2.2	267.6	17.1	35.0	9.1
" #2	6.0	48.0	47.7	17.1	69.1
Cleaner tailing	6.1	18.5	9.2	6.7	13.5
Tailing	85.7	8.1	0.40	41.2	8.3
Combined concentrate	8.2	106.9*	39.5*	52.1	78.2

Remarks:

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ORE TESTING SERVICE

ORE No. 1130 — TEST No. 2

Conditions and Reagents

Point of Addition	CONDITIONS Time Mins.	% Solids	pH	Soda Ash	A-31	Z-5	REAGENTS POUNDS PER TON MIBL	425	Na2S	Cysy
Ball mill	25	60		5.0	0.05					
Conditioner	5	25	8.4			0.1	0.08			
Rougher #1	6									
Conditioner	2				0.1	0.5		1.0		
Rougher #2	12								1.0	0.1
Cleaner	6									0.1

Remarks:

METALLURGICAL PRODUCTS

Product	Tons in 100 Tons Feed	Assays oz. per ton Silver	Lead	% of Total Silver	Lead
Heads	100.0	16.48*	4.29*	100.0	100.0
Concentrate #1	1.7	340.4	16.8	35.1	6.7
" #2	7.1	55.8	49.4	24.0	81.7
Cleaner Tailing	8.4	14.4	2.6	7.2	4.7
Tailing	82.8	6.7	0.36	33.7	6.9
Combined concentrate	8.8	109.9*	42.6*	59.1	88.4

Remarks: *Calculated

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ORE TESTING SERVICE

ORE No. 1130 — TEST NO. 3

Conditions and Reagents

Point of Addition	CONDITIONS Time Mins	% Solids	pH	REAGENTS POUNDS PER TON Soda	A-31	C	Z-5	425	Crsy.	Na2S	MIBC
Ball mill	20	60		3.0	0.08	0.15					
Conditioner	60	25	7.8				0.09	0.04			0.1
Rougher No. 1	8										
Conditioner	2						0.5	0.5			0.05
Rougher #2											1.0 stage addition

Remarks: Soda - Sodium bicarbonate
A-31 - Reagents Aerogloat 31
C - Calgon
MIBC - Amyl alcohol
Z-5 - Amyl xanthate
425 - Reagents 425
Crys - Cresylic acid
Na2S - Sodium sulphide

METALLURGICAL PRODUCTS

Product	Tons in 100 Tons Feed	ASSAY oz. per ton Silver	% of Total Silver
Heads	100.0	17.5	100.0
Concentrate #1	1.9	344.6	37.6
" #2	8.2	44.9	21.1
Tailing	89.5	8.1	4.3
Combined concentrate	10.1	101.2	58.7

Remarks: *Calculated

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ORE TESTING SERVICE

ORE No. 1130 — TEST No. 4

Conditions and Reagents

CONDITIONS Point of Addition	Time Mins	% Solids	pH	Soda Ash	REAGENTS POUNDS PER TON A-31	C	M1BL	425	Z-6	Na2S	Lime*
Ball mill	20	60		2.0	0.05	0.4					
Conditioner	5	25	9.6				0.1	0.04	0.1		
Rougher #1	7										
Conditioner	2						.05		0.5		
Rougher	15										1.0 Stage addition
Cyanidation of tailing	48 hours										

Remarks: A-31 - Aerofloat 31
C- Calgon
M1BC - Amyl alcohol
425 - Reagent 425
Z-6 - Pentosl Xanthate
Na2S - Sodium sulphide
NACN - Sodium cyanide & consumptio

METALLURGICAL PRODUCTS

Product	Tons in 100 Tons Feed	ASSAYS oz. per ton silver	% of total silver
Heads	100.0	18.0*	100.0
Concentrate #1	1.3	451.5	33.1
" #2	7.2	57.7	22.9
Middling	4.5	14.8	3.7
Cyanide tailing	87.0	6.6	31.8
Solutions	200.0	0.77	8.5
Composite concentrates	8.5	113.5	56.0

Remarks: *Calculated

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ORE TESTING SERVICE

METALLURGICAL TESTS
Ore No. 682

The sample of this ore was from the Red Cloud Mine in the Yuma district and was submitted by the Penn Metals Company of Yuma, Arizona. They requested that we determine what recovery of the lead and silver could be obtained by flotation and that we also attempt to determine the nature of the refractory silver minerals in the ore.

The result of the flotation test are presented on the following page.

This test was made by grinding the minus 10-mest ore in an Abbe mill to approximately 100-mesh. The pulp was then conditioned with .2 pounds of amyl xanthate per ton of ore for 5 minutes and floated for 5 minutes with amyl xanthate for the production of a silver concentrate. This was followed by conditioning with sodium sulphide and copper sulphate and then floated for the production of a lead carbonate concentrate. Both concentrates were cleaned once/

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ORE TESTING SERVICE

Ore No. 682 Test No. 682A

CONDITIONS AND REAGENTS

Point of Addition	Conditions: Time Mins	Conditions: % Solids	Conditions: pH	Reagents Pounds Per Ton*: SA	AX	PO	SS	CS
Grind	30	57		5.0				
Conditioning	5	40			0.2			
Silver Rough.Flot.	5	25	9.4		0.1	0.05		
Silver Clean.Flot	2				0.05			
Conditioning	10						20.	
Conditioning	5							1.0
Lead Rough.Flot	10		9.5		0.2		1.0	
Lead Clean. Flot	5				0.05			

Remarks: *SA - Soda Ash; AX- Amyl Xanthate; PO - Pine Oil; SS-Sodium Sulphide; CS - Copper Sulphate.

metallurgical products

Product	Tons in 100 Tons Feed	Assays: Au	Assays: Ag	Assays: Pb	Assays: ZN	% of Total: Au	% of Total: Ag	% of Total: Pb	% of Total: Zn
Assay Heads		.01	7.5	3.4	4.8				
Calc. Heads	100.0	.019	7.38	3.71	4.78	100.0	100.0	100.0	100.0
Silver Conc	4.65	.17	63.8	21.2	5.9	41.0	40.3	26.6	5.7
Lead Conc. #1	5.72	.02	26.8	34.4	10.4	6.2	20.8	53.1	12.5
" " #2	8.28	.025	6.3	1.3	9.9	10.9	7.1	2.9	17.1
Tails	81.35	.01	2.9	0.8	3.8	41.9	32.0	17.4	64.7

Remarks: Screen Analysis of Tails:

Plus 100-mesh	Plus 100-mesh	Minus 20-mesh
2.5	24.7	72.8

Copies made at Tucson, Arizona, 12/28/48
By Brent N. Rickard

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ORE TESTING SERVICE

Summary

This ore contained 7.5 ounces of silver, 3.4% lead and 4.8% zinc. 61.1% of the silver and 79.7% of the read were recovered in the two concentrates, both of which are of marketable grade

Microscopic examination and microchemical determinations of the tailings showed a considerable portion of manganese to be present. There was also an appreciable portion of plumbojarosite. No definite silver minerals could be identified in the tailings, but it is believed that this silver, which fails to report in the flotation concentrate, is probably in the form of either a silver manganite or an argentojarosite, or possibly in both forms.

E. H. Crabtree, Jr., Metallurgist
Arizona Bureau of Mines

Copies made at Tucson, Arizona 12/28/48
by Brent N. Rickard

Copy

Ed Eisenhauer, Jr.
Assayer, Metalurgist, & Chemist
320 So. San Pedro St.
Los Angeles, Cal.

Mr. E. Lansing Jones,
Los Angeles,
California.

Subject: Mill test of ore from Red Cloud Mine, Yuma, Arizona.

Flotation Tests.

Marked:	Gold Ozs.	Gold Value	Silver Ozs.	Silver Value	Lead %	Distrib. by weight
Heads	Trace		7.20	$5.11	4.20	100.00 %
Concentrates	.02	$.70	41.20	$29.25	34.35	8.80%
Middlings	.005	$.18	23.00	$16.33	13.72	7.80 %
Tailings	Trace		2.12	$ 1.51	.25	83.40 %

Ph Concentration 8.9
W/S Ratio 3 to 1

Ratio of Concentration
11.4 to 1

Iddicated Extraction

Silver	70.4%
Lead	94.2%

	Distribution by Value: Silver	Lead	Total Value Distribution:
Concentrates	50.44%	70.28%	66.66%
Middlings	24.96%	24.88%	31.48%
Tailings	24.60%	4.84%	1.86%

Reagents Used:

Sodium Sulphate	14 lbs. per ton ore
Sodium Acid Sulphate	12 " " " "
Aerofloat # 31	1/20 " " " "
Ethyl Xanthat	1/20 " " " "
Dupont Frother	1/20 " " " "

The ore was milled in a ball mill for 25 (twenty five) minutes with the addition of the sodium sulphide, sodiumacid sulphate and one half the amount of the Aerofloat, the pulp then being - 80 mesh. At the end of this period the ore was then floated in a Denver Sub - a flotation cell. The concentrates were pulled after seven minutes and the middlings after an additional ten minutes. The froth was good although the concentrates were slightly dirty. However, the concentrates could be very easily cleaned and the grade should easily be brought to 60%. A screen analysis of the tailings showed that 67% of the total silver values were in the plus 100 mesh material. It is therefore suggested that the ore be milled to -120 mesh before flotation.

Respectfully Submitted

Signed:
Ed Eisenhauer Jr.
Metallurgist.

October 23, 1940

E. Lansing Jones,
Picachp Corporation,
Cleveland, Ohio

RE: Ore Test #1097-P

Dear Sir:

We are pleased to submit the following report of ore tests performed upon your sample of oxidezed lead-silver ore.

SAMPLE IDENTIFICATION-

One bag of ore was received on August 7th, 1940, weighing 92 lbs., marked from E. L. Jones, c/o Paul Barnes, Glendale, California.

OBJECT OF TESTS -

The object of the tests was to determine proper conditions for the recovery of the valuable minerals in the ore by flotation and gravity concentration.

PREPARATION OF SAMPLE -

The entire sample was crushed through 1/2 inch and split on a Jones Sampler. One half was further crushed to minus 1- mesh and head sample and test charges were cut out with the Jones Sampler.

DESCRIPTION OF THE ORE -

The ore, represented by the sample submitted, is an oxidized lead-silver ore carrying considerable zinc content and a small content of vanadium. The lead and zinc occur largely as carbonates, and the vanadium as vanadinite. The gangue consists of silica and lime carbonate. When pulped with an equal weight of Denver city water having a pH of 7.6 the resulting pulp water has a pH of 9.2

Following is a partial analysis made of the sample:

Oz. gold per ton	.005
Oz. silver per ton	8.20
Per cent lead	5.2
" Zinc	4.65
" iron	3.5
" insoluble	55.4
" calcium carbonate	14.3
" sulphur	0.1
" vanadium oxide (V_2O_5)	0.28

RESULTS OF TESTS-

Four complete tests are herewith reported, details of which are shown on the accompanying data sheets. Following is a summary of the results of these tests.

TEST NO. 1 - FLOTATION USING REAGENTS RECOMMENDED BY OTHER INVESTIGATORS FOLLOWED BY GRAVITY TABLE -

This test shows a recovery of 69.6 per cent of the lead and 60.6 per cent of the silver in a primary concentrate, assaying 51.0 per cent lead and 68.0 oz. silver per ton and .02 ounces gold per ton. A secondary flotation concentrate which should be classed as a middling for re-treatment contained 11.0 per cent of the lead and 9.3 per cent of the silver. The gravity table recovered 5.1 per cent of the lead and 1.3 per cent of the silver in the form of a low grade concentrate. The table middling had a content of 17.2 per cent zinc and contained 43.1 per cent of this metal.

TEST NO. 2 - DENVER MINERAL JIG FOLLOWED BY TABLE CONCENTRATION -

In this test the jig recovered 16.8 per cent of the lead and 10.3 per cent of the silver in a concentrate assaying 49.2 per cent lead and 46.0 ounces silver per ton. The table produced a concentrate containing 33.1 per cent of the lead and 20.4 per cent of the silver in a concentrate assaying 48.4 per cent lead and 44.6 ounces silver per ton.

44.3 per cent of the zinc was obtained in a low grade table middling.

TEST NO. 3 - FLOTATION USING SMALLER QUANTITY OF SODIUM SULPHIDE AS THE ONLY MEANS OF SULPHIDIZATION, FOLLOWED BY GRAVITY TABLE -

This test produced a primary flotation concentrate containing 75.5 per cent of the lead and 60.4 per cent of the silver and assaying 54.4 per cent lead and 65.9 ounces silver per ton. A sonond concentrate, which should be classed as a middling product for re-treatment, contained 11.6 per cent of the lead and 7.3 per cent of the silver. The flotation tailing was tabled, producing a rougher concentrate containing the lead and zinc middling together, which was re-tabled to produce a table concentrate with lead and vanadium, and second concentrate containing the zinc. Tailing from this re-table operation were added to the final table tailing.

The re-tabled concentrate had a V205 content of 7.08 per cent while the table concentrate number 2 contained 32.7 per cent zinc.

TEST NO. 4 - FLOTATION WITH SODIUM SULPHIDE AND SODIUM ACID SULPHATE IN SMALLER QUANTITY FOLLOWED BY GRAVITY TABLE -

In this test the primary flotation concentrate was cleaned once by re-flotation to produce a maximum grade of concentrate. This cleaned product contained 73.0 per cent of the lead and 54.2 per cent of the silver, and had a grade of 63.6 per cent lead and 71.4 ounces silver per ton. Middling products including the cleaner tailing and rougher concentrate number 2 contained 15.0 per cent of the silver and 15.0 per cent of the lead. The table produced a vanadium lead concentrate assaying 4.5 per cent V205 and 14.1 per cent lead.

REMARKS AND CONCLUSIONS -

The tests show that fair recovery of the silver, lead and vanadium content of this ore can be recovered by flotation followed by gravity table operation of the tailing.

The zinc carbonate concentrates to some degree in the gravity table middling product.

#1097-P

In operation a somewhat higher grade of zinc could be expected by re-tabling this zinc middling. However, the tendency of iron oxide to concentrate with the zinc causes a low grade concentrate to be produced. The re-table operation of the gravity-lead-vanadium product would be necessary to produce acceptable vanadium concentrates.

The results of these tests indicate that there is no economic advantage in using the large quantity of sulphidizing reagents used in test number 1, and that the use of sodium acid sulphate does not materially change the results. However, it was noted in conducting the tests that the lower pH secured with the use of the acid sulphate produced a more consistent froth condition.

The ore represented by the sample tested is classed as Medium ore to grind when compared to our standard grind test ores. Grinding to minus 100 mesh is recommended.

The flowsheet A-2070, attached, is suggested for treating an ore of this type, producing a silver-lead concentrate by flotation. It is suggested that a conditioner ahead of the flotation machine would be advantageous, and in the event a vanadium product was to be made, a small concentrating table treating the table concentrate shown in the flowsheet be included.

Respectfully submitted,

DENVER EQUIPMENT COMPANY

Clarence Thom, Director
Ore Testing Division

Elmer J. Garbella, Metallurgist
Ore Testing Division.

EJG/RG
Enc. A-2070

cc to Central, Garbella

FLOTATION TEST DATA--DENVER EQUIPMENT COMPANY--ORE TESTING DIVISION--DENVER, COLORADO

Sample Identification: Head Ore-crushed minus 10 mesh Report No. 1097-P Test No.1

PRODUCT	Percent Weight	ASSAYS Oz. per ton Au	Ag	Per dent Pb	Zn	V205	PERCENT RECOVERY Au	Ag	Pb	Zn
Head Assay		.005	8.2	5.2	4.65	0.28				
Calculated Assay	100.0	.0024	8.25	5.13	4.36		100.0	100.0	100.0	100.0
Rgr.Flot.Conc't.#1	7.0	.02	68.0	51.0	4.0		57.4	60.6	69.6	6.4
" " " #2	3.8	.01	20.1	14.8	8.15		15.6	9.3	11.0	7.1
Table Concentrate	1.1	.01	10.2	23.7	24.50		4.5	1.3	5.1	6.2
" Midds	10.9	.005	4.8	1.8	17.20		22.5	6.4	3.8	43.1
Final Tailing	77.2	trace	2.4	0.7	2.1		--	22.4	10.5	37.2
Total flot. Conc't.	10.8		53.4	38.3	5.46			69.9	80.6	13.5

Grinding and Treatment

Operation	Time Min.	Percent Solids	pH	NaS	NaH	Z8	A31
Grinding (1)	24	67		14.0	12.0		
Rgr. Flot. Conc't #1	12	20	9.0	9x2		.05	.16
" " " #2	12	20	9.0			.05	.04

Grinding (1)
Time, minutes 12
Classification, mesh 100
Sands reground, minutes 12

(2) Reagent Symbols:
NaS-Sodium Sulphide
NaH - Sodium Acid Sulphate (NaHSO4, H20)
Z8 - Butal Xanthate
A31 - Aerofloat #31

NOTES: Flotation performed in Denver "Sub-A" (Fahrenwald) Laboratory Flotation Machine.

Screen Analysis Final Railing

Mesh	% Wt.	Oz. Ag.	%Pb
+100	1.6)		
+150	7.7)	2.9	0.3
-200	75.6	2.3	0.9

Reagents used in this test were those reported by Mr. Ed Eisenhauer in report dated Lansing Jones.

Report No. 1097-P
Test No. 2

DENVER MINERAL JIG TEST DATA

Sample Identification:
Head Ore crushed - 10 mesh

Grinding:
Preliminary grinding time, minutes 5 - classified at 28 mesh
Final grinding time, minutes 2
Percent solids 67

JIG TEST PROCEDURE:
A charge of 2000 grams of head ore crushed to minus 10 mesh was passed over the laboratory jig producing a portion of jig concentrate and a tailing. This tailing was ground to minus 28 mesh and again passed over the jig producing a second portion of jig concentrate and a jig tailing.

PRODUCT	Percent Weight	ASSAYS Oz. Ag	Ton Pb	Per cent Zn	PERCENT RECOVERY Ag	Pb	Zn
Head Assay		8.2	5.2	4.65			
Calculated Assay	100.0	8.03	5.25	4.03			
Jig Concentrate	1.8	46.0	49.2	6.4	10.3	16.8	2.9
" Tailing	98.2	7.34	4.45	4.0	89.7	83.2	97.1

NOTES:

The two portions of jig concentrate were combined and assayed.
The jig tailing was reserved for table concentration.
See Page D-3

DENVER TABLE TEST DATA

Sample Identification:
Jig Tailing from Test #2

Grinding: See Page D-2
Preliminary grinding time, minutes
Final grinding time, minutes
Percent solids

JIG TEST PROCEDURE:

The jig tailing, ground to minus 28 mesh, was fed over the laboratory Wilfley Table by means of the Denver Classifying Feeder, producing a table lead concentrate, a table zinc-lead middling and a tailing.

PRODUCT	Percent Weight	ASSAYS Oz.ton per cent			PERCENT RECOVERY		
		Ag	Pb	Zn	Ag	Pb	Zn
Calculated Assay	98.2	7.34	4.45	4.0	89.7	83.2	97.1
Table Concentrate	3.6	44.6	48.4	11.35	20.4	33.1	10.3
" Middling	13.0	11.7	8.3	13.7	19.0	20.5	44.3
" Tailing	81.6	5.0	1.9	2.1	50.3	29.6	42.5

NOTES:

SUMMARY OF RESULTS Test 2-2A DENVER EQUIPMENT COMPANY--ORE TESTING DIVISION--DENVER

Sample Identification Head Ore crushed minus 10 mesh Report No. 1097-P

PRODUCT	Percent Weight	ASSAYS Oz/ton Ag	% Pb	% Zn	Oz./ton Au	PERCENT RECOVERY Ag	Pb	Zn
Calculated Assay	100.0	8.03	5.25	4.03		100.0	100.0	100.0
Jig Concentrate	1.8	46.0	49.2	6.4	.02	10.3	16.8	2.9
Table "	3.6	44.6	48.4	11.35	.14	20.4	33.1	10.3
" Middling	13.0	11.7	8.3	13.7	-	19.0	20.5	44.3
" Tailing	81.6	5.0	1.9	2.1	-	50.3	29.6	42.5

Table Tailing Screen Analysis

Mesh	% Wt.	Oz. Ag/ton
+35	2.2)	6.1
+48	11.8)	
+65	11.8	4.8
+100	13.7	4.2
+150	11.8	3.65
+200	8.6	3.15
-200	40.1	6.00
	Average	5.10

Remarks:

FLOTATION TEST DATA--DENVER EQUIPMENT COMPANY--ORE TESTING DIVISION--DENVER, COLORADO

Sample Identification: Head Ore crushed minus 10 mesh Report No. 1097-P Test No. 3

PRODUCT	Percent Weight	ASSAYS Oz./ton Au	Ag	% Pb	% Zn	V205	PERCENT RECOVERY Ag	Pb	Zn
Calculated Assay	100.0		8.17	5.4	4.02	0.28	100.0	100.0	100.0
1.Rgr.Flot.Conc't #1	7.5	.04	65.9	54.4	2.6		60.4	75.5	4.9
2.Rgr.Flot.Conc't.#2	2.8		21.4	22.4	6.2		7.3	11.6	4.3
3.Table Conc't #1	0.3		7.0	22.4	17.6	7.08	.3	1.2	1.3
4. " " #2	4.1		8.15	2.8	32.7		4.1	2.1	33.3
5. " Tailing	85.3		2.65	0.6	2.65		27.9	9.6	56.2
Total Flot. Conc't.	10.3		53.8	45.8	3.6		67.7	87.1	9.2

GRINDING AND TREATMENT

Operation	Time Min.	Percent Solids	pH	Reagents : Pounds per ton heads-(2) NaS	Z8	A31	PO
Grinding (1)	24	67		2.0			
Conditioner	2	20	9.0	1.0			
Rgr.Flot.#1	7	20	9.0		.15	.20	08
#2 conditioner	10	20	9.8	1.5			
Rgr. Flot #2	10	20	9.8		.1		

NOTES: Flotation performed in Denver "Sub-A" (Fahrenwald) Laboratory Flotation Machine.

Grinding (1)
Time Minutes 12
Classification, Mesh 100
Sands reground, minutes 12

(2) Reagent Symbols:
NaS - Sodium Sulphide
Z8 - Butyl Xanthate
A31 - Aerofloat #31
PO - Yarmor F Pine Oil

Screen Analysis Table Tailing

Mesh	% Wt.	Oz. Ag/Ton
+100	1.1	3.6
+150	6.0	3.2
+200	15.6	2.5
-200	77.3	
Average		2.69

Additional Assays

	% Insol	%Fe
Rgr. Flot. Conc't. #1	14.6	3.4

FLOTATION TEST DATE--DENVER EQUIPMENT COMPANY--ORE TESTING DIVISION--DENVER, COLORADO

Sample Identification: Head Ore crushed minus 10 mesh Report No. 1097-P Test No. 4

PRODUCTS	Percent Weight	ASSAYS Oz./ton Au	Ag	% Pb	Zn	% V205	PERCENT RECOVERY Ag	Pb	Zn
Calculated Assay	100.0		8.19	5.41	3.65		100.0	100.0	100.0
1 Cl.Flot.Conc't #1	6.2	.02	71.4	63.6	1.7		54.2	73.0	2.9
2 #1 Flot. Cl.Midds	2.8		29.25	14.1	5.2		10.0	7.3	4.0
3 Rfr.Flot.Conc't #2	3.1		13.35	13.4	6.6		5.0	7.7	5.1
4 Table Conc't.	.5		7.0	14.1	22.0	4.5	.4	1.3	3.0
5 " Midds	8.6		5.6	1.3	19.3		5.9	2.1	45.7
6 " Tailing	78.8		2.55	.6	1.8		24.5	8.6	39.3
Total Flotation Conc't	12.1		46.8	39.3	3.75		69.2	88.0	12.0

Grinding and Treatment — Reagents: Pounds per ton heads - (2)

Operation	Time Min.	Percent Solids	pH	NaS	NaH	Z8	A31	Cr	NOTES:
Grinding (1)	24	67		2.0	1.0				
#1 Conditioner	5	20	8.6	1.0	.5				
Rgr. Conc't #1	10	20	8.6			.2	.175	.075	
#2 Conditioner	7	20	8.7	1.5	.75				
#2 Rgr. Conc't	7	20	8.7			.1			
#1 Cleaner	5			.25					

Flotation performed in Denver "Sub-A" (Fahrenwald) Laboratory Flotation Machine.

Screen Analysis Table Tailing

Mesh	% Wt.	Oz. Ag/ton
+100	.9	3.6
+150	6.5	
+200	12.0	3.15
-200	80.6	2.3
Average		2.5

Grinding (1)
Time, minutes 12
Classification, mesh 100
Sands reground, minutes 12

(2) Reagent Symbols
NaS - Sodium Sulphide
NaH - Sodium Acid Sulphate
Z8 - Butyl Xanthate
A31 - Aerofloat #31
Cr. - Cresylic Acid

Additional Assays	% Insol	%Fe
Cl. Flot. Conct.#1	7.6	2.9

December 5th, 1940

Mr. E. Lansing Jones,
Picacho Corporation,
Cleveland, Ohio.

Re: Ore Test #1097-P

Dear Sir:

Following is a supplementary report covering ore test #5, conducted upon your sample of oxidized lead silver ore.

Details of the results of this test are reported upon the following data sheets.

The test was conducted using the reagent combination and procedure described by Mr. Ed Eisenhauer, Jr. in his report of September 13, 1940, with the following exceptions: - The original head sample was crushed to minus 10 meash in place of to minus 40 mesh, which procedure in our test conforms more nearly to conditions in actual practice. The water to solid ratio, in our test was at the start 3 to 1 in place of 3.5 to 1, and at the end was approximately 3.5 to 1.

In our test we continued flotation an additional 5 minutes to obtain additional information as to need of conditioning time.

The results of the test show somewhat higher grade of concentrate and slightly higher tailing assay than does the test by Mr. Eisenhauer.

Respectfully Submitted,

DENVER EQUIPMENT COMPANY

CLARENCE THOM, Director
Ore Testing Division

ELMER J. GARVELLA, Metallurgist
Ore Testing Division

EJG/RG

FLOTATION TEST DATE--DENVER EQUIPMENT COMPANY--ORE TESTING DIVISION--DENVER, COLORADO

Sample Identification: Head Ore crushed minus 10 mesh Report No. 1097-P Test No. 5

PRODUCT	Percent Weight	ASSAYS Ox./ton Ag	% Pb	% Zn	PERCENT RECOVERY Ag	Pb	zn
Head Assay		8.2	5.2	4.65			
Calculated Assay	100.0	7.78	5.17	4.1	100.0	100.0	100.0
1 Rgr. Flot. Conc't #1	7.4	57.3	56.2	2.2	54.5	80.5	4.0
2 " " " #2	2.20	37.1	17.5	5.8	10.5	7.3	3.1
3 Scavenger Conc't.	1.34	17.2	10.3	5.5	3.0	2.7	1.8
4 Flotation Tailing	89.06	2.8	0.55	4.19	32.0	9.5	91.1

Grinding and Treatment Operation	Time Min.	Percent Solids	pH	Reagents NHS	NHS	Pounds per ton heads-(2) A31	Z8
Grinding (1)	25	67		14.0	12.0	.05	
Rgr. Flot.Conc't.#1	12	25					.05
" " " #2	12	25	9.7			.05	.05
Scavenger Conc't.	5	22.5	9.3			.05	.04

NOTES: Flotation performed in Denver "Sub-A"(Fahrenwald) Laboratory Flotation machine

Screen Analysis-Flot.Tailing

Mesh	% Wt.	% Pb
+ 100	6.2	0.62
+ 150	13.0	0.49
+ 200	12.0	9.53
- 200	65.8	0.62
Average		.59

Grinding (1)
Time, minutes 25
Classification, mesh none
Sands reground, minutes --

(2) Reagent Symbols:
NaS - Sodium Sulphide
NHS 0 Sodium Acid Sulphate
A31 - Aerofloat #31
Z8 - Butyl Xanthate

SUMMARY OF RESULTS Test 5--DENVER EQUIPMENT COMPANY--ORE TESTING DIVISION--DENVER

Sample Identification

Report No. 1097-P

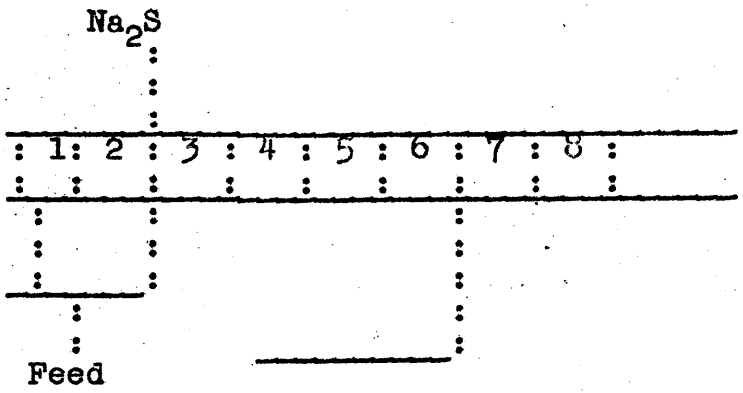
PRODUCT	Percent Weight	ASSAYS x./ton Ag	ASSAYS % Pb	ASSAYS % Zn	PERCENT RECOVERY Ag	PERCENT RECOVERY Pb	PERCENT RECOVERY Zn
Calculated Head Assay		7.78	5.17	4.1	100.0	100.0	100.0
24 minute Rgr.Conc't.) 1 and 2 combined	9.6	52.7	47.4	3.0	65.0	87.8	7.1
24 minute Rgr.Tailing) 3 and 4 combined	90.4	3.0	.694	4.2	35.0	12.2	92.9
Total Flot. Conc't) 1, 2 and 3 combined	10.94	48.4	42.8	3.3	68.0	90.5	8.9
Final Flot. Tailing	89.06	2.8	.55	4.19	32.0	9.5	91.1

REMARKS:

The above tables show the products reported on page D-7 combined according to stage of removal as shown.

TEST MILL RUN BY DENVER EQUIPMENT COMPANY

		May 19-41		May 20-41			May 21-41			May 22-41
		8-14	4-12	12-8	8-4	4-12	12-8	8-4	4-12	12-8
Heads	% Pb	2.19	4.18	2.04	3.08	3.67	1.94	3.70	1.67	1.94
	OzAg	5.20	8.25	7.20	8.45	7.70	7.30	6.60	5.60	7.70
Conct.	% PB	25.1	38.8	60.7	52.2	59.4	55.8	51.8	49.5	55.8
	oz AG	25.1	54.9	81.0	64.8	81.24	82.9	67.4	78.0	81.4
Tails	% Pb	0.26	0.18 ?	0.26	0.35	0.20	----	0.34	0.39	0.40
	oz.Ag	2.20	4.55	4.20	5.40	5.00	4.25	4.95	6.70	5.00
Recovery	% Pb	88%	96%	87.5	88.6	94.5	------	91.0	77.0	79.5
	% Ag	60.5	44.6	41.8	36.2	35.2	39.0	25.2	52.0	35.2
#1 Cell Conct.	% Pb				35.1	18.9				
	oz Ag				125.45	302.1				
Mill Feed		Dry Plant Tailing		Dry Plant Tailing			Dry Plant		Cobb Ore	Cobb Ore
Remarks					Na_2S #2 Cell	to	Na_2S #2 Cell 301	to B.	Mill	



Partial copy of Report of
ELGIN BRYCE HOLT
Consulting Mining Engineer
P. O. Box 783
Phoenix, Arizona

Subject: RED CLOUD MINE

Penn Metals, Inc.,
Penn Building,
Erie, Pennsylvania.

Gentlemen:

I am submitting for your consideration a report concerning the RED CLOUD MINE.

It is my desire to give you an outline of the outstanding features of these properties, especially Red Cloud.

LOCATION:

The Red Cloud mine is located in the Silver Mining District in Yuma County, Arizona, about 40 miles north of Yuma and four miles east of the Colorado River. It is reached by turning off the Yuma-Quartzite highway about six miles northeasterly from a suspension bridge across the Gila River, located around four miles westerly from Dome, a station on the Southern Pacific R. R. and then traveling 28 miles to property over a fair desert road, over which trucks can operate.

HISTORICAL:

The property was discovered in 1879. In 1881, it was purchased by the Red Cloud Mining Company, controlled by Knapp and Norton of New York. This company worked the mine profitably until 1892, when operations ceased due to the low price of silver. There is no accurate record of the production, but from the best authorities available, the production of this property ran well over a million dollars.

During this early period, there was a town and Post Office adjacent to Red Cloud, known as Silent, said to have contained a population of two or three thousand people, at its peak. Prior to the time with the Southern Pacific R. R. was completed through Yuma, during 1881 or 1882, communication between this area and the outside world was largely by means of steamboats, which plied up and down the Colorado River to points above Needles; and these steamers brought in all kinds of supplies and machinery needed by the miners and transported out ores which were shipped to either Swanson, Wales, or to Selby, California, for treatment at smelters located at those distant points.

In 1917, a syndicate headed by myself, purchased the Red Cloud mine, and resold it to E. S. Curtis and James A. Moore, of

Seattle, Washington. These people installed Stebbins dry concentrators and endeavored to work the dump. The effort proved a failure and they abandoned the property.

During 1926, which I was operating mines in Mexico, my associates gave a lease and option to the Primo Chemical Company. This company drove a 335-foot cross-cut into the hanging wall on the 500-foot level. At the end of the cross-cut a station was cut and two diamond drill holes were bored, directed in such manner as to intersect the vein at considerable greater depth. At this juncture a payment was about to fall due. The company wanted an extension. The owners refused to grant it, notwithstanding the low price of silver at that time. Thereupon the Primos people abandoned the property and refused to give the logs of the drill holes to owners.

In 1928, the Neal Mining Company acquired control of Red Cloud and located 55 other claims in the district. This company drove two drifts on the 500-foot level, one northwesterly and the other southeasterly of the shaft, each about 180 feet, both drifts following the hanging wall vein, which was found to be leached and carrying low values, on this level, which is five feet above water level in the mine.

During 1940, I regained control of property, and in December of that year, I arranged the execution to your company of a lease and option on the same.

GEOLOGY:

Here tuffs and lavas of Tertiary flows, floor a valley that is bordered on the east by andesite ridges and on the west by a sodic granite ridge which in turn is in contact with a high ridge of schist. The entire area of the Silver Mining District is traversed by a number of huge veins and beinlets from which silver-lead ores have been mined and shipped at a profit from superficial workings. It is believed that deeper and intelligently directed work will result in the uncovering of vast ore reserves, concerning which nothing at all is known at the present time. In the past, only outcropping ore shoots have been worked.

The Red Cloud vein is from 35 to 40 feet wide, and occurs between granite on the foot and andesite on the hanging wall. The high grade silver-lead ore was mined out years ago, at varying widths from four to 12 feet, from the hanging wall vein. There are now 40,000 tons of ore blocked out in the mine, along said vein, from the surface down to the 430-foot level. Some 460 Assays, shown on the mine map, show the ore to average around 9 ounces of silver per ton and five per cent lead, and a fair showing of wulvenite and vanadinite; also a little sinc.

FOOT WALL VEIN:

This vein is exposed on the surface, showing a goodly grade of milling ore, and has an indicated width of from 8 to 12 feet. But this vein has never been prospected by cross-cutting anywhere in the various levels of the mine, except in two places and these cross-cuts did not reach the foot wall granite. The middle portion of the 40-foot vein is mainly calcite, with low metal values. Hence, if the foot wall vein extends to depth, a large tonnage of milling ore could be picked up easily by means of short cross-cuts at the various levels of the mine. By all means this work should be done.

OXIDIZED ORE:

All ore so far exposed in the mine to the 500-foot level, is oxidized material, with residual bunches of galena, carrying values in silver up to 400 ounces per ton.

SULPHIDE ORE:

Most of the engineers and geologists who have examined the property, agree that below the water level in the mine, extensive bodies of sulphide ore should exist, carrying excellent values in silver, lead and zinc. This is attested by the fact that the oxidized ore zone above water level shows extensive leaching action caused by the rise and fall of the water level in the mine through the ages. In this way, the lower portion of the oxidized ore zone was robbed of its values which migrated downward and no doubt deposited as enriched sulphides below the original water level, wherever that may be. Anyhow, it is my firm opinion and belief that deeper work on vein, should result in uncovering sulphide ores of great importance, in which event both shipping, as well as milling ores may be expected.

As indicated above, the mine is dry and open, and for this reason it can be inspected and sampled. A few check samples against the assay map, we have on file, will prove the sampling of the entire mine. However, we must bear in mind the important fact that such ores as are now available for sampling are merely the second grade ores that were left in place by the old-timers because such ores could nat then be mined profitably.

RED CLOUD VEIN AND WORKINGS:

The following is quoted from Bulletin No. 134 of the Univeristy of Arizona, by Eldred D. Wilson:

"The Red Cloud vein occurs within a fault zone of somewhat irregular strike and dip, separating the volcanic rocks on the east from the granite on the west. At the mine, this zone strikes about north 15 degrees west and dips from 45 to 60 degrees easterly. The vein is made up chiefly of limonite, hematite, quartz, flourspar and calcite, together with considerable amounts of gouge and brecciated wall rocks, all more or less stained by pyrolusite. The quartz forms irregular, faintly crystalline, vuggy masses, which in places are cut by veinlets of coarser-grained quartz. Generally it is interbanded with gray to purple flurite which ranges in texture from dense to crystals 1/8-inch in diameter. The calcite is mostly a coarse crystalline, dark gray, mangamiferous variety, but some later white calcite also occurs. The limonite and hematite, which occupy cavities and vugs within the other gangue materials, are locally intermingled with irregular cellular masses and vuglings of cerussite, smithsonite, pyrolusite, vanadinite, wulfenite and very minor malachite. In places, nodules of argentiferous galena, partly altered to blackish anglesite and pale-yellowish cerussite, occur. The silver of this galena is probably present in minute inclusions of argentite. No other sulphides occur in the mine. Cerargyrite, present as small disseminated masses and streaks within the osidized minerals, constitutes the principal silver mineral.

"On the surface, the unmined portions of the Red Cloud vein are largely covered by dumps and hillside talus. Underground, the irregular shafts, drifts and stopes, indicated by Figure 2, have followed for a length of 560 feet and an inclined depth of 535 feet (519) feet), which is the water level. Most of the upper workings were made half a century ago, when the ore was sorted and screened underground and dragged up the incline in rawhide buckets. The stopes were supported by pillars, dry-wall fills, cottonwood timbers, willow laggings, which are fairly intact. A more recent vertical shaft, approximately 200 feet deep, intersects the vein at a depth of 290 feet on the incline."

A fact of considerable importance at this time, when our country is in need of strategic metals, that is shown in the above quotation, is the presence of wulfenite (lead molybdate) and vandinite, which occur throughout the entire workings. They are found across the whole width of the vein and in the foot wall granite. Both of these metals can be recovered by ordinary ore-dressing methods, or by means of jigs and tables, etc. As a matter of fact, Red Cloud ores contain four strategic metals: lead, zinc, and the two just mentioned.

MILL RESULTS:

I have made a tabulation from your assay records of a two weeks mill run, in June of 1941, on oxidized Red Cloud dump ores, showing that mill heads averaged 8.90 ounces silver, and tails 5.95 ounces silver, per ton of ore treated during that period. As for lead, heads averaged 4.01 per cent, tails 1.85 per cent. Hence, silver recovery equalled 33.1 per cent, and lead recovery 54.1 per cent.

During the said period, concentrates shipped by your selves to the El Paso Smelting Works, averaged: Silver, 87.63 ounces per ton; lead, 50.45 per cent.

Therefore, at the time you were operating your mill at the rate of 200 tons daily, you were discharging into the tailings pond about 1,090 ounces silver per day, with a gross value of $773.90, of which it is believed around 90 per cent could have been recovered by cyanidation, provided a properly constructed cyanide plant had been installed at the beginning, in addition to the flotation unit.

Also, no attempt at all was made to recover the wulfenite and vanadinite, a large part of which could have been isolated as a marketable concentrate, by proper plant installation.

In my opinion, there is no use at all to waste further time and money in the attempt to better the above very poor results obtained in treating the oxidized ores of these mines by Flotation alone. However, good results should be realized on such ores by using a combination of gravity concentration, flotation and cyanidation.

As to the wulfenite (lead molybdate) and vanadinite, these occur as coarse crystals in which the two are closely combined. Hence, the same would have to be recovered together by means of jigs, and possibly tables, from a coarse pulp feed, approximately 16-mesh. But also, by this method, some "free lead" minerals would be present in the resulting concentrate, which, however, could be removed by using a small flotation machine, after regrinding the said concentrates.

As to the amount of these minerals in oxidized Red Cloud ores per incomplete sampling I have done on dump material, I would say the same should average about 0.44 per cent combined wulfenite and vanadinite (or Mo) 3, 0.18%), or 8.8 pounds per ton of mill heads.

I understand, on good authority, that an ore buyer located in Tucson, Arizona, will pay 30¢ per pound for concentrates running from 20 to 25 per cent combined MoO3 and V2O5. Hence, 8.8 Pounds at 30¢ would eaual $2.64, of which we should recover at least 60 per cent, or a net of around $1.58 for these minerals, per ton of ore treated, less transportation costs to Tucson.

All in all, let us assume that the said minerals would net only $1.00 per ton of ore treated, this item alone would yield a net profit of $200.00 daily, when and if the mill could be reconstructed, which would mean moving it to a new site on the adjacent hillside, adding gravity concentration, selective flotation devices, in the event appreciable zinc should be found in the sulphide ores, and cyanidation, or broadly whatever processes may be found necessary, after proper metallurgical tests shall have been made.

However, in assuming that a net profit of $1.00 per ton of ore treated can be made on the wulfenite and vanadinite minerals, we must take into consideration that all mining, milling and other costs would be charged against the silver, lead and probably zinc contents in the ore; also that a profit can be made on these metals. These matters will be discussed later in this report.

REMARKS:

During the interim while exploratory work is being carried out, as hereinafter outlined, I would not recommend that any attempt be made to operate your present flotation plant, due to reasons cited. Neither would I recommend that this plant be remodeled or changed in any way whatever, until a considerable underground ore supply is fairly well blocked out. The reason for this statement is that until the sulphide ores are exposed, and until proper metallurgical tests have been made thereon, no one could determine, with any degree of certainty, what kind of a plant to install, in order to recover the various metals in the ore.

Red Cloud now has around 40,000 tons of oxidized ore, of milling grade, now ready to be stoped in the old mine workings, as above set forth, with excellent possibilities that new ores will be found by extending some of the levels in the mine on vein each way from the shaft, or into areas that have never been explored at all. Also, such work should result in the discovery of high grade shoots of ore, of the same tenor as were formerly found and mined out.

The Red Cloud vein is traceable on the surface, at intervals, in a northwesterly direction, from the Red Cloud workings, for a distance approximately 10,500 feet; said vein traversing the following mining claims: Red Cloud, Red Rock, Amanda, Black Eagle, Cochise, South Geronimo, North Geronimo, and Hardscrabble.

Also, once the sulphide ores are found and blocked out in all your principal mines now being discussed, the zinc content in the same can be recovered as a by-product by selective flotation. This item alone will be an important factor in putting these properties on a paying basis, for once the sulphide ores are reached and milling started in a large way, two marketable products can be made, to wit:

1. A lead-silver concentrate, low in zinc, which can be marketed to the El Paso Smelting Works; and

2. A zinc concentrate, low in silver and lead, which can be sold to the Amarilla zinc refinery.

As to wulfenite and vanadinite, as these are low temperature ores, or secondary minerals found in the oxidized ores, I do not anticipate the same will be found in the sulphide ores below water level.

However, as we already know something about the metallurgy of these ores, due to your own operation of the flotation mill, as well as to certain cyanidation tests I had made, I think it would be a good idea at this time to give a general outline of the milling plant that later may be installed in order to recover the various metals in the ore.

The plant I have in mind would be so designed as to handle both oxidized and sulphide ores.

During 1940, I had cyanidation tests run at the Producers mill on Red Cloud dump ore. These tests showed that 71 per cent of the silver values could be recovered as silver bullion, with a low lime and syanide consumption. But the said tests were conducted according to the cyanidation set up of the mill mentioned, which treats gold ores only. Hence, our tests were not conclusive by any means, for in the first place, the cyanide solution used was entirely too weak, and, secondly, in the agitation of the samples, insufficient aeration was employed, inasmuch as leaching was done in bottles placed on a revolving shaft. Therefore, it is believed when proper tests are made on this ore by metallurgists who know how to treat silver ore by this method, a goodly recovery of silver can be made, up to around 90 per cent.

The design and flow sheet of the new mill, which would be built on the hill-side below the crushing unit, would be, more or less, as follows:

Ore would be hoisted up an inclined tract from the mine to a head frame on top of the hill and dumped into a small bin located above the feed floor, which would be flush with the top of the large jaw crusher.

After the ore passes through the primary jaw crusher and then through the two gyratories, it would go to a Symons cone crusher, in which it would be reduced to say 100 per cent minus 3/8-inch mesh. Then it would be discharged into two iron ore bins, standing side by side, with capacities of 300 tons each one for the oxide and the other for the sulphide ore. One of these can be obtained from the present mill, and the other would have to be purchased. The Symons cone crusher mentioned would have to be purchased also.

From the oxide ore bins, the crushed material would pass by gravity over a 16-mesh impact screen, which would have to be provided also.

The fines from the impact screen would contain most of the wulfenite and vanadinite, due to the brittle character of these minerals. Hence, the said fines would go to a 16" by 24" Denver Mineral Jig, which would recover, as a rougher concentrate, a large part of these minerals. The jig concentrate would also contain some "free lead" minerals, which later could be removed in the laboratory in a diminutive mill, consisting of a small ball mill, classifier and flotation machine. The final product should contain wulfenite and vanadinite of marketable grade.

SELECTIVE FLOTATION PLANT INTRODUCED HERE:

Following immediately and after and below the said crushing and jigging operations, I now suggest that we introduce into the flow-sheet your 200-ton flotation unit, described above, which with such necessary changes will provide a selective flotation plant, by which a lead-silver product can be made, on the one hand, and a zinc product on the other.

The principal new equipment needed for the above purpose would be, more or less, as follows:

1 - 6' by 6' conditioner for zinc section

1 - 6' by 6' Oliver filter for zinc section

2 - 8' by 8' thickening tanks, one for the silver-lead and the other for the zinc section

1 - 8-cell, No. 21, 38" by 38", Denver Sub-A Flor. machine

This plant would be so arranged that the zinc would be dropped with the tails from the lead-silver flotation section. Then the tails would pass through another 8-cell, Denver Sub-A machine, where the zinc would be activated, floated and recovered as a separate concentrate.

200-TON CYANIDATION UNIT TO TREAT TAILS:

For reasons above cited, I have presumed that the jig tails as well as the oversize from the impact screen, will pass through the above flotation unit along with the crushed sulphide ores, later to be developed, after these are ground in the ball mill mentioned.

I now propose to install, following and below the said flotation unit, a standard counter-current cyanidation plant, with a capacity of 200 tons daily. The design of this plant will be,more or less as follows:

The tailings from flotation would have to be reground to around 100 per cent minus 200-mesh before goung to cyanidation. This could be done by installing about a 5' by 8' ball mill in closed circuit with a rake classified, into which flotation tails would flow by gravity through a launder. Here an automatic sampling device would be provided. The final discharges from classifier would then enter a launder which would deliver the pulp to a 10 by 50-foot primary thickner.

The cyanidation plant, in addition to the primary thickner just mentioned would consist of three 30 by 24 foot agitators, followed by five 10 by 40-foot decatation thickners, arranged for gravity solution flow. The pulp to be handled by Eimco duplex disphragm pumps. Tailings from the final thickner would be automatically sampled and then piped to the tailings pond.

Precipitation solution would be taken by overflow from the primary thickner and would flow by gravity to the precipitation plant, consisting of a standard Merrill-Crowe simultaneous clarification and precipitation equipment for zinc-dust precipitation. Barren solution from precipitation would be returned to the circuit in the decantation plant. Precipitates would be melted in an ordinary tilting furnace at the plant; and resulting bullion would be shipped to the U. S. Mint at San Francisco.

The above plant, if necessary, would handle around 230 tons of pulp each 24 hours.

REMARKS:

One item I have failed to mention is that in the cuanidation test made at Producers, some gold, amounting to 35 cents per ton of ore tested, was also recovered with the silver. Small as this item seems, it would add around $70.00 per day to the cash returns from the operation of this plant.

In the above discussion, it has been my idea solely to bring into the open metallurgical problems "to shoot at", or problems to be explored in great detail, prior to the erection of any plant at all. Exhaustive tests should be made, in order to work out the metallurgy of the ores, and the final plant designed and erected accordingly.

PROFITS:

As will be noted, the only positive ores now available in your holdings of which we have dependable assay records, consist of the 40,000 tons in Red Cloud, as set forth in the McDougall assay map, submitted herewith.

This block of ore is composed of second grade material, left by the 1880 operators, assaying around 9 ounces silver and 35 cents gold per ton, plus five per cent lead, zinc content not tested, and approximately 0.44 per cent combined MoO_3 and V_2O_5.

I have already roughly estimated, for your consideration, what profits might be made, treating this grade of ore, which is oxidized material, in the proposed mill, using gravity and flotation concentration, followed by cyanidation, as follows:

Mill heads:

Silver, 9.0 ounces per ton, at 70 cents - - - - - - - - - -		$6.30
Less 10% tails loss -		.63
		5.67
Lead 5.0% eq. 100 lbs, at $5.85 per 100 lbs. eq - - - - - - - - - - - - -	$5.85	
Less 46% tails loss, eq.- - - - - - - -	2.69	3.16
Recoverable value of lead & silver - - - - - - - - - -		8.83
Less marketing charges per ton of ore treated in mill, incl. truck haul to R. R., R. R. freight to El Paso, Smelter charges and all smelter deductions, estimated at 20% of net mill head values, or 20% of $8.83, eq. - - - - - - - - - - -		1.76
		7.07
Less:		
All milling costs, per ton or ore treated - - - - - - - - - - - - - - - -	$2.00	
All mining costs, ditto - - - - - - -	2.50	4.50
		2.57
Credit per ton of ore tr.: differential on marketing costs of 2/3 of recoverable silver extracted by cyanidation, as fullion - - - - -	0.74	
Credit, net gold recovery - - - - -	0.35	
Credit, net MoO_3 & V_2O_5 - - - - - - -	1.00	2.09
Net profit per ton of ore treated		$4.66

COLLABORATION:

I am indebted to Mr. L. C. Penhoel, 1919 South Santa Fe Avenue, Los Angeles, for his assistance and helpful suggestions regarding the details of the proposed new mill at Red Cloud. Mr. Penhoel is a Mining and Metallurgical Engineer who has been engaged in the design and erection of milling plants, over a long period of years, in both the United States and Mexico. I value his opinion highly.

I am also indebted to Mr. J. S. Coupal, Director of the Arizona State Department of Mineral Resources, for his offer to write yourselves commenting on both this report as well as your properties.

To Mr. Roy Williams, of Kingman, Arizona, for his suggestions concerning ore dressing methods necessary to recover wulfenite and vanadinite values from Red Cloud ores. He has worked for the Molybdenum Corporation of America, and has bad experience in treating such ores.

Mr. Walter D. Wiley of Yuma, also assisted me in many ways. He furnished me with an inventory of your milling and other equipment at Red Cloud; also data concerning your milling operations.

CONCLUSION:

From the facts herein given, it is my honest opinion and belief that your mines located in the Silver Mining District, Yuma County, Arizona, are properties of more than usual value. Furthermore, I believe these mines can be put on a paying basis, providing your proposed new operations are adequately financed and expertly managed.

Very sincerely yours,

/s/ Elgin B. Holt
Elgin Bryce Holt

January 20, 1942

(SEAL)
Registered Mining Engineer.

Report on the

PACIFIC BLACK ROCK MINING PROPERTY

Yuma County, Arizona

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This report is made after a personal, but somewhat limited examination of the property known as the Pacific-Black Rock Mining Group. Due credit is herewith given to Messrs. Frank W. Giroux, E. M., W. Tovote, E. M., and Carl Trischka, E. M., for measurements of workings, certain ore samplings and mapping. These we found to check very favorably with our investigations of the property in November, 1926.

/s/ J. V. McConnell, Mine Geologist
/s/ Harry R. Palmer, Mine Chemist and Engineer

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Geography: The Pacific-Black Rock Mine is situated in the Silver Mining District, Yuma County, Arizona, and is about 35 miles northeasterly from the town of Yuma; and approximately the same distance from Dome, a station on the Southern Pacific Railroad. The road to the mine crosses the Gila river at Dome, thence over a level plateau of some 15 miles to the Yuma wash and up the wash to the Black Rock Canyon to the mine. This property can also be reached by a good road from Yuma via Picacho, crossing the Colorado river by boat and then about five miles over a good road to the mine. Either route is approximately the same distance. The roads are little used and would require some work for economic transportation, however, there are no long or excessive grades so the cost of repairing roads would be light.

The mine is about four or five miles from the Colorado river and at elevations of upwards of 1200 feet above sea level along the ridges.

General Description: The Pacific-Black Rock Mining Group consists of ten mining claims, totaling approximately 200 acres, which is mostly mineral bearing ground. The Silent Glance, Black Rock and Pacific claims are held under United States patents. The West Glance #2, Mandan Pacific #2 and the Black Rock #2, are held by right of location and annual assessment work. The Silver Glance and the Black Rock were patented in 1881 and the Pacific was patented in 1891.

All claims show strong mineralization. There are no surface improvements such as camp buildings or machinery on the property. No extensive work has been done here for many years except annual assessments, however all openings are in fair to very good condition.

The country here is typical desert, being very warm during the months of June, July, August and September, while the balance of the year the weather is ideal. There is no water or timber on the property. The future water situation for mining and milling purposes can be solved in two ways. There is every indication that ample water will be encountered between the five and six hundred foot levels or it is possible to secure unlimited water from the Colorado River. Either plan is feasible.

History: The Silver Mining District is an old one with rather large and profitable production to its credit. It has been worked for many years for the high grade silver and silver-lead ores. These ores were mostly handled by a local smelter a few miles away and by a mill situated on the Colorado river. It is practically impossible to get definite figures as to the total values of ores extracted from the Pacific-Black Rock property on other mines in the district, however, this production must have been considerable judging from the amount of work done. We are informed that the better grade silver ores ran up to around 1000 ozs. and over to the ton? The cost of mining is reported to have been around $4.00 to $5.00 per ton.

Geology: The country rock of the district and at the Pacific-Black Rock Group is an old schist highly metamorphic in proximity to the fractures but retaining its schistosity to a marked degree. The schist has been cut by a medium chrystalline granite and later by andesite dikes and flows. Much faulting and cross-faulting has taken place. There are two and possibly three principal ore bearing fracture systems. The north-south system with a medium steep dip to the east is several hundred feet wide and traceable on the surface for at least two miles. The northwest-southeast with a somewhat flat dip to the northwest appears to be the principal ore carrier and is from 15 to 150 feet wide, but usually short in extent -- terminating in one of the north-south fractures.

The andesite is closely associated with the ore bodies and is the youngest rock of the district as is shown by its persistence in cutting all the other formations. At the Pacific-Black Rock claims the ore occurs mostly at the contact fracture. The schist being the footwall and a highly altered andesite is the hanging wall. Considerable movement has taken place at the contact and also within the vein fracture.

At the Black Rock claim the rough prismatic blocks, the deep scored walls and the brecciated zones would indicate considerable longitudinal as well as cross movement. In the mine also are found granite and intrusions of porphyry. While workings have not exposed any great amount of granite it is probable that granite will form one of the walls and in places this will have considerable bearing on the ore bodies. In places andesite gives every indication of being the principal mineralizing agent.

The ore occurs in a series of large irregular lenticular bodies along the strike of the fracture sustems and alterations showing at the surface in the form of prominent outcrops (see views attached) which have filled the wide fracture along the contact -- mineralization extending far into the highly altered zone of the wall rocks.

The andesite along the system of fractures is altered so that it appears as a recrystallized limestone. Great penetration of large quantities of lime carbonates (dolomite and calcite) have occurred which has been greatly fractured and these fractures filled with calcite, some semi-chalcedonic quartz and silver, lead and zinc minerals. The silver, lead and zinc minerals are distributed through the entire mass of the altered zone, showing concentration within the wall lines of the main and cross fractures. The limit of ore depending more upon economic consideration than the disappearance of the metallic contents.

At the junction of the north-south fracture and the northeast-southwest fracture the mineralization was very great. Here considerable ore has been extracted. At the Black Rock claim where most development work has been done the fracture zone is several hundred feet in length. The mineralization extends from 15 to 25 feet along the cross fractures.

A cross-cut 225 feet northwest of the main shaft shows a mineralized zone 96 feet wide with the face in ore. 600 feet northwest of cross-cut (Glance shaft) shows 30 feet of ore with no hanging wall in sight. 900 feet northwest of this point (Silver shaft) shows 30 feet of ore with no limit in sight. At this point a 450-foot tunnel has cut two other parallel fractures or veins showing good values for over a width of 10 feet each.

In the mineralized zones so far exposed the lead occurs as a carbonate (cerussite) and residual sulphide (galena). Zinc occurs as a carbonate (smithsonite) and the oxide (calamine). Silver occurs as a chloride and some sulphide (argentite).

The mene water level of this property is between 500 and 600 feet vertical depth as determined from the workings of the Red Cloud mine, which joins this property on the north and is an extension of the same system of fractures.

A partial analysis of a composite sample of these ores gives: silica, 46.7%; lime, 15.8%; iron 6.3%; silver 7.8 oz.; lead 4.8%; zinc 9.6%.

Development Work: The Pacific-Black Rock Group has been opened up by over 2100 feet of underground work, which consists of four incline shafts, tunnels, drifts and cross-cuts as follows:

82-foot shaft with 30-foot cross-cut in bottom.

100-foot shaft with 20-foot cross-cuts at the 20 foot, 50 foot and 100 foot levels.

250-foot shaft.

450-foot tunnel with 90 feet of drifting.

420-foot shaft with 255 feet of cross-cut and drifting at 20-foot level; 287 feet of cross-cut and drifting at 104-foot level; 50 feet drifting at 147-foot level;227 feet of drifting and cross-cutting at 171-foot level; 88 feet of drifting at 270-foot level and a 28-foot cross-cut at the 420 foot level. This shaft passes through the ore at the 300-foot level.

225 feet northeast of the 420-foot shaft is a 100-foot cross-cut.

The property has been further opened up by many open cuts on the various claims. The Mandan has the least development but the ore exposed by the outcrop and in a cross-cut that has been started would indicate that a good grade of mill ore could be expected for some 50 to 75 feet in width and several hundred feet in length.

Ore in Sight and Prospective: The estimation of positive ore now developed in the Pacific-Black Rock Group will be confined to the Black Rock Claim. Here there are now in sight approximately 56,000 tons of carbonate ores that average; 6.7 ozs. silver; 4.87% lead and 9.8% zinc. There are also some 15,000 tons of ore in the cumps averaging: 6.48 ozs. silver; 4.96% lead and 9.6% zinc.

The possible or probable ores of the entire group in the horizon of the oxidized zone alone are very great. Ore of a commercial value has been proven along the strike of the fracture system for a distance of over 4000 feet with widths of from 12 to 96 feet. As a basis of

computation take only a depth of 250 feet and an average width of 25 feet (the openings show this to be very conservative) and there hundreds of thousands of tons of mill grade ore. For a more concrete example take 1500 feet distance between the 420-foot and 250-foot shafts and assume an average width of only 15 feet and a depth of 270 feet, allowing 12 cubic feet to the ton, there are over 500,000 tons of ore in this block which gives every indication of being profitable mill grade ore.

Taking into considration the ores exposed and indicated at the Mandan, Pacific and various other claims of this group the tonnage of possible ore is enormous.

That even the lower grade carbonate ores are amenable to profitable treatment is shown by the metallurgical report of the Southwestern Engineering Co. (The same is herewith attached). At the time this report was made zinc was not taken into consideration, however subsequent preliminary tests on the extraction of the zinc values have been very satisfactory and prove that these ores yield to treatment by table and flotation methods with very high extraction of the metallic values at a low cost.

Sampling and Assays: The Pacific-Black Rock Group has been carefully sampled by several well known and competent engineers, however the most complete work in this has been done by Mr. Frank W. Giroux of Mayer and Gleeson, Arizona, Mr. Giroux has taken and tested something over 500 samples from this property and a complete list of same is available in his Mayer office. A short list of samples together with assays is attached to this report which gives a very fair estimate as to ore values and character.

In our investigations of this property we cut some 50 check samples and found that they checked absolutely with Mr. Giroux's work.

Recommendations and Conclusions: The ore on the dumps and in sight in the mine, together with the possibilities of great tonnages of ore of the same character being developed on the various claims (the limits of the ore bodies not being found in the present workings) and the yielding of these ores to profitable treatment all go to constitute a property of merit and one that is well worthy the consideration of big capital.

We base our favorable impression of this property on the present immense showings and the possibilities further explorations should develop.

Sinking should be continued on one or more of the shafts to the permanent water level or to the sulphide zone. This should be encountered between the 500 and 600-foot levels. Observations made at an adjoining property (the Red Cloud) indicate that pronounced silver and lead enrichments will occur at or near the water level. We are informed that high grade silver ores are found in streaks running through the galena. These streaks are reported to carry values from 1000 to 3000 ozs. of silver to the ton There is every reason to believe that similar ore will be found at the Pacific-Black Rock Group. Both of these properties were worked in the early days for the high grade silver ores.

In conclusion we will say that a short and intensive systematic campaign of exploration of the ore bodies above and to the water level would soon prove their economic possibilities. This exploration need not be expensive and it would regulate the size of the reduction plant and the best mode of treatment adapted to the ores. The ores of the oxidized zone should pay for the full development of the sulphide zone and leave a nice profit besides as they alone constitute sufficient tonnage to make a mine of considerable importance.

We strongly recommend the Pacific-Black Rock Group as a mining property of great merit, and properly financed and managed it has great possibilities of developing into one of the country's great mines.

/s/ J. V. McConnell, mine geologist
/s/ Harry R. Palmer, Mine chemist and Engineer

Dated: December 15, 1926
Prescott, Arizona.

dmd 1303X

HERSHEY & WHITE
Consulting Engineers
Crocker Building, San Francisco, Calif.

REPORT ON RED CLOUD MINE

C
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BY OSCAR H. HERSHEY

San Francisco, California
October 27th, 1938.

My first visit to the Red Cloud mine in the Silver Mining District of Yuma County, Arizona was made in February, 1923. In May, 1925, I spent 3½ days in the district and mapped the surface geology, on a scale of 200 feet to the inch, of the southern portion of the district in an area 6000 feet long and 1500 to 3500 feet wide. This was for The Primos Company who had an option on the Red Cloud group. My final visit was in February, 1926. I assume that practically no work has since been done in the mine and will write this report from my old observations. Also, I will try to keep it within reasonable limits.

FORMATIONS

There are three series of rock formations as follows:

1st. Archean schists extensively intruded by irregular bodies of monzonite and more basic crystallines. These rocks may be referred to collectively as the Archean Complex or crystalline basement series. They extend to an indefinite depth so far as mining is concerned.

2nd. A series of older Tertiary lavas and tuffs of rhyolite and more basic composition. They are hard and form rugged outcrops. The veins are younger than this series and penetrate from it into the basement crystallines.

3rd. A younger series of Tertiary volcanic rocks, mostly andesitic and rhyolite tuffs. They are relatively soft and have been eroded into basin-like areas of rounded hills. It appears that in the vicinity of the Red Cloud mine, after the veins were formed, erosion largely cut away the earlier volcanic rocks and exposed the veins in the basement crystallines. Then the later volcanic rocks were deposited across the veins and buried them throughout the district. Subsequent erosion has removed the later tuffs and exposed the veins except in certain areas where faults so depressed the rocks that a portion of the tuffs has remained.

FAULTS

There is a series of post-mineral faults of relatively small displacement that have east to southeast courses. Then followed extensive faulting in a north to northeast system. There are three main faults of this system, the Red Cloud, McNeal and Ming. From your standpoint the Red Cloud is the important fault. It is somewhat serpentine but has a general course about N. 15° W. It dips eastward 40° to 60°. In the Red Cloud mine, near the surface there is from 3 to 6 inches of red and green fault gouge that dips eastward 50° then 6 inches to a foot of somewhat reddened but not silicified material which in places may be seen to be broken monzonite. Then comes the barren and not silicified andesite tuff generally lavendar in color though somewhat bleached white near the fault. At one place over the ore there is a 12-inch fault breccia with rounded fragments of vein quartz along with the monzonite fragments in it. A small red gouge separates the breccia from the barren tuff. The post-mineral age of the fault is quite clear as will be shown later. It is a strike fault that has followed the general course of the original fissure and brought the Tertiary tuffs down over the Red Cloud vein. As a matter of fact the vein has largely been cut away and thrown down by the fault so that it remains buried under the tuffs for thousands of feet north and south from the mine. At the Red Cloud mine a downward curve in the vein and an upward curve in the fault permitted a lenticular body of vein to remain against the monzonite under the fault.

RED CLOUD VEIN

The Red Cloud vein seems to have consisted originally of three bands, a footwall clacite-quartz band, a central ore band and a hangingwall quartz-calcite band. The ore band has a strongly banded and crustified structure and considerable barite in irregular seams along with calcite and quartz. Locally there is some fluorspar. There are some chalcedony layers and the yellowish oily appearance of some of the quartz suggests the presence of adularia as in the veins at Oatman, Arizona. Thus the vein has the characteristics of Tertiary veins. The ore band is very porous, probably from the leaching of calcite and oxidation of sulphides that included galena and probably a little molybdenite. The visible lead minerals are chiefly the carbonate, cerussite and the molybdate, wulfenite. Kernels of galena remain sparingly near the bottom of the mine. It is in irregular seams 1/2 to 1 inch thick and in small pockets scattered through the ore band. Iron oxide stain is widely distributed in the vein, but I do not know whether it came from the oxidation of pyrite or a carbonate. A characteristic of the ore band is the presence of considerable quantities of wulfenite crystals in holes and cracks. They are clearly secondary, occur only in the oxidized zone and the question is whether they mark an important secondary enrichment of the ore. Very little wulfenite can be seen outside of the original oreband, al though the underlying porous quartz of the low-grade footwall band would seem to have been favorable for the deposition of the crystals. From this fact I deduce that there was comparatively little migration in the change from galena to wulfenite and probably not much secondary enrichment even in the ore band. This was considered very favorable to the future of the mine as what we wanted to find was a band of primary sulphide ore of good size and grade. I believed it could be found.

ORE

At the top of the Red Cloud mine there is a large surface cut in which the ore was mined 330 feet in length and to a maximum width of 35 feet. At the level of the floor of this cut the vein lens is 440 feet in length and 40 feet in maximum length. It consists of a low-grade footwall calcite-quartz band that was originally from 10 to 20 feet wide and usually not mined, a middle band of ore rather well supplied with wulfenite, originally 10 feet or more wide, and a hanging-wall calcite-quartz band, thickness not known. These three bands have been sliced off by the fault going north and south, pinching out in both directions. Towards the north the cut off was gradual and the footwall band extends 140 feet beyond where the middle band disappears. That is why the extension of the vein into the claim on the north (designated on maps in 1925 the Peterson claim) yielded very little ore. At the south end of the lens the cut off is very much more abrupt as the fault and footwall of the vein make an angle of 45°.

In the southerly 200 feet the cut was carried back practically to the footwall but underground the stopes rarely penetrate the footwall calcite-quartz band. The principal exception is that for some distance down in the mine the ground was stoped to the intersection between the fault and footwall, which intersection rakes southward 70°. The south end of the middle or wulfenite-bearing band rakes southward slightly steeper and keeps from 20 to 40 feet from the other intersection. In this short belt there was a narrow seam of galena, now largely altered to carbonate, but the assays are low in lead, not often going over 5%. I refer to the assays on the map by B. W. W. McDougall, dated April 10, 1913. In the border section of the middle band the lead assays are relatively high, 8% to 18% being common. In places one can see the footwall of this band diverging from the fault going north and the strongly banded material in the angle has considerable wulfenite. In fact, it is clear to me that the apparent ore-shoots in the mine were the belts along which the wulfenite-bearing middle band remained under the fault. They represent the original primary ore band and had it not been cut by the fault there might have been continuous ore hundreds of feet in length. As it is, we have a mere fragment left under the fault. At the floor of the surface cut this was 250 feet in length and the footwall had the form of two shallow pitching troughs. Near the axes of these troughs some of the hanging-wall calcite band remains and as the stopes below keep pretty close to the fault I suspected that some ore remains in the footwall of the stopes and could be developed by some short footwall crosscuts.

At the surface the fault dips 45° to 50° and the footwall of the vein 55°. The latter, however, must flatten, for on the 200-foot level (so-called because it is at the bottom of the 220-foot vertical shaft) the footwall appears in the drift for the larger part of 280 feet, leaving the vein only from 3 to 8 feet wide. This pinching has caused the fault to so encroach on the middle band or ore band as to reduce the ore to three relatively short shoots. The footwall calcite-quartz band has thinned, else there would have been little chance for any ore remaining. This is a very instructive level. At the south end we have an assay of 4.41% lead, beyond the edge of the molybdate-bearing band.

Near the line along which the wulfenite appears there are lead assays in pillars as high as 18%. The stoped section is 60 feet long. Thence for about 70 feet the drift is in a calcite-quartz band and assays run about 1.5 to 2.5% lead. Very little wulfenite can be seen. This may be over the middle band, in which case a footwall crosscut might develop ore. Then there is ground that was more or less stoped for about 40 feet, probably the belt along which the ore band comes to the fault. But the footwall appears and for 70 feet only the low-grade footwall band remains under the fault. Thence for 50 feet there was a well-defined ore-shoot that was stoped up to 6 feet wide. It was due to the fact that a depression in the footwall permitted a lens of the ore band to remain under the fault. But the footwall came up and for 60 feet we have only the footwall calcite-quartz band and low lead assays. At the end of this section the vein was nearly pinched out under the Red Cloud fault, but then a small fault that dips northward 85°, threw the vein down the width of the drift and immediately an ore-shoot appeared. It is 45 feet long, shows lead assays up to 20% and silver up to 165 ozs. per ton. This little shoot has been stoped down about 40 feet below the level and there is probably 2 feet of ore in the bottom. It has been stoped a very short distance above the level and may have considerable milling grade ore in that direction, presuming that it has not been stoped since 1925.

Then the footwall comes up, assays become low and finally near the north face of the drift the footwall meets the red gouge and the vein is pinched out. What I see on this level is that the stretches of low assays are due to the fact that the fault so encroached on the vein that there was much less chance for the ore band to remain than there was near the surface. There is no evidence of the metal contents in the ore band decreasing with depth.

From the 200-foot level the main shaft is an incline that lies immediately under a red fault gouge. The little shoot of ore that it started on is soon pinched out. Thence the shaft is largely in the calcite footwall band with the molybdate band largely destroyed and fragmentary, and assays are in consequence low. The dip abruptly steepens and then settles down to about 55°. There is a little stope on a narrow lens of the molybdate-bearing band, but little of it remains.

On the so-called 375 foot level the south drift was closed. Toward the north there is mainly the footwall calcite-quartz band and consequently low assays. There is a small remnant of the molybdate-bearing lens under the red gouge and breccia 20 to 40 feet north of the shaft. The drift finally becomes a raise. Caving has exposed the fact that above the red fault gouge there is white tuff and over it the main fault gouge. Over this there is monzonite. The suggestion is very strong that this is below the Tertiary tuffs. The presence of barren monzonite suggests to me that the vein is out in the hanging.

The remainder of the shaft to the water level is in the low-grade calcite footwall band which accounts for the low assays, only one going over 2% lead. My partner, Mr. Burch, said that the company that sank the last 10 feet of the shaft appealed by circular for more funds and

stated that they have 5 feet of $60.00 ore in the bottom of the shaft. I was skeptical until I discovered two facts. A small hole through the red gouge in the pump station showed porous vein material that might have been ore. At about the water level the shaft was cut back several feet into the hanging-wall over the red gouge and may have exposed ore between it and the main gouge. So I was prepared to be not surprised if ore were found at the bottom of the shaft.

On my 1926 visit I found that the 500-foot level had been driven about 280 feet along the vein and four crosscuts driven to near the footwall. The latter showed the low-grade footwall band 5 to 30 feet wide. In the 502 drift going north there was an apparent ore-shoot about 85 feet long, probably corresponding to the central shoot in the upper workings. South from the shaft there is a more or less continuous streak of what has the appearance of ore 130 feet to the face. A sample across 18 inches at the mouth of the crosscut 503 assayed 21.50 ozs. silver and 4.08% lead. A sample across 5 feet at the mouth of crosscut 507 assayed 8.10 ozs. silver and 1.18% lead. In the last 20 feet there are narrow seams of practically pure lead carbonate and a few kernels of galena.

The rock over the Red Cloud fault on the 500-foot level is coarse barren monzonite to a point 115 feet north from the shaft. Thence to the north face the material has the appearance of vein matter, suggesting that the vein is coming in above the fault. The long hanging-wall crosscut, 503, is in coarse monzonite, with a dike of dark green basic rock, to near the face where light-colored rather fine-grained rhyolite tuff comes in over it. At the contact there is a red fault gouge which dips north-northeast 25°. The beds of the tuff dip northeast 40°. It simply means a little slipping at the base of the tuff series.

It was considered desirable to sink the shaft into the sulphide zone if possible and then drive a long level along the vein and fault. Water had been standing in the last 5 feet of the shaft for years and might be considered to represent the so-called "permanent" water-level in this locality. Pumping equipment was secured but as soon as work was started and one round blasted it was shown to be inadequate. The water came along the vein in strong streams. The pumping capacity was doubled and perhaps another 10 feet of sinking accomplished. Since selling out its extensive vanadium, tungsten and molybdenum mines at the end of The War under an agreement not to reenter the rare metal business for a number of years, the company had been looking for lead, silver and gold mines at considerable expense and little success and it was disinclined to install the plant necessary to cope with the strong flow of water in the Red Cloud shaft without some assurance that the shaft would develop ore. Accordingly a diamond-drill hole was bored from the hanging-wall crosscut. The engineer in charge told me afterwards that it was evidently deflected along a small hanging-wall quartz seam and thus did not reach the main vein. It was the "last straw" and the company quit.

From a study of the formations at the surface I made the guess that the throw on the Red Cloud fault has been about 500 feet. The portion of the vein east of the fault immediately under the tuffs represents a higher portion than that in the mine workings. The predominant striae on the Red Cloud fault gouge rake northward 65°. It is probable that the movement has been downward and northward. For this reason plenty of ground should be secured in a northward direction. Also in a southward direction for the vein may extend beyond the present workings on it.

Now, as I have analyzed the showing on the Red Cloud claim, it ought to be clear that what is in sight may be a very small part of the ore that the mine under further development may be made to produce. Certainly a lot of good ore has been cut off and dragged down by the Red Cloud fault. It is not beyond reach. It is probably largely remains below the zone of oxidation and should be easily concentrated lead-silver ore. It should make high-grade concentrate. I took a specimen of galena for essay. It ran 75.4% lead and 237.3 ozs. silver per ton.

The vein is so strong where much of its width remains under the fault that it is likely that it runs a long distance under the Tertiary tuffs and may have many more shoots of ore than those in sight in the mine or may have continuous ore for hundreds of feet. Perhaps I am drawing too strongly on my imagination, but I can see a chance of developing one of the important lead-silver mines of the United States.

Respectfully submitted,

OHH:HRL

(Signed) Oscar H. Hershey

APPROVAL OF INDEPENDENT CONTRACT

To: Yuma Metals Incorporated

That certain contract, or proposed contract, a copy of which you have submitted with your request for approval, dated February 17, 1954, between you and Boyles Bros. Drilling Company for the performance of the following work: Diamond core drill hole No. 6 to a depth of approximately 500 feet, which is all or a specific element of the work described in an Exploration Project Contract dated December 3, 1952, DMA-1371, Docket No. DMA 1303X, is hereby approved by the United States of America, subject to all of the terms and conditions relating to such independent contracts set forth in said Exploration Project Contract.

Dated: February 23, 1954.

THE UNITED STATES OF AMERICA

By W. H. King

W. H. King, Executive Officer
DMA Field Team, Region IV

Bayles Bros.
DRILLING COMPANY

DIAMOND DRILLING CONTRACTORS AND MANUFACTURERS
Phone 6-8555 1321 South Main
SALT LAKE CITY 4, UTAH

FEBRUARY 17, 1954

YUMA METALS INC.
SAN CARLOS HOTEL
YUMA, ARIZONA

GENTLEMEN:

IN RESPONSE TO YOUR REQUEST AND AFTER EXAMINATION OF THE RED CLOUD MINE WE HAVE CONCLUDED THAT WE CAN UNDERTAKE THE DRILLING OF ONE HOLE APPROXIMATELY 500 FEET IN DEPTH IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

1. RATE FOR DRILLING TO APPROXIMATELY 500' TO BE $5.00 PER LINEAR FOOT. HOLE IS TO BE COLLARED SIZE BX AND COMPLETED SIZE AX PROVIDED THE DRILLING CONDITIONS PERMIT.

   ALL REAMING FOR CASING, CEMENTING AND OTHER OPERATIONAL EXPENSE WILL BE FOR OUR ACCOUNT EXCEPT AS SET FORTH BELOW.

2. YOU ARE TO FURNISH COMPRESSED AIR AND WATER FOR DRILLING PURPOSES TO THE DRILL STATIONS AND FURNISH DRILL STATIONS OF A SIZE TO PERMIT DRILL RODS TO BE HANDLED IN 10 FOOT LENGTHS.

3. IT IS FURTHER AGREED THAT YOU WILL MAKE AVAILABLE, WITHOUT CHARGE FOR OUR USE, THE EXISTING HOUSING FACILITIES.

WORK UNDER THE FOREGOING PROPOSAL CAN BE COMMENCED WITHIN TEN DAYS AFTER RECEIPT OF NOTICE TO PROCEED.

IF YOU FIND THE FOREGOING AGREEMENT ACCEPTABLE YOUR SIGNATURE IN THE SPACE PROVIDED BELOW WILL CONSITUTE A FORMAL CONTRACT.

YOURS VERY TRULY,

R. T. GOLDSWORTHY
GENERAL MANAGER

RTG:RM

ACCEPTED: Yuma Metals Inc.
By D. I. McDaniel Pres.
DATE

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

PROJECT SUMMARY REPORT

By: W. A. Griswold June 17, 1955

1. Docket No. DMEA-1303 (Lead-Zinc)
Contract No. Idm-E371
Property: Red Cloud Mine
Yuma County, Arizona

Operator: Yuma Metals, Inc.
Yuma, Arizona
Later address
Mr. Lloyd C. White, Mgr.
Yuma Metals, Inc.
1005 Oxford Street
Berkeley 7, California

expires Dec. 3, 1962.

Operator's Property Rights: Owner

2. Contract dated December 3, 1952. To complete - 12 months.

Work Authorized

Preparatory work, consisting of road repair, move mine buildings, repair and adapt buildings, transportation of supplies and equipment, rehabilitate shaft collar and head frame, install water tank and water pipe, install hoist and miscellaneous equipment, and rehabilitate mine workings.

Estimated Cost	$15,000.00
6,000 feet of diamond drilling @ $10.00/ft.	60,000.00
Total cost	$75,000.00
Government's participation, 50%	$37,500.00

Amendments

No. 1 Dated May 14, 1953

Permits of construction of washroom building, changes cost of moving building and trailers, changes cost of surface rehabilitation and repairs, changes "contingency" allowance.

No cost change to total contract figure.

No. 2 Dated August 12, 1953

Changes completion time from one year to one year and seven months. Allows recess July 1, 1953 to November 1, 1953.

No. 3 Dated June 25, 1954

Extends completion time to two years and one month. Allows recess May 11, 1954 to October 11, 1954.

Provides automatic termination and "pseudo-certification" if work is not resumed on or before October 11, 1954.

Work Completed:

Preparatory work consisting of road repair, camp facilities, buildings, shaft collar and headframe repair and mine rehabilitation.	$14,068.97
2,451 feet diamond drilling @ $10.00/ft.	24,510.00
Total costs	$38,578.97
Government's participation @ 50%	$19,289.48

Contract came to an end officially by Amendment No. 3 on October 11, 1954. Last acutual work was done in May, 1954.

3. Audit certificate dated April 21, 1955. - No Exceptions.

Operator's final report received May 25, 1955.
Field Team final report received May 25, 1955.

4. Pseudo-certification effective October 11, 1954 by Amendment No. 3.
Estimated Reserves

Oxide ore - 32,000 tons, 10 oz. silver, 6% lead, 9% zinc.

5. Comments

The Red Cloud mine is on the vein of the same name, the vein being in a fault zone, striking N. 15° W. at the mine, and dipping from 30° to 70° easterly with an average dip of about 50°. The mine has been developed by a 535-foot inclined shaft on the vein to a short distance below the 500-foot level and vertical shaft to the 270-foot level. Levels were opened from the inclined shaft and a substantial amount of oxidized lead-silver ore produced from above the 420-foot level. The hanging wall or east side of the fault zone is composed mostly of volcanic rocks above the 500-foot level, while the footwall or west side is granite. Granite also seems to occur in the hanging wall on and below the 500-foot level. Lead and zinc minerals are found with silver in a calcite gangue. The ore deposit at the mine has been mined only above the 420-foot level, the principal metal having been silver. However, substantial amounts of oxidized zinc ore and some oxidized lead ore remain in the mine. No commercial method of recoverying the zinc has been found to date.

In order to determine if primary sulphide lead-zinc ore occurred at depth beneath the old mine workings, the company proposed to drill a series of diamond drill holes downward from a 500-foot level crosscut which had been driven into the hanging wall by previous operators. All ore mined above this 500-foot level had been oxidized and it was hoped that sulphides would occur below it.

The Government participated in the drilling of six diamond drill holes (total footage 2,451) from the 500 level (bottom level of mine). No sulphide ores were found and it is presumed that the ore deposits bottom at or near the 500 level and that only small low grade or barren "roots" extend below this level. No further work appears warranted.

W R Griswold

W. R. Griswold

WRG;er

Copy to: Docket
Base Metals
Chron.

☒ Audited

☒ Certified Pseudo.

Name YUMA METALS, INC.

State ARIZONA

WORK ANALYSIS SHEET - DMEA PROJECT

Analysis as of May 18, 1955.
Incl. Voucher for May 1954

Commodity LEAD-ZINC

☒ Actual Cost

☐ Agreed Unit Costs

Docket No. 1,303

Idm-E No. 371

OPERATION	AUTHORIZED Units	AUTHORIZED Cost	COMPLETED Units	COMPLETED Cost	NET COST
Drifting & Crosscutting					
Raising					
Shafts					
Winzes					
Drilling (Specify) Diamond (AX)	6,000'	$60,000.00	2,451'	$24,510.00	$24,510.00
Surface Excavation					
Underground Excavation					
Roads and Trails					
Operating Equipment Purchased					
Surface Rehabilitation & Repairs		3,971.04		3,971.04	3,971.04
Underground Rehabilitation		7,977.22		7,977.22	7,977.22
New Building, Improvements, etc.		2,270.71		2,270.71	2,120.71
Other (Specify) Preparatory Work		781.03			
Totals		$75,000.00		$38,728.97	$38,578.97

Proceeds from Property Disposition $150.00

Memorandum to Writing to Auditor to get correction on (Item issued) terminated pending for correction of Audit & Title on Reports Etc.

Prepared by W. H. Hugenschmidt

71626

Building 20 - Federal Center
Denver 25, Colorado

OFFICIAL FILE COPY
O. M. E
RECEIVED JUL 9 1962
DATE
2/10 gla 500
220

July 6, 1962

Memorandum

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

From: Acting Field Officer, OME, Region III

Subject: DMEA-1303X (Lead-Zinc)
Yuma Metals, Inc.
(Red Cloud Mine)
Yuma County, Arizona
Contract Idm-E371

Attached is the original Report of Royalty Review on the subject property dated July 2, 1962 covering the period June 11, 1959, through May 28, 1962.

Original signed by

Hugh M. Connors

Attachments
HMC/lm
cc Chief, Division of Field Operations, OME
E. D. Talbert, Acting Chief
Contract Administration and Audit Division
Royalty Corres. Idm-E371
Chron

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
		220

JUL 2 1962

Memorandum

To: Acting Field Officer, Region III

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

Subject: [illegible]A-1303X (Lead-Zinc)
Yuma Metals, Inc.
Red Cloud Mine
Yuma County, Arizona
Contract Idm-371

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

(a) Original to the Fiscal Section, Division of Administrative Services, Office of the Secretary, Department of the Interior, Washington 25, D. C.; and

(b) One copy for your files.

This Report of Royalty Review is made for record purposes only; therefore, no copy for the Operator is provided.

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

Enclosures

EDTalbert/ama 7-2-62

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

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
5/16	Griswold	500
5/16	Talbot	800
5/16	GLS	130
"	Johnson	110
5/16	Finnell	100
		220

MAY 1 7 1962

Memorandum

To: Acting Field Officer, Region III

From: Chief, Division of Field Operations

Subject: DMEA-1303 (Lead-Zinc)
Yuma Metals, Inc.
Red Cloud Mine
Yuma County, Arizona
Contract Idm-E371

The enclosed form was returned to us as "Unknown." We believe you have a more recent address, so will you kindly forward the form for us.

George C. Selfridge

Enclosures

WRGriswold/gla
5-16-62
cc to: Director's Reading File
Review Committee
Docket
Code 500

43683

EXTRA COPY O. M. E RECEIVED FEB 15 1960		
DATE	INITIALS	CODE
2-15	gad	VVO
2/15	[illegible]	800
"	[illegible]	500
		225

Building 20 - Federal Center
Denver 25, Colorado
February 11, 1960

County Clerk and Recorder
Yuma County
Yuma, Arizona

1303

Re: Docket No. DMA 3301X (Lead-Zinc)
Contract No. Ida-X371
Yuma Metals, Inc.
(Red Cloud mine)
Yuma County, Arizona

Dear Sir:

Attempts by this office to reach the referenced Operator by mail to obtain information regarding the current status of the property have been fruitless.

We will appreciate receiving any information you can give us regarding the name and address of the present owner of the Red Cloud Claim which is recorded in Book 44 of Deeds, Page 331 in your office.

Very truly yours,

Original signed by

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

JWT:ltm

cc: Chmn. Op. Comm.
Roy. Corres.
Chron.

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
6/16	G	220
7-16	G	500
		225

JUN 16 1959

Memorandum

To: Mr. Donald T. Finch, OME Auditor

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

Subject: Docket No. DMEA-1303 (Lead-Zinc)
Yuma Metals, Inc.
Contract No. Idm-E371

Your Report of Royalty Review on the subject contract is acceptable for regional distribution after correcting the "10 years" in the third line of the second paragraph to "11 years". This correction has been made on the Washington copies.

EDTalbert/ama
June 15, 1959

Copy to: Docket
Director's Reading File
Code 800

43683

File Copy
Surname
Klugescheid
Selfridge
Fitzsimons

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

JUL 13 1956

Mr. John F. Wilkens
Valley Nut Company
17210 S.W. Shaw Street
Beaverton, Oregon

Re: Docket No. DMEA-1303 (Lead-Zinc)
Yuma Metals, Inc.
Red Cloud Mine
Yuma County, Arizona
Contract No. Idm-E371

Dear Mr. Wilkens:

This is with reference to your letter of June 25, to Mr. W. R. Griswold, inquiring as to the results obtained under the cited exploration project.

The total estimated cost of the project was $75,000.00, with the Government's share being half of such amount, or $37,500.00. The contract was automatically terminated, effective October 11, 1954, before the completion of the work for failure to resume work by a specified date.

The project work was done under the supervision of Yuma Metals, Inc. and the results of the work were supplied to us by this company. Hence, it is not clear to us how we could possess factual information that "is not even available to Yuma Metals, Inc."

It would be contrary to our policy to provide you with more detailed information without a written order addressed to us from Yuma Metals, Inc. If Yuma Metals, Inc. consents to the release to you of further information from our files, we shall then be in a position to make available to you such information as is not deemed inconsistent with the Government's interests.

WPKlugescheid/er 7/10/56(rewritten)
WRGriswold/bjl & er 7/3 & 6/56
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Region III (2)
Chron.

Sincerely yours,

C. O. Mittendorf

Administrator

R.S.S.

File Copy
Surname
Signed

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

Mr. John F. Wilkens
Valley Nut Company
17210 S.W. Shaw Street
Beaverton, Oregon

Re: Docket No. DMEA-1303 (Lead-Zinc)
Yuma Metals, Inc.
Red Cloud Mine
Yuma County, Arizona
Contract No. Idm-E371

Dear Mr. Wilkens:

This is with reference to your letter of June 25, to Mr. W. R. Griswold, inquiring as to the results obtained under the cited exploration project.

Total approved expenditures under the contract were $38,578.97, with the Government's share being half of such amount, or $19,289.48. The contract was automatically terminated, effective October 11, 1954, for failure to resume work by a specified date. Under the terms of Amendment No. 3 to the contract, the usual requirements of certification of discovery or development were waived and it was agreed that all production from the Red Cloud patented mining claim is subject to the payment of royalty to the Government until the Government's participation has been repaid, or until December 3, 1963, whichever occurs first.

While the work program under the project was not completed, yet the results of such diamond drilling as was done were considered as being unsuccessful. The project work was done under the supervision of Yuma Metals, Inc. and the results of the work were supplied to us by this company. Hence, it is not clear to us how we could possess factual data that "is not even available to Yuma Metals, Inc."

It would be contrary to our policy to provide you with more detailed information without a written order addressed to us from Yuma Metals, Inc. If Yuma Metals, Inc. consents to the release to you of further information from our files, we shall then be in a position to make available to you such information as is not deemed inconsistent with the Government's interests.

Sincerely yours,

Administrator

WRGriswold/der (7/6/56)
Copy to: Docket
Admr R File
Op/ Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Region III(2)
Chron.

File Copy
Surname

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

500

June 29, 1956

Memorandum

To: Associate Solicitor, Division of Mineral Resources

From: Chief, Base Metals Division

Subject: Docket No. DMEA-1303, Yuma Metals, Inc., Red Cloud Mine, Yuma County, Arizona, Contract No. Idm-E371, Lead-Zinc.

The attached letter from John F. Wilkens is self-explanatory.

I have prepared a reply for the Administrator's signature; will you please scan it to see if it is in order.

W. R. Griswold

W. R. Griswold

Attachment

WRG/er

Copy to: Docket
Base Metals
Chron.

VALLEY NUT COMPANY
17210 S.W. SHAW ST.
BEAVERTON, OREGON
Phone
MItchell 4-5

Packers of VAL-E-NUT Brand -:- Filberts - Walnuts - Nut Meats

1303 Yuma

June 25 1956

RECEIVED
JUN 27 1956

Mr.W.R.Griswold
D.M.E.A.
New Interior Bldg.
Washington, D.C.

Dear Mr.Griswold:

I am one of a group of Oregon men who propose to form a corporation to reactivate the Red Cloud mine which is located about fifty miles,by road,north of Yuma,Arizona. We also propose to erect a 100 ton mill at the mine site.

Mr.D.L.McDaniel,president of Yuma Metals,Inc.,owner of the Red Cloud and other mines,has told us that the D.M.E.A.jointly with Yuma Metals financed exploratory work in the Red Cloud mine below the 500 foot level. Most of the work consisted of diamond drilling and was done since 1952. Mr.McDaniel has also indicated that the exploratory work revealed a 300,000 ton body of milling grade oxide ore of sufficient richness to justify mining and milling, providing the milling was done at the mine site. Of course justification is also predicated on present market prices for silver and lead. He suggested further that the zinc values can be recovered from the particular type of oxide ore present by application of the recently developed M. Rey flotation process. However,even if the zinc values are recoverable we doubt the 30,000 to 50,000 tons of proven ore above the 500 foot level will justify a mill installation. We therefor need as much information,from a reliable source,as is available to us regarding the ore below the 500 foot level. But Mr.McDaniel also tells us that information developed from the exploration is so confidential that it is not even available to Yuma Metals, Inc. Please enlighten us regarding this last.

No doubt you will recall our telephone conversation of last week wherein you advised me that less than $39,000 of D.M.E.A. - Yuma Metals money was spent in exploratory work in the Red Cloud mine,that existence of 300,000 tons of milling grade ore had not been proven and,that the Yuma Metals request for a temporary halt in the exploration program was granted. We feel that your office is a completely reliable source of information relative to the exploration program carried on at the Red Cloud mine. We would very much appreciate a letter from the D.M.E.A. giving us as complete information on the Red Cloud exploration program and results as the law will allow. We will be most grateful for an early reply to this letter.

Very truly yours,

John F. Wilkens

John F.Wilkens

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

500

June 22, 1956

Memorandum

From: Chief, Base Metals Division

Subject: Phone Conversation on Docket No. DMEA-1303X, Yuma Metals, Inc., Red Cloud Mine, Yuma County, Arizona, Contract No. Idm-E371, Lead-Zinc.

On June 20, 1956, we received a phone call from:

Mr. John Wilkins
17210 SW Shaw Street
Beaverton, Oregon

He states that he and others were considering the milling of ore on the cited property and wanted to know if a certification had been made. We advised him that a pseudo-certification was in effect.

W. R. Griswold

WRG/er

Copy to: Docket
Base Metals
Chron.

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

RECEIVED
OCT 27 1955

October 27, 1955

Re: DMEA 1303X, Idm-E371
Yuma Metals, Inc.
Red Cloud vein
Yuma County, Arizona
$75,000.00 - Lead, Zinc

Memorandum

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

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of Field Team Final Report.

The sum of $75,000.00 was approved for this project, the work to consist of rehabilitation and 6,000 feet of diamond drilling. The original application had requested $300,000.00.

The object of the exploratory work was to investigate, largely on the lowest level and below, an old time mine credited with an output of $430,000.00 in lead and silver. The target set was to find 200,000 tons of ore running about 10 ounces silver, 6% lead and 8% zinc, the last in "carbonate" form and not now economically recoverable. Mining, extensive development and an old time sample map indicated that below the 360 level the vein had so lost grade as to be noneconomic due probably to the fact that the vein, in the shaft section, had steepened and passed into the granitic rocks.

Preparatory work and rehabilitation, costing $14,218.96, were carried out, after which 7 holes, totaling 2,451 feet, were drilled downward from stations in a crosscut on the 500 level in the shaft section. An eighth hole, 280 feet deep, was drilled but the cost was not allowed. The cost of the drilling was $24,510.00, and the total cost of the work, $38,728.96.

The drilling showed that the vein in which the ore of the upper levels occurred continues at least 500 feet below the 500 or lowest level, but is practically barren of the silver, lead, and zinc minerals which characterized it above the 270-foot horizon.

No new ore was found, but reserves of 32,000 tons of 10 oz. silver and 6% lead material is estimated as still in place in the upper levels. A substantial but undetermined amount of

5 to 15% oxidized zinc material is known to occur, but its utilization must await the development of an economic recovery process.

The General Geologic map of the Silver District shows the Red Cloud vein at surface occurs in a fault contact (dip 40° northeasterly) between volcanic and granitic rocks, the volcanic rocks forming the northeast or hanging wall. The fault, as mapped, trends north to N. 32° W. and the ore body would seem to curve around the point of greatest change in strike. Also the mine is shown as near the crest of an anticlinal fold in the volcanic rocks. The axial strike is N. 68° W. and dips of 30° are shown for both flanks of the anticline.

Two-thirds of a mile south of the mine, the mine fault is met by a S. 30° W. trending contact fault, with the volcanic rocks on the northwest side and granitic rocks on the southeast side. The dip of this fault is not given. The volcanic rocks block is thus wedgeshaped and a northerly trending canoe end or trough is indicated and fairly substantiated by the presence of granitic rocks in the hanging wall of the mine (vein) fault below the 360 level. At about that horizon the fault steepens and in the shaft section the grade of the ore, especially the lead portion, falls off (see McDougall's very good looking sampling map).

No distinct northerly plunge of the ore body can be decerned, but an irregular northerly and downward trending value bottom, and perhaps top, can be plotted. If further work should be done consideration should be given this structural feature. Perhaps the volcanic hanging wall-granitic footwall relationship persists northerly and downward in such a way as to continue to make ore, sulfide ore if, perchance, the downward tendency persists to and below the water table.

The exploratory work found no new ore but the new information obtained passed as a discovery and a suitable certification was issued.

N. E. Nelson

N. E. Nelson

Talbert
Chambers

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

MAY 2 4 1955

Mr. T. H. Brading
DMEA Auditor
224 New Customhouse
Denver 2, Colorado

AIR MAIL

Re: Contract No. Idm-E371
Docket No. DMTA-1303X
Yuma Metals, Inc.

Dear Mr. Brading:

Enclosed are the original and eight copies of a revised Report of Review in lieu of final audit covering the referenced Exploration Project Contract.

Please sign and distribute in the usual manner, including three copies to this Division, in lieu of the corrected copies submitted by your letter of May 19, 1955.

Revision has been necessary since the major portion ($24,510.00) of the costs were actually under "agreed unit costs" provisions of the contract rather than under independent contracts as indicated in your prior submissions.

Sincerely yours,

SIGNED

Jay L. Chambers, Chief
Contract Administration
and Audit Division

Enclosure

EDTalbert/wb
May 24, 1955

Copy to: Docket
Admr. Reading File
Mr. Chambers

R.C.S.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 23 1955

Opera Fl. Rpt

224 New Customhouse
Denver 2, Colorado

May 20, 1955

Memorandum

To: Secretary to the Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: Docket DMEA 1303X (Lead-Zinc), Contract Idm-E371, Yuma Metals, Inc., Yuma County, Arizona

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

1. Original and one copy of the operator's final report.
2. Original and three copies of the final geologic report by the U.S. Geological Survey.
3. Original and three copies of the final engineering report by the U.S. Bureau of Mines.

Final payment to the operator was processed by this office May 20, 1955, in conformance with the final report of review by the Contract Administration and Audit Division dated April 21, 1955, which was released to this office May 19, 1955.

The exploration work consisted of road repair, installation of camp facilities, minor repair of two existing camp buildings, repair of head frame and collar of shaft and rehabilitation of the 500 level east crosscut, and 2451 feet of acceptable drilling at a total cost of $38,578.97 in which the Government participated to the extent of $19,289.48.

The exploration work resulted in a discovery or development of lead-zinc ore and a suitable certification has been issued under the provisions of Amendment No. 3, item 4-d.

Reviewed by
DMEA OPERATING COMMITTEE

(date)

W. M. Traver

E. N. Harshman

Enclosures

1005 Oxford Street
Berkeley 7, California

May 13, 1955

U. S. BUREAU OF MINES
DEPARTMENT OF THE INTERIOR
Science Minerals Demonstration
MAY 13 1955
TUCSON, ARIZONA
MAY 25 1955

Mr. Walter R. Storms, Chief
Mining Division, Region IV
U.S. Bureau of Mines
P O Box 4097
Tucson 5, Arizona

RE: DOCKET DMEA 1303 (Lead-Zinc)
Contract IDM-E371
YUMA METALS, INC.
Red Cloud Mine
Yuma County, Arizona

Dear Sir:

FINAL ENGINEERING AND GEOLOGICAL REPORT ON THE ABOVE CONTRACT:

The first 3-1/2 months of 1953 were devoted by Yuma Metals, Inc., to preparation work for diamond drilling at the Red Cloud Mine. The buildings and equipment at the former Holmes-Riley millsite on Martinez Lake were moved ten miles and re-established near the Red Cloud vertical shaft. The above materials included a small assay office building, a cookhouse building, two house trailers, water tanks, trucks and miscellaneous tools. A carload of lumber and mining timber was brought in from Yuma.

NEW BUILDINGS AND ADDITIONS

(a) New combination tool shed building, change room with showers and sleeping quarters.

(b) Addition to the cook house.

(c) Shaft head frame was reconstructed.

(d) Shed over hoist.

(e) New ladders and safety landings in old inclined shaft.

(f) Galvanized water tank, tower on surface.

(g) Diesel oil storage tanks.

EQUIPMENT PURCHASED AND INSTALLED

1 - General Motors 3 cylinder Diesel Engine direct connected thru Clutch to 30 K.W. 440 Volt 3 Phase 60 Cycle Generator.

1 - Single Drum Electric Hoist - 30 H.P. Motor 5/8" Cable

Recd for carrying memo from N 5-25

1 - 315 Cu. Ft. Sullivan portable compressor driven by Caterpillar Diesel Engine #7700

1 - 8" Ventilating Fan with 5 H.P. Motor

1 - Triplex Water Pump with 3 H.P. Motor; 440 Volt Electric line from Generator to Water Pump on 500' level.

Compressed air line from surface to face of 503 X-Cut on 500' level.

3" water line from sump pump on 500' level to galvanized storage tank on surface.

Ventilation line from bottom of vertical shaft to face of 503 X-Cut on 500' level; 8" galvanized pipe and vent tube.

Station Wagon to Service Camp.

DIAMOND DRILLING

The Metler Drilling Co. of Tucson started drilling from Station No. 1 in the 503-X cut on the 500' level of the Red Cloud Mine on April 16, 1953.

They drilled three holes from this station, all of which passed thru the Red Cloud vein. The drill was then moved to Station No. 2 at the end of the 503 X-Cut. Holes Nos. 4 and 5 were drilled from this Station and each found the vein. After penetrating but not passing thru the vein in Hole No. 5, the bit and 85 feet of rods were lost. This was on June 12, 1953 -- and the Metler Drilling Co. decided to take a summer vacation during the hot weather and bring in heavier drilling equipment for the fall and winter campaign.

The record to this date by the Metler Drilling Co. was as follows:

Hole No. 1	144 feet	Vein 70' to 85'
Hole No. 2	158 "	" 102' to 115'
Hole No. 3	388 "	" 327' to 342'
Hole No. 4	276 "	" 244' to 258'
Hole No. 5	280 "	" 270' to 280'
Total	1,246 feet	

The objective of this drilling was to trace the Red Cloud vein downward and the campaign had been successful up to this point. Hole No. 5 (over which there has been controversy with the Bureau) reached the vein 270 feet below the collar and the recovered core assayed 2.54% zinc. This was an instructive hole and gave us the idea that the Primos Co. vertical hole from Station 2 had intersected the Red Cloud vein at 348'-367'. This is the lowest point at which the Red Cloud vein has been identified.

After the summer vacation, drilling was resumed in November, 1953, by the Metler Drilling Co. Diamond drill Hole No. 6 had been authorized by the Bureau and their engineer from Tucson spotted the hole in Drill Station No. 2 at the end of 503 X-cut. The hole was pointed easterly and at an angle of 80° from the horizontal. The hole was lost at 335' depth; also lost was the core barrel and bit together with 80 feet of casing.

This finished the Metler Drilling Co. at the Red Cloud and they moved out early in December, 1953.

This Hole No. 6 lacked a great deal over 100' of reaching the vein and in our opinion was poorly placed.

In any event, it would not have given any more information, (had it been completed) than the Primos Co. vertical hole had already given.

Yuma Metals, Inc. then employed Boyles Bros. Drilling Co. of Salt Lake City. The Bureau authorized the drilling of Hole No. 6A and their engineer located same for Boyles Bros. who started drilling on March 5, 1954. They completed the hole on March 31, 1954 at a depth of 500'. No vein was found and none could be expected at

this depth and on the course selected. This hole, No. 6A, if extended several hundred feet woudl have probably found the Red Cloud vein in the sulphide zone.

Diamond Drill Hole No. 7 was authorized by the Denver office of the Bureau of Mines on April 6, 1954, and was located by the writer April 7 in Diamond Drill Station No. 2 on the 500' level of the Red Cloud Mine. The course of the hole is North 10° West and the inclination is minus 48° from the horizontal. Boyles Bros. started drilling the hole on April 8 and the hole was stopped at 650'depth in May, 1954.

After plotting Hole No. 7 and checking the position of the vein as developed in Hole No. 3 from Station No. 1, I do not believe Hole No. 7 penetrated the Red Cloud vein. In my projection, Hole No. 7 passed over the vein and would have not reached it before 750 to 850 foot depth, where we expected the sulphide zone. I have logged the drill core on this hole from 543' depth to 635' depth and they show no vein. The assays on the last 15' of the hole show no vein.

Sketches of all holes drilled, together with logs, have been sent to the Bureau of Mines at Tucson, Arizona.

SUMMARY

The original exploration project contract called for 6,000 feet of diamond drilling, as this was considered to be the minimum to enable anyone to form an opinion of the possibilities of the Red Cloud ore shoot. Less than half of this drilling has been done, (and much of it not to advantage) so it remains for others to complete the job.

It was unfortunate that in several cases holes were either lost or stopped on account of cavey ground.

Mr. Walter R. Storms
Summary/Final Eng.& Geol.Report
Contract IDM-E371

May 13, 1955

There has been prospected laterally on the vein about 300' and the greatest depth of vein only 367' below the 500' level. Surely not a very large section of a vein which extends over two miles thru the country.

On the Bureau of Mines sampling of the 500' level, there was a shoot of zinc ore on the footwall which extends at least 250' in length, by 7 or 8 feet wide, which will average from 5% to 15% zinc; not important in itself but shows extensive numeralization.

Then on the same level and extending 40' South from the shaft, there is an ore shoot 40' by 6' thick, which will average 15 ounces silver, 3.5% lead, and 4% zinc. Some samples assay as high as 45 ounces silver.

Such showings deserve further development.

Very truly yours,

YUMA METALS, INC.

By Lloyd C. White
Lloyd C. White, Manager

1303

Date 6-2

Referred to:

1. ~~[illegible]~~
2. ~~[illegible]~~
3. ~~[illegible]~~
4. ~~[illegible]~~
5. Base Metals Division
6. Docket Control Mails and Files

Note comments in report regarding:

1. Question, if work resumed in discovery —
2. Pseudo put in
3. Term agmt. doesn't attach

and take appropriate action.

- - - - -

Action taken by Division: No discovery was made, all diamond drill holes were negative. Pseudo took effect thereafter ROBERT E. ADAMS was not resumed, after recess.

Initials

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

COPY

May 20, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: Docket DMEA 1303X (Lead-Zinc), Contract Idm-E371, Yuma Metals, Inc., Yuma County, Arizona

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

1. Original and one copy of the Operator's final report.
2. Original and three copies of the final geologic report by the U.S. Geological Survey.
3. Original and three copies of the final engineering report by the U.S. Bureau of Mines.

Final payment to the operator was processed by this office May 20, 1955, in conformance with the final report of review by the Contract Administration and Audit Division dated April 21, 1955, which was released to this office May 19, 1955.

The exploration work consisted of road repair, installation of camp facilities, minor repair of two existing camp buildings, repair of head frame and collar of shaft and rehabilitation of the 500 level east crosscut, and 2451 feet of acceptable drilling at a total cost of $38,578.97 in which the Government participated to the extent of $19,289.48.

The exploration work resulted in a discovery or development of lead-zinc ore and a suitable certification has been issued under the provisions of Amendment No. 3, item 4-d.

/s/ W. M. TRAVER
W. M. Traver

/s/ E. N. HARSHMAN
E. N. Harshman

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
6-1-55
(date)

F.T. Final Rept.

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

DMEA
Date Rec'd.
APR 7 1955
BUREAU OF MINES
Denver, Colorado

April 6, 1955

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
MAY 2 3 1955

Memorandum

To: Field Team, Region III

From: E. N. Harshman

Subject: DMEA Docket 1303-X (lead-zinc), Contract Idm-E 317, Yuma Metals, Inc., Yuma County, Arizona

Enclosed are the original and 8 copies of a final geologic report by J. N. Faick, U. S. Geological Survey, describing the geologic aspects of exploration completed under the above subject contract.

The program was designed to explore for lead and zinc sulfide ore on the Red Cloud vein below the lowest developed level in the Red Cloud mine. After drilling seven holes to explore the vein at depth, it became apparent that significant bodies of sulfide ore would not be found and exploration was stopped.

No further exploration with Government assistance is recommended.

for D. H. Macharen
E. N. Harshman
Member, Field Team

Enclosures (9)

Reviewed by
DMEA OPERATING COMMITTEE
6-1-55
(date)

IN REPLY REFER TO:

DMEA

Date Rec'd.

APR 7 1955

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration

MAY 25 1955

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Box 4126 University Station
Tucson, Arizona

BUREAU OF MINES
Denver, Colorado

March 31, 1955

MEMORANDUM

TO: Mr. E. N. Harshman

FROM: J. N. Faick

SUBJECT: Docket DMEA 1303X (Lead-Zinc) Contract Idm-E371, Yuma Metals, Inc., Yuma, Arizona

Enclosed are the original and 8 copies of the Survey's Final Report on the above subject exploration project. This contract was issued to explore for lead-zinc sulfide ore below the oxidized zone in the old, well-known Red Cloud silver-lead mine. The project was terminated when drilling revealed that the downward extension of the vein was essentially barren.

John N. Faick

John N. Faick
Geologist

JNF:ms

cc: Mr. Harshman (8)
Mr. Storms

Reviewed by
DMEA OPERATING COMMITTEE
6-1-55
(date)

MINERAL DEPOSITS
DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
D-M-E-A
RECEIVED
APR 4 1955
MAY 2 5 1955
U. S.
GEOLOGICAL SURVEY,
DENVER, COLORADO

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

DMEA
Date Rec'd.
APR 7 1955
BUREAU OF MINES
Denver, Colorado

DMEA 1303X, Contract Idm-E371

YUMA METALS, INC.

(Lead-Zinc)

YUMA COUNTY, ARIZONA

FINAL REPORT

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

Borrowed by
DMEA CLEARINGHOUSE

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 25 1955

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

FINAL REPORT

DMEA 1303X, Contract Idm-E371
(Lead-Zinc)

YUMA METALS, INC.
YUMA COUNTY, ARIZONA

CONTENTS

	Page
SUMMARY	1
GEOLOGY	2
INTERPRETATION OF THE GEOLOGY	5
THE EXPLORATION PROJECT	7
POSSIBILITIES FOR FUTURE DEVELOPMENT OR EXPLORATION	12
ORE RESERVES	13
AMENABILITY OF RED CLOUD ORES TO TREATMENT	13
CONCLUSIONS	14
RECOMMENDATIONS	15

ILLUSTRATIONS

Fig. 1	Location Map	See Engineering Final Report
Fig. 2	Geologic and Claim Map	" " " "
Fig. 3	Red Cloud Assay Map	" " " "
Fig. 3A	General Geologic Map of Silver District	Following Page 2
Fig. 4	500-foot Level, Red Cloud Mine, showing position of drill holes	" " 7
Fig. 4A	Section on Plane of Vein	" " 3
Fig. 5	Cross Section through Red Cloud Mine, showing projected drill holes	" " 7

TABLES

Table I	Generalized Summary of Drill Hole Logs	Page 8
Table II	Assays on Diamond Drill Cores	10

SUMMARY

The Defense Minerals Exploration Administration participated in exploration of the Red Cloud Mine, Yuma Metals, Inc., DMEA 1303X for the purpose of exploring for lead-zinc sulfide ores below the workings of the old mine which is known to contain oxidized lead-zinc-silver ores. Events under the exploration program are summarized as follows:

1. Property was examined December 4-8, 1951 by L. A. Stewart and W. T. Griswold of the Bureau of Mines and Carl Trischke, consultant, for the U. S. Geological Survey, and Government participation in the exploration program was recommended.

2. Contract was granted under date of December 3, 1952.

3. Work under the contract was started January 12, 1953. Part of the mine and plant were rehabilitated and 5 holes were drilled. The cost of hole No. 5 was not allowed because it was not drilled as approved by DMEA examiners.

4. Project recessed July 1, 1953 to November 1953 because of hot weather.

5. Drilling resumed November 1953. Hole No. 6 was started and lost before reaching its objective. Hole No. 6A was authorized and drilled to completion as a substitute for No. 6, and hole No. 7 was drilled to completion.

6. Project was recessed from May 11, 1954 to October 11, 1954 because of the hot weather.

7. Under date of September 7, 1954 the operating company submitted a request to explore for extensions of the known ore body

by drifting and drilling in the oxidized zone. This request was denied by the Government because the oxide ores are not amenable to treatment.

8. The contract was automatically terminated October 11, 1954, after $38,728.96 had been spent, of which 50 percent represents the Government's share. The project was terminated because there was no reason to believe that a discovery of ore would be made that would result in the recovery of substantial amounts of metal for purposes of National Defense.

GEOLOGY

The Red Cloud mine is credited with a production of 1,800,000 pounds of lead and 320,000 ounces of silver, having a total value of $430,000. Most of this production was made during the first 10 years following its discovery in 1879, but the property has been idle most of the time since 1889, and many attempts to resume operations at the mine have met with failure. The mine is developed to the 500-foot level.

The Red Cloud ore deposit is localized along a fault zone which strikes about N 15° W (fig. 3A) and which dips from about 35 to 60 degrees northeast. Granite occupies the footwall side of the fault and the hanging-wall side is mostly andesite breccia, tuff and other volcanic material to a depth of 360 feet on the incline. Below this point the vein has granite walls and steepens in general dip.

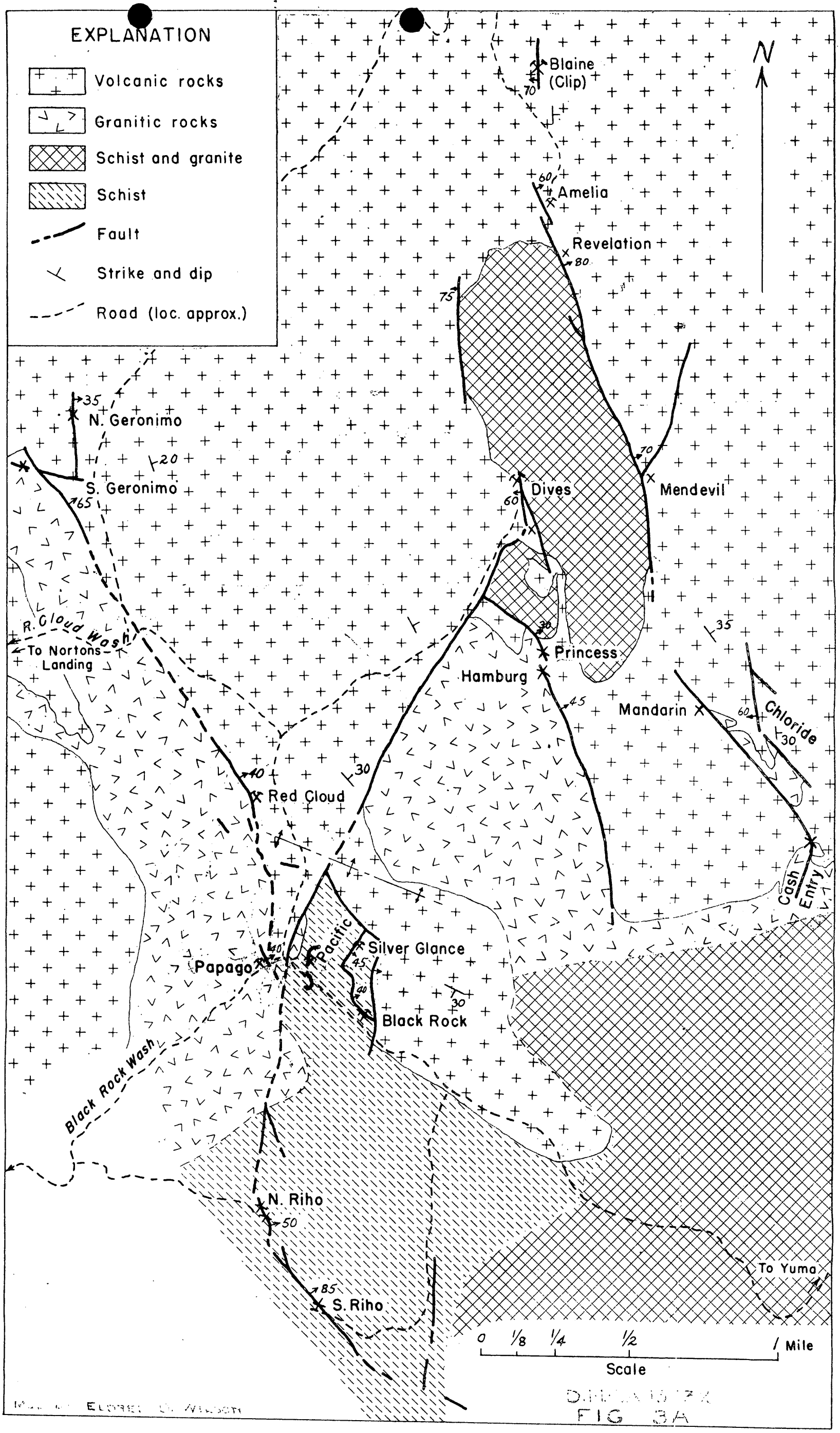

FIG 3A

GENERAL GEOLOGIC MAP OF SILVER DISTRICT

At the 500 level some granite, brecciated granite and volcanic rocks are found on the hanging-wall and in a crosscut east of the vein.

The deposit, as revealed by mining, ranges in width from about 1½ to 40 feet and is reported to average about 20 feet wide; however, the ore is only 1½ to 6 feet wide in many parts of the mine. The strike length apparently is about 600 feet, but the deposit has been mined for only about 400 feet along the strike. The vein contained two principal ore shoots (see figure 4A), each from 1½ to 6 feet wide, near or adjacent to the hanging-wall. The northern shoot was from 25 to 100 feet long by 410 feet deep, and the southern from 35 to 110 feet long by 300 feet deep. Apparently mining ceased when the ore became too low in grade to mine profitably. The vein exposed by the 420 and 500-foot levels has not been mined.

The vein is described by Wilson[1] as follows:

> "The vein is made up chiefly of limonite, hematite, quartz, fluorite, and calcite, together with considerable amounts of gouge and brecciated wall rocks, all more or less stained by pyrolusite. The quartz forms irregular, finely crystalline, vuggy masses which in places are cut by veinlets or coarser-grained quartz. Commonly the quartz is interbanded with gray to purple fluorite which ranges in texture from dense to crystals 1/8 inch in diameter. The calcite is mostly a coarsely crystalline, dark-gray manganiferous variety, but some later white calcite also occurs. The limonite and hematite, which occupies cavities and vugs within the other gangue minerals, are locally intermingled with irregular, cellular masses and vug-linings of cerussite, smithsonite, willemite, pyrolusite, vanadinite, wulfenite, and malachite. In places there are nodules of argentiferous galena, partly altered to black anglesite and pale-yellowish cerussite. Cerargyrite is present as small disseminated masses and streaks within the oxidized minerals."

Acicular barite is abundant in the vein, and is especially evident in the lower workings of the mine.

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[1] Wilson, E. D., Arizona Zinc and Lead Deposits, Part II, Arizona Bur. of Mines Bull., 158, p. 91, 1951.

only 2 percent zinc. At least part of the footwall portion of the vein was exposed in 2 crosscuts on the 500-foot level. In one of these crosscuts sampling exposed vein material 10 feet wide which contained 11.5 percent zinc and the other crosscut contained 13.3 percent zinc in a zone 7 feet wide. The crosscuts apparently did not extend far enough to expose the full width of this zone of oxidized zinc.

An assay map included with the final engineering report indicates that the lead and silver content of the ore decreases as greater depth is reached in the deposit and there is slight evidence to indicate that the amount of zinc increases and reaches a maximum at about the 500 level, below which level there is a marked decrease in the total metal content in the vein material.

It is reported[1] that in 1928 the unmined portion of the vein above a depth of 360 feet contained an average of 6 percent lead and 10 ounces of silver per ton, but in the granite below this depth the vein is less than half that rich.

INTERPRETATION OF THE GEOLOGY

The structure, texture and mineralogy of this deposit indicates that it has formed by rapid deposition or dumping of the vein materials at elevated temperatures and at relatively shallow depths. The deposit is epithermal, a type that is often associated with Tertiary

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[1] Wilson, E. D., Geology and Mineral Deposits of Southern Yuma County, Arizona. Arizona Bureau of Mines Bulletin No. 134, p. 66, 1933.

volcanic activity in the United States. A noteworthy feature of deposits of this type is the low ratio of metallic minerals to gangue minerals. Only in exceptional cases do these epithermal deposits yield significant amounts of base metals such as lead, copper or zinc; however, they frequently are important sources of precious metals. Another noteworthy feature is that this type of deposit seldom extends more than a few hundred feet below the outcrop. Normally deposits of the epithermal type, like the Redcloud, often contain rich ores at or near the surface, and the values diminish with increasing depth and at depths of a few hundred feet the veins change into worthless gangue minerals or barren country rock, but seldom grade into valuable base metal deposits.

This writer is of the opinion that the mineralogical bottom of the Red Cloud ore deposits must lie at or near the 500-foot level, and that only small low grade or barren "roots" extend far below this level. This interpretation is supported by the recently completed diamond drill holes, of which 6 holes penetrated relatively small amounts of low-grade or barren vein material, below the 500-foot level.

The change in the character of the rocks in the hanging wall and the abrupt increase in the angle of dip, both of which take place at a depth of 360 feet along the incline, must have been important controls in the localization of ore because of the abrupt decrease in lead and silver below this point.

THE EXPLORATION PROJECT

The purpose of this project was to explore by diamond drilling below the 500 level of the Red Cloud Mine for the downward continuation of the Red Cloud vein below the zone of oxidation. The project provided for rehabilitation of part of the surface plant and some of the mine workings, and provided for exploration by diamond drilling not to exceed a total of 6,000 feet of holes. Actual exploration consisted of drilling 7 holes (see fig. 4 and 5) from 2 drill stations on the 500 level. A total of 2731 feet of holes were drilled but only 2451 feet were allowed because Hole No. 5 had not been drilled as approved by DMEA representatives.

These holes are summarized as follows:

Hole No. 1 from Station No. 1, bearing N. 75° W., inclination minus 45 degrees, to a depth of 144 feet;

Hole No. 2 from Station No. 1, vertically downward to a depth of 158 feet;

Hole No. 3 from Station No. 1, bearing about due north at minus 55 degrees, to a depth of 388 feet;

Hole No. 4 from Station No. 2 at the end of the crosscut, bearing S. 75° W. at minus 65 degrees, to a depth of 276 feet;

Hole No. 5 from Station No. 2, bearing S. 60° W. at minus 75 degrees, to a depth of 280 feet;

Hole No. 6 from Station No. 2, bearing N. 75° E. and a dip of minus 81 degrees. Hole lost at a depth of 335 feet;

Hole No. 6A from Station No. 2, bearing N. 60° E., inclination minus 82 degrees, distance 500 feet;

Hole No. 7 from Station No. 2, bearing N. 10° W., an inclination of minus 48 degrees.

Generalized logs of the diamond drill holes, as revealed by the operator's progress reports, periodic visits, and a short inspection by this writer are given in Table I.

Department of the Interior
Defense Minerals Administration
MAY 25 1955

TABLE I

GENERALIZED SUMMARY OF DRILL HOLE LOGS

Hole No.	Bearing	Inclination	Interval	Description
1	N75°W	-45°	0-70	Mixed tuff and granitic rocks
			70-85	Vein, calcite and zinc, no sulfides
			85-132	Siliceous granitic rocks with traces of calcite and zinc.
			132-144	Traces of calcite and zinc
2	Vertical	Vertical	0-90	Granite
			90-102	Mixed granite and tuff
			102-105	Red Cloud Fault
			105-124	Vein material. Calcite, quartz, traces of zinc.
			124-144	Siliceous granitic rocks
3	Vertical	Vertical	0-85	Granite-Monzonite
			85-102	Tuff
			102-126	Quartz-calcite vein. Vuggy.
			126-158	Mixed granitic rock and diorite.
			158-266	Granite
			266-327	Mixed granitic rock and tuff
			327-342	Vein in tuff, with Quartz and calcite. Vuggy.
4	S75W	-70°	0-97	Tuff
			97-107	No core, fault (?)
			107-143	Granite
			143-244	Intermixed granite, tuff and dike rock
			244-258	Vein calcite
			258-276	Diorite (?)

Hole No.	Bearing	Inclination	Interval	Description
5	S60W	-70°	0-134	Tuff.
			134-265	Granitic Rocks.
			265-275	Vein; zinc, calcite. No sulfides.
			275-280	Vein. Hole lost at 280 ft.
6	N60E	-82°	0-193	Tuff.
			193-335	Granite. Hole lost at 335 ft. Vein not penetrated.
6A	N60E	-80°	0-413	Tuff.
			413-430	Siliceous dark rock. Quartz Diorite (?) Calcite and barite reported at 413-416 and 430-441 ft.
			430-451	Traces of calcite and barite. Probable vein material at 446-451 ft.
			451-500	Schist and granitic rocks.
7	N10°W	-48°	0-600	Not logged. Volcanics.
			600-625	Granite.
			625-630	Vein material. Fine grained quartz, barite, and calcite. Cavities and vugs filled with limonite and hematite. Bladed barite and banding quite prominent.
			630-635	Medium dark-grained crystalline rock, probably diorite.
			635-640	Vein material, like 625-630 interval.
			640-641	Diorite breccia.
			641-643	Dark diorite, medium grained.
			643-650	Vein, banding prominent.

Many analyses of core samples of vein material encountered below the 500-foot level are available. Analyses of a few of the highest grade, and probably the most significant samples are shown in Table II.

TABLE II

ASSAYS ON DIAMOND DRILL CORES

Hole Number	Slope	Depth	Core	Oz. Silver	% Lead	% Zinc
1	- 45°	144'	75'-80'	7.54	1.08	2.15
			80'-85'	2.14	.38	4.22
			105'-110'	.26	.11	1.82
2	Vertical	158'	112'-119'	.80	.22	2.25
			119'-124'	.86	.27	3.55
			124'-126'	1.09	.0	4.50
3	- 55°	388'	285'-296'	.80	.0	5.72
			337'-342'	.10	.0	1.90
4	- 65°	276'	244'-250'	.12	.0	1.75
			250'-256'	.28	.0	0
5	- 75°	280'	270'-275'	.40	.05	2.54
6		335'	Hole lost	.40	.05	2.54
6A		500'	Vein not recognized	-	-	-
7		650'	625'-650'	Nil	Nil	0.50

The results obtained by this drilling indicate that the Red Cloud fault extends at least several hundred feet below the 500-foot level, and that the fault is well mineralized with barite, calcite and quartz but does not contain sulfide ores, nor significant amounts of valuable metals. Whatever sulfides were formerly present in the vein have been almost entirely destroyed by oxidation. Assays indicate that only insignificant amounts of lead, zinc or silver exist in the vein.

After hole No. 7 was completed to a depth of 650 feet, the operators were disinclined to believe that the hole had reached the vein, although they had removed the core from the interval from 625 to 650 feet for analysis (shown in Table II). Fortunately, W. H. Hardwick, U. S. Bureau of Mines, made a generalized log (given in Table I) of this core before it was removed and a small piece of it was submitted to the U. S. Bureau of Mines laboratory for further study. LaMar G. Evans, Petrographer, described this core, which represents the interval 443-445, Hole No. 7, as follows:

> "Microscopic examination of thin sections reveals that this drill core sample is composed essentially of quartz, barite, limonite, calcite and hematite. Spectroscopic tests show trace amounts of zinc and manganese.
>
> "The drill core appears to represent a section of vein material in which partly replaced fragments of calcite are included. A part of the vein is composed of coarse-grained intergrowths of interlocking quartz and acicular barite crystals while other areas show a much finer-grained intergrowth of quartz, barite and limonite."

The core from hole No. 7 proves conclusively that it penetrated into the vein zone although it may not have passed entirely through it. This vein penetration is approximately 987 feet below the surface, or 485 feet below the permanent water level, and the core shows definitely that the vein is completely oxidized to this depth. The core contained no lead, and only trace amounts of zinc and silver (see assays in Table II), which is additional proof that sulfide ores do not exist in the deeper part of the Red Cloud vein. Significant amounts of sulfide ores were probably not deposited below the 500-foot level.

Lloyd C. White, Mining Engineer, who represented the applicants, either did not see or did not recognize the vein material in the core from hole No. 7 and stated that this hole did not reach the vein. White also reported that hole No. 6A did not find a vein and none could be expected because the vertical Primos hole did not show a distinct vein, although some silver values were present in the theoretical downward projection of the vein. Both of these statements are without support, and it is shown conclusively by the logs, Table I, and by the projection of the holes on cross section, Fig. ~~4~~ 5 cont., that the mineralized zone was penetrated by all holes except No. 6 which was lost at a depth of 335.

POSSIBILITIES FOR FUTURE DEVELOPMENT OR EXPLORATION

The unfavorable results of this exploration project indicate that Government participation in further exploration of the Red Cloud vein cannot be justified under present conditions. It is possible that at some future time it might be economically feasible to recover the oxidized lead-silver ores which are believed to exist in the developed part of the mine. Attempts to exploit the oxide zinc ores should be held in abeyance until feasible methods of recovering the zinc have been developed. Wilson's published reports indicate that other deposits, which contain the same type of ore, are present in the Silver district, and it might contain considerable reserves of this type of ore.

ORE RESERVES

At the time of the original examination ore reserves were estimated to be 32,000 tons containing 6 percent lead and 10 ounces of silver. This grade estimate is the same as reported by Wilson[1], who called attention to the fact that the ores in the granite below a depth of 360 feet were only half as rich. The decrease of lead-silver content of the ore in the lower levels appears to be accompanied by an increase in zinc which reaches a maximum at about the 500 level, where one crosscut reveals 10 feet of 11.5 percent zinc and another crosscut reveals 7 feet of 13.3 percent zinc in oxide forms.

This DMEA exploration project failed to find significant amounts of ore; therefore, there is no change in the above original reserve estimate of lead-silver ores. There are no adequate data by which the reserves of oxidized zinc ores might be estimated; however, many thousand tons may be present.

AMENABILITY OF RED CLOUD ORES TO TREATMENT

The Metallurgical Division, U. S. Bureau of Mines, Tucson, Arizona, made a number of tests on a composite of 22 samples obtained through DMEA examinations of the operation in December 1951. The composite sample assayed 1.9 percent lead, 6 percent zinc and 3.5 ounces of silver per ton. Cerussite, wulfenite and willemite were the principal lead and zinc minerals in the sample. Attempts to recover the lead by flotation were reasonably successful but silver recoveries

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[1] Wilson, E. D. op. cit. p. 66, 1933.

were quite low. In a typical test, about 80 percent of the lead and 30.7 percent of the silver were recovered in a product assaying 50.0 percent lead and 37.1 ounces silver per ton. Flotation of the zinc, however, was completely unsuccessful regardless of the reagents or reagent combinations employed.

CONCLUSIONS

A careful study of all the available data pertaining to the Red Cloud mine, and examination of the mine workings and inspection of the drill cores result in the following conclusions:

1. Lead is the only strategic or critical mineral that is present in a recoverable form in the Red Cloud ore.

2. The lead content of the ore is relatively low and decreases appreciably with increasing depth.

3. The zinc in the ore is present in oxidized forms that are not recoverable by today's processes.

4. The dominant characteristics of the Red Cloud vein show that it belongs to the epithermal class, a type of deposit that usually passes into barren worthless gangue materials or country rocks at depths seldom greater than a few hundred feet below the outcrop.

5. The 7 holes that the operators drilled below the 500-foot level proved conclusively that the vein zone is essentially barren of ore minerals from the 500-foot level to the greatest depth explored; 987 feet below the surface, and that oxidation extends to this depth.

6. Ore reserves are estimated to be 32,000 tons of oxidized ore, containing 6 percent lead and 10 ounces of silver per ton. Many thousand tons of oxidized zinc ore containing from 5 to 15 percent zinc are believed to be present in the mine. Additional ores of similar types probably would be found by exploration in the oxidized zone at the Red Cloud mine, and at other nearby mines in the same district.

7. The main problems to be solved at the Red Cloud mine are those of metallurgy; exploration for additional oxidized ore does not present any difficult or unusual problems.

8. The project has been certified as a discovery because of the presence of considerable lead which might be recovered under foreseeable conditions.

RECOMMENDATIONS

Additional exploration is not recommended at this time because it is not to the Government's interest to explore for oxidized ores from which it is impossible or impractical to recover strategic and critical metals.

Date Rec'd.
JAN 17 1955
DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
BUREAU OF MINES
Denver, Colorado
MAY 9 1955

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

SOUTHWEST EXPERIMENT STATION
Box 4097
UNIVERSITY STATION
TUCSON, ARIZONA

January 17, 1955

MEMORANDUM

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

From : Superintendent, Southwest Experiment Station

Subject : Final Engineering Report, DMEA Contract Idm-E371, Docket DMA-1303X, Yuma Metals, Inc., Red Cloud Lead-Zinc Mine, Silver Mining District, Yuma County, Ariz.

Enclosed are original and 8 copies of a final engineering report on the Yuma Metals project by W. R. Hardwick, Mining Engineer of the Bureau of Mines, and the undersigned.

No further exploratory work seems necessary at the Red Cloud mine as the numerous drill holes which were drilled below the 500-foot level found no ore at depth, and a substantial amount of oxidized lead-zinc-silver ore already is known to exist above this bottom level. Further metallurgical work might be justified as the known oxide ore is not commercial at the present time because the zinc cannot be produced economically. However, this metallurgical work probably could not be done with Government assistance from the Defense Minerals Exploration Administration as it hardly could be called "exploration" work.

Walter R. Storms

Walter R. Storms

CC Exec. Off. (8)
J. N. Faick
DMA-1303X
DF

WRStorms:frj

Reviewed by
DMEA OPERATING COMMITTEE
6-1-55
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM

FINAL ENGINEERING REPORT

DMA-1303X, Contract Idm-E371

Yuma Metals, Inc.

Red Cloud Lead-Zinc Mine

Silver Mining District

Yuma County, Arizona

William R. Hardwick, Mining Engineer
U. S. Bureau of Mines

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

January 1955

6-1-55

DMA-1303X, CONTRACT Idm-E371
YUMA METALS, INC.
RED CLOUD LEAD-ZINC MINE
SILVER MINING DISTRICT
YUMA COUNTY, ARIZONA

CONTENTS

Final engineering report	Page
Summary, conclusions and recommendations	1
Introduction	5
Location and accessibility	6
Physical features and climate	7
History and production	7
Geology	9
Ore Reserves	10
Work completed	12
Expenditures	16
Efficiency of operations	18

ILLUSTRATIONS

Figure		To follow page
1	Location map	6
2	Geologic and claim map	6
3	Red Cloud assay map	11
4	500 level	13
5	Section on drill holes	13

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Early in 1951, Yuma Metals, Inc., Lloyd C. White, manager, 1005 Oxford St., Berkeley 7, Calif., applied to the Defense Minerals Administration under the Defense Production Act of 1950 for Government assistance to explore a portion of its mining property in the Silver Mining District of Yuma County, Ariz., some 28 air miles north of the City of Yuma. The original application, docketed as DMA-1303X, proposed to explore the Red Cloud and other deposits by diamond drilling and drifting for the total amount of $300,000. L. A. Stewart of the Bureau of Mines and C. A. Anderson of the Geological Survey reviewed this original application and suggested that the company submit a revised, more detailed one. Evidently a second application then was submitted in August 1951 for $100,000. After considerable correspondence between the company and the Lead-Zinc Branch of the Defense Minerals Administration, a third application was submitted for $200,000.

The third application, also docketed as DMA-1303X, was sent to the field for an examination and report by the Geological Survey and the Bureau of Mines. Therefore from December 4 to 8, 1951, inclusive, L. A. Stewart and W. T. Griswold of the Bureau of Mines, and Carl Trischka of the Geological Survey examined the Yuma Metals property, accompanied by Luke Walker, secretary-treasurer of that company. The DMEA examiners' report was submitted to the Defense Minerals Exploration Administration in Washington, D. C. on May 7, 1952.

Yuma Metals, Inc. owned or controlled 60 unpatented lode mining claims and 1 patented lode mining claim (the Red Cloud) in the Silver Mining District, and 1 millsite near the Colorado River about 10 miles southeast of the lode claims. These claims were in parts of 10 sections along at least 3 vein systems. At first the company wanted to explore at several places on different claims, but finally was persuaded by the DMEA examiners to apply for exploration assistance only at the Red Cloud mine.

The Red Cloud mine is on the vein of the same name, the vein being in a fault zone, striking N. 15° W. at the mine, and dipping from 30° to 70° easterly with an average dip of about 50°. The mine has been developed by a 535-foot inclined shaft on the vein to a short distance below the 500-foot level and a vertical shaft to the 270-foot level. Levels were opened from the inclined shaft and a substantial amount of lead-silver ore produced from above the 420-foot level. The hanging wall or east side of the fault zone is composed mostly of volcanic rocks above the 500-foot level, while the footwall or west side is granite. Granite also seems to occur in the hanging wall on and below the 500-foot level. Lead and zinc minerals are found with silver in a calcite gangue. The ore deposit at the mine has been mined only above the 420-foot level, the principal metal having been silver. However, substantial amounts of oxidized zinc ore and some oxidized lead ore remain in the mine. No commercial method of recovering the zinc has been found to date.

In order to determine if primary sulphide lead-zinc ore occurred at depth beneath the old mine workings, the company proposed to drill a series of diamond drill holes downward from a 500-foot level crosscut which had been driven into the hanging wall by previous operators. All ore mined above this 500-foot level had been oxidized and it was hoped that sulphides would occur below it.

On December 3, 1952, Exploration Project Contract No. Idm-E371 was signed by representatives of the Government and Yuma Metals, Inc. for a total amount of $75,000, one-half to be furnished by the Government and the remainder by the company. Time to bring the project to completion was one year and the purpose was "to explore by diamond drilling below the 500 level of the Red Cloud mine for the downward continuation of the Red Cloud vein below the zone of oxidation".

In order to do the proposed exploratory work it was necessary to repair the road and establish a camp at the mine, then rehabilitate certain of the underground mine workings before drilling could be started. Total allowable cost of this preparatory work was $15,000. After the preparatory work had been completed, a total of 6,000 feet of diamond drilling was authorized at $10.00 per foot for a total of $60,000.

Actual work under terms of the contract started on January 12, 1953. The road was repaired, a camp was established, the vertical shaft headframe and collar were repaired, the inclined

shaft ladders were repaired and the 500-foot level crosscut to the drill hole sites was cleaned out. Early in April 1953, actual diamond drilling started.

The project was recessed from July 1, 1953 until November 1, 1953 because of the very hot summer temperatures at the mine. Up until the recess period, 5 diamond drill holes had been drilled although the cost of drilling hole No. 5 was not allowed because it was not drilled as approved by DMEA representatives. Drilling again was resumed in November 1953 and hole No. 6 was drilled. However, the rods were stuck in this hole, so hole No. 6A was authorized and drilled, then later hole No. 7 was drilled. No sulphide ore had been cut by any of these holes although most of them did cut vein matter.

After completion of hole No. 7, because of the very hot weather Yuma Metals, Inc. requested and received another recess period from May 11, 1954 until October 11, 1954. Before the recess period was completed the company submitted another proposal for additional drilling and drifting, this work to be done in the oxidized zone. However, as the purpose of the original contract was to explore below the oxidized zone and as 7 diamond drill holes had been drilled downward from the 500-foot level without finding sulphide ore, no further exploratory work was authorized by the Defense Minerals Exploration Administration. Therefore the contract was automatically terminated on October 11, 1954 after $38,728.96 had been spent. Although no ore was discovered by the

exploration work which was done under the terms of the contract, the last recess period amendment (Amendment No. 3) contained a clause whereby the project was automatically certified if work had not been begun by October 11, 1954.

Because exploration work under terms of the DMEA contract failed to find ore below the 500-foot level, and as a substantial amount of oxidized lead-zinc ore was known to occur above this level, further exploratory work at the mine seemed unnecessary. However, as there is a large amount of oxidized lead-zinc-silver ore in the Silver district, additional metallurgical research should be done on this ore.

INTRODUCTION

Yuma Metals, Inc. submitted an application early in 1951 to the Defense Minerals Administration for Government assistance to explore its mining claims in the Silver Mining District of Yuma County, Ariz. under the Defense Production Act of 1950. The original application was returned to the company for revision and a more definite plan of exploration. This original application was for $300,000. Later in 1951, a second application for $100,000 was submitted, but it also was returned to the applicant for revision. An amended application then was submitted for $200,000. This last application contained a definite plan for the exploration work, so was sent to the field for an examination and report on the feasibility of the proposed project.

From December 4 to 8, 1951, inclusive, Lincoln A. Stewart and William T. Griswold of the Bureau of Mines, and Carl Trischka of the Geological Survey thoroughly examined the property of Yuma Metals, Inc. The DMA examiners and company representatives finally agreed that $75,000 should be sufficient to explore the most promising part of the property, the old Red Cloud mine. Therefore an Exploration Project Contract(Idm-E371) was signed on December 3, 1952 after many months of negotiations between company officials and Government representatives in Washington, D. C.

LOCATION AND ACCESSIBILITY

During the life of Exploration Project Contract No. Idm-E371, Yuma Metals, Inc. owned or controlled 61 lode mining claims in the Silver Mining District, some 28 miles north of the City of Yuma, and 1 millsite near the Colorado River about 10 miles southeast of the lode claims. Sixty of these lode claims were unpatented, only one, the Red Cloud, being patented. Only this claim, the Red Cloud, was included in Contract Idm-E371 (figures 1 and 2).

The Red Cloud claim is in the south central part of the Silver district in secs. 2 and 11, T. 4 S., R. 23 W., about 27 air miles due north of Yuma, or 53 miles by road. It may be reached from Yuma by starting at U. S. Highway 80 and traveling north on Arizona State Highway 95 for a distance of approximately 25 miles,

thence turn to the northwest and follow an oiled road for approximately 13 miles, thence turn north at a sign marked "Red Cloud Mine". Follow a well defined dirt road along the east edge of the IMperial Reservoir to Yuma Wash and turn up Yuma Wash, taking a west branch to the Red Cloud claim.

PHYSICAL FEATURES AND CLIMATE

In regard to the physical features and climate of this part of Arizona, Stewart[1/] states:

"This area is in the southern part of the Trigo Mountains. Northward trending low ridges that are sharply eroded, rise to a maximum of 1,600 feet above sea level, or about 1,000 feet above the bottom of intervening, dissected, flat-bottomed valleys. The altitude of the Red Cloud shaft is approximately 750 feet.

"The mountains support very little vegetation. On the alluvial slopes, scattered creosote bushes, ocotillo and palo verde grow to a height of a few feet.

"According to Smith, the extremes of low and high temperature on record for southern Yuma County are 22° and 119° F. From October to April, inclusive, the climate tends to be very pleasant".

HISTORY AND PRODUCTION

Stewart[2/] also states:

"Because of the fact that the Silver Mining District lies near the Colorado River, a navigable stream in the early days, prospecting was carried on in this region as early as 1860, when the first discoveries were made. Soon after the district's discovery it is said to have been abandoned and remained idle until about 1879, when many of the abandoned claims were relocated and the district was organized.

"About 1880 the town of Silent was established near the mine; later the name was changed to Pacific City. A small smelter was built but it operated only intermittently for about 3 years.

1/ Stewart, L. A. and Griswold, W. T., Engineering Report, DMA-1303X, Yuma Metals, Inc., Yuma County, Arizona (Lead-Zinc), Confidential DMA Report, March 1952, p. 3.

2/ Previously mentioned in footnote 1.

Virtually all the ore was hand-sorted, freighted to the Colorado River, shipped by river boats to the Gulf of California, and re-shipped to San Francisco for treatment. By 1884 the Silver district was the foremost in Yuma County.

"The RedCloud claim was patented in 1885. In 1889, a dry-concentrator was erected to treat the dump ore but the venture did not prove successful. After 1899, the mine was virtually idle until 1917 when the Red Cloud Consolidated Mines Co. acquired it and installed a small dry-concentrator. This mill burned down before making more than a few test runs.

"In 1925, the E. R. Boericke Co. obtained a short lease on the claim, installed surface equipment, ran drifts from the bottom of the shaft, and diamond-drilled 2 holes from one of these drifts. The option was relinquished the following year.

"In 1928, the Neal Mining Co. acquired control of the Red Cloud and 45 other claims in the district and carried on an extensive sampling campaign.

"Penn Metals, Inc. took a lease-option in 1940, built a 200-ton flotation plant, ran several months on dump material, and shut down in September 1941.

"The property then was acquired by George Holmes and Walter D. Riley, who dismantled the mill. In 1948 these men diamond-drilled one hole from the bottom level crosscut. Early in 1950 Holmes and Riley sold the Red Cloud claim to the present owners.

"According to a tabulation by the Arizona Bureau of Mines, the Silver District has produced 2,329,059 pounds of lead and 1,559,201 ounces of silver for a total value of $1,755,433 during the period of 1879 through 1949.

"Of this amount, the Red Cloud mine has produced approximately 1,800,000 pounds of lead and 320,000 ounces of silver for a total of $430,000. Of this amount, approximately 30,000 ounces of silver and 400,000 pounds of lead were recovered from milling dump material".

To date, no ore has been produced by the present owner,

Yuma Metals, Inc.

GEOLOGY

Wilson[3] describes the deposit as follows:

"Vein and workings: The Red Cloud mine is at an altitude of approximately 750 feet. Its vein occurs within a fault zone which here strikes about N. 15 degrees W. and dips 35 to 60 degrees E. Irregular shafts, drifts, and stopes have followed it for a length of some 560 feet and to a depth of approximately 535 feet on the incline, * * *. Most of the upper workings were run before 1885 by hand drilling; the ore was sorted and screened underground and dragged up inclines with rawhide buckets. Stopes were supported by pillars, dry-wall backfills, cottonwood timbers, and willow laggings which are still fairly intact. A more vertical shaft approximately 200 feet deep reached the vein at the 270 level of the incline. The 500 level, immediately above the present water table, is reported to have been run about 1925.

"The vein is made up chiefly of limonite, hematite, quartz, fluorite, and calcite, together with considerable amounts of gouge and brecciated wall rocks, all more or less stained by pyrolusite. The quartz forms irregular, finely crystalline, vuggy masses which in places are cut by veinlets or coarser-grained quartz. Commonly the quartz is interbanded with gray to purple fluorite which ranges in texture from dense to crystals 1/8 inch in diameter. The calcite is mostly a coarsely crystalline, dark-gray manganiferous variety, but some later white calcite also occurs. The limonite and hematite, which occupy cavities and vugs within the other gangue minerals, are locally intermingled with irregular, cellular masses and vug-linings of cerussite, smithsonite, willemite, pyrolusite, vanadinite, wulfenite, and malachite. In places there are nodules of argentiferous galena, partly altered to black anglesite and pale-yellowish cerussite. Cerargyrite is present as small disseminated masses and streaks within the oxidized minerals.

"Except in the 500-level crosscuts, the vein walls are largely concealed behind fault gouge and breccia. The limited exposures indicate that the hanging wall from the surface down to approximately 360 feet on the incline is andesitic breccia and tuff. From there to the 500 level, the hanging wall consists largely of brecciated granitic and volcanic material, and in the 503 cross-cut it is granite with faulted volcanics locally above.

3/ Wilson, Eldred D., Arizona Zinc and Lead Deposits, Part II, Ariz. Bur. of Mines Bull. 158, 1951, pp. 90 - 93.

"The footwall consists of the "granite" described on previous pages. Here this rock is brecciated and faulted for widths ranging from a few feet to 100 feet or more. Where exposed on the surface immediately west of the mine workings, the breccia is largely cemented by calcite and quartz, together with other vein materials.

"As indicated by stoping, the vein contained two principal ore shoots, each from $1\frac{1}{2}$ to 6 feet wide, near or adjacent to the hanging wall. The northern shoot was from 25 to 100 feet long by 410 feet deep, and the southern from 35 to 110 feet long by 300 feet deep. In the vicinity of these ore shoots, the vein shows relatively more iron and manganese mineralization, and its walls are intersected by northeast fissures.

"According to Robert Morgan, sampling by the Neal Mining Company indicated that the unmined portions of the vein exposed in the workings above a depth of 360 feet on the incline contained an average of approximately 6 percent lead and 10 ounces of silver per ton, but below that level the lead and silver contents were somewhat less.

"It is estimated that the unmined material exposed in the workings contains more zinc than lead. This zinc, however, is in non-sulfide minerals.

"The portion of the vein between the stopes and the footwall seems to be relatively low in lead and silver, but it has not been sufficiently explored to determine its over-all grade. Strong non-sulfide zinc mineralization is apparent near the footwall in the 500-level crosscuts.

"Oxidation extends for an unknown distance below the present water level and was present in the Holmes-Riley drill core for more than 200 feet below the 500-level.

"An interesting possibility regarding the Red Cloud vein structure was suggested by Hearshey. He postulated that a post-mineral fault, coinciding in places with the hanging wall, displaced portions of the vein laternally and downward."

ORE RESERVES

In April 1950, 2 mining engineers[4/] from the Bureau of Mines examined the Red Cloud mine and wrote a report on the property.[5/]

4/ Stewart, L. A., and Berliner, M. H.

5/ Stewart, L. A., Supplemental Examination Report on Red Cloud property, Yuma County, Ariz., Confidential Bur. of Mines Report, 1950.

At that time 28 channel samples were cut and an estimate of ore remaining in the mine was made (see figure 3). The engineers estimated that the property contained 31,680 tons of indicated ore averaging from 7 to 9 ounces of silver a ton, 4 to 6 percent lead, and 8 percent zinc. Of this indicated ore, 27,680 tons were estimated as remaining unmined above the 420-foot level, 3,000 tons were estimated as ore used as stope fill (when mining took place the ore was hand-sorted in the stopes and only the high-grade ore was taken to the surface, the lower grade material being used for stope fill), and 1,000 tons remained in stope pillars.

Because many of the mine workings were not sampled by the Bureau engineers and much of the assay information was taken from an old map made by G. W. W. McDougall in 1918, no estimate was made by Stewart of measurable ore; and because he thought the ore body pinched out at both ends and with depth, he estimated no inferred ore.

When Stewart and W. T. Griswold of the Bureau of Mines, and Carl Trischka of the Geological Survey examined the Red Cloud mine in December 1951, Trischka estimated 32,000 tons of indicated ore with an average grade of 6 percent lead and 10 ounces of silver a ton. He estimated the zinc content from 8 to 10 percent.

No mining has taken place in the Red Cloud mine in recent years, so present ore reserves still may be estimated at 31,680 tons having a grade of from 4 to 6 percent lead, 8 to 10 percent zinc, and 7 to 9 ounces of silver a ton. This ore all is in the oxide zone, no sulphide ore being present.

WORK COMPLETED

Exploration Project Contract No. Idm-E371 states:

"The purpose of this project is to explore by diamond drilling below the 500 level of the Red Cloud mine for the downward continuation of the Red Cloud vein below the zone of oxidation. To do this drilling, the following work shall be done:

"A. Preparatory Work

"1. Repair the road for the movement of housing, equipment, supplies and water.

"2. Move mine buildings and trailers to the selected camp site, repair and adapt them for use as needed. Transport supplies and equipment to camp and repair and install latter as needed for the project. Rehabilitate shaft collar and headframe and install water tank and piping for domestic use.

"3. Rehabilitate the underground workings only sufficiently to permit the safe passage of workmen to and from the diamond drill site, and the transportation of supplies and equipment for rehabilitation and diamond drilling. Install air and water lines, hoists and equipment and retrieve same on completion of the work.

"B. Diamond Drilling

"Diamond drilling not to exceed 6,000 feet shall be done from D. D. Stations 1 and 2 on the 500 level, as shown on the drawing attached hereto and made a part hereof and entitled "Fig. 5 - Transverse Section A-A', Red Cloud mine, showing proposed drilling - DMA 1303X". The first holes shall be drilled from D. D. Station 1 in the direction and with the inclination shown on said drawing. Based upon the results of drilling from D. D. Station 1, the Government will determine whether the drilling should be continued from D. D. Station 2.

"The location, direction, inclination and extent of all work, including the number of holes drilled, is subject to the approval of the Government.

"The Operator shall obtain and furnish the Government accurate sludge samples of all drilling and obtain the maximum core recovery possible under existing conditions."

The allowable maximum cost for all preparatory work was $15,000.00. The allowable maximum cost for diamond drilling was $60,000. The total allowable maximum cost for the project was $75,000.00 with the Government furnishing one-half, or $37,500.00.

Preparatory work started on January 12, 1953 and was completed according to terms of the contract early in April 1953. Total allowable cost of this preparatory work was $14,218.96. The work consisted of the following: (1) The road from the old camp to the Red Cloud mine was repaired in places; (2) buildings, trailers, and equipment were moved from the old camp to the mine; (3) two of the old buildings were repaired and a new 9- by 15-foot wood-frame building was constructed; (4) a water tank was installed; (5) a cook house was equipped with stove, refrigerator, waterheater and other necessary equipment; (6) the headframe and collar of the vertical shaft were repaired, a hoist, cable and bucket installed, and air and water lines were installed to the 270-foot level, thence to the 500-foot level down the inclined shaft; (7) the inclined shaft collar was repaired and covered, new or repaired ladders were installed and the skidway for hoisting from the 500 to the 270-foot level was repaired; and (8) the 500-foot level east crosscut was cleaned out (part of this crosscut had caved).

Diamond drilling of Hole No. 1 was started on April 16, 1953 and by June 12, 1953, 5 holes had been drilled as follows(see figures 4 and 5):

Hole No. 1 from Station No. 1, bearing N. 75° W., dipping minus 45° for 144 feet;
Hole No. 2 from Station No. 1, vertically downward for 158 feet;
Hole No. 3 from Station No. 1, bearing about due north at minus 55° for 388 feet;
Hole No. 4 from Station No. 2 at the end of the crosscut, bearing S. 75° W. at minus 65° for 276 feet;
Hole No. 5 from Station No. 2, bearing S. 60° W. at minus 75° for 280 feet.

Because of a misunderstanding between DMEA representatives and officials of Yuma Metals, Inc., Hole No. 5 was not drilled as approved by the Defense Minerals Exploration Administration, so its cost was not allowed. As the temperature in the mine area now was getting very hot the project was recessed until November 1, 1953.

Early in November 1953, drilling again was resumed at the Red Cloud mine. Hole No. 6 was started from Station No. 2 with a bearing of N. 75° E. and a dip of minus 81°. However, the rods were stuck in this hole at a depth of 335 feet so it was abandoned and Hole No. 6A authorized to take its place. Hole 6A was drilled with a bearing of N. 60° E. and a dip of minus 82° to 500 feet. Hole No. 7 then was authorized and started from station No. 2 with a bearing of N. 10° W. and a dip of minus 48°. It was drilled to a depth of 650 feet at the end of May 1954. This completed a total footage of 2,731 feet although only 2,451 feet were allowed as Hole No. 5 had not been drilled as approved by DMEA representatives.

After completing Hole No. 7, Yuma Metals, Inc. again requested a recess and was granted one to October 11, 1954 by Amendment No. 3. This amendment also provided that the contract would be terminated if no work had been started under terms of the contract by October 11 and further provided that: "4.d. The total net amount contributed by the Government shall be repayable in the form of a percentage royalty on any minerals mined or produced from the land described in Article 2 of the contract, in the manner and amount provided in the Contract as amended by Annex I to this amendment, certification of discovery or development being hereby waived."

During the period of this recess the company requested another amendment to the contract so drifting could be done in the oxidized zone of the Red Cloud mine and also so some surface drilling could be done. However, as a substantial amount of oxidized ore already was known to occur in the mine and as no ore had been discovered below the 500-foot level by drilling under terms of the contract and its amendments, this request for further exploration work was denied by the Administrator of the Defense Minerals Exploration Administration. As no work had been begun under Amendment No. 3 by October 11, 1954, the contract was terminated automatically.

EXPENDITURES

Estimated costs of the project as allowed in Exploration Project Contract No. Idm-E371 were as follows:

A. Preparatory work (not to exceed 3 months)

1. Independent Contracts
   None - but may be entered into with the approval of the Government.

2. Labor, Supervision, Consultants.

1 Cook, 3 months @ $350/mo	$1,050.00
1 Truck driver and utility man, 3 months @ $372.50/mo	1,117.50
Supervision, accounting and engineering, 3 months @ $600.00/mo	1,800.00
Clean and repair inclined shaft manway	500.00
Clean and repair shaft stations	500.00
Install air line, hoist cable, and bucket in vertical shaft	200.00
Timber and muck-out crosscut on the 500 level and prepare diamond drill stations	800.00
	$5,967.50

3. Operating Materials and Supplies

Fuel and grease	$300.00
Small tools and equipment	300.00
Pipe	350.00
Mine-grade lumber	500.00
Cable and bucket for shaft	200.00
Nails, ties, spikes, etc.	300.00
Various supplies for mine repairs	400.00
	$2,350.00

4. Operating Equipment
   Depreciation on equipment owned by the operator was allowed as follows:

1. Compressor @ $125/mo.	$375.00
1 Hoist @ $100/mo.	300.00
1 Jeep @ $50/mo	150.00
1 Truck @ $50/mo	150.00
2 House trailers @ $50/mo	150.00
	$1,125.00

5. Rehabilitation and Repairs.

Repair road	$1,000.00
Move buildings and house trailers from old camp site and install at mine	700.00
Repair and alter buildings	500.00
Repair headframe and shaft collar	500.00
	$2,700.00

6. New Buildings, Improvements and Installations.

Water tank, toilet and plumbing for domestic use	300.00
Supplies and equipment for cook and bunk houses	500.00
	$800.00

7. Miscellaneous

Repairs to equipment	$250.00
Workmen's compensation, Employer's Liability Insurance, and Payroll Taxes	$610.00
	$860.00

8. Contingencies

Unforeseen labor and supplies	$1,197.50
Total preparatory work	$15,000.00

B. Diamond Drilling

6,000 ft. of diamond drilling @ $10 a foot	$60,000.00
Total allowable cost	$75,000.00

Funds actually spent and allowed under terms of the contract were as follows:

Preparatory work	$14,218.96
Diamond drilling, 2,450 feet @ $10 per ft.	24,510.00
Total amount spent	$38,728.96
Government's share	$19,364.48
Amount not spent under "Preparatory Work"	$781.04
Amount not spent under "Diamond Drilling"	$35,490.00
Total not spent	$36,271.04
Government's royalty paid to date	None

EFFICIENCY OF OPERATIONS

Efficiency of operations at the Red Cloud mine under Contract Idm-E371 was affected by the isolation of the property, and the extremely high summer temperatures (a 65 year average of temperatures at Yuma gives 119° F. as the high for May, June, July and August[6]. It probably would be hotter at the Red Cloud mine). Because of the former, a complete camp had to be established at the mine, including cook shack and sleeping quarters; and because of the latter, recess periods were authorized during the summers of 1953 and 1954. Three months also were lost from early December 1953 until March 5, 1954, when one drilling company cancelled its contract and Yuma Metals, Inc. was forced to find another driller. Time also was lost when Hole No. 5 was drilled S. 60° W. with a dip of 75°, when the DMEA representative had approved a hole in an easterly direction at a steep angle. The Government's share of the costs were not paid to the company for this hole No. 5 as the hole was drilled in the wrong direction, and thus cut the vein near a location that had already been explored by a previous drill hole.

Other than Lloyd C. White, General Manager, and the contract drillers, none of the officers or employees of Yuma Metals, Inc. were experienced mining men. During long periods when White was not at the mine costly mistakes were made that might have been avoided had an experienced representative of the company been on duty at all times.

6/ Smith, H. V., The Climate of Arizona, Agri. Exp. Station Bull. 197 Univ. of Ariz., July 1945, Table 2.

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

MAY 1 8 1955

Mr. Thomas H. Brading
DMEA Auditor
224 New Customhouse Building
Denver 2, Colorado

Re: Contract No. Idm-E371
Docket No. DMEA-1303X
Yuma Metals, Inc.

Dear Mr. Brading:

Reference again is made to your Report of Review on the above-cited project, any my letter of May 11, 1955, accepting your Report of Review.

My acceptance of your Report of Review was in error.

The total accepted cost found by you was $37,578.97. This should be $38,578.97. A $1,000 error was made in the deduction of proceeds from property disposition, unless the proceeds from property disposition was $1,150, instead of $150.00.

If the Yuma Metals has been furnished a copy of your Report, please tell me how you propose to correct same, and whether you will issue a new Report of Review.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Chief
Contract Administration
and Audit Division

JLChambers/wb
May 18, 1955

Copy to: Docket
Admr. Reading File
Mr. Chambers

R.C.S.

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

MAY 11 1955

Mr. Thomas H. Brading
DMEA Auditor
224 New Customhouse Building
Denver 2, Colorado

Re: Contract No. Idm-E371
Docket No. DMEA-1303X
Yuma Metals, Inc.

Dear Mr. Brading:

Reference is made to your letter of April 28, 1955, in regard to the footages and reported costs for drilling under the subject contract.

The information as submitted answers my question satisfactorily. The Report of Review is accepted and may be distributed in the usual manner.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Chief
Contract Administration
and Audit Division

WBorovies/wb
May 11, 1955

Copy to: Docket
Admr. Reading File
Mr. Chambers

R.C.L.

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

APR 27 1955

Mr. T. H. Brading
DMEA Auditor
224 New Customhouse
Denver 2, Colorado

Re: Contract No. Idm-E371
Docket DMEA-1303X
Yuma Metals, Inc.

Dear Mr. Brading:

Reference is made to your Report of Review under date of April 21, 1955, of the above-cited project.

I am requesting that you review all the vouchers submitted by the Operator, especially for the item of drilling. I am unable to get the footages reported on these vouchers and the cost therefor to agree with the final figure shown on the vouchers for the months of April and May 1954. Doubtless there is information in the Finance Office explaining why the drilling footages as reported on the vouchers do not total the amount given on the final voucher, but that information apparently was not submitted with the vouchers sent to this office.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Chief
Contract Administration
and Audit Division

JLChambers/wb
April 27, 1955

Copy to: Docket
Admr. Reading File
Mr. Chambers

R.C.L.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
DENVER
APR - 7 1955

224 New Customhouse
Denver 2, Colorado

April 5, 1955

REGISTERED

Mr. Lloyd C. White, Manager
Yuma Metals, Incorporated
1005 Oxford Street
Berkeley 7, California

Re: Docket DMEA-1303 (Lead-Zinc)
Contract Idm-E371
Yuma Metals, Inc.
(Red Cloud mine)
Yuma County, Arizona

Dear Mr. White:

Reference is made to our letter to you of December 6, 1954 relative to the liquidation of the Government's interest in property acquired under Contract Idm-E371. Records in this office indicate that the following property was acquired under the contract, the cost of which is subject to liquidation of the Government's interest under the terms of the contract:

Item:	Cost to the Project:
1. Washroom building	$ 823.00
2. Improvement of and Supplies and Equipment for Cook and Bunkhouse	887.71
3. Pipe and accessories	396.62
4. Track	195.00
5. Cable and buckets	170.00
6. Ventilation pipe	126.10
7. Small tools	201.11
Total Cost	$2,776.54

Instructions relative to the liquidation of the Government's interest in the jointly owned property was covered in our letter to you of December 6, 1954. We are desirous of closing this account at an early date; therefore, we will appreciate your prompt attention to the matter. If the matter is not satisfactorily resolved in the near future, we see no alternative other than to deduct the full amount of the Government's participation in the cost of the foregoing listed property in making final settlement to you under the terms of the contract.

JWT:sr

Very truly yours,

W. M. Traver

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

cc Chairman Op. Comm. (2)
Subject
Chron
Harshman
Storms
Faick
Townsend

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

224 New Customhouse
Denver 2, Colorado

WASHINGTON 25, D. C.

December 6, 1954

Mr. Lloyd C. White, Manager
Yuma Metals, Inc.
1005 Oxford Street
Berkeley 7, California

Re: Docket DMEA 1303 (Lead-Zinc)
Contract Idm-E371
Yuma Metals, Inc., Red Cloud Mine
Yuma County, Arizona

Dear Mr. White:

Reference is made to the letter dated December 3, 1954 from the Administrator, DMEA, relative to exploration work under the referenced contract.

By the terms of the exploration project contract under which you are operating, the Government acquires an interest in property purchased for use on the project which is "....paid for or purchased with funds contributed jointly by the operator and the Government...." Such property includes any individual items of equipment and facilities, buildings, or other fixtures costing more than $50.00 each. It also includes materials and supplies considered in groups or categories (such as pipe, explosives, rails, drill steel), if the original cost of the remaining unexpended portion of any such category of materials or supplies exceeded $50.00. As to any facility, building, fixture, or piece of equipment, and as to any such group or category of materials or supplies the original cost of which or the unexpended portion of which did not exceed $50.00, the Government does not assert any claim or interest under the terms of the contract.

The effect of the contract provisions is to make you the agent of the Government for the disposition of its interest in such property. Therefore it is your responsibility to make the best possible disposition of the property for the benefit of the Government. Every reasonable effort must be made to realize its full value. Such reasonable efforts might include: (1) Advertising in newspapers, periodicals, and posting notices in public places; (2) canvassing users of and dealers in such property; and (3) negotiating with the original vendor for the repurchase of the property.

Should you wish to retain the property, or in effect sell it to yourself, you may do this only after first having made every reasonable effort to procure a price higher than you yourself are willing to pay; or you may buy the Government's equity by paying for it either on the basis of the original cost or at a price higher than the highest bid obtainable from two independent bidders. In bidding on the property for yourself you should give consideration to the fact that the property in place is worth considerably more to you than if dismantled and disposed of elsewhere.

The undersigned is authorized to approve of and to join in the sale of such property for the joint account of the operator and the Government. You are requested to advise this office in advance of the proposed disposition of any such property so that we may advise you if the Government will approve thereof and join in the transaction. Please supply this office with the original and five copies of your liquidation proposal and all documents and other material relative to the property disposition.

The Government will withhold from your final voucher or vouchers such sums as it deems necessary to cover its equity in property, until you have rendered your final report and final account, and the final auditing and settlement of the contract has been made.

Very truly yours,

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

JWT:jp
cc Subject
Chron
Storms
Faick
Koschmann
Chairman, Op. Comm. (3)
Townsend

File Copy
Surname
Hiswell
Chapman
Johnson
Hedges
Kulsgaard
Selfridge

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

DEC - 3 1954

Mr. Lloyd C. White, Manager
Yuma Metals, Inc.
1005 Oxford Street
Berkeley 7, California

Re: Docket No. DMEA-1303 (Lead-Zinc)
Yuma Metals, Inc.
Red Cloud Mine
Yuma County, Arizona
Contract No. Idm-E371

Dear Mr. White:

The Government has given much time and serious study to your application of September 7, 1954 for a change in the exploration work under the above-cited contract.

A number of engineers and geologists have reviewed your application for an amended program, as well as the progress made under the present program, and unanimously conclude that the chances of the proposed work resulting in a significant discovery of ore that would make a substantial contribution to the National Defense are unfavorable. Consequently, I am unable to approve the new program which you presented. It also appears from your reports and reports of Government engineers that the chances of a successful discovery under the old program are very remote.

Amendment No. 3 to the contract issued under date of June 25, 1954, provided at your request that operation of the project would be recessed from May 11, 1954 to a date not later than October 11, 1954. Paragraph 4 of this amendment stipulated that if the work was not resumed on or before October 11, 1954, the project would be automatically terminated. Since the work was not started on the required date the contract was automatically terminated.

R.C.S.

Article 12 of the contract provides that "Upon the completion of the project or any termination of the contract the Operator shall dispose of any remaining materials, supplies, facilities, buildings, fixtures, and equipment in which the Government has an interest, for the joint account of the Operator and the Government in the proportion of their respective interests; shall render to the Government a full and final accounting of his operations under the contract and his expenditures of money; and shall pay to the Government its pro rata share of any money remaining."

The Government requests that your Company dispose of any joint property, make a final accounting of the operation and submit a final report in compliance with Article 12. The Government will not be able to participate in any project costs except those necessary to comply with the requirement of Article 12 of the contract.

I sincerely regret that the results of the work done on this project were so unpromising and that further participation by the Government is not warranted.

Sincerely yours,

C. O. Mittendorf

Administrator

WRGriswold
FEJohnson
JLChambers/er 12/1/54

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
F. E. Johnson
J. L. Chambers
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Region IV (2)
Chron.

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

Firswold

Mr. Lloyd C. White, Manager,
Yuma Metals, Inc.,
1005 Oxford Street,
Berkeley 7, California

Re: Docket No. DMEA-1303 (Lead-Zinc)
Yuma Metals, Inc.,
Red Cloud Mine
Yuma County, Arizona
Contract No. Idm-K371

Dear Mr. White:

Your attention is called to the fact that by the provisions of section 4 of Amendment No. 3, the subject contract was terminated as of October 11, 1954, on account of your failure to resume operations after the period allowed for suspension. In calling this to your attention, we are not unmindful of your letter of September 7 to Mr. Walter R. Storms at Tuscon, Arizona, in which you say: "We wish to activate our contract starting on October 10, 1954. . .", and then set forth some proposed amendments to the contract. The Government was unable to come to a conclusion with respect thereto before the time fixed for the resumption of work under provisions of Amendment No. 3 had elapsed.

The Government has now come to the conclusion that your proposed program for resuming the work on a changed basis is not sufficiently promising to justify the Government in participating therein. In view of the fact that the contract was automatically terminated under the provisions of Amendment 3 as of October 11, 1954, it is not now deemed necessary to give you any notice of termination, which the Government might do under the provisions of Article 12 of the contract form, on the ground either of failure to prosecute operations as required or on the ground that in the opinion of the Government further operations are not justified.

It is requested that you comply promptly with the provisions of the Contract and with Amendment No. 3 with

DMEA Docket

regard to termination, winding-up, accounting, and disposal of property in which the Government has an interest. You will also notice that by the provisions of Amendment No. 3 the Government retains a royalty claim against any production from land covered by the Contract.

Very truly yours,

Administrator,
Defense Minerals Exploration
Administration

Hofflund

JLHofflund:gjb
Copy to: Solicitor's Docket
DMEA Docket
Field Team (2)
Adm. Reading File
Division Copy
T. H. Killagaard
O. M. Bishop
J. L. Hofflund
Chron. File
Pending File

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

November 22, 1954

Memorandum

To: The Administrator, DMEA
Attention: Mr. Griswold

From: Acting Assistant Solicitor, Defense Minerals

Subject: Contract Idm-F371, Docket No. DMEA-1303 (lead-zinc), Yuma Metals, Inc., Red Cloud Mine, Yuma County, Arizona

The attached letter for your signature to the Operator is in lieu of a notice of termination that was submitted here by Mr. Griswold for our approval. I do not believe that a notice of termination is suitable in this case, and that we should stand by the automatic termination provided for by Amendment No. 3 and the pseudo certification contained therein.

I find in the official docket nothing to indicate that Amendment No. 3, dated June 25, 1954, has been executed by the parties and copies delivered. Therefore, this letter to the Operator should go through the field team to check this matter unless there is some certainty as to the status of the contract with respect to Amendment No. 3. This illustrates the difficulty of dealing with dockets which are not so maintained that we can be sure what the effective contract documents may be.

J. L. Hoflund

J. L. Hoflund
Acting Assistant Solicitor,
Defense Minerals

JLHofflund:gjb
Copy to: Solicitor's Docket
DMEA Docket
Division Copy
J. L. Hofflund
Chron. Files

File Copy
Surname
Transmitted

500

November 17, 1954

Memorandum

To: The Administrator

From: Chief, Base Metals Division

Subject: Docket No. DMEA-1303, Contract Idm-E371, Yuma Metals, Inc., Red Cloud Mine, Yuma County, Arizona

The attached notice is both a termination of the project and a denial of a request for a change in work program. The project has been idle since May 11 of this year. Amendment No. 3, dated June 25, provides for a recess period of from May 11 to October 11, and contains a provision that unless work is resumed by the latter date the contract thereby is terminated.

However, the Operator submitted his request for a revision of work program on September 7, stating it wished to reactivate its contract on October 10, therefore, it would not seem proper for us to terminiate the contract due to non-resumption of work by the October 11 date. In such a case, the company might properly maintain that it was ready to proceed, but was delayed by us during the period in which we were considering its new request.

The mine in question is an old property, during its lifetime there has been a total production of something under half a million dollars of oxidized silver-lead ores. The present project called for diamond drilling to explore for the possible existence of sulphide ores below the 500 level. 2451 feet of diamond drilling was done, in 7 drill holes. Results were completely negative, no sulphides were encountered, likewise the oxidized vein materials intersected were of little value.

The Operator now proposes to quit his sulphide program and do 1075 feet of drifting and crosscutting, plus 800 feet of diamond drilling in the oxide zone. However, there is an unanimity of opinion among the reviewers that any ore which might be found by such a program would be of small extent, would be of a sub-marginal nature, and metallurgically undesirable. The lead and silver in oxide ores can often be recovered, with indifferent results (probable extraction 70%) but the oxide zinc is non-recoverable.

All in all, it seems that work done so far has effectively proven the non-existence of a sulphide ore zone of any significance and that the oxide zone presents little opportunity.

W. R. Griswold

W. R. Griswold

WRG/er
Copy to: Docket
Base Metals
Chron.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 10 1954

November 8, 1954

Memorandum

To: W. R. Griswold, DMEA

From: O. M. Bishop, USBM (Reviewed by Walter E. Lewis)

Subject: Docket No. DMEA-1303 (Lead-Zinc) Contract Idm-E371, Yuma Metals, Inc., Red Cloud Mine, Yuma County, Arizona. Review of amendment to contract requested September 7, 1954, and of field team report on the amendment

We have reviewed the subject amendment, field team report, and the attached correspondence, and concur with the field team's recommendation that the amendment be denied and the contract terminated.

The applicant proposes further exploration of the oxidized area of the Red Cloud vein above the 500-foot level. The proposal is as follows:

1. 1,000 feet of drifting and 75 feet of cross-cutting on the 500-, 420-, and 500-foot levels.

2. 4 diamond drill holes from the surface to a depth of 200 feet to cross the Red Cloud fault zone.

The proposal is for exploration in the oxidized zone on which we recommended denial May 23, 1952 in a memorandum from Bishop to Moulds. We still believe such work is undesirable for the same reasons, namely, that the ores are still difficult to process, sub-marginal in character, and the work would not result in any significant discovery of ore that would amount to substantial contribution to national defense. There has been no new evidence offered to change our position.

We also concur with the field team recommendation that the contract be terminated. The drilling done under the project to date had as its objective exploration of the vein below the 500-foot level, down dip from the secondary enriched oresto test for the presence and grade of primary ores. A total of 7 holes were drilled from the hanging wall crosscut off the 500-foot level. All holes, except No. 6,

cut the Red Cloud vein (fault zone) below the 500-foot level, and each found oxidized mineralization of non-economic grade in a gangue of quartz, calcite, and barite. Although core recovery was not good, the data available indicates the ore zone is essentially barren at the points tested, and the oxidization continues to at least 980 feet below the surface.

There is no apparent justification for further drilling at depth, and certainly no justification for exploration above the 500-foot level in the oxidized zone under the DMEA program.

O. M. Bishop

O. M. Bishop

Copy to: Minerals Division
Edward L. Newcomb, Room 5227
O. M. Bishop
Files

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 29 1954

October 27, 1954

Re: DMEA-1303
Yuma Metals Inc.
(Red Cloud Mine)
Yuma Co., Arizona
Proposed Amendment
037,025 - Lead-Zing

Memorandum

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

From: E. L. Newcomb, U. S. Geological Survey

Subject: Review of Field Team report on proposed amendment

The applicant has proposed further exploration of the oxidized Red Cloud vein above the 500 level. His proposal is as follows:

1) Drill 4 holes from the surface to a depth of 200 feet.

2) Drive 1,000 feet of drifts and 75 feet of crosscuts on the 270-, 420-, and 500-foot levels.

The new work is planned to explore and develop oxidized ore that may exist along the Red Cloud vein (a fault zone).

Under terms of DMEA contract Idm-E371, a total of 2451 feet of diamond drilling was completed. All drilling was from the 500-level and the objective of the work was to test for a possible sulfide zone below the 500-level. The results from drilling 7 holes indicated oxidation extends at least to a depth of 987 feet. No sulfide minerals were encountered in any of the holes. J. N. Faick, Survey geologist, believes the Red Cloud ore deposit bottoms near the 500-level since the recent drilling disclosed only small amounts of low grade or barren vein below the 500-level. The present evidence strongly suggests this conclusion may be valid.

There is no new data which indicates that exploration above the 500-level is warranted. Mr. Mittendorf's letter dated October 13, 1952 to Mr. Luke Walker is still appropriate as an answer to the applicant's request for exploration assistance above the 500-level to develop submarginal oxidized ores.

The case against the proposed amendment is very adequately developed and presented in the Field Team report. The only reasonable objective of exploration on the Red Cloud vein was to test for a sulfide zone below the 500-level. This possibility has been tested to a depth of about 1,000 feet without success.

Inasmuch as a significant amount of oxidized ore is unlikely to be found and because it is impossible or impractical to recover strategic metals from this submarginal oxidized lead-silver deposit, I recommend the proposed amendment be denied.

E. L. Newcomb

E. L. Newcomb

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 18 1954

224 New Customhouse
Denver 2, Colorado

October 13, 1954

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 1303 (Lead-Zinc), Contract Idm-E371, Yuma Metals Inc., Red Cloud Lead-Zinc Mine, Yuma County, Arizona

Enclosed is the following material relative to an amendment to the subject contract:

1. Four sets of data consisting of the original and three copies of (a) Letter dated September 7, 1954 from the operator with attached map.

(b) Memorandum dated September 30, 1954 from William R. Hardwick, Tucson, Arizona, with attached map.

(c) Memorandum dated October 1, 1954, transmitting the material under (a) and (b) above.

2. Original and three copies of a memorandum from J. N. Faick, Geologist, U.S. Geological Survey, Tucson, Arizona, dated October 5, 1954.

The operator requests an amendment to the contract to authorize 1075 feet of drifting and crosscutting and 800 feet of diamond drilling at a total estimated cost of $37,025.00. The examining engineer and geologist in their reports, for reasons stated, recommend that further Government participation in the costs of exploration on this project be denied and that the contract be terminated, in which this office fully concurs.

Resolving of matters of the above nature is not within the authority delegated to this office therefore the matter is forwarded for your consideration and appropriate action.

W H King
W. H. King

Enclosures

Mining Division
Date Rec'd.

OCT 4 - 1954

BUREAU OF MINES
Denver, Colorado
TUCSON, ARIZONA

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Defense Minerals Administration
RECEIVED
OCT 18 1954

SOUTHWEST EXPERIMENT STATION
Box 4097
UNIVERSITY STATION

October 1, 1954

Memorandum

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

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

Subject : Proposed Amendment, DMEA Contract Idm-E371, Docket DMA-1303X, Yuma Metals, Inc., Red Cloud Lead-Zinc Mine, Silver Mining District, Yuma County, Ariz.

Enclosed in sextuplicate are:

(1) Request from Yuma Metals, Inc., for an amendment to Exploration Project Contract No. Idm-E371 so drifting and drilling may be done in the oxidized zone at the Red Cloud mine;

(2) Bureau of Mines engineer's recommendations.

Also enclosed are three extra copies of our engineer's report. A separate report will be submitted by the Geological Survey.

Contract Idm-E371 was signed on December 3, 1952 for the purpose of exploring the Red Cloud vein for sulphide minerals below the 500-foot level. The company's original application had proposed drifting in the oxidized zone, but this request was refused by the DMEA Administrator. Over 2,000 feet of diamond drill holes were drilled below the 500-foot level without finding sulphide ore. The company now requests permission to do work in the oxide zone.

Several tens of thousands of tons of oxidized lead-zinc-silver ore have been developed above the 500-foot level in the oxide zone. However, this ore seems only submarginal as no method has been perfected to date to successfully concentrate it. Metallurgical tests by both the Arizona Bureau of Mines and the U. S. Bureau of Mines have indicated that only small quantities of the contained metals can be recovered from this oxidized material.

CC W. H. King (8)
J. N. Faick
DMA-1303X (Contract)
DF

WRStorms:frj

As a substantial amount of oxidized submarginal ore has been developed already at the Red Cloud mine, further exploration work to discover additional tonnages of similar ore seems unwarranted. Therefore, I recommend that this request for an amendment to do drifting and drilling in the oxidized zone be denied and the contract be terminated.

Walter R. Storms

Walter R. Storms

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

SOUTHWEST EXPERIMENT STATION
Box 4097
UNIVERSITY STATION

TUCSON, ARIZONA

September 30, 1954

Memorandum

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

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

Subject : Proposed Amendment to Contract Idm-E371, Docket DMA-1303X, Yuma Metals, Inc., Red Cloud Lead-Zinc Mine, Yuma County, Ariz.

An application for assistance from the Defense Minerals Administration to explore the Red Cloud mine and other properties in the Silver mining district of Yuma County, Ariz., was submitted by Yuma Metals, Inc., in May 1951. This application proposed two objectives: (1) to explore for the downward extension of the Red Cloud vein below the permanent water level, which was presumed to contain sulfide lead-zinc-silver ore; and (2) to explore for, and block out a large tonnage of oxidized lead-zinc-silver ore in the upper part of the Red Cloud vein, and near-by veins.

The proposed cost of this initial application was $300,000.00. After extensive examination in the field by engineers of the U. S. Bureau of Mines and geologists from the U. S. Geological Survey, C. O. Mittendorf, Administrator, DMEA, wrote to Luke Walker of Yuma Metals, Inc., as follows: "The Field Team report was studied along with all related docket material, by the Base Metals Division of DMEA and the commodity specialists of the Bureau of Mines and the Geological Survey here in Washington, and each prepared a separate report setting forth their conclusions on May 26. The findings of these Divisions were identical, and all considered that the single exploration target which afforded a geologic probability of making a significant discovery was the drilling program proposed below the 500-foot level. It was the unanimous conclusion of the reviewers that the drifting proposed above the 500-foot level would not result in any significant discoveries of ore which could substantially contribute to the national defense. It was recognized that the oxidized ores above the 500-foot level were extremely difficult to process, submarginal in character, and that the salvation of the mine depended wholly upon the probability of finding sulfide ore below the 500-foot level."

CC W. H. King (Orig. & 8)
J. N. Faick
DMA-1303X(Contract)
DF

WRHardwick:frj

A contract (Idm-E371) was prepared which provided for an exploration program at an estimated total cost of $75,000.00 with the Government participating to the extent of 50 percent of the total cost. Exhibit "A", a part of the contract, states as follows: "The purpose of this project is to explore by diamond drilling below the 500 level of the Red Cloud mine for the downward continuations of the Red Cloud vein below the zone of oxidation".

Work under the contract was started on January 12, 1953 and continued intermittently until May 11, 1954, when the 7th diamond drill hole reached a depth of 650 feet. At that time the operator discontinued operations and requested a recess. The cost of the project under the contract before audit is shown by the following:

	Preliminary work	Diamond drilling	Total authorized
Total completed	$14,218.97	$24,510.00	$38,728.97
Government's part	7,109.48	12,255.00	19,364.48
Paid to operator	- - -	- - -	17,864.48
Due operator	- - -	- - -	1,500.00

A total of 2,451 feet of diamond drill hole was completed under the provisions of the contract, and in addition, 280 feet of drilling was completed at the operator's own expense. The results of this drilling are tabulated below:

Hole No.	Total Depth	Cut Vein	Percent Lead	Percent Zinc	Ounces/ton Gold	Ounces/ton Silver
1	144	75- 80 ft.	1.08	2.15	-	7.45
2	158	112-119 ft.	0.22	2.25	-	0.80
3	388	285-296 ft.	0.0	5.72	-	0.80
4	276	244-250 ft.	0.0	1.75	-	0.12
5	280	275-280 ft.				
6	335	No	-	-	-	-
6A	500	Not identified	-	-	-	-
7	650	640-650 ft.	-	-	Tr	0.50

In addition to the assay data above, a small segment of core from hole No. 7 from a depth of 643 to 645 feet was examined with a microscope by LaMar G. Evans, mineralogist, U. S. Bureau of Mines, Tucson, who reported as follows: "The drill core appears to represent a section of vein material in which partly replaced fragments of calcite are included. A part of the vein is composed of coarse-grained intergrowths of interlocking quartz and acicular barite crystals while other areas show a much finer-grained intergrowth of quartz, barite, and limonite".

The vertical depth at which drill hole number 7 penetrated the vein was 987 feet below the surface and approximately 485 feet below the permanent water level. Of the five holes which did cut the vein at varying depths, not one indicated sulfide ore minerals. Furthermore, the assay results indicate a rapid decrease in the value of the oxide minerals below permanent water level.

From an analysis of the above facts, together with the reports of the Geological Survey, it is the opinion of the undersigned that no further exploration for sulfide ore is justified. Furthermore, it appears that the purpose of the contract has been accomplished and it is recommended that the contract be terminated at the end of the presently authorized recess period (October 10,1954).

On September 7, 1954 (received in Tucson office of U. S. Bureau of Mines on September 10, 1954), Yuma Metals, Inc. requested an amendment to the existing contract to explore for oxidized ore. While it is believed that the work proposed does not come within the intent or the expressed purpose of the original contract it is discussed briefly.

The operator proposes the following work which is shown in Figure 1 of this report:

Location		Distance
270-foot level	- extend existing drift northerly	150 feet
270-foot level	- extend existing drift southerly	250 feet
420-foot level	- extend existing drift northerly	150 feet
420-foot level	- extend existing drift southerly	300 feet
500-foot level	- extend existing drift northerly	150 feet
	Total drifting	1,000 feet
	Crosscuts to footwall monzonite	75 feet
	Total drifting and crosscutting	1,075 feet

In addition to drifting, the operator proposes four short diamond drill holes from the surface to explore for new oxide ore bodies. A total of 800 feet of drilling is proposed.

The proposed cost of this program is as follows:

1,075 feet of drifting and crosscutting @ $27.00 per foot	$29,025.00
800 feet of diamond drilling @ $10.00 per foot	8,000.00
Total estimated cost	$37,025.00

These costs seem reasonable.

The proposed location of the drill holes is shown on the map submitted by the operator with his application. The proposed drifting is shown on the attached sketch (figure 1).

The expressed purpose of the proposed additional work is to block out more oxide lead-silver ore. The operator states that 30,000 to 40,000 tons of oxidized ore is now developed. This statement is confirmed by an earlier report by the U. S. Bureau of Mines which stated that the reserves predicated on ore outlines shown on the map above the 420 level, amounted to 31,680 tons with a grade from 4 to 6 percent lead, and 7 to 9 ounces silver by visual estimate. The map mentioned above was made by W. W. McDougall.

Lincoln A. Stewart, mining engineer, U. S. Bureau of Mines, postulated a possible 200,000 tons of ore having a grade similar to that indicated above, in the initial DMA examination report on this project. There are other mines in the district, notably the Black Rock mine, one mile west of the Red Cloud mine, and the Clip mine, five miles north of the Red Cloud mine, that are known to have a substantial tonnage of similar ore.

The operator has made no estimate of the ore that it expects to discover by the proposed work. The presently indicated tonnage reasonably might be expected to be doubled by wisely directed exploration. The program proposed by the operator could be expected to discover approximately 10,000 tons of ore that would be similar in grade to the present reserve.

Before the proposed drifting could be accomplished, the shaft would have to be timbered and existing drifts cleaned and repaired, track placed in existing drifts, and the headframe repaired. There is a small electric hoist and a compressor on the property that could be used for the proposed project.

The proposed drifting has been planned so that very little additional development work would be required to mine the ore discovered by the project and it is very possible that most of the 31,000 tons of indicated ore in the existing reserves could be mined through the drifts to be opened by this proposed project. This would indicate that the real purpose of the operator might be more development than exploration.

Using as a basis, a mill recovery of 60 percent for gold and silver and 80 percent for lead, and using prices of $32.32 per ounce for gold, $0.89 per ounce for 90 percent of the silver, and $0.19 per pound for lead, Lincoln A. Stewart estimated a possible operating profit of $1.00 per ton before consideration of depreciation and amortization. It is obvious that at the present price of $0.14 75 per pound for lead, the return would not equal operating costs.

The ore in the Red Cloud mine and other mines in the Silver district has been known to exist since 1890. Numerous attempts have been made to market this ore and none have been successful. The long distance to market and the very low recovery from any known method of concentration has made this ore uneconomical. However, the large contained value in minerals has often provided a base for extensive promotional enterprises.

In view of the very questionable value of the oxidized ore that would be discovered by the proposed project, it is recommended that the operator's requested amendment be denied and the contract be terminated. It would appear that any further money to be spent on the mines in this district should be spent in an attempt to work out a metallurgical process by which existing ore reserves could be successfully treated to recover the zinc.

William R. Hardwick

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

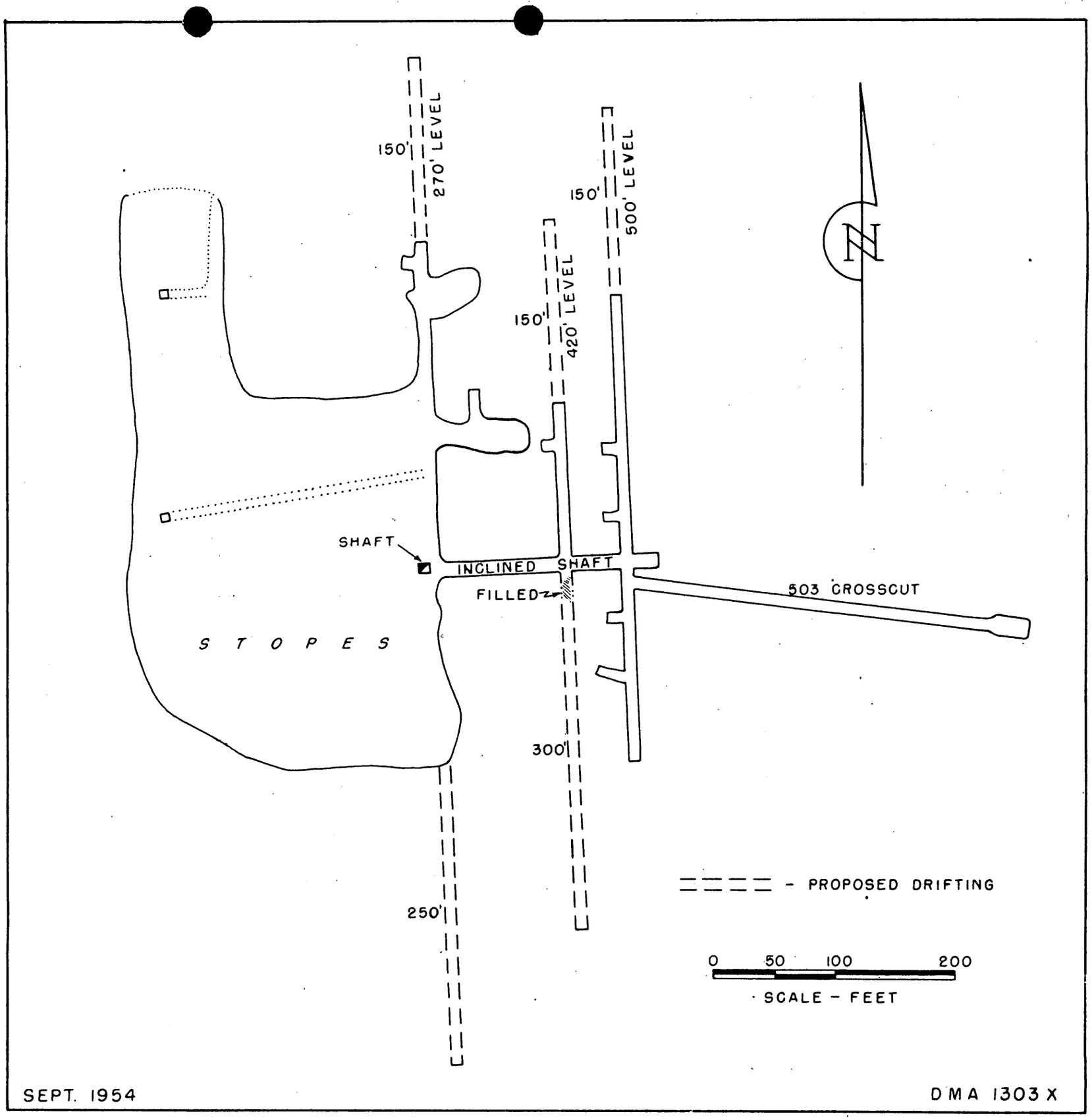

FIGURE I. - PLAN - RED CLOUD MINE - SHOWING PROPOSED DRIFTING

Berkeley 7, California
September 7, 1954
1005 Oxford Street

U. S. BUREAU OF MINES
MINING DIVISION
SEP 10 1954
TUCSON, ARIZONA

Mr. Walter R. Storms, Chief
Mining Methods Branch
Mining Division, Region IV
Bureau of Mines
P. O. Box 4097
Tucson, Arizona

Re: DMEA Contract Idm-371
Docket DMA-1303X
Lead-Zinc Contract
Yuma Metals, Inc.
Yuma County, Arizona

Dear Mr. Storms:-

AMENDMENT TO CONTRACT

We wish to activate our contract starting on October 10, 1954, along the following lines:

Reference: Geologic Map of Red Cloud Area
May 1925 by Oscar H. Hershey, Scale 1" = 200'

(1) Drill four vertical surface diamond drill holes of approximately 200 foot depth each as shown on the above map. These holes are located to intersect the Red Cloud fault and penetrate the footwall monzonite. (Objective to locate oxidized ore shoots, similar to original Red Cloud ore shoot, as recommended by State Geologist Eldred D. Wilson).

(2) Exploratory drifting in Red Cloud Mine as follows: (See above map for location)

Location	Distance
270 foot level - Extend existing drift northerly	150 feet
270 " " " " " southerly	250 feet
420 foot level - Extend existing drift northerly	150 feet
420 " " " " " southerly	300 feet
500 foot level - Extend existing drift northerly	150 feet
Total drifting - - - - - - - - - - - - - -	1,000 feet
Total cross cuts to footwall monzonite -	75 "

SUMMARY FINANCIAL REQUIREMENTS

(1)	800 feet diamond drilling @ $10.00	$ 8,000.00
(2)	1,075 feet drifting and crosscuts @ $27.00	29,025.00
	Total -	$37,025.00
	Cost of Contract to date - - - - - - - - - -	$35,418.97
	Total Cost Authorized by Contract - - - -	$75,000.00

The above program will necessitate laying mine track and cleaning out drifts in the Red Cloud Mine before exploratory drifting is started. Yuma Metals, Inc., is prepared to absorb these costs.

RECAPITULATION

As for expenditures and government participation in the Exploration Contract IDM-E371 the halfway point has about been reached.

A total of 2,731 feet was drilled in 7 diamond drill holes from Stations Nos. 1 and 2 in the 503 crosscut.

Hole No. 3 northerly from Station No. 1 attained a depth of 318 feet below the level and was in some calcite when the hole was lost. The hole passed through the footwall zinc vein and an eleven foot section of core assayed 5.7% zinc.

The other northerly hole No. 7 was stopped on account of bad ground at 650 foot depth, the bottom being 485 feet vertically below the collar of the hole. It was our hope that had this hole been extended 300 to 400 feet further the sulphide zone would have been reached. In my opinion the underground drilling to date has been inconclusive.

Although the drilling to date has not found any commercial ore, a look at the accompanying map will show what a small section of the vein has been prospected.

The next stage of our exploration project points toward the finding of enough oxidized lead silver ore to justify the building of a flotation mill.

We have an estimated 30,000 to 40,000 tons of developed oxidized ore in the Red Cloud Mine. We can reasonably expect the above proposed program will find more oxide ore.

We are supported in this opinion by Mr. Tom Lyon, DMA, in his letter to us under date of August 15, 1951.

Also, by the Bureau's Geologist John N. Faick and your Engineer William R. Hardwick.

We can also point to the milling grade ore which was developed in the Papago Claims along the Red Cloud fault some 3,000 feet south of the Red Cloud Mine. I sampled these workings in 1925, and two years ago sent a copy of my assay map to Mr. Eldred D. Wilson, and he included a summary in Arizona Bulletin of Mines #158 - Part II, Page 96.

On the 500 foot level there is an ore shoot 40 feet long by at least 5 feet wide and it is of shipping grade. This was not included in the above developed ore reserves. The A. S. & R. ore buyer at Tucson figured this high grade ore if shipped direct would net us over $20.00 per ton F.o.b. Blaisdell Station on the S. P. R. R.

We own a considerable portion of the necessary equipment for a 100 ton flotation mill, including the power plant.

Metallurgical tests made during the past three years indicate that a passable recovery can be made on our oxidized ores.

In conclusion, the property is equipped to carry out the above program and we believe that the only way for both the government and Yuma Metals, Inc., to salvage their investment and contribute to the development of the Silver District is to proceed along the above lines.

Very truly yours,

YUMA METALS, INC.

By: Lloyd C. White

Lloyd C. White, Mgr.

1-Map Enclosure

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

BOX 4126 University Station
Tucson, Arizona

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 18 1954

October 5, 1954

Memorandum

To: A. H. Koschmann E.N.H. for A.H.K.

From: J. N. Faick

Subject: Memorandum Report Recommending Denial of Operators' Proposed Amendment and Recommending Termination of DMEA Contract Idm. E371, Docket DMA 1303X, Yuma Metals, Inc., Yuma County, Arizona

INTRODUCTION

Under date line of September 7, 1954, Mr. L. C. White, Manager of the Yuma Metals, Inc., submitted a request to reactivate exploration of the Red Cloud mine, Yuma County, Arizona, by proposing an amendment to the contract Idm-E371, DMA 1303X. Mr. White's latest exploration proposals are as follows:

1. Drill 4 vertical diamond drill holes from the surface to a depth of about 200 feet, which holes, according to White, are intended "to locate oxidized ore shoots similar to original Red Cloud ore shoot," and

2. Drive 1,000 feet of drifts and 75 feet of crosscuts on the 270,420 and 500-foot levels, presumably for the purpose of exploring for other bodies of oxidized ore that may be present along the strike of the Red Cloud fault.

Part 1 above first was proposed by White in his narrative report for April and May 1954, and Part 2 above is a slight modification of proposed drifting and crosscutting described by Stewart and Griswold 1/ and subsequently denied by DMEA

1/ Engineering Report, DMA 1303X, Yuma Metals, Inc., Yuma County, Arizona, p. 15, 16, 22-23, March 1952.

It is noteworthy that the operators have now abandoned their plans of exploring for sulfide ore below the deepest workings (500 level) on the Red Cloud vein, and are now proposing to explore for additional oxidized ore by drifting from the existing mine workings and by drilling shallow holes from the surface.

The report which follows will emphasize the geological reasons why Government participation in exploration of the Red Cloud mine, either for oxidized ore or for sulphide ore, is not justified, and will present the reasons why the project should be terminated.

GEOLOGY

The Red Cloud mine is credited with a production of 1,800,000 pounds of lead and 320,000 ounces of silver, having a total value of $430,000. Most of this production was made during the first 10 years following its discovery in 1879, but the property has been idle most of the time since 1889, and many attempts to resume operations at the mine have met with failure. The mine is developed to the 500-foot level.

The Red Cloud ore deposit is localized along a prominent north-northwesterly trending fault zone which dips from about 35 to 60 degrees northeast. Granite occupies the footwall side of the fault and the hanging-wall side is mostly andesite breccia, tuff and other volcanic material, but at the 500 level some granite, brecciated granite and flow rocks are found on the hanging-wall and in a crosscut east of the vein.

The deposit, as revealed by mining, ranges in width from about $1\frac{1}{2}$ to 40 feet and is reported to average about 20 feet wide; however, minable ore is only $1\frac{1}{2}$ to 6 feet wide in many parts of the

mine. The strike length apparently is about 600 feet, but the deposit has been mined for only about 400 feet along the strike. The vein contained two principal ore shoots, each from 1½ to 6 feet wide, near or adjacent to the hanging-wall. The northern shoot was from 25 to 100 feet long by 410 feet deep, and the southern from 35 to 110 feet long by 300 feet deep. Apparently mining ceased when the ore became too low in grade to mine profitably. The vein exposed by the 420 and 500-foot levels has not been mined.

The vein is described by Wilson[1/] as follows:

> "The vein is made up chiefly of limonite, hematite, quartz, fluorite, and calcite, together with considerable amounts of gouge and brecciated wall rocks, all more or less stained by pyrolusite. The quartz forms irregular, finely crystalline, vuggy masses which in places are cut by veinlets or coarser-grained quartz. Commonly the quartz is interbanded with gray to purple fluorite which ranges in texture from dense to crystals 1/8 inch in diameter. The calcite is mostly a coarsely crystalline, dark-gray manganiferous variety, but some later white calcite also occurs. The limonite and hematite, which occupies cavities and vugs within the other gangue minerals, are locally intermingled with irregular, cellular masses and vug-linings of cerussite, smithsonite, willemite, pyrolusite, vanadinite, wulfenite, and malachite. In places there are nodules of argentiferous galena, partly altered to black anglesite and pale-yellowish cerussite. Cerargyrite is present as small disseminated masses and streaks within the oxidized minerals."

Acicular barite is abundant in the vein, and is especially evident in the lower workings of the mine.

1/ Wilson, E.D., Arizona Zinc and Lead Deposits, Part II, Arizona Bur. of Mines Bull., 158, p. 91, 1951.

The original primary ore minerals in the vein are almost entirely converted to oxides by processes of supergene alteration, and residual grains, nuggets or pods of galena are the only sulfides that have been spared from the oxidation process. The primary zinc minerals have been oxidized to such an extent that all traces of them have been destroyed and apparently all the primary silver minerals were converted to cerargyrite. Processes of oxidation have extended to considerable depths and evidence of it is obtained in the diamond drill holes extending below 500 level.

An assay map included with the original report indicates that the lead and silver content of the ore decreases as greater depth is reached in the deposit and there is slight evidence to indicate that the amount of zinc [1/] increases and reaches a maximum at about the 500 level, below which level there is a marked decrease in the metal content in the vein material.

INTERPRETATION OF THE GEOLOGY

The structure, texture and mineralogy of this deposit indicates that it has formed by dumping or impetuous deposition of the vein materials at slightly elevated temperatures and at relatively shallow depths. The deposit is epithermal, a type that is often associated with Tertiary volcanic activity in the Western United States. A noteworthy feature of deposits of this type is the low ratio of metallic minerals to gangue minerals. Only in exceptional cases do these epithermal deposits yield significant amounts of base metals such as lead, copper or zinc; however, they frequently are important sources of precious metals.

1/For a description of the zinc content of this ore see Stewart, L. A. and Griswold, W.T., Engineering Report, DMA 1303X, p. 7, 1952.

Another noteworthy feature is that this type of deposit seldom extends more than a few hundred feet below the outcrop. Normally deposits of the epithermal type like the Redcloud, often contain rich ores at or near the surface, and the values diminish with increasing depth and at depths of a few hundred feet the veins change into worthless gangue minerals or barren country rock, but seldom grade into valuable base metal deposits.

This writer is of the opinion that the mineralogical bottom and also the structural bottom of the Red Cloud ore deposit must lie at or near the 500-foot level, and that only small low grade or barren "roots" extend far below this level. This interpretation is supported by the recently completed diamond drill holes, of which 6 holes penetrated relatively small amounts of low-grade or barren vein material, below the 500-foot level.

POSSIBLE EXPLORATION FOR OXIDIZED ORE

The question which is brought forth by the operators' new proposed amendment is whether or not it is within the policy of DMEA to explore for low-grade, submarginal, oxidized ore which would yield relatively small amounts of lead and silver, but from which zinc could not be recovered. Apparently this question has been answered by Mr. Mittendorf who previously had requested the Base Metal Division of DMEA and the commodity specialists of the Bureau of Mines and the Geological Survey to review the field team reports along with all related docket material. In a letter dated October 13, 1952 to Mr. Luke Walker, Mr.

Mittendorf advised the operators of his findings as follows:

> "It was the unanimous conclusion of the reviewers that the drifting proposed above the 500-foot level would not result in any significant discoveries of ore which could substantially contribute to the national defense. It was recognized that the oxidized ores above the 500-foot level were extremely difficult to process, submarginal in character, and that the salvation of the mine depended wholly upon the probability of finding sulfide ore below the 500-foot level."

An abundance of engineering, metallurgical and geological data is available to support Mr. Mittendorf's conclusions.

It is practical to recover lead and silver from oxidized ores like those existing at the Red Cloud mine, but feasible methods for recovering the zinc have not been found. Metallurgical tests made by the Arizona State Bureau of Mines and the U.S.Bureau of Mines, and several other qualified organizations, on Red Cloud ore indicate that at present there is no practical method by which a marketable zinc concentrate can be made from this ore. Apparently this fact is recognized by A. L. Poarch[1/] who, in a letter dated June 11, 1952 to Yuma Metals, Inc., stated as follows:

> "I suggest that your mill be designed to store the zinc values in the tails."

Thus there is no way in which Government participation in exploration for oxidized ores can be justified; therefore, the recently proposed amendment to the contract should be denied.

1/ "Properties of Yuma Metals, Inc.,"p. 29, Private Publication published about June 1952.

RESULTS OF EXPLORATION FOR SULFIDE ORE

Under terms of the contract 2451 feet of diamond drill hole was completed, and an additional 280 feet of hole was drilled at the expense of the operators. All drilling was done from a hanging-wall crosscut of the 500-foot level and was intended to test extensions of the vein zone below the 500-foot level.

Of the 7 holes drilled, only No. 6 failed to reach the vein. Hole No. 6 was lost before it reached the vein, hole No. 5 was lost in the vein, and in hole 6A the presence of calcite and especially barite are definite evidence that a zone of vein-type mineralization was penetrated. Hole No. 7 was undoubtedly stopped in the vein or immediately below it, although Mr. White maintains that the hole did not reach the vein. It is significant that the operators were sufficiently interested in the core of hole No. 7 to remove the core from interval 625 to 650 feet and have it assayed; the analysis indicating about 0.5 percent zinc, as is shown in Table I. Fortunately W. H. Hardwick, U.S. Bureau of Mines made a generalized log of this mineralized core before it was removed and a small piece of it was submitted to the U.S. Bureau of Mines laboratory for further study. Hardwick's generalized log of the mineralized interval in hole No. 7 is shown in Table I.

TABLE I

Hole No. 7

0-600	Not logged.
600-625	Granite.
625-630	Vein material. Fine grained quartz, barite, and calcite. Cavities and vugs filled with limonite and hematite. Bladed barite and banding quite prominent.
630-635	Medium dark-grained crystalline rock, dark and light minerals about equal, probably diorite.
635-640	Vein material, like 625-630 interval.
640-641	Diorite breccia.
641-643	Dark diorite, medium grained.
643-650	Vein, banding prominent.

This log shows conclusively that hole No. 7 penetrated into the vein zone although it may not have passed entirely through it. This vein penetration is approximately 987 feet below the surface, or 485 feet below the permanent water level, and the core shows definitely that the vein is completely oxidized to this depth. The core contained no lead, and only trace amounts of zinc and silver (See assays in Table III), which is additional proof that sulfide ores do not exist in the deeper part of the Red Cloud vein. Significant amounts of sulfide ores were probably not deposited below the 500-foot level. A sample of core representing the interval 443-445 feet was studied by LaMar G. Evans, Petrographer, U. S. Bureau of Mines. Evans described the ore as follows:

> "Microscopic examination of thin sections reveals that this drill core sample is composed essentially of quartz, barite, limonite, calcite and hematite. Spectroscopic tests show trace amounts of zinc and manganese.
>
> "The drill core appears to represent a section of vein material in which partly replaced fragments of calcite are included. A part of the vein is composed of coarse-grained intergrowths of interlocking quartz and acicular barite crystals while other areas show a much finer-grained intergrowth of quartz, barite and limonite."

Generalized logs of the holes as shown by data submitted by Mr. White, and data obtained during periodic examinations by DMEA examiners are given in Table II.

TABLE II

GENERALIZED SUMMARY OF APPLICANT'S LOGS

Hole No.	Bearing	Inclination	Interval	Description	Remarks
1	N75°W	-45°	0-70	Mixed tuff and granitic rocks	
			70-85	Vein, calcite and zinc	No sulfides
			85-132	Siliceous granitic rocks with traces of calcite and zinc.	
			132-144		Traces of calcite and zinc. See assays Table III.
2	Vertical	Vertical	0-90	Granite and Monzonite	
			90-102	Mixed granite and tuff	
			102-105	Red Cloud Fault	
			105-124	Vein material. Calcite, quartz, traces of zinc.	See assay in Table III
			124-144	Siliceous granitic rocks, diorite	
3	Vertical	Vertical	0-85	Granite-Monzonite	
			85-102	Tuff	
			102-126	Vein, quartz, calcite	Vuggy
			126-158	Mixed granitic rock and diabase	
			158-266	Granite	
			266-327	Mixed granitic rock and tuff	See assay in Table III
			327-342	Vein, in tuff, Quartz, calcite	Vuggy
4	S75W	-70°	0-97	Tuff	
			97-107	No core	Fault?
			107-143	Monzonite	
			143-244	Intermixed monzonite, tuff and dike rock	
			244-258	Vein calcite	See assays Table III
			258-276	Diorite	
5	S60W	-70°	0-134	Tuff	
			134-265	Granitic Rocks	
			265-275	Vein; zinc, calcite	No sulfides. See assays Table III.
			275-280	Vein	Hole lost in vein at 280 feet. Government participation denied.

Hole No.	Bearing	Inclination	Interval	Description	Remarks
6	N60E	-82°	0-193	Tuff	
			193-293	Granite	Brecciated?
			293-335	Monzonite	Hole lost at 335 feet
6A	N60E	-80°	0-413	Tuff	
			413-430	Siliceous dark rock. Diorite?	Calcite and barite reported at 413-416 and 430-441
			430-451	Traces of calcite and barite	Probable vein material
			451-500	Schist and granitic rocks	
7	N10°W	-48°	0-415	Tuff	
			415-545	Mixed granite and tuff	
			545-625	Granitic rock	
			625-650	Vein material	See description of vein on page 7. See assays in Table III.

Many analyses of core samples of vein material encountered below the 500-foot level are available. Analyses of a few of the highest grade, and probably the most significant samples are shown in Table III.

TABLE III

Hole No.	Total Depth	Vein Intercept in feet	Percent Lead	Percent Zinc	Ounces Silver/Ton
1	144	75-80	1.08	2.15	7.45
2	158	112-119	0.22	2.25	0.80
3	388	285-296	0.0	5.76	0.80
4	276	244-250	0.0	1.75	0.12
5	280	270-280	-	2.54	-
6	335	no vein	-	-	-
6A	500	not identified	-	-	-
7	650	626-650	-	-	0.50

The results obtained by this drilling indicate that the Red Cloud fault extends at least several hundred feet below the 500-foot level, and that the fault is well mineralized with barite, calcite and quartz but does not contain sulfide ores, nor significant amounts of valuable metals. Whatever sulfides were formerly present in the vein

have been almost entirely destroyed by oxidation. Assays indicate that only insignificant amounts of lead, zinc or silver exist in the vein.

CONCLUSIONS AND RECOMMENDATIONS

A careful study of all the available data pertaining to the Red Cloud mine, and examination of the mine workings and inspection of the drill cores result in the following conclusions:

1. Lead is the only strategic or critical mineral that is present in a recoverable form in the Red Cloud ore.

2. The lead content of the ore is relatively low and decreases appreciably with increasing depth.

3. The zinc in the ore is present in oxidized forms that are not recoverable by today's processes.

4. The dominant characteristics of the Red Cloud vein show that it belongs to the epithermal class, a type of deposit that usually passes into barren worthless gangue materials or altered country rocks at depths seldom greater than a few hundred feet below the outcrop.

5. The 7 holes that the operators drilled below the 500-foot level proved conclusively that the vein zone is essentially barren of ore minerals from the 500-foot level to the greatest depth explored; 987 feet below the surface, and that oxidation extends to this depth.

6. Ore reserves are conservatively estimated at 32,000 tons of oxidized ore, and additional ore of the same type probably would be found by exploration at the Red Cloud mine, and other nearby mines in the same district.

7. It is not to the Government's interest to explore for submarginal oxidized ores from which it is impossible or impractical to recover strategic and critical materials.

8. The main problems to be solved at the Red Cloud mine are those of metallurgy; exploration for additional oxidized ore does not present any difficult or unusual problems.

These conclusions show that additional Government aid in exploration of the Red Cloud Mine is not justified; therefore it is recommended that the operators' recently proposed amendment to the contract be denied and Government aid be terminated.

John N. Faick

J. N. Faick

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

224 New Customhouse
Denver 2, Colorado

August 5, 1954

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 1303X (Lead-Zinc), Contract Idm-E371, Yuma Metals, Inc., Red Cloud Mine, Yuma County, Arizona

Enclosed are the Government, Division, and Docket copies of Amendment No. 3 to Contract Idm-E371 which was prepared in Washington and signed by the Administrator, DMEA, for the Government, to extend the period for completion of the project work from one year and seven months to two years and one month, amends Article 9 of the contract form by substituting the provisions of Annex I attached to and made a part of the amendment, and authorizes a suspension of operations from May 11, 1954 to not later than October 11, 1954. Also enclosed are three sets of data relevant to the amendment.

Copies of the amendment have been given to the operator, the Fiscal Officer, Region IV, and a copy has been retained for our files.

John F. Shaw, for
W. H. King

Enclosures

File Copy
Surname

500

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

Mr. W. H. King, Executive Officer
DMEA Field Team, Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-1303 (Lead-Zinc)
Yuma Metals, Inc.
Red Cloud Mine
Yuma County, Arizona
Contract No. Idm-E371

Dear Mr. King:

Referring to your teletype of June 14, regarding the cited contract, we are enclosing the original and five copies of Amendment No. 3 which are in accord with your recommendations.

Kindly present the amendment to the Operator for signature and distribute the copies in the usual manner. If you are not in agreement with any of the amendment provisions, and any proposed changes should lie beyond the range of your delegated authority, please return all copies to this office with your recommendations.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Enclosures 6

WRGriswold/bjl (6/25/54)

APPROVED:

J. H. Hedges
Member, Bureau of Mines

D. M. Larrabee
Member, Geological Survey

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Bishop
Mr. Gildersleeve
Chron.

File Copy
Surname

500

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

June 17, 1954

Memorandum

To: Acting Asst. Solicitor, DMEA

From: Chief, Base Metals Division

Subject: Docket No. DMEA-1303, Yuma Metals, Inc., Contract No. Idm-E371

Will you kindly prepare an amendment No. 3 to the contract granting a recess from May 11, 1954 to October 11, 1954.

Also please provide that if work is not resumed by such date, the project is automatically terminated and that a pseudo-certification automatically takes effect.

W. R. Griswold

W. R. Griswold

WRGriswold/bjl

Copy to: Docket
Base Metals
Chron.

File Copy
Surname

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

JUN 1 3 1954

WBGriswold/bjl, Rm. 4058, Ext. 3669

TELETYPE

Base Metals Div., DMEA, Interior

XXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXX

14X4401(01) Revolving Fund, Defense Production Act, Interior (allocated Working Fund to Office of the Secretary)

Date:

To: [illegible] King, Executive Officer, DMEA Field Team, Region IV, Denver, Colorado

Reurtt June 14, Docket DMEA-1303, Yuma Metals, Inc., Contract Idm-E371. We shall prepare the necessary amendment for requested extension of recess and completion time here and forward to you.

George C. Selfridge

Chairman, Operating Committee

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals (DMEA)
Mr. Bishop (USBM)
Mr. Gildersleeve (USGS)
Accounts
Chron.

SENT
JUN 16 1954
Clerical Service Section

1303

Mr. George Selfridge
June 16, 1954
4:00 P.M.

DEPARTMENT OF
Defense Minerals
RECEIVED
JUN 17 1954

BUR MINES DN 235 6-16-54

GEORGE C SELFRIDGE

REURTT TODAY, YUMA METALS INC., CONTRACT IDM-E371. WOXXXX WE HAVE BEEN ADVISED WORK WAS SUSPENDED AT COMPLETION OF DRILL HOLE 7 ON MAY 11,1954.

W H KING

Denver, Colo.

JUN 17 8 01 AM '54
BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

Mr. C. O. Mittendorf
June 14, 1954
Mr. Mattendorf service after 4:15

DEPARTMENT OF THE INTERIOR
Defense Liaison Staff
RECEIVED
JUN 15 1954

DN 235 BUREAU MINES 6-14-54 4-06 PM

C O MITTENDORF

RE DOCKET NO. DMEA 1303X, CONTRACT IDM-E371, YUMA METALS, INC. OPERATOR REQUESTS AUTHORIZATION OF FOUR MONTHS RECESS OF OPERATIONS EFFECTIVE JUNE 7, 1954 WHICH WILL INVOLVE A LIKE EXTENSION OF PERIOD FOR COMPLETION OF PROJECT WORK. RECESS REQUESTED TO ENABLE FORMULATION OF PLANS RELATIVE TO BALANCE OF WORK TO BE PERFORMED UNEXXX UNDER THE CONTRACT. PLEASE TELETYPE AUTHORIZATION FOR OUR PREPARATION OF AMENDMENT.

W H KING

Denver, Colo.

JUN 15 8 25 AM '54

BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

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

Department of the Interior
Defense Minerals Administration
RECEIVED
MAR 1 - 1954
DOCKET COPY

224 New Customhouse
Denver 2, Colorado

February 25, 1954

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 1303X (Lead-Zinc), Contract IDM-E371, Yuma Metals, Inc., Red Cloud Mining Claim, Yuma County, Arizona

Enclosed are three photostat copies of an independent contract between Yuma Metals, Inc. and Boyles Bros. Drilling Company for the performance of diamond drilling under the subject contract.

Also enclosed are three copies of the Government's approval of the independent contract and other data relevant to the independent contract.

W. H. King

W. H. King

Enclosures

RECEIVED
MAR 4 - 1954
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

DOCKET COPY
Please surname:

Minerals Administration
RECEIVED
MAR 1 - 1954

224 New Customhouse
Denver 2, Colorado

February 25, 1954

Mr. D. L. McDaniel, President
Yuma Metals, Inc.
P. O. Box 470
Oregon City, Oregon

Re: Docket DMEA 1303X (Lead-Zinc)
Contract IDM-E371

Dear Mr. McDaniel:

Confirming our telegram of February 23, 1954, there is enclosed the Government's approval of the independent contract between Yuma Metals, Inc. and Boyles Bros. Drilling Company for the performance of core drilling hole No. 6 to a depth of approximately 500 feet.

Also enclosed are four copies of the contract referred to above which was forwarded to this office for approval by your undated letter received in this office February 23, 1954.

Very truly yours,

W. H. KING

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

Enclosures

JWT:jp
cc Contract
Chron
TAChristensen
WRStorms
AHKoschmann
JWTownsend
COMittendorf

C
O
P
Y

SAN CARLOS HOTEL
Yuma, Arizona

W. H. King
Executive Officer, DMEA
Region 4
Denver, Colorado

Dear Mr. King:

Please find enclosed our contract for diamond drill hole No. 6 with the Boyles Bros. Drilling Co.

I respectfully request that this contract be approved by your office and wire confirmation of approval at your earliest convenience to D. L. McDaniel, Box 470, Oregon City, Oregon. Also return the enclosed contracts to the above address.

We hope to begin the drilling within a few days of formal approval of this contract.

I also feel that we will not have any further trouble and slow down.

It is further requested that since this is a parallel hole to the one that was lost that we are not required to make a sludge recovery until after we are to the depth of the hole that was lost. The sludge samples for the lost hole has been turned into the Tucson office.

Boyles Bros. felt that they could put down a larger and better hole and make us a better core recovery thru the vein if the sludge was not required thru this already loged ground. I discussed this with Mr. Storms and he advised me to make this request to your office.

Thanking you for your cooperation on this project, I am,

Sincerely yours,

Yuma Metals, Inc.
D. L. McDaniel, Pres.

C O P Y WESTERN UNION TELEGRAM

Feb. 23, 1954

D. L. McDaniel
Box 470
Oregon City, Oregon

Reference Docket 1303X, Contract Idm-E371. Proposed independent drilling contract with Boyles Bros. Drilling Company on hole 6 approved consistent with all provisions of Article 4(b) of contract. Saving of sludge waived to comparable depth of abandoned hole 6.

W. H. King
Executive Officer, [illegible] Field Team

cc: Townsend
Storms
Koschmann
Accounts
Sub
Chron

JWK:bk

APPROVAL OF INDEPENDENT CONTRACT

To: Yuma Metals Incorporated

That certain contract, or proposed contract, a copy of which you have submitted with your request for approval, dated February 17, 1954, between you and Boyles Bros. Drilling Company for the performance of the following work: Diamond core drill hole No. [illegible] to a depth of approximately 500 feet, which is all or a specific element of the work described in an Exploration Project Contract dated December 3, 1952, IM-F 371, Docket No. [illegible] 1303X, is hereby approved by the United States of America, subject to all of the terms and conditions relating to such independent contracts set forth in said Exploration Project Contract.

Dated: February 23, 1954.

THE UNITED STATES OF AMERICA

By W. H. King

W. H. King, Executive Officer
DMA Field Team, Region IV

Boyles Bros. DRILLING COMPANY

DIAMOND DRILLING CONTRACTORS AND MANUFACTURERS

Phone 6-8555 1321 South Main

SALT LAKE CITY 4, UTAH

FEBRUARY 17, 1954

YUMA METALS INC.
SAN CARLOS HOTEL
YUMA, ARIZONA

GENTLEMEN:

IN RESPONSE TO YOUR REQUEST AND AFTER EXAMINATION OF THE RED CLOUD MINE WE HAVE CONCLUDED THAT WE CAN UNDERTAKE THE DRILLING OF ONE HOLE APPROXIMATELY 500 FEET IN DEPTH IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

1. RATE FOR DRILLING TO APPROXIMATELY 500' TO BE $5.00 PER LINEAR FOOT. HOLE IS TO BE COLLARED SIZE BX AND COMPLETED SIZE AX PROVIDED THE DRILLING CONDITIONS PERMIT.

   ALL REAMING FOR CASING, CEMENTING AND OTHER OPERATIONAL EXPENSE WILL BE FOR OUR ACCOUNT EXCEPT AS SET FORTH BELOW.

2. YOU ARE TO FURNISH COMPRESSED AIR AND WATER FOR DRILLING PURPOSES TO THE DRILL STATIONS AND FURNISH DRILL STATIONS OF A SIZE TO PERMIT DRILL RODS TO BE HANDLED IN 10 FOOT LENGTHS.

3. IT IS FURTHER AGREED THAT YOU WILL MAKE AVAILABLE, WITHOUT CHARGE FOR OUR USE, THE EXISTING HOUSING FACILITIES.

WORK UNDER THE FOREGOING PROPOSAL CAN BE COMMENCED WITHIN TEN DAYS AFTER RECEIPT OF NOTICE TO PROCEED.

IF YOU FIND THE FOREGOING AGREEMENT ACCEPTABLE YOUR SIGNATURE IN THE SPACE PROVIDED BELOW WILL CONSITUTE A FORMAL CONTRACT.

YOURS VERY TRULY,

R. T. GOLDSWORTHY
GENERAL MANAGER

RTG:RN

ACCEPTED: Yuma Metals Inc.
By D. I. McDaniel Pres.
DATE

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

500

FEB 22 1954

Mr. [illegible] Kinn, Executive Officer
[illegible] Field Team, Region IV
[illegible] Customhouse Building
Denver 2, Colorado

Re: Projects believed to be of
indefinite status

Dear Mr. Kinn:

The following listing shows projects in Region IV which are believed to be inactive and having an indefinite status. In some instances they may be inactive without a recessing agreement, or others may have been recessed but with the recessing period having expired. Will you kindly review such projects with a view toward taking whichever action may seem advisable in the particular case.

We realize that you are well aware of these problems and in certain cases you have also by written recommendations which you contemplate taking. However, we list all such projects as a matter of record.

United Park City Mines, Docket [illegible]-1099, Contract DMA-100
(your telegram Feb. 17)
United Park City Mines, Docket [illegible]-1100, Contract DMA-71
(your telegram Feb. 17)
Yuma Metals, Inc., Docket [illegible]-1[illegible], Contract DMA-271
Shelby-Johnson Mines, Inc., Docket [illegible]-1[illegible], Contract DMA-[illegible]
(may now be active)
[illegible], Docket [illegible]-1[illegible], Contract DMA-[illegible]
[illegible] Mines, Docket [illegible]-2[illegible], Contract DMA-509
[illegible] Mines, Inc., Docket [illegible]-2[illegible], Contract DMA-[illegible]

Sincerely yours,

George C. Selfridge
Chairman, Over-the-Counter Committee (JHB)

Concurred:

J. H. Hedges
Member, Bureau of Mines (JHB)

Philip W. Guild
Member, Geological Survey (JHB)

WRGriswold/bjl (2/18/54)
Copy to: Docket (7)
Admr. R. File
Op. Committee
Base Metals (7)
Mr. Bishop
Mr. Kinkel
Chron.

FILE COPY
SURNAME:

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

N.S. in R.Q.

SEP 25 1953

Yuma Metals Inc., Yuma County, Arizona
Docket No. DMA 1303, Contract No. Idm-237

Contract dated December 3, 1952, total amount $75,000.00. Contract calls for road repair, moving of buildings and adaption, transfer of supplies and equipment, rehabilitation of shaft collar and headframe, installation of piping, rehabilitation of underground workings, installation of equipment and 6,000 feet of diamond drilling.

Work done to date (by our latest available reports) other than preparatory consists of 535 feet of diamond drilling, with expenditure of $21,821.04. Project recessed from June to October 1, 1953. No significant ore so far.

There has been no adequate geological coverage of the project by the Field Team, but it would appear that the target, to search for sulphide ores below the oxide zone may have been logical. Fairly substantial tonnages of lead carbonate ores had been mined in the upper levels and it was not unreasonable to believe that fair sized bodies of sulphide ore might exist below the water level.

Work to date has been done in an inefficient manner, with only one expense form for four months, January - April.

Three diamond drill holes to date have penetrated the downward vein extension with negative results, hence, target value and potential has been impaired, though by no means disproven.

If the operation is not resumed on October first it might be advisable to grant one further 3 month recession, and then terminate, if work is not resumed.

W. R. Griswold

WRGriswold/hmj
(9/18/53)
CC to: Docket
Mr. Mittendorf
Mr. F. E. Johnson
Mr. Selfridge
Mr. Alt
Mr. Keating
Mr. Griswold
Chron.

W. R. Griswold

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

Department of the Interior
Defense Minerals Administration
RECEIVED
AUG 17 1953

224 New Customhouse
Denver 2, Colorado

August 12, 1953

Memorandum

To: C.O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA-1303X (Lead-Zinc), Contract Idm-E371
Yuma Metals, Inc., Yuma County, Arizona

Enclosed are the original and two copies of Amendment No. 2 to the subject contract which increases the life of the contract from one year to one year and seven months, and authorizes a recess of operations from July 1, 1953 to November 1, 1953. Also enclosed are three sets of data relevant to the amendment.

Copies of this amendment have been given to the operator, the Fiscal Officer, Region IV, and a copy has been retained for our files.

W. H. King
W. H. King

Enclosures

RECEIVED
SEP 3 1953
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

cc
8-17

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

224 New Customhouse
Denver 2, Colorado

August 12, 1953

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA-1303X (Lead-Zinc), Contract Idm-E371, Yuma Metals Inc., Yuma County, Arizona

Enclosed are the original and two copies of Amendment No. 1 to the subject contract which have been executed by the operator. The amendment was forwarded to Mr. Luke Walker by your letter of August 3, 1953, with instructions that the executed amendment be returned through this office. The operator retained his copy of the amendment; a copy has been given to the Fiscal Officer, Region IV, and a copy retained for our files.

This amendment amends matter on pages 1 to 4 inclusive of Exhibit "A".

W. H. King
W. H. King

Enclosures

cc
8-17

9B

MINES IN SILVER DISTRICT
YUMA COUNTY

MILL ON COLORADO
~~HEAD OF MARTINEZ LAKE~~

Department of the Interior
Defense Minerals Administration
RECEIVED
AUG 10 1953

Yuma Metals, Inc.

D. L. McDANIEL, PRES.
OTTO MOTEJL, VICE PRES.
CHAIRMAN OF BOARD
LUKE WALKER
SECY. & TREAS.

LLOYD C. WHITE, GEN. MGR.

Santa Barbara Calif
~~YUMA, ARIZONA~~ Aug 5-1953.

Mr Frank Johnson
Acting Adm of DMEA.
Washington 25 D.C.

Re Contract SDM E 371
Docket No DMEA 1303X
Yuma Ariz.

Dear Sir:—

Should of acknowledged your favor sooner, The next few days after writing you I talked to Tucson, and Mr Rondle told me he was recommending our Jan 12 to May 1st bills ~~be~~ and approved for payment.

So delayed acknowledging your letter ~~to~~ could state had received some payment but so far havn't received any, but surely will next few days. As it been two weeks since Tucson sent in statements for payment.

Thanks much for your help in this matter.

Yours very truly
Yuma Metals Inc
by Luke Walker Secy

500

Griswold
Okone
Kinkel
Hedges
Selfridge
JEJohnson

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

AUG 3 1953

Mr. Luke Walker
798 Hope Avenue
Santa Barbara, California

Re: Docket No. DMA-1303 (Lead-Zinc)
Yuma Metals, Inc.
Red Cloud Mine
Yuma County, Arizona
Contract No. Idm-371

Dear Mr. Walker:

We are advised that the original and five copies of Amendment No. 1 to the above contract were delivered to you in Tucson, Arizona, on May 27, with a request that they be signed and mailed to the Denver office.

Inasmuch as they have not been received, we enclose another set of this amendment. Please sign all copies. The one marked "Operator's Copy" may be retained by you, the balance to be mailed to Mr. J. H. King, Executive Officer, DMA Field Team, Region IV, 224 New Customhouse Building, Denver 2, Colorado.

Sincerely yours,

C. O. Mittendorf (fw)

Administrator

Enclosures 6

WRGriswold/hmj
(7/30/53)

CC to: Docket
Adm. R. File
Op. Committee
Base Metals Division
Region IV (2)
Mr. Kinkel
Mr. Bishop

Coll 8-3-53

R.C.G. 8-3-53

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

Griswold
Betty

224 New Customhouse
Denver 2, Colorado

July 23, 1953

Memorandum

To: C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMA 1303X, Contract Idm-E371, Yuma Metals, Inc., Yuma, Arizona

Enclosed is a copy of a memorandum from W. R.Storms, Chief, Mining Methods Branch, Tucson, Arizona, with attached copy of a letter from Luke Walker, relative to the loss of Amendment No. 1, which was forwarded to Mr. Walker for signature. The amendment was prepared in Washington and signed by you. Therefore, we are enclosing the original and five copies of a re-typing of the amendment for your signature.

To save time in obtaining the operator's signature on the amendment, please send it direct to Luke Walker, 798 Hope Avenue, Santa Barbara, California, with instructions to him that he may retain the operator's copy and return all other copies to this office.

W. H. King
W. H. King

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

C
O
P
Y

Southwest Experiment Station
Box 4097
University Station

Tucson, Arizona

AIRMAIL

July 20, 1953

Memorandum

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

From: W. R. Storms, Chief, Mining Methods Branch, Tucson, Ariz.

Subject: Amendment No. 1 to Contract Idm-E371, Docket DMA-1303X, Yuma Metals, Inc., Yuma County, Arizona

Enclosed is a letter from Mr. Luke Walker of Yuma Metals Inc., regarding Amendment No. 1 to Contract Idm-E371. You mailed us this amendment on May 19, and we received it about May 22. As Mr. W lker was due in Tucson we held the six copies of the amendment and gave them to him on May 27 when he, McDaniel, and Lloyd White of the same company were here in the office discussing preparation of their progress report. Walker took the six amendment copies to Yuma with him where he was staying at the time, and said he would sign and mail them directly to you.

In the attached letter Walker says this amendment either was signed and left here, or mailed from Yuma. It was not left here so either Walker mislaid it in Yuma or it was lost in the mail.

If you have a copy of this Amendment No. 1, I would suggest that you retype and send six copies directly to Walker at his address at 798 Hope Avenue, Santa Barbara, California, for his signature.

/s/ Walter R. Storms

YUMA METALS, INC.
Santa Barbara, Calif.
Lloyd C. White, Gen. Mgr.

C
O
P
Y

Walter R. Storms, Chief
Mining Methods Branch
Mining Division, Region IV

Dear Mr. Storms:

Answering your letter of 14th inst. Amendment One was either signed and left with Mr. Romsle on May 27 or mailed from Yuma to Denver May 29. However, if it is lost no matter by whom if you will please mail me it again will appreciate it. And will immediately sign and send to Denver.

As to Narrative Report will mail those Monday, when can obtain a gal to type them. I read white report and couldn't see that I could add anything to it. But will give my version even if it duplicates a little.

Would appreciate it if you could get Denver to pay say about half the money we might some day receive in way of advance.

Yours truly,

Y.M. Inc.
/s/ by Luke Walker

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

Keating
Selfridge

DMEA

AGKeating/bjl
3669 4058

July 20, 1953

W. H. King, Executive Officer, DMEA Field Team, Region IV, Denver, Colorado

Reurtt July 17, Docket No. DMA-1303, Yuma Metals, Inc., Inc., Yuma County, Arizona, Contract Idm-F371, we approve your preparation and execution of amendment to recess work from June 30, 1953 to November 1, 1953, with a like extension of time for completion of work, provided acceptable Operator's monthly MF-104's are submitted prior to execution of amendment.

George C. Selfridge
Chairman, Operating Committee (GCS)

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals (DMEA)
Mr. Bishop (USBM)
Mr. Kinkel (USGS)
Accounts
Chron.

R.C.S.
7-20-53

FILE COPY
SURNAME:
800

Chambers

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

JUL 17 1953

Yuma Metals, Inc.
798 Hope Avenue
Santa Barbara, California

Attention: Mr. Luke Walker, Secretary

Re: Contract Idm-4371
Docket No. DTA-1303X
Yuma, Arizona

Gentlemen:

Reference is made to your letter of July 10, 1953, in regard to contract cited above.

Inquiry was made by teletype to the Regional Office in Denver, Colorado, concerning payments on your billings. A copy of this teletype is attached for your information.

It is noted that you sent the Forms MF-104 to the Branch Office at Tucson, Arizona. I suggest that you write the letter to Mr. W. H. King, Executive Officer Region IV, 224 New Customhouse Building, Denver 2, Colorado, asking him to expedite payment on the MF-104 in part or in whole when the invoices are received, provided such payment can possibly be made. I believe that if you followed the latest instructions in preparing your MF-104, that your reimbursement will be expedited.

Sincerely yours,

FRANK E. JOHNSON (B.J.H.)
ACTING Administrator

JLChambers/wb
July 17, 1953

Copy to: Docket
Admr. Reading File
Mr. Griswold
Mr. Chambers

R.C.G. 7-17-53

C O Mittendorf
7-17-53
2:14

OB

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 17 1953

BUR MIES DN 235 7-17-53 11-14 AM

C O MITTENDORF

REFERENCE DOCKET DMA-1303X, CONTRACT ID M-E371, YUMA METALS, INC. OPERATOR HAS REQUESTED AUTHORIZATION FOR RECESS OF OPERATIONS FROM JUNE 30,1953 TO NOVEMBER 1,1953, BECAUSE OF EXTREMLY HIGH TEMPERATURE IN PROJECT ARAXXXX AREA DURING THAT PERIOD. PLEASE TELETYPE AUTHORIZATION FOR US TO PREPARE THE NECESSARY ADXXX AMENDMENT.

W H KING

Denver, Colo.

C. O. Mittendorf
7-16-53
7:45 A.M.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 16 1953

BUR MINES DN 235 7-15-53 4-10 PM

C O MITTENDORF

REURTEL JULY 15, YUMA METALS, INC., DOCKET 1303.X, CONTAXXXX DOCKET 1303X, CONTRACT IDM-E371, MF-104 RPXXX REPORTS HAVE NOT BEEN RECEIVED IN THIS OFFICE. LATEST ADVICE INDICATES THAT OPERATOR INTENDS TO OR HAS SUSPENDED OPERATIONS.

W H KING

Denver, Colo.

JUL 16 8 02 AM '53
BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

FILE COPY
SURNAME:

Chambers

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

JUL 1 5 1953

D. M. E. A.

J. L. Chambers
3461 2542

14X3923.70 Working Fund, DMA
July 15, 1953

Mr. [illegible] King, Executive Officer, DMA Field Team, Region IV,
224 New Customhouse Building, Denver 2, Colorado

Secretary of Yuma Metals, Inc., Contract [illegible]-371, Docket 1303X complains that no payments have been made to date on this contract. Latest [illegible] rebilling contractor's claim sent to your office July 10. Please wire if voucher or at least a part of it can be paid immediately, and if not, what action should be taken either by the company or this office to enable payment.

C. O. Mittendorf

Administrator

cc: Docket
Admr. Lending File
Bu Mines Audit
Mr. Chambers
Mr. Griswold

R.C.G.
7-15-53

MINING DIVISION
REGION IV

July 14, 1953

Memorandum

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

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

Subject : Contract Idm-E371, Docket DMA-1303X, Yuma Metals, Inc., Yuma County, Ariz.

In regard to your memorandum of July 7, relative to a recess of operations under Contract Idm-E371, Yuma Metals, Inc. asked for a recess as per attached letter dated June 3, this recess to extend from June 30 to October 15. At that time we knew that the current diamond drilling would be completed in June. The company proposed to ask for an amendment so it could drive another crosscut at its own expense, then do additional core drilling below the 500 level from this new location. We then told Luke Walker and also Lloyd C. White that they should ask for an amendment to do this proposed work and submit it at the same time that they asked for a recess. Nothing was heard from them until yesterday when Walker again asked for a recess, but neglected to ask for an amendment for the additional work. He also asked for an extension of the contract time until June 15, 1954 (both requests are attached).

As all drilling has been done from the present 500 level crosscut, there is no sense in giving the company a recess until November 1 unless it asks for an amendment to do the additional drilling from another set up. That is the reason that we held up the June 3 request. As you can see, the company actually asked for a recess before it ceased work in June. However, as already mentioned, a recess will do no good unless an amendment is approved for the drilling at another location. This request we have been unable to obtain.

The last paragraph of your July 7 memorandum is slightly in error. Our telegram to you of June 16 stated: "Re your two teletypes Romalo is in Yuma checking Yuma Metals contract Idm-E371.

CC W. H. King (5)
DMA-1303X
DF

WRStorms:frj

Stop. Six copies of Amendment One were turned over to Luke Walker on May 27. Walker said he would sign and mail directly to you from Yuma. We will contact him again." Upon receipt of your teletype we wired Walker as follows: "Romalo gave you six copies of amendment number one to sign on May 27 for contract Idm-E37Ø but our Denver office has not received same. If you still have amendment please airmail to Denver." Walker did not acknowledge receipt of this telegram although we mailed the confirmation copy to him at his Santa Barbara address.

Walter R. Storms

Walter R. Storms

MINES IN SILVER DISTRICT
YUMA COUNTY

MILL ON COLORADO
HEAD OF MARTINEZ LAKE

Yuma Metals, Inc.

LLOYD C. WHITE, GEN. MGR.

OFFICE OF THE INTERIOR
Bureau Land Management
RECEIVED
JUL 13 1953

D. L. McDANIEL, PRES.
OTTO MOTEJL, VICE PRES.
CHAIRMAN OF BOARD
LUKE WALKER
SECY. & TREAS.

~~YUMA, ARIZONA~~
Santa Barbara, California

July 10, 1953

Mr. C. O. Mittendorf,
Adm. of DMEA
Department of Interior
Washington 25, D. C.

Re: Contract IDM-E371
Docket No. DMEA 1303X
Yuma Metals, Inc.
Yuma, Arizona

Dear Mr. Mittendorf:

I am writing to ask if you would assist us in obtaining some money on the above contract. We haven't received a dollar since we commenced work on January 12, 1953.

Several times we have submitted reports (forms 104 and 104A), narative reports, distribution sheets, etc., etc. with maps, logs, etc. Each time they were returned with different instructions as to how they should be filled out.

With this letter we are ~~enclosing~~ sending forms MF-104 and MF-104A which we hope are properly filled out and with the necessary information.

It has been mentioned that the wording of our contract is unusual and difficult to interpret, this being the reason why no one can agree on the proper procedure of our reports. Hence no money has been disbursed to us.

If for some reason we cannot be paid the full amount, would it be possible for us to receive an advance, or part payment? Why I suggest this is that each time we have sent in these reports we expected some money . The forms ~~enclosed~~ are very little different from some of the previous ones submitted, so this thing could go on and on. In the meantime we are in urgent need of at least part of the money due us.

Your attention to this favor would be very much appreciated.

P.S. Future new set of forms sent are being sent Tucson to day Luke

LUKE WALKER
798 HOPE AVE. • PH. 21530
SANTA BARBARA, CALIF.

Yours very truly,
YUMA METALS, INC.
Luke Walker
Sec'y

SECOND APPLICATION FOR RECESS

July 10, 1953

Mr. W. R. Storms
Chief Adm. of DMEA
c/o Bureau of Mines
Tucson, Arizona

Re: Contract No. IDM-5 371
Docket No. 1303X
Yuma Metals, Inc.
Yuma, Arizona

Dear Mr. Storms:

We respectfully request a recess on diamond drilling program on above contract, from June 30, 1953 to November 1, 1953 for the following reasons:

1. The weather is very hot in Yuma during this time. No provision was made for coolers, our buildings are temporary, lightly constructed, so much so that even coolers would not be effective.

2. Our equipment and preparatory work was put in hurriedly. We would like to overhaul these items (at our expense) and be ready to do a better job November 1, 1953.

3. Drilling equipment was too small. Diamond Driller has agreed to have larger and better diamond drill equipment on job October 15, 1953.

4. It also will give opportunity to have geological study made, using the information so far obtained.

5. This recess will make it possible for us to have efficient help available and ready November 1, 1953. Our old employees all quit, they will not work during the extremely hot weather.

6. As yet, we haven't received government share for any part of program.

Please mail approval to Yuma Metals, Inc., c/o Luke Walker, 798 Hope Avenue, Santa Barbara, California.

An early reply will be appreciated. This application was submitted June 3, 1953, with no reply.

Yours truly,

YUMA METALS, INC.

Luke Walker, Secretary

APPLICATION FOR EXTENSION OF TIME

TO FINISH CONTRACT

July 10, 1953

Mr. W. R. Storms
Chief Adm. of DMEA
c/o Bureau of Mines
Tucson, Arizona

Re; Contract No. IDM-E 371
Docket No. 1303X
Yuma Metals, Inc.
Yuma, Arizona

Dear Mr. Storms:

We respectfully request extension of time from December 12, 1953 to June 15, 1954 to complete our contract, for the reason that we cannot keep help in the hot months. Also we need a larger diamond drill, which we cannot obtain until November 1, 1953.

Another very important reason is that we have been unable to receive any money due us from DMEA.

This extension will be greatly appreciated, and it will make it possible to do a much better job, which we all are interested in doing.

Thanking you for a reply as soon as possible, we are,

Yours truly,

YUMA METALS, INC.

Luke Walker,
Secretary

FILE COPY
500 SURNAME:

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

Selfridge

June 16, 1953

Memorandum for the Files

From: A. G. Keating, Base Metals Division

Subject: Docket No. DMEA-1303, Yuma Metals, Inc., Contract No. Idm-F371

This is with relation to inquiries dated June 8 and June 15, by teletype, from W. H. King, Executive Officer, Region IV, regarding changes requested by the Operator to increase allowable maximums stipulated by the contract terms under Items 5 and 6 by subtraction from amounts of applicable charges under Items 7 and 8, with the suggestion that an amendment be prepared to eliminate allowable maximums from Items 5 and 6, and thereby letting other allowable maximums control the extent of these changes.

The Field Office wished to have the answers to their inquiries not only in this case but for future determinations.

Mr. Selfridge and the writer, both in telephone conversation with Mr. King, John Shaw and Mr. Townsend, informed them that maximum allowances were stipulated expressly for the purpose of controlling these items, that only in necessary cases of hardship would they be changed, and that in all cases such changes should only be undertaken in Washington.

It was agreed by all that the request of Yuma Metals, Inc., should be denied, at least for the present. The Field Team is sending full particulars for interpretation of this and future contracts.

A. G. Keating

AGKeating/bjl

Copy to: Docket
Admr. R. File
Op. Committee
Chron.

ion

George C. Selfridge
6-18-53
2:23
GB.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED

JUN 18 1953

BUR MINES DN 235 6-18-53 11-23 AM

GEORGE C SELFRIDGE

REFERENCE TELEPHONE CONVERSATION WITH YOU AND KEATING ON 6-16-53 REGARDING YUMA METALS, DOCKET 1303X, CONTRACT IDM-E371. AS A RESULT OF REEXAMINATION OF THE OPERATOR,S CHARGES AND WITH ASSISTANCE OF DMEA AUDITORS WE BELIEVE THE PROBLEM HAS BEEN SATISFACTORILY RESOLVED.

W H KING

Denver, Colo.

JUN 8 1 36 PM '53
BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

APPLICATION FOR RECESS

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 17 1953

June 3, 1953

Mr. W. R. Storms
Chief Adm. of DMEA
c/o Bureau of Mines
Tucson, Arizona

Reference to:
Contract No. IDM-E 371
Docket No. 1303X

Dear Sir:

We respectfully request a recess on diamond drilling program, above contract, from June 30, 1953 to October 15, 1953 for the following reasons:

1. The weather will be very hot at Yuma during this recess. No provisions were made for coolers, our buildings are temporary, lightly constructed, so much so that even coolers wouldn't be very effective.

2. Our equipment and preparatory work was put in hurriedly. We would like to overhaul these items (at our expense) and be ready to do a better job October 15, 1953.

3. Diamond Driller has agreed to have larger and better diamond drill equipment on job October 15, 1953.

4. It also will give opportunity to have geological study made, using the information so far obtained.

5. This recess will make it possible for us to have efficient help available and ready October 15th. Our present employees have given us notice that they will not work during the extremely hot period.

Please mail approval to Yuma Metals, Inc., San Carlos Hotel, Yuma, Arizona, and if convenient please mail copy to Luke Walker, 798 Hope Avenue, Santa Barbara, California.

An early reply will be appreciated.

Yours truly,

YUMA METALS, INC.

BY Luke Walker
LUKE WALKER, Secretary

FILE COPY
SURNAME:

500

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C. REWRITTEN 5/11/53

KEATING
GRISWOLD
CHAMBERS
Keating
Griswold
Martin
Johnson

MAY 1 4 1953

Mr. W. W. King, Executive Officer
Field Team, Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. [illegible]-1303 (Lead-Zinc)
Yuma Metals, Inc.
Red Cloud Mine
Yuma County, Arizona
Contract No. IDr-7371

Dear Mr. King:

Enclosed are the original and five copies of Amendment No. 1 to the above-cited contract, which have been prepared in conformity with your recommendations, and have been signed by the Administrator.

Responding to the inquiry in your letter of April 15, 1953, your interpretation is correct in that the cost of the refrigerator and welding equipment may be allowed by the contract under the heading "Estimated Costs of the Project", page 2, item 3 and page 3, item 6.

If you find the amendment satisfactory, please obtain the signature of the Operator and distribute in the usual manner.

Sincerely yours,

5-14-53

W. S. Martin
ACTING Chairman, Operating Committee

Enclosures 6

AGKeating/bjl/hmj (5/11/53)
CC to: Adm. R. File
Docket
Op. Committee
Base Metals Div.
Mr. Kinkel
Mr. Bishop
Chron.

APPROVED:

J. H. Hedges
Member, Bureau of Mines

T. P. Thayer
Member, Geological Survey

FILE COPY
SURNAME:

Keating
Thayer
Hodges
Martin

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

W. S. - R. R

DMEA

AGKeating/bjl
3669 2616

May 12, 1953

W. H. King, Executive Officer, DMEA Field Team, Region IV, Denver, Colorado

Henrtt Docket No. DMEA-1303, Yuma Metals, Inc., Contract No. Idm-8371. We are forwarding ~~expect~~ amendment to contract ~~to be forwarded~~ to you ~~shortly after Operating Committee meeting May 13.~~

W. S. Martin
ACTING Chairman, Operating Committee

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals DMEA
Mr. Bishop (BOM)
Mr. Kinkel (USGS)
Accounts
Chron.

SENT
MAY 13 1953
Clerical Service Section

500

FILE COPY
SURNAME:

KEATING
~~GRISWOLD~~
CHAMBERS
initialed

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C. rewritten 5/11/53

May 11, 1953

Memorandum

To: Administrator

From: Chief, Base Metals Division

Subject: Docket No. DMA-1303, Yuma Metals, Inc., Yuma County, Arizona, Contract No. Idm-5371 (amendment to the contract)

This amendment involves changes in "allowable maximums" in a long form contract. The Operator has contracted moving buildings for $560.00 at a saving of $140.00 less than allowed by the terms of the contract. He requests the sum of $823.00 less the $140.00 to reconstruct an additional building to provide for showers, change room, toilets and wash room. This is estimated to cost less than attempting to alter the old building. The request does not increase the estimated total cost of the project.

It is recommended by the Field Team and, therefore, the Base Metals Division also recommends favorable consideration of the amendment.

W. R. Griswold

W. R. Griswold

Attachment

~~WG~~Keating/bjj/hmj
(written 5/11/53)
ccto: Docket
Adm. R. File
Op. Committee
Base Metals Div.
Chron.

FILE COPY
SURNAME:

500

Keating
Chamber

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

May 5, 1953

Memorandum

To: Administrator

From: Chief, Base Metals Division

Subject : Docket No. DMA-1303, Yuma Metals, Inc., Yuma County, Arizona, Contract No. Idm-E371 (amendment to the contract)

This amendment involves changes in "allowable maximums" in a long form contract. It does not increase the estimated total cost of the project. It is recommended by the Field Team and, therefore, the Base Metals Division also recommends favorable consideration of the amendment.

W. R. Griswold

W. R. Griswold

AGKeating/bjl

copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Chron.

Mr. C. O. Mittendorf
5/11/53
2:30 P.M.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 11 1953

DN 235 BUREAU MINES 5-11-53 11-19 AM

C O MITTE NDORF

REFERENCE IS MADE TO OUR MEMORANDUM DATED A
PRIL 17,1953, CONTRACT IDM-E371, YUMA METALS, INC. OPERATOR IS HOLDING MONTHLY PROGRESS REPORTS PENDING YOUR DECISION.

W H KING

Denver, Colo.

MAY 11 3 11 PM '53

BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

FILE COPY
SURNAME:

140

AEKane

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

BB

April 29, 1953

N. S. in R. & R.

Memorandum

To: Base Metals Division

Subject: Yuma Metals, Inc., Docket No. DMEA-1303
(Lead-Zinc, Contract No. Idm-E371)

Reference is made to Mr. Keating's memorandum to me of April 27, 1953, which was received with reference slip dated April 28, 1953.

The Field Team and the Division apparently recommend the construction of an additional building for showers, etc., and want to take the added moneys from Item (8) Contingencies. This cannot be done in this fashion, because "Contingencies," as the contract is now written, is limited to unforeseen labor and supplies. The request can be granted through an amendment of the contract. Attached hereto is such an amendment, which should be signed by the Administrator and sent to the field for signature and distribution in the usual manner.

/S/ AEKane
for J. L. Hofflund
Chief Counsel

Attachment

AEKane:ep

Copy to: Mails & Files
Mr. Hofflund
Mr. Kane
Chron.

FILE COPY
SURNAME:

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

April 27, 1953

Memorandum

N.S. in R.V.R. bl

To: Chief Counsel

From: Base Metals Division

Subject; Docket No. DMFA-1303, Yuma Metals Inc., Yuma County, Arizona (Lead-Zinc. Contract No. Idm-8371

The Operator requests an amendment which involves a change in "allowable maximums" as provided in Item 5 of the contract, under the heading "Rehabilitation and repairs". (Move buildings and house trailers from old camp site and install at mine — $700.00).

The Operator has contracted the moving of the building for $560.00, thus effecting a saving in the above item of $140.00. He requests that this amount be deducted from the $700.00 as required in the contract and that an additional amount of $823.00 less $140.00 or $683.00 to reconstruct an additional building to provide for showers, change room, toilets and wash rooms which the Operator contends will cost less than attempting to alter the old building. He proposes that the additional amount of $683.00 be taken from the amount allowed for contract Item 8 "Contingencies".

The Field Team recommends favorable consider tion of the request, to which the Base Metals Division concurs, provided the legalities will permit.

A draft of a proper amendment is requested.

/s/
A. G. Keating

AGKeating/bjl

Copy to: Docket
~~IdmXXXRxxFixx~~
Base Metals
Chron.

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

Granwold
Kesting

224 New Customhouse
Denver 2, Colorado

April 17, 1953.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 20 1953

Memorandum

To: Secretary to the Operating Committee, Defense Minerals Exploration Administration.

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA-1303X, Contract Idm-E371 (Lead-Zinc), Yuma Metals, Inc., Yuma County, Arizona.

Enclosed are four sets, original and three copies, of matter consisting of the following:

1. Operator's proposal for an amendment to Contract Idm-E371 with attached sub-contract bid for moving of buildings.

2. Memorandum Report, dated April 15, 1953, by the Bureau of Mines concerning the Operator's request for the amendment and transmittal of the report and recommendations from the Chief, Mining Methods Branch, Mining Division, Region IV.

The Operator's request involves changes in "allowable maximums", therefore the matter is forwarded for your consideration and appropriate action. If it is legally possible we recommend that an amendment be prepared to authorize the changes as proposed by the Operator which are recommended by the examining engineer.

W. H. King
W. H. King

Enclosures

FILE COPY
SURNAME:
500

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

April 27, 1953

N. S. in R. v R.

Memorandum

To: Chief Counsel

From: Base Metals Division

Subject: Docket No. DMRA-1303, Yuma Metals Inc., Yuma County, Arizona (Lead-Zinc, Contract No. Idm-E371)

The Operator requests an amendment which involves a change in "allowable maximums" as provided in Item 5 of the contract, under the heading "Rehabilitation and repairs". (Move buildings and house trailers from old camp site and install at mine — $700.00).

The Operator has contracted the moving of the building for $560.00, thus effecting a saving the the above item of $140.00. He requests that this amount be deducted from the $700.00 as required in the contract and that an additional amount of $823.00 less $140.00 or $683.00 to reconstruct an additional building to provide for showers, change room, toilets and wash rooms which the Operator contends will cost less than attempting to alter the old building. He proposes that the additional amount of $683.00 be taken from the amount allowed for contract Item 8 "Contingencies".

The Field Team recommends favorable consideration of the request, to which the Base Metals Division concurs, provided the legalities will permit.

The Field Team in a letter April 15, 1953 requests advice regarding the cost of a refrigerator $100.00 and welding equipment $56.69 which they believe may be allowable under "allowance for equipment", Item 6 and Item 3 of the contract. They ask can these items be approved or should they be made allowable by amendment.

A draft of a proper amendment is requested.

/s/
A. G. Keating.

AGKeating/hmj
(4/27/53)
CC to: Docket
Base Metals
Chron.

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

224 New Customhouse
Denver 2, Colorado

April 17, 1953.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 20 1953

Memorandum

To: Secretary to the Operating Committee, Defense Minerals Exploration Administration.

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA-1303X, Contract Idm-E371 (Lead-Zinc), Yuma Metals, Inc., Yuma County, Arizona.

Enclosed are four sets, original and three copies, of matter consisting of the following:

1. Operator's proposal for an amendment to Contract Idm-E371 with attached sub-contract bid for moving of buildings.

2. Memorandum Report, dated April 15, 1953, by the Bureau of Mines concerning the Operator's request for the amendment and transmittal of the report and recommendations from the Chief, Mining Methods Branch, Mining Division, Region IV.

The Operator's request involves changes in "allowable maximums", therefore the matter is forwarded for your consideration and appropriate action. If it is legally possible we recommend that an amendment be prepared to authorize the changes as proposed by the Operator which are recommended by the examining engineer.

W. H. King
W. H. King

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
MINING DIVISION
REGION IV

SOUTHWEST EXPERIMENT STATION
Box 4097
UNIVERSITY STATION
TUCSON, ARIZONA

Mining Division
Date Rec'd
APR 17 1953
BUREAU OF MINES
Denver, Colorado

April 14, 1953

Memorandum

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

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

Subject : Proposed Amendment, Docket DMA-1303X, Contract Idm-E371, Yuma Metals, Inc., Yuma County, Ariz.

Enclosed in sextuplicate are the following:

(1) Operator's proposal for an amendment;

(2) Bureau of Mines inspector's recommendation;

(3) Sub-contract for moving buildings.

As the proposed amendment will not change the total cost of the project and seems to be for the good of the Government as well as the operator, I recommend that it be approved.

Walter R. Storms

Walter R. Storms

CC W. H. King (5)
DMA-1303X
DF

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

SOUTHWEST EXPERIMENT STATION
Box 4097
UNIVERSITY STATION

MINING DIVISION
REGION IV

TUCSON, ARIZONA

April 15, 1953

Memorandum

To : W. R. Storms, Chief, Mining Methods Br., Mining Div., Region Iv, Tucson, Ariz.

From : T. M. Romslo, Mining Engineer, Tucson, Arizona

Subject : Proposed Amendment, Yuma Metals, Inc, Yuma County, Ariz., Docket DMEA-1303X, Contract Idm-371

I believe the 2 items of the proposed amendment should be approved, retroactive to Jan. 12, 1953, for the reasons explained in the proposal.

In event the amendment is approved, I suggest that the $140.00 saving in moving costs be transferred to contingencies.

In addition to the above items, a review of the project records showed that a refrigerator and welding equipment were purchased for $100.00 and $58.69 respectively. The refrigeration is for the cook house and the welding equipment was used in installation of an air pipeline constructed of 3-inch tubing. Use of low-cost pipe of larger than normal size resulted in the elimination of an air receiver and a total installation cost that was not excessive. The cost of the refrigerator and welding equipment appears to be allowable on the basis of allowances for equipment under items 6 and 3 of the contract, respectively. Is my interpretation correct? If the charges should not be approved, can they be made allowable through an amendment?

T. M. Romslo

T. M. Romslo, Mining Engineer
Mining Methods Branch
Mining Division, Region IV

CC W. H. King (orig & 5)
DMA-1303X
DF

YUMA MINERALS, INC.
PROPERTY DISTRICT
YUMA, ARIZONA

Proposed Amendment

Mr. W. R. Storms
Chief Mining Methods Branch
U.S. Bureau of Mines
Mining Division, Region IV
P.O.Box 4097, University Sta.
Tucson, Arizona

WRS

Re: DMEA No. 1303X
Contract IDM-,E 371

Dear Sir:

Would like to have above contract amended as follows:

1. To have independent contract for moving of houses as listed second under Item 5 of our contract, the amount of which is to be $560.00, contract submitted herewith. The $560.00 to be deductive from item mentioned.

2. To approve a new building 16x22 for showers, change room, toilets, wash room and small bunk room. This building was put up by a good carpenter on labor contract, which required no supervision - labor we have not charged in pay roll and which we will absorb. The lumber cost 640.00 plaster board for partitions 90.00, oilcloth for wall of showers 12.00, corrugated steel for roof 81.43, making a total of 823.43, which will be totwl cost as far as the government is concerned, to be deducted from Item 8, (contingencies).

We will appreciate this.

U. S. BUREAU OF MINES
MINING DIVISION
MAR 30 1953
TUCSON, ARIZONA

The reasons for asking for these amendments are:

Relative to moving houses and trailer, we didn't have nor could we obtain proper trucks, jacks, dollies, etc. (it was the first thing to be done) Nor could we obtain men to help do it at reasonable wages. The reason being - common labor was at that time, making from 21.00 to 33.00 per day working in the lettuce.

We did not realize either that it would be classed as an independent contract. Our deal was for 250.00 labor and 310.00 for use of equipment. If we had attempted to do it ourselves it would have cost us much more and delayed the other work.

Relative to the new building: We had nothing that would serve for the showers, change room, toilets, washrooms. We started to make an addition to the old assay building (which we now use for small warehouse room) but the carpenter said it would cost more to have the same space for several reasons: the addition would have had to be built up in the air to match the old building and tearing out cost of pulling nails and working with the old lumber all torn up, would have been more. It will cost less than if we had altered the old buildings. We didn't realize it would be classed under a different heading.

YUMA METALS
PROPERTIES OF
YUMA, ARIZONA

In addition to above but not charged under the DMEA program we have installed diesel generator, a diesel storage tank, and several other items that seem to not fall within the terms of our contract.

From the progress made so far and indications ahead, we think we can terminate preparatory work and be ready for drillers, April 12th or of very soon thereafter.

Very truly yours,

YUMA METALS, INC.

By. Luke Walker Secy

dxs

P. S. Please mail check to the Bank of Douglas, Yuma, Ariz. for the Yuma Metals, Inc.

LW.

San Carlos Hotel
Yuma, Arizona Jan 13th 1953

Memo!

To Yuma Metals Inc

I will move and install thee three small wooden buildings from Mill site 7 miles west of Fisher's Camp to Red Clould mine for $250.00 labor and $310.00 for use of equiptment. I will pay my own insurance and above includes any road work I might have to do.

I will start work to morrow and continue until job is completed

Lyman Wolf
Signed

Accepted
Yuma Metals Inc
by Otto Moleyl

U. S. BUREAU OF MINES
MINERALS DIVISION
MAR 16 1953
TUCSON, ARIZONA

FILE COPY
SURNAME:

Keating
Talbot
Selfridge
Mullendorf

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

B8

4.5. in R.v R.

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DMEA
Base Metals Div.

A.G.Keating
3669 2616

March 27, 1953

W. H. King, Executive Officer, DMEA Field Team, Region IV, Denver, Colorado

REFERENCE 2/26/53 YUMA METALS INC. DMEA DOCKET 1303, CONTRACT IDM-E371 IF COOK, TRUCK DRIVER AND SUPERVISION ARE DISTRIBUTED TO ITEMS (5) AND (6) ON FORM MF 104 THE MAXIMUM UNDER ITEMS (5) AND (6) OF EXHIBIT A MAY BE INCREASED BY THE SAME AMOUNTS AND THE MAXIMUM FOR SUPERVISION ITEM (2) OF EXHIBIT A REDUCED IN AMOUNT OF SUPERVISION CHARGED TO ITEMS (5) AND (6). THE LABOR AMOUNT AND THE SUPERVISION THUS USED WOULD BE DEDUCTED FROM THE MAXIMUM ALLOWED UNDER ITEM (2) OF EXHIBIT A LIKEWISE THE DEPRECIATION FOR TRUCK AND COMPRESSOR WILL BE A DEDUCTION FROM ITEM (4) OF EXHIBIT A AND ADDED TO ITEMS (5) AND (6) OF EXHIBIT A.

AGKeating/hmj
(3/27/53)
CC to: Docket
Adm. R. File
Op. Committee
Base Metals Division
Accounts
Confirmation
Chron.

CHAIRMAN, OPERATING COMMITTEE

SENT
MAR 30 1953
Clerical Service Section

Mr. C. O. Mittendorf
3-26-53
3:40 P.M.

SPECIAL

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 26 1953

BUR MINES DN 235 2 XXX 3-26-53 1-10 PM

C O MITTENDORF

DMEA DOCKET 1303X, CONTRACT IDM-E371, YUMA METALS, INC. REFERENCE OUR MMXXX MEMORANDUM OF MARCH 6,1953 AND YOUR REPLY TO XXX OF MARCH 23. ARE WE TO UNDERSTAND THAT ALLOWABLE MAXIMUM AMOUNTS ESTABLISHED FOR WORK UNDER ITEMS 5 AND 6 MAY BE INCREASED FOR REPORTING ON FORM MF-104 BY THE AMOUNT OF APPLICABLE CHARGES THERETO WHICH ARE EXCLUDED FROM THE MAXIMUM BY FOOTNOTE "2" OF EXHIBIT "A" /Q/

W H KING

Denver, Colo.

MAR 26 3 58 PM '53
BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

FILE COPY
SURNAME:

Chambers
Selfridge
Hedges
Fuhrel
Selfridge

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

MAR 23 1953

AIR MAIL

Mr. V. H. King
Executive Officer
DMEA Field Team, Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: DMEA Docket 1303X
Contract Ida-2371
Yuma Metals, Inc.
Yuma County, Arizona
(Lead-Zinc)

Dear Mr. King:

Reference is made to your memorandum of March 6, 1953 re instructions for reporting expenditures on Forms MF-104 and MF-104A for above-cited contract.

In regard to Form MF-104, it is believed the following explanations will solve your problem:

a. Under (2) of MF-104, Labor and Supervision, report on labor and supervision chargeable to underground rehabilitation, repairs, etc. Do not include labor and supervision used for item (5) Initial Rehabilitation and Repairs or for item (6) New Buildings, Improvements, etc.

b. Under (3) of MF-104, Operating Materials and Supplies, report only such items as are used for underground rehabilitation. Do not report materials and supplies used for items (5) and (6).

c. Under (4) of MF-104, Operating Equipment, report only for equipment used for underground rehabilitation. Do not report equipment cost expended for items (5) and (6).

d. Under (5) of MF-104, Rehabilitation and Repairs, report all labor, supervision, cook, equipment, materials and supplies used for this division of the project.

e. Under (6) of MF-104, New Buildings, Improvements, etc., report all labor, supervision, cook, equipment, materials, etc., used for this division of the project.

The Operator will have to support each MF-104 with schedules showing total labor and supervision (Item A-2 of contract) and equipment (Item A-4 of contract) distributed among items 2, 4, 5, and 6 of

the NF-104, so that the certifying officer will be able to approve payments according to the contract with the knowledge that the various "allowable maximums" have not been exceeded.

We wish to call your attention to the fact that each designated item under divisions (5) and (6) of Exhibit "A" is a maximum by terms of paragraphs 5 and 6 of Article 6(a) of the contract form, and will require a separate schedule to enable the certifying officer to control expenditures by each such item.

On NF-104A Drilling costs will be reported in the usual manner. Underground Rehabilitation will be reported on the blank line filled in, just below Roads and Trails. The non-distributable costs will be reported in the usual manner; i. e. (1) Operating Equipment Purchased, if any; (2) Aboveground Rehabilitation and Repairs; and (3) New Buildings, etc.

This type of Exhibit "A" to our contracts has been called to the attention of our staff, and it is hoped that in the future the exhibits will follow the provisions of the contract form and the Form NF-104.

If there are further questions on this contract please let us hear from you.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

JIChambers/wb
March 17, 1953

Copy to: Docket
Admr. Reading File
Administrator
Mr. Chambers
Mr. Selfridge
Mr. Griswold

3/23/53

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

224 New Customhouse
Denver 2, Colorado

March 6, 1953.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 12 1953

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 1303X (Lead-Zinc), Contract Idm-E371, Yuma Metals, Inc., Yuma County, Arizona.

The operator and field engineer have made inquiry as to the interpretation of the contract relative to "allowable maximums" and the manner in which they are to be reported on Forms MF-104 and MF-104A.

This contract is similar in some ways to Contract Idm-E370, Nikas Mining Company, on which an interpretation was rendered by your letter dated March 3, 1953. However, there are phases of Contract Idm-E371 which we are unable to interpret in the same manner.

From a review of "Exhibit A," which is attached as a part of Contract Idm-E371, the following facts are assembled:

Footnote 2/ states to the effect that the "allowable maximum" cost of work under "Estimated Costs of the Project," items "(A) 5 and 6," are exclusive of the wages of the cook and truck driver, supervision, and depreciation charge for the compressor and truck, all of which are scheduled elsewhere. The work authorized under items "(A) 5 and 6" is also stated under "Description of the Work" items "(A) 1 and 2". Therefore it appears that the total allowable incurred costs of the wages of the cook and truck driver, supervision, and depreciation charge for the truck and compressor must be absorbed in the costs of the work authorized under "Description of the Work" item "(A) 3," the only other work on a cost-incurred basis to which the charge can be made.

There follows an outline of the reporting procedures which we have tentatively proposed for use.

In reporting the costs of work under said item "(A) 3," on Form MF-104, the charges for the incident labor, supervision, depreciation, timber, pipe, track, miscellaneous supplies (which includes gas,

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

oil, etc., and is to be written in as "other" in a blank space), workmen's compensation and payroll taxes, and contingencies should be recorded as provided for on Form MF-104.

In reporting the foregoing costs on Form MF-104A all charges on Form MF-104, exclusive of those under items (1), (5) and (6), should be combined and reported on the upper portion of Form MF-104A as an extra category of work written in a blank space as "Underground R.P. and D." (Underground rehabilitation,preparation and demobilization).

The costs incident to the work under item "(A) 5.", exclusive of the cook's and truck driver's wages, supervision, and truck and compressor depreciation, should be reported in the aggregate amount of all other costs after item "(5)" on Form MF-104 and after "Initial Rehabilitation and Repairs" on Form MF-104A.

The costs incident to work under item "(A) 6.", exclusive of the cook's and truck driver's wages, supervision, and depreciation charge for the truck and compressor, should be reported in the aggregate amount of all other costs after item "(6)" on Form MF-104 and after New Buildings, Improvements, etc. on Form MF-104A.

The total charge for "Labor, Supervision, Consultants" for all the preparatory work under item "(A)" cannot exceed the indicated "allowable maximum" amount, and the charge for "Supervision, accounting and engineering" cannot exceed the allowable maximum of $600.00 per month. To effect a control on these and other stipulated "allowable maximums" it will be necessary for the operator to supply, with each Form MF-104 as a part of the documentation of charges, a schedule which will show the breakdown, on a cumulative basis, of such stipulated "allowable maximums", exclusive of those that are recorded direct on Form MF-104 on a cumulative basis. A suggested form for such breakdown schedule is attached.

Please advise at your earliest convenience whether or not we are correct in our interpretation and if the manner of reporting on Forms MF-104 and 104A is acceptable.

W. H. King

W. H. King

Enclosure

Breakdown of "allowable maximum"s that
are not recorded direct on Form MF-104

Item (5)

Charge	Total Previously Reported	Total This Month	Total to Date
Labor			
Comp. Ins. & Payroll Tax			
Equip. depreciation			
Operating supplies			
Total			

Item (6)

Charge	Total Previously Reported	Total This Month	Total to Date
Labor			
Comp. Ins. & Payroll Tax			
Equip. depreciation			
Operating supplies			
Total			

Absorbed under work category "R.P.&D."

Charge	Total Previously Reported	Total This Month	Total to Date
Labor			
Comp. Ins. & Payroll Tax			
Equip. depreciation			
Operating supplies			
Total			

Summary of totals to date

Item	Labor	Comp. Ins. & Payroll Tax	Equip. Depreciation	Operating Supplies
Item (5)				
Item (6)				
R. P. and D.				
Total				

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
MAR 16 1953

224 New Customhouse
Denver 2, Colorado

March 3, 1953

aKane
3/11/53
Rutter

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 1303X (Lead-Zinc), Contract Idm-E371
Yuma Metals, Inc., Yuma County, Arizona - Approval of Subcontract

Enclosed are three copies of a subcontract between Yuma Metals, Inc., and Metler Drilling Co., for the performance of the diamond drillings which is a specific element of the work authorized by Contract Idm-E371.

Also enclosed are three copies of the Government's approval of the subcontract which has been executed by this office in accordance with the last sentence of the last full paragraph on the fourth page of "EXHIBIT 'A'" attached to Exploration Project Contract Form MF-200.

It appears to us rather unnecessary for the Government to require their approval of subcontracts when reimbursement to the operator for the work to be performed is to be on an agreed unit price basis.

I think King is right on this point
aKane JH
3/11/53
3/13/53

W. H. King
W. H. King

Enclosures

RECEIVED
MAR 16 1953
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

Docket Copy
Lead-Zinc

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

224 New Customhouse
Denver 2, Colorado

March 3, 1953

AIR MAIL

Mr. Luke Walker, Secretary
Yuma Metals, Inc.
c/o San Carlos Hotel
Yuma, Arizona

Dear Mr. White:

That certain contract, six copies of which you have submitted with your request for approval, dated February 27, 1953, between you and Metler Drilling Company, for the performance of diamond drilling from the 500 feet level of the Red Cloud mine, in an amount not to exceed 6000 feet, which is a specific element of the work described in an Exploration Project Contract dated December 3, 1952, Idm-E371, Docket No. DMEA 1303X, is hereby approved by the United States of America, subject to all of the terms and conditions relating to such independent contracts set forth in said Exploration Project Contract.

Dated: March 3, 1953

UNITED STATES OF AMERICA

By W. H. King
Executive Officer, DMEA
Field Team, Region IV

JWT:jp

cc Sec. to Oper Committee (3)
WRSterns
AHKeschmann (2)
JWTownsend
Contract
Chron
TAChristensen

AGREEMENT.

This contract made this 27th day of February 1953 between Yuma Metals Inc. parties of the first part and Metler Drilling Co. a Partnership, parties of the second part.

The party of the second part agrees to Diamond Drill for the parties of the first part, not to exceed 6000 lineal feet of diamond core drilling from stations numbers one and two on the 500 foot level of the Red Cloud Mine, as shown in Yuma Metals Inc. contract with the Defense Minerals Exploration Administration, Docket Number D.M.E.A. 1303x, contract number Idm-E371 at the Red Cloud Mine located in Yuma County, State of Arizona.

The first diamond drill holes to be drilled from station number one and in the direction and inclination shown on said drawing in said contract. With approval of the Government the next drilling shall be from diamond drill station number two.

The location, direction, inclination and extent of work including number of holes drilled, is subject to the approval of the Government.

AX size drilling equipment to be used for all drilling except under adverse conditions when BX size may be used.

The location, direction, inclination and extent of all work, including the number of holes drilled, is subject to the approval of the Government.

Drilling to commence on the 12th of April 1953.

Second parties to work two shifts per day and six days per week when ever possible.

Second parties to carry industrial insurance and indemnity and liability insurance up to $50, 000.00.

Second parties to take proper care and save all sludges. To take proper care of cores, place same in core box and mark same each run.

Second parties to furnish all drilling equipment and labor including sludge boxes necessary to the proper recovery of cores and sludges.

The prices per foot to be as follows for AX core.

0 to 300 feet	$3.00 per foot
300 to 600 feet	$4.10
600 to 900 feet	$4.50
900 to 1100 feet	$5.10

The prices for BX core to be as follows;

0 to 300 feet	$3.65 per foot
300 to 600 feet	$3.85
600 to 900 feet	$4.30
900 to 1100 feet	$4.65

Reaming at $2.00 per foot
Cementing at $6.50 per hour
Any casing used to be charged at actual cost.
Mobilization and demobilization to be charged at cost, not to exceed $100.00 for each.
There is to be no other charges of any kind.

Payment to be made on the first of every month for drilling completed the previous month.

First party to cut and establish drill stations with twelve and one half foot ceilings. To furnish core boxes and muslin sacks for sludge and furnish air and water to drill stations. Also to maintain ladder for men going to and from drilling.

This contract is subject to the approval of the Defense Minerals Exploration Administration.

Yuma Metals Inc
By Luke Walker Sec'y

Mettler Drilling Co.
By Frank R. Mettler

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 8 1953

224 New Customhouse
Denver 2, Colorado

January 2, 1953

REGISTERED

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Contract Idm-E371, Docket DMA 1303X, Yuma Metals, Inc. (Lead-Zinc)

Enclosed are the original and two copies of Contract Idm-E371. Copies of this contract have been given to the operator, the Fiscal Officer, Region IV, and a copy has been retained for our files.

W. H. King

W. H. King

Enclosures

cal 1-8-53

FILE COPY
SURNAME:

500

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

DEC 12 1952

Hon. Carl Hayden
United States Senate
Washington 25, D. C.

Re: Docket No. DMA-1303X (Lead-Zinc)
Yuma Metals, Inc.

My dear Senator Hayden:

Reference is made to your letter of December 9, concerning the status of the subject application.

I am pleased to inform you that a contract, covering most of the exploration work, mutually approved by Mr. Luke Walker and our Field Team, was sent to our regional office in Denver, Colorado, on December 3, 1952, for the approval of that office before submitting the contract to the Applicant for his approval and signature.

To date the executed contract has not been returned to this office. However, I believe that the Applicant will approve and sign the contract shortly.

As requested, I am returning the copy of my letter of October 31 which was enclosed in your letter of December 9.

Sincerely yours,

C. O. Mittendorf (fw) J.H. 12-12-52

Administrator

Enclosure 1

HFKeller/bjl (written 12/11/52)

Copy to: Docket
Admr. R. File
Op. Committee
H. F. Keller (2)
Mr. Bishop
Mr. Kinkle
Reg. IV (2)
Chron.

KENNETH MC KELLAR, TENN., CHAIRMAN
CARL HAYDEN, ARIZ.
RICHARD B. RUSSELL, GA.
PAT MC CARRAN, NEV.
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EDWARD J. THYE, MINN.
ZALES N. ECTON, MONT.
JOSEPH R. MC CARTHY, WIS.

EVERARD H. SMITH, CLERK
THOMAS J. SCOTT, ASST. CLERK

United States Senate

COMMITTEE ON APPROPRIATIONS

December 9, 1952

Mr. C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration
Washington 25, D. C.

Dear Mr. Mittendorf:

Referring to your letter of October 31, a copy of which is attached, I will be obliged if you will advise me whether any further action has been taken on the Yuma Metals, Inc. application.

Yours very sincerely,

Carl Hayden

U. S. S.

P. S. Please address reply to me, sending me original and one copy. Kindly return enclosures.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 10 1952

500 FILE COPY
SURNAME:

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

DEC 3 1952

Mr. W. H. King
Executive Officer, Region IV
DMEA Field Team
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMA-1303 (Lead-Zinc)
Yuma Metals, Inc.
Yuma County, Arizona
Contract No. Idm-E371

Dear Mr. King:

Enclosed are the original and five copies of a proposed exploration project contract covering some of the work proposed in the subject application.

This contract follows closely that suggested by Mr. Romslo in his report of November 4, except that only the actual drilling is on a unit cost basis. The costs of the preparatory work are on actual costs which are limited as much as possible by making each sub-division an allowable maximum and limiting such charges only to a period not to exceed three months or prior to the commencement of diamond drilling.

If the contract meets with your approval, kindly submit it to Mr. Lloyd C. White, 1005 Oxford St., Berkeley 7, California, and send a copy of the transmittal letter to Mr. Luke Walker, 798 Hope Ave., Santa Barbara, California. When Mr. White returns the executed contract, kindly return the original and two copies to this office and distribute the other copies in the usual manner.

Sincerely yours,

D. C. Selfridge (HB)
ACTING Chairman, Operating Committee

12-3-52

Enclosures-6
APPROVED:

J. H. Hedges (HB)
Member, Bureau of Mines

A. R. Kinkel, Jr. (HB)
Member, Geological Survey

HFKeller/hmj (11-28-52)
CC to: Adm. Reading File
Operating Committee
Docket Copy
Region IV
Mr. Keller (2)
Mr. Kinkel
Mr. Bishop

FILE COPY
SURNAME:

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

HFKeller
Talbot
Kinkle
Selfridge

Mr. Luke Walker, Secretary and Treasurer
Yuma Metals, Inc.
708 Hope Ave.
Santa Barbara, California

DEC 3 1952

Re: Docket No. DMA-1303X (Lead-Zinc)
Yuma Metals, Inc.
Yuma County, Arizona

Contract No. Idm-E371

Dear Mr. Walker:

I have your letter of November 5, 1952, in reference to the subject application and the field examination by Mr. T. M. Romslo.

Mr. Romslo's recommendations have been studied by the commodity specialists and the engineers of this Administration with the objective of arriving at a contract that is acceptable to the Government as well as to the Applicant.

Our engineers, after studying the report and recommendations of Mr. Romslo, have drawn up a proposed contract, incorporating most of the recommendations proposed in his report. This proposed contract could not be drawn up on a short form contract since there were too many items of expenditure under surface and underground rehabilitation that could not be based on unit costs because of the nature of the work to be performed and insufficient detail.

The contract as drawn up for your approval will consist of unit costs for drilling 6,000 feet of diamond drill hole at $10.00 per foot, and actual costs for the surface and underground rehabilitation and preparation in an amount not to exceed $15,000.00. Your request for an additional $13,000.00 for contingencies has been studied and rejected on the basis that the funds provided in the proposed contract for rehabilitation are sufficient, if your company does only the work specified in the proposed contract. It is the general opinion of the staff which has studied your application and supplementary reports that the size of the target area and probability of discovering a significant ore deposit are not sufficient to warrant a more costly exploration project.

I hope that your directors can approve the proposed contract which will be sent to our regional executive officer in the near future.

HFKeller/bw
(written 11/20/52)
Copy to: Docket
Ad R. File
Op. Comm.
H. F. Keller (2)

Sincerely yours,

(signed) FRANK E. JOHNSON
(for)
ACTING Administrator

Mr. Bishop
Kinkle, Jr.
Region IV (2)
Chron.

12-3-52

FILE COPY
SURNAME:

AEKane

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

November 24, 1952

Memorandum

To: H. F. Keller

From: Chief Counsel

Subject: Yuma Metals, Inc. - Docket No. DMEA-1303 (Lead-Zinc)

There is attached, in satisfactory legal form for execution, a contract covering the above-described project, subject to the attachment to the contract of the drawing entitled "Fig. 5 - Transverse Section A - A', Red Cloud mine, showing proposed drilling - DMA 1303X".

J. L. Hofflund
Chief Counsel

Attachment
AEKane/ema
cc: Mails & Files
J. L. Hofflund
A. E. Kane
Chron.

FILE COPY
SURNAME:

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION 140
WASHINGTON 25, D. C.

AEKane

November 19, 1952

Memorandum

N.S. in R. v R.

To: Administrator

Through: H. F. Keller

From: Chief Counsel

Subject: Frank Bullock, Docket No. DMEA-1953

There is attached, in satisfactory legal form for execution, a contract covering the above-described project, subject to the attachment of the Owner's Consent to Lien and the map referred to in Exhibit "A".

Signed
J. L. Hofflund
Chief Counsel

Attachment

AEKane/mef
cc to: Mails and Files ✓
Mr. Kane
Mr. Hofflund
Chron.

FILE COPY
SURNAME:

500

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

NOV 17 1952

HFKeller/bjl (written 11/14/52)
Copy to: Docket
Adrm. R. File
Op. Committee
H. F. Keller
Mr. Bishop
Mr. McKnight
Chron.

Mr. A. E. Weissenborn
Executive Officer
DMEA Field Team, Region II
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA-2496 (Lead-Zinc)
Golden Anchor Mines
Powell County, Montana

Dear Mr. Weissenborn:

We wish to acknowledge and thank you for your letter of October 29, 1952, in which you gave us information pertaining to various applications which are still pending because of lack of interest by the applicant.

In order that our active files are kept moving and up-to-date we believe that the following procedures should be followed in the case of applications which are pending because of failure on the part of the applicant to submit information, to prepare the property for a field examination, or to answer correspondence:

1. After the lapse of one month from the date of the last correspondence with the applicant, he should be advised by a form letter that action is pending receipt of his answer to the correspondence of that date.

2. If the applicant does not answer the form letter within 30 days and furnish the required information, he should be notified by letter that action on his application is pending the requested information, and that if it is not forthcoming within 30 days that the application will be removed from the active file and the docket closed.

This procedure will give the applicant at least 90 days in which to prepare his property for a field examination or to furnish the requested information, which should be sufficient time under normal conditions.

Sincerely yours,

(signed) FRANK E. JOHNSON
Chairman, Operating Committee

11-17-52

APPROVED:

J. H. Hedges
Member, Bureau of Mines

A. R. Kinkel, Jr.
Member, Geological Survey

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 1 1952

Keller
Betty

October 29, 1952

Mr. F. E. Johnson, Chairman
Operating Committee, DMEA
Dept. of the Interior
Washington 25, D. C.

Dear Mr. Johnson:

In a recent phone conversation between Mr. M. E. Volin and Mr. Keller about another matter, Mr. Keller requested information on the status of five dockets which are still pending. Following is the information which Mr. Keller has requested.

Docket No. DMEA-393X. W. A. Noon, Sunrise Mine. An exploration proposal has been worked out with the Operator and a tentative contract was drawn up on a unit cost basis. This was sent to the Operator some time ago to find out whether he would be agreeable to the costs that were stipulated. There was a long delay while Mr. Noon was apparantly taking this up with his board of directors. In response to a very recent letter from me, he has stated that the terms of the proposed contract are satisfactory to his company. The report plus the tentative contract has already gone forward to you.

Docket No. DMEA-2109. The Mineral King. The applicant has shown little interest in discussing this proposal with us presumably because he has been dickering with a mining company for the sale of the property. We have noted recently in the papers that the property has been sold to the A. S. and R. Since then we have been trying to contact the Operator to get written confirmation of this so that the application can be withdrawn. We are writing him again to this effect and will state that if we do not hear from him, we will consider the application withdrawn.

Docket No. DMEA-2339. H. T. O'Reilly, Bo Gulch, Powell Co., Montana. This was denied in July with the proviso that if bulldozing then in progress showed up anything, the application could be reconsidered. Mr. M. R. Klepper of this office has been in the general area and has been keeping an eye on the work at Bo Gulch. As I have not heard from Mr. Klepper recently, I presume that either the bulldozing has not been done, or the results were so unfavorable that Mr. Klepper did not think any further action was required.

Unfortunately, Mr. Klepper is on leave at the moment. On his return, I will obtain final word so that the matter can be closed.

Docket No. DMEA-2217, Clark Mines Inc. The applicant was to inform us when the shaft has been unwatered. He has never done so. We will contact him again and either insist on unwatering the shaft so that an examination can be made, or will deny the application.

Docket No. DMEA-2496. Golden Anchor Mine; Powell County, Montana. The same status as some of the others described above. A proper appraisal of the proposal could not be made until some old workings had been cleaned out. The applicant was to advise us when this was done. One of our men is now in the field checking on this.

In reviewing the situation, it is clear that we have been making an error in our treatment of some of these dockets. Some of them look pretty hopeless, but our field men hesitate to make a negative recommendation because if a shaft were unwatered, an old working cleaned out, or a pit or two dug so that some definite information were available, there is a bare chance that something might be worked out. The applicant usually states he will do this, but quite as commonly fails to fullfill his promise. As a result, the field man usually makes two or three attempts to find out what has happened, and when no progress is reported, he is inclined to drop the whole matter forgetting that the record is on our book as an unfinished examination. This perhaps does no great harm, but it clutters up our records and makes it appear that we are taking too long to examine a property. I think in most cases this can be avoided by the Field Team making a definite negative recommendation on the basis that the information presented is insufficient to properly appraise the applicant's proposal. A statement can be made that if the applicant will do a certain specified amount of work, say, to pump out a shaft or make workings safe for inspection, the case can be reconsidered. In other words, we should strive to make this the applicant's responsibility to present the necessary information, and if he does not do so, then the docket will be considered dead until and unless he does so. I think this would save us quite a lot of trouble and remove a lot of dead wood from our unfinished files. This is not the only reason for the delay in getting in reports to you, of course, but a number of dockets are in this condition.

I would appreciate your opinion on this matter.

Sincerely yours

A. E. Weissenborn

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II

cc: USBM (2)
DMEA (2)

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

November 17, 1952

Memorandum

To: Mr. H. F. Keller

From: Erwin J. Lyons, USGS
O. M. Bishop, USBM

Subject: Review of revised recommendation

Re: Docket DMA-1303X
Yuma Metals, Inc.
Red Cloud mine, Yuma County, Arizona
Total Project Cost: $74,793.00
Metals: Lead-zinc-silver

T. M. Romslo, mining engineer, has submitted a report based upon a reexamination of the subject property to determine the minimum requirements for a diamond drilling program. This program is the same as that which was recommended for approval by the present reviewer in a memorandum dated May 26, 1952 to D. E. Moulds, DMEA.

The report by T. M. Romslo deals with a reappraisal of the costs of surface and underground rehabilitation and of the drilling. As the report contains no geologic evidence which would warrant a change in the original recommendation, the present reviewers believe the program to be geologically justified.

Although the total estimated cost of $10.00 per foot of diamond drilling seems high, an analysis of the field team report shows the cost estimates are realistically derived, taking into consideration the necessity for road building, camp preparation and underground rehabilitation necessary to make the drill station accessible and useable.

We recommend approval of the application as amended in T. M. Romslo's memorandum of November 4, 1952.

Erwin J. Lyons
Geologist

O. M. Bishop
O. M. Bishop
Base Metals Branch

MINES IN SILVER DISTRICT
YUMA COUNTY

MILL ON COLORADO
HEAD OF MARTINEZ LAKE

Yuma Metals, Inc.

LLOYD C. WHITE, GEN. MGR.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 17 1952

D. L. McDANIEL, PRES.
OTTO MOTEJL, VICE PRES.
CHAIRMAN OF BOARD
LUKE WALKER
SECY. & TREAS.

Copy

YUMA, ARIZONA

November 14, 1952

Hon. Carl Hayden,
Phoenix, Arizona

Re: Docket No. DMEA-1303X
Yuma Metals, Inc.

Dear Senator Hayden:

Your favor of the 7th inst. received. Thanks for your continued interest in our Minerals Exploration program.

We are enclosing our last letter to DMEA. Their attitude has changed to being more reasonable as indicated in letters to you and ourselves. They seem to have abandoned their unreasonable offer of $35,000.00. They are so busy, this offer must have been made by someone who was not familar with our case.

We are enclosing our last letter to DMEA. The figure of $87,000.00 we suggested is $32,000.00 less than the schedule we submitted September 20th, which was made from the amended application (eliminating the drifting work) that was agreed to by the field team last November. The $87,000.00 we suggested in our letter was made thinking that this low figure would close the matter promptly and we could get to work while the weather was favorable in Arizona. Also, this figure is only $13,000.00 higher than the field team's last minimum estimates which were $74,000.00 and which was agreed to by the Denver office by telephone.

We appreciate very much your interest in this matter. Without it I am sure we would have had to abandon our program.

I do believe this man Mittendorf is competent and doing a good job.

Thanking you again, we remain,

Very truly yours,

YUMA METALS

By Luke Walker Secy

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

224 New Customhouse
Denver 2, Colorado

November 5, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 7 1952

AIR MAIL

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMA 1303X, Contract Idm-E371, Yuma Metals, Inc. (Lead-Zinc), Yuma County, Arizona

At your request, a re-examination was made of the property of the Yuma Metals, Inc. We are enclosing the original and two copies of a supplemental memorandum report by T.M. Romslo, Bureau Engineer. This report contains the estimated cost of road repairs, surface and underground rehabilitation and diamond drilling, for a total cost of $74,793.00. These costs are reasonable and we recommend that a contract to do this work be prepared on the short form. We are also enclosing six copies of a map to be used in the contract.

W. H. King

W. H. King

Enclosures

MINES IN SILVER DISTRICT
YUMA COUNTY

MILL ON COLORADO
HEAD OF MARTINEZ LAKE

Yuma Metals, Inc.

D. L. McDANIEL, PRES.
OTTO MOTEJL, VICE PRES.
CHAIRMAN OF BOARD
LUKE WALKER
SECY. & TREAS.

LLOYD C. WHITE, GEN. MGR.

YUMA, ARIZONA

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 1 1952

November 5, 1952.

Mr. C. O. Mittendorf
Administrator
Defense Minerals Exploration Administration
Washington 25, D. C.

Re: Docket No. DMA-1303X (Lead-Zinc)
Yuma Metals, Inc.
Yuma County, Arizona

Dear Mr. Mittendorf:

Yours of the 31st inst. received and note as soon as the report of the Field Team is received it will be studied immediately. We would appreciate this very much as it is the right time of year to commence the work.

Also, am pleased you stated that our new schedule of September 20th, amounting to $119,944.67, will be studied along with field team report. In this regard, please let me say that the last figure I talked over with Field Team was between $74,000 and $75,000 and was to be written on the short form. The items that make up the above figures are very low - so low that the 18% or 19% contingent will not nearly bring them up to the actual cost. The reason for this is that Mr. Romslo was trying to arrive at the lowest possible over-all figure, and to do that:

1. He eliminated the water pump. That necessitates hauling water up hill over not too good a road for 18 miles. This will, of course, lower the first cost, but will necessitate a full man's and truck time as the road is slow and the only water supply less than 45 miles is at Fisher Camp. The only water supply there is a 3/4" pipe under low pressure. It will take three hours each day to load water, if not longer. The tire, fuel and repairs are going to be excessive. In Mr. Romslo's figures not over 50% of these items are covered.

No. 2. Mr. Romslo did not allow for air blower but depended on compressor to take care of changing the air. This again reduces the over-all figure, but will be expensive on a seven or eight month's job, because it will be running a 77 h.p. engine to produce less air than a 5 h.p. would produce on a blower. Again, no place in his figures is this air changing expense taken care of.

No. 3. Mr. Romslo did not allow for a telephone - a small item, but a necessary one.

No. 4. No small tool allowance.

No. 5. No rail tie and spike allowance - small item but will have to have them.

No. 6. Am sure the timber allowance is too small.

There are other expenses not taken care of in his estimates such as transportation in and out on rented equipment, lost time setting up, etc. The one big contingency is what the State mine inspector will require. You will notice that in his estimate, rehabilitation is drastically reduced.

Have heard from Mr. White and the other directors. They have told me to negotiate a program with you and to do so as promptly as possible. Taking into consideration items already mentioned, I will suggest this, if the contract can be written on the short form and using Mr. Romslo's estimates ~~that~~ adding a contingency of 15% ~~be added~~ to the total amount of $74,000 plus or making a total figure of about $87,000. If this figure can be arrived at I will recommend it to our director and think this matter can be disposed of quickly. This might be a strange way of doing this but am suggesting it rather than attempting to go into it item by item, for on that basis it would come back to the $119,944.67 figure which we believe the program will cost. However, I can see on the short form we can make some saving that would be impossible under the long form. Considering this, and if we can get going quickly, prompts me to make the above suggestion.

Hoping this will be satisfactory and that we can close this promptly and thanking you for past favors and all your time you have given to this case, I am,

Yours very truly,

YUMA METALS, Inc.

By Luke Walker
Luke Walker, Sec.

LW:h

(See attached sheet)

I understand under the short form contract, the test is that we complete each item as listed - regardless as to how we accomplish it.

With this in mind, thought it advisable to tell you how we probably will operate and for what reason.

To operate, as set up by Mr. Romslo, we would have poor accommodations for men, unsatisfactory water situation which would necessitate men climbing down and up 500 ft. each shift, which would not be inducive to obtaining good men or keeping any kind of men on the job, all of which would be unsatisfactory and considerable money wasted.

We probably (if we are granted the loan) would install pump and water line and tank at camp, arrange so we can carry men to and from work, fix better accommodations than Romslo allowed for. This of course, will cost us considerable more but which will assure a better and more satisfactory job - we, of course, to absorb the extra cost.

If this is allowable under the short form, please proceed on our application as outlined in other letter.

You can understand our reasoning, if our water truck broke down or men quit, we would be out of water with no alternative and, at best, expensive to find and hire another truck or find another man. As to men climbing down and up 500 ft. they would not be in too good spirits to do their best work, besides losing 1½ to 2 hours on every man every shift. As to accommodations, this again is the difference between having good men satisfied or the other kind. It is cold there in winter and very hot in summer and only good equipment and housing can defeat these climatic conditions.

Am not criticising Mr. Romslo because he was setting it up with the very least possible outlay in mind, nothing else considered. But these days you have to take fair care of men or you won't have any good ones - and even the no goods won't stay long.

Luke Walker

Luke Walker, sec.

Copies of this and
attached letter to:

Hon. Senator Carl Hayden
Hon. Senator E. W. McFarland
Yuma Chamber of Commerce
Westover & Mansfield
Lloyd C. White
D. M. McDaniel
Otto Motejl

Mining Division
Data Rec'd
1952
BUREAU OF MINES
TUCSON, ARIZONA
Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR

Arizona-New Mexico Branch
Box 4097
UNIVERSITY STATION

BUREAU OF MINES
MINING DIVISION
REGION IV

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 1952

November 4, 1952

AIR MAIL

Memorandum

To : W. H. King, Denver, Colorado

From : Chief, Arizona-New Mexico Branch, Mining Div., Region IV

Subject : Revised recommendations, Docket DMA-1303X, old contract Idm-E371, Yuma Metals, Inc. (Lead-Zinc), Yuma County, Ariz.

As requested in John Shaw's memorandum of October 16 and our later telephone conversations, we had T. M. Romslo contact Mr. Luke Walker of Yuma Metals, Inc. in Yuma and go over revised project costs with him. Later, Walker came to Tucson and we worked out a core drilling project with costs that were agreeable to both Walker and to the DMEA engineers.

Attached are original and 8 copies of Romslo's report, recommending road repairs, surface and underground rehabilitation, and diamond drilling for a total cost of $74,793.00. As these costs and the proposed work are fair and reasonable, I recommend that a Short Form contract be made for this project.

Please have the contracts submitted to Mr. Lloyd C. White at Berkeley, Calif. as the company is giving White authority to carry out all negotiations and to sign for the company; also, send a copy of all correspondence to Mr. Luke Walker at 798 Hope Avenue, Santa Barbara, Calif.

Walter R. Storms

Walter R. Storms

CC: W. H. King (8)
DMA-1303X
DF

FOR VICTORY
BUY
UNITED STATES SAVINGS BONDS AND STAMPS

UNITED STATES
DEPARTMENT OF THE INTERIOR

Arizona-New Mexico Branch
Box 4097
University Station

BUREAU OF MINES
MINING DIVISION
REGION IV

Tucson, Arizona

November 4, 1952

Memorandum

To : W. R. Storms, Chief, Arizona-New Mexico Branch, Mining Div., Region IV, Tucson, Arizona

From : T. M. Romslo, Mining Engineer, Tucson, Arizona

Subject : Yuma Metals, Inc., Yuma County, Ariz., Docket DMA-1303X, Contract Idm-E371.

The Red Cloud mine of the Yuma Metals, Inc., Yuma County, Ariz. was examined by me on October 28, 1952 in order to determine the minimum requirements for the diamond drilling program.

The examination was made in the company of Mr. Luke Walker, secretary and treasurer of Yuma Metals, Inc., and Mr. Mike Weaver, representative of R. S. McClintock Co., Spokane, Wash. As you know, I called Mr. Walker by telephone Oct. 21, and suggested that representatives of drilling companies be present during the examination and that their bids on the drilling be used as a basis for estimating the overall drilling costs. Mr. Weaver was one of 3 representatives we hoped would be present.

The pertinent underground workings were examined in the company of Mr. Weaver, and Mr. Walker accompanied us during an inspection of the surface.

On the following day, Mr. Weaver's bid for drilling was received and cost estimates were prepared for a project that would involve surface

CC: W. H. King (Orig. & 8)
DMA-1303X
DF

FOR VICTORY BUY UNITED STATES SAVINGS BONDS AND STAMPS

and underground rehabilitations and 3,800 feet of drilling. This footage would be sufficient to complete the first 10 of the 12 holes of the original program without taking advantage of the Riley hole. The modified drill-program with estimated costs were submitted to Mr. Walker for his approval. He indicated that he might go along with the set-up even though the rehabilitation costs appeared to be too low but that the final decision would have to come from the corporation's board of directors. He said he would contact them and give you the decision by October 31. I was informed by you that Walker had phoned on schedule and had told you that: (1) The corporation's directors had disapproved the modified program, and (2) Arrangements had been made for Walker to get together with me in Tucson on October 31 in an effort to work out a program that could be approved both by the corporation and the Government.

As arranged, Walker and I finally worked out a set-up that he said the corporation would approve and that I believed would be acceptable to DMEA.

The project is set-up to be carried out under <u>the Short Form Contract</u> (Form MF-200A) and consists of the following 4 operations.

<u>Roads</u>

Time estimate: concurrent with the following work.
Repairs .....$ 1,000.00

<u>Initial Rehabilitations and Repairs</u>.

Time estimate: 1½ months - Move equipment, 2 house-trailers, and 3 buildings from camp to mine, (approx. 6 miles); repair equipment and 4 buildings that include one at mine, convert buildings for use as bunk-, supply-, cook-, and hoist-houses and shed for compressor; repair head-frame and collar of shaft; install water tank for domestic use, and hoist; and maintain camp .....$ 7,639.00

Underground Rehabilitations and Repairs.

Time estimate: 1½ months - Clean and repair inclined manway from surface to 500-foot level, repair 270- and 500-foot level stations, rehabilitate caved section of drift at No. 1 drill site, install hoisting cable and bucket, and compressed air line; and maintain road and camp .....$ 6,154.00

Diamond Drilling.

Time estimate: 8 months.
6,000 feet @ $10.00 a foot $60,000.00
(Holes to be completed at Ax size, if possible)

Recapitulation of Costs

Road repairs	$ 1,000.00
Surface rehabilitations and repairs	7,639.00
Underground rehabilitations and repairs	6,154.00
Diamond Drilling	60,000.00
Total cost	$74,793.00

In the preparation of the above costs, I have considered the minimum requirements for carrying out the work in a safe and realistic manner. Mr. Walker said the costs are adequate for a project of that type but that the corporation will probably elect to make more elaborate preparations for the drilling. In the event that is done, he said that all costs over that allowed in the contract would be absorbed by the corporation. Some of the work they have planned and that I have not allowed are as follows:

1. Large electric hoist with electric generator-set for power and lights for the camp;
2. New buildings in place of remodeling old structures;
3. Timber the vertical shaft and installation for lowering men and supplies to 270 level. Note: If this is done it will cost $8,000 to $10,000. Men then can be lowered to 270-foot level instead of climbing the manway.

In the following detailed cost estimates I have used the wage and supervision rates of Lincoln A. Stewart's report and have applied the following monthly depreciation and rental rates for the necessary equipment.

Depreciation and Rentals.

Compressor	$ 125.00
Hoist	100.00
Jeep	50.00
Truck - lowered from $100 to $50 because of present condition..	50.00
2 - House-trailers for living quarters @ $25.00 each	50.00
Total per month	$ 375.00

Road - Since Stewart's examination, the corporation has spent $2,500 on repairs. Additional work to repair several bad stretches and maintain the road can be done for the estimated $1,000.00. Here again the corporation will probably elect to place the road in a far better condition and at a greater cost than is justified $1,000.00

Surface Rehabilitations and Repairs.

Time: 1½ months.

Move buildings, trailers, and equipment	$ 600.00
Level for buildings	100.00
Repairs and alterations to buildings	1,000.00
Water tank and plumbing	250.00
Toilet	50.00
Equipment (depreciation)	561.25
Cook @ $350 per month	525.00
Truck-driver-utilityman *	558.75
Supervision	900.00
Fuel, grease and repairs	600.00
Small tools, safety supplies, etc.	300.00
Supplies and equipment for cook and bunk houses	500.00
Head-frame and shaft collar	1,000.00
Contingency, approx. 10 percent	694.00
Total	$7,639.00

* Note - included in other items. Employed mainly in hauling camp - water about 16 miles and maintaining the road.

Underground Rehabilitations and Repairs.

Time: 1½ months.

Manway - clean and repair inclined shaft manway	$ 800.00
Station at 270- and 500-foot levels - clean and repair - place bulkheads at 270 station to make manway safe	1,000.00
Install air line, hoisting cable and bucket in vertical shaft	450.00
* Timber and muck-out 40-foot section of caved drift at drill-site No. 1 and blast, muck-out and timber above drift for drill head-room	1,250.00
Equipment, (depreciation)	561.25
Fuel, gas and repairs	450.00
Cook @ $350 per month	525.00
Truck-driver-utilityman	558.75
Contingency, 10 percent	559.00
Total	$6,154.00

* This section of drift is nearly filled with rock and timber at present.

Diamond Drilling.

The 6,000 feet of drilling as provided in Stewart's report has been allowed because this footage may be necessary in event the dip of the vein is found to be steeper than indicated.

Cost estimates that justify the allowable $10.00 per foot follow:

Time schedule: 15 feet per shift, 6-day week, to complete in 400 working days, or 8 months.

	Cost/foot
* Contract drilling	$ 6.20
Supervisor, compressor-man, sampler, and utilityman	3.58
Depreciation of surface equipment	1.00
Fuel, grease and repairs for surface equipment	.40
Sampling supplies and assaying	.10
Estimated cost per foot	$ 11.28

* The contract price was estimated from R. S. McClintock Co's. bid that provided for delay, cementing, and reaming charges and for drilling BX and AX size holes. It also allows for a reduction of 40 cents a foot after a minimum of 1,000 feet of drilling. The bid was made with the understanding that the drilling company would furnish its own camp. Camp costs plus bonus payments for the drill crew for living conditions accounted for probably about $1.20 of the overall costs.

On the above basis, drilling costs at an established camp would be $10.08 a foot (use $10), a cost that is closely approximated by Stewart's estimate after the addition of costs for supervision, surface labor, surface equipment, and supplies that would be allowable on this project.

Mr. Walker, in approving the cost of drilling, stated that the $10.00 per foot cost could probably be attained either by obtaining a lower bid from a contractor or by doing the job as originally proposed.

The possibility of drilling from the surface was considered during the examination. It was found that a surface project would involve the drilling of comparatively long holes with much of the drilling in ground that would be difficult and costly to penetrate. Furthermore, the overall cost of surface drilling would be equal to or greater than underground drilling and would have less chance of yielding good drilling conditions at the vein zone.

T. M. Romslo, Mining Engineer
Arizona-New Mexico Branch
Mining Div., Region IV

FILE COPY
SURNAME:

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

500

OCT 31 1952

Hon. Carl Hayden
United States Senate
Washington 25, D. C.

Re: Docket No. DMEA-1303X
Yuma Metals, Inc.

My dear Senator Hayden:

In accordance with your request dated October 27, 1952, I am pleased to give you the following information concerning the action that is now being taken by this Administration on the captioned application.

Since writing my letter of October 13, to Mr. Luke Walker, Secretary of Yuma Metals, Inc., informing him of a proposed reexamination of his property by the Field Team, I have received two letters dated the 20th and 22nd of October from him, requesting additional information and presenting a revised exploration program.

I have informed Mr. Walker that as soon as I receive the report of the Field Team, which has now made the necessary arrangements to reexamine the mining properties of Yuma Metals, Inc., that we shall restudy the proposed exploration project contract in the light of that report. Until that time, we shall be unable to take any further action on the application and proposed contract.

I hope that I shall be able to report to you shortly after receiving that report that a contract, acceptable to both the Operator and the Government, has been executed.

Sincerely yours,

C. O. Mittendorf (for) HFK 10-31-52

Administrator.

HFKeller/bw
(written 10/28/52)
Copy to:
Docket
Adm R. File
Op. Comm.
H. F. Keller (2)
Mr. Bishop
Mr. McKnight
Reg. IV (2)
Chron.

FILE COPY
SURNAME:

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

500

Mr. Luke Walker, Secretary-Treasurer
Yuma Metals, Inc.
798 Hope Ave.
Santa Barbara, California

OCT 31 1952

Re: Docket No. DMA-1303X (Lead-Zinc)
Yuma Metals, Inc.
Yuma County, Arizona

Dear Mr. Walker:

Reference is made to your letters of October 20 and 22, in reply to my letter of October 13, concerning the captioned application.

I sincerely regret the apparent misunderstanding on your part concerning the final approval of your application especially as to the amount approved. However, you must admit that you never received a direct communication from this Administration stating that your application would be approved for any definite amount before June 26, when Mr. Corbett advised you by telephone that the contract had been approved for $32,500.

The engineers of this Agency, who studied your application, the field report and other information available to them were of the opinion that the real future of your mine depended not so much on the known reserves of oxide ore but on the possible discovery of significant sulphide ore deposits. For that reason they recommended and drew up an exploration project contract covering a diamond drilling program to explore the downward extension of the oxide ore shoots, which program always had interested the companies previously in possession of the property.

In accordance with my letter of October 13, the Field Team was instructed to contact you at the earliest possible date, for the purpose of reexamining your mine. We understand that the Field Team has now made arrangements to visit your property and should shortly submit their report and recommendations. If the final approved estimated cost of the project does not exceed $50,000, the amended contract can be finalized by the Executive Officer of Region IV at the following address:

Mr. W. H. King, Executive Officer
DMEA Field Team, Region IV
224 New Customhouse Building
Denver 2, Colorado

That your application may be finalized by the Executive Officer of Region IV is no indication that we are no longer interested in your

application but, to the contrary, it indicates our desire to expedite the approval and execution of the proposed exploration project contract.

As soon as the report of the Field Team is received, it will be studied immediately by our staffs in Denver and Washington and a proposed contract will be made on their findings, either by the Denver office if the total sum involved is within their delegated authority, or by this office if the estimated cost of the project is superior to that amount. The new schedule of September 20, for an exploration program, which was enclosed with your letter of that date, will be studied in conjunction with the recommendations of the Field Team. The above statement does not imply that our staff approves the items of expenditure or the estimated costs as proposed in that program.

In accordance with the request in your letter of October 22, for regulations, rulings and policies that apply to your application, we are pleased to enclose the following:

1. DMA Order 1
2. The Defense Minerals Exploration Program

Before providing you with the names and functions of each division or group named in your letter of October 22, the following explanation is necessary.

Commodity Specialists are engineers or geologists who have acquired a broad knowledge of the occurrence and mining, production and exploration methods best adapted for certain minerals or ores. These men are personnel of the U. S. Bureau of Mines or the U. S. Geological Survey.

Reviewers are the Commodity Specialists and the engineers of this Administration who study applications for aid in exploration projects and report their recommendations to the Chiefs of their Divisions.

The Operating Committee is made up of three members, one from each of the following: U. S. Bureau of Mines, U. S. Geological Survey and the Defense Minerals Exploration Administration. This committee coordinates the work of the three agencies and serves to make technical information and abilities available to this Administration. The Chairman of this Committee is Frank Johnson, Deputy Administrator, Defense Minerals Exploration Administration.

The Defense Minerals Exploration Administration is divided into the following divisions: Iron and Ferro-Alloy, Base Metals, Rare and Miscellaneous Metals, Non-Metallic, Contract Administration and Audit, and Operations Control and Statistics Division. In addition to these, are the Chief Counsel, Administrative Officer and Information Officer and their staffs which are directly under my jurisdiction.

The Base Metals Division, which handles only the applications for aid in the exploration for lead and zinc, has the following personnel.

H. F. Keller, Chief
George Keating, Mining Engineer
J. W. Alt, Mining Engineer
F. X. Corbett, Mining Engineer

These engineers study and evaluate the information supplied in the application, field reports and other available data, and either approve or deny the application. If the former, they draw up a proposed contract, describing the work to be done and providing the funds necessary to perform it.

The Lead-Zinc Commodity Group are commodity specialists under the following directors: C. H. Johnson, Chief of the Base Metals Branch of the U. S. Bureau of Mines, and E. T. McKnight, Geologist, U. S. Geological Survey.

The men in the aforementioned divisions are not under my jurisdiction but cooperate with this Administration in the evaluation of exploration project applications. There is no Supply Division in the organization of this Administration.

It is hoped that the foregoing information is that which you require and will fulfill your needs.

Please be assured that I take your letters as friendly and only indicative of your desire to present your opinion on the problems involved in finalizing your application.

Sincerely yours,

C. O. Mittendorf (fw)

Administrator

Enclosures 2

J.H. 10-31-52

HFKeller/bw (written 10/29/52)
Copy to: Docket
Adm. R. File
Op. Comm.
H. F. Keller (2)
Mr. Bishop
Mr. McKnight
Reg IV (2)
Chron.

KENNETH MC KELLAR, TENN., CHAIRMAN
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A. WILLIS ROBERTSON, VA.
STYLES BRIDGES, N. H.
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JOSEPH R. MC CARTHY, WIS.

EVERARD H. SMITH, CLERK
THOMAS J. SCOTT, ASST. CLERK

United States Senate

COMMITTEE ON APPROPRIATIONS

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 27 1952

Phoenix, Arizona
October 23, 1952

Mr. C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D.C.

Dear Mr. Mittendorf:

I thank you for your letter of October 14 with regard to the contract application filed by Yuma Metals, Inc. (DMEA-1303X).

This morning I received a copy of the letter addressed to you on October 20 by Mr. Luke Walker, Secretary of the Yuma Metals, Inc., in which he suggests revisions to the former contract application, and asks that the application be reconsidered in the light of the proposed revisions.

I shall be obliged for your advice as to action which you may now be able to take on the application.

Yours very sincerely,

Carl Hayden

Carl Hayden
United States Senator

MINES IN SILVER DISTRICT
YUMA COUNTY

MILL ON COLORADO
HEAD OF MARTINEZ LAKE

Yuma Metals, Inc.

LLOYD C. WHITE, GEN. MGR.

D. L. McDANIEL, PRES.
OTTO MOTEJL, VICE PRES.
CHAIRMAN OF BOARD
LUKE WALKER
SECY. & TREAS.

YUMA, ARIZONA

October 22, 1952.

C. O. Mittendorf
Administrator of DMEA
Department of Interior
Washington 25, D. C.

RE: Exploration Loan DMA 1303-X

Dear Mr. Mittendorf:

Since writing you yesterday, have read your letter more carefully. Relative to first paragraph, Page 4, of your letter, I do think the action was against our best interests. From this paragraph I am afraid you think I was wrong in saying our application had been approved. Maybe I was. Am going to tell you why I thought so and how it sounded from this end then you can be the judge. If you say I shouldn't I apologize and stand corrected.

In November, 1951, Johnson told me on the phone that he was sending our application to Field Team for re-examination and their recommendations and that what they recommended he would approve. That is one reason we consented to our application being cut from $199,000 to $171,000, thinking it to be a final figure. Johnson told me to try and agree with them as it would probably save some correspondence. We did agree to each and every item as to estimated cost and necessity.

Our application did not get back to Washington until May 12th. About this time I asked you, through Willis, <u>if any changes came up for discussion Mr. White would like to come to Washington</u> and discuss them with the proper parties. (Below is your answer)

Willis wrote us June 6th as follows:

"Dear Mr. Walker: I have received a letter from C.O. Mittendorf, Acting Administrator of DMEA, Washington, relative to your application. He states: "The Field Team report on this application, which was received in my office on May 15, 1952, has been sent to our lead-zinc commodity group for study in conjunction with the application. You may be assured that we will do everything possible to expedite the completion of processing this application. <u>We do not believe, however, that it will be of any advantage or is necessary for Mr. White to come to Washington</u> in this connection.

"With respect to your inquiry as to change in Government policies regarding exploration assistance because of the recent reduction in the price for lead, DMEA will continue to enter into exploration contracts for lead on the same basis as heretofore. Our thinking along this line is that we consider the exploration for strategic minerals to be a long range program for the purpose of discovering ore reserves to replace in part those reserves now being mined in very large quantities, and that fluctuations in the markets for these minerals should not be a governing factor in exploration."

Willis wrote us May 22nd as follows:

"Dear Mr. Walker: I have received a report from Washington on the Yuma Metals, Inc., Exploration Loan DMA 1303-X.

Bill Broadgate reports to me that the Field Team report only arrived in Washington on May 12. This report has gone to the operating committee which will consider it this week. If approved, which they generally are, as it comes from the field recommended, they will then be ready to negotiate a contract. This does not take long if the title and subordinations are in good shape and it is not necessary to call for additional documents.

Broadgate also writes that he thinks it would be a mistake for Mr. White to come to Washington unless some hitch develops which might require personal attention."

Your letter states the cut was made May 26th. May 29th Harold A. Patten, M. C. wrote Carl Self, one of the stockholders:

"Dear Mr. Self: Contacting the Defense Mineral Administration they informed me that your application is being processed at the present time, and from the information at hand it appears as though there will be no difficulty in the completion of this application. They were not in a position to inform me as to what date the work would be completed, however from the conversation, I gathered it would be in the very near future."

June 9th I called Mr. Corbett from Yuma, Ariz., inquiring about our loan application. Was told it had been approved, contract written, and all that was left to be done was for it to be passed on by legal department. He said he would personally take it to the legal department and try to rush it and thought we might have it in ten days. Your letter correctly says Corbett talked to me June 26th and advised that our application had been cut from $171,856 to $32,500.

Willis wrote June 13th as follows:

"Dear Mr. Walker: I have a letter from Bill Broadgate

in which he advises me that the Yuma Metals Inc. application has been approved and that a contract is now being drawn up by the DMEA legal department.

This process generally takes about a week. Therefore, if Mr. White does not hear anything within 10 days, will you please let me know and I will have Mr. Broadgate follow it up."

Do you think I was wrong in thinking our loan was approved? Whatever your decision, no hard feeling I assure you. Please tell me frankly, this concerns me personally. We were sincere in thinking it had been approved for we immediately spent several thousands of dollars we would not have spent if we had a doubt of its approval.

We realize you personally are much too busy to keep up with each application. Therefor, for your information, up until we talked to Keller, everyone had been courteous and encouraged us in every way. Keller's attitude was, if your mine is any good this is enough, you are not going to get anymore. The same attitude prevailed until you personally went over this matter. We appreciate especially your saying: "It was conceded that the unit cost of $6.00 per foot for drilling was insufficient" and that "The amount fixed for rehabilitation was only an estimate and to be later reconsidered." If these two statements had been given us by Keller or later by the man who called White on phone, we would have felt much differently. I am sorry to have to name certain persons saying certain things but I see no other way to clear ourselves in your mind.

The predicament we are in probably is our fault for not pursuing our application harder as soon as we filed it. We thought out of the many applications filed some would have preference over ours on account of being scarser minerals and relied on what DMEA told us at Pheoniz that it could and would be processed promptly. We thought our application was among the first filed and that in due time it would have its turn. But it has taken so long and so many different ones have handled it with different ideas, like Lyons suggesting to explore the oxidized zone, we agreeing, now over a year later someone doesn't like oxidized ore. In the meantime we spent money relying on what Lyons said thinking that it would carry through.

Lyons and Billings suggested an outside geologist DMEA to participate 50%. We submitted geologists' names three times - no answer. Evidently, the next man handling our application did not think it necessary. When sending it back to Field Team the second time they reduced it $18,000. They certainly conservatively checked every item as to cost and necessity but it took time. We wrote about reducing our application of $300,000. Mr. Billings answered Sept. 5th: "It is not so much the size of your loan that makes it impossible for us to approve your loan as it is the indefiniteness of the various proposals." It now seems the amount of the loan is quite important. I am mentioning these things to explain that if we had been agressive and a nuisance last year when everyone encouraged us and loans were

going through better, our loan would have gone through without any trouble. It does not seem right to me that because we have been patient and I believe reasonable that now we should be penalized.

I am just plain confused.

Your letter states Field Team was instructed to Finalize our application. This seems to indicate you are not too interested in our application. This we can understand, it is an old application and you undoubtedly would like to clear it out. Another thing, lead and zinc are not so important now as a year ago or when we filed our application and undoubtedly you are very busy with the more important metals.

Is there anyway we can renew your interest? Could I suggest you look at this property or have it examined. We will help in any way we can. If you have a man within 500 miles of this property, we will pick him up with our own plane and fly him in and out at our expense. We feel sure this would solve our difficulties and I venture this, if you see it you would want to increase the loan instead of cutting it. Without seeing it, it is hard, if not impossible to render a correct decision. We understand the regulation will allow a loan on unknown or undeveloped sources of metals or minerals. Our oxidized portion is more certain than that.

The logic of whoever suggested cutting out the drifting portion of our application confuses us. By leaving the drifting in gives us the opportunity of paying the government loan both for drifting and drilling in a comparatively short time without any undue hardships on ourselves. To do it as Kellar suggested of doing the drilling, then later applying for the drifting loan, a year for the drifting application to be acted upon, a year to do the drifting - double overhead on both programs. A year to set up a mill. This does not seem logical. I can see where the expense and overhead would be three times as great. Anything can happen in mining in that many years. We might be dead, we certainly would have lost our enthusiasm - if not all our money, going into such a deal.

We are sorry to bother you with this long letter but sincerely believe we are right and this might help to explain things. If further proof is necessary we stand ready and willing to prove it - and would appreciate the opportunity to do so. I suppose in all these letters your lawyers can find many technical reasons for throwing us out. I trust you will not take such an unfair advantage. We are not lawyers - we are miners.

We sincerely hope you will go along with our program for both drifting and drilling in the amount of $171,586.

Kellar's attitude sounded like maybe he thinks we are promotors or something like that. If such is the case, let me try to expel it from your mind and the best way, I think, is to repeat the history of our application and the facts leading up to it.

In August, 1950, there was some publicity given to our shortage of minerals, oils, etc. In September, 1950, the Production Act of September 19, 1950, was passed by Congress, giving the President practically unlimited powers to carry out the Act. The President delegated the Department of Interior to carry out the law passed by Congress. The Department of Interior established Defense Minerals Administration and under orders of Department of Interior, dated December 4, 1950, and February 28, 1951, I understand the Exploration Loan was devised. However, it was not generally made public until April, 1951. All during this process the public was told minerals were short and a very urgent need had developed, etc.

All of this, plus hearing directly from DMEA officials at a public Congressional hearing at Pheonix in April, 1951, where DMEA said they had worked out the Exploration Loan, that they were anxious to make loans, that the red tape was out of this particular loan, therefor they could and would be processed quickly. Also, they explained that the test was if the applicant would put up 50%. That in itself would be a big consideration in granting the loan, or words to that effect.

We obtained Title 32A National Defense Appendix, Chapter XII, Defense Minerals Adm. (MOS) Regulations governing Government aid in Defense Exploration Projects. We read them carefully. They seemed to be very plain as to what the Government would and would not do and they were simple and reasonable.

After talking to Mr. Hoffman at Phoenix in April, 1951, when he encouraged us to file an application, telling us it would be processed fairly quick, we asked if it would be processed by September 1, 1951. He thought it could be. We made our plans accordingly and sent an application May 22, 1951, for $300,000. (This district needs $1,000,000 to properly explore it). The reason for this amount was we did not have more money than our share at that time. After waiting several months, hearing nothing but the letter saying the application had been received, we began to enquire around and was told (and what we saw in the Mining paper bore it out) that only small loans were being considered in the U.S.A. Believing this, we reduced our loan to $199,000. Later, when the agreement was reached at Tucson, the Field Team there talked us down to $171,856.

Up to this point, we thought we were helping or trying to help the Defense effort. At least we were told the Government wanted to know where these minerals were, how much, etc. Part of the reason we applied was patriotic. Selfish reasons are always involved. You know what has happened since then.

Our application has not worked like the regulation indicated or progressed the way we were told it would. Mr. Mittendorf, please try to put yourself in our place the past seventeen months. Don't you think you would become a little irritated and impatient. I know it is not your fault personally nor do I think it is ours - maybe it is. If we had been more aggressive, maybe this might have been completed a long time ago.

I hope this will explain why now we might have led you to believe we are unreasonable or impatient, suspicious, etc., but we are not. All we want is a fair deal the same as other loans that have been granted.

Surely it is not all our fault our application is so old nor do I think we should be treated differently now than if it had been completed a year ago.

Would you please send me copies of all regulations, rulings, policies, etc. that apply to our loan. If it is not too much trouble, I would like to know the personnel and functions of each of the following:

Lead & Zinc Commodity Group
Base Metals Division
Commodity Specialists
Operating Committee
Reviewers
Supply Division.

Are all these under your jurisdiction?

In closing, please take my letters as friendly and I assure you they are not personal. In fact, your name has come up a good many times talking to mining men, and I know a few people that have known you a long time. Never have I heard your sincerity or integrity questioned and have heard some very complimentary things about you. I also appreciate the situation you are in relative to obtaining competent help. I know my letters do not sound smooth as

many people's would. I can handle a pick and shovel better than words.

Please take this into consideration when you review our application.

Very truly yours,

YUMA METALS, Inc.

By Luke Walker.
Luke Walker, Sec.

P. S. As yet we have not heard from the Field Team.

LW:h

Copies to:

Hon. Carl Hayden
Hon. E. W. McFarland
Yuma Chamber of Commerce
Westover and Mansfield
Mr. Lloyd C. White
D. M. McDaniels
Otto Motejl

YUMA COUNTY CHAMBER of COMMERCE

YUMA

Box 230

YUMA, ARIZONA

Notes Com

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED

OCT 27 1952

October 21, 1952

Mr. C. O. Mittendorff, Administrator,
Defense Minerals Exploration Administration,
U. S. Department of the Interior,
Washington 25, D. C.

Dear Mr. Mittendorff:

I hasten to reply to your most courteous and thoroughly complete explanation of the Yuma Metals, Inc. (DMEA - 1303X) status.

I, too, was considerably disturbed over the excessive length of time that this request has been under consideration which is of course the prime reason which prompted our participation in the inquiry.

I appreciate the break down of the reasons for disapproving explorations applications. It was most clear and I also appreciate your red pencilled underlinings on the enclosed DMEA Order - 1. The status of applications from Arizona as of September 30, 1952 showing executed contracts, applications in process was most interesting and I assure you that I understand the reason for treating confidently those applications which have been denied.

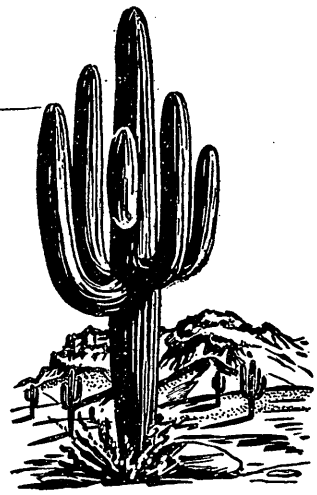
I am sure, Mr. Mittendorff, that there has been no foul play or deliberate action worked by you against the applicant and I regret that anything that I may have said gave you any concern. Your delineation of experience and activities as administrator in mining operations was most commendable and deserves highest praise and respect. As Administrator of Defense Minerals Exploration, you have an enviable record, one of which of course you should be very proud and never find it necessary to defend or justify. If my words were interpreted as being critical and prompted the paragraph reciting a history of your activities, I apologize. May I thank you again for the complete explanation of the Yuma Metals, Inc. status.

Respectfully yours,

Raymond N. Cowley

Raymond N. Cowley
General Manager

RNC:ak



"YUMA, THE SUNSHINE CAPITAL OF THE UNITED STATES"

MINES IN SILVER DISTRICT
YUMA COUNTY

MILL ON COLORADO
HEAD OF MARTINEZ LAKE

Yuma Metals, Inc.

D. L. McDANIEL, PRES.
OTTO MOTEJL, VICE PRES.
CHAIRMAN OF BOARD
LUKE WALKER
SECY. & TREAS.

LLOYD C. WHITE, GEN. MGR.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
OCT 21 1952

YUMA, ARIZONA

October 20, 1952. 4:30 p.m.

C. O. Mittendorf
Administrator of DMEA
Department of the Interior
Washington 25, D.C.

RE: DMEA Exploration Application 1303X

Dear Sir:

This will acknowledge your letter of the 13th inst. Your letter seems to defend DMEA rather than to reconsider our application which we so wished you would. Please reconsider it favorably.

In answering your letter will be some of the reasons we believe it should be reconsidered favorably. You know we do believe in it or we would not be putting up at least one-half of the money and borrowing the rest. If, however, it is not reconsidered favorably, we are enclosing new schedule for the diamond drilling (eliminating the drifting) to expedite matters as we have not had any word from your Field Team - which you instructed October 9th "to contact us at earliest possible date."

Answering your letter:

What was the apparent reason the Field Team recommended our application be considered at the Washington level?

As to our oxidized ores being difficult to process, this I believe is generally true of oxidized ores until the recovery process is worked out. In our case please let me call your attention (you have copies) of not one but three ore tests that show good recoveries of lead and silver on our ore. The three ore tests are:

	Lead Recovery	Silver Recovery
Ed Eisenhauer, jr.	94.2%	70.4%
Denver Equipment Co.	90.5%	68%
University of Arizona	88.4%	59.1%

As to the oxidized ores being submarginal: After the richer part of the vein has been removed, 460 Assays show 6.07% of lead, 10.05 oz. silver and scattered assays indicate 10% zinc.

Considering the above recoveries and the smelter breakdown by Porch and checked by American Smelter & Refining Co. which shows a $15.88 crude ore value on 15¢ lead. Should this be considered submarginal ore? Is submarginal ore barred from exploration?

Another reason we like our oxidized ore: Tom Lyons' letter to us of August 15, 1951, writing for DMEA about our sulfide zone, said "IT APPEARS TO US THAT OTHER ORE SHOOTS OF OXIDIZED LEAD MIGHT BE EQUALLY DESIRABLE TARGETS OF EXPLORATION." We agree 100%.

We believe a significant discovery that would contribute to the National Defense would be made in the oxidized portion of Red Cloud for these reasons: There were two rich ore shoots within 300 ft; that the end of every drift is in ore and the known depth is 400 ft. If the drifting is left in the program, we would only drift as far as we were in paying ore, thereby wasting no money. In our case we are not drifting hoping to make a discovery, we are in ore to start with.

We cannot see what the Operating Committee's logic is in recommending the diamond drilling and "assume that additional underground work later could be considered." As we look at it, they are separate and distinct. Finding sulfide ore would not change the oxidized ore situation. But if they could be done at one time the overhead on both would be much less. This is why we would like to do both at one time plus the fact that the new found oxidized ore would be the immediate source of paying the loan.

We cannot agree that "the conclusions you reached are logical or the best for us." However that is just an honest difference of opinion. No better proof of our sincerity than that we are furnishing one-half the money on any proposition. Considering this do you blame us for wanting a program that will accomplish the most for the money invested?

I want to definitely say we have no suspicions of unfair treatment or that anyone we know of has been biased. The worst in this regard I could say is, it seems that sometimes they do not read all the file. This is only human and we hold no hard feeling whatsoever. The decision was made contrary to the engineers and geologists that were actually on the property and examined same.

Many different people have handled our application - what one would suggest the other would not wholely agree with. I believe this has caused the present disagreement.

This is how the milling of the ore entered this picture: Mr. Corbett, when he told us our application had been cut said that if it had been known we had a mill this probably would have made a

difference in considering our application for the reason it would be the means of paying back the loan. After Corbett said it would be in our favor to mention it, we did. That is why White Wrote wrote about it, and now, what he wrote seems to be the main reason for not allowing the drifting because he said it would leave the mine so we could extract 30,000 tons of oxidized ore. You say this is the crux of the controversy and is the principal part of request and is denied because it does not fall within the purviews of exploration regulations.

We are not lawyers, have not had too much education, and are only farmers and miners. This ought to be reason enough for not always saying the right word at the right time. We are not some of the people that think the Government owes us anything. We would appreciate any loan the government will give us in this deal. However, as we are putting up one-half the money, and probably more, own the property, have already spent considerable time and money and will spend more and have seriously studied this proposition, we would like to have a program where our money, as well as the Government loan would be spent so as to receive 100 cents for every dollar expended. We wish to pay back every dollar we borrow as soon as possible. That is why we have begged so hard for you to reconsider our application and to go along with the drifting program.

We realize you have a good excuse technically for cutting out the drifting as you stated that White mentioned the program would leave the mine so 30,000 tons of ore could be extracted. We have, however, told you we would first mill any new found ore which would immediately start paying the government back the money they loaned. To do this, we have to install the mill and other equipment necessary at our expense. As to whether this falls within the purview of exploration, it seems to me it is either way you wish to interpret it. Loans have been made for drifting and sinking shafts, nothing else. These certainly were classed as exploration and could be used for mining later and, for sure, I can see in our case is we said we were going to use them. The principal reason is so we could pay the government what they loaned us. This was suggested by Corbett. We frankly admit our wording was wrong. ~~We should have said exploration~~ instead that the mine would be ready for extracting ore. This also was a mistake for it would not be ready to extract ore until we had spent considerable more money. Any equipment, at the end of exploration if we used it, we would be obliged to buy the government's interest.

We are very humble in this matter, we understand you have the final say, so all we can do is to ask. Again we do ask that you reconsider our application favorably. However, if you will not and to expedite matters we are submitting a revised program which is the minimum to do the diamond drilling. Every item was agreed to with the Field Team. In fact, many of our estimates were reduced by them. We are using the original figures and the revised figures. You will notice that several items have been reduced. This arises from two reasons: when we thought out application was approved we

began to locate equipment and was able to option some cheaper than the estimate. The second reason is, if only the diamond drilling is to be done, we do not want to spend so much money. I am copying the old figures and adding the new so that they can be more easily checked.

We are sending copies of the revised program to both Denver and Tucson thinking this might help expedite its handling.

This revised program covers only the minimum rehabilitation and surface expense necessary to do the work of diamond drilling and none of the money will be used in either mining or preparation of mining. The same would be true if the drifting is left in the program. If it will help, we will abandon the milling if only drilling is allowed, or will, if drifting is allowed if you say to.

A favor I would ask, if the drifting is eliminated, would you please expedite the revised one as soon as possible. My reason for asking this is that the season is right to commence this work. It is impractical to try to commence the work in the heat.

The overhead is the same whether 5,000 or 6,000 feet is drilled so that the other 1,000 ft. does not cost nearly as much per foot as the first 5,000 ft. However, you are the boss. This is again up to you. Am just drawing this to your attention for your consideration, we prefer the 6,000 ft. program.

In Engineering & Mining Journal this month, it gives the Departments of Governments significant interest in minerals. It listed DMEA functions as "Encouraging Exploration of Minerals and Metals. DMEA did encourage us at Congressional Hearing at Phoenix and can say you did until about Junellth of this year. And can again - please do. We are ready, willing and able if you will give us the go ahead signal.

Respectfully yours,

YUMA METALS, Inc.

By Luke Walker
Luke Walker, Sec.

LW:h
Encl.

Copies To:
Mr. L.C. White
Hon. Carl Hayden
Hon. E. . McFarland
U. S. Bureau of Mines, Region IV, Tucson
Yuma Chamber of Commerce
Westover and Mansfield
DMEA, Denver
D. M. McDaniels and Otto Motejl

EXPLORATION PROGRAM

The proposed work is as follows:

Item 3. Construct camp and mine buildings.

Rehabilitate headframe, 200 ft. vertical shaft, and connecting 250 ft. inclined shaft, to make accessible the workings of the mine for the following exploratory work:

Maximum of 6,000 feet of diamond drill holes from the hanging wall crosscut on the 500 ft. level, to explore the vein below this bottom level.

The total cost of this exploratory work is estimated at $119,944.67.

The work can be started 30 days after notification to proceed and will be completed within 1 year after starting date.

PAGE 2 and 3 DELETED -- both relative to drifting.

Dated October 20, 1952.

Exploratory diamond drilling to be done to cut out the vein in various planes below the 500 ft. level (See Fig._____)

From Astation 100 ft. east of shaft	Estimated footage
1 hole inclined at 60° at right angle to vein	150
2 holes, fanned 45° right and left at 55°	350
1 hole vertical	250
2 holes, fanned 45° right and left at 50°	700

From station at end of crosscut

1 hole inclined at 70° at right angles to vein	450
1 hole pointing southwest at - 50°	550
Deepen Riley hole, if possible	150
1 hole, vertical (1 to duplicate Primos hole	800
2 holes, fanned right and left if above hole is successful	2,000
	5,400
Add for contingency	600
Total	6,000

Calculated cost of diamond drilling, 6,000 feet

Assume 15 ft. advance/shift. 6,000 ft. or	400 days @ 1 shift/day
Work 2 shifts per day	200 days
Work 25 days per month or	8 months to complete
Drillers aver. daily (incl. overtime)	20.30 x 25 or $507.50 /mo.
Helpers " " " "	13.00 x 25 or $325.00 /mo.

Cost for 8 months.	Old Figures	New Figures
Rental of drill @ $425/mo	$3,400.00	$3,400.00
Labor 2 drillers @ $507.50	8,120.00	8,120.00
2 helpers @ $325.00	5,200.00	5,200.00
(½ of) 2 hoist-compressormen @ $360/mo	2,880.00	5,760.00
(½ of) Assay-sampler @ $350/mo	1,400.00	2,800.00
Payroll taxes 15%	2,640.00	3,249.00
Core boxes & splitter	400.00	400.00
Replacement parts, bits, casing cement, etc.	5,000.00	5,000.00
(½) Diesel fuel oil for compressor	800.00	1,600.00
(½) Rental of compressor $\frac{125}{2}$ x 8	500.00	1,000.00
Contingency (18.6%)	5,660.00	6,790.67
	$36,000.00	$43,319.67
	$6.00/foot	$7.21/foot.

	Old Figures	New Figures
Item 5. Rehabilitation of working shaft (incl. labor)		
Install footing and repair headframe	$1,000.00	$1,000.00
Timber and install guides in 200-ft. vertical shaft @ $25/ft.	5,000.00	5,000.00
Repair timbers, ladders, and skidway in 250 ft. inclined shaft @ $14/ft.	3,500.00	3,500.00
Recondition and enlarge 250 ft. level station	250.00	250.00
Retimber 500 ft. shaft section	250.00	250.00
Install 300 ft. of 3 inch airline in shaft	500.00	500.00
Move assay office from river camp to mine site	300.00	300.00
TOTAL- -	$10,800.00	$10,800.00
Item 6. Construct light frame buildings (incl. labor)		
Combination boarding and bunk house	$9,000.00	$4,500.00
Combination office and warehouse	3,600.00	3,000.00
Furnishings, plumbing, etc. for above 2 buildings	5,000.00	2,500.00
Compressor and generator shed	1,800.00	1,500.00
Hoist house	600.00	--
	$20,000.00	$11,500.00

Item 7 (a). Operating equipment to be rented.

Underground diamond drill machine $425/mo.

Calculated in cost per foot of drilling.

7 (b) To be purchased	Old Figures	New Figures
40 H. P. electric hoise	$5,000	$3,000
Bucket, cable and crosshead	500	500
Mine pump and pipe installation in shaft	1,600	1,600
Telephones, hoist house to mine levels	275	275
Ventilating fan with motor	500	500
60-KW Diesel generator (2nd hand) installed	4,500	3,500
Diesel oil storage tank, installed	1,500	500
Water storage tank, installed	1,100	1,100
Arc welder and accessories	600	--
2 jackhammer type machines and pneumatic pushers	1,000	--
Bit grinder and spare grinding wheel	400	--
Miscellaneous small tools, hardware and repair parts	5,000	2,500
3 Mine cars	600	200
Miscellaneous	1,000	--
The following items calculated necessary for diamond drilling in cost per foot of drilling or job work:		
Mine rail, plates, bolts, spikes	1,600	500
Drill steel with attached bits	900	--
Ventilating pipe and tubing	1,500	1,500
Water and air pipe 2", 1" & 3/4"	700	600
Mine timber and ties	700	700
Air and water hose, couplings, oil, repair parts, etc.	1,000	500
	$23,575.	$17,475

7 (c) To be furnished by applicant.

	Monthly depreciation
Chevrolet truck, 4 x 4, equipped with boon and hoist	$100
Army jeep	50
Compressor, Sullivan 310 cfm portable Diesel powered $150	
Depreciation for 12 months	$1,800

Calculated in cost per foot of drilling

8. Schedule of labor.

	Per day	
	Base Pay	Aver. with overtime
2 diamond driller's helpers	12.00	13.00
1 top lander	13.00	14.00
1 surface utility man	14.00	15.15
1 general surface laborer	12.00	13.00

	Per month	For 12 months
1 cook	$300	
1 truck driver-mechanic	360	
2 hoist-compressor men	360	
1 assayer-sampler	350	
1 Part time bookkeeper	100	
1 Engineer-manager	600	

Calculated in cost per foot of drifting, drilling, or job.

		Old Figures	New Figures
Item 9.	Assay supplies, reagents, etc.	$2,000	$1,000
	Road repairs Rental of dozer and necessary hand-labor	$2,000	2,000
	Gas, diesel fuel, repair parts, etc. for equipment not used in cost per ft. basis	5,000	2,500
	Recondition and rehabilitate mine levels, exclusive of shaft work	1,350	1,350
Summary of estimated costs.			
	Construct mine and camp buildings	20,000	11,500
	Rehabilitate shaft	10,000	10,000
	Move Assay office	300	300
	Purchase and install 3 inch air line	500	500
	Drifting	45,000	--
	Drilling (Page 5)	36,000	43,319.67
	Road repairs	2,000	2,000
	Clean out mine levels	1,350	1,350
	Purchase equipment	23,575	17,475
	Assay supplies and reagents	2,000	1,000
	Gas, diesel fuel, oil, repair parts	5,000	3,000
	Rental (depreciation)	1,800	1,800
	Supervision $600/mo. x 12	7,200	7,200
	Cook, $300/mo x 12	3,600	3,600
	Truck driver-mechanic $600/mo x 12	4,320	4,320
	Part time bookkeeper $100/mo x 12	1,200	1,200
Surface labor	- Utilityman ($14.00/day) $15.15 x 200 days	3,030	--
	Laborer (12/day) 13.00 x 200 days	2,600	2,600
	Payroll taxes: Su. @ 15%, remain. @ 7%	2,112	1,930
		$171,587	119,944.67

FILE COPY
SURNAME:

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

OCT 14 1952

Mr. W. H. Westover
Westover and Mansfield
Attorneys at Law
P.O. Box 551
190 Madison Avenue
Yuma, Arizona

Re: DMEA-1303X (Lead-Zinc)
Yuma Metals, Inc.

Dear Mr. Westover:

This will acknowledge receipt of your letter dated September 30, 1952, relative to the above-numbered application. We note that you are writing at the request of Mr. Luke Walker, who wishes to have his company's application reconsidered and who is worried over what appears to be undue delay in answering his communication to this office dated September 16.

Enclosed is a copy of our reply to Mr. Walker's recent correspondence, which should furnish the information you request.

If you have need of further inquiry, we shall be pleased to have your request.

Sincerely yours,

C. O. Mittendorf

Administrator

S.H. 10-14-52

Enclosure

COMittendorf/fw

cc: Admr Reading File
Mails & Files
Base Metals Div.
Mr. Bishop
Mr. McKnight
Field Team, Reg. IV
Mr. Mittendorf

FILE COPY
SURNAME:

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

OCT 14 1952

Mr. Raymond N. Cowley
General Manager
Yuma County Chamber of Commerce
Yuma, Arizona

Re: DMEA-1303X
Yuma Metals, Inc.

Dear Mr. Cowley:

Reference is made to your letter dated September 29, 1952 and to my interim telegraphic reply of October 9, both of which are related to the current status of the captioned case. I am attaching a copy of my reply to Mr. Walker, which I trust will answer many of the questions that you also have in mind.

During my recent review of the docket in this case I must admit that I was considerably disturbed over the excessive length of time that it has been under consideration. The application was first submitted in May 1951, and after reviews by the Supply Division of the Defense Minerals Administration, it underwent several revisions and was finally referred to the Regional Office in November for a field examination.

I well recall that during the month of November 1951 the functions of the old Defense Minerals Administration were divided between the newly created DMPA and DMEA and that for the two months following our small staff devoted most of its time to a re-examination of the several hundred dockets inherited from the Supply Division. This situation in Washington did not directly affect the Yuma Metals case, since it had already been sent to the field for an on-site examination; however, further delays were experienced by insufficient personnel in the Bureau of Mines and Geological Survey, and it was not until May 16, 1952 that the Washington office received the report of their findings.

It is not proper to place the blame for the delays on any one group, since there is ample evidence throughout the elapsed period that at times both the Washington and Field Offices and the applicant were pressing each other for early action.

I personally regret that a full explanation of the rationale applied in this case was not explained to the applicants shortly after our decision had been reached, because so doing might have avoided the additional delay suffered between July 18, when the amended contract was submitted, and my last letter of October 13.

In answer to your specific question, the reasons for disapproving exploration applications are due to their failure to meet the regulations appearing in DMEA Order 1. The most common reasons are (1) the geologic improbability of making a significant discovery, (2) that the work proposed is beyond the exploratory stage and is designed primarily for mining or preparation for mining, (3) defects in land titles and lease agreements, and (4) the inability of the lessee to obtain subordination agreements necessary to protect the Government's right of repayment in the event a discovery is made and a lease is forfeited or revoked.

In accordance with your request, I am enclosing a copy of DMEA Order 1, a list of the contracts which have been executed with Arizona applicants, and a further list of the applications now in process. It is not our policy to reveal the identity of the applications which are denied, and I am sure you will agree that, in the continued interest of the applicant, such information should be treated confidentially.

The part of your letter which causes me the greatest concern is the inference of foul play or deliberate action which worked against the applicant. As you probably are aware, I have personally been identified with the small mining industry all my life, and I have surrounded myself with staff members who are equally sympathetic with the problems of the small mining operator. I have publicly voiced my concern as to why a greater number of exploration contracts have not been approved for Arizona and New Mexico, and during the past few months I have sent my Division Chiefs to the Western mining regions in order to determine the reasons. During the recent Convention of the American Mining Congress in Denver, I spent a considerable portion of my time with the Asbestos Producers Association of Arizona; and I also authorized the Chief of the Non-Metallics Division to visit their properties and to assist them in preparing their applications for exploration assistance. I can assure you that my weekly meetings with the staff are most often devoted to a review of our procedures and a discussion of ways and means of better serving the mining industry.

I trust that the foregoing and the enclosures will adequately answer your inquiries, and if not, I shall be pleased to furnish additional information upon your request.

Sincerely yours,

C. O. Mittendorf

Administrator

(fw) J.H. 10-14-58

Enclosures-3

COMittendorf/fw

cc: Admr Reading File
Mails & Files
Base Metals Div.
Field Team, Reg. IV

Mr. Bishop
Mr. McKnight
Mr. Mittendorf

Status of Applications from Arizona as of September 30, 1952

EXPIRED CONTRACTS

Name of Contractor	County	Commodity	Gov't Part.	Contract Value
Busisto, Ike V.	Yavapai	Lead-Zinc	$ 2,500.00	$ 5,000.00
Banner Mining Co.	Pima	Copper	63,393.00	126,789.00
Banner Mining Co.	Pima	Copper	67,[illegible]4.50	135,789.00
American Asbestos Cement Corp.	Gila	Asbestos	111,482.10	123,869.00
Eugene J. Meyer	Yavapai	Copper	2,095.00	4,190.00
Sherwood F. Owens	Cochise	Lead-Zinc, copper	31,963.00	63,926.00
Yucca Mining and Milling Co.	Mohave	Copper	29,735.00	59,470.00
Reed & Reed	Mohave	Lead-Zinc	10,000.00	20,000.00
James [illegible]. Nash	Santa Cruz	Copper	19,300.00	38,600.00
Mikas Mining Co.	Pinal	Tungsten	44,400.00	59,200.00

APPLICATIONS IN PROCESS

Name of Contractor	County	Commodity	Amount Requested
Sorsen & Williams Mining Co.	Gila	Asbestos	$ 15,000.00
Letate Asbestos Corp.	Gila	Asbestos	25,000.00
D. W. Jaquays & Co.	Gila	Asbestos	16,220.00
Apache Asbestos Mines, Inc.	Gila	Asbestos	24,616.60
N. American Asbestos Co.	Pinal & Maricopa	Asbestos	14,195.96
Bear Canyon Mining Co.	Gila	Asbestos	25,000.00
Arizona Copper Mines, Inc.	Pima	Copper	130,400.00
Kurt F. Moenzbock	Pinal	Copper, molybdenum, lead	100,000.00
Charles La Turco	Gila	Copper	24,000.00
Fluorspar Producers Corp.	Greenlee	Fluorspar	36,300.00
Yuma Metals, Inc.	Yuma	Lead, zinc, molybdenum, silver	300,000.00
Silver Queen Mining Co.	Yavapai	Lead	25,000.00
Magna Ming Manganese Mining Co.	Pinal	Lead-Zinc	59,727.00

APPLICATIONS IN PROCESS (CONT'D.)

Al Stoval & Sons	Yuma	Manganese	33,266.00
Emery Hill Mining Co.	Mohave	Manganese	26,269.00
Ace Building & Roofing Supplies	Greenlee	Manganese	46,800.00
Tom Russell	Gila	Mercury	20,000.00
Carter & Lamb	Mohave	Uranium	17,567.00
Athletic Mining Co.	Graham	Lead-Zinc	101,045.00
Arizona Metals Co.	Mohave	Lead-Zinc-Copper	42,960.00
Verde Lode Mining Co., Inc.	Yavapai	Beryl	100,000.00

DENIED APPLICATIONS

A total number of 46 applications have been denied.

FILE COPY
SURNAME:

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

OCT 14 1952

Hon. Carl Hayden
Phoenix, Arizona

My dear Senator Hayden:

Reference is made to your letter dated September 30, 1952, which requested information relating to docket DMEA-1303X (Yuma Metals, Inc.), and to my telegram dated October 9 stating that I would review the case and advise you of my findings.

Beginning Friday, October 10, and extending over the week end, I was able to concentrate my time to a study of the docket material and have prepared a lengthy reply to the questions raised by the applicants. Since their inquiries are similar to some questions raised by you, I am taking the liberty of replying, in part, through the medium of furnishing you a copy of my letter to Mr. Walker. I hope this procedure will meet with your approval.

You have asked for a breakdown for each of the two estimates in Exhibit A of the proposed contract, expressed in terms of time schedules, type and number of employees, and other details as contained in the loan application.

It was difficult for us in Washington to ascertain exactly what items of expense would be necessary to do only the diamond drilling. The Field Team report contained a summary recapitulation of costs which listed drilling at $6 per foot. This estimate was assumed to include all direct costs of drilling, and since it was not considered excessive, it was approved. Estimated costs for similar work in the Southwest vary from $3.75 to $6 per foot.

The contract was thus prepared on the Short Form (unit basis) which, by design, does not specify the increments making up the unit of cost and thereby eliminates the necessity of documentation of vouchers in order to obtain Government reimbursement of expenditure made. It is a far more simple type of contract to administer and is very popular with the operators.

As I have implied in the attached letter, I was afraid we might be found vulnerable by fixing Item (1), Rehabilitation, at $2500. For that reason we advised the Denver office to execute a

revised contract under their delegated authority, if they found changes necessary. An interesting paradox developed shortly thereafter when the Denver office questioned our $2500 figure as possibly being in excess of the actual costs necessary to rig up for the drilling campaign. As you probably know, the applicant subsequently estimated the cost of the preparatory work at $26,000, which appears to be grossly out of proportion with the cost of the actual drilling to be done.

On October 2, 1952 our Mr. Keating reviewed the situation in a telephone conversation with Mr. White and I understand that the necessary items of preparatory costs were discussed in considerable detail. Moreover, agreement was reached that the preparatory work could be done for $5000 and that an amended contract with a total estimated cost of $35,000 would be acceptable. Mr. White wished to first consult with his associates before committing his company to formal acceptance of the proposal.

Mr. White's directors did not agree with him and they have chosen to reopen the case on the basis of the original request. My reply to them endeavors to explain the reasons for our previous action of deleting certain work and that we must reaffirm our former decision.

I trust that this letter and the enclosure will adequately answer the points of confusion which have developed in this case. If not, I shall be pleased to amplify them upon your request.

Sincerely yours,

C. O. Mittendorf (fw)

Administrator

fH. 10-14-52

COMittendorf/fw/pa 10-14-52

cc: Admr. Reading File
Mails & Files
Base Metals Division
Field Team, Reg. IV
Mr. Mittendorf

FILE COPY
SURNAME:

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

OCT 14 1952

Hon. Ernest W. McFarland
United States Senate
Washington 25, D.C.

Re: DMEA-1303X
Yuma Metals, Inc.

My dear Senator McFarland:

In accordance with your request dated September 19, 1952, I am pleased to transmit herewith a copy of my reply to Mr. Walker, Secretary-Treasurer of the captioned firm, pursuant to his letters to me dated September 16, et seq.

It is hoped that the enclosure will be found self-explanatory and that it adequately covers the points of confusion which have arisen in this case. If not, I shall be pleased to furnish additional information upon your request.

Sincerely yours,

C. O. Mittendorf (fw)
Administrator

f.H.
10-14-52

Enclosure

COMittendorf/fw

cc: Admr Reading File
Mails & Files
Base Metals Division
Field Team, Reg. IV
Mr. Mittendorf

FILE COPY
SURNAME:

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

October 13, 1952

Mailed Day Ltr. 10/13/52

Mr. Luke Walker
Secretary-Treasurer
Yuma Metals, Inc.
798 Hope Avenue
Santa Barbara, California

Re: DMEA-1303X
Contract Idm-2371

Dear Mr. Walker:

Since my telegram to you dated October 9, I have had the opportunity to personally review the docket in the subject case and will endeavor to answer the principal points raised in your recent correspondence. During the past three weeks we have received several letters from you and Mr. White, as well as inquiries from Senator Carl Hayden, Senator Ernest W. McFarland, the Yuma Chamber of Commerce, and the law firm of Westover and Mansfield. We have drafted replies to individual letters several times, but mailing was deferred due to the receipt of new letters which raised additional questions. In the interest of expediency, I will attempt to answer all letters, beginning with that of September 16, in a single reply. I trust that this procedure will meet with your approval.

In analyzing the accumulated correspondence, it appears to me that the main issues can be summarized as follows:

1. Why did the Washington office reduce the approved amount of your contract from $171,587 to $35,000 when the Field Team recommended the loan for the larger amount?

2. What theories and unpublished rules or regulations were applied in your case?

3. Why cannot the original request be reconsidered and approved?

The Washington office received the Field Team recommendations on May 16, 1952. The report represented a thorough and detailed analysis of your application with respect to its geologic, engineering, and economic aspects. One of the summary conclusions of the report was the recommendation that the proposed exploration project be considered at the Washington level. Although the Field report did not state specifically the reasons for that recommendation, they were, nevertheless, apparent.

Your case was under consideration at a time when the supply situation in lead and zinc became eased and the market prices for these metals started to decline. A question arose at that time in the minds of persons inside and outside of Government as to the propriety of continuing Government aid for expanded production of these metals and whether or not they should be deleted from the list of metals and minerals eligible for exploration assistance. This question was subsequently resolved by a joint press release dated May 30, 1952, which notified the public that the easing of the supply situation and the attendant fulfilment of program goals for certain metals required for the national defense should not affect the exploration program.

In our review of the field report, a careful evaluation was made for conformity with the regulations appearing in Section 6 of DMEA Order 1 with respect to (a) the strategic importance of the mineral involved, and (b) the geologic probability of making a significant discovery. A careful analysis was also made of the work proposed in the larger project to determine its compliance with Section 2, paragraph (a) of DMEA Order 1, which states that exploration funds shall not be used for work prosecuted primarily for mining or preparation for mining.

The Field Team report was studied, along with all related docket material, by the Base Metals Division of DMEA and the commodity specialists of the Bureau of Mines and the Geological Survey here in Washington, and each prepared a separate report setting forth their conclusions on May 26. The findings of these Divisions were identical, and all considered that the single exploration target which afforded a geologic probability of making a significant discovery was the drilling program proposed below the 500-foot level. It was the unanimous conclusion of the reviewers that the drifting proposed above the 500-foot level would not result in any significant discoveries of ore which could substantially contribute to the national defense. It was recognized that the oxidized ores above the 500-foot level were extremely difficult to process, submarginal in character, and that the salvation of the mine depended wholly upon the probability of finding sulfide ore below the 500-foot level.

The Operating Committee concurred in these recommendations on July 1 and approved the modified program of diamond drilling below the 500-foot level, on the assumption that additional work of an underground nature could be considered later if warranted by the results of the drilling.

A contract was immediately prepared on a unit basis, which authorized 5000 feet of drilling at an estimated cost of $6 per foot. It was conceded that the unit price for the drilling was insufficient to cover the necessary rehabilitation work and an additional $2500 (later increased to $5000) was authorized for that purpose.

The amount fixed for rehabilitation in Washington was only an estimate, because it was difficult to determine from the field report exactly what items of expense would be necessary to carry out only the drilling program. Since the field report stated that the underground workings were in good condition, and that some diamond drilling had been done on the 500-foot level during 1948, it was felt that no large outlay of expense would be necessary to undertake further drilling at this time. The contracts thus prepared were forwarded to the Denver office on July 18, with a letter setting forth our rationale for eliminating the work proposed in the oxidized zone. It also included the stipulation that, provided the contract was not acceptable to the Denver office, then they were free to redraft it under their delegated authority.

I have again discussed your case with the Operating Committee, who reaffirm our former conclusions and consider that the logical approach to your problem is to first determine if sulfide ore exists below the present depth of your mine. In Mr. White's letter dated September 22 he states that the diamond drilling is the principal objective of the application, that he was confident of finding sulfide ore below the 500-foot level, and that, if the program developed as expected, then much of the drifting work applied for in the oxidized zone could be postponed until a later date.

All who have reviewed your case in Washington agree wholeheartedly with those opinions. It is our intention, however, to approve Government funds only to the extent of minimum rehabilitation and surface expense necessary to do the work.

Your appeal for a reconsideration of the original program is submitted on the basis that it will leave the mine properly equipped to extract the 30,000 tons of oxide ore already developed and that, if granted, you will erect a 100-ton flotation plant to treat those ores. This represents the crux of the controversy, and it is the principal part of your request, which was denied for the reason that it did not fall within the purview of exploration as defined by our regulations.

In our opinion, the remaining issue is the determination of the necessary rehabilitation work required to prosecute a drilling program. To resolve the point, the Field Team was instructed, on October 9, to contact you at the earliest possible date and finalize an amended contract which will include the items agreed upon, without further reference to Washington, provided the total sum involved is within their delegated authority.

You have stated that you were informed on several occasions that the application was once approved in Washington for the total sum requested, and that you are perplexed because the sum was later reduced.

In other correspondence there are intimations of suspicion of deliberate action taken against your best interests. I have talked with all persons in Washington who have been connected with this case and am assured that at no time did they ever give the slightest indication that the project would be approved as submitted. No application attains the status of approval until it is passed by the Operating Committee. As stated herein, the decision to modify your request was reached by the reviewers on May 27, 1952. Advice to that effect was given to Mr. Willis in reply to his inquiry dated June 6, and also during a telephone conversation between Mr. Walker and Mr. Corbett on June 26.

I can give you positive assurance that no element of bias whatsoever entered into our considerations of your application. Our records show that similar problems arose in scores of other cases, and that it is the rule, rather than the exception, that many items requested are not approved for the same reasons applied in your case. I trust that when you carefully consider the foregoing, without prejudice, any suspicion of unfair treatment will be immediately dispelled, and that you will agree that the conclusions we have reached are logical from the viewpoint of both the private investor and the Government.

Sincerely yours,

C. O. Mittendorf

Administrator

Copies to:
Mr. L. C. White
Hon. Carl Hayden
Hon. E. W. McFarland
Yuma Chamber of Commerce
Westover and Mansfield

Admr Reading File
Mails & Files
Base Metals Div.
Field Team, Reg. IV (2)
Mr. Mittendorf

COMittendorf/fw
10/13/52

MINES IN SILVER DISTRICT
YUMA COUNTY

MILL ON COLORADO
HEAD OF MARTINEZ LAKE

Yuma Metals, Inc.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 13 1952

D. L. McDANIEL, PRES.
OTTO MOTEJL, VICE PRES.
CHAIRMAN OF BOARD
LUKE WALKER
SECY. & TREAS.

LLOYD C. WHITE, GEN. MGR.

YUMA, ARIZONA

October 10, 1952.

C. O. Mittendorf
Acting Administrator of DMEA
Department of the Interior
Washington 25, D. C.

RE: DMEA Exploration Application 1303X

Dear Sir:

Yesterday when I wrote you, your telegram had only been read to me on the telephone. Just now received it.

Note you say "AFTER PHONE DISCUSSIONS WITH WHITE WERE HOPEFUL THAT AGREEMENT REACHED INSOFAR AS DRILLING PROJECT CONCERNED REPLIES TO ALL INTERESTED PARTIES WERE PREPARED ACCORDINGLY LETTER FROM TODAY FROM YOU AND WHITE ARE DEFINITELY CONTRARY TO PREVIOUS ASSUMPTION."

I Cannot understand why anyone would assume or hope White would agree to the $17,500 offered by Mr. Keating.

Let us get the record straight:

1. Keating phoned on October 2nd. Offered $17,500 instead of $16,250.

White's answer, airmailed October 3rd, was: "$171,586 is necessary and said the $35,000 proposal was entirely inadequate."

2. PREVIOUSLY, on September 16th I wrote you asking DMEA to reconsider our application in the amount of $171,587 and gave reasons why we could not accept the $32,500 offer.

3. September 19th I again wrote sending some questions and answers that went into more details explaining why we needed $171,587 and could not accept $32,500.

4. September 22nd White wrote you referring to my letter to you of September 16th in which he said "I am wholeheartedly in favor of the $171,587 program and said Contract IDM E 371 is entirely inadequate.

There is not one thing to indicate any agreement was reached or that we would even consider the $35,000 program offered.

P.1

If you were informed we would accept the $171,587 program, that is correct.

In telegram you say "LETTER FROM YOU AND WHITE ARE DEFINITELY CONTRARY TO PREVIOUS ASSUMPTION AND AGREEMENT." White's letter you refer to is in answer to Keating's phone call. How could he assume anything until he had White's answer? How could he hope we would consider his offer if he had read our letters of September 16th, 19th and 22nd, 1952?

Am sorry this misunderstanding has occurred but it certainly was no fault of ours as you can see. We have consistently asked for our application to be approved for $171,587 because we believe that this is the minimum program for a job that would be satisfactory to us as well as to the government. Anything less, we just would not be getting value for our money. After all if we are going to put $90,000 to $100,000 into this project we want to know it is going to be well spent and at least do a minimum job considering the property.

Hoping this will straighten out the misunderstanding and that we will hear from you soon, we are,

Very truly yours,

YUMA METALS, Inc.

By Luke Walker
Luke Walker, Sec.

LW:h

FILE COPY
SURNAME:

500

Keating

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

Hon. Carl Hayden
United States Senate
Washington, D. C.

My dear Senator Hayden:

This will acknowledge receipt of your letter dated September 30, 1952, relative to an application for exploration assistance, Docket No. DMEA-1303X, Yuma Metals, Inc., Red Cloud Mine, Arizona.

Since the file on this application covers a considerable period of time and contains unusually voluminous data, we assume that a brief recital of the situation will better serve your purpose than a chronological description of great length detailing the matters involved.

The application for Government assistance for an exploration was first submitted by this company to the Defense Minerals Administration in May 1951. In this request the Applicant estimated the total cost of the project to be $300,000. Later this application was revised and the estimated cost reduced to $200,000, and again revised and reduced to $171,587. The Field Team, in a report resulting from their reexamination of March 1952, referred the matter to Washington for consideration. Finally, a contract was prepared on the basis of $32,500 as the estimated total cost of a preliminary exploration program.

So that you may more readily understand the circumstances surrounding this project, we can explain that the Red Cloud mine has produced only carbonate ore which is difficult to process with reasonably good recovery. Extensive metallurgical tests were carried out, and two field examinations were conducted. Consideration was given to employing outside geologists in order to make an extensive study of the area, which the limited field personnel of the U. S. Geological Survey were unable to undertake.

From a review of the file, it appears that the Applicant has been unable to differentiate between an exploration project and one for development and production. As you know, Order DMEA 1, the regulation governing our activities, restricts us to a responsibility only for exploration assistance as defined in that Order.

The Washington engineers who have studied this project are of the opinion that the only justification for favorably recommending the project would be the possibility of uncovering ore reserves which might in the future supply a small amount of metal at a time of great scarcity and high prices. It does not appear probable that the property, even if extensively developed, will become an important producer. Therefore, we are unable to approve the larger sum requested by Yuma Metals, Inc. In drafting the contract the program of work proposed by the Applicant was confined to the preparation for and the undertaking of a limited preliminary underground diamond drilling program to first determine if the vein persists at depth and, if so, the tenor of the ores. If successful, this work could be followed by sinking, drifting and crosscutting at the locations and in the directions indicated by the results of the diamond drilling.

Recently our Base Metals Division, in telephone communication with Mr. White, General Manager of Yuma Metals, Inc., discussed the situation in detail. Agreement was reached with Mr. White that a total estimated cost of $35,000 should be acceptable, of which a sum of $30,000 would be for 5,000 feet of underground exploratory diamond drilling and $5,000 for preparation for this work. Mr. White said that while he was in agreement, he wished to consult with his associates and would telegraph or telephone consent to this office. We have not heard from Mr. White as yet.

Referring to your request for each of the two estimates in Exhibit "A" of the proposed contract, in this type (short form) contract the estimated costs are set up by costs per unit of work and the detail you mention is not enumerated as in the usual (long form) contract.

There follows a breakdown description of the estimated costs of the proposed contract which were detailed in the discussion with Mr. White:

Estimated Costs of the Project

1. Preparatory Work

Hoist (rental)	$ 300.00
Blower and ventilation pipe (rental)	200.00
Sump Pump, boiler feed (rental or purchase, used)	100.00
2" pipe, 1,000 feet and fittings	400.00

1" pipe, 350 feet and fittings	$ 90.00
Installation of the above and clearing muck — 2 miners @ $16.00/day for 15 days	460.00
Installation of footings and repair of head-frame, shaft repairs, and other contingencies	3,470.00
	$ 5,000.00
2. 5,000 lineal feet of diamond drilling @ $6.00/ft.	$30,000.00
Total estimated cost of the project	$35,000.00
Government participation at 50 percent	$17,500.00

For your added information there is attached a copy of our reply to an inquiry dated September 16, 1952, from Mr. Luke Walker, Secretary of Yuma Metals, Inc.

If you have further inquiry regarding this matter, we will be pleased to hear from you.

Sincerely yours,

Administrator

Enclosure

AGKeating/bjl (written 10/8/52)

Copy to: Docket
Admr. R. File
Op. Committee
H. F. Keller (2)
A. G. Keating
Mr. Bishop
Mr. McKnight
Reg. IV (2)
Chron.

FILE COPY
SURNAME:

500

Keating

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

Mr. [illegible] Walker, Secretary
Tom Metals, Inc.
[illegible], Arizona

Re: Docket No. [illegible]-1900 (Lead-Zinc)
Tom Metals, Inc.

Dear Mr. Walker:

This is in response to your letter dated September 16, 1952, requesting the above-numbered application for exploration assistance in which you state that the amount allowed by the Government for its participation share in a proposed contract covering your project is inadequate. You request that the application be reconsidered in view of a report by the DMEA Field Team, which you state favorably recommended a sum of $171,587 as the total estimated cost of the project.

A review of our records shows that a report by the Field Team during June 1951, indicates that the information they had received from you was too general in scope, the description of the proposed work was inadequate, and there were discrepancies in the application concerning surface and underground drilling. They recommended that a more detailed plan of exploration be made before any action should be taken by the Government. In an amended application dated September 12, 1951, the sum of $300,000 which you originally applied for was reduced to $[illegible],000 and a more definite program and cost was submitted. Apparent excessive costs of certain items were questioned, and reexamination resulted in a recommendation that your application be referred to the Director for consideration.

There follows answers to the questions contained in your letter in the sequence which you have presented them:

1. Question: In November 1951, Mr. Johnson advised that he would recommend the agreement arrived at by the Field Team.

Answer: Our records show that on October 24, 1951, you telephoned Mr. Gunnar Johnson, who at that time was head of the Base Metals Division of the Defense Minerals Administration, Washington. This discussion was related to the question of extensive geological work which had been requested in connection with your application. The point of the conversation was to the effect that it would be best to leave it

to the judgment of the Field Team as to whether additional geological work was necessary or desirable, and whether Durand Hall and C. E. Herron, consulting engineers not with the Government, would be acceptable for a geological survey. It had developed that the Government Geological Survey field personnel was not sufficiently staffed to undertake the very extensive study of your property requested. Mr. Johnson advised that as far as he was concerned personally, he was willing to leave this question to the Field Team.

2. Question: The property is 50 miles from Yuma, and Yuma is the nearest housing.

Answer: This appears to be at variance with the report from the Government examining engineers, who state that your company owns a mill site near the Colorado River about 10 miles southeast of your mining claims. On this property there is a small gravity mill, two frame buildings, one dwelling, one fairly equipped assay laboratory, a tent house and a house trailer which serves as headquarters for visiting company personnel. For the amount of preliminary work proposed under an exploration program, it is not clear why these facilities cannot be utilized.

3. Question: Contract, Exhibit "A", paragraph 1, Estimated Costs of the Project. You state that the work outlined will cost between $20,000 and $30,000, but that the Government has only allowed $2,500.

Answer: Please carry in mind that your project must necessarily be considered from the viewpoint of a limited amount of equipment required for exploration work only and not for development or production. The Government is concerned in getting the work done as cheaply and efficiently as possible. An expenditure of $20,000 to $30,000 for equipment preparatory to undertaking a $30,000 diamond drilling program is difficult to justify. The report from the Field Team indicates that although no mining has been done since 1900, the ground has stood up remarkably well. Pillars in the stope section are intact, timbers and pole lagging are in fair condition and the stopes are generally accessible. The Government engineer's report in April 1950 states that the 500 foot level crosscut was accessible for the full length of 335 feet, but during a reexamination in March 1952, there was a small cave-in about 100 feet from the shaft, and that except for relatively little cleanup, the main parts of the mine and stopes are accessible. In so far as we can learn there is no material which has to be removed for the No. 1 drilling station and only

a small tonnage of slumped-in material need be removed to make the No. 2 drilling station readily accessible. You will no doubt recall that Mr. Holmes, who previously owned the property in 1949, drilled from the 500 foot level without difficulty. It is reported that there are several crosscuts and drifts on the 500 foot level available to store the caved rock in sufficient amount to permit passage for diamond drilling work. It appears that the probable maximum depth of hole that would be drilled from either drilling station 1 or drilling station 2 could be readily equipped within the capacity of a small machine, easily portable, without the need of hoisting equipment. It is the opinion of our engineers that the handling of supply and auxiliary equipment would involve no transportation problems which would require extensive equipment on the surface. While the sum of $24,000 which you maintain is necessary for preparatory work might be required for development and subsequent production, we cannot find that it would be justified in this instance for the work as outlined to be considered as exploration, as defined in BPA Order 1 which states that exploration shall not include work prosecuted primarily for mining or preparation for mining.

4. Question: The drifting as outlined in our application has been totally omitted.

Answer: Your project, when viewed from a present production standpoint is considered by our engineers to be submarginal. The area so far exposed are oxidized and a high percentage of recovery is unlikely. The deepest workings in the mine have not yet encountered sulfide ore, nor has the previous diamond drilling, probing 700 feet deeper, been successful in this attempt. Washington engineers, in a review of your application, reach the conclusion that the only justification for favorably recommending your project would be the possibility of uncovering a new reserve which might in the future supply a small amount of metal at times of great scarcity and high prices. They recommend only that the diamond drilling be undertaken in this instance which, if successful, can be followed by underground exploration.

In a recent telephone communication with Mr. White, General Manager of your company, the details of the necessary requirements for preparation for the diamond drilling program were discussed and agreement of the sum of $5,000 for this work was reached. He was informed that if he believed the former request for $24,000 was necessary to prepare for exploration, then in all probability there would have to be a reexamination of the project in order to determine if the items making up the $24,000 could be properly substantiated. Mr. White stated that he would consult with his associates and call this office by telephone immediately thereafter.

Upon receipt of word from Mr. White, which we have not yet received, that the program and estimated costs as outlined in the telephone conversation are acceptable, this office will endeavor to have a new contract prepared immediately and forwarded to the field office for execution.

Sincerely yours,

Administrator

AGKeating/bjl (written 10/8/52)

Copy to: Docket
Admr. R. File
Op. Committee
Mr. Keller (2)
Mr. Keating
Mr. Bishop
Mr. McKnight
Reg. IV (2)
Sen. Hayden
W. H. Westover
(Attorney, Yuma, Arizona)
Chron.

110
FILE COPY
SURNAME:

Mittendorf

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

OCT 10 1952

Mr. W. H. King
Executive Officer
DMEA Field Team, Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMA-1303X (Lead-Zinc)
Yuma Metals, Incorporated
Exploration Contract No. Idm-E371

Dear Mr. King:

Pursuant to the telephone conversation on October 9, 1952, between Mr. John Shaw of your office and Mr. C. O. Mittendorf and Mr. Frank E. Johnson of the Washington DMEA Office, it was agreed that you would arrange to have an engineer reexamine the property of Yuma Metals, Incorporated, if necessary, to determine the minimum cost of repairs, rehabilitation of the shaft and 500 foot level, equipment, etc. required to carry out the drilling program set forth in the contract for exploring the possible sulphide zone below the 500 foot level.

We understand that the field engineer will contact the applicant's representative at his earliest convenience in order to expedite the completion of a satisfactory contract.

As you were advised, we all agreed that the only justifiable target for exploration is the sulphide zone. It was also mutually agreed in the conversation referred to above that if the cost for carrying out this proposed program would be $50,000 or less, that you would execute contract under your delegated authority. In this connection the number (Idm-E371) on the original contract may be used. Of course a new starting date for the project should be used and other necessary changes and provisions made to suit the new conditions.

Sincerely yours,

(signed) FRANK E. JOHNSON (245)

Chairman, Operating Committee

F.H. 10-10-52

APPROVED:

J. H. Hedges (245)

Member, Bureau of Mines

T. P. Thayer (245)

Member, Geological Survey

FEJohnson/bih 10/10/52
cc to: Docket - Admr's Reading File
Operating Committee - Region IV
Messrs. Hedges R-4604
Thayer GSA Bldg. R-5216
Keller
FEJohnson

FILE COPY

C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration
14X3923, Working Fund, Interior, DMEA

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

OCTOBER 9, 1952

DMEA-1303

MR. LUKE WALKER, SECRETARY
YUMA METALS, INC.
~~YUMA, ARIZONA~~ 798 HOPE AVENUE, SANTA BARBARA, CALIFORNIA

REURLET OCTOBER 4 JUST RECEIVED. YOUR LETTERS SEPTEMBER 16 AND 19 RECEIVED DURING MY ABSENCE WASHINGTON UNTIL 29. MEANWHILE OUR BASE METALS DIVISION HANDLED MATTER AND AFTER PHONE DISCUSSIONS WITH WHITE WERE HOPEFUL THAT AGREEMENT REACHED INSOFAR DRILLING PROJECT CONCERNED. REPLIES TO ALL INTERESTED PARTIES WERE PREPARED ACCORDINGLY. LETTERS TODAY FROM YOU AND WHITE ARE DEFINITELY CONTRARY TO PREVIOUS ASSUMPTION AGREEMENT AND HAVE THEREFORE CAUSED ME TO PERSONALLY REVIEW ENTIRE DOCKET. YOU WILL FURTHER HEAR FROM ME PROMPTLY.

C. O. Mittendorf (fw)

C. O. MITTENDORF, ADMINISTRATOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

P.S. in R.R.

COMittendorf/fw

cc: Admr Read File
Mails & Files
Base Metals Div.
Field Team, Reg.IV
Mr. Mittendorf

FILE COPY

C. O. Mittendorf, Administrator

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

Defense Minerals Exploration Administration
14X3923, Working Fund, Interior, DMEA

OCTOBER 9, 1952

HONORABLE CARL HAYDEN
PHOENIX, ARIZONA

RE YUMA METALS INC. REPLY TO YOUR LETTER SEPTEMBER 30 PREPARED ON ASSUMPTION POSSIBLE AGREEMENT REACHED WITH APPLICANT LAST FEW DAYS INSOFAR AS REDUCED DRILLING PROJECT CONCERNED ADVICE RECEIVED TODAY FROM WALKER AND WHITE DEFINITELY CONTRARY AND THEY REQUEST RECONSIDERATION ON BASIS OF LARGER PROJECT. I AM EMBARRASSED OVER DELAYS THIS CASE AND WILL PERSONALLY REVIEW ENTIRE DOCKET HISTORY AND GIVE YOU MY REPORT PROMPTLY.

C. O. Mittendorf (fw)

C. O. MITTENDORF, ADMINISTRATOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

P.S. w R.w R.

COMittendorf/fw

cc: Admr Reading File
Mails & Files
Base Metals Div.
Field Team, Reg. IV
Mr. Mittendorf

FILE COPY

C. O. Mittendorf, Administrator

Defense Minerals Exploration Administration

14X3923, Working Fund, Interior, DMEA

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

MR. RAYMOND H. COWLEY, GENERAL MANAGER
YUMA COUNTY CHAMBER OF COMMERCE
BOX 230, YUMA, ARIZONA

OCTOBER 9, 1952

REURLET SEPTEMBER 29 HEREWITH TEXT TELEGRAM SENT WALKER QUOTE REURLET OCTOBER 4 JUST RECEIVED. YOUR LETTERS SEPTEMBER 16 AND 19 RECEIVED DURING MY ABSENCE WASHINGTON UNTIL 29. MEANWHILE OUR BASE METALS DIVISION HANDLED MATTER AND AFTER PHONE DISCUSSIONS WITH WHITE WERE HOPEFUL THAT AGREEMENT REACHED INSOFAR DRILLING PROJECT CONCERNED. REPLIES TO ALL INTERESTED PARTIES WERE PREPARED ACCORDINGLY. LETTERS TODAY FROM YOU AND WHITE ARE DEFINITELY CONTRARY TO PREVIOUS ASSUMPTION AGREEMENT AND HAVE THEREFORE CAUSED ME TO PERSONALLY REVIEW ENTIRE DOCKET. YOU WILL FURTHER HEAR FROM ME PROMPTLY. UNQUOTE. WILL LIKEWISE PREPARE NEW REPLY YOUR LETTER PROMPTLY.

C. O. MITTENDORF (fw)

C. O. MITTENDORF, ADMINISTRATOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

P.S. in R.J.R.

COMittendorf/fw

cc: Admr Read File
Mails & Files
Base Metals Div.
Field Team, Reg. IV
Mr. Mittendorf

FILE COPY

C. O. Mittendorf, Administrator

Defense Minerals Exploration Administration

14X3923, Working Fund, Interior, DMEA

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

OCTOBER 9, 1952

MR. LLOYD C. WHITE
1005 OXFORD STREET
BERKELEY 7, CALIFORNIA

REURLET OCTOBER 3 HEREWITH COPY MY WIRE TO WALKER QUOTE REURLET OCTOBER 4 JUST RECEIVED. YOUR LETTERS SEPTEMBER 16 AND 19 RECEIVED DURING MY ABSENCE WASHINGTON UNTIL 29. MEANWHILE OUR BASE METALS DIVISION HANDLED MATTER AND AFTER PHONE DISCUSSIONS WITH WHITE WERE HOPEFUL THAT AGREEMENT REACHED INSOFAR DRILLING PROJECT CONCERNED. REPLIES TO ALL INTERESTED PARTIES WERE PREPARED ACCORDINGLY. LETTERS TODAY FROM YOU AND WHITE ARE DEFINITELY CONTRARY TO PREVIOUS ASSUMPTION AGREEMENT AND HAVE THEREFORE CAUSED ME TO PERSONALLY REVIEW ENTIRE DOCKET. YOU WILL FURTHER HEAR FROM ME PROMPTLY UNQUOTE.

C. O. MITTENDORF (fw)

C. O. MITTENDORF, ADMINISTRATOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

n. s. in R. v R.

COMittendorf/fw

cc: Admr Read File
Mails & Files
Base Metals Div.
Field Team, Reg. IV
Mr. Mittendorf

MINES IN SILVER DISTRICT
YUMA COUNTY

MILL ON COLORADO
HEAD OF MARTINEZ LAKE

Yuma Metals, Inc.

D. L. McDANIEL, PRES.
OTTO MOTEJL, VICE PRES.
CHAIRMAN OF BOARD
LUKE WALKER
SECY. & TREAS.

LLOYD C. WHITE, GEN. MGR.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 14 1952

YUMA, ARIZONA

October 9, 1952.

Mr. C. O. Mittendorf
Acting Administrator of DMEA
Department of the Interior
Washington 25, D. C.

Re: DMEA Application 1303X

Dear Sir:

Your telegram of today just received. Am glad you are going to review our application and appreciate it as I know you must be a very busy man.

Am enclosing a booklet that condenses a good portion of the information relative to Silver District and Red Cloud Mine.

When Mr. White wrote Denver asking if they would consider raising the $16,500 offer to $25,000 it was after Kellar, on the phone, suggested to start the work with what was offered. When that was spent, if it looked encouraging, DMEA would anticipate IN the balance of the work. This promise, plus the fact that our application has been so long in process, White wanted to expedite it thinking Denver would give him a prompt answer.

However, White did this only to obtain something to submit to the directors for their approval, knowing they would not consider the $16,500 nor would he recommend it. Since then, on September 16, 1952, Mr. White met with the Directors and the matter was carefully gone over. It was agreed that on the basis of a $32,500 program as outlined, it would cost us around $40,000. The government would loan only $16,500 or less than 30%, and the work would cost twice or more what it would under our application.

For our money to be well spent, it requires the $171,856 program, and by the same token, the government loan will be better spent and much surer of being paid. Anything less than $171,856 per unit of work will cost more. The more it is cut, the more haywire a job it is going to be. We would like a job that both you and ourselves could be proud of -- not ashamed of. Another thing, if entire program goes as per application, I am quite sure the government will have their money back in not too long a time.

Rest assured, we are very serious about this matter and anxious to get to work and do a good job. I want to draw this to your attention. It will take $199,000 to do the job. However, we agreed to the $171,586. This cut was made by the field team at Tucson. They are very conservative. However, they are careful and certainly hard workers and men of high integrity and ability.

We were patient with this matter until (after they told us our loan application had been approved) they told us it had been cut to $16,125. In the meantime, we spent some money starting to get ready, engaged some men, but worst of all we notified some stockholders in Arizona that our application had been approved. From this, a lot of publicity was given the approval.

With this matter in your hands, we feel much relieved and want to express our appreciation.

Very truly yours,

Yuma Metals Inc.

Luke Walker

Luke Walker Secy

LW:h
Encl.

MINES IN SILVER DISTRICT
YUMA COUNTY

MILL ON COLORADO
HEAD OF MARTINEZ LAKE

Yuma Metals, Inc.

LLOYD C. WHITE, GEN. MGR.

D. L. McDANIEL, PRES.
OTTO MOTEJL, VICE PRES.
CHAIRMAN OF BOARD
LUKE WALKER
SECY. & TREAS.

for
DEPARTMENT OF THE INTERIOR
Bureau Mineral Administration
RECEIVED
OCT 6 1952

YUMA, ARIZONA

October 4, 1952.

Mr. C. O. Mittendorf,
Chief of DEMA
Department of the Interior
Washington 25, D.C.

Re: DEMA Exploration application 1303X

Dear Sir:

On September 16, 1952, I wrote you air mail asking you to reconsider our exploration application for $171,589. Also wrote you on September 19, 1952. Have had no answer or acknowledgment of either.

Mr. Keating told Mr. White on the phone that your rules and regulations could not allow the $171,587 we applied for. Will you please tell me the exact regulations that would limit our application to $35,000 or not allow the $171,587. On the basis of $171,587 what percentage of this would you be willing to anticipate? Why I ask this is that we feel, after talking to several engineers and mining men familiar with the location, that anything less we would not be spending our money to the best advantage.

I would appreciate it very much if you would write me fully explaining your theories and conclusions on this matter and your rules and regulations (other than has been published). I do believe we are entitle to this. We went into this at your invitation. We surveyed our situation thoroughly before we applied relative to your requirements. We furnished you with all information required and co-operated in every way possible. We do have a property that fits your requirements as they have been given to us. We have been patient as our application was acknowledged by you on May 31, 1951. (17 month's ago)

Another answer I would like to have: was our application once approved? Your office reported it was to at least three different parties. I would appreciate an answer to this letter. A full letter from you might help to bring this matter to a satisfactory conclusion for all concerned. If you will reconsider our application, please consider this - if it is granted we will erect a 100 floatation plant at the Red Cloud Mine and mill the new found oxidized ore first which would repay the government their money in short order.

Very truly yours,

Luke Walker

LUKE WALKER
798 HOPE AVE. • PH. 21530
SANTA BARBARA, CALIF.

Please answer to

October 4, 1952.

Chamber of Commerce
Yuma, Arizona

Attention: Ray Cowley

Gentlemen:

[illegible] again refuses to go 50-50 on our application. George Teasing phoned and raised their anticipation from $16,250 to $17,500. This is on a job they outline that will cost about $65,000 or their anticipation would be 27%.

Their attitude has changed completely. Until lately they seemed very interested in our application. Now they give us the impression that they do not want us to have an exploration loan. I say this because of the impractical offers they make.

Have had no answer or acknowledgment of my letter of September 18th and 19th. An enclosing letter requesting some and other information. Will keep you informed as to what takes place relative to our loan.

Very truly yours,

[illegible]:h
Encl.

Luke [illegible]alber

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 6 1952

Yuma Metals, Inc.

1005 Oxford Street,
Berkeley 7, California,
October 3, 1952.

Exploration Project
Red Cloud Mine
Docket No. DMEA - 1303X

Mr. C. O. Mittendorf, Chief
Department of the Interior
Washington 25, D.C.

Attention Mr. George Keating.

Dear Sir:-

Referring to our telephone conversation of yesterday morning on the above project and to Exploration Project Contract Idm-E 371 sent from Denver on August 20, 1952, I have to make the following comments:

My understanding is you proposed to "boost" Contract Idm-E 371 by only $2,500.00, making a total of $35,000.00, fifty per cent to be shared by the government and fifty per cent by ourselves.

I had promised to telephone you in Washington this morning after contacting my directors but after getting their instructions it was too late to telephone you. I am therefore sending this air mail letter which you should have Monday morning.

We have all agreed that to properly develop the patented Red Cloud claim that our amended application calling for the expenditure of $171,557.00 is necessary. We understand that the Arizona field team have approved of our program.

Carrying out our original program will leave the mine properly equipped to extract the 30,000 tons of oxidized ore already developed.

Also without further delay or duplication of effort we will be in a position to start extending the shaft to reach the ore to be developed by the proposed diamond drilling campaign.

As already pointed out in my letter to Mr. Mittendorf of Sept. 22, 1952, we regard Contract Idm-E 371 as being entirely inadequate, especially under Item (1) for preparatory work.

In case you wish to telephone me again for further discussion I will be in my office all next week. My telephone number is Landscape 4-3960.

Very truly yours,

Lloyd C. White.

Lloyd C. White

c.c. Luke Walker Sec'y
Santa Barbara, Calif.

Dat

10/3/54

Mr. Mittendorf:

A rather nasty threat in this one. I am preparing answers for the various letters but before going too far, think it best to await the telephone reply from White which should come in today.

Keating
Keating

Return to Keating

Do not believe we should give details on denials. Only total number without revealing applicant or name.

FILE COPY
SURNAME:

500

Keating

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

October 2, 1952

Memorandum

To: Administrator

From: Acting Chief, Base Metals Division

Subject: Yuma Metals, Inc., Docket No. DMA-1303

I telephone Mr. Lloyd C. White, General Manager of Yuma Metals, citing him a brief outline of regulations under which we worked relative to exploration projects.

White did not realize that preparations for development and production could not be provided for in conjunction with exploration. When he had a clear picture of the distinction, he agreed with me that the 1,650 feet of drifting requested in the original application should be deleted at present. This work could be undertaken if the drilling was successful.

White stated that he wanted the large sum as first applied for so that the mine could be developed and put into production.

After the above matters were thoroughly discussed, I reiterated the points made so that White would thoroughly understand.

Thereupon I asked him to go into detail as to what he needed to undertake the exploration work only.

I suggested the following, and he concurred:

Yuma Metals already has:

Portable compressor
Air Drill
Diamond drill

Minimum needs:

Little tugger hoist, rented @ $50/mo. for 4 mos.	$ 300.00
Blower and pipe rental	200.00
Sump pump (boiler feed)	100.00
2" Pipe, 1,000 ft. @ 30 cents plus 10%	400.00
1" Pipe, 350 ft. @ 15 cents	52.50

Installation and clearing muck
2 miners @ $16.00/day for 15 days
(100 tons muck to be removed) $ 460.00

$1,512.50

I then pointed out that we recognized there were other items and probable contingencies, such as timber, small tools, bucket, etc. That we had generously estimated $5,000.00 which should be sufficient to do the necessary preparation work. To this White agreed and said he was satisfied. He wanted to consult his associates before giving us formal consent. White will get consent of others by telephone and call me tomorrow.

I further explained that DMEA has to have requests for exploration assistance substantiated by factual data and that if he felt the request for $26,000.00 was necessary for exploration, we would in all probability have to request the Field Team to examine the mine again in order to determine if, in their opinion, the items making up the $26,000.00 could be supported.

A. G. Keating, Acting Chief
Base Metals Division

AGKeating/bjl

Copy to: Docket
Admr. R. File
H. F. Keller (2)
A. G. Keating
Chron.

October 2/5 Yuma Metals, Inc

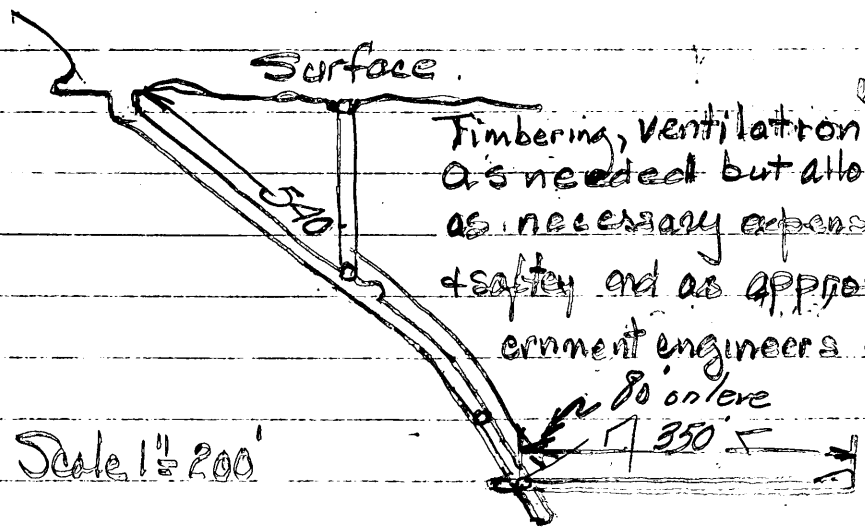
Memorandum:

Subject: Preparation of Red Cloud Mine for Diamond Drilling under Docket # 1303x

PIPE: 1000' — 2" black pipe — @ $.30/ft — 300.00
(10% delievery cost — 30.00
350' — 1" black pipe @ $.157/ft 55.00
Installing pipe 8 shifts @ $15/shift 120.00
$505.00

CLEANUP:
10 shifts @ $15.00/shift — $150.00
Tools $25.00 25.00
Wheelbarrow 20.00
195.00 $195.00

REPAIR:
ladders 200' ± installed $100 = 100.00
$800.00



Timbering, ventilation etc — as needed but allowable only as necessary expense for health & safety and as approved by Government engineers — $1700.00
$2500.00

Scale 1" = 200'

550
also
1500

September 30, 1952

Memorandum for the Files

Chronological actions contained Luke Walker's letter (Answering questions re loan DMEA 1303) under date of September 21, 1952.

May 22, 1951	Filed application for $300,000.00
~~May 3, 1951~~	~~Received acknowledgement from ?~~
August 1951	Applicant telephoned re status of application. Letter from Tom Lyons and Billings in answer.
Sept. 12, 1951	Applicant amended application from $300.000.00 to $199,150.00
November 1951	Applicant phoned Billings - not there talked to Johnson who informed would start application on its way to Field Team for examination. Johnson said if applicant could agree with Field Team he would go along. Applicant says one month before application reached Field Team Tucson.
Jan 30, 1952	Applicant received rough draft proposed work from Tucson. OKed and returned.
May 1952	Walker telephoned Moulds - informed no longer with DMEA, that Corbett had taken his place.
June 9, 1952 ?	Walker telephoned Corbett - was informed contract had been approved and would be ready to sign ten days or two weeks.
June 19, 1952	Walker received work from Willis at Phoenix and Broadgate, Washington, that application was approved and contract being drawn by Legal Division.
July 1, 1952	After waiting double time indicated, Walker telephoned Corbett. Was told contract written but cut to $32,500.00.
Aug. 20, 1952	Walker called Washington for Mittendorf - out and talked to Keller who stated contract sent to Denver. Walker then called Denver for contract and it was sent to them.

YUMA METALS, INC.

1951

5/31 Rec. MF-100, C D etc. Referred to USGS

/31 Rec. and sent to F.T. - & 8

7/6 Ltr. from FT encl report. Memo recommends that if expl funds are available in Fiscal 1952, a detailed geologic exam be made - cost of exam would be approx. $10,000 - 1/2 paid by Govt. Rec'd 7/16

7/16 Referred to USGS

7/24 Recd. 2 copies of MF 100 & 103; Report by O.H. Hershey, maps, etc.

7/25 Referred to USGS

8/2 Report on this docket mailed by Reg. IV on 7/6 together with field's copy; return to field extra copies.

8/13 Wire to Mr. White - Ltr being sent re alternate proposal.

8/13 Ltr to appl suggesting that detailed geologic exam be made approx. cost $10,000. Encl. form MF-103 to be completed.

8/25 Ltr from appl advising that they intend to file an amended application for $100,000.

8/30 * 2

9/4 ltr to Mr. White Mgr. info submitted insufficient encl. copy of contract form to show what info is needed. Large geol. investigation would need to be made; USGS has not adequate staff for this.

9/12 Ltr from applicant encl amended MF-103's for a loan of $200,000 on a 50-50 basis. Maps and other info also enclosed.

9/12 Ltr from Reg. IV requesting file copies of report.

10/5 Ltr from applicant forwd. copy of MF-100 Question 7(c) & 4 copies of Holt report on the Red Cloud

10/25 Docket to field for further info and advice; 2 copies of F.T. report ret.

YUMA METALS, INC.
DOCKET NO. DMA-1303

(Base Metals Division Record)

To Region IV on 10/31/51

Examined December 7, 1951

4/8	Rec'd phone call from Sec. of Co. re status and he said report had been mailed from Tucson a month ago yesterday. Please trace and send him wire collect at 798 Hope Ave., Santa Barbara, Calif.
4/8	Teletype to East re status of field report.
4/9	Answer to teletype - Denver office revising Geo. Survey Report.
4/10	Telegram to Luke Walker (Sec. of Co.) re status (collect)
4/10	Rec'd letter from appl. re mining claims which they were requested to get by Denver - will have to contact Denver office.
4/11	Sent teletype to East re info we rec'd from appl.
4/15	rec'd answer to teletype re retaining info in Base Metals
5/15	Rec'd field report for approval
5/16	Letter to appl. stating we rec'd report.
5/20	Rec'd letter from small mine operators re status
5/26	letter from appl. showing assays of ore
5/27	Rec'd GS and BM recommendation
6/4	To legal
6/19	Letter to Small Mine Operators
6/17	Rec'd letter from Small Mine Operator in Arizona
6/23	Returned from Legal approved.

19

7/1	To Operating Committee thru legal division — Contract to Field for signature
7/23	Ltr. Op. Com. to King re telephone conversation 7/22 re manner of payment for preparatory work.
7/28	Rec'd for approval rewritten letter on above (Chambers)
7/29	Above surnamed by Keller and Sent to Legal for surname
7/30	Rewritten by Kane (he surnamed our ltr. and his and gave us choice)
8/1	Kane's ltr. surnamed by Keller and sent on to Op. Com.
8/12	Telephone conversation King and Keller—King may revise contract if he wishes
9/16	Rec'd ltr. King to Mittendorf 9/8 returning unsigned contract—Operator is not satisfied with amount of funds to be granted—King says if amount were increased the project would not be feasible.
9/18	Rec'd ltr. 9/16 from Applicant to Mittendorf re insufficiency of amount allowed on proposed contract.
9/22	Rec'd letter Sen. McFarland to Mittendorf 9/19 re above ltr. and requesting copy of our reply.
9/25	Rec'd teletype from King to Keating re phone call with East. It is satisfactory to increase $2,500 for rehabilitation to $5,000 as Keating suggested.
9/29	Rec'd letter Operator 9/19 to Mittendorf transmitting "Answer to Questions". Also ltr. dated 9/22 from Operator re amounts to be on contract for work to be performed.

KENNETH MCKELLAR, TENN., CHAIR
CARL HAYDEN, ARIZ.
RICHARD B. RUSSELL, GA.
PAT MCCARRAN, NEV.
JOSEPH C. O'MAHONEY, WYO.
DENNIS CHAVEZ, N. MEX.
BURNET R. MAYBANK, S. C.
ALLEN J. ELLENDER, LA.
LISTER HILL, ALA.
HARLEY M. KILGORE, W. VA.
JOHN L. MCCLELLAN, ARK.
A. WILLIS ROBERTSON, VA.
STYLES BRIDGES, N. H.
HOMER FERGUSON, MICH.
GUY CORDON, OREG.
LEVERETT SALTONSTALL, MASS.
MILTON R. YOUNG, N. DAK.
WILLIAM F. KNOWLAND, CALIF.
EDWARD J. THYE, MINN.
ZALES N. ECTON, MONT.
JOSEPH R. MCCARTHY, WIS.

EVERARD H. SMITH, CLERK
THOMAS J. SCOTT, ASST. CLERK

United States Senate

COMMITTEE ON APPROPRIATIONS

Phoenix, Arizona
September 30, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 2 1952

AIRMAIL

Mr. C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D.C.

Dear Mr. Mittendorf:

I recently have had occasion to examine material relating to Docket DMEA 1303X, this being an application by Yuma Metals, Inc. for an exploration project contract for work at the Red Cloud Mine in Yuma County, Arizona.

It is my understanding that this application as finally submitted to your office was for the sum of $171,587. The application was prepared with the assistance of the Tucson, Arizona, Office of the Bureau of Mines and the proposed work and the costs thereof were approved by that agency. I have noted that the offered contract is in the amount of $32,500.

I am not informed of the reasons why the amount for which the application was made was reduced, but I will appreciate your detailed advice on this point. I will also be obliged if you will furnish to me a breakdown of the expenditures contemplated under the proposed contract. It will be helpful if the breakdown for each of the two estimates in Exhibit A accompanying the proposed exploration contract sets forth in detail information as to time, type and number of employees, and costs in the same manner as these data are contained in the loan application.

I need this information at an early date and will be glad to have it as soon as you can send it to me.

Yours very sincerely,

Carl Hayden

Carl Hayden
United States Senator

P. S. [illegible]

WM. H. WESTOVER
J. D. MANSFIELD

WESTOVER & MANSFIELD
ATTORNEYS AT LAW
190 MADISON AVENUE
P. O. BOX 551
YUMA, ARIZONA
TELEPHONE 70

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 2 1952

September 30, 1952.

Mr. C.A. Mittendorf
Department of the Interior
Defense Minerals Exploration Administration
Washington, D.C.

Dear Sir:

Ref. D.M.E.A. 1303X

On the 16th of the month the Yuma Metals Inc., a corporation, wrote you concerning the contribution of the Federal Government toward the development of the Red Cloud Mine in Yuma County, Arizona. This letter was in the nature of a request for further consideration of the original application and was based upon the facts and circumstances which surrounded the application and the attitude of the department.

Mr. Walker was in the office yesterday somewhat perturbed over the fact that he had not received any reply from his letter and I pcaified him by stating that it was too early to expect a reply. However, he requested that I write you to ascertain if his letter was received and request a prompt reply.

Respectfully,
WESTOVER & MANSFIELD

By

WHW/I

YUMA COUNTY CHAMBER of COMMERCE

YUMA

Box 230

YUMA, ARIZONA

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 1 1952

September 29, 1952

Mr. C. O. Mittendorf
U. S. Dept. of Interior
Defense Minerals Exploration Administration
Washington 25, D. C.

Dear Mr. Mittendorf:

May I thank you for your prompt response to my telephonic request for a list of minerals exploration contracts in force as of May 31, 1952 and its supplement.

These reports carried much of the information sought, however we would like a mimeograph copy showing a break down of Arizona applications; those that were denied, those in process, and those granted.

The interest of the Yuma County Chamber of Commerce in DEMA 1303X springs from an investigation of all the facts regarding this loan application and are vitally interested in its final outcome. There are a great number of questions I would like to ask regarding the failure to receive 100% approval of the amount asked, but will content ourselves for the present at least with answers to the following:

1. What are the general reasons for disapproving an application and wherein DEMA 1303X failed?

2. or what was your reason for reducing the amount applied for?

The history of this case shows an unusual lapse of precious time from inception to its present status. Either there is a logical explanation for this or it was deliberate, we were unable to determine which.

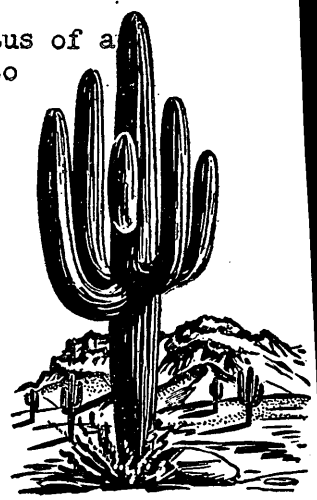
In the event that the case of DEMA 1303X should develop to the status of a hearing, we would like very much to be notified as we stand ready to witness on behalf of Yuma Metals Corporation.

An early reply is desired.

Very truly yours,

Raymond N. Cowley
General Manager

RNC:ak



"YUMA, THE SUNSHINE CAPITAL OF THE UNITED STATES"

G. Keating Sec
Sept. 25, 1952
2:50

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 25 1952

DN 235 BUREAU MINES 9-25-52 11-50 AM

GEORGE KEATING
DMEA

RE TELETPXXXX TELEPHONE CONVERSATION WITH EAST RE YUMA METALS.
SATISFACTORY TO INCREASE $2500.00 FOR REHABILITATION TO $5,000 AS
YPXX YOU SUGGEST.

W H KING

Denver, Colo

SEP 25 3 09 PM '52

BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

Y U M A M E T A L S , I N C.

1005 Oxford Street
Berkeley 7, California
September 22, 1952

EXPLORATION PROJECT
RED CLOUD MINE
Docket No. DMEA--1303X

Mr. C. O. Mittendorf, Chief DMEA
Department of the Interior
Washington 25, D. C.

Dear Sir:-

References are made to the following:

1) Letter to C. O. Mittendorf from Yuma, Arizona, dated Sept. 16, 1952 by Luke Walker, Secretary Yuma Metals, Inc.

2) Letter to W. H. King, Region No. 4 Denver, dated Sept. 3, 1952 by (the writer) Lloyd C. White Manager Yuma Metals, Inc.

3) Letter from W. H. King to Lloyd C. White dated Denver Sept. 8, 1952.

4) Letter from W. H. King to Lloyd C. White dated Denver Aug. 20, 1952 and containing Original and five copies of Contract IDM - E371 between the Government and Yuma Metals, Inc.

I have just received copy of our Secretary's letter to you posted at Yuma, Arizona, under date of Sept. 16, 1952 and listed under References No. 1 above. When Mr. Walker wrote this letter to you he had already received copy of my letter to Mr. King (item 2 above) and Mr. King's reply to me (item 3 above). When Mr. Walker learned that the Denver office had not made a decision and that the loan application had been passed back to Washington he realized it was time to try and get our amended application for $171,557.00 reconsidered. I am whole heartedly in favor of this procedure otherwise we would not have asked for this amount in the first place.

Contract IDM - E371 is entirely inadequate to carry out our entire program as was also my proposal for a $50,000.00 to Denver. The only reason I made the proposal to Mr. King of the Denver office on Sept. 3 was that I considered "half a loaf better than none." Also I wished to establish the fact that contract IDM - E371 did not provide the means to equip the mine for diamond drilling on the 500 foot level, which after all is the principal objective.

Our original application which included the development of several promising prospects in our group of 61 claims was very carefully worked out. Considering the remoteness of the mine from any housing projects and on account of sections of poor roads it was considered necessary to have a boarding house and bunk house on the property; for an economical operation this is still essential.

Our amended application for $171,557.00 (of which the governments share would be approximately $86,000.00) was agreed to by the Tucson Field Team. No outlying claims were to be developed at this time and the work was to be concentrated on the Red Cloud patented claim.

However all of mine equipment, buildings, shpps, roads, etc. are necessary and any curtailment on these items would seriously effect the ultimate cost of the project.

After the mine is made accessible for diamond drilling on the 500 foot level, we confidently expect to find sulphide silver lead ore below the level along the Red Cloud fault. If this develops as expected then much of the recommended drifting in the upper oxidized levels of the Red Cloud mine can be postponed until a later date.

I have a knowledge of long standing with the Red Cloud mine. I sampled the mine and made a geological map of the surface for my partner, Oscar H. Hershey in 1925. Our firm. Burch, Hershey & White Consulting Engineers, San Francisco recommended the property for development.

In conclusion I have been working on this project for nearly two years; it is unfortunate that the personel of the Defense Minerals Administration has changed so often during this period, otherwise I feel

confident that a favorable contract would have been granted a long time ago.

Hoping we may get favorable action in the near future so we can get the project started next month I am,

Very truly yours,

Lloyd C. White.
1005 Oxford St, Berkeley Cal
Tel Landscape A-3960

Lloyd C. White, Manager,
Yuma Metals, Inc.

Registered California Engineer No. 1872
Registered Wisconsin Engineer No. 2055

lcw:brm

ERNEST W. McFARLAND
ARIZONA

United States Senate
Office of the Majority Leader
Washington, D. C.

September 19, 1952

Defense Minerals Administration
SEP 22 1952

Mr. C. A. Mittendorf
Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D. C.

Re: D. M. E. A. 1303X

Dear Mr. Mittendorf:

I have been furnished with a copy of a letter dated September 16, 1952, and addressed to you from Yuma Metals Incorporated, Yuma, Arizona, with regard to its application for financial assistance as designated by the aforementioned docket number.

I would appreciate your giving careful consideration to the facts set forth in this Company's letter and furnishing me with a copy of your reply.

Sincerely yours,

Ernest W. McFarland

Ernest W. McFarland

MINES IN SILVER DISTRICT
YUMA COUNTY

MILL ON COLORADO
HEAD OF MARTINEZ LAKE

Yuma Metals, Inc.

LLOYD C. WHITE, GEN. MGR.

D. L. McDANIEL, PRES.
OTTO MOTEJL, VICE PRES.
CHAIRMAN OF BOARD
LUKE WALKER
SECY. & TREAS.

YUMA, ARIZONA

September 19, 1952

Mr. C. A. Mittendorf,
Department of the Interior
Defense Minerals Exploration Administration
Washington, D. C.

Re: DMA 1303X

Dear Mr. Mittendorf:

I want to apologize for sending this "personal" to you, but believe it might be important enough to warrent me doing so.

I have had a request to answer several questions relative to our application No. 1303X. I am enclosing a copy of the answers, and I wish you would look them over and if I have made any mistakes or misstatements, please call my attention to them and I will immediately follow through and correct them.

I want you to know this investigation was not instigated at our request.

We appreciate the fine treatment we have had, both from your office and the Tucson office.

An early reply will be appreciated.

Yours very truly,

Luke Walker

LUKE WALKER

LW-m
enclosure

P.S. Please answer to.

LUKE WALKER
798 HOPE AVE. • PH. 21530
SANTA BARBARA, CALIF.

ILVER DISTRICT
A COUNTY

MILL ON COLORADO
HEAD OF MARTINEZ LAKE

Yuma Metals, Inc.

LLOYD C. WHITE, GEN. MGR.

D. L. McDANIEL, PRES.
OTTO MOTEJL, VICE PRES.
CHAIRMAN OF BOARD
LUKE WALKER
SECY. & TREAS.

YUMA, ARIZONA

September 16, 1952.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 18 1952

Mr. C.A. Mittendorf
Department of the Interior
Defense Minerals Exploration Administration
Washington, D.C.

Dear Sir:

Ref. D.M.E.A. 1303X.

After carefully considering your offer to participate in the above loan to the extent of $16,250.00, we find this amount to be so inadequate that we request that you reconsider our application as rewritten and agreed upon by your field team of Tucson, Arizona, in the amount of $171,587.00. This is $21,564.00 below our first amended application and $128,413.00 below our iriginal application. This is the bare minimum required to do an efficient job for ourselves or the Government.

1. In November, 1951, Mr. Johnson then head of the lead and zinc division in your agency, informed the writer by telephone he was sending our application to the field team at Tucson, and then he would approve the agreement arrived at between your field team and my organization.

2. Our property is fifty miles from Yuma over roads that in parts are almost impassable. Yuma is the nearest housing. Camp at Yuma would require two to two and a half hours each way plus about one and one half hour to change the air in the drift after the men arrive at the mine. This would, of course, leave very. very little time for the men to work each day, if they attempt to commute from and to Yuma. You can see from this that a camp at the mine is a MUST.

3. May I call your attention to Document, YUMA METALS INC. EXPLORATION PROJECT CONTRACT, RED CLOUD MINE, DOCKET NO. DEMA-1303X, EXHIBIT "A" ? Please note paragraph "1" under "Estimated Costs of the Project."

Herein is outlined work that will cost between $20,000.00 and $30,000.00 for which your Department allows only $2,500.00.

Nothing is allowed for the purchase or installation of a hoist, blower, ventilation lines, skip, cable, cars, rails, light system or tools of any type. Might we respectfully ask just how this muck is to be removed from the 500 foot level to the surface without these things?

MINES IN SILVER DISTRICT
YUMA COUNTY

MILL ON COLORADO
HEAD OF MARTINEZ LAKE

Yuma Metals, Inc.

LLOYD C. WHITE, GEN. MGR.

D. L. McDANIEL, PRES.
OTTO MOTEJL, VICE PRES.
CHAIRMAN OF BOARD
LUKE WALKER
SECY. & TREAS.

YUMA, ARIZONA

#2.

4. The drifting, as outlined in our application, has been totalling omitted. Drifting is just as important as diamond drilling, as stated by Mr. Tom Lyons in his letter to us under date of August 15th, 1951. This is essential, because this will assure the building of a mill which will be the means of repaying the Government all monies which they put into this project.

5. Profitable recovery of the lead and silver from this ore is assured by competent authorities. As proof of this, please consult your files for the ore tests of the following persons and firms:

Ed Eisenhauser, Jr.
Arizona Bureau of Mines
Denver Equipment Co.

You will note that they show an average recovery of 65.8 on silver and 91% on lead. You will also note in the Denver Equipment test that 91.1 of the zinc will be depressed and stored in the tails, for future recovery.

I trust you will reconsider our position in this matter. We have spent no small amount of time and monies getting this project this far along.

We have been most patient, I think you will agree, with the many unnecessary delays encountered in the handling of this matter, which are perhaps unavoidable. From this brief outline I believe you will agree that the amount applied for, $171,587.00, is the low figure for which a good and competent job can be done. This is no small project. We have 61 claims upon which there are 60,000 lineal feet of ore veins of good width. All of this could be developed profitably into millable ore. It is one of the larger unexploited ore bodies in the entire United States. For the welfare of Yuma County, the State of Arizona, and the entire commonwealth of the U.S.A. it should, and must be developed, even aside from its contribution to the defense effort.

Would you please give this matter your immediate personal attention?

Respectfully,
Yuma Metals Inc.
by Luke Walker Sec'y

BUR MINES DN 235 9-12-52 8-30 AM

C O MITTENDORF SPECAAL PLS DELIVER IMMEDIATELY

RE OUR LETTER SEPTEMBER 8, DMEA-1303X, YUMA METALS IDM-E371, LLOYD WHITE CALLED US AND WE EXPECT HIM TO CALL YOU BY TELEPHONE SHORTLY.

W H KING

July 18

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

224 New Customhouse
Denver 2, Colorado

September 8, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 15 1952

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, Field Team, Region IV

Subject: Docket DMEA 1303X, Contract Idm-E371, Yuma Metals, Inc. (Lead-Zinc)

Enclosed are two copies of a letter dated September 3, 1952, from Lloyd C. White regarding Contract Idm-E371 which was recently sent him for signature, and two copies of our reply. Also enclosed are five copies of an Exploration Project Contract between the Government and Yuma Metals, Inc. which has been signed by the Acting Administrator.

We believed it desirable to mention in more detail the preparatory work which was estimated to cost $2,500.00. Accordingly, Exhibit "A" of the contract was rewritten and sent to the operator as part of a contract prepared for the signature of the Executive Officer, DMEA Field Team, Region IV. A copy of Exhibit "A" as sent to the operator is also enclosed.

The estimated cost of the contract is $32,500.00. We note that in the enclosed letter Mr. White estimates it will cost $26,000.00 to prepare for the diamond drilling. On this basis it appears to us that the contract would be economically unfeasible because he anticipates spending $26,000.00 preparatory to spending $30,000.00 diamond drilling. This would bring the total cost of diamond drilling up to $11.20 per foot.

W. H. King

Enclosures

W. H. King

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

224 New Customhouse
Denver 2, Colorado

September 8, 1952

Mr. Lloyd C. White
Yuma Metals, Inc.
1005 Oxford Street
Berkeley 7, California

Re: Docket DMEA 1303X
Contract Idm-E371

Dear Mr. White:

Your letter dated September 3 regarding Contract Idm-E371 has been sent to our Washington office for reply.

Very truly yours,

W. H. King

W. H. King
Executive Officer
Field Team, Region IV

JFS:jp
cc Contract
Chron
Administrator DMEA
WRStorms
AHKoschmann (2)

C
O
P
Y

YUMA METALS, INC.

1005 Oxford Street
Berkeley 7, California
September 3, 1952

EXPLORATION PROJECT
RED CLOUD MINE
Docket No. DMEA--1303X

Mr. W. H. King, Executive Officer
Region No. 4
224 New Custom House
Denver 2, Colorado

Dear Mr. King:

Your letter of August 20, 1952 together with the original and five copies of contract Idm--E371 between the Government and Yuma Metals, Inc. received.

I forwarded these to the officers of the company, first taking a copy for study.

As you probably know, we filed an Amended Application on this project under date of September 12, 1951 on recommendation from Washington in the amount of about $200,000. This application was later worked over and agreed upon by the Tucson Field team in the amount of $171,000.

Sometime ago our Secretary, Mr. Luke Walker, was advised by telephone by C. O. Mittendorf DMEA from Washington that our Amended Application had been approved. Therefore when I received your letter of August 20, 1952 I was taken aback to learn that an expenditure of only $32,500 had been authorized by the government.

However with this entering wedge we feel that the Bureau recognizes that the project has merit--and in line with my original recommendations you have selected the place to diamond drill (on the bottom level of the Red Cloud Mine) which is practically sure to get ore. Refer to my Sketch Map--Plan and Section of Red Cloud Mine--Yuma, Arizona, January 25, 1951 (accompanying our Amended Application of September 12, 1951).

Getting back to contract Idm--E371 we wish to point out that the amount $2,500.00 is entirely inadequate for the preparatory work under Item (1).

I estimate the minimum requirements to prepare the property for diamond drilling to be as follows:

	Items	Installed Cost
(1)	(a) Retimbering Vertical Shaft (197') and providing guides for Bucket Cross-head (b) Replacing ladders and Blcket Skid-way in inclined section of Shaft (250') (c) Rebuilding Head frame with small waste pocket (d) Mine car and short length of mine track to waste dump	$ 7,500.00
(2)	Single Drum (Second Hand) Gasoline Hoist	2,300.00
(3)	Shed Roof over Hoist	300.00
(4)	Bucket and Cable	425.00
(5)	Telephones--Hoist House to bottom level	275.00
(6)	Water Storage Tank	500.00
(7)	Air Driver Ventilation Fan (Coppus Type) installed at bottom of Vertical Shaft with ventube to bottom level and to Diamond Drill Station No. 1	1,900.00
(8)	Car and mine track for bottom level	1,100.00
(9)	Air Driver Boiler Feed Pump to pump water from Sump to Diamond Drill Station	200.00
(10)	Mining ground and timbering for Diamond Drill Station No. 1	1,400.00
(11)	Compressed Air Line from surface portable compressor to Diamond Drill Station, 500'-3" Pipe--150'-2" Pipe--200'-1" Pipe	900.00
(12)	Small Blacksmith Shop complete and Acetylene Welding	1,100.00
(13)	Combination Warehouse, Office, Tool House, Hospital Supplies, Stretcher, Fire Extinguishers, etc.	3,400.00

(14)	Miscellaneous Tools--Saws, Hammers, Spikes, Rope, Chain Blocks, Carbide Lamps, etc.	1,400.00
(15)	Contingent	3,300.00
	Total	$26,000.00

The above does not provide for any boarding house or living quarters but I am now assuming the small crew could live in trailers or tents and provide their own board. Or the crew could commute a distance of about 17 miles from the Red Cloud mine to Bert Fisher's cabins on the Colorado River, where fresh well water is available. Living at the mine would necessitate hauling in drinking water.

We have a portable compressor and trucks to service the camp.

Since you are an operator and a hard rock miner (the same as myself) you will realize at once that Contract IDM--E371 is entirely inadequate for the job.

If, however, Item (2) of the Contract was reduced to 4,000 lineal feet of diamond drilling, at $6.00 per foot would make $24,000--which added to the above preparatory work of $26,000 would make $50,000, of which the government participation would be $25,000.

In my opinion the contract should be written for an absolute minimum of $50,000--and we understand you can do this out of Denver without starting the long trail back to Washington again.

If it would help matters along I could fly over to Denver some morning and we could go over the project together. If we could get to work on the property in October, we could have the drilling campaign completed during the most favorable time to work in that location.

Please give me your reactions to the above so I can advise my directors.

Very truly yours,

/s/ Lloyd C. White

lcw;ch

Lloyd C. White

FILE COPY
SURNAME:

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

August 11, 1952

Memorandum

To: Acting Administrator

From: Acting Chief, Base Metals Division

Subject: Teletype from W. H. King

In answer to Mr. King's inquiries, we wish to give you the following information on the dockets in question:

Athletic Mining Company, Docket No. DMEA-2366, Contract No. Idm-E378:- There is no question as to the legality of payment by unit costs in first paragraph of Stage I. That method of payment meets with the approval of our legal and accounting departments.

Yuma Metals, Inc., Docket No. DMA-1303X, Contract No. Idm-E371:- Letter explaining procedure approved by legal and accounting departments for payment of $2,500.00 for preparatory work was mailed on August 5, 1952.

H. F. Keller, Acting Chief
Base Metals Division

H.F.Keller/bjl

Copy to: Docket
Admr. R. File
H. F. Keller (3)
Chron.

DN 235 BUREAU MINES 8-8-52 8-10 AM

C O MITTENDORF

WE WILL TELEPHONE YOU AUGUST 11 , 1952 RELATIVE TO THE FOLLOWING--

MEMO DATED JULY 10, 1952 FROM CHIEF COUNSEL TO ACTING ADMINISTRATOR DMEA 1776X. IS STATEMENT IN SECOND PARAGRAPH OF LAST PAGE APPLICABLE TO PROPOSED CONTRACTS INVOLVING STATE LAND.

LEGALITY OF PAYMENT ON BASIS OF AGREED UNIT COSTS IN FIRST PARAGRAPH UNDER STATE I, DOCKET NUMBER DMEA 2366, CONTRACT IDM-E378, ATHLETIC MINING COMPANY.

FINAL DECISION RE $2500 ALLOTMENT FOR PREPARATORY WORK ON CONTRACT IDM-E374/////// IDM-E371 DOCKET DMEA 1303, YUMA METALS, INC.

REFERRING TO CONTRACT IDM-E381 DOCKET DMEA 2135 SUNNYSIDE URANIUM COMPANY UNDER IXXX OPERATING EQUIPMENT TO BE FURNISHED BY OPERATOR, DEPRECIATION IS ALLOWED ON MICXXX MISCELLANEOUS EQUIPMENT AND REPAIR PARTS. STATEMENT SHOULD BE INCLUDED THAT DEPRECIATION IS ONLY ALLOWABLE FOR MONTHS DSXXX DURING WHICH EACH ITEM OF EQUIPMENT IS IN USE. MONTHLY DEPRECIATION SHOULD BE SHOWN FOR EACH ITEM. NO COMPRESSOR RENTAL FOR SHAFT SINKING. LEGALITY OF STATEMENT AHEAD OF SUMMARY.

CONTRACT IS SIGNED BY ACTJXXX ACTING ADMINISTRATOR, MUST BE SENT TO HOLLYWOOD, CALIFORNIA AND AKRON, OHIO FOR APPLICANT'S SIGNATURE. HOW SHOULD THIS BE HANDLED.

DECISION ON GOVERNMENT PARTICIPATION IN DMEA 2181, FRED STAATS, SEE OUR MEMORANDUM DATED JULY 30, 1951xxx 1952.

DECISION ON MORTGAGEE'S SUBORDINATION AGREEMENT, ORD MERCURY MINE, DMEA 2445 SEE MEMORANDUM DATED JULY 25, 1952.

W H KING

FILE COPY
SURNAME:

Chambers
Keller
Jackson
Mitchell

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

Rewritten by

AUG 5 1952

Mr. W. H. King, Executive Officer
DMEA Field Team, Region IV
224 New Customhouse Building
Denver 2, Colorado

Subject: Docket No. DMEA-1303X
Contract No. Idm-E371
Yuma Metals, Inc.
(Lead-Zinc)

Dear Mr. King:

This is in reply to your telephone conversation of July 22 with Mr. Frank E. Johnson, concerning the payment of $2,500 for the preparatory work in the subject contract.

While the contract describes all the preparatory work as a single unit, it was contemplated that the work would be done in two phases and in the first phase $2,200 would be spent for doing all the necessary rehabilitation work, the establishment of a drilling station at Point No. 1 and the installation of necessary air and water pipes to Station One, and that in the second phase $300 would be spent for the necessary rehabilitation of the drift and the construction of a drilling station at Point No. 2. Since, however, the contract calls only for payment for units of work actually performed, you are authorized to amend the contract to provide for the making of disbursements upon percentages of completion of the preparatory work if such payment is necessary to facilitate the successful prosecution of the project. You should work out with the engineers a basis for establishing completion stages of the applicable phase. In contracts of this kind it is usually the practice to make payments on the basis of 20 to 40 percent completion stages.

You, of course, realize that all the rehabilitation work should be performed in a manner to meet the Arizona safety requirement laws and regulations.

Approved:

J. H. Hedges
Member, Bureau of Mines

J. M. Lemmon
Member, Geological Survey

Sincerely yours,

(signed) FRANK E. JOHNSON

Chairman, Operating Committee

J.N. 8-5-52

AE
~~HFKeller/AEKane/em~~
7/31/52
HFKeller/JLChambers/AEKane/em
Copy to: Mails and Files
Adm. Reading File
Operating Comm.
L. P. Thayer - Rm. 5216, GSA Bldg.
J. H. Hedges, Rm. 4604
H. F. Keller
H. H. Chambers
H. F. Keller
J. L. Hofflund
Chron
pending
A. E. Kane

500 FILE COPY
SURNAME:

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

JUL 18

Mr. W. H. King
Executive Officer, Region IV
DMEA Field Team
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA 1303 (Lead-Zinc)
Yuma Metals, Inc.

Dear Mr. King:

Enclosed please find the original and 5 copies of the Exploration Contract for the Yuma Metals, Inc.

In writing this Contract, we have deleted the provisions for drifting in the oxide zone to the north and south of the old workings for the following reasons:

The possibility of this mine becoming an important producer of critical metals within a reasonable time is largely dependent on discovering relatively large sulfide ore bodies which will be amenable to treatment in the mill which the applicants have acquired.

[redacted]

mond drilling believing that this should be sufficient to discover and delineate any significant deposit of sulfide ore that may be encountered on the downward extension of the existing ore shoots.

The Field Team should cooperate with the applicant in planning the location, strike, dip and length of the diamond drill holes. In accordance with the contract, the number of holes drilled is subject to the approval of the Government. If the Field Team believes at any time that because of the results obtained in diamond drilling to that date, that further drilling is not justified, they should so notify the applicant. In this case the contract should be rescinded before completing the total maximum allowable footage or total estimated cost of the project.

The proposed work in the original application called for an expenditure of approximately $60,000.00 for rehabilitating and equipping the shaft, erecting surface buildings and installations, and other preparatory work. This estimated expenditure is necessary if the property is to be exploited, but we do not believe that it can be considered a necessary expenditure for a limited exploration project. We believe that the program as contracted will enable the applicant, with the least expenditure of his and public funds, to determine the potential value of his property as a source of strategic metals.

It will be necessary to insert in the contract in the space provided under Article 3, the number of the days from the date of the contract in which work shall commence.

If this contract meets with the approval of your office and the applicant, please have the original and copies signed and handled in the approved manner.

Sincerely yours,

(signed) FRANK E. JOHNSON (GHB)

Chairman, Operating Committee
Defense Minerals Exploration
Administration

Enclosures-6
APPROVED:

J. H. Hedges (GHB)
Member, Bureau of Mines

D. M. Lemmon (GHB)
Member, Geological Survey

FXCorbett/mb
6/30/52
cc to: Adm. R. File
Op. Comm.
Docket
Mr. Keller
Mr. Corbett
Mr. McKnight
Mr. Bishop
Region IV

P. S. Although this contract comes within your delegation of authority, it was completed by our commodity group and has been signed by the Administrator in order to expedite processing. However, if you prefer, we have no objection to your rewriting the contract and signing it under your delegation of authority.

FILE COPY
500 SURNAME:

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

JUN 27 1952

Mr. Charles F. Willis, State Secretary
Arizona Small Mine Operators Association
508 Title and Trust Building
Phoenix, Arizona

Re: Docket No. DMEA 1303 (Lead)
Yuma Metals, Inc.

Dear Mr. Willis:

We wish to thank you for your letter of June 6, 1952 concerning the subject application and the additional information that you furnished us pertaining to the sentiment in Arizona in relation to the program of the Defense Minerals Exploration Administration.

Complying with your request for information on the status of the subject application as expressed in your letter of May 15, 1952, we are pleased to inform you of the following:

The exploration project proposed by Yuma Metals, Inc. under the subject application has been reviewed by the Base Metals Division of this Agency in conjunction with the lead-zinc Commodity Specialists of the Bureau of Mines and the Geological Survey. A proposed modified exploration project contract has been drawn up and shortly will be sent to the Executive Officer of Region IV to obtain the approval and signature of the applicant.

Sincerely yours,

C. O. Mittendorf (for)
Acting Administrator

J.N.
6-27-52

HFKeller/mef/mb
6/26/52
cc to: Adm. R. File
Docket
Mr. Keller
Chron

AN ORGANIZATION INTERESTED IN THE PROBLEMS OF THOSE WHO OPERATE SMALL MINING PROPERTIES IN ARIZONA

ARIZONA SMALL MINE OPERATORS ASSOCIATION

OFFICE OF STATE SECRETARY
CHARLES F. WILLIS
508 TITLE AND TRUST BLDG.
PHOENIX, ARIZONA

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YUMA

June 6, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 9 1952

C.O. Mittendorf, Acting Administrator
Defense Minerals Exploration Administration,
Washington 25, D.C.

Dear Mr. Mittendorf:

I wish to thank you for your letter of May 29 regarding Docket No. 1303X, Yuma Metals, Inc., Lloyd C. White. This application took so long in field work and was bandied about so much in rewriting, making amendments, etc., that we hope those who are looking it over in Washington will have all the necessary information at hand for proper consideration.

I was very glad to have your assurance that the present situation on lead, and which probably will also apply to zinc, is not going to affect consideration of these exploration loan applications.

I note your comments on the fact that Arizona has not made the number of applications for exploration loans as have been made by other states. I only wish I knew the answer. I do know that in the very early stages of the program a great many applications were made. This was at the time when no consideration could be given because of the tax situation which had to be ironed out. In other words, it was a long time after the program was originally announced before anything could actually be done. This developed the feeling that nothing much would be done, therefore it was rather useless to apply.

There was another sentiment in Arizona which I do not feel was at all justified. The examining team was composed of L.L. Farnham and Morris Elsing. These two men are old-time examining engineers in the state and there is hardly a property of any material importance that had not at some time or another been examined and reported on by them. This work, of course, was done for prospective purchasers and inasmuch as many of the properties did not fit the specifications of the prospective purchasers, the engineers turned them down.

There has been a feeling expressed a number of times that having once made a negative report on a mining property they would very definitely be handicapped in reversing that opinion and making a positive report for help on the Government exploration program. In other words, it might look as though they were reversing themselves in spite of the fact that the Government specifications on what was wanted might be quite different from the conditions under which they had examined the properties previously.

As I said before, I do not believe that this criticism was

justified. Nevertheless it did exist for I frequently ran up against this as a reason why no applications were made.

I can fully appreciate, however, that an engineer might make a negative report on a mining property in 1936 under the conditions which existed at that time and under the specifications of those for whom he was examining, and still make a very different report under the conditions existing today. I have argued with those who had that objection but I am sure it has had some influence.

I will check further into this subject and maybe we can find out why there have been a lesser number of applications from Arizona.

Again thanking you for your letter, and with kindest personal regards, I am

Very sincerely,

Charles F. Willis

Charles F. Willis
State Secretary

CFW:VSW

FILE COPY
SURNAME:

F. Johnson

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

Mr. Charles F. Willis
State Secretary
Arizona Small Mine Operators Association
508 Title and Trust Building
Phoenix, Arizona

Re: Docket No. 1303X (Lead and Zinc)
Yuma Metals, Inc.
Lloyd C. White

Dear Mr. Willis:

This is with reference to your letter of May 15, 1952 inquiring as to the status of the application of Yuma Metals, Inc. for aid in an exploration project.

The Field Team report on this application, which was received in my office on May 15, 1952, has been sent to our lead-zinc commodity group for study in conjunction with the application. You may be assured that we will do everything possible to expedite the completion of processing this application. We do not believe, however, that it will be of any advantage or is necessary for Mr. White to come to Washington in this connection.

With respect to your inquiry as to change in Government policies regarding exploration assistance because of the recent reduction in the price for lead, DMEA will continue to enter into exploration contracts for lead on the same basis as heretofore. Our thinking along this line is that we consider the exploration for strategic minerals to be a long-range program for the purpose of discovering ore reserves to replace in part those reserves now being mined in very large quantities, and that fluctuations in the markets for these minerals should not be a governing factor in exploration.

You state in your letter that "We in Arizona feel very much put out because of the small share of exploration loans this state has received, and many are wondering why." We in Washington also have been wondering why there have not been more exploration contracts entered into with operators in Arizona. A review of the contracts executed for projects in Arizona shows that the average amount of money for these contracts is considerably more than the

average for the United States, however, fewer applications have been received from Arizona than from some of the other western states. Possibly these facts may indicate that the mineral deposits of Arizona, being more accessible than in some other areas, have already been explored or that they are under control of operators who are not interested in obtaining government assistance for exploration. Since our principal purpose is to find additional ore reserves, we too are very much interested in knowing why more of the potential mineralized areas in Arizona are not being explored under our program.

With best personal regards,

Sincerely yours,

C. O. Mittendorf (for) 5/29

C. O. Mittendorf
Acting Administrator

FEJohnson/pa
5/27/52

cc: Admin. Reading File
Mails and Files
Mr. Moulds
Field Team, Region IV (2)
FEJohnson

AN ORGANIZATION INTERESTED IN THE PROBLEMS OF THOSE WHO OPERATE SMALL MINING PROPERTIES IN ARIZONA

ARIZONA SMALL MINE OPERATORS ASSOCIATION

OFFICE OF STATE SECRETARY
CHARLES F. WILLIS
508 TITLE AND TRUST BLDG.
PHOENIX, ARIZONA

May 15, 1952

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WICKENBURG
WILLCOX
WINKELMAN
YARNELL
YUMA

C.O. Mittendorf, Acting Administrator
Defense Minerals Exploration Administration,
Washington 25, D.C.

Dear Mr. Mittendorf:

I am wondering if you can give me any information on the status of loan application 1303-X of the Yuma Metals, Inc., Lloyd C. White, 1007 Oxford Street, Berkeley, California. This application was originally made in May 1951 and has been bandied back and forth, with numerous examinations between Denver, Tucson and the mine.

Being recommended by Commodity Office on this E

Rec'd. 5/15

There have been innumerable delays and changes to clarify details. I understand that everything was finally cleared out of Denver several weeks ago and that it is now in Washington. Anything you can do to expedite consideration will be greatly appreciated.

I am also wondering if there will be any change in government policies regarding these exploration loans because of the recent slump in the lead market. These people went ahead in good faith, have already spent a lot of money in getting set up for an exploration loan, and it would be a crime if the current slump has lessened the government's interest in exploration of lead properties. ?

I'm also wondering if there would be any advantage in or the necessity for Mr. White going to Washington to iron out any details of this loan application, which might avoid additional correspondence and consequent delay. No

We in Arizona feel very much put out because of the small share of exploration loans this state has received, and many are wondering why. ?

Thanking you for an early reply, and with kindest personal regards, I am

Very sincerely,

Charles F. Willis

Charles F. Willis
State Secretary

CFW:VSW

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 19 1952

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

May 26, 1952

Memorandum

To: Mr. D. E. Moulds, DMEA

From: Erwin J. Lyons, USGS

Subject: Docket DMA-1303, Yuma Metals, Incorporated.

Yuma Metals, Inc., requested an exploration grant in the amount of $300,000 on a participating basis to explore the Red Cloud and Dives mines and the New North and South Geronimo claims in the Silver mining district, Yuma County, Arizona. The docket was referred to the field team for their appraisal. The field team, after consulting with the applicant and examining the properties, recommends an exploration project, having a total estimated cost of $171,000, for the Red Cloud mine. Exploration of the Dives mine and of the New North and South Geronimo claims is not considered warranted.

The proposed exploration work at the Red Cloud mine consists of 6000 ft. of diamond drilling from the lowest level to investigate the possible downward extension of the vein and 1650 ft. of drifting on several levels to attempt to extend the orebody along its strike and to explore the footwall zone.

Total recorded production from the Red Cloud mine has been 900 tons of lead and 320,000 oz. of silver. Since 1889 the only production has been from reworking of dumps.

In the vicinity of the Red Cloud mine the rocks are pre-Cambrian granite and Tertiary tuffs, andesites, and rhyolites. The deposit occurs in a fault whose hanging wall is tuff and andesite, and whose footwall is granite. The fault strikes N 15° W and dips 35° to 65° east. The vein averages 10 to 30 ft. in width and has been divided into 3 zones: the "hanging wall" zone from which most of the production has come; the "middle" zone which is barren; and the "footwall" zone which has been investigated only to a limited extent, but which holds promise. The last zone is believed to contain more zinc and less lead than the hanging wall zone.

All of the ore above the lowest (500) level is oxidized. The field team believes that there has been little, if any, migration of the metals and that the grade of the primary ore will be comparable to that of the oxidized.

The Neal Mining Company, in 1928, estimated that above the 420 ft. level there were 32,000 tons of ore having a grade of 6.07% Pb and 10.15 oz. Ag. This estimate has been checked by the U. S. Bureau

of Mines and has been accepted by the field team as indicated ore. Additional ore may be present in the footwall zone and below the 500 level and the ore in the footwall zone possibly may average 8-10% Zn.

The present reviewer finds it difficult to justify an exploration program of the size proposed for a submarginal property such as the Red Cloud. The only justification is that there is a possibility of uncovering an ore reserve which would supply a small amount of metal at times of scarcity and high prices. The best possibility for a deposit of minable ore appears to be in the sulfide zone. It is therefore recommended that the drilling to investigate the downward extension of the deposit be approved, and the remainder of the project be denied.

Erwin J. Lyons

Erwin J. Lyons
Geologist

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

May 23, 1952

Memorandum

To: D. E. Moulds, DMEA

From: O. M. Bishop, USBM

Subject: Docket No. DMA-1303X, Yuma Metals, Inc., Yuma County, Arizona.

The final report on this exploration loan by the field team has been received and reviewed by us. The field team recommends consideration of an exploration project costing $170,737 on the Red Cloud claim, the work to consist of 1,400 feet of drifting on the 160, 270, 420, and 500-foot levels; 250 feet of crosscutting on the 160, 270 and 500-foot levels; and 6,000 feet of diamond drilling from two stations in the 500-foot level crosscut. Drifting and crosscutting are estimated at $27.00 per foot of advance and drilling at $6.00 per foot. Other expected expenses include $10,800 for rehabilitating working shaft; $20,000 for erection of camp buildings; $22,575 worth of equipment and supplies.

The field team estimates there are approximately 32,000 tons of ore in the known ore shoots above the 500-foot level. This ore is believed to analyze about 5 to 6 percent lead, and 10 ounces of silver with perhaps 5 to 8 percent zinc. The ore is oxidized, however, and recoveries indicated by ore tests made by Denver Equipment Company, the Arizona Bureau of Mines, and A. L. Poarch showed that most of the zinc remained in the tailings and that about 80 percent of the lead and 60 percent of the silver was recovered. That being the case the field team estimated the smelter net recovery per ton of ore would be $15.18 when lead sells for $0.19 a pound. The field team estimated that costs exclusive of depletion, depreciation and amortization would be $14.18 per ton, leaving a $1.00 margin.

Because this estimated problematical margin becomes a loss at the present price of lead it seems inadvisable to do any exploration in the oxidized zone. We, therefore, recommend denial of the exploration on and above the 500-foot level.

We believe that exploration at depth to check for a primary zone in the lower part of the known ore shoots is sound exploration procedure. Such a program can be undertaken at a reasonable expense and we recommend that the diamond drilling program be approved.

O M Bishop

O. M. Bishop

MINES IN SILVER DISTRICT
YUMA COUNTY

MILL ON COLORADO
HEAD OF MARTINEZ LAKE

Yuma Metals, Inc.

LLOYD C. WHITE, GEN. MGR.

D. L. McDANIEL, PRES.
OTTO MOTEJL, VICE PRES.
CHAIRMAN OF BOARD
LUKE WALKER
SECY. & TREAS.

YUMA, ARIZONA

May 23, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 26 1952

Mr. D. E. Moulds, Chief
Base Metals Division
Defense Minerals Exploration Administration
Washington, 25, D. C.

Dear Mr. Moulds:

Your favor of the 16th instant received, and want to thank you for your promptness and the information.

Am enclosing copy of letter from American Smelting & Refining Company, dated May 22nd, showing $15.88 value of Red Cloud ore, FOB Blaisdell (our shipping point). This is on heads of 6% lead, 10.15 oz silver, and .02 oz. gold. Also I am enclosing copy of their letter of May 5th, showing the statement is based on Denver Equipment Company's concentrates from their ore test No. 1097, which you have in your files.

We have set up our mining costs at $6.50. However, our actual mining costs will not exceed $4.50, we will have no hauling or handling, as we dump ore direct from the mine into mill bins. Our milling costs will be $3.40, hauling Concentrates 25¢ per ton of crude ore. This will give us a net return, each ton of crude ore of $7.73. This is on the average of 460 assays of blocked-out ore; new found ore should be higher in value.

Another thing I would like to bring to your attention. This is one loan that in all probability will be paid back on account of the above net return and the fact that very recently we have bought the Clip flotation mill, which is eleven miles from the Red Cloud Mine.

If our loan application is approved, we will install this mill at the Red Cloud mine, October, 1952, and mill the blocked-out ore as well as the ore we find in the exploration program.

Yours very truly,

Luke Walker

Luke Walker

P.S. Would you please notified me copy to White any progress in this matter

LUKE WALKER
798 HOPE AVE. • PH. 2-1530
SANTA BARBARA, CALIF.

AMERICAN SMELTING AND REFINING COMPANY
SOUTHWESTERN ORE PURCHASING OFFICE
810 VALLEY BANK BUILDING
TUCSON, ARIZONA

May 22, 1952

REED F. WELCH
MANAGER

Mr. Luke Walker, Secy.-Treas.
Yuma Metals, Inc.
c/o Hotel Adams
Phoenix, Arizona

Dear Sir:

In response to your telephone call this morning from Phoenix I show below the per ton outcome in carlots, based on present 15-cent lead price, for concentrates with assays shown below. Your letter to me under date April 30th indicates you expect to produce such concentrates by treating ore from the Red Cloud Mine, Silver Mining District, Yuma County, with head assays: Silver 10.15 ozs., Lead 6%, Gold .02 oz.

	Gold-oz	Silver-oz	Lead-%
Assays-Concts.	0.1328	55.2	43.7

Payments:	Gold .1328 oz. @ $32.3185		$ 4.29
	Silver 95%= 52.44 oz @ .885		46.41
	Lead 90% dry = 759.6 lb.@ .13		98.75
	Total payments		149.45
Deductions:	Base less lead credit	9.78	
	Bullion freight tax	.27	10.05
F.o.b. El Paso Plant			139.40
Less Freight, tax, switch, est.10% H20			12.38
Net per ton concentrates, Blaisdell			127.02
" " " crude ore (ratio 8 to 1)			15.88

Yours very truly,

REED F. WELCH

By ars

Enc.-ex cc

C O P Y

AMERICAN SMELTING & REFINING COMPANY
Southwestern Ore Purchasing Office
810 Valley Bank Building
Tucson, Arizona

May 5, 1952

Mr. Luke Walker, Secy-Treas.
Yuma Metals, Inc.
% San Carlos Hotel
Yuma, Arizona

Dear Sir:

This will acknowledge receipt of your letter of April 30th enclosing data on certain mill tests including Denver Equipment Company Ore Test No. 1097 (1940), of which I have a copy in my file. I return your enclosures herewith.

You ask the outcome on present metal prices for concentrates assaying: Gold .1328 oz; silver 55.2 oz; lead 43.7%. The per ton value in carload lots of such product on today's price of 17 cents per pound would be substantially as shown below.

Payments:	Gold .1328 oz @ $32.3185	$4.29
	Silver 95% - 52.44 oz @ .885	46.41
	Lead 90% dry= 759.6 lb @ .15	113.94
	Total payments	164.64
	Deductions: Base less lead credit $9.78	
	Bullion Ft.Tax .27	10.05
	F.O.B.Smelter	154.59
	Less Freight, tax, switch & est. 10% H20	12.38
	Net per ton concentrates Blaisdell	142.21
	" " " Crude (ratio 8 to 1)	17.77

I trust this will give you the information you are seeking. Please let me know if I can be of further assistance.

Yours very truly,

(Signed) REED F. WELCH

Enclosures
cc: 798 Hope Ave
Santa Barbara, Calif

500 FILE COPY
SURNAME:

Moulds

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

MAY 16 1952

Mr. Luke Walker
San Carlos Hotel
Yuma, Arizona

Re: Docket No. DMEA 1303

Dear Mr. Walker:

This is to inform you, as per your request, that the field team report on your Red Cloud exploration project was received in this office today, and is being processed by this Division.

We are unable to advise you how long it will be until final action is taken on your project, but you may be assured that everything possible is being done to expedite its processing.

Sincerely yours,

D. E. Moulds (mef) cc 5/16

D. E. Moulds, Chief
Base Metals Division
Defense Minerals Exploration
Administration

DEMoulds/mef/hmj
5-16-52
CC to: Adm. Reading File
Docket File Copy
Mr. Moulds
Region IV

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

224 New Customhouse
Denver 2, Colorado

May 7, 1952

Memorandum

To: Acting Secretary to the Operating Committee, Defense Minerals Exploration Administration

From: Field Team, Region IV

Subject: Final Report, DMA Docket 1303X, (Lead-Zinc) Yuma Metals, Inc., Yuma County, Arizona

Enclosed are the original and three copies of the report pertaining to the above application.

The project consists of exploring the Red Cloud vein by diamond drilling, drifting, and crosscutting at a cost of $170,737.

The field examiners recommend that the proposed project be approved and we concur in their recommendation.

W. H. King
W. H. King for
J. H. East, Jr.

A. H. Koschmann
A. H. Koschmann

Enclosures

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 12 1952

F.T. Rpt.

Mining Division
Region IV

May 7, 1952

Memorandum

To: Field Team, Region IV

From: Acting Chief, Mining Division, Region IV

Subject: Final Report, DMA Docket 1303X, Yuma Metals, Inc., (Lead-Zinc) Yuma County, Arizona

Enclosed are the original and 7 copies of the final report on the application of Yuma Metals, Inc. by L. A. Stewart and W. J. Griswold of the Bureau of Mines.

The project consists of drifting, crosscutting and diamond drilling to further explore the Red Cloud vein at a cost of $170,737.

The field examiners recommend that the proposed project be approved and we concur in their recommendations.

W. H. King

W. H. King

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 12 1952

Reviewed by
DMEA OPERATING COMMITTEE
5-14-52
(date)

Mining Division
Date Rec'd.

MAR 17 1952

BUREAU OF MINES
Denver, Colorado

March 11, 1952

Memorandum

To : W. H. King, Denver, Colorado

From : Chief, Arizona-New Mexico Branch

Subject : Final Report, DMA Docket 1303X, Yuma Metals, Inc., Yuma County, Ariz.

Enclosed are original and 7 copies of the section on Summary, Conclusions and Recommendations by L. A. Stewart and W. T. Griswold of the Bureau of Mines and Carl Trischka of the Geological Survey , and the section on Engineering by Stewart and Griswold, for the above report. A separate section on Geology will be submitted by the Geological Survey.

Although this deposit seems to be marginal at the present time, the examiners believe that the loan should be approved, provided lead is badly needed. All known zinc occurs in the oxidized portion of the deposit so cannot be recovered commercially at the present time.

This report, although somewhat voluminous, has my approval.

Brochure is enclosed.

WRS

Walter R. Storms

CC: W. H. King (7)
C. A. Anderson
DMA-1303X
DF

WRStorms:als

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.
200 New Customhouse
Denver 2, Colorado

April 28, 1952

Memorandum

To: DMEA Field Team, Region IV

From: Ogden Tweto

Subject: DMA Docket 1503X, Yuma Metals Inc., (Red Cloud and Dives Mines, New North and South Geronimo Claims), Yuma County, Arizona (Lead-Zinc)

Enclosed are the original and 8 copies of the geologic report by Carl Trischka, Consultant for the U. S. Geological Survey, covering the above docket. It has been recommended that a loan be approved for the Red Cloud Mine, but it has been recommended that the loan for the other areas be denied.

Ogden Tweto

Ogden Tweto, Alternate
Supervising Geologist
Colorado-Wyoming

Enclosures (9)

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

April 23, 1952

Memorandum

To: A. H. Koschmann, Denver, Colorado

From: A. F. Shride, Tucson, Arizona

Subject: Geologic Report, DMA 1303X, Yuma Metals Inc. (Red Cloud and Dives Mines, New North and South Geronimo Claims), Yuma County, Arizona (Lead-Zinc)

Enclosed are the original and 8 copies of the above report by Carl Trischka, Consultant for the Geological Survey.

This report recommends an exploration project for the Red Cloud Mine, but recommends that exploration for the other areas be denied. The recommendation for the Red Cloud mine area assumes that the carbonate ores expectable on exploration can be treated commercially.

A. F. Shride
Acting District Supervisor
Arizona-New Mexico

Enclosures 9

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMA-1303X, Yuma Metals, Inc.

Yuma County, Ariz.

(Lead-Zinc)

L. A. Stewart, Mining Engineer
and
W. T. Griswold, Mining Engineer
U. S. Bureau of Mines

Carl Trischka, Geologist
U. S. Geological Survey

March 1952

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By Lincoln A. Stewart[1], Wm. T. Griswold[1], and Carl Trischka[2]

An application was submitted early in 1951 to the Defense Minerals Administration by Yuma Metals, Inc. for a loan to explore part of its property. This company owns, or has optioned, a total of 1 patented and 60 unpatented mining claims, and 1 millsite. These claims lie more or less contiguously along the ramifications of 3 vein systems in the Silver (Eureka) mining district, about 28 air miles north of Yuma, Yuma County, Ariz.

The original docket, DMA-1303X, requesting aid in the amount of $300,000, was received at the Tucson, Ariz., office of the Defense Minerals Administration on June 21, 1951. It was too general in scope, the description of the proposed work was inadequate, and there was a discrepancy in the application concerning surface and underground drilling. Charle s A. Anderson, geologist, Geological Survey, and Lincoln A. Stewart, mining engineer, Bureau of Mines, studied the docket and wrote a memorandum report dated June 26, 1951, recommending that a more detailed plan of exploration be made before any action should be taken by the Defense Minerals Administration.

An amended application, dated September 12, 1951, at an estimated cost of $200,000 was received at the Tucson office November 8, 1951. The proposed exploration and costs were very definite for this revised program. The Chairman of the Coordinating Committee of DMA questioned

---

1/ Mining Engineer, Bureau of Mines, Tucson, Ariz.
2/ Geologist, U. S. Geological Survey

the apparently excessive cost of certain items. Luke Walker, one of the owners of Yuma Metals, Inc., came to Tucson in November 1951 to discuss the application. He was willing to alter some of the costs in question, but expressed a desire to increase the amount of drilling. During the period from December 4 through 7, 1951, the property was examined by Lincoln A. Stewart and William T. Griswold of the Bureau of Mines, and Carl Trischka of the Geological Survey.

Several mines in the Silver district were active from 1879 to 1889, producing 1,900,000 pounds of lead and 1,370,000 ounces of silver. No ore has been produced by mining since that time, but reworking of the old dumps at various times up to 1949 has brought the total production to 2,330,000 pounds of lead and 1,560,000 ounces of silver. Of this total, the Red Cloud mine is credited with a production of 1,800,000 pounds of lead and 320,000 ounces of silver, for a total value of $430,000.

The oldest rocks in the district are schists, probably of pre-Cambrian age. Intruding the schists are irregular masses of granite. Unconformably overlying the schist and granite is a thick series of volcanic flows, breccias, and tuffs, probably of Tertiary age. The Red Cloud vein lies in a strong, northerly trending, eastward dipping, fault zone between a granite footwall and a tuff hanging wall.

On the surface of the Red Cloud claim a large open cut is found, 400 feet in length, with a maximum width of 40 feet. The material from this excavation was taken out as lead-silver ore from the outcrop

of the Red Cloud vein. The ore of the outcrop was followed downward for approximately 400 feet, in several ore shoots in the vein. The vein has a strike of N. 15° W. and dips on an average of 40° to the east.

The material in the vein in general, can be considered as occurring in three zones with a width of from 10 to 30 feet. In the hanging wall zone, which is 3 to 6 feet wide, a silicious, somewhat iron-stained, rather porous material is found, containing lead and zinc carbonates, and some banded fluorite and wulfenite. Most of the mining has been done in this zone and most of the reported ore reserves are located here. The middle zone is from 8 to 21 feet wide and consists almost entirely of crystalline calcite which is slightly stained by manganese. No ore mineralization has been found here. The footwall zone,7 to 10 feet wide, has been explored only to a limited extent. Where known, it contains more zinc than lead than is found in the hanging wall zone. The silicious, somewhat brecciated rocks are vuggy and porous. In them fluorite, barite and some wulfenite are found.

From the appearance of the vein on the 500, or bottom level, it is judged to be still as strong, though perhaps not as well mineralized, as above the level. Other than on this bottom level, no work has been done in the mine since 1900.

There are no buildings or facilities of any kind on the surface. Except for relatively little clean-up, the main parts of the mine and stopes are accessible.

The final amended application requests rehabilitation of the shaft, 1,650 feet of drifting on various levels to explore extensions of the vein on both sides of the mine, and 6,000 feet of core drilling from the bottom level to explore continuation of the vein at depth. The total cost of the project is estimated at $171,000, to be completed within 1 year from starting date.

It is concluded that core-drilling of the vein below the 500-foot level and drifting from the margins of the mine might substantiate the inference of approximately 200,000 tons of ore. The grade of the ore probably would be on the order of 10 ounces of silver a ton, 6 percent lead, and 8 percent zinc. At the present state of metallurgical knowledge, the zine in the oxide zone is not recoverable; it will remain in the tailings and constitute a future source of that metal whe n a method has been perfected for its recovery.

Rough calculations indicate that at present market prices, the net value of a ton of ore of this grade is about $15.00. This gives a profit of approximately $1.00 a ton. Although a deposit of this grade is marginal at present market prices, it is thought that it is to the advantage of Government economy to know where marginal lead-zinc deposits of this magnitude are located and the tonnages that are available.

It is possible that the primary ore zone may be encountered at depth, in which case the indicated profit of an ore of comparable grade would be substantially increased.

It is recommended that this exploration project be considered at the Washington level. The owners of Yuma Metals, Inc. have signified that they are able and willing to pay 50 percent of the estimated $171,000 cost of the project.

DMA-1303X, YUMA METALS, INC.
YUMA COUNTY, ARIZONA
(LEAD-ZINC)

Engineering Report

By Lincoln A. Stewart,
Mining Engineer
and
W. T. Griswold,
Mining Engineer
U. S. Bureau of Mines

March 1952

DMA-1303X, YUMA METALS, INC.
YUMA COUNTY, ARIZONA
(LEAD-ZINC)

CONTENTS

Engineering report	Page
Introduction	1
Ownership and extent	2
Location, topography, and physical features	3
History and production	3
Description of the deposit	5
Physical condition of the mine	7
Present status	8
Previous diamond drilling	8
Sampling	10
Minable ore reserves	11
Proposed exploration project	11
Discussion of the proposals	22
Metallurgical tests	28
Conclusions	34
Recommendations	37

ILLUSTRATIONS

Figure		Following Page
1	Location map	3
2	Assay section map	6
3	Longitudinal section on vein, showing proposed drifting	16
4	Plan showing proposed drifting and drilling	16
5	Transverse section showing proposed drilling	17
6	Geologic and claim map (in geologic section)	

INTRODUCTION

In May 1951 an application was submitted to the Defense Minerals Administration for a $300,000 exploratory loan by Yuma Metals, Inc., Yuma County, Ariz. The docket was received at the Tucson, Ariz. office of the DMA on June 21, 1951, with copy of a letter from the Coordinating Committee stating "The description of the exact work proposed is inadequate and there is an apparent discrepancy - -", concerning surface and underground drilling. No data were given for the surface drilling other than that it "will be done on favorable outcrops on the following claims--" (14 claims were named).

After reviewing the docket, Chas. A. Anderson[1/] and Lincoln A. Stewart[2/] wrote a memorandum report suggesting that the applicant submit a more detailed plan of exploration. It was recommended that if necessary, a geologic study of the property be made with Government participation in the cost.

According to correspondence included in the brochure, the applicant filed an amended application dated August 25, 1951, for a $100,000 loan. After further correspondence between the applicant and the Lead-Zinc Branch of DMA, another amended application was made for the sum of $200,000 that defined the proposed work and costs in detail. This docket was received at Tucson, Nov. 8, 1951 with copy of a letter from the Coordinating Committee Chairman stating "Certain items of proposed expenses - - - appear excessive for an exploration project. If the

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1/ District Supervisor, U. S. Geological Survey, Prescott, Ariz.
2/ Mining Engineer, U. S. Bureau of Mines, Tucson, Arizona

geologic feasibility of the project is approved, certain of these cost items should be reviewed critically to see if they are essential to an exploration project".

A representative of the applicant came to the Tucson office on November 15 and these phases were discussed with him. He was willing to alter some of the costs in question, but expressed a desire for an additional amount of drilling on one of the outlying claims. Field investigation was made during the period of December 4 to 8, 1951 by Lincoln A. Stewart[3/], William T. Griswold[3/], and Carl Trischka, in company with Luke Walker.

OWNERSHIP AND EXTENT

Yuma Metals, Inc., owns or controls 61 mining claims in the Silver district, one of which, the Red Cloud, is patented. The claims lie in parts of 10 sections along the ramifications of 3 vein systems. The claims along each vein system are not contiguous in their entirety. The company also owns a millsite near the Colorado River at the head-waters of the Imperial Reservoir, about 10 miles southeast of the claims.

The following named men are the owners of the entire capital stock of the Yuma Metals, Inc.:

Don S. McDaniel, president, Oregon City, Ore.

Otto Motejl, vice-president, Sandy, Ore.

Luke Walker, secretary-treasurer, Santa Barbara, Calif.

Lloyd C. White, general manager, Berkeley, Calif.

3/ Mining Engineer, Bureau of Mines, Tucson, Ariz.
4/ Geologist, U. S. Geological Survey

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

The applicant's numerous claims lie in the Silver mining district of Yuma County, Ariz. The district is in T. 3 and 4 S., R. 22 and 23 W., with the Colorado River bording the south and west sides (Fig. 1). The Red Cloud claim is in the south central part of the district, in secs. 2 and 11, T. 4 S., R. 23 W., about 27 air miles due north of Yuma, or 57 miles by road.

This area is in the southern part of the Trigo Mountains. Northward trending low ridges that are sharply eroded, rise to a maximum of 1,600 feet above sea level, or about 1,000 feet above the bottom of intervening, dissected, flat-bottomed valleys. The altitude of the Red Cloud shaft is approximately 750 feet.

The mountains support very little vegetation. On the alluvial slopes, scattered creosote bushes, ocotillo and palo verde grow to a height of a few feet.

According to Smith,[5/] the extremes of low and high temperature on record for southern Yuma County are 22° and 119° F. From October to April, inclusive, the climate tends to be very pleasant.

HISTORY AND PRODUCTION

Because of the fact that the Silver mining district lies near the Colorado River, a navigable stream in the early days, prospecting was carried on in this region as early as 1860, when the first discoveries were made. Soon after the district's discovery it is said to have been

5/ Smith, H. V., Climate of Ariz.; Univ. of Ariz. Agri. Exp. Sta. Bull. 197, 1945, Table 2, page 47.

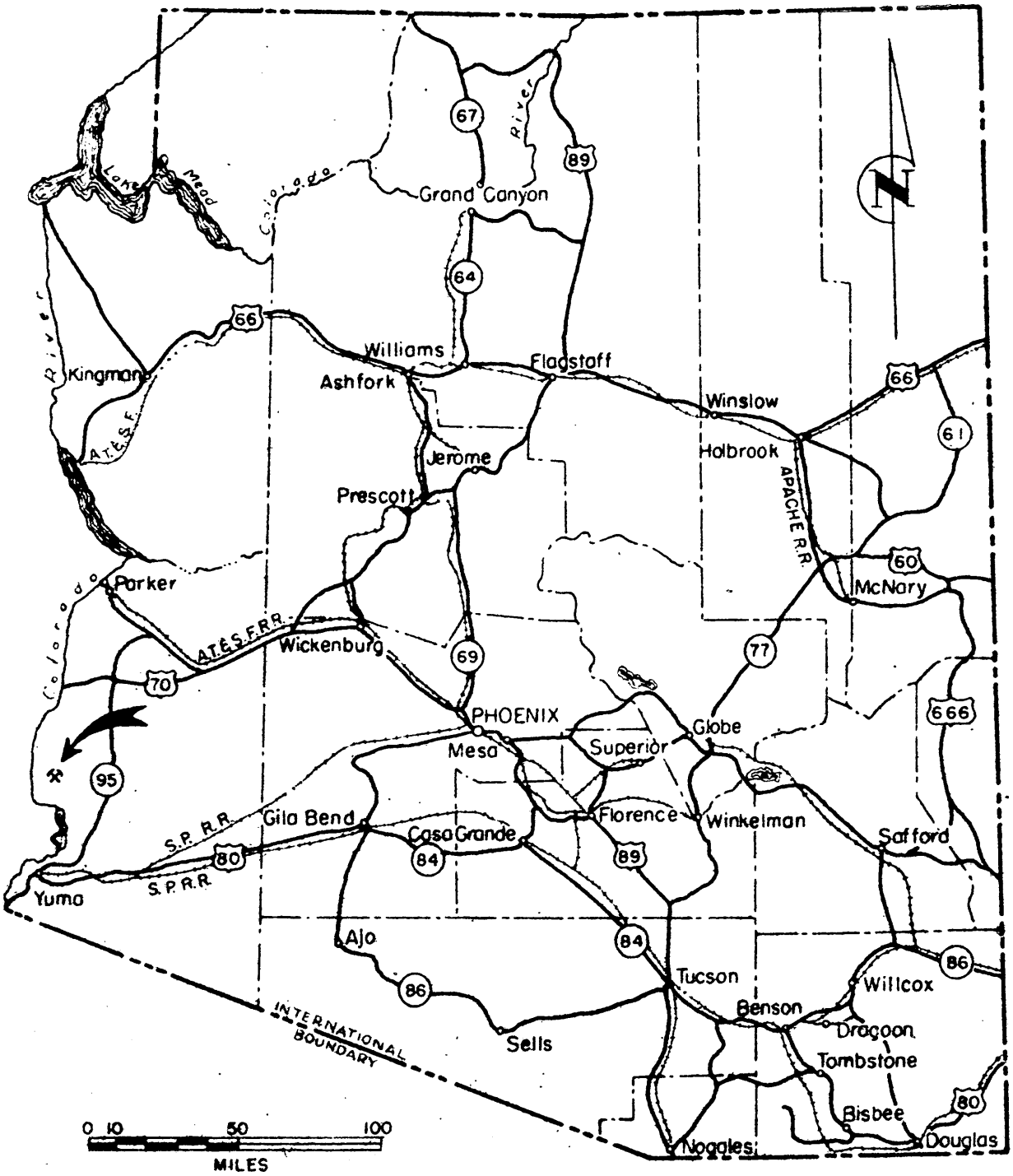

FIG. 1 - LOCATION MAP
RED CLOUD MINE
YUMA COUNTY, ARIZ.
DMA 1303X

abandoned and remained idle until about 1879, when many of the abandoned claims were relocated and the district was organized.

About 1880 the town of Silent was established near the mine; later the name was changed to Pacific City. A small smelter was built but it operated only intermittently for about 3 years. Virtually all the ore was hand-sorted, freighted to the Colorado River, shipped by river boats to the Gulf of California, and re-shipped to San Francisco for treatment. By 1884 the Silver district was the foremost in Yuma County.

The Red Cloud claim was patented in 1885. In 1889, a dry-concentrator was erected to treat the dump ore but the venture did not prove successful. After 1899, the mine was virtually idle until 1917 when the Red Cloud Consolidated Mines Co. acquired it and installed a small dry-concentrator. This mill burned down before making more than a few test runs.

In 1925, the E. R. Boericke Co. obtained a short lease on the claim, installed surface equipment, ran drifts from the bottom of the shaft, and diamond-drilled 2 holes from one of these drifts. The option was relinquished the following year.

In 1928, the Neal Mining Co. acquired control of the Red Cloud and 45 other claims in the district and carried on an extensive sampling campaign.

Penn Metals, Inc. took a lease-option in 1940, built a 200-ton flotation plant, ran several months on dump material, and shut down in September 1941.

The property then was acquired by George Holmes and Walter D. Riley, who dismantled the mill. In 1948 these men diamond-drilled one hole from the bottom level crosscut. Early in 1950 Holmes and Riley sold the Red Cloud claim to the present owners.

According to a tabulation by the Arizo na Bureau of Mines, the Silver District has produced 2,329,059 pounds of lead and 1,559,201 ounces of silver for a total value of $1,755,433 during the period of 1879 through 1949.[6/]

Of this amount, the Red Cloud mine has produced approximately 1,800,000 pounds of lead and 320,000 ounces of silver for a total of $430,000. Of this amount, approximately 30,000 ounces of silver and 400,000 pounds of lead were recovered from milling dump material.

DESCRIPTION OF THE DEPOSIT

The Red Cloud vein occurs within a fault zone that separates the volcanic rocks on the east from granite on the west. The vein is irregular in dip and strike. At the mine the strike is N. 15° W. and the dip, as shown by the incline under the hanging wall, varies irregularly from 30° to 70° east, with an average of about 50°. In this report the mine levels are identified by the distance from surface on the dip of the vein.

The vein filling is mainly calcitic material. At the surface the total width is 35 to 40 feet. At about the 100-foot level, a crosscut shows a width of 20 feet between the walls. In places on the

6/ Wilson, Eldred D., Arizona Zinc and Lead Deposits, Part II; Ariz. Bureau of Mines Bull., 158, 1951, p. 88.

270-foot level the distance between the hanging and footwall is only 8 feet. Below this level the vein widens again, as a crosscut on the 500-foot level shows a width of about 30 feet.

The gangue material is predominantly coarsely crystalline calcite, with lesser quantities of fluorite and barite. The ore minerals are oxides of lead, zinc, and silver, with small amounts of wulfenite and vanadinite. Small unaltered, residual galena nodules can be found throughout the mine workings. Only traces of gold have been found in mine samples.

No mining has been done since 1900. At that time only the richer portion of the vein was taken near or against the hanging wall, 3 to 6 feet wide. Part of the vein adjacent to the footwall contains up to 13 percent zinc with low lead values. The middle portion of the vein appears to be low in lead and silver values. An inspection of the section map (figure 2) suggests that there were 2 major ore shoots, and other minor shoots. The assay values indicated along the borders of the pillars show that much of these areas are of ore grade at the present time.

It must be borne in mind that the Red Cloud was one of the earliest locations in the district, and that ore production was confined to the period of 20 years prior to 1899. Production figures indicate that the average market prices during this time was 4½ cents for lead and $1.05 for silver.

Except for the drifts on the 500-foot level, all work was done by hand drilling, consequently only the richer portion of the vein near or

against the hanging wall was mined. Much of the ore was hand-sorted and screened underground. Thus, there is considerable backfill in the mine that probably would be of ore grade today.

Previous to Bureau sampling in 1950, there was no indication that zinc could be considered as one of the major constituents of the ore. Ten Bureau samples of the hanging wall portion of the vein showed that about 9 percent zinc could be expected in the ore. At least part of the footwall portion of the vein was exposed in 2 crosscuts on the 500-foot level in which sampling showed 10 feet of 11.5 and 7 feet of 13.3 percent zinc. Neither crosscut was extended far enough to prove that the granite footwall had been reached. A sample taken in the footwall portion of the vein at the surface assayed 5 percent zinc. The only crosscut to the footwall in the upper portion of the mine is at about the 110-foot level; this showed less than 2 percent zinc. It is the opinion of the examiners that appreciable zinc mineralization is present in the footwall portion of the vein over most of the mine, and that the 110-foot crosscut is an exception.

PHYSICAL CONDITION OF THE MINE

Notwithstanding the fact that no mining has been done in the stoped portions of the mine since 1900, the ground has stood remarkably well. The pillars are intact, timbers and pole lagging are in fair condition and except near the surface, the stopes are generally accessible. The air is good in the workings above the 270-foot level. There is virtually no circulation of air in the shaft or workings

below that level. Water stands in the shaft about 3 feet below the 500-foot level; it is extremely humid on this level, and hot even at the shaft. At the ends of the drifts and crosscuts the damp heat is almost unbearable, although the air does not seem to be bad.

When a Bureau engineer 7/ examined this level in April 1950, the hanging wall crosscut was accessible for its full length of 335 feet. During the current investigation it was found that access to the end of the crosscut was barred by a cave-in about 120 feet from the shaft.

The drift south on the 420-foot level has been backfilled so the face is not visible. During a prior cloudburst, surface water has washed debris into the south end of the 270-foot level so the face now is inaccessible.

PRESENT STATUS

The Red Cloud and adjacent properties have been idle for years. All equipment and buildings long have since been removed. The applicant bought a millsite 10 miles south of the mine. On this claim there is a small, poorly-arranged gravity mill, and 2 frame buildings. One building is a dwelling, the other a fairly well equipped assay laboratory. A tent house, and house trailer serve as headquarters for occasional visits of company personnel.

PREVIOUS DIAMOND DRILLING

About 1925, the E. R. Boeriche Co. (Primos Chemical Co.) took a lease-option on the property, drifted on the vein at the 500-foot level northward 220 feet and southward 160 feet. A 335-foot crosscut

7/ Stewart, L. A.

was run eastward into the hanging wall at the end of which a drilling station was cut. The standpipes of 2 diamond drill holes indicate that one hole was drilled vertically and the second was drilled downward at minus 53°, pointed S. 25° W.

Walter Riley, who later took over the property, stated that in 1926 a dispute arose between Boeriche and the owners of Red Cloud concerning a payment on the option. The company ceased drilling, abandoned their lease, destroyed the drill cores, and refused to divulge their findings. In May 1950, the Tucson office of the Bureau wrote a letter to the Primos company asking for information about this drilling. The letter remained unanswered. In 1951, Yuma Metals, Inc. secured the information that the vertical hole was 646 feet deep, and that the angle hole had been drilled to a depth of only 285 feet. Neither hole had encountered the vein.

Riley and Holmes, owners of the Red Cloud in 1948, diamond-drilled one hole from the station at the end of the crosscut. It had a bearing of N. 67° W. at minus 55°, drilled to a depth of 300 feet. A few narrow calcite stringers were encountered at less than 200 feet below the collar, but it is evident that the Red Cloud vein was not reached. No hoisting facilities were in place at the time of this drilling. Material from a cave-in was piled along the main north and south drifts of this level.

Yuma Metals, Inc., acquired a small Longyear Jr. surface diamond drill machine early in 1951. A hole was drilled on the South Geronimo claim without benefit of a survey to determine the objective, with

inconclusive results. One short hole was drilled into the footwall granite near the Red Cloud shaft. A second hole was started to prospect the vein 500 feet south of the shaft. Before intersecting the vein, the hole caved, the bit was lost, and work was suspended.

SAMPLING

The only available map of the mine is one made by B. W. W. McDougall, dated April 10, 1918. It is an assay section on the strike and dip of the vein and indicates thorough and systematic sampling. Only values of lead and silver are shown. According to Holt, 8/ "Some 460 assays show the ore to average around 9 ounces silver per ton and 5 percent lead, and a fair showing of wulfenite and vanadinite".

According to a map furnished with the application, the Neal Mining Co. in January to March 1928 check-sampled McDougall's work to the extent of 75 samples and found an average discrepancy of only minus 0.61 percent lead and minus 0.41 ounces silver in the samples checked.

In April 1950, Bureau engineers cut a total of 28 samples in the mine, only 9 of which could serve as a rough check on the assay values shown on the map. In general, the Bureau samples showed a little less lead and a little more silver than McDougall's samples.

No samples of the Red Cloud were taken during the current investigation.

8/ Excerpt from a report by Elgin Bryce Holt (deceased) to Penn Metals, Inc., dated Jan. 20, 1942.

MINABLE ORE RESERVES

The Red Cloud was mined in the 1880's when only the higher grades could stand the shipment charges. The then marginal ore was left in pillars and in the stope floors. The broken ore was hand-sorted and screened underground to segregate the high-grade that was taken out. The reject was left in the stopes. Much or all of these rejects is undoubtedly of grade equal to that left in the pillars.

The limited Bureau investigation does not supply sufficient data to calculate ore reserves from first-hand information. However, by using information based on McDougall's map a reasonable estimate can be made. The ore reserves have been calculated as indicated rather than measured and are presented in the Geologic section by the Geological Survey as totaling 31,600 tons.

PROPOSED EXPLORATION PROGRAM

The amended application of September 12, 1951 was detailed for a $200,000 exploration project. Costs of buildings, automotive equipment, and some other items appeared extravagant. These costs were discussed with Walker at Tucson before the examination was made. He agreed that some of these costs could be cut, but wanted to increase drilling footage by 7,000 feet. After preliminarily paring numerous costs, deleting some equipment, adding the extra proposed drilling, and increasing drifting cost estimates that definitely were too low, the final total was approximately the same.

When the property was examined, it was immediately apparent that drilling of the 2 outlying claims was not justified and that any

recommendation for work should be confined only to the Red Cloud claim. Consequently the application was further revised by discussion in the field, limiting proposed work to the Red Cloud mine. Details of this revision appear in the report following a discussion of the reasons for rejection of proposed drilling on the New Dives and New North Geronimo claim.

New Dives Claim

Six holes for an estimated total of 2,000 feet were requested to test the vein to an inclined depth of 600 feet. Walker, in a consultation at the Tucson of fice on November 15, 1951, expressed a desire for additional drilling to a total maximum of 9,000 feet in 20 holes that would explore the vein to an inclined depth of 1,000 feet.

This claim had been investigated in April 1950 by Bureau engineers. It again was examined during the current investigation.

This prospect is 1.8 miles by road northeast of Red Cloud, on a vein system about a mile east of and paralleling the Red Cloud fault. The road is in very poor condition, traversable only by jeep. The main workings on the New Dives claim appear to be on a pocket or chimney of ore formed at the junction of the main fault and a shorter branch fault. In the early days a cut had been opened on the side of the hill from the floor of which a 38-foot shaft was sunk. At about 25 feet below the collar some workings extend from the shaft. As the collar was covered, these could not be investigated. North from the open cut an adit extends into the hill as a 2-pronged drift

following each fracture zone. A 5-foot sample at the junction across the east prong assayed 0.12 percent lead, 0.85 percent zinc and 3.5 ounces of silver. A 6-foot sample across the west prong assayed 17.1 percent lead, 4.0 percent zinc and 6.3 ounces of silver. The face of each drift appeared to be barren of values. An 8-foot adit south from the cut was virtually unmineralized.

On the surface the mineralized zone could be traced northward for only a few feet. Southward the vein likewise narrowed, showing only as numerous veinlets and small zones of discoloration. Even these indications disappeared in a few hundred feet and there was no evidence of a fracture across a precipitous wash. On the next claim south (New Dives No. 2) along the same general strike line, traces of a fracture zone were present. The only mineralization seen on the dump of a 38-foot shaft was some barite and a little fluorite.

It is concluded that mineralization of ore grade is confined to a small lens or chimney, and that the minable tonnage is too small to warrant extensive drilling.

New North Geronimo Claim

The application requested that 6 holes for a total of 2,000 feet be drilled to explore the vein to an inclined depth of 600 feet. This claim is about 1½ road miles north of the Red Cloud and is on the same fault system. It is in relatively flat country near a northward-trending wash. The fault-zone appears to be 10 to 15 feet wide where it crops out of a desert wash. An inaccessible shaft,

100 feet south of the north end line, seems to be the only work on this claim.

There was an accessible shaft on the adjoining Hardscrabble claim, about 200 feet north of the previously mentioned shaft. Although the Hardscrabble claim is not owned by the applicant, the writers were able to go into the shaft and examine the workings. The shaft was sunk vertically 32 feet to intersect the easterly dipping fault zone, where a short level was driven northward in calcitic material. Near the hanging wall a 6-inch zone of more or less oxidized material contained small wulfenite and vanadinite crystals around vugs. From this level the shaft follows the hanging wall on a 40° incline for an additional 30 feet where a station was cut. A thickness of 11 feet of calcite was exposed at this place, but the footwall had not been reached. Mineralization was very weak on this level, consisting of scattered whorls of fluorite, some silica and a few vanadinite and wulfenite crystals.

Relative to the North Geronimo claim, Wilson states[9/] "(it) is on rhyolite tuffs and andesitic flows, cut by a northward-trending fault zone that dips 35° E. An irregular vein, up to a few feet in maximum width, occurs within this fault zone. Near the northern end of the claim, it has been prospected by an 80-foot shaft with two short drifts on the 25-foot level. These workings show the vein to consist of hematite and limonite together with finely crystalline

9/ Wilson, Eldred D., Geology and mineral deposits of southern Yuma County, Ariz. Ariz. Bur. of Mines Bull. 134, 1933, pp. 64-65

fluorite which is coated with vuggy manganiferous calcite and coarsely crystalline quartz. The vugs contain abundant crystals of wulfenite and vanadinite. A few streaks and bunches of galena, partly altered to anglesite, cerrusite, and yellow oxide, occur near the footwall".

The examiners concluded that the mineralized showings of this area did not justify a drilling program.

Red Cloud Claim

As amended in the field, with the approval of the applicant, the proposed work on the Red Cloud claim is detailed below, itemized according to form MF-103.

Item 3 (a) Describe fully the proposed work and give the total cost of the project.

Construct camp and mine buildings.

Rehabilitate headframe, 200-ft. vertical shaft, and connecting 250-ft. inclined shaft, to make accessible the workings of the mine for the following exploratory work:

Maximum of 6,000 feet of diamond drill holes from the hanging wall crosscut on the 500-ft. level, to explore the vein below this bottom level;

Maximum of 1,650 feet of drifting on various levels of the mine to explore extensions of the vein on both sides of the mine.

The total cost of this exploratory work is estimated at $171,000.

Item 3 (b) State the time required to start the project and to complete it.

The work can be started 30 days after notification to proceed and will be completed within 1 year after starting date.

Drifting

Exploratory drifting to be done, location, and footage is as follows (see figures 3 and 4):

Drifts		Estimated footage
160-ft. level	North from stope face	150
270-ft. level	North from end of drift	50
270-ft. level	South from end of drift	200
420-ft. level	South from shaft	300
500-ft. level	North from end of drift	200
500-ft. level	South from end of drift	500

Crosscuts

Drive crosscuts through the vein to the footwall as needed, to determine thickness and value:

500-ft. level	100
270-ft. level	100
160-ft. level	50
Total drifting and crosscutting	1,650

Time required at average advance of 4 ft. per shift, 1,650 divided by 8 or 206 days (working 2 shifts a day).

Calculation of direct cost of drifting:

Work to be conducted 6 days per week.

Wages based on average days pay including overtime.

Assume 25 working days per month, 2 shifts per day, and 4 feet advance per shift.

Labor	Per shift	Per foot
1 miner	$16.25	
1 mucker	13.00	
1 top lander	14.00	
½ hoist-compressor man, 360 ÷ 50	7.20	

Labor (Con't.)	Per shift	Per foot
½ assayer-sampler, 350÷(50 x 2)	$ 3.50	
Payroll taxes	8.10	
	$ 62.05	$15.51
½ compressor rental, 125 ÷ (2 x 50)	1.25	.31
½ Diesel fuel, 4.00 ÷ 2	2.00	.50
Explosives		2.50
Mine, track, splice bars, bolts, spikes		1.00
Ties		.25
Pipe, air and water		.43
Pipe, ventilating		.90
Drill steel and bits		.55
Air & water hose, fittings, repair parts, etc.		.60
		$22.55
Contingency		4.45
Cost per foot		$27.00

Diamond Drilling

Exploratory diamond drilling to be done to cut the vein in various planes below the 500-ft. level (see figs. 4 and 5).

	Estimated footage
From a station 100 ft. east of shaft:	
1 hole inclined at 60° at right angles to vein	150
2 holes, fanned 45° right and left at ±55°	350
1 hole vertical	250
2 holes, fanned 45° right and left at ±55°	700
From station at end of crosscut:	
1 hole inclined at 70° at right angles to vein	450
1 hole pointing southwest at ±50°	550
Deepen Riley hole, if possible	150
1 hole, vertical (to duplicate Primos hole)	800
2 holes, fanned right and left if above hole is successful	2,000
	5,400
Add for contingency	600
Total	6,000

Calculated cost of diamond drilling, 6,000 feet:

Assume 15 ft. advance/shift. 6,000 ÷ 15 = 400 days @ 1 shift/day

Work 2 shifts per day = 200 days

Work 25 days per month. 200 ÷ 25 = 8 months to complete

Drillers ave. daily (Inc. overtime) $20.30 x 25 = $507.50/mo.

Helpers " " " " 13.00 x 25 = 325.00/mo.

		Cost for 8 months
Rental of drill @ $425/mo.		$3,400.00
Labor 2 drillers @$507.50	$8,120	
2 helpers @ $325.00	5,200	
½ of 2 hoist-compressor men @ $360/mo	2,880	
½ of Assayer-sampler @ $350/mo	1,400	
	17,600	
Payroll taxes 15%	2,640 ...	$20,240.00
Core boxes & splitter		400.00
Replacement parts, bits, casing, cement, etc.		5,000.00
½ Diesel fuel & oil for compressor		800.00
½ Rental of compressor, $\frac{125}{2}$ x 8		500.00
Contingency (18.6%)		5,660.00
		$36,000.00
Cost per foot		$6.00/foot

Item 5. Rehabilitation of working shaft (includes labor).

Install footings and repair headframe	$1,000	
Timber and install guides in 200-ft. vertical shaft @ $25/ft.	5,000	
Repair timbers, ladders, and skidway in 250-ft. inclined shaft @ $14/ft.	3,500	
Recondition and enlarge 250-ft. level station	250	
Retimber 500-ft. shaft section	250	
		$10,000
Install 300 feet of 3-inch airline in shaft		500
Move assay office from river camp to mine site		300
Total		$10,800

Item 6. Construct light frame buildings (includes labor).

Combination boarding and bunk house	$9,000
Combination office and warehouse	3,600
Furnishings, plumbing, etc., for above 2 buildings	5,000
Compressor and generator shed	1,800
Hoist house	600
	$20,000

Item 7 (a). Operating equipment to be rented.

Underground diamond drill machine, $425/mo [10/]

Item 7 (b). To be purchased.

40 H.P. electric hoist	$ 5,000
Bucket, cable and crosshead	500
Mine pump and pipe installation in shaft	1,600
Telephones, hoist house to mine levels	275
Ventilating fan with motor	500
60-KW Diesel generator (2nd-hand) installed	4,500
Diesel oil storage tank, installed	1,500
Water storage tank, installed	1,100
Arc welder and accessories	600
2 jackhammer-type machines and pneumatic pushers	1,000
Bit grinder and spare grinding wheel	400
Miscellaneous small tools, hardware & repair parts	5,000
3 mine cars	600

The following items were calculated in cost per foot of drifting, or job work:

Mine rail, plates, bolts, spikes	$1,600	
Drill steel with attached bits	900	
Ventilating pipe and tubing	1,500	
Water and air pipe 2 in, 1 in., & 3/4 in.	700	
Mine timber & ties	700	
Air & water hose, couplings, oil, repair parts, etc.	1,000	
Total to be purchased		$22,575

10/ Calculated in cost per foot of drilling

Item 7 (c). To be furnished by applicant.

	Monthly depreciation
Chevrolet truck, 4 x 4, equipped with boom and hoist	$ 100
Army jeep	50
Compressor, Sullivan 310 cfm portable, Diesel powered, $125 11/	---
Depreciation for 12 months	$1,800

Item 8. Schedule of labor.

	Per day		
	Base Pay	Ave. with overtime	
2 Miners	$15.00	$16.25	12/
2 Muckers	12.00	13.00	12/
2 Diamond drillers	18.75	20.30	12/
2 Diamond driller helpers	12.00	13.00	12/
2 Top landers	13.00	14.00	12/
1 Surface utility man	14.00	15.15	
1 general surface laborer	12.00	13.00	

	Per month	
1 Cook	$300	
1 Truck driver-mechanic	360	
2 Hoist-compressor men	360	12/
1 Assayer-sampler	350	12/
1 Part time bookkeeper	100	
1 Engineer-manager	600	

Item 9. Detailed cost of supplies, etc.

Assay supplies, reagents, etc.	$2,000
Road repairs Rental of dozer and necessary hand labor	2,000
Gas, Diesel fuel, repair parts, etc., for equipment not used in cost per foot basis	5,000
Recondition and rehabilitate mine levels, exclusive of shaft work	1,500
	$10,500

11/ Calculated in cost per foot of drifting & drilling.
12/ Calculated in cost per foot of drifting, drilling, or job.

Summary of estimated costs.

Construct mine and camp buildings	$20,000	incl.	labor
Rehabilitate shaft	10,000	"	"
Move assay office	300	"	"
Purchase and install 3-inch air line	500	"	"
Drifting	45,000	"	"
Drilling 6000'	36,000	"	"
Road repairs	2,000	"	"
Clean out mine levels	1,500	"	"
Purchase equipment	22,575	"	"
Assay supplies and reagents	2,000	"	"
Gas, Diesel fuel, oil, repair parts	5,000	"	"
Rental (depreciation)	~~1,800~~	"	"

Supervision $600/mo x 12	$7,200	
Cook, $300/mo x 12	3,600	
Truck driver-mechanic $360/mo x 12	4,320	
Part time bookkeeper $100/mo x 12	1,200	
Surface labor		
Utility man ($14.00/day) $15.15 x 200 days	3,030	
Laborer ($12.00/day) $13.00 x 200 days	2,600	
Payroll taxes: Sup. @ 15% Remainder @ 7%	2,112	
Total labor		$24,062
Total		$170,737

DISCUSSION OF THE PROPOSALS

Drifting

The drifting program has been designed to explore the vein north and south of the present workings on various levels (figure 3 and 4).

The proposed 160-foot level drift will prospect an unexplored block of ground. As this area is accessible only from the inclined manway, the broken material will have to be dumped into the open stope.

The present face of the 270-level north is against a pinch in the vein, but additional drifting will determine if this is a local condition. The face of the south end of the 270-foot level is full of detritus washed down from the stope above, but the stope face 40 feet above shows fair ore values in the hanging wall vein over a width of 3 feet.

The exploratory drift south on the 420-level is proposed to start from a stub drift off the inclined shaft. It has been backfilled with gob so the face cannot be seen.

The calcite-filled fault zone is possibly as wide on the 500-foot level as it was on the surface. The crosscut at 90 feet south of the shaft extends westward into the zone for 30 feet, where granitic material is exposed on one side of the face. Owing to the attitude of this granite it is not thought to be the true footwall. The other 3 westerly crosscuts on this level are from 15 to 20 feet in length and have not reached the footwall.

Although the mineralization in the hanging wall vein portion is weak throughout the length of the 500-foot level, it is possible that

ore shoots may be found beyond the faces. Consequently proposed drifting for 500 feet south and 200 feet north has been set up.

Crosscutting to the footwall of the vein at various places has been proposed to the extent of 250 feet. The location of these crosscuts should be determined as the work progresses.

The cost per foot of drifting and drilling has been detailed by the writers and is considered to be a close estimate of proposed performance.

Diamond Drilling

It is proposed to core drill for extension of the vein below the 500-foot level from an existing 335-foot hanging wall crosscut (figures 4 and 5). A slabbing round in the roof at 100 feet from the shaft would make the first drill station in this crosscut. The vein would be tested by fanning 3 holes to intersect it at about 100 feet down the dip. Then a vertical hole and 2 angle holes, north and south, would test the vein at 200 feet down dip.

If results of these holes justified, drilling would be done from the station at the end of the drift, cutting the vein at 450 and 800 feet down the dip. The number of holes and the pointing of the deeper ones would be dependent upon conditions encountered, but would not exceed a total footage of 6,000.

The core should not be smaller than AX in the ore zone. As core recovery may not be good, arrangements should be made to save the sludge. The drill helper should be trained to save the core and decant the sludge. The assayer could dry the sludge at the assay office.

Drilling water can be pumped from the shaft sump, but return water should be settled before return to that source. The crosscut at 35 feet south of the shaft apparently was previously used for this purpose as it is lined with concrete. This storage and settling facility should be used during this drilling project, as it is expected that water for camp use, other than drinking purposes, likewise will be pumped from the sump.

Rehabilitation of Shaft

It is thought that the present headframe can be made serviceable with proper bracing and installation of concrete footings. Very little timbering can be seen in the shaft, so the rock must be solid as no caving has taken place in 50 years. Sufficient timbering must be installed to support guides for a bucket crosshead that will stop near the 270-foot level, allowing the bucket to proceed down the incline. The inclined shaft timbering will be confined mainly to supporting a bucket skidway and ladders.

As drifting is to be done on the 270-foot level, a shaft station should be shot out. At present the shaft merely penetrates the stoped area. It will be noted that only 300 feet of 3-inch air line is required. At this depth in the shaft, the 3-inch line can be connected to an old water column that continues to the bottom. As this column is partly 6-inch and partly 4-inch pipe, it will have sufficient capacity so that an underground receiver will not be needed.

Owing to the humid atmosphere on the 500-foot level, it has been though advisable to retimber the shaft station and flooring over the sump.

It is expected that the assayer will be competent to take samples or at least supervise the taking of current samples. Allowance has been made to move the assay office from its location at the mill site to the mine area. Thus the assayer will be available at the project site.

No ore or waste bin will be necessary. The toplander can dump the bucket directly into a mine car. If the material appears to be of ore grade it can be stockpiled at a point different from the waste dump.

Building Construction

These are listed as lump sum amounts as set up by the applicant. The costs appear to be reasonable.

Rental Equipment

The applicant was quoted the $425 per month rental of the diamond drilling machine by a coast firm.

Equipment to be Purchased

The writers have checked the itemized costs to the best of their ability and all costs seem to be reasonable. It will be noted that the labor of installation is included in the items of mine pump and pipe, 60 KW generator, and 2 tanks.

Equipment Furnished by Applicant

The applicant estimates the value of the 4 by 4 Chevrolet truck, equipped with boom and hoist, as $4,500. The monthly depreciation charge of $100 represents 1/45th of the value, at this rate it would be depreciated in 3.75 years. This and the charge of $50 per month

for a jeep seem reasonable for automotive equipment.

The compressor, a Diesel-powered, 4-wheel portable, has been rebuilt. The chassis originally carried a 210-cfm compressor. A larger compressor and motor have been installed on the chassis. It appears to be a 315 cfm unit. The applicant estimates the present value at $7,500. A new one of this capacity costs about $9,000. Depreciation charge of $125 per month is 1/60th of the estimated value, and is considered a fair price.

Schedule of Labor

Owing to the remoteness of the project site, work will have to be conducted 6 days per week to hold employees, consequently one overtime day per week has been calculated in the cost of labor. As the shift crews are small, the surface jobs are consolidated so that a truck-driver who can be a mechanic part of his time will have to to chosen. The hoistman will be close to the compressor and can run it. The toplander will be available to help unload trucks or other short jobs as needed. Applicant had set up L. C. White, a minority owner, as manager-engineer on a part time salary of $500, and a "working foreman" at $400 per month. As Mr. White lives in San Francisco and is actively engaged in consultation work, he presumably would only make occasional visits to the property. The writers are of the opinion that the manager-engineer should devote full time to the job, and thus will have to live at the job. He can give instructions to the night shift as well as being on day shift, thus eliminating expense of a foreman. He should be qualified to supervise the drilling and drifting to attain maximum results. The salary has been set

at $600 so that a good engineer can be employed.

Reconditioning of mine levels is a clean-up job that necessitates the following:

Muck out south end of 270-foot level;

Lay track on 270-foot level north and south from shaft;

Recondition and lay track on 16-foot level for approximately 50 feet north of inclined manway;

Muck out the stub drift south on 420-foot level (this may be gobbed for as much as 50 feet);

Muck out debris on 500-foot level and lay track;

Catch up and timber caved area in hanging wall crosscut (503 crosscut);

Cut drill station in above crosscut at 100 feet from shaft.

Labor for above work estimated at 3 weeks (18 working days):

2 miners @ $16.25	$ 585
2 muckers @ $13.00	468
Pay roll taxes	160
Timber	275
Total	$1,488

Item 9

The existing assay office appears to have equipment sufficient for the project. Minor supplies, reagents, etc., will have to be stocked as needed.

It is estimated that road repairs will require the use of a dozer for 12 days. Applicant thinks one can be secured for $120 per day, including operation and maintenance. Two laborers will be required to rough-wall the lower side of numerous small washes to

prevent erosion of ditches during rainy periods.

Dozer rental $120/day for 12 days	$1,440
Moving-in charge	300
Wages, 2 men @ $12/day for 10 days	240
Pay roll taxes	20
	$2,000

Time required

Two weeks will be required to put the road in shape for hauling. Two to three months may be required to collect material and build camp facilities. Toward the end of this period rehabilitation of headframe and shaft can be started. After hoist is installed and shaft timbering well under way, the clean up program can be initiated.

The drifting and drilling program will run concurrently. Even with telescoping of the operational time of the preliminary work, it is thought that a total of 1 year should be allowed for the completion of the project.

METALLURGICAL TESTS

Numberous metallurgical tests on the oxide ore of the Red Cloud mine have indicated that only fair recovery of the lead and silver minerals can be made, and that most of the zinc remains in the tailings. The original application contains detailed reports. A brief summary of indicative tests follows:

In 1940 the Denver Equipment Co. ran tests on a sample that assayed 0.005 ounces gold and 8.20 ounces silver per ton, 5.2 percent lead, and 4.65 percent zinc. One test showed a recovery of 69.6

percent of lead and 60.6 percent of the silver in a primary flotation concentrate assaying 51.0 percent lead, 68 ounces silver, and 0.02 ounces gold per ton. A secondary flotation concentrate, which is classed as a middling for re-treatment, contained 11.0 percent of the lead and 9.3 percent of the silver in a product that assayed 14.8 percent lead and 20.1 ounces silver per ton.

A second test produced a primary flotation concentrate containing 75.5 percent of the lead and 60.4 percent of the silver and assayed 54.4 percent lead, and 65.9 ounces silver per ton. A second flotation concentrate, which should be classed as a middling product for re-treatment, contained 11.6 percent of the lead and 7.3 percent of the silver in a product that assayed 22.4 percent lead and 21.4 ounces silver a ton.

In a third test, the primary flotation concentrate was cleaned once by re-flotation to produce a maximum grade of concentrate. This cleaned product contained 73.0 percent of the lead and 54.2 percent of the silver, and had a grade of 63.6 percent lead and 71.4 ounces silver a ton.

The Ore Testing Service of the Arizona Bureau of Mines made a number of tests at various times. In 1941 a test was made on ore that assayed 0.01 ounces gold, 7.5 ounces silver, 3.4 percent lead, and 4.8 percent zinc. Two flotation concentrates were made. The so-called silver concentrate contained 40.3 percent of the silver, and 26.6 percent of the lead, and assayed 63.8 ounces silver a ton and 21.2 percent lead. The lead concentrate contained 20.8 percent

13/ Crabtree, E. H. Jr., metallurgist.

of the silver, and 53.1 percent of the lead, and assayed 26.8 ounces silver and 34.4 percent lead.

The combined concentrates thus contained 61.1 percent of the silver and 79.7 percent of the lead, with a calculated assay of 0.087 ounces gold and 43.4 ounces silver per ton, 28.5 percent lead and 9.4 percent zinc. The combined concentrates amounted to 10.37 tons per 100 tons head feed.

In 1948,[14] tests were made on a sample that assayed 16.5 ounces silver and 4.2 percent lead. Two concentration products were made, which when combined, contained 52.1 and 78.2 percent, respectively, of the silver and lead in a product that assayed 106.9 ounces silver and 39.5 percent lead.

A second test produced 2 concentrates which, when combined, contained 59.1 and 88.4 percent, respectively, of the silver and lead in a product that assayed 109.9 ounces silver and 42.6 percent lead.

Later, Roseveare made a pilot plant test on 800 pounds of ore that assayed 13.1 ounces a ton of silver and 4.05 percent lead. Two flotation concentrates were made. The combined concentrates amounted to 8.5 tons per 100 tons of classifier overflow, assayed 56.2 ounces silver per ton and 33.4 percent lead, and contained 44.9 and 81.2 percent of the total silver and lead, respectively.

About October 1951, A. L. Poarch[15] conducted tests on a sample that assayed 0.02 ounces gold and 7.0 ounces silver per ton, 4.7 percent

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14/ Roseveare, Geol. H., metallurgist
15/ Consulting metallurgist, Box 1950, Prescott, Ariz.

lead, and 8 percent zinc. A concentrate, after one stage of re-cleaning, gave the following recoveries: 73.6 percent of the lead in a concentrate assaying 39.1 percent lead; 65.8 percent of the silver assaying 48.2 ounces; 61 percent of the gold assaying 0.11 ounces a ton; and 10.4 percent of the zinc, assaying 5.22 percent.

On the basis of the above tests it is thought that a fair appraisal of the economic possibilities of Red Cloud ore can be calculated using the following assumptions, 100 ton base:

	Grade of Ore	Mill recovery	Price of Metals
Gold	0.02 oz.	60%	$32.32
Silver	10.0 oz.	60%	0.89 for 90%
Lead	6.0 %	80%	0.19

Lead 6% = 120 pounds

80% of 120 = 96 pounds recoverable per ton of ore

40% concentrate = 800 pounds

800 pounds in conc. divided by 96 = 8-1/3 ratio of concentration.

100 tons ore will produce 12 tons of concentrate.

Gold 0.02 in ore, 60% recover = 0.012 ounc es per ton ore,

gold content of concentrates is 0.012 x 8.33 = 0.10 ounces.

Silver 10.0 ounces in ore, 60% recovery = 6.0 ounces recovered, per ton ore.

6 ounces x 8.3= 50 ounces in concentrate.

Metal Content of Concentrates from 100 Tons of Ore

Kind	Tons	Gold oz.	Silver oz.	Lead, percent	Ratio of Concentration
Lead	12.0	0.10	50.0	40.0	8.33

Value of Concentrates from 100 Tons of Ore

Kind	Tons	Gold 1/	Silver 2/	Lead 3/	Total per ton	Grand total from 100 tons ore
Lead	12.0	$3.23	$40.05	$117.81	$161.09	$1,933.08

Costs Trucking, Freight & Smelting of Concentrates

Per ton of Concentrates

Kind	Tons	Trucking 4/	Freight 5/	Smelting 6/	Total	Grand Total
Lead	12.0	$4.89	$20.50	$8.65	$34.04	$408.48

Value of concentrates before mining, milling, State sales tax, overhead, depreciation, and amortization: $1,933.08 less $408.48 = $1,524.60

Per ton of ore = $15.25

Footnotes:

1. Pay for 100% at $32.3185 per ounce
2. Pay for 90% at 89¢ per ounce
3. Pay for 40% less 1.5% at 90% of remainder.

   40-1.5 = 38.5%. Pay for .90 x 38.5 = 34.65% or 693 pounds at 19¢ minus 2¢ or 17¢ per pound.
4. Trucking at 10¢ per ton mile wet weight. Estimate 12% moisture 43 mile haul, 4.3 x .10 = $\frac{4.30}{88}$ = $4.89 per dry ton
5. Freight Blaisdell to El Paso $17.51 per ton, plus 3% Federal transportation tax = $18.04 per wet ton. $\frac{18.04}{88}$ = $20.50 per dry ton.
6. Smelter rate. $9.50 base charge, less credit of 10¢ per unit of settlement over 30 percent dry assay.

   Dry assay= 40 - 1.5 or 38.5%
   38.5 - 30 = 8.5 units @ 10¢ = 85¢
   $9.50 less 85¢ = $8.65 smelter charge.

   No penalty for less than 10% zinc content.

Value of ore paid for per ton		$ 15.25
less 1% sales tax (exclusive precious metal values)		.07
		$ 15.18
Estimated cost per ton ore produced		
Mining	$9.00	
Milling 16/	3.50	
Overhead	.75	
Development	.50	
State and County property tax	.10	
Direct operating cost per ton ore		$ 13.85
Profit per ton before taxes		$ 1.33
Less 25% State & Federal income taxes..		.33
Net profit per ton		$ 1.00

Note that depreciation and amortization of the capital expenditure necessary to produce this result has not been included.

Results of extensive tests were submitted to the applicant by A. L. Poarch in October 1951. This complete file is in the docket material, and indicates that in addition to a lead flotation concentrate mentioned in this report, a second concentrate was made that after cleaning "contained 65.6% of the zinc assaying 54.38% zinc, 6.4 ounces of silver representing 12.2% of the total silver recovered, 0.05 ounces of gold, 22% of total recovered, and 2.70% lead, or 14.4% of the total lead recovered".

16/ Milling, all flotation, one mineral, 150-200 tons/day

The zinc minerals in the ore are stated to be smithsonite and willemite with traces of zincite. The percentages of zinc in these minerals are respectively 52, 58.6, and 80.3. By mathematical reasoning a concentrate containing 54.38 percent zinc would have to be some combination of virtually pure zinc minerals without gangue. Roseveare states that it is metallurgically impossible to float a clean concentrate.

If a zinc concentrate could be made, it can be sold to the International Smelting & Refining Co. at Toole, Utah under the following schedule: If zinc content is over 10 percent, pay for 75 percent of the zinc content at 22 percent of the market price and charge 15 cents per unit for smelting. Lead, no minimum, deduct 1.5 percent from the wet assay and pay for 90 percent of the balance, based on wet assay at market price less 2.175 cents per pound.

Such a product would augment the potential value of the ore.

For this reason, Roseveare recently made tests for the purpose of checking Poarch's method of oxide zinc recovery. He used the rejects of the composited 3 mine samples and the method detailed by Poarch. He found that the zinc could not be concentrated in either a lead or a zinc product.

CONCLUSIONS

The Red Cloud fracture zone contains a zone of oxide mineralization near the hanging wall that has been extensively mined to the 420-foot level, producing approximately 1,800,000 pounds of lead and

320,000 ounces of silver.

The ore left in pillars and unmined portions adjacent to the workings has a grade on the order of 10 ounces silver a ton and 6 percent lead.

The drift and crosscuts on the 500-foot level show that the fracture zone is as strong on this level as anywhere in the mine but the ore values are lower than in the stoped portions above. The writers are of the opinion that this represents a more or less lean portion of the vein and that there is a possibility that deeper exploration will show ore values comparable in grade to that above.

It is only in recent years that Red Cloud samples were assayed for zinc. These samples indicate that the percentage of zinc is usually greater than that of the lead. Sampling of 2 of the longer crosscuts on the 500-foot level shows a zone of zinc mineralization on or near the footwall side of the vein. This zone may be continuous over much of the deposit. The exploration proposal includes crosscutting to the footwall on various mine levels.

Owing to the fact that the vein filling is calcitic, there would not have been any downward migration of the lead and zinc. The original sulfides must have been oxidized in place. Consequently the primary ore should have a grade similar to that of the oxidized zone. The deepest proposed drill holes will prospect the vein to an inclined distance of 750 feet below the 500-foot level.

Trischka states in his geologic report that "the tonnage to be found below the 500-foot level may be at the rate of 200 tons per foot of inclined distance on the vein". This would predicate an estimated 150,000 tons of ore below the 500-foot level. The estimated indicated ore in blocks A and B, figure 2, plus the ore previously mined, is on the order of 50,000 tons. It is possible that an additional like amount can be found by exploratory drifting above the 500-foot level. Thus a total of 200,000 tons of ore might be found, having a grade similar to that in sight in the present stopes.

Rough calculations indicate that at present market prices the net value of ore of a grade of 6 percent lead and 10 ounces of silver is $14.18, and that a profit of $1.00 is indicated before consideration of depreciation and amortization. Eighty to 85 percent of the zinc remains in the mill tailings and will constitute a worthwhile stockpile of that mineral until such a time as the metallurgy of oxide zinc has been perfected. At such a time the band of zinc ore on the footwall of the vein could likewise become a potential source of zinc production. The 2 available exposures show this band to be from 7 to 10 feet wide, containing an average of 12 percent zinc.

Should primary ore be developed at depth, the mill extraction would become more efficient and zinc then would be produced. From ore of similar grade, the St. Anthony Mining & Development Co. of Tiger, Ariz. recovers 90 plus percent of the lead and 85 percent of the zinc.[17/]

17/ Oral communication, Geo. H. Rosevear.

RECOMMENDATIONS

Relative to the economic considerations of the project, it is granted that this project is a marginal proposition and it is questionable whether there will be total repayment of the Government participation funds.

There is a possibility of finding an ore body on the order of 200,000 tons of a grade of approximately 6 percent lead and 10 ounces silver a ton. The ore probably will contain 6 to 8 percent zinc that will be impounded in the tailings. It also is possible that an appreciable tonnage of 8 to 10 percent oxide zinc will be found in a parallel footwall band of the vein that would be mined only when a beneficating method is perfected for this type of ore.

For the reason that it is thought to be to the advantage of Governmental economy to know where a lead-zinc deposit of this magnitude might be found, it is recommended that this exploration project be considered. Yuma Metals, Inc., has signified that it is able and willing to pay 50 percent of the estimated $171,000 cost of the project.

Inasmuch as the proposed exploration will be done within a limited area covered by the Red Cloud patented claim and the unpatented Gladys, New Dandy, and Emily claims, it is suggested that future production only from these claims be considered liable for royalty to the Government. It is possible that subordination agreements for some of the numerous other claims might be difficult to obtain, and are not essential to the project.

RED CLOUD MINE, DIVES MINE
AND
NEW NORTH AND SOUTH GERONIMO CLAIMS
YUMA METALS, INC.
YUMA COUNTY, ARIZONA
DMA 1303X

LEAD-ZINC

Geology

By
Carl Trischka
Consultant, U. S. Geological Survey

RED CLOUD MINE, DIVES MINE
AND
NEW NORTH AND SOUTH GERONIMO CLAIMS
YUMA METALS, INC.
YUMA COUNTY, ARIZONA
DMA 1303X

LEAD-ZINC

CONTENTS

	Page
Introduction	1
The Dives Mine	1
New North and South Geronimo Claims	2
Red Cloud Mine	3
Rocks	3
The Red Cloud Vein	3
Ore Reserves	5
Summary and Conclusions	6

ILLUSTRATIONS

Figure		
1.	Location Map	See Engineering Report
2.	Assay Section Map	" " "
3.	Longitudinal Section on Vein Showing Proposed Drifting	" " "
4.	Plan Showing Proposed Drifting and Drilling	" " "
5.	Transverse Section Showing Proposed Drilling	" " "
6.	Geologic and Claim Map	Following Page 2

INTRODUCTION

Most of the claims in the Silver District of Yuma County, Arizona, are owned or controlled by The Yuma Metals, Incorporated (see Fig. 6).

The owners have proposed work in the district on the Dives Mine, the New North and South Geronimo claims, and the Red Cloud Mine.

An investigation of the workings in the claims where the work was suggested resulted in the rejection of the exploration proposals on the Dives Mine and the North and South Geronimo claims and the acceptance of that on the Red Cloud Mine for reasons which appear below.

The examination and report were made with Mr. Lincoln A. Stewart of the Bureau of Mines. His help and guidance are highly appreciated.

THE DIVES MINE

At the outcrop the vein at the Dives Mine cuts through easterly dipping layers of agglomerate, andesite, and rhyolite. This vein ranges from 5 to 7 feet in width. The ore-bearing shear zone, which strikes north-northwest, dips an average 80° to the west. In the best mineralized area the east wall of the vein dips from 80° to 67° to the west; the west wall dips 80° to the east. The vein is traceable only intermittently on the surface, and probably exists only intermittently at depth.

A drift from the collar of the shaft follows the vein to the north approximately 30 feet, before digressing from the vein. This vein zone consists mostly of calcite and silicified volcanics; there are only a few narrow (1-2 inch) stringers of low-grade lead carbonates and some iron oxides in the exposed parts of the zone. This material would not be minable under any predictable conditions.

Most of the exploration work, other than that noted above, has been done in a mineralized zone west of the west wall of the Dives vein. The exposed mineral showings in the west wall of oxidized vein material are spotty and weak. There are some workings below the ones described above but they were not accessible.

The proposed work consisted of an extensive program of core drilling. Eastward inclined diamond drill holes, the collars of which would be at the surface, were designed to intersect the westward dipping shear zone at depth.

This work, judging from the weakly mineralized zone seen underground and on the surface, does not seem justified.

NEW NORTH AND SOUTH GERONIMO CLAIMS

Workings on the Hardscrabble Claim were examined to see what might be expected on the Red Cloud vein which is not well exposed on the New North and South Geronimo Claims. The Hardscrabble Claim, which is not owned by The Yuma Metals, Inc., lies to the north of the New North and South Geronimo Claims (see Fig. 6). The Red Cloud vein, which dips at 40° to the east, passes lengthwise through these three claims which are joined end to end.

That part of the Red Cloud vein, on the New North and South Geronimo claims, that contains ore minerals, is narrow (2-3 feet) and pinches irregularily. The vein dips 40 degrees to the east. Some vanadinite and wulfenite, which occur in scattered vugs and pockets, has been mined recently. The wulfenite is essentially the only ore mineral that can be seen in the accessible workings.

The proposed exploration work on the Geronimo claims would probably not expose minable minerals, therefore it is recommended that this phase of the program be denied.

RED CLOUD MINE

Rocks

From the map, Figure 6, it will be seen that in the neighborhood of the Red Cloud Mine the rocks are granite and volcanic rocks such as tuffs, andesite, and rhyolite. The volcanic rocks are probably Tertiary in age. The granite appears to be one of the oldest rocks in the Silver District, the other old rock, which is schist, crops out about three quarters of a mile south of the mine. The older rocks are probably pre-Cambrian in age, but some varieties of the granite may be of a later age.

The Red Cloud Vein

The ore mined from the mine occurred in a pinching and swelling fracture zone which averages about twenty feet in width. On the surface the zone has been mined on for about four hundred feet along its strike and to a maximum width of forty feet. To the north the vein is traceable for 150 feet beyond the cut and somewhat less than that to the south of the cut. Mining followed a number of ore shoots from the surface down the dip of the fracture zone for 400 feet (see Fig. 2).

The mineralized zone as exposed by mining and development work has a strike of about N. 15° W., dips 35 to 65 degrees to the east and occurs in a prominent fault zone. The footwall of the zone is granite and the hanging wall is tuff and andesite down to the vicinity of the 500-foot or bottom level where some granite, brecciated granite and flow rocks are found on the hanging wall and in one of the crosscuts east of the vein.

The vein averages 10 to 30 feet in width and may be divided into three parallel zones. These zones are here termed the "hanging wall," "middle," and "footwall" zones.

The hanging wall ore zone, made up in part of silicified replaced breccia, is 3 to 6 feet wide. In general the material in it is oxidized, and consists mainly of iron oxides, vuggy iron-stained quartz, lead and zinc nonsulfides, patches of fluorite, barite and small amounts of wulfenite and occasional small patches of galena surrounded by anglesite. The unoxidized galena remnants seem to increase in number with depth, but the over-all values of lead, from visual inspection, seem to be decreasing somewhat with depth. Practically all of the ore that has been mined and the remaining ore pillars are found in the hanging wall zone.

The middle zone consists almost entirely of crystalline calcite which is somewhat stained by manganese. Apparently ore minerals do not occur in this zone, which is 8 to 12 feet wide.

The footwall zone apparently has been explored only to a limited degree. The writer estimates that it averages 3 to 6 feet in width; on the 500 level it is 7 to 10 feet in width. Generally the footwall zone is similar in character to the hanging wall zone, except that the footwall zone most likely contains more zinc and less lead than the hanging wall zone. Such a comparison seems to prevail on the 500 level. In some places the granite of the footwall is mineralized.

The Red Cloud vein is located in the desert region of Arizona. Veins and ore bodies in this region are frequently characterized by the abruptness of the transition from the oxide zone to the primary ore zone with only a narrow zone of secondary enrichment between them.

The primary ore grade in many deposits is almost the same as that in the oxidized zone. In the Red Cloud workings the ore so far found is mostly oxide material, but, by the above analogy, if sulfides are encountered in depth the grade and width of the ore-bearing zone will probably be approximately that of the oxide ore. The diamond drilling which has been proposed from the 500 level to cut the mineralized fracture zone below the 500 level may find the sulfide ore.

Water stands in the shaft 3 feet below the 500 level. Its source may be from rainwater running into the mine or it may be the permanent water level. A former lead concentrator operating at the mine is reported as having pumped 100 gallons per minute from the sump, without appreciably lowering the water level.

ORE RESERVES

The accompanying assay map (Fig. 2) shows where the samples were taken in the mine. The map was surveyed by W. W. McDougall. The U. S. Bureau of Mines' early report stated that the reserves predicated on ore outlines shown on the map above the 420 level, amounted to 31,680 tons with a grade from 4-6% lead, and 7-9 oz. Ag by visual estimate.

On the same assay map (Fig. 2) a tabulation by Will W. Neal of the Neal Mining Company shows a minimum of 32,000 tons of ore with a grade of 6.07 percent lead and 10.15 ounces of silver based on the samples shown plus 75 additional check samples. These calculated results are taken as reliable and the best available information, and used as having a grade of 6.0 percent lead and 10 ounces of silver.

Zinc is present in the ores of both the hanging and footwall zones; there is no information as to its grade from stope samples.

On the 500 level where 3 crosscuts into the footwall zone have exposed zinc, the zinc content ranges from 4 to 15 percent and possibly averages 8-10 percent.

The proposed exploration work will expose both the hanging wall and the footwall zones.

As stated above, the largest amount of ore was found in the hanging wall zone, and though the grade of the ore which the proposed development work may be expected to find in this zone is not predictable, it might be of the same grade as the reserves.

It is not possible to accurately predict the quantity of ore with perhaps 8 to 10% zinc and some lead that may be found above and below the 500 level when the proposed work is done in the footwall ore zone in exploring the fracture zone of the Red Cloud vein, but it may be an appreciable tonnage and worthwhile because methods of beneficiating this type of ore are being perfected. The tonnage to be found below the 500 level in both zones may be 200 tons per foot of incline distance on the vein.

SUMMARY AND CONCLUSIONS

The vein is as strong on the 500 level as anywhere in the mine but the values are somewhat lower than the ore reserve average. There is no way of determining beforehand what average grade may be found in the unknown part of the vein. The lower values of the 500 level may be due to the workings being in a more or less lean part of the vein and does not discourage the belief that the proposed work of drifting, crosscutting, and diamond drilling should be done on, above, and below the 500 level.

This work has a good chance of finding ore in the fracture zone on, above, and below the 500 level. Subsequent sinking of the shaft and other development work can then open up ore reserves.

If the development work finds as great or a greater tonnage as the known reserve estimate, the total would about suffice to put up a concentrator to mill it. This is the main objective of the exploration.

For the above reasons the proposed development to explore the 3 to 6 foot wide hanging wall and the footwall zone in the fractured zone is recommended.

D. E. Moulds - Room 4070
April 11, 1952
3:35

BUR MINES DN 235 4-11-52 1-30 PM

D E MOULDS, CHIFXXX CHIEF, ~~BASE METALS DIVIION~~

REURTT TODAY, DOCKET EMXXXX DMEA-1303, YUMA METALS, INC. SUGGEST YOU RETAIN INFORMATION CONCERNING PLACE, BOOJXXXX BOOK, AND CLAIM RECORDING IN YOUR OFFICE. THE CONTRACT WILL BE FOR MORE THAN $25,000 GOVERNMENT PARTICIPATION.

J H EAST JR

END PLS ACK FTM
MSG RECD OK JEDV

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 14 1952

Denver Colorado

APR 14 8 35 AM '52

BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

FILE COPY
SURNAME:

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

Defense Minerals Exploration Adm.
D. E. Moulds
2616
Moulds(meh)

3669

Defense Production Staff
April 11, 1952

Mr. J. H. East, Jr., Exec. Officer, Region IV, DMEA Field Team, 224 New Customhouse Building, Denver 2, Colo.
Docket No. DMEA 1303 - Numa Metals, Inc.

Received place, book and claim recording of 1303 which Tucson office requested applicant to send to Denver. If you desire we will send data.

p.s.

D. E. Moulds (meh)

D. E. Moulds, Chief
Base Metals Division

DEMoulds/meh
cc to: Docket
Mr. Moulds
Files

2061

SENT
APR 11 1952

Clerical Service Section

Sa

Docket
FILE COPY
SURNAME:

Moulds

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

APRIL 10, 1952

MR. LUKE WALDON, SEC.
798 HOPE AVENUE
SANTA BARBARA, CALIFORNIA

REGION IV ADVISED APRIL 9 THAT THE REPORT ON 1303 HAS BEEN DELAYED DUE TO NECESSITY FOR REVISION.

D. E. Moulds (meh)

D. E. MOULDS, CHIEF
BASE METALS DIVISION

S.N.
4-10-52

DEMoulds/meh/hmj
4-10-52
CC to: Adm. Reading File
Docket File Copy
Mr. Moulds

Sd

R. E. Moulds
4-9-52
10:30

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 9 1952

BUR INES DN 235 4-9-52 8-30 AM

D E MOULDS

REURTT. ENGINEERING REPORT, DOCKET 1303, YUMA METALS, INC., IS IN THIS OFFICE. GEOLOGICAL SURVEY REPORT BEING REVISED.

W H KING FOR J H EAST JR

Denver, Colorado

APR 9 11 15 AM '52
BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

Docket

FILE COPY
SURNAME:

Moulds

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

DMEA

D. E. Moulds
3669 2616

1420137 Salaries and Expenses, Defense
Production Activities, Interior, 1952
April 8, 1952

J. H. East, Jr., Exec. Officer, Region IV, 224 New Customhouse Bldg.
Denver 2, Colorado
Docket 1303, Yuma Metals, Inc.

PLEASE ADVISE STATUS OF REPORT ON DOCKET 1303, YUMA METALS, INC.

D. E. Moulds (mch)

D. E. MOULDS, CHIEF
BASE METALS DIVISION
DEFENSE MINERALS EXPLORATION
ADMINISTRATION

N.S
R+R

DEMoulds/hmj
4-8-52
CC to: Adm. R. File
Docket File Copy
Mr. Moulds

SENT

Clerical Service Section

MINES IN SILVER DISTRICT
YUMA COUNTY

MILL ON COLORADO
HEAD OF MARTINEZ LAKE

Yuma Metals, Inc.

LLOYD C. WHITE, GEN. MGR.

D. L. McDANIEL, PRES.
OTTO MOTEJL, VICE PRES.
CHAIRMAN OF BOARD
LUKE WALKER
SECY. & TREAS.

YUMA, ARIZONA

April 8, 1952.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 10 1952

Mr. Moules
Lead and Zinc Division of DEMA
Interior Department of U. S. A.

RE: Exploration Loan 1303X

Dear Sir:

The location notices of the following mining claims are recorded in the office of the County Recorder of Yuma County, State of Arizona, as follows, to-wit:

	Book	Page		Book	Page
New North Glance	39	232	New Dives #2	39	262
New East Glance	39	233	New Dives #3	39	263
New West Glance	39	234	New Dives #4	39	264
New Lone Star	39	235	New Dives #5	39	265
New Black Rock Extension	39	236	New Dives #6	39	266
New West Black Rock	39	237	New Maverick	39	267
New Black Jack	39	238	New Maverick #2	39	268
New Rhomboid	39	239	New Maverick #3	39	269
New West Papago	39	240	New Spotted Dog	39	270
New West Side Fraction	39	241	New Smuggler	39	271
New Solo	39	242	New Celt	39	272
New Trader	39	243	New Mondrin #2	39	278
New Hunter	39	244	New Chloride #1	39	279
New Trapper	39	245	New Mondrin	39	277
New Cochise	39	246	New Chloride #2	39	280
New Black Eagle	39	247	New Chloride #3	39	281
New North Geranemo	39	248	New Chloride #4	39	282
New South Geranemo	39	249	New Chloride #5	39	283
New Eagle Rock	39	250	New Chloride #6	39	284
New Equinox	39	251	New Cash Entry	39	285
New Ribbon Rock	39	252	New Cash Entry#2	39	286
New Sikes	39	253	New Big Bill	39	287
New Long Fellow	39	255	New Little Bill	39	288
New Danby	39	256	New Pelman	39	289
New Silver Bell	39	257	New Poor Man	39	290
New Hidden Treasure	39	258	Riho #1	41	145
New Hamberg	39	259	Riho #2	41	146
New Hamberg #2	39	260	Silver Crown	41	144
New Dives	39	261	New Emily	39	259

The Deed to the Yuma Metals, Inc. for the above claims are filed in Docket 52, Page 309, March 25, 1952, 4:03 p.m.

The Red Cloud Mine, patented August 24, 1894, the patent of which is recorded in the Office of the County Recorder of Yuma, Arizona, in Book 44 of Deeds, Page 331, March 25, 1952, 4:02 p.m.

The Deed to the Yuma Metals, Inc. is filed in Docket 52, Page 307.

The Deed to the Yuma Metals, Inc. for the M.J.B. and Gladys lode claims was filed March 10, 1952, under Fee No. 2336.

All of the above mining property are free and clear of any encumbrances.

The Tucson office asked us to send this information to Denver. However, the deeds were so long in returning to us, I am sending them direct to your office in Washington.

Very truly yours,

YUMA METALS, Inc.

By Luke Walker
Luke Walker, Secretary.

LW:hf

FILE COPY
SURNAME:

350

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

OCT 31 1951

McKnight
Bishop
Allison

Re: DMA-1303X
Yuma Metals, Inc.
Silver Mining District
Yuma County, Arizona
Exploration loan, $200,000
Lead, zinc

Mr. J. H. East, Jr.
Executive Officer, DMA Field Team
Region IV
224 New Customhouse
Denver 2, Colorado

Dear Mr. East:

Subject docket is returned to field team for further information and advice, in view of the large amount of unpublished information available to the field team and the personal familiarity of some members of the field team with this camp.

The company has presented a revised application which supplies the details on just what they propose to do and the details of expense that were lacking in the original proposal. They believe (letter of September 12) that additional geologic work is unnecessary in view of their more explicit revised proposal, but they originally submitted the names of Durand Hall and C. N. Herron as geologists, one of whom they would propose for further work if the DMA should still feel that further geologic work was necessary. However, in a telephone conversation on October 25, Mr. Luke Walker of the applicant company informed Mr. Gunnard Johnson that neither of these men had yet replied to letters written to them, and in the eventuality that neither would be interested, the company would like to propose the Southwestern Geological Service of Prescott, Arizona, whose geologists are Alfred D. Wandke and Arthur Still.

The revised application appears to the Lead-Zinc Branch to be explicit enough so that the project can possibly be judged without another geologic report being prepared and submitted by the applicant. However, inasmuch as this recommendation originally came from the field team, judgment on the matter will be left to the field team. Letter of September 5 from the Lead-Zinc Branch to the applicant was basis for the new application; copies of this letter were previously forwarded to the field team.

Certain items of proposed expense, such as $50,000 worth of buildings (item 23 d), appear excessive for an exploration project. If the geologic feasibility of the project is approved, certain of these cost items should be reviewed critically to see if they are essential to an exploration program.

Material forwarded includes a copy of first application, for certain general information was not repeated in the revised application.

In reply to your letter of September 12 concerning misplaced copies of the field team report of July 2 on this docket, there are enclosed with the docket material two copies of this report which appear to be part of the missing copies.

Very truly yours,

Signed 10/31

Tom Lyon, Chairman
Coordinating Committee

for Bureau of Mines

for Geological Survey

Enclosures

ETMcKnight:emp
G 10-25-51
Copies to: Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
O. M. Bishop
Directors r. files 4214 GSA
Br. r. files 4214 GSA
Administrators r. files
DMA docket files

FILE COPY
SURNAME:

350

McKnight
Bishop
Yuma

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

OCT 31 1951

Re: DMA-1303X

Mr. Lloyd C. White, General Manager
Yuma Metals, Incorporated
1005 Oxford Street
Berkeley 7, California

Dear Mr. White:

Your revised application for an exploration loan on the Red Cloud No. 1, North Geronimo, and Dives Claims, in the Silver district, has been reviewed by the Defense Minerals Administration, and has again been forwarded to our Arizona field office through Mr. J. H. East, Jr., Executive Officer, DMA Field Team for the region that includes Arizona. Mr. East's address is 224 New Customhouse, Denver 2, Colorado.

Very truly yours,

signed 10/31

Tom Lyon, Director
Supply Division

ETMcKnight:emp
G 10-25-51
Copies to: Mr. J. H. East, Jr. Region IV (2)
Chief, Lead-Zinc Branch
E. T. McKnight 4204 GSA
O. M. Bishop
Directors r. files 4214 GSA
Br. r. files 4214 GSA
Administrators r. files
DMA docket files

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

224 New Customhouse
Denver 2, Colorado

September 12, 1951

AIR MAIL

Memorandum

To: Executive Secretary, Defense Minerals Administration

From: Executive Officer, DMA Field Team, Region IV

Subject: DMA Docket 1303X, Yuma Metals, Inc., Yuma County, Arizona

We have received no reply to our memorandum to you dated August 21, with reference to our file copies of the report on DMA Docket 1303X, Yuma Metals, Inc. The original and two copies of the bound report were forwarded to your office on July 6, 1951, and it is believed that our five file copies may have inadvertently been mailed at the same time.

In the event that our file copies were forwarded to you we would appreciate receiving them so that the proper distribution can be made.

P. T. Allsman, Alternate

DEFENSE MINERALS
ADMINISTRATION
WASHINGTON, D.C.
SEP 14 10 15 AM '51

SEP 21 1951

FILE COPY
SURNAME:

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

McKnight
Bishop
Billingsley

SEP 5 1951

Airmail

Re: DMA-1303X

Q.E.C.

Mr. Lloyd C. White, Manager
Yuma Metals, Inc.
1005 Oxford Street
Berkeley 7, California

Dear Mr. White:

This will acknowledge your letter of August 25 concerning your application for an exploration loan on the Red Cloud and adjacent properties.

It was not so much the size of the exploration loan that made it impossible for us to approve it without further consideration as it was the indefiniteness of the various proposals. Any exploration contract that is drawn up has to be accompanied by exhibits, illustrated by sketch maps, and giving such information as the location of drill holes, their inclination, proposed footage, geologic objective and cost per foot. A similar type of information is needed for any underground drifting. The information supporting a detailed proposal should give enough of the geologic basis so that the merits of the proposal can be judged. The geologic report by Oscar Hershey which you submitted with your application is generalized and does not lay out the details of the exploration work that you propose to do. It was our suggestion that such details could be obtained only through further geologic attention with the specific objective of this exploration program in mind. The material previously submitted by you gives no information at all about the ore occurrence, altitude of the veins, or details of the proposed drilling on the Dives and North Geronimo veins, which are the subjects of the second and third stages of your revised program.

A geologic study of the type proposed in our letter of August 15 would, we hope, present a set of proposals that, taken in conjunction with what our field offices already know about the properties, could lead to a quick appraisal of the proposals. The alternative would be for you to draw up in more detail your revised proposal and send it in for consideration by the field personnel. For your information I am enclosing a copy of the contract form that has to be made out, which shows what information is expected in Exhibit A. This information has to be made up from the information

presented by you.

As originally presented by you, with details lacking, a large geological investigation had to be made of your proposal before it could be approved. The Geological Survey personnel available for this type of work is not large enough to take on a job of the magnitude indicated which explains why we have made the suggestion that your company furnish this professional talent on a participating expense basis.

Copies of Mr. Lyon's letter of August 15 were sent to Mr. Miller through a stenographic error, as they should have been forwarded to our Colorado-Arizona region. Doubtless Mr. Miller has told you that he has no jurisdiction over your application.

Very truly yours,

BJ 9/6

T. P. Billings, Chief
Lead-Zinc Branch

Enclosure

ETMcKnight:emp
G 9-4-51
Copies to: J. H. East, Jr. Region IV (2)
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
R. H. Mote
Reports & Records
Directors r. file 4214 GSA
Br. r. file 4214 GSA
Adm. r. file
DMA docket files

350

FILE COPY
SURNAME:

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

McKnight
Billings
O'Leary

A.E.C.

G 1 5 1950

Air Mail

Yuma Metals, Incorporated
Mr. Lloyd C. White, General Manager
1005 Oxford Street
Berkeley 7, California

Re: DMA-1303x

Dear Mr. White:

The application of Yuma Metals, Incorporated, for an exploration loan of $300,000 to explore the Red Cloud and some adjacent claims has been reviewed by the Defense Minerals Administration. We have had the advice of Government field engineers and geologists in the Arizona region.

Although we believe that the properties may merit exploration for lead and zinc, there is not enough specific information given in your application to warrant approval of the project without further consideration. You propose additional underground work on the Red Cloud mine; diamond drilling from the surface and underground at this mine; and surface diamond drilling on 12 additional claims. The number and location of the proposed holes, the bearings, inclinations, depths, etc. are not given, nor are the geologic factors described that indicate the merits of the various targets. The only objective that is stated is a generalized one, to prospect for ore, particularly in the sulfide zone. However, the depth to the sulfide zone is unknown, and there is no basis for making a prediction. It appears to us that other ore shoots of oxidized lead might be equally desirable targets of exploration.

What we believe is needed is a detailed geologic study of the property in order to plan and present for consideration the details of an exploration program, together with the geologic basis for this program. We believe that the cost of such an examination by a competent mining geologist should not exceed $10,000, which should include the hire of assistants, transportation, and the preparation of a report. This type of work is a permissible project under the Defense Minerals Administration's program for the encouragement of exploration, and as such would be eligible for 50 percent Government participation. The mining geologist selected should be subject to the approval of DMA.

If you should care to enter into such a program, will you please present a new application on Form MP 103 (5 copies attached), omitting the questions answered in your previous application, and answering only those questions specifically pertinent to the new application. It can then be attached as a supplement to the earlier application and I believe that it can be given special handling to insure prompt approval. The new application should give the name of the proposed geologist.

We have delayed presenting this proposal to you in the hope that the appropriation implementing the exploration program for another year would be soon passed by the Congress for the next fiscal year. This would insure funds for exploration of your property provided the geological work resulted in an acceptable proposal. As of the moment, appropriations are being extended on a month to month basis without definite assurance that the requested funds will eventually be available. This uncertainty may continue for several weeks. However, we have enough confidence that the exploration program will be continued that we believe it best to present our proposal of a preliminary geologic examination to you at this time. If the proposal is acceptable to you, you can decide whether you want to go ahead with the examination or await the passage of the appropriation bill that will assure funds for a later project if an acceptable proposal should result from the geologic examination.

Very truly yours,

Tom Lyon 8/15 ce

Tom Lyon, Director
Supply Division

cc: Chief, Lead-Zinc Br.
E. T. McKnight
R. H. Mote
Reports and Records
Harold C. Miller (2)
Dir. Reading, Rm. 4212
Br. Reading, Rm. 4212
Files

ETMcKnight:jr
G: 8/13/51

Defense Minerals Administration
Salaries and Expenses Defense
Production Act Department of
Interior 1A0137 - 1952

FILE COPY
SURNAME

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

Billings
McCufflt
O'Leary
(Geo Mots)
Johnson.

August 13, 1951

Mr. Lloyd C. White
1005 Oxford Street
Berkeley 7, California

Letter being sent regarding alternate proposal.

T. P. Billings, Chief
Lead-Zinc Branch

TPBillings'lm

cc: Mr. Maye
Audits
Reports and Records
Mote
McKinght
DMA Docket File

DMA 1303

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

OFFICE OF
REGIONAL DIRECTOR

REGION IV

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

August 2, 1951

Has been returned

Memorandum

To: Landon Strobel, Executive Secretary, Defense Minerals Administration

From: Executive Officer, DMA Field Team, Region IV

Subject: DMA Docket 1303X, Yuma Metals, Inc., Yuma County, Arizona

The report on the above docket was mailed to your office on July 6, 1951, and it is believed that our file copies may have inadvertently been mailed to you at the same time.

If this is the case, it will be appreciated if you will return the extra copies so that the proper distribution can be made.

P. T. Allsman, for
J. H. East, Jr.
Executive Officer
DMA Field Team, Region IV

AUG 7 1951

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

224 New Customhouse
Denver 2, Colorado

July 6, 1951

Memorandum

To: Landon Strobel, Executive Secretary, Defense Minerals Administration

From: Executive Officer, DMA Field Team, Region IV

Subject: DMA Docket 1303X, Yuma Metals Inc., Yuma County, Arizona

We are attaching a report regarding the above docket. The Field Team concurs with the findings shown on the attached report.

J. H. East, Jr.

J. H. East, Jr.

Attachment

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 12 1951
LANDON F. STROBEL
Executive Secretary

JUL 16 1951

F.T. Rpt.

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

200 New Customhouse
Denver 2, Colorado

July 2, 1951

Memorandum

To: DMA Field Team, Region IV

From: A. H. Koschmann

Subject: Memorandum on DMA Docket #1303X, Yuma Metals, Inc., Yuma County, Arizona

Enclosed are the original and 5 copies of the memorandum on DMA Docket #1303X by C. A. Anderson and L. A. Stewart.

A. H. Koschmann

A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (6)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 12 1951
LANDON F. STROBEL
Executive Secretary

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

June 26, 1951

Memorandum

To: Field Team, Region IV

From: C. A. Anderson, U. S. Geological Survey, Tucson, Arizona
W. R. Storms, U. S. Bureau of Mines, Tucson, Arizona

Subject: Memorandum on DMA Docket #1303X, Yuma Metals, Inc., Yuma County, Arizona

Enclosed are 1 original and 5 copies of the memorandum on DMA Docket #1303X, written by C. A. Anderson and L. A. Stewart. This memorandum recommends that if exploration funds are available in Fiscal 1952, the applicant should have a detailed geologic examination of his property made by a consulting mining geologist, approved by the Government, to cost approximately $10,000, and that the Government pay for half of the cost of the examination. This work is necessary to plan an intelligent exploration program.

We approve of this recommendation.

Two copies of the brochure are enclosed.

No copies of the memorandum are to be returned to Tucson.

Charles A. Anderson

Charles A. Anderson
District Supervisor
Arizona-New Mexico

Walter R. Storms

Walter R. Storms
Chief, Arizona-New Mexico Br.
Mining Div., Region IV

Enclosures 8

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

June 26, 1951

Memorandum

To: Field Team, Region IV

From: C. A. Anderson, Geological Survey, Tucson, Arizona
L. A. Stewart, Bureau of Mines, Tucson, Arizona

Subject: DMA Docket #1303X, Yuma Metals Inc., Yuma County, Arizona

This docket was received in the Tucson office June 21, and Anderson conferred with Dr. E. D. Wilson of the Arizona Bureau of Mines June 22, as Wilson has done geologic work recently on the property of Yuma Metals Inc. and has made available his report. Further action was delayed until the return to duty on June 25 of L. A. Stewart who made a detailed study of the property in April, 1950, and has prepared a report for the Bureau of Mines. Stewart and Anderson conferred with Wilson on June 25, and the conclusions for this memorandum were made.

The letter to the Field Team, Region IV, from the Chairman of the Coordinating Committee stated that "as the application requests a rather large sum for exploration, a geologic appraisal, perhaps on the basis of what is already known in the regional offices, is needed."

The applicant proposes an exploration program to cost $300,000 for additional underground work in the Red Cloud mine; diamond drilling from the surface and underground on the Red Cloud claim; and surface diamond drilling on 12 additional claims. The number and location of the proposed holes, the bearings, depths, etc. are not given, nor are the geologic factors described that indicate the merit of the various targets. The only objective that is stated is to prospect for ore in the sulfide zone.

The claims owned by the company are in an area of 9 square miles, and the country is rugged and difficult of accessibility except with a jeep. A rapid reconnaissance by a member of the Geological Survey would not add to the geologic information available, which is too limited to locate drill holes and lay out a satisfactory exploration program. The Survey does not have the manpower in Arizona at this time to make the necessary detailed examination of the property.

According to Wilson's report, the ore deposits in the district consist of a number of veins containing the following gangue minerals: calcite, fluorite, quartz, and barite. The ore minerals are oxides of lead and zinc, together with wulfenite, vanadinite, and cerargyrite. Production from 1879 to 1949 totaled 1,559,201 ounces of silver; 2,329,059 pounds of lead; and 14,200 pounds of zinc. Much of this production came from the Red Cloud mine.

G. H. Roseveare, Metallurgist, Arizona Bureau of Mines, tested ore from the district, using standard methods of gravity, flotation, and cyanidation, and he recovered 55 percent of the silver, 80 percent of the lead, and 20 percent of the zinc.

Wilson stated that in his opinion, the main hope of the district is to find another ore shoot of oxidized lead ore on the Red Cloud vein. The depth to the sulfide zone is unknown, and there is no basis for making a prediction.

Wilson and Stewart believe the district is worthy of additional study, and that minable ore may be found by an exploration program. Stewart advised the owners of the property in April, 1950, that they should have a detailed geologic study made of this property in order to plan a sensible exploration program.

Recommendation: A detailed geologic study of the property owned by the Yuma Metals Inc. is necessary to plan an intelligent exploration program. It is estimated that the cost of such an examination by a competent mining geologist should not exceed $10,000, which should include the hire of assistants, transportation, and preparation of a report. It is recommended that the Government pay for half the cost of such an examination to be made by a consulting mining geologist, subject to the approval of the Government, provided exploration funds are available in Fiscal 1952.

If the conclusions of this geologic examination are favorable for an exploration program, the applicant should submit a detailed exploration program showing location of exploration targets, methods of exploration, and cost estimates.

Charles A. Anderson

Charles A. Anderson
U. S. Geological Survey

Lincoln A. Stewart

L. A. Stewart
U. S. Bureau of Mines

FILE COPY
SURNAME:

McKnight
White
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Ron

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

JUN 15 1951

Re: Docket DMA-1303

Lloyd C. White, General Manager
Yuma Metals, Incorporated
1005 Oxford Street,
Berkeley 7, California

Dear Mr. White:

Your application (DMA-1303) for a loan, submitted on behalf of the Yuma Metals, Incorporated, located about 25 miles north of Yuma, Arizona, has been referred to Mr. J. H. East, Jr., Executive Officer of the Field Team, 224 New Customhouse, Denver 2, Colorado, for further information and advice.

Very truly yours,

Tom Lyon, Director
Supply Division

ETMcKNIGHT:emp
G 6/14/51
Copies to: J. H. East, Jr. Region IV (2)
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
R. H. Mote
L. F. Strobel
Directors r. file 4214 GSA
Br. r. file 4214 GSA
Files

FILE COPY
SURNAME:

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

McKnight
Herbert

Mayfield to — JUN 15 1951

Docket DMA-1303X
Yuma Metals, Inc.
Mine in Silver District
North of Yuma, Arizona
Lead-zinc
Exploration loan

Mr. J. H. East, Jr.
Executive Officer, DMA Field Team
Region IV
224 New Customhouse
Denver 2, Colorado

Dear Mr. East:

This docket is being referred to the field for advice as the property has recently been visited and sampled by the Tucson office of the Bureau of Mines. Eldred Wilson of the State Bureau has also examined the property in recent months (see answer to question 7 (c) on Form 100). Possibly the Geological Survey personnel may be familiar with the property. As the application requests a rather large sum for exploration, a geologic appraisal, perhaps on the basis of what is already known in the regional offices, is needed. The description of the exact work proposed is inadequate and there is an apparent discrepancy between the answers to questions 21 and 10 (b) of Form MF-103, in that the answer to 10 (b) includes surface drilling on several deposits not mentioned in the answer to question 21.

Very truly yours,

Tom Lyon

Chairman
Coordinating Committee

Russell B. Moon

For the Bureau of Mines
Olaf N. Rove

For the Geological Survey

ETMcKNIGHT:emp
G 6/14/51
Copies to: Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
R.H. Mote
L. F. Strobel
Directors r. file 4214 GSA
Br. r. file 4214 GSA
Files

FILE COPY
SURNAME:

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

May 31, 1951

Mr. Lloyd C. White
General Manager
Yuma Metals, Inc.
1005 Oxford Street
Berkeley 7, California

Subject: DMA-1303X
Re: Exploration Loan
Old Red Cloud Mine

My dear Mr. White:

Receipt is acknowledged of your application and attachments of May, 1951 for an exploration loan under the Defense Production Act of 1950.

The application was assigned Docket Number DMA-1303X and was referred to Mr. Otto Herres, Chief, Lead-Zinc Branch on May 29, 1951.

In any future correspondence relating to your application, kindly refer to DMA-1303X.

Sincerely yours,

LANDON F. STROBEL

Landon F. Strobel
Executive Secretary

LFSTROBEL:jhs
cc: Strobel-2
Files
Herres
Lyon

DMA 1303