DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE

Idm-E NO. ~~362~~ 632

DMEA NO. 2957

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- [ ] Withdrawn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

See remarks #3

Right Side

- [x] Project summary (final)
- [x] Work Completed analysis (final)

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

- [x] Field Team Semi-Annual Report for Certified Project
- [x] Final Field Team Report (Tab)
- [x] Operator's Final Report (Tab)
- [ ] Interim Field Team Reports
- [x] Operator's monthly reports and all attachments
- [x] On-site Exam Report (Tab)
- [ ] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

Folders No. 2 : Reports
- [x] 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

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-E632, Docket DMEA-2957 (tungsten), dated October 30, 1953, with

Carl Hovgard
1141 Butternut Street
Abilene, Texas

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 Williams Tungsten Mine (Wothree Mine) located in Mohave County, Arizona, during the period May 7, 1960, through October 28, 1963.

A certification of discovery or development was issued on August 9, 1956, and, in accordance with Annex XII (attached to Amendment No. 2) and 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 11 years from the date of the contract or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first. A Report of Review dated December 14, 1955, indicated accepted costs under the exploration contract amounting to $31,275.00 with the Government's contribution on a 75 percent basis being $23,456.25.

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

This review found 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 May 6, 1960, to be $29,735.66. The royalty account as of May 6, 1960, was:

Total Royalty Payable	$1,486.78
Total Royalty Paid	1,486.78
Balance of Royalty Due	$ -0-

As of October 28, 1963, the royalty account of this project was found to be:

Total Royalty Payable	$1,486.78
Total Royalty Paid	1,486.78
Balance of Royalty Due	$ -0-

E. D. Talbert

E. D. Talbert, OME Auditor

November 4, 1963

STATUS OF PROJECT, SCOPE OF REVIEW
AND REASONS THEREFOR

This contract as amended provides that the Operator, as principal if the producer or as surety if not the producer, shall pay to the Government a percentage royalty on all minerals produced from the land thereunder. The land consists of ten unpatented claims (Tungsten Nos. 1 through 10) in secs. 19, 20, 29, and 30, T. 16½ N., R. 11 W., G. & S.R.M., Greenwood Mining District. At the time the contract was executed the Operator was the owner of the property subject to contractual liens of Joseph B. Rice, Jr., Norman D. FitzGerald, F. Leroy Foster, and George B. Blonsky. In consideration of the contract each of these parties executed Owner's Consents to Lien in September 1953.

Exploration work under the contract was completed in October 1955. During the exploration period and for a few months thereafter, the Operator, d/b/a Wothree Mines, mined and concentrated about 1,800 tons of ore, which produced 526.8725 units of WO_3. The proceeds of $29,735.66 from the sale of this production, principally to the General Services Administration under the Domestic Tungsten Purchase Program, are covered by Reports of Royalty Review dated May 10, 1960, and August 25, 1955.

The Operator ceased both mining and milling in December 1955, disposed of all equipment and buildings, and formally abandoned the claims on February 10, 1956. The claims were relocated in 1958 by Grace E. Melles, Box 806, Kingman, Arizona.

Examinations of the property and inquiries by DMRA and OME regional representatives disclosed no evidence of production from December 1955 to May 10, 1960. In September 5, 1962, and October 28, 1963, replies to MME Form 63 inquiries addressed to the Operator, Norman D. FitzGerald, Box 5046, Abilene, Texas, advised over his title of "Manager" that neither production nor change in property status had occurred since May 10, 1960.

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

(1) The files indicate that all production since the date of the contract has been reported and proper royalty thereon paid;
(2) No production has occurred since December 1955; 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.

Hall

225

OFFICE OF MINERALS EXPLORATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF ROYALTY REVIEW

I have reviewed the files of the Office of Minerals Exploration, Washington, D. C., and the Acting Field Officer, OME Region III, Denver, Colorado, pertaining to Contract No. Idm-E632, Docket No. DMEA-2957 (Tungsten), dated October 30, 1953, with

Carl Hovgard
1141 Butternut Street
Abilene, Texas

for the purpose of determining the amount of royalty due the U. S. Government on sales of minerals from property referred to as Williams Tungsten Mine (Wothree Mine) located in Mohave County, Arizona, during the period May 18, 1953, through May 6, 1960.

A certification of discovery or development was issued on August 9, 1956, and, in accordance with Annex III and Amendment No. 4 of the contract, royalty is payable on all minerals mined or produced from the land described in Article 2 of the contract for a period of 11 years from the date of the contract or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first. A Report of Review in lieu of final audit dated December 14, 1955, indicated accepted costs under the exploration contract amounting to $31,275.00 with the Government's contribution, on a 75 percent basis, being $23,456.25.

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

This review established the total sales of tungsten concentrates for the period to be $8,471.49. Royalty due the Government at rates specified in the contract is $423.57.

A prior Report of Royalty Review found the sales subject to Government royalty through May 17, 1955, to be $21,264.17 which added to the sales for this subsequent period make a total of $29,735.66. The royalty account as of May 17, 1955, was:

Total Royalty Due	$1,063.21
Total Royalty Paid	1,063.21
Balance of Royalty Due	$ -0-

At May 6, 1960, the royalty account of this project was found to be:

Total Royalty Due	$1,486.78
Total Royalty Paid	1,486.78
Balance of Royalty Due	$ -0-

C. E. Fisher

May 10, 1960

C. E. Fisher, OME Auditor

STATUS OF PROJECT, SCOPE OF REVIEW
AND REASONS THEREFOR

In a letter dated August 31, 1956, the Operator advised that Wothree Mine was abandoned in March 1956. In Statement in Lieu of Interim Report of Certified Project dated March 10, 1960, signed by T. M. Remslo, statement is made that notice of abandonment of the property was filed and recorded at the County Recorder's Office, February 15, 1956.

This review included a tabulation and recomputation of copies of settlement sheets submitted in support of royalty payments made to the Executive Officer, Region III. The tabulation is filed as a part of my audit work-papers.

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

(1) Inspection reports by representatives of the Field Team, Region III, indicated that there has been no sales of production since January 1956 and that all production from the mine has been reported and proper royalty paid to the Government; and

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

MME Form 22
April 59

DEPARTMENT OF THE INTERIOR
Office of Minerals Exploration

CHECK SHEET OF EXAMINING ENGINEER

Operator's Name Carl Hovgard

Address 1141 Butternut Street

Abilene, Texas

Exploration Contract No. Idm-E632 Docket No. DMEA-2957

			Check One Yes	Check One 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 or OME 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 or OME 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.		

A Notice of Abandonment of the property was filed and recorded at the County Recorder's Office February 15, 1956. There has not been any production from the property subsequent to that date.

Hugh M. Connors

May 10, 1960
Date

Hugh M. Connors
~~XXXXXXXXXXXX~~
Actg.Field Officer, OME, Region III

402

DEFENSE MINERALS EXPLORATION ADMINISTRATION

CONTRACT ADMINISTRATION AND AUDIT DIVISION

RECEIVED

SEP - 1 1955

REPORT OF ROYALTY REVIEW

I have reviewed all copies of settlement sheets on file with the Executive Officer, DMEA Field Team, Region III, applicable to royalties collected on the sales of 5.3772 dry tons of Wolframite Concentrates during the period October 30, 1953 to May 17, 1955 by

Carl Hovgard
1141 Butternut St.
Abilene, Texas

WSM

produced from the Wothree Mine, (P. O. Box 47, Kingman, Arizona) located in Mohave County, Arizona, under the terms of Contract Idm -E632, Docket No. DMEA-2957.

My analysis included review of the periodic reports of on-site examinations by the Inspecting Engineer and also "Check Sheet of Examining Engineer."

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

1. The production involved was incidental to the exploration operations.

2. The five small shipments were reconciled with those reported by the Inspecting Engineer.

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 sales of Wolframite Concentrates for this period to be $21,264.17. Royalty due the United States Government at the contract rate of 5% is $1,063.21. The royalty paid and balance due are as follows:

Total Royalties Due	$1,063.21
Total Royalties Paid	1,063.21
Balance of Royalties Due	$.00

August 25, 1955

Donald T. Finch

Donald T. Finch, Auditor

Royalty Audit

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SEP - 2

Check Sheet of Examining Engineer

Operator's Name Carl Hovgard (Wothree Mines)

Address P. O. Box 47

Kingman, Arizona

Exploration Contract No. E-632 Docket No. DMEA 2957

	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.

3 (a) As far as known, there are no mine or mill rejects of potential value

T M Romsho
Mining Engineer

Date August 26, 1953

82448

400

DOCKET
Surname:

Holt
Martin
Indrz 7/25/56
Berger

Chambers
Holliday
Nelson
Lamb
Hyman

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

To: Mr. Carl Hovgard
1141 Butternut Street
Abilene, Texas

Pursuant to the provisions of Exploration Project Contract No. Idm-E632, executed October 30, 1953 (Docket No. DMEA-2957), as amended, hereinafter called the "Contract", between Carl Hovgard 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.

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

Drifting, crosscutting, raising, and shaft sinking have indicated a minable tonnage of tungsten ore occurring as wolframite and hubnerite in pegmatitic quartz veins in aplite and granite.

THE UNITED STATES OF AMERICA

Dated: AUG 9 - 1956

By C O Mitteenory
Administrator, Defense Minerals
Exploration Administration

cc: Docket
Code 110
Code 400
Code 800
Adm. Read. File
Oper. Committee
R. W. Geehan, USBM
R. W. Holliday, USBM
T. Kiilsgaard, USGS

cc: FT, Region 3
Finance Officer
Norman D. Fitzgerald
Joseph B. Rice, Jr.
F. Leroy Foster
George B. Blonsky
Clarence A. Fredell

SPHolt/ls
7/23/56

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
11/16	Murphy	120 M
11/16	Fisher	800
	GCS	120
11/16	Johnson	110
		100
		220

NOV 16 1964

Mr. Carl Hovgard
c/o Mr. Norman D. Fitzgerald
Box 2044
Abilene, Texas

Re: UMRA-2937 (Tungsten)
Carl Hovgard
Williams Tungsten Mine
(Wathree Mine)
Mohave County, Arizona
Contract Ida-2432

Dear Mr. Hovgard:

By the issue of the subject Exploration Project Contract, as amended, and the certification of discovery or development dated August 9, 1954, all minerals mined or produced from October 30, 1953, to October 30, 1964, were subject to the Government's royalty as set forth in said contract.

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

Sincerely yours,

George Fumich, Jr.

Acting Director

MMerrithew/mm
11/16/64
cc: Director's Reading File
CA&A Division
Region III w/cy of incoming Form 63 dated 10/30/64
Docket
Code 120M

23263

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

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DEC 19 1955
2957

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

Carl Hummel
1141 Hillcrest Street
Atlanta, Texas

pertaining to Exploration Project Contract No. Ida-2632, Docket No. DMEA-2957, including Amendments Nos. 1 through 4, for the months of December, 1953 to October, 1955, inclusive, covering a project for the exploration of Tungsten on property known as Vulcan Mine, located in Mohave County, 72 miles southeast of Kingman, Arizona.

My review included an examination of the Monthly Reports (Form MP-104) and supporting documents obtained therein, comparison of the costs claimed with the contract and pertinent schedules, consultation with the Executive Officer, DMEA Field Team, Region III, 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:

1. All 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		$33,275.00
Exceptions:		
By DMEA Finance Officer	$8.00	
Herewith	2.00	10.00
Total Accepted Cost		$33,265.00

The contract calls for a 75 percent participation of exploration expense by the United States Government. Therefore, payment to the contractor by the Government in the amount of Twenty-three thousand, four hundred fifty-six, and 25/100ths Dollars

** $23,456.25 **

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.

Donald F. Finch

November 14, 1955

Donald F. Finch, Auditor

Docket Copy

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EXPLORATION PROJECT CONTRACT
CARL HOVGARD
DOCKET NO. DMEA-2957

AMENDMENT NO. 4

It is agreed this 12th day of August, 1955, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and Carl Hovgard, that Exploration Project Contract No. IDM-E632 (Docket No. DMEA-2957), dated October 30, 1953, as amended, is further amended, effective April 11, 1955, as follows:

1. In Amendment No. 3:

(a) In Paragraph 1(a), substitute the period "not later than September 1, 1955" for the period "not later than June 1, 1955."

(b) In paragraph 2, substitute the date "October 30, 1955" for the date "September 1, 1955."

(c) In paragraph 3(a), substitute the date "September 1, 1955" for the date "June 1, 1955."

2. The maximum period for royalty payments and lien to secure the payment thereof, provided for in the contract, is increased to "eleven years."

3. Exhibit "A" is amended as follows:

(a) Prior to February 1, 1955, the following work had been performed:

780.5 feet of drifting
Raising 60 feet, and sinking a winze 50 feet.

In lieu of performing the remaining drifting and raising described in Exhibit "A", the following crosscutting and drifting shall be performed:

From the face of the "Old Timers Crosscut" on the 200 foot level, continue the crosscut on an approximate course of N. 50° E., to intersect the "West Outcrop or Upper Vein," and drift upon the vein in the direction of better mineralization. This work shall not exceed an aggregate of 159.5 feet of crosscutting and drifting. See Figure 1, attached hereto and made a part hereof, for outline of work.

(b) The estimated costs of the project are revised to read as follows:

AGREED UNIT COSTS

Work completed prior to February 1, 1955:

Drifting 780.5 feet @ $30/ft.	$23,415.00	
Raising 60 feet @ $30/ft.	1,800.00	
Sinking winze, 50 feet @ $60/ft.	3,000.00	
		$28,215.00

Work to be completed:

Crosscut and drift 159.5 feet @ $30.00/ft.	$ 4,785.00	
		$ 4,785.00

Estimated total cost of the project	$33,000.00
Government participation @ 75%	$24,750.00

* * * * * * * * * * *

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may be required to contribute, nor the agreed unit cost of any item of work.

Executed in sextuplicate the day and year first above written.

for GARL HOVGARD

George B. Blonky

THE UNITED STATES OF AMERICA

By C. O. Mathieson

Administrator, Defense Minerals Exploration Administration

Burton
Hoffland
"Appu. Jul. Oil."
Chapman
Martin
Talbot
Hillsley
Kilmer
H. Johnson

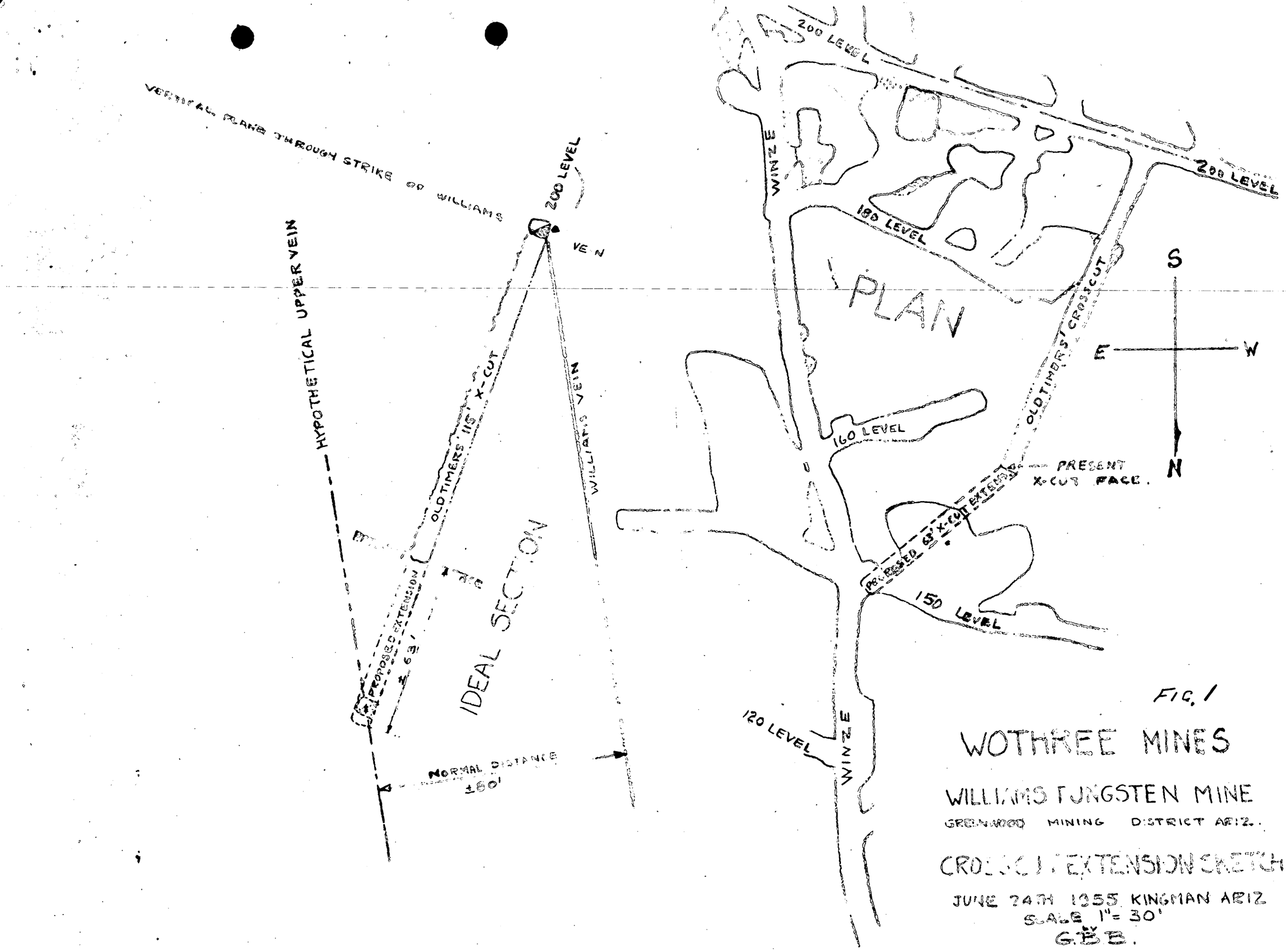

FIG. 1

WOTHREE MINES

WILLIAMS TUNGSTEN MINE

GREENWOOD MINING DISTRICT ARIZ.

CROSSCUT EXTENSION SKETCH

JUNE 24TH 1955 KINGMAN ARIZ

SCALE 1" = 30'

BY G.B.B.

DOCKET COPY

SUSPENSION-TERMINATION AGREEMENT
CARL HOVGARD
DOCKET NO. DMEA-2957

AMENDMENT NO. 3

It is agreed this 11th day of April, 1955, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Carl Hovgard, hereinafter called the "Operator," parties to that certain Exploration Project Contract No. Idm-E632, (Docket No. DMEA-2957), dated October 30, 1953, as amended, hereinafter called the "Contract," that:

1. (a) Work under the Contract shall be suspended during the period beginning February 1, 1955, and ending not later than June 1, 1955.

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

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

2. The time fixed for the completion of the work is further extended to September 1, 1955.

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

(a) Effective June 1, 1955, the Contract and all obligations of the parties thereunder, except as otherwise herein expressly provided, shall be and are hereby terminated.

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

(c) The total net amount contributed by the Government shall be repayable in the form of a percentage royalty on any minerals mined or produced from the land referred to in Article 2 of the Contract, in the manner and amount provided in Annex III to Amendment No. 2, for a period of eleven years from the date of the Contract or until the total net amount contributed by the Government is repaid, a certification of discovery or development being hereby waived.

(d) The Operator hereby releases and agrees to save the Government harmless from all claims or demands under or arising out of the Contract, except as otherwise provided in this Amendment No. 3.

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

THE UNITED STATES OF AMERICA

By C. A. Mitteudorf
Administrator, Defense Minerals
Exploration Administration

for
CARL HOVGARD

Rubin (J&H)
Hoffland

George B. Blosky

Rutledge
Martin
Chapman
Jeffridge
J. B. Johnson

Docket copy

OCT 18 1954

EXPLORATION PROJECT CONTRACT
CARL HOVGARD
DOCKET NO. DMEA-2957

AMENDMENT NO. 2

It is agreed this 4th day of October, 1954, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and Carl Hovgard, that Exploration Project Contract No. Idm-R632 (Docket No. DMEA-2957), dated October 30, 1953, as amended, is further amended, effective October 30, 1953, as follows:

1. (a) Work under the Contract shall be suspended during the period beginning June 1, 1954, and ending not later than October 1, 1954.

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

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

2. The time fixed for the completion of the work is extended to January 30, 1955.

3. Amendment No. 1 is cancelled.

4. Annex III, attached hereto and made a part hereof, is substituted for Article 6 of the Contract as amended by Annex II attached thereto.

5. Exhibit "A" is amended to read as follows:

EXHIBIT "A"

Description of the Work

(a) On the 150-foot level, drift on the vein in a westerly direction for a distance of 472.5 feet from the main winze.

(b) On the 120-foot level, drift on the vein in an easterly direction for a distance of 302.5 feet from the main winze.

(c) On the 0-feet level, drift 100 feet southeasterly along the vein to explore what is believed to be the main vein.

(d) From the southeast drift on the 0-foot level, raise 50 feet.

(e) From a point below the raise referred to in (d) above, sink a 50-foot winze from the 0-foot level.

(f) From the west drift on the 150-foot level, raise 50 feet at a location selected by the Operator but subject to the prior written approval of the Government.

(g) Raise 25 feet from near the bottom of the inclined winze as indicated on the attached maps entitled "Figure 1 - Geology of Part of Zero Level," and "Figure 2 - Section Facing Westerly Thru Lower Part of Winze."

The location of the above work is substantially indicated on the attached map entitled "Figure 3 - Map of the Williams Tungsten Mine - Mohave County, Arizona," attached hereto and made a part hereof. The location, direction and extent of all work are subject to the approval of the Government.

All work shall be timbered as necessary. The drifts shall be not less than 4½ feet by 6 feet in cross section in the clear of timber; the raises shall be not less than 4 feet by 6 feet in cross section in the clear of timber; and the winzes shall be not less than 4 feet by 6 feet in cross section in the clear of timber.

<u>Agreed Unit Costs</u>

Drift 875 feet @ $30.00/ft. $26,250.00

Raise 125 feet @ $30.00/ft.	$ 3,750.00
Sink 50 feet of winze @ $60.00/ft.	3,000.00
Estimated Total Cost of Project	$33,000.00
Government Participation @ 75%	$24,750.00

* * * * *

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may be required to contribute, nor the agreed unit cost of any item of work.

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By O. Mitteudorf
Administrator, Defense Minerals
Exploration Administration

Peterson
Hoffman
Rutledge
Martin
Talbert
Selfridge
Johnson

for CARL HOVGARD

By George B. Blountz
General Manager
as per power of attorney
granted Feb. 24 - 1954.

EXPLORATION PROJECT CONTRACT
CARL HOVGARD
DOCKET NO. DMEA-2957

OCT 18 1954

ANNEX III

The following provisions are in lieu of Article 6:

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

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

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

* The "land" refers to the land described in Article 2 of the contract.

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

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

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

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

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

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

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

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

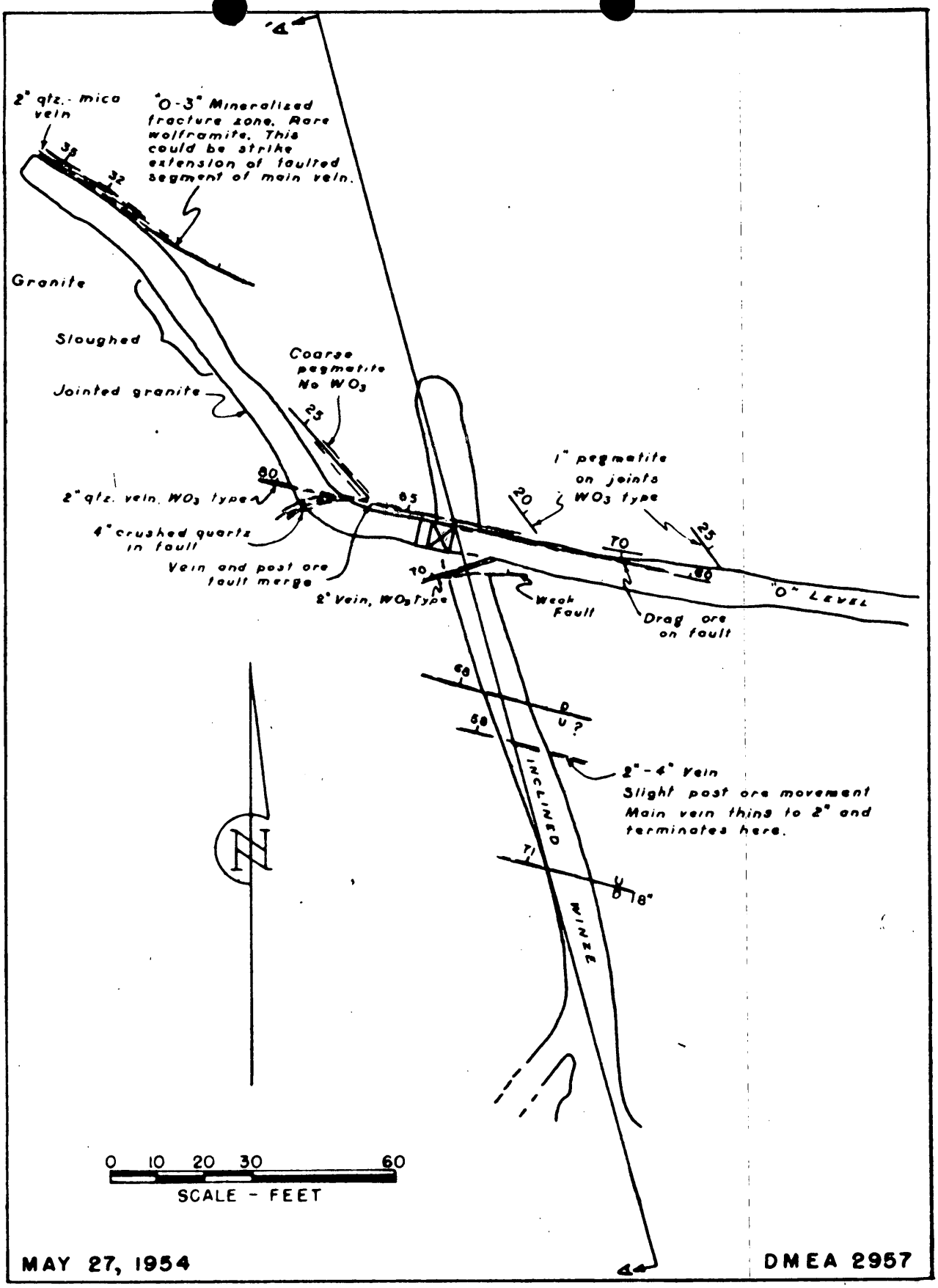

FIGURE 1. - GEOLOGY OF PART OF ZERO LEVEL
WOTHREE (WILLIAMS) TUNGSTEN MINE MOHAVE COUNTY, ARIZONA

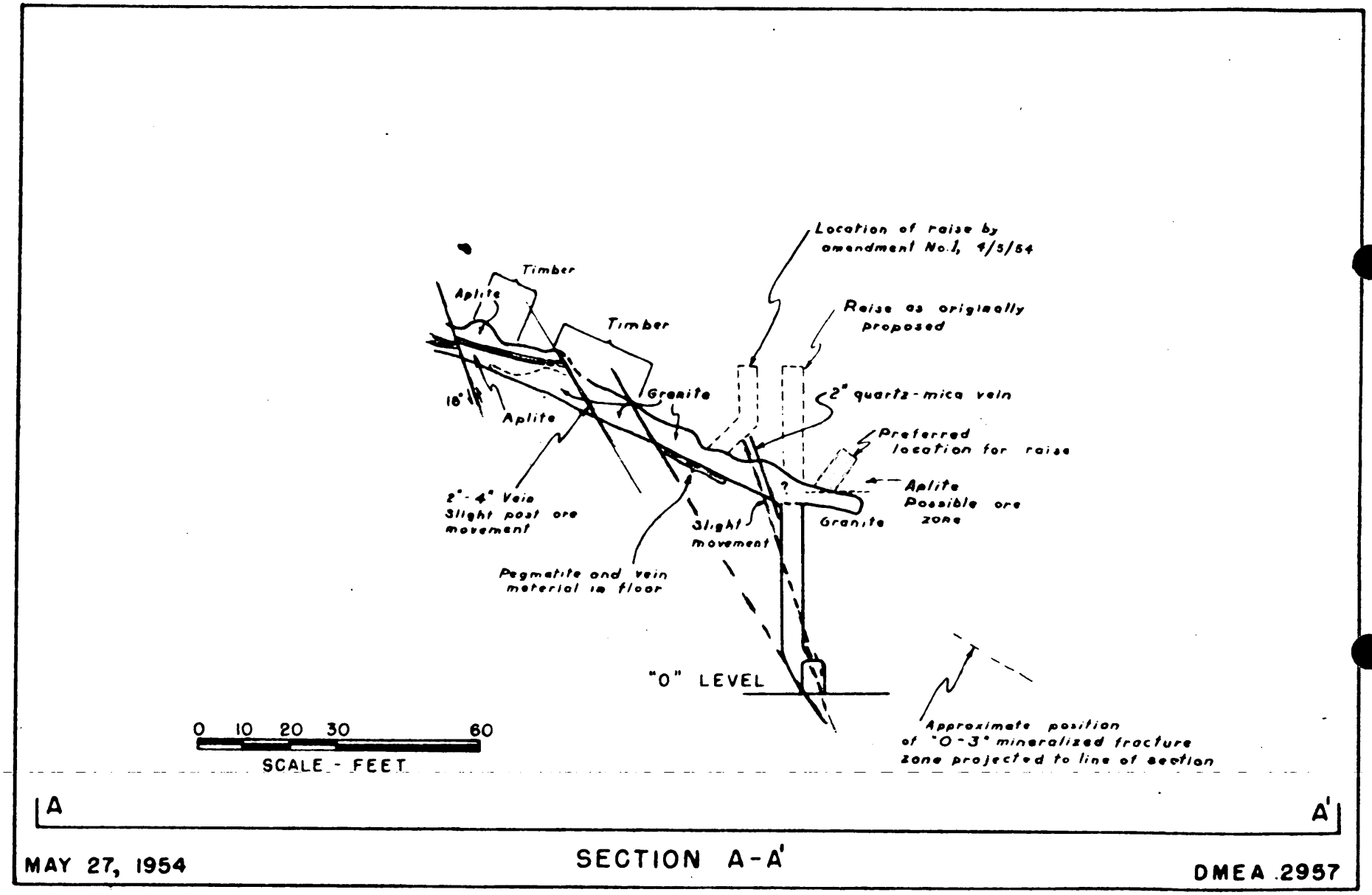

FIGURE 2. - SECTION FACING WESTERLY THRU LOWER PART OF WINZE

WOTHREE (WILLIAMS) TUNGSTEN MINE MOHAVE COUNTY, ARIZONA

Rubin 5/4/54

No. 1

AMENDMENT OF CONTRACT: No. Idm-E632

Contract Docket No. DMEA 2957, dated October 30, 1953, between the United States of America and Carl Hovgard 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(A) (February 1952) following the words "and shall bring the project to completion within a period of", delete "6 months" and in lieu thereof substitute "nine (9) months".

Referring to Exhibit "A" attached to Exploration Project Contract Form MF-200(A) (February 1952), caption "Description of the Work", delete the sentence "Raise 1 is to be extended vertically from the bottom of the inclined winze for 25 feet to attempt to find the main vein north of the fault" and in lieu thereof substitute the following:

Raise 1 is to be started approximately 18 feet up the inclined winze from the grizzley and driven at an angle of 45 degrees from the horizontal until well away from the winze, then turned vertically for a total of 25 feet of raise, in an attempt to find the main vein north of the fault.

Further referring to said Exhibit "A", caption "Estimated Costs of the Project", fourth line, following the words "Raise 1, from", delete the words "bottom of".

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 APR 5 1954

UNITED STATES OF AMERICA

Carl Hovgard

Carl Hovgard - Operator

By W.H. King

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

MF-200 (A)
(February 1952)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 4 1953

DOCKET NO. DMEA 2957

COMMODITY Tungsten

Idm-E632

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12/7/53
Rutin

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

EXPLORATION PROJECT CONTRACT [1]
(Short Form)

IT IS AGREED this 30th day of October, 1953, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and [2] Carl Hovgard
1141 Butternut Street
Abilene, Texas

hereinafter called the "Operator," as follows: and as set forth in Annex II attached hereto and made a part hereof.

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 Mohave, described as follows: [3] Ten unpatented lode mining claims, which are recorded in the Office of the County Recorder at Kingman, Mohave County, Arizona.

(See Annex No. 1 attached)

the Operator represents and undertakes: [4]

(*a*) That the Operator is the owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached: Contractual liens of Joseph B. Lice, Jr., Norman D. Fitzgerald, E. Leroy Foster, and George D. Blonsky, whose consents to lien are attached.

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

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

ARTICLE 3. *Exploration project.*—The Operator, within 60 days from the date of this contract shall commence work on a project of exploration for [5] Tungsten in or upon the described land; and shall bring the project to completion within a period of 6 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. The work shall be performed by the Operator or by independent contractor or contractors efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for workmen's compensation and employers' liability insurance, with suitable and adequate equipment, materials, and labor, to bring the project to completion within the time fixed. 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 4. *Costs of the project.*—The agreed, estimated costs of performing the work, expressed in terms of units of work to be performed (per foot of drifting, per foot of drilling, per cubic yard of material to be moved, etc.) are set forth in Exhibit "A," attached hereto. The Government will pay seventy-five (75) percent of these agreed, estimated costs, as they accrue, for units of work actually performed that conform with the description or specifications for the work set forth in this contract, in an aggregate total amount not in excess of $24,750.00, which is 75 percent of $33,000.00, 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 check or 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. The Government may, as it sees fit, make payments direct to the Operator's independent contractors, if any, for the account of the Operator, rather than to the Operator.

ARTICLE 5. *Reports, accounts, audits.*—(*a*) *Progress reports.* The Operator shall provide the Government with monthly reports of units of work performed 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 units of work performed 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.

[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*) *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 the units of work performed, which the Government may inspect and audit at any time. The Government may at any time require a check of the work performed and an audit of the Operator's records and accounts, by a certified public accountant or otherwise, 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 and statement of work performed to accompany his final report.

ARTICLE 6. *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: **See Annex II substituted for that part of 6(a) preceding the colon.**

(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 the 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 7. *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 8. *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.

ARTICLE 9. *Changes and added provisions* _____

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

Carl Hagand
(Operator)

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

By _____

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.

_____ [CORPORATE SEAL]

U. S. GOVERNMENT PRINTING OFFICE 16—66329-1

Docket No. [illegible] 2957

Article 2, Exploration Project Contract Form NF-200(A)

ANNEX NO. 1

Claim	Book No.	Page No.
Tungsten No. 1	EE	264
Tungsten No. 2	EE	265
Tungsten No. 3	EE	266
Tungsten No. 4	EE	267
Tungsten No. 5	EE	736
Tungsten No. 6	EE	737
Tungsten No. 7	EE	738
Tungsten No. 8	FF	671
Tungsten No. 9	FF	672
Tungsten No. 10	FF	673

ANNEX II

DEPARTMENT OF THE INTERIOR
Bureau of Mines
RECEIVED

The following provisions are in lieu of all of paragraph (a) of Article 6 which precedes the colon:

If 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 a sufficient, complete, final report and final account referred to in the contract has been rendered, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development. 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, as follows: (1) Regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification 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 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 net amounts realized from the sale or other disposition of any such production (including any bonuses), in whatever form disposed of, including ore, concentrates, or metal, as follows:

Docket No. [illegible] 8297

Exhibit "A"

Description of the Work

A drift will be driven from the main winze on the 150 level on the vein for 400 feet in a westerly direction. A drift will be driven on the 100 level on the vein for 375 feet in an easterly direction. A continuously drift will be driven 300 feet along the vein on the "0" level to explore what is believed to be the main vein. Raise 1 is to be extended vertically from the bottom of the backlimit which for 25 feet to attempt to find the main vein north of the fault. Three additional raises of 50 feet each may be driven from the 100, 150 and "0" levels at locations acceptable to the BLM representatives if prior written approval is granted by the Field Team. The tentative location of the work is shown on Figure 3 and Figure 4 which are attached and made a part of Exhibit A.

Project No. [illegible] 2957

Estimated Costs of the Project

150 level drifting westerly 450 feet @ $30.00 per foot	$13,500.00
150 level drifting easterly 375 feet @ $30.00 per foot	11,250.00
"9" level drifting westbeasterly 100 feet @ $30.00 per foot	3,000.00
Raise 1, from bottom of footwall winze 25 feet @ $30.00 per foot	750.00

The following raises if approved by the Field Team:

50 feet of raise from the 150 level drift @ $30.00 per foot	1,500.00
50 feet of raise from the 150 level drift @ $30.00 per foot	1,500.00
50 feet of raise from the "9" level drift @ $30.00 per foot	1,500.00
Total estimated cost of project:	$33,000.00
Government participation @ 75%	24,750.00

The above costs include any and all costs incurred in the performance of the above described work.

53
(Revised July 1, 1953) OWNER'S CONSENT TO LIEN

WHEREAS, the undersigned, as owner, co-owner, lessor, or seller has an interest in certain property in the State of Arizona, County of Mohave, described as follows:1/

Ten unpatented lode mining claims which are recorded in the Office of the Recorder at Kingman, Mohave County, Arizona, which are more particularly described in Annex No. 1 hereto attached.

which is the subject of a proposed exploration project contract, hereinafter called the "contract", between the United States of America, hereinafter called the "Government", and

2/ Carl Hayward

hereinafter called the "Operator"; and

WHEREAS, under the provisions of said contract the Government is entitled to a percentage royalty on production (as set forth on the reverse side hereof) and to other rights and equities which do or may conflict with or be adverse to the rights of the undersigned:

NOW THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, undertakes and agrees as follows:

1. The Government's equity in and right to dismantle, sever, take possession of, and remove and dispose of facilities, buildings, fixtures, equipment, or other items as provided in the contract, or any amendment thereof, shall prevail over and be prior and superior to any conflicting or adverse rights of the undersigned, and the Government is authorized to enter upon the land for such purposes.

2. To secure the payment to the Government of the percentage royalty on production3/ provided for under the terms of said exploration project contract, or any amendment thereof, there is hereby granted to the Government a lien upon the land above referred to and upon any production of minerals therefrom, until said royalty is fully paid or ten years have elapsed from the date of the contract, whichever occurs first.

3. The undersigned shall commit no act nor assert any claim that may contravene or conflict with the lien, claim, or rights of the Government under the provisions of said contract. This agreement shall be binding upon the heirs, executors, administrators, successors, and assigns of the undersigned.

4. Changes and added provisions None

Dated this 29th day of September, 1952.

Joseph B. Rice, Jr. [Seal]
Joseph B. Rice, Jr.

[Seal]

[Seal]

1/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease [or contract, deed, or other document] dated _____, and recorded in book _____ page _____ official records of said county." If (b) is used, the book and page of recordation cannot be dispensed with. If the space provided is insufficient, use an Annex, and refer to the Annex in the space.

2/ Insert the name of the Operator as it will appear in the exploration project contract.

3/ Mining or production from the land is not required, and in the absence of production there is no obligation to repay the Government.

RELEVANT CONTRACT PROVISIONS

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 the 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 net amounts realized from the sale or other disposition of any such production, in whatever form disposed of, including ore, concentrates, or metal, as follows:

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

(b) 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.)

c. Definitions.--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.

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.

ANNEX NO. 1

Claim	Book No.	Page No.
Tungsten No. 1	EE	264
Tungsten No. 2	EE	265
Tungsten No. 3	EE	266
Tungsten No. 4	EE	267
Tungsten No. 5	EE	736
Tungsten No. 6	EE	737
Tungsten No. 7	EE	738
Tungsten No. 8	FF	671
Tungsten No. 9	FF	672
Tungsten No. 10	FF	673

MF-203
(Revised July 1, 1953)

OWNER'S CONSENT TO LIEN

WHEREAS, the undersigned, as owner, co-owner, lessor, or seller has an interest in certain property in the State of Arizona, County of Mohave, described as follows:1/

Ten unpatented lode mining claims which are recorded in the Office of the Recorder at Kingman, Mohave County, Arizona, which are more particularly described in Annex No. 1 hereto attached.

which is the subject of a proposed exploration project contract, hereinafter called the "contract", between the United States of America, hereinafter called the "Government", and

2/ Carl Hovgard

hereinafter called the "Operator"; and

WHEREAS, under the provisions of said contract the Government is entitled to a percentage royalty on production (as set forth on the reverse side hereof) and to other rights and equities which do or may conflict with or be adverse to the rights of the undersigned:

NOW THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, undertakes and agrees as follows:

1. The Government's equity in and right to dismantle, sever, take possession of, and remove and dispose of facilities, buildings, fixtures, equipment, or other items as provided in the contract, or any amendment thereof, shall prevail over and be prior and superior to any conflicting or adverse rights of the undersigned, and the Government is authorized to enter upon the land for such purposes.

2. To secure the payment to the Government of the percentage royalty on production3/ provided for under the terms of said exploration project contract, or any amendment thereof, there is hereby granted to the Government a lien upon the land above referred to and upon any production of minerals therefrom, until said royalty is fully paid or ten years have elapsed from the date of the contract, whichever occurs first.

3. The undersigned shall commit no act nor assert any claim that may contravene or conflict with the lien, claim, or rights of the Government under the provisions of said contract. This agreement shall be binding upon the heirs, executors, administrators, successors, and assigns of the undersigned.

4. Changes and added provisions None

Dated this 22nd day of September, 1953.

Norman D. FitzGerald [Seal]

[Seal]

[Seal]

1/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease [or contract, deed, or other document] dated _____, and recorded in book _____ page _____ official records of said county." If (b) is used, the book and page of recordation cannot be dispensed with. If the space provided is insufficient, use an Annex, and refer to the Annex in the space.

2/ Insert the name of the Operator as it will appear in the exploration project contract.

3/ Mining or production from the land is not required, and in the absence of production there is no obligation to repay the Government.

RELEVANT CONTRACT PROVISIONS

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 the 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 net amounts realized from the sale or other disposition of any such production, in whatever form disposed of, including ore, concentrates, or metal, as follows:

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

(b) 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.)

c. Definitions.--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.

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.

ANNEX NO. 1

Claim	Book No.	Page No.
Tungsten No. 1	EE	264
Tungsten No. 2	EE	265
Tungsten No. 3	EE	266
Tungsten No. 4	EE	267
Tungsten No. 5	EE	736
Tungsten No. 6	EE	737
Tungsten No. 7	EE	738
Tungsten No. 8	FF	671
Tungsten No. 9	FF	672
Tungsten No. 10	FF	673

MF-203
(Revised July 1, 1953)

OWNER'S CONSENT TO LIEN

Bureau of Land Management
Lands Unit
RECEIVED
Nov 2 1953

WHEREAS, the undersigned, as owner, co-owner, lessor, or seller has an interest in certain property in the State of Arizona, County of Mohave, described as follows:1/

Ten unpatented lode mining claims which are recorded in the Office of the Recorder at Kingman, Mohave County, Arizona, which are more particularly described in Annex No. 1 hereto attached.

which is the subject of a proposed exploration project contract, hereinafter called the "contract", between the United States of America, hereinafter called the "Government", and

2/ Carl Howgard

hereinafter called the "Operator"; and

WHEREAS, under the provisions of said contract the Government is entitled to a percentage royalty on production (as set forth on the reverse side hereof) and to other rights and equities which do or may conflict with or be adverse to the rights of the undersigned:

NOW THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, undertakes and agrees as follows:

1. The Government's equity in and right to dismantle, sever, take possession of, and remove and dispose of facilities, buildings, fixtures, equipment, or other items as provided in the contract, or any amendment thereof, shall prevail over and be prior and superior to any conflicting or adverse rights of the undersigned, and the Government is authorized to enter upon the land for such purposes.

2. To secure the payment to the Government of the percentage royalty on production3/ provided for under the terms of said exploration project contract, or any amendment thereof, there is hereby granted to the Government a lien upon the land above referred to and upon any production of minerals therefrom, until said royalty is fully paid or ten years have elapsed from the date of the contract, whichever occurs first.

3. The undersigned shall commit no act nor assert any claim that may contravene or conflict with the lien, claim, or rights of the Government under the provisions of said contract. This agreement shall be binding upon the heirs, executors, administrators, successors, and assigns of the undersigned.

4. Changes and added provisions None

Dated this 30th day of September, 1953.

Witness
Anne M. Bowes
Cambridge, Mass.

F. Leroy Foster [Seal]
F. Leroy Foster

[Seal]

[Seal]

1/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease [or contract, deed, or other document] dated _____, and recorded in book _____ page _____ official records of said county." If (b) is used, the book and page of recordation cannot be dispensed with. If the space provided is insufficient, use an Annex, and refer to the Annex in the space.

2/ Insert the name of the Operator as it will appear in the exploration project contract.

3/ Mining or production from the land is not required, and in the absence of production there is no obligation to repay the Government.

RELEVANT CONTRACT PROVISIONS

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.

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(b) 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.

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MF-203
(Revised July 1, 1953)

OWNER'S CONSENT TO LIEN

WHEREAS, the undersigned, as owner, co-owner, lessor, or seller has an interest in certain property in the State of Arizona, County of Mohave, described as follows:1/

Ten unpatented lode mining claims which are recorded in the Office of the Recorder at Kingman, Mohave County, Arizona, which are more particularly described in Annex No. 1 hereto attached.

which is the subject of a proposed exploration project contract, hereinafter called the "contract", between the United States of America, hereinafter called the "Government", and

2/ Carl Hovgard

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WHEREAS, under the provisions of said contract the Government is entitled to a percentage royalty on production (as set forth on the reverse side hereof) and to other rights and equities which do or may conflict with or be adverse to the rights of the undersigned:

NOW THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, undertakes and agrees as follows:

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3. The undersigned shall commit no act nor assert any claim that may contravene or conflict with the lien, claim, or rights of the Government under the provisions of said contract. This agreement shall be binding upon the heirs, executors, administrators, successors, and assigns of the undersigned.

4. Changes and added provisions None

Dated this 29th day of September, 1953.

George B. Blonsky [Seal]
George B. Blonsky

[Seal]

[Seal]

1/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease [or contract, deed, or other document] dated _____, and recorded in book _____ page _____ official records of said county." If (b) is used, the book and page of recordation cannot be dispensed with. If the space provided is insufficient, use an Annex, and refer to the Annex in the space.

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Tungsten No. 8	FF	671
Tungsten No. 9	FF	672
Tungsten No. 10	FF	673

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 30 1953

Budget Bureau No. 42-R1035.2.

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. DMEA-2957
Metal or Mineral
Date Received 3-30-53
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: Norman D. FitzGerald dba Wothree Mines
George B. Blonsky, General Manager
Please address all correspondence to: George B. Blonsky, General Manager
Wothree Mines, Box 448, Kingman, Arizona.

(*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 10 unpatented claims, named Tungsten #1 to Tungsten #10 inclusive, located 12 miles east of Big Sandy, in Greenwood Mining District, on Sections 19,20,29 & 30, T-16½ N.R.11W., G & S R.B.& M. Mohave County, Arizona.

(*b*) State any mine name by which the property is known. Williams Tungsten Mine.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Norman D.FitzGerald is owner, having fully exercised his option to purchase on 12.2.52.

(*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 whatsoever

(*f*) If the land consists of unpatented claims, add to the description above the book and page numbers for each recorded location notice. Book of Mines EE Pages 264, 265, 266, 267, 736, 737, 738
" " " FF " " 671, 672, 673

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. see separate sheet p.1 to 2

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades. sep.sheet pg.2

(*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. please see accompanying sheet page 3

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points. please see accompanying sheet page 3

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

please see accompanying sheet page 4.

16—66551-1

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to [illegible]ore Wolframite (FeMn) WO_4

(*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. please see accompanying sheets, page 4.

(*c*) The work will start within seven days and be completed within three 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. see accompanying sheet p.4

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: $33,300.00

(*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.). see separate sheets pages 5, 6 & 7.

(*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)? yes

(*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 22, 1953

Norman D. FitzGerald, dba Wothree Mines
(Applicant)

By George B. Blonsky, General Manager

George B. Blonsky

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

NORMAN D. FITZGERALD
OWNER

GEORGE B. BLONSKY
GENERAL MANAGER

WOTHREE MINES
P. O. BOX 448
KINGMAN, ARIZONA.

4. PHYSICAL DESCRIPTION.

(a) The Williams Tungsten Mine was discovered early in the first decade of the century. Since then and until December 2,nd, 1952, it always belonged to Ed. Williams, members of his family and their associates. During that time numerous parties had this mine under lease and option, but all except for Norman D. FitzGerald, present owner and loan applicant, failed to exercise the purchase option. The numerous previous parties have spent considerable moneys on opening up of the mine, equipping it with camp and milling facilities and actually on mining and milling operations.

The total development to date can be described as follows:

<u>On "0" level:</u> (claims Tungsten # 4 and #5)
1) 1400' of crosscut along the main vertical fault.
2) ± 60' of drift on vein North of "0" level crosscut.
3) 40' of drift on vein South of "0" level crosscut.(by Wothree Mines)
4) 40' of raise from "0" level crosscut to Bottom of the inclined winze.

<u>On 100 level, off Winze (on claim Tungsten #1)</u>
a raise of unknown length, caved.

<u>On 120 level, off winze (on claim Tungsten #1)</u>
1) 10' drift east of winze (by Blonsky)

<u>On 150 lefel (on claim Tungsten #1)</u>
1) 70' drift East of winze.
2) 65' drift West of winze.
3) one stope above each drift on 150 level.

<u>On 180 level (on claim Tungsten #1)</u>
1) 85' drift West of winze
2) 10' drift East of winze
3) 20' raise up from end of West drift.
4) stope above West drift.

<u>On 200 levell (on claim Tungsten #1)</u>
1) 700' drift from portal to face at West end.
2) 360' winze from a point ± 200' west of portal of 200 level down to 15' past the down raise near bottom of winze, described as on "0" level.
3) 65' crosscut into the hanging wall at about 280' west of portal of 200 level.
4) Numerous stopes above 200 level.
5) 80' raise from 200 to 260 level.

<u>On 260 level: (on claim Tungsten #1)</u>
1) 300' of drift from portal to face at the West end.

NORMAN D. FITZGERALD
OWNER

GEORGE B. BLONSKY
GENERAL MANAGER

WOTHREE MINES
P. O. BOX 448
KINGMAN, ARIZONA.

260 level continued:

2) 55' of crosscut in footwall 100' west of portal.
3) 40' raise from crosscut to 280 level, partly on vein;
4) 60' ra ise and stope from 260 to 280 level on vein.
5) 30' blind raise on vein.
6) 5 stopes (of which three are caved near portal; two are connecting with the 280 level, of which one is caved.

On 280 level (on claim Tungsten #1)

1) 170' of drift from portal to face at the West end
2) 20' raise
3) 50' raise
4) 30' raise
5) one caved stope near portal.

On West side of claim Tungsten #1

1) 70' crosscut addit, which never reached the vein.
2) 20' underhand stope shaft
3) 10' underhand stope shaft
4) several smaller surface cuts.

On other claims:

1) Several surface openings, from some of which reputedly highgrade ore was obtained.

The accessible workings, not counting stopes, thus add up to 3615' at least. These workings are all easily accessible and only about 400' of drift in the West end of the 200 level are partially blocked. 10 Mandays of work would open even this part of the mine to mine car traffic.

The "0", 150, 180, 200,260 levels are equipped with track.
The "0", 150, 180 and 200 levels and winze are equipped with water and air pipe. At the "0" portal a rented 210 cfm gas compressor and in winze a tugger hoist and slusher are installed.
At 200 level a #10 Imperial Ingersol Rand compressor is installed, but has no power. Two new airhammers and accessories are at the property

(b). The past production of this mine is unknown as no good records were kept. Both Mr. Fernstrom of Tucson and Mr. Glen of Los Angeles -- tungsten buyers -- are familiar with Williams Tungsten ore and bought quantities of highgrade and concentrate from this mine. U.S.G.S. bulletin 940-I, on pages 259 to 264 gives a good official description of the mine and data available on its production. The numerous stopes (27 were counted) indicate that a very considerable tonnage of rock was moved out of this mine.

About 180 samples were taken by the writer from the different levels and stopes in the mine. Weighted average calculations indicate , that mean width of mineralized vein is close to 25", and that mean value of mineable ore in place is about 1.25% WO_3.

NORMAN D. FITZGERALD
OWNER

GEORGE B. BLONSKY
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4 (c) Geologically speaking the Williams Tungsten vein is a pegmatite intrusion of quartz, mica and wolframite in a flattish dike of aplite, dipping north at about 20° to 30° with ~~xxxxxxx~~ horizontal in a mass of granite.

Aplite is quite strong, 10' thick and is very persistent. The quartz vein is also very persistent, though not so strong. In places quartz comes in two streaks from 12" to 30" wide each with a horse of aplite in between. There is a very good possibility that in some mined parts of the dike only one streak was mined. This will bear investigation.

Along the dip of the vein mineable values are exposed for a stretch of about 450'. Along the strike mining was done for some 550' on the 200 level, but in most places horizontal extension of actual exposure is between 100' and 200'.

On the "0" level present owner drove 40' of drift (at the very bottom of the mine and some 400' away from the nearest stope) and averaging all ten samples taken (at 5' intervals) obtained a figure of 1.726% WO_3. We are eager to extend this drift further south east to see how much ore we will encounter along the strike on this level. The proof of further extension of ore along the strike on the "0", 120, 150, 180, 200 and 280 levels is very desirable.

On the 200 level the west end of the drift is in the hanging wall and on the wrong side of the strike fault. We want to cut across to the vein to the south of the present working and drift on the vein.

Also the 200 level should be extended some 200' to 300' westward to intersect the projection of the plane of the west vein exposed on the west side of the #1 claim. The outcrop is some 175' long, is at an elevation 200' above the 200 level and dips at about 20° with horizontal eastward towards the west face of the present 200 level.

Should ore be encountered in the extension of the 200 level a very considerable block of virgin ore would be developed and available for milling. Backs would be extensive. If no vein would be cut by 300' west extension of the present 200 level, diamond drilling should be resorted to from the new west face of this tunnel and ground above and further west thus explored.

4 (d). Williams Tungsten Mine is located 72 miles SE of Kingman, Mohave County, Arizona. For the first 45 miles the road is a State dirt highway and the rest a well maintained County dirt road. Except after big snows and rains, which are experienced only occasionally, this road is in fair shape and maintained by cooperative Mohave County officials. This is the distance to shipping and supply point at Kingman, Arizona. Camp has three bunkhouses, two good cabins, cookhouse, change house, shop.

NORMAN D. FITZGERALD
OWNER

GEORGE B. BLONSKY
GENERAL MANAGER

WOTHREE MINES
P. O. BOX 448
KINGMAN, ARIZONA.

4 (c). Water supply is by 2000' pipeline from well and pump. In our 6 months' operation of Wothree Mines we had no lack of manpower. We have no power supply and will have to use gas and oil driven compressors until mill is built and diesel generator set is installed.

We had no trouble in obtaining materials, supplies and equipment from Kingman.

5 (b) In view of the above described geological facts we would like to undertake the following exploration program.

I: DRIFTING, RAISING:

Location	Footage Drift	Footage Raise	
"0" level	100'	50'	to prove ore above "0" level
40 level (winze bottom)		10'	to cut vein above bottom of winze.
120 level	100'		to extend ore already known
150 "	60'		" " " " "
180 "	120'		" " " " "
200 "	320'	20'	to undercut east extension of west outcrop
280 "	60'		to extend ore already known.
	760'	80'	

II: DIAMOND DRILLING

Location	Number D.D.holes	Length D.D.holes
At west end of 200 level extension	3	600'
On "0" level between drift and raise	4	400'
Total Diamond Drill footage	7	1000'

5 (d). The applicant, Norman D. FitzGerald, is an M.I.T. Ph.D. in Mining Engineering.

The undersigned is a 1925 M.I.T. Mining Engineering graduate. Since 1925 he was always employed by mining or metallurgical concerns: he was general superintendent for Operator Consolidated Mines' gold mine and mill at Johannesburg, Cal.; general superintendent for Custer Consolidated Mines at Sunbeam, Idaho; mine engineer for M.A. Hanna Co.'s Three Kids Mine in Nevada, did mining engineering work for U.S. Smelting & Refining Co., the Cyprus Mines, Coronado Copper and Zinc Corp. and other concerns. He is a member of A.I.M.E. and has done many consulting jobs and mine examinations.

6. COST ESTIMATE:

I. Drifting and raising : proposed 840' of drift, crosscut and raise.

		Cost p.foot of advance	
(a)	INDEPENDENT CONTRACTS: assume no contracts will be given out	0.00	
(b)	LABOR 8 miners @ $12.00 a day (working 6 day week) 4 helpers @ $12.00 a day	10.30	
	COMPLEMENT no outside consultant	0.00	
	SUPERVISION: Manager $1000.00 a month; Mine Foreman 400.00 a month; Mine Mechanic 400.00 a month	4.80	
		$15.10	15.10
(c)	OPERATING MATERIALS AND SUPPLIES		
	Gasoline	1.23	
	Oil	0.06	
	Powder	1.20	
	Fuses and Caps	0.40	
	Rotor (none)	0.00	
	Steel	0.10	
		$ 3.04	3.04
(d)	OPERATING EQUIPMENT		
	Rented: one compressor 21 cfm @ $200 p.mo.	0.60	
	" " one tugger hoist @ 200. p.mo.	0.20	
	Owned: 3 Swedish Hammers @ 10% cost	0.20	
	" Ingersoll Rand Compressor 240 cfm. (amortized)	0.00	
	" Slusher	0.05	
	" 4 mine cars	0.10	
	" small tools	0.03	
	Pipe	0.59	
	Rail	1.77	
		$ 3.54	3.54
(e)	REHABILITATION AND REPAIR none, as just completed	0.00	0.00
(f)	NEW BUILDINGS none, as just completed	0.00	0.00
(g)	MISCELLANEOUS		
	Maintenance of compressors	0.03	
	" " " hammers	0.06	
	" " " tugger hoist	0.03	
	Analytical work	0.36	
	Accounting	0.24	
	Payroll taxes	1.30	
	Compensation & liability insurance	1.30	
	Mulage of supplies	1.00	
		$ 4.52	4.52
(h)	CONTINGENCIES @ 15% on all above	$ 5.95	5.95
	Total cost per foot of advance....		$30.13

DRIFTING AND RAISING 840' @ $30.13 per foot TOTALS $25,309.20

COST ESTIMATE -- continued:

II. Diamond drilling: proposed 1000' of diamond drill hole.

	cost p.foot of D.D.hole	
(a) INDEPENDANT CONTRACT: assume no contracts will be given out	$0.00	0.00
(b) LABOR for 1000' of hole @ 20' per shift 2 drillers @ $15.00 each per day equals $30.00 2 helpers @ $12.00 " " " " $24.00 with ½day overtime per week	$1.46	1.46
(CONSULTANT no outside consultant SUPERVISION none, as already figured in estimate for drifting and raising		
(c) OPERATING MATERIALS AND SUPPLIES		
Oil for engineer for compressor	0.25	
Bits	0.05	
Lubricants	0.05	
	$ 0.35	0.35
(d) OPERATING EQUIPMENT		
Owned: Ingersoll Rand compressor	$ 0.05	
To purchase: 40 HP engine for compressor price less sales value over 1000'	0.20	
" " " drill and accessories (price less sales value over 1000')	0.50	
	$ 0.75	0.75
(e) REHABILITATION Ingersoll Rand compressor	$ 0.20	0.20
(f) NEW BUILDING: Cutting stations @$620 p.Sta. $1860 total over 1000'	$ 1.86	1.86
(g) MISCELLANEOUS:		
Maintenance Drill	$ 0.10	
" " Compressor	0.03	
" " Bits	0.10	
Analytical work	0.05	
Accounting (already estimated in Part I)	0.00	
Compensation and Liability insurance	0.15	
Payroll Taxes	0.10	
	$ 0.53	0.53
(h) CONTINGENCIES @20% on above $5.15	$1.03	1.03
Total cost per foot of advance.....		$6.18

DIAMOND DRILLING 1000' @ $6.18 per foot TOTALS $6,180.00

COST ESTIMATE SUMMARY:

III. SUMMARY:

Cost of drifting and raising 840 ft. @$30.13	$25,309.20
" " Diamond Drilling 1000' @ $6.18 p.ft.	$ 6,180.00
Unforeseen expenditures	$ 1,844.13
Total cost of proposed exploration:	$33,333.33

On Tungsten the U.S. Government reimburses 75%

Therefore cost to the Government or the amount

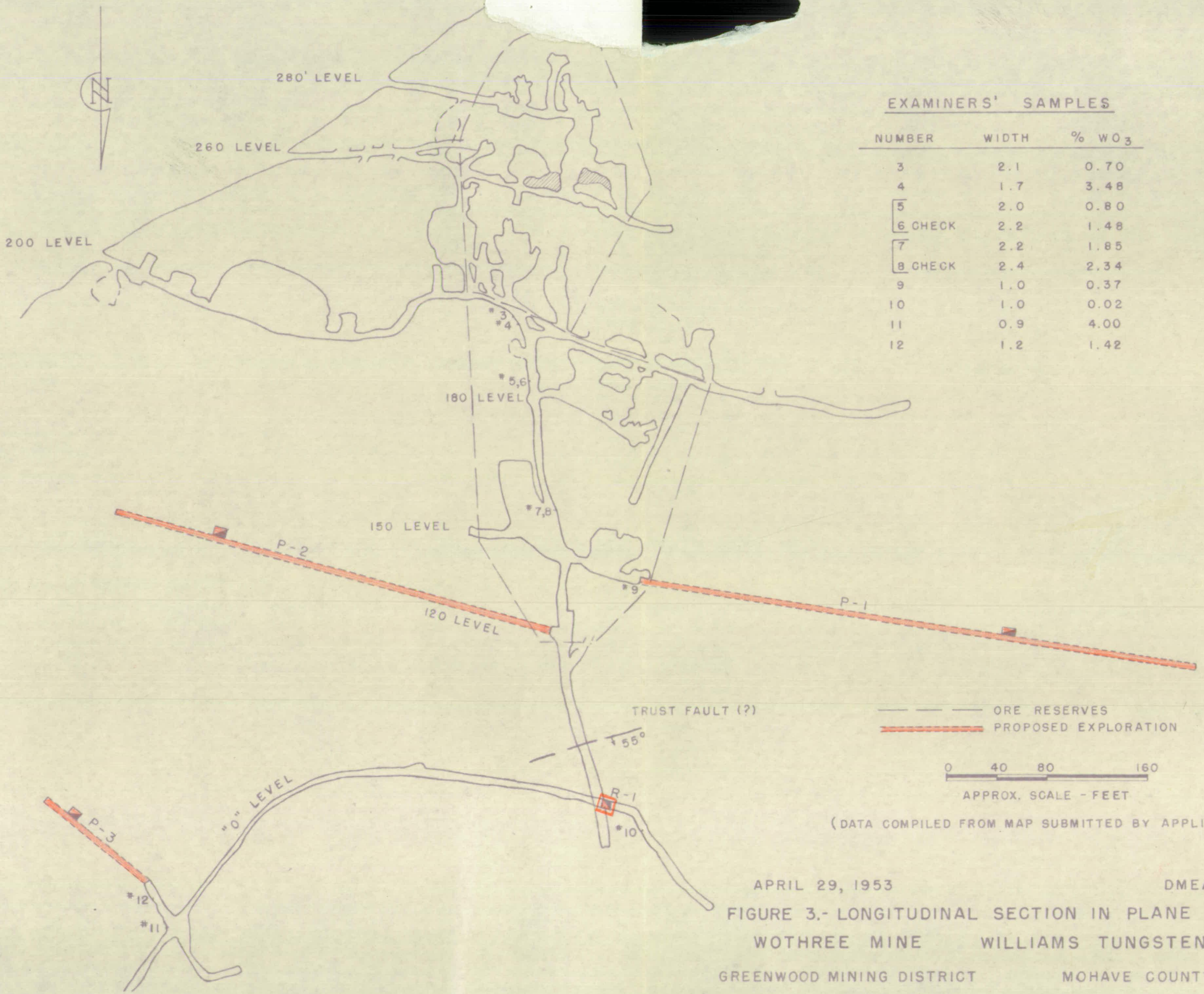
of loan applied for: $25,000.00

7 (b) HOW DO YOU PROPOSE TO FURNISH YOUR SHARE OF THE COSTS?
We propose to furnish our share of the costs principally in money except for small amounts in form of depreciation on our equipment used, as shown in cost estimate.

We would finance the spending and request monthly reimbursements of 75% of moneys spent.

	Cost per foot of advance	
Operating equipment		
Rented: compressor 210 cfm @ $250 per mo.....	$ 0.60	
Rented: one tugger hoist @ $80 per mo.	0.20	
Owned: 2 Swedish drills	0.20	
1 I.R. 240 cfm compressor	0.00	
1 Slusher	0.05	
4 mine cars	0.10	
Small tools	0.03	
Pipe	0.59	
Rail	1.77	
	$ 3.54	$ 3.54
Miscellaneous		
Maintenance of compressors	0.03	
Maintenance of hammers	0.06	
Maintenance of tugger hoist	0.03	
Analytical work	0.36	
Accounting	0.24	
Payroll taxes	1.30	
Compensation and liability insurance	1.50	
Haulage of supplies	1.00	
	$ 4.52	$ 4.52
Contingencies, 15% of above	$ 3.93	3.93
Total cost per foot of advance		$30.13

A contract price of $30 per foot for a standard 5 by 7 foot drift, fully equipped, is reasonable. Operations will be conducted under two very unfavorable factors. One is the fact that the property is isolated as it is 72 miles from the railroad and supply center. The second is that the major part of the drifting will be from the inclined winze. This winze dips at about 25° and all muck from the drifts dropped into the winze has to be scraped down the winze for some 175 feet to a vertical raise. Blonsky has estimated $1.60 for powder, fuse and caps. This cost is too low and there are other items on the low side. These items outweigh his salary of $1,000 per month, which for supervising the running of 2 or 3 headings, is fantastic. The proposed work at $30 per



EXAMINERS' SAMPLES

NUMBER	WIDTH	% WO_3
3	2.1	0.70
4	1.7	3.48
5	2.0	0.80
6 CHECK	2.2	1.48
7	2.2	1.85
8 CHECK	2.4	2.34
9	1.0	0.37
10	1.0	0.02
11	0.9	4.00
12	1.2	1.42

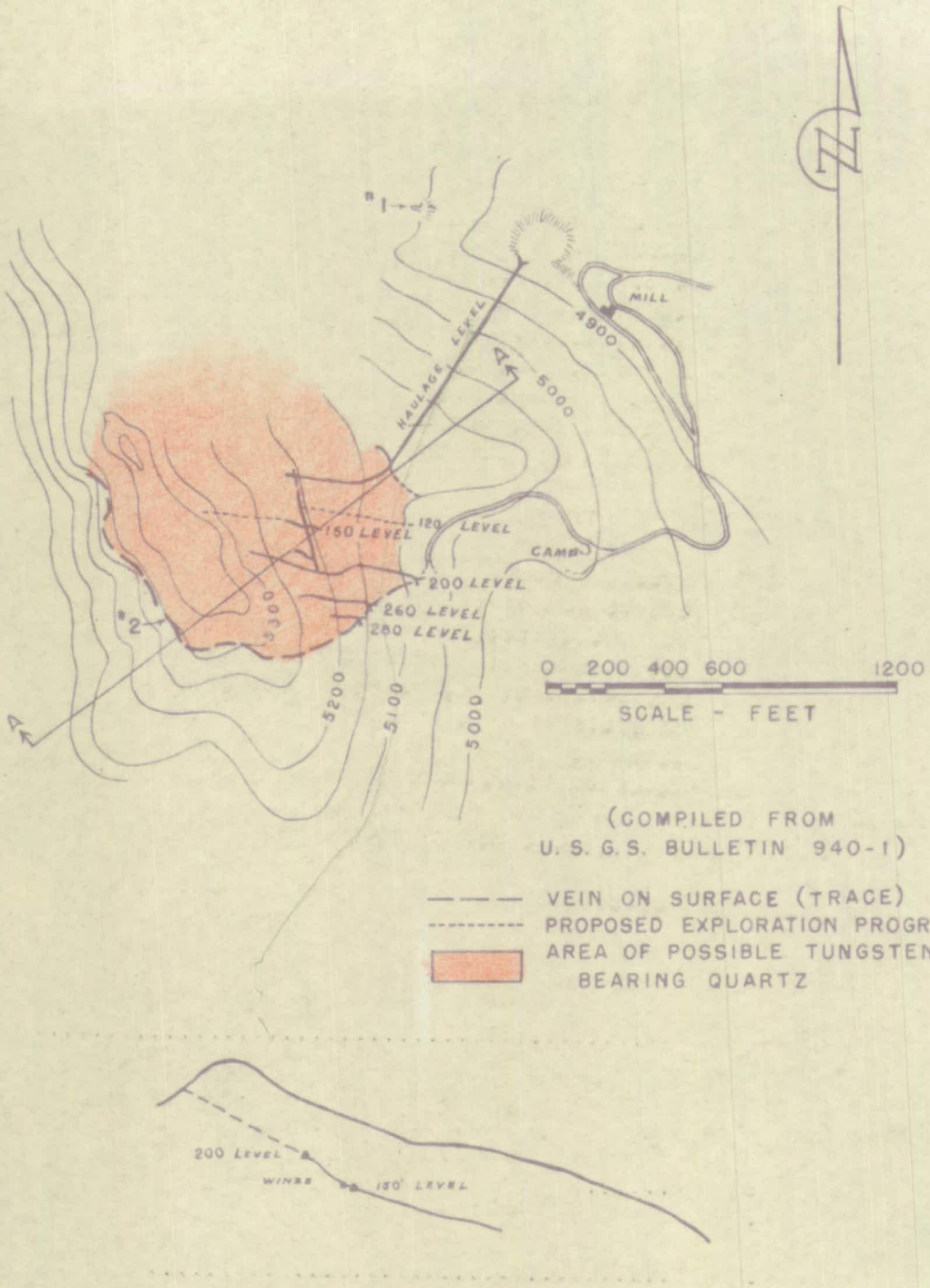
(DATA COMPILED FROM MAP SUBMITTED BY APPLICANT)

APRIL 29, 1953 DMEA 2957

FIGURE 3.- LONGITUDINAL SECTION IN PLANE OF VEIN

WOTHREE MINE WILLIAMS TUNGSTEN MINE

GREENWOOD MINING DISTRICT MOHAVE COUNTY, ARIZONA



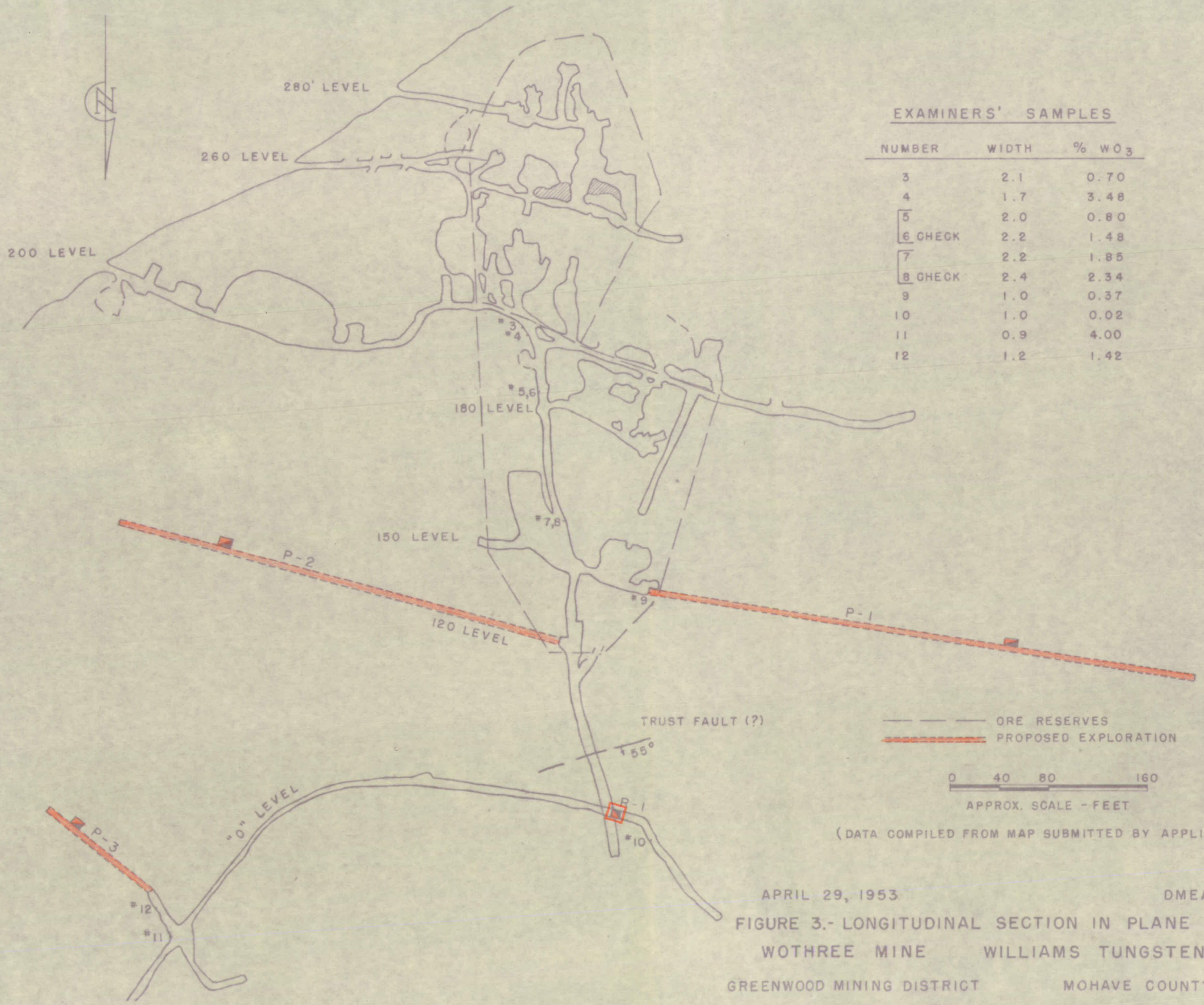
SECTION A – A

APRIL 29, 1953 DMEA 2957

FIGURE 2. - AREAL MAP - WOTHREE MINE

WILLIAMS TUNGSTEN MINE

GREENWOOD MINING DISTRICT MOHAVE COUNTY, ARIZONA



(DATA COMPILED FROM MAP SUBMITTED BY APPLICANT)

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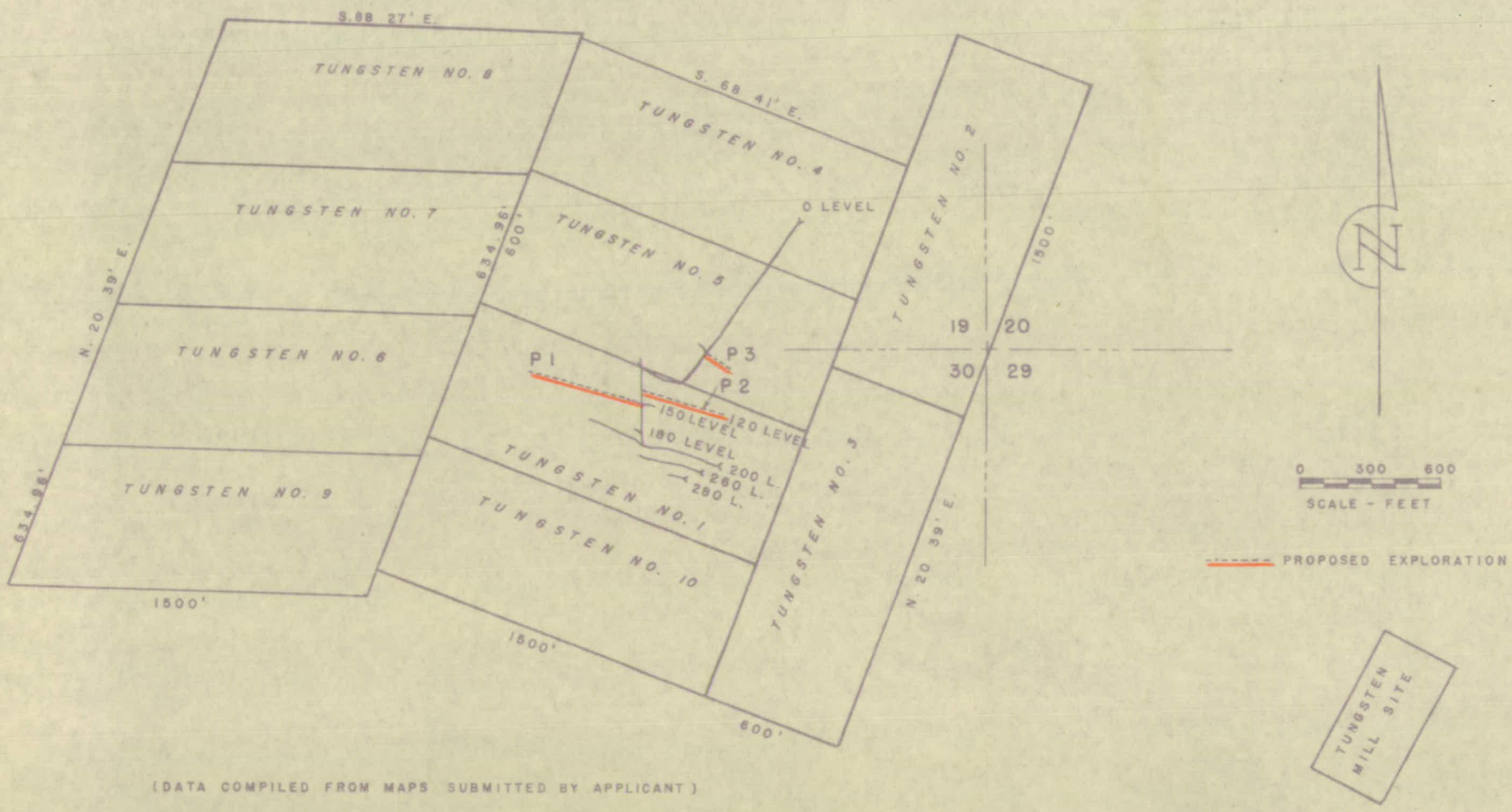
APRIL 29, 1953 DMEA 2957

FIGURE 3.- LONGITUDINAL SECTION IN PLANE OF VEIN

WOTHREE MINE WILLIAMS TUNGSTEN MINE

GREENWOOD MINING DISTRICT MOHAVE COUNTY, ARIZONA



(DATA COMPILED FROM MAPS SUBMITTED BY APPLICANT)

LOCATION OF PROPOSED WORK IS APPROXIMATE ONLY
AN ACCURATE LOCATION WOULD NECESSITATE A NEW SURVEY

DMEA 2957 JUNE 1953

FIGURE 4.- CLAIM MAP - WOTHREE MINE - WILLIAMS TUNGSTEN MINE

GREENWOOD MINING DISTRICT MOHAVE COUNTY, ARIZONA

EXAMINERS SAMPLES

NUMBER	WIDTH	% WO_3
3	2.1	0.70
4	1.7	3.48
5	2.0	0.80
6 CHECK	2.2	1.48
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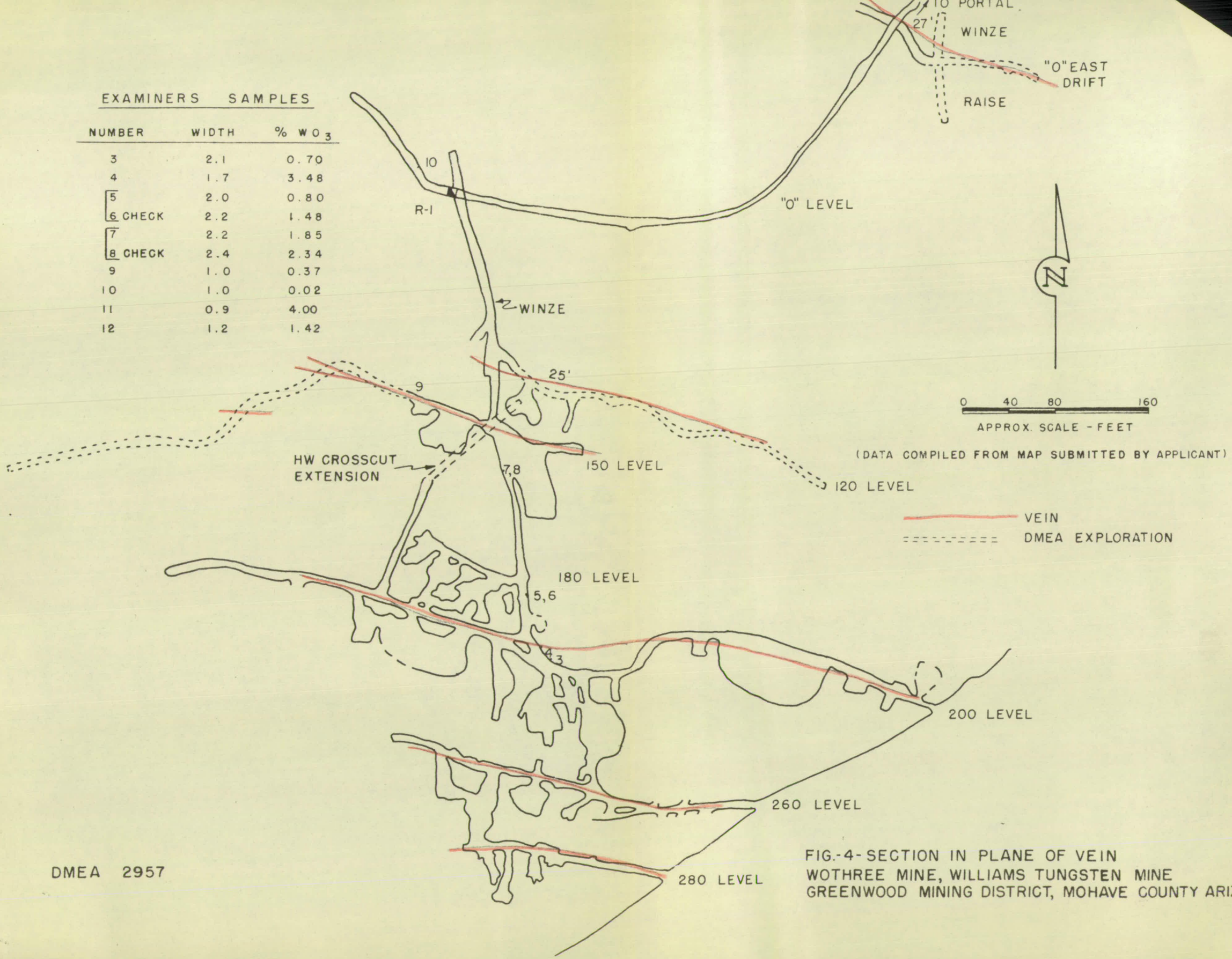
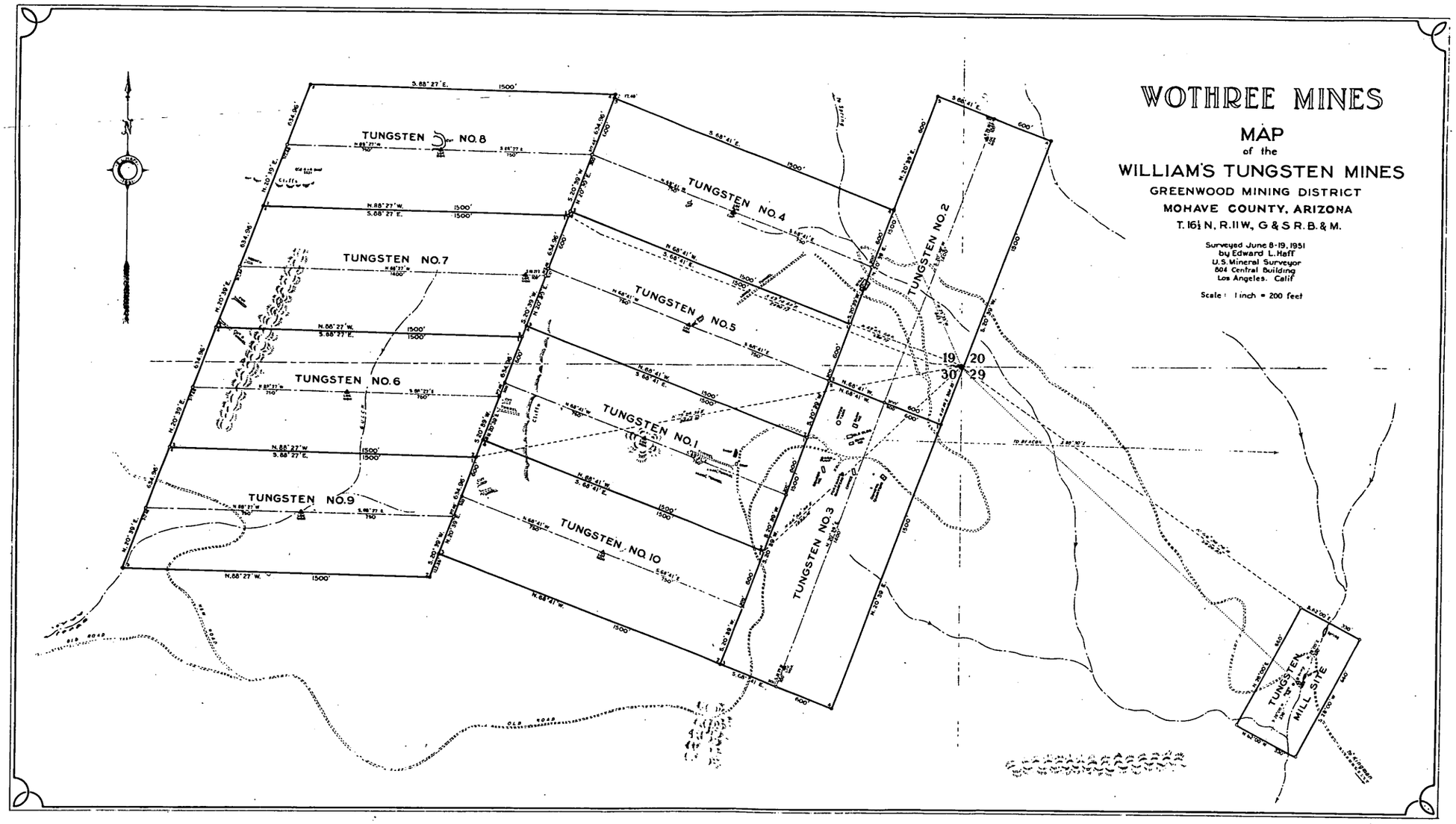
9	1.0	0.37
10	1.0	0.02
11	0.9	4.00
12	1.2	1.42

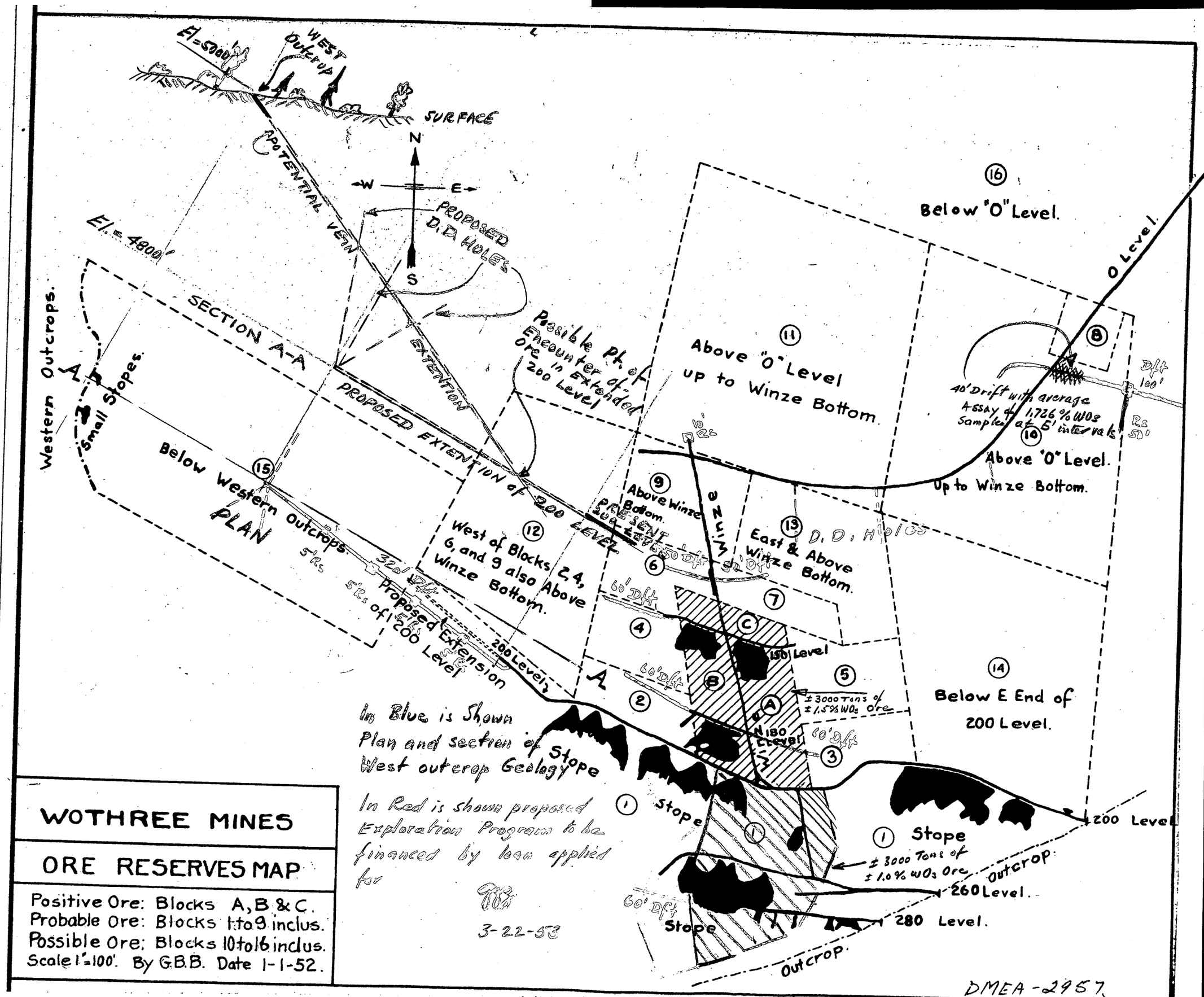


DMEA 2957

FIG.-4- SECTION IN PLANE OF VEIN
WOTHREE MINE, WILLIAMS TUNGSTEN MINE
GREENWOOD MINING DISTRICT, MOHAVE COUNTY ARIZ.


WOTHREE MINES
MAP
of the
WILLIAM'S TUNGSTEN MINES
GREENWOOD MINING DISTRICT
MOHAVE COUNTY, ARIZONA
T. 16½ N, R. 11 W, G & S R. B. & M.
Surveyed June 8-19, 1951
by Edward L. Haff
U.S. Mineral Surveyor
804 Central Building
Los Angeles. Calif
Scale: 1 inch = 200 feet
TUNGSTEN NO. 8
TUNGSTEN NO. 7
TUNGSTEN NO. 6
TUNGSTEN NO. 9
TUNGSTEN NO. 4
TUNGSTEN NO. 5
TUNGSTEN NO. 1
TUNGSTEN NO. 10
TUNGSTEN NO. 2
TUNGSTEN NO. 3
TUNGSTEN MILL SITE
19
20
30
29

DMEA-2957


El=5000'
WEST Outcrop
SURFACE
N
W
E
S
POTENTIAL VEIN
PROPOSED D.D. HOLES
El. = 4800'
SECTION A-A
EXTENTION
PROPOSED EXTENTION of 200 LEVEL
Possible Pt. of Encounter of Ore in Extended 200 Level
Western Outcrops.
Small Stopes.
Below Western Outcrops.
PLAN
Above Winze Bottom.
PRESENT 200 LEVEL
West of Blocks 2, 4, 6, and 9 also Above Winze Bottom.
Proposed Extension of 200 Level
200 Level
Above "O" Level up to Winze Bottom
Below "O" Level.
O Level.
40' Drift with average Assay of 1.726 % WO3 Sampled at 5' intervals
Above "O" Level. Up to Winze Bottom.
East & Above Winze Bottom.
D.D. Holes
Below E End of 200 Level.
150 Level
180 Level
± 3000 Tons of ± 1.5% WO3 ore
± 3000 Tons of ± 1.0% WO3 Ore
Stope
Stope
Stope
Outcrop
260 Level.
280 Level.
200 Level
Outcrop.
In Blue is Shown Plan and section of Stope West outcrop Geology
In Red is shown proposed Exploration Program to be financed by loan applied for
3-22-53
WOTHREE MINES
ORE RESERVES MAP
Positive Ore: Blocks A, B & C.
Probable Ore: Blocks 1 to 9 inclus.
Possible Ore: Blocks 10 to 16 inclus.
Scale 1"=100'. By G.B.B. Date 1-1-52.

DMEA-2957

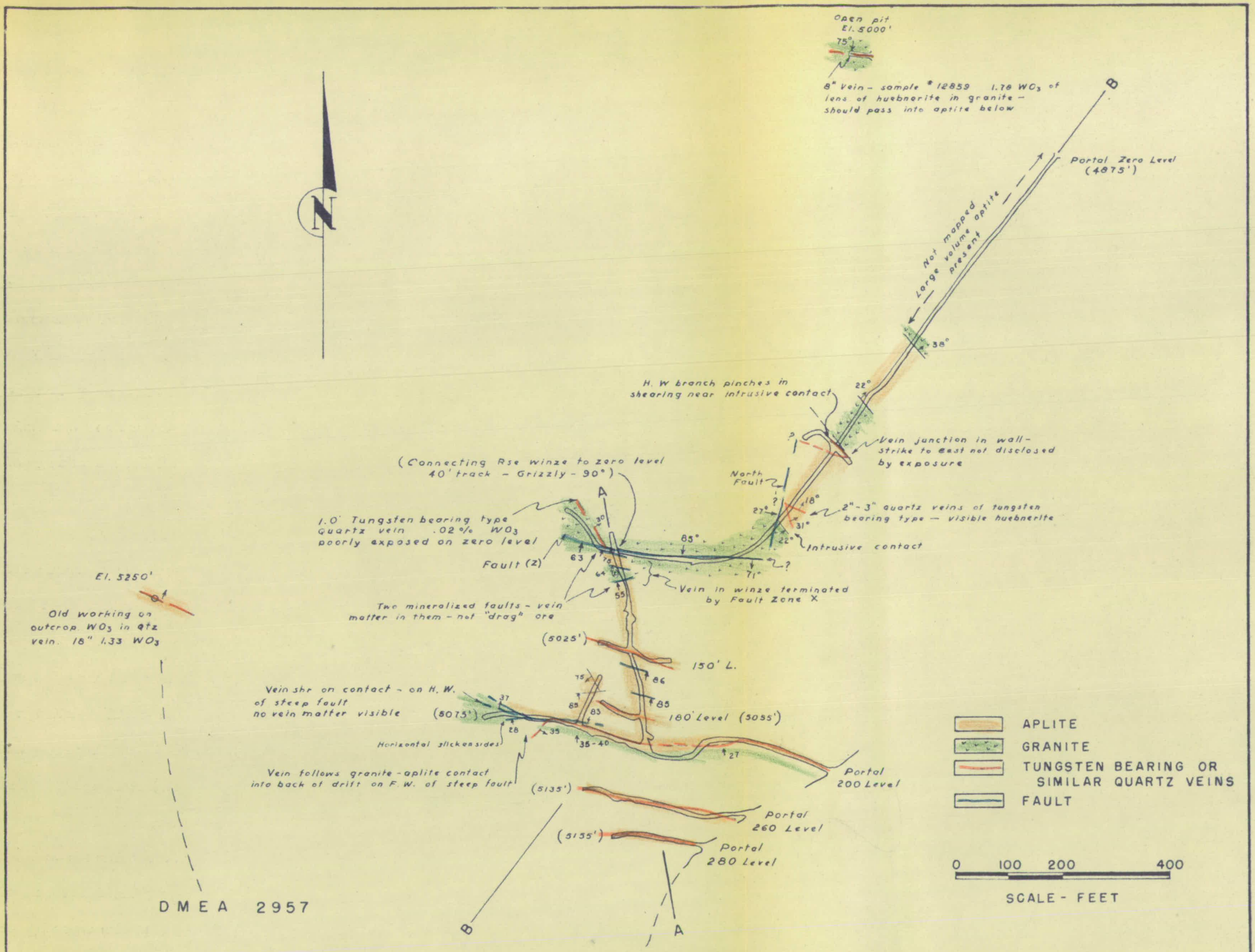
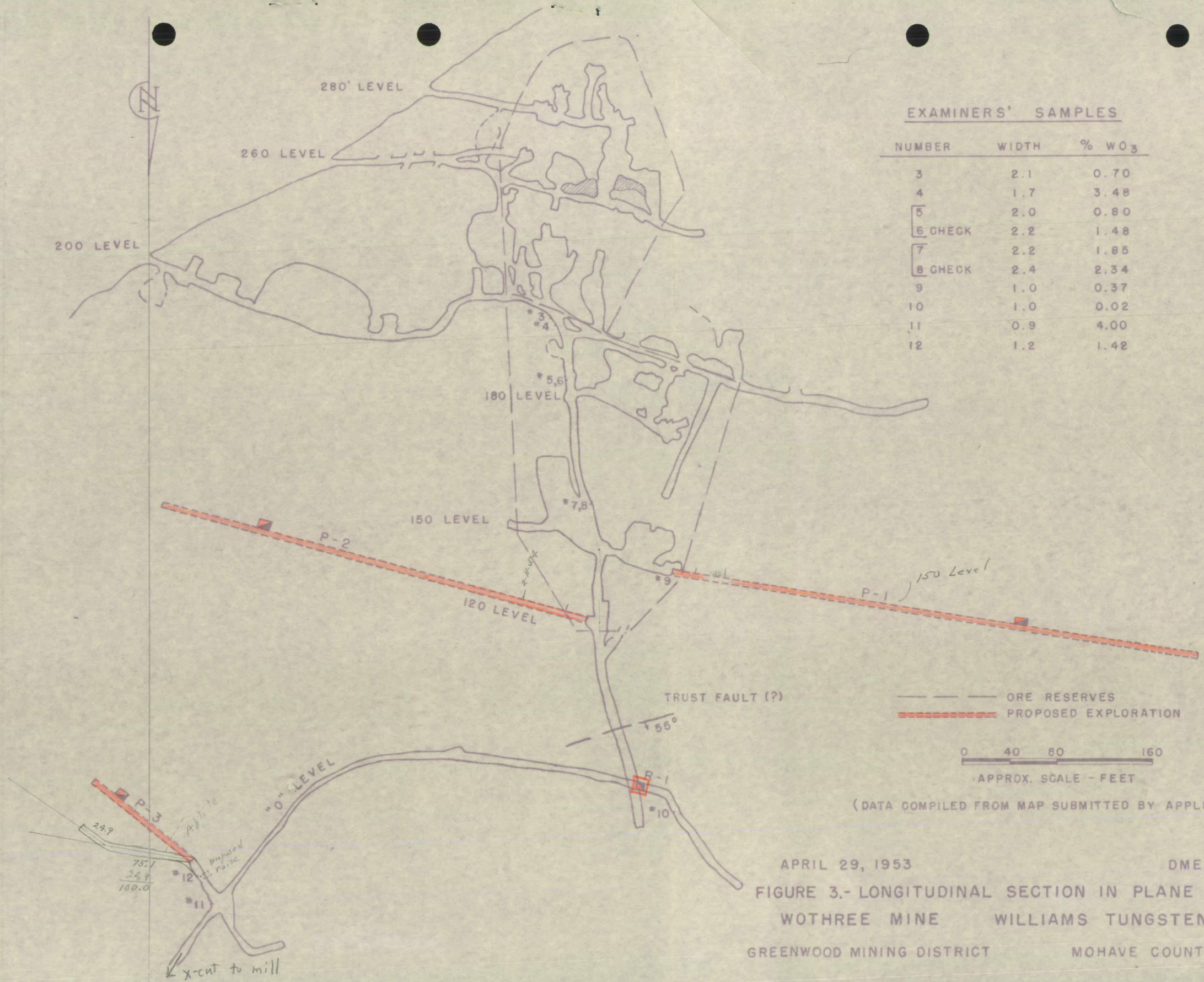


FIGURE I. - GEOLOGY OF PORTION OF MINE WORKINGS

WOTHREE TUNGSTEN MINE MOHAVE COUNTY, ARIZONA



EXAMINERS' SAMPLES

NUMBER	WIDTH	% WO_3
3	2.1	0.70
4	1.7	3.48
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10	1.0	0.02
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12	1.2	1.42

(DATA COMPILED FROM MAP SUBMITTED BY APPLICANT)

APRIL 29, 1953 DMEA 2957

FIGURE 3.- LONGITUDINAL SECTION IN PLANE OF VEIN

WOTHREE MINE WILLIAMS TUNGSTEN MINE

GREENWOOD MINING DISTRICT MOHAVE COUNTY, ARIZONA

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE ELECTRIC POWER ADMINISTRATION
WASHINGTON 25, D. C.

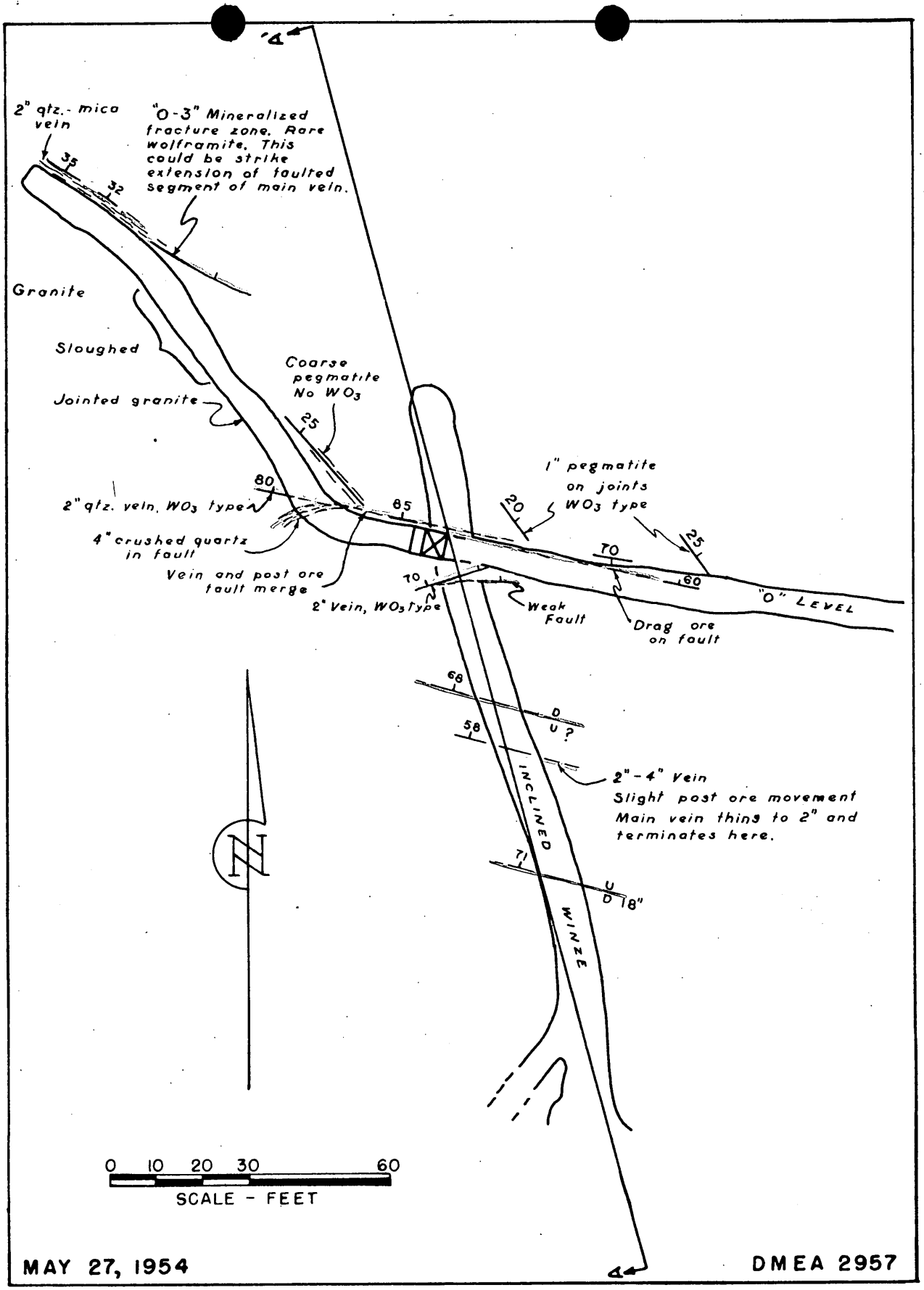

FIGURE 1. - GEOLOGY OF PART OF ZERO LEVEL
WOTHREE (WILLIAMS) TUNGSTEN MINE MOHAVE COUNTY, ARIZONA

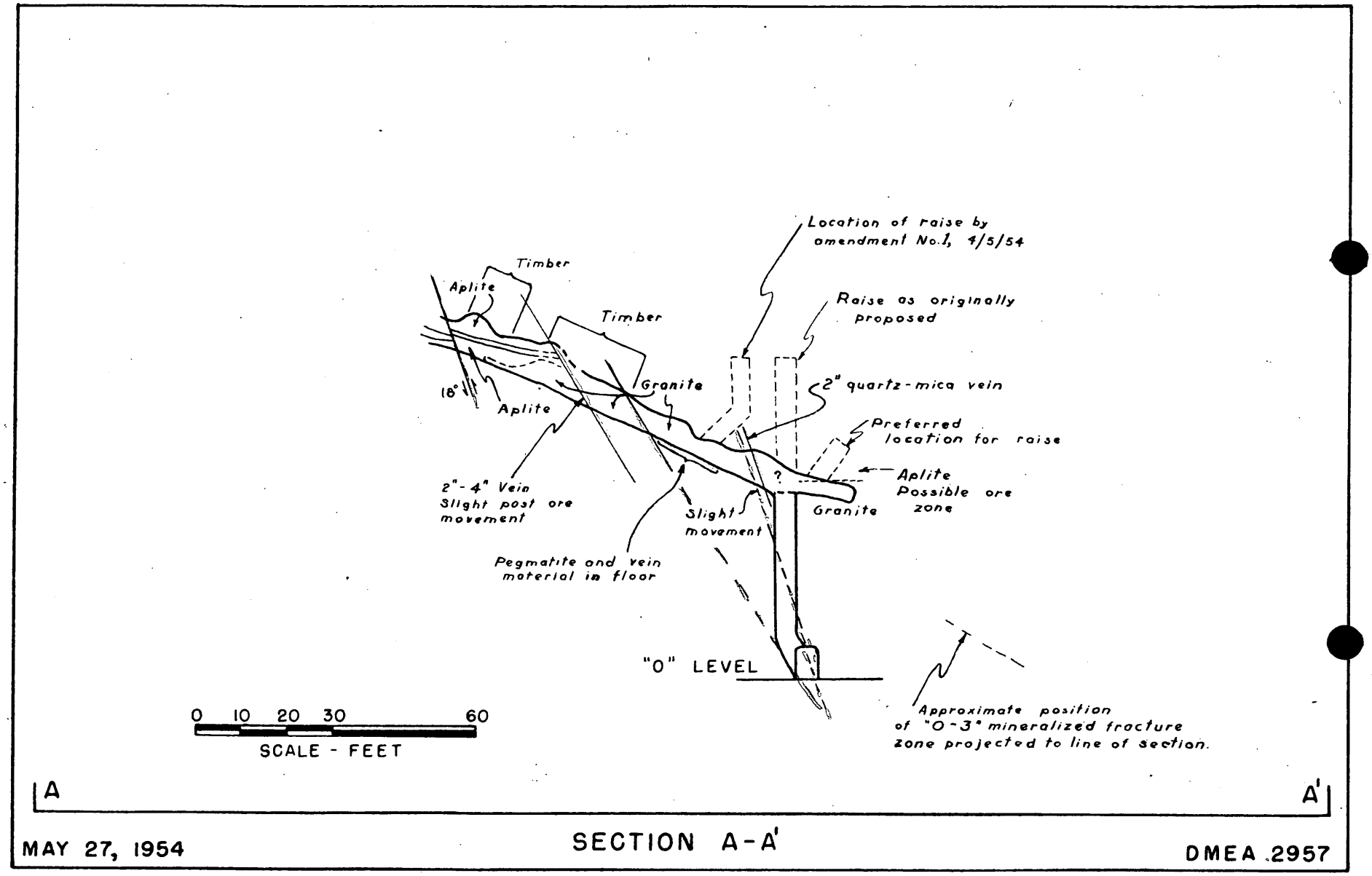

FIGURE 2. - SECTION FACING WESTERLY THRU LOWER PART OF WINZE

WOTHREE (WILLIAMS) TUNGSTEN MINE MOHAVE COUNTY, ARIZONA

EXAMINERS SAMPLES

NUMBER	WIDTH	% WO_3
3	2.1	0.70
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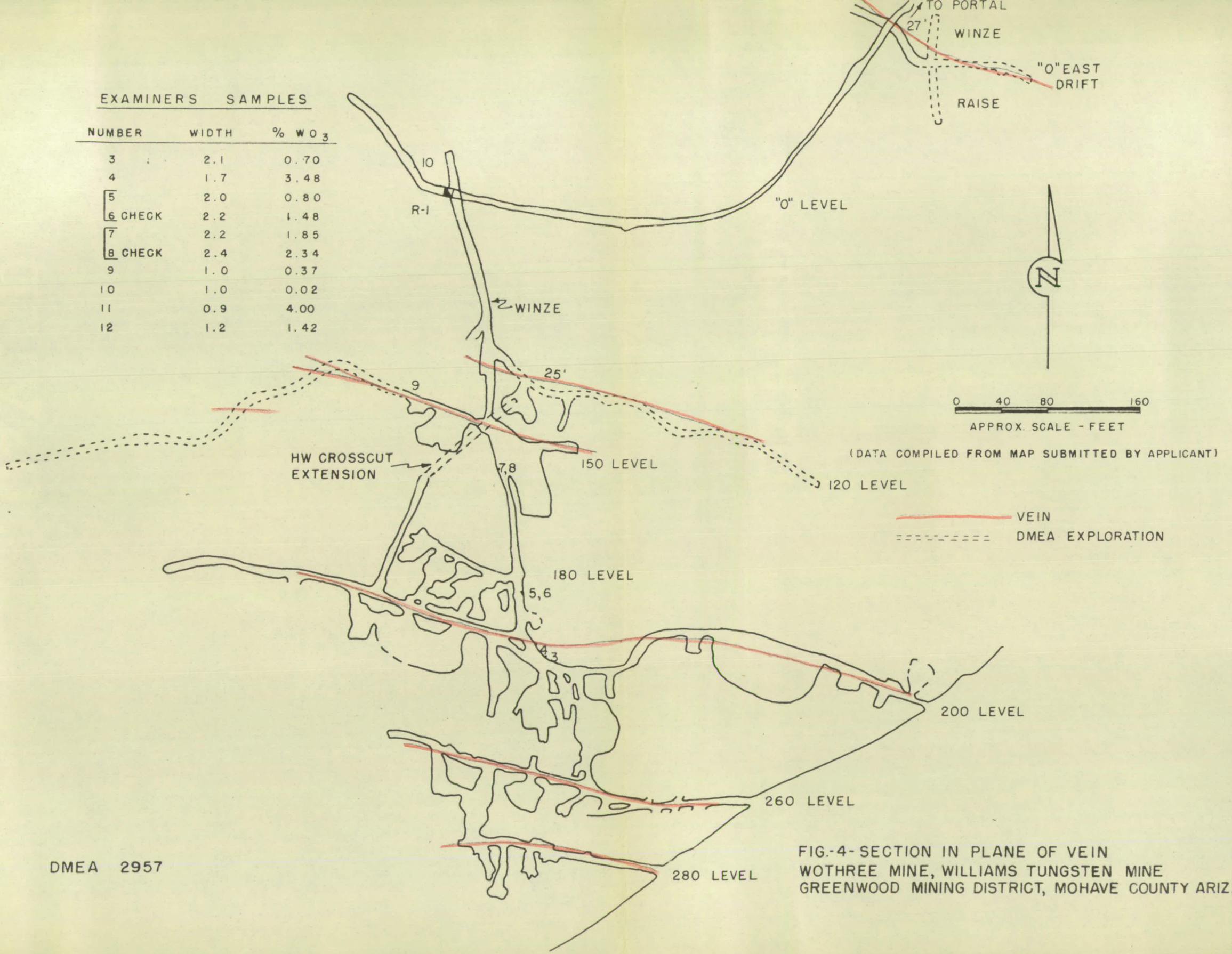
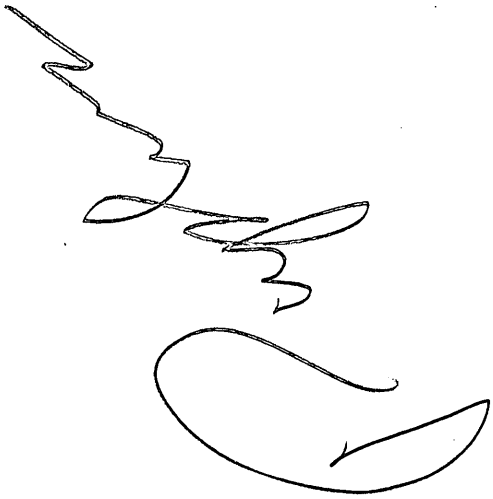


DMEA 2957

FIG.-4- SECTION IN PLANE OF VEIN
WOTHREE MINE, WILLIAMS TUNGSTEN MINE
GREENWOOD MINING DISTRICT, MOHAVE COUNTY ARIZ.

FIGURE 2. - SECTION FACING WESTERLY THRU LOWER PART OF WINZE
WOTHREE (WILLIAMS) TUNGSTEN MINE
MOHAVE COUNTY, ARIZONA

FIGURE 1. - GEOLOGY OF PART OF ZERO LEVEL
WOTHREE (WILLIAMS) TUNGSTEN MINE MOHAVE COUNTY, ARIZONA



224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

OFFICIAL BUSINESS

Defense Minerals Exploration Administration

Interior Building

Washington 25, D.C.

1 copy of two maps enclosed
8-30-53

DMEA Form 17
Feb. 58

DEFENSE MINERALS EXPLORATION ADMINISTRATION

WORK COMPLETED ANALYSIS

After final audit or review report is received, prepare original only and file in official docket

Operator: Carl Hovgard		Actual Cost	
State: Arizona		Agreed Unit Cost 33,000.00	
Final Report of Audit		Commodity	Docket No. DMEA-2957
Final Report of Review 31,275.00		Tungsten	Contract No. Idm-E632

Operation	Authorized by Contract and Amendments		Completed		Net cost after sale of Government Property
	Units	Cost	Units	Cost	
Drifting & Crosscutting	** 875 ft.	26,250	882.5 ft.	26,475	
Raising	** 125 ft.	3,750.00	60 ft.	1,800	
Shafts					
Winzes	** 50 ft.	3,000	50 ft.	3,000	
Drilling (Specify)					
Surface Excavation					
Underground Excavation					
Roads and Trails					
Operating Equipment Purchased					
Surface Rehabilitation & Repairs					
Underground Rehabilitation					
New Building, Improvements, etc.					
Other (Specify)					
Totals		$33,000.00		$31,275.00	*

* Net cost total must agree with final report of audit or review.
** Original drifting 925 ft. and original raising 175 ft. Amended to sink 50 feet of winze in lieu of 50 ft. of drifting or crosscutting and 50 feet of raising.

Prepared by Thos. L. Chapman Date 6/2/58

Subsequently amended to allow additional crosscutting in lieu of raising.

31390

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

DATE	INITIALS	CODE
12/2	[illegible]	800
12/3	[illegible]	500
		220

Building 20 - Federal Center
Denver, Colorado
80225

~~November 27, 1963~~

Memorandum

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

From: Acting Field Officer, OME, Region III

Subject: DMEA-2957 (Tungsten)
Contract Idm-E632
Carl Hovgard
(Williams Tungsten Mine - Wothrow Mine)
Mohave County, Arizona

Attached is the original Report of Royalty Review dated November 4, 1963, on the subject property covering the period May 7, 1960, through October 28, 1963.

Original signed by

Hugh M. Connors

Attachment

cc Chief, Division of Field Operations, OME
E. D. Talbert, Acting Chief
Contract Administration and Audit Division
Royalty Corres. Idm-E632
Chron
HMC/lm

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
		220

NOV 20 1963

Memorandum

To: Acting Field Officer, Region III

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

Subject: DMEA-2957 (Tungsten)
Carl Hovgard
Williams Tungsten Mine (Wothree Mine)
Mohave County, Arizona
Contract Idm-E632

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

(a) Original to the Fiscal Section, Division of Management Operations, Office of the Secretary, U. S. Department of the Interior, Washington, D. C. 20240; and

(b) One copy for your files.

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

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

Enclosures

EDTalbert/ama 11-19-63

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

43683

OFFICIAL FILE COPY
O. M. E.
RECEIVED SEP 26 1963

DATE	INITIALS	CODE
9/24	407	800
	Drawed	500
September 23, 1963		
		220

Building 20 - Federal Center
Denver 25, Colorado
80225

Miss Grace E. Melles
P. O. Box 806
Kingman, Arizona 86401

Re: [illegible]-2957 (Tungsten)
Carl Hovgard
William Tungsten Mine
(Wethree Mine)
Mohave County, Arizona
Contract Idm-E632

Dear Miss Melles:

This responds to your letter of September 20, 1963 regarding the captioned contract.

Only the owners of the property could execute a lease to you. The unrecorded lien the Government has on the property pertains to a percentage royalty on all minerals mined or produced from the land as defined in the contract. The Government's lien continues until October 30, 1964, or until the amount of Government participation in the contract has been paid, whichever occurs first.

Sincerely yours,

Original signed by

Hugh M. Connors
Acting Field Officer, OME
Region III

cc Chief, Division of Field Operations, OME
Royalty Corres. E632
Chron
HMC/lm

Kingman, Ariz.

Sept. 20, 1963

OME
DEPARTMENT OF THE INTERIOR
SEP 23 1963
REGION III
DENVER, COLORADO

Hugh M. Connors
Acting Field Officer, OMe
Region 111

Dear Mr. Connors:

In March L961, I wrote to you concering the Williams Tungsten Mine

Docket No. DMEA 2957 (Tungsten)
Contract No. Idm E632
Carl Hovgard
Williams or Worthree Mine
Mohave County, Ariz.

We are interested to know, If it would be possiable for you to give us a long time lease on this property, Undere the same terms as stated, In your letter of March 8, 1961. Tungsten as you know is very low, But what we have in mined. Is to maintain the Mine, Such as the Road Water and Portals of the Tunnels. Untill Tungsten comes up, Where it would be workable.

There is the three of us, Of the immediate Williams family left, My self, Grace E. Melles Louise Wilson and Roy Williams and we would like to have this lease under the three names.

If you are unable to give us a long term lease, Any advise you can give me will be appreciated, As to going about securing the Mine.

If you do see fit to give us a long term lease, This would inable THE Government to collect their royaltys and keep the Mine a Live.

Yours very truly
Grace E. Melles
Grace E. Melles
Box 806
Kingman, Ariz. 86401

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
9/14	Holt	500
	Hamel	500
9/14	Talbert	800
"	on leave	120
		110
9/14	on leave	100
		220

SEP 1 4 1962

Mr. Carl Hovgard
c/o Mr. Norman D. FitzGerald
Box 5046
Abilene, Texas

Re: DMEA-2957 (Tungsten)
Carl Hovgard
Williams Tungsten Mine
(Wethrea Mine)
Mohave County, Arizona
Contract Idm-E632

Dear Mr. Hovgard:

We thank you for the information contained in your reply of September 5, 1962, to our MME Form 63, Request for Information on Certified Project and Project under Royalty Agreement.

Although you state that the property has been abandoned, please note that under Article 6 of the contract, as modified by Annex III, and as set forth in our letter of August 9, 1956, your responsibility for the payment of the Government's percentage royalty on all minerals mined or produced from the land under the contract continues, as surety under the contract, from October 30, 1953, to October 30, 1964, until the sum of $23,456.25 has been paid. To date $1,486.78 royalty has been paid, leaving a balance repayable by royalty of $21,969.47.

Sincerely yours,

(signed) FRANK E. JOHNSON

ACTING Director

(SPH)

SPHolt/ama 9-14-62

cc:
Docket
Director's Reading File
CA & A Division
Region III (2) (w/cy of Form 63)
Code 500

43683

OFFICIAL FILE COPY
O. M. E
RECEIVED MAR 13 1961

DATE	INITIALS	CODE
3-13	gad	VVO
3/13	[illegible]	800
"	~~Holt~~ SPH	500
		220

Building 20 - Federal Center
Denver 25, Colorado

March 8, 1961

Mrs. Grace E. Melles
Box 806
Kingman, Arizona

Re: Docket No. EMEA-2957 (Tungsten)
Contract No. Idm-2632
Carl Hovgard
(Williams or Wothree Mine)
Mohave County, Arizona

Dear Mr. Melles:

This responds to your letter of March 6, 1961 regarding the Wothree mine, Mohave County, Arizona.

Contract No. Idm 2632 for the exploration of the Williams (Wothree) mine tungsten deposits was executed October 30, 1953. Expenditures up to $33,000.00 were authorized by the contract, of which the Government's share at 75% was $24,075.00. The cost of the work completed was $31,275.00, of which the Government's share at 75% was
* $23,456.25.

The work completed comprised 882.5 feet of drifting and crosscutting, 60 feet of raise, and 50 feet of winze. Sufficient tungsten ore was discovered by the project work to warrant a Certification of Discovery.

The contract provided for royalty on production as follows:

WHEN VALUE PER DRY TON IS:		ROYALTY PAYMENTS ARE:
$0.01 - $8.49		1.5%
8.50 - 8.99		2.0
9.00 - 9.49		2.5
9.50 - 9.99	then	3.0
10.00 - 10.49		3.5
10.50 - 10.99		4.0
11.00 - 11.49		4.5
11.50 - and over		5.0

* $1,486.78 has been refund by royalty
Faldet
7/13/61

I do not have sufficient information concerning you, your finances, the present condition of the property and other information necessary to advise you whether or not it would be advisable for you to go ahead with location work and assessment work on these claims.

May I suggest that you consult your family attorney regarding the advisability of your going ahead with this work.

Yours very truly,

Original signed by

Hugh M. Connors
Acting Field Officer, OME
Region III

HMC/lm
cc Chief, Division of Field Operations (2)
with copy of Grace Melles letter dated March 6, 1961
Royalty Corres E632
Chron

Kingman, Ariz.

March 6, 1961

OFFICIAL FILE COPY
O. M. F
RECEIVED MAR 13 1961

DATE	INITIALS	

E632

Hugh M. Connors

Acting Field Officer, Ome

Region 111

Dear Mr. Connors

I recieved your letter of March 7.1961, In regards to the Northree Williams Tungsten Mines.

Would you give me some information? As to the condition of the Loan? and what Royaltys the Goverment would demand?

Would it be advisable for me to go ahead with the Location Work and assessment work?

Any information you can give me will be appreciated.

Thanks Kindly

Grace E. Melles

Grace E. Melles

Box 806

Kingman, Ariz

Selfridge (2)

OFFICIAL FILE COPY
O. M. E
RECEIVED MAR 6 1961

DATE	INITIALS	CODE
3-6	gad	VRO
		PRO
3/6	[illegible]	800
"	[illegible]	500
		220

Building 20 - Federal Center
Denver 25, Colorado

March 3, 1961

Mrs. Grace E. Mellen
Box 806
Kingman, Arizona

Re: Docket No. DMEA-2957 (Tungsten)
Contract No. Ida-2632
Carl Hrvgard
(Williams or Wathrus Mine)
Mohave County, Arizona

Dear Mrs. Mellen:

Your letter dated February 23, 1961, addressed to Lincoln A. Stewart, Tucson, Arizona, has been referred to this office for reply.

This is to advise that ten unpatented lode mining claims, Tungsten No. 1 -- Tungsten No. 10, inclusive, were subordinated to the Government under the captioned contract. A certification of discovery or development under the contract was dated August 9, 1956. Pursuant to the provisions of that contract, royalty is due the Government on any production from the property covered by the contract until October 30, 1964, or until the amount contributed by the Government is repaid in full, whichever occurs first.

Yours very truly,

Hugh M. Connors
Acting Field Officer, OME
Region III

cc: Lincoln A. Stewart
Tucson, Arizona
Chief, Division of Field Operations, OME (2)
R. W. Geehan, Regional Director, Region III
Royalty Corres E632
Chron

HMC/lm

OFFICIAL FILE COPY
O. M. E
RECEIVED MAR 6 1961

DATE	INITIALS	CODE

U. S. BUREAU OF MINES
FEB 24 1961
TUCSON, ARIZONA

Kingman, Feb. 23, 1961

Lincolin A. Stewart

Bureau Of Mines

Dear Mr. Stewart:

Would you give me some imformation on the Williams Tungsten Mine? Whitch I have located,and hoped to Patent a couple of the Claims and do some work on a small scale.

One of the neighbors Who live near the Mine, Told me there is a goverment Lean against the Property.

When Mr. Blonskey left the property, Him and his Company Filed Notice of Abandonment, and the Goverment Auction off all Machinery Buildings Rail in fact every thing.all they left is the Tunnels. Now I was under the impression, That satisfied the Exploration loan from the Goverment.

If this is so I would not care to spend any more money or time on the Property,

Would you have any imformation on this? If not,,Could you advise me where to write? To clear this matter,up, Any thing you can tell will be appreciated.

Thanks Kindley

Grace E. Melles

Grace E. Melles

Box 806

Kingman, Ariz.

OFFICIAL FILE COPY O. M. E RECEIVED MAR 6 1961		
DATE	INITIALS	CODE

Box 4097, Tucson, Arizona

February 28, 1961

Memorandum

To: Hugh M. Connors, Acting Field Officer, OME, Denver, Colo.

From: Lincoln A. Stewart, Tucson, Arizona

Subject: DMEA-2957, Wothree Mines, Williams Tungsten, Mohave County, Arizona.

Herewith find a copy of a letter from Grace E. Melles requesting information concerning captioned mine, and my reply to her.

Please note that a reply will be expected from you, as you have the requested information in your files.

Lincoln A. Stewart

CC H. Connors
R. W. Geolgan
Act. Chief, Div. of Min. Res.
467-W. of Gila etc.
DF

LAS tewart:frj

OFFICIAL FILE COPY
O. M. E
RECEIVED MAR 6 1961

DATE	INITIALS

Box 4097, Tucson, Arizona

February 28, 1961

Mrs. Grace E. Melles
Box 806
Kingman, Ariz.

Dear Mrs. Melles:

As we explained in our letter of January 30, information concerning the Williams (Wothree) tungsten mine will be published shortly in a Report of Investigations entitled "Tungsten Deposits of Gila, Yavapai, and Mohave Counties, Ariz."

This mine was the recipient of Government aid in the form of a Defense Minerals Exploration Administration project. The functions of this agency now rest in the Office of Minerals Exploration, of which Hugh M. Connors, Denver, Colo. is Acting Field Officer of this region.

We are sending your letter to him, as all essential data concerning the status of royalties, possible certification, etc., are in his office.

You will receive a reply from Connors.

Sincerely yours,

Lincoln A. Stewart
Mining Engineer

CC H. Connors (2)
R. W. Geehan
Acting Chief, Div. of Min. Res.
467-W Gila etc.
DF

LAStewart:frj

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

JUN 13 1960

Memorandum

To: Acting Director
Office of Minerals Exploration

From: Associate Solicitor
Division of Mineral Resources

Subject: DMEA-2957 (Tungsten)
Carl Hovgard
Williams Tungsten Mine (Wothree Mine)
Mohave County, Arizona
Contract Idm-E632

The memorandum on this subject initialled June 1, by the Chief, Division of Field Operations, Office of Minerals Exploration, refers to the following statements in our memorandum of May 24 and asks two questions:

(a) "At no time did the Government have a lien against the land."

(b) "Therefore, the Government in the Owner's Consent to Lien received only a lien upon production and not a lien running with the land."

Question No. 1:

"Would these statements mentioned above apply to unpatented claims only?"

When the two questions in my memorandum of May 24 were discussed, we were concerned only with unpatented mining claims on the basis of the record there presented, and the discussion in that memorandum was not intended to be applicable to other situations. This conclusion is clear from the discussion in the next to the last paragraph of the May 24 memorandum. Therefore, the answer to question No. 1 is in the affirmative.

In view of the discussion in the memorandum of June 1 concerning the statements quoted above, it may be that some other method or means to supplement the forms now used should

be employed to insure, in cases of unpatented mining claims, that a proper title or interest is vested in the Government before a project contract with the operator is consummated. During the World War II period when the Bureau of Mines embarked on a mineral exploration program, a preliminary check was made of the land title records in the several counties involved so that the Bureau would have some assurance that the exploratory drilling was being done on the proper land and that the owners of the property who signed the agreements could not claim damages against the Government for trespass. Whether this procedure would be feasible in your program is a matter for administrative consideration.

It is stated in the memorandum from your office that "For several years GAO suggested that the Consent to Lien be recorded as it was a lien upon the land and would, therefore, be binding." However, before this procedure is adopted, it should be carefully considered because when the "Consent to Lien" has been recorded in the land records of the county where the claim or claims are located, ostensibly, a lien of record has been created. Consequently, OME in certain cases might be called on to furnish releases of the liens thus created in order to clear title to the property or interest involved. Whether this procedure should be adopted, therefore, is again a matter for administrative determination.

Question No. 2:

"Under our present MME Form-52 - Lien and Subordination Agreements, what protection does the Government have in having the lien even if recorded upon the right, title, and interest in the land if it is unpatented?"

The answer to this question as we stated in our memorandum to your office of May 24 depends upon the status of the title to the land on which the claims are located. As indicated above, the status of the title can only be determined by a check of the county records or by the more expensive means of obtaining an abstract of title, certificate of title, or title insurance policy, that will show the status of the title to the land involved.

In short, the protection of the Government depends on the right, title and interest of the parties in question. Whether

a statement on the lien form should be accepted as the only basis for establishing the title to the parties in question, is a matter for administrative consideration.

Charles M. Soller
Associate Solicitor
Division of Mineral Resources

Attachment

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

DATE	INITIALS	CODE
6-6	gad	VVO
6/6	[illegible]	800
"	[illegible]	500
		225

Building 20 - Federal Center
Denver 25, Colorado

June 1, 1960

Mr. Carl Hovgard
1141 Rutherford Street
Abilene, Texas

Re: Docket No. [illegible]-2957 (Tungsten)
Contract No. [illegible]-[illegible]32
Carl Hovgard
(Williams or Hathaway Mine)
Mohave County, Arizona

Dear Mr. Hovgard:

This has further reference to the Notice of Abandonment on the captioned property.

A review of the Arizona Statutes and the decisions in that State pertaining to the abandonment of mining claims reveals the decision of the Arizona Supreme Court in Alexander v. Shannon, 16 Pacific [illegible].45, holding that a mining claim which is subject to a lien may not be abandoned by the owners in order to defeat the lien. By Annex III the Government received a guaranty that you would, as surety, be liable for any production from the land.

Therefore, we are continuing to look to you for payment of Royalty on any production from the property covered by the contract, as amended, until October 30, 1964, or until the sum of $[illegible],[illegible].85 is paid, whichever occurs first.

Yours very truly,

Original signed by

Hugh M. Connors
Acting Field Officer
OME, Region III

CC: Mr. Kenneth B. Fitzgerald
P. O. Box 5046
Abilene, Texas

HMC/lm

cc: Chief, Division of Field Operations (2)
Hasler
Royalty Corres. E632
Chron

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

DATE	INITIALS	CODE
6-6	gad	210
6/6	[illegible]	800
"	[illegible]	500
		225

Building 20 - Federal Center
Denver 25, Colorado

June 1, 1960

Mr. Norman D. Fitzgerald
P. O. Box 5046
Abilene, Texas

Re: Docket No. [illegible]-0957 (Tungsten)
Contract No. IBm-[illegible]
Carl Nevgard
(Williams or Bothree Mine)
Mohave County, Arizona

Dear Mr. Fitzgerald:

Enclosed is your copy of the Report of Royalty Review covering the period May 18, 1955, through May 6, 1960.

Yours very truly,

Original signed by

Hugh M. Connors
Acting Field Officer
OME, Region III

Enclosure
HMC/lm
cc: Chief, Division of Field Operations (2)
E. D. Talbert, Acting Chief
Contract Administration and Audit Division
Royalty Corres. E632
Chron

Building 20 - Federal Center
Denver 25, Colorado

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

DATE	INITIALS	CODE
6-6	gad	VVO
6/6	[illegible]	800
		500

June 1, 1960

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, OMR, Region III

Subject: Docket No. [illegible]-2957 (Tungsten)
Contract No. [illegible]-E632
Carl Hovgard
(Williams or Withers Mine)
Mohave County, Arizona

Attached is the original of the Report of Royalty Review on the subject contract covering the period May 18, 1955, through May 6, 1960.

Original signed by

Hugh M. Connors

Enclosure

HMC/lm
cc: Chief, Division of Field Operations (2)
Royalty Corres. E638
Chron

SMMR Form 7
(10-58)

JUN 1 1960

TERIOR DEPT.

OFFICIAL FILE COPY

Date	Surname	Code
6/1	GCS	120
	Selber	140

5/31/60

Memorandum

To: Associate Solicitor, Division of Mineral Resources

From: Chief, Division of Field Operations, OME

Subject: DMEA-2957 (Tungsten)
Carl Hovgard
Williams Tungsten Mine (Wethree Mine)
Mohave County, Arizona
Contract Idm-E632

RECEIVED
JUN 1 1960
ASSOC. SOLICITOR
MINERAL RESOURCES

Reference is made to the memorandum of May 24, 1960, wherein the following statements are made:

(1) At no time did the Government have a lien against the land.

(2) Therefore, the Government in the "Owner's Consent to Lien" received only a lien upon production and not a lien running with the land.

Would these apply to unpatented claims only?

The statements are entirely at variance to our understanding of the purpose of the Consent to Lien forms, at least those through 1954. Early in the exploration program, especially in the Northwest, lessors refused to sign the lien forms because they contained the words "lien upon the land." It was suggested that they be eliminated from the forms. The matter was thoroughly discussed, and legally it was decided that the Government could not have a lien upon the production without having a lien upon the land, a tangible. For several years GAO suggested that the Consent to Lien be recorded as it was a lien upon the land and would, therefore, be binding. The DMEA-OME has never done so, supposedly because of the time and expense involved. As these seemingly are less of a hurdle than formerly thought, perhaps consideration should be given, at least in the future, to recording lien documents on certified projects.

Under our present MME Form-52 - Lien and Subordination Agreements, what protection does the Government have in having a lien even if recorded upon the right, title, and interest in the land if it is unpatented?

George C. Selfridge (hb)

GCSelfridge/hb/fw-5/31/60
cc: Director's file
Dir.Read.File
F.E.Johnson
G.C.Selfridge
Docket DMEA-2957
Chron.

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
5/26	GCS	1120
	Inman	500
5/26	Holt	500
5/26	Talbert	800
5/26	Seller	140
	App'd. Sol. Off.	
		~~130~~ 345
5/26	On leave	110
5-26	gad	220

MAY 26 1960

RECEIVED
MAY 26 1960
ASSOC. SOLICITOR
MINERAL RESOURCES

Memorandum

To: Acting Field Officer, OME Region III

From: Chief, Division of Field Operations

Subject: BMEA-2957 (Tungsten)
Carl Hovgard
Williams Tungsten Mine (Wothree Mine)
Mohave County, Arizona
Contract Idm-E632

Reference is made to Mr. Townsend's memorandum of February 12, 1960, requesting advice as to whether the subject Contract will fall into a category similar to that of Contract No. Idm-E468, Docket No. BMEA-2202, Amerimex Mining Company.

The subject Contract was later amended by Amendment No. 2 which added Annex III (58694). The Annex provides that the Operator, either as principal or as surety, shall pay royalties to the Government. The project was certified as a discovery or development on August 9, 1956, subsequent to its abandonment as shown by the copy of Notice of Abandonment which was sent us in February.

A review of the Arizona Statutes and the decisions in that State pertaining to the abandonment of mining claims reveals the decision of the Arizona Supreme Court in Alexander v. Sherman, 16 Pacific PAC.43, holding that a mining claim which is subject to a lien may not be abandoned by the owners in order to defeat the lien. By Annex III the Government received a guaranty from the Operator that he would, as surety, be liable for any production from the land. Therefore, the Operator should be notified that the Government will continue to look to him for payment of royalty on any production from the property covered by the Contract, as amended, during the remainder of the Contract period.

/s/
George C. Selfridge

SPHolt/GCSelfridge/gla/hb (5/25/60)
Copy to: Director's Reading File
Review Committee
Harold Kirkemo, USGS
G.C.Selfridge
Docket
Chron.
OA+A Div

FROM SOLICITOR
MAY 26 1960
FOR SIGNATURE

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
2/17	Holt	500
	Arnold	500
2/18	J. Lynch	140
	Hoffland	140
2/19	Talbot	800
		130

110
220
225

Memorandum

To: Executive Officer, OME Field Team, Region III

From: Chairman, Operating Committee, OME

Subject: Docket No. DMEA-2957 (Tungsten)
Carl Hovgard
Williams Tungsten Mine (Wothree Mine)
Mohave County, Arizona
Contract No. Idm-E632

Reference is made to your memorandum of February 12, 1960, requesting advice as to whether the subject contract will fall into a category similar to that of Contract No. Idm-E468, Docket No. DMEA-2202, Amerimex Mining Company.

In view of the Notice of Abandonment presented with Norman D. Fitzgerald's letter of February 11, 1960, and the letter of February 5, 1960, from Peggy B. Smith, Mohave County Recorder, this seems to be another case of abandonment, as the subject contract contains the abandonment clause in Article 7, not later rescinded by Annex II, or any contract amendment.

Therefore, this contract should not be deleted from your list of certified projects. However, interim reports will not be required.

APPROVED:

SPHolt/gla 2-17-60
cc to: Director's Reading File
Operating Committee
R. W. Holliday, USBM
Harold Kirkemo, USGS
Docket
Chron

Member, Bureau of Mines

Member, Geological Survey

FROM SOLICITOR
FEB 19 1960
FOR SIGNATURE

43683

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

MAY 24 1960

Memorandum

To: Acting Director
Office of Minerals Exploration

From: Associate Solicitor
Division of Mineral Resources

Subject: Docket No. DMEA-2957 (Tungsten)
Carl Hovgard
Williams Tungsten Mine (Worthree Mine)
Mohave County, Arizona
Contract No. Idm-E632

The handwritten note on a reference slip from your office received March 31 asks the following two questions:

"1. Does the second paragraph (of our memorandum of March 28, 1960) imply that certification prior to recording abandonment would have established a lien?"

"2. As the Government certified within the time limit, what value does Annex III (58694) have which was added to strengthen the Government's claim?"

The questions will be answered in the order in which they are stated.

Question No. 1:

At no time did the Government have a lien against the land. The land covered by this contract consisted of 10 unpatented lode mining claims. The status of the title to the lands on which these claims were located when the contract was made with the Government cannot definitely be determined from the information appearing in the files. The data obtained on May 19, 1960, from the Land Record Maintenance and Service Section, Branch of Field Service, of the Bureau of Land Management shows that part of the land is public and part patented railroad land. However, the Operator filed and recorded a Notice of Abandonment

of these claims on February 15, 1956, which was prior to the certification of August 9, 1956. The locators of these claims had a right of possession which was paramount to that of any other individuals' claim. Nevertheless, any title which the locators might claim was also subject to certain statutory requirements such as discovery, assessment work, etc. Therefore, the Government in the "Owner's Consent to Lien" received only a lien upon production and not a lien running with the land.

Question No. 2:

By Annex III the Government received a guarantee from the Operator that he would, as surety, be liable for royalty on any production from the land. This in no way made the Operator guarantee that there would be production. He simply agreed that, if there was production, he would make sure that the Government received the royalty payments. In the instant case the Government has no claim to royalties at this time. However, should the new locators of these claims begin to produce we could, at that time, claim royalty against the Operator. Therefore, the only purpose of Annex III is the preservation of royalty on future production. In short, the Operator, Carl Hovgard, has determined that there is little or no chance of production. Therefore, he is willing to gamble that the time for royalty payments, which is until October 30, 1964, will run out prior to any production.

In conclusion, it is our opinion that no set rule may be made for any and all contracts regarding abandonment by the Operator. Each case must be considered separately and the liens, if any, in favor of the Government, determined on the basis of the record presented. In some jurisdictions, liens could be challenged and might be considered insufficient, because liens against real property must be recorded to be binding upon any innocent purchaser. In other cases, the consent to lien might be insufficient because the person signing the lien did not have at the time a sufficient title or interest in the property to make the property subject to the lien.

In this case the Operator is liable, as surety, for the royalty payments should any become due and payable under the terms of the contract.

Charles M. Soller

Charles M. Soller
Associate Solicitor
Division of Mineral Resources

FORM 6 REFERENCE SLIP

REV. 2-59 OFFICE OF MINERALS EXPLORATION

TO:	DATE	INITIALS
1. Associate Solicitor, Division of Mineral Resources Room 6554		
2.		
2. G. C. Selfridge 4459		
4.		
5.		
FROM:	3/30	3/31/60

FOR: Check items for action desired

____ Action ____ Reply for signature of ____

____ Approval ____ Investigate ____ Surname

____ Comment ____ Recommendations ____ Signature

____ Conference ____ Rewrite ____ File

Instructions Your information

REMARKS: Does second paragraph imply that certification prior to recording abandonment would have established a lien? As the Government certified within the time limit, what value does Annex III (58694) have which was added to strengthen the Government's claim?

INT.-DUP. SEC., WASH., D.C. M56300-59

MAIL ROOM:

Everything attached goes to Solicitor's Office with Mr. Selfridge's Routing Slip memo.

(Dockets Nos. 1, 2, & 3; Committee memo to Reg. III - undated & unsigned)

HBerry
3/31/60

DMEA Form 15 CIRCULATING REFERENCE
Rev. 4-57

Date _____

This material is circulated for information. Please read and refer to the next person without delay.

100
110
112
120
400
500
600
700
800
200
210

_____

_____

_____

All material will be filed in Central Files, unless otherwise requested below:

_____

INT.-DUP. SEC., WASH., D.C. M29602

that the Operator could not make a legal abandonment which could affect the lien of the Government for royalty on production.

Therefore, it is the opinion of this office that the Operator should be notified that the Government will continue to look to him for payment of royalty from any production on the property covered by the contract, as amended, during the remainder of the contract period.

We are returning the files on the project which were submitted with your memorandum.

Charles M. Soller
Associate Solicitor
Division of Mineral Resources

Attachments

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
2/24	Selfridge	120
		110
		225

FEB 24 1960

Memorandum

To: Acting Associate Solicitor, Division of Mineral Resources

From: Acting Director, Office of Minerals Exploration

Subject: Docket No. DMEA-2957 (Tungsten)
Carl Hovgard
Williams Tungsten Mine (Wothree Mine)
Mohave County, Arizona
Contract No. Idm-E632

The subject Contract, dated October 30, 1953, is written on form MF-200(A) (February 1952). Annex II (45106) providing that either the Operator or his successor in interest should pay royalty was substituted for all of paragraph (a) of Article 6 which precedes the colon. The contract also includes an Owner's Consent to Lien on form MF-203 (Revised July 1, 1953).

Later the Contract was amended by Amendment No. 2, executed October 4, 1954, effective as of October 30, 1953, which added Annex III (58694) in lieu of Article 6. This Annex provides that the Operator either as principal or as surety shall pay royalties to the Government. The project was certified as a discovery or development on August 9, 1956, apparently subsequent to the abandonment of the land.

The accompanying Contract Idm-E482, dated January 30, 1953 (Docket No. DMEA-2862), is written on the same contract form as the subject Contract Idm-E632. By Amendment No. 2 executed on July 15, 1954, Annex I (58694) was substituted in lieu of Article 6. This Annex contains the surety clause and is the same as Annex III of the subject Contract. This Contract Idm-E842 has an Owner's Consent to Lien on form MF-203 (Revised July 1, 1954) which is much the same as the Owner's Consent to Lien in the subject Contract. The project was certified as a discovery or development on August 18, 1954.

In answer to an inquiry of July 15, 1955, from Mr. W. R. Griswold, the Office of the Acting Assistant Solicitor, Defense Minerals, prepared a memorandum of September 22, 1955, setting forth the relationship of the (abandonment provision) and the Annex (58694) containing the surety clause. The memorandum states that the Operator is still liable for

43683

royalty even though the (abandonment provision) exists as the Annex is the latest agreement of the parties. Such obligation to pay royalty is secured by a Consent to Lien of the landowner. In other cases involving the later addition of the surety clause, Annex (58694), DMEA has always held that the Operator was liable for royalty payments in keeping with the September 22, 1955, memorandum .

In the light of this information, is the proposed memorandum regarding abandonment of the subject property valid?

(signed) FRANK E. JOHNSON

Acting Director

Attachments

GCSelfridge/hb (2/24/60)
Copy to: Director's File
Director 's Reading File
Frank E. Johnson
G. C. Selfridge
Docket No. DMEA-2957

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
Building 20 - Federal Center
Denver 25, Colorado
February 12, 1960

OFFICIAL FILE COPY
O. M. E.
RECEIVED FEB 15 1960

DATE	INITIALS	CODE
2-15	gad	220
2/15	[illegible]	800
2/16	[illegible]	1500
		225

Memorandum

TO: Chairman, Operating Committee, OME

From: Executive Officer, OME Field Team, Region III

Subject: Docket No. DMEA ~~2757~~ 2959 (Tungsten) Contract No. Idm-E632 Carl Hovgard (Williams or Wothree mine) Mohave County, Arizona

Enclosed are the following pertaining to abandonment of the subject property:

(1) Two copies of a letter dated February 5, 1960 from the office of the County Recorder of Mohave County, Arizona.

(2) Two copies of a letter dated February 11, 1960 from Norman D. Fitzgerald who signed Form MF 203, Owner's Consent to Lien in conjunction with the contract.

Under the circumstances it appears that this property will fall in a category similar to that of Contract Idm-E468, Docket No. DMEA 2202X, Amerimex Mining Company. We will appreciate your advice in the matter.

J. W. Townsend

+ Excalibur Doc. 1631 cont. Idm-E 236

Enclosures

EXPLORATION
EXPLOITATION

Norman D. FitzGerald

Producer of Crude Oil

OFFICIAL FILE COPY
O. M. E.
RECEIVED FEB 16 1960
ABILENE, TEXAS

DATE	INITIALS	CODE
2/16	RCW	225
2/16		800
		500

February 11, 1960

Mr. J. W. Townsend, Executive Officer, OME
United States Department of the Interior
Office of Minerals Exploration
Building 20 - Federal Center
Denver 25, Colorado

Re: Docket No. DMEA 2957 (Tungsten)
Contract No. Idm-E632
Carl Hovgard
(Williams or Wothree mine)
Mohave County, Arizona

Dear Mr. Townsend:

Reference is made to your letter of February 3, 1960 regarding the abandonment of the above mine by Mr. Carl Hovgard.

Enclosed please find copy of a Notice of Abandonment which we obtained from the County Clerk of Mohave County, Arizona. Mr. Hovgard and I owned 100% of the mine at the time of abandonment. Joseph B. Rice, Jr., F. Leroy Foster, and George B. Blonsky had only contingent interests which were tied to the interests of Hovgard and FitzGerald. Any abandonment by Hovgard and FitzGerald automatically wiped out the contingent interests of the other three people.

You asked if we were Mr. Hovgard's agent in the Wothree mine venture. The facts are that Mr. Hovgard and I jointly employed Mr. George B. Blonsky as our agent and manager with full authority to file all necessary papers in connection with all business matters, which according to our understanding were fully and completely terminated when he filed the legal papers covering the abandonment. Since that date our part in this venture has been limited to receiving mail re-directed from Kingman, Arizona.

We hope this Notice of Abandonment will enable you to close your file on this contract.

Yours very truly,

Norman D. FitzGerald

NDF/gf

cc: Mr. C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration
Washington 25, D. C.

NOTICE OF ABANDONMENT

TO ALL WHOM THESE PRESENTS MAY CONCERN:

Notice is hereby given that NORMAN D. FITZGERALD and CARL HOFGARD, doing business under the firm name and style of WOTHREE MINES, and formerly owners of the mine and mining claims hereinafter described.

That they have ceased all operations therein and thereon; that they do not intend to operate the same in the future nor be responsible, in any manner whatsoever, for the operation thereof by other persons.

That they have and do hereby abandon said mining claims and property and all thereof and all of their right, title and interest therein or thereto.

The property so abandoned is described as follows:

Tungsten No.1, Tungsten No.2, Tungsten No.3, Tungsten No.4, Tungsten No.5, Tungsten No.6, Tungsten No.7, Tungsten No.8, Tungsten No.9, and Tungsten No. 10, unpatented lode mining claims situate in the Greenwood Mining District in Mohave County, Arizona, location notices whereof are of record in the office of the Recorder of Mohave County, Arizona, in Book [illegible] of Mines at Pages 264, 265, 266, 267, 736, 737, and 738, and in Book FF of Mines at Pages 671, 672, and 673, respectively, records of Mohave County, Arizona; and Tungsten Mines No. 1 Millsite Claim and Water Right and Tungsten Mines No. 2 Millsite Claim and Water Right, location notices whereof are of record in the office of the Recorder of Mohave County, Arizona, in Book 2 of Millsites and Water Rights at Pages 259 and 260.

IN WITNESS WHEREOF they have caused this instrument to be executed by their General Manager thereunto lawfully authorized this 10th day of February, 1956.

WOTHREE MINES

BY: George B. Blonsky
GEORGE B. BLONSKY, Gen. Manager

STATE OF ARIZONA)
) ss.
COUNTY OF MOHAVE)

The foregoing instrument was acknowledged before me this 10th day of February, 1956, by GEORGE B. BLONSKY, as General Manager of WOTHREE MINES.

Carl D. Hammond
Notary Public

My Commission expires:
July 12, 1957

Filed and Recorded at Request of Carl D. Hammond
Feb 16 A.D. 1956, 3:00 Min Past 9 o'clock A.M.
in Book DOCKET NO. 14 Page 267
Records of Mohave Co. Ariz.

73557

By _____ Deputy Recorder

Reggy A. Smith Recorder

PEGGY B. SMITH
RECORDER

ANNIE J. KAUSE
CHIEF DEPUTY

OFFICE OF THE

RECORDER

OF MOHAVE COUNTY
KINGMAN, ARIZONA

OME
DEPARTMENT OF THE INTERIOR
FEB 8 1960
REGION III
DENVER, COLORADO

February 5, 1960

J. W. Townsend
Executive Officer, IME
Field Team, Region III
Office of Minerals Exploration
Building 20- Federal Center
Denver 25, Colorado

Re: Docket No. DMEA 2957
COntract No. Idm-E632

Dear Mr. Townsend:

The Claims Tungsten No. 1 through 10, were abandoned in 1956 by the Worthree Mining Company. They were relocated in 1958 by Tony Melles and R. J. Miller, Box 1287, Kingman, Arizona.

Yours very truly,

Peggy B. Smith
Mohave County Recorder

OFFICIAL FILE COPY
O. M. E.
RECEIVED FEB 8 1960

DATE	INITIALS	CODE
2-8	gad	220
2/8	[illegible]	800
"	Holt 5.1.11	500
		225

Building 20 - Federal Center
Denver 25, Colorado
February 3, 1960

County Recorder
Mohave County Courthouse
Kingman, Arizona

Re: Docket No. [illegible] 2957 (Tungsten)
Contract No. I4m-R632
Carl Hovgard
(Williams or Wethree mine)
Mohave County, Arizona

Dear Sir:

Please furnish this office with the name and address of the present owner of the following claims:

Claim	Book No.	Page No.
Tungsten No. 1	[illegible]	264
Tungsten No. 2	[illegible]	265
Tungsten No. 3	[illegible]	266
Tungsten No. 4	[illegible]	267
Tungsten No. 5	[illegible]	736
Tungsten No. 6	[illegible]	737
Tungsten No. 7	[illegible]	738
Tungsten No. 8	FF	671
Tungsten No. 9	FF	672
Tungsten No. 10	FF	673

An early reply will be appreciated.

Very truly yours,

Original signed by

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

TWR:ltm

cc: Chmn. Op. Comm.
Roy. Corres.
Charon.

OFFICIAL FILE COPY
O. M. E.
RECEIVED FEB 8 1960

DATE	INITIALS	CODE
2-8	gad	220
2/8	[illegible]	800
"	Holeth	500
		225

Building 20 - Federal Center
Denver 25, Colorado
February 5, 1960

Mr. Norman Fitzgerald
1141 Butternut Road
Abilene, Texas

Re: Docket No. DMEA 2957 (Tungsten)
Contract No. Dma-B632
Carl Hovgard
(Williams or Wethree mine)
Mohave County, Arizona

Dear Mr. Fitzgerald:

Reference is made to Carl Hovgard's letter (signed by Leland G. Bally) to Mr. C. G. Mittendorf, Administrator, Defense Minerals Exploration Administration, Washington 25, D. C., dated August 31, 1956, and to the attached form letter to Mr. Carl Hovgard, dated January 25, 1960. The latter letter, which you returned with answers to its questionnaire, is your file copy.

Please furnish this office with a copy of the Quit Claim agreement by which your contractural lien on the property was relinquished. In event the other co-owners, Joseph B. Rice, Jr., F. Leroy Foster, and George B. Blonkey, relinquished their liens, Quit Claims covering the agreements also are to be supplied.

Are we right in assuming that Mr. Carl Hovgard retained ownership of the property when the mine was abandoned? If so, does he still own the property, and is he aware of his obligation to notify this office of any changes in ownership or production rights that have any effect on the Government's right to its percentage royalty?

Our letter to Mr. Hovgard was answered by you. Are you his designated representative?

Very truly yours,

Original signed by

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

TMR:ltm

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

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

January 25, 1960

OFFICIAL FILE COPY
DEPARTMENT OF THE INTERIOR
O. M. E.
RECEIVED FEB 8 1960
DENVER, CO.

DATE	INITIALS	CODE
2-8	gad	NO
2/8		800
		500

Mr. Carl Hovgard
1141 Butternut Road
Abilene, Texas

Re: Docket No. DMEA 2957 (Tungsten)
Contract No. Ida-[illegible]
(Williams or Wothrow mine)
Mohave County, Arizona

Dear Mr. Hovgard:

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,

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 X . 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 X . If yes, and shipments made, who was the purchaser? _____

3. Is any of the following material stockpiled? Yes ___ No X .

(a) Ore, Tons _____ Estimated grade _____
(b) Concentrates, lbs. _____ Estimated grade _____
(c) Low grade ore, tons _____ Estimated grade _____
Place stockpiled _____

Signed Norman D. FitzGerald
Norman D. FitzGerald

Title Former Co-owner
Date January 28, 1960

PROPERTY QUIT-CLAIMED ABOUT FOUR YEARS AGO

OFFICIAL FILE COPY O. M. E. RECEIVED JAN 28 1960		
DATE	INITIALS	CODE
1-28	gad	VVO
"	GEF	800
1.29	~~Hoff~~ S.T.H.	~~500~~
		225

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

January 25, 1960

Mr. Carl Hovgard
1141 Butternut Road
Abilene, Texas

Re: Docket No. DMEA 2957 (Tungsten)
Contract No. Idm-E632
(Williams or Wothree mine)
Mohave County, Arizona

Dear Mr. Hovgard:

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. E632 Chron.

Docket
Holt
Martin

July 25, 1956

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: General Summary of Contract and Results Obtained
Docket No. DMEA 2957, Tungsten
Mr. Carl Hovgard
Williams Tungsten Mine (Wothree Mine)
Mohave County, Arizona
Contract No. Idm-E632

Operator: Carl Hovgard
1141 Butternut Street
Abilene, Texas

Property: Ten unpatented lode mining claims situated in the Aquarius Range, secs. 19, 20, 29 and 30, T. 16½ N., R. 11 W., G. and S. R. Meridian, and recorded in Kingman, Mohave County, Arizona.

Claim Name	Book No.	Page No.
Tungsten No. 1	EE	264
Tungsten No. 2	EE	265
Tungsten No. 3	EE	266
Tungsten No. 4	EE	267
Tungsten No. 5	EE	736
Tungsten No. 6	EE	737
Tungsten No. 7	EE	738
Tungsten No. 8	FF	671
Tungsten No. 9	FF	672
Tungsten No. 10	FF	673

The Operator is owner of the property, with liens by Joseph R. Rice, Jr., Norman D. FitzGerald, F. Leroy Foster, and George B. Blonsky.

Contract Dated October 30, 1953. Amount - $33,000.00.
Government participation at 75% - $24,750.00.
Four amendments were written:

No. 1, extending time and changing raise, was cancelled.

No. 2, changed Exhibit "A" of contract to drifting 875 feet, raising 125 feet, and a winze 50 feet, the total cost remaining the same.

No. 3, suspended work for five months, and extended time.

No. 4, Time was extended to October 1, 1955; remaining portion of drifting and raising was changed to crosscutting and drifting for another vein. The balance remaining was as follows:

Drifting and crosscutting, 940 ft. at $30.00/ft.	$28,200.00
Raising, 60 feet at $30.00/ft.	1,800.00
Winze, 50 feet at $60.00/ft.	3,000.00
Total	$ 33,000.00

The time for royalty payments was extended to 11 years.

Work Completed

Drifting and crosscutting 882.5 ft. at $30.00/ft.	$26,475.00
Raising, 60 feet at $30.00/ft.	1,800.00
Winze, 50 feet at $60.00/ft.	3,000.00
Total expended	$31,275.00
Government participation, 75%	$23,456.25

Geology The property is situated in a shallow saddle in an area underlain by granite. The granite is cut by irregular dikes, pegmatites, and aplites. Near the mine the rock is sheeted or gneisoid in structure, resembling metamorphic sediments. This ore is cut by faults and veins. The veins are of the pegmatite type, containing quartz, mica, wolframite, and hubnerite, and pyrite. The ore occurs in sheets and lenses, some of which are of minable size and grade. The faults are usually of small displacement.

History and production

The original claims were first located in 1902. In the following 50 years, eight different outfits tried to operate the property with little success. Production during that period was approximately 2,500 units of WO_3 from 6,000 to 10,000 tons of ore, averaging from 0.25 to 0.41 percent WO_3.

In 1943 the Reconstruction Finance Corporation made a loan of $26,000.00, which was never repaid except for some interest by resale of equipment. As the lease was cancelled, the RFC had no lien on the property.

In 1951 the property was leased by Wothree Mines, who rehabilitated the property and constructed a 60-ton mill. Exploration assistance was obtained from the DMEA in 1953. During this period about 1,800 tons was mined and milled, 400 tons of which was discovered by DMEA work. 525.8725 units of WO_3 were produced, which were sold for $29,735.66, and the DMEA received royalties amounting to $1,486.78.

Certification

As recommended by the Field Team, a Certification of Discovery or Development was issued by this office on Aug. 9 1956. The Commodity Divisions of the Geological Survey and the Bureau of Mines condur in the recommendation of the Field Team.

Comments:

The project was established to explore for tungsten in the Williams (Wothree) mine property. Tungsten ore discovered by project work was estimated by the Field Team as 6,200 tons of indicated ore, average assay about 0.25% WO_3.

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

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

TLChapman/SPHolt/ls
7/23/56

☐ Audited ☑ WORK ANALYSIS SHEET - DMEA PROJECT ☐ Actual Cost

☐ Certified Analysis as of 12-16-54 ☑ Agreed Unit Costs

Incl. Voucher for May 54

Name Carl Hovgard Docket No. 2957

Jan. 31, 1955

State Arizona Commodity Sunspot Idm-E No. 632

OPERATION	AUTHORIZED Units	AUTHORIZED Cost	COMPLETED Units	COMPLETED Cost	NET COST
Drifting & Crosscutting	875	26250	780.5 ~~648~~	23,415.00 ~~19455~~	19455
Raising	125	3750	60 ~~50~~	1800.00 ~~1500~~	1500
Shafts					
Winzes	50	~~3000~~	50'	3,000.00	
Drilling (Specify)					
Surface Excavation					
Underground Excavation					
Roads and Trails					
Operating Equipment Purchased					
Surface Rehabilitation & Repairs					
Underground Rehabilitation					
New Building, Improvements, etc.					
Other (Specify)					
Totals		33000		~~20955~~ 28,215.00	20955

Suspension - Termination Agreement To June 1, 1955 to Sept. 1, 55

Prepared by EGM

71626

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

RECEIVED

224 New Customhouse
Denver 2, Colorado

September 17, 1956

Mr. Joseph B. Rice, Jr.
Box 271
La Canada, California

Re: Docket DMEA 2957 (Tungsten), Contract Idm-E632, Carl Hovgard (Wothree Mine) Mohave County, Arizona

Dear Mr. Rice:

We are forwarding herewith the following correspondence:

1. One copy of Certification by the United States of America of a Discovery or Development Under an Exploration Project Contract, dated August 9, 1956, to Mr. Carl Hovgard from C. O. Mittendorf, Administrator, DMEA.

2. One copy of letter dated August 9, 1956 to Mr. Carl Hovgard from the Administrator, transmitting the Certification.

3. One letter (undated) to you from the Administrator transmitting the above listed correspondence.

The enclosed material was forwarded by Washington to this office with the request we determine your correct mailing address. We hope you have not been inconvenienced by the necessary delay.

Yours very truly,

W. M. TRAVER

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

Enclosure
MHM/vj
cc: Royalty File E632
Corres. File E632
Sec. Opr. Comm. (2)
W. R. Storms
Marshall
Chron.

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

RECEIVED
SEP 21 1956

224 New Customhouse
Denver 2, Colorado

September 17, 1956

Dr. Leroy Foster
Massachusetts Institute of Technology
Cambridge, Massachusetts

Re: Docket DMEA 2957 (Tungsten), Contract Idm-E632, Carl Hovgard (Wothree Mine) Mohave County, Arizona

Dear Dr. Foster:

We are forwarding herewith the following correspondence:

1. One copy of Certification by the United States of America of a Discovery or Development Under an Exploration Project Contract, dated August 9, 1956, to Mr Carl Hovgard from C. O. Mittendorf, Administrator, DMEA.

2. One copy of letter dated August 9, 1956 to Mr. Carl Hovgard from the Administrator, transmitting the Certification.

3. One letter (undated) to you from the Administrator transmitting the above listed correspondence.

The enclosed material was forwarded by Washington to this office with the request we determine your correct mailing address. We hope you have not been inconvenienced by the necessary delay.

Yours very truly,

W. M. TRAVER

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

Enclosure
MHM/vj
cc: Royalty File E632
Corres. File E632
Sec. Opr. Comm. (2)
W. R. Storms
Marshall
Chron.

C

Docket

Norman D. FitzGerald

Producer of Crude Oil

EXPLORATION
EXPLOITATION

1141 BUTTERNUT STREET
ABILENE, TEXAS

August 31, 1956

RECEIVED
SEP - 4 1956

WSM

Mr. C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration
Washington 25, D. C.

Re: Docket #DMEA-2957
Williams Tungston Mine
(Wothree Mine)
Mohave County, Arizona
Contract #IDM-E632

Dear Mr. Mittendorf:

Reference is made to your letter of August 9, 1956, to Mr. Carl Hovgard concerning Wothree Mines.

Wothree Mine was abandoned in March of this year. The notice and final report were mailed to the U. S. Bureau of Mines in Tucson, Arizona, on March 5, 1956.

Please advise if you need further information.

Copy retained 400

Yours very truly,

CARL HOVGARD

BY Leland G. Kelley
Leland G. Kelley

LGK: ldf

Copies made for 400 & F.T. & sent with routing slip 9/13/56 ls

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

224 New Customhouse
Denver 2, Colorado

August 15, 1956

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: Certification of Discovery or Development, Docket DMEA 2957 (Tungsten), Contract Idm-#632, Carl Hovgard (Wothrees Mine), Mohave County, Arizona

Enclosed for your records is a copy of a Certification of Discovery or Development for the above referenced property.

W. M. TRAVER

W. M. Traver

Enclosure

MMM/vj

RECEIVED
AUG 17 1956

cc: Royalty File #632
Corres. File #632
Sec. Opr. Comm. (2)
Townsend w/cy of Certification & related Corres.
Storms w/cy of Certification
Hershman " " "
Emerick " " "
Charon.

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

224 New Customhouse
Denver 2, Colorado

CERTIFIED MAIL

August 15, 1956

Mr. Carl Hovgard
1141 Butternut Street
Abilene, Texas

Re: Docket DMEA 2957 (Tungsten), Contract Idm-E632, Carl Hovgard (Wothree Mine), Mohave County, Arizona

Dear Mr. Hovgard:

The Washington office, DMEA, has requested we forward to Joseph B. Rice, Jr. and F. Leroy Foster, both of whom signed Consent to Lien form, a copy of Certification of Discovery with a copy of Mr. C. O. Mittendorf's, Administrator, letter dated August 9, 1956 to you.

Please advise us by return mail the mailing address for Mr. Rice and Mr. Foster.

Yours very truly,

W. M. TRAVER

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

MMM/vj

cc: Royalty Fiel E632
Corres. File E632
Sec. Opr. Comm. (2)
Townsend
W. R. Storms
Marshall
Chron.

RECEIVED
AUG 17 1956

DOCKET
Surname:
Holt
Martin
Andrews
Douglas
Chambers
Holliday
Wilson
Lamb
Johnson

AUG - 9 1956

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

Re: Docket No. DMEA-2957, Tungsten
Carl Hovgard
Williams Tungsten Mine
(Wothree Mine)
Mohave County, Arizona
Contract No. Idm-E632

Dear Mr. Fredell:

Enclosed is a copy of a certification of discovery or development for the above-subject contract.

Contract No. Idm-E632 for the exploration of the Williams (Wothree) mine tungsten deposits was executed October 30, 1958. Expenditures up to $33,000.00 were authorized by the contract, of which the Government's share at 75% was $24,075.00. The cost of the work completed was $31,275.00, of which the Government's share at 75% was $23,456.25.

The object of the exploration program was to test the possible tungsten occurrences along pegmatitic quartz veins in granite. The program employed drifting, crosscutting, and winze sinking to explore the veins. The contract allowed $33,000.00 for driving 940 feet of drifts and crosscuts, 60 feet of raise, and 50 feet of winze.

Work completed comprised 882.5 feet of drift and crosscut, 60 feet of raise, and 50 feet of winze.

Tungsten ore discovered by project work was estimated by the Field Team as approximately 6,200 tons of indicated ore, average assay about 0.25% WO_3.

Sincerely yours,

C. O. Mittendorf

Administrator

Enclosure

cc: Docket
Code 400

cc: R. W. Geehan, USBM
R. W. Holliday, USBM
T. Killsgaard, USGS
Code 800

cc:
Adm. Read. File
Oper. Committee
Field Team, Reg. 3
Code 110

SPHolt/ls
7/24/56

400

DOCKET
Surname:
Holt
Martin
Indritz 8/1/56
Douglas
Holliday
Nelson
Lamb
F B Johnson

AUG - 6 1956

Mr. Norman D. FitzGerald
1141 Butternut Street
Abilene, Texas

Re: Docket No. DMEA-2957, Tungsten
Carl Hovgard
Williams Tungsten Mine
(Wothree Mine)
Mohave County, Arizona
Contract No. Idm-8632

Dear Mr. FitzGerald:

Transmitted herewith for your information is a copy of the certification of discovery or development issued as a result of the exploration program under the above-referenced contract. The property as set forth in the contract was leased, with option to purchase, by the estate of Edward G. Williams, deceased, to George B. Blonsky, under a certain indenture executed February 2, 1951; transferred by George B. Blonsky to Norman D. FitzGerald under a certain indenture executed December 2, 1952; and transferred by Norman D. FitzGerald to Carl Hovgard under a certain indenture dated April 30, 1953. The same property was also referred to in Consents to Lien executed September 22, September 29, September 29, and September 30, 1953, by Norman D. FitzGerald, Joseph B. Rice, Jr., George B. Blonsky, and F. Leroy Foster, respectively.

Also enclosed is a copy of a letter to Mr. Carl Hovgard.

Sincerely yours,

C. O. Mittendorf

Administrator

Enclosures

cc: Docket
Code 400
Code 110
Code 800
Oper. Committee
Adm. Read. File
R. W. Geehan, USBM

cc: R. W. Holliday, USBM
Thor Kiilsgaard, USGS
Field Team, Region 3

SPHolt/ls
7/23/56

400

DOCKET
Surname:
Holt
Martin
Indritz
8/1/56
Holliday
Kauffman

AUG 8 1956

Mr. George B. Blonsky
P. O. Box 448
Kingman, Arizona

Re: Docket No. DMEA-2957, Tungsten
Carl Hovgard
Williams Tungsten Mine
(Wothree Mine)
Mohave County, Arizona
Contract No. Idm-E632

Dear Mr. Blonsky:

Transmitted herewith for your information is a copy of the certification of discovery or development issued as a result of the exploration program under the above-referenced contract. The property as set forth in the contract was leased, with option to purchase, by the estate of Edward G. Williams, deceased, to George B. Blonsky, under a certain indenture executed February 2, 1951; transferred by George B. Blonsky to Norman D. FitzGerald under a certain indenture executed December 2, 1952; and transferred by Norman D. FitzGerald to Carl Hovgard under a certain indenture dated April 30, 1953. The same property was also referred to in Consents to Lien executed September 22, September 29, September 29, and September 30, 1953, by Norman D. FitzGerald, Joseph B. Rice, Jr., George B. Blonsky, and F. Leroy Foster, respectively.

Also enclosed is a copy of a letter to Mr. Carl Hovgard.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

SPHolt/ls
7/23/56

Enclosures

cc: Docket
Code 400
Code 110
Code 800
Admin. Read. File

cc: R. W. Geehan, USBM
R. W. Holliday, USBM
T. Kiilsgaard, USGS
Field Team, Region 3
Operating Committee

400

DOCKET
Surname:
Holt
Martin
Hydrick
Hougard
Holliday
Nelson
Lamb
Fitzsimons

AUG - 9 1956

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

Re: Docket No. DMEA-2957, Tungsten
Carl Hovgard
Williams Tungsten Mine
(Wothree Mine)
Mohave County, Arizona
Contract No. Idm-E632

Dear Mr. Traver:

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

Sincerely yours,

W. S. Martin
ACTING Chairman, Operating Committee (SHB)

Enclosures

APPROVED:

FRANK D. LAMB
Member, Bureau of Mines (SHB)

N. E. Nelson
Member, Geological Survey (SHB)

cc: Docket ✓
Code 400
Oper. Committee
Adm. Read. File
Thor Kiilsgaard, USGS
R. W. ~~Holliday~~, USBM
FT, Region 3 Beeler
Code 110
Code 800

SPHolt/ls

SPHolt/ls
7/23/56

DOCKET
Surname:
Holt
Martin
Indritz
Sawyer
Chamberlin
Holliday
Nelson
Lamb
Kyhum

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

AUG - 9 1956

Mr. Carl Hovgard
114. Butternut Street
Abilene, Texas

Re: Docket No. DMEA-2957, Tungsten
Williams Tungsten Mine
(Bothree Mine)
Mohave County, Arizona
Contract No. Idm-2632

Dear Mr. Hovgard:

Transmitted herewith is a certification of discovery or development issued under the subject contract which was executed October 30, 1953.

By the terms of the Exploration Project Contract, as amended, and of the certification, all production from the lands described in the referenced contract from October 30, 1953, the date of the contract, is subject to the Government's percentage royalty as set forth in the contract until the sum of $23,456.25 is paid or until October 30, 1964, whichever occurs first.

You should continue making royalty payments, as you have been doing, to Mr. W. M. Traver, Executive Officer, DMEA Field Team, Region III, 224 New Customhouse Building, Denver 2, Colorado. Checks should be made to the Defense Minerals Exploration Administration. The purchaser should be advised to deduct royalties from the amount due on each shipment and forward check direct to the Executive Officer. Royalty payments to the Government should be accompanied by suitable evidence, such as copies of settlement sheets, showing quantity and grade of the products sold, the name of the purchaser, and the price and charge certified to be correct by the purchaser.

You are requested to notify Mr. Traver of any changes in ownership or production rights that might 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

Enclosure

cc: Docket
Code 110
Code 400
Code 800
Adm. Read. File
Oper. Committee
R. W. Geehan, USBM
R. W. Holliday, USBM
T. Kiilsgaard, USGS
Field Team, Region 3
Norman D. FitzGerald
F. Leroy Foster
George B. Blonsky
Clarence A. Fredell, EPS, GSA
Joseph B. Rice, Jr.

SPHolt/ls
7/23/56

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

RECEIVED
AUG 10 1956

224 New Customhouse
Denver 2, Colorado

AIR MAIL

August 8, 1956

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Recommendation for Certification of Discovery or Development, Docket DMEA 2957 (Tungsten), Contract Idm-E632, Carl Hovgard (Worthree Mine), Mohave County, Arizona

Reference is made to our teletype of May 29, 1956 and the last paragraph of the Field Team's Final Report dated June 8, 1956.

The expiration date of period within which certification can be made is September 14, 1956.

Please advise us as soon as possible of your decision relative to issuance of Certification of Discovery or Development for the subject property.

W. M. Traver

W. M. Traver

Crossed in mail

MF-50

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Closing

REFERENCE SLIP

DATE JULY 5, 1956

REFERRED TO:

1. ~~Mr. Chambers~~ Selfridge
2. ~~Operating Committee~~
3. ~~Mr. Johnson~~
4. Mr. Mittendorf
   Mail Room

FOR:

..... Action	..... Recommendation
..... Approval	..... Record of .....
..... Comment	..... Referring to .....
..... Conference	..... Reply for signature of .....
..... Consideration	..... Rewriting
..... Filing	..... Signature
..... Instructions	..... Suggestions
..... Investigation	..... Your information
..... Initials	
..... Mailing	
..... Previous correspondence	

REMARKS: Operator's final report dated 3/4/56.
Not surnamed as it appears 6 mos. should elapse before full release is made. Talbot

Check (X) before the items needing attention.

TLChapman/ls
Initials of sender.

GPO 16—63815-1

Chapman
Holt
Holliday
Nelson
~~Hunt~~

Mr. Carl Hovgard
1141 Butternut Street
Abilene, Texas

Re: Docket No. DMEA-2957, Tungsten
Williams Tungsten Mine
(Nothree Mine)
Mohave County, Arizona
Contract No. Idm-E632

Dear Mr. Hovgard:

This is with reference to the subject exploration contract between you and the Government.

It is not our intention to issue a certification of discovery or development which would create a lien against the subject property. We are, therefore, closing our books and records with respect to this project. Your attention is called, however, to the provisions of the contract which require the operator to keep and preserve certain records for the period indicated.

We regret that the exploration work performed did not result in a discovery or development. Your participation in the exploration program, however, is sincerely appreciated.

Sincerely yours,

Administrator

cc: Docket
Code 400
Adm.Read. File
Oper. Committee
T. Kiilsgaard, USGS
R. W. Holliday, USBM
FT, Region 3
George B. Blonsky)
Joseph B. Rice, Jr.) all signed Consent to Lien forms.
Norman D. FitzGerald)
F. Leroy Foster)
Code 800

TLChapman/ls
7/5/56

Not-discovery letter
Not used

IN REPLY REFER TO:

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

RECEIVED
JUN 29 1956

June 28, 1956

Re: DMEA 2957, Idm E-632
Wothree Mines Co.
Williams Mine
Mohave Co., Ariz.
Cont. Est. $33,000 - Tungsten

Memorandum

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

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

Subject: Review of Field Team Final report.

The applicant was awarded a contract, Idm-E632, approving the expenditure of $33,000. A total of 992.5 lineal feet of exploratory headings were driven at an accepted cost of $31,275.00 in which the government participated to the extent of 75% or $23,456.25.

The examiners and Field Team under date of March 30, 1956, recommended that a certificate of discovery be executed.

Prior to the contract about 8,000 tons of ore was produced. It assayed about 0.39% WO_3, assuming 80% recovery.

In 1943 and 1944 the R.F.C. loaned an operator $26,000. Some ore was produced but no payment on principal was made. No lien exists in favor of the R.F.C.

While DMEA work was in progress about 1,800 tons of ore was mined and milled. The operator reported 526.872 units of WO_3 or 0.293 units per ton were produced from the ore, part of which, 400 tons, was "discovered" by DMEA assisted work. Based on an assumed 80% recovery the mined material averaged about 0.366% WO_3, a reasonable check on the 0.39% estimated for the prior production. If the ore in place grade is 0.65% WO_3, as estimated by Elsing, the dilution factor is high about 62% assuming the dilution material carries no tungsten. Probably development muck went into the mill.

The 526.872 units realized $29,735.66 and the royalty at 5% is $1,486.78. Operations ceased in Aug. 1955 and early in 1956 the operator abandoned the property.

As of now the Government through R.F.C. and D.M.E.A. has put the following amount into the property:

	R.F.C.	$26,000.00
	D.M.E.A.	23,456.25
	Total	$49,456.25
Less royalty		1,486.78
Balance		$47,969.47

From the maps and sections at hand, it seems, as noted by Hobbs in 1943, "no very pronounced structural control has been demonstrated that would help in looking for them" - 'them' being the pockets of ore grade material in the Williams vein. Apparently the vein and the vein-containing aplite were 'lost' in the main winze and never found.

Obviously the outlook is poor, but the participation under DMEA was recommended because there seemed "to be a very good chance of discovering a substantial quantity of low-grade ore which might be mined in case of a National emergency". Some ore was 'discovered' and a small amount of low-grade ore was produced. Some low-grade ore remains in place.

The recommendation of the examiners and the Field Team that a certificate of discovery be executed is justified.

I concur with that recommendation.

N. E. Nelson

N. E. Nelson

Docket

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

Copy retained 400

June 28, 1956

Memorandum

To: W. S. Martin, Chief, Iron and Ferroalloys Division-DMEA
Through: Acting Chief, Branch of Ferrous Metals & Ferroalloys

From: R. W. Holliday, Commodity Specialist, Branch of Ferrous Metals & Ferroalloys

Subject: Final Report and Certification of Discovery
DMEA 2957, Contract Idm-E632
Carl Hovgard (Wothree mine)
Mohave County, Arizona
Tungsten

Subject report recommends certification of Discovery although ore reserves are estimated to be only 6,200 tons of 0.25 percent WO_3 which "cannot be mined profitably under foreseeable conditions."

Costs of semiannual examination and reports during the period of certification (about 8 years) are expected to exceed any possible royalty payment to the Government.

However, because some royalty has been paid, because there is a possibility that operations will be resumed and because action taken in this case will be considered a precedent in other cases I recommend that a certification of discovery be issued.

R W Holliday
R. W. Holliday

2957

ACTION ON INTERIM
OR FINAL FIELD TEAM REPORT

Date 6-15

Referred to:

1. ~~Mr. Mittendorf~~
2. ~~Mr. Johnson~~
3. Mr. Chambers
4. ~~Docket Control Mails and File~~
5. ~~[illegible] Divis.~~
6. Docket Control Mails and File

Note comments in report regarding:

1. Certified? —
2. Marginal [illegible]
3. Previous certification indefinitely cancelled
4. by resumption of work. [illegible]

and take appropriate action.

- - - - - - - -

[illegible]

Action taken by Division:

[illegible]

Robert E. Adams

Docket

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

RECEIVED
JUN 13 1956

224 New Customhouse
Denver 2, Colorado

June 8, 1956

Memorandum

To: Chairman, Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: Docket DMEA 2957 (Tungsten), Contract Idm-E632, Carl Hovgard (Wothree mine), Mohave County, Arizona - FINAL REPORT

Enclosed are the original and three copies of a joint final engineering and geologic report pertaining to work completed under the subject contract.

The original and one copy of the Operator's final report were forwarded to you by memorandum of March 15, 1956.

Final payment to the Operator was processed by this office March 21, 1956, in conformance with the report of review of contract expenditures by the Contract Administration and Audit Division, dated December 14, 1955, which was released to this office December 16, 1955.

The exploration work consisted of 882.5 feet of drifting and crosscutting, 50 feet of winze, and 60 feet of raise, at a total accepted cost of $31,275.00, in which the Government participated to the extent of 75%, or an amount of $23,456.25.

The exploration work resulted in the discovery or development of tungsten ore, certification of which was recommended by this office March 30, 1956.

DMEA Field Team, Region III

By W. M. Traver
W. M. Traver

By E. N. Harshman
E. N. Harshman

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
6-15-56
(date)

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

MINERAL DEPOSITS
DMEA
RECEIVED
JUN 6 1956
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

DMEA
Date Rec'd.
JUN 6 1956

June 1, 1956

RECEIVED
JUN 13 1956
BUREAU OF MINES
Denver, Colorado

MEMORANDUM

To: Executive Officer, DMEA Field Team Region III

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

Through E. N. Harshman ENH

Subject: Final Joint Engineering and Geological Report, DMEA 2957 (Tungsten), Contract Idm-E632, Wothree Mines Company, Williams Mine, Mohave County, Ariz.

Enclosed are the original and 8 copies of a joint final report on the Williams Mine, DMEA 2957, prepared by T. M. Romslo, U. S. Bureau of Mines, and J. N. Faick, U. S. Geological Survey. Also included are 2 copies of the operator's final report which had been retained by this office for use in preparation of the above report.

This final report completes project DMEA 2957, for which the issuance of a Certificate of Discovery has been recommended.

Walter R. Storms
Walter R. Storms

JNF
John N. Faick Lemuel Burpee

JNF:ms
cc: Harshman (8)
Storms
Faick

Reviewed by
DMEA OPERATING COMMITTEE
6-15-56
(date)

DMEA
Date Rec'd.
JUN 6 1956
BUREAU OF MINES
Denver, Colorado
RECEIVED
JUN 13 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
FRED A. SEATON, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

FINAL REPORT

DMEA-2957, CONTRACT Idm-E632

Wothree Mines, Williams Mine (Tungsten)

Greenwood Mining District

Mohave County, Arizona

T. M. Romslo, Mining Engineer
U. S. Bureau of Mines

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

Reviewed by
DMEA OPERATING COMMITTEE
6-15-56
(date)

June 1, 1956

RECEIVED
JUN 13 1956

SUMMARY AND RECOMMENDATION

The Williams Tungsten Mine, Mohave County, Arizona, was explored jointly by the Wothree Mines and the Government during the period November 16, 1953 to early October 1955. Early in 1953, Wothree Mines applied for aid in the project, as authorized by the amended Defense Production Act of 1950, and the Defense Minerals Exploration Administration investigated the property under docket DMEA-2957. The investigations resulted in contract Idm-E632, that authorized total expenditures of $33,000.00, of which the Government's share was 75 percent, or $24,750.00.

The Williams Tungsten Mine had been intermittently operated from 1904 to 1955 for a total production of 3,043 units of WO_3. The mine is developed on a pegmatitic-type vein containing quartz, mica, feldspar, hubnerite and trace amounts of fluorite and apatite. The vein, which averages about 2 feet thick, strikes about N75°W., dips from 10 to 30 degrees northeasterly, and occurs in granite host rock. Most of the ore produced from the mine has been from an oreshoot having a strike length of about 200 feet and a dip length of about 600 feet. Another vein, which is thin and discontinuous, but is mineralogically similar to the Williams vein, lies 60 to 120 feet above it.

A total of 992.5 lineal feet of exploratory headings were driven under the contract. To test for extensions of the known ore horizon, 3 drifts were driven a total of 780.5 feet, 2 raises were driven a total of 60 feet and a winze was sunk to a depth of 50 feet. The remaining 200 feet was driven in an unsuccessful attempt to find another ore horizon.

Total cost of the project was $31,275.00, of which the Government's share was 75 percent, or $23,456.25.

The project workings encountered a few small ore zones and certification as a discovery has been recommended. The better portions of these zones were mined out for a production of about 400 tons. An additional 1400 tons were mined from old stope pillars and from 360 feet of drifts and raises driven in old sections of the mine at no expense to the Government.

The 1800 tons of ore was treated in a 60-ton, gravity-flotation concentrator that was designed and constructed on the property by Wothree Mines. A total of 526.8725 units of WO_3 was produced in concentrates containing an average of 61.21 percent WO_3. Average mill recovery was about 80 percent based on an average calculated mill head of 0.336 percent WO_3.

Payments to the operator on the sale of the 526.8725 units of WO_3 totalled $29,735.66, of which $1,486.78, or 5 percent, was payed as royalty to the Defense Minerals Exploration Administration.

Ore reserves are estimated at 6,200 tons of ore that might be expected to average about 0.25 percent WO_3, most of which remains in pillars and unmined zones in the main oreshoot. The ore cannot be mined profitably under foreseeable conditions.

Additional Government aid for exploration of the Williams mine is not recommended because there is no geological reason to expect discoveries of significant amounts of tungsten ore on the property.

DMEA-2957, CONTRACT Idm-E632
WOTHREE MINES, WILLIAMS MINE
(TUNGSTEN)
GREENWOOD MINING DISTRICT
MOHAVE COUNTY, ARIZONA

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ILLUSTRATIONS

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INTRODUCTION

Early in 1953, Norman D. FitzGerald applied for Governmental aid, as authorized by the amended Defense Production Act of 1950, in a proposed exploratory project at the Wothree Mines, formerly known as the Williams Tungsten Mine, Mohave County, Arizona. The application was received by the Defense Minerals Exploration Administration. It was docketed as DMEA-2957, reviewed by the Operating Committee, and forwarded to the Field Team, Region III, for field investigations.

The field investigations were made April 7-10, 1953 by M. J. Elsing and R. W. Ageton, mining engineers formerly with the U. S. Bureau of Mines' Southwest Experiment Station, and R. F. Robinson, a former geologist of the U. S. Geological Survey. George B. Blonsky, General Manager for Wothree Mines, was present during the investigations. After completing the investigations the examining team discussed with Blonsky a tentative program of exploration which eliminated some of the proposed work and increased other parts of the proposed exploration. The work eliminated was in part development and the work substituted provided for long range exploration. The revised program was recommended by the examining team and a contract for the work, Idm-E632, was signed October 30, 1953, by Carl Hovgard, who had purchased FitzGerald's interests. The contract provided for estimated total expenditures of $33,000.00, with the Government's share at 75 percent, or $24,750.00. The work was started November 16, 1953 and was completed early in October 1955.

A prior application for Governmental aid, DMA-913, requested a loan of $80,000.00 for the purpose of equipping the property for production. L. L. Farnham, mining engineer, U. S. Bureau of Mines, and A. F. Shride, geologist, U. S. Geological Survey, examined the property and found that a production loan was not advisable but that aid for exploratory work could be given favorable consideration.

LOCATION, TOPOGRAPHY AND PHYSICAL FEATURES

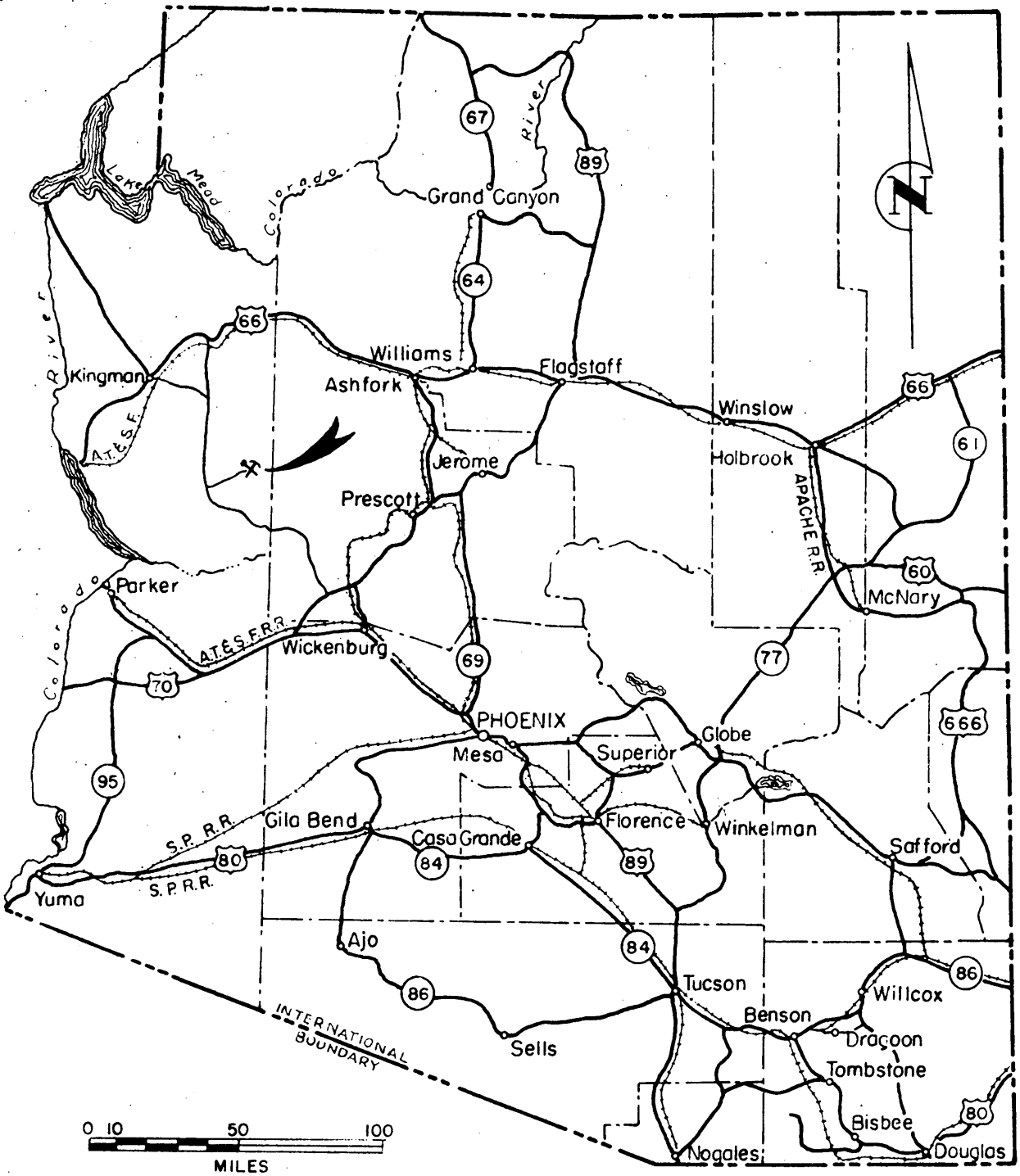
Elsing and Ageton report:[1]

"The Wothree or Williams Tungsten mine is situated in the Aquarius Mountain Range in Sections 19, 20, 29 and 30, T. 16½ N., R. 11 W., G. and S. R. Meridian, Greenwood Mining District, Mohave County, Arizona. The mine is 72 miles southeast of Kingman, which is the shipping point and supply center on the Santa Fe Railroad (see figure 1).

"The property is reached from Kingman by following U.S. Highway 66 for 1.5 miles east of Kingman, then turning south on State Highway 93 for 43 miles to a sign showing 'Trout Creek'. At this sign there is also a Wothree mine sign showing that the distance to the mine is 27.2 miles. This branch road turns east and crosses the Big Sandy Wash. Most of the road from the Trout Creek sign to the mine is a winding mountain road without excessive grades. In wet weather the Big Sandy might be impassable for several days at a time. The road is well signed all the way to the mine. The driving time is approximately 1.5 hours for the 27 miles, and approximately 3 hours from Kingman.

---

[1] Elsing, M. J., and Ageton, R. W., Engineering Report, Wothree Mines, Williams Tungsten Mine, Greenwood Mining District, Mohave County, Arizona, DMEA-2957, p. 2, May 1953.



DMEA 2957

FIGURE 1. - LOCATION MAP - WOTHREE MINE
WILLIAMS TUNGSTEN MINE

GREENWOOD MINING DISTRICT MOHAVE COUNTY, ARIZONA

"The altitude of the lowest tunnel is 4,800 feet. The highest elevation near the mine is approximately 5,400 feet. The topography is sufficiently steep to permit exploration by tunnels. The vegetation includes juniper and small pine trees, shrubs and some grass."

HISTORY AND PRODUCTION

Elsing and Ageton state:[1]

"The original claims were located in 1902 by Ed Williams. Blonsky stated that no less than 8 different individuals or companies had attempted to operate the mine during the past 50 years. Each time Ed Williams or his son Roy Williams had gotten some kind of a down payment, which, with the royalties, had made the property quite remunerative to them.

"In a report on the Williams Tungsten Mine, Mohave County, Ariz., Ottey M. Bishop of the U. S. Bureau of Mines states that the mine has produced approximately 2,500 units of WO_3 and that this production came from 6,000 to 10,000 tons of ore. On this basis the recoverable content of the ore produced was 0.25 to 0.41 percent WO_3, depending upon whether 10,000 to 6,000 tons were mined and milled. The mine examiners have made estimates of the ore mined based upon stope maps which appear to be fairly accurate. Stope maps indicate that slightly more than 6,000 tons were mined. There are several stopes with incomplete outlines. Production from these stopes probably would raise the total to 8,000 tons of ore mined.

---

[1] Op cit. p. 3.

"In 1943, William Bradbury obtained a lease on the Williams mine and operated the property on the proceeds of two loans from the Reconstruction Finance Corporation. In order to obtain accurate information relative to the status of these loans a letter was written to C. A. Rockwood, mining engineer with the Reconstruction Finance Corporation at Los Angeles. On April 17, 1953, Rockwood advised that 'a loan for $20,000 was made to William S. Bradbury on September 15, 1943 and an additional loan of $6,000 was made on February 2, 1944. Only a few tons of ore were shipped and operations terminated in June 1944 and the lessor cancelled the borrower's lease in November 1944. The amount of $1,500 received from the sale of equipment was applied on interest. No payment on the principal was ever made.

" 'The loan was repayable from production only and borrower's lease on the property was cancelled. Consequently, the Reconstruction Finance Corporation has no lien against the property for the unpaid balance of the loan.' "[1]

The property was idle from 1944 until 1951, when it was taken over by Wothree Mines, which rehabilitated the mine, built a mill and conducted exploration with DMEA aid until August 1955, when the property was abandoned.

Milling of the ore found in and near the project workings started during April 1954. The mill, a well designed 60-ton gravity-flotation concentrator, was designed and built by the operator. It was operated intermittently until December 1955, when both mining and milling operations were terminated. Early in 1956, Wothree Mines abandoned the property after auctioning off all equipment, materials and supplies, and buildings.

---

[1] Op. Cit. p. 4.

According to the operator's final report to the DMEA, about 1800 tons of ore was mined and milled. Of the 1800 tons, we estimated about 400 tons was discovered by the project and the remaining 1400 tons was mined from old stope pillars and from 360 feet of drifts and raises driven at no expense to the Government. The operator reported that 496.25 units of WO_3, or 0.275 units per ton, were produced from this ore. Settlement sheets that accompanied royalty payment to the DMEA show that total production was 526.8725 units of WO_3 as concentrates averaging 61.21 percent WO_3. The difference in the 2 production totals is the 30.6225 units in the last 2 shipments that evidently were not included by the operator. Based on 1800 tons of ore treated, 0.2927 units of WO_3 were recovered per ton of ore for an average mill recovery of 80 percent.

Royalty payments to the Defense Minerals Exploration Administration on the 526.8725 units of WO_3 valued at $29,735.66 was 5 percent, or $1,486.78.

Production has been approximately as follows:

Year	Operator	Units WO_3
1904-15	To Primos Chemical Co.	Small lots
1917-18	James Townsend	720
1936-39		650
1940-41	Continental Mining Co.	935
1942	Roy Williams	212
1943-44	Wm. Bradbury	Small
1954-55	Wothree Mines	526
	Total	3,043

EXTENT AND OWNERSHIP OF PROPERTY

Elsing and Ageton say the following:[1]

"The property of the Wothree, or Williams tungsten mine comprises 10 unpatented lode mining claims, including Tungsten No. 1 to Tungsten No. 10 (see fig. 2). The location notices of these claims are recorded in the Office of the County Recorder, at Kingman, Mohave County, Arizona, in the book number and on the page number as shown below:

Claim	Book No.	Page No.
Tungsten No. 1	EE	264
Tungsten No. 2	EE	265
Tungsten No. 3	EE	266
Tungsten No. 4	EE	267
Tungsten No. 5	EE	736
Tungsten No. 6	EE	737
Tungsten No. 7	EE	738
Tungsten No. 8	FF	671
Tungsten No. 9	FF	672
Tungsten No. 10	FF	673

"On February 2, 1951, the estate of Edward G. Williams, deceased, gave Blonsky a lease and option to purchase the property for $21,000. Shortly after this Blonsky and Joseph B. Rice, Jr. formed a partnership for the purpose of operating the property. On March 22, 1953, in the application for exploration assistance, Blonsky stated that Norman D. FitzGerald on December 2, 1952 had fully exercised his option to purchase the Williams tungsten property and that the property was free and clear of liens and other encumbrances."

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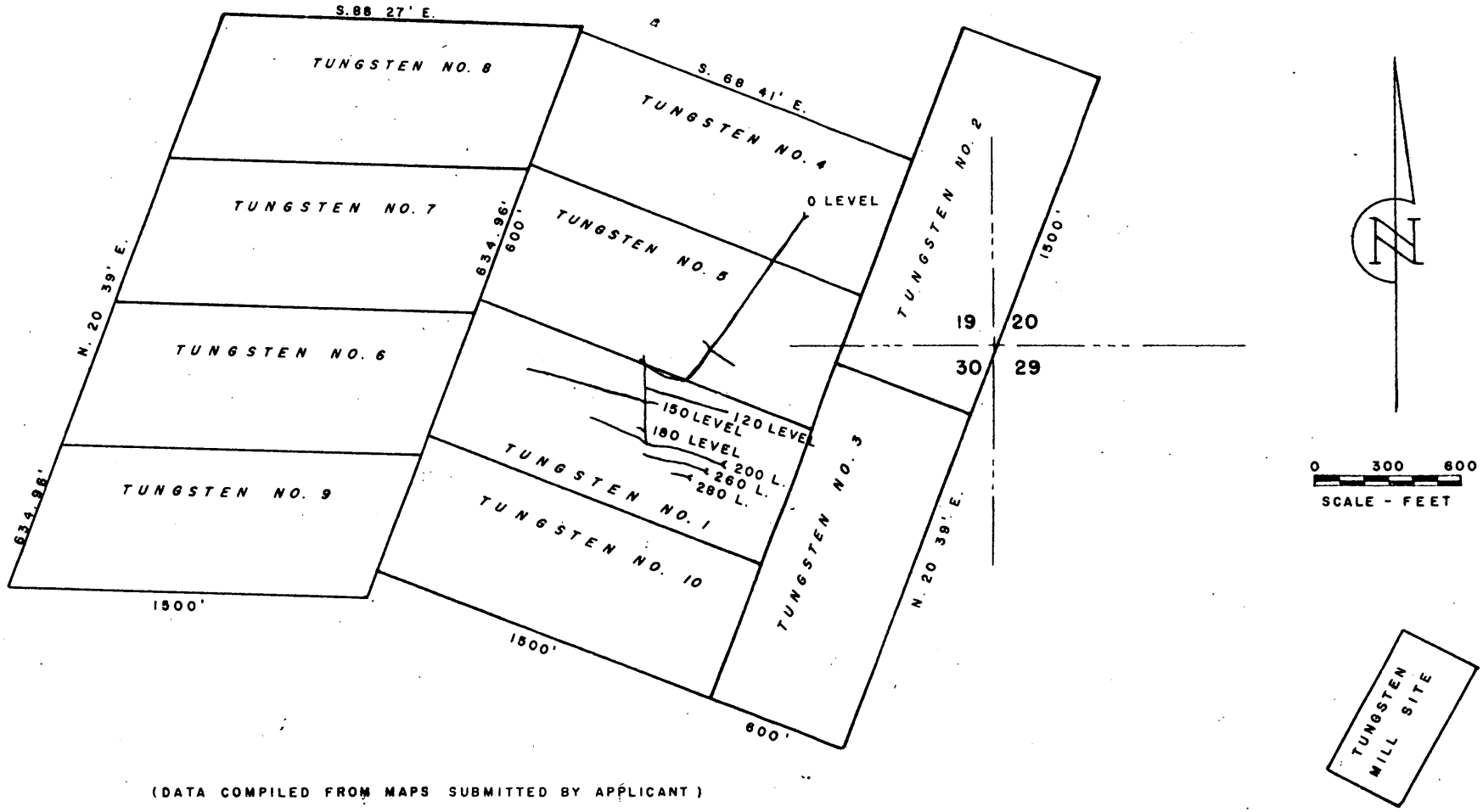
[1] Op. cit. p. 4.



(DATA COMPILED FROM MAPS SUBMITTED BY APPLICANT)

DMEA 2957 JUNE 1953

FIGURE 2.- CLAIM MAP - WOTHREE MINE - WILLIAMS TUNGSTEN MINE

GREENWOOD MINING DISTRICT MOHAVE COUNTY, ARIZONA

On April 30, 1953, FitzGerald sold the property to Carl Hovgard. The property as purchased was subject to contractual liens held by Joseph B. Rice, Jr., Norman D. FitzGerald, F. Leroy Foster, and George B. Blonsky.

The Williams property had been surveyed for patent at one time, but the patent apparently was not granted.

GEOLOGY OF THE DEPOSIT

The geology of the Williams or Wothree mine has been described briefly in at least 4 reports, as follows:

1) Hobbs, S. W., Tungsten Deposits in the Boriana District and the Aquarius Range, Mohave County, Arizona: U.S.Geol.Survey Bulletin 940-I, 1944.

2) Williams Tungsten Mine, DMA Docket 913, Geologic Section, by A. F. Shride.

3) Williams Tungsten Mine, DMEA 2957, Geologic Section, by R. F. Robinson.

4) Williams Tungsten Mine, DMEA 2957, an interim report by J. N. Faick.

The mine (see fig. 3) is situated in a shallow saddle in the Aquarius range in an area underlain by granite. The granite is heterogenous in composition. Most of it is a light-colored rock containing orthoclase and quartz with smaller amounts of plagioclase, biotite and hornblende. It is cut by irregular dikes and masses of pegmatite and aplite. Most of the rock near the Williams mine is slightly banded, sheeted or gneissoid and vaguely resembles metamorphosed sediments. In some areas, especially west and northwest of the mine, the granite loses its gneissoid or banded appearance and

grades gradually into a light-colored, massive pegmatitic granite with which is associated considerable aplitic material. Interbanded, or interlayered with the gneissoid granite, and apparently intrusive into it, is a dark-colored rock in which hornblende and biotite are abundant constituents. This rock, which is locally referred to as dark granite, is abundant near the mine workings and east of them.

Associated with the light-colored granite are many aplite zones which in many places are only a few inches thick, but which are several feet thick in the vicinity of the main working of the Williams mine, and appear to be considerably thicker at the Aquarius Cliffs on the west side of the area studied.

The rocks in the Williams mine area reveal a vague but definite structural pattern to which all the various lithologic units approximately conform. The banding of the gneissoid granite, the zones of inter-banded dark and light granite, most of the aplite zones, numerous faults and the principal veins apparently have approximately the same attitude. These strike about west-northwest and dip northeasterly about 25 degrees; however, the dip ranges from about 30 degrees at the outcrop to about 10 degrees near the bottom of the Williams mine and in the area north of it. This simple structural pattern in the district is modified to a slight extent by numerous easterly-trending high-angle faults along which displacement seldom exceeds a few feet.

Mineralogy

The Williams ore deposit is a pegmatitic-type of vein containing quartz, mica, wolframite or hubnerite, pyrite and trace amounts of

fluorite. Scheelite and manganiferous apatite, which fluoresces pinkish orange, have been reported. Sparse amounts of chalcopyrite occur in the lower part of the deposits. The ore mineral wolframite or hubnerite occurs chiefly as bladed crystals enclosed in quartz or in mica aggregates or veins, most of which tend to be localized along the walls of the quartz veins. Most of the vein minerals are comparatively coarse-grained, and some of the hubnerite crystals attain lengths of about 3 inches.

The vein is heavily stained by limonite and hematite and by small amounts of manganese oxides, especially above the 200 level. Below the 200 level the degree of oxidation decreases appreciably and is barely evident in the lower workings. The limonite is probably derived from pyrite, which originally must have been a comparatively abundant constituent throughout the vein. It is probable that oxidation of the ore above the 200 level has been an important factor in making it amenable for concentration by simple processes, and that the decreasing intensity of oxidation in the lower levels of the mine is accompanied by greater metallurgical problems.

Veins

The Williams mine (see figures 3 and 4) and several small prospects in the vicinity of it, have explored many small veins which are classified into two groups on the basis of attitude. The veins in both groups strike about N. 70° W., one group dips gently north and the other group dips steeply north. The steeply dipping veins are relatively unimportant as they apparently are discontinuous along both strike and

dip, and are very thin, generally less than 3 inches thick. The veins that dip gently to the northeast are the most important. These occur principally in the slightly banded, sheeted or gneissoid granite with which is associated considerable aplitic material. The veins appear to be concentrated in a zone having a maximum thickness of about 200 feet, and which apparently has approximately the same attitude as the apparent banding or zoning of the host rocks. The veins are spacially closely related to aplite-granite contacts and appear to have followed planes of weakness similar to those which channeled aplite-pegmatite intrusions. The veins are tabular deposits ranging in thickness from a few inches to a few feet and have strike lengths ranging from a few feet to about 500 feet. In the direction of the dip, the length of individual veins is unknown, but in the Williams vein there is evidence to indicate that it may terminate against narrow, steeply dipping, easterly-trending veins at a slope distance of about 600 feet below the outcrop. The Williams vein is the largest in the area; however a vein (sometimes referred to as the Aquarius Cliff, West or Upper Vein) exposed near the base of the Aquarius Cliffs is fairly large. This vein is about 500 feet long and 2 feet thick at the outcrop.

The veins tend to be overlapping but are widely spaced and in most cases they are separated by great volumes of barren granite. Branching or feathering of the veins at the ends of oreshoots is a common feature in the Williams mine, as shown on figure 5. Here the thickest part of the vein occurs in competent aplitic zones in the light-colored granite. In many places where the dark-colored granite

is penetrated by the vein it pinches to a very thin stringer or branches into many thin seams that disappear within short distances in the incompetent dark-colored granitic host rock. The narrow branch veins and stringer veins in the dark-colored granite generally are not of mineable thickness, but where they intersect in areas where aplite is a noteworthy constituent of the wall rocks, the veins may form oreshoots of mineable size.

The Williams vein has been developed and explored by about 4000 feet of tunnels, drifts and winzes principally on 7 levels (see figures 3 and 4). The lowest level is the "0" or haulage level, and above this in consecutive order is the 120, 150, 180, 200, and 260 levels. Some stoping has been done from all of the levels. These workings and surface cuts and prospects have proven beyond reasonable doubt that two nearly parallel veins exist. Most of the workings are on the main Williams vein the position of which is evident from a series of pits and open cuts at the outcrop above the 260 level. The underground workings (fig. 4) show that the main oreshoot on the Williams vein has a strike length of about 200 feet and a dip length of about 600 feet. The strike of the oreshoot is about N75°W and the northeasterly dip ranges from about 30° in the upper part of the deposit to about 10° in the lower part. This vein is invariably closely related spacially to aplite or aplitic granite. In the most productive part of the mine the tungsten-bearing veins traverse an aplitic zone several feet thick. Usually aplite forms the hanging wall of the veins, but in places also occurs in the footwall. The most productive part of the vein appears to be localized by 3 factors, as follows: (1) abundant aplite, (2) zones where steep dips are prevalent, (3) zones where the strike is approximately N75°W.

Another vein, similar in most respects to the Williams vein, has been explored by a drift, raise and winze on the "0" or haulage level, about 700 feet from the portal (see figure 5). This vein is approximately parallel to the Williams vein. Where exposed on the "0" level a small oreshoot has a strike length of about 100 feet and attains a maximum thickness of about 30 inches. The oreshoot has been explored by a raise and a winze, each about 50 feet long. These workings reveal that the vein splits into narrow branch veins which die out in the inhospitable dark granite, along the strike and the veins apparently also weaken along the dip. Stadia surveys made during the life of the DMEA project indicate that the "0" east vein is the same as the vein exposed at the base of the Aquarius Cliffs, west of the Williams mine. At the outcrop the vein, which is sometimes referred to as the West or Cliff vein, has been locally mined and prospected for a strike distance of about 500 feet. On the hill above the Williams mine, the "0" east or upper vein has been mined at several shallow open cuts. Projections made through the mine indicate that all of these workings are on a vein zone that is more-or-less continuous from "0" east to the outcrop at the base of the Aquarius Cliffs. This vein is approximately parallel to the Williams vein and is from 60 to 120 feet above it, in a direction normal to the veins. The upper vein is comparatively long on both the strike and dip, but it is comparatively thin; in most places it is only about 2 feet thick or less. In places the vein splits into 2 or 3 stringer veins and in other places it becomes very thin or pinches out entirely. Apparently the vein is lenticular and discontinuous in habit.

Faults

Many faults, all of which have relatively small displacement, are exposed in the Williams mine. The faults are strike faults, that is, the strike of the faults is approximately parallel to the strike of the vein. Like the veins, there are two systems of faults: 1) those that dip gently to the north, 2) those that dip steeply north or are nearly vertical. The low angle faults generally occur closely associated with the veins but in places are independent of them. The margins of the veins, and some of the aplite dikes commonly show evidence of low angle faulting. Undoubtedly some of the low angle faults were in existence at the time the ore was introduced and these were probably important in localizing the ore. Post ore movement is obvious on many of the low-angle faults. In many places in the mine the veins pinch out in the gently dipping zones of fault gouge.

Exposed in the winze below the 200-level and on the "0" level are several of the steeply dipping or vertical faults, all of which have relatively small displacement. Some of these are older than the ore and contain narrow stringer-veins of ore, and some of them are younger than the ore and displace the gently dipping veins from a few inches to a few feet. Near the bottom of the winze the Williams vein thins appreciably and is joined by several small veins that are localized on the high angle faults. Apparently the low angle faults were the most receptive to ore, as only very thin discontinuous veins were localized on the high angle faults. On the "0" level and in the raise connecting this level to the winze is exposed one of the

more prominent of the steeply dipping faults. Crushed ore was found along it on "O" level; therefore it undoubtedly was in existence prior to emplacement of the ore, and post-ore movement occurred along it. Displacement on this fault is unknown but is probably only a few feet.

Geologic conditions at the bottom of the winze are illustrated by Fig. 5, Section A-A'. This illustration is important because it shows that the actual bottom of the oreshoot has not been reached, although here the vein is discontinuous, offset by faults, and is too thin to mine.

PROJECT WORK COMPLETED WITH RESULTS

Work under the Contract Idm-E632 and its amendments was started November 16, 1953 and was completed early in October 1955. A total of 992.5 lineal feet of drifts, raises and a winze were completed with the following results:

150 West Drift. The west drift was extended 378 feet from the old workings for the purpose of exploring the western extension of the main vein and to determine if other oreshoots exist west of the main oreshoot. As shown on fig. 5, the Williams vein decreased in thickness from about 30 inches to about 10 inches within 60 feet of the starting point and it pinched out completely about 90 feet from the starting point. The vein apparently pinched out where the strike changes from about N60°W to about S70°W. Beyond this "pinch-out" there are several thin discontinuous veins and lenses of ore material, but none of these were of any importance. Many minor low-angle and high-angle faults were encountered by the drift.

120 East Drift. The 120 east drift was advanced 302.5 ft. for the purpose of exploring the eastern extension of the main Williams vein. The vein, which was exposed in the upper part of the drift, was followed for a distance of about 110 feet from the starting point, beyond which point the vein pinched and split into 2 veins about 1 inch thick in fault gouge in granite. The vein ranged in thickness from about 26 inches near the winze to about 14 inches at the point where it starts to pinch out.

"O" East Drift. The "O" east drift was driven 100 feet eastward from the "O" level to explore an oreshoot in the west or upper vein as it is called. The drift started in a vein approximately 2 feet thick but about 40 feet from the starting point the vein split into 3 irregular stringer veins, only a few inches thick. This vein originally was thought to be the Williams vein or a faulted extension of it, but surveying and mapping done in June 1954 proved conclusively that the vein is an upper or separate vein parallel to the Williams vein as shown on figure 3, Section A-A'.

"O" East Raise. The "O" east raise was driven 50 feet on the vein exposed in the "O" east drift. The vein split into 2 veins, each about 1 foot wide; and separated by a horse of granite about 1 foot thick. Near the top of the winze one of the veins pinches out in dark granite and the other flattens and pinches appreciably as shown in fig. 5 Section A-A'. Some of the ore exposed in the raise was stoped before the end of the DMEA project.

"O" East Winze. The "O" east winze was sunk 50' to explore the downdip extension of the small oreshoot exposed in the "O" east drift. The vein in the winze is irregular, contains at least one relatively large waste horse, and near the bottom of the winze splits into 2 narrow stringer veins. The maximum width of the vein in the winze is about 20 inches.

"O" raise from main winze. A raise (fig. 5, Section B-B') was driven about 10 feet above the bottom of the main winze for the purpose of testing a zone thought to be a faulted extension of the Williams vein. The raise penetrated a low grade vein zone about 1 foot thick which probably is the downward extension of the Williams vein.

200 crosscut. On the 200 level an old crosscut into the hanging wall of the Williams vein was extended 102.0 feet in an effort to penetrate the upper vein which is believed to extend from the base of Aquarius Cliffs to the "O" East drift. The upper vein (fig. 3, Section A-A') is believed to be approximately parallel to the Williams vein and is from 60 to 120 feet above it. The crosscut (fig. 3) penetrated 3 veins, from 1/2 inch to 2 inches wide and sparse hubnerite was observed in one of the veins. These veins, which dip from 40 degrees north to vertical, are not considered to be the upper vein because of the difference in attitude. A couple of zones of pegmatitic granite were penetrated by the crosscut extension but the north end of it passed into dark granite which, in many places in the mine, is an unfavorable host rock. The crosscut failed to locate the upper vein. This vein, where exposed at the

base of the Aquarius Cliffs, on the ridge above the Williams mine, and in the "O" East drift, is thin, comparatively discontinuous, and in places consists of 2 or more stringer veins separated by considerable wall rock. The vein is considerably less productive than the main Williams vein; therefore, further expenditure of Government funds for exploration of the vein does not appear justified.

COST OF THE PROJECT

The total estimated cost of the project authorized by contract Idm-E632 was $33,000.00, of which the Government's share was 75 percent, or $24,750.00. Unit costs authorized by the contract and its amendments were $30.00 per foot for drafting, crosscutting, and raising, and $60.00 per foot for winzing. Pertinent final cost data is shown below:

Working place	Advance (ft.)	Cost/ft.	Totals
150 West Drift	378.0	30.00	$11,340.00
120 East Drift	302.5	30.00	9,075.00
"O" East Drift	100.0	30.00	3,000.00
"O" East Winze	50.0	60.00	3,000.00
"O" East Raise	50.0	30.00	1,500.00
"O" Raise from main winze	10.0	30.00	300.00
200 Crosscut	102.0	30.00	3,060.00
Totals	992.5		$31,275.00

The Government's share, 75 percent of $31,275.00, was $23,456.25.

EFFICIENCY OF PROJECT OPERATIONS

George B. Blonsky, General Manager for Wothree Mines, supervised all operations. Exploratory headings were completed in a workman-like manner but their rate of advance was poor. Probably the main reason for the slow progress was the isolated location of the property. Very few good miners were obtainable and those hired generally left after a few days of work. A contributing factor was the abnormally long periods required for repairing equipment after break-downs, some of which probably were due to improper servicing.

ORE RESERVES

Ore reserves at the Williams mine have been calculated by different individuals on several occasions, and the grade of ore was estimated from hundreds of samples. Sample results that have been used in making ore estimates were obtained by the following:

1. George B. Blonsky, General Manager for the operating Company.
2. Wm. S. Bradbury, Mining Engineer and former lessee of the property.
3. T. P. Lane, engineer, Reconstruction Finance Corporation.
4. O. M. Bishop, Engineer, U. S. Bureau of Mines.
5. Continental Mining Company, former owners.
6. DMEA examiners; from samples taken at time of original examination and during progress of exploration project.

Tonnage and grade estimates were carefully made during previous investigations and are accepted here as being correct except for revisions that are necessary as a result of the DMEA project. Evidence obtained during the DMEA project indicates that tonnage and grade of reserves are subject to downward revisions. Ore values are erratically distributed throughout the vein and a true weighted average grade is difficult to obtain.

The average of 41 samples taken by the Bureau of Mines in 1942 is 1.03 percent WO_3 and the average of 73 samples taken in 1943 is 1.06 percent WO_3. The average of 115 samples taken by Blonsky is 0.74 percent. By recalculating the weighted average grade of 229 samples, M. J. Elsing, Consulting Mining Engineer, U. S. Bureau of Mines, determined that the grade of the ore in place is about 0.65 percent WO_3, or would be 0.55 percent WO_3 after allowing 15 percent dilution in mining. In January 1953 Blonsky shipped 53 tons of ore for a test at Boriania mill and this was found to contain 0.39 percent WO_3. From these figures Elsing concluded that the grade of ore at the Williams mine if mined at a production rate of 50 tons per day over an extended period would average about 0.4 percent WO_3. About 1800 tons of ore were mined and milled during the life of the project, and the average recovery of the ore milled was about .3 percent tungsten. Undoubtedly waste dilution is responsible for this low grade, and the ore in the mine probably contained about 0.65 percent WO_3, as shown by Elsing.

Accurate tonnage estimates of reserves are impractical to make because of irregularities in the vein and because it has been mined in many places by small irregular stopes of imperfectly known size and shape. Early in this DMEA project reserves were estimated as follows:

	Ore	Waste Dilution	Total	Percent WO_3 before mining
DMA-913 Shride & Farnham (Sept.1951)	6,600	3,000	9,600	0.75
DMEA-2957 Elsing & Robinson(May 1953)	7,757	1,164	8,921	0.65
George Blonsky, operator	6,000			1.25

Results of the DMEA exploration project did not materially change these estimates. The spotty distribution of tungsten values in the vein, the tendency of values to be localized in small pods or pockets widely separated by zones of low-grade or essentially barren vein material, and the absence of precise geologic guides to ore make estimation of reserves extremely difficult. Probably the reserves estimated by Elsing in May 1953 are the most reliable and are acceptable now if allowance is made for recent production. Blonsky states that he produced 1800 tons of ore, which, if 15 percent allowance is made for dilution, indicates that 1520 tons of ore were mined. Deducting this figure from Elsing's 7757 indicates that about 6200 tons of ore might remain in the mine. This figure is reasonable; however it must be made clear that this ore remains in or near the old stoped area in the mine. DMEA exploration failed to find mineable quantities of ore much beyond the limits of the old stopes; therefore added very little to the known reserves. However, exploration on the 120 and 150 levels indicates that the oreshoot extends about 50 feet farther west and about 150 feet farther east on these levels than originally thought. As the vein is only about 1 to 2 feet thick in this area, and as the vein practically pinches out immediately below the 150 level, this DMEA exploration work did not materially increase the ore reserves. In the "0" East drift a block of ore having a strike length of about 35 feet, a dip length of about 100 feet, and an average thickness of about 1.5 feet thick was exposed by DMEA exploration of the extension of the "0" east vein. This vein practically pinched out in all directions. In the "0" level East

drift about 250 tons of ore, or about one-half of the amount discovered, was mined out during the life of the project. We do not believe the ore found on the "0" level, or the extension found on the 120 and 150 levels are of sufficient magnitude to modify the ore reserve estimates previously given.

There is no reliable basis for estimating the grade of the remaining ore reserves, but all previous grade estimates should be disregarded. During the life of the contract Blonsky selectively mined the highest grade ore he could find and his reported average grade of this was 0.366 percent WO_3. The remaining ore certainly is much lower grade and probably ranges from about 0.15 to 0.35 percent WO_3, and may average about 0.25 percent WO_3. Blonsky did not mine above the 200 level and it is probable that some better quality ore remains in the upper part of the old workings.

In summary, the writers believe that the ore reserves remaining at the Williams mine amount to about 6200 tons of low-grade ore that might average about 0.25 percent WO_3. Most of this ore is in pillars and unmined areas above the 200 level, some remains between the 200 and 120 levels, and a very small amount remains in the "0" level east workings. The ore cannot be profitably mined under any foreseeable conditions; however, it is possible that "high-graders" or "chloriders" might exploit some of the high-grade ore lenses under extremely favorable conditions at some future time. There is no geological reason to expect significant discoveries of tungsten ore to be made in the Williams area.

STANDARD FORM No. 14
APPROVED BY THE PRESIDENT
MARCH 10, 1926

TELEGRAM

OFFICIAL BUSINESS—GOVERNMENT RATES

FROM Interior Department
BUREAU Defense Minerals Exploration Administration
CHG. APPROPRIATION 14X4401(01) Revolving Fund, Defense Production Act, Interior (Allocated Working Fund to the Office of the Secretary)

U. S. GOVERNMENT PRINTING OFFICE 10—1723

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

Reurtel May 29, Docket DMEA-2957, Contract Idm-E632, Carl Hovgard. Indications are that relatively small tonnage of marginal ore will not be minable in the foreseeable future and cost of policing would not be justified. Hence we do not believe certification is justified. If you have any further knowledge concerning the property, please advise.

Chairman, Operating Committee

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

DN 235 BUR MINES 5-29-56 8-51

CHAIRMAN, OPERATING COMMITTEE, DMEA

RE DOCKET DMEA 2957, CONTRACT IDM-E632, CARL HOVGARD, OUR MEMORANDUM OF MARCH 30,1956. PLEASE TT ADVICE AS TO DECISION REACHED RELATIVE TO CERTIFICATION OF DISCOVERY OR DEVELOPMENT.

J W TOWNSEND. ACTING EXECUTIVE OFFICER

RECEIVED
MAY 29 1956

ver, Col.

MAY 29 12 58 PM '56

BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

2957

[illegible]

Date 4-5

To forward to:

1. ~~[illegible]~~
2. ~~[illegible]~~
3. ~~[illegible]~~
4. ~~Director General of Postal Savings Bank Division~~
5. ~~Inst. Div.~~ Division
6. Back to Control Desk and File

Your comments in report regarding:

1. Certification
2. recommendation
3.
4.

and take appropriate action.

- - - - -

Action taken by Division:

Cert. to be prepared here

WSM

Initials

Docket

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

RECEIVED
APR 4 - 1956

224 New Customhouse
Denver 2, Colorado

March 30, 1956

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 2957 (Tungsten), Contract Idm-E632, Carl Hovgard (Williams Tungsten mine - Wothree mine), Mohave County, Arizona

In compliance with your request of March 5, 1956, we are enclosing the original and three copies of a joint memorandum report, dated March 23, 1956, from J. N. Faick, Geologist, Geological Survey, and W. R. Storms, Superintendent, Southwest Experiment Station, Bureau of Mines, relative to certification of the subject project.

The joint report contains a tentative analysis of the work performed, results thereof, and recommendations that the project be certified as a discovery or development as a result of the DMEA work performed, in which this office concurs.

We have been informed that the Operator considers that the ore discovered and developed is submarginal at present prices and of no further interest. Therefore, he has abandoned the property and posted notices to that effect.

The Operator's final report was forwarded to you by our memorandum of March 15, 1956. The Field Team final report will be forwarded as soon as the work load will permit completion of the engineering and geologic sections.

W. M. Traver

Enclosures

W. M. Traver

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Box 4126 University Station
Tucson, Arizona

March 23, 1956

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

MEMORANDUM

To: Executive Officer, DMEA Field Team Region III

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

Through: E. N. Harshman

Subject: Recommendations relative to Certification of DMEA 2957, Contract Idm E-632, Williams (Wothree) Mine (Tungsten), Mohave County, Arizona

RECEIVED
APR 4 - 1956

We have been requested to make specific recommendations regarding certification of discovery or development at the Williams Mine. The work done under the contract has been completed and some ore has been mined and milled, and royalties have been paid to the Government on the production. Part of the ore mined may be regarded as newly discovered ore because it was obtained in parts of the mine that were explored with DMEA assistance, and some ore also was mined from reserves that existed when the contract was started. The project established the existence of only small reserves of ore that are of submarginal grade, and that are expensive to mine and process; hence the mine could not be worked profitably, and the mine ceased operating during the latter part of 1955. It is conceivable that the remaining reserves, possibly 2 or 3 thousand tons of ore, might be mined during periods of extremely high prices by lessees equipped with simple concentrating facilities.

The project explored the zones most likely to contain ore and we believe showed quite conclusively that the ore was in 2 nearly parallel veins rather than a single vein as originally thought. Only the main Williams vein was explored by the project. An upper vein which crops out near the base of Aquarius Cliffs was not explored, although it was sought by a single crosscut from the 200 level in the Williams vein. The ore occurred in definite shoots in narrow quartz-muscovite-wolframite veins in aplitic granite. Ore was found by the following DMEA workings:

1. A drift, raise, and winze on the "0" level, east of the haulage level;
2. The 120 level drift driven eastward from the main winze;
3. The 150 level drift west of the main winze.

These 3 workings found small amounts of ore in the Williams vein, and some of it was mined. A crosscut driven into the hanging wall on the 200 level, and a raise driven above the bottom of the main winze found only meager amounts of vein material of no particular significance.

Until the final engineering and geological report is completed we are tentatively accepting the operator's reports as being reliable. These show that a total of 992.5 feet of drifts, crosscuts, raises and winzes were driven under terms of the contract with Government participation and that 360 feet of raises and drifts were completed by the operator at his own expense. About 1800 tons of ore were mined

and milled from which 496.25 units of WO_3 were sold. The average grade of concentrate was 62.17 percent WO_3.

Zones most likely to contain ore were adequately explored and there is no justification for Government participation in additional exploration at the Williams Mine in the foreseeable future. As ore was mined, milled, and concentrates were sold, and royalty was paid, and as a small reserve of ore remains in the mine, it is recommended that the project be certified.

John N. Faick

John N. Faick

Walter R. Storms

W. R. Storms

JNF:ms

cc: Harshman (8)
Storms

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

Box 4125 University Station
Tucson, Arizona

March 28, 1956

MEMORANDUM

To: Executive Officer, DMEA Field Team, Region III

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

Through: E. H. Harshman

Subject: Final Report, Docket DMEA 2957, Contract Ida 8-638 (Tungsten), Carl Hoygard, Williams Tungsten Mine (WOthree mine), Mohave County, Arizona.

This is to advise you that we hope to have a joint final report on the above subject property completed by May 15, 1956.

J. H. Faick
John H. Faick

Walter R. Storms
Walter R. Storms

JHF:ms

cc: Harshman (8)
Storms

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

RECEIVED
MAR 19 1956

224 New Customhouse
Denver 2, Colorado

March 15, 1956

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 2957 (Tungsten), Contract Idm-E632, Carl Hovgard (Williams Tungsten mine, Wothree mine), Mohave County, Arizona

In compliance with Special Notice Instructions in the "Minutes Operating Committee" No. 622, dated January 27, 1956, we are enclosing the original and one copy of the Operator's final report.

W. M. Traver

W. M. Traver

Enclosures

OPER FINAL REPORT

NORMAN D. FITZGERALD
OWNER

GEORGE B. BLONSKY
GENERAL MANAGER

WOTHREE MINES

P. O. BOX 47
KINGMAN, ARIZONA

March 4, 1956.

RECEIVED
MAR 19 1956
U. S. BUREAU OF MINES
WEST EXPERIMENT STATION
MAR 8 1956
TUCSON, ARIZONA

GENERAL AND FINAL REPORT

on work done on

Contract Idm- E632
Docket DMEA- 2957
Williams Tungsten Mine
Mohave County, Arizona.

The Williams Tungsten Mine, located in Aquarius Range of the Greenwood Mining District, previous to purchase by Wothree Mines was operated by other parties to the following extent:

1. Three drift adits on 200, 260 and 280 levels, total about 1200'.

2. A 1400' haulage tunnel crosscut adit on "0" level, underlying the whole structure.

3. A 40' raise and 366' winze connecting the "0" level with the 200 level.

4. Short lateral drifts from the winze on 150 and 180 levels (about 250')

5. About 30 stopes and 4 raises, connecting above mentioned levels.

6. Shallow open cuts on the outcrop of the Williams vein.

7. Shallow surface workings on the West outcrop of the upper vein -- apparently parallel with the Williams vein and about 80' normally above it.

All above workings are located on Tungsten No. 1 claim. There were a few small exposures of narrow stringers on other claims, but they were of no immediate commercial value and of very little promise.

Both veins are striking east and west and are dipping northward at 20 to 30 degrees with the horizontal. They are narrow (one to two ft. wide) streaks of quartz and mica in 10 to 20 ft. flat aplite dikes in granite country rock. They have limited ore shoots of wolframite, which comes in narrow streaks of spectacularly high concentrations, located in widely spaced spots. Only two stopes existed below 200 level.

On the other hand, some 30 stopes mined by former operators were above the 200 level, located in the region east and west of the upward projection of the winze and stretching from the portal for 500' to a point about 100' to the west of the collar of the winze. They represent a strike extension of some 500'. These stopes also extend up the dip to within a few feet of the surface and represent about 200' of dip ore extension above 200 level. Below the 200 level dip extension of ore sampled in the winze was 260', thus giving a total dip extension of about 460'. But below the 200 level the strike extension east and west was exposed only in three short drifts and three stopes for about 40 to 70' on each side.

The samples in the three small drifts and three small stopes about the winze were medium to low grade, while assays of the winze samples, taken every 10', were very encouraging, averaging 1.53% WO_3. The large potential mineralized area thus was indicated above and about the winze.

Our first intention was to drive among other things six exploratory drifts of about 100' each, three on each side of the winze; this plan did not meet with the approval of the DMEA authorities, as they felt that such work would be more of development than exploratory nature. Therefore we changed our program, putting the heavy end of it into long range exploration, driving two long drifts, one east and the other west of the winze. Most of the effort spent on this contract was concentrated in this area, on the westward extension of the 150 West drift, and the eastward extension of the 120 East drift.

Eastward extension of ore from winze on <u>120' level</u> persisted for about 40', then pinched down and values dropped way below commercial grade. Assaying showed every 60' or so a good value up to 6% WO_3, but all intermediate assays (at 10' intervals) ran way below anything mineable and the average value was noncommercial. Also the width of vein narrowed down to 6" or less as one progressed eastward from the winze. On the other hand, structure persisted, aplite and shear encouraged continuation of work, but eventually proved misleading.

Westward extension of ore from winze at <u>150' level</u> was explored for several hundred feet with same result as the work done eastward on 120' level. Grade here was very erratic at first, quickly stabilizing at low values as one progressed westward. The vein thinned out; aplite changed to pegmatite; shear persisted. In two places a vein structure reappeared, only to peter out in a couple of rounds. Our geological study indicated, that extension of the 150W drift for 300 to 400' westwards might intercept the West Cliff Vein, exposed on the westend of the Tungsten No. 1 claim. Therefore we followed shear and structure for a long way westwards, never encountering the West Cliff Vein extension. The west outcrop with its Oldtimers' workings suggested, that 150 West drift

that 150 West Drift may encounter downward and eastward extension of that vein, then thought to be the same as the Williams Vein. The eastward extension of the 120 East drift was to open up the vein crossed by the "0" level crosscut. The above gave us the geological reasons for undertaking the long drifts on the 150 and 120 levels.

As work progressed, it became more and more apparent, that both West Vein outcrop and the ore in the "0" East drift had no connection with the Williams Vein, but probably were the continuation of the"Upper Vein" exposed on the surface above and to the north of the Williams Vein.

The other work undertaken under this contract can be listed as:

1. 100' drift on "0" East level.
2. 50' raise above "0" East level.
3. 50' winze below "0" East level.
4. 10' raise above bottom of winze.
5. 102' extension of oldtimers' crosscut north of 200 level.

The geological reasons for this work were as follows:

In their "0" level crosscut, some 700' west from portal and some 500' east from the bottom of the winze the oldtimers encountered two narrow streaks of good ore. They drifted north for 40' and though vein persisted, it flattened and lost most of the values.

Wothree Mines on their own drifted eastwards on same vein for 35', opening up a highly mineralized structure, from 12 to 24" wide, which upon sampling every 5' gave average assay of 1.75% WO_3. This was our first and very encouraging exploratory work. It was done before the DMEA contract was applied for. For financial reasons we were forced to stop this work at the 35' point. Could we have persisted for another 15', we would have gone out of the aplite into the granite and also out of good ore, as proved by subsequent DMEA work. DMEA authorized first a 100' eastward extension of this drift and a 50' raise at the most promising point, above it. The first 15' of DMEA extension in "0" East drift took us out of aplite. The vein persisted into granite, but it split into three narrow streaks. We still had two streaks with wolframite in the granite face at the end of the 100' of DMEA drift, all of this was noncommercial.

Thereupon it was decided to drive a raise, where Government work had started on the "0" E drift. The ore looked and assayed very well at this point. Unfortunately the first two rounds took all the good ore down. Continuation of this raise showed a narrowed vein with aplite disappearing in a few rounds. The vein flattened, went into granite, narrowed down to 6" and lost grade. At the face of the raise, 50' above the drift, tungsten is still present, but it is definitely noncommercial.

As commercial ore in "0" East drift dit not extend eastward, westwards and upwards, it was conjectured that it must have come from below the drift and an amendment of contract was requested and granted for sinking a 50' winze at a point below the above raise. This was done. Some encouragement was experienced for the first 30', but after that the vein flattened, narrowed down, pitched to the East, split and lost values. Aplite persisted, but ore definitely became noncommercial. At the face 50' below "0" East level about 6" of vein was left, but this was not encouraging enough to continue exploration. This ended work on the "0" East level.

A short raise above the bottom of the main winze was included in the contract, because apparently the aplite dike and the probable ore went into the hanging about 100 ft. up the winze from this point and the ore might be cheaply intercepted here at a short distance. This was done 4' above the winze. Aplite was exposed almost immediately and a 4" veinlet of quartz,containing wolframite crystals, was cut. In another 6' our raise went back into the granite, indicating end of mineral bearing structure.
This ended exploration in this location.

The 120E and 150 W drifts, as well as surface and underground surveying of most all mineral exposures in the mine and the outcrops by this time strongly suggested, that the West Cliff outcrops, the surface outcrops north and west of Williams Tungsten Vein outcrop, and the ore exposed in "0" East drift represented the "Upper Vein", parallel with the Williams Tungsten Vein and normally about 80' above it. Joint survey by DMEA Team and the writer enabled Mr. J. Faick of U.S.G.S. to draw up sections, strongly supporting this opinion.
It occurred to the writer that, the "Upper Vein" being so close to the Williams Tungsten vein, would probably have been subjected to the same mineralizing agents and might have an ore shoot above the corresponding ore formation in the Williams Tungsten Vein plane. Therefore an amendment of contract was again requested and granted for the extension in the northeasterly direction of the 115' oldtimers' crosscut started from the 200 level at a point about 100' west of the collar of the winze. Should normal distance between the two veins be 80', as indicated by survey, a 63' extension of the 115' crosscut would cut it.

This work was done in September and October 1955 and 102' extension exposed no aplite, no vein and no mineral. Apparently at the location penetrated by our crosscut the upper vein either is swerving further north, or has a local pinch to nothing. In any event, further possibility of finding a highly mineralized commercial size ore deposit in this locality became so problematic, that Wothree Mines decided to stop all operations.

RECEIVED
MAR 19 1956

Summary of all work done under DMEA Contract:

150 West Drift	378'
120 East Drift	302.5'
"0" East Drift	100'
	780.5'
"0" East Winze	50'
"0" East Raise	50'
Bottom of Winze Raise	10'
	60'
200 level Crosscut	102'

Total Drifts	780.5'
Total Raises	60'
Total Winzes	50'
Total Crosscuts	102'

Exploration work done by Wothree Mines on their own account during this period:

120 E Drift	20'	
"0" E Drift	35'	
"0" W Drift	20'	
	75'	75' of drifts
120 E Raises	60'	
150 W Raises	30'	
190 E Raise	20'	
160 W Raise	60'	
135 W Raise	20'	
170 E Raise	15'	
230 W Raise	80'	
	285'	285' of raises

The cost figures on this work were kept fairly closely, but were badly obscured by several starts and stops, by difficulty of obtaining labor which would be willing to work night shifts or any shifts at all, by many oacasions of men taking contracts and failing utterly to produce, as well as by part of operation done on a very small scale, where one shift of two men was used per day and overheads were exhorbitant.

In general, drifting has costed between $45.oo and 50.oo p/foot, sinking 50' winze about the same, while raises costed about $40.oo per foot. This was considerably over estimates made before work started and as things came out, DMEA Loan took care of no more than 50% of our expense. Of course the estimates were based on assumption that exploration would be done concurrently with our miningaand milling work and hence carry only a minor fraction of overheads. As it turned out, the opposite condition prevailed.

During our operation about 1800 tons of ore were mined and milled.

A total of 496.25 units of WO_3 were shipped, averaging a recovery of 20.275 units per ton. 74.67%

Average grade of material milled was 0.366% WO_3.

Average of concentrate shipped was 62.17% WO_3.

CONCLUSIONS:

1. Exploration done on DMEA Contract has uncovered no additional reserves of ore.
2. Exploration proved exhaustively that the Williams Tungsten Mine can be considered an exhausted property.
3. Our work on DMEA Contract, as well as on our own, showed that ore occurrence in Williams Tungsten Mine is of extremely spotty and limited nature.
4. The number of stopes above 200 level, mostly mined out by previous operators indicates that the vein had large strike and dip extension, which did not occur below 200 level
5. Below 200 level the mineralization of the quartz vein in the flat aplite dike in granite country rock was confined almost entirely to the immediate vicinity of the winze and did not extend laterally more than a few feet both east and west from the winze. Apparently the winze was sunk in a feeder pipe ore shoot and the exposed stoping structure above 200 level, combined with winze exposure to give misleading impression of a considerable potential ore area about the winze.
6. In several exposures the tungsten - quartz vein persisted beyond the pinched out aplite into granite. But in all such occurrances vein became noncommercial because of narrowness, lowgrade and splintering into several stringers.

WOTHREE MINES.

George B. Blonsky

George B. Blonsky.
General Manager.

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

RECEIVED
MAR 16 1956

[redacted] New Customhouse
Denver 2, Colorado

[redacted] March 14, 1956

Return Receipt Requested
ADDRESSEE ONLY

Mr. Carl Bovgard
1141 Butterwort Street
Abilene, Texas

Re: [redacted] Docket 2957 (Tungsten), Contract Idm-E632, Carl Bovgard, Tungsten Claims No. 1 to 10 Incl., (Williams Tungsten Mine), Aquarius Mining District, Mohave County, Arizona

Dear Mr. Bovgard:

Enclosed is a photocopy of a letter received from George B. Blensky, General Manager of Bothree Mines, under whose direction the exploration work of Contract Idm-E632 was performed.

According to the last paragraph of Mr. Blensky's letter, Bothree Mines has ceased operations on this property. Please advise us by return mail if full ownership of the ten Tungsten claims is still vested in you as an individual as was the case at the time you signed Contract Idm-E632. Please advise us also of your future intentions regarding operations at the Williams Tungsten Mine. In case you intend to sell or lease the property, we advise that you make full provisions in writing to protect the Government's lien for royalty payments. You are referred to Article 7 of Contract Idm-E632 for this requirement.

Yours very truly,

W. M. TRAVER

W. M. Traver
Executive Officer, [redacted]
Field Team, Region III

Enclosures
RDB/vj
cc: Royalty File E632 w/orig. ltr.
Correspondence File E632 w/copy ltr.
Sec. Opr. Comm. (2) w/copies ltr.
W. R. Storms w/copy ltr.
J. N. Faick w/copy ltr.
E. N. Harshman w/copy ltr.
J. W. Townsend w/copy ltr.
Berkenkotter
Chron.

NORMAN D. FITZGERALD
OWNER

WOTHREE MINES

P. O. BOX 47
KINGMAN, ARIZONA

GEORGE B. BLONSK
GENERAL MANAGER

DMEA
Date Rec'd.
MAR 9 1956

RECEIVED
BUREAU OF MINES
Denver, Colorado
MAR 16 1956

March 5, 1956.

Mr. W. M. Traver, Executive Officer, DMEA
224 New Customhouse
Denver 2, Colo.

Re: Royalty Payments

Contract Idm-E632
Docket DMEA 2957
Williams Tungsten Mine
Mohave County, Arizona.

Dear Mr. Traver,

We are sending you herewith our check No. 1133 for $202.54, payment of 5% royalty due DMEA on our last and final production. Also included are two sets of sales papers. The sum adds up as follows:

Purchase statement from C.W. Jones, Jan. 6 55.543 units, assay 58.16% @ $58.97 less assaying & sampling	$3,250.82	5% Royalty $162.54
Consignment Paper C.W.Jones, Jan. 7 1142 lbs.net,reputedly assaying 41.75% no settlement made, price unknown, due to G SA refusal to buy from middlemen, directly after receipt of and advance payment on this last clean-up material		
Advance payment:	800.oo	40.oo
		$202.54

You will note that the pink multigraph represents a preliminary acceptance of our 1167 lbs. gross of mill clean-up concentrates and middlings and records an advance paid of $800.oo. Above royalty payment includes payment on these $800.oo.

Subsequent correspondence with Mr. Jones shows, that this clean-up and middlings material contained only 41.75% WO_3. Furthermore that shortly after the $800.oo payment was made to us, GSA informed Mr. Jones that they had quit buying from all the middlemen. As a result Mr. Jones wanted us to take back our material and reimburse him the $800.oo plus his sampling and assaying charges.

This last clean-up of ours being low-grade and only half a ton, we had to sell to a middleman, who could blend it in with higher grade material to make acceptable Government grade in the normal course of his business. However, right after receiving our material GSA quit buying from the middlemen. Our company having gone out of business was in no position to take this material back for more upgrading and future sale. Mr. Jones naturally is caught in the middle of it and very unhappy about it all and not prepared to make the final settlement on these about 23.85 units. He

expects GSA to lift the ban on buying before too long, at which time he will be able to settle this last shipment of ours.

It would be a great help to all those concerned, if DMEA who is also interested in settling this account, could make a suggestion to GSA that they accept this shipment from Mr. C. W. Jones in Bishop in this special hardship case.

If and when any further payment is received on this last shipment either Mr. Carl Hovgard or Mr. Norman D. FitzGerald will be in a position to complete the royalty payments on this shipment to C.W.Jones.

I am taking this opportunity to inform you that Wothree Mines has quit operation, auctioned off the mill and abandoned the Williams Tungsten Mine. Also that this is my last letter to you in capacity of Manager of Wothree Mines, as I am leaving their employ.

Thanking you for your cooperation

Yours very truly

WOTHREE MINES.

George B. Blonsky

George B. Blonsky.
General Manager.

check.
4 photostats each of Jones Jan.6 invoice
" " 7 consignment.

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

RECEIVED
MAR 15 1956

[redacted]

[redacted]

[redacted]

To: [redacted]

From: [redacted]

Subject: [redacted]

[redacted]

[redacted]

[redacted]

W. M. TRAVER

[redacted]

[redacted]
JWT:bh
cc-Chair., Op. Comm. (2)
Harshman w/copy letter
Townsend
Corres. File E-632
Chron.

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

RECEIVED
MAR 12 1956

224 New Customhouse
Denver 2, Colorado

March 9, 1956

Memorandum

To: W. R. Storms

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 2957 (Tungsten) Contract Idm-E632, Carl Hovgard, Williams Tungsten Mine, (Wothree Mines), Mohave County, Arizona

Enclosed is a copy of a letter dated March 7, 1956 from George B. Blonsky which is in reply to our letter to Carl Hovgard of March 2, 1956 regarding the final report on work performed under the subject contract.

When you receive the report as indicated in Blonsky's letter, please forward at least the original and two copies to this office immediately so that we can forward two copies on to the Washington office.

W. M. TRAVER

W. M. Traver

Enclosure
JWT:jy
cc: Corresp. E632)
Chairm. Opr. Comm. (2))
Harshman) w/copy Blonsky's
Faick) letter of March 7, 1956
Townsend)
Chron.

NORMAN D. FITZGERALD
OWNER

GEORGE B. BLONSKY
GENERAL MANAGER

WOTHREE MINES

P. O. BOX 47
KINGMAN, ARIZONA

MAR 12 1956
DMEA
Date Received
MAR 9 1956
BUREAU OF MINES
Denver, Colorado

March 7, 1956.

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

Re Docket DMEA 2957
Contract Idm-E632
Carl Hovgard
Williams Tungsten Mine
Wothree Mines
Mohave County, Arizona.

Dear Mr. Traver,

We received copy of your letter to Carl Hovgard and want to inform you that the final report on above report is on its way to Mr. Storms in Tucson.

Yours truly

WOTHREE MINES.

George B. Blonsky

George B. Blonsky.

Chairm, C.P. Comm.

400

DOCKET
Surname:
Holt
Martin
Selfridge
Fergusson
McKenney

MAR - 5 1956

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

Re: Docket No. DMEA 2957, Tungsten
Carl Hovgard
Williams Tungsten Mine
(Wothree Mine)
Mohave County, Arizona
Contract No. Idm-E632

Dear Mr. Traver:

Reference is made to the Operator's Narrative Report on the subject contract for October, 1955, in which report the Operator noted his responsibility to submit an Operator's Final Report on the project.

As you know, this is a case where we had a "pseudo-certification," set up as a contingency and intended to insure compliance with the requirement that the work be resumed after the recess. Inasmuch as work was so resumed, the "pseudo" no longer applies. Consequently, we now require your recommendations with regard to certification.

Please also inform us whether you have the Operator's Final Report and when we may expect the Final Report of the Field Team.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (S/B)

APPROVED:

/s/ Robert W. Geehan (S/B)

Member, Bureau of Mines

Thor H. Kiilsgaard (S/B)

Member, Geological Survey

cc: Docket
Code 400
Oper. Committee
Adm. Read. File
FT, Region 3
T. Kiilsgaard, USGS
R. W. Holliday, USBM

SPHolt/ls
2/29/56

P.C.h.

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

RECEIVED
MAR - 5 1956

224 New Customhouse
Denver 2, Colorado

CERTIFIED MAIL

March 2, 1956

Mr. Carl Hovgard
1141 Butternut Street
Abilene, Texas

Re: Docket DMEA 2957 (Tungsten)
Contract Idm-B632
Carl Hovgard
Williams Tungsten Mine
(Wothree Mines)
Mohave County, Arizona

Dear Mr. Hovgard:

In processing form MF-104, Operator's Monthly Report and Voucher, submitted by George B. Blomsky, covering work performed during the month of October, 1955, we withheld the amount of $250.00 from reimbursement to you pending receipt of the Operator's final report and release to this office of the report of review of contract expenditures by the Contract Administration and Audit Division.

The report of review of contract expenditures by the Contract Administration and Audit Division has been released to this office. Therefore, receipt of your final engineering and geologic report, in conformance with Article 5(b) of the Contract is all that is holding up our closing of our files on the account.

As we are desirous of closing out this account at an early date, we will appreciate your prompt attention to the matter of rendering your final engineering and geologic report. Further, we will appreciate advice by return mail as to the date on or before which we can expect to receive the report.

Very truly yours,

W. M. TRAVER

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

JWT:prl
cc: Chairman, Oper. Comm. (2)
Harshman
Storms

cc: Mr. George B. Blomsky
Wothree Mine
P. O. Box 448
Kingman, Arizona

Faick
Townsend
Corres. file
Chron.

Talbert

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

SEP - 9 1955

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

Re: Report of Royalty Review
Idm-E632, DMEA-2957
Carl Hovgard

Dear Don:

Thanks for your letter of September 6, 1955, relative to the referenced Report of Royalty Review.

If I had waited a few days before writing my letter of September 2, 1955, the misunderstanding on my part would have been cleared. Both the monthly work load report and this Division's copy (Government copy) of Amendment No. 4 were received subsequent to the date of my letter.

I would have still questioned, however, the reason for the date of May 17, 1955, since the Report is dated August 25, 1955. However, your letter leads me to believe that May 17, 1955 was the date of the Examining Engineer's last inspection.

Sincerely yours,

(Signed) J. L. Chambers

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

EDTalbert/wb
September 8, 1955

Copy to: Docket
Admr. Reading File
Mr. Chambers

R.C.B.

Talbert

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

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

SEP - 2 1955

Re: Report of Royalty Review
Idm-E632, DMEA-2957
Carl Hovgard

Dear Mr. Finch:

Receipt is acknowledged of your Report of Royalty Review covering the subject Exploration Project Contract.

This Report of Royalty Review is acceptable and normal distribution is authorized. Distribution of the Washington copies, however, is being held in abeyance pending submission of two copies of the Check Sheet of Examining Engineer.

For your future guidance in the preparation of Reports of Royalty Reviews it is suggested that the period covered include the latest practical date. This Report, which covers only production incidental to the exploration work, indicates the period as ending May 17, 1955. Since by Amendment No. 3 the contract was "automatically" terminated on June 30, 1955, it appears that your Report should have covered, at the least, a period ending on that date.

Also for your future guidance it is suggested that, instead of the second reason given by you for the review, that a more "positive" statement such as the following be used:

> "The examining Engineer is of the opinion that all sales of production during the period indicated have been properly accounted for."

Sincerely yours,

(Signed) E. D. Talbert

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

EDTalbert/wb
September 2, 1955

Copy to: Docket
Admr. Reading File
Mr. Chambers
Mr. Fisher
Mr. Brading
Mr. Mavor
Mr. Turner

R.C.G.

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

RECEIVED
SEP - 6 1955

224 New Customhouse
Denver 2, Colorado

August 31, 1955

Memorandum

To: Chairman of the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 2957 (Tungsten), Contract Idm-E632, Carl Hovgard, Williams Tungsten Mine, Mohave County, Arizona.

Enclosed are the Government's, Division, and Docket copies of Amendment No. 4, signed by George B. Blonsky, under power of attorney for the Operator, as requested by you in your letter of August 15, 1955. Other copies have been correctly distributed.

W. M. Traver

W. M. Traver

DOCKET
Surname:
Chapman
Holt
Martin
Talbot
Holliday
Nelson
Hightman

AUG 15 1955

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

Re: Docket No. DMEA 2957 - Tungsten
Carl Hovgard
Williams Tungsten Mine
Mohave County, Arizona
Contract No. Idm-E632

Dear Mr. Traver:

Enclosed are the original and five copies of a proposed amendment, Amendment No. 4, to the above-referenced contract signed by the Administrator for the Government, with an attached map, Figure 1.

If the terms and conditions of this proposed amendment are satisfactory to you and the operator, all six copies should be signed and the usual distribution made.

If any part of this proposed amendment does not have either your approval or that of the operator and cannot be amended within your delegated authority, the original and all copies of the proposed amendment are to be returned to this office, together with the proposed changes for consideration.

Please note that this amendment, No. 4, extends the period of suspension of work in Amendment No. 3 to not later than September 1, 1955, and the date for completion of the work to October 30, 1955. The estimated cost of the project, the aggregate amount which the Government may be required to contribute, and the agreed unit cost of any item of work, remain unchanged.

Sincerely yours,

W. S. Martin

ACTING Chairman, Operating Committee (JB)

Enclosures

APPROVED:

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

Thor H. Kiilsgaard (JB)
Member, Geological Survey

cc: Docket
FT, Reg. 3
Adm. Read. File
Oper. Comm.
Code 400
Robt. Holliday, USBM
Thor Kiilsgaard, USGS

SPHolt/ls
8/9/55

TELEGRAM

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

DOCKET
SURNAME
Martin

MR. NORMAN D. FITZGERALD
1141 BUTTERNUT STREET
ABILENE, TEXAS

AUG - 3 1955

WITHOUT MAKING ANY COMMITMENT CAN CONFIRM FAVORABLE CONSIDERATION IS BEING GIVEN TO REQUEST FOR AMENDMENT NUMBER 4 CONTRACT IDM-E632, CARL HOVGARD, DOCKET DMEA 2957. WE PLAN WITHIN TEN DAYS TO SUBMIT PROPOSED EXPLORATION PROGRAM AT MODIFIED UNIT COST FOR YOUR CONSIDERATION.

C. O. Mittendorf (for)

ADMINISTRATOR,
DEFENSE MINERALS EXPLORATION
ADMINISTRATION

WSMARTIN/foc
8-2-55
cc to: Docket
Code 400
Adm. Read. File
Operating Comm.
FT. REG. III
Messrs. Holliday, USBM
Kiilsgaard, USGS

R.C.B.

400
DOCKET
SURNAME
Chapman
Martin

August 3, 1955

MEMORANDUM

To: Acting Assistant Solicitor, Defense Minerals

From: Iron and Ferro-Alloys Division, DMEA

Subject: Preparation of proposed Amendment No. 4
Docket No. DMEA 2957
Carl Hovgard
Williams Tungsten mine
Mohave County, Arizona
Contract No. Idm-8632

Transmitted herewith is a rough draft of a proposed Amendment No. 4 for your use in preparing the final draft.

W. S. Martin

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

Attachment

TLChapman:foc
8-3-55
cc to: Docket
Code 400

EXPLORATION PROJECT CONTRACT
CARL HOVGARD
DOCKET NO. DMEA 2957
CONTRACT NO. IDM-8632

AMENDMENT NO. 4

It is agreed this _____ day of _____, 1955, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and Carl Hovgard, that Exploration Project Contract No. Idm-8632 (Docket No. DMEA 2957), dated October 30, 1953, as amended, is further amended, effective June 1, 1955, as follows:

1. (a) Work under the Contract shall continue in suspension during the period beginning June 1, 1955, and ending not later than September 1, 1955.

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

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

2. The time fixed for completion of the work is further extended to October 30, 1955.

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

draft

(a) Effective September 1, 1955, the Contract and all obligations of the parties thereunder, except as otherwise herein expressly provided, shall be and are hereby terminated.

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

(c) The total net amount contributed by the Government shall be repayable in the form of a percentage royalty on any minerals mined or produced from the land referred to in Article 2 of the Contract, in the manner and amount provided in Annex XIX to Amendment No. 2, for a period of eleven years from the date of the Contract or until the total net amount contributed by the Government is repaid, a certification of discovery of development being hereby waived.

(d) The Operator hereby releases and agrees to save the Government harmless from all claims or demands under or arising out of the Contract, except as otherwise provided in this Amendment No. 4.

4. Exhibit "A" is amended to read as follows:

EXHIBIT "A"

Description of the Work

1. Prior work on this Contract consists of drifting 780.5 feet, Raising 60 feet and sinking of a winze 50 feet.

2. On the 200 foot level from the face of the "Old Timers Crosscut" (Fig. 1) on an approximate course of N. 50° E., continue the crosscut to intersect the "West Entrop or Upper Vein" and drift upon the vein in the direction of better mineralization. The total of this work shall not exceed 159.5 feet.

Estimated Cost of the Project

Fixed Unit Costs

Prior work		
Drifting 780.5 feet at $30.00 per foot	$23,415.00	
Raising 60 feet at $30.00 per feet	1,800.00	
Sinking winze, 50 feet at $60.00 per feet	3,000.00	
Total		$28,215.00
Crosscut and drift 159.5 feet at $30.00 per foot	4,785.00	4,785.00
Estimated total cost of the project		$33,000.00
Government participation at 75 percent		$24,750.00

* * * * *

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

RECEIVED
JUL 25 1955

224 New Customhouse
Denver, Colorado

July 20, 1955

Memorandum

To: Chairman, Operating Committee

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 2957 (Tungsten), Contract Idm-E632, Carl Hovgard, Mohave County, Arizona

Enclosed are the original and three copies of the following material with reference to an amendment to the subject contract:

1. Request from the Operator for an amendment to the contract addressed to W. R. Storms and dated June 22, 1955.

2. Joint memorandum report by J. N.Faick, U.S.G.S., and T. M.Romslo, U.S.B.M., with their recommendations.

3. Transmittal of 1 and 2 by W. R. Storms, Superintendent of the Southwest Experiment Station, U. S. Bureau of Mines, dated July 13, 1955.

The Operator requests authority to drive a crosscut on the 200' level about north 50° east to the upper vein. The crosscut would be about 100' long and he estimates will cost $4,000.00.

The examiners believe the vein should be explored, the Geologist favoring a crosscut and the Engineer diamond drilling. Inasmuch as time is an important factor, Mr. Storms favors in this instance the crosscutting for reasons given in his transmittal memorandum. The Field Team concurs with the Geologist and Mr. Storms.

Preparation for such an amendment is not within the delegated authority of the Region III Field Team. Accordingly, it is requested that you prepare the amendment at your earliest convenience, **allowing only $30.00 per foot for drifting and crosscutting as provided in the contract originally.**

W. M. Traver

E. N. Harshman

Enclosures

DMEA Field Team, Region III

DMEA
Date Rec'd.
JUL 15 1955
BUREAU OF MINES
Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Box 4097
Tucson 5, Ariz.
July 13, 1955

Memorandum

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

RECEIVED
JUL 25 1955

From : Superintendent, Southwest Experiment Station

Subject : Proposed Amendment, DMEA Contract Idm-E632, Docket DMEA-2957, Carl Hovgard's Williams Tungsten Mine (Wotheree Mines), Aquarius Mining District, Mohave County, Ariz.

Enclosed in sextuplicate are the following:

(1) Operator's request with map for an Amendment to Contract Idm-E632, so a crosscut may be driven from the 200-foot level to a vein parallel to the present Williams vein (exploration work under terms of the contract was done on this Williams vein);
(2) A joint memorandum report by J. N. Faick of the Geological Survey and T. M. Romslo of the Bureau of Mines, with map and section.

Also enclosed are 3 extra copies of the joint memorandum report.

The operator wants to drive a crosscut from the "Oldtimers" crosscut on the 200-foot level about N. 50° E. to the Upper vein. This vein is about parallel to the Williams vein, some 80 feet from it, normal to the dip. The proposed crosscut probably would be about 100 feet in length and would cost $4,000, according to the operator (the contract calls for drifting and crosscutting at $30 per foot, instead of the operator's proposed $40).

CC W. M. Traver (8)
J. N. Faick
DMEA-2957
DF

WRStorms:frj

The DMEA examining team believes that this parallel vein should be explored, but Faick favors the crosscut as proposed by the operator, while Romslo favors a few diamond drill holes. However, time now is an important factor. The operator has equipment on the property for driving the crosscut and probably could complete it within a month after approval of the amendment. If core drilling were done, a contractor would have to be found who would come to this isolated property for only a small amount of work. If one were found (which seems doubtful), it probably would be at least 2 months before the holes could be completed. If conditions were otherwise, I would favor the core drilling, but as things are, I believe the crosscut would be best at this time.

Walter R. Storms

Walter R. Storms

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

RECEIVED
JUL 25 1955
TUCSON, ARIZONA

SOUTHWEST EXPERIMENT STATION
Box 4097
UNIVERSITY STATION

July 13, 1955

Memorandum

To : DMEA Field Team, Region III, Denver, Colorado

Through : Walter R. Storms, Supt., SW Experiment Station WRS

From : J. N. Faick, Geologist, U. S. Geological Survey, and T. M. Romslo, Mining Engineer, U. S. Bureau of Mines, Tucson, Ariz.

Subject : Proposed extension of time and amendment of contract Idm-E632, DMEA 2957, Carl Hovgard's Williams Tungsten Mine (Wothree Mine) Mohave County, Ariz.

On June 22, 1955, George B. Blonsky, General Manager of the subject property, made application for an amendment to allow a 6-month extension of the contract from the end of May, and to allow for extending the "Oldtimers" crosscut to test the upper vein, sometimes referred to as the "O" East or West cliff vein. This proposal is described in Blonsky's application and is adequately illustrated by his map.

This request for an amendment had been anticipated by this office and was discussed with Blonsky when J. N. Faick and T. M. Romslo inspected the project last February. At that time Blonsky was uncertain whether he would attempt to explore the upper vein and was undertain as to choice of methods in case he decided to explore it. Apparently he elected to crosscut to the vein because of possible operational advantages, but it is obvious that diamond drilling or raising might be used to accomplish the same purpose.

Data that has been accumulated during several visits to this property indicate that two nearly parallel vein zones exist, (1) the Williams vein, on which most of the work has been done in the past, and (2) the "O" East, Westcliff or Upper vein which is from 60 to 120 feet above the Williams vein, in a direction normal to the veins. These relationships are illustrated in the attached sketch plan and section.

CC W. M. Traver (Orig. & 8)
J. N. Faick
DMEA-2957
DF

Faick-Romslo;frj

The upper vein has been mined in 3 places as follows:

1. At the western outcrop near the base of the Aquarius Cliffs;
2. In the "O" East workings near the haulage level;
3. At the outcrop on the prominent ridge above the Williams mine.

The amount of tungsten concentrate produced from the upper vein is unknown but the extent of the workings indicates that production is comparatively small. The upper vein zone is comparatively long on both the strike and dip, but the vein is thin; it ranges from a few inches to about 2 feet thick where exposed. In places the vein splits into 2 or 3 stringer veins, and in other places becomes very thin or pinches out entirely. High grade ore has been obtained from it in a few places. The upper vein is the only remaining place known to us where the search for additional ore might be justified, however, the possibilities of discovering significant quantities of minable ore are remote. We believe, however, that attempts should be made to test the vein in order to exhaust the remaining possibilities for making a discovery.

It is suggested that all of the funds remaining from the uncompleted contract be transferred to exploration of the upper vein. According to our records there remains an unexpended balance of $4785.00 and the amount of work remaining to be done, as authorized by contract, consists of 94.5 feet of drifting and 65 feet of raising, all at a unit cost of $30.00 per foot. We do not believe the project merits an increase in the available funds or the amount of work allowed.

With the remaining funds there are 3 obvious ways in which the upper vein could be explored easily from the existing mine workings, as follows:

1. Raise from the end of the "Oldtimer" crosscut;
2. Diamond drill several short holes from the crosscut;
3. Extend the crosscut as proposed by Blonsky.

<u>Item 1</u>, Exploration by raising, like the crosscut, would result in testing only one small part of the vein zone. It is not recommended because it is not as feasible as crosscutting. <u>Item 2.</u> Exploration by drilling is favored by Romslo because 4 or 5 penetrations of the vein could be obtained by drilling short holes from near the end of the "Oldtimer" crosscut. This method is probably the best because it would test a fairly large part of the vein zone,

in which tungsten mineralization is probably not continuous, but is likely to be in widely separated discontinuous lenses. Item 3. Crosscutting vein, as proposed by Blonsky, is the method preferred by Faick because of its simplicity and ease of execution.

It is doubtful if the 100 feet of crosscutting requested by the applicant will be sufficient to adequately test the vein, therefore, unless the field team prefers diamond drilling, it is suggested that the remaining 159.5 feet of drifting and raising be allowed as crosscutting to the vein, and the unused portion be allowed for drifting along the vein if conditions warrant.

Admittedly the applicant's proposed program may not be the most satisfactory method of exploration but it is the easiest to execute under existing conditions. There is only money enough for 400 to 500 feet of drilling, an amount which may be too small to justify a diamond drill contractor moving his equipment into this isolated camp. Blonsky is equipped to drive the crosscut and drifts that might be required, and he can probably do this with the available funds in less time than would be required to complete the project by drilling.

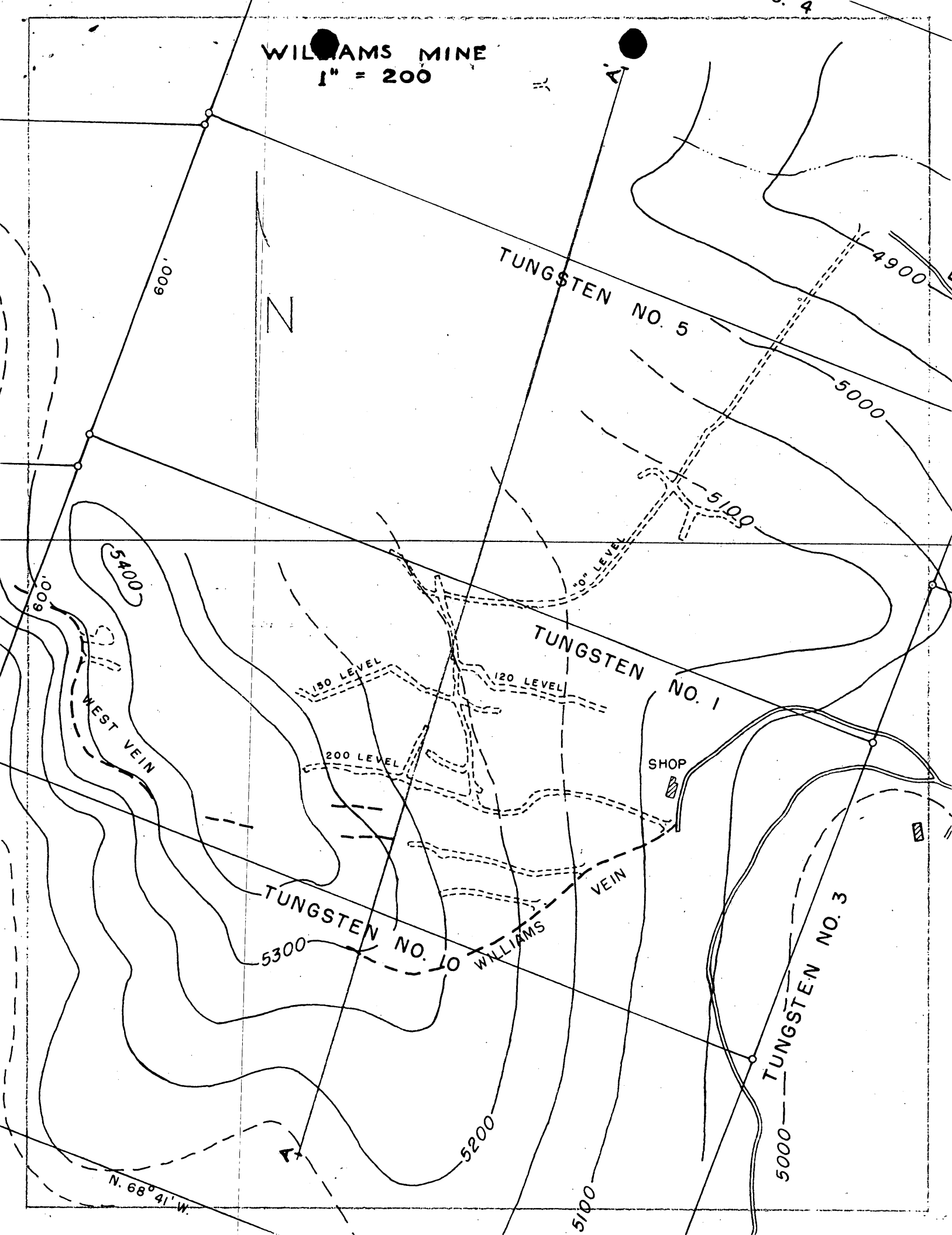
In order to complete exploration of the Williams mine, and to bring the project to a definite conclusion as quickly as possible Government participation is recommended in the applicant's proposed program or in diamond drilling. In event the Field Team prefers diamond drilling, Blonsky should be advised to submit a revised application with cost estimates.

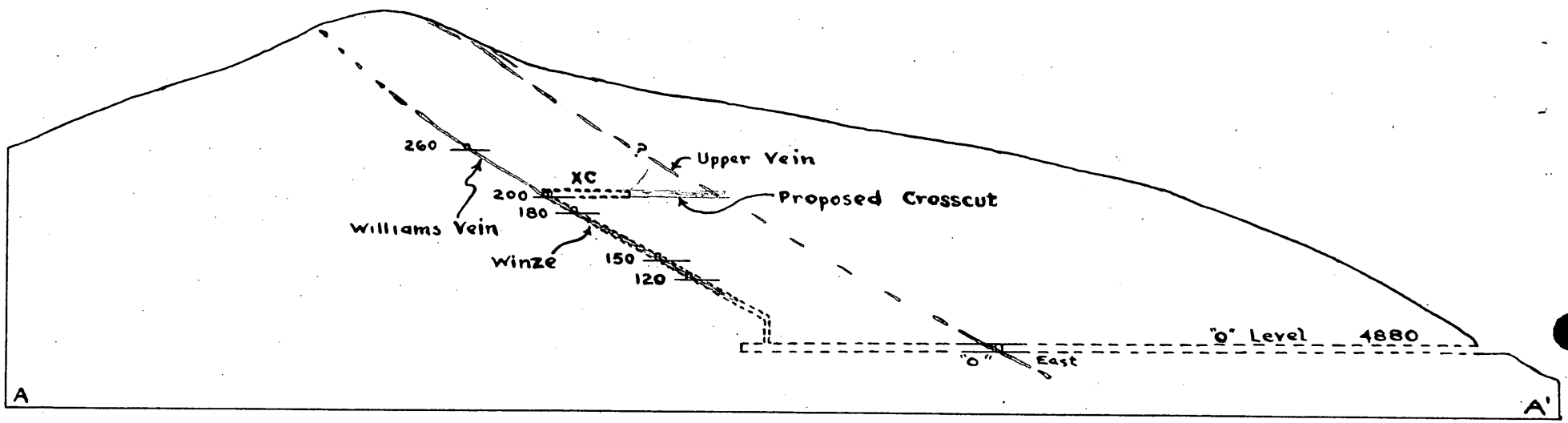
J. N. Faick

John N. Faick
Geologist
U. S. Geological Survey

T. M. Romslo

T. M. Romslo
Mining Engineer
U. S. Bureau of Mines


WILLIAMS MINE
1" = 200
A
A'
N
600'
600'
TUNGSTEN NO. 5
TUNGSTEN NO. 1
TUNGSTEN NO. 10
TUNGSTEN NO. 3
4900
5000
5100
5400
5300
5200
5100
5000
"0" LEVEL
150 LEVEL
120 LEVEL
200 LEVEL
WEST VEIN
WILLIAMS VEIN
SHOP
N. 68° 41' W.



SECTION A-A'

WILLIAMS MINE

Showing relationship of Upper Vein to Williams Vein

Scale 1" = 200'

NORMAN D. FITZGERALD
OWNER

GEORGE B. BLONSKY
GENERAL MANAGER

WOTHREE MINES
P. O. BOX ~~xxx~~ 47
KINGMAN, ARIZONA.

June 22, 1955.

U. S. Bureau Of Mines
Southwest Experiment Station
JUN 2 3 1955
Tucson, Arizona

RECEIVED
JUL 2 5 1955

Mr. W. R. Storms, Superintendent
Southwest Experiment Station
Box 4097, University Station
Tucson, 5, Arizona.

Re: Docket DMEA 2957 (Tungsten)
Contract Idm -E632
Carl Hovgard
Mohave County, Arizona.

Dear Mr. Storms,

Referring to Mr. W. M. Traver's letter of June 8th and in the light of further study we are hereby submitting the following information and request for contract amendment. Time period should be extended by at least 6 months from the end of May to give sufficient time for everybody concerned to get going.

100 ft. of tunnel should be contracted for, most of which to be a crosscut to reach the upper vein, and the remainder of the footage to be expended on drifting on upper vein, if exposed.

The location of the crosscut extension is the present face of the oldtimer's crosscut on the 200 level about 160' west and 115' north of the collar of the winze. The direction of the proposed tunneling should be about N-50°-E and towards a point above the intersection of the winze and the 150 level.

Pertinent Data to assist the examining team.

1. According to the best information available about 80' normally above the Williams Tungsten Vein is located the "O" East or West Outcrop vein, which we shall call in further discussion the "upper vein".

2. This upper vein has much larger strike and dip extension than the Williams Tungsten Vein.

3. Wolframite ore was mined in the upper vein in 3 locations:
   a. Northeasternmost in "O" E winze, on "O" E level, and "O"E raise.
   b. Southernmost exposure in oldtimers open cuts on the outcrops
   c. In the underhand stopes on the far to the west side outcrop.

4. Conditions causing mineralization of the Williams vein and winze oreshoot very conceivably could create a deposit in the upper vein in the region above the Williams Tungsten vein oreshoot.

5. Previous operators probably appreciated above facts, as they have driven from 200 level on Williams vein a 115' crosscut in a generally northern direction into the hanging wall probing ground above Williams vein winze oreshoot. They did not get far enough to cut upper vein, if it is 80' normally from the Williams vein.

6. Geological study, as the Team know, indicates the probable location of the upper vein 80' normally above and parallel to the Williams vein.

7. If this is true, a 100' extension in generally N.E. direction of the oldtimers' crosscut should cut the upper vein vertically above the winze oreshoot in the Williams vein.

8. As the upper vein is a bigger and stronger structure, it is very possible that it might have a bigger and better oreshoot in its central part and above the oreshoot in the Williams vein.

Therefore hereby we wish to request for an amendment of our exploration contract, which would permit us to extend the 115' crosscut on the 200 level for an additional 100' in the N-E direction as shown on attached sketch. It is very possible that the upper vein will be encountered at a point 70' from present face. Should the upper vein be cut by the crosscut before the 100' being asked for are exhausted, it is hereby requested that the remainder of the footage could be used for drifting on the vein thus exposed.

Cost Estimate on 100' crosscut.

Men needed:	Preparation 4 days @ 2 men : 8 mandays @$20.oo		160.oo
	Tunneling 100' @ 4' pday 25 days @ 2 men: 50 " " @$20.oo		1000.oo
	Incidental time lost etc. 6 days @ 2 men: 12 " " @$20.oo		240.oo
	Overhead:		
	Superintendent @$500.oo a month		700.oo
	Mechanic @$425.oo a month		500.oo
	Cookhouse		100.oo
Materials:			
	Powder: 2# per hole, 14 holes p/round for 100' or 25 rounds need 700 lbs. @ $22.oo		154.oo
	Fuse		30.oo
	Caps		10.oo
	Timber: 2000 bf		200.oo
	Fuel 25 days @ 20 gallons: 500 gall. @ 20¢		100.oo
	lubricants		15.oo
			$3209.oo
Incidentals:	spareparts, trips to town, camp gas, etc.		791.oo
	Total cost of 100' of tunnel		$4000.oo

Time Estimate

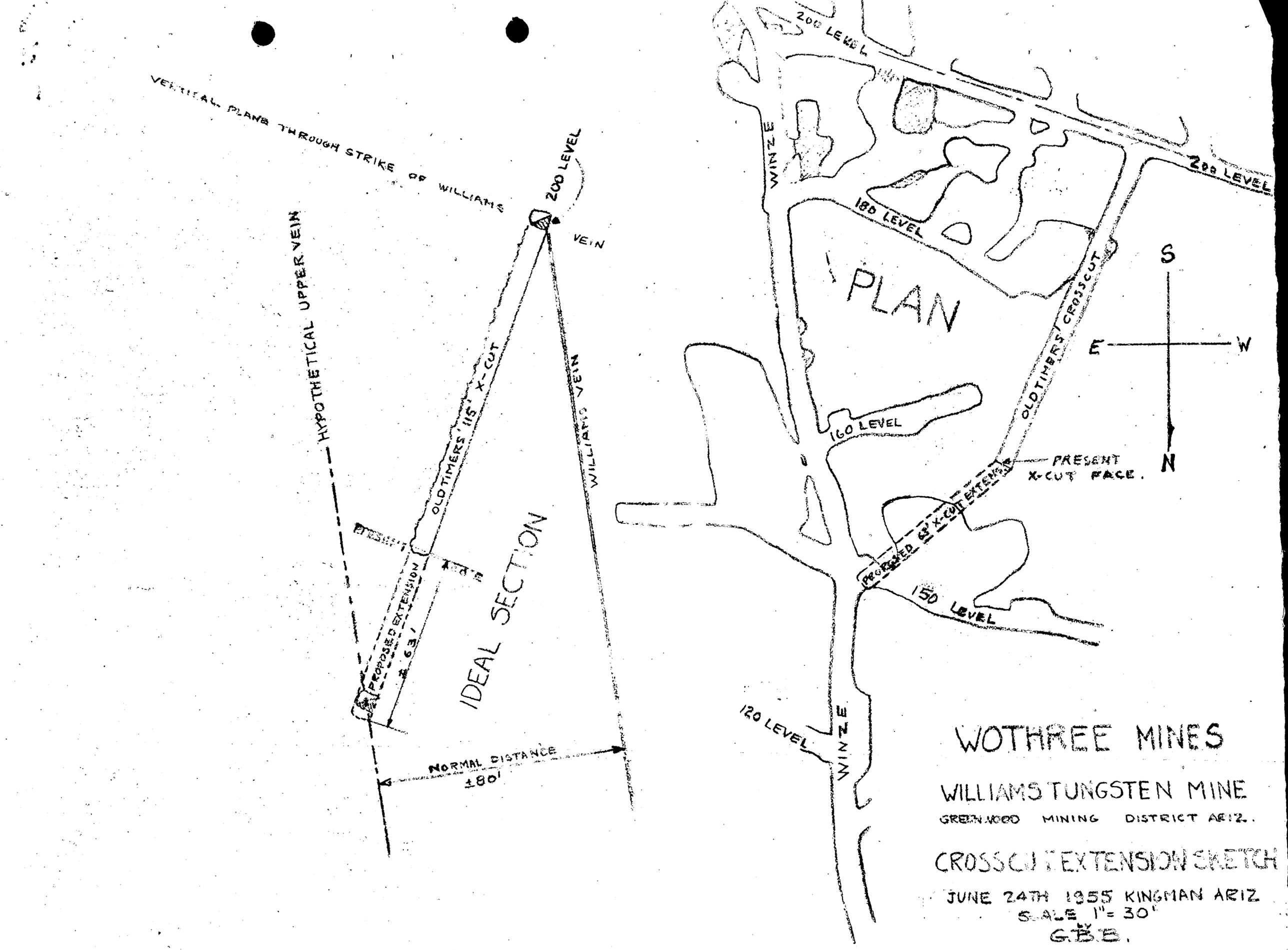
Preparation ;	4 days
Driving	25 days
Incidental delay	6 days
	35 working days, or a month and ten days.

Yours truly

WO THREE MINES.

George B. Blonsky

George B. Blonsky.
General Manager.


VERTICAL PLANE THROUGH STRIKE OF WILLIAMS VEIN
200 LEVEL
HYPOTHETICAL UPPER VEIN
OLDTIMERS' 115' X-CUT
WILLIAMS VEIN
PROPOSED EXTENSION ± 63'
IDEAL SECTION
NORMAL DISTANCE ±80'
200 LEVEL
WINZE
180 LEVEL
PLAN
OLDTIMERS' CROSSCUT
S
E
W
N
160 LEVEL
PRESENT X-CUT FACE.
PROPOSED 63' X-CUT EXTENSION
150 LEVEL
120 LEVEL
WINZE
WOTHREE MINES
WILLIAMS TUNGSTEN MINE
GREENWOOD MINING DISTRICT ARIZ.
CROSSCUT EXTENSION SKETCH
JUNE 24TH 1955 KINGMAN ARIZ
SCALE 1" = 30'
BY
G.B.B.

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

224 New Customhouse
Denver 2, Colorado

June 8, 1955

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 2957 (Tungsten), Contract Idm-E632, Carl Hovgard, Mohave County, Arizona

In conjunction with matter discussed in your teletype of June 6, 1955, we are enclosing the following material:

1. The Government, Division and Docket copies of Amendment No. 3 "Suspension-Termination Agreement" which were forwarded by your letter of April 11, 1955 for signature by the operator.

2. Three copies of the operator's letter of May 30, 1955 returning the signed amendment.

3. Three copies of a letter from this office to the operator dated June 8, 1955.

4. Three copies of a memorandum to W. R. Storms and J. N. Faick dated June 8, 1955 relative to additional work to be proposed by the operator.

If the project is to be reactivated it appears to us that an instrument should be prepared to nullify the terminating provisions of Amendment No. 3 pending resolution of the operator's request for approval of work not presently approved under the contract.

Enclosures

W. M. Traver

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

224 New Customhouse
Denver 2, Colorado

June 8, 1955

AIRMAIL

Mr. George E. Blonsky
General Manager
Wothree Mines
Post Office Box 346
Kingman, Arizona

Re: Docket DMEA 2957 (Tungsten)
Contract Idm-E652
Carl Hovgard
Mohave County, Arizona

Dear Mr. Blonsky:

Reference is made to your letters of May 18 and May 20, 1955, relative to approval of work elsewhere on the property in lieu of performing the balance of work presently authorized under the contract.

Please submit your request in sextuplicate, complete in detail, to Mr. W. H. Storms, U. S. Bureau of Mines, P. O. Box 4097, University Station, Tucson, 5, Arizona. The details must include a map or maps showing the proposed work in relation to the property lines, an estimate of the cost of performing the work, an estimate of the time required to complete the work, and any other data pertinent to the matter which will be of assistance to the examining team in evaluating the proposal.

Very truly yours,

W. M. TRAVER

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

JWT:jp
cc Subject
Chron
Harshman
Storms
Faick
Chairman, Op. Comm. (3)
Townsend

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

224 New Customhouse
Denver 2, Colorado

June 8, 1955

Memorandum

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

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 2957 (Tungsten), Contract Idm-E632, Carl Hovgard, Mohave County, Arizona

Enclosed is the following material relative to future operations under the subject contract:

1. Copy of the operator's letter of May 30, 1955.

2. Copy of letter to Klonsky from this office dated June 8, 1955.

A copy of Klonsky's letter of May 18, 1955 was forwarded to you as attachment to a copy of our letter to the operator dated May 20, 1955.

When the operator's request is received please give the matter your prompt attention and submit a joint memorandum report of your recommendations.

W. M. TRAVER

W. M. Traver

Enclosures

JWT:jp
cc Subject
Chron
Harshman
Townsend
Chairman, Op. Comm. (3)

DOCKET
Surname:

Martin
Hedges
Kilsgaard
Selfridge
Holliday

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

JUN - 6 1955

TELETYPE

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

Reurtt June 3, Docket DMEA 2957, Contract Idm-E632, Carl Hovgard. We would not object to extending period of suspension or to changes in work program intended to give project greater possibility of success, but we first require your recommendations.

George C. Selfridge
G. C. Selfridge
Chairman, Operating Committee

cc: Docket
Adm. Read. File
Oper. Comm.
Code 400
Thor Kiilsgaard, USGS
Robt. Holliday, USBM
FT, Reg. 3 - confirmation

WSMartin/ls
6/6/55

R.C.H.

Mr. G. Selfridge

RECEIVED
JUN - 6 1955

DN 235 BUR MINES 6-3-~~66~~ 55 11-19 AM

CHAIRMAN, OPERATING COMMITTEE, DMEA

REFERENCE DOCKET DMEA 2957, CONTRACT IDM E-632, CARL HOVGARD, OUR LETTER TO BLONSKY OF MAY 20,1955, A COPY OF WHICH WAS FORWARDED TO YOU WITH ATTACHMENTS. WE HAVE TODAY RECEIVED THE EXECUTED COPIES OF SUSPENSION TERMINATION AGREEMENT AND BLONSKY REQUESTS FURTHER EXTENSION OF CONTRACT TO PERMIT FORMULATING PLANS FOR ADDITIONAL WORK AS OUTLINED IN HIS LETTER OF MAY 18. PLEASE TELETYPE ADVICE AS TO HOW WE SHOULD PROCEED.

W M TRAVER

Plenner, Calif.

JUN 3 3 52 PM '55
BUREAU OF MIN
MAIL ROOM
WASHINGTON, D. C.

NORMAN D. FITZGERALD
OWNER

GEORGE B. BLONSKY
GENERAL MANAGER

WOTHREE MINES

P. O. BOX 448
KINGMAN, ARIZONA.

May 30, 1958.

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

Re: Docket DMEA 2957 (Thurston)
Contract Idm-E632, Coal Hoyard
Mohave County, Arizona.

Dear Mr. Trever,

I have your letter of May 20, which reached me only yesterday. We are located 75 miles by dirtroad from the nearest postoffice and at present are receiving our mail only once a week when we go to town for it ourselves.

I regret not having returned the signed Suspension-Termination Agreement immediately upon its receipt by end of April. At that time we were consulting our principals as to the advisability of further exploration and arranging for an outside consulting engineer to give us an unprejudiced opinion on our property. We were delaying signing the Suspension-Termination Agreement, because we knew that the work autorized on the old contract was no more desirable, and the consultant's opinion and reaction to it by our principals was not yet available.

Please find enclosed the signed contract.

We would appreciate if DMEA would give favorable consideration to our request for further extension and for authorization of crosscutting and drifting on 200 level, as described in my letter of May 18th.

Yours very truly

WOTHREE MINES.

George B. Blonsky

George B. Blonsky.
General Manager.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

224 New Customhouse
Denver 2, Colorado

WASHINGTON 25, D. C.

May 20, 1955

Mr. George B. Blonsky
Wothree Mines
Post Office Box 47
Kingman, Arizona

Re: Docket DMEA 2957 (Tungsten)
Contract Idm-E632, Carl Hovgard,
Mohave County, Arizona

Dear Mr. Blonsky:

Receipt is acknowledged of your letter of May 18, 1955 wherein you request a further extension of the period of suspension of operations to give the Government engineers time to approve additional work you intend to propose.

As the matter now stands you are in default of the contract because the Suspension Termination Agreement forwarded to you by our letter of April 20, 1955, to which you refer, has not been executed and returned to this office as you were instructed. We still have the "Operator's copy" of Amendment No. 3, Suspension Termination Agreement, in our files. Before any consideration can be given to your request it is necessary that the properly executed copies of Amendment No. 3, Suspension Termination Agreement, be returned to this office.

The matter of a further extension of the suspension period must necessarily be referred to the Washington office, DMEA, which we will do upon receipt of executed copies of Amendment No. 3. In conjunction with the matter we are enclosing for your information a copy of our letter dated May 13, 1955 to Carl Hovgard which was written in an effort to obtain the return of the executed copies of the amendment.

The matter of amending the contract to authorize work other than that presently approved in the contract must also necessarily be referred to the Washington office, DMEA, as preparation of such an amendment is not within the authority delegated to this office.

Very truly yours,

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

JWT:jp
cc Subject
Chron
Chairman, Op.Comm.) w/copy
Harshman) operator's
Storms) letter
Faick) 5/18/55
Carl Hovgard
Townsend

Cross-Reference made for Code 400 files

Enclosure

MAN D. FITZGERALD
OWNER

GEORGE B. BLONSKY
GENERAL MANAGER

WOTHREE MINES

P. O. BOX 47
KINGMAN, ARIZONA

DMEA
Date Rec'd
MAY 20 1955
BUREAU OF MINES
DENVER, COLORADO

May 18, 1955.

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

Re: Docket DMEA 2957 (Tungsten)
Contract Edm-E632,
Williams Tungsten Mine
Mohave County, Arizona.

Dear Mr. Traver,

Referring to your letter of April 20 and the suspension termination agreement of Carl Hovgard's Contract wewish to thank you for the extension given us until end of May of this year. We now have contacted our owners and on their request have undertaken an outside consulting engineer examination of our property. As a result we have decided to resume mining operations and on the consultant's recommendations we wish to continue some exploration on the above contract.

The work authorized has been pushed to the utmost limit of diminishing returns and it would not be advisable to spend any further effort or money in those old workings.

On the other hand, there is a very good possibility of cutting the "0" East - Westcliff outcrop vein just above the oreshoot in the Williams Tungsten vein. At the proposed point in the opinion of DMEA geologist, Mr. John Faick, the two parallel vein planes are separated by about 80' of granite. The former operators have driven a 112' crosscut, aiming directly at the optimum point on the other vein plane, which crosscut, if extended additional 70' should intercept the vein plane. As the "0" East-Westcliff outcrop vein has more than double the dimensions both on the dip and strike than the Williams Tungsten vein, and wolframite was found on the east, south and west extremeties of it, in the writer's opinion it is only very reasonable to suspect a possibility that the part of this vein in the nearest proximity to the and above the Williams Tungsten oreshoot could contain a good oreshoot of its own. In view of the above we hereby wish to apply for the amendment of the above contract, allowing us to apply the remainder of the unexpended funds on the extension of the above mentioned crosscut for a maximum of 100' and on some drifting on the vein to be exposed, if it proves advisable.

As automatic termination of this present contract is set for the end of May, if necessary, we are hereby applying for additional extension of suspension of operations to give the Government Engineers time to approve our proposed work.

Yours very truly

WOTHREE MINES.

George B. Blonsky

COPY

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

224 New Customhouse
Denver 2, Colorado

May 13, 1955

Mr. Carl Hovgard
1141 Butternut Street
Abilene, Texas

Re: Docket DMEA 2957 (Tungsten)
Contract Idm-E632

Dear Mr. Hovgard:

Enclosed is a copy of a letter dated April 20, 1955 to Mr. George B. Blonsky which is self explanatory relative to Amendment No. 3 to Contract Idm-E632 which was prepared to authorize a recess of operations to June 1, 1955 and extends the period for completion of the project work to September 1, 1955.

As the executed amendment has not been returned to this office we would appreciate your checking into the matter at your earliest convenience to the end that the executed copy of the amendment be returned as requested.

Very truly yours,

/s/ W.M. Traver

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

Enclosure

400

DOCKET
Surname:
Rutledge
Martin
Talbert
Newcomb
Halliday
Selfridge
Johnson

APR 11 1955

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

Re: Docket No. DMEA 2957-Tungsten
Carl Howgard
Williams Tungsten mine
Mohave County, Arizona
Contract No. IAm-8632

Dear Mr. Traver:

Enclosed are the original and five copies of a proposed amendment, Amendment No. 3, to the above-referenced contract signed by the Administrator for the Government. Amendment No. 3 embodies a suspension-termination agreement.

If the terms and conditions of this proposed amendment are satisfactory to you and the operator, all six copies should be signed and the usual distribution made.

If any part of this proposed amendment does not have either your approval or that of the operator and can not be amended within your delegated authority, the original and all copies of the proposed amendment are to be returned to this office, together with the proposed changes for consideration.

Please note that the amendment, while authorizing suspension of the exploration during the period beginning February 1, 1955, and ending not later than June 1, 1955, automatically cancels the subject contract as of September 1, 1955, if the work is not resumed before termination of the suspension period. In addition, the royalty repay period is extended to eleven years and, whether or not certification of discovery or development is made, the operator is

R.C.G.

required to pay royalty on all minerals mined or produced within a period of eleven years from the date of the contract or until the total net amount contributed by the Government is repaid, whichever occurs first.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Enclosures

APPROVED:

J. H. Hedges

Member, Bureau of Mines

Thor H. Kiilsgaard

Member, Geological Survey

cc: Docket
Adm. Read. File
Oper. Comm.
Code 400
Field Team - Reg. 3
Robt. Holliday, USBM
Thor Kiilsgaard, USGS

FARutledge/ls
3/30/55

(c) Paragraph b. of Annex III to Amendment No. 2 is amended to read as follows:

b. Royalty on production.-- Regardless of whether the Government certifies a discovery or development under paragraph a. of this Annex, which might be done for statistical purposes, the Operator, as principal if the Operator is the producer or as surety if the Operator is not the producer, shall pay to the Government a royalty on all minerals mined or produced from the land within a period of eleven 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.

(d) The Operator hereby releases and agrees to save the Government harmless from all claims or demands under or arising out of the Contract, except as otherwise provided in this Amendment No. 3.

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

THE UNITED STATES OF AMERICA

By _____
Administrator, Defense Minerals
Exploration Administration

Rubin Goffman

CARL HOWARD

Rutledge
Martin
Talbot
Holliday
Selfridge
H. Johnson

500

DOCKET
SURNAME
Rutledge
Martin
Holliday

March 22, 1955

MEMORANDUM

To: Acting Assistant Solicitor, Defense Minerals

From: Iron and Ferro-Alloys Division, DMEA

Subject: Preparation of Suspension-Termination Agreement
Docket No. DMEA 2757 - Tungsten
Cook Mangum
William Tungsten mine
Mohave County, Arizona
Contract No. [illegible]

Transmitted herewith is a rough draft of a Suspension-Termination Agreement for your use in preparing the final form.

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

Enclosure

FiRutledge:fec
3-22-55
cc to: Docket
Code 500
Adm. Reading File

SUSPENSION-TERMINATION AGREEMENT
CARL HOVGARD
DOCKET NO. DMEA 2957

It is agreed this _____ day of March, 1955, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Carl Hovgard, hereinafter called the "Operator," parties to that certain Exploration Project Contract No. Idm-8632, dated October 30, 1953, as amended, hereinafter called the "Contract," that:

1. (a) Work under the Contract shall be suspended during the period beginning February 1, 1955, and ending not later than June 1, 1955.

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

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

2. The time fixed for the completion of the work is extended to September 1, 1955.

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

(a) Effective September 1, 1955, the Contract and all obligations of the parties thereunder, except as otherwise herein expressly provided, shall be and are hereby terminated.

(b) The Government shall contribute only to the allowable costs incurred prior to said effective date in accordance with the contract.

(c) Any work or operations prosecuted or costs incurred by

the operator beginning with said effective date shall be for the sole account of the Operator without contribution by the Government.

(d) If the Government has made no certification of discovery or development before the termination of the period fixed for suspension, the total net amount contributed by the Government shall nevertheless be repayable in the form of a percentage royalty on any minerals mined or produced from the land described in Article 2 of the Contract, in the manner and amount provided in the Contract, certification of discovery or development in such case being hereby waived.

(e) The maximum period for royalty payments and lien for the payment thereof, provided for in the Contract is increased to eleven (11) years.

(f) The Operator hereby releases and agrees to save the Government harmless from all claims or demands under or arising out of the Contract, except as otherwise provided herein.

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

THE UNITED STATES OF AMERICA

By _____
Administrator, Defense Minerals
Exploration Administration

CARL HOWARD

_____

Mr. George Selfridge

DEPT. OF
Defense Atomic Administration
RECEIVED
MAR 17 1955

DN 235 EUR MINES 3-16-55 4-30 PM

CHAIRMAN, OPERATING COMMITTEE, DMEA

REURTT 3-16-55 REFERENCE DOCKET DMEA 2957, CONTRACT IDM E632, CARL HOVGARD, THIS OFFICE RECOMMENDS THAT SUSPENSION TERMINATIONS AGREEMENT CONTAIN PROVISIONS FOR ROYALTY WITHOUT CERTIFICATION UNLESS INFORMATION CONTAINED IN ROMSLO S MEMORANDUM OF FEBRUARY 15, FORWARDED BY OUR MEMORANDUM OF FEBRUARY 23, IS SUFFICIENT TO ENABLE YOU TO CERTIFY THE PROJECT.

W M TRAVER

Denver, Colo.

MAR 17 9 16 AM '55
BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

Interior Department
Defense Minerals Exploration
Administration
14X8C1 (GA) Revolving Fund,
Defense Production Act,
Interior (Allocated Working Fund to
the Office of the Secretary)

DOCKET
SURNAME
Rutledge
Martin
Hedges
Kilsgaard
Selfridge
Johnson
Mitchendorf

MAR 16 1955

TELETYPE

Mr. W. M. Traver, Executive Officer
DMEA Field Team, Region III
7th Floor Carbonhouse Building
Denver 2, Colorado

Receipt February 23, 1955, Suspension-Termination Agreement, Carl Hovgard, Contract Ida-8512, Docket DMEA 2957. We believe agreement should contain provision for royalty without certification clause unless we have sufficient data to certify. Please wire recommendations.

George C. Selfridge
Chairman, Operating Committee (JHB)

cc to: Docket
Code 400
Adm. Reading File
Operating Comm.
FT. REG. III - CONFIRMATION
Robert Holliday, USBM
Thor H. Kilsgaard, USGS

FARUTLEDGE/foc 3-16-55

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

224 New Customhouse
Denver 2, Colorado

February 23, 1955

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 2957 (Tungsten), Contract Idm-E632, Carl Hovgard, Wothree Mines, Mohave County, Arizona

Enclosed is the following material relative to a three months' extension of the subject contract:

1. Original and three copies of the operator's letter of January 19, 1955.

2. Original and three copies of a memorandum dated February 14, 1955 from T.M. Romslo, Mining Engineer, Tucson, Arizona, and transmittal thereof from the Superintendent, Southwest Experiment Station, Region III, of the same date.

3. Original and three copies of a memorandum dated February 14, 1955 from J.N. Faick, Geologist, U.S. Geological Survey, and transmittal thereof from E.N. Harshman dated February 16, 1955.

Also enclosed are two copies of the engineer's report relative to work performed during the month of December 1954.

The examining engineer and geologist recommend that a three months' extension of the contract be granted, in which this office concurs. In addition we recommend as follows:

1. That a recess of operations for a like period be included in the amendment.

2. That if operations are not resumed by April 30, 1955, or prior to expiration of the recess period, that the contract is automatically terminated and that the operator shall perform all winding-up actions toward closing the account as stipulated in the contract.

W. M. Traver

W. M. Traver

Enclosures

Jan 19th 1955

W O Three Mines.
Williams Tungsten Mine
P.O. box 47
Kingman, Ariz.

Re
DM&A Contract Num E 632
Docket # DM&A 2957
Williams Tungsten Mine,
Mohave County, Arizona.

Mr. William M. Traver
Director
DM&A Field Team
224 New Custom house
Denver 2, Colorado.

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

Dear Mr. Traver,

Today I received Mr. Storms notification that our exploration contract with DM&A expires on Febr 1st. Upon his suggestion I wish here by to apply for a 3 month's expension as we still have about 200' of work to do and now are very badly handicapped by 75 miles of mountain dirt roads covered with heavy snow.

Also I wish here by to apply, subject to approval by your field team a transfer of some footage from the 150 W drift to the "O" East Wrise. Both of these workings were exploration work done on there contract. While 150 W tunnel now gives us very little encouragement we had to stop the wrise at a 50' mark (approved total length) with a face showing ore and further possibilities.

Please excuse this hand scrabling - I had one hell of a time getting out to town and my strong is left in camp.

Respectfully yours
W O Three Mine
George B. Bonsey
General Manager

DMEA
Date Rec'd
FEB 17 1955
BUREAU OF MINES
Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

SOUTHWEST EXPERIMENT STATION
Box 4097
UNIVERSITY STATION
TUCSON, ARIZONA

February 14, 1955

Memorandum

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

From : Superintendent, Southwest Exp. Station, Region III

Subject : Proposed Amendment to DMEA Contract Idm-E632, Docket DMEA-2957, Carl Hovgard's Williams Tungsten Mine (Wothree Mines), Mohave County, Ariz.

Enclosed are original and 8 copies of a short report by T. M. Romslo of the Bureau of Mines regarding the above operator's request for an amendment to Exploration Project Contract No. Idm-E632. Romslo visited this property on February 7-10, 1955 with John N. Faick of the Geological Survey.

Romslo and Faick found Blonsky, manager of the mine for Carl Hovgard, very discouraged and ready to shut the mine down as soon as he could mine all available ore. Exploratory work has shown only a very narrow vein that in most cases is not minable. It would seem that this is another case where a mill was constructed before a significant amount of ore had been blocked out.

I concur with the examiners' recommendations that a 3-month extension of time be granted the operator. By the end of that period, perhaps Blonsky will know what the operator intends to do.

Walter R. Storms

Walter R. Storms

CC W. M. Traver (8)
J. N. Faick

DMEA-2957
DF

WRStorms:frj

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
SOUTHWEST EXPERIMENT STATION

~~ARIZONA DISTRICT~~
~~WESTERN REGION~~

BOX 4097
UNIVERSITY STATION
TUCSON, ARIZONA

February 14, 1955

Memorandum

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

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

Subject : Proposed extension and amendment of contract Idm-E632, DMEA-2957, Carl Hovgard's Williams Tungsten Mine (Wothree Mine), Mohave County, Ariz.

On January 19, 1955, George B. Blonsky, General Manager of subject property, made application for a 3-month extension of the contract and for permission to transfer some authorized footage on the 150 W drift to the "O" level where he proposed sinking a winze an additional 50 feet. On January 25, 1955, W. M. Traver, Executive Officer, DMEA Field Team, Region III, notified Mr. Blonsky that the matter had been referred to DMEA field engineers for their recommendations.

In accordance with your request, I visited the property February 7 to 10, 1955 in order to: (1) measure advance on the project for December and January, and (2) examine the project with J. N. Faick of the U. S. Geological Survey, who accompanied me, for the purpose of making recommendations regarding the operator's requests. Advance on exploration work will be covered in the customary monthly Progress Reports.

In regard to the proposed extension and amendment to the contract, we found that Blonsky was uncertain as to future operations. He thought the best thing to do would be to discontinue exploratory work and to dismantle and sell all equipment, supplies, etc., after mining and milling all readily accessible ore. However, as he is a minor partner, he must discuss the problem with his financial backers. He promised to notify the

CC W. M. Traver (Orig. & 8)
J. N. Faick
DMEA-2957
DF

TMRomslo:frj

DMEA as to their decision within a few weeks. In the meantime, he has started stoping operations from the main winze and the 180 East drift. Milling of ore, temporarily halted by freezing weather late in December, will be renewed as soon as sufficient ore for several days run is available.

I concur with the following findings of Mr. Faick, that are contained in a memorandum of February 14, 1955 to E. N. Harshman:

"Geological data that this writer has been able to assemble indicates that a couple of "targets" for exploration remain, but it is doubtful if these are worthy of exploration. The work completed thus far has had essentially negative results, and it is doubtful if additional exploration would yield results that are any better; therefore, it is unlikely that the operator will do the work for which the amendment was requested.

"Further work on this project will be held in abeyance by this office until we are advised of Mr. Blonsky's intentions. Additional time will be required to make the necessary decisions pertaining to this contract; therefore, I recommend that the requested 3-month extension of time be granted."

T. M. Romslo

T. M. Romslo
Mining Engineer
Region III

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Defense Minerals Exploration Administration
Denver Federal Center
Denver 2, Colorado

DMEA
Date Rec'd
FEB 17 1955
BUREAU OF MINES
Denver, Colorado

February 16, 1955

Memorandum

To: Field Team, Region III

From: E. N. Harshman

Subject: DMEA Docket 2957 (tungsten), Contract Idm E 632, Carl Hovgard, William Tungsten mine, Mohave County, Arizona

Enclosed are the original and eight copies of a memorandum report by J. N. Faick, U. S. Geological Survey, on the above subject property.

It appears that the operator needs additional time to complete financial arrangements for continued exploration.

I concur with Faick's recommendation that a three-month extension of time be granted.

E. N. Harshman

E. N. Harshman
Member, Field Team

Enclosures (9)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Box 4126 University Station
Tucson, Arizona

IN REPLY REFER TO:
MINERAL DEPOSITS
DMEA
RECEIVED
FEB 16 1955
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

February 14, 1955

MEMORANDUM

To: E. N. Harshman E.N.H.

From: J. N. Faick

Subject: Docket DMEA 2957 (Tungsten), Contract Idm-E632
Carl Hovgard, William Tungsten Mine, Mohave County, Arizona

In compliance with Mr. Blonsky's request of January 19, 1955, to amend the above subject contract, this writer and T. M. Romslo, U.S.Bureau of Mines, critically examined the project February 7-10, 1955. At this time Mr. Blonsky was uncertain whether additional exploration should be done or whether the project should be terminated, and he wanted additional time to discuss his problems with his financial backers before making his decision.

Geological data that this writer has been able to assemble indicates that a couple of "targets" for exploration remain, but it is doubtful if these are worthy of exploration. The work completed thus far has had essentially negative results, and it is doubtful if additional exploration would yield results that are any better; therefore, it is unlikely that the operator will do the work for which the amendment was requested.

Further work on this project will be held in abeyance by this office until we are advised of Mr. Blonsky's intentions. Additional time will be required to make the necessary decisions pertaining to this contract; therefore, I recommend that the requested 3-month extension of time be granted.

J. N. Faick
J. N. Faick
Geologist

JNF:ms
cc. (8) Mr. Harshman
Mr. Storms

DMEA
Date Rec'd.
FEB 17 1955
BUR[illegible]
Denver, Colo.

February 15, 1955

Memorandum

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

From : Superintendent, Southwest Exp. Station, Region XII

Subject : December 1954 Progress Report, DMEA Contract Idw-632, Docket DMEA-2957, Carl Hovgard's Williams Tungsten Mine (Wetmore Mines), Mohave County, Ariz.

Enclosed in quintuplicate are the following:

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

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

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

The operator's report was received on January 20, but a Bureau of Mines engineer was unable to visit the mine before February 7 because of snow.

Walter R. Storms

Walter R. Storms

cc W. H. Traver (8)
DMEA-2957
DF

WRStorms:frj

Memorandum February 15, 1955

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

From : T. M. Romslo, Mining Engineer, Region III

Subject : Progress Report for December 1954, Project DMSA-3957, Contract Ibm-1632, Carl Swygard's Williams Tungsten Mine (Mathews Mines), Mohave County, Ariz.

The Williams Tungsten mine was visited February 7 to 10, 1955 for the purpose of measuring advance for the months of December and January and to obtain data for recommendations regarding a proposed extension and amendment of the contract. Measurements were taken February 9 with Mr. Blemsby, General Manager. The remainder of the period, except for the 8th when I visited the Fountain Head mine of terminated project DMSA-1801X, was spent with J. M. Faick, U. S. Geological Survey, on work connected with the proposed extension and amendment. Bad roads, caused by a heavy snow storm made an earlier visit to the mine impossible.

Work authorized by the contract and performed during December and January was confined to extending the 180 west drift. Work in this drift had been stopped by Blemsby on January 23 because little ore mineralization had been encountered in the last 100 feet of drift. The face of the drift was at 447 feet from the center of the main winze. At the end of May, when last measured, the face was at 515 feet from the reference point. According to Blemsby, 80 of the 132 feet of advance was accomplished during December. A sample (No. 12775) was cut at 320 feet from the winze in the only significant mineralized zone penetrated by the 132 feet of drifting. It had not been assayed at this writing.

Milling of ore from the winze from "G" level stopped December 23 with the freezing of water pipes, had not been resumed. Sixteen of the 22 tons of ore recovered from the winze had been milled. The grade of the ore, based on concentrates produced, was placed at 0.75 percent WO_3 by Blemsby. On January 28, mining was started in the ore zone above the winze that had been explored

CC M. M. Tanner (Orig. & 3)
DMSA-3957
BF

TMRomslo:frj

under the contract by a 10-foot raise. The minable portion of the ore zone yielded about 30 tons of ore by February 7 when operations were transferred to stoping of ore to the east of the main winze above the 100 level. Milling of ore will be resumed by some of the 6-man mining crew when about 100 tons is available.

The fourth lot of concentrates, mentioned in the previous monthly report, was not shipped because assays of the coarse and fine concentrates averaged less than 20 percent WO_3. The grade of the concentrates, upgraded to about 20 percent by roasting and magnetic separation, will be raised to plus 65 percent by additional similar operations. Upgrading has lowered the weight of the concentrates from plus 1 ton to about 1,700 pounds. A minimum lot of 1 ton should be available for shipment shortly after milling is resumed.

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

	Remaining	Total
Drifting @ $35.00/ft.	$1,676.00	$19,452.00
Raising @ $30.00/ft.	—	1,320.00
Stoping @ $40.00/ft.	—	1,080.00
Total	$1,676.00	$21,852.00
Government's share	$1,202.00	$10,101.75

The operator has presented forms 10-104 and 1044 on which he claims reimbursement for the Government's share of the costs of 25 feet of authorized drifting. His narrative report is considered adequate but should have been supported with a plan map of the drawpoint instead of cross sections. It has proved to initiate a plan map with most monthly reports. The Government should reimburse the operator for the full share of boundary costs in records show royalties have been paid on all reported shipments of concentrates.

The operator has applied for a 3-month extension of the contract from January 30, 1955 and for permission to transfer some of the authorized funds to more favorable sites. As you know, a memorandum from this office of February 15 contained a recommendation of the proposed extension of the contract but withheld recommendation of the amendment granting the operator's final decision as to future plans. Hinsley said that the decision, either to continue explorations or limit operations to the mining and milling of all readily accessible ore, will be contained in a letter that should be received by the

ERDA within a few weeks. The probability is that the operator will request termination of the contract. Consequently, next month's program report probably will recommend that a portion of the Government's share of costs for January should not be paid until receipt of the operator's final report.

T. M. Rumale
Mining Engineer
Region III

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

224 New Customhouse
Denver 2, Colorado

October 14, 1954

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 2957 (Tungsten), Contract Idm-E632, Carl Hovgard, Williams Tungsten Mine, Wothree Mines, Mohave County, Arizona

Enclosed are the Government, Division, and Docket copies of Amendment No. 2 to Contract Idm-E632 which was prepared in Washington and signed by the Administrator, DMEA, for the Government, and forwarded to this office for signature of the operator by your letter of October 5, 1954. The amendment authorizes a recess of operations from June 1, 1954 to not later than October 1, 1954 and modifies the description of work to be performed under the contract.

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
W. H. King

Enclosures

DOCKET
Surname:
Rutledge
Martin
Talbot
Newcomb
Hedges
Selfridge
Kilsgaard

OCT 5 1954

Mr. W. H. King, Executive Officer
DMEA Field Team, Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA 2957-Tungsten
Carl Hovgard
Williams Tungsten mine
Mohave County, Arizona
Contract No. Idm-E632

Dear Mr. King

Enclosed are the original and five copies of a proposed amendment, Amendment No. 2 (3 pages), to the above-referenced contract, signed by the Administrator for the Government, together with Annex III (3 pages) and three maps.

If the terms and conditions of this proposed amendment are satisfactory to you and the Operator, all six copies should be signed and the usual distribution made.

If any part of this proposed amendment does not have either your approval or that of the Operator and cannot be amended within your delegated authority, the original and all copies of the proposed amendment are to be returned to this office, together with the proposed changes for consideration.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (JHB)

Enclosures

APPROVED:

J. H. Hedges
Member, Bureau of Mines (JHB)

Thor H. Kiilsgaard
Member, Geological Survey (JHB)

cc: DOCKET
FT, REG. IV
OPER. COMM.
ADM. READING FILE
CODE 400
R. W. GEEHAN, USBM
THOR KIILSGAARD, USGS

FARutledge/ls
9-30-54

R.C.S.

DOCKET
Surname:
Rutledge
Martin
Kiilsgaard
Hedges
Selfridge

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

To: W. H. King, Executive Officer, DMEA Field Team,
Region IV, Denver, Colorado

Rett September 24, Docket DMEA 2957, Carl Hovgard, Contract Idm-E632.

Effective date of Amendment 2 is date of contract. You can expect amendment soon.

George C. Selfridge (by ESS)
Chairman, Operating Committee

cc: DOCKET
FT, REG. IV, CONFIRMATION
CODE 400
OPER. COMM.
ADM. READ. FILE
R. W. GEEHAN, USBM
THOR KIILSGAARD, USGS
MR. HOFFLUND - Rm. 7349

WSMartin/FARutledge/ls
9-28-54

SENT
SEP 29 1954
Clerical Service Section

Chairman, Operating Committee DMEA
Sept. 24. 1954
12:00 Noon

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 24 1954

DN 235 BUR MINES 9-24-54 8-57 AM

CHAIRMAIN. OPERATING COMMITTEE, DMEA

REUR TELETYPE AUGUST 27, CARL HIVGARD, DOCKET DMEA 2957, AMENDMENT NO. 2, OPERATOR ANXIOUS TO RESUME WORK UNDER CHANGES THAT WILL BE AUTHORIZED BY THE AMENDMENT. PLEASE TELETYPE ADVICE AS TO EFFECTIVE DATE OF AMENDMENT AND WHEN ITS RECEIPT CAN BE ESPECTED.

W H KING

Denver, Colo.

SEP 24 12 01 PM '54
BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

DOCKET
Surname:
Rutledge
Martin
Kielsgaard

September 2, 1954

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Recess of Project for 120 days
Docket No. DMEA 2957 - Tungsten
Carl Hovgard
Williams Tungsten mine
Mohave County, Arizona
Contract No. Idm-E632

INTERIOR DEPT.
SEP 2 - 1954
SOLICITOR

This Division recommends granting the referenced request for an amendment allowing a 120-day recess and authorizing the changes in the work program recommended by the Field Team. A summary of the contract to date follows:

1. The subject contract, executed October 30, 1953, by Region IV, provided $33,000.00 on a unit cost basis for the following work:

(a) Drift westerly on the 150 level for 450 feet.

(b) Drift easterly on the 120 level for 375 feet.

(c) Drift southeasterly on the 0 level for 100 feet.

(d) Raise near the bottom of the inclined winze for 25 feet.

(e) Raise 50 feet at locations on the 150, 120, and 0 levels acceptable to the DMEA representatives.

2. Amendment No. 1 changed the position of the raise under (d) above.

3. Exploration under the contract was stopped at the end of May 1954 due to financial difficulties of the Operator. Apparently we have here another case of building a mill before sufficient ore reserves have been developed. Work completed consists of the following:

R.C.L.

Level	Authorized	Completed
0	100 feet drifting 50 feet raising	100 feet drifting 50 feet raising
120	375 feet drifting 50 feet raising	302.5 feet drifting 0.0 feet raising
150	450 feet drifting 50 feet raising	246.0 feet drifting 0.0 feet raising
Raise I	25 feet raising	0.0 feet raising

4. An interim inspection by the Field Team has indicated that the ore exposed to date is marginal or submarginal in grade and the possibility of a profitable operation is very remote under present economic conditions. The last 100 feet of the work on the 120-foot level has been disappointing and the Field Team recommends that the work remaining on this level be deleted. More work would then be authorized for the 150-foot and 0-foot levels. Fifty feet of raising and 72.5 feet of drifting were deleted and 22.5 feet of drifting on the 150-foot level and 50 feet of winze on the 0-foot level were substituted.

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

CC: Docket
Code 400
Adm. Reading File

FARutledge/ls

DOCKET
Surname:
Rutledge
Martin

September 2, 1954

MEMORANDUM

To: Acting Assistant Solicitor, Defense Minerals

From: Chief, Iron and Ferro-Alloys Division, DMEA

Subject: Review and preparation of Amendment No. 2 to
Contract No. Idm-E632
Docket No. DMEA 2957 - Tungsten
Carl Hovgard
Williams Tungsten Mine
Mohave County, Arizona
Contract No. Idm-E632

Transmitted herewith is the rough draft of a proposed amendment, Amendment No. 2, for your use in preparing the amendment in final form.

Execution of the amendment by the Operator has been indicated for the signature of Carl Hovgard according to the memorandum dated March 5, 1954, by W. H. King, Executive Officer, DMEA Field Team, Region IV.

Copies of the three maps referred to in the amendment are attached.

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

Attachments

cc: Docket
Code 400
Adm. Reading File

FARutledge/ls
9/2/54

DOCKET
Surname:

Martin
Hedges
Kiilsgaard
Fagman
Mitkendorf

Interior Department
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

To: W. H. King, DMEA Executive Officer, Field Team, Region IV
Denver, Colorado

Relet August 17, Contract Idm-E632, Carl Hovgard, Docket DMEA 2957. Amendment No. 2 being prepared covering suspension of work, extension of time for completion of project, and changes in contract as recommended by Field Team.

W. S. Martin
ACTING Chairman, Operating Committee (2AB)

cc: Field Team, Reg. 4 - Confirmation
Docket
Adm. Read. File
Oper. Comm.
Code 400
R. W. Geehan, USBM
Thor. Kiilsgaard, USGS

FARutledge/ls
8-27-54

SENT
AUG 27 1954
Clerical Service Section

RCh

Docket

IN REPLY REFER TO:

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

August 26, 1954

WSM

Re: DMEA-2957
Wothree Mine
Greenwood District
Mohave Co., Ariz.
Tungsten
Proposed amendment

Memorandum

To: W. S. Martin
Defense Minerals Exploration Administration

From: E. L. Newcomb
U. S. Geological Survey

Subject: Recommendation for approval of proposed contract changes

The applicant has requested five (5) ? changes in his contract which involve location of exploration work, recission of contract for 90 days, and extension of contract expiration date from July 30, 1954 to January 30, 1955.

The Field Team has requested the proposed amendments be approved.

Sufficient footage remains to continue drifting on 150 level as provided in original contract. The only justification for the raise from near the bottom of the inclined winze is to test the area before discounting it as ore bearing ground. The cost of doing this work is moderate, otherwise the raise project might be considered unwarranted.

I concur with the Field Team's conclusions and recommend the proposed amendments be approved.

E. L. Newcomb

E. L. Newcomb

400

Docket
Surname
Rutledge
Martin
Geehan
Newcomb
Kilsgaard
Johnson
Nutkendorf

AUG 2 0 1954

Mr. W. H. King, Executive Officer
DMEA Field Team, Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA 2957 - Tungsten
Carl Hovgard
Williams Tungsten mine
Mohave County, Arizona
Contract No. IGs-E632

Dear Mr. King:

Reference is made to your letter of August 17, 1954, transmitting Mr. Blomsky's request for access to the geologic data and mine maps prepared as a result of a DMEA field examination by John H. Faick, Geological Survey, and William R. Hardwick, Bureau of Mines, on or about June 25, 1954.

We assume that members of a DMEA field team would ordinarily cooperate with an Operator under a DMEA contract by making accessible the factual data obtained during an examination whenever such information would assist the Operator in carrying out the project work more effectively. It may be that the data referred to by Mr. Blomsky had not been checked and final drawings prepared, but we are sure that Mr. Blomsky will be furnished copies of the necessary information as soon as it is expedient. In the interim, we believe Mr. Blomsky could be allowed to inspect and discuss as much of the factual information he needs as is now available.

Sincerely yours,

W. S. Martin
ACTING Chairman, Operating Committee (JHB)

APPROVED:

J. H. Hedges
Member, Bureau of Mines (JHB)

s/ Thor N. Kilsgaard
Member, Geological Survey (JHB)

FARutledge:foc
8-23-54
cc to: Docket
Code 400
Adm. Reading File
Operating Comm.
R. W. Geehan, USBM
E. L. Newcomb, USGS
FT. Reg. IV

R.C.G.

Docket
Surname
Rutledge
Martin
Gahan
Newcomb

Mr. W. H. King, Executive Officer
DMEA Field Team, Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA 2957 - Tungsten
Carl Hovgard
Williams Tungsten mine
Mohave County, Arizona
Contract No. Idm-E632

Dear Mr. King:

Reference is made to your letter of August 17, 1954, transmitting Mr. Blonsky's request for access to the geologic data and mine maps prepared as a result of a DMEA field examination by John H. Faick, Geological Survey, and William N. Hardwick, Bureau of Mines, on or about June 25, 1954.

We assume that members of a DMEA field team would ordinarily cooperate with an Operator under a DMEA contract by making accessible the factual data obtained during an examination whenever such information would assist the Operator in carrying out the project work more effectively. It may be that the data referred to by Mr. Blonsky had not been checked and final drawings prepared, but we are sure that Mr. Blonsky will be furnished copies of the necessary information as soon as it is expedient. In the interim, we believe Mr. Blonsky could be allowed to inspect and discuss as much of the information he needs as is now available.

Sincerely yours,

Chairman, Operating Committee

APPROVED:

FARutledge:foc
8-20-54
cc to: Docket
Code 400
Adm. Reading File
Operating Comm.
R. W. Geehan, USBM
E. L. Newcomb, USGS

Member, Bureau of Mines

Member, Geological Survey

Feet

	Contract	Completed
0-Level	100 drift	100 drift
	50 raise	50 raise
120-level	375 drift	302.5
	50 raise debris	
150-level	450 drift	246.0 drift
	50 raise	detail
Raise I	25' raise	

120 (1) 18
(2) 38
(3) 77.5
124
45.0
302.5

150 (1) 18
(2) 36.4
(3) 62.6
98.0
31.0
246.0

0 raise (2) 33.66
(3) 18.34
52.0
charge 50'

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

224 New Customhouse
Denver 2, Colorado

August 17, 1954

AIRMAIL

Mr. George B. Blonsky
Wothree Mines
P.O. Box 47
Kingman, Arizona

Re: Docket DMEA 2957 (Tungsten)
Contract Idm-E632

Dear Mr. Blonsky:

Receipt is acknowledged of your letter of August 3, 1954, wherein you request to be supplied with certain geologic data assembled in conjunction with DMEA Exploration Project Contract Idm-E632.

We do not have authority to authorize the release of the data you have requested, therefore the matter has been referred to the Washington office, DMEA.

Upon receipt of their advice and instructions in the matter you will be further advised relative to your request.

Very truly yours,

W H King

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

JWT:jp
cc Contract
Chron
WRStorms
AHKoschmann
JNFaick
JWTownsend
Chairman, Oper. Comm.

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

224 New Customhouse
Denver 2, Colorado

August 17, 1954

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 2957 (Tungsten), Contract Idm-E632, Carl Hovgard, Wothree Tungsten Mine, Mohave County, Arizona

Enclosed are the original and three copies of a letter dated August 3, 1954 from George B. Blonsky, agent for the operator to conduct affairs under the subject contract, wherein he requests certain geologic information and maps as a result of DMEA investigations in conjunction with the project work.

It appears that the operator or his agent are entitled to the data requested and that it would be in the interests of the Government as well that he be furnished the information in order to better understand the geological problems involved in conjunction with the project work. However, we have been informed by Mr. A. H. Koschmann that it is against U.S. Geological Survey policy to release such information. Therefore, if you deem that he is entitled to the data requested it is suggested that you clear the matter through the Washington office of the U.S. Geological Survey with appropriate advice to Mr. Koschmann for his action in the matter.

W. H. King

W. H. King

Enclosures

NORMAN D. FITZGERALD
OWNER

GEORGE B. BLONSKY
GENERAL MANAGER

WOTHREE MINES

P. O. BOX 47
KINGMAN, ARIZONA

U. S. BUREAU OF MINES
MINING DIVISION
AUG 9 1954
TUCSON, ARIZONA

August 3, 1954.

Mr. W. H. King, Executive Officer
DMEA Field Team, Region IV
224 New Customhouse
Denver 2, Colo.

Re: DMEA Contract Idm-E632
Docket DMEA -2957
Williams Tungsten Mine
Mohave County, Arizona.

Dear Mr. King,

About June 25 the DMEA Field Team consisting of Mr. J. Faick and Mr. W. Hardwick spent five days at our property making geological studies of several principal workings and mapping main features of our property. The undersigned was very happy to have them do this work and endeavoured to assist them in every possible way.

As our geological information and maps on hand are very sketchy to say the least, and we are trying to develop additional ore reserves, we would greatly appreciate if you could be so kind as to arrange with the above mentionned gentlemen to have them send us a set of maps and sketches made by them as a result of their visit to our property.

As you probably remember we have asked for two amendment of the location of a small raise near the bottom of the winze. These two amendments were necessary, because we misunderstood the geology of that part of the mine.

Since we wrote you last we sent off a third shipment of wolframite concentrates to GSA, representing about 89.5 units and bringing our total production up to about 233 units averaging 65.12% WO_3.

As we are making plans for resuming operations at our property any geological information such as mentionned above, would help us greatly. One important phase of Mr. Faick's and Mr.Hardwick's work here was a travers survey connecting our North vein with "0" level portal , also with portals of 200,,260 and 280 levels and outcrops both on the East and the West side of our claim No.1 hill. We are very eager to know whether this survey will give further indication of possible identification of the West Aquarius Cliffs outcrops with the vein recently encountered in the face of 150 West drift.

We would appreciate greatly if you could extend your permission to Mr. W. R. Storms and his men to give us the information above requested.

Yours truly

WOTHREE MINES.

George B. Blonsky

George B. Blonsky.

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

224 New Customhouse
Denver 2, Colorado

August 17, 1954

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 2957 (Tungsten), Contract Idm-E632, Carl Hovgard, Wothree Tungsten Mine, Mohave County, Arizona

Enclosed are the original and three copies of the following material relative to an amendment to the subject contract:

1. Memorandum dated June 4, 1954, from J. N. Faick, Geologist, U.S. Geological Survey, containing recommendations relative to future work.

2. Memorandum dated July 1, 1954 from the Chief, Mining Methods Branch, Mining Division, Region IV, advising of certain difficulties at the project.

3. Memorandum dated July 23, 1954 transmitting (a) a letter from the operator's agent dated July 6, 1954 requesting amendments to Contract Idm-E632, and (b) a memorandum dated July 23, 1954 from William R. Hardwick, Mining Engineer, Tucson, Arizona, containing his recommendations relative to the operator's requested amendments.

4. Memorandum dated July 30, 1954 from John N. Faick, Geologist, U.S. Geological Survey, containing recommendations relative to the requested amendments to the contract.

The operator's agent in his letter of July 6, 1954, under item 3, requests an amendment to the contract as follows:

1. In lieu of performing the unexpended footage authorized for the 120 foot level east drift to instead apply a portion of the footage in extending the 150 foot level westward.

2. In lieu of driving the raise from the location as provided by Amendment No. 1 to instead drive the raise from the point originally authorized in the contract.

3. Apply the balance of the drifting and raising footage approved for the 120 foot level east drift, not used in extending the 150 foot level drift westward, to sink a winze from the "0" level east drift from a point below the raise driven southward from the "0" level east drift.

4. Authorization of a 90 day recess of operations from July 1, 1954. 1/

5. Extension of the period for completion of the project work from July 30, 1954 to January 30, 1955.

Our recommendations in the matter of an amendment to the contract are as follows, in item order of the operator's agent's request.

(1). That 22.5 feet of drifting and raising footage and an amount of $675.00 be deleted from that authorized for the 120 foot level east drift and instead be applied to the drifting footage authorized for the 150 foot level drift westward. The provision for a 50 foot raise from the 150 foot level drift should be retained.

(2). That Amendment No. 1 be voided effective as of its effective date and that the original description of the raise involved be reinstated with the added provision that the 25 foot raise be inclined to the north as depicted on "Figure 2" attached to Faick's report of June 4, 1954.

(3). Delete the remaining unexpended footage of 100 feet of drifting and raising and the amount of $3,000.00 from that authorized for the 120 foot level east drift and instead apply it to sinking a 50 foot inclined winze at a direction of about N. 20° E. from a point on the "0" level directly below the "0" level raise, which was driven under Field Team, Region IV, authorization of February 11, 1954, at an agreed unit cost of $60.00 per foot.

(4). Authorization of a recess of operations from June 1, 1954 to on or before October 1, 1954.

(5). Extend the period for completion of the project work from July 30, 1954 to January 30, 1955.

The operator has been reimbursed under the terms of the contract for all work performed prior to June 1, 1954.

1/ No progress was made during the month of June 1954, therefore it appears that the recess should be made effective June 1, 1954 and extend to October 1, 1954

An amendment in the nature as outlined above is deemed not within the authority delegated to this office, therefore the matter is forwarded to you for your consideration and appropriate action.

After the matter has been reviewed we will appreciate advice by teletype as to the action you are taking.

W. H. King

W. H. King

Enclosures

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Box 4126 University Station
Tucson, Arizona

Mining Division
Date Rec'd
AUG 9 - 1954
BUREAU OF MINES
Denver, Colorado

Memorandum

July 30, 1954

To: Mr. A. H. Koschmann E.N.H. for A.H.K.

From: John N. Faick, Geologist, U.S.Geological Survey

Subject: Request for Amendment, Docket DMEA-2957, Contract Idm-E632, Carl Hovgard's Williams Tungsten Mine (Wothree Mines) Mohave County, Arizona

INTRODUCTION

This memorandum report on the above subject is being submitted as a recommendation to approve requested changes in the above contract, and to supplement a similar report, dated July 23, 1954, on the same subject by W.H.Hardwick, Engineer U.S.Bureau of Mines.

Mr. George B. Blonsky, General Manager and part owner of the Williams Tungsten mine submitted on July 6, 1954 a request to amend contract Idm-E632 in order to permit several changes in the exploration project now in effect at the Williams mine. This property has been visited on several occasions by DMEA representatives, and during the periods of May 26-27, and June 24-29, 1954 this writer and W. H. Hardwick devoted considerable effort to making an engineering and geologic study of the property. All mine workings driven under the contract were mapped, a few of the older workings were examined or mapped and a stadia traverse was made to establish the relationship of the Williams vein to a vein exposed at the base of the Aquarius Cliffs. This work was done in an effort to salvage the current exploration project to the fullest extent possible, and to gather data for a final report on the project in case it is prematurely terminated.

NOTES ON THE GEOLOGY

The country rock in vicinity of the Williams mine is principally granite, most of which is light gray, slightly banded, sheeted or gneissoid. In some areas, especially west and northwest of the mine, the granite loses its gneissoid or banded appearance, and grades gradually into a light-colored, massive pegmatic granite with which is associated considerable aplitic material. Interbanded, or interlayered with the gneissoid granite, especially near the main workings and east of them, is a dark colored rock in which hornblende and biotite are abundant constituents. It is locally referred to as dark granite, a name which is retained herein.

Associated with the light-colored granite are many aplite zones which in many places are only a few inches thick, but which are several feet thick in the vicinity of the main working of the Williams mine, and appear to be considerably thicker at the Aquarius Cliffs on the west side of the area studied.

The rocks in the Williams mine area reveal a vague but definite structural pattern to which all the various lithologic units approximately conform. The banding of the gneissoid granite, the zones of inter-banded dark and light granite, most of the aplite zones and the principal veins apparently have approximately the same attitude. These strike about west-northwest and dip easterly about 25 degrees, but there is some evidence to indicate that the dips are less steep near the bottom of the Williams mine and in the area north of it. This simple structural pattern in the district is modified to a slight extent by numerous easterly-trending high-angle faults along which displacement seldom exceeds a few feet.

The Williams mine and several small prospects in the vicinity of it have explored many small veins which appear to be more-or-less concentrated in a zone having a maximum thickness of about 200 feet, and which apparently has approximately the same attitude as other structural units of the host rocks. The veins are essentially independent members of a series or group of veins that occur principally in the slightly banded, sheeted or gneissoid granite with which is associated considerable aplitic material. The veins are tabular deposits varying in thickness from a few inches to a few feet and have a strike length ranging from a few feet to about 500 feet. In the direction of the dip, the length of individual veins is unknown, but in the Williams vein there is evidence to indicate that it may terminate against narrow, steeply dipping, easterly-trending veins at a slope distance of about 600 feet below the outcrop. The Williams vein is undoubtedly the largest in the area; however a vein (herein referred to as the Aquarius Cliff vein) exposed near the base of the Aquarius Cliffs is fairly large, it being about 500 feet long and 2 feet thick at the outcrop.

The veins tend to be overlapping but are widely spaced and in most cases they are separated by great volumes of barren granite. Branching or feathering of the veins at the ends of oreshoots is a common feature in the Williams mine. Here the thickest part of the vein occurs in competent aplitic zones in the light colored granite. In many places where the dark colored granite is penetrated by the vein it pinches to a very thin stringer or branches into many thin seams that disappear within short distances in the incompetent dark colored granitic host rock. The narrow branch veins and stringer veins in the dark-colored granite generally are not of mineable thickness, but where they intersect in areas where aplite is a noteworthy constituent of the wall rocks, the veins may form oreshoots of mineable size.

COMMENTS ON PROPOSED AMENDMENTS

Amendment 1. It is proposed to drive the 150 level drift westward (see map included with Hardwick's report) to explore low-grade vein material presently exposed in the face of this heading.

In this area it is significant that within the last 75 feet of this supposedly barren drift, 4 veins, which range in thickness from about 3 to 12 inches, and which contain small amounts of wolframite, were encountered in the dark granite host rock. These veins are approximately parallel to the main Williams vein, but the linear extent of the small veins and their relationship to the Williams vein is not known at present. Associated with the small veins is minor low-angle faulting or shearing in the granite. The veins are characteristic of the branch or stringer veins that are found in the dark granite, and I believe are quite capable of forming oreshoots of mineable size if the veins should intersect in zones containing appreciable amounts of aplite. That these veins could lead to mineable ore is a definite possibility because a small amount of aplite was found associated with one of the veins and because large amounts of aplite are present in the Aquarius Cliffs area toward which the 150-level drift would be driven. It is not yet known whether the veins exposed in the 150 level are extensions of the Aquarius Cliff vein but it is very doubtful; for this vein appears to be at a higher altitude.

This part of the project is apparently the most likely to result in the discovery of significant amounts of ore; therefore I recommend that the 150 level drift be continued westward.

Not all the drift work originally provided by the contract has been used; therefore it does not seem necessary to transfer additional footage to this part of the project at this time.

Amendment 2. It is proposed to change the position of a small exploration raise from its present position south of the ore-pocket to near the bottom of the inclined winze as provided by the original contract. I recommend approval of this change in location, because the zone above the bottom of the winze has not yet been adequately explored, and exploration should be completed before this part of the project is abandoned. As stated in my memo dated June 4, 1954, I question whether ore will be discovered by this raise, but believe it is desirable to complete the project by proving whether or not ore is present in this area.

Amendment 3. Mr. Blonsky proposes to sink a winze on the vein exposed in the "O" E drift and which was partly mined through the "O" E raise above the level. This ore body has a strike length of about 100 feet and is about 2 feet thick on the "O" E level, but where exposed in the raise it consists of two veins, each about 1 foot thick, and which are separated by about 1 foot of granite. The

veins occur in dark granite, but the footwall of the vein zone is massive aplitic granite. At the northwest and southeast sides the ore body pinched or feathered out. The vein appeared to be uniform in character where explored by the "O" E raise which was stopped by the operator about 50 feet above the level where the vein flattened and became nearly horizontal.

As this "O" E vein is one of the most favorable showings remaining to be explored at the Williams mine, I recommend that the request to sink the winze be granted. Geologic conditions indicate that this vein may not be regular in habit, nor very extensive; therefore it should be specified in the amendment that the winze must follow the ore. A winze 50 feet long on the slope should be sufficient, but if more footage is required it could be added by a later amendment. As usual the Government should reserve the right to stop the winze if the ore pinches out. The direction of the winze should be about N 20° E, approximately parallel to the dip of the vein.

Amendment 4. This requested amendment is for a short recess. I don't know of any reason why a recess should not be granted to give Mr. Blonsky an opportunity to reorganize, and to prepare for future activity.

Amendment 5. This requested amendment is for an extension of time. As the exploration work cannot be completed by July 30, the expiration date of the contract should be extended to January 30, 1955, as requested.

CONCLUSIONS AND RECOMMENDATIONS

Mr. Blonsky has proved that ore from the Williams mine can be successfully treated by the new mill; however, the operation may not be profitable. It is doubtful if the ore reserves known at present can sustain the operation for more than a year, at most. It is important that additional ore be discovered as soon as possible and the above amendments, all of which are recommended, may help in this respect; however, there is little reason to hope that large bodies of mineable-grade ore will be found.

John N. Faick

John N. Faick
Geologist

JNF:ms
cc. Koschmann (8)
Storms

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

SOUTHWEST EXPERIMENT STATION
Box 4097
UNIVERSITY STATION

TUCSON, ARIZONA

Memorandum

July 23, 1954

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

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

Subject : Proposed Amendment, DMEA Contract Idm-E632, Docket DMEA-2957, Carl Hovgard's Williams Tungsten Mine (Wothree Mines), Mohave County, Ariz.

Enclosed are original and 5 copies of a letter from George B. Blonsky, general manager for Carl Hovgard at the Williams tungsten mine, requesting a recess for 90 days from July 1, that the contract termination date be extended to January 30, 1955, that the unexpended contract footage for the 120 level drift be transferred to the 150 level drift, that the position of the raise mentioned in Amendment No. 1 of the contract again be changed, and that he be permitted to sink a winze below the zero level. Also enclosed are original and 7 copies of a report by W. R. Hardwick of the Bureau of Mines, containing recommendations in regard to Blonsky's proposed changes. A separate report will be submitted by John N. Faick of the Geological Survey, containing similar recommendations.

In Blonsky's letter, his request for a winze fails to contain any cost estimates. Hardwick has estimated a cost of $60 per foot and this seems reasonable. However, we have not contacted Blonsky to find out if this amount is agreeable to him as we wanted to send in his request for a recess as soon as possible. If the Field Team considers $60 a foot a fair figure and favors the sinking of a winze, then we can contact Blonsky and find out if this figure is agreeable to him.

I concur with Hardwick's recommendations.

Walter R. Storms

Walter R. Storms

CC W. H. King (7)
J. N. Faick
DMEA-2957
DF

WRStorms:frj

NORMAN D. FITZGERALD
OWNER

GEORGE B. BLONSKY
GENERAL MANAGER

WOTHREE MINES

P. O. BOX 47
KINGMAN, ARIZONA

U. S. BUREAU OF MINES
MINING DIVISION
JUL 12 1954
TUCSON, ARIZONA

July 6, 1954.

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

RE: Contract Idm-E632
Docket DMEA-2957
Williams Tungsten Mine
Mohave County, Ariz.

Dear Mr. King,

The field team consisting of Mr. W. R. Hardwick and Mr. J. N. Faick spent considerable time at our property from June 24 to June 29; they made an extensive study of our workings a nd outcrops, including a day and a half transit survey, tying to the "0" level the north vein, outcrops of our main vein and the western outcrops at the Aquarius Cliffs. The writer personally assisted them with this work and is very interested in what this map is going to show.

Upon completion of the team's field work we had a conference and have mutually agreed that in the light of the latest information available it was very desirable to request from DMEA three amendments of the exploration program, a recess until the presently suspended exploration program could be resumed upon completion of our reorganization, and an extension of the contract expiration date.

Amendment 1: Mr. Faick, having studied the vein newly exposed in the last 10' of the 150 W drift, is of the opinion that very possibly this vein is the downward extension of the western outcrop showing at the base of the Aquarius Cliffs. If this could be really proven, a very considerable potential ore reserve might be found in this region. In view of this fact Mr. Faick thought it well worthwhile to continue drifting on the 150 W level, until we either prove that the vein now exposed is only of local significance, or that it is actually a main feature of the geological structure of the mine. As the 120 E drift apparently left the aplite zone and is in hopeless granite territory, both Mr. Faick and Mr. Hardwick thought, that continuation of work in this 120 E drift is not desirable. On the other hand, they suggested that we should ask for an amendment to enable us to apply, if need be, the remaining footage of the 120 E contract allowance in full or part to more promising parts of the mine, and particularly 150 W.

Amendment 2: After further study of the geological features exposed near the bottom of our main winze, Mr. Faick is now completely persuaded that driving a raise a little to the south of the ore pocket in the winze would neither give us additional information nor explore any further reserves. On the other hand,

he is of the opinion that a small raise of maximum 25', driven from the bottom of the winze a few feet to the north of the present ore pocket may encounter the downward extension of the vein, which is cut off by a system of faults some 40 to 50' south of the ore pocket. Therefore Messrs. Hardwick and Faick's recommendation is that we should ask DMEA to again amend the location of this small proposed raise back to the bottom of the winze north of the ore pocket.

Amendment 3: Messrs. Hardwick and Faick's study of the geological features exposed in the "0" crosscut, "0" E drift and "0" E raise suggested to them and the writer that there is a very good possibility, that our "0" drift has exposed the very uppermost tip of mineralized aplite and ore zone, dipping north-eastwards below the "0" level and probably extending that way for a considerable distance. The latter conjecture is supported by the fact, that the extensions south and east and to a great extent west of the ore and aplite showing on this level are definitely limited by granite and, if this occurrence is not just a local spot of aplite, the only extension possible would be downwards and this extension should be explored. Therefore the team suggests that we should apply for an amendment of our contract to permit us to sink from the "0"E drift at a point just below the raise driven southwards from the "0" E drift. The footage not used in the 120 E drift could be applied at least in part to this sinking work.

Amendment 4:

Due to several factors, including the necessity to supply the mill with ore from the mine and later to the shutdown of both mill and mine forced by the loss of some of our key men and other circumstances, it became unavoidable for us to suspend our exploration operations. Hence, we made no progress on our exploration program in June. As upon completion of our reorganiza tion we are desirous to continue our exploration program, we wish hereby to ask for a recess until we are in a position to start work again. We hope to be in operation shortly, but to make sure that the recess to be granted would be sufficient to cover the whole shutdown, we wish to ask for a recess of 90 days from the first of July.

Amendment 5: As the present expiration date of the contract is July 30 and it is obvious that we cannot complete our work before that date, we wish hereby to apply for an extension of the contract expiration date to January 30, 1955.

We wish to use this opportunity to express to DMEA our sincere appreciation of the good and useful work of the Field Team, Mr. Hardwick and Mr. Faick, who put in long and exhausting hours in the field, as well as spending their evenings in night-work and conferences with the undersigned.

Sincerely yours

WOTHREE MINES.

George B. Blonsky

George B. Blonsky.
General Manager.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

SOUTHWEST EXPERIMENT STATION
Box 4097
UNIVERSITY STATION

TUCSON, ARIZONA

July 23, 1954

Memorandum

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

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

Subject : Request for Amendment, Docket DMEA-2957, Contract Idm-E632, Carl Hovgard's Williams Tungsten Mine (Wothree Mines), Mohave County, Ariz.

George B. Blonsky, general manager and part owner of Wothree Mines, wrote to Walter R. Storms, Chief, Mining Methods Branch, Region IV, U. S. Bureau of Mines, on May 14, 1954 and asked that representatives of the DMEA Field Team examine the work that had been completed under the subject contract with the view of making several changes in proposed future work. Therefore, the Williams tungsten mine was visited on May 26-27, 1954 by William R. Hardwick, mining engineer, Bureau of Mines, and John N. Faick, geologist, U. S. Geological Survey. Blonsky was unable to be at the mine during those two days, but as a result of the work accomplished during the period, Faick wrote a memorandum on June 4, 1954, suggesting changes in future work.

The mine again was visited on June 24-29, 1954 by Faick and Hardwick. This time Blonsky was at the mine. All underground work under the contract was mapped and a stadia traverse was run to locate the west vein with respect to existing workings.

Contract Idm-E632 was approved on October 30, 1953 for the purpose of exploring a flat-dipping, blanket-type vein that averages 2.2 feet thick and contains 0.55 percent WO_3 in the form of Wolframite. The original program and the work completed to June 1, 1954 are shown in the following table:

CC W. H. King (Orig. & 7)
J. N. Faick
DMEA-2957
DF

WRHardwick:frj

	Original	Completed	Remaining
"0" Level			
Drift and raise ---------	175 ft.	150 ft.	25 ft.
Cost ----------	$5,250.00	$4,500.00	$750.00
120 Level			
Drift and raise ---------	425 ft.	302.5 ft.	122.5 ft.
Cost ----------	$12,750.00	$9,075.00	$3,675.00
150 Level			
Drift and raise ---------	500 ft.	246 ft.	254 ft.
Cost ----------	$15,000.00	$7,380.00	$7,620.00
Total			
Drift and raise ---------	1,100 ft.	698.5 ft.	401.5 ft.
Cost ----------	$33,000.00	$20,955.00	$12,045.00
Government's part ----------	$24,750.00	$15,716.25	$9,033.75

All of the Government's part of the cost of work completed has been paid to the operator.

The various operators who have attempted to produce tungsten from this property in the past have not been able to produce a concentrate that was readily saleable because they could not eliminate high iron. The iron is contained in the ore in three forms, pyrite, magnetite, and hematite. Blonsky, who is a capable metallurgist, working with A. M. Gaudin has solved this problem. A mill has been constructed and approximately 700 tons of ore have been milled. Two lots of concentrates have been sold and a third lot was almost ready for shipment at the time of my last visit. The weight of the two lots sold was 4,406 pounds, and the third lot is estimated to contain 3,000 pounds. The WO_3 content of the last lot sold was 67.05 percent.

When the mine was visited on June 24, all operations had been stopped and the only employee on the property, other than Blonsky, was a watchman. Blonsky was cleaning up the last of the concentrates for shipment. Blonsky stated that he had received orders from his backer to stop all operations on June 22.

While Blonsky has done an excellent job in designing and constructing the mill, he has entrusted the mine development and exploration almost entirely to his mine superintendent. He has changed men twice on this job and was dissatisfied with both men. The mine is not properly prepared for a continuous production of 50 tons of ore per day. As a result, all available manpower in the mine was used to produce ore during the period from June 1 to June 22 when the mine was shut down on orders from Carl Hovgard who has been furnishing the money.

During the period, June 24-29, 1954, the work completed under the DMEA project was carefully examined and mapped by John N. Faick and the undersigned, and the probable future plan of action by the operator was investigated. Blonsky stated that he did not know the exact reason why the operation was shut down by Hovgard. Blonsky stated that his arrangements with Hovgard were that as of the time the mill actually began production, he and Hovgard each were to have a 50 percent interest in the venture. However, if the cost of placing the mine in production exceeded a certain sum, Blonsky's interest was to be reduced by one percent for each $3,000.00. Blonsky stated that as of June 29, his interest in the property was about 35 percent. He also remarked that the total amount expended so far was approximately $200,000.00. Most of this has gone into design and construction of the mill. Blonsky expected to go to New York early in July and make arrangements to continue the project.

On July 6, 1954, Blonsky wrote a letter addressed to W. H. King, Executive Officer, DMEA Field Team, in which he requested five changes to the contract. These changes are discussed in the order presented.

Change 1: The main feature of this contract consisted of drifting 375 feet eastward on the 120 level and 450 feet westward on the 150 level.

For the first 180 feet, the 120 level drift cut a vein that averaged 16.5 inches wide and contained 0.69 percent WO_3. This drift was extended for a total distance of 302.5 feet, but the vein narrowed rapidly and at the face it had become less than one inch wide. A rough calculation indicates that approximately 3,000 tons of ore were discovered by this part of the project. However, the very poor showing in the face and for the last 100 feet of this drift, indicates that it should not be continued.

No ore has been estimated as a result of the work on the 150 level. This drift has been advanced 246 feet under the contract. For the first 100 feet the vein persisted in encouraging widths, but the tungsten content was low. Then the direction of the strike changed abruptly and the vein became very thin with granite on both walls. Finally at about 200 feet from the starting point, the direction of the strike changed back to the original course and the vein began to widen. In the face the vein has a width of 12 to 18 inches and assayed 0.16 percent WO_3 (operator reported 0.41% WO_3). Two hundred four feet of drifting has been authorized in addition to that already completed. The exposure in the west face of the 150-foot level is promising and the drifting on this level should be continued.

However, it is believed that the 204 feet now authorized may be enough, and the operators request for additional footage seems premature at this time. At some later time it may be desirable to extend the work authorized in this area.

Change 2: This change requests that the position of the No. 1 raise from the back of the inclined winze be moved northward from its present position as described in Amendment No. 1. The mine is not operating and I see no reason why this raise should not be driven at the place originally proposed. I concur with the recommendations of John N. Faick that the position of this raise be moved to that shown on figure 2 of his Memorandum to A. H. Koschmann, dated June 4, 1954.

Change 3. - On the "0" level, ore was exposed for 40 to 50 feet along the drift to the east. A raise was driven southward in this ore, but the vein went into granite and become narrow at 35 feet above the level. Some very high-grade ore occurred in this area. No samples have been reported by the operator, but he believes that the ore from this location will average about 2.00 percent WO_3. Four samples were taken by DMEA representatives. Disregarding one of these samples, which ran 28.50 percent WO_3, the average of these samples was 0.42 percent WO_3. The operator believes that this small oreshoot may be the top of a more extensive ore body that extends downward and he has requested an amendment to the contract to allow Government participation in the costs of a winze to explore for the downward extension of this ore. The aplite along which the ore has formed is quite thick and there seems to be a possibility that the ore does extend downward so it is recommended that the operator's request for a winze be approved.

Blonsky has made no cost estimate for this winze. This type of ground should stand well and require little or no timber support. If the proposed winze is located directly below the raise that was driven under the contract, the initial cost of installing hoist and head sheave should be small. A winze 50 feet deep on the vein should be adequate and should be easily completed in a month. A list of the estimated costs of this winze is as follows:

	Cost
Install hoist, sheave, dump, etc.	$250.00
Labor	1,512.50
Timber	100.00
Explosives	150.00
Pipe	62.50
Track-guides	50.00
Power and air	375.00
Rock bits and steel	20.00
Equipment depreciation (60 mos.)	87.50
Repairs to equipment	50.00
Payroll taxes and insurance	227.00
Boarding house loss	87.50
Contingency	28.00
Total cost	$3,000.00
Cost per foot	$60.00

There remains $3,675.00 in funds originally intended for extending the 120 drift further to the east. Further work in this drift is not desirable and, if these funds are used to finance the proposed winze, the original estimated cost of the project need not be exceeded. It is recommended that the operator's request for this winze be approved.

Change 4 and change 5: In these changes the operator has requested a recess of 4 months from June 1, 1954, and a change of the contract expiration date from July 30, 1954 to January 30, 1955. It is recommended that these changes be allowed.

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 University Station
Tucson, Arizona

June 4, 1954

Memorandum

To: A. H. Koschmann

From: J. N. Faick

Subject: Information memorandum, DMEA 2957, Contract Idm-E632
Wothree (Williams) Tungsten Mine, Mohave County, Arizona

Mr. George B. Blonsky, General Manager, Wothree Mines (Williams Tungsten mine), recently requested that his exploration project be reviewed at the property with the Government being represented by a geologist and an engineer. Accordingly, W. H. Hardwick (Bureau) and this writer spent May 26-27 at the property and remapped part of the critical areas and sampled some of the recently exposed vein. It was impossible to discuss the results of the examination with Mr. Blonsky because he had to leave camp before the work was completed; however, the results were discussed with Mrs. Blonsky and Mr. Hartley (mine superintendent); and sketch maps showing the results of mapping were left at the mine.

Results of this brief examination essentially support the conclusions expressed by Robinson and Elsing in the report of the original examination. The principle conclusions are summarized as follows:

1. Appreciable low-grade ore reserves exist in a blanket-type vein deposit which averages about 2.2 feet thick and dips from 20 to 30 degrees northerly.

2. Ore reserves are estimated to range from 6,000 to 10,000 tons containing about 0.55 percent WO_3.

3. The ore is marginal or submarginal in grade and the possibility of a profitable operation is very remote under present economic conditions.

4. Faulting, branching and pinching of the vein create problems in exploration and mining which are not fully appreciated by the operator.

Exploration of the property was proposed[1/] by means of drift and raises in the vein on the 150, 120 and "0" levels; and by driving a raise from the bottom of the inclined winze to search for a faulted segment of the vein.

1/ Refer to Fig. 3, Report of Examination by M. J. Elsing and R. W. Ageton, May 1953.

March 17, 1954 Mr. Blonsky requested permission to change the position of the raise (see Fig. 1 and Fig. 2 attached) from the bottom of the inclined winze to a location about 18 feet south of the vertical raise which connects the inclined winze with the "0" level. Permission to make this change was granted by Amendment No. 1, dated April 5, 1954. This change was made because of practical operating problems, which could easily have been avoided by discreet management. In changing the raise from its original proposed location, Mr. Blonsky and the Government representatives overlooked the geological reasons for providing for the raise in the original contract.

By inspecting Figure 2, which partly duplicates the important details of Figure 26 of Robinson's original report, it can be seen that the purpose of the raise is to locate a faulted segment of the vein. The easterly-trending high-angle fault, which probably displaced the vein, is readily apparent on "0" level, but in the lower part of the inclined winze movement appears to have taken place on several poorly defined planes, upon which it is difficult to determine the direction and amount of displacement. Most of the post-ore displacement appears to have taken place along a fault plane exposed in the inclined winze about 30 feet south of the vertical raise. A fault at the top of the vertical raise and another fault about 45 feet south of it are occupied by narrow ore-type veins which are essentially undisturbed by post ore movement. At the last mentioned fault the main Williams vein apparently thins appreciably and merges with the vein material localized along the high angle fractures. It is possible that this and other narrow veins, which are localized on steep pre-ore fractures, have served as ore inlets to the main Williams vein.

Within the zone of easterly-trending faults it is impossible to predict the existence of the main vein, and if it exists there is no assurance that the vein is situated above the incline in the zone that would be explored by the recently approved raise. Small amounts of vein material are present in the floor of the incline and indicate that the vein may be below the incline rather than above it. The amount of ore that might be present in the easterly-trending fault zone is probably not significant and should not be explored at this time.

Aplite is exposed in the back of the inclined winze north of the vertical raise, and it is probable that this is an extension of the same aplite with which ore is associated in other parts of the mine. The zone north of the vertical raise and north of the "0" level should be explored along the down-dip projection of the main ore shoot. Inspection of Figures 1 and 2 indicate that the zone could be explored by several methods as follows:

1. Raise from the bottom of the inclined winze as originally proposed.

2. Use diamond drill holes as a substitute for raising.

3. Raise or diamond drill from "0" level.

4. Crosscut, or drift, and raise from "0" level.

Raising from the incline will serve no useful purpose except to prove the presence or absence of small amounts of ore, but crosscutting, drifting and raising from the "0" level would be useful as an extraction base if ore is found by exploration. Exploration could be supplemented by diamond drilling, as it is practical and feasible to drill for aplite, pegmatite and quartz with which the ore minerals are associated, although it is not practical to drill for ore minerals alone.

In order to explore for a possible down-dip extension of the main Williams oreshoot, this writer favors crosscutting northward from "0" level directly beneath the incline, and then by drilling and raising from the crosscut. This could be done as a substitute for the raising previously authorized, or as a substitute for some of the drifting authorized on the 120 or 150 levels. A change in the contract might require a request from the operator, but it should be encouraged because of the apparent advantages of exploration from "0" level. This is the best course of action, although it is uncertain that the ore bodies that might be found will be of mineable size or grade.

The Wothree mill started operation recently and the first shipment was made about May 25. Mr. Blonsky reports that the total investment in the property is in excess of $200,000, which, if true, is an amount which probably will not be repaid from the reasonably indicated and inferred ore reserves.

John N. Faick

John N. Faick
Geologist

JNF:ms

cc. Koschmann (8)
Storms
Faick

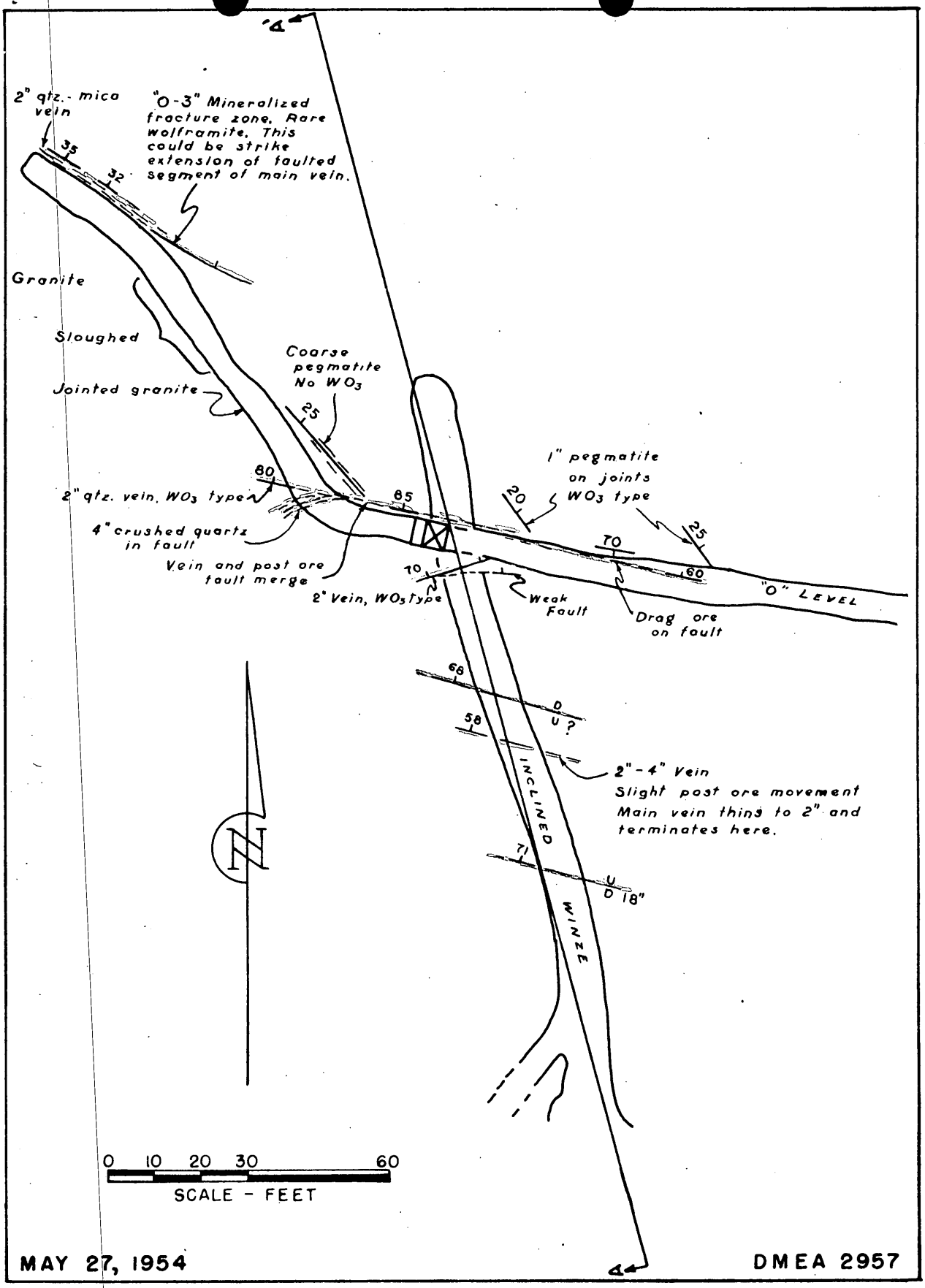


FIGURE 1. - GEOLOGY OF PART OF ZERO LEVEL
WOTHREE (WILLIAMS) TUNGSTEN MINE MOHAVE COUNTY, ARIZONA

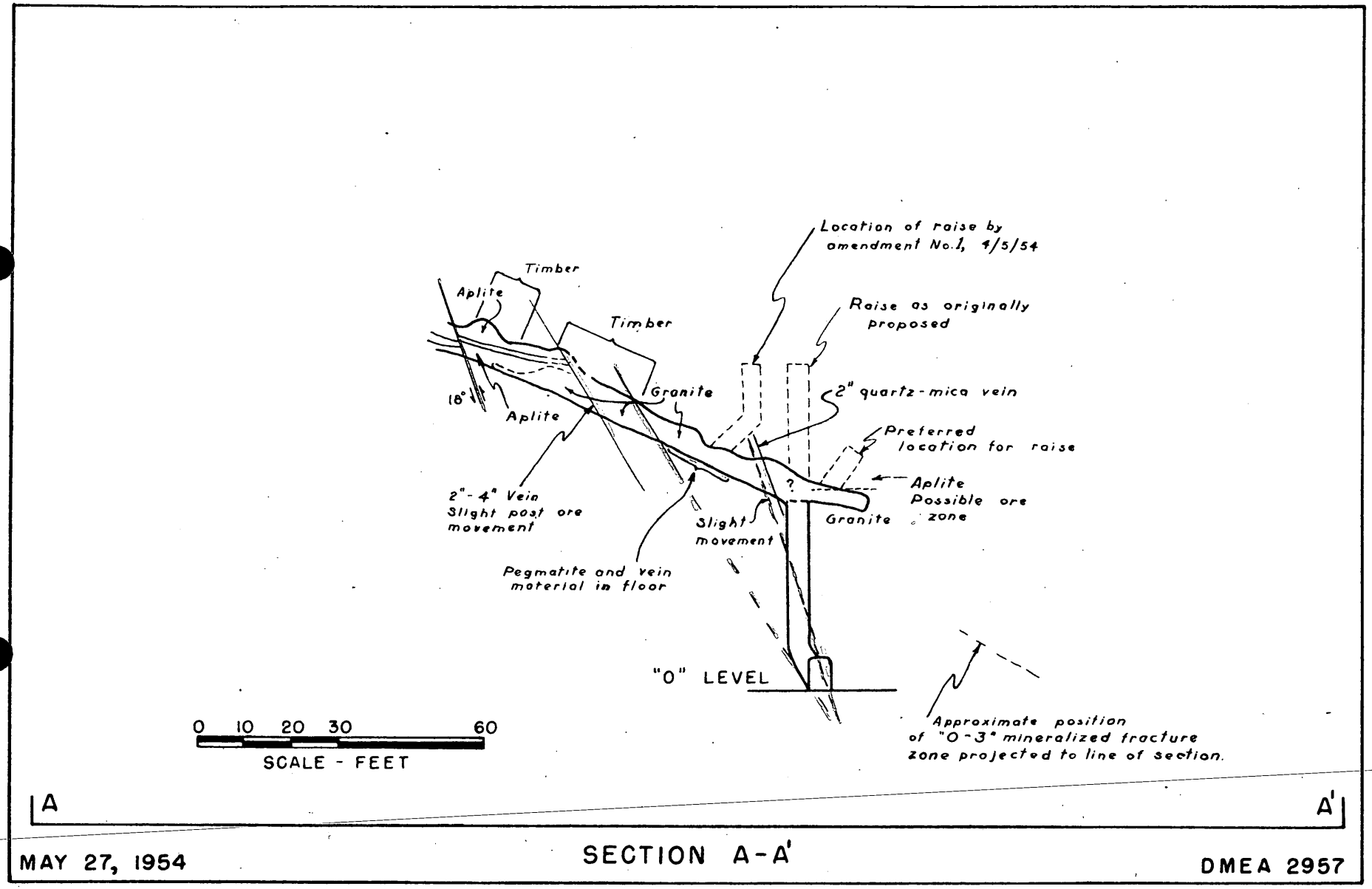


FIGURE 2. - SECTION FACING WESTERLY THRU LOWER PART OF WINZE

WOTHREE (WILLIAMS) TUNGSTEN MINE MOHAVE COUNTY, ARIZONA

Mining Division
Date Rec'd
JUL 2 - 1954
BUREAU OF MINES
Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

SOUTHWEST EXPERIMENT STATION
Box 4097
UNIVERSITY STATION

TUCSON, ARIZONA

July 1, 1954

Memorandum

Air Mail

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

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

Subject : DMEA Contract Idm-E632, Docket DMEA-2957, Carl Hovgard's Williams Tungsten Mine (Wothree Mine), Mohave County, Ariz.

In regard to my teletype of yesterday, informing you that the Williams mine and mill were shut down and if possible to stop payment of the May account, and your teletyped answer to submit a memorandum with recommendations for termination of contract and certification of discovery, W. R. Hardwick and J. N. Faick went to the Williams mine on June 22 and did not return here until the evening of June 29. They went to try to come to some mutual agreement with Blonsky on future exploration plans. As you may remember, Faick had recommended in his memorandum of June 4 that the proposed raise not be driven above the winze, but that certain other work be done.

Hardwick and Faick found that Blonsky was having financial difficulties and had been forced to close the mine and mill, at least temporarily. The mill had operated only a short time but evidently this was another of those instances where the mill was constructed without sufficient blocked-out ore. Anyway, Carl Hovgard, who evidently is the "angel" in this case, seems to have put up about $600 to meet Blonsky's last payroll, then called a halt to the whole thing.

Blonsky is going east to discuss the situation with Hovgard, so perhaps something can be worked out. In the meantime, I believe Blonsky should ask for a recess until such a time as he knows what he is going to do. I have so written him.

Hardwick and Faick again are in the field, but will submit a short memorandum report at a later date on their discussions with Blonsky. This short memorandum of mine is to more or less acquaint you with the facts until they can submit a longer report.

Walter R. Storms

Walter R. Storms

CC J. N. Faick
DMEA-2957
DF

WRStorms:frj

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

400

224 New Customhouse
Denver 2, Colorado

August 17, 1954

AIRMAIL

Mr. George B. Blonsky
Wothree Mines
P. O. Box 47
Kingman, Arizona

WSM

Re: Docket DMEA 2957 (Tungsten)
Contract Idm-E632

Dear Mr. Blonsky:

Receipt is acknowledged of your telegram of August 17, 1954, wherein you state that a unit cost of $60.00 per foot for sinking of the winze, authority for which was requested in your letter of July 6, 1954, is acceptable to you.

In your telegram you also state that you would greatly appreciate receiving confirmation of the requested amendment on or before August 20, 1954.

Amendments to DMEA contracts of the nature you have requested are not within the authority delegated to this office, therefore the matter has been forwarded to the Washington office, DMEA, for their consideration and appropriate action.

Very truly yours,

W H King

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

JWT:jp
cc Contract
Chron
WRStorms
AHKoschmann
JNFaick
JWTownsend
Chairman, Operating Committee

1-1027
(April 1946)

UNITED STATES
DEPARTMENT OF THE INTERIOR

AGENCY DMEA REG IV

TELETYPE

Originator:
Ext.: Room:

Appro.:
Date: 8/10/54
Time:
No.:
To: W. R. STORMS
117 Engineering Bldg.,Univ. of Ariz., Tucson

WSM

Subject:

REFERENCE DOCKET DMEA 2957, CONTRACT IDM-E632, CARL HOVGARD, REQUESTED AMENDMENTS. NECESSARY WE FORWARD MATTER TO WASHINGTON FOR THEIR CONSIDERATION AND ACTION. PLEASE OBTAIN CONFIRMATION FROM BLONSKY THAT 50 FEET OF WINZING AT $60.00 PER FOOT IS ACCEPTABLE TO HIM.

W. H. KING

cc: Townsend
Koschmann
Chairman Op. Comm.

Authorized:
CONFIRMATION

Sign original message and transmit to Room _____ in duplicate

U. S. GOVERNMENT PRINTING OFFICE 16—50915-1

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 7 1954

224 New Customhouse
Denver 2, Colorado

April 5, 1954

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 2957 (Tungsten), Contract Idm-E632, Carl Hovgard, Williams Tungsten Mine, Mohave County, Arizona

Enclosed are the original and two copies of Amendment No. 1 to Contract Idm-E632 which has been executed to modify the description of the work relative to driving Raise 1. Also enclosed are three sets of data relevant to the amendment.

Copies of this amendment have been given to the operator, the Fiscal Officer, Region IV, and a copy has been retained for our files.

W. H. King

W. H. King

Enclosures

RECEIVED
APR 30 1954
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

March 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 Idn-E632, Docket DMEA-2057, Williams Tungsten Mine, Mohave County, Ariz.

Enclosed in sextuplicate is a request from George B. Blemsky, general manager of Wethree Mines for an amendment to DMEA Exploration Project Contract No. Idn-E632 to extend the contract termination date by three months, or to extend the time under Article 3 of the contract from 6 to 9 months.

As this will not increase the total costs of the contract and as Blemsky reports that several factors beyond his control have slowed down the contract work, I recommend that the time to complete the contract work be extended to 9 months.

Walter R. Storms

Walter R. Storms

CC W. H. King (5)
A. F. Shride
DMEA-2057
DF

WRStorms:frj

NORMAN D. FITZGERALD
OWNER

GEORGE B. BLONS
GENERAL MANAGER

WOTHREE MINES

P. O. BOX 47
KINGMAN, ARIZONA

March 17, 1954.

[illegible] 7 1954

Mr. T. E. King, Executive Officer
DMEA Field Team, Region IV
836 New Customhouse
Denver 2, Colo.

Re: Contract Ion-2552
Docket DMEA-2557
Williams Hungerton Mine
Lincoln County.

Dear Mr. King,

Our exploration work on Williams Hungerton Mine so far has met with several considerable difficulties and we have lost much time due to several factors beyond our control.

Our roads were completely demolished twice. At the present writing, on March 17, we have a severe snowstorm with several inches of snow and the prospect of no roads for another week or so. Our machine shop gave us considerable trouble and spare parts were slow in coming. When this matter was taken care of, our 550 cf Chicago Pneumatic compressor developed a crack in the crankshaft and had to be taken for a thorough overhaul to Las Vegas, Nevada, where it will be until late this week. Therefore we are forced to operate with the only available rental unit, a 210 cfm gas compressor. On January 2 our good mine foreman, Mr. John Hutson, developed a sore knee and was on the verge of hospitalization to wait for six weeks. When finally he did so, he had to go back to Kingman the next day because an operation on the knee became necessary. Due to the specifications of the contract, requiring full exposure of the vein in the drift and the necessity of moving the valuable ore, we are forced to do double shooting for every five foot of advance which slows down the progress very considerably and besides demoralizes the crew, who, after having settled to make money on contract work, work on a deliberate program of slow-down.

In view of the above facts we are hereby requesting a little amendment of the contract to extend the duration of same by three months; we have discussed this matter with the field engineers and they believe that our request is reasonable and that we should approach you in this connection.

We have now reorganized our crew; the working machine has been completely rehabilitated with new parts; an additional blacker hoist, cable and bucket were acquired and as soon as the 550 cfm compressor returns by March 20, we expect to be able to start going full blast ahead.

Yours truly

WOTHREE MINES

George B. Blonsky

George B. Blonsky.
General Manager,

March 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 to DMEA Contract Idm-E632, Docket DMEA-2957, Carl Hovgard (Wothree Mines), WilliamsTungsten Mine, Mohave County, Ariz.

Enclosed in sextuplicate is a request from George B. Blonsky, general manager of Wothree Mines, for an amendment to DMEA Exploration Project Contract No. Idm-E632, so the position and direction of Raise 1 as described under Exhibit "A" of the contract may be slightly changed.

The contract states under Exhibit "A", Description of the Work: "Raise 1 is to be extended vertically from the bottom of the inclined winze for 25 feet to attempt to find the main vein north of the fault". As explained by Blonsky, and as described to me by John F. Haynes, Bureau of Mines Mining engineer who recently visited the Williams mine and discussed this problem with Blonsky, it would be much better if Raise 1 could be started some 15 or 20 feet up the winze from the grizzley, driven at an angle of 45 degrees until well away from the winze, then turned vertically. The total vertical distance from back of winze to top of raise should not be over 25 feet, no matter what the total length of the raise is.

We told Blonsky that if the contract said "Vertical", it meant vertical, so he should ask for an amendment if he wanted to drive Raise 1 otherwise.

Walter R. Storms

Walter R. Storms

CC W. H. King (5)
A. F. Shride
DMEA-2957
DF

WRSTorms:frj

NORMAN D. FITZGERALD
OWNER

GEORGE B. BLONSKY
GENERAL MANAGER

WOTHREE MINES

P. O. BOX 47
KINGMAN, ARIZONA

PROPERTY OF THE PUBLIC
Lands Commission
RECEIVED
APR - 7 1954

March 27, 1954.

Mr. W. H. Ellis, Executive Officer
Mineral Board Div., Room IV
234 Day Street
Denver 9, Colo.

Re: Pilot Del
Contract 20-058
Report 2057
Wolfram Surprise Mine
Mohave County, Arizona.

Dear Mr. Ellis,

We are about ready to start raising up a short raise near the bottom of our mine. This raise was authorized in the original contract to be taken a head up from the bottom of the mine. We estimated the location of the bottom of the mine as being a certain level. Unfortunately it turns out the raise drives a little down our expected elevation, which we may do, but not at the very end of the mine.

The ceiling of the raise at the very bottom of the mine will give the necessity of executing all other operations and numbers the charge holes, (the) to located between the points in the raise and the bottom of the mine. As this is most impractical to execute to meet our contract activity as follows:

We raise not the level end of the mine to be taken back a raise to be 100 ahead the activity and to be end 100 a set back a 40 cross cutting and then vertically to reach a total vertical 140 above the end of the mine at about 40 feet.

As the chief engineer of Defense will know, this raise is intended to cut up the ground above the mine so there is a considerable probability that the ore is displaced in that direction by a fault cutting off the ore in the lower part of the mine.

Yours very truly

WOTHREE MINES.

George B. Blonsky

George B. Blonsky.
General Manager.

400

C O P Y

2957

Extract from
THE MINING RECORD
Thursday, March 18, 1954

WOTHREE MINES IS MINING TUNGSTEN
IN ARIZONA AREA

Kingman, Ariz. -- At the end of an almost primitive road, 73 miles southeast of Kingman, lies one of Mohave County's biggest industrial payrolls. It's the operation of the Wothree Mines, high on a mountain side in the Aquarius Range.

Here over 40 men are working around the clock in the development of wolframite tungsten ore bodies and in building a mill to reduce the high grade to concentrates.

The Wothree operation is presided over by manager George B. Blonsky. The company itself is a joint venture controlled by Norman D. FitzGerald of Texas and Carl Hovgard, New York.

The ~~scientific~~ symbol for Tungstic Acid is WO_3. Thus the name Wothree from the symbol WO_3 for Tungstic Acid.

Who Three
Who! There!

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable symbol above or preceding the address.

WESTERN UNION

W. P. MARSHALL, PRESIDENT

FX-1201

SYMBOLS
DL=Day Letter
NL=Night Letter
LT=Int'l Letter Telegram
VLT=Int'l Victory Ltr.

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

OA448

O.SEA900 25 NL PD 2 EXTRA=ANCHORAGEALASKAR 177=PM 1) 31

US BUREAU OF MINES=

WASHDC=

I ASK, THAT YOU GIVE NO MORE LOANS TO A L HOWARD, BEFORE COMPLETE INVESTIGATION IS MADE. WILL EXPLAIN IN LETTER WHICH FOLLOWS.=

GUS B BERNESS PLATINUM ALASKA..

DME 02957

Defense Minerals Administration
RECEIVED
MAR 18 1954

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

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

224 New Customhouse
Denver 2, Colorado

March 5, 1954

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 2957 (Tungsten), Contract Idm-E632, Carl Hovgard, Wothree Mines, Mohave County, Arizona

Enclosed for your records are the original and two copies of a Power of Attorney executed by Carl Hovgard, giving George B. Blonsky authority to conduct affairs of the project under the terms of the contract.

Mr. Shireman's interpretation of the Power of Attorney is that it gives Blonsky the power to conduct affairs under the contract, or negotiate changes in the contract, but does not give him authority to approve changes in the contract.

Copies of the Power of Attorney have been given to the Fiscal Officer, Region IV, and a copy has been retained for our files.

W. H. King

W. H. King

Enclosures

2957-C

I, Carl Hovgard, of 292 Madison Ave., New York, New York do hereby nominate, constitute and appoint George B. Blonsky, presently General Manager of Wothree Mines, P. O. Box 448, Kingman, Arizona, as my attorney to act in my place and stead under Contract No. Idm-E632 which I now have with the United States of America Department of the Interior, Defense Minerals Exploration Administration. The said George B. Blonsky shall have the power to do anything under the said contract which I might do were I to act personally in the same and shall have the power to negotiate or renegotiate subject to his sole judgment any of the terms or conditions of said contract with any of the other parties thereto. I hereby ratify any acts the said George B. Blonsky may perform under the said contract acting as my said attorney.

This power of attorney shall continue until one year from the date hereof unless the same shall sooner be revoked by me.

Carl Hovgard

Dated February 24, 1954

STATE OF NEW YORK }
COUNTY OF NEW YORK } ss.:

On the 24th day of February, 1954 before me personally appeared Carl Hovgard to me known and known to me to be the person who executed the above Power of Attorney and he acknowledged to me that he had executed the same.

Charles E. Elting

Notary Public
State of New York

CHARLES E. ELTING
Notary Public, State of New York
No. 60-6180150
Qualified in Westchester County
Term expires March 30, 1954

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

224 New Customhouse
Denver 2, Colorado

February 11, 1954.

Mr. Carl Hovgard
1141 Buttermut Street
Abilene, Texas

Re: Docket No. DMEA-2957 (Tungsten),
Contract No. Idm-E632

Dear Mr. Hovgard:

Enclosed is DMEA Field Team, Region IV, authorization for driving a raise under the subject contract consistent with stipulations contained in Exhibit "A", caption "Description of the Work", attached to the contract, which we have issued in conformance with the request from George B. Blonsky, General Manager, Wothree Mines, dated February 1, 1954,

Concerning Mr. Blonsky's request for authority to drive a raise under the contract, we fail to find a record in this office indicating that you have delegated authority to Mr. Blonsky to conduct matters pertaining to the DMEA contract, which is drawn in favor of you.

If it is your intent that Mr. Blonsky act as your agent in the matter, please forward the original and five copies of a Power of Attorney or Delegation of Authority to the extent you desire him to act as your agent.

Very truly yours,

W H King

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

Enclosure

JWT:cwm

cc: Contract
Administrator, DMEA w/Encl.
AHKoschmann w/Encl.
WRStorms w/Encl.
AFShride w/Encl.
Chron.
JWTownsend w/Encl.

February 11, 1954.

Carl Hovgard
1141 Butternut Street
Abilene, Texas

Operator under Contract No. Idm-E632, Docket No. DMEA-2957

Consistent with the stipulations contained under the caption "Description of the Work" in Exhibit "A" attached to Exploration Project Contract Form MF-200(A), Contract No. Idm-E632, you are hereby authorized to drive a raise, not to exceed 50 feet in height, from the "0" level at a point approximately 15 feet southeasterly from the starting point of the "0" level drift driven under the DMEA contract.

W. H. King
DMEA Field Team, Region IV

A. H. Koschmann
DMEA Field Team, Region IV

February 4, 1954

Memorandum

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

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

Subject : Contract Idm-E632, Docket DMEA-2957, Williams Tungsten Mine, Mohave County, Ariz.

In regard to your memorandum of January 25, concerning one raise from the "O" level of the Williams mine under Contract Idm-E632, we wrote to Blomsky, the mine manager, on January 27 and asked him to submit a formal request for this raise, as provided for in the contract. Enclosed are original and 5 copies of such a request.

The operator wants to drive a raise from the "O" level, starting at a point about 15 feet east or southeast of the original starting point of drift work under the contract. According to Exhibit "A" of the contract, this raise will be limited to not more than 50 feet.

W. R. Hardwick and I recommend that the operator be given permission to drive this raise in order to more fully explore the mineralized vein material as uncovered on the "O" level. Hardwick's original recommendation was contained in his progress report, dated January 22, for the period November 16 to December 31, 1953, at the top of page 2.

Walter R. Storms

WALTER R. STORMS

CC W. H. King (5)
DMEA-2957
DF

WRStorms:frj

MAN D. FITZGERALD
OWNER

GEORGE B. BLONSKY
GENERAL MANAGER

WOTHREE MINES

P. O. BOX 448
KINGMAN, ARIZONA.

February 1, 1960.

Mr. M.E. Ely, Executive Officer
U.S. Bureau Land Mgmt, Idaho St
806 Fed Centennial
Denver 2, Colo.

Re: Contract 2Ln-3088
Docket 2LLA-2897
Milton Simpson
Claim
Mohave County,
Arizona.

Dear Mr. Ely,

We solicited in our formal request for permission to drive a raise above the 90' level drift at a point 15' from the spot at which the face of the drift was when the work on the Government financed exploration began in this drift.

We have explained to Mr. E. H. Dardick our reasons for starting this work as near as possible at this particular point. This place is the most likely to be the central point of the ore opened in our old 90' drift and the extension of ore lens under the present Government exploration contract.

In all we are confident there is the levels above 90' level have so far been in our old ore pocket at the bottom of the shaft. The exploration program in the upper levels, requiring considerable quantities of timber, will not in the run of one shift per day for the mill, which will start operating in the very near future. In view of this we are very eager to complete our exploration program on 90' level, before the mill is constructed, so as to enable us to supply our mill with ore from that part of the mine, while we are finishing the exploration work in the upper levels.

The above matter was thoroughly explained to Mr. Dardick and he was in agreement with us that our proposed raise of reliefy dimensions and that he was in favor of approving the driving of such a raise in the indicated fashion.

We would greatly appreciate if you could be so kind as to give this matter your consideration at your early convenience, informing us of your decision so that we could begin the raise above the 90' foot drift soon.

Yours very truly

WOTHREE MINES.

George B. Blonsky

George B. Blonsky.
General Manager.

February 10, 1954

Memorandum

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

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

Subject : Operator's Request for a Raise, Contract Ida-E632, Docket DMEA-2957, Carl Hovgard's Williams Tungsten Mine, Mohave County, Ariz.

In order that there will be no question about the Bureau of Mines recommendation for a raise to be driven from the "O" level of the Williams Tungsten mine as requested by the mine manager on February 1, we are attaching a memorandum from W. R. Hardwick of the Bureau of Mines. This memorandum should be attached to the material which I sent you on February 4 (request from Klonsky and my recommendations).

Walter R. Storms

Walter R. Storms, Chief
Mining Methods Branch
Mining Division, Region IV

CC W. H. King (5)
DMEA-2957
DF

WRStorms:frj

February 10, 1954

Memorandum

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

From : William R. Hardwick, MiningEngineer, Tucson, Arizona

Subject : Operator's Request for permission to drive 50-foot raise on "O" level Docket DMEA-2957, Contract Idm-E632, Carl Hovgard's Williams Tungsten Mine, Mohave County, Ariz.

Mr. George B. Blonsky, General Manager, Wotherse Mines (Williams tungsten mine), has requested permission to drive a 50-foot raise on the "O" level under contract Idm-E632. Mr. Blonsky's letter requesting permission to drive this raise was received on February 4. This raise was recommended in my progress report dated January 22, 1954.

The vein on the "O" level increased in thickness to a point 15 feet beyond the start of the DMEA project, then thinned to a point 50 feet from the start, where it split into two parallel veins. This split continued to the end of the drift. The maximum thickness of the vein was 18 inches and the average thickness was approximately 10 inches. After the vein split, each part was very thin, probably averaging less than 2 inches in thickness.

Two samples were taken by the writer, one at the point of maximum width, or 15 feet from the starting point, which ran 0.63 percent tungsten trioxide, and one sample at a point 38 feet from the starting point where the vein was 10 inches thick. This sample ran 0.28 percent tungsten trioxide.

Including drifting before the DMEA project was started the operator has now exposed the vein for a length of approximately 80 feet, not including the part where the vein is split. The vein is so thin for the distance exposed that it is questionable whether any ore can be mined. The vein exposed on the 120 level is much thicker and there is some indication that the vein may widen above the "O" level.

CC W. H. King (orig. & 5)
DMEA-2957
DF

WRHardwick:fmj

The 50-foot raise on the "O" level for which the operator has requested permission will determine whether or not the vein widens to a minable width above. It is recommended that the operator be authorized in writing, as provided by the contract, to drive a raise (as requested) from a point approximately 15 feet east of the starting point of the DMEA project.

The following conditions should be incorporated in the authorization:

1. The raise must be in the vein or include the vein;

2. The raise must be sampled at 10-foot intervals and the width and assay reported for each sample.

William R. Hardwick

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

C
O
P
Y

TELETYPE

FEBRUARY 10, 1954
TUCSON, ARIZONA

ADVISE KING I CONCUR WITH OLD LEVEL RAISE RECOMMENDATION OF FEBRUARY 4, 1954, DMEA DOCKET 2957, WILLIAMS TUNGSTEN.

A. F. SHRIDE

Mines 2957

Copied from MINING WORLD November 1953

WD3

Operators of the Wothree Mines, 73 miles southeast of Kingman, Arizona, have decided to go ahead with constructions plans for a 50-ton tungsten milling plant. The old mill will be rebuilt and additions made. The process decided upon after extensive metallurgical tests, calls for tabling followed by reasting and magnetic separation. A 200-horsepower, Diesel-electric generator and other machinery were recently hauled to the mine.

At present about 20 men are employed in plant construction and facilities rehabilitation work and plans call for a crew of 35 to 30. Wothree Mines operates the Williams tungsten mine, owned by Norman D. Fitzgerald, Abilene, Texas, George B. Blonsky of Kingman is general manager.

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

RECEIVED
NOV 10 1953

224 New Customhouse
Denver 2, Colorado

November 5, 1953.

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 200

From: Field Team, Region IV

Subject: Report of Examination - DMEA Docket 2957 (Tungsten), Carl Hovgard, Wothree Mines, Mohave County, Arizona.

Enclosed are four copies of the report of examination on the subject property. The contract has been signed and is in effect. The Operator is Carl Hovgard instead of Norman Fitzgerald.

W. H. King

W. H. King

E. N. Harshman

E. N. Harshman
For A. H. Koschmann

ON SITE EXAM

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

June 24, 1953.

Memorandum

To: Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Final Report, DMEA Docket 2957 (Tungsten), Norman Fitzgerald, Wothree Mines, Mohave County, Arizona.

Enclosed are nine copies of the final engineering report on the subject docket.

The examining engineer recommends approval of an exploration project estimated to cost $33,000.00, Government participation $24,750.00. The work consists of drifting and raising and may indicate the existence of ore which could be of great importance at some future time. We concur in this recommendation.

W. H. King
W. H. King

Enclosures

MINING DIVISION
REGION IV

May 15, 1953

Memorandum

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

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

Subject : Report on Docket DMEA-2957, Wothree Mines, Williams Tungsten Mine, Greenwood Mining District, Mohave County, Ariz.

Enclosed are original and 8 copies of the section on Summary, Conclusions and Recommendation by M. J. Elsing and R. W. Ageton of the Bureau of Mines and R. F. Robinson of the Geological Survey, and the section on Engineering by Elsing and Ageton for the above report. A separate section on Geology will be submitted by the Geological Survey.

Although the ore discovered probably will be submarginal, the examiners recommend a loan of $33,000 to explore the Williams tungsten mine. There seems to be a very good chance of discovering a substantial quantity of low-grade ore which might be mined in case of a National emergency. I concur with their recommendations.

Brochure is enclosed.

Walter R. Storms

Walter R. Storms

CC: W. H. King (8)
R. F. Robinson
DMEA-2957
DF

WRStorms:als

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

200 New Customhouse
Denver 2, Colorado

June 8, 1953

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 2957, Wothree Mines, Williams Tungsten Mine, Mohave County, Arizona.

Enclosed are the original and 8 copies of the geologic report by Raymond F. Robinson of the U. S. Geological Survey covering the above docket.

It has been recommended that the loan be approved.

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 5, Arizona

June 5, 1953

Memorandum

To: A. H. Koschmann, Denver, Colorado

From: Raymond F. Robinson, Tucson, Arizona

Subject: DMEA Docket 2957, Wothree Mines, Williams Tungsten Mine, Mohave County, Arizona

Enclosed are the original and 8 copies of the geologic report on the subject docket by Raymond F. Robinson.

The examining team believes that there is an opportunity of finding an additional tonnage of ore which should approximate .5% to .6% WO_3 as indicated by available sample data and past production. Since geologic conditions appear to be constant over a large area in which the vein is indicated to occur, ultimate tonnage of this ore may be substantial.

Largely because of the strategic nature of the commodity and in spite of the fact past production has been submarginal to marginal, it is recommended that the applicant be granted a DMEA loan totalling $33,000, of which the Government's share will be $24,750.

Raymond F. Robinson

Raymond F. Robinson
Acting District Supervisor
Arizona-New Mexico

Enclosures 9

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA-2957, Wothree Mines, Williams Tungsten Mine

Greenwood Mining District

Mohave County, Ariz.

M. J. Elsing, Consulting Mining Engineer
U. S. Bureau of Mines

R. W. Ageton, Mining Engineer
U. S. Bureau of Mines

R. F. Robinson, Geologist
U. S. Geological Survey

May 1953

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By M. J. Elsing[1], R. W. Ageton[2] and R. F. Robinson[3]

In a memorandum dated March 31, 1953, the Field Team, Region IV, of the Defense Minerals Exploration Administration requested that an examination and report be made on the Williams Tungsten Mine, now known as the Wothree Mines, situated in the Greenwood Mining District, Mohave County, Ariz. The purpose of such an examination was to determine the feasibility of Government assistance in an exploration project to cost $33,000. The applicant is Norman D. FitzGerald dba Wothree Mines, George B. Blonsky, General manager. The project has been given the number DMEA-2957 (Tungsten). The Field Team also requested that the present status of a former Government loan be ascertained.

On April 7 - 10, 1953, M. J. Elsing and R. W. Ageton of the U. S. Bureau of Mines and R. F. Robinson of the U. S. Geological Survey visited the property. They examined the various workings with particular attention to the most favorable location for additional exploration. They took 10 check samples, most of which were in areas where former sampling has shown exceptionally high-grade ore.

The property is reached from Kingman, Ariz. by following U. S. Highway 66 for 1.5 miles east of Kingman, thence turning south on State Highway 93 for 43 miles to a sign marked "Trout Creek". From this point a winding mountain road is followed for 27.2 miles to the mine. The road is well marked with Wothree Mine signs.

1/ Consulting Mining Engineer, U. S. Bureau of Mines
2/ Mining Engineer, U. S. Bureau of Mines
3/ Geologist, U. S. Geological Survey

The principal mineral showing is a quartz vein containing wolframite. The vein dips from 20° to 30° to the northeast. It is in granite and is associated with a large aplite dike and some pegmatite. The vein has been developed by nearly 4,000 feet of work. Some 6,000 to 10,000 tons of ore have been produced from numerous small stopes. The total production of tungsten has been 2,500 units of WO_3.

In 1943, the mine was sampled by the Bureau of Mines and the Geological Survey, and more recently by Blonsky. The DMEA examiners have recalculated the reserves on the basis of 229 samples. Some abnormally high samples were weighted. Allowing 15 percent for dilution, they find that the average minable grade is 0.55 percent WO_3. Allowing 25 percent for pillar support in the combined old and new workings, the indicated ore reserves total 6,750 tons. Blonsky estimates 6,000 tons averaging plus or minus 1.25 percent WO_3.

In January 1953, Blonsky mined 53 tons from various parts of the mine for a concentration test. This ore was supposed to be representative of the grade and character of the ore reserves in the mine. This ore was shipped to the Boriana mill in Mohave County, Ariz. where sampling and assaying showed that it contained 0.39 percent WO_3.

Some post-mineral faulting has occurred, but except in the lower part of the mine displacement has been small.

On September 15, 1943, the Reconstruction Finance Corporation made a loan of $20,000 for the exploration and development of the Williams Tungsten mine. This was followed on February 2, 1944 by an

additional loan of $6,000. The lessor cancelled the borrower's lease in November 1944. Only a few tons of ore were shipped and the equipment was sold for $1,500 which was applied to interest. The Government has no lien against the property for the unpaid balance of the loan.

From underground and surface observations it is believed quite likely that in an area 900 feet by 1,000 feet, there may be more than 100,000 tons of vein quartz containing an appreciable amount of tungsten. It is doubtful that any of it will be sufficiently high grade to mine under present operating conditions and a price of $63.00 per unit.

The possibility of profitable operation is very remote. Some 115 samples show that the minable ore has a width of 2.2 feet. The DMEA examiners estimate that production from a vein of this width will average 0.75 tons per manshift, and that mining and exploration will cost approximately $33.00 per ton. It is estimated that in order to break even, a grade of approximately 1.0 percent WO_3 and a mill recovery of 80 percent will be required.

The examiners believe that 229 samples, when properly weighted, indicate that the average grade will be approximately 0.55 percent WO_3. As nearly as can be ascertained, the mine has produced 8,000 tons of ore from which 2,500 units of WO_3 were recovered. If the mill recovery is taken at 60 percent, the crude ore contained 0.54 percent WO_3. This agrees closely with the estimated grade on the basis of 229 samples. The examiners believe that they have been more than fair to the applicant in calculating the grade of the ore, particularly in view of the fact that Blonsky's 53-ton composite sample averaged only 0.39 percent WO_3.

The examiners believe that of the 100,000 tons or more of quartz bearing wolframite in the area to be explored, up to 50,000 tons might be ore of a submarginal grade. The examiners conferred with Blonsky about a program of exploration for the larger area, which he approved. It is extremely important that the Government have as much information as possible about sources of tungsten and the examiners believe that the information obtained by doing the proposed work will be of sufficient value to justify the expenditure.

Because reserves of submarginal tungsten ore can be developed which some day may be of inestimable value, it is recommended that an exploration project for Norman D. FitzGerald be approved in the amount of $33,000, of which the Government's share will be $24,750.

WOTHREE MINES
WILLIAMS TUNGSTEN MINE
MOHAVE COUNTY, ARIZONA

DMEA 2957

Geology

By
Raymond F. Robinson
Geologist, U. S. Geological Survey

WOTHREE MINES
WILLIAMS TUNGSTEN MINE
MOHAVE COUNTY, ARIZONA

DMEA 2957

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Figure 2	Vertical Sections Through Mine Workings of the Wothree Tungsten Mine, Mohave County, Arizona	6

INTRODUCTION

The geology of the Wothree Tungsten Mine has been previously reported in good detail by A. F. Shride of the Geological Survey, who examined the mine with L. L. Farnham of the U. S. Bureau of Mines during July, 1951 in connection with an application for a production loan. The property was then called the William's Tungsten Mine, DMA Docket 913.[1/] S. W. Hobbs of the U. S. Geological Survey published a report on the area including a section on the Williams Tungsten Mine, for strategic minerals investigation, 1943.[2/]

After examining the mine in the company of Messrs. M. J. Elsing and Robert Ageton of the Bureau of Mines, mapping and check-sampling portions of it, the writer was in close agreement with Shride and Hobbs. Since the geology of the mine has been previously reported by Shride in detail, the writer has summarized the geology and discussed personal observations of the geology which appear to have some bearing upon the exploration targets, procedures, and the ore reserves.

GENERAL GEOLOGY

In the vicinity of the mine the country rock is composed of granitic rock with variable composition which has been highly injected by large volumes of aplite and pegmatite in the form of flat dikes.

The granitic rock in the mine workings is dioritic in appearance above the 200 level. On the zero level it is a quartz monzonite. The transition between the two rocks was not observable and the boundary between the two may be related to the manner in which they have been emplaced. It

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1/ Blonsky and Rice, Williams Tungsten Mine, Mohave County, Arizona, DMA Docket 913.

2/ Hobbs, S. W., Tungsten Deposits in the Boriana District and the Aquarius Range, Mohave County, Arizona: U.S.Geol.Survey Bull. 940-I, 1944.

is possible that two separate intrusives are present, the mutual physical relationship of which may be similar to that of the aplite and the enclosing granite. The flat dipping pre-aplite structures which controlled the inflation of the area by aplite and pegmatite may have been dependent upon the physical relationship of the diorite and quartz monzonite. Hereafter, the term "granite" will be used to describe the country rock.

Aplite-pegmatite dikes range from a few feet to at least sixty feet in thickness. This is attained in the cliff face west of the mine workings and is seen in a crosscut on the 200 level and in the main crosscut on the zero level. Several separate dikes are exposed in the area. Large blocks of granitic rock are included in the thicker dikes. They appear to have intruded the granite along flat northeasterly dipping 10-30° planes of weakness which may have been either joints or shear planes. The flat-dipping structures dominate the area about the mine and are quite prominent topographically, forming northeasterly dipping slopes of the mountain ridges in the vicinity.

MINERALOGY

The exposures in the mined areas indicate that much of the vein on which the principle work has been done is a pegmatitic type of vein which has been reworked and mineralized. All variations from pegmatite to a typical high temperature glassy quartz vein can be observed. Evidence of low temperature stages are visible in the present of brown jasper or chalcedony in the vein fractures. The dominant vein minerals are glassy to milky quartz and green mica. The quartz shows a crude tendency for crystallinity and the mica varies from fine-grained aggregates to coarsely crystalline clusters. Huebnerite is the ore mineral, occurring in both

large and minute crystal plates in quartz and mica. Some feldspar occurs in the vein. A fluorescent and phosphorescent, colorless to pink, fluorite with little or no visible cleavage occurs sparingly. Pyrite and small amounts of chalcopyrite are found in the vein particularly below the 180 level. The vein throughout the mine is heavily stained by limonite and hematite and manganese oxides, but especially so above the 200 level. This attests to the leaching of the sulfide minerals once present more abundantly. Scheelite was not noted by the examiners but was reported by Shride (DMA 913). A fine-grained yellow fluorescing mineral resembling powellite was seen at several places in insignificant amounts. Huebnerite which occurred with mica was most abundantly concentrated along the margins of the vein, that in quartz showed no particular place for concentration.

VEINS

Pegmatite and quartz veins occur in both granite and aplite in the area. Ore bearing veins, which are known, occur for the most part in aplite but some occur in granite. The veins are predominantly flat dipping to the northeast and are nearly parallel to the aplite-granite contacts. They appear to have followed planes of weakness similar to those which channeled aplite-pegmatite intrusions. One vein in granite at the surface was observed to dip 75 degrees south but has a strike similar to the major vein in the mine (see fig. 1).

The main vein in the mine has been exposed along several levels and has a maximum strike length exposure of about 600 feet, along which it is essentially continuous (see fig. 1). On the west side of the conspicuous ridge on which the mine is located and opposite the east vein croppings in which the main portals occur, a tungsten bearing vein is exposed

in some old workings which is very similar in all respects to the outcroppings and mine workings on the east side. It is believed that this is the main vein outcropping and that it is essentially continuous through the ridge. At the horizon of the workings the vein would thus have a strike length of about 1300 feet.

The main vein has been exposed on dip in the upper mine workings and winze for a distance of 600 feet. On the zero level a vein has been found which is also very similar in all respects to the main vein. Projections made through the mine suggest that the lower vein is a down-dip exposure of the main vein. However, some steep strike faults are known to interrupt the vein continuity between the upper levels and the zero level. Most of the faults have a displacement of not more than a few inches to a few feet and should not influence the position of the vein on a projection significantly. However, one such fault, X on figure 1, has cut off the main vein and the amount of displacement or the direction has not yet been determined. It is believed to be small. If the vein on the lower level is the main vein of the workings above, the dip extent of the vein will be in excess of 1300 feet; however, the faulting problem, until solved one way or another, does not permit the assumption of continuity without some reservation.

The vein in the upper part of the mine strikes N. 80 W. and dips 25-35° NE. In the lower part of the mine below the 150 level (El 5025) it flattens to 10 degrees. The main vein on the zero level has two branches which strike S. 40 E. and S. 65 E. dipping 10-15 degrees and 30 degrees respectively (see fig. 1). All the exposures on the larger veins show that they vary locally in strike and dip, tend to pinch and swell, and

show erratic distribution of huebnerite mineralization in small rich shoots. Because of these characteristics, conditions of barren vein, rich vein, narrow widths, etc. must be considered localized conditions when met in exploration procedures. The main vein above the 150' level is observed to branch on strike and dip. The strands of the vein are observed to join again on dip in the winze to form a loop-like structure and presumably do so on strike. This is a complicating feature in planning development because, according to Blonsky, one split is usually barren while the other is apt to be ore bearing.

The main vein in the upper levels occurs in fracture or shear planes within a few feet of the base of the aplite dike and nearly parallel to it. Locally, and near the west extremity of the 200 level mine working particularly, the vein passes over to the shear zone along the contact, pinches, and loses its ore value. According to Blonsky the ore is richest and the vein widest where it is wholly within aplite. On the zero level the main vein occurs near the upper contact of a wide dike. The hanging wall split of the vein pinches to the southeast as it diverges toward the sheared contact.

Several small narrow veins occur in the mine aside from the main vein and they are either tungsten bearing or of the same type. They are indicated on figure 1. Some of them contain variable and visible amounts of huebnerite but they were not sampled. Two veins occur in pre-mineral strike faults. They dip 55-75 degrees north in contrast to the flat dips of the main and related veins. At the surface northwest of the zero level tunnel portal an east-west quartz vein bearing good lenses of huebnerite dips 75 degrees north. A sample of some of the better material assayed 1.78 WO_3 (see fig. 1). At the foot of the raise between the zero level and the winze

a strong quartz vein of the tungsten bearing type was noted in the hanging wall of the strong fault (see figs. 1 and 2). The vein was poorly exposed behind lagging but it was noted to be in granite and to be about 1.0'thick. A sample was taken of it but no appreciable values of tungsten were found. This could be a local condition. The strike of the vein and the wall rock environment indicates that it is not a faulted segment of the main vein last seen in the winze above.

As noted on the geological map almost all the veins exposed in the mine are in aplite which appears to be the most favorable host rock. However, the presence of other veins of some size and fair mineralization in the granitic rock indicates that exploration of these should not necessarily be dismissed.

FAULTING

Strike faults cut the main vein in the mine and displace it slightly from a few inches to a few feet in a normal direction. These faults are nearly parallel to the vein, consist of a few inches of gouge up to two feet of gouge and breccia, and dip steeply north to 90 degrees. Two of the faults contain up to 2 inches of vein matter which cannot be classified as drag ore and which appears to be due to mineralization introduced into the fault. Possibly this and other faults of the same type may have acted as ore channels in the area.

Several low angle faults occur in the mine associated with the veins and also independently of them. The margins of the dikes which are flat dipping to the northeast commonly show evidence of faulting. These faults are thought by Shride to be thrust faults and to have had post-mineralization movement on them. He likewise, felt that they were pre-mineral in origin and acted to various degrees as channels for mineralization.

At the north end of the winze the vein is terminated abruptly by one of the mineralized faults mentioned above in a fault zone. The vein has not been found north of the zone in the winze or in the connecting raise with the zero level. Figure 2c illustrates the probably geologic conditions existing. The vein is likely to be present above the back of the winze to the north of the fault zone indicated so that the over-all displacement has probably been slightly reverse in contrast to the usual normal displacement elsewhere. The movement is not believed to have been great since the base of the aplite dike can be seen at the back of the winze and as noted above, projections between the levels indicate little break in the continuity of the main veins on the upper and zero levels.

On the zero level a north-south low angle fault apparently brings granite (quartz monzonite) across the north-west extension of the various veins in the zero level crosscut. The relation of the fault to the veins has not been disclosed. The fault is post-aplite and it may or may not cut the veins. The present exploration program does not provide for drifting on the vein in this direction since the ore values appear to be stronger to the southeast.

In several places nearly horizontal post-mineral slickensides were noted on strike faults. If this feature is significant it means that the alignment of severed ore shoots from fault block to fault block may be dependent upon strike displacement and that ore shoots will not persist in definite trends along the dip of the vein. In effect this only adds to the already erratic distribution of the ore shoots natural to this type of deposit.

ORE CONTROLS

The main vein and the greatest amount of tungsten mineralization in the mine occurs in aplite host rock along a zone which is close to the margins of the flat aplite dikes. It may be explained that tension fractures were more easily maintained as openings by orogenic stresses in the brittle aplite than in the softer,more altered dioritic and quartz monzonite. The latter may have acted with more plasticity than the aplite. However, it must be realized that no exploration work has been done on the few veins disclosed in the coarser-grained, granitic rocks and their potentiality has not been disproven. The host rock control may be largely localized or apparent.

The tungsten veins with a few exceptions have been emplaced along flat planes of weakness which appear to have existed as pre-aplite structures and may have been related to early intrusions. These may have received ore along some of the steeply dipping strike faults which show evidence of having been pre-mineral and to have undergone post mineral readjustment.

These general controls are not of particular aid in narrowing exploration targets.

FEASIBILITY OF EXPLORATION

Inspection of the mine workings indicated that the limits of the ore bearing vein have not been established by mining to date at any point in the mine. The geologic interpretation of the showings suggest that the main vein is probably present and unexplored over about three times the area which has been partially explored by the mine workings. In addition to this, other veins containing tungsten values exist here which are not of sufficient size in their present exposures to warrant the operators to expend resources to explore them. They may some day be exploration targets and, conceivably,

have sufficient size to be of interest at some point along their extent. It appears that exploration on the property has a reasonable hope of finding ore of comparable grade to that already mined. The ultimate production judged from the basis of areal extent of the unexplored vein, may be considerably in excess of that to date.

DISCUSSION OF THE EXPLORATION TARGETS

The applicant originally laid out an exploration plan in which a series of short drifts totaling 760' were proposed, to be driven from the ore shoots at close vertical intervals. One long heading was proposed to the northwest to determine continuity of the main vein in the mine workings with the mineralized vein outcropping in the cliff on the west side of the ridge. Several raises and diamond drill holes were also planned.

It was pointed out by the examining team that the drifting proposed constituted development work and was better designed to block out ore than to explore. This part of the proposal did not accomplish adequate exploration. Diamond drilling was eliminated by common agreement when it was shown that drilling for this type of ore was highly unsatisfactory because of the erratic nature of ore distribution in the vein. The exploration plan set forth in the engineering report was agreed upon by Blonsky and the examining team.

Figure 3 of the engineering report graphically displays the proposed exploration. Basically, the program is designed to explore the western extension of the main vein in the upper works from the 150 foot level. This level was selected because it was near the west outcrop, required no rehabilitation, and allowed initial progress on mineralized vein. The 200 level is in bad repair and complicated faulting in the west drift extremity together with a sharp footwall swing of the vein makes drifting on the vein impossible.

Exploration of the eastern extension of the vein is proposed from the 120 level. This horizon appears to be generally half way between the main vein on the zero level and the main workings. It will explore the possible down-dip extension of a favorable zone suggested by the ore shoots defined by mining on the 200 level and the upward extension of a similar favorable zone suggested by the ore shoot found on the zero level southeast drift.

Raising is provided to test the presence of the vein in the back of the winze north of the steep dipping faults. It may be that very good ore will be found in this raise. It appears that some allowance should have been made for exploration of this target in case it was found. Possibly amendments can be made to take care of this, especially if it is not feasible to continue some of the other drifting to completion. Additional raising is allotted to allow a minimum of exploration of ore shoots that might be found in drifting on the three levels, 150, 120, and zero.

It should be realized that the vein will probably not be continuous in the drifting at any of the contemplated horizons. The vein very likely will be faulted and displaced and it may very well pinch out in some of the flat shears or migrate to the aplite-contact shear and pinch out. In either instance, the situation may be a local condition or represent a definite termination of the ore bearing possibilities. It is also possible that tungsten veins occur in an en echelon fashion within the aplite. It appears to be advisable that when these geologic conditions are met that the examining team should be advised and called on to inspect the geologic conditions. It should pass on whether or not additional exploratory steps are feasible and if so, what they should be.

Other exploration targets are present in the area and while they are at present beyond the scope of this program, they should be recorded for future reference. The area of the aplite dike which has been explored is small. If Steep faults have acted as feeders, as has been suggested by vein matter in some of them, any favorable fractures in any given dike could be mineralized. Veins could exist in ladder-like relationships to each other or in en echelon patterns through the area. Some evidence of this is seen by the presence of tungsten bearing vein types in the footwall of the main vein on the zero level. Therefore, the footwall and hanging wall of the vein, which have scarcely been tested, offer a target for some future exploration.

Veins which exist in the coarse-grained, granitic rocks and which contain tungsten should not be dismissed from explorational considerations until some work has been done on them to establish their unfavorable character. The possibility of some of these veins passing into aplite environment, as in the case of the surface vein northwest of the zero portal, creates additional targets.

The area contains an abundance of aplite dikes and there are several in the mine area which have not been investigated.

ORE RESERVES

The ore reserves of deposits of this type are very difficult to estimate with a satisfactory degree of accuracy or dependability. This is principally due to the inherent nature of tungsten bearing vein deposits. The ore is erratically distributed in small irregular rich pockets which are widely separated by areas of essentially barren vein. At the Wothree mine, the lack of detailed knowledge of ore controls further inhibits dependable projection of ore boundaries.

The examiners found that the development headings were rather thoroughly sampled by several previous sampling programs and that some wide divergences in both the sample values and method of combining existed between them. Since time and expediency did not permit resampling or extensive additional sampling, dependence was placed upon what was judged to be the three best sets of samples in order to calculate a mine grade for the ore. These samples were recalculated to weight some erratic high grade samples and the results are set forth in the section on ore reserves in the engineering report. There was a marked insufficiency of samples in the stoped areas of the mine around which much of the indicated ore is likely to be. The only samples available in the stopes were those taken by Blonsky.

The examiners took ten check samples in order to check the existence of some high grade areas indicated by earlier sampling. Messrs. Ageton and Elsing took channel samples in these areas without regard to the appearance of the vein. Robinson took three samples in areas selected by the U.S.B.M. members of the team with particular care to channel high grade ore. These samples are shown on figure 3 of the Bureau report. Wide variances in these samples were naturally obtained but all were below the values reported by previous sampling in the same area. The only significance of the check samples is that they emphasize the erratic distribution of tungsten values in the vein.

The U.S.B.M. report contains the detailed figures and break down on the calculations of reserves. By using the past samples taken by the U.S.B.M. - U.S.G.S. and Blonsky's samples and recalculating in order to weight high grade samples, a grade of .5% to .6% WO_3 has been obtained. This

is considerably lower than Blonsky's estimate of 1.25% WO_3. Shride and Farnham arrived at a .75% WO_3 but they used different sets of samples.

The U. S. Bureau of Mines have classified the ore reserves in the Wothree mine as "indicated" ore and this varies from the U.S.G.S. classification. It is believed that this should be broken down into indicated and inferred ore according to definitions set up. However, since the recent estimate of grade depends upon others sampling, and the degree of extension of ore beyond the stope limits is largely a matter of personal opinion and guess work, no active disagreement with the classification by the Bureau is intended or contemplated. It is thought that Shride and Farnham's breakdown of tonnage classification is perhaps the most applicable.

	Indicated reserves	Inferred reserves	Total Res.
1.(Shride,Farnham, DMA913)	3000 tons	6600 tons	9600 T
2.(Elsing,Ageton,Robinson, DMEA 2957)	8921 tons	------	8921 T

In addition to the reserves above, based on possible maximum distribution of the main vein above the zero level, it is estimated that an area of 900 x 1000 feet is potential tungsten bearing ground. This area is indicated in the Engineering report in figure 2. This area may contain about 100,000 tons of vein matter and an unknown amount of tungsten ore which would probably be of about the same grade already produced in the mined areas.

CONCLUSIONS

At the Wothree tungsten mine granitic country rock has been intruded by thick flat-lying northeast dipping dikes of aplite and pegmatite. Tungsten bearing quartz veins are contained in an aplite dike near its contacts with granite to which the veins are essentially parallel. The veins resemble many

other wolframite-huebnerite bearing vein deposits on the continent. They are flat dipping, irregular, and contain small, erratic, rich, ore shoots. The Wothree mine is unusual in that the principal vein appears to have greater continuity along strike and dip than most other veins of this type. The rich ore shoots of these veins are enticing but economic mining on them has been a difficult goal to achieve in most cases. Metallurgical work is still being conducted on the Wothree ore and the operator is having trouble in obtaining a 60% WO_3 concentrate. This may be an impossibility due to inherent characteristics of the ore which may require very fine grinding.

The ore reserves are estimated to be as great as 8000-9600 tons, most of which are classed as inferred ore. Recent recalculations of available data suggest that the grade varies from .5% to .6% WO_3 and that this has very likely been the grade of past production. The applicant estimates a grade of 1.25%, which appears to be too high. Shride and Farnham arrived at a grade of .75% WO_3 from the data available to them. The more conservative grades indicate that the tungsten deposit is sub-marginal, or at the best, marginal.

Exploration has a reasonable chance of disclosing ore shoots with approximately the same grade as that produced in the past. There is no evidence that the grade will be higher or lower. Due to the large area through which the veins are likely to extend and which is similar geologically to that in which mining has been done to date, exploration may ultimately disclose considerably larger tonnages of ore than have yet been mined.

Faulting, branching, and pinching of the vein are apt to create some problems which will affect the procedure of exploration. The operator is a competent manager but it is felt that he is not apt to appreciate the mining problems that geologic structural conditions to be encountered will make.

He is not likely to appreciate the value of continued drifting on barren vein nor likely to be inclined to expend sufficient effort to look for faulted segments of the vein. It is felt that the Government team should keep close track of the work to be done here and guide as often as necessary to see that the DMEA money is well spent.

Several targets for exploration exist in the mine which are beyond the xcope of the present program. They should eventually be recalled and evaluated for possible exploration at a later date. Briefly, they are: hanging wall and footwall portions of the dike containing the principal producing vein; other similar dikes in the area; veins in granite which are presently unattractive because of size or ore content, either of which can be a local condition; and veins which may be projected from granite environment into aplite.

In view of the fact that substantial amounts of vitally essential tungsten metal may eventually be developed by the exploration of this mine, it is recommended that a DMEA loan be granted to the applicant.

DMEA-2957, WOTHREE MINES, WILLIAMS TUNGSTEN MINE
GREENWOOD MINING DISTRICT
MOHAVE COUNTY, ARIZ.

Engineering Report

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May 1953

DMEA-2957, WOTHREE MINES, WILLIAMS TUNGSTEN MINE
GREENWOOD MINING DISTRICT
MOHAVE COUNTY, ARIZ.

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INTRODUCTION

In a memorandum dated March 31, 1953, the Field Team, Region IV, of the Defense Minerals Exploration Administration requested that an examination and report be made on the Williams Tungsten mine, now known as the Wothree Mines, situated in the Greenwood Mining District, Mohave County, Ariz. The purpose of such an examination was to determine the feasibility of Government assistance in an exploration project to cost $33,333.33. The applicant is Norman D. Fitzgerald, dba Wothree Mines, George B. Blonsky, General Manager. The Field Team also requested that the present status of a former Government loan be ascertained.

On April 7-10, 1953, M. J. Elsing and R. W. Ageton visited the property, accompanied by R. F. Robinson of the Geological Survey. They examined the various mine workings with particular attention to the most favorable location for additional exploration. On the morning of the third day the examiners discussed with Blonsky a tentative program of exploration which eliminated some of the work proposed by him and increased other parts of his original program. The proposed plan was satisfactory to Blonsky. The work eliminated was in part development and the work substituted provided for longer range exploration.

The examiners took 10 samples, mainly as a check against some of the original sampling and assaying.

ACKNOWLEDGMENTS

Acknowledgments are due George B. Blonsky, general manager of the Wothree Mines, P. O. Box 448, Kingman, Ariz. Blonsky provided the examiners with an assay map of samples taken by him and also the results of

the 53-ton concentration test. This information was of great value in arriving at a conclusion relative to the merits of the project.

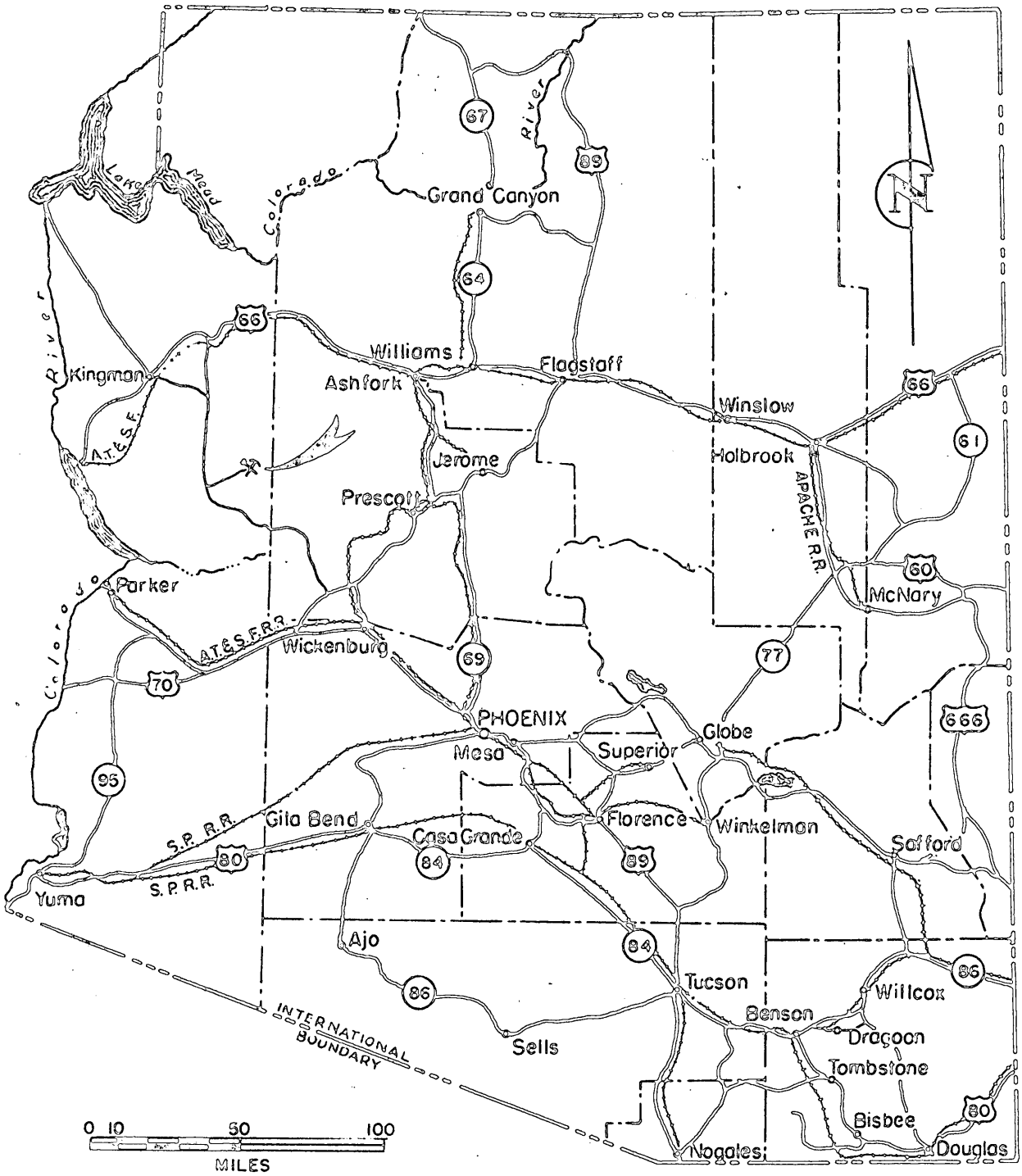
Acknowledgment also is made of the use of the U. S. Geological Survey Bulletin 940-I, "Tungsten Deposits in the Boriana District and the Aquarius Range, Mohave County, Arizona" by S. W. Hobbs.

LOCATION, TOPOGRAPHY AND PHYSICAL FEATURES

The Wothree or Williams Tungsten mine is situated in the Aquarius Mountain Range in Sections 19, 20, 29 and 30, T. 16½ N., R. 11 W., G. and S. R. Meridian, Greenwood Mining District, Mohave County, Ariz. The mine is 72 miles southeast of Kingman, which is the shipping point and supply center on the Santa Fe Railroad (see figure 1).

The property is reached from Kingman by following U. S. Highway 66 for 1.5 miles east of Kingman, then turning south on State Highway 93 for 43 miles to a sign showing "Trout Creek". At this sign there is also a Wothree mine sign showing that the distance to the mine is 27.2 miles. This branch road turns east and crosses the Big Sandy Wash. Most of the road from the Trout Creek sign to the mine is a winding mountain road without excessive grades. In wet weather the Big Sandy might be impassable for several days at a time. The road is well signed all the way to the mine. The driving time is approximately 1.5 hours for the 27 miles, and approximately 3 hours from Kingman.

The altitude of the lowest tunnel is 4,800 feet. The highest elevation near the mine is approximately 5,400 feet. The topography is sufficiently steep to permit exploration by tunnels. The vegetation includes juniper and small pine trees, shrubs and some grass.



DMEA 2957

FIGURE 1.- LOCATION MAP - WOTHREE MINE
WILLIAMS TUNGSTEN MINE

GREENWOOD MINING DISTRICT MOHAVE COUNTY, ARIZONA

HISTORY AND PRODUCTION

The original claims were located in 1902 by Ed Williams. Blonsky stated that no less than 8 different individuals or companies had attempted to operate the mine during the past 50 years. Each time Ed Williams or his son Roy Williams had gotten some kind of a down payment, which, with the royalties, had made the property quite remunerative to them.

Production has been approximately as follows:

Year	Operator	Units WO_3
1904-15	To Primos Chemical Co.	Small lots
1917-18	James Townsend	720
1936-39		650
1940-41	Continental Mining Co.	935
1942	Roy Williams	212
1943-44	Wm. Bradbury	small
	Total	2,517

In a report on the Williams Tungsten Mine, Mohave County, Ariz., Ottey M. Bishop of the U. S. Bureau of Mines states that the mine has produced approximately 2,500 units of WO_3 and that this production came from 6,000 to 10,000 tons of ore. On this basis the recoverable content of the ore produced was 0.25 to 0.41 percent WO_3, depending upon whether 10,000 to 6,000 tons were mined and milled. The mine examiners have made estimates of the ore mined based upon stope maps which appear to be fairly accurate. Stope maps indicate that slightly more than 6,000 tons were mined. There are several stopes with incomplete outlines. Production from these stopes probably would raise the total to 8,000 tons of ore mined.

In 1943, William Bradbury obtained a lease on the Williams mine and operated the property on the proceeds of two loans from the Reconstruction Finance Corporation. In order to obtain accurate information relative to the status of these loans a letter was written to C. A. Rockwood, mining engineer with the Reconstruction Finance Corporation at Los Angeles. On April 17, 1953, Rockwood advised that "a loan for $20,000 was made to William S. Bradbury on September 15, 1943 and an additional loan of $6,000 was made on February 2, 1944. Only a few tons of ore were shipped and operations terminated in June 1944 and the lessor cancelled the borrower's lease in November 1944. The amount of $1,500 received from the sale of equipment was applied on interest. No payment on the principal was ever made.

"The loan was repayable from production only and borrower's lease on the property was cancelled. Consequently, the Reconstruction Finance Corporation has no lien against the property for the unpaid balance of the loan."

OWNERSHIP AND EXTENT

The property of the Wothree, or Williams tungsten mine comprises 10 unpatented lode mining claims, including Tungsten No. 1 to Tungsten No. 10. The location notices of these claims are recorded in the Office of the County Recorder, at Kingman, Mohave County, Ariz. in the book number and on the page number as shown below:

Claim	Book No.	Page No.
Tungsten No. 1	EE	264
Tungsten No. 2	EE	265
Tungsten No. 3	EE	266
Tungsten No. 4	EE	267
Tungsten No. 5	EE	736
Tungsten No. 6	EE	737

Claim	Book No.	Page No.
Tungsten No. 7	EE	738
Tungsten No. 8	FF	671
Tungsten No. 9	FF	672
Tungsten No. 10	FF	673

On February 2, 1951, the estate of Edward G. Williams, deceased, gave Blonsky a lease and option to purchase the property for $21,000. Shortly after this Blonsky and Joseph B. Rice, Jr. formed a partnership for the purpose of operating the property. On March 22, 1953, in the application for exploration assistance, Blonsky stated that Norman D. FitzGerald on December 2, 1952 had fully exercised his option to purchase the Williams tungsten property and that the property was free and clear of liens and other encumbrances. Blonsky has some kind of an interest in the property and some kind of an agreement that should FitzGerald default in advancing funds for development, the property will revert to Blonsky.

It is believed that if a contract is granted for the exploration of the property it should be signed by FitzGerald and not by Blonsky as general manager.

DESCRIPTION OF DEPOSIT

The most important showing at the Williams tungsten mine is a flat dipping quartz vein in granite. The vein is associated with pegmatite and a large aplite dike. The vein can be traced on the surface for some 2,000 feet. Underground it has been followed for some 400 feet along the strike, and down the dip for 700 feet.

The vein dips from 20 to 30 degrees to the northeast and varies in thickness from a few inches to 3 or 4 feet. The average thickness

based on 115 samples taken by Blonsky is 2.2 feet. The tungsten mineral is wolframite which occurs in the quartz in a very erratic manner. Small high-grade concentrations of wolframite, surrounded by lean ore, occur throughout the mine. Because of these small high-grade areas it is very difficult to sample and estimate ore reserves. On the basis of giving a weighted average to abnormally high-grade samples, the examiners have estimated that the ore contains approximately 0.55 percent WO_3. This figure checks very closely with the known production of 2,500 units from 6,000 to 10,000 tons of ore on the basis that the mill recovery was 60 percent.

It is quite evident that the larger part of the vein is very low grade, and that were it not for the small spotty concentrations of wolframite, the average grade of the ore would not be nearly as high as it is. It follows that no drift in the vein should be stopped as soon as the vein became low grade. The same principal applies to stoping operations.

From the standpoint of mining the problem is a difficult one. In places the vein narrows to a foot or less, and in places it splits into a footwall and a hanging wall streak with aplite between the streaks. In several places the vein has been cut by strike faults but in most cases the displacement has been so small that there has been no difficulty in following the ore across the fault by drifting or stoping. The exception to this is that the vein apparently has been displaced near the bottom of the main inclined winze and thus far has not been found. It has been suggested that this is a reverse fault and any search for the vein should be made by continuing the vertical raise from the "Q" level to the bottom of the inclined winze for 25 feet above the present connection.

From the surface and underground evidence it is reasonable to suppose that this quartz vein underlies an area at least 900 by 1,000 feet in size. It is probable that all of this quartz contains at least minor amounts of wolframite. It is not anticipated that any of it will be sufficiently high grade to warrant the expectation of profitable operation with the present price of $63 per unit of WO_3 and with present operating conditions. There is enough geological and factual evidence to warrant the supposition that tungsten can be produced from the Williams mine in the event that an extreme need for it arises. The proposed exploration will not indicate any appreciable tonnage but it will give a little more definite assurance as to the amount, grade and character of the probable reserves which can be counted on in the event of a grave emergency when the cost of production would not be the controlling factor.

MINABLE ORE RESERVES

The Williams mine has been sampled on numerous occasions. In 1942, the U. S. Bureau of Mines took 41 samples, and in 1943 the U. S. Geological Survey took 73 samples. The latest sampling has been done by Blonsky who took 115 samples.

In his application for an exploration loan Blonsky submitted a map on which he shows that the present ore reserves amount to 6,000 tons with an average grade of 1.25 percent WO_3. This map shows that of this amount, 3,000 tons above the 200 level has an average grade of plus or minus 1.0 percent WO_3 and 3,000 tons below the 200 level

has an average grade of plus or minus 1.5 percent WO_3. The average of the 115 samples taken by Blonsky is 0.74 percent which does not check with the average given for the ore reserves as shown on his map.

The average of the early Bureau samples is 1.03 percent WO_3 and the average of the Geological Survey samples is 1.06 percent.

Each set of samples contains some abnormally high values, some running to $500.00 per ton in value. It is not believed that abnormally high samples should be included or entirely eliminated in calculating ore reserves. The following formula has been developed for giving some weight to very high sporadic samples:

(1) Obtain an average without the abnormally high samples;

(2) Replace each very high grade sample with a value 3 times this average;

(3) Recalculate an average grade with these weighted values.

The average of the samples of Blonsky, the Bureau, and the Survey has been recalculated on the basis of weighting samples by this method. The results of these calculations are herewith shown:

Ore Reserves
Tons and Grade Calculated by Examiners,
Percent WO_3

	Ore, Tons	Including High Values	Weighted Average
I Area above 280' Level	742		
Blonsky		0.60	0.49
U.S.B.M.		0.76	0.76
U.S.G.S.		0.60	0.60
II Area between 260 and 280	911		
Blonsky		0.65	0.60
U.S.B.M.		0.87	0.56
U.S.G.S.		0.59	0.59

Ore Reserves

Tons and Grade Calculated by Examiners,
Percent WO_3 (Con.'t)

	Ore Tons	Including High Values	Weighted Average
III Area between 200 and 260	1,292		
Blonsky		0.57	0.57
U.S.B.M.		0.94	0.46
U.S.G.S.		0.60	0.60
IV Area between 150 and 200	3,816		
Blonsky		0.93	0.61
U.S.B.M.		1.18	0.95
U.S.G.S.		1.37	0.87
V Area between 0 and 150	996		
Blonsky		0.47	0.47
U.S.B.M.		0.93	0.68
U.S.G.S.		1.24	0.70
Total Areas I-V incl.	7,757		
Blonsky (115 samples)		0.74	0.57
U.S.B.M.(41 samples)		1.03	0.77
U.S.G.S.(73 samples)		1.06	0.74
Total - 229			
Total Areas I-V incl. with 15% dilution	8,921		
Blonsky		0.65	0.50
U.S.B.M.		0.90	0.67
U.S.G.S.		0.92	0.64

On the basis of the above calculations it is believed that allowing for 15 percent dilution the grade of the ore will be from 0.5 to 0.6 percent WO_3. It is anticipated that some 25 percent of the above tonnage will be required for pillars and that the net minable tonnage will be approximately 6,750 tons.

The examiners took 12 samples, the location and grade of which are shown on figures 2 and 3. The main reason for taking most of the samples was to check the abnormally high-grade values obtained by Blonsky. The check samples were taken at points where the highest grade ore was reported. The examiners obtained much lower values, indicating the erratic occurrence of the wolframite and the definite need for weighting the very high grade samples.

As already stated the reported recovery of 2,500 units of WO_3 from 6,000 to 10,000 tons of ore indicated a recovered grade of 0.25 percent to 0.41 percent WO_3 depending upon which tonnage is correct. If it is assumed that recovery was 60 percent in the mill, the grade of the ore varied from 0.41 percent WO_3 to 0.67 percent, or an average of 0.54 percent. The calculated grade after weighting a few of the 229 samples indicates that the ore has a content of approximately 0.55 percent WO_3 which is a remarkably close check with the grade obtained from the reported production.

In considering the grade of the ore, attention should be called to the fact that in January 1953, Blonsky mined 53 tons of ore which was shipped to the Boriana mill in Mohave County, Ariz. for testing. This ore was supposed to be representative of the character and grade of the ore that it was anticipated could be mined. Part of this ore came from the area which Blonsky's map shows to be plus or minus 1.5 percent WO_3 and part from the vein in the "O" tunnel level where Blonsky's sampling showed 40 feet of drift averaged 1.726 percent WO_3.

The Boriana mill sample showed that the 53 tons had an average assay of 0.39 percent WO_3. Blonsky apologized for the sample by saying that it was hastily and improperly taken and not representative of the true grade of the ore. In spite of Blonsky's explanations, this descrepancy in grade should not be taken lightly. It seems reasonable to conclude Blonsky's estimate of 1.25 percent is much too high. In making their estimate of 0.55 percent WO_3, the examiners believe they have been more than fair to the applicant and recognize the possibility that the grade over any extended period might be 0.4 percent, particularly when production is 50 tons per day.

PRESENT STATUS

Exploration and Development

Including the "0" level haulage tunnel, 3,779 feet of development has been driven on 6 levels. Of this amount there are 3,038 feet of adits, drifts and crosscuts, 305 feet of raises, and 436 feet of winzes.

The tons of ore produced per foot of development work amount to 1.7. On the basis of the tons of ore mined and the present ore reserves, the tons of minable ore per foot of development amount to 3.4. It is evident that with vein widths from 12 to 36 inches, the tonnage of ore developed per foot of work will be small and the cost of development per ton of ore will be high.

Mining and Milling Equipment

The mine is adequately equipped to drive two headihgs simultaneously. The major items of the equipment include the following:

1 240 cfm compressor
1 210 cfm compressor, rented
1 Tugger hoist, rented
1 Slusher
2 Swedish drills
4 Mine cars

The company has an old 50-ton gravity concentrator. There are only a few items in it that can be used. The mill, including power, will be completely revamped.

The company has a 2,000-foot pipe line from its well to the camp, and adequate pumping facilities. The camp includes 3 bunkhouses, 2 cabins, cookhouse, change house, and a shop.

PROJECT PROPOSALS

Exploration and Development

The applicant originally proposed to do 760 feet of drifting, 80 feet of raising, and 1,000 feet of diamond drilling, all at a cost of $33,333. Of this amount he proposed to furnish $8,333 and he requested that the Government provide $25,000.

The plan of exploration was carefully reviewed with Blonsky and a revised plan was formulated with which he was in complete agreement. Diamond drilling was eliminated because of the narrowness of the vein and the erratic character of the mineralization in the vein. Instead of 6 short drifts, the present program includes 2 long drifts, one short drift, and 4 raises. The work planned is shown in figures 2 and 3.

Blonsky agreed to do the drifting and raising at $30.00 per foot and submitted the following costs:

	Cost per foot of advance	
Labor	$10.80	
8 miners @ $13.60 per shift		
4 helpers @ $12.00 per shift		
Supervision: Manager, $1,000 per month		
Mine foreman, 400 per month		
Mine mechanic, 400 per month	4.30	
	$15.10	$15.10
Operating Materials and Supplies		
Gasoline	$ 1.28	
Oil	0.06	
Powder	1.20	
Fuse and caps	0.40	
Power (none)	0.00	
Steel	0.10	
	$ 3.04	3.04

	Cost per foot of advance	
Operating equipment		
Rented: compressor 210 cfm @ $250 per mo.	$ 0.60	
Rented: one tugger hoist @ $80 per mo.	0.20	
Owned: 2 Swedish drills	0.20	
1 I.R. 240 cfm compressor	0.00	
1 Slusher	0.05	
4 mine cars	0.10	
Small tools	0.03	
Pipe	0.59	
Rail	1.77	
	$ 3.54	$ 3.54
Miscellaneous		
Maintenance of compressors	0.03	
Maintenance of hammers	0.06	
Maintenance of tugger hoist	0.03	
Analytical work	0.36	
Accounting	0.24	
Payroll taxes	1.30	
Compensation and liability insurance	1.50	
Haulage of supplies	1.00	
	$ 4.52	$ 4.52
Contingencies, 15% of above	$ 3.93	3.93
Total cost per foot of advance		$30.13

A contract price of $30 per foot for a standard 5 by 7 foot drift, fully equipped, is reasonable. Operations will be conducted under two very unfavorable factors. One is the fact that the property is isolated as it is 72 miles from the railroad and supply center. The second is that the major part of the drifting will be from the inclined winze. This winze dips at about 25° and all muck from the drifts dropped into the winze has to be scraped down the winze for some 175 feet to a vertical raise. Blonsky has estimated $1.60 for powder, fuse and caps. This cost is too low and there are other items on the low side. These items outweigh his salary of $1,000 per month, which for supervising the running of 2 or 3 headings, is fantastic. The proposed work at $30 per

foot will not permit any such salary and if he receives such a salary it will have to be provided by the applicant. A contract price of $30 per foot is approved, without approval of the individual items comprising it.

Seven of the 8 drifts originally proposed by Blonsky are more in the nature of development work than exploration. Size of these 7 drifts were to be 50 to 60 feet long and are near the stoped area. Driving them would merely extend known ore in the area.

Reference to figure 3 shows the work presently proposed. P-1 is a drift from the main winze on the 150 level which is planned to follow the vein for 450 feet to the west. P-2 is a drift on the 120 level which is laid out to explore the vein for 375 feet to the east. P-3, a south-easterly drift along the vein on the "O" level, is laid out to follow what is believed, but not known to be the main vein. Raise 1 is to be extended vertically for 25 feet to attempt to find the main vein north of the fault.

Blonsky proposed driving a 50-foot raise in P-1, P-2, and P-3. The exact position of these raises should be determined after drifting has been completed. <u>If no ore is exposed in the drifts, raising should be eliminated from the project.</u>

Each piece of work was agreed to by Blonsky who stated that he was not too much concerned with the exact character of the work as long as it aided in the exploration of the property. From the more economical operational point of view the examiners felt that P-1 and

P-2 should be driven on the same level but Blonsky thought he had sufficient drilling equipment so that there would be no disadvantage in driving these drifts on different levels.

It is believed that once P-1 and P-2 are started, as long as they are following the vein they should be driven even though the vein material is low grade or barren. The important thing is to prove or disprove the possibilities of finding tungsten in adequate amounts in the Williams mine. If possible the question should be settled for all time. If this program is completed it should be evident whether or not this property is of merit.

It is quite likely that faults with small displacements will be encountered. In the area where the work is planned it should be possible to find the position of the faulted part of the vein by compressed air drilling with comparatively short drill holes. This work should be for the account of the applicant. Having found the vein the drift will have to be turned in order to permit following the vein beyond the fault.

The cost of the proposed work will be as follows:

P-1, 150 level, drifting	450 ft.	@	$30	$13,500
Raise in P-1 drift	50 ft	@	30	1,500
P-2, 120 level, drifting	375	@	30	11,250
Raise in P-2 drift	50	@	30	1,500
P-3, "0" level, drifting	100	@	30	3,000
Raise in P-3	50	@	30	1,500
Raise 1, bottom of inclined winze	25	@	30	750
Total	1,000 ft.	@	$30	$33,000

PRODUCTION PLAN

The applicant's sponsor, Norman D. FitzGerald, has invested over $60,000 in this project since October 1952. This includes the purchase of the property, rehabilitation of the camp, sampling, and metallurgical testing. Blonsky stated that it was the present intention of FitzGerald to erect a mill and start production in the near future at the rate of 50 tons per day.

The proposed program of exploration can be started within a week or two and can be completed in 6 months.

Mining Methods and Costs

At the time of the examiner's visit Blonsky advised that the date for the construction of the mill had not been decided upon but that metallurgical testing was being done so that an efficient mill operation could be conducted.

The former method of mining was to be used except that scrapers would be installed in the stopes to scrape the ore down the footwall of the vein. The method of mining to be used is open stoping with stull support. It is doubtful if production from a vein averaging 2.2 feet in width will be more than 0.75 tons per manshift. It is estimated that it costs $25.00 per shift to keep a man underground and supply him with compressed air, explosives, timber, tools, and other facilities and supplies. This means that the cost of mining a vein 2.2 feet wide will be approximately $33.00 per ton. Of this amount approximately $7.50 will be for exploration and development.

Milling Methods and Costs

While the present flow sheet is unknown it is believed that ultimately flotation should be included in the milling process. The cost of gravity concentration is considerably less than flotation but the greater saving of the latter process will more than compensate for the increased costs.

The mill test sample of 53 tons of ore mined and shipped to the Boriana mill averaged 0.39 percent WO_3. A total of 752 pounds of concentrates averaging 45.17 percent WO_3 were obtained. These concentrates contained 339.68 pounds WO_3, or 16.984 units. Concentrates were trucked from Boriana, Ariz. to Bishop, Calif., where they were upgraded and sold to the Jones ore purchasing agency. The 16.984 units were paid for at the rate of $56.55 per unit and the total payment was $960.45.

The following deductions were made:

Upgrading	$73.41
Sampling	8.50
Assaying	21.00
Total	$102.91

The net value of the shipment was $857.54, which is equivalent to $16.18 per ton of crude ore. It is of interest to note that the Boriana charge for milling was $12.00 per ton.

It is believed that the minimum cost of milling at the mine should be estimated at $6.00 per ton of ore.

Amortization of Exploration Loan

The gross value of ore averaging 0.55 percent WO_3 is $27.72 per ton. This figure is obtained as follows: 0.55 percent WO_3 equals 11.0

pounds WO_3 per ton. Assuming a mill recovery of 80 percent, 8.8 pounds of WO_3 will be recovered per ton of ore. The maximum value of this 8.8 pounds will be $3.15 per pound, or $27.72 per ton of ore. The Government royalty for the repayment of the exploration loan will be 5 percent of this amount, or $1.39 per ton of ore.

FitzGerald has already invested some $60,000 in the property and it is likely that to revamp the old mill and adequately equip the mine will cost up to $90,000, making a total investment of $150,000. If 30,000 tons of ore are developed amortization of capital will be $5.00 per ton of ore.

SUMMARY: COST OF PROJECT

Capital Requirement

Since the proposed project will be a short form contract there will be no capital investments on the part of the Government. The mine is fairly well equipped and work can be started without any capital investments except some working capital to carry on operations until the first footage payment is received.

Operating Costs

The examiners have made an estimate of the cost of producing ore from the mine on the basis that the average width of the vein is 2.2 feet and that the production will be 0.75 tons per manshift.

Cost per ton of Ore.

Mining including development	$ 33.00
Milling including transportation	6.00
Marketing concentrates	1.75
	$ 40.75
Amortization of Government loan	1.39
Amortization of other capital	5.00
Total cost	$ 47.14

Estimated Profit or Loss.

	Per ton ore
Value of 0.55 percent WO_3 in concentrates at $63 per unit with 80% mill recovery	$ 27.75
Costs of production	47.14
Loss	19.39

It is believed that it will require ore averaging approximately 1.0 percent WO_3 with a mill recovery of 80 percent to make the Williams mine show sufficient returns to pay its operating and amortization costs. Any excess in grade over 1.00 percent will be profit.

PROPOSED FINANCING

The applicant has requested approval of an exploration project to cost $33,000 of which the Government's share is $24,750. The applicant proposes to contribute $8,250.

The loan is to be repaid on the basis of 5 percent of the value of concentrates at the railroad shipping point for all concentrates produced from the Williams mine until the loan is repaid.

CONCLUSIONS

Reference to figure 2 shows that there is an area approximately 900 by 1,000 feet in which there is a flat-dipping quartz vein which contains wolframite. Some 3,000 feet of drifting and raising has been done in vein material which ranges in width from a few inches to 3 or 4 feet. A total of 115 samples from underground workings shows an average width of 2.2 feet. The quartz vein is continuous and persistent on the surface and it is probable that it also averages 2.2 feet. In the area indicated, it is quite possible that there may be

100,000 tons of vein quartz containing some wolframite. The grade of the ore produced and of the 6,750 tons of reserves has been estimated to have an average value of 0.55 percent WO_3. The higher grade ore occurs in lenses and shoots in the vein. What part of the 100,000 tons of vein quartz would have a grade of 0.55 percent WO_3 and a width of 2.2 feet is speculative.

Nearly 4,000 feet of exploration and development work, several hundred feet of vein outcrop, and the production of up to 10,000 tons of ore having set up a pattern which indicates that additional exploration will show the following:

1. The grade of ore will be approximately 0.55 percent WO_3;
2. The width of the vein will be approximately 2.2 feet;
3. Lenses or shoots will be small;
4. The vein will pinch and swell;
5. Small spots of high-grade ore will be surrounded by lean ore.

Exploration work should indicate ore with a grade no better or no worse than 0.55 percent WO_3 with an average thickness of the vein of approximately 2.2 feet. Of the 100,000 tons of vein quartz, there may be 25,000 tons or there may be 50,000 tons that will average 0.55 percent WO_3.

From an economic standpoint the picture is not bright. It is believed that including exploration and development the output per man-shift will be not more than 0.75 tons of ore delivered to the portal of the tunnel. It costs approximately $25 per shift to keep a man underground and supply him with compressed air, explosives, and tools.

This means that the cost of mining will be approximately $33 per ton. The total cost of mining and milling, before amortization of the capital expense, will be $40.75 per ton. The value of ore running 0.55 percent WO_3 with 80 percent mill recovery is approximately $27.75 per ton. Therefore, the direct loss is $13.00 per ton. Amortization of the Government loan will be $1.39 per ton and amortization of the total capital will add an additional $5.00 to the loss, making the loss $19.39 per ton. To operate on a break-even basis will require ore averaging 1.0 percent WO_3.

RECOMMENDATIONS

In spite of the fact that exploration at the Williams mine will prove only submarginal ore and that the amount will be limited to a maximum of some 50,000 tons, it is believed expedient to do the exploration planned. The work may indicate the existence of ore which could be of great importance to the defense effort at some future time. There is little or no question that tungsten reserves can be developed. The only question is how submarginal they will be.

Because reserves of submarginal tungsten ore can be developed which some day may be of inestimable value, it is recommended that an exploration project for Norman D. FitzGerald, dba Wothree mines, be approved in the amount of $33,000 of which the Government's share will be $24,750.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 4 1953

224 New Customhouse
Denver 2, Colorado

November 2, 1953

REGISTERED MAIL

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Contract No. Idm-E632, Docket No. DMEA 2957, Carl Hovgard (Wothree Mines), Williams Tungsten Mine, Mohave County, Ariz.

Enclosed are the original and two copies of Contract No. Idm-E632.

Copies of this contrat have been given to the Operator, Fiscal Officer, Region IV, and a copy has been retained for our files.

W. H. King

Enclosures

RECEIVED
DEC -7 1953
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

11-4

SURNAME COPY

Adams

Defense Minerals Exploration Administration
Robert E. Adams
Ext. 2017

14X3923.970, Working Fund, Interior, DMEA
October 30, 1953
10:10 a.m.
To: W.H.King,Executive Officer,Region IV,224 New Customhouse Bldg.,Denver 2,Colorado

SUBJECT: Assignment of Contract Number

MESSAGE:

REURTEL 10-29-53, DOCKET NO. DMEA 2957, CARL SOVGARD, 1141 BUTTERNUT STREET, ABILENE, TEXAS, PROPERTY LOCATED IN MOHAVE COUNTY, ARIZONA, OCPROPERTY TUNGSTEN. CONTRACT NUMBER ILM-E632 ASSIGNED THIS CONTRACT. K. O. Mittendorf (fw)

AUTHORIZED: ADMINISTRATOR

REAdams/meb
cc to: Adm.Reading File
Mails & Files Br.
Bu. of Mines, Audits Div., Rm. 2509
Miss Curtin

SENT
OCT 30 1953
Clerical Service Section

R.C.G.
10-30-53

Mr. C. O. Mittendorf
10-30-53
(Airmail service)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 30 1953

DN 235 BUREAU MINES 10-29-53 3-36 PM

C O MITTENDORF

PLEASE ASSIGN A NUMBER TO CONTRACT COVERING DOCKET NO. DMEA 2957 OPERATOR CARLXXXXX CARL HOVGARD, 1141 BUTTERNUT STREET, ABILENE, TEXAS. COMMODITY TUNGSTEN. PROPERTY LOCATED IN MOHAVE COUNTY, ARIZONA. CONTRACT DATED OCTOBER 30, 1953. AMOUNT OF CONTRACT $33,000.00 GOVERNMENT,S PARTICIPATION $24,750.00.

W H KING

Denver, Colo.

75040 I-DME 632

OCT 30 8 25 AM '53

BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

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

5

224 New Customhouse
Denver 2, Colorado

October 1, 1953.

Mr. Norman D. Fitzgerald
1141 Butternut Street
Abilene, Texas

Re: Docket DMEA-2957

Dear Mr. Fitzgerald:

This will acknowledge receipt of your letter dated September 26, 1953 and amended application showing Carl Hovgard as owner and applicant.

When may we expect to receive the waivers of claims from all others who might be concerned?

Very truly yours,

W H King

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

HMC:cwm

cc: Docket
Administrator, DMEA
WRStorms
Chron.
HMConnors

Docket 93

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

224 New Customhouse
Denver 2, Colorado

Department of the Interior
Defense Minerals Administration
RECEIVED
SEP - 8 1953

September 3, 1953

WSM

a Region 4 case

not charged to you!

Mr. Norman D. FitzGerald
1141 Butternut
Abilene, Texas

Re: Docket No. DMEA 2957 Wolfram,

Dear Mr. FitzGerald:

Your application dated March 22, 1953 stated that you were the owner of the ten unpatented claims, Tungsten No. 1 to Tungsten No. 10 inclusive, and there were no liens or encumbrances whatsoever. Your letter of August 28, 1953 stated that a small royalty interest was reserved by Joseph B. Rice and that George Blonsky has a contingent contractual interest.

As stated in our letter to you of August 18, the present condition of the title was not clear to us, and your reply of August 28 mentioned a contract with Carl Hovgard that made him the owner, but you are still the owner of record. You did not clarify the ownership or furnish us a copy of your contract with Carl Hovgard as we requested.

Your application has been placed in our inactive file pending receipt of signed copies of your contracts or agreements with Joseph B. Rice, George Blonsky, and Carl Hovgard, since we cannot in advance approve the assignment of a contract.

If this information is not received within 30 days the 10/3 docket will be closed.

Very truly yours,

W. H. KING

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

HMC:jp
cc Subject
Chron
WRStorms
AHKoschmann
COMittendorf

Copy retained 400

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

400

224 New Customhouse
Denver 2, Colorado

August 18, 1953

Mr. Norman D. Fitzgerald
Wothree Mines
P. O. Box 448
Kingman, Arizona

Re: Docket No. DMEA 2957

Dear Mr. Fitzgerald:

Reference is made to your letter of July 21 addressed to Mr. Walter R. Storms, Chief of Mining Methods Branch, Mining Division, Region IV.

If Mr. Hovgard is now the owner of the "Tungsten" claims, the exploration project contract should be made with him, unless you have a lease or some other form of contract which entitles you to possession and the right to mine ore. In the latter case, we would need a signed copy of your lease and an owner's consent to lien executed by Mr. Hovgard.

The present condition of the title to the claims is not clear to us. Will you also please advise whether the estate of Edward G. Williams, deceased, or Mr. Blonsky, or Mr. Joseph B. Rice, Jr., have any interest in the property or contractual rights with respect thereto.

It might be helpful if you would furnish a copy of your contract with Mr. Carl Hovgard.

Very truly yours,

W. H. King

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

HMC:es

cc: Docket
Chron.
Mittendorf
Connors
Storms
Koschmann (2)

140

FILE COPY
SURNAME:

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

AUG 1 1 1953

Mr. W. H. King, Executive Officer
DMEA Field Team, Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Wothree Mines (Tungsten)
Docket No. DMEA-2957
Mohave County, Arizona

Dear Mr. King:

Reference is made to your memorandum to the Administrator dated July 30, 1953, in the above-entitled matter.

You refer to the Operator's representation in Article 2 of the proposed contract that he is the owner of the land, which is unencumbered, and then say that the Operator, in his letter dated July 21, 1953, to Mr. Storms, states that he "entered into a contract with one Carl Hovgard to buy the mine." You ask whether, under these circumstances, the contract can be released in its present form.

Mr. Fitzgerald's letter does not state that he is buying the mine, but that Mr. Hovgard contracted to buy it from him. Consequently, Article 2 now correctly describes the Operator as the owner, but since such a contract of sale would be in the nature of an "encumbrance," it would ordinarily have to be mentioned in Article 2 or in an annex to the contract. However, in this case, the contract of sale seems to have been consummated on April 30. Therefore, Mr. Fitzgerald no longer is the owner and does not presently have a sufficient interest in the land so that the Government can enter into an exploration project contract with him.

To remedy this situation, the land must either be leased to Mr. Fitzgerald by Mr. Hovgard, in which event an Owner's Consent to Lien signed by Mr. Hovgard would be required, or the latter must become the Operator, either alone, jointly with Mr. Fitzgerald, or as a corporation to which the land may be transferred.

R.C.G. 8-11-53

From the wording of your memorandum, it seems that the exploration project contract has not yet been signed by you, and consequently an assignment would not be in order. If the contract has been signed by you, and if Mr. Hovgard does not wish to lease the property to Mr. Fitzgerald, it is suggested that the contract, nevertheless, be terminated by use of Form 18262-3, "Rescission of Exploration Project Contract by Agreement before Work is Begun," and that a new contract be entered into with Mr. Hovgard.

Sincerely yours,

W. S. Martin
(S)

ACTING Chairman, Operating Committee

Approved:

E. H. Hedges
(S)

Member, Bureau of Mines

A. R. Kinkel, Jr.
(S)

Member, Geological Survey

AEKane/ema/8-6-53

Copy to: Mails & Files
Admr. R. File
Op. Comm.
Mr. Thayer
Mr. Hedges
Mr. Martin
Mr. Kane
Mr. Hofflund
Chron.
Pending

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 3 1953

224 New Customhouse
Denver 2, Colorado

July 30, 1953

Memorandum

To: C. O. Mittendorf, DMEA Administrator

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA 2957, Wothree Mines, Williams Tungsten Mine, Mohave County, Arizona

A contract has been prepared between the Government and Norman D. Fitzgerald doing business as Wothree Mines, P. O. Box 448, Kingman, Arizona.

Article 2 of the contract states that the Operator is the owner and there are no encumbrances. We have received six copies of the contract signed by Norman D. Fitzgerald, and the signature is acknowledged by a Notary Public.

The enclosed transmittal letter states that the applicant has entered into a contract with Carl Hovgard to buy the mine.

Please advise us if it will be necessary for us to make any changes in the contract or if we can release it to the applicant in its present form.

W. H. King
W. H. King

Enclosures

RECEIVED
AUG -5 1953
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

C
O
P
Y

NORMAN D. FITZGERALD
1141 Butternut
Abilene, Texas

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG - 3 1953

July 21, 1953

Mr. Walter R. Storms, Chief
Mining Methods Branch
Mining Division, Region IV
Southwest Experimental Station
Box 4097, University Station
Tucson, Arizona

Dear Mr. Storms:

1. There are enclosed herewith all six copies of Exploration Project Contract, Docket 2957-Tungsten, covering operation in my name designated Wothree Mines in Mohave County, Arizona; these have been acknowledged before a Notary. We hope that you will be able to complete processing them and determine starting points for our drifts in the near future so that we may commence exploration.

2. We have executed the contract and propose to comply fully with all its terms. There is, however, one privilege we ask, provided that it will not delay approval; it concerns Article 7.

3. Application was made for this Exploration Project Contract in my name. Later it became evident that sound business judgment required me to obtain financial assistance in developing the mine and building the mill necessary to make the venture economic. To this end I entered into a contract with Mr. Carl Hovgard to buy the mine from me effective April 30, 1953. For my part of the venture I propose to build the mill. This contract with Mr. Carl Hovgard was specifically subject to obtaining Government approval for transfer of my rights under the Government contract, when and if granted. In the event such approval is not granted then the contract with Mr. Carl Hovgard is of no force and effect.

4. Your approval of the proposed transfer of my rights under this Government contract is requested because it will actually expedite, rather than impede, the proposed exploration and development of the mine. This will be the case due to the financial hardship that will otherwise be imposed upon me, if I must carry the whole venture unaided.

5. From a practical standpoint no change of any kind or character, other than financial, would take place. Operations will continue under the direction of Mr. George Blonsky. Mr. Carl Hovgard and I have been associated in the oil business in Texas. He is President of The Research Institute of America at 292 Madison Avenue, New York 17, New York. I can assure you that the change requested will in no way impair fulfillment of the exploration contemplated in the Government contract.

6. We hope you will see fit to process this Government contract without any delay due to this request. If this application for permission to transfer my rights under this Government contract is handled as a supplementary item perhaps it would be simplest for all of us. If it would help you in any way to reach a decision on this matter I would appreciate your calling Mr. Carl Hovgard collect in New York City at Murray Hill 9-7200. Since he is vitally interested in taking his proposed financial part in this venture without delay I am certain he can supply such assurances as you will want to justify granting me the privilege of transferring my rights under this Government contract to him.

7. Should there be any occasion for you to discuss this matter with me, please do not hesitate to call me collect at Abilene 4-7346.

Yours very truly,

/s/ Norman D. Fitzgerald

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

224 New Customhouse
Denver 2, Colorado

June 24, 1953.

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 200

From: Field Team, Region IV

Subject: Final Report, DMEA Docket 2957 (Tungsten), Norman Fitzgerald, Wothree Mines, Mohave County, Arizona.

Exploration assistance in the amount of $33,000.00, Government participation $24,750.00, has been approved and the contract will be prepared by this office.

Four copies of the final report will be forwarded you when the contract is executed.

The original and one copy of Form 3b is attached.

W. H. King
W. H. King

A. H. Koschmann
~~E. N. Harshman~~
For A. H. Koschmann

Enclosures

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

224 New Customhouse
Denver 2, Colorado

March 27, 1953.

Memorandum

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
MAR 30 1953

To: Administrator, Defense Minerals Exploration Administration
Attention: 200

From: Executive Officer, Field Team, Region IV

Subject: Docketing for Exploration Assistance

Enclosed herewith in duplicate is DMA Form 3a and Form MF-103 in duplicate and supporting data pertaining to the following applications for Government assistance in exploration work:

H. C. Gamblin
1307 Colorado Avenue
Grand Junction, Colorado

and

J. M. Knowles
337 North Avenue
Grand Junction, Colo.

Dee Harrington and
John Harrington
Nederland, Colorado

✓ Wothree Mines
George Blonsky, General Manager
Box 448
Kingman, Arizona

W. H. King
W. H. King

Enclosures

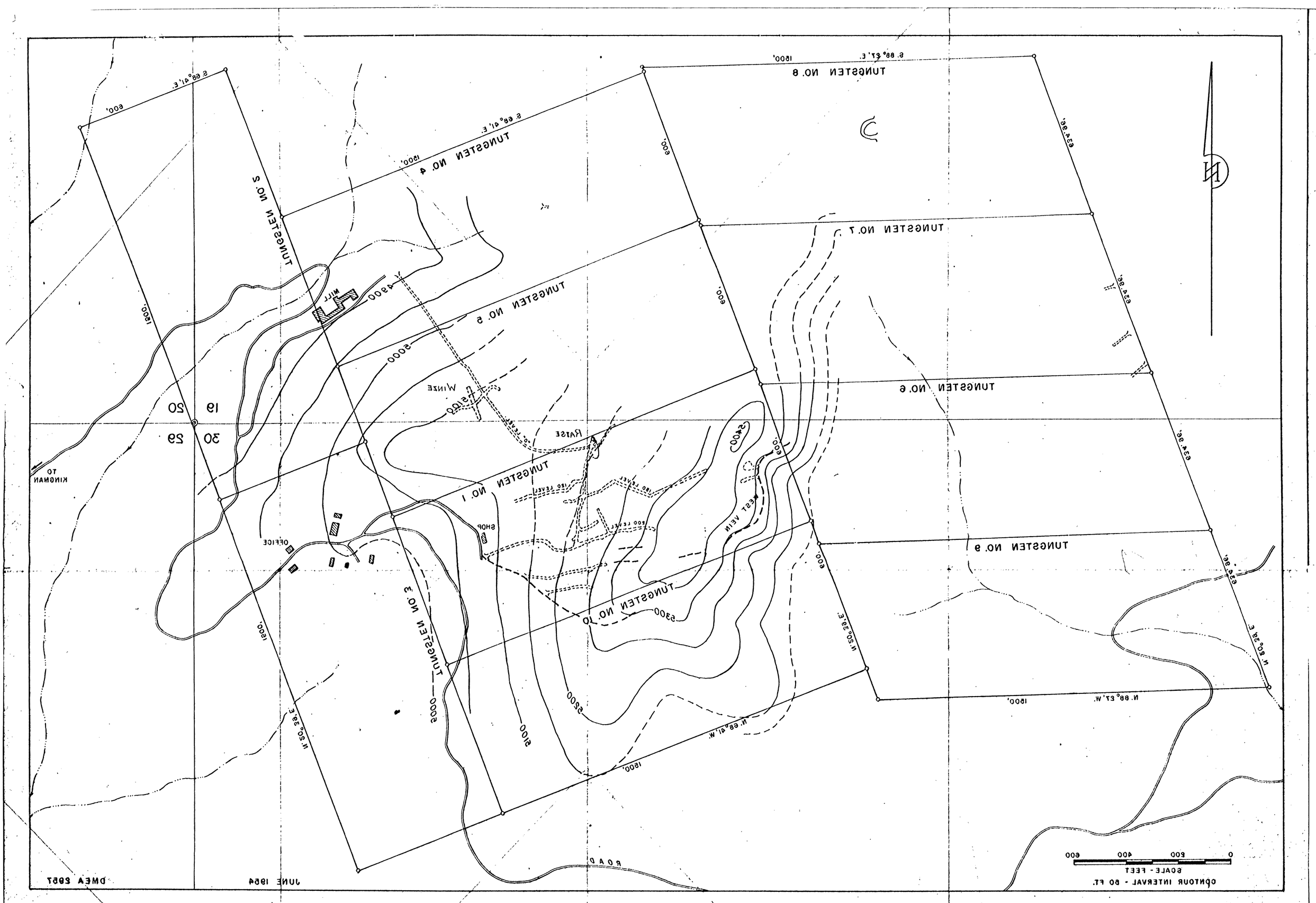


FIGURE 3. - MAP OF THE WILLIAMS TUNGSTEN MINE - MOHAVE COUNTY, ARIZONA

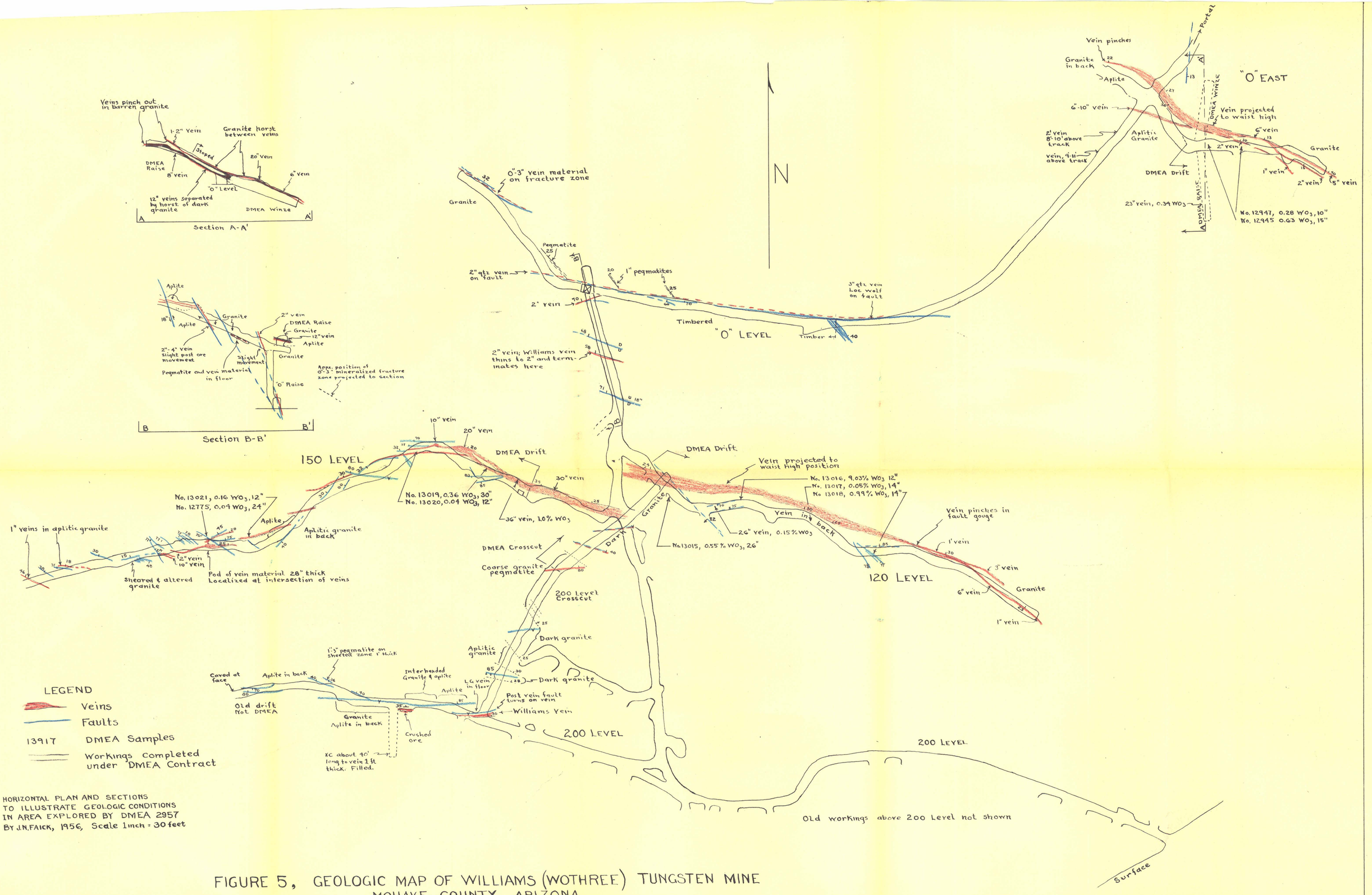
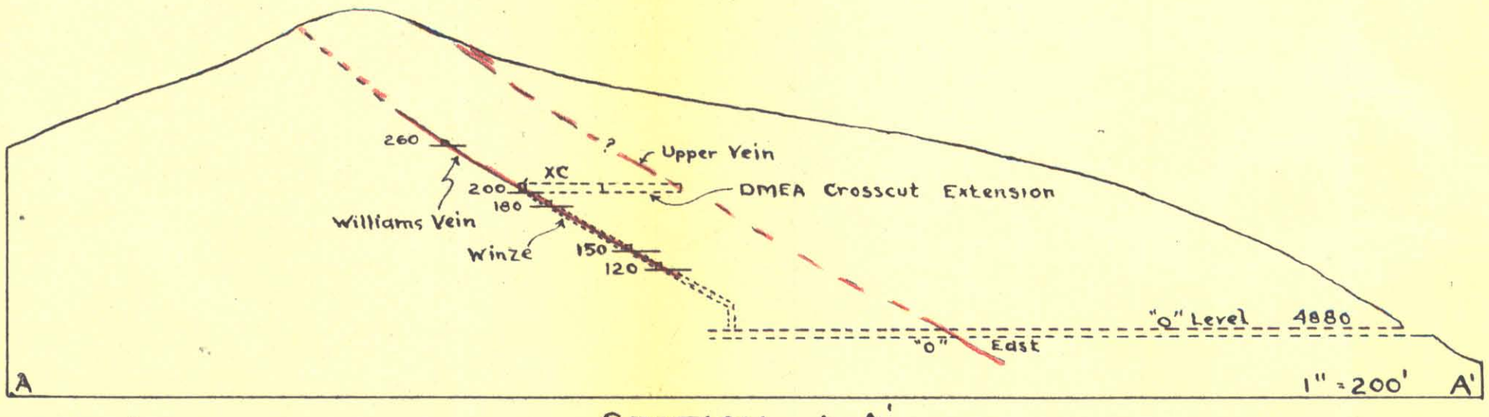
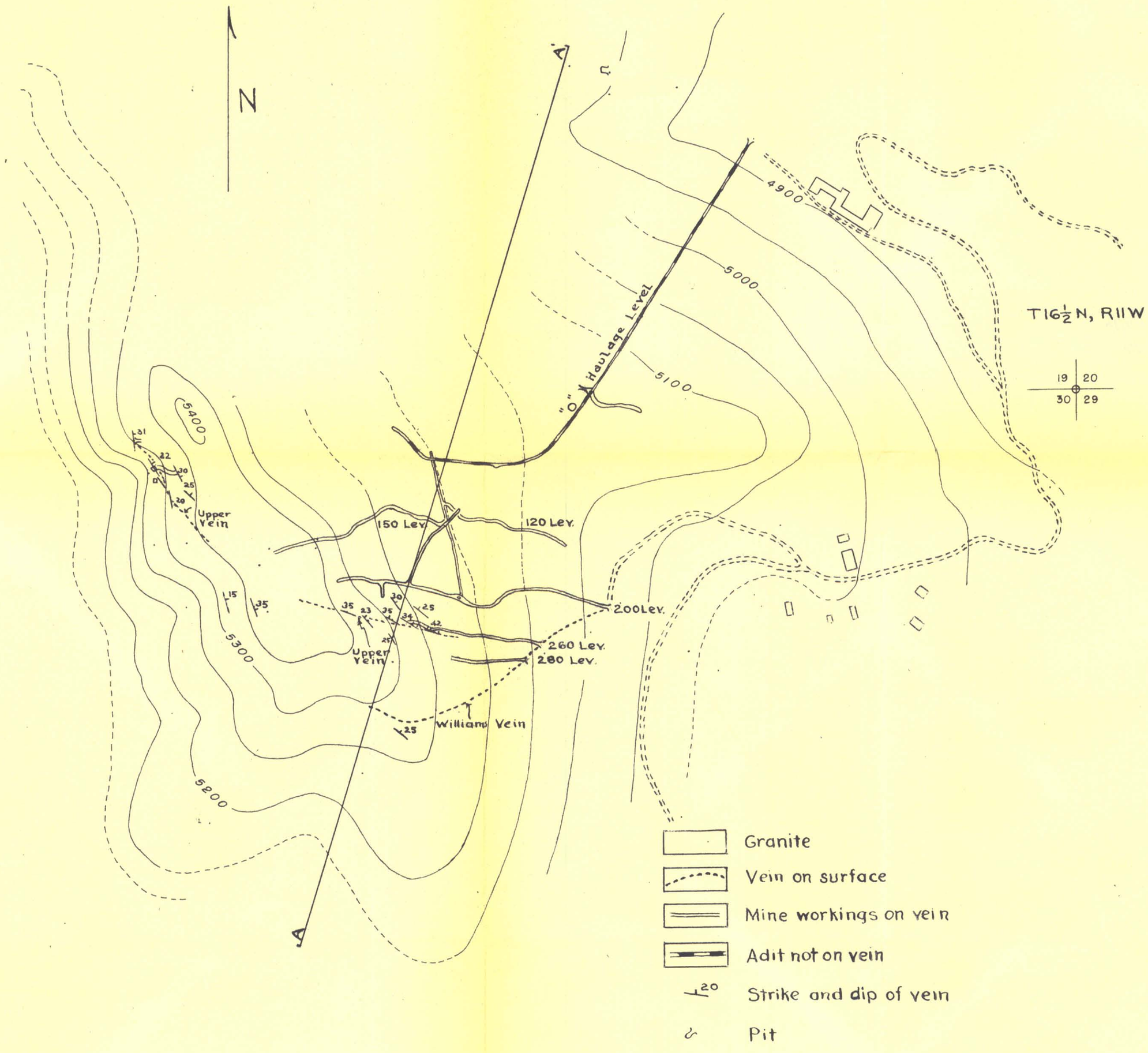


FIGURE 5, GEOLOGIC MAP OF WILLIAMS (WOTHREE) TUNGSTEN MINE
MOHAVE COUNTY, ARIZONA
DMEA 2957



SECTION A-A'
WILLIAMS MINE
Showing relationship of Upper Vein to Williams Vein



DMEA 2957

Figure 3 Map of the Williams tungsten mine, Mohave County, Arizona

Fig. 3

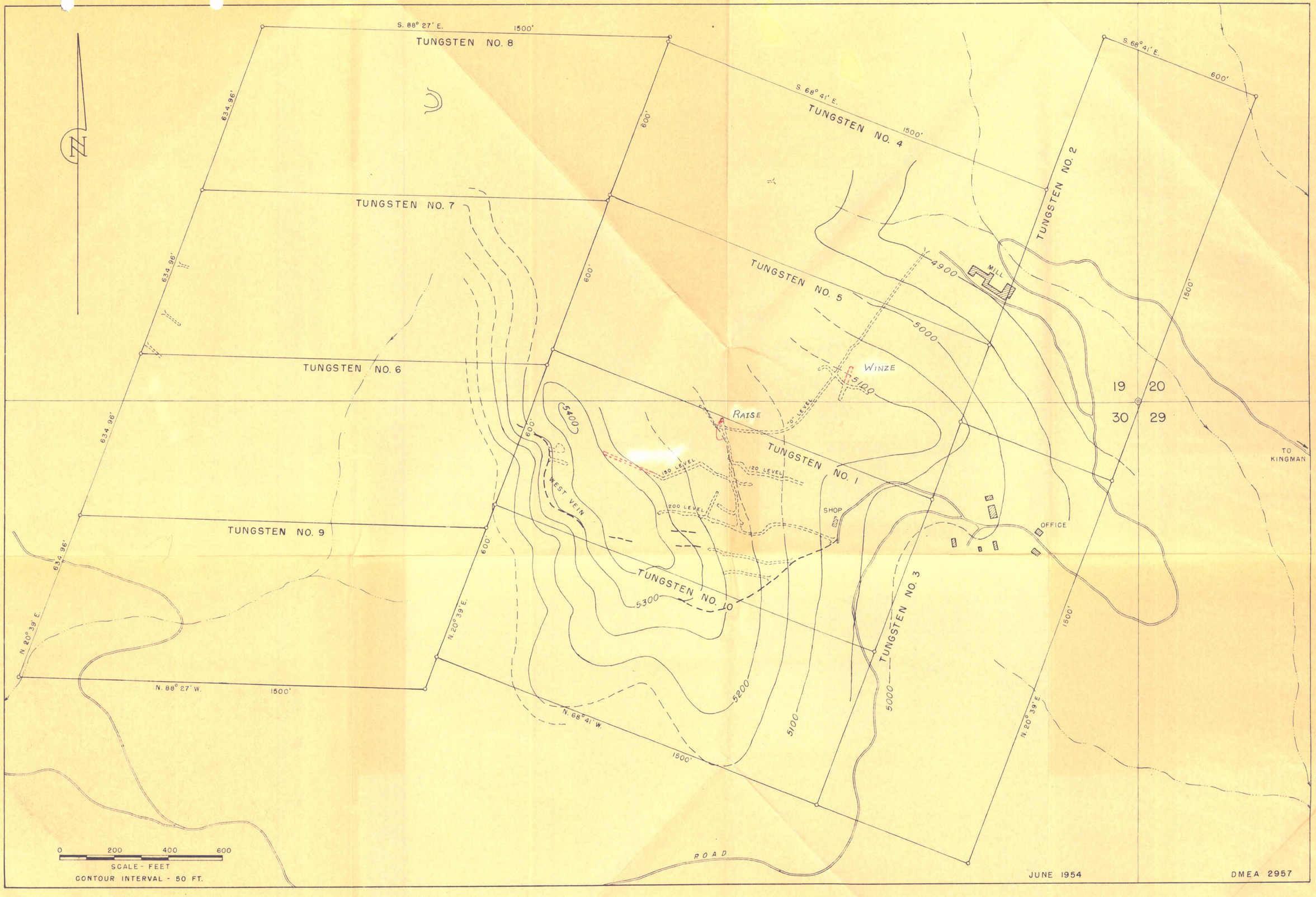


FIGURE 3. - MAP OF THE WILLIAMS TUNGSTEN MINE - MOHAVE COUNTY, ARIZONA

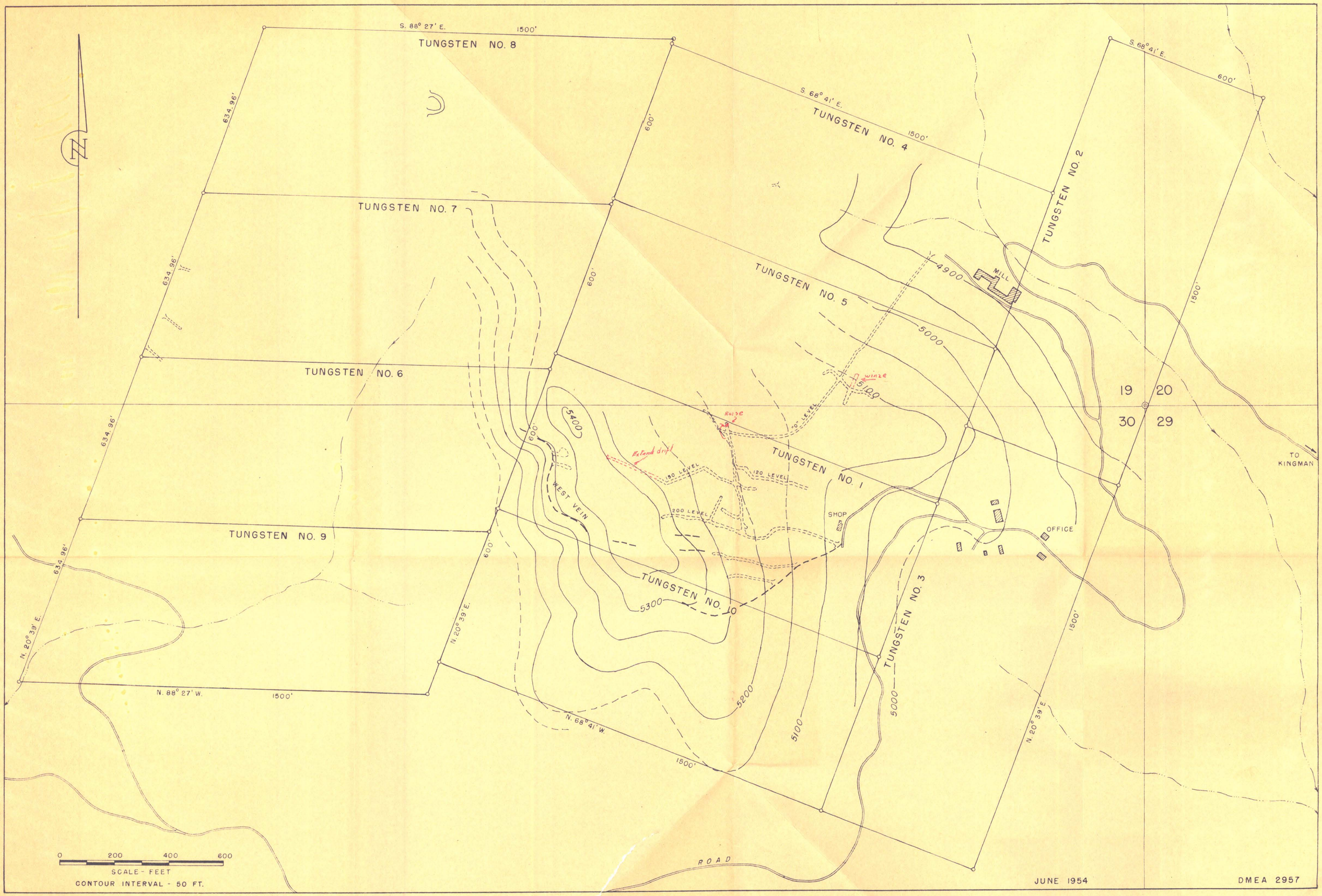
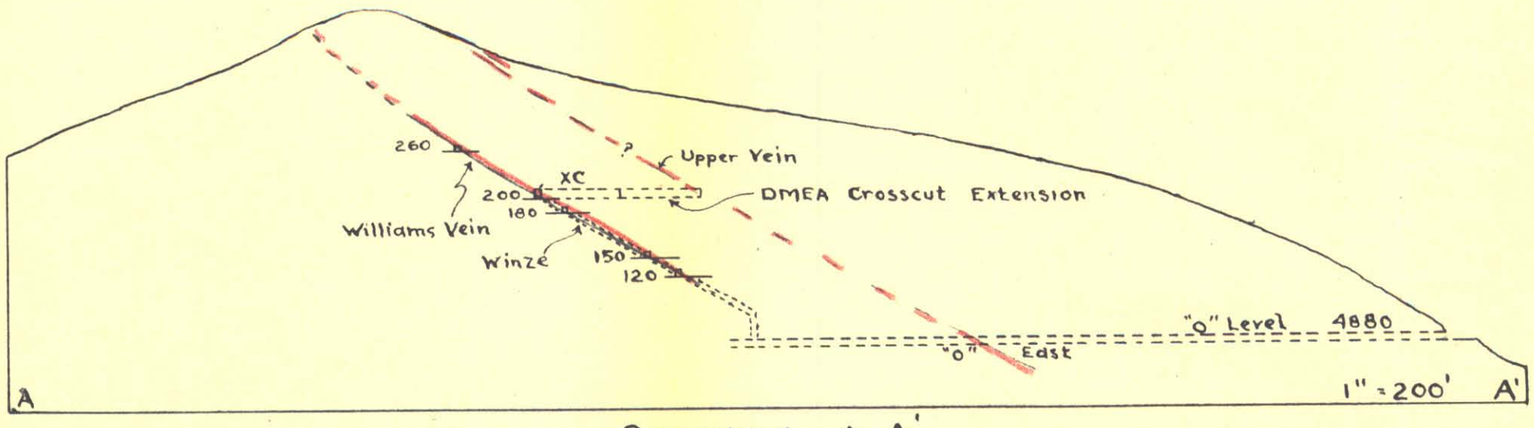


FIGURE . - MAP OF THE WILLIAMS TUNGSTEN MINE - MOHAVE COUNTY, ARIZONA



SECTION A-A'
WILLIAMS MINE
Showing relationship of Upper Vein to Williams Vein

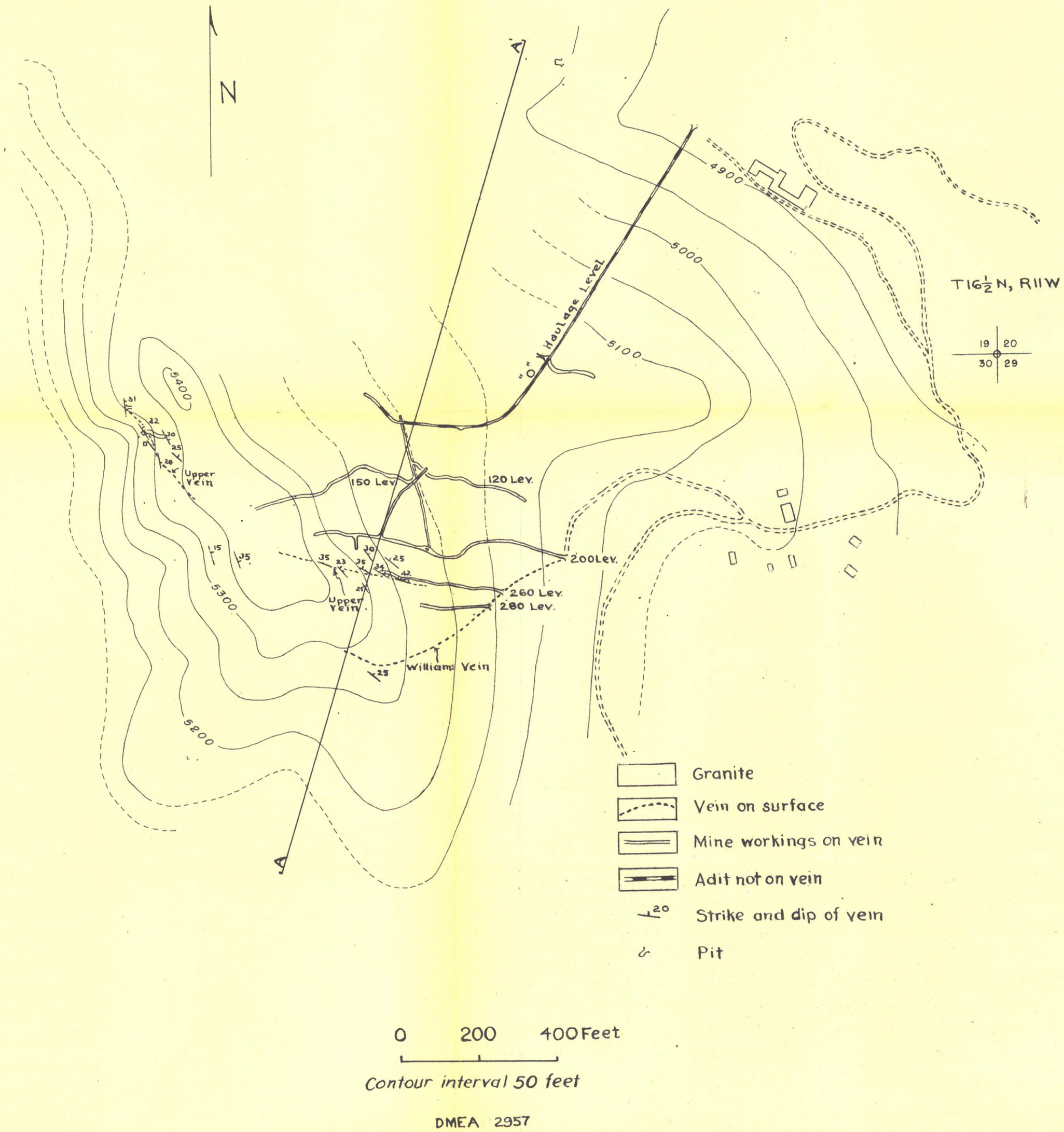


Figure 3 Map of the Williams tungsten mine, Mohave County, Arizona

Fig. 3

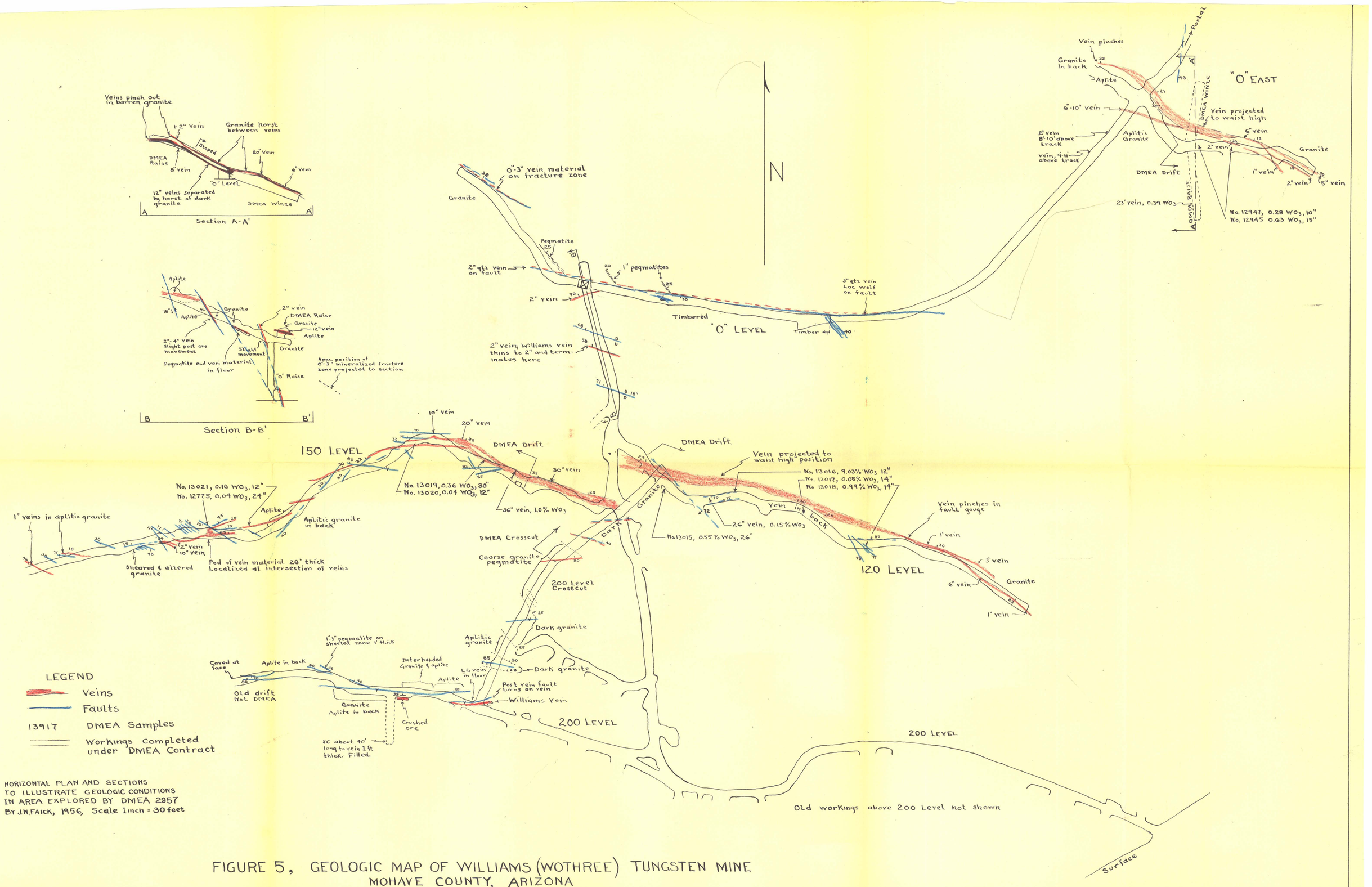


FIGURE 5, GEOLOGIC MAP OF WILLIAMS (WOTHREE) TUNGSTEN MINE
MOHAVE COUNTY, ARIZONA
DMEA 2957

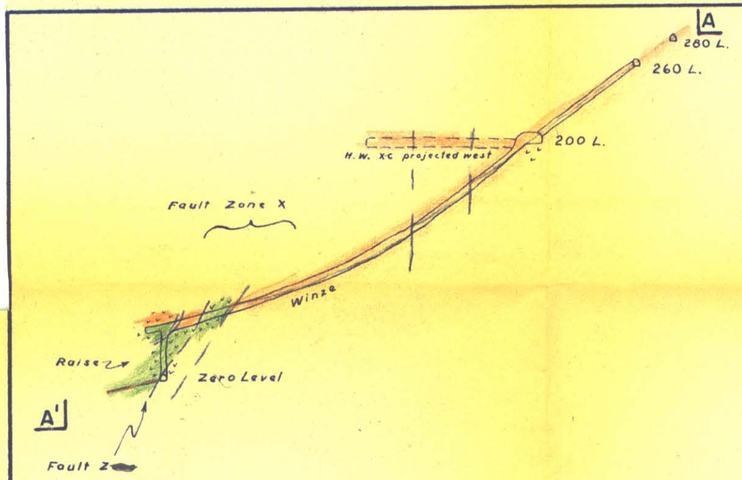


FIGURE 2 A

VERTICAL SECTION EAST THRU INCLINED WINZE

SCALE 1" = 100'

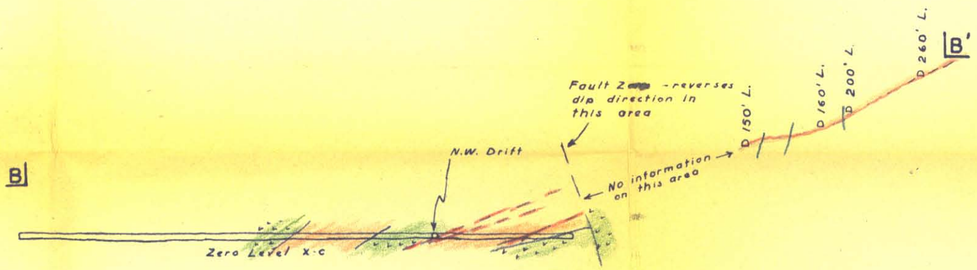


FIGURE 2 B

VERTICAL SECTION LOOKING EASTERLY THRU ZERO LEVEL X-CUT

SCALE - 1" = 200'

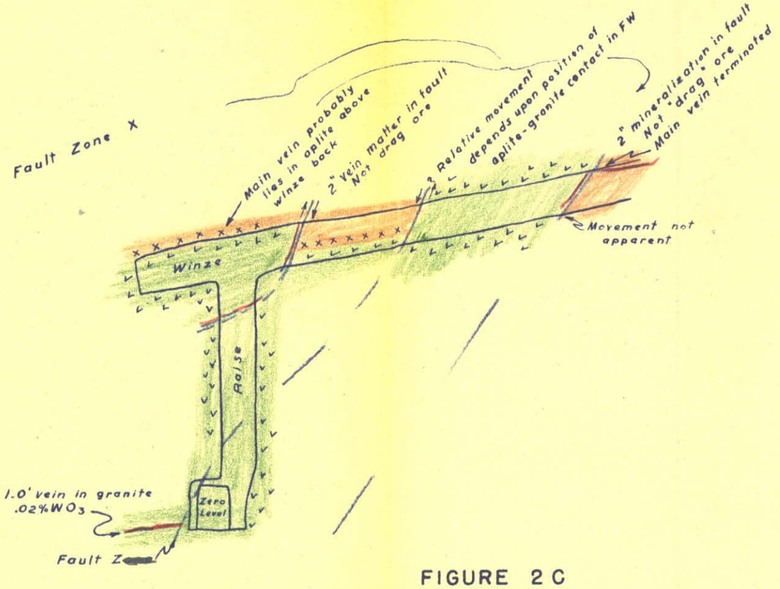


FIGURE 2 C

SECTION LOOKING EASTERLY THRU LOWER PORTION OF WINZE

SCALE - 1" = 20'

APLITE

GRANITE

TUNGSTEN BEARING OR SIMILAR VEIN

FAULT

FIGURE 2

DMEA 2957

VERTICAL SECTIONS THRU WOTHREE TUNGSTEN MINE

MOHAVE COUNTY, ARIZONA