DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE Idm-E460 ____ DMEA NO. 2445

Application
- [ ] Denied
- [ ] Withdrawn

Contract
- [ ] Terminated - Not Certified
- [x] 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
- [x] Certification of Discovery
- [ ] Closing Letter
- [x] Cost Audits
- [ ] Termination Notice or Agreement
- [ ] Recision Notice
- [ ] 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)
- [ ] Work Comoleted analysis (final)

All other material filed in chronological order including the following reports if checked:

- [ ] Field Team Semi-Annual Report for Certified Project
- [x] Final Field Team Report (Tab)
- [x] Operator's Final Report (Tab)
- [ ] Interim Field Team Reports
- [ ] 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 Semi-Annual Inspection Reports
- [ ] Project Summary (Interim) by DMEA Engineers

Right Side

- [x] Field Team Semi-Annual 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. 3 : Royalty material

(ev)

17963

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-E460, Docket DMEA-2445 (mercury), dated November 10, 1952, with

Ord Mercury Mines
258 South Scottsdale Road
Scottsdale, Arizona

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 Ord Mercury Mine located in Gila County, Arizona, during the period December 13, 1955, through November 28, 1961.

A certification of discovery or development was issued on April 13, 1956, and, in accordance with Annex I attached to Amendment No. 4 of the contract, royalty is payable on all minerals produced from the land described in Article 2 of the contract for a period of 10 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 November 22, 1955, indicated accepted costs under the exploration contract amounting to $25,423.43 with the Government's contribution on a 75 percent basis being $19,067.57.

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 found the sales subject to the Government's royalty through December 14, 1955, to be $47,351.68. The royalty account as of December 14, 1955, was:

Total Royalty Payable	$2,367.62
Total Royalty Paid	2,424.54
Overpayment of Royalty	$ 56.92

At November 28, 1961, the royalty account of this project was found to be:

Total Royalty Payable	$2,367.62
Total Royalty Paid	2,367.62
Balance of Royalty Due	$ -0-

E. D. Talbert

E. D. Talbert, OME Auditor

December 1, 1961

STATUS OF PROJECT, SCOPE OF REVIEW
AND REASONS THEREFOR

The last exploration work under this contract was performed during October 1954. Prior to that date, that is on July 1, 1954, Uranium Enterprises Incorporated, 330 E. Camelback Road, Phoenix, Arizona, acquired control of the Operator and the property through an option to purchase 65 percent of the stock. On May 9, 1955, Uranium Enterprises became full owner through purchase of all of the Operator's stock. Although operations of the property after July 1954 continued in the name of the Operator, sales of production from November 1954 through May 1955 were in the name of Uranium Enterprises.

Prior to initiation of Uranium Enterprises milling operations only 608½ lbs. (8 flasks) of mercury were produced. Thereafter through May 1955, when all operations ceased, 11,251 lbs. (148 flasks) of mercury were produced from 2,530 tons of ore. All production came from the 240 level and from above the 150 level and ceased because of exhaustion of readily available ores and difficulty in rehabilitation of the small antiquated furnace.

All sales of production were covered by a prior Report of Royalty Review dated December 15, 1955. The $56.92 overpayment of royalty disclosed by that review was refunded to the Operator on January 24, 1956.

Inspections of the property and inquiries by field representatives of OME have found that, other than the removal of mining equipment and supplies during early 1957, no activity has occurred since the cessation of operations in 1955 and that no ore is stockpiled.

Annex I, a part of Amendment No. 4 to this contract, provides that the Operator, or his successor in interest, shall pay the Government a percentage royalty on all minerals produced from the five patented claims described in the contract. Annex I also grants the Government a lien upon the property and any production therefrom until the royalty claim is extinguished by lapse of time or is fully paid.

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

(1) The property has been inactive since May 1955;
(2) All sales of production have been accounted for and proper royalty thereon paid; and
(3) 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 additional royalty which might be disclosed.

MME Form 22
Dec. 60

DEPARTMENT OF THE INTERIOR
Office of Minerals Exploration

CHECK SHEET OF EXAMINING ENGINEER

Operator's Name and Address

Ord Mercury Mines, Inc.

258 South Scottsdale Road

P. O. Box 875
Scottsdale, Arizona

Contract No.	Docket No.
Idm E460	DMEA 2445

Prepared by (Signature)	Date
Hugh M. Connors	11-28-61

Hugh M. Connors

Yes	No		
		1. (a)	Does the Operator stockpile ore subject to royalty repayment?
		(b)	If so, is segregation and identification procedure adequate?
		2. (a)	Does the Operator commingle production subject to DMEA or OME royalties with exempt production?
		(b)	If so, is the allocation of the commingled production equitable?
		3. (a)	Does the Operator stockpile mine or mill rejects (low grade ore, tailing, middlings, etc.) that may have potential value within the royalty payment period?
		(b)	If so, are adequate records maintained on such material to protect the Government's interest?
		4.	Are the assay controls in effect adequate?
		5.	Does the manner of disposing of production give the Government its fair royalty returns?
		6.	Do your periodic examinations of operations indicate the Operator is properly reporting his production of ores subject to DMEA or OME royalties?
		7.	Does the Operator buy from or sell to other Operators?
		8.	Current status of property. (Check one).
			Operating.
	X		Inactive.
			Abandoned.

5-27-55 Date of last production if not operating.

Comment on items 1(b), 2(b), 3(b), and 4 to 6, if answer is No:

Uranium Enterprises -- 330 E. Camelback Road, Phoenix, Arizona made the last shipments, and I understand that James Poules is their Agent; his address is 7th & Pitkin Sts., Grand Junction, Colorado.

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DEC 28 1955

[redacted]

[redacted]

I have reviewed the files of the Executive Officer, DMEA Field Team, Region III, pertaining to Contract Ida-2446, Docket No. DMEA-2446, with

Sri Mercury Mines,
An Arizona Corporation
Phoenix, Arizona.

WSM

for the purpose of determining the amount of royalties due the U. S. Government on sales of mercury produced from property referred to as Sri Mercury Mines, located in Gila County, Arizona, during the period November 10, 1952 to December 14, 1955.

My review included correspondence with Mr. T. H. Remele, Mining Engineer, U. S. Bureau of Mines, Tucson, Arizona, who is thoroughly familiar with the project.

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

(1) The major portion ($42,476.68) of the sales of mercury was confirmed by direct correspondence with the purchaser, Mallard Chemical Company, Los Angeles, California;

(2) The balance of the sales ($4,875.00) of mercury were confirmed by examination of a copy of purchase orders issued by the purchaser, Brown Corporation, Los Angeles, California; and

(3) 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 additional royalty which might be disclosed.

The examination established the total net sales of mercury for the period under review to be $47,351.68. Royalties due the U. S. Government at the contract rate of 5% are $2,367.58. The royalties paid and the balance due are as follows:

Total Royalties Due	$2,367.58
Total Royalties Paid	[redacted]
Royalties Overpaid	[redacted]

LB Moody

November 15, 1955

T. H. Bunting, Auditor.

Schedule 3

RECEIVED
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[illegible]

STATEMENT OF INCOME RECEIVED
[illegible]

[illegible]

	PURCHASERS		
	Home Corporation	Retired Shareholder	Total
Number of Tickets	15	141	156
Total Value	$4,875.00	$43,762.00	$48,637.00
Deductions	-	$ 1,385.32	$ 1,385.32
Net Value	$4,875.00	$42,476.68	$47,351.68
Royalty Percentage	5	5	5
Royalties Due	$243.75	$2,123.87	$2,367.62
Royalties Paid	243.75	2,188.79	2,432.54
Royalties Overpaid		$64.92	$64.92

[illegible]

	[illegible]				[illegible]		
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1614 – 1638	$ 7,[illegible]	$ [illegible]	$ [illegible]	$ 7,[illegible]	[illegible]	$ [illegible]	[illegible]
1649 – 1651	954.00	47.70	28.62	965.38	46.27	47.70	1.43
1658 – 1677	6,360.00	[illegible]	315.80	6,044.20	308.21	[illegible]	15.79
1698 – 1702	4,796.59	239.84	144.38	4,652.72	232.64	239.84	7.20
1706 – 1708	2,240.00	112.00	67.20	2,172.80	108.64	112.00	3.36
1803 – 1812	3,200.00	160.00	96.00	3,104.00	155.20	160.00	4.80
1824 – 1829	1,817.00	90.85	54.50	1,762.50	77.95	80.64	2.69
1832 – 1835	1,820.00	91.00	48.50	1,772.70	78.09	80.50	2.41
1839 – 1854	2,238.00	112.90	67.14	2,170.86	109.52	112.90	3.38
1857 – 1860	1,288.00	64.40	38.64	1,249.36	62.47	64.40	1.93
1880 – 1883	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

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Check Sheet of Examining Engineer

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DEC 22 1955

Operator's Name Ord Mercury Mines

Address Payson,
Arizona

Exploration Contract No. Idm-E460 Docket No. DMEA-2445

	Check One Yes	No
1. (a) Does the Operator stockpile ore subject to royalty repayment?		✓
(b) If so, is segregation and identification procedure adequate?		
2. (a) Does Operator commingle production subject to DMEA royalties with exempt production?		✓
(b) If so, do you consider the allocation of the commingled production equitable?		
3. (a) Does the Operator stockpile mine or mill rejects (low grade ore, tailing, middlings, etc.) that may have potential value within the royalty payment period?		✓
(b) If so, are adequate records maintained on such material to protect the Government's interest?		
4. Do you consider the assay controls in effect are adequate?	✓	
5. Do you consider that the manner of disposing of production gives the Government its fair royalty returns?	✓	
6. Do your periodic examinations of operations indicate the Operator is properly reporting his production of ores subject to DMEA royalties?	✓	
7. Does the Operator buy from or sell to other Operators?		✓

8. Comment on any item 2 (b) to 6 if answer is No.

W M Pomeroy
Mining Engineer

Date Oct 21, 1955

82448

CERTIFICATION BY THE UNITED STATES OF AMERICA
OF A DISCOVERY OR DEVELOPMENT UNDER AN
EXPLORATION PROJECT CONTRACT

To: Ord Mercury Mines
258 South Scottsdale Road
P. O. Box 875
Scottsdale, Arizona

Pursuant to the provisions of Exploration Project Contract No. Idm-E460, dated November 10, 1952, as amended, (Docket No. DMEA 2445), hereinafter called the "Contract," between Ord Mercury Mines, a corporation, and the United States of America, hereinafter called the "Government"; to establish and fix the Government's percentage royalty on production and its lien therefor and on the land described in the contract, the Government considers and therefore certifies that a discovery or development from which production may be made has resulted from the exploration work.

The nature of said discovery or development is described broadly or indicated as follows:

Rehabilitation to the 200-foot level and winzing and drifting below that level resulted in the discovery or development of mineralized zones of altered schists bearing cinnabar and metacinnabar.

Mineralization occurs in parallel shear zones. In these zones the schists and phyllites have been crumpled, sheared, hydrothermally altered and locally impregnated with cinnabar and quartz.

cc: Docket
Code 400
Code 800
Code 110

THE UNITED STATES OF AMERICA

Dated: APR 1 3 1956

By [signature]
Administrator, Defense Minerals
Exploration Administration

Oper. Committee
Adm. Read. File
Thor Kiilsgaard, USGS
R. W. Geehan, USBM
Helena Meyer, USBM

cc: C. A. Fredell, Act.Dir.,EPS,GSA
Finance Office
Field Team, Region 3

ADMcMahon/ls
2/21/56

400

Amea 2445

[redacted] MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

Old Mercury Mine,
An Arizona Corporation
Globe, Arizona.

pertaining to Exploration Project Contract No. [redacted], Docket No. [redacted], including Amendments Nos. 1 to 5, for the months of February, 1953 to October, 1954, inclusive, covering a project for the exploration of Mercury on property known as Old Mercury Mine, located in Gila County, Arizona.

My review included an examination of the Monthly Reports (Form MF-104) and supporting documents attached thereto, comparison of the costs claimed with the contract and pertinent schedules, 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 for the first month, or that portion of the contract under actual cost basis of $1,540.93, were supported by documentary proof of the costs incurred under the contract; and

C. A major portion ($23,882.50) 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		$25,423.43
Exceptions:		
By [redacted] Finance Officer	$0.00	
Herewith	0.00	0.00
Total Accepted Cost		[redacted]

The contract calls for a 75 percent participation of exploration expenses by the United States Government. Therefore, payment to the contractor by the Government in the amount of Nineteen thousand, sixty-seven, and 57/100ths Dollars

or $19,067.57 or

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.

November 22, 1955

F. H. [redacted], Auditor

Chron 19

No. 2

AMENDMENT OF CONTRACT: No. Idm-E460

Contract Docket No. DMEA 2445, dated November 10, 1952, between the United States of America and Ord Mercury Mines, is hereby amended as follows, effective September 10, 1954:

> Referring to Amendment No. 4, dated May 10, 1954, paragraph ending with "twenty-two (22) months", change the said twenty-two (22) months to read "twenty-four (24) months".
>
> Further referring to said Amendment No. 4, subheading "Stage II 1/", following the words "said unexpended balance of funds amounting to $1225.00 will be expended", delete the next three lines, and "40 feet of raise at $30.00 per foot" and in lieu thereof substitute the following: "in extending the drift westerly on the strike of the mineralization on the 240 level (called sub-level by operator)."

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 OCT 11 1954

ORD MERCURY MINES

By Tom J Russell

Seal

UNITED STATES OF AMERICA

By W H King

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

Partin 7/1/54

No. 4

AMENDMENT OF CONTRACT: No. Idm-E460

Contract Docket No. DMEA 2445, dated November 10, 1952, between the United States of America and Ord Mercury Mines is hereby further amended as follows, effective March 26, 1954:

Referring to "Article 3. Exploration project" of Exploration Project Contract Form MF-200 (June 1951) (Revised Feb. 1952), following the words "and shall bring the project to completion within a period of", delete "eighteen (18) months" and in lieu thereof substitute "twenty-two (22) months".

Referring to EXHIBIT "A" attached to Exploration Project Contract Form MF-200 (June 1951) (Revised Feb. 1952), work described under headings Stage II and Stage III, subheadings "Description of the Work" and "Costs of the Work", said work description and relevant costs are modified as follows:

Stage II 1/

Whereas only 265 feet of drifting and crosscutting has been performed on the 300 level at a cost of $9,275.00 and conditions encountered do not warrant further drifting on the 300 level, which leaves an unexpended balance of 35 feet of drifting and crosscutting and funds amounting to $1,225.00. Therefore, in lieu of performing the remaining 35 feet of drifting on the 300 level at $35.00 per foot, said unexpended balance of funds amounting to $1,225.00 will be expended in driving a raise on the metacinnabar mineralization at a point in the 300 level drift approximately 90 feet from the inclined winze as follows:

40 feet of raise at $30.00 per foot

Stage III 1/

The 200 feet of drifting and crosscutting at the agreed unit cost of $35.00 per foot, described under Stage III of said EXHIBIT "A" will be expended in extending the drift westerly on the strike of the ore on the 240 level (called 248 sublevel by operator) and crosscutting therefrom to the extent acceptable to the Government, dependent on conditions encountered as the work progresses.

Referring to Article 9 of Exploration Project Contract Form MF-200, the provisions of Annex I, attached hereto and made a part of this amendment are substituted in lieu of said Article 9.

1/ The work to be performed under this amendment is shown on the map titled "Section in Plane of Mineralized Zone - Ord Mercury Mine" which is attached hereto and made a part of this amendment.

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 MAY 10 1954

ORD MERCURY MINES

By Fred O. Jones
President

UNITED STATES OF AMERICA

By W.H. King
W.H. King, Executive Officer
MEA Field Team, Region IV

Seal

PROPERTY OF THE [illegible]
Bureau of Mines Information
[illegible]
[illegible] 13 1954

ANNEX I

The following provisions are in lieu of Article 9:

Repayment by Operator.--a. Certification.--If at any time the Government considers that a discovery or development from which production may be made has resulted from the exploration 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. Percentage royalty.--The Operator, or his successor in interest, shall pay to the Government a royalty on all minerals mined or produced from the land described in Article 2,--(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 of discovery or development, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first, unless the Government waives its right to a royalty; or (2) if the Government makes a certification of discovery or development, for a period of ten years (or other period fixed by this contract) from the date of the contract, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first. Said royalty shall be a percentage of the net smelter returns, the net concentrator returns, or other amounts realized from the sale or other disposition of any such production (including any bonuses, premiums, allowances, or other benefits), in whatever form disposed of, including ore, concentrates, or metal, as follows:

(a) One and one-half ($1\frac{1}{2}$) percent of any such net amounts not in excess of eight dollars ($8.00) per ton.

(b) One and one-half ($1\frac{1}{2}$) percent of any such net amounts, plus one-half ($\frac{1}{2}$) 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.

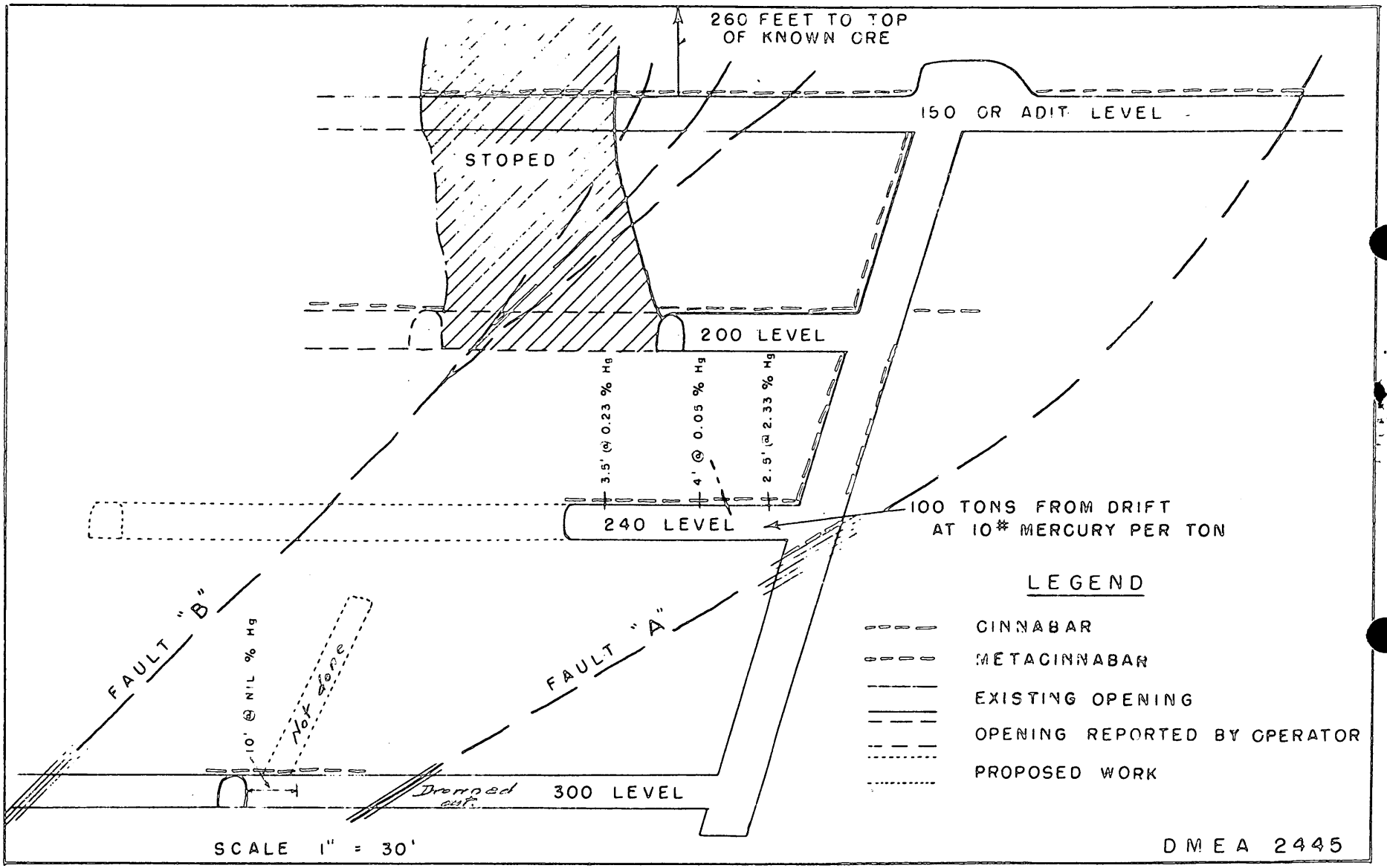
(For instance: the percentage royalty on a net amount of five dollars ($5.00) per ton, would be one and one-half ($1\frac{1}{2}$) percent; on a net amount of ten dollars ($10.00) per ton, three and one-half ($3\frac{1}{2}$) percent.)

c. Definitions.--As here used, "net smelter returns", "net concentrator returns", and "other 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.

d. Lien for Payment.--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.

e. Notice to Purchasers.--The Operator shall notify any purchaser of the production of the Government's royalty interest, and shall authorize and direct the purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets; but failure or refusal by the purchaser to comply shall not relieve the Operator of liability to pay any royalty falling due.

f. No Obligation to Produce.--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.



SECTION IN PLANE OF MINERALIZED ZONE - ORD MERCURY MINE

No. 3

Rubin 2/9/54

AMENDMENT OF CONTRACT: No. I m-1460

Contract Docket No. DMEA 2445, dated November 10, 1952, between the United States of America and Ord Mercury Mines is hereby amended as follows, effective as of the date of said Contract:

> Referring to "Article 3. Exploration project" of Exploration Project Contract Form MF-200 (June, 1951) (revised Feb. 1952), as amended by Amendment No. 2 dated Sept. 21, 1953, following the words "and shall bring the project to completion within a period of", delete "one year" and in lieu thereof substitute "eighteen (18) months".

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 NOV 30 1953

ORD MERCURY MINES

By Tom J. Russell
Tom J. Russell

UNITED STATES OF AMERICA

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

(SEAL)

No. 2

AMENDMENT OF CONTRACT: No. Idm-E460

Contract Docket No. DMEA 2445, dated November 10, 1952, between the United States of America and Ord Mercury Mines is hereby amended as follows, as of the date of said contract:

> Referring to "Article 3. Exploration Project" of Exploration Project Contract Form MF-200 (June 1951)(Revised Feb. 1952), delete "nine (9) months" and in lieu thereof substitute "one year."

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: SEP 21 1953

ORD MERCURY MINES

By Tom J. Russel
Tom J. Russel

UNITED STATES OF AMERICA

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

Seal

Docket G.

No. 1

AMENDMENT OF CONTRACT: No. Idm-E460

Contract Docket No. DMA 2445, dated November 10, 1952, between the United States of America and Ord Mercury Mines is hereby amended as follows, effective as of the date of said contract:

> Referring to Article 3, Exploration Project, after "The Operator, within", strike out "sixty (60)" and insert "one hundred twenty (120)". (drop)
>
> Referring to EXHIBIT "A", Stage 1, Operating Equipment, subheading To be furnished by Operator, delete the following: "1 - 1949 Chevrolet 1½ ton pickup - allowable monthly depreciation $20.00*" and insert in lieu thereof the following: "1 - 1947 Chevrolet ½ ton pickup - allowable monthly depreciation $20.00*".

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 March 17, 1953

ORD MERCURY MINES

By Tom J Russell

UNITED STATES OF AMERICA

By W. H. King

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

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 1 1952

DOCKET DMEA 2445

COMMODITY Mercury

Idn-E460

U. S. BUREAU OF MINES
MINERAL SURVEY
DEC 1 1952
TUCSON, ARIZONA

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
EXPLORATION PROJECT CONTRACT[1]

IT IS AGREED this 10th day of November, 1952, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] Ord Mercury Mines, an Arizona Corporation
Tonto Basin, Arizona
Payson (N.A)

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 Gila, described as follows:[3]
Ord No. 6, U.S. Survey No. 4086; Ord No. 7, U.S. Survey No. 4086; Ord No. 12, U.S. Survey No. 4086; Ord No. 13, U.S. Survey No. 4086; Ord No. 19, U.S. Survey No. 4086

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 [redacted]
A promissory note in favor of the Reconstruction Finance Corporation in the amount of $36,598.37. A copy of a letter from the R.F.C. to the DMEA Administrator subordinating the rights of the R. F. C. to the DMEA is attached.

(*b*) ~~That the Operator is a lessee, in possession and entitled to possession, and the Owner's consent to this contract 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 (60) days from the date of this contract shall commence work on a project of exploration for[5] Mercury

in or upon the described land; and shall bring the project to completion within a period of nine (9) months 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 [redacted] 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 [illegible] 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 seventy-five percent of the allowable costs incurred, as they accrue, in an aggregate total amount not in excess of $21,000.00, which is 75 percent of $28,000.00, 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

Ord Mercury Mines
(Operator)

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

By H. Grady Harrison Pres

I, , certify that I am the secretary of the corporation named as Operator herein; that , who signed this contract on behalf of the Operator, was then 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.

Tom J. Russell Sec

[CORPORATE SEAL]

U. S. GOVERNMENT PRINTING OFFICE 16—66328-1

EXHIBIT A

Description of the Work

The exploration project is divided into three stages and consists of the following:

STAGE I

This stage consists of rehabilitating the 0-,50-, and 100 foot levels, unwatering the mine to the present bottom at the 200 foot level, and sampling the accessible workings.

Estimated Costs of the Project

(Items followed by an asterisk are allowable maximums)

(1) Independent Contracts

None

(2) Labor, Supervision, Consultants

Supervision	$300.00*	
Labor-2 miners for 4 weeks	718.00	
		1,018.00

(3) Operating Materials and Supplies

Timber, fuel, greases, small tools, nails, bolts, and any other supplies and materials necessary to complete this project	420.00

(4) Operating Equipment

To be purchased

None

To be rented

Pump	100.00* per month	100.00

To be furnished by Operator

1-300 c.f.m. compressor-allowable monthly depreciation	70.00*

1 - 1949 Chevrolet 1½ ton pickup-allowable monthly depreciation	$20.00*	
2 - Mine cars - allowable monthly depreciation	5.00*	$95.00

(5) Initial Rehabilitation and Repairs

None

(6) New Buildings, Improvements, Installations

None

(7) Miscellaneous

Assaying	150.00	
Bookkeeping	50.00	
Repairs and maintenance-operating equipment	67.00	
Workmen's Compensation, employer's liability and payroll taxes	100.00	367.00

(8) Contingencies

Total contingencies	700.00
Total Cost of Stage I	2700.00
Government's participation, Stage I, at 75%	2025.00

The Operator will perform the work indicated under Stages II and III on a unit basis which includes all costs of the work and the Government will reimburse the Operator for the Government's pro rata share of the costs on the basis of the agreed unit costs indicated below, as they accrue, for units of work actually performed, in lieu of actual costs.

STAGE II

Description of the Work

Stage II is to be undertaken only after completion of Stage I, and the location and extent of the work is dependent upon the results of Stage I. This work must have the prior written approval of the DMEA representative.

Stage II consists of minor repairs to company-owned houses, sinking the adit winze 100 feet below the 200-foot level, drifting westward approximately 260 feet from the bottom of the winze on the new 300-foot level, and driving 40 feet of crosscuts. The location and extent of the crosscuts will be determined after part or all of the drifting is completed, and must be acceptable to the DMEA representative.

The location of the tunnel in relation to the property line is shown on Figure 2 attached, which is made a part of this exhibit.

The location of the proposed extension of the winze and of the proposed drift is shown on Figure 3 attached, which is made a part of this exhibit.

Estimated Costs of the Work

Repairs to company-owned houses	$ 800.00 1/	
Sinking 100 feet of 2-compartment winze at $70.00 per foot	7000.00	
Driving 300 feet of drifts and crosscuts at $35.00 per foot	$10500.00	
Total Cost of Stage II		$18,300.00
Government's participation at 75%		$13,725.00

1/ The entire work constitutes the unit of work.

STAGE III

Description of the Work

Stage III is to be undertaken only after completion of Stage II, and the location and extent of the work is dependent upon the results of Stage II. This work must have the prior written approval of the DMEA representative.

Stage III consists of driving an additional 200 feet of drifts and crosscuts.

Costs of the Work

Driving 200 feet of drifts and crosscuts at $35.00 per foot	$7000.00	
Cost of Stage III		7,000.00
Government's participation at 75%		5,250.00
Total Cost of project		$28,000.00
Total Government's participation at 75%		$21,000.00

C
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RECONSTRUCTION FINANCE CORPORATION

WASHINGTON 25, D. C.

October 27, 1952

Mr. C. O. Mittendorf
Administrator
Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D. C.

Re: Ord Mercury Mine
Tonto Basin, Arizona

Dear Mr. Mittendorf:

Reference is made to your letter dated October 13, 1952, in connection with the captioned mine.

I wish to advise that this Corporation interposes no objection to the proposed exploration project referred to in your aforesaid letter and in the event commercial production of ore results, this Corporation will not object to the payment from proceeds of production of royalties due the Government under the contract.

Very truly yours,

/s/ Leo Nielson

Leo Nielson
Secretary

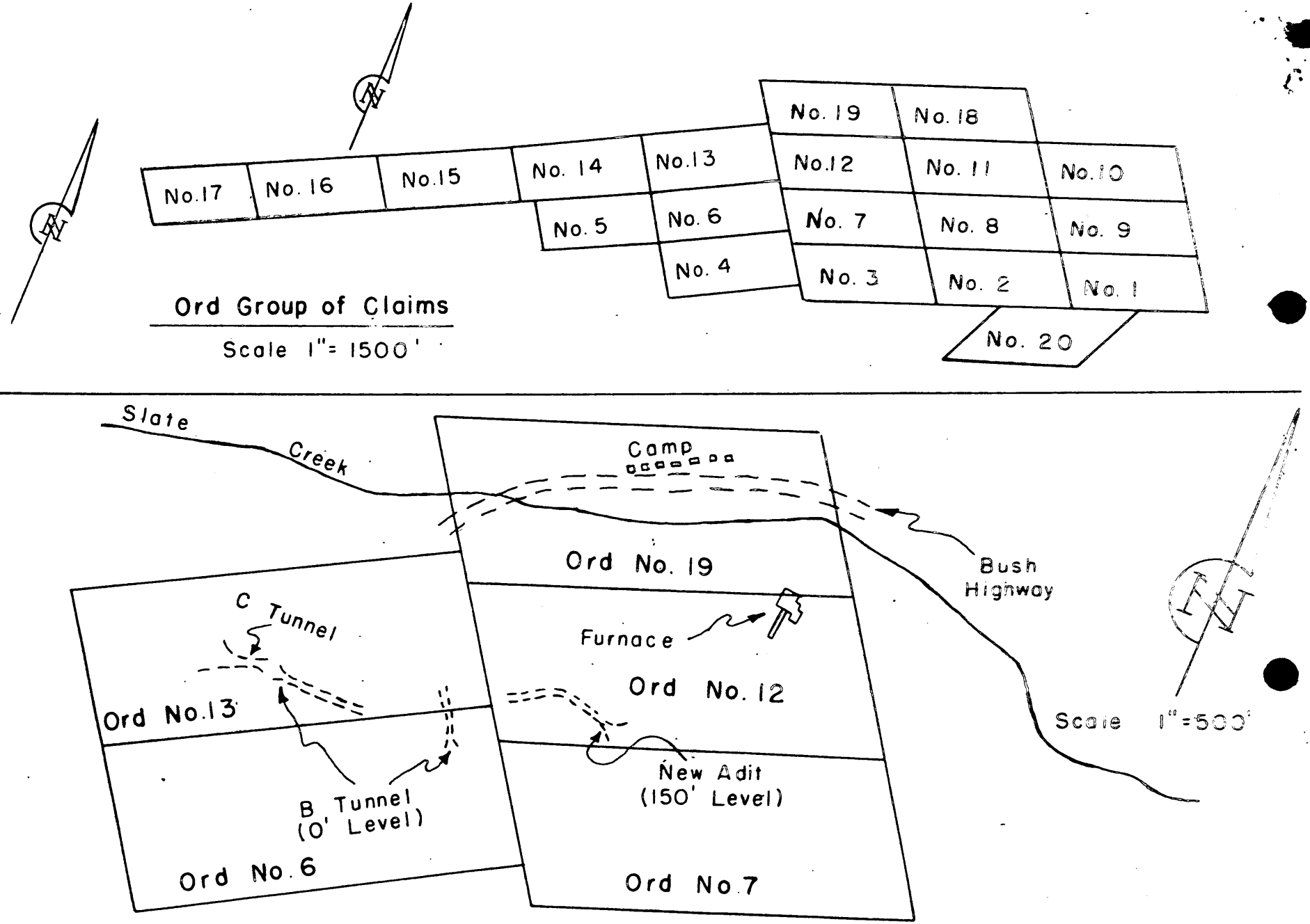

FIG. 2— Claim Map, Ord Mercury Mine

Gila County, Arizona DMEA 2445

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

MF-103 Should Be Filed With General Technical Data Form MF-100

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

Not To Be Filled in by Applicant

Docket No. DMEA-2445
Metal or Mineral
Date Received 3-24-52
Amount $
Participation (Government %)

[illegible]
[illegible]
[illegible]

Name and address of applicant

Date March 17th, 1952

If you have already filed MF-100, give date filed May 14, 1951, type of assistance requested Production loan $15,000.00 procurement contract

DMA Docket Number (if available) ~~0330~~

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four copies each, of the signed application form, General Technical Data Form MF-100, and answers to questions as specified, to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive office thereof, with your name and address on each sheet of the application and all accompanying papers. If you have previously filed MF-100, it is not necessary to file it again. However, you should indicate in space provided above the type of assistance previously applied for (loans, procurement contracts, etc.) and DMA Docket Number, if available. *When a question is inapplicable it should be so stated in the form.* Additional sheets should be attached in answering any questions or in supplying additional information. IF YOU CANNOT ANSWER A QUESTION, SO STATE.

1. (*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*) If you are not the owner of the property, submit a copy of the lease, purchase option, or other agreements under which you are authorized to operate the property with each copy of your application.

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

   NOTE: (1) 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 (*c*) 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.

   (2) If applicant is not the owner of the property or if there are any liens or encumbrances against the property, copy of agreements of claimants, lienors, encumbrances, and lessors subordinating their interests in the property to the interest of the Government under the Exploration Project Contract will be required for attachment to the Contract.

2. (*a*) What metals or minerals do you expect to find?

   (*b*) Furnish statement of the geologic features of your property, giving type of ore deposit and reasons for expecting to find commercial ore bodies. Illustrate with maps or sketches. If you have a geologic or engineering report, or assay maps showing width and grade, please send them with application, stating whether or not you wish to have them returned.

The information requested questions 3, 4, 5, 6, 7, 8, and 9 below should be answered specifically and in detail, as this information will be attached to and incorporated as part of the Exploration Project Contract, if such contract is entered into with you by the Government.

ANSWER EACH QUESTION ON SEPARATE SHEETS OF PAPER AND SUBMIT A COPY OF EACH ANSWER FOR EACH COPY OF YOUR APPLICATION.

3. (*a*) Describe fully the proposed work and give the total cost of the project.

   (*b*) State the time required to start the project and to complete it.

4. Submit a map or sketch of the property involved showing a plan (and cross section, if needed) of the present mine workings and the *location of the proposed exploration work* as related to geologic features, such as contacts, veins, ore-bearing beds, etc.

5. Furnish an itemized list of existing facilities, buildings, installations, and fixtures with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition.

6. Furnish a detailed list of additional facilities, buildings, and fixtures to be purchased, installed, or erected by you, with the estimated cost of each item.

7. Furnish a detailed list of operating equipment, separated into items to be—

   (*a*) Rented

   (*b*) Purchased

   (*c*) Furnished by you

   with the rental, purchase price, or depreciation of each item, as the case may be, to be charged as a cost of the project.

8. Furnish an itemized schedule of labor, by numbers and classes (miners, muckers, etc.) and of supervisors by numbers and positions, with the maximum wages or salaries to be paid to each.

9. Furnish a detailed list with estimated cost of each item for materials, supplies, engineering, assaying, accounting, power, water, utilities, and any other items not provided for above.

10. (*a*) How much are you prepared to invest in the proposed project?

    (*b*) Is this amount sufficient to pay your part of the cost of the project, in accordance with the regulations on Government participation (Sec. 9 of MO–5)?

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

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.

CRD MERCURY MINE
(Name of company)

By Tom Russell
(Signature of authorized official)

March 17th, 1952
(Date)

Secretary-Treasurer
(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—64067-2

SHEET NO. I

I. (a) Ord claims, patent survey No. 4066, Township 7N Range 9, Brown Mining District, Gila County, Arizona.

(b) Owned by Ord Mercury Mine, a corporation organized under the laws of the State of Arizona.

(c) Same as I (a).

Note: (1)

(2) Only as R.F.C. contract on DND-4604 (docket) No other encumbrance on property.

SHEET NO. 2

2. (a) Mercury.

(b) R. F. C. has maps on this property.

SHEET NO. 3

3. (a) Sinking present 50 foot winze in our adit level tunnel 100 foot and drifting 300 to 400 foot. Approximate cost: $20,000.00.

(b) Can start at once. Will complete work in approximately six months.

4. Complete maps are in the RFC files, except the present 50 foot winze, which is located 800 feet inside our (adit) level tunnel, about 480 feet from the surface outcrops and has about 125 feet of drifting. Those winze workings are all on the vein. The winze is shown on their maps but not a cross section of the stoping in same. This vein is along side of a quartzite-Jasper dike folded in a large formation of pre-cambrian schist and slate.

SHEET NO. 5

5. Equipment available for work: 3 houses, compressor, 300 cubic ft., D2800 Caterpillar Diesel V bolted to same, Hoist, buckets, mine cars, and all required is to clean up same. Was all in operating condition when last used. Approximate cost of this work $500.00.

SHEET NO. 6

6. Roofing for present camp buildings approximately $300.00.

7. Rented: Air pump to unwater 50 ft. winze. Approximate cost $100.00. Can salvage our own on the 50 ft. level. Air hose is broken to same.

(b) Purchased: New Jackhammer, some steel and small tools such as picks, shovels, wrenches, etc. Approximate cost $500.00.

(c) All our available machinery and equipment.

SHEET NO. 8

8.	Hoistmen	2	$10.00	each	per	day
	Miners	4	10.00	"	"	"
	Trammers	2	8.00	"	"	"
	Mechanic	1	10.00	"	"	"
	Supervisor	1	400.00	per month		

(Day men subject to overtime for over forty hours per week)

SHEET NO. 9

9.	Timber and Ranger rods	approximately	$4,000.00
	Supplies, carbide, nails, pipe, etc.		1,000.00
	Accounting	Approximately	300.00
	Assaying: Have own equipment		

SHEET NO. 10

10. (a) $5,000.00

(b) Yes

11. We have a complete 25 ton mill on the property and a large tonnage of medium grade ore developed. What we wish to accomplish is to explore this deeper ore body to assure a higher grade ore for our mill feed. Our last level in this vinne was much higher in value than the adit level ores.

DOCKET
SURNAME

McMahon
Martin
Yk Johnson

April 12, 1956

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: General Summary of Contract and Results Obtained
Docket No. DMEA 2445 - Mercury
Ord Mercury Mines,
Ord Mercury Mine
Gila County, Arizona
Contract No. Idm-5460

Operator: Ord Mercury Mines,
258 South Scottsdale Road, P. O. Box 875
Scottsdale, Arizona

Operator's property rights:

The five claims, Ord Nos. 6, 7, 12, 13 and 19, patented under U. S. Survey 4086 and located in the northeast corner of unsurveyed T. 7 N., R. 9 E., Sunflower Mining District, Gila County, Arizona, are owned by the operator.

Contract:

1. Executed November 10, 1952.
2. Completion period - nine (9) months. Under four amendments to the contract this completion was extended to twenty-four (24) months.

Work authorized:

The project was divided into three stages:

(1) Rehabilitate the upper levels, unwater the mine to the bottom 200 level and sample accessible workings; (2) sink winze 100 feet, drift and crosscut 300 feet therefrom and repair company owned houses; (3) drift and crosscut an additional 200 feet.

Total cost of work authorized	$28,000.00
Government participation @ 75%	$21,000.00

Work completed:

Rehabilitation and dewatering to the 200-foot level.

Winze	93 feet
Drifting and cross-cutting	473½ feet

Total expenditures for completed work	$25,423.43
Government participation @ 75%	$19,067.57

Reports: The Operator's Final Report was received by DMEA in Washington, D. C., January 26, 1956.

The Final Engineering and Geological Reports were received January 9 and February 23, 1956, respectively.

Audits:

A Report of Review, dated November 22, 1955, was submitted in lieu of a final audit because most of the expenditures were based on unit costs of work performed. The expenditures of that portion of the contract under an actual cost basis were supported by documentary proof.

Application for Additional Work:

On April 1, 1955, the Operator requested an amendment providing for drifting, crosscutting and diamond drilling estimated at $176,550.00. The application was denied after a field examination of the Operator's proposals.

Certification:

A certification of discovery or development was prepared by this Division on February 17, 1956, Issued Apr. 13, 1956.

Summary:

Stage I sampling on the 200-foot level encouraged proceeding with Stage II. The winze was sunk to the 300' level; drifting 224 feet westward and 40 feet of crosscutting encountered no ore on this level. By amendment of the contract, the balance of the authorized Stage II drifting was transferred to the 240-foot level where good ore was found. The 240 west drift was advanced 256.5 feet. However, in the last 40 feet there was no ore and the examiners observed that the alteration and leaching of the schist were decreasing, indicating the face was beyond the mineralized zone. Accordingly, the examiners recommended the balance (26.5)feet) of the authorized drifting be cancelled and the contract be terminated. The ore discovered on the 240 level

has been mined, along with a small amount from above the 150 level. Total production under terms of the contract is 2,530 tons of ore yielding 156 flasks of mercury on which $12,367.62 was paid to the Government through January 1956.

In addition to the production mentioned above the field examiners estimate inferred ore reserves amounting to 6,000 tons consisting of 5,500 tons of three (3) pound ore above the 200-level and 500 tons of eight (8) pound ore below the 200-level. The ore discovered as a result of this DMEA exploration project is summarized as follows:

	Tons of Ore	Hg. content (lbs./ton)	Lbs. Hg	Flasks Hg
Production	2,530	4.69	11,856	156
Reserves above 200 level	5,500	3.00	16,500	217
Reserves below 200 level	500	8.00	4,000	53
TOTAL -	8,530	3.79	32,356	426

W. S. Martin, Chief
Iron and Ferro-Alloys Division

ADMcMahon
4/12/56
cc to: Docket
Code 400
Admr. Read. File
Oper. Comm.

MME Form 7
(2/63)

OFFICIAL FILE

Date	Surname	
8/4		1
8/4/66	Kirkham	120
		220

Mr. Russell Wright
4839 East Osborn Road
Phoenix, Arizona

AUG 4 1966

Re: DMEA-2445 (Mercury)
Ord Mercury Mines
Ord Mercury Mine
Gila County, Arizona
Contract Idm-E460

Dear Mr. Wright:

This is in reply to your letter of July 29, 1966, concerning available information under the subject contract.

Factual data supplied by the operator under an exploration contract may be made available to the owner of the property, if the operator has abandoned all interest in the property. Also such data may be released to other parties upon written authorization from the operator or owner.

Upon receipt of such written authorization we shall be glad to release to you available factual data on the Ord Mercury Mine. There will be a charge of $5.00 for the cost of duplication and mailing. Check or Money Order for this amount should be made payable to the U. S. Geological Survey.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

cc: Director's reading file
Division file
Economic Geology file
OME file
OME reading file
FEJohnson/bih 8/4/66

23263

OFFICIAL
COPY
O. M. E.
RECEIVED
AUG 2 1966
INITIALS | CODE
110

RUSSELL A. WRIGHT
4839 EAST OSBORN ROAD
PHOENIX, ARIZONA

July 29, 1966

DMEA 2445

Defense Minerals Exploration Administration
Washington, D. C.

Re: Ord Mine
Mazatzal Mountains
Arizona

Gentlemen:

In 1952 Russell & Associates procured a DMEA loan to explore certain levels in the above named mine.

I am considering and investigating the feasibility of reopening this mine for the production of mercury, and would like to study all available geological and exploration data.

If your department sends out such data I would like to have them. Otherwise perhaps you could advise which governmental agency would have this available to me.

Yours very truly,

Russell Wright

Russell Wright

MME Form 7
(2/63)

JUL 9 1963

OFFICIAL FILE COPY

Date	Surname	Code
7/9		120
		110
		100
		220

FILE: Docket DMEA-2445

Mr. R. R. Maurer
Area Director, Area VI
U. S. Bureau of Mines
430 Custom House
555 Battery Street
San Francisco 11, California

Re: DMEA Contracts

Dear Mr. Maurer:

Reference is made to the June 25, 1963, memorandum of W. F. Dietrich to William H. Kerns, Project Coordinator, Division of Mineral Resources, Region III, Denver, Colorado, a copy of which was forwarded to us for action. It is our understanding that Mr. Dietrich retired at the end of June.

In the early days of the DMEA it was decided that any information relating to DMEA projects which was to be published would be cleared with the operator or owner of the property involved. If either the Bureau of Mines or the Geological Survey were to describe exploration work done at a property under a DMEA contract, the DMEA participation was to be mentioned. The files in Mr. Fille's office should cover the matter of handling the DMEA information and the review of manuscripts involving DMEA projects.

Only one contract for mercury was executed in Region III. This involved the Ord Mine in Arizona, DMEA Docket No. 2445. Exploration under the contract involved rehabilitation and unwatering of the mine to the 200-foot level, sinking a 93-foot winze to the 300-foot level, and 265 feet of crosscutting and drifting was done on the latter level. Subsequently, the contract was amended and 208 feet of drifting was done on the 240-foot level. Ore was mined from the 240-foot level and above.

The DMEA has always held confidential the amount of money expended on a project except in the cases where the Government's participation was repaid in full. With regard to the DMEA Field Team's estimate of reserves, which is confidential information for Government use only, it was estimated that 10,000 tons of ore averaging 3.5 pounds of mercury per ton remained above the 200-foot level, and 1,000 tons averaging 5 pounds of mercury per ton below the 200-foot level largely in pillars. Production under the DMEA contract amounted to 2,530 tons of ore from which 156 flasks of mercury were recovered averaging 4.48 pounds per ton.

GCSelfridge/gla (7-9-63)

Sincerely yours,

cc to: Director's Reading File
G. C. Selfridge
W. H. Kerns, Denver, Colo.
Hugh M. Connors, GME

Director

C. H. Johnson, Rm. 4604

2326

orm 7
-58)

OFFICIAL FILE COPY

Date	Surname	Code
	Gruenwald	500
	Selbredge	120
2/21	[illegible]	110
2-21	Fumich	100
		220

FEB 21 1963

Mr. R. M. Seabury
Office of Defense Lending
Treasury Department
Main Treasury Building
Washington, D. C.

Re: DMEA-2445 (Mercury)
Ord Mercury Mines
Ord Mercury Mine
Gila County, Arizona
Contract Idm-E460

Dear Mr. Seabury:

We are enclosing for your attention a letter concerning mortgages to the Reconstruction Finance Corporation. We understand that this falls under your jurisdiction.

Sincerely yours,

George Fumich, Jr.

Director

Enclosure

WRGriswold/mm
2/20/63
cc: Director's Reading
Docket
Code 500

COPY

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
	[illegible]	170
	Selfridge	220
2/21	[illegible]	110
2-21	Fumich	100
		220

FEB 2 1 1963

Mr. George M. Hill
Hill, Savey and Mitchell
512 Arizona Bank Building
Phoenix 3, Arizona

Re: DMEA-2445 (Mercury)
Ord Mercury Mines
Ord Mercury Mine
Gila County, Arizona
Contract Idm-2460

Dear Mr. Hill:

Your February 15 letter concerning certain mortgages to the Reconstruction Finance Corporation has been referred to:

Mr. R. M. Seabury
Office of Defense Lending
Treasury Department
Main Treasury Building
Washington, D. C.

We are sure that you will be advised in due time.

Sincerely yours,

George Fumich, Jr.

Director

(pf)

cc: Mr. R. M. Seabury
Director's Reading File
Docket
Code 500
WRGriswold/mm'
2/20/63

43683

Treasury Department
Office of Defense Lending

OFFICIAL FILE COPY
O. M. E
RECEIVED MAR 4 1963

DATE		
3/4		800
3/4		100
		~~100~~
3/4		110
	Received	500
		520

February 28, 1963

Mr. George M. Hill
Hill, Savey and Mitchell
512 Arizona Bank Building
Phoenix 3, Arizona

Re: DMEA-2445 (Mercury)
Ord Mercury Mines
Ord Mercury Mine
Gila County, Arizona
Contract Idm-2460

Dear Mr. Hill:

Your letter of February 15, 1963 concerning the captioned matter, referred here by Mr. Fumich of the Department of the Interior, has been passed on to Small Business Administration, Washington 25, D. C., attention Mr. W. A. Chadwell, as functions relating to loans of this type made by Reconstruction Finance Corporation were transferred to that Administration under Reorganization Plan No. 1 of 1957 (22 F.R. 4633).

Very truly yours,

(Signed) William A. Devin, Jr.

William A. Devin, Jr.
Acting Director
Office of Defense Lending

cc: Mr. George Fumich, Jr.
Director
Office of Minerals Exploration
Department of Interior
Washington 25, D. C.

HILL, [illegible] MITCHELL
[illegible] BANK BUILDING
PHOENIX 3, ARIZONA
TELEPHONE 2[illegible]9-7523

GEORGE M. HILL
JOHN E. SAVOY
ANIS MITCHELL

February 15, 1963

2

Mr. George Furnish, Jr.
Director of Minerals Exploration
United States Department of the Interior
Washington 25, D. C.

Re. DMEA-2445 (Mercury)
Ord Mercury Mines
Ord Mercury Mine
Gila County, Arizona
Contract Idr-E460

Dear Mr. Furnish:

In October of 1962 you wrote to me with relation to the remaining obligation on the above contract and enclosed a copy of the letter of Mr. C. C. Mittendorf, Administrator, dated April 16, 1956.

It appears under Mr. Mittendorf's letter, that the Government's royalty rights expired on November 10, 1962. To date the company has not received any royalties on the O[illegible] [illegible]nson lease agreement.

We have had a title report run on the claims with the idea of disposing of them, and it appears that there are two recorded mortgages to the Reconstruction Finance Corporation. The first mortgage was executed January 26, 1943 by Ord Mercury Mine, a partnership, to Reconstruction Finance Corporation, and was recorded January 27, 1943 in the office of the County Recorder of Gila County, Arizona in Book 25 of Real Estate Mortgages, page 526. The second mortgage was executed by the same partnership on December 15, 1943 and recorded on December 17, 1943 in Book 25 of Real Estate Mortgages, page 425.

While we do not have copies of these mortgages, we assume that they, like the later work, were contingent on production and that the Government no longer has any interest by virtue of the said mortgages.

If the records are available I would appreciate your advising me as to what steps would have to be taken to arrange for the satisfaction of record of these mortgages.

Thanking you for your courtesy and cooperation with regard to this matter, I am

Very truly yours,

For HILL, SAVOY & MITCHELL

George M. Hill/LL
AIR MAIL

Form 7
-58)

OFFICIAL FILE COPY

Date	Surname	Code
11/13	Holt	500
	Rhoads	500
11/13	Talbot	500
	Selbridge	120
11/13	Johnson	110
11-13	Fumich	100
		220

11/19/62

Ord Mercury Mines
c/o Mr. George M. Hill
Hill, Savey and Mitchell
512 Arizona Bank Building
Phoenix 3, Arizona

Re: DMEA-2445 (Mercury)
Ord Mercury Mines
Ord Mercury Mine
Gila County, Arizona
Contract Idm-E460

Gentlemen:

By the terms of the subject Exploration Project Contract, as amended, and the certification of discovery or development dated April 13, 1956, all minerals mined or produced from November 10, 1952, to November 10, 1962, were subject to the Government's royalty as set forth in the 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. (gla)

Director

SPHolt/mm
11-13-62
cc: Director's reading
CA&A Division
Region III (2)
Docket
Code 500

43683

E Form 7
10-58)

OFFICIAL FILE COPY

Date	Surname	Code
11/13	Holt	500
	Farnell	500
11/13	Talbert	800
	GCS	130
11/13	Johnson	110
11/13	Farnell	100
		220

NOV 13 1962

Memorandum

To: Acting Field Officer, Region III

From: Chief, Division of Field Operations

Subject: DMRA-2445 (Mercury)
Ord Mercury Mines
Ord Mercury Mine
Gila County, Arizona
Contract Idm-2460

If the enclosed letter to the Operator, Ord Mercury Mines, concerning the expiration of the royalty period for the subject contract, meets with your approval and if you have no present information to the contrary, kindly date and mail it, returning the distribution copies to us.

George C. Selfridge

Enclosure

SP/hcf
~~WRGriswold~~/mm
11-13-62
cc: Director's reading
Review Committee
Docket
Code 500

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
10-24	Hoff	500
11	Brown	500
10/24	Talbot	800
10/25	Schwarz	120
11	Johnson	110
10-25	Funk	100
		220

Mr. George M. Hill
Hill, Savey & Mitchell
512 Arizona Bank Building
Phoenix 3, Arizona

OCT 25 1962

Re: DMEA-2445 (Mercury
Ord Mercury Mines
Ord Mercury Mine
Gila County, Arizona
Contract Idm-E460

Dear Mr. Hill:

We thank you for the information concerning the subject contract in your letter of October 8, 1962, and the completed Form 63, Request for Information on Certified Project and Project Under Royalty Agreement, also for the copy of lease, dated June 1, 1962, from Ord Mercury Mines to O. L. Johnson.

Enclosed, as you requested, is a copy of the Certification of Discovery or Development, dated April 13, 1956, issued as a result of exploration work under the contract. We also enclose a copy of letter to Ord Mercury Mines, dated April 16, 1956, transmitting the certification and setting forth the obligations of the Operator thereunder.

In the second paragraph of the enclosed letter of April 16, 1956, the sum of $19,067.57 has been reduced by royalty payments totalling $2,367.62, so that the amount repayable is now $16,699.95.

The instructions in the third paragraph of the same letter were superseded when the Defense Minerals Exploration Administration became the Office of Minerals Exploration. Royalty payments should now be forwarded to the Acting Field Officer, Region III, Office of Minerals Exploration, Building 20, Denver Federal Center, Denver 25, Colorado. Checks should be made payable to the Office of Minerals Exploration. References to Mr. Traver, in the fourth paragraph, should be changed to "Acting Field Officer, Region III."

We note that the lease to O. L. Johnson does not contain a clause recognizing the Government's lien. Article 10 of the contract provides that "The Operator shall not make any voluntary or permit any

43683

involuntary transfer or conveyance of 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;". Actually, it would be very much to the best interest of the Ord Mercury Mines that the lease contain a clause or an addendum covering this matter.

Sincerely yours,

George Fumich, Jr.

Director

Enclosures

SPHolt/mm
10-24-62

cc: Director's Reading File
Region III (2) w/copy of incoming letter and Form 63 completed 10/8/62
CA&A Division
Docket
500

LAW OFFICES
HILL, SAVOY & MITCHELL
512 ARIZONA BANK BUILDING
PHOENIX 3, ARIZONA
TELEPHONE 258-7523

GEORGE M. HILL
JOHN E. SAVOY
ANIS MITCHELL

OFFICIAL FILE COPY
O. M. E
RECEIVED OCT 11 1962

DATE	INITIALS	CODE
10/11		800
		120
10-11		100
10/11		110
		500
10/15		500
		220

October 8, 1962

Mr. W. R. Griswold, Chief
Division of Minerals
United States Department of the Interior
Office of Minerals Exploration
Washington 25, D. C.

Re: DMEA-2445 (Mercury)
Ord Mercury Mines, Inc.
Ord Mercury Mine
Gila County, Arizona
Contract Idm-E460

Dear Mr. Griswold:

There has been a change in the ownership of the stock of Ord Mercury Mines, Inc., an Arizona corporation, in that it was taken over by the Thornburg interests in 1955.

We are not familiar with what obligations there may be due from production on this property to the United States Government by virtue of the above DMEA exploration work.

The files and records of the company do not disclose any Certificate of Discovery as a result of the development work. In the event there was such a certificate I would appreciate receiving a copy of it.

We have received no report from the present operator under the new lease.

Thanking you for your courtesy, I am

Very truly yours,

George M. Hill

For HILL, SAVOY & MITCHELL

George M. Hill/LL
Encls.

Cy letter to Region III w/MME Form 63

LEASE OF MINING CLAIMS

DATE: June 11, 1962.

LESSOR: ORD MERCURY MINES, an Arizona corporation.

LESSEE: O. L. JOHNSON.

The LESSOR, for and in consideration of the rents and royalties hereinafter specified to be paid by the LESSEE and the covenants and agreements herein contained by said LESSEE to be kept and performed, does hereby by these presents lease and demise to the LESSEE those certain patented mining claims known and designated as ORD #1 through ORD #20, inclusive, situated in the Brown Mining District, in Sections 11, 12, 13 and 14, Township 7 North, Range 9 East, Gila and Salt River Base and Meridian, Gila County, Arizona, on the following terms and conditions:

1. The LESSEE will enter upon the said leased premises within thirty (30) days from the date hereof, and thereafter shall mine the same in good faith and according to approved mining methods, so as to take out the greatest amount of minerals or ores possible, with due regard to the development and preservation of said mine or mining premises as a workable mining property, and so that all available minerals shall be mined as the work progresses, and will not indulge in the practice known as high grading or gouging, and shall not suspend mining operations for a longer period than twenty (20) days in any twelve (12) consecutive months without consent of the LESSOR. Delays caused by unavoidable accidents or causes beyond the control of the LESSEE alone are excepted.

2. The LESSEE shall at all times keep the drifts, shafts, tunnels and other works thoroughly drained and clear of loose rock and rubbish, as dictated by good mining practices.

3. The LESSOR, or its duly-authorized agent or agents, may from time to time go upon and enter into all parts of said leased premises for the purpose of inspection, survey or taking samples therefrom, and the LESSEE shall render the LESSOR, or its duly-authorized agent or agents, reasonable assistance in making such inspection, survey or examination.

4. The LESSEE covenants and agrees to pay to the LESSOR as royalties ten per cent (10%) of the gross receipts of the LESSEE from the sale, or the market value if not sold, of all minerals extracted by the LESSEE from the leased premises.

5. The LESSEE shall keep a correct account of all minerals mined and sold, the grade and weight thereof, to whom sold, and the price received therefor, which books shall be open to the inspection of the LESSOR at all reasonable times.

6. The royalties herein provided for shall be due and paid on the 20th day of each month for all minerals sold during the preceding calendar month. At the time of making each payment of royalties the LESSEE shall transmit to the LESSOR an exact statement of the amount of all minerals mined from the leased premises during the preceding month and the grades thereof, the amount of all minerals sold during the preceding month, to whom sold, and the price received therefor, and shall, if requested, furnish the LESSOR true copies of all settlement sheets for any and all such sales or shipments. Payments of royalties shall be made to the LESSOR at such address as it may from time to time designate.

7. The LESSOR shall not be responsible in case of accident to any of the employees of the LESSEE in or about said property.

8. All taxes and assessments levied or assessed in excess of the amount of the taxes for the year 1961, on the mining claims, mining equipment, buildings machinery, and all minerals mined and shipped pursuant to the terms of this lease, shall be paid and borne by the LESSEE.

9. All bills and expenses incurred by the LESSEE or those in privity with him shall be promptly paid by the LESSEE, and by such prompt payment the LESSEE shall prevent the filing of any and all liens against the demised premises for or on account of labor, supplies, materials, equipment or services furnished or performed, and if by reason of the failure of said LESSEE to pay such bills or expenses any lien or liens shall be filed against said premises, said LESSEE shall contest and defend against such lien, and if as a result thereof any such lien shall be established against said

premises, then the LESSEE shall promptly pay off and discharge same, and if said LESSEE shall fail to do so, then the LESSOR shall have the right to pay off and discharge the same and the said LESSEE holds himself liable and bound to pay to the LESSOR all sums so advanced or paid to clear said premises from such liens.

10. The LESSEE further agrees to post on the leased premises all notices required by the laws of Arizona, and to post at the collar of all working shafts, tunnels and entrances to the mine and at all boarding houses, on or before the day the LESSEE begins operations and files for record in the office of the County Recorder of Gila County, Arizona, within thirty (30) days from the date of this lease, a notice that said mining claims are not being operated by the LESSOR, that the LESSOR will not be liable for labor, materials or merchandise furnished to or performed in the operation or development of said mine or mining claims, and that said mine or mining claims will not be subject to a lien therefor.

11. The LESSEE shall deliver to the LESSOR quiet and peaceful possession of said leased premises in good order and condition, with all drifts, tunnels and other workings thoroughly drained and cleared of loose rock and rubbish, without demand or further notice, upon the expiration of the term of this lease, or at any time previous thereto upon demand for forfeiture. It is mutually understood that all structures, machinery and equipment which may be placed upon the premises by the LESSEE may be removed therefrom within sixty (60) days after the termination of this lease; provided, however, that no such structure, machinery, tools and equipment shall be removed while the LESSEE may be in any manner indebted to the LESSOR under any obligation incurred under this lease.

12. Upon the violation of any covenant, provision or condition herein contained in this lease the LESSOR shall give the LESSEE notice thereof in writing, and in the event any such violation of any covenant, provision or condition, breach or default is not remedied and the terms and conditions of this agreement fully complied with and in every way restored

to good standing within thirty (30) days of the date of receipt of notice by the LESSEE, then this lease shall, at the option of the LESSOR, expire and terminate and the said LESSOR or its agent may thereupon, after demand of possession in writing, enter upon said premises and dispossess all persons occupying the same, with or without force and with or without due process of law.

13. The LESSEE shall have the right at any time to abandon this lease in the event that commercial ores cannot, in the opinion of the LESSEE, be produced on the claims hereinabove referred to; but upon the LESSEE determining to abandon the same he shall give to the LESSOR written notice, at LESSOR'S address as herein stated, by registered mail, not less than ten (10) days prior to any such abandonment. In the event of the failure of this lease or its forfeiture or termination as herein provided, the LESSEE shall have a reasonable time within which to remove from said mining claims any and all equipment, machinery, buildings or bins and surface improvements, whether affixed to the realty or otherwise; excluding, however, the timber or underground supports.

14. The term of this lease shall be for five (5) years from and after the date of its execution.

15. Minimum Royalties: If and in the event the percentage royalties as hereinabove provided for the months beginning September 1, 1962 and thereafter are not in an amount of $100.00 a month or more, then the LESSEE shall pay to the LESSOR, on October 1, 1962 and on the first day of each month thereafter, a minimum rental of $100.00 a month; provided, however, that all gross royalties shall apply on the minimum, so that the minimum amount to be paid by the LESSEE to the LESSOR of the total of the percentage and minimum royalties shall be not less than $100.00 a month for each month of this lease, beginning September 1, 1962.

16. Any notices required to be given under the terms hereof by either party may be given by depositing the same in the registered mails of the United States, postage prepaid, and addressed as follows:

LESSOR: Ord Mercury Mines
512 Arizona Bank Bldg.
34 W. Monroe Street
Phoenix 3, Arizona

LESSEE: O. L. Johnson
3830 E. Van Buren Street
Phoenix 8, Arizona

17. Time is of the essence of this agreement, and the terms and conditions hereof shall bind and benefit the heirs, executors, administrators and assigns of the parties hereto.

IN WITNESS WHEREOF the LESSOR has caused this instrument to be executed by its duly-authorized Vice President and the LESSEE has hereunto set his hand as of the day and year first hereinabove written.

ORD MERCURY MINES,
an Arizona corporation

(SEAL)

By George M. Hill
George M. Hill, Vice President
LESSOR

O. L. Johnson
O. L. JOHNSON
LESSEE

STATE OF ARIZONA)
) ss.
County of Maricopa)

On this the 11th day of June, 1962, before me, the undersigned Notary Public, personally appeared GEORGE M. HILL, who acknowledged himself to be the Vice President of ORD MERCURY MINES, an Arizona corporation, and that he, as such officer, being authorized so to do, executed the foregoing Lease of Mining Claims for and on behalf of the said corporation for the purpose and consideration therein expressed.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My commission expires

(SEAL) August 7, 1962.

Lelia G. Long
Notary Public

STATE OF ARIZONA)
) ss.
County of Maricopa)

On this the 11th day of June, 1962, before me, the undersigned Notary Public, personally appeared O. L. JOHNSON, known to me to be the person whose name is subscribed to the foregoing Lease of Mining Claims, and acknowledged that he executed the same for the purpose and consideration therein expressed.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My commission expires

(SEAL) Aug. 7, 1962 .

Lelia G. Long
Notary Public

involuntary transfer or conveyance of 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;". Please, if you have not already done so, advise the lessee of the Government's lien on production from the property.

Sincerely yours,

W. R. Griswold, Chief
Minerals Division

Enclosures

SPHOLT/mm
10-23-62
cc: Director's reading file
Region III (2) w/copy of incoming letter and Form 63 completed 10/8/62
CA&A Division
Docket
Code 500

Actually it would be very much to the best interest of the Orf Mercury Mines Company that the lease contain a clause or an addendum covering this matter.

Director

Re: DMEA-2445 [redacted] 500

Shouldn't Mr. Hill be advised that:

(1) Instructions in 3rd par. of 4/16/56 have been superseded; and

(2) $2,369.62 royalty has been paid, so refayable amount now is $16,699.95.

Talbert
10/22/62

[illegible] document [illegible]
DMEA [illegible]

Obligation under [illegible]

UNITED
DEPARTMENT OF
DEFENSE MINERALS EXPLO

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
10 18	Holt	500
	On Leave	500
		800
		120
		110
		100
		220

Mr. George M. Hill
Hill, Savey & Mitchell
512 Arizona Bank Building
Phoenix 3, Arizona

Re: DMEA-2445 (Mercury)
Ord Mercury Mines
Ord Mercury Mine
Gila County, Arizona
Contract Ldm-2460

Dear Mr. Hill:

We thank you for the information concerning the subject contract in your letter of October 8, 1962, and the completed Form 63, Request for Information on Certified Project and Project Under Royalty Agreement, also for the copy of lease, dated June 1, 1962, from Ord Mercury Mines to O. L. Johnson.

Enclosed, as you requested, is a copy of the Certification of Discovery or Development, dated April 13, 1956, issued as a result of exploration work under the contract. We also enclose a copy of letter to Ord Mercury Mines, dated April 16, 1956, transmitting the certification and setting forth the obligations of the Operator thereunder.

Sincerely yours,

Fr- First two paragraphs OK as written

that the lease to O. L. Johnson does not contain a clause recognizing the nment's lien. Article 10 of the contract ~~contains the statement~~ provides that "The Operator all not make any voluntary or permit any involuntary transfer or conveyance of the land described in Article 2, without making suitable provision for the ~~XXXX XXXXXXXXXXXXXXXXXX~~ the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof;". Please ~~inform us if~~ if you have not already done so, advise the lessee ~~has been advised and is aware of the Government's lien on production from the property.~~

¶ 3 In the second paragraph of the enclosed letter of April 16, 1956, the sum of $19,067.57 has been reduced by royalty payments totalling $2,367.62, so that the amount repayable is now $16,699.95.

¶ 4 The instructions in the third paragraph of the same letter were superceeded when the Defense Minerals Exploration Administration became the Office of Minerals Exploration. Royalty payments should now be forwarded to the Acting Field Officer, Region III, Office of Minerals Exploration, Building 20, Denver Federal Center, Denver 25, Colorado. Checks should be made payable to the Office of Minerals Exploration. References to Mr. Traver, in the fourth paragraph, should be changed to "Acting Field Officer, Region III.

OFFICIAL FILE COPY
O. M. E
RECEIVED DEC 12 1961

DATE	INITIALS	CODE
12/12	[illegible]	800
"	"	500
	gla	500
		220

Building 20 - Federal Center
Denver 25, Colorado

December 8, 1961

Ord Mercury Mines, Inc.
258 South Scottsdale Road
P. O. Box 875
Scottsdale, Arizona

Re: DMEA-2445 (Mercury)
Contract Idm-E460
Ord Mercury Mines
(Ord Mercury Mine)
Gila County, Arizona

Gentlemen:

Enclosed is a copy of the Report of Royalty Review on the captioned property dated December 1, 1961 for the period December 15, 1955, through November 28, 1961, which shows that no royalty is due the Government at this time.

Yours very truly,

[illegible] TMR

for

Hugh M. Connors
Acting Field Officer, OME
Region III

Enclosure
TMR/lm
cc Chief, Division of Field Operations, OME
E. D. Talbert, Acting Chief
Contract Administration and Audit Division
Royalty Corres. Idm E460
Chron

OFFICIAL FILE COPY
O. M. E
RECEIVED DEC 12 1961

DATE	INITIALS	CC

Building 20 - Federal Center
Denver 25, Colorado

December 8, 1961

Memorandum

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

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

Subject: IMEA-2445 (Mercury)
Contract Idm-E460
Ord Mercury Mines
(Ord Mercury Mine)
Gila County, Arizona

Attached is the original Report of Royalty Review on the subject property dated December 1, 1961 covering the period December 15, 1955, through November 28, 1961.

TMR

Initialed by

for

Hugh M. Connors

Attachment
TMR/lm
cc Chief, Division of Field Operations (2)
E. D. Talbert, Acting Chief
Contract Administration and Audit Division
Royalty Corres Idm E460
Chron

ME Form 7
10-58)

OFFICIAL FILE COPY

Date	Surname	Code
		220

DEC 5 1961

Memorandum

To: Acting Field Officer, Region III

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

Subject: IMEA-2445 (Mercury)
Ord Mercury Mines
Ord Mercury Mine
Gila County, Arizona
Contract Idm-E460

The original and two copies 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.;
(b) One copy for the Operator; and
(c) One copy for your files.

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

Enclosures

EDTalbert/ama 12-5-61

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

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
		220

NOV 24 1961

Memorandum

To: Acting Field Officer, Region III

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

Subject: DMRA-2445 (Mercury)
Ord Mercury Mines
Ord Mercury Mine
Gila County, Arizona
Contract Idm-E460

This Division is preparing a Report of Royalty Review on the subject contract. Accordingly, your submission of an original and one copy of MME Form 22, Check Sheet of Examining Engineer, will be appreciated.

It appears that this project has been inactive since May 1955. If this is so, please make an appropriate statement under item 8 of MME Form 22.

EDTalbert/ama 11-24-61

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

43683

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

January 25, 1960

OFFICIAL FILE COPY
O. M. E.
RECEIVED JAN 28 1960

DATE	INITIALS	CODE
1-28	gad	770
"	GEJ	800
1-29	Hact	700
		225

S.P.H.

Ord Mercury Mines, Inc.
258 South Scottsdale Road
P. O. Box 875
Scottsdale, Arizona

Re: Docket No. DMEA 2445 (Mercury)
Contract No. Idm-E460
(Ord Mercury mine)
Gila County, Arizona

Dear Sir:

In reference to the "Certification by the United States of America of a Discovery or Development under an exploration Project Contract" and the instructions in the Washington Office letter of transmittal of the Certification on the captioned project, please indicate your answer to the following questions and return one copy of the questionnaire immediately to this office.

Very truly yours,
Original signed by

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

1. Has the property been sub-leased or any change made in ownership other than this office has been notified? Yes ___ No___. If yes, please furnish details of the transaction on a separate sheet and include a true or signed copy of any instrument that was executed in conjunction with the matter.

2. Has there been production from the land subordinated under the referenced contract since January 1, 1959 ? Yes___ No___. If yes, and shipments made, who was the purchaser?_____

3. Is any of the following material stockpiled? Yes___ No___.

(a) Ore, Tons_____ Estimated grade_____
(b) Concentrates, lbs._____ Estimated grade_____
(c) Low grade ore, tons_____ Estimated grade_____
Place stockpiled_____

Signed_____

Title_____ Date_____

TMR:ltm cc: Chmn. Op. Comm. Roy. Corres. E460 Chron.

400

DOCKET
Surname:
McMahon
Martin
Chamber
Indrus 2/29/56
Lloyd
Mehen
Kiilsgaard
Selbridge
Helena
Nelson

APR 16 1956

Ord Mercury Mines
258 South Scottsdale Road
P. O. Box 875
Scottsdale, Arizona

Re: Docket No. DMEA 2445 - Mercury
Ord Mercury Mine
Gila County, Arizona
Contract No. Idm-E460

Gentlemen:

Transmitted herewith is a certification of discovery or development issued under the subject contract which was executed November 10, 1952.

By the terms of the exploration project contract and of the certification, all production from the lands described in the referenced contract from the date of the exploration project contract is subject to the Government's percentage royalty as set forth in the contract until the sum of $19,067.57 is paid or until November 10, 1962, whichever occurs first.

Payments should be made to Mr. W. M. Traver, Executive Officer, DMEA Field Team, Region III, 224 New Custom House, Denver 2, Colorado. Checks should be payable to the Defense Minerals Exploration Administration. Royalty payments to the Government should be accompanied by suitable evidence, such as copies of settlement sheets, showing the quantity of mercury sold, the name of purchaser, and the price and charges certified to be correct by the purchaser.

You are requested to notify Mr. Traver of any changes in ownership or production rights that may have any effect on the Government's right to its percentage royalty. Also, if production ceases at any time for any extended period, please notify Mr. Traver at 6-month intervals that no production has been made, when that is the case.

Sincerely yours,

C. O. Mittendorf

Administrator

cc: Docket
Code 400
Oper. Comm.
Adm. Read. File
Code 800

Enclosure

cc: Code 110
FT, Region 3
Finance Office

cc: Thor Kiilsgaard, USGS
R. W. Geehan, USBM
Helena Meyer, USBM

R.C.O

ADMcMahon/ls 2/17/56

DOCKET
SURNAME
McMah
Martin
Chand
Nelson
Rennie
Selfe
Fox

APR 16 1956

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

Re: Docket No. DMA 2445 - Mercury
Ord Mercury Mine
Ord Mercury Mine
Gila County, Arizona
Contract No. Ida-2445

Dear Mr. Fredell:

Enclosed is a copy of a certification of discovery or development issued under the subject contract.

Contract No. Ida-2445 for the exploration of the Ord Mercury Mine was executed November 30, 1952.

Expenditures authorized $28,000.00
Government participation at 75% $21,000.00

Expenditures authorized were for rehabilitating the 0-, 50-, and 100-foot levels; sampling the mine to the bottom of the 200-foot level and sampling accessible workings; sinking a winze 100 feet; and driving 500 feet of drifts and crosscuts.

Work accomplished under the contract consisted of the rehabilitation and timbering on planned, a 93-foot winze, and 473½ feet of drifting and crosscutting. The total cost of the work completed was $[illegible], with Government participation at 75% amounting to $[illegible].57.

As a result of this exploration project one reserve amounting to 8,530 tons were discovered. The yield from 2,530 tons of this ore was 138 flasks of mercury valued at $[illegible] and upon which the sum of $[illegible].42 in royalties was paid to the Government through January 1956. The remaining 6,000 tons of indicated reserves consist of 5,500 tons of low grade ore, above the 200 level, averaging approximately three (3) pounds of mercury per ton and 500 tons of eight (8) pound ore below the 200 level.

Sincerely yours,

C. O. Mittendorf

Administrator

Enclosure

FT. REG. IV
Mr. Graham, USBM
cc to: Oper. Comm.
T. H. Killegaard, USGS
L. M. Meyer, USBM

cc to: Code 800
Code 110
Admr. Read. File

cc to: Docket
Code 400
Code 800

AMMARMAN/Kos 4-12-56

R.C.H.

DOCKET SURNAME

400

McMahon
Martin
Keehan
Kilsgaard
Selfridge
Robinson
Chambers

Noted

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

Re: Docket No. DMRA 2445 - Mercury
Ord Mercury Mines
Ord Mercury Mine
Gila County, Arizona
Contract No. Idm-E460

Dear Mr. Fredell:

Enclosed is a copy of a certification of discovery or development issued under the subject contract.

Contract No. Idm-E460 for the exploration of the Ord Mercury Mine was executed November 10, 1952.

Expenditures authorized. $28,000.00
Government participation at 75%. $21,000.00

Expenditures authorized were for rehabilitating the 0-, 50-, and 100-foot levels; unwatering the mine to the bottom of the 200-foot level and sampling accessible workings; sinking a winze 100 feet; and driving 500 feet of drifts and crosscuts.

Work accomplished under the contract consisted of the rehabilitation and dewatering as planned, a 93-foot winze, and 473½ feet of drifting and crosscutting. The total cost of the work completed was $25,423.43, with Government participation at 75% amounting to $19,067.57.

As a result of this exploration project, 2,530 tons of ore were mined, yielding 156 flasks of mercury, upon which $2,367.62 in royalties were paid to the Government through January 1956. Although there has been no calculation of ore reserves because most of the area above the 200 level is inaccessible, the field examiners have submitted estimates of inferred low grade ore reserves ranging from 3,000 to 6,000 and 11,000 tons.

Sincerely yours,

Enclosure

Administrator

cc to: Oper. Committee
T. H. Kilsgaard, USGS
H. M. Meyer, USBM
R. W. Geehan, USBM
Ft. MEG. III

AMcMahon/foc 3-6-56
cc to: Docket
Code 400
Code 800
Code 110
Adm. Read. File

400

DOCKET
Surname:
McMahon
Martin
Chambers
Andrews 2/29/56

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

Re: Docket No. DMEA 2445, Mercury
Ord Mercury Mines
Ord Mercury Mine
Yavapai County, Arizona
Contract No. Idm E460

Dear Mr. Fredell:

Enclosed is a copy of a certification of discovery or development issued under the subject contract.

Contract No. Idm E460 for the exploration of the Ord Mercury Mine was executed November 10, 1952.

Expenditures authorized $28,000.00
Government participation at 75%..... $21,000.00

Expenditures authorized were for rehabilitating the 0-, 50-, and 100-foot levels; unwatering the mine to the bottom of the 200-foot level and sampling accessible workings; sinking a winze 100 feet; and driving 500 feet of drifts and crosscuts.

Work accomplished under the contract consisted of the rehabilitation and dewatering as planned, a 93-foot winze, and 473½ feet of drifting and crosscutting. The total cost of the work completed was $25,423.43, with Government participation at 75% amounting to $19,067.57.

As a result of this exploration project, 2,530 tons of ore were mined, yielding 156 flasks of mercury, upon which $2,330.82 in royalties were paid to the Government. Although there has been no calculation of ore reserves, the field examiners estimate between 3,000 and 5,000 tons of potential low grade ore is indicated.

Sincerely yours,

Administrator

cc: Helena Meyer, USBM
R.W.Geehan, USBM
Field Team, Reg. 3

ADMcMahon/ls 2/16/56

cc: Docket
Code 400
Code 800
Code 110
Adm. Read. File
Oper. Committee
Thor Kiilsgaard, USGS
Enclosure

DOCKET
SURNAME

400

McMahon
Martin
Chambers
Johnson 2/29/56
Selfridge
Johnson

APR 16 1956

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

Re: Docket No. DMEA 2445 - Mercury
Ord Mercury Mines
Ord Mercury Mine
Gila County, Arizona
Contract No. Km-2460

Dear Mr. Traver:

Enclosed are copies of a certification of discovery or development for the above-noted property and of related correspondence.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

Enclosure

ADMcMahon/fec 2/20/56

APPROVED:

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

Thor H. Kiilsgaard (GCS)
Member, Geological Survey

cc to: Docket
Code 400
Adm. Read. File
Operating Comm.
FT. REG. III
H. M. Meyer, USBM
T. H. Kiilsgaard, USGS
Mr. Chambers - Code 800
Mr. Johnson - Code 110
Mr. Geehan, USBM

R.C.S.

Docket

RECEIVED
APR 4 - 1956

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

224 New Customhouse
Denver 2, Colorado

April 2, 1956

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 2445 (Mercury), Contract Idm-E460, Ord Mercury Mines, Sunflower Mining District, Gila County, Arizona

In compliance with your teletype of March 14, 1956, we are enclosing the original and three copies of a joint memorandum report from J. N. Faick and W. R. Storms, relative to the revision of ore reserves as previously reported.

W. M. Traver

W. M. Traver

Enclosures

2445

Date 4/5

Referred to:

1. ~~[illegible]~~
2. ~~Mr. Johnson~~
3. ~~Mr. [illegible]~~
4. ~~Docket Control Mails and Files~~
5. Juan V. Pierce Clay Division
6. Docket Control Mails and Files

Note comments in report regarding:

1. Justifies new ore reserve estimate
2.
3.
4.

and take appropriate action.

- - - - -

Action taken by Division:

Noted
WSM

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

DMEA Date Rec'd. MAR 30 1956
DMEA Date Rec'd. MAR 30 1956
BUREAU OF MINES Denver, Colorado
BUREAU OF MINES Denver, Colorado

March 28, 1956

RECEIVED APR 4 - 1956

MEMORANDUM

To: Executive Officer, DMEA Field Team Region III

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

Through: E. N. Harshman EMH

Subject: Docket DMEA 2445, Contract Idm-E 460, Ord Mercury Mines Co., Ord Mine (Mercury), Gila County, Arizona.

We have been asked to review the status of ore reserves of the Ord Mine and to reconcile, if possible, the discrepancy between the estimates submitted in a report of January 1955 and a report of February 1956. This discrepancy in the estimates is due to differences in interpretation of conditions at the mine and is not due to the results of exploration, development or mining between January 1955 and February 1956.

Recalculation of reserves at the Ord Mine indicates that both of the previous estimates should be revised downward, although these estimates cannot be supported by accurate maps, measurements or production records. The mine has produced about 2000 flasks of mercury which preliminary calculations from incomplete data indicate was obtained from about 22,000 tons of ore that assayed about 7 pounds of mercury per ton. Of this amount we guess that about 12,000 tons has been produced from the mine workings on the "B" zone, which was explored by DMEA funds, and the remainder was produced from 3 other ore zones, the "C" zone, Indian tunnel, and No. 1 workings.

The amount of ore remaining in the old workings of the Ord Mine "B" zone is estimated to be about one-half of the amount previously mined, or about 6,000 tons in the zone explored by DMEA. Of this amount it is believed that about 5,500 tons of 3-pound ore remains above the 200 level, and about 500 tons of 8-pound ore remains below the 200 level.

The 5,500 tons of reserves estimated above the 200 level consist of low-grade extensions of previously mined ore bodies, and pillars. This estimate is inaccurate because the old stopes are inaccessible and cannot be mapped or sampled except on the levels. The grade of this ore, which is estimated at 3 pounds of mercury per ton, obviously is very low, otherwise the ore would have been mined during the last period of operations when mercury prices were unusually high. We believe attempts would have been made to mine this ore in developed parts of the mine, in 1955, if the ore contained over 3 pounds of mercury per ton and mercury was selling for about $4.00 per pound. A little ore was mined above the Mercury adit near the Adit winze, and the grade of it was disappointingly low; therefore, mining of it was discontinued.

Most of the 500 tons of ore estimated below the 200 level is present in the floor of the 240 drift, in a pillar in the Adit winze, and in other unmined pillars between the 200 and 240 levels. Grade estimates are based on the results of the latest mining, wherein about 2,530 tons of ore yielded about $4\frac{1}{2}$ pounds of mercury per ton. This ore was obtained from the high-grade zone between the 200 and 240 levels, and some was obtained from the low-grade zone mined above the 150 level. The weighted average grade of ore obtained by driving the first 48 feet of the 240 level drift was 10 pounds of mercury per ton; therefore, a

grade of 8 pounds of mercury per ton is accepted as a conservative estimate for the 500 tons of ore remaining below the 200 level. It is possible that the ore remaining below the 200 level may never be mined because of difficulties that will be encountered in mining it.

After reviewing the subject of ore reserves at the Ord Mine, we feel that all previous estimates should be disregarded in favor of the following:

Location	Tons	Grade
Above the 200 level----------	5,500	3 lb/ton
Below the 200 level----------	500	8 lb/ton

These reserves should be classified as inferred because the estimates are based on geologic character of the deposit and assumed extension of low-grade ore beyond the limits of the old stopes. The reserves are not supported by adequate samples or measurements.

Geological conditions are favorable for the existence of ore beneath "C" hill, and about 500 feet southwest of the No. 1 workings. We have no basis for inferring ore in either of these areas; therefore, are not including these in the estimate, but guess that not more than 5,000 tons of ore could be present in the 2 areas.

J. N. Faick

J. N. Faick

Walter R. Storms

W. R. Storms

JNF:ms

cc. Harshman (8)
Storms

T # 2530 4½# 11,395 <-- ? 550 3# 16500 500 8# 4000 5530 3.7 31,895 420 flasks

(DMEA Proved) Reserves DMEA " " 2530 12,000 T - 7# 84,000# 5,500 T - 3# 16500 500 T - 8# 4000

18,000 T - 5.7# 104,500

Total DMEA Reserves - 591 flasks

IN REPLY REFER TO:

RECEIVED
MAR 21 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

March 20, 1956

Re: DMEA 2445 Idm-E460
Ord Mercury Mines
Ord Mine
Gila County, Arizona
$28,000 - Mercury

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of Final Field Team Report

A contract that approved the expenditure of $28,000 was signed November 10, 1952. The work was designed to search, in 3 stages, for a downward continuation of the Ord orebody 100 feet below the then lowest level, the 200.

No ore was found on the new 300 level, but drifting on a new level at 240 feet, developed the bottom of the orebody. 2,530 tons of ore was subsequently mined, part of which came from the new level. Royalty payments of $2,367.62 were made, the value of the ore having been $47,351.68 and the recovery 4.48 pounds of mercury per ton.

The cost of the exploratory work was $25,423.43 of which the Government share is $19,067.

The examiners estimate the reserves in the mine as:

Horizon	Tons	Grade # mercury
150-240 levels	1-2,000 *	3.5 to 8 *
+ 150 level	3-10,000 *	

* Opinions vary as to tonnage and grade. No good figures are available.

One examiner (geologist) believes some ore might be found at other places on the property. An application for an amendment enabling additional exploration was denied September 30, 1955.

The examiners join in recommending the issuance of a certificate of discovery, based on the 'establishment' of ore at the 240 level.

I concur with the recommendation of the examiners that a certificate of discovery be issued.

N. E. Nelson

N. E. Nelson

C Chairman, Op. Comm. D.M.E.A.

no ans. needed
matter

RECEIVED
MAR 19 1956

DN 235 BUR MINES 4-20 3-16-56

CHAIRMAN, OPERATING COMMITTEE, DMEA

RERXX REURTT 3-14-56 DOCKET DMEA 2445, ORD MERCURY MINES, IDM-E460. MATTER REFERRED TO THE FIELD AND WE WILL FORWARD INORMATION AS SOON AS RECEIVED.

W M TRAVER

Denver, Colo.

MAR 19 8 49 AM '56

BUREAU OF MINES
MAIL ROOM
WASHINGTON D. C.

DOCKET
Surname:
Martin
McMahon
Selfridge
Johnson
McCandless

MAR 14 1956

TELETYPE

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

Re Docket DMEA-2445, Ord Mercury Mines, Contract Idm-E460, January 1955 report which included ore reserve plan and section estimated 5000 to 8000 tons 8-pound ore. February 15, 1956, report estimates ore reserves as 10,000 tons 3½-pound ore and 1000 tons 5-pound ore. Please confirm our understanding that this later estimate covers ore remaining after mining approximately 2500 tons 4½-pound ore during DMEA project. Also advise promptly whether we can now ignore earlier estimates.

George C. Selfridge
Chairman, Operating Committee

cc: Docket
Code 400
Oper. Committee
Adm. Read. File
T. Kiilsgaard, USGS
H. Meyer, USBM
FT, Region # 3, Denver

ADMcMahon/ls
3/14/56

CLASS OF SERVICE

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

WESTERN UNION

TELEGRAM

W. P. MARSHALL, PRESIDENT

SYMBOLS

(26) Letter

Night Letter

1201 LT=International Letter Telegram

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

OA327

O REA271 PD=RENO NEVADA 13 2 05PMP=

OPERATING COMMITTEE DEFENSE MINERAL EXPLORATION=ADMN

INTERIOR BLDG WASHDC=

REYOURTEL MARCH 13TH RE DOCKET DMEA-2445 ORD MERCURY MINES CONTRACT IBM-E460. TELEGRAM EVIDENTLY SENT TO THIS OFFICE BY MISTAKE WE HAVE NO SUCH DOCKET IN OUR FILES=

S RICKER=

RECEIVED

MAR 14 1956

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

DOCKET
Surname:
McMahon
Martin
Selfridge
H E Johnson
Whitendorf

TELEGRAM

MAR 13 1956

Mr. Spangler Ricker, Executive Officer
DMEA Field Team, Region II
1605 Evans Avenue
Reno, Nevada

Re Docket DMEA-2445, Ord Mercury Mines, Contract Idm-E460, January 1955 report which included ore reserve plan and section estimated 5000 to 8000 tons 8-pound ore. February 15, 1956, report estimates ore reserves as 10,000 tons 3½-pound ore and 1000 tons 5-pound ore. Please confirm our understanding that this later estimate covers ore remaining after mining approximately 2500 tons 4½-pound ore during DMEA project. Also advise promptly whether we can now ignore earlier estimates.

George C. Selfridge
Chairman, Operating Committee (GCS)

cc: Docket
Code 400
Oper. Comm.
Adm. Read. File
T. Kiilsgaard, USGS
H. Meyer, USBM
FT, Reg. 2

ADMcMahon/ls
3/13/56

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

RECEIVED
FEB 23 1956

224 New Customhouse
Denver 2, Colorado

February 20, 1956

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: FIELD TEAM FINAL REPORT - Docket DMEA 2445 (Mercury), Contract Idm-E460, Ord Mercury Mines, Sunflower Mining District, Gila County, Arizona

Supplementing material forwarded with the Field Team Final Report of January 19, 1956, we are enclosing the original and three copies of Final Geologic Report by John N. Faick, Geologist, U. S. Geological Survey.

W. M. Traver

W. M. Traver

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
2-27-56
(Date)

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

RECEIVED
FEB 23 1956

DMEA
Date Rec'd
FEB 20 1956
BUREAU OF MINES
Denver, Colorado

Box 4126 University Station
Tucson, Arizona

February 15, 1956

MEMORANDUM

TO: Mr. E. N. Harshman

FROM: J. N. Faick

SUBJECT: Final Report - DMEA-2445 - Ord Mercury Mine, Mazatzal Mountains, Gila County, Arizona (Mercury)

Enclosed are the original and 8 copies of my Final Report on the above subject property.

John N. Faick

JNF:ms

cc. Harshman (8)
Storms

Reviewed by
DMEA OPERATING COMMITTEE
2-27-56
(date)

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

FIELD TEAM, REGION III

Final Eighth Report

GEOLOGY

FINAL REPORT

DMEA 2445

ORD MERCURY MINE, MAZATZAL MOUNTAINS

GILA COUNTY, ARIZONA

(Mercury)

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

February 15, 1956

Reviewed by
DMEA OPERATING COMMITTEE
2-27-56

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

RECEIVED
FEB 23 1956

FINAL REPORT

DMEA 2445
ORD MERCURY MINE, MAZATZAL MOUNTAINS
GILA COUNTY, ARIZONA
(Mercury)

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PROJECT SUMMARY

The significant events pertaining to DMEA participation in exploration of the Ord Mercury Mine, Mazatzal Mountains, Gila County, Arizona, are given below:

1. Early in 1952 an application for Government assistance in exploration of the Ord Mercury Mine, at a cost of $20,000, was submitted by Tom J. Russell and Associates. The application was docketed as DMEA 2445.

2. The property was examined May 21-22, 1952 by T. M. Romslo, U. S. Bureau of Mines, and J. N. Faick, U. S. Geological Survey, and a modified exploration program was recommended.

3. An exploration contract at a cost of $28,000 was signed November 10, 1952, to allow for exploration of a downward extension of the main Ord ore body. Exploration was provided in 3 stages as follows:

Stage I - Rehabilitate "B" (0) level, 50 and 100 levels, and unwater the mine to the 200-foot level, and sample accessible workings.

Stage II - Sink the adit winze 100 feet below the 200-foot level, drift westward approximately 260 feet from the bottom of the winze on the new 300-foot level and drive 40 feet of crosscuts.

Stage III - This stage consists of driving an additional 200 feet of drifts and crosscuts.

4. Stage I of the contract was started December 29, 1952, and completed March 23, 1955. Under Stage II sinking of the winze an additional 93 feet to the 300 level was started April 29, 1953 and completed August 1953. Between September 1953 and April 1, 1954 the 300 level drift was completed 225' westward from the winze and 40 feet of crosscutting was completed. Exploration work on the 300 level failed to discover ore; therefore the contract was amended to allow drifting on the 240 level, which was completed for a distance of 256.5 feet west of the winze. The contract was terminated November 10, 1954.

5. All of the work originally provided by the contract was completed except 26.5 feet of drifting. Actual cost, or funds spent, are as follows:

Stage I		$ 1,540.93
Stage II		16,585.00
Stage III		7,297.50
	Total spent	$25,423.43
	Unexpended funds	2,576.56

6. Work on the 300 level failed to discover ore; however, several small shoots were found on the 240 level, and some ore was found above the 150 level by the operator at his own expense.

7. On July 1, 1954, Uranium Enterprises, Inc., an Arizona corporation, secured a lease and option on the property, and completed purchase of it May 9, 1955, after mining readily available ore, mostly below the 200 level.

8. Production from the 240 level, and from above the 150 level started about August 1, 1954 and continued to May 1955, when operations ceased because of exhaustion of readily available ores.

9. Production made under terms of the contract amount to 2530 tons of ore from which was recovered 156 flasks of mercury, an average of 4.48 pounds of mercury per ton of ore.

10. Sales of mercury produced from the Ord mine under terms of the contract amount to $47,351.68, and royalties amounting to $2,367.62 have been paid the Government.

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

GEOLOGY

The Ord mine (figs. 1 and 2) is located in the Mazatzal Mountains, Gila County, Arizona, in a belt of metamorphosed sedimentary rocks of Precambrian age that follows along Slate Creek for about 3 miles. The prevailing rock type in this belt is dark gray, brown or maroon slate or phyllite and associated with it are some prominent beds of light gray or white quartzite and conglomerate. In most places the foliation of the schist is approximately parallel to the bedding planes of the original sediments. At the Ord mine the general direction of foliation is about N 65° E. and dips about 65°-70° northwest.

Conspicuous in the slates and phyllites exposed along Slate Creek are a number of zones in which these rocks have been bleached and altered to a thinly laminated schist which is white or very light gray in color. These zones range from a foot or two in width to about 30 feet wide, are somewhat silicified, and most of them have a relatively high content of sericite. These zones apparently owe their origin to the passage of mineralizing solutions as all known ore bodies have been found associated with these altered zones. Many, but not all, of the altered zones along Slate Creek contain bodies of mercury ore, and these bodies appear to be localized in the zones where the schist has been folded and crinkled or where the shearing cuts across the foliation. Relatively intense structural deformation of the schist apparently is a prerequisite to the localization of ore.

In the Ord area, fig. 5, the rocks undoubtedly have undergone considerable deformation as is indicated in many places by the crumpled nature of the phyllite, by displacement of the quartzite and conglomerate marker beds, and by the presence of inconspicuous faults and shear zones that are approximately parallel to the foliation. The last mentioned faults and shear zones are probably the most important structures because of the influence they have had on the distribution and localization of the ore deposits. Faults which strike either northeasterly or northwesterly, most of which dip steeply west, cut obliquely across the foliation and displace the quartzite marker beds in several places, as shown on fig. 5. Most of these "cross" faults can be traced only for relatively short distances along the strike.

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ORE DEPOSITS

General Features

Most of the ore produced from the Ord property was obtained from 4 mineralized zones along which ore cropped out in several places. The largest of these productive zones, the "B" zone, underlies "B" Hill (fig. 5). Other ore bodies were mined from "C" Hill and from the No. 1 workings, which are situated about 450 feet southwest of "C" Hill, and from the Indian tunnel workings, which are about a mile west of Ord mine.

Essentially all of the ore of minable grade and quantity has been found in the phyllites and schists and only very small amounts of mercury have been found in other rocks. Most of the ore occurred in narrow, lenticular bodies having the greatest dimensions approximately parallel to the foliation of the host rocks, that is, they strike east-northeasterly and are vertical or dip steeply north. The ore bodies have a pronounced rake to the west in those cases where it can be determined. The "B" zone, which has been the most productive, consists of a group of closely spaced, small lense-like ore bodies, each separated from the others by fault gouge, barren schist or mineralized host rocks of submarginal grade. Individual ore bodies on the Ord property range from about 15 to about 150 feet in strike length, and widths range from about 2 to 8 feet and probably average about 3.5 feet. Exceptional widths as great as 20 or 25 feet were encountered in places in the "B" zone. The vertical dimension of the ore bodies is nearly always considerably greater than the horizontal dimension.

Structure

The ore deposits are situated in zones of pronounced structural deformation represented by many faults of diverse attitudes, and by flexing, jointing and shearing of the phyllite and schistose host rocks. The nature of the complex deformation in the "B" ore zone is revealed by the detailed geological maps, fig. 6, of the mine workings. The ore bodies and the alteration zones with which they are associated tend to be parallel to the foliation of the host rocks and apparently are localized principally along inconspicuous east-northeasterly trending bedding plane faults and shear zones. The attitude of these zones, in the vicinity of the ore bodies, locally deviates considerably from the attitude of the foliation in other parts of the property. In the "B" zone, fig. 6, the strike ranges from the east-northeast to east-southeast. Presumably these variations in the attitude are due to pre-ore deformation.

Mineralogy

Cinnabar is the only mineral of commercial importance in the deposits but native mercury has been found in a few places and metacinnabar and calomel have been reported in the near-surface ores. Associated minerals are mercurian tennantite, sparse pyrite, chalcopyrite, chalcocite and hematite. A quartz and iron-rich carbonate, magnesian siderite, which is often referred to as ankerite, are the principal gangue minerals in the ore, and sericite is the principal constituent of the altered host rocks. The most abundant mineral in the zone of oxidation is limonite, most of which appears to result from the

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oxidation of magnesian siderite. Supergene copper minerals occur sparsely in many places. An unusual occurrence of black mercury ore was encountered on the 240 level. The black mineral was found by analyses to be mercurian tennantite, with which is associated trace amounts of chalcocite.

Cinnabar in many places is intimately intergrown with the quartz and iron-bearing carbonate, thus indicating a close genetic relationship between these minerals, and the cinnabar is also closely related, at least in space, to the mercurian tennantite and chalcocite and to the altered host rocks. Probably only one period of mineralization is represented; however, the different minerals are not uniformly distributed with equal abundance. The gangue minerals are by far the most abundant and in many places are not accompanied by mercury-bearing minerals.

Character of the Ore

Quicksilver ore at the Ord mine is of 2 distinctly different types; the most abundant is composed of very fine-grained cinnabar disseminated in whitish, sericitized phyllite or schist, and the other type is composed of coarser-grained cinnabar embedded in quartz-carbonate veins. Some of the cinnabar is distinctly crystalline. The disseminated ore, often referred to as paint ore by the miners, consists of minute specks of cinnabar disseminated in the sericite schist in such abundance as to impart a pinkish color to the host rocks. In a few places many small, paper-thin veinlets of relatively pure cinnabar occupy partings along foliation planes near faults or fractures and in a few places these

veinlets cut obliquely across the foliation. A slight variation of the disseminated ore might be designated gouge ore, as it consists of cinnabar scattered through fault gouge. Along some of the faults, especially those striking east-northeasterly, cinnabar has been smeared by post-ore movement.

Most of the ore occurs in irregular bodies in which the mercury values are not uniformly distributed and the ore boundaries in places are economic limits determined by the relative quantity of mercury in the ore. In a few places the ore bodies have a chimney-like core of comparatively high-grade ore which is surrounded by a halo of lower grade ore which may be gradational into barren wall rock.

THE EXPLORATION PROJECT

Exploration work completed

Under Stage I of the DMEA exploration project the mine was rehabilitated and dewatered to the 200-foot level, which is the first sublevel below the main haulage level, which is also referred to as the Mercury adit or 150 level. Under Stage II the Adit winze was deepened to the 300-foot level, and from the bottom of it a drift was driven 225 feet westward and 40 feet of crosscuts were driven. Under Stage III, on the 240 level, a drift was extended westward from 48 feet to 256.5 feet west of the winze.

The contract was terminated on November 10, 1954, when all the authorized work was completed except 26.5 feet of drifting. Total cost of the project was $25,423.43.

Results of Exploration

The principal objective of this exploration project was to establish the downward extension of the main oreshoot below the 200 level of the Ord mine. The winze penetrated ore to the 240 level and westward from the winze the 240 level drift penetrated several small shoots of ore for a distance of about 240 feet. No ore was found on the 300 level. Apparently cinnabar mineralization stops between the 240 and 300 levels.

The ore discovered on the 240 level has been mined, along with a small amount mined from above the 150 (Mercury adit) level. Total production under terms of the contract is 2530 tons of ore which yielded 156 flasks of mercury, for an average of 4.48 pounds of mercury per ton of ore. Sales amount to $47,351.68 and $2,367.62 have been paid in royalties to the Government.

ORE RESERVES

It is difficult to arrive at a satisfactory estimate of ore reserves of the Ord mine because the available maps and production records are inadequate. When the project was originally started the reserves were estimated at 10,000 tons of low-grade ore in the old workings above the 200 level and about 5,000 tons of ore in the lower part of the mine below the 200 level. Under terms of the contract little ore was mined from the upper workings; therefore this part of the reserve is not changed. In the lower workings, the 1952 reserve estimate is too high as the ore did not extend to the 300 level. Most of the ore -- probably from 1500 to 2000 tons of it -- came from between the 200 and 240 levels, and probably about 1000 tons of ore remain in unmined pillars in this zone.

Grade of the remaining reserves of ore can be estimated only from what has been mined in the past, and this must necessarily be based on fragmentary information. The average grade of ore mined from the No. 1 deposit in 1928-1929 was 0.43 percent mercury, and the writer believes this to be approximately the grade of ore mined from the main oreshoots above the "B" tunnel, which was mined about the same time. From 1942 to 1946, inclusive, the average grade was about 7.1 pounds of mercury per ton of ore, and the ore produced in late 1954 and early 1955 averaged 4.48 pounds per ton. Considerable selective mining of high-grade ores was done from 1942 to 1946, and only the lower grade ores were left. It is reasonable to suppose that the remaining ore above the 150 level contains only 3 or 4 pounds of mercury per ton. The ore below the 200 level is somewhat richer, and is estimated by the writer to contain about 5 pounds per ton. This ore below the 150 level may never be recovered because of difficult working conditions.

Estimated ore reserves are summarized as follows:

Location	Tons	Lbs. per ton
Above the 200 level	10,000	3.5
Below the 200 level	1,000	5.0

SUGGESTIONS FOR FUTURE EXPLORATION

The main ore body at the Ord mine, as developed by the "B" tunnel and the Mercury adit, appears to be adequately developed and no further work except possible mining appears to be justified. At the "C" tunnel and the No. 1 workings the ores may be nearly exhausted, although low grade ore is present in the deepest workings of the No. 1.

Structural deformation and hydrothermal alteration of the phyllite are the best guides to ore and these suggest that other zones worthy of exploration exist on the Ord property. Small ore bodies may exist in 3 areas: (1) beneath "C" Hill between the "C" tunnel and No. 1 workings; (2) about 500 feet southwest of the No. 1 workings; and (3) an altered zone about 400 feet south of the No. 1 workings. As the main oreshoot dies out between the 240 and 300 level, it appears as if the oreshoots are shallow and that the search for deep extensions of ore may be futile. The vertical dimension of the orebodies is generally greater than the horizontal dimensions; therefore it is feasible to explore for ore by drifting along the altered zones. History shows that the orebodies are relatively small and low grade, and the cost of exploration and development is relatively high. The total cost of development of the Ord mine probably greatly exceeds the value of the mercury recovered.

CONCLUSIONS AND RECOMMENDATIONS

The project was successful to the extent that minable ores were found and recovered as a result of the project; however, it was greatly disappointing that ore could not be found below the 240 level. As 2530 tons of ore were mined, from which 156 flasks of mercury were recovered, the project should be certified as a discovery. Ore reserves above the 200 level were not significantly changed by the project, the remaining ore reserves below the 200 level are only about 1000 tons, and this may not be recovered because of difficult mining conditions.

There are other areas on the property that justify exploration; and Government participation might be justified in a small, carefully planned exploration project that includes shallow diamond drilling and possibly drifting from present workings.

Docket

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

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February 2, 1956

Copy [illegible] W. S. Martin

Memorandum

WSM

To: W. S. Martin, Defense Minerals Exploration Administration

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

Subject: Review of Final Engineering Report, Docket No. DMEA 2445 (mercury), Contract No. Idm-E460, Ord Mercury Mines, Inc., Gila County, Arizona, $28,000.00

This report on the Ord Mercury Mine by William R. Hardwick and Walter R. Storms, Bureau of Mines, has been reviewed.

Exploration of the mine was done in 3 stages at a total cost of $25,423.43. Stage 1 consisted of rehabilitation of the zero and New adits, unwatering the mine to the 200 or bottom level, and sampling accessible areas. In Stage 2 a winze was sunk from the 200-foot level to the 300-foot level and 225 feet of drifting and 40 feet of crosscutting was done on the 300-foot level under an amendment and Stage 3, 208.5 feet of drifting and crosscutting was done on the 240-foot level.

The Bureau engineers stated that at least 2000 tons of ore were discovered by the work done. They also stated that by January 1, 1956, the operator had mined 2,530 tons of ore to produce 156 flasks of mercury. However, it is not clear whether the ore that was discovered has been mined.

In any event, the DMEA field representatives conclude that at least 2000 tons of ore were discovered under the Exploration Contract and its amendments and recommend that a Certification of Discovery or Development be issued.

I agree with this recommendation.

J W Pennington
J. W. Pennington

Copy to: Division of Minerals
Branch of Base Metals (2)
Thor Kiilsgaard, U.S.G.S.
R. W. Geehan
Files

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

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224 New Customhouse
Denver 2, Colorado

January 19, 1956

Memorandum

To: Secretary to the Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: FIELD TEAM FINAL REPORT - Docket DMEA 2445 (Mercury), Contract Idm-E460, Ord Mercury Mines, Sunflower Mining District, Gila County, Arizona

Enclosed are the original and one copy of the Operator's final report pertaining to work performed under the subject contract.

The original and three copies of the final engineering report by the U. S. Bureau of Mines were forwarded by our memorandum of January 5, 1956.

The final geologic report by the U. S. Geological Survey has not been received but will be forwarded to you as soon as it is received.

Final payment to the Operator was processed by this office January 10, 1956, in conformance with the Report of Review by the Contract Administration and Audit Division, dated November 22, 1955, which was released to this office December 2, 1955.

The exploration work consisted of cleaning out and rehabilitating the adit levels, unwatering the mine to the 200-foot level and sampling accessible workings, 93 feet of winze sinking, and an aggregate of 473.5 feet of crosscutting and drifting, at a total accepted cost of $25,423.43, in which the Government participated to the extent of 75%, or an amount of $19,067.57.

The exploration work resulted in the discovery of mercury ore, recommendations for certification of which were forwarded by our memorandum of December 2, 1955, and is further detailed in the final engineering report submitted by our memorandum of January 5, 1956.

W. M. Traver
W. M. Traver

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

Enclosures

DMEA
Date Rec'd.

JAN 9 1956

BUREAU OF MINES
Denver, Colorado

uranium enterprises incorporated

258 SOUTH SCOTTSDALE ROAD
P. O. BOX 875
SCOTTSDALE, ARIZONA
PHONE: WHITNEY 5-0709

160 WEST MAIN
GRAND JUNCTION, COLORADO
PHONE: GRAND JUNCTION 261

ADDRESS REPLY TO OUR SCOTTSDALE OFFICE

January 6, 1955

Operator's Final Report.

Executive Officer
DMEA FIELD TEAM REGION III
224 New Customhouse
Denver 2, Colorado

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Dear Sir:

We are sending you herewith the Closing Report on the Ord Mercury Mines, DMEA Docket 2445, Contract Idm-E460, duly signed by a proper official of the Ord Mercury Mines.

We hope that this final report and its attached field maps will meet with your approval.

Very truly yours,

ORD MERCURY MINES, INC.

J. E. O'Connor

J. E. O'Connor

JEO'C:gfh

DMEA
Date Rec'd.
DEC 22 1955
BUREAU OF MINES
Denver, Colorado

CLOSING REPORT ON ORD MERCURY MINES

DMEA DOCKET 2445

CONTRACT Idm-E460

DMEA
Date Rec'd.
JAN 9 1956
BUREAU OF MINES
Denver, Colorado

Contract Scope and Description:

Stage I

This stage consisted of rehabilitating the 0, 50, and 100 foot level, unwatering the mine to the present bottom at the 200 foot level and sampling the accessible workings.

Estimated Cost of Project

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1.	Independent Contracts		None
2.	Labor, Supervisor, Consultants		
	Supervision	$ 300.00	
	Labor - 2 miners for 4 weeks	718.00	$ 1,018.00
3.	Operating, Materials and Supplies		
	Timber, fuel, greases, small tools, nails, bolts, and any other supplies and materials necessary to complete the project.		420.00
4.	Operating Equipment		
	To be purchased		None
	To be rented - Pump, per month		100.00
	To be furnished by operator:		
	1 300 c.f.m. compressor--allowable monthly depreciation	70.00	
	1 1947 Chevrolet ½ ton pickup--allowable depreciation	20.00	
	2 Mine cars--allowable monthly depreciation	5.00	95.00
5.	Initial Rehabilitation and Repairs		None
6.	New Buildings, Improvements, Installations		None
7.	Miscellaneous		
	Assaying	150.00	
	Bookkeeping	50.00	
	Repairs and Maintenance on Operating Equipment	67.00	
	Workmen's Compensation, Employer's Liability and Payroll Taxes	100.00	367.00

8. Contingencies	700.00
Total Cost of Stage I	$ 2,700.00
Government Participation, Stage I @ 75%	$ 2,025.00

Stage II

Stage II is to be undertaken only after completion of Stage I, and the location and extent of the work is dependent upon the results of Stage I. This work must have the prior written approval of the DMEA representative.

Stage II consists of minor repairs to company-owned houses, sinking the adit winze 100 feet below the 200 foot level, drifting westward approximately 260 feet from the bottom of the winze on the new 300 foot level, and driving 40 feet of crosscuts. The location and extent of the crosscuts will be determined after part or all of the drifting is completed, and must be acceptable to the DMEA representative.

Estimated Cost of Project

1. Repairing Company-Owned Houses (Entire Work Unit)	$ 800.00
2. Sinking 100 feet of 2 Compartment Winze at $70.00 per foot	7,000.00
3. Driving 300 feet of drift and crosscuts at $35.00 per foot	10,500.00
Total Cost of Stage II	$18,300.00
Government Participation, Stage II @ 75%	$13,750.00

Stage III

Stage III is to be undertaken only after completion of Stage II, and the location and extent of the work is dependent upon results of Stage II.

Stage III consists of driving an additional 200 feet of drifts and crosscuts.

Estimated Cost of Project

1. Driving 200 feet of drifts and crosscuts at $35.00 per foot	$ 7,000.00
Total Cost of Stage III	$ 7,000.00
Government Participation, Stage III @ 75%	5,250.00
TOTAL ESTIMATED COST OF ENTIRE THREE STAGES	$28,000.00
TOTAL GOVERNMENT PARTICIPATION AT 75%	$21,000.00

Execution and Progress of DMEA Contract:

On December 29, 1952 operations under Stage I of the contract were inaugurated and pursued to completion on March 23, 1953. The first step was the cleaning out and rehabilitation of the 0 adit level, also known as the "B" level, and the new level. Then the mine was unwatered down to the 200 ft. level, and extensive sampling was done in all of the accessible workings.

As a result of the foregoing work, the operators felt that there were definite indications of ore which might be found by the exploration work proposed under Stage II, and after consultation with the DMEA representatives, received authorization from them to proceed with this second phase.

The first step of Stage II was the sinking of a winze below the 200 ft. level. Begun on April 29, 1953, it was driven 93 feet to the 300 ft. level by late August, 1953. September operations saw the start of westward drifting from the bottom of this winze. From this point the operator followed along the mineralized zone on the 300 ft. level, and by April 1, 1954 had completed 225 ft. of drifting and 40 ft. of cross cutting, but had been unable to locate ore.

However, a sub-level drift at the 240 ft. level from the winze revealed good ore, and it was at this point that the operator requested permission from DMEA to apply the contract footage still remaining on the 300 ft. level workings to the drifting and crosscutting which had been bringing excellent results on the 240 ft. level. The operator had proceeded with this more promising operation on the 240 ft. level for some 48 ft. of

of drifting before authorization and approval was received to apply the footage from the 300 ft. level to the 240 ft. level. This 48 ft. of drifting had been completed in April, and from that time on, the drift was steadily advanced until on November 10, 1954 it had been driven 208.5 feet with contractual approval or a distance of 256.5 ft. from the winze. During the course of this work, the drift had been successful in uncovering several small ore shoots, and in view of such favorable aspects, the operator received DMEA authorization to go into Stage III of the operation when the remainder of the footage on the 300 ft. level had been completed as outlined in the contract.

In spite of there being no recovery of ore from the 300 ft. level, the shoots from the 240 ft. level were productive to the extent that by November 19, 1954, ore from this level resulted in a total of 156 flasks of mercury produced.

All during the period of the contract, the operator pursued his program in a workmanlike manner, but through circumstances beyond his control, ran into a number of difficulties which made it necessary for him to ask for an extension of the time limit under the original contract, which was for nine months. Because progress was so much slower than had been anticipated, the termination date of the contract was advanced several times--until the final extension brought the expiration date up to November 10, 1954. Thus the total contract time was for exactly two years, instead of the original nine months. At the expiration date of the contract there were 26.5 ft. of drifting still remaining to be done, but in view of the fact that the 240 ft. level west drift face was in waste, the DMEA representative put in his recommendation that the contract be terminated.

The operator at all time attempted to complete his contract in the most efficient method possible, but found great difficulty in locating mining help and in keeping them. The work on the 300 ft. level took much longer than anticipated because of the unusually heavy ground encountered during the sinking of the winze and the drifting operation. On the 240 ft. level stoping operations were much more time-consuming than the drifting which was covered by the contract. These, and sundry other unanticipated factors combined to explain the necessity for a long time extension on the original contract Idm-E460.

The following recapitulation will show, however, that though the DMEA contract spent more time than originally was allotted

to the operation, the actual expenditure of money on the program was well within the allowable limits of the contract.

Expenditures

Allowable expenditures under the terms of the contract were as follows:

Stage I	$ 2,700.00	
Stage II	18,300.00	
Stage III	7,000.00	
Total Allowable		$ 28,000.00

Actual funds spent were as follows:

Stage I	1,540.93	
Stage II	16,585.00	
Stage III	7,297.50	
Total Spent		25,423.43
Unexpended funds amounted to:		$ 2,576.57

Geology

In order to give a geological picture of the Ord Mercury Mines, we quote from the University of Arizona Bulletin No. 122 entitled "Quicksilver (Mercury) Resources of Arizona", dated June 1, 1927, which describes the property as follows:

"The prevailing types of schist on this group of claims are brown slate and cream-colored phyllite, with here and there ribs of hard quartzite. The schists strike nearly east and west, and dip at steep angles usually to the northwest. At least two, and possibly three, parallel lodes exist on this group of claims. These lodes have been shown to be continuous by numerous prospect pits and trenches. Two quite different types of ore occur here, quartz veins carrying cinnabar, and finely disseminated cinnabar in puckered phyllite. In the quartz veins the quartz is intergrown with ferruginous carbonate." "The disseminated ore in phyllite consists of minute specks of cinnabar, visible only with a microscope yet abundant enough to impart a pinkish color to the rock. Occasionally tiny veinlets of pure cinnabar traverse the rock, but are seldom over an eighth of an inch in width."

Scope of Work Performed on the Property

In addition to the DMEA project, other work was carried on at the property at company expense. The company reopened and retimbered station level #1 on Claim #14, and sunk a shaft winze of 40 feet and drove 70 feet of drift as a part of the exploration for initial work. The ore located and discovered by the use of DMEA monies was mined out in part. Some ore and mineralization was left in place. The mining operation consisted of stoping on the 200 ft. level, leaving a 10 ft. wall in place between the winze and the stoping operation. The stoping actually covered practically all of the feasible ore on the 200 ft. level roof as indicated on the map. A V-shaped section was left in place between the old stoped area and the new stope. Some ore was left as a floor for the 150 ft. level drift. Ore was then mined out in a stoping operation from the 240 ft. level leaving a 10 ft. pillar at the winze. A stoping operation also took place farther down the 240 ft. drift to the 200 ft. level, again leaving an inverted V-shaped pillar. No production was ever realized from the 300 ft. level drift--however, considerable low grade ore was left in place above the 150 ft. level.

Additional discovery work was performed on claim #16, known as the Indian Tunnel, and practically continuous exploration work was carried on on the entire property. A number of favorable outcroppings of mineralization were worked on as far as discovery work was permitted to go. A great deal of low grade ore is evident at several of these outcroppings. Additional work was performed on camp rehabilitation and road work at company expense. Also a new small retort furnace was constructed.

Discovery

#1 Shaft

After completing the station on #1 shaft, a new drift on the 90 ft. level was advanced 51 ft. with a southwestward trend. A 3 ft. zone containing myriad paralleling wafer-thin quartz stringers showing spotty quartz cinnabar was encountered from 22 to 35 ft. at the drift measured from the winze. This zone crosscut the drift at a gradual angle and then trailed out to nothing. It is possible that the ore zone passed through was a downward extension of the shoots in the 50 ft. level. Additional drilling was suggested but the program in the #1 shaft has not been completed.

Indian Tunnel

Bull dozer stripping of the overburden from several mineralized outcrops opened up a band of ore 6 ft. wide, and showed considerable indication as to commercial value of ore. Again the drilling program was recommended, but to date has not been carried out.

Malone Lead

Dozer work failed to uncover any hopeful signs of mercury mineralization at the Malone Lead. Samples cut across the limonitic fracture zone reportedly containing the cinnabar assayed no higher than 0.200 Hg. This along with a great deal of other low grade outcroppings was carried through the stage of elementary exploration. Again it was reported that a drilling program and advanced geology could very possibly lead this property into active production with a program laid out in such a manner that it could be carried on concurrent with high-grade production. To date none of these programs have been carried out, however by and large, with an optimistic outlook, this property seems to be a potential profitable operation.

Production

Production actually started on this property shortly before August of 1954, but due to an antiquated furnace and the difficulty in construction and rehabilitation of the small retort, it dwindled to an absolute standstill in May of 1955. During that time, they had recovered 2,530 tons of ore and had run it through the mill with a recovery of 11,251 pounds of Hg, or 156 flasks. Due to the fact that the majority of production was carried on concurrently with rehabilitation, exploration, development, DMEA project work and construction, no effort was put forth to maintain an actual cost of recovery from the mining or milling operation. A great deal of money was put in by management for new equipment on this property. To date, in addition to the recovered expenditures, management has invested for exploration or rehabilitation work some $56,000.00, which is indicative that no expense was spared to continue the exploration and development work after the completion of the DMEA contract.

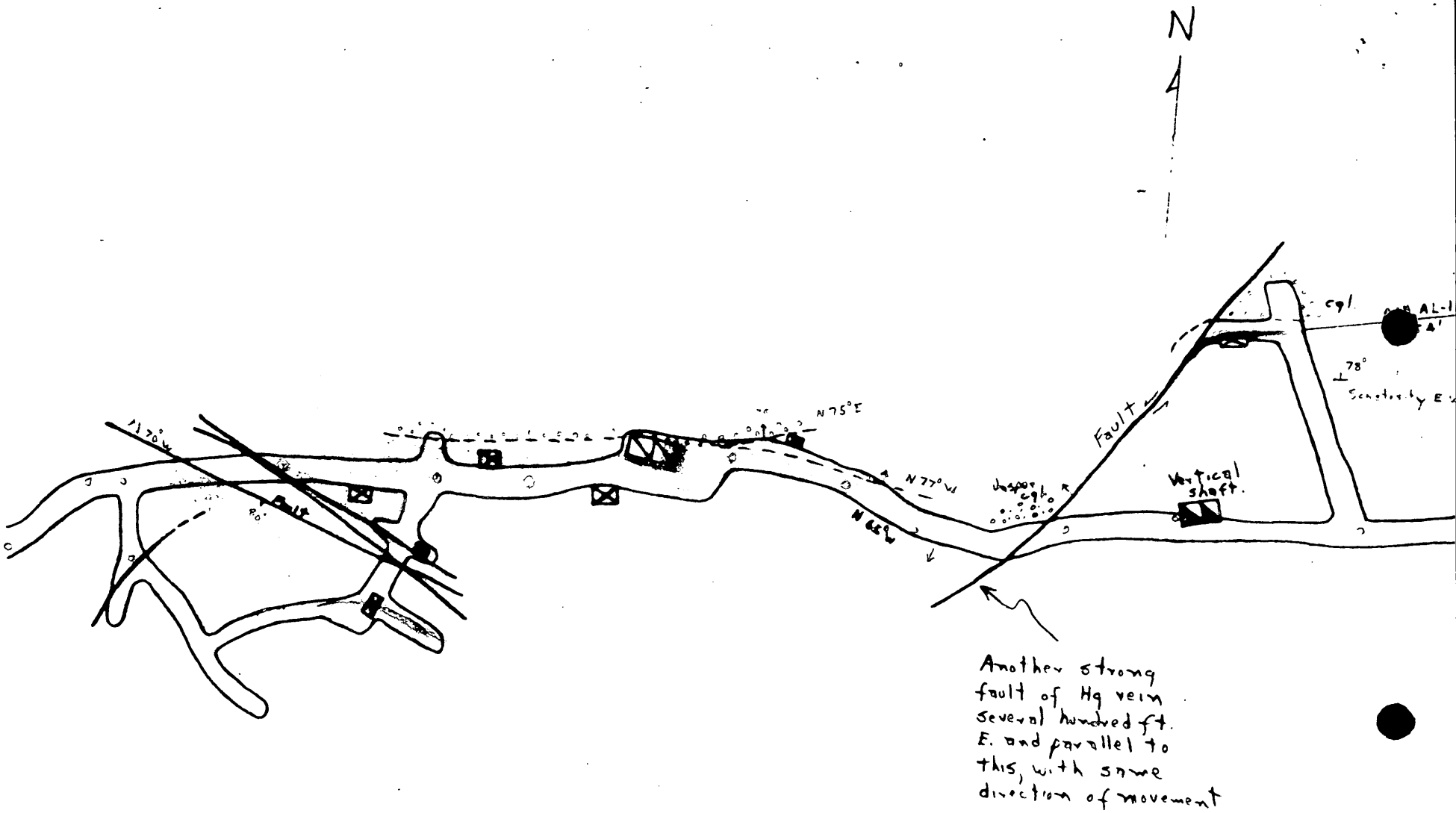
Respectfully submitted,

ORD MERCURY MINES, INC.

J. E. O'Connor

J. E. O'Connor, Secy.-Treas.

Dated: 1-6-56



Ord Mercury Mine

Adit Level

as of 3/44

Scale 1" = 30'

W.E. Mead

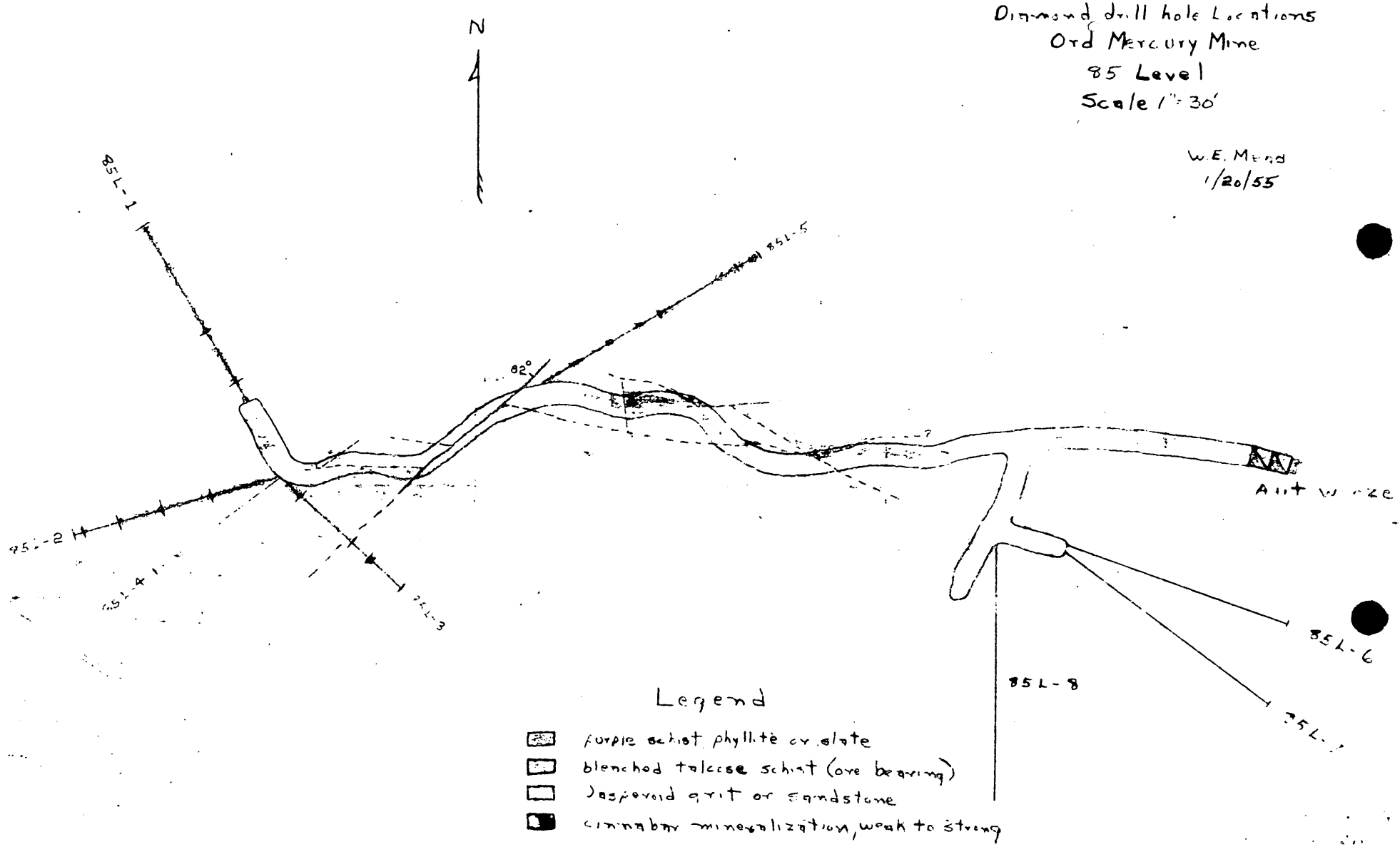
Adapted from Rasor's map of Adit Level

DMEA Copy

RECEIVED
JAN 2 6 1956

Diamond drill hole Locations
Ord Mercury Mine
85 Level
Scale 1" = 30'

W.E. Mead
1/20/55



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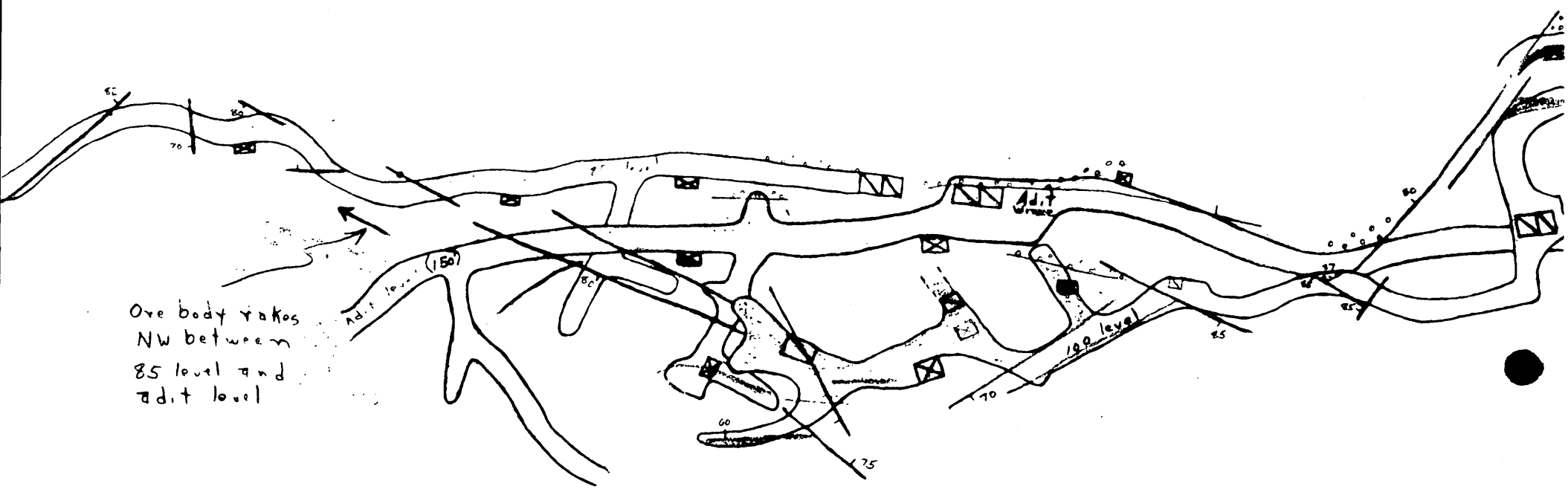
Heading of adit winze, N 65° W

Scale 1" = 30'



Ord Mercury Mine
Composite showing
1) 100 level
2) Adit level
3) 85 level

W.E. Mead

RECEIVED
JAN 26 1956

RECEIVED
JAN 26 1956

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

224 New Customhouse
Denver 2, Colorado

January 5, 1956

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 2445 (Mercury) Contract Idm-E460
Ord Mercury Mines, Inc., Gila County, Arizona

In compliance with your request of December 19, 1955, we are enclosing the original and three copies of the final engineering report pertaining to work completed under the subject contract.

Three unsigned copies of the Operator's final report were received December 22, 1955. However, they were returned to the Operator through Mr. W. R. Storms, as indicated by our memorandum of December 22, 1955, copies of which were forwarded to you.

The Field Team final report will be forwarded as soon as the Operator's and Geological final reports are received. Because of the present backlog of work in the field, we are unable to advise at this time as to when we will be able to forward the Field Team report.

W. M. Traver

Encls.

W. M. Traver

Reviewed by
DMEA OPERATING COMMITTEE
1-13-56
(date)

RECEIVED
JAN 9 1956

T
C
B

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DMEA
Date Rec'd.
JAN 3 1956

Box 4097
Tucson 5, Arizona

BUREAU OF MINES
Denver, Colorado

December 30, 1955

Memorandum

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

RECEIVED
JAN 9 1956

From : Superintendent, Southwest Experiment Station

Subject : Final Engineering Report, DMEA Contract Idm-E460, Docket DMEA-2445, Ord Mercury Mine, Sunflower Mining District, Gila County, Ariz.

As requested in a recent memorandum, we have revised the above report to show the company's last request for an amendment and its rejection.

Walter R. Storms

Walter R. Storms

CC W. M. Traver (8)
DMEA-2445
DF

WRStorms:frj

Reviewed by
DMEA OPERATING COMMITTEE
1-18-56
(date)

Date Rec'd.
JAN 21 1955
BUREAU OF MINES
Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

SOUTHWEST EXPERIMENT STATION
Box 4097
UNIVERSITY STATION

TUCSON, ARIZONA

January 19, 1955

Memorandum

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

From : Superintendent, Southwest Experiment Station

Subject : Final Engineering Report, DMEA Contract Idm-E460, Docket DMEA-2445, Ord Mercury Mine, Sunflower Mining District, Gila County, Ariz.

Enclosed are original and 8 copies of a Final Engineering Report on the above property by William R. Hardwick of the Bureau of Mines and the writer. The operator asked for an extension of time so the property could be thoroughly examined by a geologist; the company then planned to ask for additional Government aid. However, we believe that any future work will be on claims other than those subordinated in Contract Idm-E460, so are submitting a final report at this time.

Walter R. Storms

Walter R. Storms

CC W. M. Traver (8)
J. N. Faick
DMEA-2445
DF

WRStorms:frj

Reviewed by
DMEA OPERATING COMMITTEE
1-18-56
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REGION III

FINAL ENGINEERING REPORT

DMEA-2445, Contract Idm-E460

Ord Mercury Mine

Sunflower Mining District

Gila County, Arizona

William R. Hardwick, Mining Engineer

and

Walter R. Storms, Supervising Mining Engineer

U. S. Bureau of Mines

January 1955

Received for
DMEA OPERATING CONTRACTOR
1-16-56
(date)

DMEA-2445, CONTRACT Idm-E460
ORD MERCURY MINE
SUNFLOWER MINING DISTRICT
GILA COUNTY, ARIZONA

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Physical features and climate	7
History and production	7
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Ore reserves	11
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Expenditures	16
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SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Early in 1952, Ord Mercury Mines, Inc. applied to the Defense Minerals Exploration Administration under the Defense Production Act of 1950, as amended, for Government assistance in exploring the Ord Mercury mine in the Sunflower Mining District of Gila County, Ariz. The application, which was for $20,000.00, was docketed as DMEA-2445, then sent to the field for an examination and a report on the feasibility of the project. The applicant proposed to unwater part of the mine, sink a winze, and do several hundred feet of drilling.

On May 21 and 22, 1952, T. M. Romslo of the Bureau of Mines and J. N, Faick of the Geological Survey examined the property, accompanied by Tom J. Russell, one of the mine owners. During the investigation the proposal was revised to a 3-stage project, costing $28,000.

The Ord mine is on a shear zone in schists and phyllites, the zone being roughly parallel to the foliation of the enclosing rocks, striking about N. 70° to 80° E. and dipping about 80° to the north. The shear zone ranges from a few inches to 40 feet in width and has a strike length of several thousand feet. Cinnabar occurs as disseminated particles, as films and veinlets in the country rock, and in quartz-carbonate veinlets. The principal ore zone in the mine is about 175 feet long and from a few inches to 25 feet in width.[1]

1/ Romslo, T. M. and Faick, J. N., DMEA-2445, Ord Mercury Mine, Gila County, Arizona, DMEA Examination Report, June 1952, section on Summary, Conclusions and Recommendations.

The mine was located in 1925 and has been developed by 7 levels, 3 at 50-foot intervals above the 150 or New Adit level, and 3 below this level (the 200, 240, and 300). The latter three are reached by a winze from the New Adit level. Ore has been produced from several small stopes above the 240-foot level. Up until 1946, production amounted to about 1,500 flasks. Recently production has started again. Fifty-eight flasks had been produced from the start of contract work up to November 19, 1954.

As a result of the DMEA examiners' recommendations, Exploration Project Contract No. Idm-E460 was signed on November 10, 1952 by a representative of the company and by the Executive Officer of the Region IV DMEA Field Team. This contract was for the amount of $28,000.00, the Government to furnish $21,000.00 and the company the remainder. The contract was for a period of 9 months and work was to start within 60 days from the contract date. The project was divided into 3 stages as follows: (1) Rehabilitate the upper levels, unwater the mine to the 200-foot level, and sample accessible workings; (2) if work under Stage 1 showed promising results, company-owned houses were to be repaired, then a winze was to be sunk 100 feet below the 200-foot level to the 300-foot level and 260 feet of drifts and 40 feet of crosscuts were to be driven on that level; and (3) if work under Stage 2 showed promising results, 200 feet of

additional drifts and crosscuts could be driven. Total cost of Stage 1 was $2,700.00, Stage 2 was $18,300.00, and Stage 3 was $7,000.00, for a total of $28,000.00.

Work under Stage 1 of the contract started on December 29, 1952 and was completed on March 23, 1953. The zero or "B" adit level, and the New Adit or 150-foot level were cleaned out and retimbered where necessary; the mine was unwatered to the 200 or bottom level and that level was cleaned out as far as possible; then accessible areas were sampled. As work done under Stage 1 seemed favorable, the company was authorized to begin Stage 2.

On April 29, 1953, the operator started to sink the winze below the 200-foot level, and completed it to the 300-foot level by the end of August. In September, drifting was started from the winze bottom on the 300-foot level. By April 1, 1954, the 300-foot level drift had been advanced 225 feet and 40 feet of crosscutting had been done. No ore was found beneath the ore shoot that occurred on the 200-foot level.

In the meantime the operator had driven a drift 48 feet westward from the winze on the 240-foot level and had found good ore. As no ore had been found on the 300-foot level, the operator requested an amendment, which was approved by the Defense Minerals Exploration Administration, so the remaining Stage 2 footage could be used on the 240-foot level. Therefore, in April the 240-foot level drift was driven westward until the

footage under Stage 2 had been exhausted. DMEA representatives then approved work under Stage 3, so this drift again was advanced until on November 10, 1954, 208.5 feet of drifting and crosscutting had been done under terms of the contract and its amendments.

On November 10, 1954, the contract time expired although 26.5 feet of drifting remained to be done to complete the total contract footage. However, as the 240-foot level west drift face was not in ore, the DMEA representative recommended that this footage be cancelled and the contract terminated.

On December 9, 1954, Ord Mercury Mines requested that final settlement of its contract be deferred for 4 months while a new application was being made for additional exploration work. On December 30, 1954 the Executive Officer of the Region III Field Team granted an extension of time to March 31, 1955. At that time, Ord Mercury Mines applied for additional exploratory aid in the amount of $176,550.00. On June 21 and 22, 1955, T. M. Romslo of the Bureau of Mines and J. N. Faick of the Geological Survey again visited the Ord property to investigate the new proposal. Subsequently this new request was rejected and the operator so notified on September 30, 1955.

During the life of the contract, $25,423.43 was spent on rehabilitating the upper levels, unwatering the mine to the 200-foot level and sampling, repairing houses, sinking 93 feet

of winze to the 300-foot level, driving 265 feet of drift and crosscuts on that level, and driving 208.5 feet of drift and crosscut on the 240-foot level.

As at least 2,000 tons of ore were discovered by work done under terms of Exploration Project Contract No. Idm-E460 and its amendments, the DMEA field representatives recommended that a "Certification of Discovery or Development" be issued by the Administrator of the Defense Minerals Exploration Administration. Several thousand additional tons of ore are known to exist in the upper workings of the mine.

INTRODUCTION

Early in 1952, Ord Mercury Mines, Inc. applied to the Devense Minerals Exploration Administration for Government assistance under the Defense Production Act of 1950, as amended, to explore the mercury deposit at the Ord Mine. The applicant proposed to rehabilitate old workings, unwater the lower part of the mine, sample accessible workings, then explore favorable areas by sinking a winze and drifting and crosscutting beneath known ore shoots. The application was docketed as DMEA-2445, then sent to the field for an examination and report. The amount of the original application was for $20,000.00.

On May 21 and 22, 1952, T. M. Romslo of the Bureau of Mines and J. N. Faick of the Geological Survey examined the Ord property and recommended Government exploratory assistance. However, they recommended that this work be done in stages for a total cost of $28,000.00, instead of $20,000.00.

On November 10, 1952 Exploration Project Contract No. Idm-E460 was signed. It provided that: (1) The upper mine levels would be rehabilitated, the mine unwatered to the bottom or 200-foot level, and favorable accessible areas sampled; (2) the winze from the main adit level to the 200-foot level was to be

deepened to the 300-foot level and a substantial amount of drifting and crosscutting done on that level; and (3) additional drifting and crosscutting were to be done if the results of the prior work seemed promising.

When the contract was signed the Ord mine and surrounding lode claims were owned by Ord Mercury Mines, Inc., Tonto Basin, Ariz., H. Grady Harrison, President, and Tom J. Russell, Secretary. During the life of the contract the company office was moved to Payson, Ariz. Later, it was reported that a controlling interest in the company had been sold to the Thornberg Brothers and associates.

LOCATION AND ACCESSIBILITY

The Ord mercury mine is situated on the western side of the northerly-trending Mazatzal Mountains in the Sunflower Mining District, Gila County, Ariz. (figure 1). The Ord property is comprised of 20 patented lode mining claims as shown on figure 2, all in the northeast corner of unsurveyed T. 7 N., R. 9 E.

The mine may be reached from Phoenix by traveling eastward on paved U. S. Highway 60-70-80-89 for about 24 miles to the Bush Highway, thence northeasterly on this unpaved road for about 56 miles to the property. The Bush Highway crosses the Ord claims. The mine also may be reached from Roosevelt Dam by taking the Globe-Payson road northward from the dam for about 28 miles to a point 5 miles north of Tonto Basin, thence 7 miles westward on a dirt cut-off road to the Bush Highway and the mine.

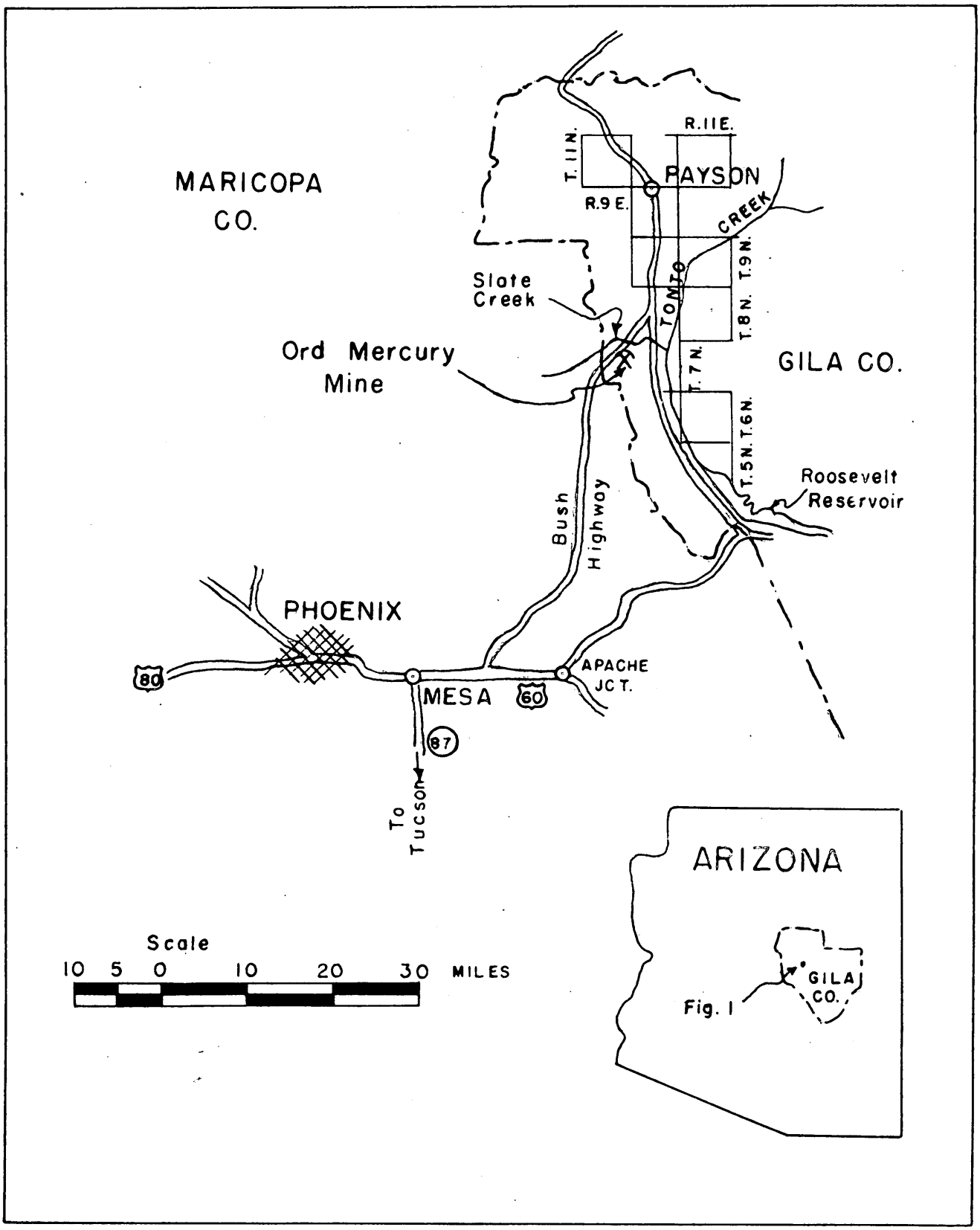

FIG. 1 — Location Map, Ord Mercury Mine
Gila County, Arizona DMEA 2445

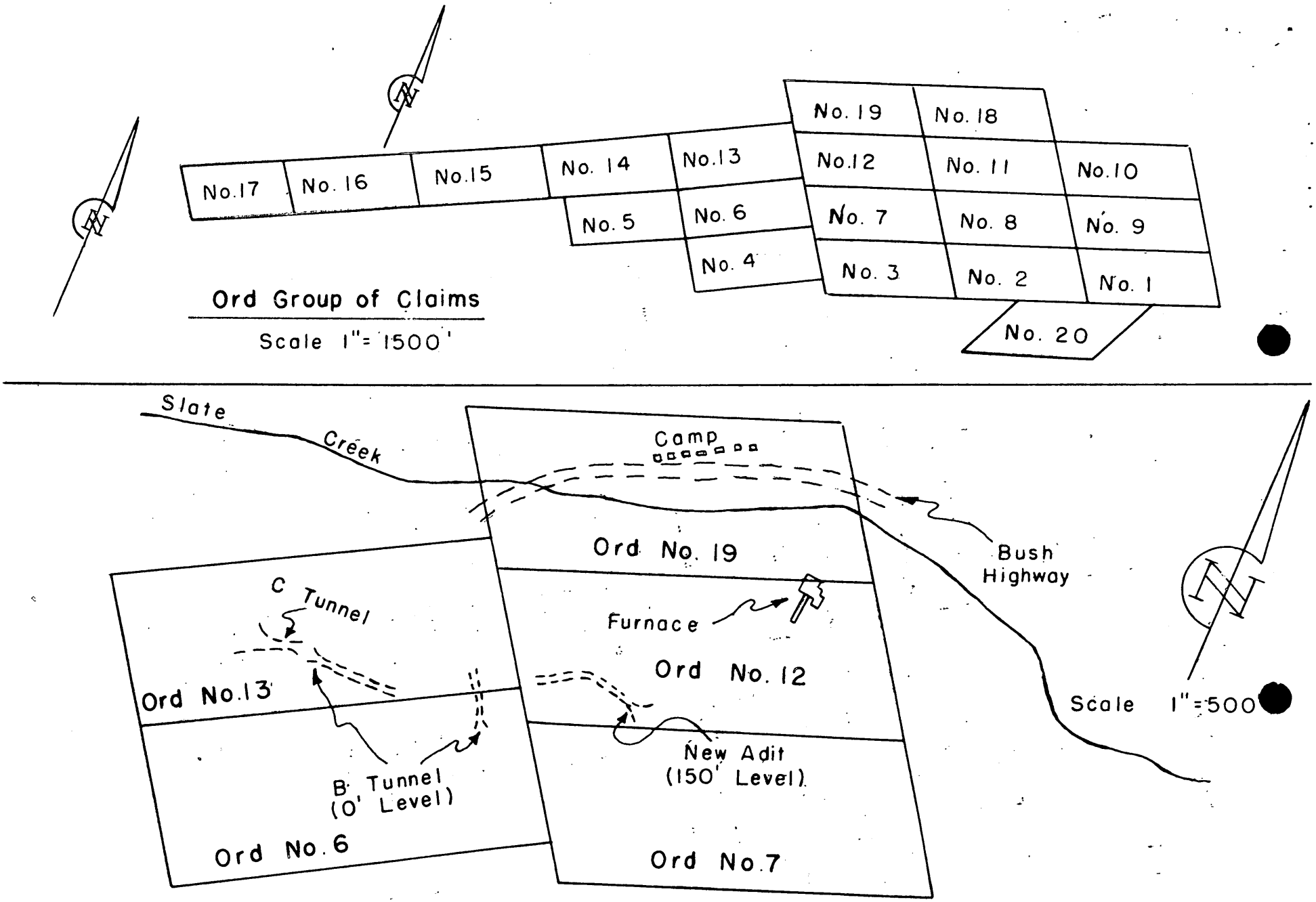

FIG. 2— Claim Map, Ord Mercury Mine

Gila County, Arizona DMEA 2445

PHYSICAL FEATURES AND CLIMATE

Romslo states [2]: "The property is on the eastern slope of the Mazatzal Mountain range that extends slightly west of north from the Salt River on the south to the East Verde River, a distance of about 50 miles. It is in an area of rugged topography at an average altitude of about 4,000 feet. Slate Creek traverses the property and drains easterly to Tonto Creek.

"Climatic conditions are favorable for year round mining operations. Summers are pleasant and winters are mild. Snows fall frequently during the winter but seldom remain on the ground for more than a few days. Rainfalls are seasonable and fall chiefly as torrential downpours during July and August. No records are available of precipitation in the immediate vicinity, but it probably averages between 15 and 20 inches annually.

"Vegetation on the property consists of juniper trees and a variety of bushes with a preponderence of catsclaw. Cypress, oak and pine are present at higher elevations.

"Water for domestic purposes is available from shallow wells and springs. Water also is obtainable throughout the year except following abnormally dry seasons."

HISTORY AND PRODUCTION

Romslo also states [3]: "Locations were made on the Red Bird property in 1922, and upon the Ord and Rattlesnake groups of mining claims in 1925. The Ord property was actively developed in 1926 by the Arizona Quicksilver Corp. During 1927, the Tonto Mining Co. made some production from the properties. During 1928 to early 1930, the Mercury Mines of America, successor to the Tonto Mining Co., continued operations on the Ord and Rattlesnake groups and produced quicksilver with a Foster 30-ton capacity paddle-conveyor-type furnace situated on the Ord property. Little work was done from late 1930 to 1940 when W. V. Rainey and associates (Ord Mercury Mines) resumed mining on the Ord and Rattlesnake groups. They produced approximately 430 flasks of quicksilver up to February 11, 1941, production prior to 1940 probably amounting to 700 flasks. The major portion of the 1940 production came from the Rattlesnake group.

2/ Previously mentioned in footnote 1, section on Engineering.
3/ Previously cited in footnotes 1 and 2.

"Tom Russell and associates acquired the property under a lease agreement in February 1941 and produced 50 flasks of quicksilver to May 1941. The property was inactive to May 1942 when Russell and his associates again acquired the property from W. V. Rainey, under a bond and lease agreement. They operated the property from then until May 1946 and produced 822 flasks of quicksilver from 8,773 tons of ore. During this period they received loans totaling $35,000 from the Reconstruction Finance Corporation. Payment on these loans amounted to $5,000. Royalty payments of about $18,000 toward purchase of the property also were made. During 1946, Russell and his associates obtained ownership of the property through the payment of an additional $2,000.

"Production data for the 1942 to 1946 operation are shown in the following table.

"Year	Ore(Tons)	Flasks*	Recovery lbs/ton	Value Per Flask	Value Total
1942	2,059	132	5	$186	$24,595
1943	4,760	304	6	256	77,821
1944	945.2	171	16	133	22,729
1945	889.2	120	10	132	15,875
1946	120(est.)	95	60	92	8,745
Totals & Averages	8,773.4	822	7.1	$182	$149,765

*Flask contains 76 pounds of mercury.

"The property has been inactive since May 1946."

From the start of work under Contract Idm-E460 up until November 19, 1954, Ord Mercury Mines had produced 58 flasks of mercury.

GEOLOGY

Wilson[4/] describes the Mazatzal Mountains mercury deposits as follows:

"The principal known quicksilver deposits of the Mazatzal Mountains are in the middle segment of the range, in both Maricopa and Gila Counties, 60 to 65 miles by road from Mesa and 70 to 75 miles from Globe.

"The Mazatzal Mountains form a high northwestward-trending range about 50 miles long by 12 to 18 miles wide. Their surface is characteristically rough and brushy.

"Timber is plentiful in the high portions of the range. Water is obtainable from springs, temporary streams, and shallow wells.

"The range consists of pre-Cambrian rocks, overlain in places by Paleozoic strata, Tertiary volcanic beds, and Tertiary gravels. Its central segment, which contains the quicksilver deposits, is made up of pre-Cambrian rhyolite, shale, slate, grit, quartzite and conglomerate, locally metamorphised to phyllite and schist. These rocks apparently occupy a faulted syncline 5½ miles wide, with the beds striking northeastward and dipping almost vertically, except where deformed by local minor folds. This structure is terminated on the southeast by the Mt. Ord pyroxenite intrusive, which in turn is intruded by the pre-Cambrian granite that forms most of the southern segment of the range. On the northwest the syncline is limited by fault contact with the pre-Cambrian rhyolite of Sheep or Pele Mountain. Within the syncline the rocks have been intruded, essentially parallel to the bedding, by a few dikes of diorite porphyry and by the belt of rhyolite porphyry that forms Pine Mountain. The structure is further complicated by bedding faults of indeterminate magnitude; steeply dipping normal and reverse faults of northeast trend and great magnitude; and northwestward-trending faults of relatively small horizontal displacement.

"The quicksilver deposits occur within 4 northeastward-trending mineralized zones which may be designated as the Alder-Sycamore, Pine Mountain, Mercuria, and Slate Creek belts.

4/ Wilson, Eldred D., Quicksilver (Mercury), Ariz. Bur. of Mines, Cir. No. 9, Apr. 1941, pp. 4 & 5.

"The lodes occupy fracture zones which in some cases are traceable for lengths of thousands of feet. As a rule the vein outcrops are not conspicuous. In general the ore shoots are lenticular bodies with quicksilver mineralization in the form of veinlets, thin films on fracture planes, or disseminations. The veinlets vary in width from a fraction of an inch to 2 inches and exceptionally to 6 or more inches. Much of the mineralized rock must be sorted to make furnace-grade ore.

"As a rule the ore shoots do not have clear-cut walls. They range in width from less than a foot to 3 or more feet, and exceptionally to 25 feet.

"Cinnabar is the only mineral of commercial importance in the ore. Small amounts of calomel, native mercury, and metacinnabar are locally present. Associated minerals include pyrite, tetrahedrite (?), chalcopyrite, and oxidized copper minerals.

"Gangue minerals consist chiefly of quartz, lime-iron carbonates, and tourmaline, and sparse serpentine and sericite."

Faick[5] describes the Ord deposits as follows:

"On the Ord Claims, it is reported by the applicant that there are two parallel mineralized shear zones about 200 feet apart. The shear zones are known from numerous prospect pits and trenches to be nearly continuous along the strike. Most of the development work has been done on the northernmost of the two shear zones, and this also appears to be the most thoroughly mineralized. The nearly vertical zones approximately parallel the schistosity of the country rock in strike,[6] but dip more steeply than the schistosity. The shear zones range in width from a few inches to about 40 feet. In these zones the schists and phyllites have been crumpled, sheared, hydrothermally altered and locally impregnated with cinnabar and quartz. Locally small subsidiary fractures branch off the main shear zone at angles of a few degrees. A few high angle northerly trending transverse faults displace the northernmost of the easterly-trending shear zones from a few feet to a few tens of feet. One of these cuts obliquely across the main ore shoot in the Ord workings and displaces the lode about 60 feet * * *.

5/ Previously mentioned in footnote 1, section on Geology.
6/ N. 70° to 80° E.

"The bleached zones in the schists and phyllites are readily apparent on the surface, and easily traceable for several thousand feet. Where cinnabar is an important constituent in these bleached zones the weathered outcrops are stained dark reddish-brown or blackish, but are pale yellow, or pink on a fresh break. Where quartz is present in the outcrop it is usually pitted and iron-stained suggesting that pyrite and possibly cinnabar may have been leached from the outcrop.

"There are two types of ore in the Ord lode. Most of the cinnabar occurs as disseminated particles, thin films and veinlets in the bleached and altered sericite schist and phyllite. Cinnabar also occurs in quartz-carbonate seams and veinlets, usually only ½ to 1 inch wide and 1 to 3 feet long; larger veins have been reported. The cinnabar imparts a pinkish cast to the altered phyllite and this is especially noticeable where there has been some post-ore movement to cause "smearing" of the cinnabar along foliation planes of the country rock. The Ord shear zone is not everywhere metallized and the cinnabar is concentrated in well-defined, widely spaced irregular ore shoots that tend to be localized in areas where subsidiary branch fractures are the most numerous. Localization of the ore shoots also appears to be influenced by slight changes in strike of the shear zones, and appears to favor nearly east-west trending portions. An ore body has been explored, developed, and partly mined by "B" tunnel, the New Adit and by the several sublevels shown * * *. In the New Adit, the highest concentration of cinnabar is along the hanging wall on the north side of the ore shoot, where the side of the ore shoot appears to have formed against one wall of the shear zone. In the footwall side of the ore shoot the cinnabar is disseminated and gradational into barren altered country rock. The ore body in horizontal plan is about 175 feet long and reaches a maximum width of about 25 feet. It rakes westward about 60 degrees and is partly explored, developed, and mined for a rake length of about 400 feet * * ".

ORE RESERVES

Because many of the upper workings in the Ord mine are inaccessible and old sampling records are not available, it is very difficult to estimate ore reserves in this mine. Probably 2,000 tons of ore occur between the New Adit or 150-foot level, and the 240-foot level; and possibly 3,000 to 6,000 tons of ore

remain above the New Adit level. Available assays seem to indicate that reserves will average 0.40 percent mercury, or 8 pounds per ton (see figures 3 and 4).

WORK COMPLETED

Work to be done under terms of Exploration Project Contract No. Idm-E460 is described as follows:

Stage 1.

"This stage consists of rehabilitating the 0, 50, and 100 foot levels, unwatering the mine to the present bottom at the 200 foot level, and sampling the accessible workings."

Estimated Costs of the Project

1. Independent Contracts	None
2. Labor, Supervision, Consultants.	
Supervision	$300.00
Labor, 2 miners, 4 weeks	718.00
	$1,018.00
3. Operating Materials and Supplies.	
Timber, fuel, greases, small tools, nails, bolts, and any other supplies and materials necessary to complete this project	$420.00
4. Operating Equipment.	
To be purchased	None
To be rented, pump, $100/mo	$100.00
To be furnished by operator,	
1 300-cfm. compressor, allowable monthly depreciation	70.00
1 1949 Chevrolet 1½ ton pickup, allowable monthly depreciation	20.00
2 mine cars, allowable monthly depreciation	5.00
	$195.00
5. Initial Rehabilitation and Repairs	None
6. New Building, Improvements, Installations	None

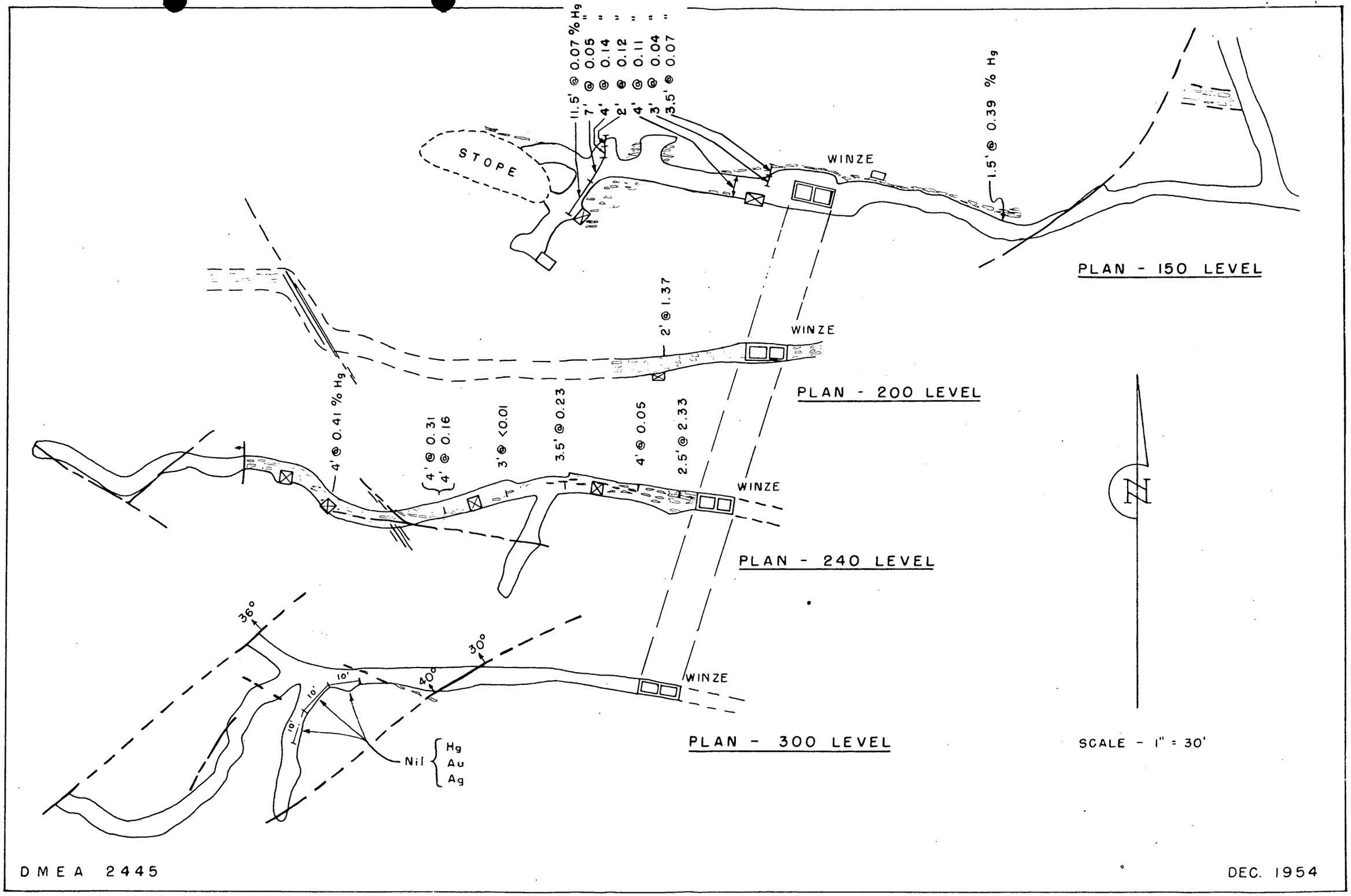

FIGURE 3. — PLAN OF MINE LEVELS - ORD MERCURY MINE — GILA COUNTY, ARIZONA

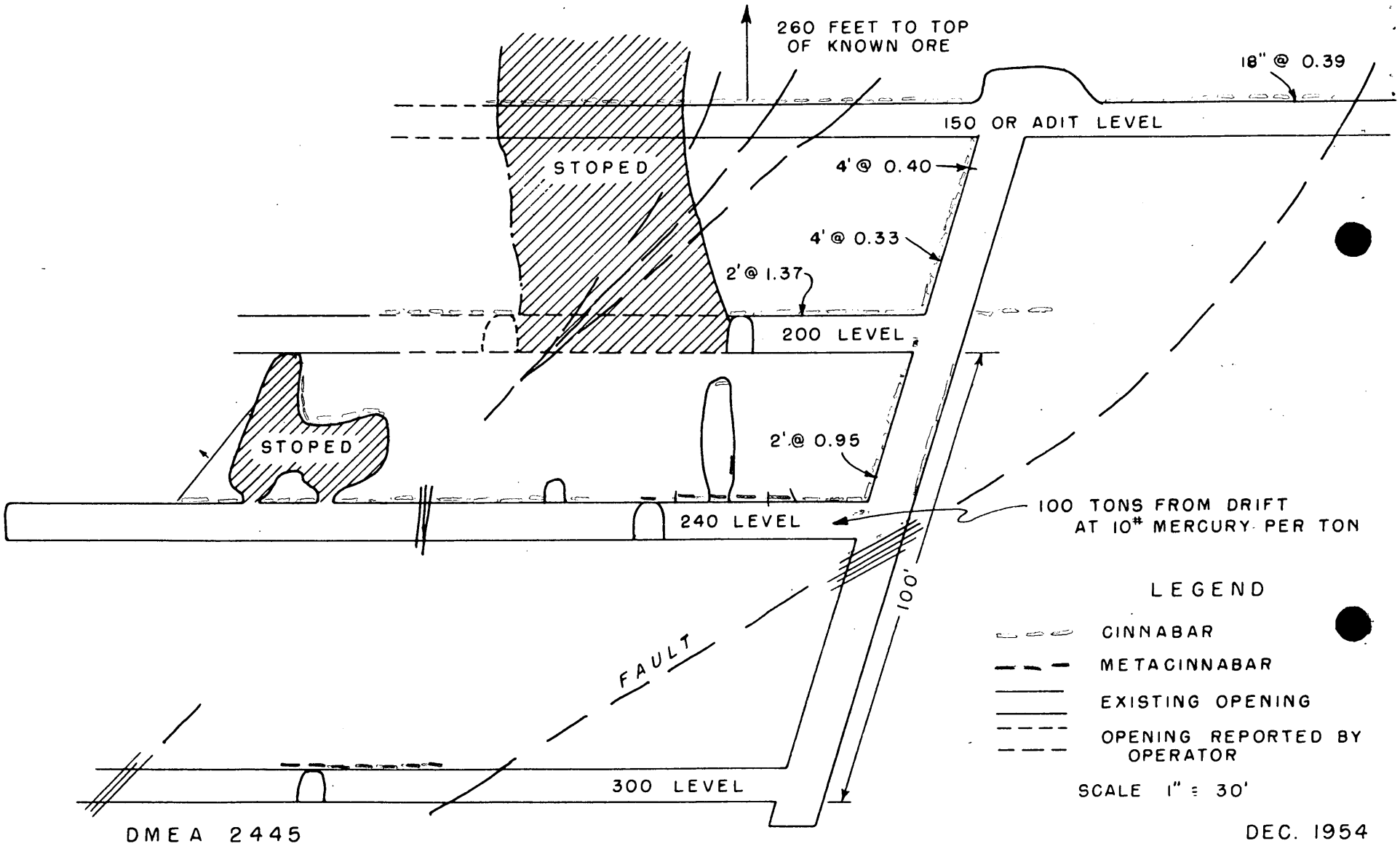

FIGURE 4. - SECTION IN PLANE OF MINERALIZED ZONE - ORD MERCURY MINE

7. Miscellaneous

Assaying	$150.00
Bookeeping	50.00
Repairs and maintenance, operating equipment	67.00
Workmen's compensation, Employer's Liability, and payroll taxes	100.00
	$367.00

8. Contingencies	$700.00
Total cost of Stage 1	$2,700.00

Stage 2

"Stage 2 is to be undertaken only after completion of Stage 1, and the location and extent of the work is dependent upon the results of Stage 1. This work must have the prior written approval of the DMEA representative.

"Stage 2 consists of minor repairs to company-owned houses, sinking the adit winze 100 feet below the 200-foot level, drifting westward approximately 260 feet from the bottom of the winze on the new 300-foot level, and driving 40 feet of crosscuts. The location and extent of the crosscuts will be determined after part or all of the drifting is completed, and must be acceptable to the DMEA representative."

Estimated Costs of the Work

Repairs to houses	$800.00
Sinking 100 feet of 2-compartment winze at $70 per ft.	7,000.00
Driving 300 feet of drifts and crosscuts at $35 per ft.	$10,500.00
Total cost of Stage 2	$18,300.00

Stage 3

"Stage 3 is to be undertaken only after completion of Stage 2, and the location and extent of the work is dependent upon the results of Stage 2. This work must have the prior written approval of the DMEA representative.

"Stage 3 consists of driving an additional 200 feet of drifts and crosscuts."

Costs of the work

Driving 200 feet of drifts and crosscuts at $35/ft	$7,000.00
Total cost of Stage 3	7,000.00
Total cost of project	$28,000.00
Total Government's share	$21,000.00

Work under Stage 1 of the contract started on December 29, 1952 and was completed on March 23, 1953. The 0 or "B" adit level and the New Adit level were cleaned out and rehabilitated, the mine was unwatered to the 200-foot level, and accessible workings were sampled.

As work done under Stage 1 seemed to indicate that significant amounts of ore might be found by the exploration work as proposed under Stage 2, DMEA representatives authorized this second step. On April 29, 1953, the operator started to sink the winze below the 200-foot level. This winze was completed to the 300-foot level (93 feet) by the end of August 1953. In September of that year, drifting was started westward from the bottom of the winze. By April 1, 1954, 225 feet of drift and 40 feet of crosscut had been driven along the mineralized (?) zone on the 300-foot level, without discovering any ore.

Meantime the operator had started a sub-level drift on the 240-foot level from the winze and had found good ore. A request then was made and granted, that the contract footage remaining on the 300-foot level be applied to drifting and

Operate should 240 subl. vol + draw 48' prior to April

By January 1956

2530 [illegible]

156 [illegible]

156
-16
93 6
.03

506,000 | 1,185,6,000
1,012,000
1736 0000

crosscutting on the new 240-foot level. The operator already had driven the 240-foot level drift 48 feet when the amendment was approved to allow the remainder of the 300-foot footage to be used on this level. In April, this 240-foot level was advanced from the 48-foot point and by November 10, 1954, it had been driven 208.5 feet under the terms of the contract, or 256.5 feet from the winze. Several small ore shoots had been found by this drift. As the results obtained by this drift were favorable when the remainder of the 300-foot level footage had been used up, Stage 3 had been authorized.

Because the work under terms of the contract and its amendments progressed slower than was expected, the termination date of the contract had to be advanced several times, the last time until November 10, 1954, just 2 years from the date of the contract. On November 10, 26.5 feet of drifting still remained to be done, but as the 240-foot level west drift face was in waste, the DMEA representative recommended that the contract be terminated.

Although no ore was found on the 300-foot level, several small ore shoots were discovered by the 240-foot level work. By January 1, 1956, the operator had mined 2,530 tons of ore to produce 156 flasks of mercury.

EXPENDITURES

Allowable expenditures under terms of the contract were as follows:

Stage 1	$2,700.00
Stage 2	18,300.00
Stage 3	7,000.00
Total	$28,000.00

Funds actually spent were as follows:

Stage 1	1,540.93
Stage 2	16,585.00
Stage 3	7,297.50
Total spent	$25,423.43

Unexpended funds amounted to $2,576.57.

Ore was found by work done under terms of the contract and its amendments. By January 1, 1956 Ord Mercury Mines had sold 156 flasks of mercury and had paid a total royalty of $2,330.82 to the Government.

EFFICIENCY OF OPERATIONS

Work under the terms of Contract Idm-E460 was done in a workman-like manner, but progress was much slowsr than had been anticipated. Original time to complete the work was given as 9 months, but the actual work took nearly 2 years. Workmen were difficult to find and hold. Much trouble was encountered in sinking the winze and drifting on the 300-foot level because of extremely heavy ground. After ore had been found on the 240-foot level, the operator also spent more time in stoping operations than it did in drifting under terms of the contract.

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

DEC 28 1955

Mr. Thomas H. Brading
DMEA Auditor
224 New Customhouse
Denver 2, Colorado

Re: Idm-2460, DMEA-2445
Ord Mercury Mines

Dear Tom:

In my letter of December 27, 1955, in reference to your Report of Royalty Review covering the subject company, I neglected to advise you that the Report is acceptable. You are authorized to make the normal distribution.

Sincerely yours,

C.E. Fisher
for Jay L. Chambers, Chief
Contract Administration
and Audit Division

WBorovies/wb
December 28, 1955

Copy to: Docket
Admr. Reading File
Mr. Chambers

R.S.

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

DEC 27 1955

Mr. T. H. Brading
DMEA Auditor
224 New Customhouse
Denver 2, Colorado

Re: Idm-E460, DMEA-2445
Ord Mercury Mines

Dear Tom:

Your Report of Royalty Review dated December 15, 1955, pertaining to the subject company indicates royalties paid amounting to $2,424.54 whereas our records indicate royalty receipts credited to this account amounting to $2,840.64. The difference of $416.10 apparently relates to Certificate of Deposit No. 14-23-040-62 dated January 18, 1955 which bore the following notation:

Idm-E460 U. S. Smelting $416.10

Will you please investigate and advise whether this was an error in typing on the deposit slip and the amount of this collection should be applied to Contract No. Idm-E360, Docket No. DMEA-2028, U. S. Smelting, Refining, and Mining Company. For your information our records indicate royalty receipts from the latter company through December 7, 1955 in the amount of $5,979.95.

Sincerely yours,

SIGNED

Jay L. Chambers, Chief
Contract Administration
and Audit Division

CEFisher/ama
December 27, 1955
Copy to: Docket DMEA-2445
2028
Admr. Reading File
Mr. Chambers

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

224 New Customhouse
Denver 2, Colorado

December 22, 1955

Memorandum

To: W. R. Storms

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

Subject: Docket DMEA 2445 (Mercury), Contract Idm-E460, Ord Mercury Mines, Inc., Gila County, Arizona

Enclosed are the original and two copies of an unsigned "Closing Report" on Ord Mercury Mines, Inc., DMEA Docket 2445, Contract Idm-E460, which were received in this office today without covering letter or other indication as to the source.

It is assumed to be the Operator's final engineering and geologic report rendered in compliance with our request of December 16, 1955. However, there should be five copies of the report and the report should be signed or an indication from the Operator that it is submitted as their final engineering and geologic report under the terms of the Contract. We can duplicate the report to provide the additional copies.

If you consider the report to be adequate, please return the report to the Operator for signature, after which return all copies to this office when the report has served your and Faick's needs.

E. N. Harshman

By J. W. Townsend

Enclosures

JWT:prl
cc: Chairman, Oper. Comm. (2)
Harshman
Faick
Townsend
Corres. file
Chron.

DOCKET
Surname:
McMahon
Martin
Selfridge
Lehman
Mathews

400

DEC 1 9 1955

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

Re: Docket No. DMEA 2445 - Mercury
Ord Mercury Mines, Inc.
Ord Mercury Mine
Gila County, Arizona
Contract No. Idm-E460

Dear Mr. Traver:

This will acknowledge receipt of Mr. E. N. Harshman's memorandum of December 2, 1955, transmitting Mr. William R. Hardwick's interim report of November 19, 1954, which recommends termination of the subject contract and certification of a discovery. In this connection reference is made to the statement in the last paragraph of T. M. Romslo's memorandum of June 30, 1955, to W. R. Storms, on the above-cited property:

> "On January 1, 1955, the Final Engineering Report on the subject contract was sent to W. M. Traver, Executive Officer, DMEA Field Team, Region III."

A review of our files indicates that this report has not been received.

Possibly the Final Engineering Report was also held pending action on the Operator's request for assistance for additional exploration. If so, we would appreciate your forwarding the original and three copies at your earliest convenience.

Inasmuch as the Ord Mercury Mines, Inc., has failed to acknowledge your request of October 6, 1955, for a final report, we believe it would now be advisable to inquire as to when said report may be expected.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (40)

Approved:

/s/ Robert W. Geehan (63)
Member, Bureau of Mines

Thor H. Kiilsgaard (65)
Member, Geological Survey

cc: Docket
Code 400
Adm. Read.File
Oper. Committee
T. Kiilsgaard, USGS
H. Meyer, USBM
FT, Region 3

ADMcMahon/ls 12/16/55

P.S. - Of course, we would prefer to receive the complete Field Team report, including the geologic section.

R.C.G.

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

224 New Customhouse
Denver 2, Colorado

December 16, 1955

Ord Mercury Mines
330 East Camelback Road
Phoenix, Arizona

Re: Docket DMEA 2445 (Mercury)
Contract Idm-E460

Gentlemen:

Reference is made to our letter of October 6, 1955, wherein we referred to the Administrator's letter to you of September 30, 1955, and called to your attention the requirement of your rendering a final engineering and geologic report pertaining to work completed under the contract.

We are desirous of closing this account at an early date; therefore we will appreciate your prompt attention to the matter of rendering a final report in compliance with Article 7(b) of the Contract form.

Very truly yours,

E. N. Harshman

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

JWT:prl
cc: Chairman, Oper. Comm. (2)
Harshman
Storms
Faick
Townsend
Corres. file
Chron.

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

RECEIVED
DEC 16 1955

224 New Customhouse
Denver 2, Colorado

December 13, 1955

Mr. J. E. O'Connor, Business Manager
Ord Mercury Mines, Inc.
258 South Scottsdale Road
P. O. Box 875
Scottsdale, Arizona

Re: Royalty payments, DMEA Docket 2445(Mercury), Contract Idm-E460, Ord Mercury Mines, Inc., Gila County, Arizona

Dear Mr. O'Connor:

In conjunction with the second paragraph of our December 1, 1955 letter to you, please be advised that our Washington office approves our considering the 3.0 percent commission as an allowable deduction for purposes of computing DMEA royalties.

This deduction will be incorporated in the first royalty audit for Contract Idm-E460 which is now in process. Upon release of this audit, a refund check will be furnished to your company if a refund is in order, with no further action from you being required.

Yours very truly,

E. M. Hirschman

E. M. Hirschman
Acting Executive Officer
DMEA Field Team, Reg.III

RDB/vj

cc: Royalty File E460
Sec. Opr. Comm. (2)
W. R. Storms w/cy WO ltr
T. A. Christensen
T. H. Brading w/cy WO ltr
Berkenkotter
Chron.

400

DOCKET
Surname:
Chapman
Hunter
Chambers
Selfridge
Fishman
Mitchendorf

DEC - 9 1955

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

Re: Docket No. DMEA 2445 - Mercury
Ord Mercury Mines, Inc. ~~(assigned to Uranium Enterprises, Inc.)~~
Ord Mercury Mine
Gila County, Arizona
Contract No. Idm-E460

Dear Mr. Traver:

Reference is made to your memorandum of December 1, 1955, questioning deduction of commission before computing royalty payments under the subject contract.

In this case the commission is an allowable deduction, and although it appears to be above normal for ordinary mercury sales commissions, the form of advance payment may justify the high rate. We, therefore, accept the deductions as reported.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee

APPROVED:

/s/ Robert W. Geehan
Member, Bureau of Mines

Thor H. Kiilsgaard
Member, Geological Survey

cc: Docket
Code 400
Oper. Committee
Adm. Reading File
Helena Meyer, USBM
Thor Kiilsgaard, USGS
FT, Region 3

TLChapman/ls
12/7/55

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

Mr. Thomas H. Bruding
DMEA Auditor
224 New Customhouse Building
Denver 2, Colorado

Re: Report of Review
Idm-2460, DMEA-2445
Ord Mercury Mines

Dear Tom:

Receipt is acknowledged of the Washington copies of your Report of Review covering the referenced contract.

The Report is acceptable and normal distribution may be effected.

Sincerely yours,

SIGNED
Jay L. Chambers, Chief
Contract Administration
and Audit Division

WBoroview/wb
November 28, 1955

Copy to: Docket
Admr. Reading File
Mr. Chambers

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

224 New Customhouse
Denver 2, Colorado

November 16, 1955

Mr. J. E. O'Connor, Secretary-Treasurer
Ord Mercury Mines, Inc.
330 East Camelback Road
Phoenix, Arizona

Re: Royalty payments, DMEA Docket 2445 (Mercury)
Contract Idm-E460, Ord Mercury Mines, Inc.,
Gila County, Arizona

Dear Mr. O'Connor:

A royalty audit for the subject DMEA Contract is now in process. As part of this audit a letter was addressed to the Mefford Chemical Company in order to establish the price schedule for the purchase of refined mercury from your corporation. Mefford Chemical Company informed this office that they had purchased 8 flasks sold under the name of Ord Mercury Mines for $1,582.00 and 140 flasks sold under the name of Uranium Enterprises for $44,513.00.

Production reported to the DMEA has amounted to 8 flasks from Ord but only 133 flasks from Uranium Enterprises; therefore royalty is evidently still due on the sale of these additional seven flasks. Please check your records and advise if this is correct. We can supply the flask numbers of the reported production if this information is not available to you.

We also enclose a photo copy of our letter dated October 20, 1955 concerning royalty payments on the final settlement of the nine flask shipment dated April 12, 1955.

We will greatly appreciate your efforts to bring this royalty account current in order that the royalty audit may be completed. Four copies of applicable settlement sheets are needed for our use.

Yours very truly,

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

By J. W. Townsend

Enclosure
RDB/vj

cc: Royalty File E460
Sec. Opr. Comm. (2)
W. R. Storms
T. H. Brading
Berkenkotter
Chron.

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

RECEIVED
NOV 17 1955

224 New Customhouse
Denver 2, Colorado

November 15, 1955

Memorandum

To: Secretary, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 2445 (Mercury), Contract Idm-E460, Ord Mercury Mines, Inc., Gila County, Arizona

In reply to our letter of October 21, 1955 addressed to Mr. Vance Thornburg, President of Uranium Enterprises, Inc., we received a reply from George M. Hill of the law firm of Shimmel, Hill, and Cavanagh concerning the present ownership of the Ord Mercury Mines Corporation.

A photo-copy of this reply is enclosed for your records.

W. M. Traver

By J. W. Townsend
J. W. Townsend

Enclosure

LAW OFFICES
SHIMMEL, HILL & CAVANAGH
TITLE & TRUST BUILDING
PHOENIX, ARIZONA

BLAINE B. SHIMMEL
ROULAND W. HILL
GEORGE M. HILL
HARRY J. CAVANAGH

ROBERT R. STEWARD
JOHN E. SAVOY
FERRIS W. BELLAMAK

NOV 14 1955
NOV 17 1955

November 10, 1955

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

Re: DMEA Docket 2445 (Mercury)
Contract Idm-E460, Ord Mercury Mines, Inc., Gila County, Arizona

Dear Mr. Traver:

Mr. Vance Thornburg has been absent from the city, and your letter of October 21 has been handed to me with the request that we give you the information therein requested.

Mr. Thornburg and his associates, in May of 1955, acquired by purchase all of the issued and outstanding stock of Ord Mercury Mines, an Arizona corporation.

There has been no change in the corporate structure. The properties and claims are all still owned by Ord Mercury Mines, and there has been no change of any kind other than a change in stockholders, which had no effect on the company, its properties or obligations.

For your information, the present officers are:

Vance Thornburg,	President
Garth W. Thornburg,	Vice President
George M. Hill,	Vice President
J. E. O'Connor,	Secretary-Treasurer

Very truly yours,

RECEIVED
OCT 24 1955

25th New Customhouse
Denver 2, Colorado

October 21, 1955

Mr. Vance Thornburg, President
Uranium Enterprises, Inc.
330 East Camelback Road
Phoenix, Arizona

Re: RMMA Docket 2445 (Harvery)
Contract No-2468, Sun Harvery Mines,
Inc., Gila County, Arizona

Dear Mr. Thornburg:

It is our understanding that the Uranium Enterprises, Inc. acquired control of the Sun Harvery Mines as of July 1, 1955 under an option to purchase 45 percent of the stock, and later became full owners of the company on May 19, 1955 with the purchase of the remaining stock.

Would you please verify this ownership question for us and furnish a list of the officers of Uranium Enterprises, Inc. Please also advise whether the Sun Harvery Mines Corporation has been liquidated or whether you are conducting operations under this company name. For our records we request that you furnish us with two copies of the legal document by which Uranium Enterprises, Inc. assumed control of the Sun Harvery Mines, Inc. This document is necessary for our records and should have been requested from you when this change of ownership was brought to our attention.

Your reply to this letter in the near future will be greatly appreciated by us as the RMMA auditors are now in the process of preparing their final audit of the project.

Yours very truly,

W. M. Hoover
Executive Officer, RMMA
Field Team, Region XII

RMM/vj
cc: Equity File 2468
Correspondence File 2468
Sec. to Op. Comm. (2)
W. R. Stone
Subcontractor
Comm.

RECEIVED
OCT 10 1955

224 New Customhouse
Denver 2, Colorado

October 6, 1955

Ord Mercury Mines
330 East Camelback Road
Phoenix, Arizona

Re: Docket DMEA 2445 (Mercury),
Contract IAm-2460

Gentlemen:

The Administrator, DMEA, in his letter of September 30, 1955, advised you that the Government, acting through the Defense Minerals Exploration Administration, did not consider the probability of finding significant mercury ore to be sufficiently promising to justify Government participation in any additional exploration. You therefore are required to prepare and submit five copies of an adequate final engineering and geologic report which covers all project work completed under the original exploration program in conformance with Article 7(b) of the contract form.

Government participation in approved work completed in October and November, 1954, will be withheld until we have received this report and until we receive clearance from the Contract Administration and Audit Division.

Very truly yours,

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

WMT:prl
cc: Chairman, Oper. Comm. (3)
Harshman
Stearns
Faick
Townsend
Corres. file
Chron.

DOCKET
Surname:

Martin
Nelson
Gichan
Selfridge
Fleman
McKinney

SEP 30 1955

Interior Dept.
Defense Minerals Exploration Administration
14X4401(01) Revolving Fund, Defense Production Act
Interior (Allocated Working Fund to the Office of the Secretary)

T E L E T Y P E

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

Reurtt September 29, Ord Mercury Mines, Inc., Docket DMEA 2445. Request for additional funds denied. Letter follows.

George C. Selfridge

Chairman, Operating Committee

cc: Docket
Adm. Read. File
Code 400
Oper. Committee
T. Kiilsgaard, USGS
H. M. Meyer, USBM
FT, Region 3

WSMartin/ls
9/29/55

P.C.S.

400

DOCKET
Surname:
Martin
Chapman
Nelson
Gerhon
Selfridge
FEJohnson

SEP 30 1955

Ord Mercury Mines
330 Camelback Road,
Phoenix, Arizona

Re: Docket No. DMEA 2445 - Mercury
Ord Property
Gila County, Arizona
Contract No. Idm-E460

Gentlemen:

Reference is made to your application requesting additional Government assistance for further exploration of your property.

Projects approved by the Defense Minerals Exploration Administration must, in its judgment, show definite promise of yielding materials of acceptable grade in quantities that will significantly improve the mineral supply position for the National Defense Program.

Based upon the results of the work performed under the current contract with Defense Minerals Exploration Administration, it appears that the probability of finding additional minable ore on your property is not sufficiently promising to justify further Government participation. We regret to advise you that, under these circumstances, your application for an amendment to the referenced contract increasing the exploration assistance is denied.

We appreciate your interest in the Defense Minerals Exploration Administration program and wish to thank you for presenting your proposal for our consideration.

Sincerely yours,

C. O. Mittendorf

Administrator

cc: Docket
Code 400
Adm. Read. File
Operating Committee
FT, Reg. 3
H. M. Meyer, USBM
Thor Kiilsgaard, USGS

TLChapman/FEJohnson/ls 9/30/55

R.C.G.

DOCKET
SURNAME
400 Chapman
Martin

Ord Mercury Mines
330 Camelback Road
Phoenix, Arizona

Re: Docket No. DMEA 2445 - Mercury
Ord Property
Gila County, Arizona
Contract No. Idm-E460

Gentlemen:

Your application for an amendment to the above referenced contract requesting additional work and other information available to us in Washington has been carefully reviewed.

Projects approved by the Defense Minerals Exploration Administration must, in its judgment, show definite promise of yielding materials of acceptable grade in quantities that will significantly improve the mineral supply position for the National Defense Program.

Careful study of all our information, although noting that the proposed exploration program might disclose a small tonnage of minable mercury ore, indicates to us that the probability of finding minable reserves in quantities that would significantly improve the mineral supply position is not sufficiently promising to justify Government participation. We regret to advise you, under these circumstances, that your application for an amendment to the referenced contract increasing the exploration assistance is denied.

We wish to thank you for your past and present interest in the Defense Minerals Exploration Administration Program and for bringing your property to our attention.

TLChapman:foc 9/29/55

Sincerely yours,

cc to: Docket
Code 400
Adm. Read. File
Operating Comm.
FT. REG. III
H. M. Meyer, USBM
Thor H. Kiilsgaard, USGS

Administrator

Chairman, Operating Committee D.M.E.A.

DN 235 BUR MINES 9-29-55 10-19 AM

CHAIRMAN, OPERATING COMMITTEE, DMEA

REOURLET 8-25-55, DOCKET DMEA 2445, CONTRACT IDM-E460, ORD MERCURY MINES, INC., WHAT IS STATUS OF REQUEST FOR ADDITIONAL FUNDS /Q/

W M TRAVER

Denver, Colo.

SEP 29 12 51 PM '55

BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

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

September 29, 1955

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Denial of a request for an amendment increasing exploration assistance to the extent of $176,550.00
Docket No. DMEA 2445 - Mercury
Ord Mercury Mines
Ord Property
Gila County, Arizona
Contract No. Idm-E460

Denial of the subject application is recommended by this Division based on the following information:

Operator: Ord Mercury Mines, (sold to Uranium Enterprises, Inc.)
330 Camelback Road
Phoenix, Arizona

Contract: Dated November 2, 1952, with five amendments. Time increased from 9 months to 24 months, with a 4 month extension granted to make out an application for additional work. Contract was for $28,000.00. Government participation 75 percent, $21,000.00

On April 1, 1955, the Operator requested an amendment for additional exploration work to the extent of $176,550.00 for drifting, crosscutting, diamond drilling and an ore bin.

Property Ownership: Property allocated to the original contract and owned by the applicant was as follows:

Name of claims	U. S. Patent Number
Ord No. 6	4086
Ord No. 7	4086
Ord No. 12	4086
Ord No. 13	4086
Ord No. 19	4086

Involved in the transfer of property to the Uranium Enterprises, Inc., are the following claims:

Ord Claims 1 to 20 inclusive, patented
Slate Creek Claims 1 to 7 inclusive, unpatented.

Claims relocated by the Uranium Enterprises, Inc., are as follows:

Slate Creek Claims 8 to 11 inclusive and Tinto Claims 1 and 2.

On account of the location of work in proposed amendment it would be necessary to include most of these claims.

Work Accomplished: Work on contract was completed in November 1954, and was as follows:

Drifting 399½ feet, crosscutting 74 feet, winze sinking 93 feet, and rehabilitation, at total cost of $25,423.23. Government participation 75 percent $19,067.42.

Ore Discovered and Produced: All the ore discovered by the exploration program was produced, amounting to 156 flask of mercury from 2,540 tons of ore mined, averaging 4.67 pounds of mercury per ton of ore. Royalties to the amount of $2,408.63 were paid on the ore produced. $2824.73

Past History: The property was first discovered and located in 1921. It is estimated to have had a total production of 1,938 flasks of mercury. During the World War II period the property was operated and produced 822 flasks of mercury. Loans amounting to $36,000.00 were received from the Reconstruction Finance Corporation and remain unpaid.

Recommendations: The Field Team recommends denial of the requested amendment, although J. N. Faick, of the Geological Survey recommends a small program of 26 diamond drill holes with a total 8,360 feet and 1,550 feet of road building. The Commodity Divisions of the Geological Survey and the Bureau of Mines concur in the denial.

Comments: Although it is probable the proposed program of the applicant and of J. N. Faick, Geological Survey would open up additional ore, the past history and geology indicate that no significant ore discovery would be made. It is also probable that the reserves found would be small in comparison to the funds expended for exploration.

W S Martin

W. S. Martin, Chief
Iron and Ferro-Alloys Division

Docket

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

September 9, 1955

WSM

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

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

Subject: Field Team Report recommending denial of requested amendment to DMEA Contract Idm E-460 Docket DMEA No. 2445 (Mercury) Ord Mercury Mines, Inc., Sunflower Mining District, Gila County, Arizona

It is unfortunate that Faick and Romslo could not have resolved their differences and presented a unified program. I believe the reports represent extreme opinions whereas a combination of the outstanding features of each would have been more appropriate.

For example, certain of Faick's recommendations are good. His proposals to explore areas listed under Items II C, IV, and VIII certainly appear justified. At the same time, Romslo's statements that any new discoveries would be insignificant appear contrary to the exploration program.

However, I concur with Romslo in recommending denial of the company's proposal and of Faick's modified program in its present form. Yet, I would favor additional exploration work as recommended by Faick under Items II C, IV, and VIII.

James W. Pennington

James W. Pennington

Copy to: Division of Minerals
Branch of Base Metals
H. M. Meyer
F i l e s
Thor Kiilsgaard

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

RECEIVED

September 6, 1955

Re: DMEA 2445, Idm-E460
Ord Mercury Mines, Inc.
Ord Mercury Mine
Gila Co., Arizona
$176,550 - Mercury

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of Field Team reports.

Two Field Team reports are to be considered in appraising the application. The review will consider the Items I-VIII of the geologist's report.

Item I.

If the fault which crosses "B" level near the top of "B" winze is, as the geologist (Faick) says, a major structural feature, there is little reason to expect more ore on the footwall side--west--since the fault cuts across the boundary of the ore shoot and the stoping west of "B" winze has probably removed the footwall ore (see longitudinal projection A-A' of application).

The disappointing results of work in drifts off the Adit winze make that area unpromising and strongly suggest that the B ore shoot is practically delimited. Drilling of B ore body is not recommended.

Item II.

Extension of the Mercury adit as proposed by the applicant is not recommended. If depth of overburden has precluded good surface prospecting the drilling should receive consideration. "B" tunnel tends to crosscut the zone but the work may not be conclusive. Drilling at depth (Adit level) for blind ore shoots is not justified but near surface drilling may be warranted.

Item III.

For reasons advanced by Faick I see little justification for the underground work proposed by the applicant. As in II, if overburden conceals too much, the drilling proposed by Faick might be recommended but I presume the zone of alteration is exposed to some extent and no ore crops out. If work to date, under R.F.C. and DMEA, had not been so unremitting some drilling might be justified, but as is drilling for small isolated ore shoots cannot be recommended.

Item IV.

Like III, unless the outcrops of the altered zones are so deeply buried as to have prevented surface prospecting, deep drilling is not warranted, but surface trenching or shallow drilling, as proposed by Faick, may be. We are told too little about previous surface work on the outlined zones of alteration.

Item V.

I agree with Faick that no work is warranted.

Item VI.

The extensive underground work proposed by the applicant cannot now be justified. The 6-foot outcrop which has yielded mercury-bearing samples of varying grade may bear checking. Again there is an altered zone, but opinions as to its importance do not agree. If prospecting for 600 feet showed no ore, the target would be indefinite and perhaps difficult to justify.

Item VII.

Malone Lead. This area of reported low-grade showings offers no clean-cut target. Until one is offered drilling should be deferred.

Item VIII.

In case the altered zone south of No. 1 shaft is more or less new and unprospected, investigation as outlined by Faick may be justified. If it is well exposed and bears signs of prospecting the reverse is indicated.

Conclusions.

The Ord property has had the check recommended in a previous memorandum and no part of the underground work, to cost $176,550.00, outlined by the applicant is justified in the opinions of the examiners. Following a thorough geologic study the geologist considers certain diamond drilling warranted. As estimated by the engineer such work would cost $52,187.50. As noted above some of the drilling of the altered zones may be justified if previous work on the outcrops has not already shown them to be lacking of definite targets. A limited amount of prospecting by the applicant, as outlined by the geologist, might result in targets worth exploration, but Government participation in such work is believed unwarranted.

I concur with the denial recommendation of the Field Team.

N. E. Nelson

N. E. Nelson

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

RECEIVED
AUG 29 1955

224 New Customhouse
Denver, Colorado

August 25, 1955

Memorandum

WSM

To: Chairman of the Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: Docket DMEA 2445 (Mercury), Contract Idm-E460, Ord Mercury Mines, Inc., Ord Mercury Mine, Gila County, Arizona

Ord Mercury Mines, Inc., by docketed application 2445 received in this office on May 12, 1955, requested an amendment to Contract Idm-E460 to authorize additional work estimated by the applicant to cost $176,550.00. This request was forwarded to the examining engineer and geologist for joint recommendations, but because of a difference in opinion each submitted a separate report. We are sending you the original and ~~two~~ 3 copies of each report. The conclusions of both have merit; the examining engineer recommends denial and the examining geologist recommends a modified program.

Work under the original contract explored the area known to be most favorable and productive. Undoubtedly, additional work would find a few small, isolated ore bodies; however, because of the economic conditions involved relative to the cost of exploration and chances of making any worth while discovery, we are recommending denial.

W. M. Traver

W. M. Traver

E. N. Harshman

E. N. Harshman

Reviewed by
DMEA OPERATING COMMITTEE
9-2-55
(date)

DMEA
Date Rec'd
AUG 12 1955
BUREAU OF MINES
Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

RECEIVED
AUG 29 1955

Box 4097
Tucson 5, Arizona

August 10, 1955

Memorandum

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

From: Superintendent, Southwest Experiment Station, Region III

Subject: Requested Amendment to DMEA Contract Idm-E460, Docket DMEA-2445, Ord Mercury Mines, Inc., Sunflower Mining District, Gila County, Ariz.

Enclosed are original and 8 copies of a memorandum report by T. M. Romslo of the Bureau of Mines on the requested amendment to DMEA Exploration Project Contract No. Idm-E460. Romslo and J. N. Faick of the Geological Survey cannot agree on their recommendations, so each man is submitting a report.

As there seems to be little chance of finding any substantial quantity of mercury ore by the proposed additional exploration work, Romslo recommends that the requested amendment be denied. I concur with his recommendation. I believe that a small amount of ore would be found, but that this quantity would be insignificant when compared to the cost.

Walter R. Storms

Walter R. Storms

CC W. M. Traver
J. N. Faick
DMEA-2445
DF

P. S. Brochure is enclosed.

WRS

WRStorms:frj

Reviewed by
DMEA OPERATING COMMITTEE
9-2-55
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

RECEIVED
AUG 29 1955

Box 4097
Tucson 5, Ariz.

August 10, 1955

Memorandum

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

From : T. M. Romslo, Mining Engineer, Tucson, Arizona

Subject : Requested amendment of Ord Mercury Mines, Inc., for additional exploration under Contract Idm-E460 of Docket DMEA-2445, Gila County, Ariz.

The following is a short memorandum report on the requested amendment of the Ord Mercury Mines, Inc. to DMEA Contract Idm-E460.

CONCLUSIONS AND RECOMMENDATION

I believe that the Governmental aid for additional exploration of the several deposits of the Ord Mercury Mines, Inc. property is not warranted for the following reasons:

1. All of the deposits, except the favorable zone near the Inspiration Tunnel, cropped out and have been thoroughly explored and developed to depths ranging from 150 to 350 feet;

2. All evidence indicates the developed deposits have been essentially bottomed;

3. Several hundred feet of adits have prospected favorable zones adjacent to the mined-out deposits without encountering significant amounts of mercury ore;

4. Although mercury mineralization may be present, it is doubtful that exploratory work could find as much ore as has been produced. Production to date totals about 2,000 flasks of mercury;

5. Royalty payments to the Government at 5 percent on 2,000 flasks of mercury at $300.00 per flask would total $30,000.00. This amount plus royalty payments to date would represent about 42 percent of the Governments share of completed work and costs of explorations proposed by Faick.

CC W. M. Traver (Orig. & 8)
J. N. Faick
DMEA-2445
DF

Reviewed by
DMEA OPERATING COMMITTEE
9-2-55
(date)

TMRomslo:frj

Included in this memorandum are my detailed estimated costs of work proposed by Faick. The estimates indicate that the cost of diamond drilling 8,350 feet in 26 holes would be $52,187.50 or $6.25 per foot, assay costs of $400.00, and $2,325.00 for road work, or a total of $54,912.50.

INTRODUCTION

An application by the Ord Mercury Mines, Inc. requested that Contract Idm-E460 of Docket DMEA-2445 be amended to include additional exploration of its mercury properties in Gila County, Ariz. Under the contract, work originally was started on December 29, 1952 and was completed on November 10, 1954 when a reported $25,423.23 of the authorized $28,000.00 had been expended. Shortly before completion of the work, the operator requested a 4-month extension of the contract in order to have time to prepare the subject application. The request was granted. The application apparently was signed on March 31, 1955, the date to which the contract was extended. Proposed additional explorations, costing an estimated $176,550.00, involved road building, new construction, diamond drilling, drifting, crosscutting, and shaft sinking.

The application was reviewed by the Operating Committee and forwarded to the Field Team of Region III for investigation and recommendations. Field investigations were made on June 21 and 22 by J. N. Faick, Geological Survey, and the writer, the team that made the original DMEA examination of the property in 1952. Supplemental geological data for the present investigation were obtained by Faick, when he revisited the property on June 29 and 30, and July 1, 1955. Jim Poulos, mine superintendent for Uranium Enterprises, Inc., was present during the first of the recent field investigations. He acted as guide and furnished information regarding operations of the property since July 1, 1954. According to Poulos, Uranium Enterprises, Inc. controlled operations of the property under an option agreement from July 1, 1954 to May 9, 1955 when ownership was acquired by purchasing all stock of the Ord Mercury Mines, Inc. He also said the property would continue to be operated by the Ord Mercury Mines, Inc. from a new mailing address and with a complete change of officers.

HISTORY AND PRODUCTION

Locations were made on the Red Bird property in 1922, and upon the Ord and Rattlesnake groups of mining claims in 1925. The Ord property was developed actively in 1926 by the Arizona Quicksilver Corp. During 1927, the Tonto Mining Co. made some production from

the properties. During 1928 to early 1930, the Mercury Mines of America, successor to the Tonto Mining Co., continued operations on the Ord and Rattlesnake groups and produced quicksilver with a Foster 30-ton capacity paddle-conveyor-type furnace situated on the Ord property. Little work was done from late 1930 to 1940, when W. V. Rainey and associates (Ord Mercury Mines) resumed mining on the Ord and Rattlesnake groups. They produced approximately 430 flasks of quicksilver up to February 11, 1941, production prior to 1940 probably amounted to 700 flasks. The major portion of the 1940 production came from the Rattlesnake group. 1/

Tom Russell and associates acquired the property under a lease agreement in February 1941, and produced 50 flasks of quicksilver to May 1941. The property was inactive to May 1942, when Russell and his associates again acquired it from W. V. Rainey under a bond and lease agreement. They operated the property from then until May 1946, and produced 822 flasks of quicksilver from 8,773 tons of ore. During this period they received loans totalling $35,000 from the Reconstruction Finance Corporation. Payment on these loans amounted to $5,000. Royalty payments of about $18,000 toward purchase of the property also were made. During 1946, Russell and his associates obtained ownership of the property through the payment of an additional $2,000.

The property then was inactive to December 29, 1952 when exploration of the Ord mine by the Government and Ord Mines, Inc. was started under DMEA Exploration Project Contract No. Idm-E460. Work under Stage 1 of the contract was completed on March 23, 1953. It consisted of clean-up work and necessary retimbering of "B" adit and the New Adit, dewatering the mine to the 200 or bottom level, and sampling of accessible areas. Under Stages II and III, a winze from the 200 level was deepened to the 300 level, 225 feet of drifting and 40 feet of crosscutting were completed on the 300 level, and 208.5 feet of drift was driven from the winze on the 240-foot level. Contract work was terminated on November 10, 1954 when expenditures totalled $25, 423.23. Production of mercury by retorting an estimated 14 tons of high-grade ore from the 240 level started shortly before July 1, 1954 when Uranium Enterprises, Inc. acquired control of the property under an option agreement.

During July 1954, all buildings on the property were repaired and painted, an ore bin was built near the portal of the New Adit, and the 30-ton furnace was reconditioned at a cost of $10,000.00.

1/ Wilson, Eldred D., Quicksilver, Arizona Bureau of Mines Circular No. 9.

Furnacing of ore started the following month and continued to March 4, 1955 when all operations, except clean up of mercury, were terminated. A total of 2,540 tons of ore, treated during both operations, yielded about 11,860 pounds of mercury. Royalty payment to the Government totalled $2,408.63 before final settlement on a few flasks.

During January and February 1955, considerable work was done on the subordinated property and on adjacent claims in an effort to locate ore and to determine if additional exploration was warranted. The Malone claims were explored by trenches after a road was built from the mill, portals of "A", "B", "C", and the Inspiration tunnels were reopened, 50 feet to No. 1 shaft was re-timbered after its station was reopened, and 60 feet of drifting was done from the bottom ofNo. 1 shaft after it was deepened 40 feet.

On May 9, 1955, Uranium Enterprises, Inc. reportedly purchased all stock of the Ord Mercury Mines, Inc. Additional mining claims were acquired by the new owners during the option period when the subject application for Governmental aid on additional exploratory work was prepared.

Total recorded and estimated production of mercury from property presently held by the Ord Mercury Mines, Inc. is placed at 1,938 flasks.

PROPERTY AND OWNERSHIP

According to Poulos, property of the new Ord Mercury Mines, Inc. comprises a group of 33 mining claims and an adjacent mill site claim that recently was relocated as an unpatented mining claim. The group of claims are shown on figure 2. Patented Ord claims 1 to 20, unpatented Slate Creek claims 1 to 7, and the mill site were involved in the transfer of ownership. The other claims of the group, unpatented Slate Creek claims 8 to 11 and unpatented Tonto Nos. 2 and 4 recently were relocated by the new corporation.

The mailing address of the new Ord Mercury Mines, Inc. is 330 East Camelback Road, Phoenix, Ariz. Officers of the corporation are: Vance Thornburg, President; Dr. Garth W. Thornburg, Vice President; and Jack O'Connor, Secretary and Treasurer.

DESCRIPTION OF THE DEPOSITS

Reference is made to Figures 3, 4 and 5 of Faick's memorandum report that describes the several mineralized zones by workings.

"B" Tunnel of Mercury Adit Workings. These workings, the site of work performed under the contract, have yielded probably more than one half of all mercury produced from the applicant's property. The workings have thoroughly explored a mineralized zone that ranges in strike length from about 280 feet near the surface to a few tens of feet on the 240-foot level, a vertical distance of about 350 feet. The more highly mineralized portions of the zone essentially have been mined out by open stopes. Mined ore bodies ranged from 10 to 60 feet in length, and 1 to 5 feet in width. Exploration of the zone at about 50 feet below the 240 level encountered minor amounts of metacinnabar, but no cinnabar.

"C" Tunnel Workings. These workings are largely inaccessible. Old maps indicate the workings explored a single deposit. On the tunnel level the stope was about 70 feet long and less than 5 feet wide. It was mined, probably by an open stope, a vertical depth of 160 feet from the surface.

No. 1 Shaft. A single deposit of these largely inaccessible workings was mined by open stoping to a depth of 220 feet from the surface. The length of the deposit decreases from about 200 feet at the surface to less than 10 feet on the 220-foot level. Ore on the level is spotty and very low grade.

Outcrop between "C" Tunnel and No. 1 Shaft. Several very narrow stringers of cinnabar are exposed by a shallow pit.

Adit between Indian Tunnel and No. 1 Shaft. A bleached shear zone has been explored by a 10-foot adit. No cinnabar was observed in the adit.

Indian Tunnel. A single deposit of these inaccessible workings was mined, probably by an open stope. Old maps and reports indicate the deposit was about 80 feet long and was worked to a vertical depth of about 100 feet from the surface. R. L. Ransome visited the workings in 1927 and reported that the lower part of deposit was decreasing in size and grade. He expected the deposit would be bottomed in a short distance.

The applicant reported 0.58 percent mercury for a 6-foot sample cut across a mineralized outcrop at the east end of the Indian Tunnel workings. A sample obtained from the same zone by the DMEA examiners assayed 0.21 percent mercury.

Malone Lead. The principal vein zone has been explored by a 25-foot adit and by a 25-foot shaft at the portal of the adit. It narrows from about 2 feet in width at the shaft to a few inches at the face of the adit. No mercury mineralization was observed by the examining team. Jim Poulos reported that a sample cut across the 2-foot vein in the shaft assayed 0.12 percent mercury. There are 2 other weakly defined iron-stained zones near the shaft. One of the zones has been explored by a shallow open-cut and the other is exposed by a small open pit. Observed cinnabar was confined to a few blebs at one place in the open cut.

The one area of the so-called Malone Lead in which significant cinnabar was observed is on Slate Creek No. 1 claim. At a few hundred feet west of the portal of Inspiration tunnel, a thick mantle of rock debris has been prospected by a few shallow pits. Some of the rock fragments from the pits and from nearby talus slopes contain cinnabar, mainly as fracture fillings.

ORE RESERVES

Reserves of mercury-bearing rock on the applicant's property are confined largely to 2 small zones, one at the Indian Tunnel and the other at the Mercury Adit.

Indian Tunnel. - A possible easterly extension of the Indian Tunnel deposit is exposed by an open cut. A sample across 6 feet of the more highly mineralized portion of zone assayed 0.21 percent mercury. Indicated reserves of this grade have been estimated at 100 tons.

Mercury Adit. - Cinnabar-bearing rock in the Mercury Adit or "B" tunnel workings is confined largely to stope and shaft pillars near the winze that was deepened under subject contract. Tonnage in these pillars has been estimated at 1,000 to 2,000 tons. Sampling in this area during the original DMEA examination indicated an average mercury content of about 0.1 percent.

Under prevailing conditions, material is not considered as ore unless it contains at least 0.4 percent mercury. Consequently none of the above indicated reserves can be considered as ore,

PROPOSED EXPLORATIONS

J. N. Faick has proposed that the several deposits be explored by 26 diamond drill holes for a total of 8,350 feet. Depths of the holes range from 250 to 500 feet. He also has estimated that access to the drill sites will require the construction of 1,550 feet of roads.

I have estimated the cost of Faick's proposed work at $52,187.50 for diamond drilling, $400.00 for assaying, and $2,325.00 for road work, or a total of $54,912.50.

The basis of diamond drilling costs is the lowest of 2 informal bids received by the applicant. This bid, by Western Drilling of Phoenix, Ariz., gives costs of EX to NX size drilling to depths of 500 feet. Cost of AX drilling, the preferable size, is given at $4.15 a foot. Cementing and drilling out is $1.80 per foot. If it is assumed that 20 percent of the drilled footage will require cementing, the overall cost per foot will be about $4.50.

Other allowable costs of $1.75 a foot, as shown below, bring total drilling costs to $6.25 a foot. The additional costs are based on a 2-shift operation for 6 days a week and drilling at about 750 feet per month for 11 months.

	Estimated Costs	
	Month	11 Months
Supervision	$500.00	$5,500.00
Labor, 50 shifts per month for 2 samplers per day at $13.80, taxes included	690.00	7,590.00
Materials and supplies		
Fuel and grease for pickup	30.00	330.00
20 wooden core boxes per month at $4.00 each	80.00	880.00
Equipment		
Company owned 1953 Chevrolet pickup, value at $1,200.00	20.00	220.00
Miscellaneous		
Repairs to pickup	10.00	110.00
Totals	$1,330.00	$14,630.00

Thus other allowable costs, before $400.00 for assaying an estimated 100 samples, would amount to an estimated $1.75 per foot.

The estimate of road costs is based on construction of 10 feet of road per hour with a bulldozer contracted for at $15.00 per hour.

T. M. Romslo
Mining Engineer
Southwest Experiment Station

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

RECEIVED
AUG 29 1955

DMEA
Date Rec'd.
AUG 1 1 1955
BUREAU OF MINES
Denver, Colorado

August 19, 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: E. N. Harshman

Subject: DMEA Docket 2445 (Mercury), Contract Idm-E460, Ord Mercury Mines, Inc., Gila County, Arizona - Request for additional funds

Enclosed are the original and eight copies of a report by J. N. Faick, U. S. Geological Survey, in which additional exploration assistance at the Ord mercury mine is recommended.

My comments, item by item, are as follows:

Exploration item I "B" - I feel that there is little geologic probability of finding ore by drilling the three holes proposed by Faick. His discussion suggests to me that the proposed drilling is intended to secure geologic data on the habit of ore shoots in the district rather than to explore an area believed to contain ore.

Exploration item II "C" - Exploration from the Mercury adit to explore beneath the "C" tunnel workings, as proposed by the applicant, is not recommended by Faick. Although I concur with this recommendation, I do not concur with the alternative proposal to drill two holes to explore the ore zone 100 to 200 feet west of the face of the Mercury adit. These holes would prove or disprove the presence of the ore zone in that area but certainly might not "prove whether or not the zone contains minable ore," particularly when the ore is reported to occur in small shoots. If this area warrants prospecting, I suggest that the Mercury adit be extended approximately 150 feet westward along the altered zone to explore for minable ore bodies. The value of the data to be obtained by drifting is certainly commensurate with the additional cost involved in drifting as opposed to diamond drilling.

Exploration item III - Drilling in this area, as proposed by Faick, may be justified in view of the expected size of any ore bodies that may occur in the bleached and altered zone which outcrops on the surface and along which the ore bodies in the No. 1 workings were mined.

Reviewed by
DMEA OPERATING COMMITTEE
9-2-55
(date)

Exploration item IV - Appears reasonable as proposed by Faick.

Exploration item V - Denial of this item is recommended by Faick. I concur.

Exploration item VI - From the data presented in the report, it is difficult to conclude that there is a geological probability of finding ore by the work proposed by Faick, and certainly the work proposed by the applicant cannot be justified. Size, grade, and depth factors do not appear favorable, and I believe that additional geologic data on possible targets and their location must be presented before the recommended exploration can be approved.

Exploration item VII - Denial of the requested exploration of the Malone lead, as recommended by Faick, appears justified. The suggested alternative exploration program on the north slope of Malone hill may or may not be justified. There is little geologic data upon which to base a program of exploration, and it is my opinion that work in this area should not be considered until geologic justification is in hand.

Exploration item VIII - This item was not requested by the applicant nor is there any indication that he has expressed a willingness to proceed with the exploration proposed by Faick. The geologic probability of finding ore in the area south of the No. 1 workings does not appear great, but perhaps one hole could be justified to explore the large altered zone exposed at the surface.

In summary, it is my opinion that from the geological point of view, some exploration under items Nos. II C, III, IV, and perhaps item VIII may be justified by the geologic data given in the report. The propriety of work under the other items is questioned.

E. N. Harshman

E. N. Harshman
Member, Field Team

Enclosures (9)

IN REPLY REFER TO:
MINERAL DEPOSITS
DMEA
RECEIVED
AUG 16 1955
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

RECEIVED
AUG 29 1955

Box 4126 University Station
Tucson, Arizona

DMEA
Date Rec'd.
AUG 19 1955

August 11, 1955

BUREAU OF MINES
Denver, Colorado

MEMORANDUM

To: Mr. E. N. Harshman

From: J. N. Faick

Subject: Application for extension of Contract Idm-E 460, DMEA 2445, to increase exploration assistance at Ord Mercury Mine, Gila County, Arizona

Enclosed is the original and 8 copies of my geological report recommending Government participation in an extension of the above subject exploration program at the Ord mercury mine. The participating engineer from the Bureau of Mines is not in agreement with my recommendations; therefore, he is submitting a separate report recommending denial of the application. It will be necessary for the field team to weigh the evidence and to determine which course of action is to be taken. The Ord properties may contain sufficient mercury in the small, shallow, isolated ore bodies to be of interest to DMEA, and this assumption is the basis for my recommendation.

John N. Faick

John N. Faick

JNF:ms

cc. Mr. Harshman (8)
Mr. Storms

Reviewed by
DMEA OPERATING COMMITTEE
9-2-55
(date)

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

RECEIVED
AUG 29 1955

IN REPLY REFER TO:
DMEA
Date Rec'd
AUG 19 1955
BUREAU OF MINES
Denver, Colorado

August 11, 1955

MEMORANDUM

To: Mr. E. N. Harshman

From: J. N. Faick

Subject: Application for extension of Contract Idm-E 460, DMEA 2445, to increase exploration assistance at Ord Mercury Mine, Gila County, Arizona.

INTRODUCTION

In accordance with instruction of the DMEA Field Team of Region III, a careful inspection and re-appraisal of the property of the Ord Mercury mine was made by this writer for the U. S. Geological Survey, and by T. M. Romslo for the U. S. Bureau of Mines. The engineer and geologist have arrived at different conclusions regarding Government participation in exploration; therefore separate reports are being submitted. The engineer favors denial of additional Government aid, and the geologist favors a moderately restricted program of exploration by diamond drilling.

A description of the geology and ore deposits and a discussion of history and production was given in the original report of examination submitted in June 1952. Results of the work done under the DMEA contract and the present status of the property is given in the engineering report prepared by Romslo, and the geological report explains each of the various parts of the applicants' proposed project. Discussion of each item includes a statement of the applicants' proposal, a discussion of pertinent factors pertaining to each item, and specific recommendations.

Reviewed by
DMEA OPERATING COMMITTEE
9-2-55
(date)

DISCUSSION OF PROPOSED AND POSSIBLE EXPLORATION

ITEM 1 "B" TUNNEL OR MERCURY ADIT WORKINGS

Proposal: The applicants propose a system of 5 diamond drill holes, averaging 500 feet in length, to be drilled from the surface to test below the main ore shoot developed by the workings of the "B" tunnel and the Mercury adit. See fig. 1 and fig. 6, section A-A'. The applicants state that this ore shoot has been cut off by a major fault zone that dips 30 degrees north and, therefore, they assume that a segment of ore, as yet undiscovered, must exist in the footwall side of this fault below the 85-foot winze level, which is the same as the DMEA 240 level.

Discussion: The fault mentioned is undoubtedly the same as the prominent northeast-trending, nearly vertical fault on "B" level, which may be seen near the top of the "B" winze. The fault crosses the Mercury adit level (DMEA, 150 level), where the fault dips about 75 degrees northwest and it is presumably penetrated by the winze below the Mercury adit, and by the 300 level drift westward from the bottom of the winze. The fault apparently flattens to 30 or 40 degrees on the 300 level but at this depth its identity is almost lost in a mass of crushed and altered phyllite or schist.

The relative age of this fault, with respect to the ore is in doubt. The operators believe that it is post ore, but this writer contends that the fault existed prior to mineralization. Without doubt some post ore movement has taken place along it.

This structure is probably one of the most important we have to contend with at the Ord mine because it extends into the area in which the ore shoot apparently has been bottomed. This ore shoot may have bottomed for structural reasons, by offset along the fault as contended by the applicant and others, or it may have bottomed primarily because of mineralogical changes accompanying an increase in depth as is favored by this writer. Near the bottom of this oreshoot, antimony, as revealed by furnace sublimates from treated ore, became an important constituent of the ore and metacinnabar became relatively abundant.

Above the 200 level minable ore was found on both sides of the fault but between the 200 and 240 levels ore was found only on the hanging wall side and no minable ore was found on the 300 level, although this level apparently explored part of the hanging wall segment beneath the known ore shoot. Traces of sulfides were reported, and the host rocks were thoroughly altered, bleached and silicified on the 300-foot level. Only the bottom of the winze and a few feet of the drift explored the foot wall segment of the fault and a few pounds of cinnabar, reported by the operator to be drag ore, was reported to have been found at the bottom of the winze.

Whether or not the ore shoot is bottomed is a moot question which can be answered only by additional exploration. This ore shoot extended to a depth of about 350 feet below the surface and is one of the deepest known in the Mazatzal Mountain district but the criteria by which the bottoms of the ore shoots might be recognized are not yet established, and the depths to which these ore shoots might extend is not known.

As we do not know how deep the ore bodies will extend it would seem reasonable to drill a few holes beneath the principal ore shoot at the Ord mine in an effort to prove a possible downward extension of the ore. It has long been recognized in the Mazatzal quicksilver belt that large ore reserves probably do not exist unless the ore bodies extend to considerable depths, and as far as we can determine little effort has ever been made to locate deep ore in the district. Presumably the Rattlesnake mine, which is reported to have mined to a depth of 500 feet below the outcrop is the deepest mine in the district.

Recommendation: I believe a few drill holes to test for the downward extension of the principal ore bodies at the Ord mine are justified although I am very skeptical of the possibility of finding ore. To deny this part of the applicants' request would eliminate the first deep test in the district and I believe would have an adverse effect on future exploration of this and other properties. The applicants have requested 5 holes, each 500 feet deep, but I believe 3 holes are sufficient to test the ground in a preliminary manner. Thus 3 holes, each 500 feet deep are recommended, to be drilled about as proposed by the applicants, and shown on section A-A'. These should penetrate the mineralized zone about 100 feet below the bottom or 300 level.

ITEM II "C" TUNNEL WORKINGS

Proposal: The applicants propose to extend the Mercury adit level, fig. 3, westward about 700 feet and to drill 4 surface holes to explore the "C" zone at depths greater than 100 feet below the "C" tunnel workings.

Discussion: In the "C" tunnel workings an ore body having a strike length of about 70 feet on the level has been mined from the surface to a depth of about 100 feet below the level, a vertical distance of about 160 feet, according to old reports. The elevation of the "C" tunnel workings is about 4100 feet; therefore, the bottom of the stope is at an elevation of about 4000 feet, or only a few feet higher than the elevation of the Mercury adit, the elevation of which is about 3980 feet.

As most of the workings are inaccessible, there is no way of knowing if the "C" tunnel orebody is mined out or if the ore extends to greater depths. The ore body is so small that testing for an extension of it in depth, by extending the Mercury adit 700 feet, is not justified. The ore body is unfavorably situated for exploration by diamond drilling, and the "C" tunnel adequately explored the mineralized zone within reasonable limits; therefore no further work is proposed at the "C" tunnel.

Recommendation: Extending the Mercury adit westward 700 feet is not justified because of the small exploration potential below the "C" tunnel workings, but a small amount of exploratory work approximately at the same elevation as the Mercury adit and from 100 to 200 feet west of the present face appears justified. As a substitute for the long adit I am proposing the drilling of two diamond drill holes, from the surface, as shown on the map, fig. 3 and fig. 6, section B-B'. The purpose of these holes is to test the westward extension of the main mineralized zone developed by the "B" tunnel and Mercury adit workings. At the face of the Mercury adit there is quartz-carbonate vein material in bleached and altered schist, but this mineralized and altered zone contains no visible cinnabar. Exploration of the westward extension of this zone is justified because of the structure and alteration; it is apparent that the mercury ore occurs in small, nearly vertical or steeply raking

shoots along these altered zones. Only 2 holes from the surface, each about 350 feet long, are proposed, but it is believed that these will prove whether or not the zone contains minable ore.

ITEM III, NO. 1 SHAFT

Proposal: At the No. 1 workings the applicants propose to drift westward a distance of 50 feet beyond the present face of the lowest level (90 foot winze level or the 220 level), and they propose to explore the mineralized zone by 50 feet of crosscutting on this same level. The applicants also propose to sink the No. 1 adit winze an additional 100 feet, and at this depth they propose to do 400 feet of drifting and crosscutting.

Discussion: The No. 1 ore body has been explored, developed and mined by several workings:

(a) a nearly vertical shaft (now inaccessible),

(b) tunnel (caved) that followed the ore zone from the outcrop and connected with the shaft at a depth of 50 feet,

(c) a short drift on the vein, and connecting with the shaft, at a depth of about 100 feet,

(d) Tunnel No. 1, which is a crosscut adit to the vein, and a drift along it at an elevation about 130 feet below the collar of the shaft,

(e) a winze 90 feet deep, below the crosscut adit.

(f) a sublevel drift (180 level) at a depth of 50 feet below the crosscut adit, and

(f) a short drift from the winze at a depth of 90 feet (220 level).

The ore body at the No. 1 workings was apparently one of the more productive bodies at the Ord mine. Old maps indicate that this ore body had a strike length of about 200 feet at the surface and mercury mineralization persists to the bottom of the deepest workings, a depth of about 220 feet below the surface, but at this depth the ore is spotty and very low grade. The strike length of the ore shoot apparently also decreases with depth, for on the 180 level (winze 50 level) the shoot is only about 120 feet long. The length of the shoot on the bottom level (220 or winze 90 level) is not known but the only ore that is believed to be of minable grade is localized within a few feet of the winze. The western end of the ore body, as shown on a map of the 150 level, is limited by north-northeasterly trending fault which intersects the ore body at an acute angle. On the 180 level ore was found against this fault on the east side but was not found on the west side of it. A zone of bleached or altered schist, like that usually associated with the ore, extends about 550 feet westerly from the No. 1 ore body but this extension has not been explored, although geological conditions indicate that exploration is justified.

Recommendation: As the No. 1 ore body apparently is diminishing downward in size and grade there is no justification for the applicants' proposal to sink the winze another 100 feet and to do 400 feet of drifting and crosscutting from the bottom of the winze. It seems that a better exploration venture would be to test the westward extension of this No. 1 zone, in an area which has not previously been explored, and in which geological conditions appear favorable, although mercury has not been found at the outcrop.

I recommend that 3 holes be drilled to test this westward extension of the No. 1 zone as shown on fig. 3 and section C-C'. One of these holes should be placed about 100 feet west of the old stope, one hole should be drilled into the zone of alteration about where it is intersected by northwesterly trending faults, and the other hole should be drilled midway between these holes. These holes probably should penetrate the favorable zone at depths of from 100 to 150 feet below the surface to be most effective. These holes were not requested by the applicants but are recommended as a substitute for the costly program requested.

ITEM IV OUTCROP BETWEEN "C" TUNNEL AND NO. 1 SHAFT

Proposal: Several very narrow stringers of cinnabar are exposed in a shallow pit on the south side of "C" hill and the applicants believe this is the outcrop of an ore body which they propose to explore by drifting or crosscutting 260 feet from near the portal of the No. 1 tunnel.

Discussion: The area at "C" hill looks unusually favorable for the occurrence of ore because of a combination of geological conditions with which ore is generally associated. A zone of alteration extends from the "C" tunnel workings to the prospect pit on "C" hill where the stringer veins containing cinnabar are found. Near this pit the zone of alteration is intersected by 2 northwesterly trending faults which this writer regards as favorable rather than unfavorable criteria.

This favorable zone could be explored as proposed by the applicants, or by extending the "C" tunnel, or by diamond drilling from the surface. This writer favors diamond drilling, which, if successful, would probably have to be followed by underground drifting or crosscutting, preferably from the "C" tunnel.

Recommendation: This writer recommends drilling 2 diamond drill holes under "C" hill, these to be drilled about 100 feet apart, one on either side of the prospect pit, and should be drilled so as to penetrate the mineralized zone at a depth of about 125 feet below the outcrop, as shown on fig. 3 and Section D-D'. If these holes are successful then drifting to the ore from the No. 1 tunnel or the "C" tunnel would be in order, but drifting is not recommended at this time.

ITEM V, ADIT BETWEEN INDIAN TUNNEL AND NO. 1 SHAFT

Proposal: About 1200 feet west of the No. 1 workings a small prospect exposed a bleached and altered zone containing a small amount of quartz and iron carbonate, but no cinnabar was visible at the time of examination. The applicants propose to explore this zone by drifting eastward 300 feet.

Discussion: The alteration and mineralization exposed in the surface cuts is so slight that exploration is hardly justified.

Recommendation: Exploration of the area between the Indian Tunnel and the No. 1 shaft is not recommended at this time because of the absence of specific data which would indicate that minable quantities of ore might be present in the area.

ITEM VI INDIAN TUNNEL

Proposal: The applicants propose to explore the Indian deposit by sinking 200 feet of shaft and by driving 350 feet of crosscut.

Discussion: The Indian deposit is situated about 3000 feet west of the No. 1 workings and crops out only a few feet above the highway on the north side of Slate creek. This highway passes a few feet over an adit about 100 feet long through which the mine was previously worked. An old sketch map, fig. 4, shows that the workings in the deposit consist of about 80 feet of drift on the adit level, about the same amount of workings on a sublevel about 48 feet below the adit, a shaft of unknown depth and an inclined winze. These workings have been inaccessible for many years.

The Indian deposit was actively mined in 1927 and 1928, but has not been worked since 1929, with the possible exception of 1942, as far as we can determine. F. L. Ransome regarded it as one of the best deposits in the area because of wide widths and persistence of the mineralized zone, but in 1929 he thought the deposit was decreasing in size and grade in the lower part and he expected it would be bottomed in a short distance. Production records are not available but the average of many samples, probably representing actual shipments, shows a mercury content of 0.266 percent. At the outcrop the applicants reported obtaining 0.58 percent mercury from a sample cut across a width of 6 feet, but a sample cut by the DMEA examiners from approximately the same locality yielded only 0.21 percent mercury. The old maps available to us indicate that the Indian deposit strikes about N.50° E. and dips about 60 degrees northwest. It has been developed and mined for a strike distance of about 80 feet but the claim map

shows that the zone has been prospected at the surface for a distance of about 600 feet.

Recommendation: The Indian deposit apparently is worthy of additional exploration; however, the applicants' program appears to be much too ambitious considering the available evidence. Any program of exploration that can be devised for the Indian deposit will be encumbered with many practical difficulties because of the location of the highway, the steep hillside, and the steep northerly dip of the ore zone away from the most favorable drill sites.

Data presently available are insufficient to justify sinking a 200 foot shaft and driving 350 feet of crosscut to explore the Indian deposit. Likewise re-opening the old workings is not justified because of the difficulty and expense of reclaiming the old workings and because of the limited extent to which the deposit could be explored effectively from these workings.

A modest program of exploration by diamond drilling is recommended by this writer to search for extensions of the deposit. About 7 holes, shown on fig. 4, are deemed sufficient as a preliminary phase of exploration, these to be drilled at about 75 to 100 foot intervals along the strike of the ore body. West of the ore body it is recommended that 2 holes be drilled northward at an inclination of about 35 degrees in order to intersect the westward extension of the ore body at a depth of about 50 to 100 feet below the outcrop. Immediately north of the old workings, and eastward along the mineralized zone it is suggested that vertical holes, or holes inclined steeply south, be drilled from the surface in such a way as to penetrate the mineralized zone at a depth

of about 150 to 250 feet below the outcrop of the ore zone. As these holes will be drilled from the steep hillside above the outcrop of the mineralized zone they will be longer than normally to be desired, but this is unavoidable because of the nature of the topography and the dip of the possible ore zone.

ITEM VII MALONE LEAD

Proposal: Adjacent to the east end of the Ord group, on the unpatented Slate Creek claims, formerly known as the Red Bird claims, it is proposed by the applicants to explore 3 weakly mineralized zones with 3200 feet of drill holes, a 450 foot adit and 400 feet of drifting.

Discussion: The most southerly zone which the applicants propose to explore is believed to be the Malone or High lead which was discovered in the early twenties and which has been explored only slightly by several shallow workings. The Malone, which is approximately parallel to the principal mineralized zones of the district, crosses the southwestern part of the Ord group and extends into the Slate Creek claims. Apparently the Malone lead is one of the more prominent of several weakly mineralized zones in the area.

The principal workings which reveal the presence of Mercury on the Malone lead consist of a shaft 21 feet deep and an adit which was driven about S. 65° W. along the vein for a distance of 25 feet from the shaft. The vein zone in the shaft is about 2 feet wide but it pinches to only a few inches wide at the face of the adit. A sample of the 2 foot wide vein in the shaft was taken by Jim Poulos for the applicants and found to contain 0.12 percent mercury.

Two other zones which the applicant proposes to explore lie north of the shaft about 135 and 270 feet respectively. The first of these is an obscure, iron-stained zone about 4 feet wide, and the second is a weakly mineralized, poorly defined zone explored by an open pit in which small amounts of quartz, carbonate, and probably tourmaline are exposed. Neither of the 3 zones, which are considered together as the Malone lead, have sufficient evidence of mineralization to justify further exploration as far as could be determined from this brief examination.

In the Slate Creek claims there is one area that appears to have considerable merit; this was found in an effort to locate the source of several large blocks of mercury-bearing schist and small pieces of mercurous vein material lying on the dump near the remains of an old retort or furnace near the portal of the Inspiration adit. As far as we can determine, this mercury-bearing material was derived from a few shallow cuts on a brushy hillside a couple hundred feet west of the portal of the Inspiration adit. On the steep brushy hillside a few tens of feet south of the cuts, some cinnabar was found in bleached, altered, sericitic schist. The area appears to be favorable for the occurrence of mercury; however, none of the material appears to be in place. In addition to brush the north slope of Malone hill is covered with a thick mantle of rock debris somewhat like that in talus slopes. This debris mantle was penetrated by the first 40 feet of the Inspiration adit, and preliminary calculations suggest that the thickness of the mantle is about 25 or 35 feet, but it is impossible to predict how far the mercury-bearing material in this debris has moved. About 100 to 150 feet south of the open-cuts is a small ledge of altered schist,

which may not have moved and which possibly may indicate the south limit of the mineralized zone.

The applicants did not propose exploration of this area, and they apparently were unaware of it. This is the only place on the Malone group that the examiners found sufficient evidence of mineralization to justify exploration. It is proposed that this area be explored as a substitute for the area that the applicants proposed to explore. Jim Poulos, representing the applicants, agreed that his company would do sufficient bulldozing in the area to clear the site for access, mapping, and for diamond drilling.

Developing a suitable exploration program for this area is difficult because we have little knowledge of the sub-surface geology. Our best information is based on the geology of the Inspiration adit, which shows the effects of considerable faulting, folding of the schist and weak mineralization as is shown by the presence of quartz, carbonate and limonite. At the base of the debris mantle the schist has about the same attitude as elsewhere in the district, i.e. it strikes east-northeasterly and dips about 80 degrees north. At about 60 feet from the portal of the adit a low-angle south-dipping fault is crossed, and from this fault to the face of the adit the schist dips from 50 to 55 degrees south, an attitude which has not been observed elsewhere in the district. These structures strike west-southwesterly toward the mineralized area for which exploration is proposed, but there is no certainty that these structures extend into the mineralized area.

3 '40
0 in '41

Tom Russell
James Hanson

Trobaugh

Ord
Rattlesnake
Nat Mercury
Tonto

Pilsen

Joe Conway
Wasson
Sam

Recommendation: I believe the mineralized area justifies exploration, and as the bed rock is concealed with a deep mantle of rock debris, preliminary exploration should be by diamond drilling. As the schist apparently dips toward the south and the slope of the hill rises steeply in the same direction, diamond drilling may be difficult but it can be accomplished best by vertical or nearly vertical holes, which may have to be supplemented by low angle holes drilled in a southerly direction. During the late twenties Ransome suggested exploring the Malone lead by extending the Inspiration adit, but apparently this was never done.

To explore this mineralized area I recommend drilling 7 holes, a total of 2000 feet, at locations to be selected after the applicants make the necessary preparations, such as mapping, trenching, preparing roads and drill sites, which can be done easily under direction of the Company geologist.

ITEM VIII AREA ABOUT 400 FEET SOUTH OF NO. 1 WORKINGS

Proposal: The applicants did not propose any work south of the No. 1 workings, but this writer considers an altered zone in this area to have sufficient merit to justify preliminary-type drilling with a couple of holes.

Discussion: A Geological map by McCallister shows an unusually large altered zone lying about 200 feet south of the No. 1 deposit and trending approximately parallel to the other altered zones on the Ord property. The eastward extension of this zone contains considerable amounts of quartz and iron carbonate but lacks the sericitic alteration that normally is associated with the mercury deposits. As the mercury deposits are nearly always associated with quartz, carbonate, and with bleached or sericitized wall rocks it seems that the large altered zone

south of the No. 1 workings is worthy of exploration.

Recommendation: To test the area south of No. 1 workings this writer recommends two diamond drill holes to be drilled about as shown on fig. 3 and Section C-C'. Holes 300 feet long are indicated, and 2 holes, total 600 feet, should be sufficient to make a preliminary test of the zone.

SUMMARY OF PROPOSED EXPLORATION

Item I Drill 3 holes approximately as shown at I on Fig. 3 and Sec. A-A', average depth 500 feet, estimated total 1500 feet. These holes will explore for the downward extension of the main ore zone developed through the "B" tunnel and Mercury adit workings.

Item II Drill 2 holes approximately as shown at II Fig. 3 and Sec. B-B', average depth about 350 feet, estimated total 700 feet. These holes will explore for a westward extension of the ore zone developed through the "B" tunnel and Mercury adit workings.

Item III Drill 3 holes approximately as shown at III on Fig. 3 and Sec. C-C', depth 250 feet, total 750 feet. These holes will explore the westward extension of the ore zone developed by the No. 1 workings.

Item IV Drill 2 holes as shown at IV on Fig. 3, and Sec. D-D', average depth about 350 feet, total 700 feet. These holes will test the extension of the "C" mineralized zone in a structurally favorable area beneath "C" hill.

Item V Exploration of the area at V, shown on Fig. 3, is not recommended.

Item VI Exploration for extensions of the ore zone at the Indian tunnel is recommended by drilling 7 diamond drill holes, a total of 2000 feet. These holes will test for extensions of ore both east and west of the old stope and also below it. The proposed exploration is shown on Fig. 4.

Item VII It is recommended that a mineralized area lying a couple hundred feet southwest of the Inspiration adit, fig. 5, be explored by about 7 diamond drill holes a total of 2000 feet. Location, bearing, inclination and depth of holes to be determined by the operator, with DMEA approval at a later date, after preliminary preparations are completed by the operator.

Item VIII At area VIII, Fig. 3, and Sec. C-C', south of No. 1 workings, this writer proposes drilling at least 2 inclined diamond drill holes to test a previously unexplored zone of alteration. Holes will be an estimated 350 feet deep, total 700 feet. The above recommended drilling is summarized as follows:

Item	Location	No. of Holes	Average Depth	Total
I	Below main ore zone in Mercury adit and "B" workings	3	500	1500
II	West of main ore zone in Mercury adit and "B" workings	2	350	700
III	West extension of No. 1 ore zone	3	250	750
IV	Favorable zone under "C" Hill	2	350	700
V	From 900 to 1200 feet west of No. 1 workings. Exploration not recommended	-	-	-
VI	Indian Tunnel area	7	286 (approx.)	2000
VII	Southwest of Inspiration adit	7	286 (approx.)	2000
VIII	Altered zone about 200 feet South of No. 1 workings	2	350	700
				8350

It is evident that the above proposed program of diamond drilling may not be adequate to explore a property as large as the Ord group of claims, and that modification in the proposals or additions to the total amount of drilling may be required as the work progresses.

If ore is found by drilling, then a program of exploration or development by shafts, tunnels or drifts, etc. may be required. Such workings are not recommended for exploration at this time because of the high cost, and because of the lack of definite evidence that such workings are justified. Suitable methods of exploring these small, scattered ore bodies by mine workings cannot be determined until preliminary type exploration by drilling is completed.

ROADS

In order to reach the drill sites some road work will be required. This is summarized by items as follows:

Item I To reach the drill sites for surface holes in Area I there are several alternate routes. Probably the best route is the applicants' proposed alternate, which starts at the Forest Service road at the top of "B" hill, passes westward over the "B" tunnel and then follows more-or-less along the contour to the drill sites at the north side of "B" hill. It is estimated that 750 feet of road will be required to reach the drill sites for item I.

Item II The drill site for item II probably will be just below the access road proposed for Item I, and no additional road work should be required. From this road it is probable that the drilling equipment could be skidded to the drill site.

Item III Access road is now available to drill site at Item III; additional road work is not required.

Item IV I believe it is easier to skid the drilling equipment to drill sites for Item IV than to build a road; therefore road work is not proposed.

Item V No work is proposed for Item V.

Item VI At the Indian deposit the drill equipment can be skidded into position from the Bush Highway; therefore, road construction is not required.

Item VII On the Slate Creek claims it is estimated that about 500 feet of road work will be required to prepare suitable access to the mineralized area southwest of the Inspiration adit.

Item VIII In order to reach the site for drilling the altered zone south of the No. 1 workings, about 300 feet of access road probably will be required.

SUMMARY OF ACCESS ROAD CONSTRUCTION

Item	Required Road
I	750 feet
II, III, IV, V, VI	Roads not required
VII	500 feet
VIII	300 feet
Total	1550 feet

CONCLUSIONS AND RECOMMENDATIONS

Most of the exploration work done on the Ord property has been in or near the larger mineralized zones where mercury was present in the outcrop, and it is probable that most of these occurrences have

been satisfactorily explored. Other zones which appear favorable because of structural conditions, hydrothermal alteration or by the actual presence of cinnabar in the outcrop either have not been explored at all or have been inadequately explored. Exploration by drilling has a reasonable chance of discovering a few additional ore bodies similar in size and grade to those previously mined. I believe that exploration for ore bodies of this type is within the field of interest of DMEA; therefore I am recommending the program set forth in the above report.

J. N. Faick

J. N. Faick
Geologist

JNF:ms

224 New Customhouse
Denver 2, Colorado

May 16, 1955

Memorandum

To: W. R. Storms (w/brochure)
J. N. Faick

From: Field Team, Region III

Subject: Docket DMEA-2445 (Mercury), Ord Mercury Mines, Gila County, Arizona, Contract Idm-2460

Enclosed is the subject application for an amendment to Contract Idm-2460 (Docket DMEA-2445) to increase the exploration assistance.

The brochure consists of:

1. Form MF-103 and accompanying answering sheets.

2. A photostatic copy of an agreement to extend payment date.

3. A photostatic copy of an agreement, dated July 1, 1954, between Ord Mercury Mines and the claim owners.

4. A photostatic copy of a claim map.

The following maps are enclosed:

(a) Map showing relation of underground workings and ground surface.

(b) Map of Mercury Adit Level.

(c) Longitudinal Projection A-A' Figure 3.

(d) Map of B-Tunnel Level.

(e) Map showing outcrops and road system.

(f) USGS Contour Map of the area.

(g) Malone Lead - Diamond Drill Hole Cross Sections Holes 5a, 5b, 6a, and 6b.

(h) Malone Lead - Diamond Drill Hole Cross Sections Holes 1a and 2.

(i) Malone Lead - Diamond Drill Hole Cross Sections Holes 1b, 3a, 3b, and 4.

(j) Proposed Diamond Drill Hole Location "C" Tunnel.

(k) Proposed Diamond Drill Hole Location below Adit Level in "B" Tunnel.

(l) Map of the Indian Tunnel.

(m) Ord Mercury Mine No. 1 Shaft.

(n) No. 1 Shaft Proposed Underground Exploration.

(o) Composite Map showing 100 level, adit level, and 85 level.

(p) Claim Map.

Also enclosed for your information is a copy of a letter from the Chairman of the Operating Committee and attached memoranda from the Commodity Committee.

A field examination and suitable report are requested.

W. M. TRAVER.

W. M. Traver

E. N. Harshman

E. N. Harshman

Enclosures
HMC:pw

cc: Subject
Chron
Townsend
Harshman
Sec.Op.Comm. (2)

DOCKET
SURNAME
400 Chapman
Martin
Crawford
Johnson

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

Re: Docket No. DMEA 2445 - Mercury
Ord Mercury Mines
Gila County, Arizona
Contract No. Idm-2460

Dear Mr. Traver:

The above docketed application for an amendment to Contract No. Idm-2460 (Docket No. DMEA 2445), to increase the exploration assistance is being referred to your office for a review and possible field examination.

Two copies each of relevant memoranda dated April 20, and May 2, 1955, from J. M. Hedges, Bureau of Mines and M. R. Nelson, Geological Survey, respectively, are enclosed for your information.

Sincerely yours,

W. G. Martin

ACTING Chairman, Operating Committee (JB)

Enclosure

APPROVED

/s/ John E. Crawford (JB)
Member, Bureau of Mines

/s/ R. D. Trace (JB)
Member, Geological Survey

TLChapman:foc
5-5-55
cc to: Docket
Code 400
Adm. Read. File
Operating Comm.
FT. REG. III
H. M. Meyer, USBM
T. H. Kiilsgaard, USGS

P.S. Please note from the above caption we are giving the application sent to us with your letter of April 4, 1955, the same docket number as the current contract.

R.C.J.

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

Defense Minerals Administration
RECEIVED
MAY 3 - 1955

May 2, 1955

Re: DMEA-2445
Uranium Enterprises, Inc.
Ord Mercury Mines Co.
Gila County, Arizona
$176,550.00 - Mercury

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of application for an extension to Contract E460

This request provides for the exploration of the Ord Mercury Mines and adjoining and nearby properties in a big way. Small scale work under an R.F.C. contract and contract E460 failed to meet the expectations of the applicants though done in what appeared to be a favorable section of the mercury bearing zone. The large scale work now proposed would explore by drifting, crosscutting and drilling areas of less apparent promise.

This application for an extension (the fifth) and the original application name only the 5 claims of the Ord Mercury Mines Co. under 3 "Applicant's property rights." The 5 claims are the central part of the 19 claim Ord Group. An agreement dated July 1, 1954 provides for the inclusion of 7 Slate Creek claims, but the application makes no mention of them nor does the application.mention the easterly Ord claims, specifically, Ord #14, #15 and #16, on which work would be done if the extension applied for is granted.

Production during the period of the R.F.C. contract is given in the original DMEA application as $149.765, received for 822 flasks of mercury recovered from 8,773 tons of ore, or 7.1 pounds per ton. At the conclusion of the work the Ord Mercury Mines gave the R.F.C. a promissory note for $36,598.37.

Under contract E460 for $28,000, production has been $14,740 and the Government royalty $737.00. Apparently the Ord Mercury Mines property has been high graded, there are, as stated, no reserves and royalty obligations amount to:

R.F.C.	$36,598.37	
E460	20,263.00±	($28,000 x 75% less $737.00)
	$56,861.37	

A very thorough field check is indicated before the applied for extension is granted. Too much reliance appears to have been placed in the ore estimates of a stockholder of Ord Mercury Mines Co., the applicant.

Referral to the Field Team is recommended.

N. E. Nelson

N. E. Nelson

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

Defense Minerals Administration
RECEIVED
APR 20 1955

April 20, 1955

Memorandum

To: E. W. Ellis, Chief, Rare and Miscellaneous Metals Division

From: J. H. Hedges

Subject: DMEA-2445 (Mercury) Contract Idm-E460, Ord Mercury Mines, Gila County, Arizona

I have reviewed the application of Ord Mercury Mines for additional exploration at an estimated cost of $176,550. This sum seems excessive in relation to the past history and future potential of the property. However, I have seen no report on the results of the work already completed and am in no position to judge the merits of the new program.

Much of the proposed work lies outside the claims subordinated under Contract Idm-E460 as listed by Mr. Traver, although it is not clear from the claim map submitted with this application what area may be covered by U. S. Survey No. 4086.

The application should be referred to the field for investigation and recommendations.

I am returning the application and accompanying maps for your files.

J. H. Hedges

J. H. Hedges

Attachment

Copy to: Division of Minerals
Miss Meyer, Room 3623
J. H. Hedges

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

224 New Customhouse
Denver 2, Colorado

April 6, 1955

2445

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Ord Mercury Mines (Mercury) - Gila County, Arizona
Application for DMEA Assistance

This has further reference to our letter of April 4, 1955, in which we transmitted the subject docket.

The applicant has since forwarded this office 4 sets of maps. Three copies of each are attached as follows:

1. Map showing relation of underground workings and ground surface.
2. Map of Mercury Adit Level
3. Longitudinal Projection A-A' Figure 3
4. Map of B-Tunnel Level
5. Map showing outcrops and road system
6. U. S. G. S. Contour Map of the area
7. Malone Lead - Diamond Drill Hole Cross Sections Holes 5a, 5b, 6a, and 6b
8. Malone Lead - Diamond Drill Hole Cross Sections Holes 1a and 2
9. Malone Lead - Diamond Drill Hole Cross Sections Holes 1b, 3a, 3b, and 4
10. Proposed Diamond Drill Hole Location "C" Tunnel
11. Proposed Diamond Drill Hole Location Below Adit Level in "B" Tunnel
12. Map of the Indian Tunnel
13. Ord Mercury Mine No. 1 Shaft
14. No. 1 Shaft Proposed Underground Exploration
15. Composite Map showing 100 level, adit level, and 85 level
16. Claim Map

One copy of each of these maps is being retained in our files.

W. M. Traver

Encs.

W. M. Traver

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

RECEIVED
APR 7 1955

224 New Customhouse
Denver 2, Colorado

April 4, 1955

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region III

Subject: Ord Mercury Mines (Mercury), Gila County, Arizona, Application for DMEA assistance

Enclosed are three copies of an application for DMEA assistance in the amount of $176,550.00.

The mining claims included in the application are Ord No. 6, Ord No. 7, Ord No. 12, Ord No. 13, Ord No. 19, all U. S. Survey No. 4086. These are the identical claims subordinated under Docket DMEA-2445, Contract Idm-E460. In this case, would this new application be given the same docket number?

The application consists of:

(1) Forms MF-103 and attached answering sheets.

(2) A photostat of a signed copy of an agreement dated July 1, 1954 to extend the date for the payment of $16,250.00.

(3) A photostat of a signed copy of an agreement dated July 1, 1954 between the Ord Mercury Mines and the claim owner.

(4) Claim map of the Ord Mercury Mine.

One copy of the application is being retained in the files of this office.

W. M. Traver

Enclosures

W. M. Traver

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

Defense Minerals Administration
RECEIVED
APR 7 6 1955

224 New Customhouse
Denver 2, Colorado

April 4, 1955

Ord Mercury Mines
330 Camelback Road
Phoenix, Arizona

Gentlemen:

This will acknowledge receipt of your application for DMEA aid on the Ord claims located in Gila County, Arizona.

The application is being forwarded to our Washington office for proper action.

Very truly yours,

W. M. TRAVER

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

HMC:pw

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

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved:
Budget Bureau No. 42-R1035.2.

DMEA Received
APR 1 1955

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APR 6 1955
BUREAU OF MINES
Denver, Colorado

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. ____
Metal or Mineral ____
Date Received ____
Estimated Cost ____
Participation (Government %) ____

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: Ord Mercury Mines, an Arizona Corporation
330 East Camelback Road, Phoenix, Arizona
Fred H. Jones, Pres. Box 3016, Globe, Ariz. --Lelia G.Long,Asst.Sec'y and
George M. Hill,V.Pres., 1018 Title & Trust Bldg., Phoenix, Ariz.
Tom J. Russell,Sec'y., Ord Mercury Mines, Payson, Ariz.

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract Gila County, Arizona--Ord No. 6, U.S.Survey No. 4086; Ord No. 7, U.S. Survey No. 4086; Ord No. 12, U.S. Survey No.4086; Ord No. 13, U.S. Survey No. 4086; Ord No. 19, U.S. Survey No. 4086

(*b*) State any mine name by which the property is known.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise
Lessee--purchaser under contract

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property.

(*e*) If you own the land, describe any liens or encumbrances on it None

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

5. *The exploration project.*—State the mineral or minerals for which you wish to explore Mercury

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within 30 days and be completed within 12 months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of 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.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—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 the contract, should be included in the estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)?

(*b*) How do you propose to furnish your share of the costs?

[X] Money [X] Use of equipment owned by you [ ] Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated March 30, 1955

ORD MERCURY MINES
(Applicant)

By J. E. O'Connor

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—66551-1

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4. Physical description

(a) A summary of all mining and exploration operations conducted upon the land, prior to July 1, 1954, the commencement date of the current lease, may best be found by reference to the original loan application of which this requested extension is a part. Since this date, the bulk of the mining activity has been confined to the adit level, all in the "B" tunnel workings. Unwatering and rehabilitation of the adit winze to the sub-levels was necessary before access could be gained. Ore production under the present lease has come largely from this part of the mine and the workings above these levels have yielded only a relatively minor tonnage. A certain amount of reopening of caved lateral workings was necessary. Exploration in the form of diamond core drilling (EX-diameter) 54 feet on the adit level, and 377 feet on the 85 level, consisting of flat holes averaging about 50 feet in length. All production under the new lease has been from these workings.

The caved portal of the "C" tunnel was opened up to permit inspection of the interior, which is now accessible.

Rehabilitation of the adit winze below the No. 1 shaft workings (1200 feet west of the "B" tunnel area) was completed for a distance of 70 feet and the winze was sunk another twenty feet on ore. At this depth a drift approximately 59 feet in length was driven to the west and southwest to explore for the downward extension of the ore shoot in the 50 level, without notable success.

Approximately 1000 feet west of the No. 1 shaft workings, an adit was started west on a mineralized outcrop and was extended 30 feet.

At the Indian Tunnel, which lies about two miles west of the "B" tunnel workings, dozer excavation of an outcrop near the caved shaft revealed the presence of 6 feet of good ore. These workings are inaccessible at the present time.

Other dozer work lasting several weeks was expended on numerous other mineralized outcrops above and between the various underground systems from one extremity of the property to the other. A few of the structures exposed by this method have been further examined to a minor extent by blasting.

At the eastern end of the ground under lease, approximately 1.3 miles east of the "B" tunnel workings, a series of outcrops explored in the past by several short adits and one 20-foot shaft define a structure generally known as the Malone Lead. An extensive system of roads and cuts was made in this area under the current lease, and succeeded in exposing mineralization so that at least three mineralized structures in close proximity to each other are known to exist which would warrant further exploration.

(b) Refer to records furnished in the original D.M.E.A. loan application of which this is an extension, for production prior to July 1, 1954. Under the current lease, production has amounted to 131 flasks of mercury from ore averaging 0.3% Hg. There is no production at the present time.

Based on the current mill grade requirement, there is no available reserve, proven or inferred. Use of the term "available" means ore that does not need to be left in place for pillars, shaft support, and so forth. Small high grade streaks which are present at scattered locations are not considered "ore" here, in the strict definition.

(c) Refer to the data furnished for this sub-heading in the original D.M.E.A. loan application of which this request for extension is a part.

Pre-Cambrian schists, slates and quartzites dipping steeply northward and flanking the granitic mountain core to the south are the host rocks for the mercury mineralization in this district. The ore forms lenticular replacement bodies in the phyllitic schist belts, and is characteristically accompanied by bleaching of the schist. Individual ore shoots would be considered chimney-like, their greatest dimension being in a vertical direction, and with respect to each other exhibit parallelism in that a steep westward rake is usually observed. A relatively large halo of low grade mineralization commonly encloses the rich shoots. Post-mineral faulting with a pronounced horizontal component northeastward has created offsets up to tens of feet in several of the main ore bodies, and at least in the "B" tunnel workings, strong faults of this same attitude seem to form the limits of the mineralized zone along the east-west strike of the containing structure. Ore

has been mined to a depth of between 300 and 350 feet below the surface in the "B" tunnel workings, and has reportedly persisted to a depth of 500 feet in the Rattlesnake workings less than 3 miles to the west. It is therefore probable that many of the ore bodies yet inadequately explored on the property will extend to greater depths than now known, and will continue to yield substantial quantities of good cinnabar. The prime objective of this loan request is to obtain the financial aid necessary to execute a project of exploration of the magnitude warranted by present direct and indirect evidences that point toward the likelihood of developing ore. This may or may not be the proper place for mentioning the success attending previous D.M.E.A. loans in the search for ore on this property.

(d) The Bush Highway passes directly through the Ord Mining camp and permits easy accessibility to the property. Roads to all outcrops have been recently prepared, and only the short spur roads to the drill sites remain unbuilt, pending approval of the proposed diamond-drilling program.

The factor of shipping distance is not a matter of consideration, because all ore is processed in our own furnace on the property. The nearest supply center is Phoenix, approximately 80 miles distant, except for foodstuffs, mine timber and small hardware items, which may be obtained at Payson 20 miles away on excellent gravel-surfaced highway.

Several non-insulated bungalows without coolers are available at the camp to provide residence facilities for most of the miners, mill men and supervisory personnel required for the project. Limited housing may be available at Jake's Corner and Punkin Center, both approximately 15 miles from camp. Payson, 20 miles north of Ord, has numerous cabins and motels and a permanent population of perhaps 200, thus providing additional aid in this respect, if needed.

(e) Mining men of experience are quite easily obtainable from Tonto Basin, the copper mines of Globe-Miami and from other properties in the mercury district. Phoenix is the nearest supply center for all major machinery items and so forth as indicated under Item 4 (d). Water is supplied by spring flow from Ord Mountain to the south. It is stored in tanks and since the supply is limited, usage must be conservative, especially during the summer months. Power is provided by a 10 kw. Diesel generator which barely meets the mine-mill requirements with no excess for domestic use.

5. The exploration project

(b) "B" Tunnel Workings

The major proportion of underground activity on the Ord property has taken place in the "B" tunnel workings, and most of the ore produced to date came from this mine. Shoots of ore have been traced downward for nearly 350 feet from the surface and although the bottom level, at about 400 feet, did not develop a body of ore, mineralization was encountered. Exceedingly severe caving and flooding conditions precluded adequate investigation on the bottom level, however. Immediately below the lowest shoot, just below the 85 level, a major fault zone dipping 30° northward, the only one of its type in the mine, truncates the main mineralized zone in which all the above workings are located and appears to offset the footwall segment an unknown distance northward. It is conceivable that although the hanging wall portion of this mineralization is quite thoroughly mined out, the offset portion, as yet unfound, lies to the north of the present workings and may be of even greater magnitude than its counterpart. With this as a basis, a system of five diamond core drill holes approximately 500 feet in depth have been tentatively plotted which should reveal the presence of any cinnabar of consequence below the present workings.

There is general concurrence by all investigators that exploration in the "B" tunnel workings below the B level has never been carried far enough westward, and mineralization

still shows in the westernmost drift faces on the 50 level and 100 level below the B level. A drift of 700 feet westward from the adit level is recommended which will explore the favorable structure to the west and will also pass about 150 feet beneath the two ore bodies in the "C" tunnel, whose lower limits are not known. Two hundred feet of crosscutting from this drift will allow a minimum of exploration transverse to the structure to pick up offsets and so forth.

"C" Tunnel Workings

Extension of the drift westward from the adit level of the "B" tunnel workings will examine the plyllitic schist belt favorable to cinnabar mineralization approximately 150 feet below the main level of "C" tunnel. Four diamond drill holes totalling 1100 feet are recommended for the "C" tunnel area to explore the ground in excess of 100 feet below the workings.

No. 1 Shaft

Recent rehabilitation of the adit winze for a depth of 70 feet and further sinking for a distance of twenty feet showed a persistent streak of ore ranging in Hg content from 0.50% to 0.75%. From the position of the several high grade streaks mined out above the 50 level below the adit tunnel, it appears that the winze was following the eastern extremity

of the ore along its rake to the west. The driving of a 59 foot drift westward from the bottom of the shaft (called the 90 level) encountered sporadic indications of ore, especially at about 30 feet from the shaft, where the body consisted of myriads of parallel, narrow quartz stringers containing coarse cinnabar. Intense local contortion of the schistosity was probably influential in the lensing out of this small mass within a few feet. The face still shows a trace of cinnabar and strong alteration characteristic of proximity to ore bodies and it is felt that another 50 feet of drifting with the same amount of crosscutting is definitely justified, as is an extension of the adit winze another 100 feet in the favorable showing at the present shaft bottom. At the bottom of the proposed extension another 400 feet of drifting and crosscutting is requested. This work will be at approximately 230 feet under the surface, well within the depth limits of ore occurrences elsewhere on the property.

Outcrop between "C" Tunnel and No. 1 Shaft

Recent excavation of this 20 foot shaft from which a small very high grade pocket was reportedly extracted, revealed the presence of a remaining bit of very rich cinnabar judged to be several percent Hg from megascopic examination. Such pods as this showing at the surface usually in the past have been shallow and descent on the structure has commonly passed progressively from this small high-grade ore zone

Since this outcrop and the proposed shaft lie so close to the Bush Highway, waste disposal presents a problem whose practical solution is the construction of a waste bin for transfer of the material by truck to some other dumping point, probably across the highway. Funds are requested for the construction of this bin.

Malone Lead

Lying at the eastern limit of the property is a mineralized structure known as the Malone Lead. Although the richest portion of this structure appears to have been covered by a massive landslide from which boulders of very high grade retort ore were recovered, the leaner portion outcrops a few hundred yards to the east of the landslide and has been exposed by short adits, cuts, and a 20-foot shaft which show three separate mineralized zones. West of the landslide area the same structure is found, but the cinnabar, some of it very coarsely crystalline, is confined more to numerous quartz-ankerite seams and veins. Exploration of this structure by 17 drill holes totalling 3200 feet seems amply justified. Crosscutting beneath the three mineralized structures with a 450 foot adit accompanied by 400 feet of drifting, divided more or less proportionately among the three zones of mineralization would determine the potentiality of this area.

through a barren zone on into extensive mineralization of substantial tonnage. In view of this, a 260 foot crosscut in under this zone at a depth of about 111 feet can be conveniently started near the portal of the adit to the No. 1 shaft, so that the same dump, track and ore bin facilities may be used for both workings. One hundred feet of drifting at the end of this crosscut should delineate any downward extension of the ore shoot.

Adit between Indian Tunnel and No. 1 Shaft

A small showing of cinnabar at this location prompted the lessee to start a short adit eastward. Although the mineralization did not persist, the structure resembles that in the "C" tunnel, and the northernmost mineral-bearing zone in "B" tunnel. Three hundred feet of drifting eastward from the present heading would explore new ground west of the ore bodies in the No. 1 shaft.

Indian Tunnel

Records on this working are meager and little is known of the quality or extent of ore obtained. Judging from the one map available, two levels were driven but followed the structure only a short distance. Ore in place at the surface is a very promising six feet of 0.58% Hg. Therefore the prospect has not been adequately explored and warrants the 200 feet of shaft sinking and 350 feet of crosscutting requested.

5. (d) The operator's experience covers six years of uranium mining operations, having at his disposal complete exploration units, both air-borne and ground, complete mining equipment for all general phases of mining, superintendents of long standing, plus experienced mining procedures. He is currently operating seven producing mines. Has over one year cinnabar and quicksilver mining experience covering both mining and milling operations.

6. Estimate of costs

		Cost
(a)	**Independent contracts**	
	Diamond drilling, 6800 ft. at $5.00/ft.	$ 34,000.00
	Bull dozer road preparation, 3100 feet 8 days at $100.00/day	800.00
(b)	**Labor, supervision, consultants**	
	Drifting and crosscutting, 3350 ft. at $35.00/ft.	117,250.00
	Shaft sinking, 300 feet at $75.00/ft.	22,500.00
	(Geologic supervision to be exercised by resident graduate geologist permanently employed by Uranium Enterprises, Inc.)	
(c)	**Operating materials and supplies***	
(d)	**Operating equipment***	
(e)	**Rehabilitation and repairs**	None required
(f)	**New buildings, improvements, installations**	
	Construction of waste bin at Indian Tunnel	2,000.00
(g)	**Miscellaneous***	
(h)	**Contingencies***	
	Total	$ 176,550.00

* In referring to our previous D.M.E.A. Loan on which we are asking this extension, the above starred items have been answered in 6 (a) and (b), in that we have determined from our past records in the operation of the Ord Mercury Mines the unit cost for mining operations, and in these unit figures are

applied the breakdown of such expenses as labor, supervision, consultants, operating materials and supplies, operating equipment, accounting, workmen's compensation, insurance and payroll taxes. Should you require a detailed breakdown of the above mentioned items, we can submit it to you as required.

Our assumption in answering these questions in the above manner is based on the fact that these items were fully explained in detail on our previous loan, and our past operating experience indicates these overall unit figures to be accurate.

LIST OF MAPS INCLUDED IN QUADRUPLICATE WITH APPLICATION *

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"B" Tunnel Workings

Composite plan and longitudinal cross section	1
Composite plan - geologic	1
Mercury adit level	1
"B" level	1

Indian Tunnel

Composite underground plan and surface map	1

No. 1 Shaft

Composite plan	1
Longitudinal cross-section	1

Malone Lead

Surface map	1

Diamond Drilling Cross Sections

Malone Lead (3 sheets)	3
"B" tunnel workings	1
"C" tunnel workings	1

Miscellaneous

General surface and underground plan maps of active workings at Ord Mercury property	1
U.S.G.S. topographic quadrangle (NW $\frac{1}{4}$)	1
General claim map	1
Total	16

* Separate Cover

WE DO HEREBY AGREE
THAT THE DUE DATE
FOR THE PAYMENT OF
$16,250.00 ON JAN. 16, 1955
AS SET FORTH IN THE ORIG.
AGREEMENT DATED JULY 11 1954
IS EXTENDED FOR FOUR MONTHS
TO MAY 16, 1955.
NO OTHER PROVISION OR TERM
OF SAID CONTRACT IS IN ANY WAY
CHANGED.

DONE AT PHOENIX THIS 16th DAY
OF DECEMBER 1954.

[illegible]
[illegible] Fred E. Jones, Pres.
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] Fred E. Jones
[illegible] Fred E. Jones
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

AGREEMENT

DATE: July 1, 1954.

The parties to this agreement are:

ORD MERCURY MINES, an Arizona corporation, hereinafter referred to as the "Company";

TOM J. RUSSELL, FRED H. JONES, H. GRADY HARRISON, HUGH NICHOLS, KEITH OWENS and GEORGE M. BILL, being and comprising all of the stockholders of Ord Mercury Mines, an Arizona corporation, hereinafter referred to as the "Stockholders";

VANCE THORNBURG, of Phoenix, Arizona, hereinafter referred to as the "Optionee"; and

FRED H. JONES and TOM J. RUSSELL, hereinafter referred to as the "Claim Owners".

COME NOW the above-named parties and covenant and agree to and with each other as follows:

1. That all operations of the Company are turned over to the Optionee, his associates and assigns, as of July 1, 1954, in consideration of which the said Optionee covenants and agrees to and with the said Company as follows:

(a) The Optionee shall take over the operation and provide the necessary capital and personnel to place the retort and the property in operation on the production of quicksilver at the earliest date commensurate with conditions as they exist, and commensurate with good and sound practices with relation thereto.

(b) The Optionee shall pay to the Company $2,000.00, to be used by the Company to retire the indebtedness due The Valley National Bank at Globe, Arizona in the amount of $1,000.00, and to retire approximately $1,000.00 of additional indebtedness consisting of withholding, social security, employment security, and other taxes.

(c) The Optionee will provide all funds and pay all bills, costs and expenses with relation to placing the property in operation and producing quicksilver.

(d) The Optionee shall be entitled to the proceeds of the sale of quicksilver during the time he is in possession of and operating the property, to the extent that such sales will cover his advances and operating costs; provided, however, that if and in the event the proceeds of the sale of quicksilver are more than t he amount of the Optionee's costs and the $2,000.00, as hereinabove set forth, then such amount shall be paid by the Optionee to the Company and shall be and become the moneys and funds of the Company.

(e) This arrangement shall continue for six months and ten days from and after July 1, 1954, and as long thereafter as the Optionee has not defaulted in the payment of the stock purchase price, or until the Optionee has ceased operations on the property, whichever should occur first; it being covenanted and agreed that all of the Optionee's operations with the Company and on the property involving the Company's mining claims and equipment will be conducted in a good, minerlike fashion, with due regard being had for the maintenance and repair of all the Company's equipment and property in the same condition it is at the time when it is turned over to the Optionee, reasonable wear and tear excepted.

2. The Stockholders do hereby agree that they will within ten days from the date of this agreement place in escrow with The Valley National Bank at Globe, Arizona 32,500 shares of the capital stock of the Company, comprising 65% of the 50,000 shares of stock authorized, issued and outstanding; which stock shall be in the names of the individual Stockholders, and to which shall be attached stock powers authorizing the conveyance thereof upon delivery by the escrow agent to the Optionee, together with a

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General Reports Administration
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letter of escrow instructions authorizing The Valley National Bank at Globe, Arizona, as the escrow holder, to deliver the said stock certificates to the Optionee at such time as he shall have paid to the said escrow holder $1.50 per share, amounting to $48,750.00. Said payment shall be made on the basis of 50¢ per share, amounting to $16,250.00, on or before January 10, 1955, a like amount on or before July 10, 1955, and a like amount on or before January 10, 1956; it being covenanted and agreed by and between the parties, and to be so provided in the escrow instructions, that if and in the event the Optionee does not make any of the payments in the amount and at the times hereinabove provided, then the escrow agent, The Valley National Bank at Globe, Arizona, shall immediately forthwith return the stock certificates to the said Stockholders, and all sums theretofore paid by the Optionee shall be deemed forfeited.

3. If the option of the Optionee to purchase the said stock is exercised on or before January 10, 1955, then an accounting shall be had between the Company and the Optionee, and all costs and expenses reasonably and necessarily incurred or expended by the Optionee, including the said $2,000.00, reduced by the proceeds of the sale of quicksilver during the said period, shall be an obligation of the Company; but if the said option is not exercised and the payment of $16,250.00 made on the stock purchase price, then the said Optionee shall cancel any and all obligations growing out of his operation of the property, and the Company shall not in any way be indebted to the Optionee, and the Optionee shall vacate the premises of the Company and redeliver possession of the claims and equipment to the Company.

4. In the event the option is exercised, the indebtedness due the Optionee shall be evidenced by promissory notes, which shall bear interest at not in excess of 5% per annum, and which shall be due and payable within a

reasonable time, giving due consideration to the earning capacity and business outlook of the Company at the time the notes are executed; and which notes shall provide on the face thereof that if the Optionee fails or defaults in the completion of the stock purchase payments, then the notes shall be deemed fully paid.

5. It is covenanted and agreed by and between Fred H. Jones and Tom J. Russell, as the Claim Owners, and the other parties to this agreement that simultaneous with the delivery of the stock, as aforesaid, to the escrow holder, the said Claim Owners will place in escrow a deed conveying to Ord Mercury Mines, an Arizona corporation, those certain mining claims situate in Gila County, Arizona, described as SLATE CREEK No. 1 through No. 7, the location notices of which are now on file and of record in the office of the County Recorder of Gila County, Arizona in Book 47, pages 102 to 108 inclusive; together with a certain milling water right location in the vicinity of the Ord property, to be described in the instrument of conveyance, together with the proper instruments of assignment to effect an assignment and conveyance of the said milling water right to Ord Mercury Mines on the records of the State Land Commissioner, with escrow instructions to deliver the said conveyance upon the payment by all of the Stockholders to the Claim Owners of $5,000.00, as hereinabove set forth.

6. In the event the option is exercised by the payment of the first installment of $16,250.00, then it is hereby covenanted and agreed that all six of the Stockholders will authorize the escrow agent to pay to the Claim Owners, from the $16,250.00 due the Stockholders, $1,666.67; and a like amount on the 10th day of July, 1955, and a like amount on the 10th day of January, 1956, until there shall have been paid to the Claim Owners by the six Stockholders the sum of $5,000.00 as consideration for their conveying to the Company the aforesaid seven mining claims and milling water right.

7. The escrow instructions shall direct the said Valley National Bank at Globe, Arizona, as escrow agent, to pay the balance of each installment, after the payment of the $1,666.67 due the Claim Owners, to the Stockholders on the ratio that their stock ownership bears to the 32,500 shares placed in escrow.

8. Notwithstanding any other provision hereof, the Optionee reserves the right to cease operating the property at any time, either before or after any payments have been made on the purchase price of the stock; and if such termination is effected prior to the payment of the original $16,250.00 payment due January 10, 1955, then the escrow agent shall be authorized to return all escrow instruments, all stock certificates to the Stockholders owning the same, and to return the mining claim conveyance and milling water right location to the Claim Owners.

9. It is further covenanted and agreed by and between all parties hereto that, subject to the obligations and covenants of this agreement, any and all parties may assign their rights or interests hereunder, and the Optionee is specifically authorized to assign this contract or all interest therein to such firm, person or corporation as he sees fit.

10. This agreement shall extend to and be binding upon the heirs, successors and assigns of the parties hereto.

IN WITNESS WHEREOF, the Company has caused this agreement to be executed by its duly-authorized president and secretary, and the Stockholders, Optionee, and Claim Owners have hereunto set their hands as of the day and year first hereinabove written.

ORD MERCURY MINES,
an Arizona corporation

ATTEST:

Tom [illegible]
Secretary

By [illegible]
President

COMPANY

APR 6 1955

Tom J. Russell
Tom J. Russell

Fred H. Jones
Fred H. Jones

H. Grady Harrison
H. Grady Harrison

Hugh Nichols
Hugh Nichols

Keith Owens
Keith Owens

George M. Hill
George M. Hill

STOCKHOLDERS

Vance Thornburg
Vance Thornburg

OPTIONEE

Fred H. Jones
Fred H. Jones

Tom J. Russell
Tom J. Russell

CLAIM OWNERS

STATE OF ARIZONA)
) ss.
County of Pima)

On this the _____ day of _____, 1954, before me, the undersigned Notary Public, personally appeared FRED H. JONES and TOM J. RUSSELL who acknowledged themselves to be the president and secretary, respectively, of RED MERCURY MINES, an Arizona corporation, and that they, as such officers, being authorized so to do, executed the foregoing instrument for and on behalf of the said corporation, for the purpose and consideration therein expressed.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My commission expires

_____

_____
Notary Public

STATE OF ARIZONA)
) ss.
County of Gila)

On this the _____ day of _____, 1954, before me, the undersigned Notary Public, personally appeared TOM J. RUSSELL, [redacted], H. GRADY HARRISON, HUGH NICHOLS and KEITH OWENS, known to me to be the persons whose names are subscribed to the foregoing agreement as stockholders, and acknowledged that they executed the same for the purpose and consideration therein expressed.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My commission expires

Dec 11-1956.

James W. Deming
Notary Public

STATE OF ARIZONA)
) ss.
County of Maricopa)

On this the 1st day of July, 1954, before me, the undersigned Notary Public, personally appeared GEORGE M. HILL, known to me to be the person whose name is subscribed to the foregoing agreement as a stockholder, and acknowledged that he executed the same for the purpose and consideration therein expressed.

IN WITNESS WHEREOF, I hereunto set my hand a nd official seal.

My commission expires

Aug. 7, 1954.

Lelia G. Long
Notary Public

STATE OF ARIZONA)
) ss.
County of Maricopa)

On this the _____ day of _____, 1954, before me, the undersigned Notary Public, personally appeared VANCE THORNBURG, known to me to be the person whose name is subscribed to the foregoing agreement as the optionee, and acknowledged that he executed the same for the purpose and consideration therein expressed.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My commission expires

_____.

_____
Notary Public

STATE OF ARIZONA)
) ss.
County of Gila)

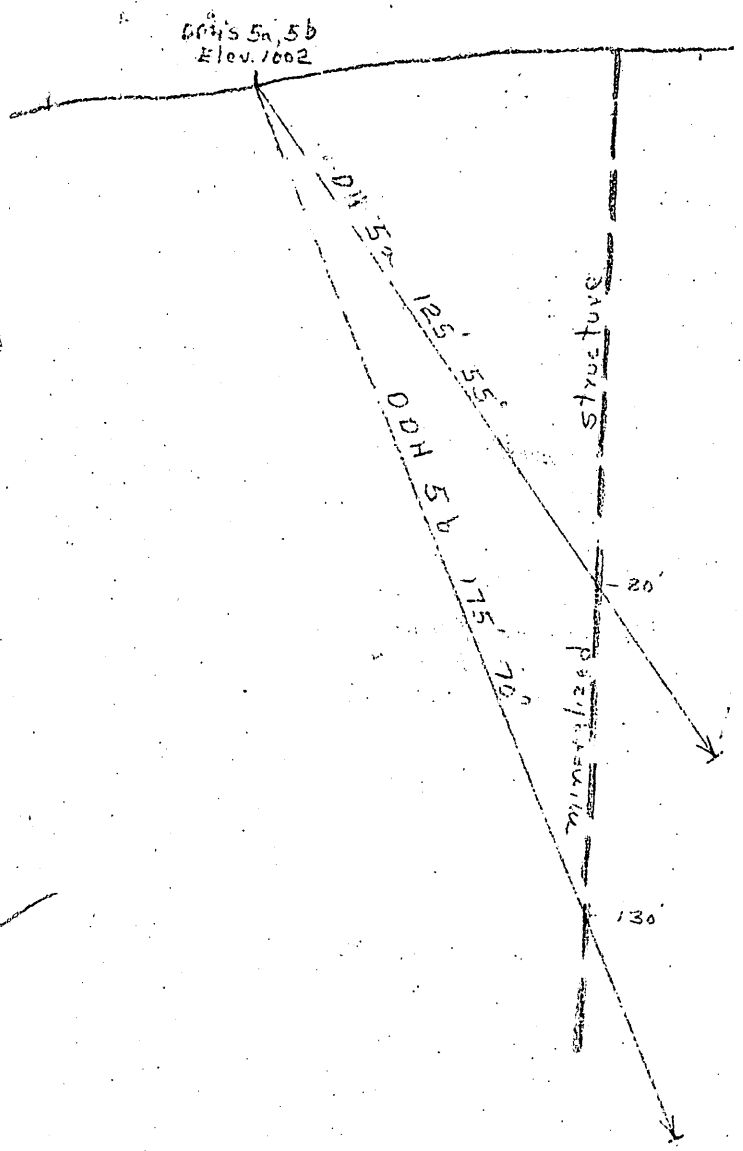
On this the_____day of_____, 1954, before me, the undersigned Notary Public, personally appeared FRED H. JONES and TOM J. RUSSELL, known to me to be the persons whose names are subscribed to the foregoing agreement as the claim owners, and acknowledged that they executed the same for the purpose and consideration therein expressed.

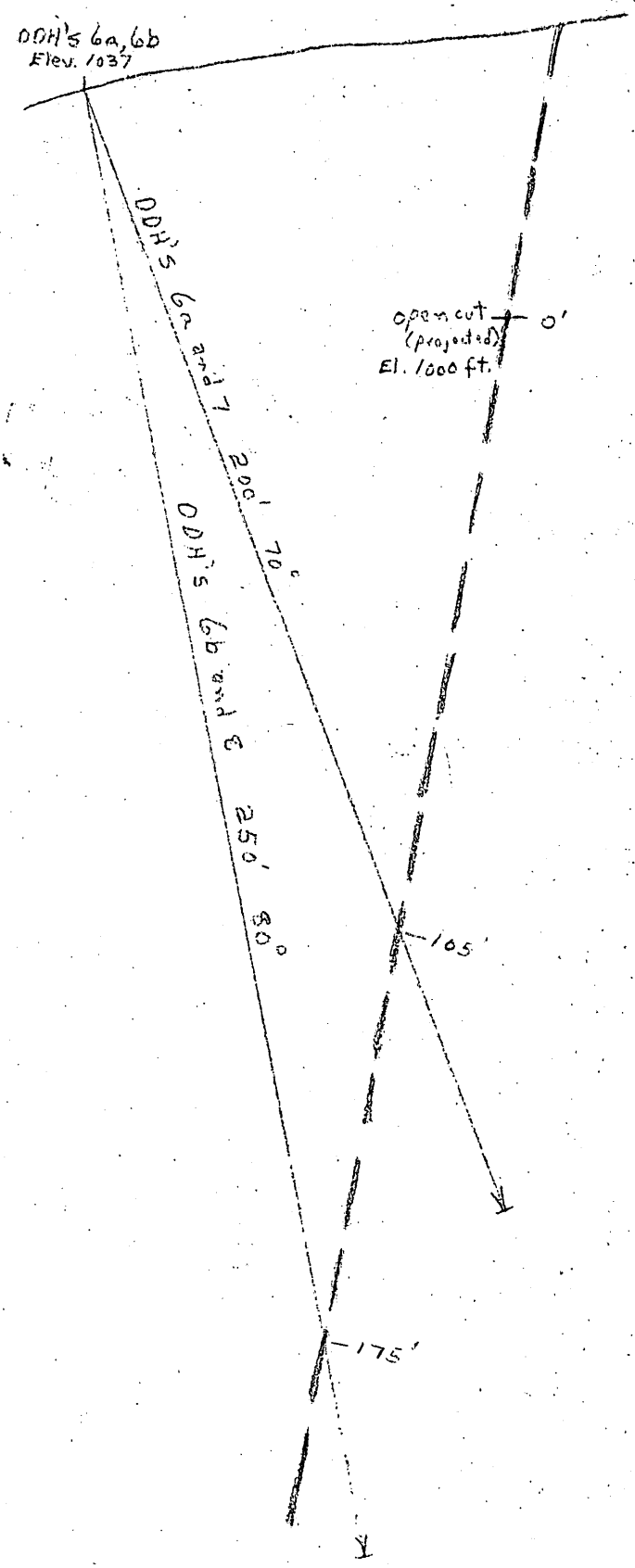
IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My commission expires

_____.

_____
Notary Public





Ord Mercury Mine

Malone Lead

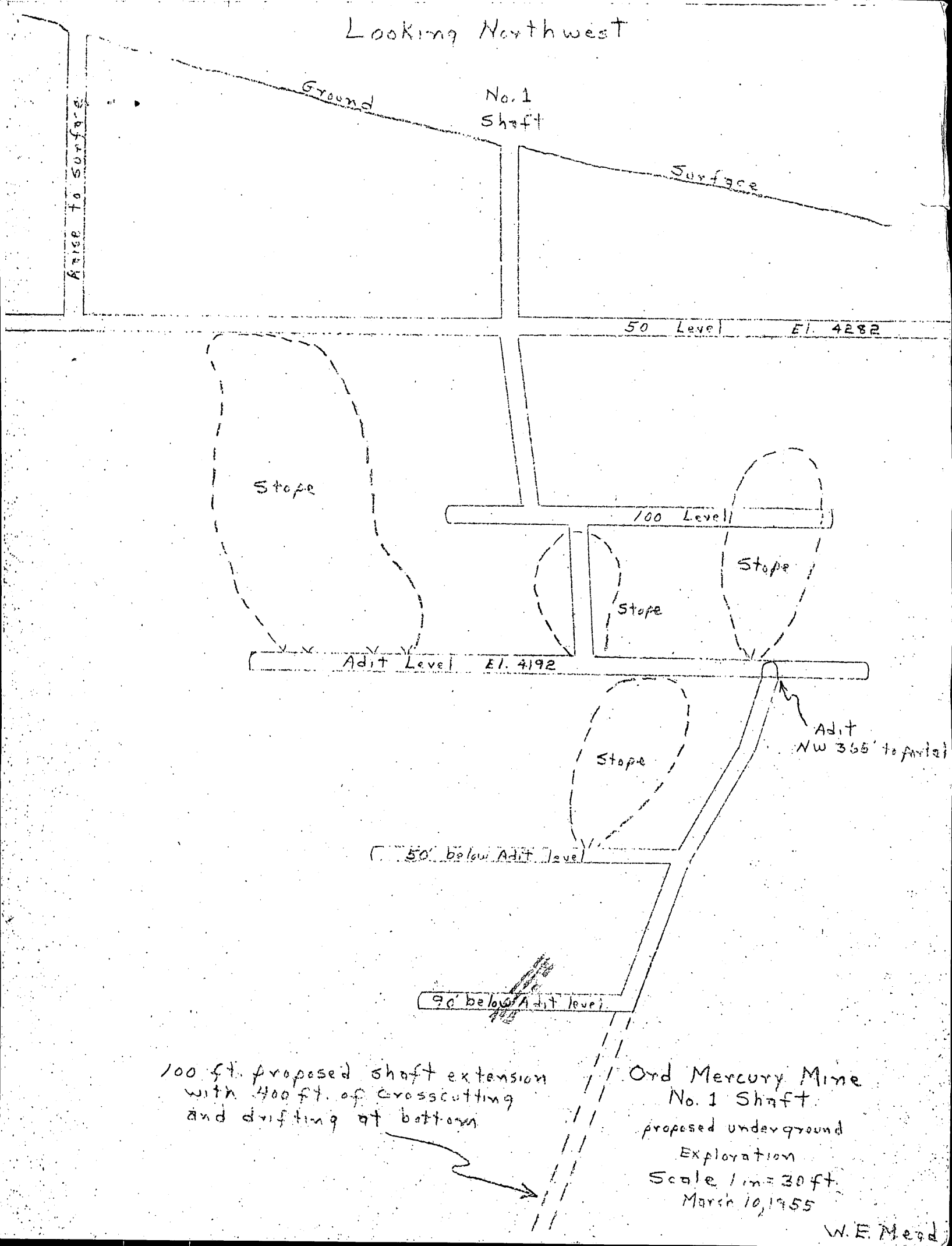
Diamond-drill Hole
Cross-Sections

Scale 1 in = 30 ft.

Uranium Exploration, Inc.

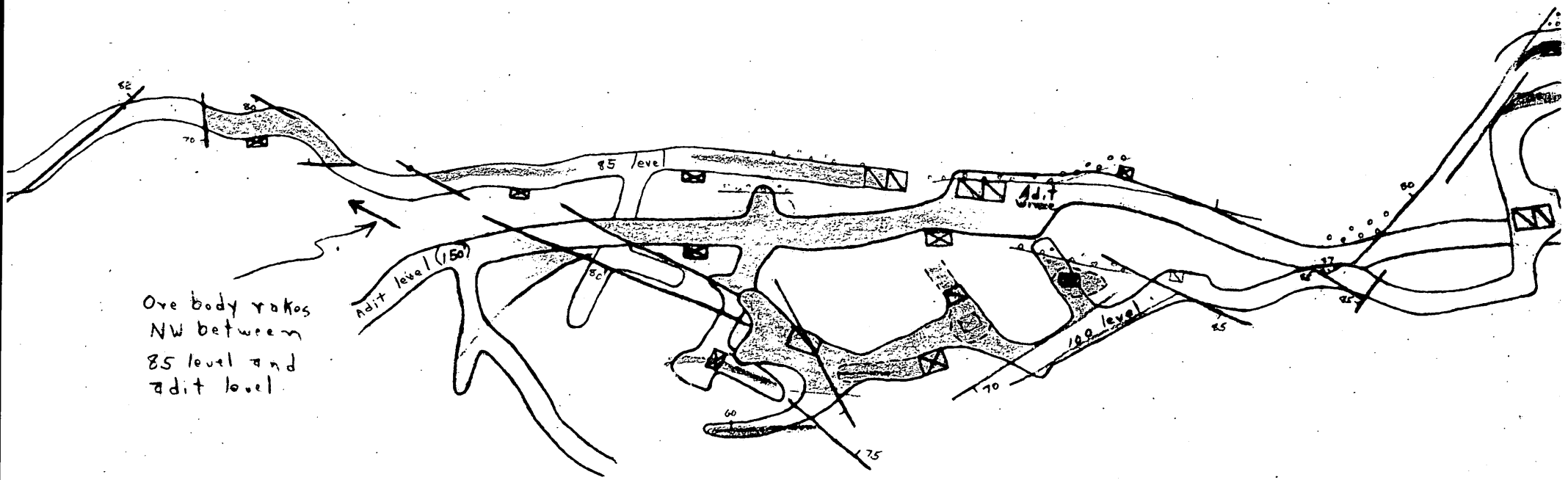
March 25, 1955

W.E. Mead


Looking Northwest
Ground
No. 1
Shaft
Surface
Raise to surface
50 Level
El. 4282
Stope
100 Level
Stope
Stope
Adit Level
El. 4192
Adit
NW 365' to portal
Stope
50' below Adit level
90' below Adit level
100 ft. proposed shaft extension
with 400 ft. of crosscutting
and drifting at bottom
Ord Mercury Mine
No. 1 Shaft
proposed underground
Exploration
Scale 1 in = 30 ft.
March 10, 1955
W. E. Mead

Heading of adit winze, N 65° W

Scale 1" = 30'



Ord Mercury Mine

Composite showing

1) 100 level
2) Adit level
3) 85 level

Stoped-out high grade shoots

Low-grade mineralization

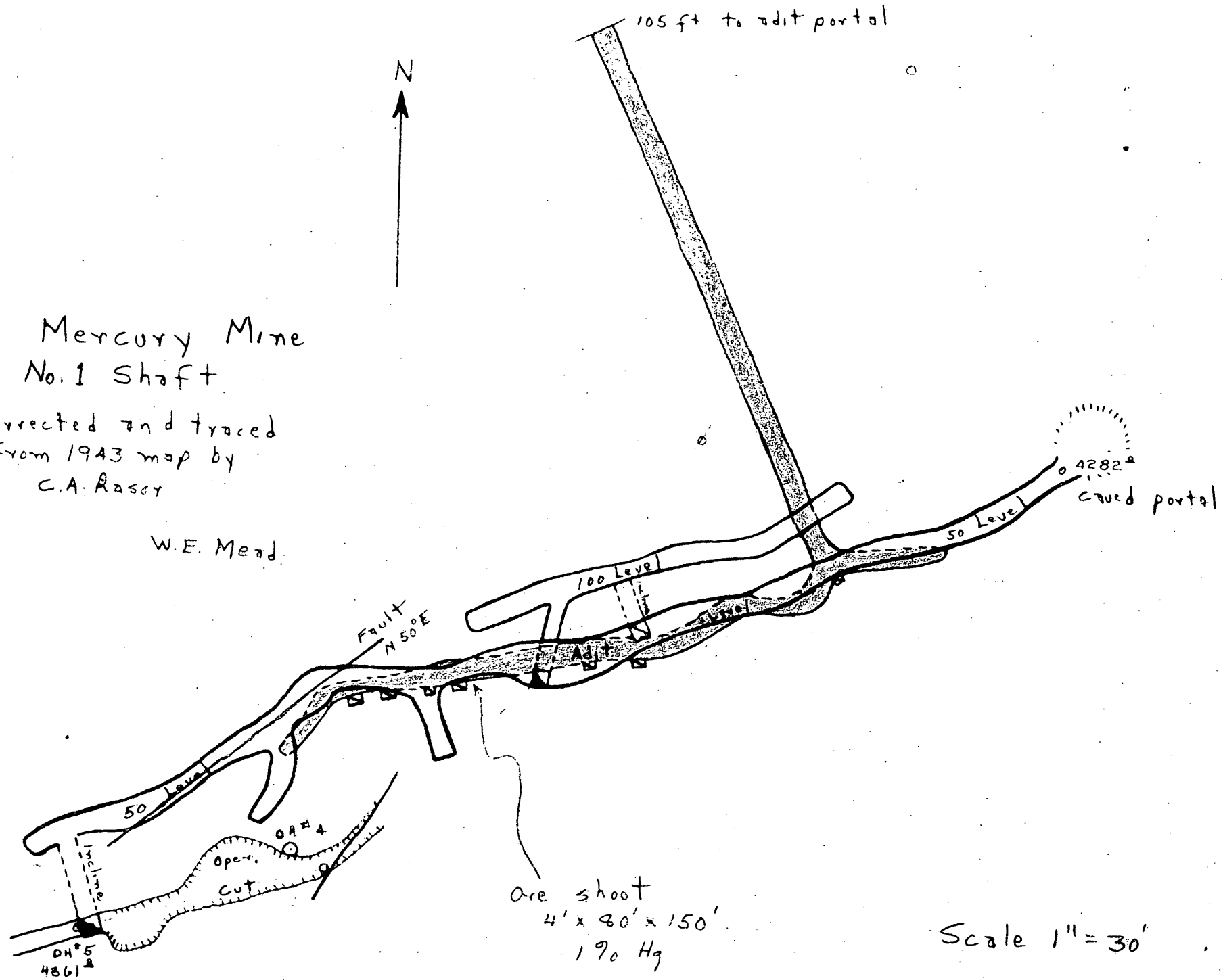
Jasper grit

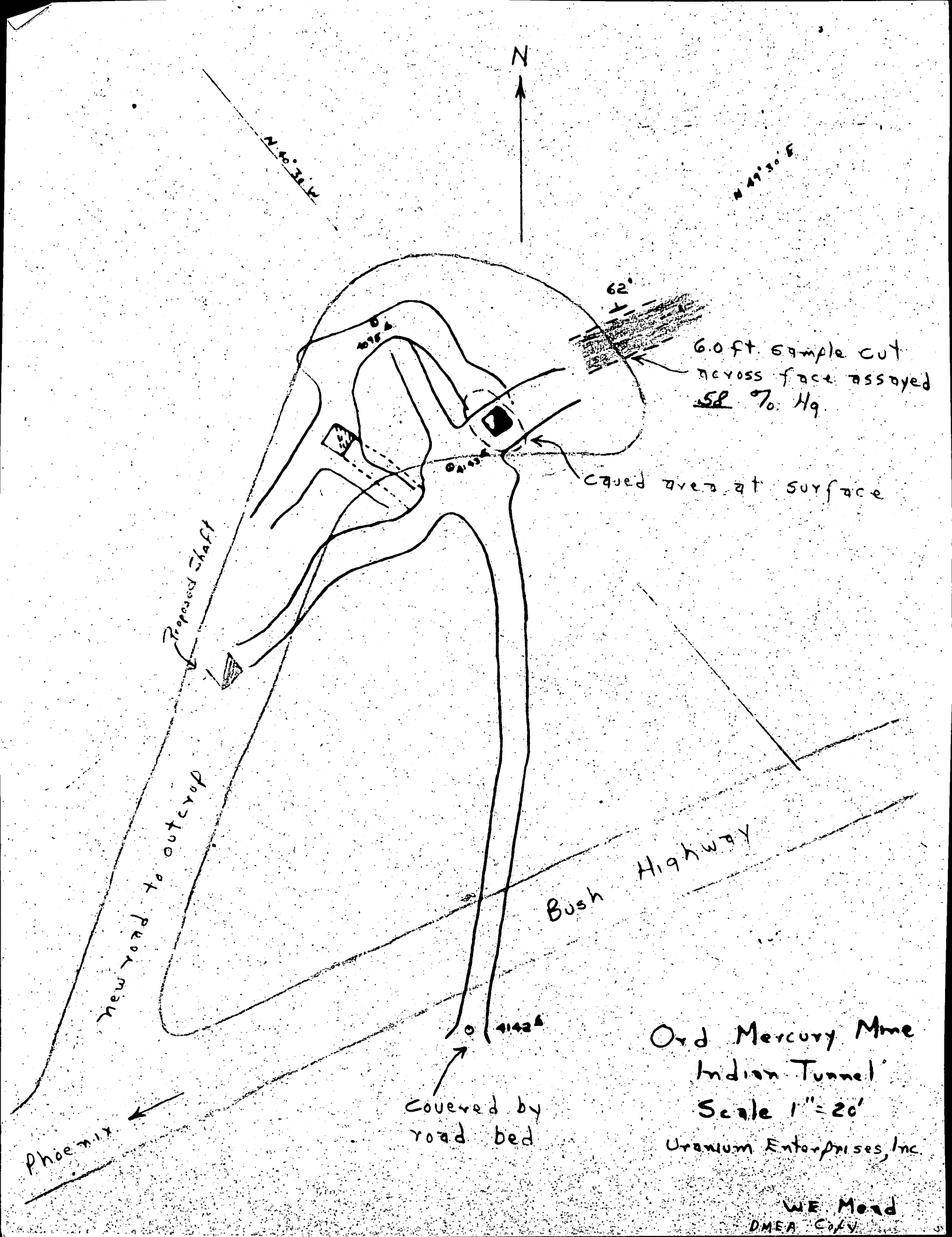
W.E. Mead

Ord Mercury Mine
No. 1 Shaft

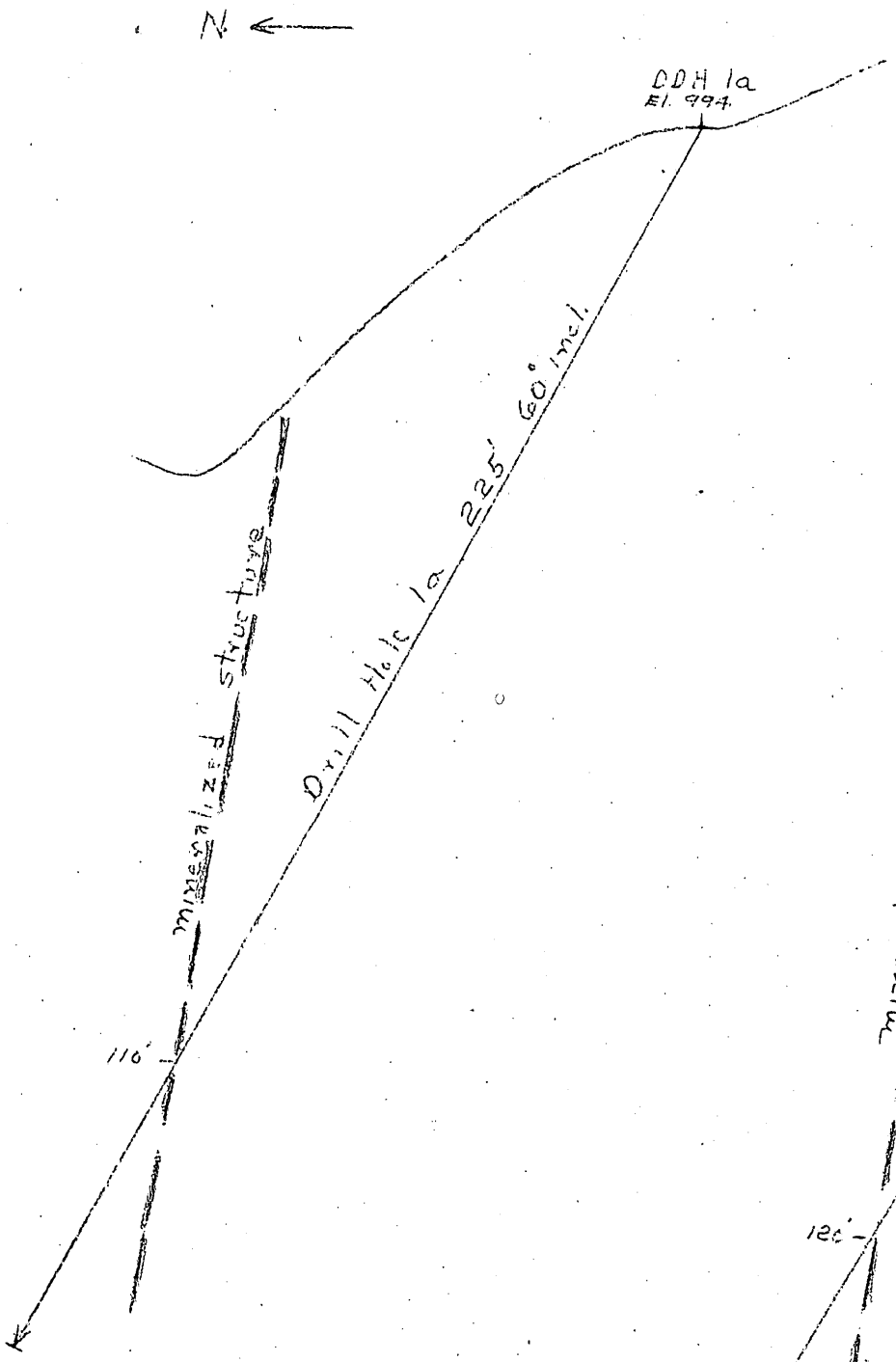
Corrected and traced
from 1943 map by
C.A. Raser

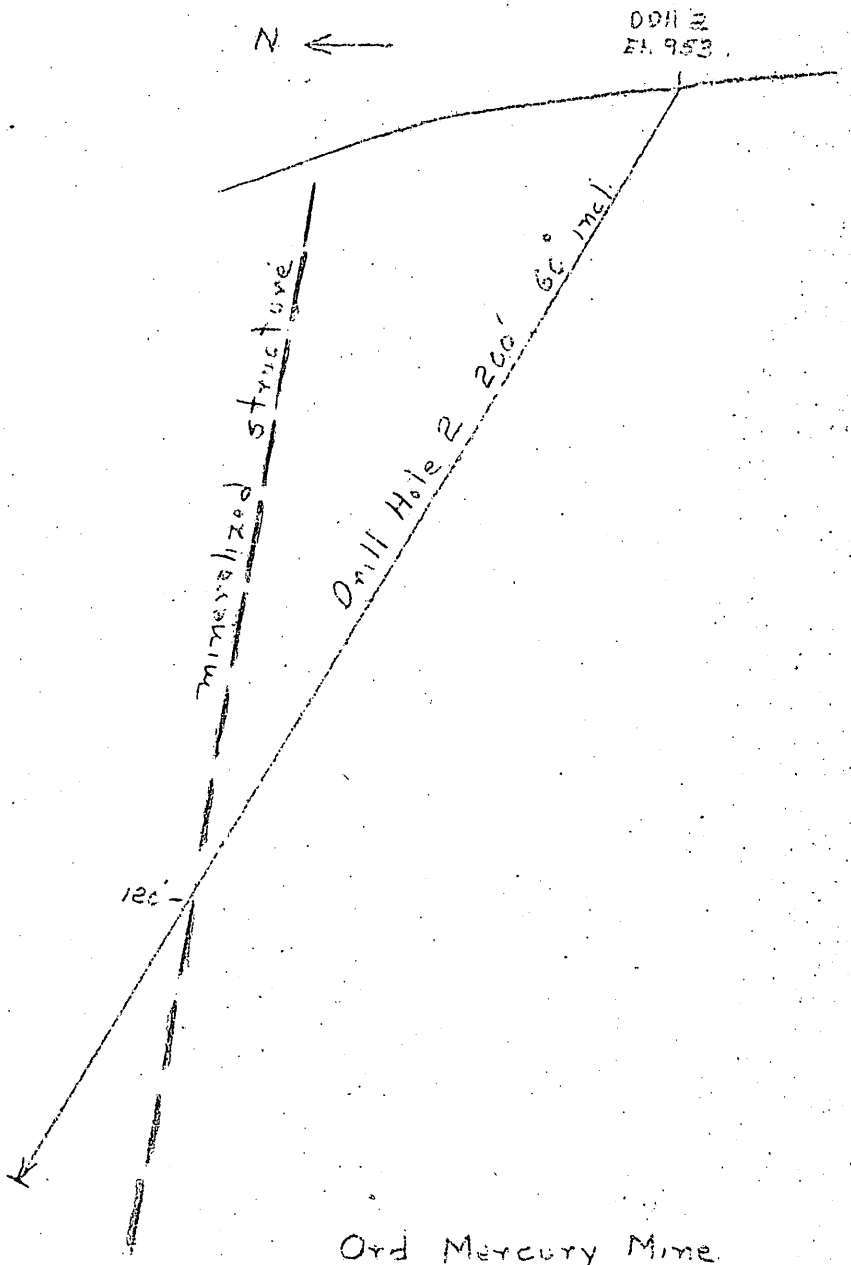
W.E. Mead




N
N 40° 30' W
N 49° 30' E
62°
6.0 ft. sample cut across face assayed .58 % Hg.
Caved area at surface
Proposed Shaft
New road to outcrop
Bush Highway
Covered by road bed
Phoenix
Ord Mercury Mine
Indian Tunnel
Scale 1" = 20'
Uranium Enterprises, Inc.
W.E. Mead
DMEA Copy

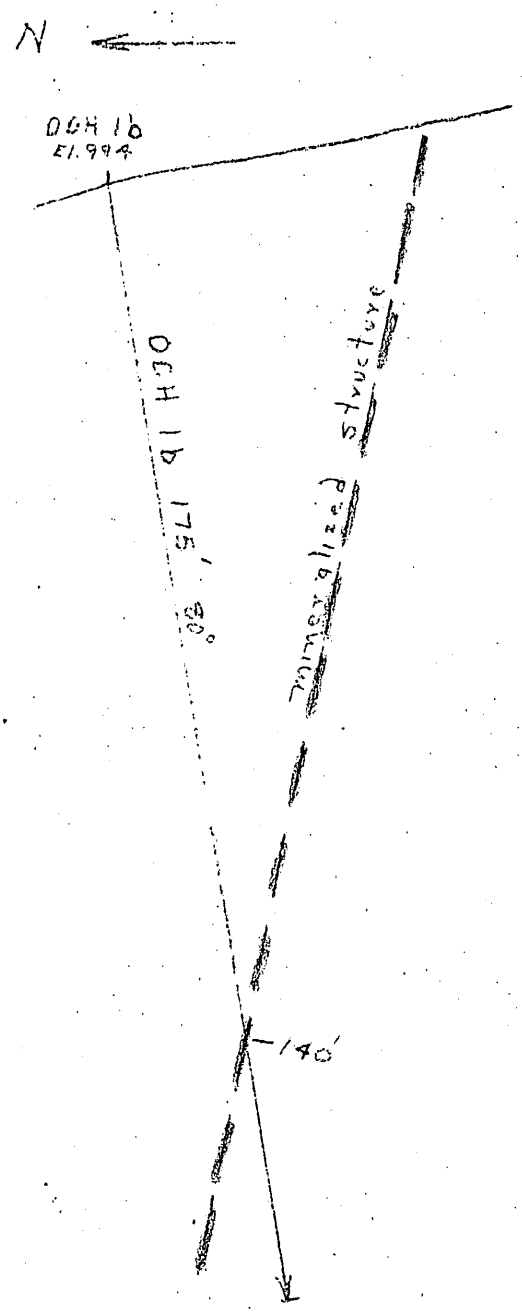
APR 11 1935

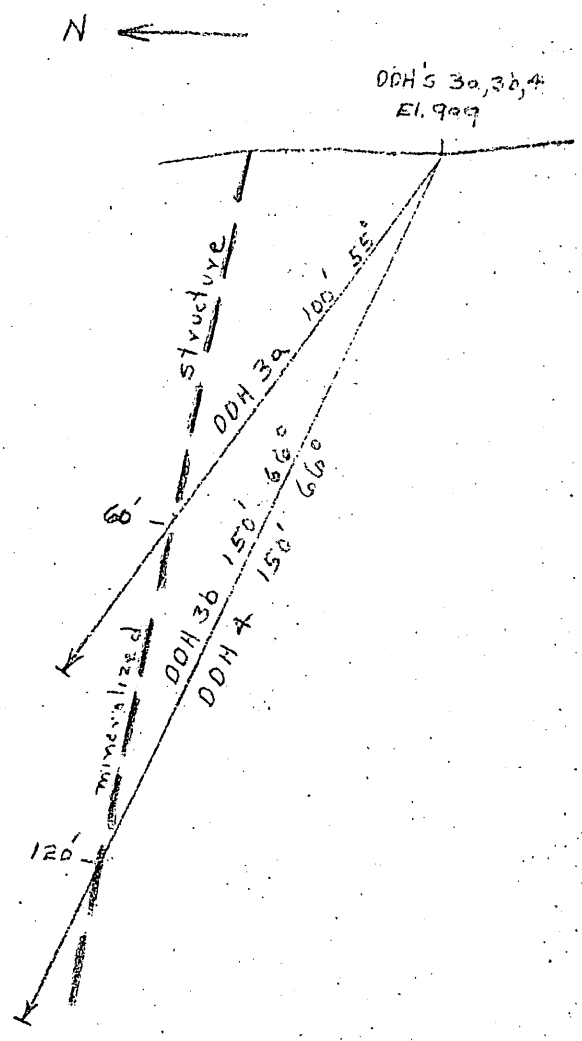




Ord Mercury Mine
Malone Lead
Diamond-drill Hole
Cross-Sections
Scale 1 in = 30 ft.
Uranium Enterprises
Inc.
March 25, 1955

W. E. Mead





Old Mercury Mine
Malone Lead

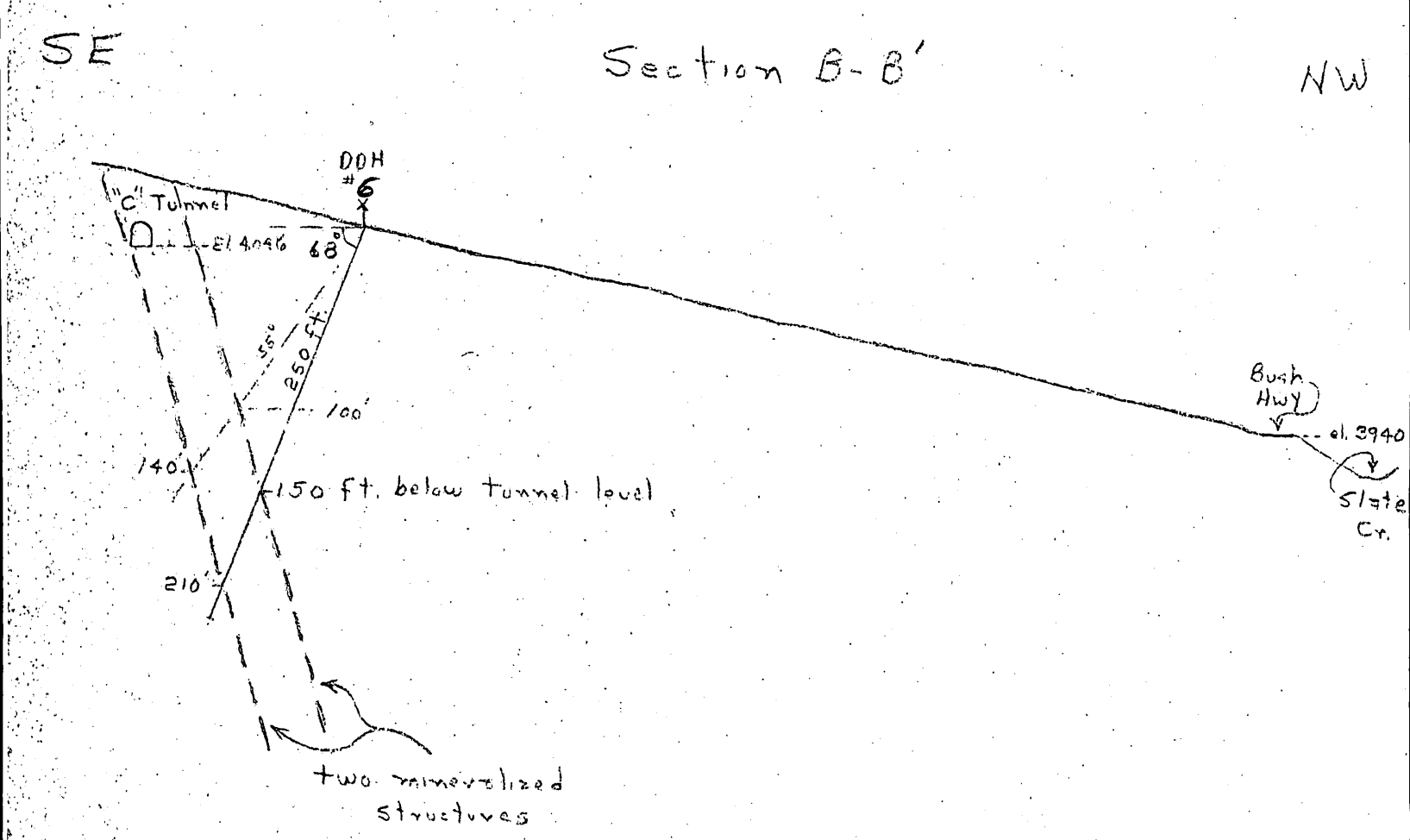
Diamond-drill Hole
cross-sections

Scale 1 in = 30 ft.

Uranium Enterprises, Inc.

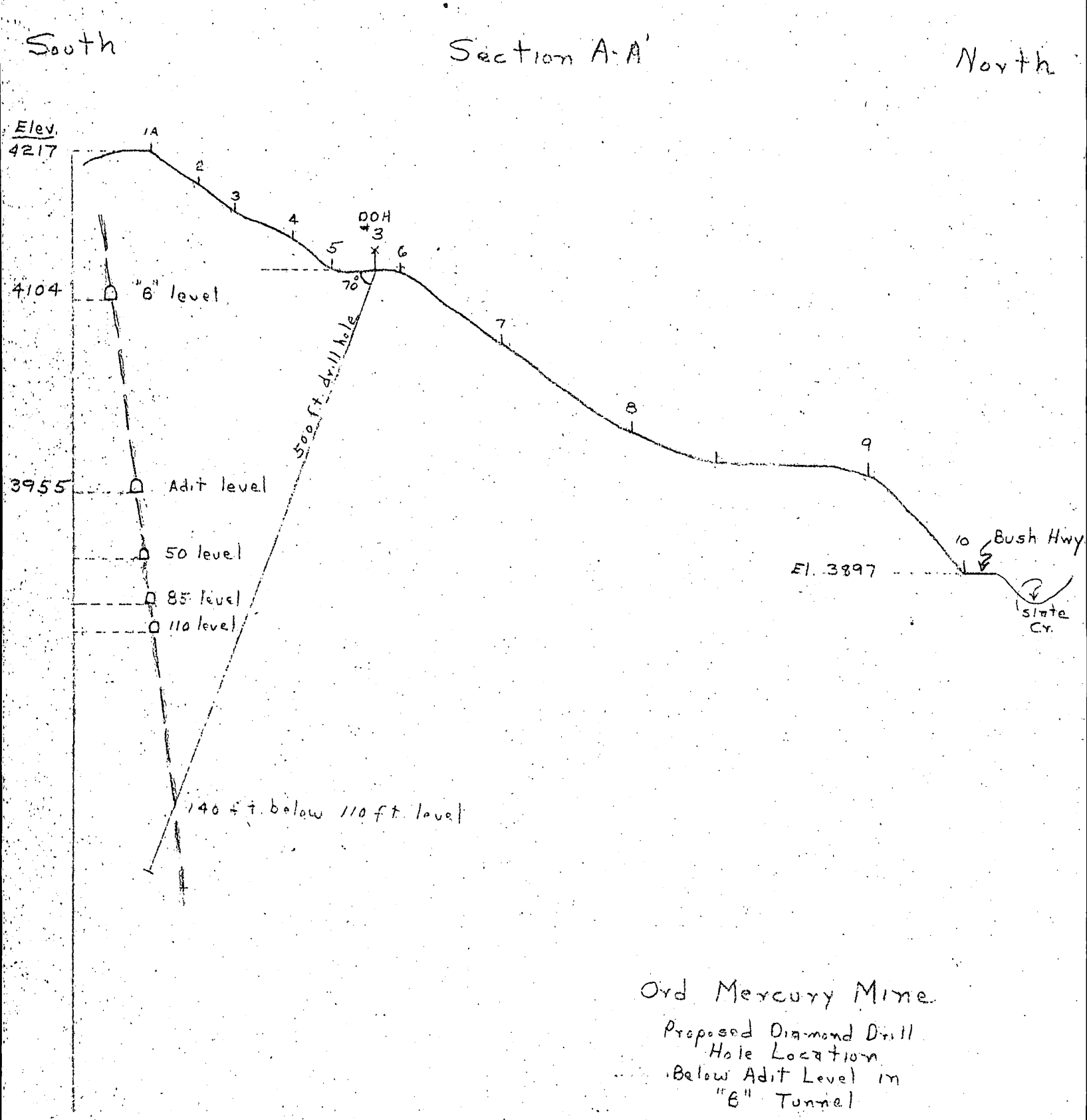
March 25, 1955

W. E. Mead



Ord Mercury Mine
Proposed Diamond Drill Hole Location
"C" Tunnel
Scale 1 in = 100 ft.
March 1, 1955

W.E Mead



Ord Mercury Mine

Proposed Diamond Drill Hole Location Below Adit Level in "B" Tunnel

Scale: 1 in = 100 ft.

March 1, 1955

Note: This cross-section applicable to the other drill holes planned for the "B" tunnel workings. DDH 4 may require slightly flatter inclination

W.E. Mead

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

224 New Customhouse
Denver 2, Colorado

April 5, 1955

Mr. L. F. Mason, Office Manager
Ord Mercury Mines, Inc.
Uranium Enterprises, Inc.
160 West Main Street
Grand Junction, Colorado

Re: Royalty Payments - DMEA Docket 2445 (Mercury), Contract Idm-E460, Ord Mercury Mines, Inc., Gila County, Arizona

Dear Mr. Mason:

We hereby acknowledge receipt of your letter of March 15, 1955, transmitting settlement sheets and royalty payment in the amount of $1,749.60 pertaining to ore shipments under the subject DMEA contract.

We have duplicated a sufficient number of copies of the settlement sheets for our use and are returning herewith the originals to you.

We have determined that correct royalty due on these shipments should be $1,747.92 instead of the amount of $1,749.60 which you have paid. This error came from your not deducting the charges for "Freight" and "Warehouse" shown on the settlement sheets. We have determined that these charges are allowable deductions which may be considered in the calculation of DMEA royalties due. The sum of these deductions on the settlement sheets submitted amounts to $33.51 and royalty at 5.0 percent on this amount is equal to $1.68 - the amount you are overpaid.

You may deduct this amount ($1.68) from your royalty payments on future shipments of mercury under DMEA Contract Idm-E460.

Yours very truly,

W. M. TRAVER

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

Enclosures
RDB:ld
Copy to: Sec. Opr. Comm. (2)
Royalty File 2460
T. A. Christensen
W. R. Storms
R. D. Berkenkotter

Chron

1/5/55 gla

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

224 New Customhouse
Denver 2, Colorado

December 30, 1954

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 2445 (Mercury), Contract Idm-E460, Ord Mercury Mines, Gila County, Arizona

In compliance with your request by teletype of December 20, 1954, we are enclosing one copy of Form MF-104A, Engineer's and Operator's Progress Report, relative to work performed during the period October 1 through November 10, 1954 under the subject contract.

In addition we are enclosing a copy of our letter to the operator dated December 30, 1954 and attachments.

W H King
W. H. King

Encls.

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

224 New Customhouse
Denver 2, Colorado

December 30, 1954

Mr. Tom J. Russell, Secretary-Treasurer
Ord Mercury Mines
Payson, Arizona

Re: Docket DMEA 2445 (Mercury)
Contract Idm-2460

Dear Mr. Russell:

Reference is made to your letter of December 9, 1954, wherein you request a four month's recess of operations in lieu of closing the referenced contract account in order to allow you time to submit a request for additional Government assistance in exploration work under the Defense Minerals Exploration Administration.

In reference to your request we will withhold closing of the account for a period of 90 days, or until March 31, 1955, to give you time to submit your request.

As requested in your letter of December 9, 1954, we are enclosing a set of Form MF-103 Application for Exploration Assistance, a booklet of questions and answers on the Defense Minerals Exploration Program, and a copy of DMEA Order-1 Amended. A completed application consists of the original and four copies of Form MF-103, complete in all detail outlining the work proposed, the costs thereof, and maps showing the property involved in relation to the proposed work.

In the event any questions arise relative to preparation of the application form please consult Mr. W. H. Storms or this office in the matter.

Very truly yours,

W H King

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

Encls.
JWT:jp
cc Subject
Chron
Harshman) with copy
Storms) operator's
Faick) ltr 12/9/54
Chairman, Op.Comm.) & Storms memo 12/14/54

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Date Rec'd
DEC 16 1954
BUREAU OF MINES
TUCSON, ARIZONA
Denver, Colorado

SOUTHWEST EXPERIMENT STATION
BOX 4097
UNIVERSITY STATION

RECEIVED
JAN - 1 1955

December 14, 1954

Memorandum

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

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

Subject : DMEA Contract Idm-E460, Docket DMEA-2445, Ord Mercury Mines, Gila County, Ariz.

Enclosed is a letter from the Ord Mercury Mines regarding a four months recess on DMEA Exploration Project Contract No. Idm-E460. We are not certain whether this is supposed to be our copy and the original was sent to you or not, as Russell often sends us an original instead of a copy (evidently he runs out of carbon paper).

Until we know more about Ord's proposed additional exploration work we cannot make any recommendations although a 4-months recess would seem to be in order. Hardwick talked to Russell the last time he was at the Ord and he understood that the new proposed area for exploration was outside the area specified in Contract Idm-E460. In that case a new contract seemed to be needed instead of an amendment to the old one.

Walter R. Storms

Walter R. Storms

ORD MERCURY MINES

Payson, Arizona

RECEIVED
JAN 1 1955

December 9th, 1954

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

Docket DMEA 2445 (Mercury
Contract Idm-E460

Dear Sir:-

With reference to the above contract, we suspended work on the 10th of November and feel that we should do considerable more exploration in this area. We also have three other major mineralizations on the property that are very promising and wish to make application for Government assistance to explore same.

We also have an adjoining property that has fine possibilities. We would like to include this in a large exploration program.

Therefore we request that you defer final settlement of the above contract and grant a recess of operations for four minths, pending preparation and processing of an application for this additional exploration.

We are in a position to go ahead and do this work as soon as it is authorized, so there would be no delay on our part. Please send us the required application blanks.

Sincerely,

ORD MERCURY MINES

Tom J. Russell
Secr'y-Treas.

U. S. BUREAU OF MINES
MINING DIVISION
DEC 13 1954
TUCSON, ARIZONA

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

224 New Customhouse
Denver 2, Colorado

December 29, 1954

Mr. J. E. O'Connor
Uranium Enterprises, Inc.
330 East Camelback Road
Phoenix, Arizona

Re: Royalty Payments - DMEA Docket 2445
(Mercury) Contract Idm-E460
Ord Mercury Mines, Inc.
Gila County, Arizona

Dear Mr. O'Connor:

We return herewith the evidence of sale of mercury produced under DMEA Contract Idm-E460 which was forwarded to this office by your letter of December 21, 1954.

We thank you very much for the use of this information.

Yours very truly,

W. H. KING

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

Enclosure

RDB:ld

Copy to: Sec. Opr. Comm. (2)
W. R. Storms
T. A. Christensen
Royalty File E460
Chron

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

Ching
Johnson
Kiilsgaard
Selfridge
Williams

TELETYPE

MChing/gla

DEC 20 1954

DMEA - Department of the Interior

14X4401(01) Revolving Fund,
Defense Production Act, Interior
(Allocated Working Fund to the
Office of the Sec.)

W. H. KING, EXECUTIVE OFFICER
DMEA FIELD TEAM, REGION IV
224 NEW CUSTOMHOUSE BUILDING
DENVER 2, COLORADO

REURTT DECEMBER 16 ORD MERCURY MINES DOCKET 2445 FORMAL RECESS AND EXTENSION COMPLETION PERIOD NOT WARRANTED BUT CONTRACT MAY BE CONSIDERED OPEN REASONABLE PERIOD NOT EXCEEDING 90 DAYS PENDING RECEIPT OPERATOR'S NEW PROPOSITION. PLEASE FORWARD LATEST 104A AND PROGRESS REPORTS.

George C. Selfridge

GEORGE C. SELFRIDGE, GCS
CHAIRMAN, OPERATING COMMITTEE

MChing/gla
12-20-54
cc to: Admr.'sReading File
Operating Committee
Docket
Messrs. H. M. Meyer, Rm. 2623
T. H. Kiilsgaard, Rm. 5224
Code 700
Mr. Ching
Confirmation to Region IV

SENT
DEC 20 1954
Clerical Service Section

R.C.S.

Mr. George Selfridge
12-16-54
3:12 P.M.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 17 1954

BUR MINES DN 235 12-16-54 1-09 PM

CHAIRMAN, OPERATING COMMITTEE, DMEA

REFERENCE DOCKET DMEA 2445, CONTRACT IDM-E460, ORD MERCURY MINES, GILA COUNTY, ARIZONA. OPERATOR REQUESTS AUTHORIZATION OF FOUR OXXX MONTHS RECESS OF OPEAXXXX OPERATIONS TO ENABLE THEM TO FORMULATE PLANS AND COMPLETE APPLIAXXXX APPLICATION FOR A REQUEST OF ADDITIONAL WORK AND FUNDS. CONTRACT EXPIRED NOVEMBER 10 WITHOUT WORK PREVIOULXXXX PREVIOUSLY APPROVED BEING COMPLETED IN ENTIRETY. PLEASE TELETYPE ADVICE IF AMENDMENT AUTHORIZING RECESS AND COMPLETION PERIOD BE EXECUTED OR THE MATTER BE HELD IN DEFERMENT PENDING RECEIPT OF DEFINITE PLANS FROM THE OPERATOR RELATIVE TO THE ADDITIONAL WORK.

W H KING

Nevada, Calif.

DEC 16 3 59 PM '54
BUREAU OF MINES
MAIL ROOM
WASHINGTON D. C.

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

224 New Customhouse
Denver 2, Colorado

December 3, 1954

Mr. Tom J. Russell
Secretary-Treasurer
Ord Mercury Mines
Payson, Arizona

Re: Docket DMEA 2445 (Mercury)
Contract Idm-E460

Dear Mr. Russell:

Reference is made to your letter of November 28, 1954, wherein you request advice as to whether or not to complete your final report relative to work performed to date under Contract Idm-E460 or whether to hold the matter open pending your preparation and submittal of a request for additional Government assistance in exploration work.

If the additional work you have in mind is truly exploration and not in the nature of development of known ore bodies, and if the work will further explore ground presently described in the contract, and if the adjacent property can also be included under Article 2 of the contract, then it appears that you should defer preparation of your final report relative to the present operation and request a recess of operations for sufficient time to resolve the matter relative to your proposed request for additional Government assistance in exploration work.

Your request for authorization of a recess of operations should state the date operations were suspended and the date you contemplate they can be resumed, allowing a minimum of 90 days for our processing of your application after it is received in this office.

Your application for additional Government assistance should be submitted to this office, furnishing the original and 7 copies complete with an outline and cost estimate of the proposed work, maps showing the work in relation to property lines, the period required to complete the work, and contain a complete description of the additional ground involved for inclusion under Article 2 of the contract.

Very truly yours,

W H King

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

JWT:jp
cc Subject
Chron
Chairman, Op. Comm. (2) with
Koschmann) copy
Storms) opr's
Faick) ltr
Townsend) 11/28

MAR 2 - 1934
BUREAU OF MINES
Denver, Colorado

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

224 New Customhouse
Denver 2, Colorado

November 24, 1954

Mr. Tom J. Russell
Ord-Mercury Mine
Payson, Arizona

Re: Docket No. DMEA 2445 (Mercury)
Contract Idm-E460

Dear Mr. Russell:

In conjunction with matters discussed in our letter to you of November 10, 1954, receipt is acknowledged of Form MF-104, Operator's Monthly Report and Voucher for the period of October and November, 1954, which constitutes your final accounting report on work performed under the contract.

The September Form MF-104 report, which has been held in deferment in this office pending receipt of a subsequent report or reply to our letter of November 10, has now been processed for reimbursement to you.

Processing of the report for the period of October and November, 1954, will be held in deferment pending receipt of your final engineering and geologic report in conformance with Article 5(b) of the contract, and until a Report of Review of contract expenditures by an auditor of the Contract Administration and Audit Division has been released to this office.

Very truly yours,

W H King

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

JWT:dm
cc: Chm., Oper. Comm. (2)
WRStorms
JNFaick
AHKoschmann
JWTownsend
Subject
Chron

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

224 New Customhouse
Denver 2, Colorado

November 10, 1954

Memorandum

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

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 2445 (Mercury), Contract Idm-E460
Ord Mercury Mine, Gila County, New Mexico

Enclosed for your information is copy of a letter to the Operator relative to work and reports thereon under the subject contract. In conjunction therewith, please supply this office with an analysis of the work performed under the Contract through November 10, 1954 and the units of work remaining to be completed.

Also include your recommendations relative to the completion of the remaining work and the issuance of a Certification of Discovery or Development as a result of the work completed.

John F. Shaw
For W. H. King

JWT:mn

cc: Subject
A.H.Koschmann
Chairman, Oper. Comm. (2)
J.W.Townsend
Chron.

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

RECEIVED

224 New Customhouse
Denver 2, Colorado

November 10, 1954

Mr. Tom J. Russell
Ord Mercury Mine
Payson, Arizona

Re: Docket DMEA 2445 (Mercury)
Contract Idm-E460

Dear Mr. Russell:

Receipt is acknowledged of Form MF-104, Operator's Monthly Report and Voucher, for the month of September, 1954. In conjunction therewith, we are informed that you do not intend to request an extension of the period for the completion of the project work which expires November 10, 1954. In that respect, we are prohibited from making final payment under a DMEA Contract until the Operator has rendered his final Engineering and Geologic Report in conformance with Article 7(b) of the Contract, and until a report of review of Contract expenditures by the Contract Administration and Audit Division has been released to us.

As we are in doubt as to the extent of work performed subsequent to that reported on the September report, it will be necessary for us to defer processing of the September report until we have received your report for the following month or until all winding up actions as required by the Contract have been completed.

We will appreciate advice at your earliest convenience as to your intentions relative to completing the balance of work authorized under the Contract.

Yours very truly,

John F. Shaw
For W. H. King
Executive Officer, DMEA
Field Team, Region IV

JWT:mn

cc: Subject
A.H.Koschmann
J.N.Faick
W.R.Storms
J.W.Townsend
Chairman, Oper. Comm. (2)
Chron.

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

October 26, 1954

Memorandum

To: Miss Curtin, Statistics and Control Division, DMEA

From: Hazel Berry, Operating Committee, DMEA
Cy 257

Subject: Amendment to Contract

Attached is the following docket copy of an amendment to a contract which has been reviewed and approved by the commodity division, Contract Administration and Audit Division, and the Legal Division.

Ord Mercury Mines, DMEA-2445, Idm-E460, Amendment No. 5.
The official docket is also attached.

Attachment 1

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

224 New Customhouse
Denver 2, Colorado

October 11, 1954

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 2445 (Mercury), Contract Idm-E460, Ord Mercury Mines, Gila County, Arizona

Enclosed are the original and two copies of Amendment No. 5 to Contract Idm-E460 which has been executed to modify the description of a portion of the work to be performed under the Contract. Also enclosed are three sets of data relevant to the amendment.

Copies of the amendment have been given to the operator, the Finance Office, Region IV, and a copy has been retained for our files.

W. H. King

Enclosures

RECEIVED
OCT 20 1954
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

7.

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Box 4126 University Station
Tucson, Arizona

September 17, 1954

Memorandum

To: W. H. Koschmann WHK

From: J. H. Faick

Subject: Ord Mercury Mine, DMEA 3445, Idm-2460
Gila County, Arizona

We are in receipt of a request dated September 15, 1954 from Mr. T. J. Russel, Secretary-Treasurer, to amend the contract for exploration of the Ord Mercury mine. Amendment No. 4, dated May 10, 1954 provided for the driving of a 40-foot raise, to cost $30 per foot, from the 300-level drift for the purpose of exploring the bottom of one of the oreshoots. The operators now want to abandon the proposed raise and to use the available money for drifting westward on the 240- sublevel.

This proposed change in the contract is apparently requested for the following reasons:

1. The 300-level is in very heavy ground and is yielding a troublesome flow of water. The operators will probably lose this level, if they have not already done so. To drive the raise now would be difficult and very expensive.

2. The operators are undoubtedly convinced that commercial ore does not extend to the 300-level, and they probably intend to recover the deepest ore by underhand stoping below the 240-level.

3. Favorable exploration results are being obtained by driving westward on the 240-level and this drifting undoubtedly offers the best opportunity to appreciably increase the ore reserves.

Although I personally believe the proposed raise would be desirable exploration, I do not believe we should require the operator to drive it. The exploration project has been reasonably successful and a 40-foot raise for the 300-level would not materially modify the results already obtained.

I recommend that the proposed amendment to the contract be granted.

JHF:ms
cc. Koschmann (8)
Storms

J. H. Faick
Geologist

September 17, 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-8460, Docket DMEA-2445, Ord Mercury Mines, Gila County, Ariz.

Enclosed in sextuplicate are the following:

(1) Request from the Ord Mercury Mines for an amendment, whereby the funds provided under amendment No. 4 for a 40-feet raise from the 300-foot level be transferred to drifting on the 240-feet level;

(2) Bureau of Mines engineer's report.

Also enclosed are 3 extra copies of our engineer's report.

DMEA Exploration Project Contract No. Idm-8460 expired on September 10, 1954. Ord Mercury Mines request is dated September 15, after the expiration date of the contract. However, if possible, I would recommend that this request be granted and the funds which were to be used for a 40-foot raise from the 300-foot level under Amendment No. 4 be transferred and used for drifting on the 300-foot level. In order to complete this work, the contract termination or expiration time should be extended for at least 2 months.

As explained by Hardwick, the 300-foot level now is full of water and as the ground there was extremely heavy, most of the level probably has caved, or would cave if the water were removed. Therefore, it seems doubtful if the raise could be driven except at a very high cost. The operator can sink a short winze from the 240-foot level, if he desires, in place of this raise.

J. N. Faick concurs with this recommendation and will submit a separate report.

Walter R. Storms

Walter R. Storms

CC W. H. King (8)
J. N. Faick
DMEA-2445
DF

WRStorms:frj

September 17, 1954

Memorandum

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

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

Subject : Request for Amendment, DMEA Contract Idm-5460, Docket DMEA-2445, Ord Mercury Mine, Gila County, Ariz.

Tom J. Russell, secretary-treasurer of Ord Mercury Mines, an Arizona corporation, has asked that the provision for 40 feet of raise in Amendment No. 4 to contract Idm-5460 be deleted and in lieu thereof, he has asked that an additional 35 feet of drifting be provided on the 240-foot level.

The original contract provided for 300 feet of drifting on the 300-foot level. However, when 265 feet of drifting had been completed it became evident that the ore body did not extend down to that level and the operator asked to substitute a raise in lieu of the remaining 35 feet of drifting. This request was approved as Amendment No. 4.

The mine was not operated for a short period of time and the 300-foot level was allowed to flood. This level has now cleared and the operator believes that it is not advisable to do the necessary repair work to enter and drive the raise. Instead he proposes to apply the remaining funds to extend the 240-foot level further to the west.

When the face of the 240 level west drift was examined by the writer on September 2, 1954, there was a small amount of cinnabar showing. Several small but significant stringers have been discovered by this drift and it is very probable that the showing in the face may develop into a significant lens of ore. Therefore, it is recommended that the operator's request be granted, and that the provision for the raise from the 300-foot level be changed to provide for an additional 35 feet of drift on the 240-foot level.

CC W. H. King (Orig. & 8)
J. N. Faick
DMEA-2445
DF

WHHardwick:frj

If the amendment is approved, it will be necessary to extend the termination date to allow time to complete the work, say 60 days.

William R. Hardwick

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

ORD MERCURY MINES
Payson, Arizona

September 15, 1954

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

Re: Docket DMEA 2445
Contract Idm-E460
Mercury

Dear Sir:-

In view of existing conditions; heavy ground and water in the bottom level of the Ord mine, we respectfully request that an amendment to our contract be processed allowing the balance of our contract, namely the driving of a raise from the bottom level, approximately 60 feet to the sub-level, be transferred to the sub-level, in continuing the drift west along the mineralization. This work should show more results than the said raise.

Respectfully,

ORD MERCURY MINES,

Tom J. Russell

Secr'y-Treas.

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

224 New Customhouse
Denver 2, Colorado

May 10, 1954

INTERIOR DEPT.
JUL 1 - 1954
SOLICITOR

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 2445 (Mercury), Contract Idm-E460, Ord Mercury Mines, Gila County, Arizona

Enclosed are the original and two copies of Amendment No. 4 to Contract Idm-E460 which has been executed to extend the period for completion of the project work from 18 months to 22 months, modify the description and costs of the work to be performed under Stages II and III, and amend article 9 of the contract form by substituting the provisions of Annex I attached to and made a part of the amendment. 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.

W H King
W. H. King

Enclosures

April 19, 1954

Memorandum

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

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

Subject : Request for Amendment, DMEA Contract Idm-E460, Docket DMEA-2445, Ord Mercury Mine, Gila County, Ariz.

Enclosed in septuplicate are the following:

(1) Request from operator to amend Contract Idm-E460, so the remaining funds under Stage II may be used to drive a raise upward from the new 300-foot level to the new sublevel (called the 248-foot sublevel by operator), and so Stage III funds may be used for drifting westward on this sublevel.

(2) Bureau of Mines engineer's report with map, recommending this work.

Stage II of the contract consisted "of minor repairs to company-owned houses, sinking the adit winze 100 feet below the 200-foot level, drifting westward approximately 260 feet from the bottom of the winze on the new 300-foot level, and driving 40 feet of crosscuts." The operator has sunk the winze the proposed distance and has driven 225 feet of drift and 40 feet of crosscut on the 300-foot level. No ore was found on this level so the operator drove a 48-foot drift at its own expense from the winze at the 40-foot point on known ore (this sublevel is called the 248-foot sublevel by the operator). The operator now requests an amendment to the contract so the remaining funds from Stage II and some from Stage III may be used to drive a 60-foot raise from the 300-foot level up to the sublevel in order to find the bottom of the sublevel oreshoot.

Under DMEA regulations, it would seem that possibly such a raise would be exploratory in nature only until it hit the ore, then probably it could be classed as development work. Hardwick has recommended that 48 feet of raise be allowed under the requested amendment. The remainder would be at company expense. Hardwick also recommends a cost for raising of $30 per foot, which seems fair enough, considering the heavy character of the ground on the 300-foot level.

CC W. H. King (5)
J. N. Faick
DMEA-2445
DF

WRSbofma:frj

The operator also requests that the funds remaining under Stage III, after completing the raise, be used for drifting westward on the sublevel. Hardwick recommends that this work be allowed. John H. Faick of the Geological Survey submitted a report on April 1, recommending these same things, although he recommends drifting first on the sublevel, with the raise to be driven at a later date.

As the possibility of discovering further quantities of mercury ore seems good, I recommend that the operator's request be allowed.

Walter R. Storms

Walter R. Storms

April 19, 1954

Memorandum

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

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

Subject : Interim Report, Bachut DMEA-2445, Contract Idm-5460, Ord Mercury Mine, Gila County, Ariz.

The Ord Mercury Mine was visited on March 22, to 25, 1954 by John N. Faick, geologist, U. S. Geological Survey, and the undersigned engineer for the purpose of examining the results of Stage II. This stage under Contract Idm-5460 consisted of minor repairs to company buildings, sinking 100 feet of winze, and driving 300 feet of drift and crosscut on the 300-foot level to explore for the downward extension of a known ore body. Work was authorized by a letter to Tom J. Russell on April 13, 1953. Progress has been slow, due principally to the difficulty of obtaining experienced miners and other labor, and to difficult, heavy ground that was encountered. On March 22, 1954 the winze had been completed and a total of 265 feet of drift and crosscut had been completed on the 300-foot level, and 45 feet of drift had been completed at the operator's own expense on a sublevel 40 feet below the starting point of the winze.

The drifting on the 300-level winds and twists but the operator has attempted to follow the favorable beds of schist. The ground exposed on the 300 level has been examined as the work progressed by Tom J. Russell, the operator, and the undersigned, and the gangue minerals appear to be identical with those in the ore zone above. However, no cinnabar was found on the 300-foot level. After the drift passed through the fault "A" which apparently had cut off the cinnabar mineralization in the winze, no cinnabar was found as had been expected. A black mineral, which was identified as metacinnabar, was observed. This mineral occurred in small quantities in quartz or schist gangue in exactly the same manner as did cinnabar in the levels above. However, three samples were cut along the drift and crosscut at the point where the crosscut left the drift and in what was judged to be the most favorable location. These samples showed no mercury.

CC W. H. King (orig. & 5)
J. N. Faick
DMEA-2445
DF

WRHardwick:frj

After finding no cinnabar and only a small amount of metacinnabar on the 300 level in locations that appeared to be favorable, the operator opened the winze at the point where cinnabar had last been observed, or just above the fault "4" shown on the attached sketch, and drove westward on the ore. This drift exposed very good cinnabar ore for about 15 feet and at that point disclosed an abrupt transition from cinnabar to metacinnabar. Metacinnabar continued on to the end of the drift. Two samples taken across the back in this metacinnabar gave 0.05 percent mercury, at 20 feet from the winze and 0.23 percent mercury at 40 feet from the winze. The back of the drift has been raised in the metacinnabar area and some high grade metacinnabar ore exposed. Approximately 1,000 pounds of picked black ore was retorted and 24 pounds of mercury was recovered.

Discouraged by the scanty mercury mineralization on the 300 level the operator has requested that the remaining drifting on the 300 level be converted to raising from the 300-foot level on the mineralized zone in an attempt to prove that the zone where metacinnabar occurs on the lower level corresponds to the zone on the 240 sublevel where high-grade metacinnabar ore was found. The operator also expects to determine the bottom economic limit of his ore.

The operator has presented no cost estimate for the proposed raise. In heavy ground of the type found in the Ord mine, a cost of $30.00 per foot could be expected. There remains 35 feet of drifting under Stage II, or funds to the amount of $1,225.00. The cost of 40 feet of raise at $30.00 per foot would be $1,200.00. Thus the proposed raise could be driven 40 feet for the funds still remaining in the unexpended portion of Stage II of the project. Any raising in ore would seem to be development and not exploration, so it is thought that 40 feet should be enough.

In addition to the raise discussed above, the operator has requested that the entire Stage III of the project, which consists of driving 200 feet of drift and crosscut, be transferred from the 300-level to the 240 sublevel and be applied to extend the drift from the present face on westward until Fault "5" has been crossed. He then proposes to crosscut to the north and attempt to find the downward extension of the ore which, he states, was found on the level above.

Further drifting on the 300 level does not seem justified at this time, and since there seems to be good indications that additional ore may be discovered by drifting westward on the 240 sublevel, it is recommended that the part of the operator's request be approved which requests the transfer of the Stage III part of the contract from the 300 level to the 240 sublevel.

John N. Faick, geologist, U. S. Geological Survey, has recommended 40 feet of raise to definitely establish the bottom of commercial ore and I concur in his recommendation. I recommend that the operator's requested amendment be approved to drive not to exceed 40 feet of raise at an estimated cost of $30.00 per foot.

William R Hardwick

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

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Box 4126, Tucson 5, Arizona

April 1, 1954

To: A. H. Koschmann, 200 New Customhouse, Denver 2, Colorado AHK

From: John H. Faick

Subject: Application for Amendment to the contract, Docket DMEA 2445, Contract Idm-2460; T. J. Russel, applicant for the Ord Mercury Mine, Gila County, Arizona

Mr. T. J. Russel has recently made application to the Defense Minerals Exploration Administration for permission to revise his exploration project by amending the present contract. A map illustrating the proposed revisions in the exploration project will be submitted by W. H. Hardwick, U.S.Bur. Mines.

The amendment is requested because drifting on the 300 level, from the bottom of the winze, has failed to find commercial ore, but encountered only narrow, uneconomic veins or stringers containing metacinnabar in a gangue of quartz. The operator reported that a few tens of pounds of ore containing cinnabar was found at the bottom of the winze but the veinlets containing metacinnabar are about 100 to 120 feet west of the winze. The veinlets containing metacinnabar occur near the northwall of a westerly trending quartzose zone which is about 25 feet wide and which is believed to be the downward extension the ore zone mined in the old workings.At about 60 feet above the 300 level; the applicant, at his own expense, drove the 240 sublevel westward about 48 feet from the winze. This sublevel was driven in ore from which about 9 tons were hand sorted and retorted, and the sorted ore yielded 50 pounds of mercury per ton. Many tons of lowgrade material containing 0.28 percent mercury was not treated, but was stored on the dump. The width of the high grade ore zone on the 240 level is about 2 feet, and adjacent to it is a zone of low grade material, the width of which has not been determined. The ore zone between the 240 and 200 levels has not been mined, but above the 200 level much of the ore has been exploited.

The ore mineral previously mined on the 200 and higher levels was all cinnabar insofar as known. On the 240 level an appreciable amount of metacinnabar was found, and on this level the ore minerals are estimated to be about 40 percent cinnabar and about 60 percent metacinnabar. In the 300 level drift there is no cinnabar and only minor amounts of metacinnabar were found in the drift. The change in mineralogy which takes place between the 200 and 300 levels is not accompanied by any apparent change in lithology of the host rocks or by any unusual structural condition, or by any apparent change in the character of the gangue minerals.

The change from cinnabar ore on the 200 level, to cinnabar-metacinnabar ore on the 240 level and the apparent complete disappearance of cinnabar and the notable reduction of the amount of metacinnabar between the 240 and 300 levels is regarded as being geologically significant. This mineralogical change is accompanied by the appearance of arsenic and antimony in the ore as is shown by analysis of sublimates obtained from retorting 9 tons of the high-grade ore obtained from the 240 level. Neither arsenic or antimony has been reported previously.

The almost complete disappearance of mercurous minerals from the vein zone below the 240 level is interpreted by this writer to indicate that geological conditions were unfavorable for the deposition of mercury at this depth (nearly 400 feet below the outcrop) and therefore the bottom of the commercial-grade oreshoot is probably somewhere between the 240 and 300 level. Further search for the main oreshoot by drifting on the 300 level is unwarranted at this time; however, it is possible that other oreshoots in other parts of the mine may extend to the depth of the 300 level.

All the work authorized by Stage III of the contract, including drifting on the 300 level has not been completed, and the operator proposes to use the remaining work for drifting and crosscutting on the 240 level. The operator proposes to extend the 240 level (which was driven without Government aid) to the west end of the oreshoot. Near the west end of the oreshoot is a westerly dipping crossfault which is reported to have displaced the main ore zone northward about 20 feet. Most of the known ore is on the east or foot wall side of this fault; however, some ore is reported to have been mined from the hanging wall or west side of the crossfault. The operator proposes to extend the 240-level drift across this crossfault and, on the west side of it, to explore for an extension of the ore zone.

In order to establish the lower limit of the ore body, it is proposed to raise from the 300 level. The length of the raise that will be required is unknown because we cannot predict the exact bottom of the commercial ore; however, about 40 feet of raise should be provided. A raise less than 40 feet long may not reach the bottom of the ore, and a vertical raise about 53 feet long would reach the 240 drift and would therefore probably be development work rather than exploration. It is not practical, at this time, to select the most favorable location for a raise from 300 level, or to determine whether it should be vertical or inclined. Selection of the location and type at raise should be made on the basis of results obtained from extending the 240 drift.

As additional drifting and crosscutting is not justified on the 300 level at this time, it is recommended that the contract be amended to permit drifting and crosscutting on the 240 level drift. It is also recommended that provision be made for raising from the 300 level to the bottom of the ore as soon as a favorable location can be selected.

Sincerely,

John H. Faick

JHFaick:mm

8 c.c. to A. H. Koschmann

ORD MERCURY MINES

PAYSON, ARIZONA

March 26th, 1954

Mr. Walter R. Storms, Chief
Mining Methods Branch
Mining Division, Region IV
Box 4097 University Sta tion
Tucson, Arizona

Re: Docket DMEA-2445
Contract Idm-E460

Dear Sir:-

In view of the conditions existing in the bottom level of the Ord Mercury Mine, we respectfully request that an a mendment to our Contract No. Idm-E460 be processed allowing the balance of Stage II and Stage III of the Contract to be applied to driving a raise from the lower level up to the known mineralization (about 60 Ft), and to drifting west along the strike of the ore in the 248 foot or sub-level that we drove last month.

This will determine where the lower section of the ore body is faulted or if there is a radical change in the mineralization at this depth, we can tell at what level this takes place.

Respectfully,

ORD MERCURY MINES

Tom J. Russell

Secr'y-Treas.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 2 - 1953

224 New Customhouse
Denver 2, Colorado

November 30, 1953

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 2445 (Mercury), Contract Idm-E460, Ord Mercury Mines, Gila County, Arizona

Enclosed are the original and two copies of Amendment No. 3 to Contract Idm-E460 which has been executed to authorize an extension of the completion period of work under the contract from one year to 18 months. Also enclosed are three sets of data relevant to this 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

Enclosures

RECEIVED
FEB 8 - 1954
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

MINING DIVISION
REGION IV

November 2, 1953

Memorandum

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

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

Subject : Contract Idm-E460, Docket DMEA-2445, Ord Mercury Mine, Gila County, Ariz.

Enclosed are original and 5 copies of a request from Ord Mercury Mines to amend Contract Idm-E460 so the completion time may be extended to May 10, 1954 from November 10, 1953.

As the operator still has considerable work to do under the contract, which cannot be completed by November 10, it has asked for this extension. I recommend that the request be approved.

Walter R. Storms

Walter R. Storms

CC W. H. King (5)
DMEA-2445
DF

WRStorms:frj

ORD MERCURY MINES

PAYSON, ARIZONA

October 29th, 1953

Executive Officer, DMEA
Field Team, Region IV
224 New Customhouse
Denver 2, Colorado

Re: Contract Idr-2460
Docket No. DMEA 2445

Gentlemen:-

Due to unforseen difficulties we have been unable to complete our DMEA Contract No. Idr-2460 by November 10th, 1953, expiration date of same by Amendment No. 2.

We respectfully request that this Contract be amended to extend the completion date to 18 months instead of 12 months as stated, or May 10th, 1954.

We have had considerable trouble keeping a crew for more than one shift on this job. Also have had considerable trouble with bad ground in the last 80 feet of the winze and 60 feet of the new drift from the bottom of the winze. We seem to be out of this at present and anticipate much faster work from now on.

Thanking you kindly for prompt consideration of this matter, we are

Sincerely yours,

ORD MERCURY MINES

Tom J. Russell

Secr'y-Treas.

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

September 28, 1953

Memorandum

To: Hazel Berry, Operating Committee

From: Grace L. Ault, Rare & Misc. Metals Division

Subject: Amendment No. 2, dated September 21, 1953
Contract Idm-E460
Docket No. 2445 (Mercury)
Ord Mercury Mines

Mr. Ching has reviewed the above amendment and approves it.

Grace L. Ault

Grace L. Ault

RECEIVED
OCT 6 1953
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

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

224 New Customhouse
Denver 2, Colorado

September 22, 1953

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA-2445 (Mercury), Contract Idm-E460, Ord Mercury Mines, Gila County, Arizona

Enclosed are the original and two copies of Amendment No. 2 to the subject contract which we have executed to extend the completion time of the contract from nine months to one year. Copies of this amendment have been given to the operator, the Fiscal Officer, Region IV, and a copy has been retained for our files.

Also enclosed are three sets of data relevant to the amendment.

W. H. King
W. H. King

Enclosures

cee 9-25

RECEIVED
OCT 6 1953
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

U. S. DEPT. OF THE INTERIOR
Defense Materials Administration
RECEIVED
SEP 2 0 1953

MINING DIVISION
REGION IV

August 24, 1953

Memorandum

Air Mail

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

From : Chief, Mining MethodsBr., Mining Div., Region IV

Subject : Extension of Time, Contract Idm-E460, Docket DMEA-2445, Ord Mercury Mines, Gila County, Ariz.

Enclosed are original and 5 copies of a request for an amendment to contract Idm-E460 to extend the life of the contract for 3 months from its present expiration date of August 10. I recommend that this amendment be approved so operator can complete the winze and drifting under Stage II, and possibly do some drifting under Stage II, if approved by the DMEA representative.

Walter R. Storms

Walter R. Storms

CC W. H. King (5)
DMEA-2445
DF

WRStorms:frj

ORD MERCURY MINES

PAYSON, ARIZONA

August 21st, 1953

Executive Officer, DMEA
Field Team, Region IV
224 New Customhouse
Denver 2, Colorado

Re: Exploration Contract
No. Idm-E460
Docket No. DMEA 2445

Gentlemen:-

We were advised by Mr. Storms on August 20th that our Contract had expired on August 10th. We were under the impression that we had nine months to complete this contract as Amendment No. I, March 17th, gave us 120 days to start work. However I note the contract date, November 10th, 1952 is correct.

Therefore we request that the Contract Idm-E460, Docket No. DMEA 2445 be extended for a period of three months to allow time for us to complete the winze and do the necessary drifting. We are almost down with the winze now and fully organized with a good crew on the job.

Sincerely,

ORD MERCURY MINES

Tom J. Russell

Secr'y-Treas.

FILE COPY 9B
SURNAME:

Ching
Ellis

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

SEP 21 1953

DMEA

5295 4640

14X3923.970 Working Fund, Interior, DMEA
September 21, 1953

W. H. KING, EXECUTIVE OFFICER, DMEA FIELD TEAM REGION IV
224 NEW CUSTOMHOUSE BUILDING, DENVER, COLORADO

RE CONTRACT IDM-2460 DOCKET DMEA 2445 ORD MERCURY MINES

CONTRACT COMPLETION DATE AUGUST 10, 1953, APPARENTLY REQUIRES

EXTENSION. PLEASE ADVISE.

FRANK E. JOHNSON (B.D.N.)
F. E. JOHNSON, ACTING ADMINISTRATOR

MChing/db
9-21-53
cc to: Adm. Reading File
Docket
Messrs: H.M.Meyer, Rm. 3623
A.R.Kinkel, Rm. B-242A, GSA
Ellis
Ching
Confirmation to Region IV

9-21-53

Mr. F. E. Johnson
Sept. 21, 1953
(unattended service
after 4:15 p.m.)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 22 1953

DN 235 BUR MINES 9-21-53 4-10 PM

F E JOHNSON, ACTING ADMINISTRATOR

REURTT CONTRACT IDM-E460, DOCKET DMEA 2445, ORD MERCURY MINES AMENDMENT NO.2 WHICH EXTENDS LIFE OF CONTRACT TO NOVEMBER 10,1953 WAS SENT TO THE OPERATOR FOR SIGNATURE ON SEPTEMBER 3,1953.

W H KING

Denver, Colo.

SEP 22 8 29 AM '53

BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

3/23/53 gla

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

224 New Customhouse
Denver 2, Colorado

March 17, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 20 1953

Memorandum

To: C.O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Amendment No. 1 to Contract Idm-E460, Docket DMEA 2445, Ord Mercury Mines

Enclosed are the original and two copies of Amendment No. 1 to Contract Idm-E460. Copies of this amendment have been given to the operator, the Fiscal Officer, Region IV, and a copy has been retained for our files.

Also enclosed are three copies of a letter from the operator requesting this amendment.

W. H. King
W. H. King

Enclosures

cc 3-20

Amend #1

#1

ORD MERCURY MINES

Payson Arizona

February 12th, 1953

ExecutiveOfficer, DMEA
Field Team, Region IV
224 New Customhouse
Denver 2, Colorado

Re: Exploration Contract
No. IDm-E460
Docket No. DMEA 2445

Gentlemen:-

Due to difficulty in obtaining a suitable pump to fit in with our equipment on the job, we have delayed actually hiring miners under this Contract until February 11th. While I have been devoting my time to this since the 1st of January, we wish to request that our actual starting date be extended to February 11th. 1953. We have acquainted Mr. Storms at the Tucson Station, of this delay.

Also on Exhibit A, item 4, attached to the Contra ct, I note, Chevrolet 1½ ton pickup truck. This item should read 1947 ½ ton Chevrolet pickup truck, with the same vaulation as before.

We would also like our mailing address changed from Tonto Basin, Arizona to Payson, Arizona. This will let us receive our mail one day sooner.

Sincerely yours,

ORD MERCURY MINES

Tom J. Russell
Secretary

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

700

December 22, 1952

Memorandum

To: Hazel Berry, Operating Committee

From: Grace L. Ault, Rare and Misc. Metals Division

Subject: Docket No. DMEA-2445 (Mercury) Contract Idm-E460
Ord Mercury Mines
Gila County, Arizona

Mr. Ellis has reviewed the above contract, dated November 10, 1952, which was finalized by Region IV, and has raised no questions in connection with it.

Grace L. Ault
Grace L. Ault

cc 1/5/53

Docket Copy

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 18 1952

224 New Customhouse
Denver 2, Colorado

December 15, 1952

Registered

#60189

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Contract Idm-E460, Docket DMEA 2445, Ord Mercury Mines

Enclosed are the original and two copies of Contract Idm-E460. Copies of this contract have been given to the operator, the Fiscal Officer, Region IV, and a copy has been retained for our files.

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

Enclosures

coe
12/18/52

RECEIVED
DEC 24 1952
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

SURNAME COPY
REAdams (meb)

Defense Minerals Exploration Administration
Robert E. Adams
2017

14X3923.970, Working Fund, Interior, DMEA
December 12, 1952
2:30 p.m.

BW.

W.H.King, Executive Officer, Region IV, 224 New Customhouse Bldg., Denver 2, Colorado

Assignment of Contract Number

REPORTED 12-11-52 ORD MERCURY MINES, DMEA 2445, CONTRACT NUMBER I-DM-E460 ASSIGNED THIS CONTRACT.

n.s. in R.v.R.

C. O. Mittendorf (JW)

ADMINISTRATOR

READams/meb
cc to: Adm.Reading File
Mails & Files Br.
Audits Division
Miss Curtin

SENT
DEC 12 1952
Clerical Service Section

C. O. Mittendorf
12-11-52
6:25

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 12 1952

DN 235 BUREAU MINES 12-11-52 4-25 PM

SPCIAL SPECIAL SPECIAL

C O MITTENDORF

PLEASE ASSIGN A NUMBER TO CONTRACT COVERING DOCKET NUMBER DMEA 2445, ORD MERCURY MINES, AN ARIZONA CORPORATION, TONTO BASIN, ARIZONA.

COMMODITY MERCURY. DATE OF CONTRACT NOVEMBER 10,1952. PROPERTY LOCATED IN GILA COUNTY, ARIZONA. AMOUNT OF GOVERNMENT PARTICIPATION $21,000.00, TOTAL AMOUNT OF CONTRACT $28,000.00.

W H KING

Denver, Colo.

IDME ~~24~~ 460

Y5%

140

FILE COPY
SURNAME:

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

AEKane
EWE

NOV 3 1952

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

Re: Docket No. DMEA-2445
Ord Mercury Mine
(Mercury)

Dear Mr. King:

Please refer to our letter of August 12 in the above matter. I now enclose a copy of the letter from Mr. Leo Nielson, Secretary, Reconstruction Finance Corporation, to Mr. C. O. Mittendorf, dated October 27, 1952.

From this letter it is obvious that no subordination agreement from the Reconstruction Finance Corporation will be required.

It might be advisable to attach copies of this letter to all copies of the contract.

Sincerely yours,

(signed) FRANK E. JOHNSON
GVB

Chairman, Operating Committee

Enclosure

Approved:

J. H. Hedges GVB
Member, Bureau of Mines

A. R. Kinkel Jr. GVB
Member, Geological Survey

11/3/52

AEKane/em 11/3/52
Copy to: Mails and Files
Adm. R. File
Op. Comm.
J. H. Hedges
L. P. Thayer E. W. Ellis JLHofflund AEKane chron
pending

RECONSTRUCTION FINANCE CORPORATION

WASHINGTON 25, D. C.

OCT 2 7 1952

DMEA-2445

M). Mittendorf
A trator
: Minerals Exploration Administration
ment of the Interior
gton 25, D. C.

Re: Ord Mercury Mine
Tonto Basin, Arizona

Dear Mr. Mittendorf:

Reference is made to your letter dated October 13, 1952, in connection with the captioned mine.

I wish to advise that this Corporation interposes no objection to the proposed exploration project referred to in your aforesaid letter and in the event commercial production of ore results, this Corporation will not object to the payment from proceeds of production of royalties due the Government under the contract.

Very truly yours,

Leo Nielson
Secretary

RECEIVED
OCT 29 1952
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 28 1952

FILE COPY
SURNAME:

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

OK per Hoffman
Ellis

OCT 13 1952

Mr. Leo Nielson, Secretary
Reconstruction Finance Corporation
Washington 25, D. C.

My dear Mr. Nielson:

There is pending in one of our Regional Offices an application of the Ord Mercury Mine (Docket No. DMEA-2445) for an exploration project contract with the Government for a certain property covered by patent survey #4086, Township 7 N., Range 9, Brown Mining District, Gila County, Arizona.

It is my understanding that this property is encumbered as security for a loan from Reconstruction Finance Corporation in the amount of $36,598.37. Ord Mercury Mine's note dated June 30, 1950 and due on June 29, 1960, states that payment of the indebtedness "shall be made only from proceeds of operation of the mining property described in an Instrument of Security and Chattel Mortgage dated June 30, 1950."

A copy of our proposed exploration project contract form on which this exploration project is drawn is enclosed for your inspection. The estimated total cost of the exploration project is $28,000 of which sum the Government would contribute 75% or $21,000. This contribution would be repayable to the Government only if the Government considers and certifies "that a discovery or development from which production may be made has resulted from the exploration work" (Article 9), and the Government has a lien upon the property and upon any production to secure this repayment.

Ordinarily, Defense Minerals Exploration Administration would require the subordination agreement of a prior encumbancer as a prerequisite to entering into an exploration project contract, because if all the proceeds from the operation of mining property for ten years were used to pay off the encumbrancer's loan, there would then be nothing remaining to pay any royalties to Defense Minerals Exploration Administration. However, in the case of the Reconstruction Finance Corporation, it would seem unnecessary to require any such formal subordination.

In a previous similar case, the Whitedelph Mining & Development Company, in response to a similar inquiry on October 12, 1951, Mr. E. J. Singer, your Assistant Secretary, wrote in part as follows:

"In the event the proposed contract is entered into with the Company, it seems to us that it would be inadvisable to relieve the Company from placing the proceeds from operation, if and when received, in said special /trust/ account. If the account is used, this Corporation would approve requisitions in payment of the royalties as contemplated by your Exploration Project Contract, or arrangements could be made to have royalty payments made direct to the Government. We would not attempt to direct any mining operations, but we assume that the lien of this Corporation would be and remain in effect except as modified regarding payment of royalties. Accordingly, the Corporation has no objection to the proposed contract, subject to the foregoing."

In another similar case, David E. Bell (Champion Mine), Mr. Singer wrote as follows on June 17, 1952:

"I wish to advise that this Corporation interposes no objection to the proposed 'Exploration Project Contract' with the captioned individual and further that in the event commercial production of ore results, this Corporation will not assert any claim against the proceeds of production."

As time is of the essence, I would appreciate being advised at your earliest convenience if your response would be similar for this case.

Sincerely yours,

C. O. Mittendorf (fw)

Administrator

Enclosure-1

AEKane/mef
10/8/52
cc to: Adm. R. File
Mr. Mittendorf
Mails and Files
Mr. Ellis
Mr. Hofflund
Mr. Kane
Chron.
Bending

J.H.
10-13-52

9/30/52 fm

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 29 1952

224 New Customhouse
Denver 2, Colorado

September 26, 1952

ans. 10/3/52
ABK/mwf

Memorandum

To: C.O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 2445, Ord Mercury Mine

According to the application submitted by the Ord Mercury Mine, the company owed the Reconstruction Finance Corporation $30,000. The application was approved and a contract has been prepared in this office. The contract is being held pending an agreement with the Reconstruction Finance Corporation regarding the indebtedness.

In a letter dated August 12, 1952, the Chairman of the Operating Committee requested that we obtain all the details of the Reconstruction Finance Corporation loan so that the matter of the proposed exploration contract could be discussed with the Washington authorities and the necessary subordination agreements prepared.

We are enclosing three copies of a letter from Tom J. Russell, Secretary, Ord Mercury Mine, and three copies of a promissory note of the Ord Mercury Mine.

The exploration project contract will be held in this office pending receipt of mortgagee's subordination agreement.

W. H. King
W. H. King

Enclosures

RECEIVED
SEP 30 1952
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

COPY

Ord Mercury Mine
Tonto Basin, Arizona
September 21st, 1952

Mr. W.H. King
Executive Officer, Field Team Region IV
Defense Minerals Exploration Administration
224 New Customhouse
Denver 2, Colorado

Re: Docket DMEA 2445

Dear Sir:

Your letter of September 9th received.

Am enclosing herewith copy of Instrument of Security and Chattel Mortgage and Promissory Note made to Reconstruction Finance Corporation and signed by H. Grady Harrison as President and Tom J. Russell as Secretary, Ord Mercury mine, dated June 30th, 1950. This represents the status of the RFC loan at the present time.

Very truly yours,

ORD MERCURY MINE

/s/ Tom J. Russell

Secretary

(C O P Y)

PROMISSORY NOTE
OF
ORD MERCURY MINE

Dated June 30, 1950

Due June 29, 1960

$36,598.37

For value received, the undersigned promises to pay to the order of RECONSTRUCTION FINANCE CORPORATION, at the Loan Agency of the Reconstruction Finance Corporation, in the City of Los Angeles, State of California, or, at Payee's option, at such other place as may be designated from time to time by the Payee, THIRTY SIX THOUSAND, FIVE HUNDRED NINETY EIGHT DOLLARS AND THIRTY SEVEN CENTS with interest on the unpaid principal at the rate of four per cent (4%) per annum, on or before ten years from the date hereof.

Payment of the foregoing indebtedness shall be made only from proceeds of operation of the mining property described in an Instrument of Security and Chattel Mortgage dated June 30, 1950, executed by the undersigned (except as proceeds of sale of mortgaged equipment may be applied to payment).

The undersigned further agrees to pay, from the same sources only, with interest at four per cent (4%) per annum, all expenses of any nature whatsoever which the holder hereof may incur in connection with the collection of principal or interest hereon or the enforcement of any of the provisions hereof, whether in or out of court and whether before or after this Note shall become due, including but not being limited to reasonable attorney's fees.

ORD MERCURY MINE, a corporation

By (SIGNED) H. GRADY HARRISON
President

By (SIGNED) TOM J. RUSSELL
Secretary

(S E A L)

FILE COPY
SURNAME:

UNITED STATES 140
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

Written by

Ellis ✓
Kane
Holt
Mittendorf

AUG 12 1952

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

Subject: Docket No. DMEA-2445

Dear Mr. King:

In your memorandum to Mr. Mittendorf of July 25, you state that the Ord Mercury Mine owes the Reconstruction Finance Corporation $30,000 and you ask whether there should be attached to the Exploration Project Contract, Form MF-201, "Mortgagee's Subordination Agreement," or whether another form has been prepared.

Form MF-201 was revised in June 1951 for ordinary use and I am enclosing a copy thereof for your information, but there should be inserted in the "NOW THEREFORE" paragraph after the words "Exploration Project Contract" the following: "or any amendment thereof which does not increase the maximum amount of the Government's claim therein stated or alter the provisions for repayment".

Where the lien to be subordinated is that of another Government Agency, such as the Reconstruction Finance Corporation, it is not essential to require a subordination agreement unless the facts indicate that if the other Government lien is paid first, the lien for exploration may never be reached since it is good only for ten years. Of course this difficulty could be obviated if the contract terms were altered to increase the period in which the exploration lien would be valid.

The interest of the Reconstruction Finance Corporation, however, will have to be considered before any exploration contract is entered into. If you will therefore advise

me of all the details of the Reconstruction Finance Corporation loan, I will discuss the matter of the proposed exploration contract with the Washington authorities and advise you whether or not there is any objection to the contract, and what sort of subordination agreement, if any, may be necessary.

Sincerely yours,

(signed) FRANK E. JOHNSON (HB)

Chairman, Operating Committee

J.H.
8-12-52

Enclosures

Approved:

C. H. Johnson (HB)
Member, Bureau of Mines

D. M. Lemmon (HB)
Member, Geological Survey

AEKane/em/ema
written 8/1/52 - rewritten 8/7/52
cc: Mails and Files
Adm. Reading File
Operating Comm.
J. H. Hedges
L. P. Thayer
E. W. Ellis
J. L. Hofflund
A. E. Kane
Chron.
Pending

FILE COPY
SURNAME:

140

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

OK Kane
Ellis

rewritten 8/8/52 AEKane/em

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

Subject: Docket No. DMEA-2445

Dear Mr. King:

In your memorandum to Mr. Mittendorf of July 25, you state that the Ord Mercury Mine owes the Reconstruction Finance Corporation $30,000 and you ask whether there should be attached to the Exploration Project Contract, Form MF-201, "Mortgagee's Subordination Agreement," or whether another form has been prepared.

In response to your question please be advised that Form MF-201 was revised in June 1951, and we enclose several copies thereof for your use.

Sincerely yours,

Chairman, Operating Committee

Enclosures

Approved:

Member, Bureau of Mines

Member, Geological Survey

AEKane/em
written 8/1/52
Copy to: Mails and Files
Adm. Reading File
Operating Comm.
J. H. Hedges
L. P. Thayer
E. W. Ellis
J. L. Hofflund
A. E. Kane chron. pending

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

224 New Customhouse
Denver 2, Colorado

July 25, 1952

Ans. 8/11/52
A.E. Konefsna

Rewritten
8/7/52 A.E. Konefsna

Memorandum

To: C. O. Mittendorf, Acting Administrator
Defense Minerals Exploration Administration

From: Executive Officer, Field Team, Region IV

Subject: Docket DMEA 2445, Ord Mercury Mine (Mercury)

According to Tom J. Russell, Manager, Ord Mercury Mine, Apache Junction, Arizona, the Ord Mercury Mine owes Reconstruction Finance Corporation $30,000.00.

We are preparing an exploration project contract between the Government and Ord Mercury Mine. Should Mortgagee's Subordination Agreement, Form MF-201, be attached to Form MF-200 (Revised February, 1952), or has some other form been prepared to accompany the revised form?

W. H. King

W. H. King

RECEIVED
JUL 29 1952
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration
Denver
JUL 28 1952

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

224 New Customhouse
Denver 2, Colorado

July 9, 1952

Memorandum

To: Secretary to the Operating Committee
Defense Minerals Exploration Administration

From: Executive Officer, Field Team, Region IV

Subject: Final Report, Docket DMA 2445, (Mercury), Ord Mercury Mine, Gila County, Arizona

Enclosed is one copy of the Final Report on DMEA Docket 2445, Ord Mercury Mine. In our letter dated July 2, 1952, to the Acting Administrator, Attention: Code 210, we stated that four copies of the report would be forwarded when the contract was signed. However, three copies of the final report were included with the letter. The contract covering this docket is being prepared in this office.

Please distribute all four copies of this final report.

W. H. King

W. H. King

Enclosure

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
JUL 14 1952

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

224 New Customhouse
Denver 2, Colorado

July 2, 1952

Memorandum

To: Acting Administrator, Defense Minerals Exploration Administration
Attention: 210

From: Field Team, Region IV

Subject: Final Report, DMEA Docket 2445, (Mercury) Ord Mercury Mine, Gila County, Arizona

Exploration aid amounting to $28,000 has been approved. The Government's share is $21,000.

The contract will be prepared by this office and four copies of the report will be forwarded to you when the contract is signed.

The original and one copy of Form 3b is attached.

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
DENVER
JUL 7 - 1952

Forms 3b detached in R. & R. - 7/7/52 - BL

Mining Division
Region IV

July 2, 1952

Memorandum

To: Field Team, Region IV

From: Acting Chief, Mining Division, Region IV

Subject: Final Report, DMEA Docket 2445, (Mercury) Ord Mercury Mine, Gila County, Arizona

Enclosed are nine copies of the final engineering report on DMEA-2445 by T. M. Romslo of the Bureau of Mines.

The examining engineers recommend exploration aid in the amount of $28,000, Government participation 75% or $21,000. The work would be done in two stages. Stage one consists of dewatering the mine and sampling potential ore bodies. Stage two would consist of deepening the adit winze 100 feet and drifting under the ore shoot 260 feet with two or three crosscuts for a total of 40 feet. Stage two is only to be carried out in event Stage one results in favorable findings.

We concur in this recommendation.

W. H. King
W. H. King

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 7 - 1952

Reviewed by
DMEA OPERATING COMMITTEE

7-11-52
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.
200 New Customhouse
Denver 2, Colorado

July 1, 1952

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 2445, Ord Mine (Mercury), T. J. Russel, Gila County, Arizona

Enclosed are the original and 8 copies of the geologic report by J. N. Faick of the U. S. Geological Survey covering the above docket. It has been recommended that the project be set up in two stages; the second stage to be recommended only if the results of the first stage are satisfactory.

A. H. Koschmann
A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (9)

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

June 27, 1952

Memorandum

To: A. H. Koschmann, Denver, Colorado

From: A. F. Shride, Tucson, Arizona

Subject: Geologic Report, DMEA 2445, Ord Mine (Mercury), T. J. Russel, Gila County, Arizona

Enclosed are the original and 8 copies of the above report by J. N. Faick of the Geological Survey.

The report and recommendations have my approval. It is believed from inadequate data that this deposit may have some potential; however, the data available is poorly documented. Therefore it is recommended that a project be set up in two stages. The first stage will rehabilitate the mine sufficiently so that adequate sampling and inspection of the mine can be done. A second stage is recommended only if the results of the first stage are satisfactory.

A. F. Shride
Acting District Supervisor
Arizona-New Mexico

Enclosures 9

Mining Division
Date Rec'd.

JUN 30 1952

BUREAU OF MINES
Denver, Colorado

MINING DIVISION
REGION IV

June 25, 1952

Memorandum

To : W. H. King, Acting Chief, Mining Div., Region IV

From : Chief, Arizona-New Mexico Dr., Mining Div., Region IV

Subject : Final Report, DMEA Docket 2445, Ord Mercury Mine, Gila County, Ariz.

Enclosed are original and 8 copies of the section on Summary, Conclusions and Recommendations by T. M. Romslo of the Bureau of Mines, and J. H. Faick of the Geological Survey, and the section on Engineering by Romslo for the above report. A separate report on the geology will be submitted by the Geological Survey.

Most of the mine is full of water so the examiners could see very little of the underground workings. However, from old reports and other data they came to the conclusion that at least 15,000 tons of ore containing 10 recoverable pounds of mercury might be uncovered by exploratory work, and that the proposed loan could be repaid from this amount of ore. Therefore, they have recommended a loan, this loan to be in two stages, the first to unwater and sample the mine, the second to do exploratory work if the first stage indicates that further work is justified. I concur with their recommendations.

Brochure is enclosed.

Walter R. Storms

Walter R. Storms

CC W. H. King (8)
C. A. Anderson
DMEA-2445
DF

WRStorms:frj

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA-2445, Ord Mercury Mine

Gila County, Arizona

T. M. Romslo, Mining Engineer
U. S. Bureau of Mines

J. N. Faick, Geologist
U. S. Geological Survey

June 1952

On-Site Report

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

By T. M. Romslo[1/] and J. N. Faick[2/]

The Ord Mercury mine was examined by the Defense Minerals Exploration Administration, under docket DMEA-2445, to determine if Governmental participation in the owners proposed exploratory program would be warranted. The applicant proposed an exploratory program that was designed to indicate the presence of sufficient ore to justify operation of the mine. It originally was estimated that the program could be completed in 6 months at a cost of $20,000. During the investigation the program was revised to a 2-stage project that could be completed in 7 months at an estimated cost of $28,000.

J. N. Faick

The Ord mine, located in 1925, was operated intermittently from 1926 to 1946. Recorded production for 1942 to 1946 shows that 822 flasks of mercury were produced from 8,773 tons of ore. Prior to this operation, about 700 flasks of mercury were produced from ore mined on the Ord and adjoining Rattlesnake property.

The mine is developed on a shear zone in schists and phyllites. The shear zone is roughly parallel to the foliation of the enclosing rocks that strike nearly east-west and dip about 80 degrees north. It ranges in width from a few inches to 40 feet and has a strike length of several thousand feet. Cinnabar occurs as disseminated particles, and as films and veinlets in the schist and phyllite. It also occurs in quartz-carbonate veinlets. The principal ore zone of the mine is about 175 feet long and from a few inches to 25 feet wide.

1/ Mining Engineer, Bureau of Mines
2/ Geologist, U. S. Geological Survey

Walter R. Storms. T M Romslo

Mine development consists mainly of 5 levels from which several crosscuts and raises have been driven and a few small stopes have been worked. Three levels at 50-foot intervals above the New Adit, or 150-foot level are not readily accessible at present. A winze connects the 200 level with the New adit, or haulage level. Workings below the haulage level are filled with water that enters the mine at an estimated rate of 5 gallons a minute.

The major mining equipment consists of a 300-cfm compressor, a small air-hoist, 2 stopers, several mine cars, and an air-driven water pump. The pump is installed on the 200 level, now under water, but should be available once the mine is unwatered.

A 40-ton ore bin is situated near the portal of the haulage level. The mill, about 400 feet from the ore bin, contains a jaw crusher, ore elevator, 300-ton ore bin, and a 30-ton Foster furnace. Power for the equipment is furnished by a 25-K.W. Diesel-generator. Water for washing down the condensors is obtained from near-by springs and stored in a 12,000-gallon tank. The mill can be put in operating condition at an estimated cost of $1,000 to $2,000. The applicant stated that mill recovery, during 1942 to 1946, was 86 percent.

Living quarters, consisting of 10 small buildings with some in need of new roofing, are available on the property.

The applicant proposes to make the workings accessible and then to sample mineralized zones. To gain access to the workings, a small amount of rehabilitation must be done and workings below the

J. M. Zaich

Walter P. Storme T. M. Rosalo

haulage level must be dewatered. It is estimated that this work can be completed in one month at a cost of $2,000.00. If the findings from this work are favorable, the second stage of the project, requiring 6 months work, will be carried out at an estimated cost of $26,000. It will consist of deepening a winze from the 200- to the 300-foot level, the driving of 300 feet of drift and crosscuts on the 300 level, and the sampling of possible ore exposures.

The ore reserves, based on information supplied by the applicant, consist of 10,000 tons of ore containing 10 pounds of recoverable mercury above the 200-foot level and 5,000 tons of inferred ore of similar grade that might be developed between the 200-and 300-foot levels. This estimated grade of ore appears to be too high. However, the deposit is sufficiently promising to warrant the proposed preliminary explorations that are designed to determine the potential ore reserves.

An operating profit can probably be made on ore containing 7 pounds of recoverable mercury a ton with mercury at $200 a flask. The production of 15,000 tons of ore containing 10 recoverable pounds of mercury could result in repayment of the proposed loan and also retire much of the $30,000 debt which the corporation owes the Reconstruction Finance Corporation.

The second phase of the project should be approved in event (1) the ore reserves are found to be of the indicated magnitude, and (2) providing economic operation is feasible on the basis of the market price of mercury and production costs that can be more accurately estimated once the mine is open.

Walter R. Storms, J. M. Parish

The project work is technically feasible and should be completed in 7 months. Competent supervision is expectable. The applicant probably will be able to finance its share of the project cost.

Conditional approval of the proposed exploratory program is recommended. Condition: In event the project is carried out with Governmental aid and the property is placed in operation, royalty payments on the Governmental loan shall be made on mercury produced from ore that is mined from the presently developed portion of the deposit, in addition to ore obtained from below the 200-foot level.

J. R. Oaith

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T. M. Pamolo

A. F. Shide

ORD MERCURY MINE
(TOM J. RUSSEL, PARTNER AND MANAGER)
BROWN MINING DISTRICT
GILA COUNTY, ARIZONA
DMEA 2445

Geology

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

ORD MERCURY MINE
(TOM J. RUSSEL, PARTNER AND MANAGER)
BROWN MINING DISTRICT
GILA COUNTY, ARIZONA
DMEA 2445

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Figure 1	Location Map, Ord Mine	See Engineering Report
Figure 2	Claim, Map, Ord Group	" " "
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INTRODUCTION

An application for $20,000 has been received by the Defense Minerals Exploration Administration, DMEA Docket 2445, for exploration of the Ord Mercury Mine, Gila County, Arizona. The property was shown to the DMEA examiners by Mr. Tom J. Russel, manager and one of the principal owners of the property. The Ord Mine has previously received financial aid from the Reconstruction Finance Corporation, and this organization now holds a lien of $30,000 against the property.

The geology of the Ord mercury deposit and others in the Mazatzal Mountains have been described in the following reports:

Lausen, Carl and Gardner, E. D., Quicksilver Resources of Arizona: Ariz. Bur. of Mines Bull. No. 122, pp. 60-105, 1927.

Ransome, F. L., Quicksilver Deposits of the Mazatzal Range, Arizona: U. S. Geological Survey Bull. No. 620, pp. 111-128, 1915.

Wilson, E. D., Quicksilver: Ariz. Bur. of Mines Circular No. 9, pp. 7-8, 1941.

In addition to the above the Ord Mine has been visited by C. P. Ross and studied by J. F. McAllister, geologists for the U. S. Geological Survey but reports on these examinations are not available to the writer.

The Ord Mine is located (Fig. 1) on Slate Creek on the eastern slopes of the Mazatzal Mountains and lies along the south side of the Bush Highway about 10 miles by road northwest of Tonto Basin, Gila County, Arizona. The Ord Mine consists of a group of twenty patented claims (Fig. 2) occupying an area about 12,000 feet long and from 600 to 2,400 feet wide. The property is in an area of relatively rough topography

with steep walled V-shaped canyons separated by high ridges. Available relief is sufficient to allow exploration and development to depths of about 300 feet below the outcrops of the lodes by long adits driven from the canyon floors.

GENERAL GEOLOGY

The area in which the Ord Mine and several nearby mines and prospects are situated is underlain by grayish and reddish-brown sericite schists and phyllites of pre-Cambrian age. The schistosity strikes north 70-80 degrees east and dips 75 to 85 degrees northwest. In places quartzite and conglomerate beds are present and these suggest that the schistose rocks have formed by intense metamorphism of sediments. The bedding in the quartzite diverges from the foliation in the phyllite at an angle of about 45 degrees. The only intrusive rocks present on the Ord property are a few large dikes of andesite or latite and these were seen by this writer only in isolated outcrops.

GEOLOGY OF THE ORD MINE

On the Ord claims, it is reported by the applicant, that there are two parallel mineralized shear zones about 200 feet apart. The shear zones are known from numerous prospect pits and trenches to be nearly continuous along the strike. Most of the development work has been done on the northernmost of the two shear zones, and this also appears to be the more thoroughly mineralized. The nearly vertical zones approximately parallel the schistosity of the country rock in strike, but dip more steeply than the schistosity. The shear zones range in width from a few inches to about 40 feet. In these zones the schists and phyllites have been crumpled, sheared, hydrothermally altered and locally impregnated with cinnabar and quartz. Locally small subsidiary fractures branch off the main

shear zone at angles of a few degrees. A few high angle northerly trending transverse faults displace the northernmost of the easterly-trending shear zones from a few feet to a few tens of feet. One of these cuts obliquely across the main ore shoot in the Ord workings and displaces the lode about 60 feet as shown in Figures 4 and 5.

The bleached zones in the schists and phyllites are readily apparent on the surface, and easily traceable for several thousand feet. Where cinnabar is an important constitutent in these bleached zones the weathered outcrops are stained dark reddish-brown or blackish, but are pale, yellow, or pink on a fresh break. Where quartz is present in the outcrop it is usually pitted and iron-stained suggesting that pyrite and possibly cinnabar may have been leached from the outcrop.

There are two types of ore in the Ord lode. Most of the cinnabar occurs as disseminated particles, thin films and veinlets in the bleached and altered sericite schist and phyllite. Cinnabar also occurs in quartz-carbonate seams and veinlets, usually only ½ to 1 inch wide and 1 to 3 feet long; larger veins have been reported. The cinnabar imparts a pinkish cast to the altered phyllite and this is especially noticeable where there has been some post-ore movement to cause "smearing" of the cinnabar along foliation planes of the country rock. The Ord shear zone is not everywhere metallized and the cinnabar is concentrated in well-defined, widely spaced irregular ore shoots that tend to be localized in areas where subsidiary branch fractures are the most numerous. Localization of the ore shoots also appears to be influenced by slight changes in strike of the shear zones, and appears to favor nearly east-west trending portions. An ore body has been explored, developed, and partly mined by "B" tunnel, the New adit and by the several sublevels shown

on Figures 3 and 4. In the New adit, the highest concentration of cinnabar is along the hanging wall on the north side of the ore shoot, where the side of the ore shoot appears to have formed against one wall of the shear zone. In the footwall side of the ore shoot the cinnabar is disseminated and gradational into barren altered country rock. The ore body in horizontal plan is about 175 feet long and reaches a maximum width of about 25 feet. It rakes westward about 60 degrees and is partly explored, developed, and mined for a rake length of about 400 feet as shown on Figures 3 and 4.

In the Ord lode cinnabar is just as abundant at the moderate depths exposed in the mine workings as it was in the outcrops and there is no evidence to indicate that either the size of the ore shoots or the mercury content will decrease appreciably within the range of proposed exploration. It is claimed by the applicant that some of the best ore previously produced has come from between the New adit level and the 200 foot sublevel and this tends to be substantiated by recent production figures. These facts suggest that the proposed exploration may be justified.

PROPOSED EXPLORATION

It is proposed to sink the adit winze (Figures 3 and 4) an additional 100 feet to a depth of 150 feet below the adit, and to drift westward into the ore shoot at this elevation. The proposal is technically feasible, simple of execution, and is expected to establish the presence of a deep extension of the main ore shoot.

ORE RESERVES AND GRADE

As the mine has been indifferently exploited on several occasions over a period of many years without the keeping of adequate records on production, grade, or costs, it is difficult to appraise the

available data and arrive at a satisfactory ore reserve estimate. Much of the mine is inaccessible and examination and sampling is impossible except in the New adit, therefore reserves must be estimated from information furnished by the applicant as well as the data obtained by the examiners. The main ore shoot of the Ord mine, as shown on Figure 3, is calculated to contain about 200 tons per foot of depth including all grades of mineralized material. According to the applicant the ore shoot is essentially mined out above "B" tunnel, and between this tunnel and the 50 level it is about 50 percent mined out. Between the 50 and 100 levels is an area in which the remaining ore is reported by the applicant to be too low-grade to be minable, but between the 100 and 200 foot levels he believes that only about 40 percent of the ore has been mined.

Mr. Russel states that there is as much unbroken ore remaining in the old part of the mine as has previously been produced, or about 10,000 tons. If the grade were known this tonnage could be regarded as indicated ore because it is explored and developed by the old workings and is available for mining when economic conditions justify.

Computations of the ore reserves below the 200 level are based on projecting known geological conditions as found in the developed portion of the mine. Of the available metallized rock (200 tons per foot of depth for a rake length of 400 feet) only about 1/8 has been extracted as ore and about 1/8 is estimated to remain as available low-grade reserves according to information provided by the applicant. The remaining 3/4 is thought to be too low grade to constitute ore. It is assumed that a similar ratio of ore to waste will persist to the 300 level and the block between the 200 and 300 foot levels is therefore estimated to contain about 5000 tons of inferred ore, which is about 1/4 of the probable metallized rock.

Grade estimates are difficult to make because of the lack of reliable data. Shown on Figure 5 and in the table below are 8 samples taken by the examiners with sample widths in feet and grades in percent mercury.

Number	Sample Width	Percent Mercury	Number	Sample Width	Percent Mercury
11486	2	0.12	11490	3.5	0.07
11487	4	0.14	11491	3	0.04
11488	7	0.05	11492	4	0.11
11489	11.5	0.07	11493	1.5	0.39

These samples represent the character of material remaining on the adit level and this material is not considered ore. Higher grade ores have been selectively mined both above and below this level, and possibly from a now inaccessible portion of the level. In 1941 the ore being mined was reported 1/ to contain from 0.15 to 0.70 percent mercury. From 1942 to 1946, the last period of operation, 822 flasks of mercury were recovered from 8773 tons of ore, an average of 7.1 pounds of mercury per ton of ore, or an average content of 0.356 percent mercury. This ore was produced by selectively mining the best portions of the lode, and leaving low grade, uneconomic portions. Total production from the mine is not known but the examiners estimate that about 10,000 tons of ore have been mined which has yielded about 1,000 flasks of mercury.

Production data for the 1942 to 1946 period of operations are as follows:

Year	Tons Produced	Flasks* Recovered	Recovery Lbs.Per Ton	Value Per Flask	Total Value
1942	2,059	132	5	$ 186	$ 24,595
1943	4,760	304	6	256	77,821
1944	945	171	16	133	22,729
1945	889	120	10	132	15,875
1946	120	95	60	92	8,745
Totals ~~&~~ ~~Averages~~	8,773	822	7.1	182	149,765

* Flask contains 76 pounds of mercury.

1/ Wilson, E. D., Op. cit., p. 7.

From the above data it is ascertained that the greatest production of mercury was from low-grade material produced during periods of high prices, but that as prices decreased smaller quantities of higher grade ore were produced, until the price became so low as to force closing of the mine in 1946. It is to be noted that from 1944 to 1946 a fairly good grade of ore was produced by selective mining, and it is probable that lower grade ore was left in the stopes. This production record in general indicates the quality of ore that may be obtained by additional exploration and development.

The applicant claims that the 10,000 tons of ore above the 200 level will contain about 10 pounds of recoverable mercury per ton. However, this appears too high, otherwise it probably would have been mined during or prior to 1945 when metal prices justified exploitation of this grade of ore. It is logical that lower grade ore may have been left in the old workings because of decreasing metal prices during the last period of operation and the examiners are of the opinion that the remaining ore might contain as little as 5 pounds but not over 10 pounds recoverable mercury per ton. The grade of the 5,000 tons of inferred ore between the 200 and proposed 300 level is expected to be between the average grade of ore produced from the upper workings and the applicant's estimate of the grade of the remaining ore; that is between 7 and 10 pounds of recoverable mercury per ton. The applicant claims the ore between the 200 and 300 levels will be considerably higher grade than that previously mined, a fact partly substantiated by the 1946 production of 120 tons which yielded 60 pounds of mercury per ton, nearly all of which was mined between the New adit and the 200 level.

In estimating the above ore reserves the grade is an extremely important factor because a pound or two of mercury per ton more or less than that estimated would greatly increase or decrease the amount of possible commercial ore reserves. To properly evaluate the ore body it would be necessary to sample the remaining potential ore zones in the developed portion of the ore shoot. To obtain these samples it would be necessary to recondition some of the upper workings, replace a few ladders and to pump out and clean-up the adit winze and 200 foot sublevel. This work would cost about $2,000 but would permit making a reasonably thorough examination which, in the examiners' opinions, would be justified because of the size of the ore shoot and the past production of the mine. After additional samples are taken, the project should be re-appraised to determine if additional sinking and drifting is justified.

CONCLUSIONS AND RECOMMENDATIONS

It is concluded that in the block of ground for which exploration is proposed there are about 5,000 tons of ore containing from 7 to 10 pounds of recoverable mercury per ton. In addition there is an estimated 10,000 tons of ore containing from 5 to 10 pounds of recoverable mercury per ton in old stopes above the New adit that would become available if the mine were again placed in operation. It has been calculated that the mine could be profitably operated on ore containing 7 pounds of recoverable mercury per ton at the present price of about $200 per flask.

As the property is in fair condition and the workings could be easily repaired to permit examination and sampling, it is desirable that some work be done. It is recommended that the proposed exploration be undertaken in two stages, the undertaking of the second part being dependent on obtaining encouraging results during the first part.

Stage I. We recommend unwatering the adit winze, cleaning out the 200 level to permit careful measuring and sampling of the remaining ore. While this is being done the old workings above the New adit are to be partly reconditioned to permit sampling and measuring of the ore. This work probably can be accomplished at a cost of about $2,000, and the results would indicate whether the remaining part of the proposed project is justified. The project should be re-evaluated after completion of Stage I, and the ore reserves re-estimated on the basis of the new data.

Stage II. If the results of the exploration done by Stage I are favorable, i.e. reserves and grade are of the magnitude expressed in this report or higher, then the more expensive part of the project should be undertaken. This requires sinking of the adit winze an additional 100 feet and driving about 300 feet of drifts and crosscuts along the lode on the 300 foot level. This part of the project is calculated to cost about $26,000, but is to be done only if the results of Stage I are favorable.

It was stated by Mr. Russel that the owners of the property intend to undertake the proposed exploration regardless of whether or not they receive Government aid. Government aid will greatly assist in placing the property in operation, therefore it is recommended that Stage I be approved in order to obtain additional data and that Stage II be approved on the condition that the results of Stage I indicate that the quantity and grade of ore will be as good or better than estimated under ore reserves, and that current economic conditions indicate that a successful operation may result from the exploration.

DMEA-2445, ORD MERCURY MINE
GILA COUNTY, ARIZONA

Engineering Report

By T. M. Romslo
Mining Engineer
U. S. Bureau of Mines

June 1952

DMEA-2445, ORD MERCURY MINE
GILA COUNTY, ARIZONA

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INTRODUCTION

The Ord Mercury property, Gila County, Ariz. was examined by the Defense Minerals Exploration Administration in connection with an application for Governmental aid by the Ord Mercury Mine, a corporation. The examination was carried out under docket DMEA-2445.

The applicant proposed an exploratory program that could be completed in 6 months at an estimated cost of $20,000. The program involved dewatering of part of the mine, the deepening of a winze for 100 feet, and the driving of 300 to 400 feet of drifts, The object of the program was to set up sufficient ore reserves to justify operation of the property with treatment of the ore in a furnace owned by the corporation. The necessary ore reserves would consist of high-grade ore developed by the exploratory program, and reportedly developed low-grade ore. During the investigations the program was revised to a 2-stage project costing an estimated $28,000. The first stage, costing an estimated $2,000, would consist of making mine workings accessible and the sampling of ore zones. The second stage of the project would be undertaken in event the results of the initial work were favorable.

Tom J. Russell, one of the owners of the Ord Mercury mine, accompanied T. M. Romslo, Bureau of Mines and J. N. Faick, Geological Survey during the examination of the property on May 21 and 22, 1952.

LOCATION, TOPOGRAPHY AND CLIMATE

The Ord Mercury property is about 55 air-miles northeast of Phoenis, Ariz. (figure 1). It is situated in the northeast quarter of unsurveyed T. 7 N., R. 9 E., Sunflower Mining District, Gila County, Ariz. This property and the adjoining Red Bird and Rattlesnake groups of claims comprise the so-called Slate Creek mercury belt.

The mine may be reached from Phoenix by traveling easterly for about 24 miles on U. S. Highway 60 and thence northeasterly for 56.6 miles on the Bush highway that traverses the property. The Bush highway from U. S. 60 to the mine contains a 30-mile section of typical desert road, and the remainder is of improved, gravel construction. Mesa, about 8 miles west of the junction of U. S. 60 with the Bush highway, is the most readily accessible city with railroad service. The village of Payson is 22 miles north of the mine by the Bush highway.

The property is on the eastern slope of the Mazatzal Mountain range that extends slightly west of north from the Salt River on the south to the East Verde River, a distance of about 50 miles. It is in an area of rugged topography at an average altitude of about 4,000 feet. Slate Creek traverses the property and drains easterly to Tonto Creek.

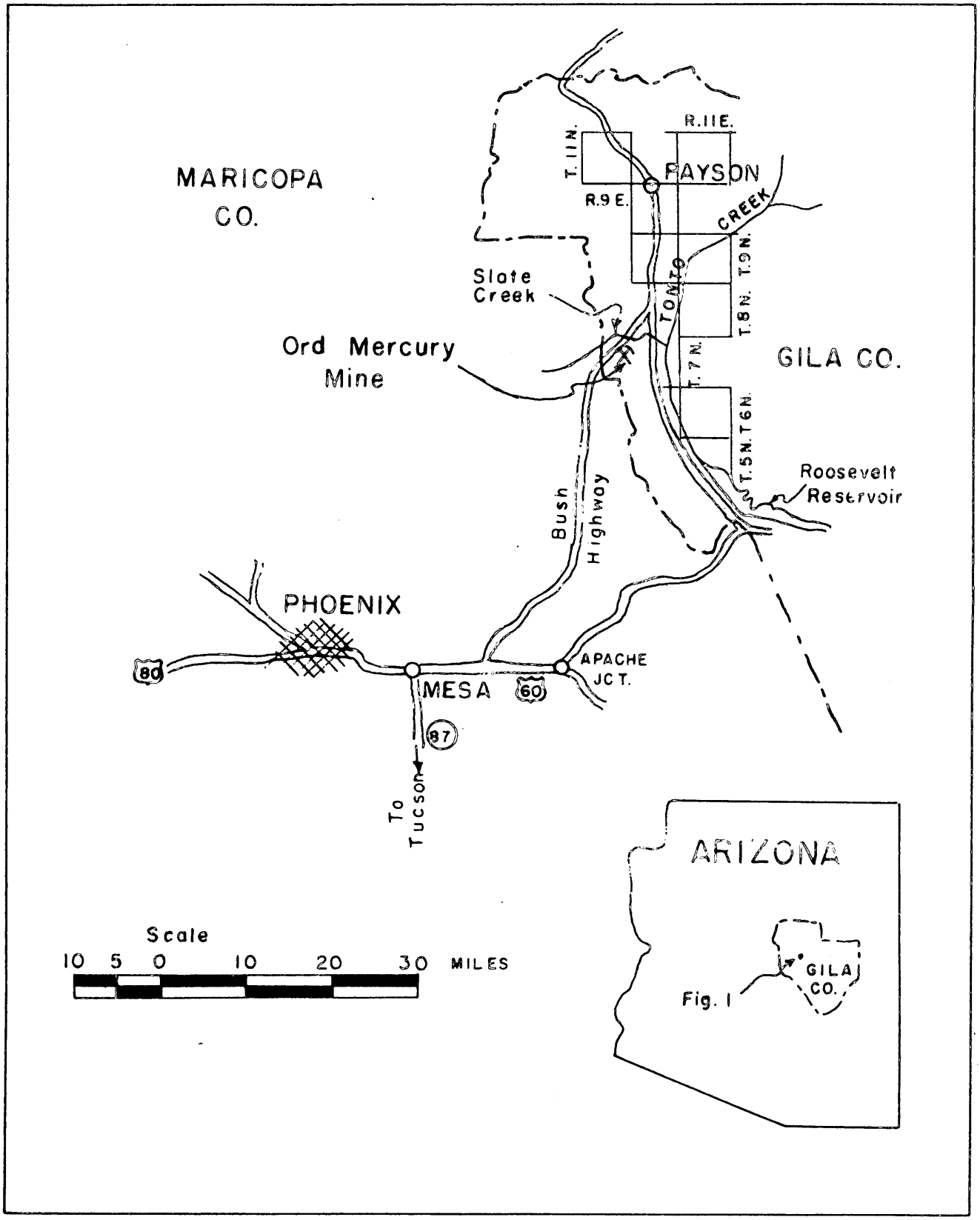


FIG. 1 — Location Map, Ord Mercury Mine
Gila County, Arizona DMEA 2445

Climatic conditions are favorable for year round mining operations. Summers are pleasant and winters are mild. Snows fall frequently during the winter but seldom remain on the ground for more than a few days. Rainfalls are seasonal and fall chiefly as torrential downpours during July and August. No records are available of precipitation in the immediate vicinity, but it probably averages between 15 and 20 inches annually.

Vegetation on the property consists mainly of juniper trees and a variety of bushes with a preponderence of catsclaw. Cypress, oak and pine is present at higher elevations.

Water for domestic purposes is available from shallow wells and springs. Water also is obtainable throughout the year except following abnormally dry seasons.

HISTORY AND PRODUCTION

Locations were made on the Red Bird property in 1922, and upon the Ord and Rattlesnake groups of mining claims in 1925. The Ord property was actively developed in 1926 by the Arizona Quicksilver Corp. During 1927, the Tonto Mining Co. made some production from the properties. During 1928 to early 1930, the Mercury Mines of America, successor to the Tonto Mining Co., continued operations on the Ord and Rattlesnake groups and produced quicksilver with a Foster 30-ton capacity paddle-conveyor-type furnace situated on the Ord Property. Little work was done from late 1930 to 1940 when W. V. Rainey and associates (Ord Mercury Mines) resumed mining on

the Ord and Rattlesnake groups. They produced approximately 430 flasks of quicksilver up to February 11, 1941, production prior to 1940 probably amounted to 700 flasks. The major portion of the 1940 production came from the Rattlesnake group.[1/]

Tom Russell and associates acquired the property under a lease agreement in February 1941 and produced 50 flasks of quicksilver to May 1941. The property was inactive to May 1942 when Russell and his associates again acquired the property from W. V. Ranney, under a bond and lease agreement. They operated the property from then until May 1946 and produced 822 flasks of quicksilver from 8,773 tons of ore. During this period they received loans totalling $35,000 from the Reconstruction Finance Corporation. Payment on these loans amounted to $5,000. Royalty payments of about $18,000 toward purchase of the property also were made. During 1946, Russell and his associates obtained ownership of the property through the payment of an additional $2,000.

Production data for the 1942 to 1946 operation are shown in the following table.

Year	Ore (Tons)	Flasks*	Recovery lbs/ton	Value Per flask	Value Total
1942	2,059.	132	5	$186	$24,595
1943	4,760	304	6	256	77,821
1944	945.2	171	16	133	22,729
1945	889.2	120	10	132	15,875
1946	120(est.)	95	60	92	8,745
Totals & Averages	8,773.4	822	7.1	$182	$149,765

*Flask contains 76 pounds of mercury.

The property has been inactive since May 1946.

1/ Wilson, Eldred D., Quicksilver, Arizona Bureau of Mines Circular No. 9.

PROPERTY AND OWNERSHIP

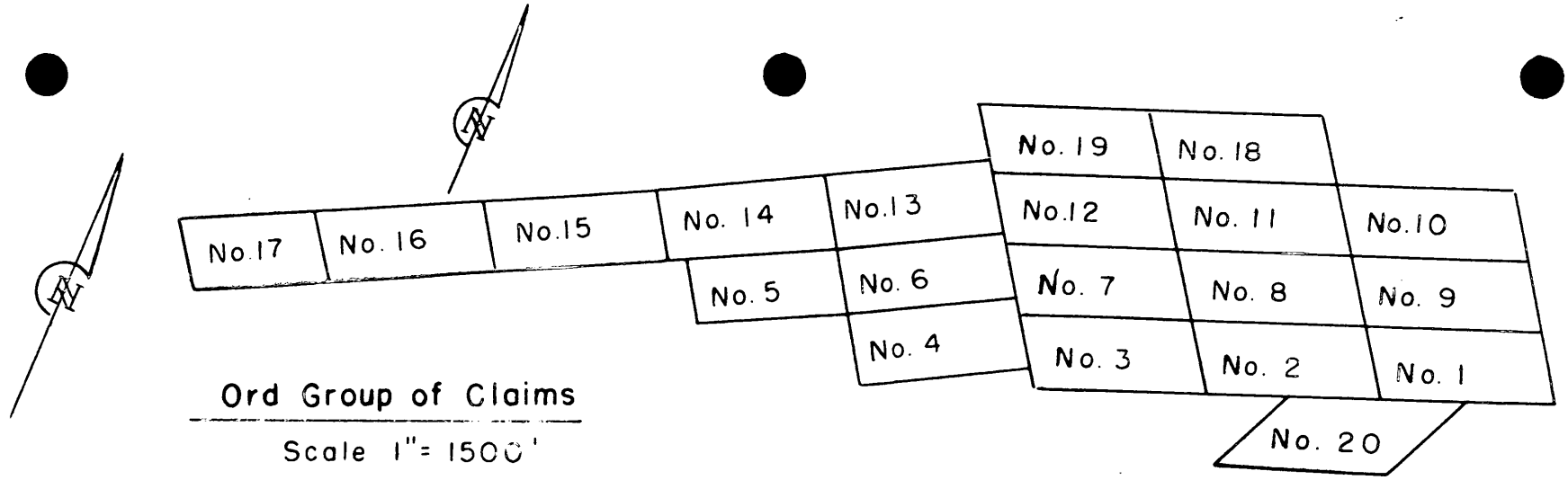
The property comprises a group of 20 lode mining claims that is patented under Survey No. 4086 (figure 2). It is owned by the Ord Mercury Mine, a corporation organized under the laws of Arizona. The corporation has issued no stock and its obligations are confined to $30,000 that is owed the Reconstruction Finance Corporation. An agreement calls for retirement of this debt through royalty payments of 10 percent.

DESCRIPTION OF THE DEPOSITS

The Ord Mercury mine is developed on a shear zone in pre-Cambrian sericite schists and phyllites. The shear zone is roughly parallel to the foliation of the enclosing rocks that strike nearly east-west and dip about 80 degrees north. It ranges in width from a few inches to 40 feet and has a strike length of several thousand feet. The rocks of the shear zone have been thoroughly bleached by hydrothermal solutions.

Cinnabar occurs as disseminated particles, and as films and veinlets in the bleached and altered sericite schist and phyllite. It also occurs in quartz-carbonate veinlets, usually $\frac{1}{2}$ to 1 inch wide and a few feet long. The cinnabar imparts a pinkish cast to the altered rocks. Weathered outcrops are stained dark-reddish brown or blackish where cinnabar is an important constituent.

The principal ore zone of the mine has been developed by the workings shown on figure 3.. It is about 175 feet long, a few inches to about 25 feet wide, and has been partly developed and mined for a pitch length of about 400 feet.



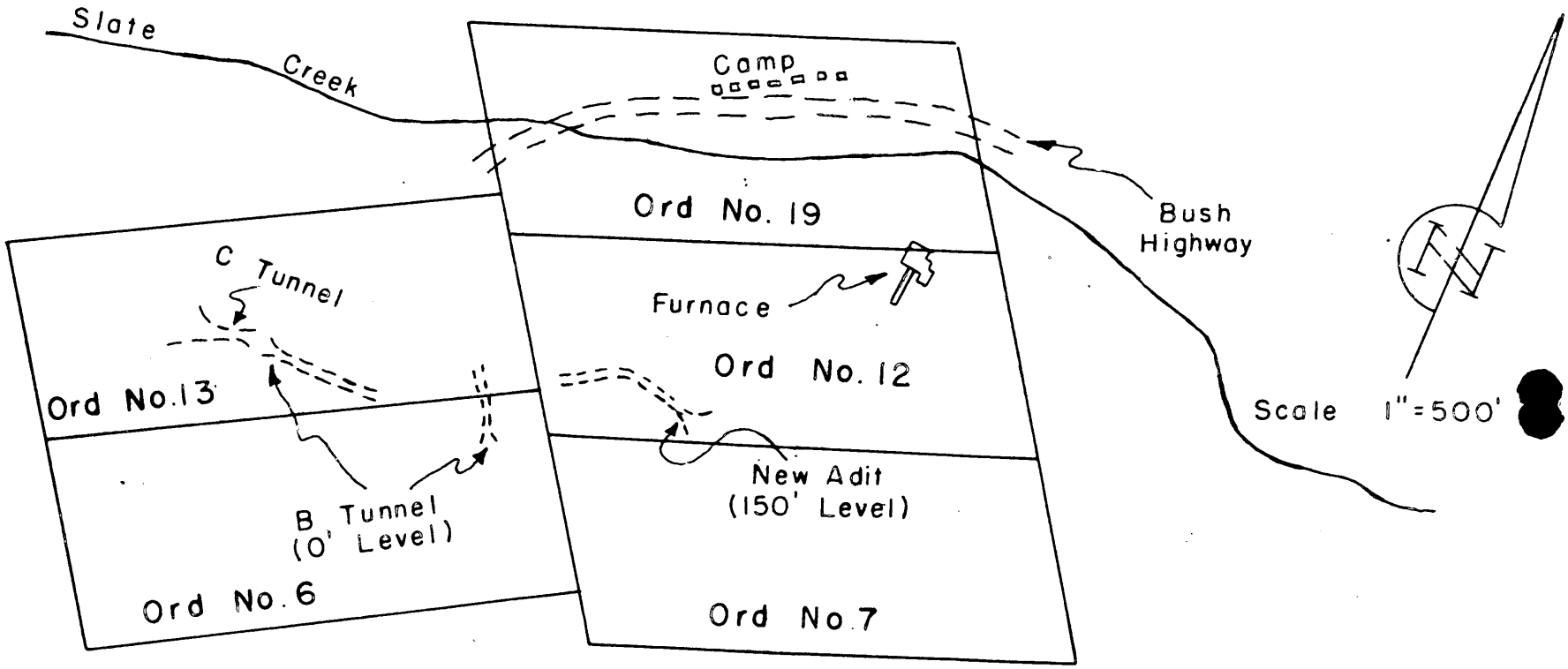


FIG. 2— Claim Map, Ord Mercury Mine

Gila County, Arizona DMEA 2445

ORE RESERVES

There are no available assay maps and the mine workings are largely inaccessible. Under these circumstances, production data, geologic maps, statements by the applicant, and engineering judgment have been used to determine the order of magnitude of the reserves.

T. J. Russell stated that the tonnage of ore remaining above the 200-foot level is equal to that mined, or approximately 10,000 tons. The ore, according to Russell, contains 10 recoverable pounds of mercury per ton, and is concentrated between "B" tunnel and the 50 level, and between the 100- and 200-foot levels. The ore between the other levels is either essentially mined or or is too low grade to be minable at present. This information would indicate the 400-foot mineralized zone contained 50 tons of 10 pounds of recoverable mercury per foot of depth. According to Russell, the 200-foot level contains higher than average grade ore and the mineralized zone has not decreased in extent. All the above information would indicate that inferred reserves below the 200-foot level would be at least 50 tons of 10 pounds of recoverable mercury per foot of depth.

As a check against the above estimates, geologic mapping shows the mineralized zone contains 4 times the estimated 50 tons per foot of depth, or 200 tons of ore of all grades. Whether or not one-fourth of the zone contains 10-pound ore is questionable. Production records for the years 1944 to 1946 show that 10- to 60-pound recoverable ore was produced. They indicate some 10-pound ore was not mined for

economic reasons but there are no data on the amount or distribution of such remaining ore. Furthermore, the assays of samples taken during the examination and shown on figure 3 cannot be used as a basis of grade determination for the following reason. The samples, each containing less than 6 pounds of recoverable mercury, were taken in the only accessible portion of the mineralized zone and they were expected to show little or no minable ore on the basis of Russell's estimates. They were taken primarily to form a basis for possible future grade estimations in this or similar deposits. The mineralized zone immediate west of the sampled section is inaccessible and overlies a stope from which high-grade ore was reportedly mined in 1945 and 1946. There the ore reserves are unknown but it is possible that the tonnage and grade of ore may approximate the estimate of 50 tons of 10 percent ore, per foot of depth.

PRESENT STATUS

Mine Workings

The portion of the property under consideration has been developed mainly from "B" tunnel (zero level) and from the New adit or 150-foot level (figure 3). From "B" tunnel, 3 small stopes were worked to the surface, a winze was sunk about 130 feet, and the 50-and 100-foot levels were driven from the winze. Small stopes also were worked between the 100-foot level and "B" tunnel. At present, these workings are not readily accessible. The New adit then was driven, a raise was connected from the adit to the winze from "B" tunnel, a winze was sunk from the adit to a depth of 50 feet, and the 200-foot

level was developed. Two raises were run from the 200-foot level to the adit and a stope was worked from just above the 200-foot level to within about 10 feet of the adit. At present, the workings below the adit are filled with water and collapse of the roof-pillar of the stope from the 200-foot level have made inaccessible the west 200 feet of the adit level.

Water enters the mine at a rate of probably not over 5 gallons a minute. The workings above the adit level are dry for the most part and stand open with little or no support. Wet sections require support and have been lagged tight to stop the ground from running.

A minor amount of clean-up work and a few sets of timber should make "B" tunnel accessible and place the New adit in operating condition.

Major mining equipment consists of a compressor of 300 cfm capacity, a small air hoist, an air-driven water pump, 2 stopers, and several mine cars. The pump is under water on the 200 level.

Mill

The mill is about 400 feet from a 40-ton ore bin that is located near the portal of the New adit. It can be placed in operating condition by making minor repairs in the frame building, the condensor tubes, pipe lines, etc. The cost of this work probably would be between $1,000 and $2,000.

Operation of the mill is as follows:

Ore is trucked to a 9- by 14-inch jaw crusher where it is reduced to pass a $\frac{1}{2}$-inch screen. It then is elevated to a 300-ton bin where it flows by gravity to a 30-ton Foster furnace. Mercury vapors are drawn from the furnace and through the condensor unit by a suction fan. Power for driving the crusher and fan motors is furnished by a 25-KW diesel generator.

Water for washing-down the condensors is stored in a 12,000-gallon tank. The source of water is nearby springs.

Camp

Living quarters on the property consist of 10 small buildings, several of which are in need of new roofing.

Water for domestic purposes is stored in an 8,000 gallon tank. It comes from nearby springs.

ECONOMICS OF OPERATION

The following estimates indicate that mining and milling costs will total about $13.07 a ton of ore, and that a pound of mercury will yield about $2.21, before operating costs. On this basis, a reasonable operating profit could be expected from the treatment of ore containing about 7 pounds of recoverable mercury, with a market price of $200.00 a flask.

Mining Costs

The following estimates are based on the production of 210 tons of ore weekly (mill capacity, 30 tons daily) by conducting a one-shift mining operation for 6 days per week. It also is assumed that the production would come from cut-and-fill stopes, both above and below the haulage level.

Labor requirements:

Per shift	Cost per week
2 - miners	$156.00
2 - Miner's helpers	130.00
1 - Hoistman	156.00
3 - Trammers	130.00
1 - Mechanic	156.00
	$728.00
State and Federal Taxes, 15%	109.00
Total labor	$837.00

Operation costs probably would be double the labor costs, or $1,674.00 weekly. Overhead costs, supervision, and office at $15 per day would bring the total weekly mining costs to $1,779, or approximately $8.60 a ton of ore.

Milling Costs

Labor per day		
1 - Truck driver and crusherman	$15.00	
3 - Mill operators	15.00	
3 - Mill operator helpers	12.50	
1 - Clean-up man	15.00	
	$57.50	$57.50
Fuel		
Furnace, 300 gal. Diesel @ 15 cents	$45.00	
Generator & truck, 50 gal. @ 15 "	7.50	
	52.52	52.50
Repairs and maintenance		10.00
Overhead, supervision, and office		15.00
Total		134.00

Cost per ton of ore, $\frac{134}{30}$ or $4.47

Value of Ore

The following data indicates that returns per pound of mercury to the operator, before mining and milling costs, would be about $2.21.

Market value per flask		$200.00
Less		
Flask cost	$1.50	
Freight	2.25	
Royalties		
DMEA 5%	9.81	
RFC 10%	18.65	
Total charges	32.21	32.21
Return per flask		$167.79

Return per pound of mercury $\frac{\$167.79}{76}$ or $2.21

PROPOSED EXPLORATORY PROGRAM

The proposed exploratory program is set up as a 2-stage project, the second stage to be carried out in event the initial work results in favorable findings.

The work under the first stage would consist of (1) making accessible the 0-, 50- and 100-foot levels, (2) dewatering the mine to its present bottom at the 200-foot level, and (3) sampling potential ore bodies.

The second stage of the project would consist of (1) minor repairs to 4 company owned houses, (2) deepening the adit winze 100 feet (from the 200- to 300-foot level), (3) drifting westward for 260 feet on the 300-foot level, and (4) driving 2 or 3 crosscuts for a total of 40 feet.

COST OF PROJECT

Tom J. Russell will supervise the project with a salary of $300.00 per month. His wife will do the bookkeeping at $50.00 monthly. The work will be done with local labor on a 6 days a week basis. Overtime work in excess of 40 hours weekly will be $1\frac{1}{2}$ times the basic rates. Pay rates will be as follows:

Classification	Wage Rate Hourly	Daily	Weekly
Miner	$1.50	$12.00	$78.00
Hoistman	1.50	12.00	78.00
Miner's helper	1.25	10.00	65.00
Mechanic	1.25	10.00	65.00
Trammer	1.25	10.00	65.00

Labor costs in the following estimates include 15 percent for Federal and state taxes:

First Stage

It is estimated that the supervisor and 2 miners can complete the first stage of the project in one month.

Supervision		$300.00
Labor, 2 miners for 4 weeks		717.60
Equipment		
Company owned (depreciation on 60-month basis)		
1 compressor, 300 cfm, value $4,200	$70.00	
1 1949 Chevrolet 1½-ton pickup, value $1,200	20.00	
2 mine cars @ $150 each	5.00	
To be rented		
Pump (company pump on 200-foot level to be salvaged for future use)	100.00	
Total equipment		195.00
Materials and supplies		
Timber, (few square sets, lagging and ladders, all probably available on property)	50.00	
Fuel and greases for compressor, 360 hours @ 75¢	270.00	
Repair parts for compressor	25.00	
Fuel and greases for truck when used on project business	25.00	
Small tools (few picks, shovels, hammers, etc)	25.00	
Nails, bolts, etc.	25.00	
Total materials and supplies		420.00
Other		
Assay of 50 samples @ $3.00	$150.00	
Bookkeeping	50.00	
Contingency for labor and supervision beyond estimated periods and for additional materials, supplies and other items	167.40	367.40
Total cost of first stage		$2,000.00

Second Stage

Supervision, 6 months			$1,800.00
Labor, 150 days or 25 weeks			
2 Hoistmen	$4,485.00		
2 Miners	4,485.00		
2 Miners Helpers	3,737.50		
2 Trammers	3,737.50		
1 Mechanic	1,868.75		
Total labor			$18,313.75
Equipment			
Company owned (depreciation on 60-month basis)			
1 - Compressor, 300 CFM, value $4,200		$420	
1 - 1949 Chevrolet 1½-ton pickup, value $1,200		120	
2 - Mine cars @ $150 each		30	
To be purchased			
1 - Medium weight jackhammer		500	
Total equipment			$1,070.00
Materials and supplies			
Timber for shaft and drift, 12,000 B.F. @ $80		960	
Tie-rods for shaft		150	
Track, less ties, 250 ft. of 12-pound rails		200	
Ties for track		50	
Pipe, 350 feet each of 1- and 2-inch		160	
Pipe fittings		50	
Roofing paper for houses		50	
Small tools, shovels, picks, hammers, wrenches, etc.		100	
Fuel, oil and grease for compressor, 600 hours @ 75¢		450	
Fuel, oil and grease for truck, $10 monthly		60	
Drill steel, 7/8 in., 4 each of 4- and 6-foot lengths		50	
Drill bits, 4 tungsten-carbide		80	
Repair parts for equipment		150	
Explosives and primers		1,200	
Total materials and supplies			$3,710.00
Other			
Assays of 10 samples @ 3.00		30	
Bookkeeping, 6 months @ 50.00		300	
Contingency, for supervision and labor beyond estimated period and for additional supplies, materials and other items		776.25	
Total other			1,106.25
Total for second stage			$26,000.00

Recapitulation of Costs

First stage	
Supervision	$300.00
Labor	717.60
Equipment	195.00
Materials and supplies	420.00
Other	367.40
	$2,000.00
Second stage	
Supervision	$1,800.00
Labor	18,313.75
Equipment	1,070.00
Materials & supplies	3,710.00
Other	1,106.25
Total	$26,000.00

CONCLUSIONS

An estimated 15,000 tons of ore containing 10 recoverable pounds of mercury a ton is expectable on the basis of reputed reserves of 10,000 tons of ore of similar grade above the 200-foot level. The deposit probably contains several times the estimated tonnage but there is a possibility that the grade of ore may be substantially lower than claimed. However, the deposit is sufficiently promising to justify the expenditure of a few thousand dollars to determine its potentiality.

An operating profit, after royalty payments on the proposed loan and the debt to the Reconstruction Finance Corporation, is expectable on ore containing at least 7 pounds of recoverable mercury per ton, with mercury at $200.00 a flask. The production of about 15,000 tons of 10-recoverable-pound ore should result is repayment of the proposed loan and also retire much of the debt to the Reconstruction Finance Corporation.

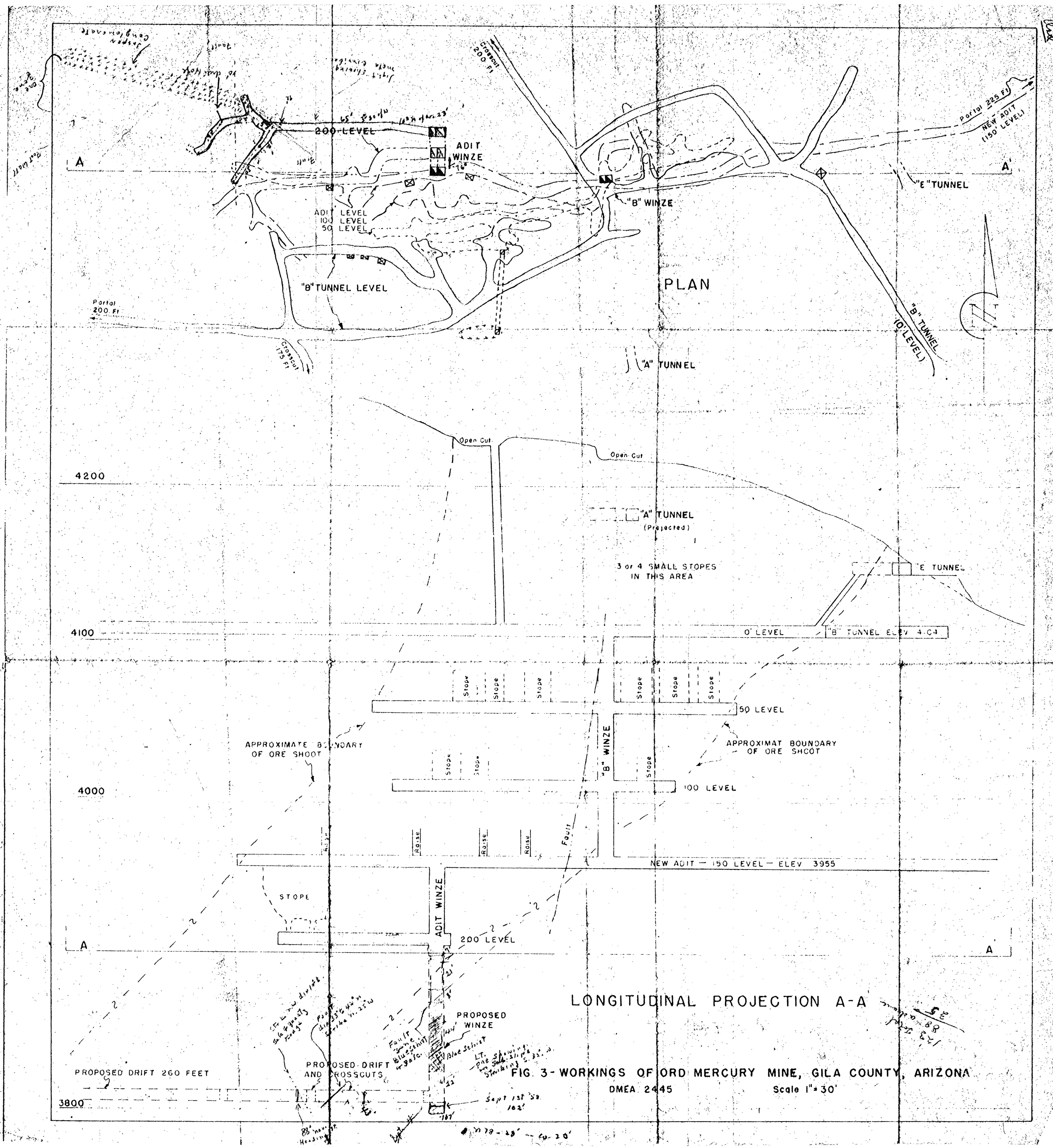
The second phase of the proposed project should be approved in event the ore reserves are found to be of the indicated magnitude, and providing economic operation is feasible on the basis of the market price of mercury and production costs that can be more accurately estimated once the mine is open.

The project work is technically feasible and should be completed in 7 months. Competent supervision is expectable.

The applicant probably will be able to finance its share of the project cost.

RECOMMENDATION

Approval is recommended for the proposed exploratory program with the following proviso: In event the project is carried out and the property is placed in operation, royalty payments on the Governmental loan shall be made on mercury produced from ore from the presently developed portion of the deposit <u>in addition to</u> ore encountered below the 200-foot level.

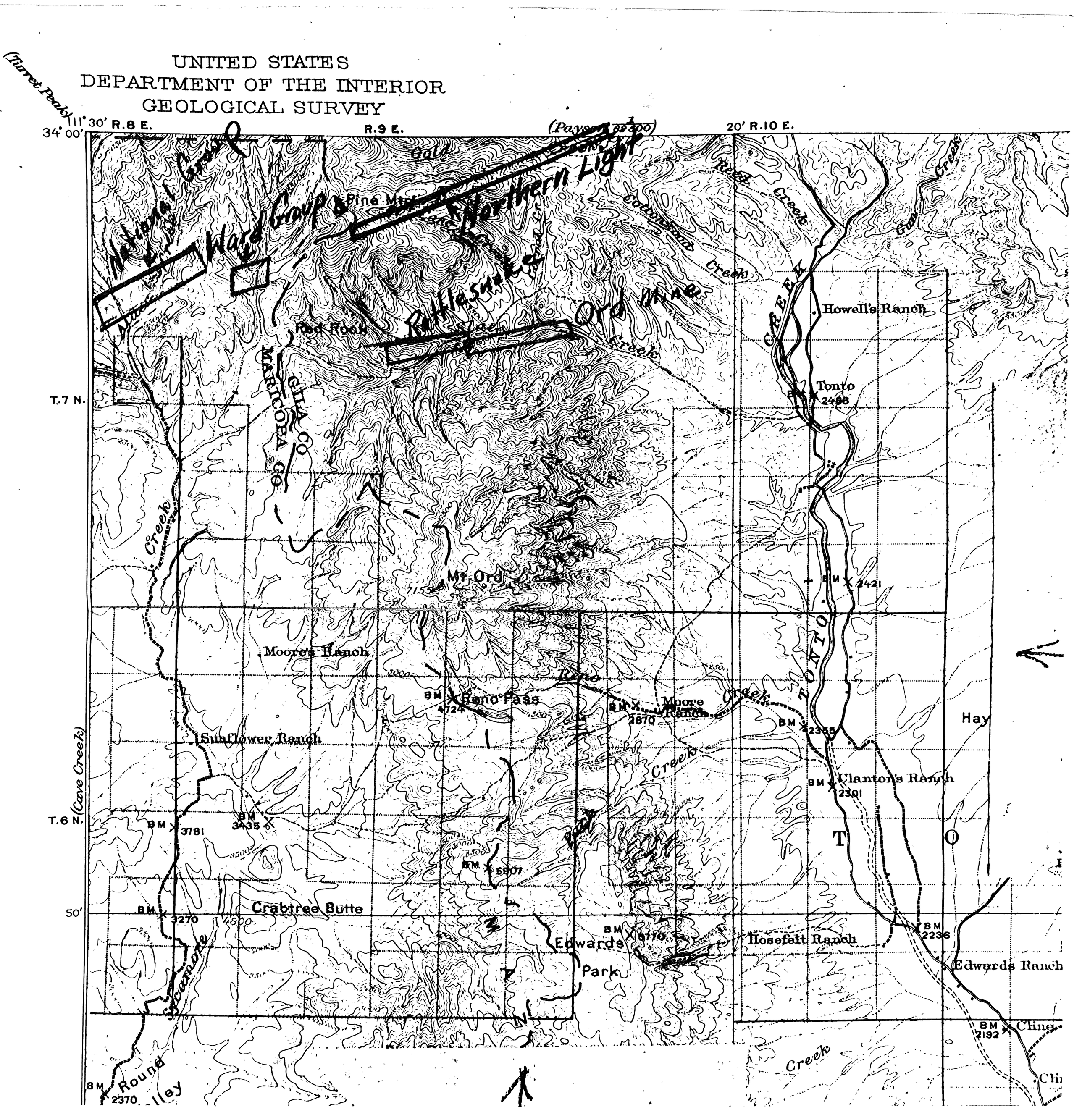


LONGITUDINAL PROJECTION A-A

FIG. 3 - WORKINGS OF ORD MERCURY MINE, GILA COUNTY, ARIZONA

DMEA 2445 Scale 1" = 30'

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



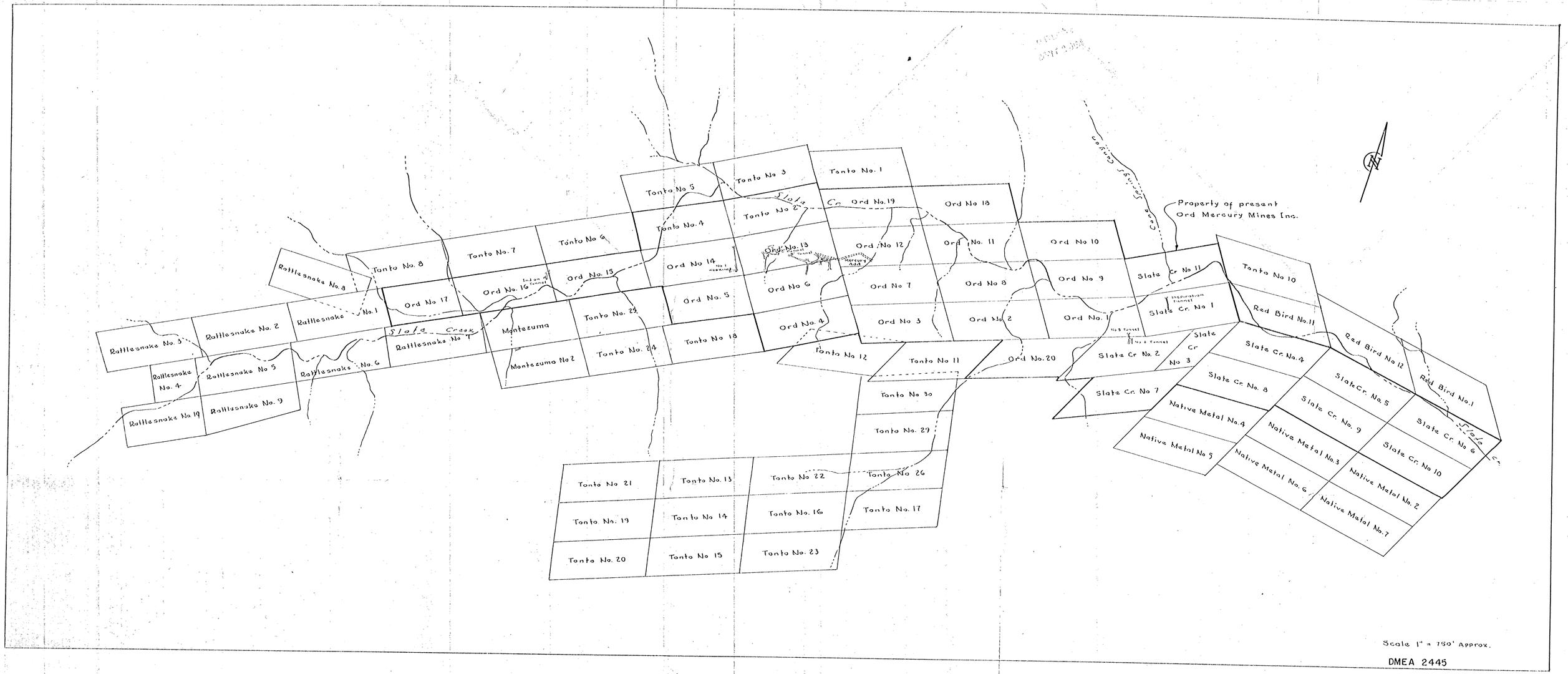


FIG.-2- ORD MERCURY MINES INC. GILA CO. ARIZ.

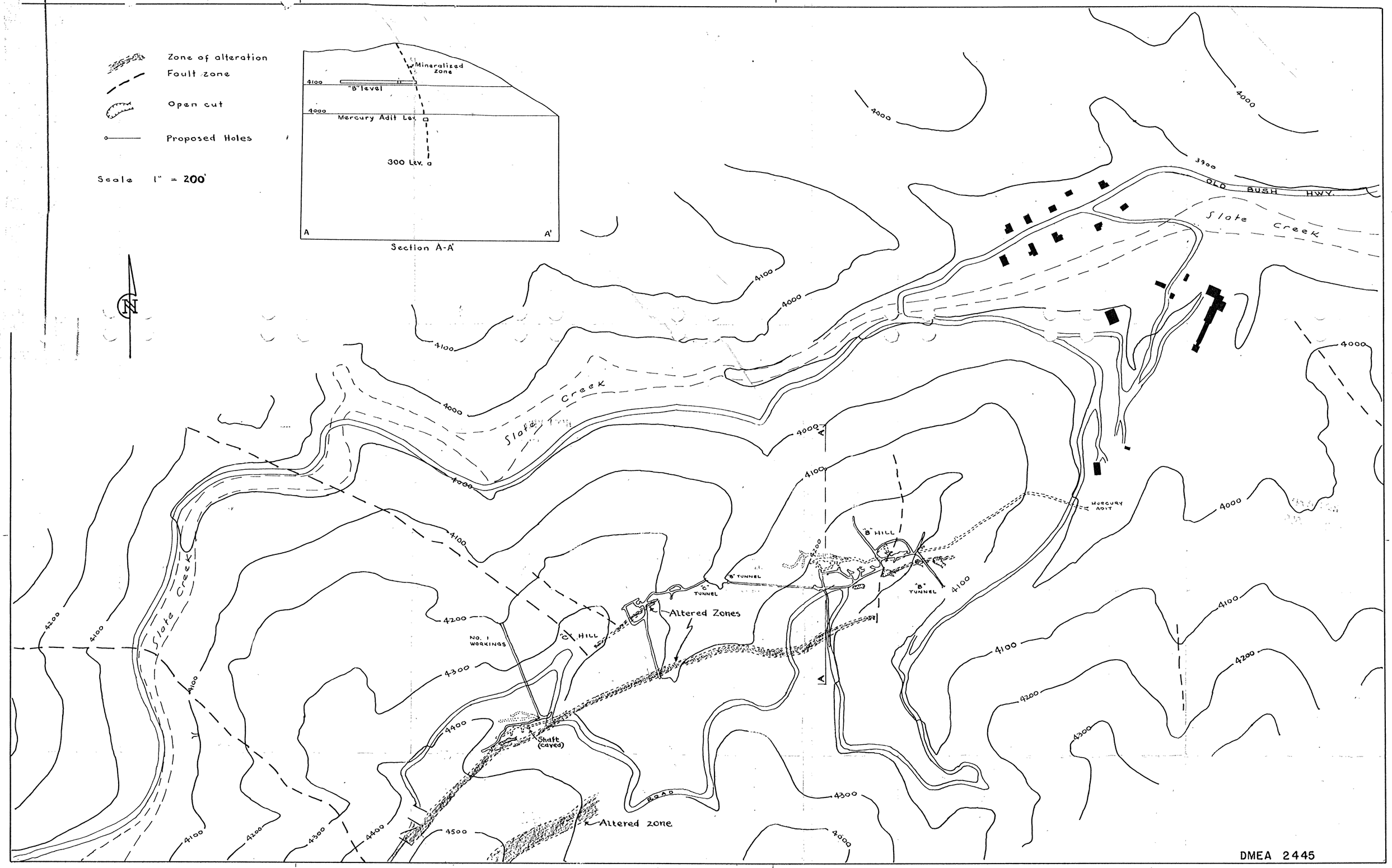


FIG. 5 - ORD MINE, SHOWING ALTERATION ZONES, MINE WORKINGS [redacted]

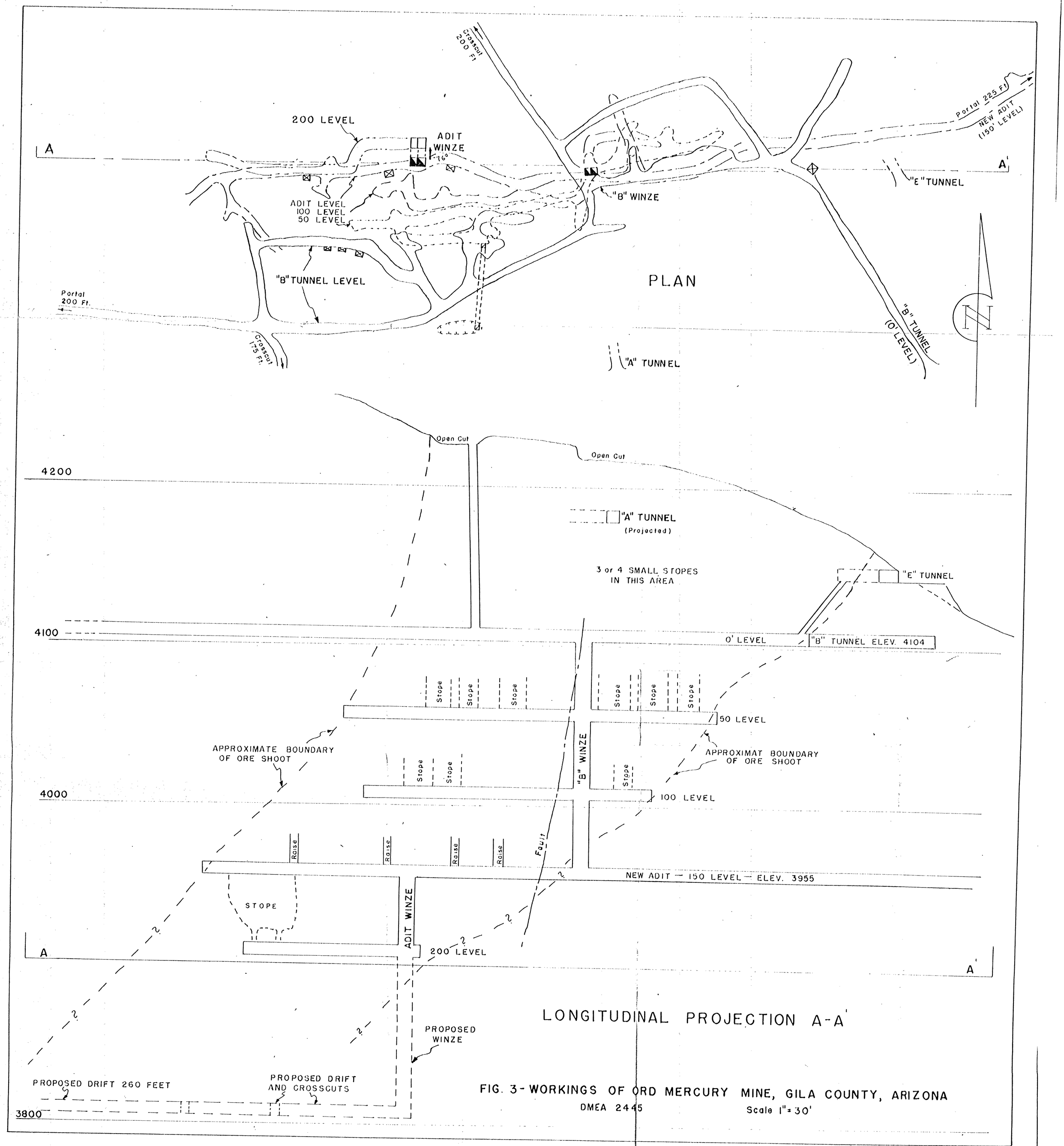
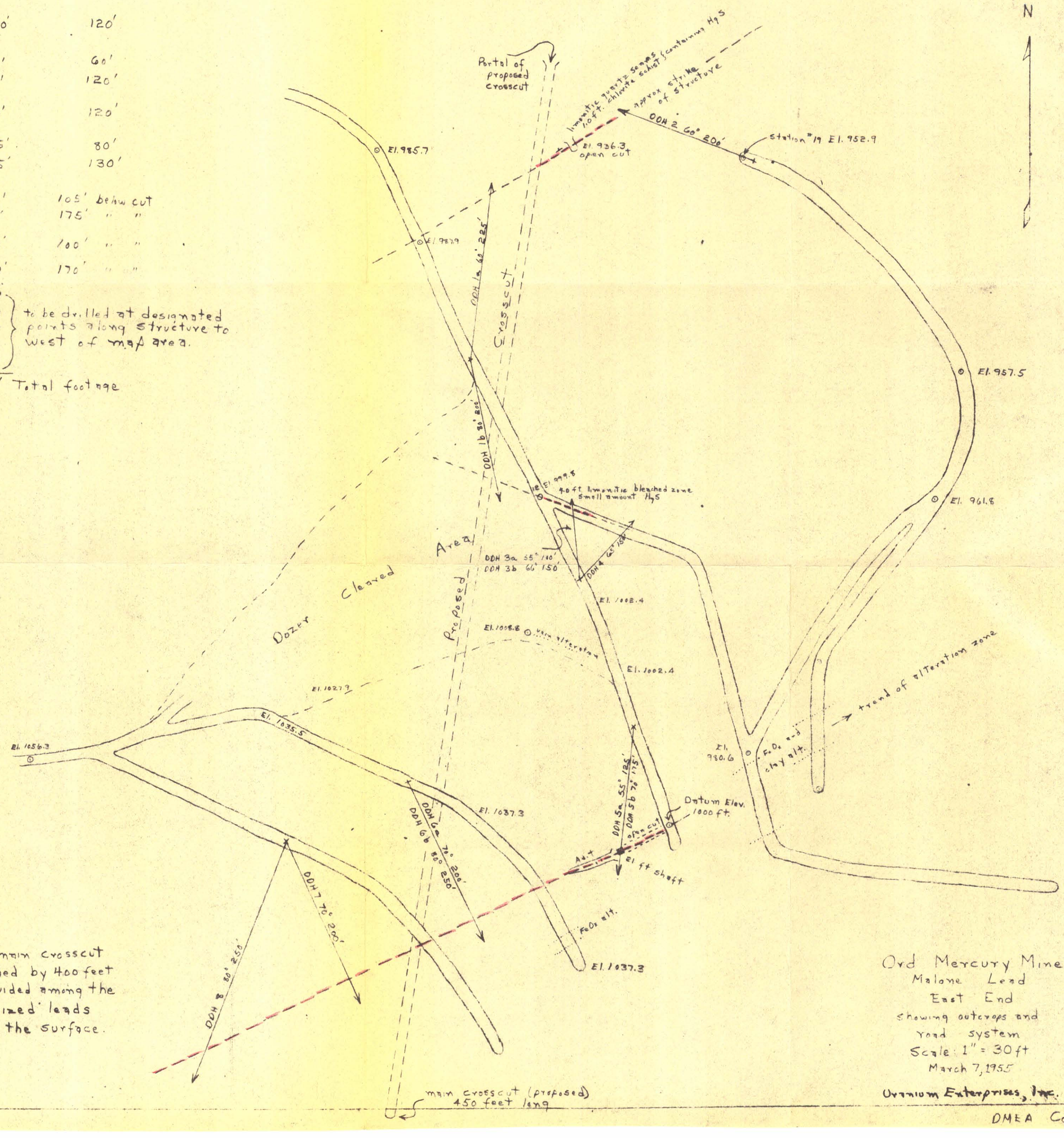


FIG. 3 - WORKINGS OF ORD MERCURY MINE, GILA COUNTY, ARIZONA

DMEA 2445

Scale 1" = 30'

Hole No.	Inclination	Length	Depth Intersected on structure
DDH 1a	60°	225'	110'
1b	80°	175'	140'
2	60°	200'	120'
3a	55°	100'	60'
3b	66°	150'	120'
4	65°	150'	120'
5a	55°	125'	80'
5b	70°	175'	130'
6a	70°	200'	105' below cut
6b	80°	250'	175' " "
7	70°	200'	100' " "
8	80°	250'	170' " "
9	60°	200'	to be drilled at designated points along structure to west of map area.
10	60°	200'	
11	60°	200'	
12	60°	200'	
13	60°	200'	
		3200' Total footage	



Note: Proposed main crosscut to be accompanied by 400 feet of drifting, divided among the three mineralized leads outcropping at the surface.

Ord Mercury Mine
Malone Lead
East End
showing outcrops and road system
Scale: 1" = 30 ft
March 7, 1955

Uranium Enterprises, Inc. W. E. Mead

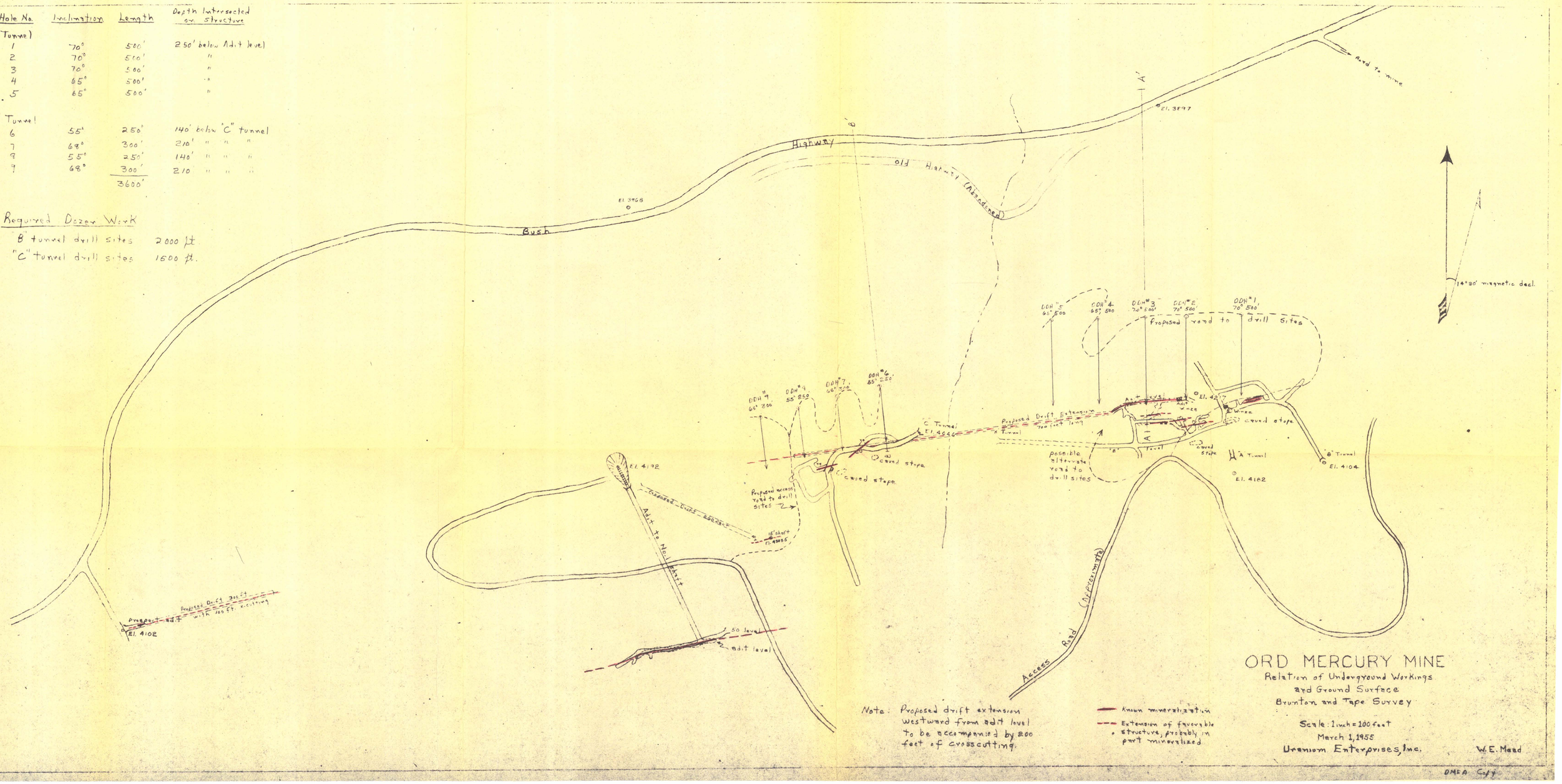
DMEA Copy

Hole No.	Inclination	Length	Depth Intersected or Structure
"B" Tunnel			
1	70°	500'	250' below Adit level
2	70°	510'	"
3	70°	500'	"
4	65°	500'	"
5	65°	500'	"
"C" Tunnel			
6	55'	250'	140' below "C" tunnel
7	68°	300'	210' " " "
8	55°	250'	140' " " "
9	68°	300'	210' " " "
		3600'	

Required Dozer Work

"B" tunnel drill sites 2000 ft.

"C" tunnel drill sites 1500 ft.



Note: Proposed drift extension westward from adit level to be accompanied by 200 feet of crosscutting.

Known mineralization

Extension of favorable structure, probably in part mineralized

ORD MERCURY MINE

Relation of Underground Workings and Ground Surface

Brunton and Tape Survey

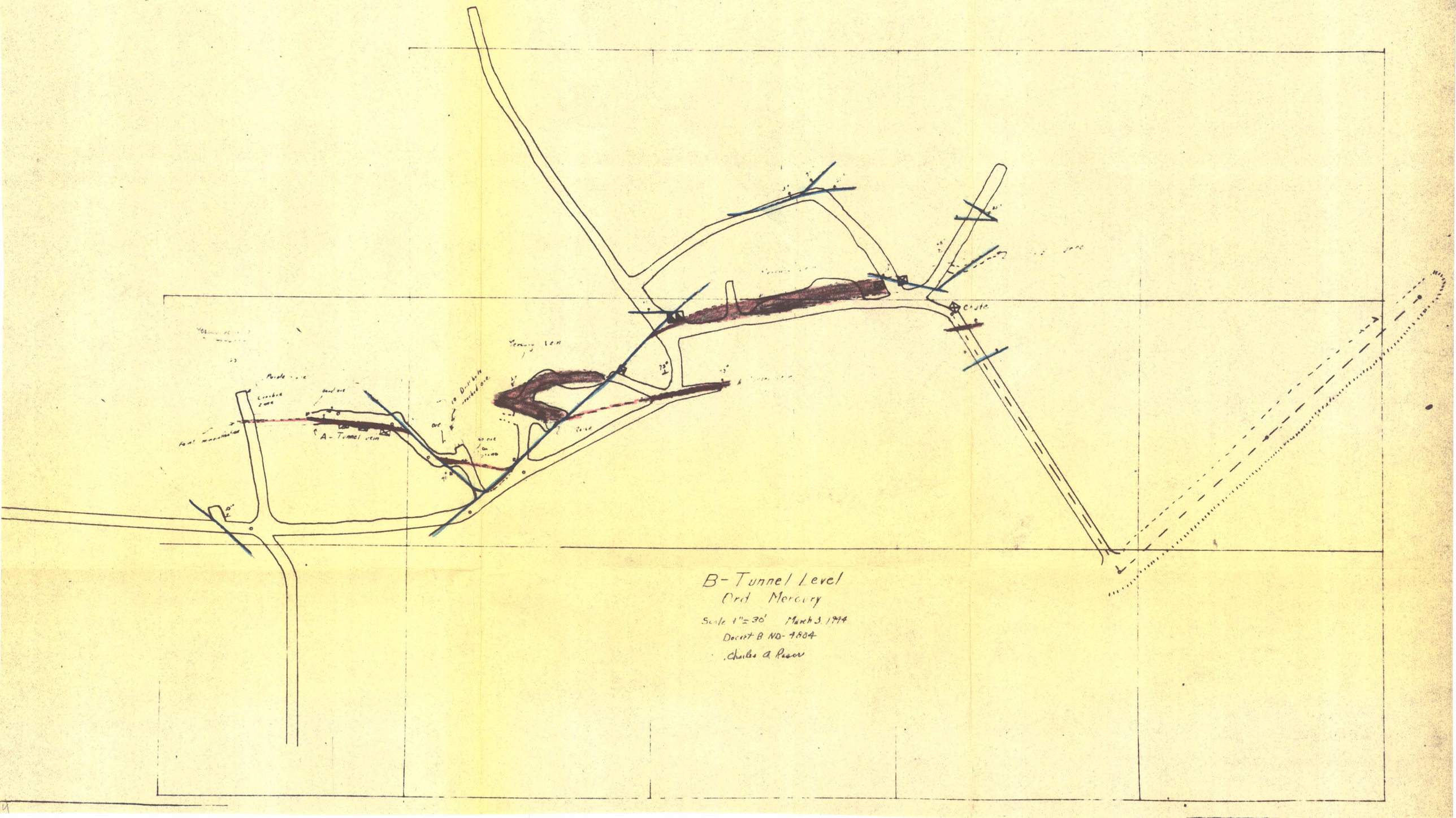
Scale: 1 inch = 100 feet

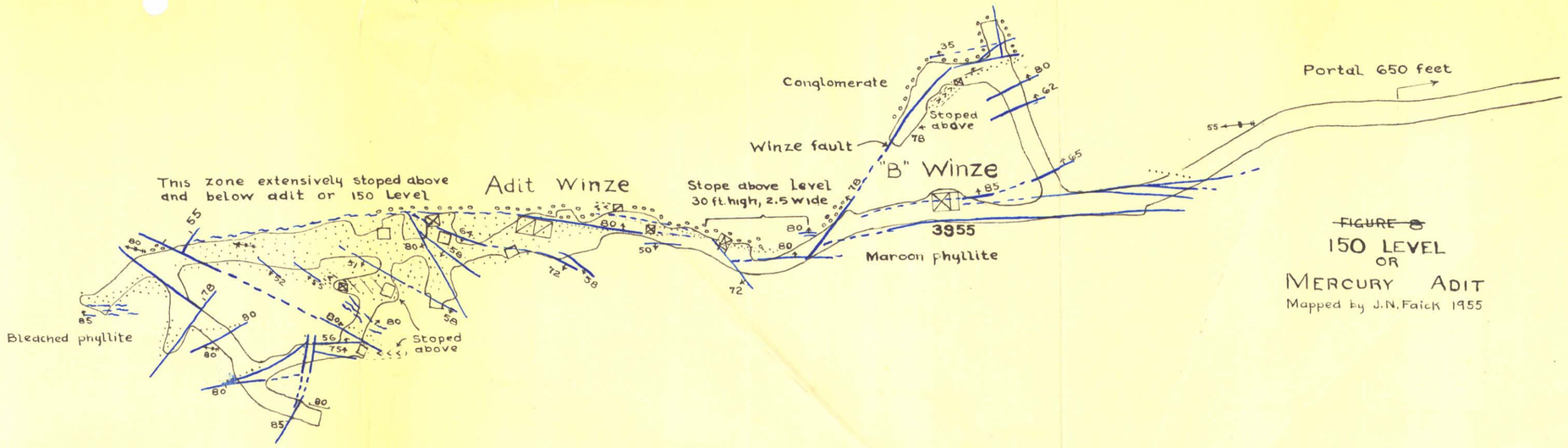
March 1, 1955

Uranium Enterprises, Inc.

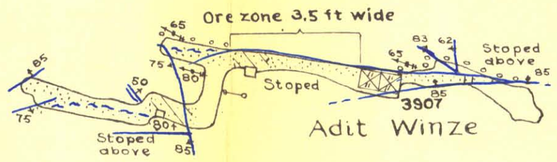
W. E. Mead

DMEA Copy

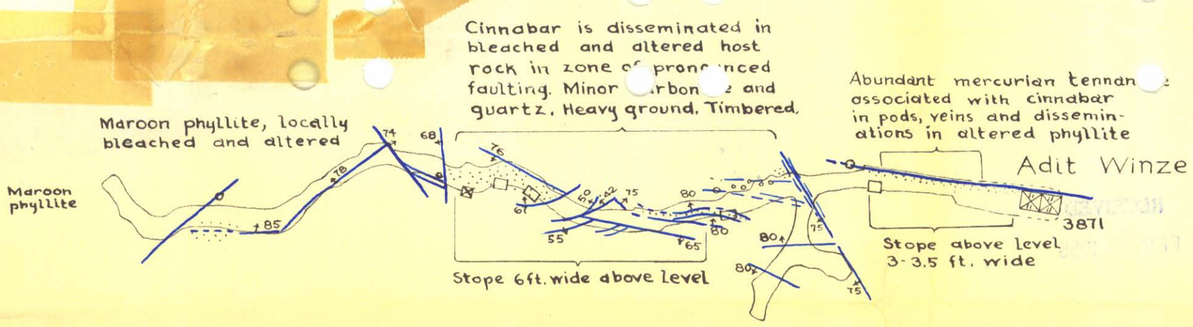

A-Tunnel vein
B-Tunnel Level
Ord Mercury
Scale 1" = 30'
March 3, 1944
Docket B ND-4884
Charles A Pason



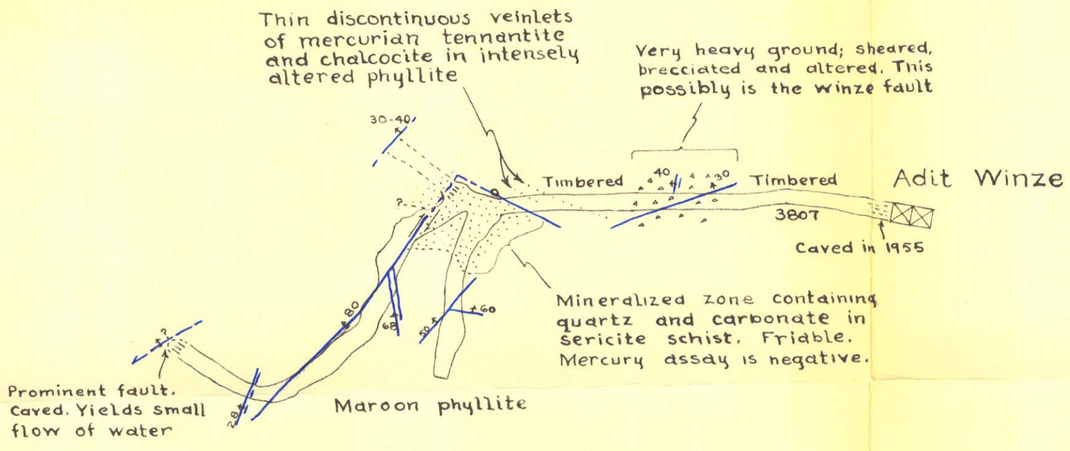
~~FIGURE 8~~
150 LEVEL
OR
MERCURY ADIT
Mapped by J.N. Faick 1955



~~FIGURE 9~~
200 LEVEL
Mapped by J.F. McAllister, 1945
and J.N. Faick, 1955



~~FIGURE 10~~
240 LEVEL
Mapped by J.N. Faick, 1955



~~FIGURE 11~~
300 LEVEL
Mapped by J.N. Faick, 1954

FIG 6
GEOLOGIC MAPS OF WORKINGS, ORD MINE, MAZATZAL MOUNTAINS, ARIZONA

0 50 100 Feet

Fig. 6

Mercury Adit Level
Old Mercury Mine Docket B-ND 4 P.
Tape and Compass Survey
Scale 1" = 30 July 13, 1943
Charles A. Hague
Jasper Comp
Jasper Comp
Fault
Vertical Shaft
Zone of Alteration
Quartz Carbonate
Mineralization
Zone of
intense fasting
Faulting
Alteration - quartz - carbonate mineralization
Zone of faulting
Faulted
Outcrop of
Mercury Vein
U
D

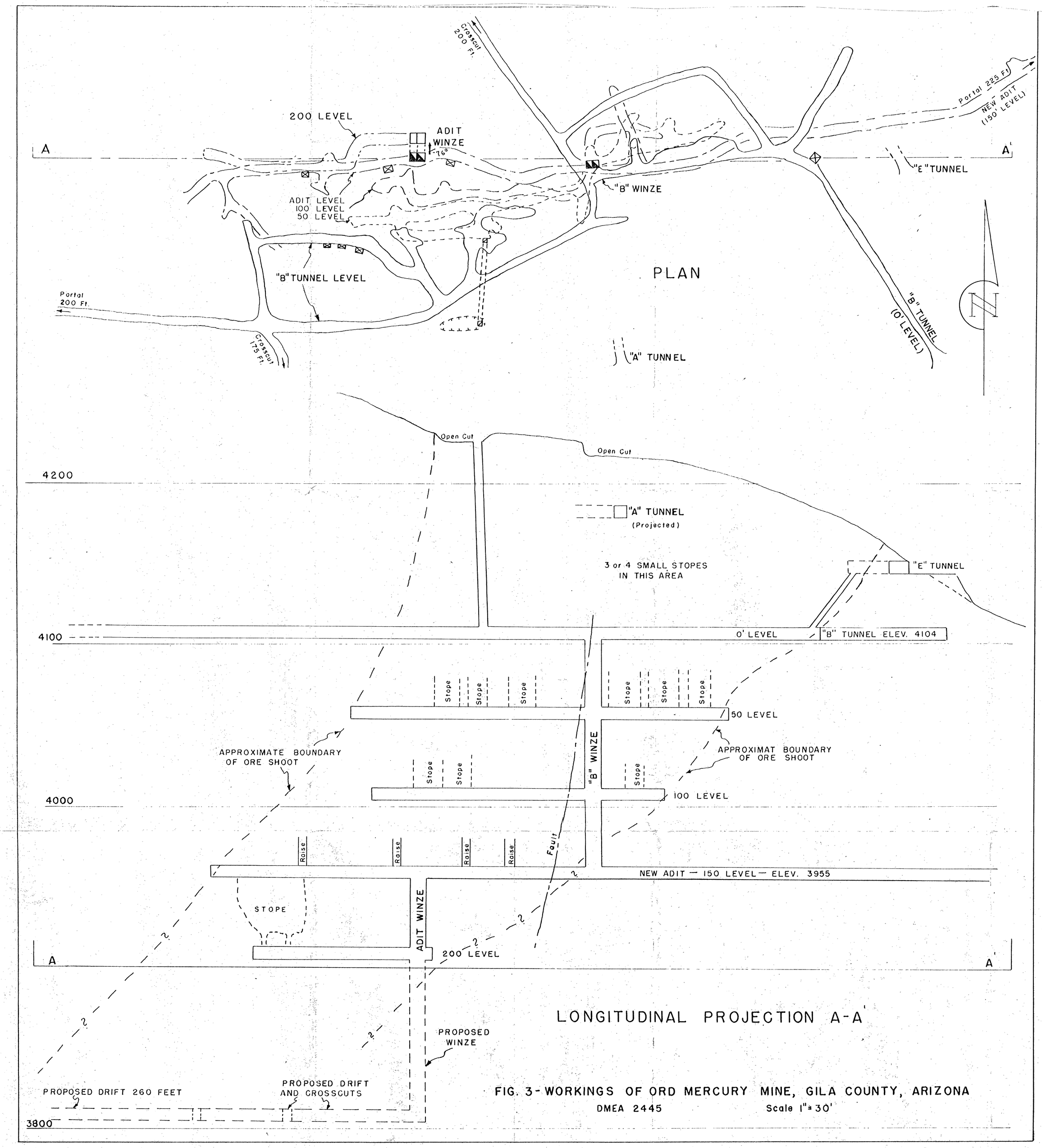


FIG. 3 - WORKINGS OF ORD MERCURY MINE, GILA COUNTY, ARIZONA

DMEA 2445 Scale 1" = 30'