DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

CONTROLLED DOCUMENT

DMEA ~~DMA~~ Docket No. 2649

DO NOT DETACH THIS SLIP

Action on this document is recorded and controlled in Reports and Records Branch. Any movement of this document between divisions or offices of DMA or movement outside DMA must be reported to the Reports and Records Branch. Actions taken that affect status of the case must also be reported.

This document has been recorded as

EXPLORATION PROJECT

Any action taken to change the type of request for assistance must be promptly reported to the Reports and Records Branch. Use DMA Form 2 for submitting these reports.

Routing Slip

Copies to USBM, USGS, and Region III.

To: Code 400, Rm. 3538 Date 8-13-52

To: _____ Date _____

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DO NOT DETACH

CONTROLLED DOCUMENT

R. E. Adams, Chief, Oper. Control and
Statistics Division, DMEA

Jan. 16, 1953

2649

Iron and Ferro-Alloy Division, DMEA

Removal of application from the active files
Docket No. DMEA 2649 - Tungsten
Isabella Mines
Big Four Tunnel
Kern County, California

The applicants were advised by letter on August 20, 1952, that additional information was needed before their application for exploration assistance could be processed. The data requested were not received, and on October 1, 1952, we again asked that in the interest of expediting the processing of the application, the information requested be promptly furnished. The data still were not received, and on December 3, 1952, they were advised by letter that if the data were not received by January 15, 1953, their application would be transferred to the inactive files.

To date, we have not received the data requested and are removing the docket from our Division files. The docket is transmitted herewith.

W. S. Martin, Acting Chief
Iron and Ferro-Alloy Division

Attachment

FARutledge/ls 1/16/53

CC: DOCKET
CODE 400
FIELD TEAM, REG. 3
ADMN. READ. FILE
D. M. LEMMON, USGS
R. W. GEEHAN, USBM

DEC 3 1952

Mr. . C. Cheesman, Gen. Partner
Tantalite Mines
Suite [illegible]
[illegible] South Hill Street
Los Angeles 14, California

re: Docket No. [illegible] - Thurston
Tantalite Mines
[illegible] Canyon
[illegible] County, California

Dear Mr. Cheesman:

On August 20, 1952, we wrote you requesting additional information needed to process the subject application for exploration assistance at the Big Four Tunnel. This information was not received, and on October 1, 1952, we again asked that in the interest of expediting the processing of the application, the information requested be promptly furnished.

The Defense Minerals Exploration Administration was notified by telegram dated October 16, 1952, that the information would be forwarded as soon as possible. To date, these data have not been received.

We wish to cooperate with you in the matter of allowing ample time, but if the needed data have not been received by January 15, 1953, we will then remove the application from the active file and consider the matter closed.

Sincerely yours,

(signed) FRANK E. JOHNSON

Acting Administrator

FAPutledge:lm
12/2/52

cc: Wash. Reading File
Docket
F. W. Keehan, [illegible]
[illegible] H. Lemmon, [illegible]
Field Team Reg. [illegible]
[illegible] C. Selfridge
F. A. Putledge

Interior Department

Defense Minerals Exploration
Administration

400

STRAIGHT WIRE

OCTOBER 3, 1952

MR. A. B. PARSONS
ROOM 306-A
CUSTOM HOUSE
SAN FRANCISCO, CALIFORNIA

[illegible] CONCERNING CO ISABELLA MINES APPLICATION DMEA 2649 FOR EXECUTED CONSENT TO FILE VOLUME RECOVERY PLAN IS LIMITED TO [illegible]. [illegible] TO GOVERNMENT MINERALS ROYALTY ON ALL MINERAL [illegible] LETTER AUGUST 20, 1952, TO D. G. CHESNAN.

C. O. Mittendorf

C. O. MITTENDORF
ADMINISTRATOR, DMEA

GCSelfridge:ls
10/3/52

Copy to: Docket No. 2649
Admn. Read. Files
G. C. Selfridge
Audits
Confirmation
Field Team, Region

OCT 1 1952

Mr. N. G. Chapman, Gen. Partner
Isabella Mines
Suite 510
609 South Hill Street
Los Angeles 14, California

Re: Docket No. DMEA 2649 - Tungsten
Isabella Mines
Big Four Tunnel
Kern County, California

Dear Mr. Chapman:

On August 20, 1952, we wrote you requesting additional information needed to process the subject application for exploration assistance at the Big Four Tunnel.

In the interest of expediting the Defense Minerals Program, it would be appreciated if you will promptly furnish the required information.

Sincerely yours,

S. C. Selfridge, Chief
Iron and Ferro-Alloy Division

FARutledge:lm
9/30/52

cc: Admn. Reading File
Docket
R. W. Cochan, USBM
D. M. Lemmon, USGS
Field Team Reg. III
S. C. Selfridge
F. A. Rutledge

OCT 1 1980

AUG 20 1952

Mr. D. G. Chessman, General Partner
Isabella Mines
Suite 510
629 South Hill Street
Los Angeles 14, California

Re: Docket No. DMEA 2649 - Tungsten
Isabella Mines
Big Four Tunnel
Kern County, California

Dear Mr. Chessman:

Reference is made to your application for exploration assistance to reopen the Big Four Tunnel. Before we can proceed with the processing of your application, Owner's Consent to Lien forms must be obtained.

In a review of the application, it was noticed that the lease agreement was for a five year period and covered scheelite and other tungsten-bearing ores only. Repayment of contract loans under the Defense Minerals Exploration Administration program covers a ten year period, but with the Owner's Consent to Lien, the Government is protected in case your lease is not extended. However, before a contract may be considered, royalty from the production of any base or precious metals discovered as the result of exploration in which the Government shares in the costs must be included in the repayment to the Government.

It is not clear from sections 11 and 11a of the lease pertaining to the location in the name of the First Parties any lodes or veins discovered whether the mineral rights go with the surface rights. This should be determined.

The description of the property covered by the lease and the subject application are not in agreement. Which is correct: the S½ of the NE¼ of Section 34 or the SW¼ of the NW¼ of Section 34?

Please have the attached Owner's Consent to Lien forms executed and return six copies to this office. When these are received along with the other information requested above, we will continue to process your application.

Sincerely yours,

cc: Admn. Reading File
Docket
R. W. Gephan, USBM
H. M. Lemmon, USGS
Field Team Reg. III
O. O. Selfridge
Wale Ford Rutledge

O. O. Selfridge, Chief
Iron and Ferro-Alloy Division

WARutledge:lm
8/20/52

400

IN REPLY REFER TO:
G-MD-CP

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

August 18, 1952

Memorandum

To: George C. Selfridge, DMEA

From: D. H. Lemmon, USGS

Subject: Exploration application $31,773.50-$40,303.50
Isabella Mines
Suite 510, 629 S. Hill St.
Los Angeles 14, California DMEA 2649 - Tungsten

Property: Big Four Tunnel
Secs. 34 and 35
T. 27 S., R. 32 E.
Kern County, California
(1½ miles north of Havilah)

Proposal: It is proposed to reopen a caved adit 1,700 feet long, driven 1905-07 in search of gold-bearing quartz veins. Some scheelite-bearing tactite is present on the end of the waste dump, and the lessees believe a tungsten ore body was hit near the end of the adit.

In 1951 the adit was reopened to a point 475 feet from the portal of the adit was again blocked in part during the winter of 1951-52.

The lessees apparently devoted much of their funds to rehabilitating the mill at Weldon rather than in finding an ore supply.

The Geological Survey has not examined the dump of the Big Four Tunnel, and has no record of what was found underground. Scheelite has been found in a number of deposits in the vicinity, both in quartz veins and in tactite. Production was small despite erection of mills in the period 1941-44 at Weldon, Isabella, and the Tungsten Chief mine 6 miles south of the Big Four Tunnel. The largest output was made by the Tungsten Chief mill which turned out about 3,500 units of WO_3. All the tungsten deposits found to date in this region are small and of low grade.

Copy retained 400

Recommendation. I suggest that this application be referred to the field team for examination of the property. The proposal to re-open the Big Four Tunnel should be evaluated on the basis of the dump and the portion that is open, the other occurrences of tungsten on the property should be examined and sampled, and the Weldon mill should be inspected. If reopening of the adit be recommended, the work should be planned at minimum cost to permit sampling of the face. The proposed costs seem excessive and such a sum might be spent to better advantage elsewhere on the property in near-surface exploration.

The ownership of mineral rights should be investigated to determine if they go with the surface rights, a matter that is not clear from sections 11 and 11a of the lease.

DMLemmon:gt

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : R. E. Adams, Chief, Oper. Control and Statistics Division, DMEA

DATE: Jan. 16, 1953

FROM : Iron and Ferro-Alloy Division, DMEA

BL

SUBJECT: Removal of application from the active files
Docket No. DMEA 2649 - Tungsten
Isabella Mines
Big Four Tunnel
Kern County, California

The applicants were advised by letter on August 20, 1952, that additional information was needed before their application for exploration assistance could be processed. The data requested were not received, and on October 1, 1952, we again asked that in the interest of expediting the processing of the application, the information requested be promptly furnished. The data still were not received, and on December 3, 1952, they were advised by letter that if the data were not received by January 15, 1953, their application would be transferred to the inactive files.

To date, we have not received the data requested and are removing the docket from our Division files. The docket is transmitted herewith.

WSMartin

W. S. Martin, Acting Chief
Iron and Ferro-Alloy Division

Attachment

FILE COPY
SURNAME:

R. E. Adams, Chief, Oper. Control and
Statistics Division, DMEA

Jan. 16, 1953

Rutledge
Martin

Iron and Ferro-Alloy Division, DMEA

Removal of application from the active files
Docket No. DMEA 2649 - Tungsten
Isabella Mines
Big Four Tunnel
Kern County, California

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W. S. Martin, Acting Chief
Iron and Ferro-Alloy Division

Attachment

FARutledge/ls 1/16/53

CC: DOCKET
CODE 400
FIELD TEAM, REG. 3
ADMN. REA. FILE
D. M. LEMMON, USGS
R. W. GEEHAN, USBM

FILE COPY 409
SURNAME:

Rutledge
Selfridge

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

DEC 3 1952

Mr. D. G. Chessman, Gen. Partner
Isabella Mines
Suite 510
629 South Hill Street
Los Angeles 14, California

Re: Docket No. DMEA 2649 - Tungsten
Isabella Mines
Big Four Tunnel
Kern County, California

Dear Mr. Chessman:

On August 20, 1952, we wrote you requesting additional information needed to process the subject application for exploration assistance at the Big Four Tunnel. This information was not received, and on October 1, 1952, we again asked that in the interest of expediting the processing of the application, the information requested be promptly furnished.

The Defense Minerals Exploration Administration was notified by telegram dated October 16, 1952, that the information would be forwarded as soon as possible. To date, these data have not been received.

We wish to cooperate with you in the matter of allowing ample time, but if the needed data have not been received by January 15, 1953, we will then remove the application from the active file and consider the matter closed.

Sincerely yours,

(signed) FRANK E. JOHNSON (fw)

Acting Administrator

FARutledge'lm
12/2/52

cc: Admn. Reading File
Docket
R. W. Geehan, USBM
D. M. Lemmon, USGS
Field Team Reg. III
G. C. Selfridge
F. A. Rutledge

F.H. 12-3-52

SENDER IS AWAITING A SPEEDY answer

PLEASE GIVE IT TO THE MESSENGER OR TELEPHONE WESTERN UNION

2477-C (6-48)

WESTERN UNION

W. P. MARSHALL, PRESIDENT

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

PB533 LA455

OCT 16 PM 7 57

L.PMA198 NL PD=PM LOS ANGELES CALIF 16=

G C SELFRIDGE=CHIEF IRON AND FERRO ALLOY DIVISION

DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 17 1952

DEPT OF INTERIOR WASHDC=

FORWARDING ADDITIONAL PAPERS FOR YOUR APPROVAL AS SOON AS POSSIBLE. DELAY UNAVOIDABLE DUE TO PARTIES OUT OF STATE. THANK YOU FOR YOUR PROMPT ATTENTION TO THIS MATTER AS WE ARE VERY ANXIOUS TO GET STARTED=

D G CHESSMAN..

No reply necessary. WSM

Isabella Mines

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

OCT 17 7 12 AM '52
BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

MF-500

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

REFERENCE SLIP

DATE 10-17-52

REFERRED TO:

1. Code 400
2.
3.
4.

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: .....

Check (X) before the items needing attention.

R. E. ADAMS

Initials of sender.

Ala

GPO 16—63815-1

FILE COPY
SURNAME:

Selfridge

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

G. C. Selfridge, Room 3538, Ext. 5284

Interior Department

Defense Minerals Exploration Administration

STRAIGHT WIRE

OCTOBER 3, 1952

MR. A. B. PARSONS
ROOM 306-A
CUSTOM HOUSE
SAN FRANCISCO, CALIFORNIA

HOLDING PROCESSING OF ISABELLA MINES APPLICATION DMEA 2649 FOR EXECUTED CONSENT TO LIEN FORMS BECAUSE LEASE IS LIMITED TO TUNGSTEN. REPAYMENT TO GOVERNMENT REQUIRES ROYALTY ON ALL MINERALS. SEE OUR LETTER AUGUST 20, 1952, TO D. G. CHESSMAN.

C. O. Mittendorf (fw)

C. O. MITTENDORF
ADMINISTRATOR, DMEA

GCSelfridge:ls
10/3/52

Copy to: Docket No. 2649
Admn. Read. Files
G. C. Selfridge
Audits
Confirmation
Field Team, Region

SH
10-6-52

FILE CO
SURNAME

Rutledge
Selfridge
Rutledge

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

OCT 1 1952

Mr. D. G. Cheesman, Gen. Partner
Isabella Mines
Suite 510
629 South Hill Street
Los Angeles 14, California

Re: Docket No. DMEA 2649 - Tungsten
Isabella Mines
Big Four Tunnel
Kern County, California

Dear Mr. Cheesman:

On August 20, 1952, we wrote you requesting additional information needed to process the subject application for exploration assistance at the Big Four Tunnel.

In the interest of expediting the Defense Minerals Program, it would be appreciated if you will promptly furnish the required information.

Sincerely yours,

George C. Selfridge

G.N. 10-1-52

G. C. Selfridge, Chief
Iron and Ferro-Alloy Division

FARutledge'lm
9/30/52

cc: Admn. Reading File
Docket
R. W. Geehan, USBM
D. M. Lemmon, USGS
Field Team Reg. III
G. C. Selfridge
F. A. Rutledge

ME-500

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

REFERENCE SLIP

DATE 9-9-52

REFERRED TO:

1. ~~Mr. Johnson, Rm. 4624~~
2. Mr. Dilfridge
3.
4.

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: ----------

Check (X) before the items needing attention.

R. E. ADAMS
Initials of sender.

GPO 16—63815-1

Frank:

Trust this letter is in accord with your news.

A.B.P.

Federal Supply Service
630 Sansome Street
San Francisco 11, California

September 4, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 8 1952

Mr. N. N. Sugarman
629 South Hill Street
Los Angeles 14, California

Dear Mr. Sugarman:

Apropos of the present status of the application of Isabella Mines for Government financial aid in exploring for tungsten ore in the Kernville (California) area:

As you know, this application has been received by the Defense Minerals Exploration Administration in Washington and has been docketed as "DMEA-2649". As you also know, DMEA has written regarding a formal "consent" from the lessors which would validate any future claim that the Government may have for royalty payments arising from shipments of ore that may be made as a result of the projected exploration program.

Mr. Frank Johnson, Chairman of the Operating Committee, DMEA, was in San Francisco last week and I had an opportunity to discuss some aspects of the project with him. I explained to him that your group had invested a very substantial amount of money in tungsten operations in the Kernville region; and expressed my opinion that your financial responsibility and managerial competence were established beyond question. I also told him that you had an operating organization ready to proceed promptly with the project just as soon as a contract with DMEA had been completed.

Mr. Johnson indicated that on the basis of information at hand, the project seems attractive from the Government's standpoint. However, he made a tentative suggestion that it might be divided into two phases, the financing of the second being contingent upon the results of the first. Phase No. 1 would

Mr. N. N. Sugarman September 4, 1952

consist of the re-habilitation and sampling of the tunnel (adit) and a preliminary examination of the surface "showings" on the hill above the tunnel. Phase No. 2 might be a limited amount of drifting, cross-cutting and raising and perhaps some core-drilling from the tunnel; but this would be undertaken only if the disclosures of Phase No. 1 were favorable.

The contract between Isabella Mines and DMEA might be drawn to provide something along these lines; and it seems to me that such a program would meet your needs and be entirely satisfactory to you. There is nothing official in the foregoing, but the ideas presented may be useful to you in the further development of your plans.

Mr. Johnson says that the DMEA has reduced its backlog of work and is in a position to act with dispatch on meritorious projects. He expects to be back in Washington very soon and has said he will be glad to do anything he can ~~to~~ help get prompt action on the application.

Sincerely yours,

A. B. Parsons

ABP/jr

cc: Mr. D. G. Chessman
Mr. Frank Johnson

FILE COPY
SURNAME:

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

Rutledge
Selfridge

Mr. D. G. Cheesman, General Partner
Isabella Mines
Suite 510
629 South Hill Street
Los Angeles 14, California

AUG 20 1952

Re: Docket No. DMEA 2649 - Tungsten
Isabella Mines
Big Four Tunnel
Kern County, California

Dear Mr. Cheesman:

Reference is made to your application for exploration assistance to reopen the Big Four Tunnel. Before we can proceed with the processing of your application, Owner's Consent to Lien forms must be obtained.

In a review of the application, it was noticed that the lease agreement was for a five year period and covered scheelite and other tungsten-bearing ores only. Repayment of contract loans under the Defense Minerals Exploration Administration program covers a ten year period, but with the Owner's Consent to Lien, the Government is protected in case your lease is not extended. However, before a contract may be considered, royalty from the production of any base or precious metals discovered as the result of exploration in which the Government shares in the costs must be included in the repayment to the Government.

It is not clear from sections 11 and 11a of the lease, pertaining to the location in the name of the First Parties any lodes or veins discovered, whether the mineral rights go with the surface rights. This should be determined.

The description of the property covered by the lease and the subject application are not in agreement. Which is correct: the SE¼ of the NE¼ of Section 34 or the SW¼ of the NW¼ of Section 34?

Please have the attached Owner's Consent to Lien forms executed and return six copies to this office. When these are received along with the other information requested above, we will continue to process your application.

Sincerely yours,

Signed 8/20

G. C. Selfridge, Chief
Iron and Ferro-Alloy Division

cc: Admn. Reading File
Docket
R. W. Geehan, USBM
D. M. Lemmon, USGS
Field Team Reg. III
G. C. Selfridge
F. A. Rutledge

Enclosures

FARutledge:lm
8/20/52

IN REPLY REFER TO:
G-MD-CF

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

August 18, 1952

Memorandum

To: George C. Selfridge, DMEA

From: D. M. Lemmon, USGS

Subject: Exploration application $31,773.50-$40,303.50
Isabella Mines
Suite 510, 629 S. Hill St.
Los Angeles 14, California DMEA 2649 - Tungsten

Property: Big Four Tunnel
Secs. 34 and 35
T. 27 S., R. 32 E.
Kern County, California
(1½ miles north of Havilah)

Proposal: It is proposed to reopen a caved adit 1,700 feet long, driven 1905-07 in search of gold-bearing quartz veins. Some scheelite-bearing tactite is present on the end of the waste dump, and the lessees believe a tungsten ore body was hit near the end of the adit.

In 1951 the adit was reopened to a point 475 feet from the portal of the adit was again blocked in part during the winter of 1951-52.

The lessees apparently devoted much of their funds to rehabilitating the mill at Weldon rather than in finding an ore supply.

The Geological Survey has not examined the dump of the Big Four Tunnel, and has no record of what was found underground. Scheelite has been found in a number of deposits in the vicinity, both in quartz veins and in tactite. Production was small despite erection of mills in the period 1941-44 at Weldon, Isabella, and the Tungsten Chief mine 6 miles south of the Big Four Tunnel. The largest output was made by the Tungsten Chief mill which turned out about 3,500 units of WO_3. All the tungsten deposits found to date in this region are small and of low grade.

Copy retained 400

Recommendation. I suggest that this application be referred to the field team for examination of the property. The proposal to re-open the Big Four Tunnel should be evaluated on the basis of the dump and the portion that is open, the other occurrences of tungsten on the property should be examined and sampled, and the Weldon mill should be inspected. If reopening of the adit be recommended, the work should be planned at minimum cost to permit sampling of the face. The proposed costs seem excessive and such a sum might be spent to better advantage elsewhere on the property in near-surface exploration.

The ownership of mineral rights should be investigated to determine if they go with the surface rights, a matter that is not clear from sections 11 and 11a of the lease.

D.M. Lemmon

IN REPLY REFER TO:

G-MD-CF

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

August 18, 1952

Memorandum

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From: D. M. Lemmon, USGS

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Isabella Mines
Suite 510, 629 S. Hill St.
Los Angeles 14, California DMEA 2649 - Tungsten

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Secs. 34 and 35
T. 27 S., R. 32 E.
Kern County, California
(1½ miles north of Havilah)

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DMLemmon:gt

IN REPLY REFER TO:

G-MD-CP

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

August 18, 1952

Memorandum

To: George C. Selfridge, DMEA

From: D. M. Lemmon, USGS

Subject: Exploration application $31,773.50-$40,303.50
Isabella Mines
Suite 510, 629 S. Hill St.
Los Angeles 14, California DMEA 2649 - Tungsten

Property: Big Four Tunnel
Secs. 34 and 35
T. 27 S., R. 32 E.
Kern County, California
(1½ miles north of Havilah)

Proposal: It is proposed to reopen a caved adit 1,700 feet long, driven 1905-07 in search of gold-bearing quartz veins. Some scheelite-bearing tactite is present on the end of the waste dump, and the lessees believe a tungsten ore body was hit near the end of the adit.

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The Geological Survey has not examined the dump of the Big Four Tunnel, and has no record of what was found underground. Scheelite has been found in a number of deposits in the vicinity, both in quartz veins and in tactite. Production was small despite erection of mills in the period 1941-44 at Weldon, Isabella, and the Tungsten Chief mine 6 miles south of the Big Four Tunnel. The largest output was made by the Tungsten Chief mill which turned out about 3,500 units of WO_3. All the tungsten deposits found to date in this region are small and of low grade.

Recommendation. I suggest that this application be referred to the field team for examination of the property. The proposal to re-open the Big Four Tunnel should be evaluated on the basis of the dump and the portion that is open, the other occurrences of tungsten on the property should be examined and sampled, and the Weldon mill should be inspected. If reopening of the adit be recommended, the work should be planned at minimum cost to permit sampling of the face. The proposed costs seem excessive and such a sum might be spent to better advantage elsewhere on the property in near-surface exploration.

The ownership of mineral rights should be investigated to determine if they go with the surface rights, a matter that is not clear from sections 11 and 11a of the lease.

DMLemmon:gt

DEFENSE MINERALS EXPLORATION ADMINISTRATION --

U.S. DEPARTMENT OF THE INTERIOR

WASHINGTON 25, D.C.

Gentlemen:

We desire to obtain aid from the Government as outlined and authorized by D.M.E.A. Order 1.

Attached hereto are four forms - MF-103 - filled in and signed. In addition thereto are explanatory notes and descriptive maps.

It is hoped that sufficient data to support our request for aid is contained in MF-103, and that the Administrator will authorize a contract with us.

Respectfully yours,

~~ISABELLA MINES~~

D. G. Chessman

~~D. G. Chessman, General~~ Partner

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
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-2649
Metal or Mineral
Date Received 8-12-52
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: Isabella Mines,
Suite 510
629 S. Hill St.
Los Angeles 14, Calif.

(*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

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

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise

(*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

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

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

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

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

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

5. *The exploration project.*—(State the mineral or minerals for which you to explore .....

.....

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within ..... days and be completed within ..... months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)?

(*b*) How do you propose to furnish your share of the costs?

☒ Money ☐ 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 August 8, 1952

Isabella Mines
(Applicant)

By [signature]

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

1. (a) Isabella Mines
(b) A Limited partnership State of California
(c) Inapplicable
(d)

(a)	(b)
E. G. Johnson Bodfish Kern County California	General Partner
D. G. Chessman 7387 Woodrow Wilson Hollywood 46, Calif.	General Partner
Lillian Jackson Reliable Glass Ware 208 S. Spring St. Los Angeles, Calif.	Limited Partner
M. T. Sugarman 110 N. Rossmore Los Angeles, Calif.	Limited Partner
Aubrey Gifford Bodfish, Kern County California	Limited Partner

3. (a) E. 1/2 of the S.E. 1/4 and the S.E. 1/4 of the N.E, 1/4 of Section 34, and the West 1/2 of Section 35 of Township 27 South Range 32 East M.D.B.M., Kern County, California.

(b) Big Four Tunnel.

(c) Property is held under Mineral Lease.

(d) Copy attached - Owner's subrogation agreement will be furnished.

(e) Not applicable.

(f) Not applicable.

4. (a) Situated in the beautiful Clear Creek valley, one and a half miles north of the ghost town of Havilah, California, and on land owned by the Bar Nothing Cattle Ranch, is the Big Four Tunnel.

Havilah (from the Bible, meaning "Land of Gold") was the center of a gold mining area, and before Bakersfield, was the County-Seat of Kern County, California.

In 1905 a group of railroad men, of the Big Four Brotherhood of Trainmen, headed by L. S. Hough of Los Angeles, combined to finance the driving a 3 or 4 thousand foot tunnel westward from Clear Creek into the base of the mountain, in the hopes of crosscutting the Rand gold vein (which runs north and south) at a depth of about 1300 ft.

From 1905 into 1907, a 5 ft. x 9 ft. tunnel was driven, without crosscuts or stopes, for a distance of 1700 ft. westward. Owing to the panic of 1907, work was discontinued on the tunnel at this distance. The former superintendent, now 78 years of age, lives on his ranch in the Walker Basin, 14 miles from the tunnel, and is the source of much information about the property.

In 1918 a portion of the tunnel, that had been timbered 300 feet from the portal, caved in. At that time the rail from the portal to the cave-in was removed.

Thirty years ago the rancher owning the property installed a concrete bulkhead 60 ft. in the drift, to impound the water the tunnel made and use the tunnel as a reservoir to water cattle.

Owing to the size of the tunnel, a large dump of about 8000 tons of rock was generated.

In 1942 it was discovered that the tail end of the dump contained Epidote and Tactite carrying Scheelite; and a considerable quantity of the Epidote was cobbled from the dump and milled at the Tungsten chief mill at Havilah.

In 1950, Earl Johnson, one of the General Partners of Isabella Mines, sampled the dump and got assays from 2/10% WO_3 to 1½% WO_3, for picked samples. The only evidence of Scheelite on the dump is contained in several hundred tons on the tail end of the dump. 95% of the dump is barren; only the last few hundred tons removed from the tunnel contain Scheelite.

Early in 1951, Mr. Johnson secured a mining lease from the Bar Nothing Ranch owners on 440 acres of their property. This lease covers property running one mile north and south along the strike of the veins, and 3/4 of a mile east and west.

As can be seen from the attached maps, there is a known Scheelite-bearing zone for a distance of seven miles north and south, with practically continuous outcroppings for half a mile across the top of the area penetrated by the tunnel.

During the late summer of 1951, the Isabella Mines group started to re-open the Big Four Tunnel. The entrance was cleared and bulkhead removed. From the bulkhead, for a

distance of 90 feet, the drift was found to be open and in perfect condition. The rock was hard, and no timber had ever been used.

Here, 150 feet from the entrance, at an area that had originally been timbered, it was found that the timbers had been rotted and it was caved.

For a distance of 40 ft., the distance the early-day timber continued, the tunnel was caved. This section was cleaned out and temporary timbering was done. Then a solid open section of tunnel was entered. This extended for 110 feet, then another cave-in was reached; this also had been originally timbered.

During the clearing and retimbering of this caved section of 50 feet, the old rail and air duct was uncovered. Beyond this cave-in, the rail was found to be in place and in good condition, and the tunnel again was in perfect untimbered condition for another 110 feet. Here again, at a distance of about 475 feet from the portal, was another caved section.

Work was discontinued on the tunnel, and the Welden Tungsten mill was purchased and rebuilt from a twenty-ton to a 50-ton mill, and all available money and crew was used in production and milling of ore from a small outcrop one mile south and on the same vein strike as the outcrop above the tunnel.

This is on a claim known as Tungsten Hill #1. Over $20,000.00 worth of Scheelite Concentrate has been produced from this small working; and a premium grade concentrate, cleaning to 65% and 70% WO_3 without penalty impurities, sold to the Molybdenum Corp. of America, through C. W. Jones of Bishop, California, and the Sun Valley Tungsten Co., of Sun Valley, California.

The recovery of Scheelite Concentrate from this property was 3/4%, and a comparison of the ore on the dump of the tunnel, with the ore produced from Tungsten Hill #1, shows an identical material with the exception that the Scheelite crystals on the dump are nearly twice the size as the crystals from Tungsten Hill #1. The outcroppings above the Big Four Tunnel are the same material as the outcrop on which the Tungsten Hill #1 was sunk.

David Baker, of Fresno, and George Blondsky, of Los Angeles, both eminent mining engineers, have examined this property, and it is the opinion of both that considering the large quantity of Scheelite-bearing ore on the dump, produced from only a crosscut drift, that a 50 to 150 foot Scheelite zone lies at the back of the tunnel. This fact, coupled with the geology of the hill, and the outcrops above the end of the tunnel, with over 800 feet of backs, caused them to recommend that the drift be re-opened at "all costs."

The very wet winter of '51-52 caused slides that partially

covered the entrance to the tunnel, allowing water to back up in the drift to a depth of two feet -- but an examination of the property could be readily made to verify all of the findings outlined here. A geological and engineering examination can readily be made to establish the feasibility of re-opening the entire tunnel and exploring the extent of the Scheelite deposits.

(b) Inapplicable.

(c) Endlining the Tungsten Hill #1 Claim -- on the south -- is the Tungsten Hill mine. During the early 1940's, this property produced about 700 units of Scheelite Concentrate. From this property to the Prosperity Mine, north two miles and crossing the Big Four Tunnel, several strong quartz veins run, with a strike of North 12° East and with a varying slight E. or W. dip.

Scheelite occurs in Quartz, Epidote and Tactite, which occurs on contact of Dolomite and Granite.

A 1907 report of the California State Division of Mines says of the Big Four Tunnel, "The drift cuts 4 Quartz veins of 7 to 25 ft. in width, having a N.W. S.E. strike with a slight dip East. The hanging walls are Granite Pherphry, the foot wall, limestone and schist. These veins are 350 ft. to 1,350 ft. at greatest depth below outcrop."

(d) The Big Four Tunnel entrance is about 600 feet from the paved highway, connecting Havilah and Bodfish. It is about the same level as the highway. The road to the entrance is accessible all year to trucks, but a small bridge should cross Clear Creek to allow cars to cross in the Spring, during high water.

The distance to Bodfish is 6 miles, Isabella 8 miles, Kernville 14 miles, Weldon 18 miles, and Bakersfield 50 miles -- all overpaved highways.

Nearest residence points are Havilah 2 miles, and the Bodfish Isabella area about 7 miles.

Isabella is the site of the New Isabella dam, being constructed to control the waters of the Kern river.

(e) Manpower is available in the area. Material and supplies are available at Kernville and Bakersfield.

Water is available from the tunnel and from Clear Creek, running in front of the tunnel entrance.

Southern California Edison Power line runs along the highway 600 feet from the mouth of the tunnel. Due to the cost of transformers and power line the proposed exploration project would use diesel power for air and power.

5. (a) Scheelite is the mineral to be explored for.

(b) It is proposed to:

Retimber the adit entrance, install new rail and ties to connect with the rail now in place, retie that rail, and install air blower and air ducts.

Purchase a mucking machine and a compressor large enough to supply air for the mucker and three air hammers.

Install air pipe to service these machines, clean out all muck and debris and properly retimber the heavy ground to the distance already explored.

At this point, to spile through the unopened, caved ground, timber it properly and to open any other caved ground encountered until the entire length of the tunnel is open for exploration.

Based on:

1. The similar characteristics of the ore on the dump and the outcrop above the tunnel.

2. The similarity of the ore produced from the Tungsten Hill #1 to the ore on the dump.

3. The practically unbroken seven mile mineralized zone.

4. The unrefutable evidence on the dump of Scheelite bearing ore produced from a depth of nearly 1000 feet below the surface.

5. The large tonnage of Scheelite bearing ore produced from crosscutting veins.

6. Evidence obtained from the Superintendent in charge of the original work.

It is reasonable to expect that sizable bodies of commercial quality ore will be encountered in the area somewhere between 1500 ft. and 1700 ft. from the portal.

When the tunnel is reopened for inspection, it is proposed to drift north and south on the vein or veins a distance of 50 feet each way. It is also proposed to explore with a 50 foot raise on one of the veins.

(c) The exploratory work will start immediately on the granting of an exploration contract and be completed within 6 months' time.

(d) Earl Grant Johnson, age 50. Grew up in Oregon mine country,

working for his father. High School and one year business college. Worked at Inspiration Mine, Miami, Arizona, from 19 to 21; building and construction business in Los Angeles age 31;-- took 3 years night school Mineralogy. Crystallography and Economic Geology; prospected and mined as hobby from 31 to 41; 41 mined Chromite in Northern California; 46 - placer mining in Trinity County, California; 47 to 49, operated Jack Pot Gold Mine and Mill near Havilah, California; 49 and 50, prospected for Tungsten; 51, studying Tungsten mills and Tungsten operations around Bishop and Fresno, California; presently in charge of mining and milling for Isabella Mines as General Partner.

D. S. Chessman, age 54. - Two years mining in Alaska - 1914-15; 17 - 18, officer pilot British R.F.C.; 19-20, operated Desert Forwarding Co. and many mines during Tonopah Divide boom; owned Reville Lead Mine, Nevada, 1920-27; automobile business Los Angeles 27, 28, 29; operated Golden Ace Mine, Arrowhead Mine; owned California Aircraft Co., Commercial Aircraft Co., Vice President Continental Airlines. 1930-33 - Building and Mortgage business, Los Angeles; 1934-41 - Business consultant and appraiser for Federal Court, Southern District, California; 1939-51, dewatered and retimbered and reopened Red Rock Mine, Yavapai County, Arizona; 42-44, civilian in charge of purchasing for Army Air-Force, Western District (11 Western States). 44-46, business consultant for 12 aircraft parts firms in Washington and Dayton, Ohio; 46-50, surplus property purchasing and sales for self.

Both General Partners named will be on the operation in a supervisory capacity with organization of highest qualified personnel.

6. (a) Independent contracts are not considered to be economical in this type of work.

(b) In estimating labor and supervision in this project, there are three stages of the operation - 1. work to be done to the point already explored; 2. work to be done reopening the remaining 1200 ft. of drift; 3. drifting and raising on the ore bodies.

Estimates of the first and third stages can be made with reasonable accuracy because of cost experience in the district and knowledge of the work to be accomplished.

The second stage can be estimated on a maximum and minimum basis, because the extent of caved sections is unknown.

Based on the experience gained in the first 500 feet of drift, and finding that only the portions which were originally timbered had caved, and the information from the former Superintendent that timbering had only been used in three sections, it is possible to assume that only 50 to 100 feet of additional caved ground will be encountered. Therefore, 100 feet could be used as a minimum figure. As a maximum

figure an estimated 400 feet of caved ground should be considered, although an examination of the dump shows that progressively harder rock was removed from the original workings as greater depth from the surface was gained. In either case the setup work and equipment costs would remain the same, only the labor, supervision, insurance and material costs would vary.

Labor - Stage 1.

Clearing entrance, timbering portal, laying rail, installing air ducts and air line.

Mucking out and timbering 100 feet of heavy ground

Work would be done on 3 8-hour shifts daily, and a 5-day work week. 4 men would be used on two shifts and 3 men on the third shift, with one supervisor on the job. The 4-man crews would each consist of one miner, one timber man, and two helpers; the 3-man shift would be one miner and two helpers.

It is estimated this work would require 12 days to complete.

2 Timber men	@	$2.25	per hr.	192 hrs.=	$432.00
3 Miners	@	2.00	" "	288 hrs.=	576.00
6 Muckers	@	1.75	" "	576 hrs.=	1008.00
1 Supervisor	@	2.50	" "	96 hrs.=	240.00
				1,152 hrs.	$2256.00

Direct labor cost for first stage -- $2,256.00

Labor - 2nd Stage.

This consists of spiling through, mucking out, and retimbering all caved areas, installing air duct, lights and air lines, retieing rails in place.

1. Minimum basis, 100 ft. of mucking and retimbering:

   12 men - as above. 15 days = $2,620.00
   Direct labor cost, second stage minimum - $2,620.00

2. Maximum basis 400 ft. of mucking and retimbering:

   12 men, as above. 40 days = $7,520.00
   Direct labor cost, second stage maximum - $7,520.00

Third Stage of Operation:

50 ft. drift north
50 ft. drift south
50 ft. raise

100 ft. of drift work, laying track, and installing airducts, at $20.00 a ft. $2,000.00

50 exploratory non-working raise @ $12.00 per ft. $ 600.00

1. Total direct labor:

Minimum ..... $ 7,476.00
Maximum 12,376.00

(c) Timber

Minimum	7,000 ft.	@ $125.00 per M.	$ 875.00
Maximum	16,000 ft.	@ $125.00 per M.	$2,000.00

Logging

Minimum	5,000 ft.	@ $110.00 per M.	$ 550.00
Maximum	12,500 ft.	@ $110.00 per M.	$1,375.00

Ties

3000 ft. @ $100.00 $ 300.00

Rail

6 tons 20# rail @ $125.00 $ 750.00

Spikes and Plates $ 125.00

Air Duct

1850 ft. of 14" 20 gauge galv. @ .45¢ per ft $832.50

Air Line Pipe & Fittings

1800 ft. @ 60¢ average $1,080.00

Fuels

Gasoline, diesel and lube. oil $ 800.00

Oxygen Masks

2 - at $300.00 each $ 600.00

First-aid and Mine Safety Equipment $ 200.00

(d)	Air Blower and engine		$ 500.00 ?
	Mechanical loader		3,000.00 — ?
	Compressor		5,000.00 — ?
	Electric generator panel board & wire		800.00 —
	3 ore cars @ $200.00		600.00
	2 Jack hammers, 1 steper, steel, bits and hose		1,800.00
	Gasoline driven chain saw		375.00
(e)	None		
(f)	Change room and office 12'x20' = 240' x $6.00 per ft. labor and material		$1,440.00
(g)	Accounting 6 mo. @ $125.00		
	Lease rental 6 mo. @ $200.00 month		
	Insurance - Minimum	$1,000.00	
	Maximum	1,600.00	$1,600.00
	Payroll Tax		
	Minimum	$ 220.00	
	Maximum		
	Sampling and assay		$ 500.00
(h)	Contingencies		
	Minimum	$1,000.00	
	Maximum	2,000.00	$2,000.00

RECAPITULATION

Minimum Basis:

(b)	Labor	
	Stage one	$2,256.00
	Stage two	2,620.00
	Stage three	2,600.00
		$7,476.00
(c)	Material and Supplies	
	Timber	$ 875.00
	Logging	550.00
	Ties	300.00
	Rail, Spikes & Plates	875.00
	Air Duct	832.50
	Air Line Pipe & Fittings	1,080.00
	Fuel	800.00
	Oxygen Masks	600.00
	First-aid Equipment	200.00
		$6,112.50
(d)	Operating Equipment	
	Air Blower Engine	$ 500.00
	Mechanical Loader	3,000.00
	Compressor	5,000.00
	Electric Generator	800.00
	3 Ore Cars	600.00
	Compressed Air Equipment	1,800.00
	Gasoline Chain Saw	375.00
		$12,075.00
(e)	None	
(f)	New buildings	
	Change room and office	$ 1,440.00
(g)	Miscellaneous	
	Accounting	$ 750.00
	Lease Rental	1,200.00
	Insurance	1,000.00
	Payroll Taxes	220.00
	Sampling & Assaying	500.00
		$3,670.00
(h)	Contingencies	1,000.00

Minimum Basis Total $31,773.50

RECAPITULATION

Maximum Basis:

(b)	**Labor**	
	Stage one	$2,256.00
	Stage two	7,520.00
	Stage three	2,600.00
		$12,376.00
(c)	**Material & Supplies**	
	Timber	$ 2,000.00
	Logging	1,375.00
	Ties	300.00
	Rail, Spikes & Plates	875.00
	Air Duct	832.50
	Air Line Pipe & Fittings	1,080.00
	Fuel	800.00
	Oxygen Masks	600.00
	First Aid Equipment	200.00
		$8,062.50
(d)	**Operating Equipment**	
	Air Blower and Engine	$ 500.00
	Mechanical Leader	3,000.00
	Comptessor (air)	5,000.00
	Electric Generator	800.00
	Ore Cars	600.00
	Compressed Air Equipment	1,800.00
	Gasoline Chain Saw	375.00
		$12,075.00
(e)	**None**	
(f)	**New buildings**	
	Change room & Office	$ 1,440.00
(g)	**Miscellaneous**	
	Accounting	$ 750.00
	Lease Rental	1,200.00
	Insurance	1,600.00
	Payroll Taxes	300.00
	Sampling & Assaying	500.00
		$ 4,350.00
(h)	**Contingencies**	$ 2,000.00

Maximum Basis Total $40,303.50

7.

(a) Yes
(b) Money

MINING LEASE

THIS LEASE AGREEMENT, made and entered into this _____ day of April, 1951, by and between LOUIS BAER and BETTY G. BAER, husband and wife, MARCUS RUDNICK and MARSHA RUDNICK, husband and wife, EDWIN L. O'REILLY and ELVIRA M. O'REILLY, husband and wife, WESTON L. O'REILLY and LELAND T. O'REILLY, hereinafter referred to as First Parties or Lessors, and B. G. JOHNSON and G. A. RIEL, JR., hereinafter referred to as Second Parties or Lessees,

Will need assignment of lease to Lacabella Arizona

W I T N E S S E T H:

First Parties do hereby lease, let and demise unto the Second Parties, and Second Parties do hereby lease, hire and take from the First Parties, all of First Parties' right, title and interest in and to the minerals within and underlying the following described real property in the County of Kern, State of California, to wit:

> The east half of the southwest quarter, and the southwest quarter of the northwest quarter of Section 34, and the west half of Section 35, all in Township 27 South, Range 32 East, M. D. B. & M., Kern County, California.
>
> SUBJECT to existing conditions, restrictions, reservations, easements and rights of way. EXCEPTING AND EXCLUDING HEREFROM, however, all of First Parties' right, title and interest in and to any oil, gas, hydrocarbon substances and minerals, other than scheelite or other tungsten bearing ores. FURTHER EXCEPTING AND EXCLUDING herefrom the exclusive right to use the surface of said lands, and all waters heretofore developed thereon and that may hereafter

be developed by First Parties, for the purpose of grazing and watering livestock thereon.

for the purpose of mining tungsten only, and for the term and upon and subject to each and all of the conditions, provisions and agreements hereinafter set forth, to each and all of which the First Parties and the Second Parties jointly and severally herewith respectively covenant and agree:

Section 1: The term of this lease shall be for a period of five years from and after the date hereof, and so long thereafter as minerals are produced therefrom in paying quantities or development work for the purpose of extraction of the same is being carried on and the rentals hereinafter provided are paid.

Section 2: Second Parties shall have the right to prospect for and extract scheelite and other tungsten bearing ores upon and from said property, and to make such tunnels or excavations, and erect or install such improvements and equipment as may be necessary or incidental for the foregoing purposes, and to construct and maintain such roads as may be incidental thereto, and may use existing roads and tunnels theron of First Parties for said purposes. Second Parties may likewise develop and use such water as they develop for mining purposes.

Section 3: Second Parties agree to use only such portion of the surface of said property as is reasonably necessary for their mining purposes, and agree to construct and locate surface roadways, improvements and excavations at such place or places, and in such manner, as First Parties' agent in writing may designate, and Second Parties further agree to conduct their operations on said property to

avoid so far as possible any interference with First Parties' grazing operations or damage to First Parties' grazing lands. Second Parties, at their own expense, agree to fence any and all excavations upon request therefor from the First Parties, and Second Parties further agree to keep gates closed in First Parties fences, and not to make any openings in First Parties fences without First Parties' prior written consent.

Section 4: Second Parties agree to pay to First Parties in lawful money of the United States of America, at Bakersfield, California, or at such other place as First Parties may from time to time in writing designate, as rental, a sum equal to one-tenth (1/10) of the gross proceeds of all tungsten bearing minerals taken and sold from said land, payable within ten days after the receipt by the Second Parties, or within ten days after the same is credited to their account, whichever is the earlier. "Gross proceeds" shall mean the total proceeds from the sale of such minerals produced, without deduction of transportation costs, milling costs, or other costs therefrom. Immediately upon extraction from the ground, ten per cent (10%) of all such minerals shall forthwith vest in and become the property of the First Parties, and First Parties may, if they so elect, take and receive their proportionate share of such minerals extracted. In the event First Parties elect to take their share of the minerals in kind, Second Parties agree to deliver the same to First Parties at such point and in such condition as Second Parties sell their share of such minerals extracted.

Section 5: In the event, commencing with the month of December, 1951, First Parties do not receive from their share of such minerals

produced, sums equalling or exceeding Two Hundred Dollars ($200.00) per month, then in that event Second Parties agree to pay to the First Parties each month thereafter, a sum equalling the difference between the moneys First Parties have received from the minerals produced, and the sum of Two Hundred Dollars ($200.00) per month, so that there will be paid, commencing with the month of December, 1951, and each month thereafter during the term of this lease, a minimum of Two Hundred Dollars ($200.00) per month, regardless of the amount of such ore mined and extracted. Said monthly payments shall be made on or before the tenth day of the succeeding month, for the preceding month commencing January 10, 1952.

Section 6: Second Parties agree to do all mining work on said properties in a good and minerlike fashion, so as to take out the greatest amount of ore practicable, with due regard to the safety, development and preservation of the same as a workable mine, and to mill the ore extracted in accordance with good mining practices. Second Parties further agree, each year during the term of this lease, to do or cause to be done not less than one hundred (100) man days of work in prospecting or mining activities upon the demised premises. Second Parties acknowledge that they are familiar with the condition of the demised premises and all existing tunnels theron, and agree to accept the same in their present condition, and further agree that the First Parties shall not be called upon to make any alterations, additions or repairs to the demised premises or any portion thereof. All labor, materials, machinery, equipment, supplies, and other costs required, used or incurred by the Second Parties in Second Parties' operations hereunder, shall be at the sole cost and expense of the Second Parties, and Second Parties shall promptly pay all claims for any obligations

incurred by Second Parties or arising out of Second Parties' operations hereunder, and Second Parties shall keep the demised premises free and clear of any mechanics' liens or claims of liens of any kind, nature or description arising out of or connected with Second Parties' operations. Second Parties further agree to pay all taxes levied and assessed upon Second Parties' improvements, equipment and personal property and are located upon the demised premises, and in addition Second Parties agree to pay nine-tenths (9/10) of the taxes levied and assessed upon the mineral rights during the continuance of this lease, and First Parties agree to pay the remainder of the taxes levied and assessed upon the demised real property and taxes levied and assessed upon First Parties' personal property located thereon.

Section 7: Second Parties further covenant and agree to keep full, complete and accurate books and records of their mining operations upon the demised premises and sales of minerals therefrom, and to render monthly summaries thereof to First Parties. Second Parties further agree to make surveys of work done by them both above or under the ground, and to furnish First Parties with copies of all surveys or maps made by the Second Parties, and to further furnish to First Parties copies of all assays or other information or tests made concerning Second Parties' operations hereunder. First Parties or their duly designated agent shall at all reasonable times have access to the books and records kept by Second Parties, and to make copies thereof, and First Parties shall have the right to enter and visit all parts of the demised premises and workings of the Second Parties for the purpose of taking assay samples and observing whether or not the terms of this lease are being fully and faithfully complied with by the Second Parties, and for the further purpose of posting and keeping posted notices of non-responsibility.

Section 8: Second Parties further agree to comply with all laws of the County of Kern, State of California, and the United States, relating to or governing Second Parties' operations hereunder, and Second Parties further agree, at their own expense,

To carry workmens' compensation covering all employees of the Second Parties engaged in their operations hereunder. Second Parties further agree to indemnify and hold First Parties harmless of and from claims for damages or injuries to persons or property occasioned by Second Parties' operations hereunder, and Second Parties agree to procure and maintain in full force and effect public liability insurance in an amount of not less that $100,000.00 for the injuries to one person, and $200,000.00 for injuries to more than one person in any one accident, in a company or companies acceptable to First Parties, and First Parties shall be named as a party insured in said policies. Second Parties further agree to procure and maintain in force property damage insurance in an amount of not less than $10,000.00 insuring the contingent liability of the First Parties for damage to property resulting from Second Parties' operations hereunder. Second Parties agree to procure a certificate or certificates from the insurance company or companies issuing the above mentioned insurance, that the same is in full force and effect, and that the carrier will not cancel, alter or modify said insurance without first giving First Parties ten days' written notice of their intention so to do. In the event Second Parties fail to procure any such insurance at any time during the term hereof, then First Parties may procure the same, pay the premiums thereon, and said premiums so paid shall be considered to be due as additional royalties accruing hereunder and shall be repaid to First Parties upon demand.

Section 9: Second Parties' interest hereunder shall not be assignable in whole or in part, nor shall the same be sublet either in whole or in part without the prior written consent of the First Parties first had and obtained, and any attemped assignment or subletting of the same or any interest therein without such prior written consent, shall be grounds, at the option of the First Parties, for the immediate termination and cancellation of this lease.

Section 10: Upon any termination of this lease, providing the Second Parties are not in default, the Second Parties shall have the right to remove their equipment and improvements placed upon the demised premises, within sixty days after such termination, Providing the same can be removed without injury to the demised premises, and providing further the removal thereof will not leave the tunnel or improvements in a dangerous condition. Any improvements or equipment Second Parties fail to remove within sixty days after termination, shall be and become the property of the First Parties without the payment of any compensation therefor.

Section 11: Second Parties further agree that they will locate in the name of the First Parties any veins of ore intersected by operations in the Big Four Tunnel on or off of the demised premises which are subject to location, and First Parties' right, title and interest in and to said locations when so made, and the minerals therein, shall be and become a portion of the demised premises subject to this lease.

Section 11 A. First Parties hereby further license the Second Parties to enter upon the North half and also the Southeast quarter of Section 2, Township 28 South, Range 32 East, M.D.B. & M., County of Kern for the purpose of prospecting for minerals and Second Parties hereby agree to locate in the name of First Parties any and all loads or veins of ore located thereon by them, which are subject to location, and thereafter First Parties' right, title and interest therein shall be subject to this lease.

Section 11 B. First Parties further except and reserve from this lease the right to grant easements for roadways and the right to grant others the right to use a millsite over and upon Section 35 in Township 27 South, Range 32 East, M.D.B. & M. in the County of Kern.

Section 12: It is further understood and agreed that this lease is made and intended to cover mining only for tungsten bearing ores, and that Second Parties shall have no right to mine and remove other minerals from the demised premises unless a further agreement is reached between the parties therefor.

Section 13: In the event Second Parties default in the performance of the covenants and conditions herein contained on their part to be performed, or fail to pay the royalties or rental payments herein provided, at the time specified, and in the event Second Parties fail to remedy said default within thirty days after receiving written notice so to do, then in that event First Parties may at their option terminate this lease and First Parties shall thereupon be entitled to immediate possession thereof and to re-enter the same and remove all persons therefrom.

Section 14: Each and all of the terms, conditions and provisions in this lease contained on the part of the Second Parties to be kept and performed are hereby declared to be express conditions subsequent as well as express covenants by the Second Parties, and in case default be made by the Second Parties in the keeping or performance of any of such terms or conditions or provisions, or in the event of any of the following (each of which is hereby expressly declared to be a default on the part of the Second Parties) to wit: (a) the filing of any petition in bankruptcy by or against the Second Parties; (b) the filing of any other petition or the taking of any proceeding or the seeking of any relief under Section 75 or any other section or provision of the Bankruptcy Act as it now exists; or may hereafter be amended or supplemented; (c) the filing of any petition for the appointment of a receiver of Second Parties' assets or any part thereof; (d) the making of any

assignment by Second Parties for the benefit of creditors; or (e) the taking advantage by the Second Parties of any insolvency law; - then the First Parties may at their election and in addition to any other remedy they may have either under this lease or in law or in equity, declare this lease terminated and re-enter the demised premises and remove all persons therefrom, and in any such event the First Parties shall be entitled to retain any and all ore upon the demised premises that has not then been milled, and the Second Parties shall have no right or interest therein or thereto, nor shall the Second Parties be entitled to any compensation therefor or on account thereof.

Section 15: The Second Parties shall pay all cost and expenses (including attorney's fees in a reasonable amount) incurred by the First Parties in bringing any action to enforce any of the terms and conditions of this lease, or any action to dispossess the Second Parties or to recover possession of the demised premises, irrespective of whether such action shall be brought to final judgment or not.

Section 16: Any Notice which may be given either party to the other under or in regard to this lease shall be deemed to have been given when made in writing and deposited in a sealed envelope in the United States mail, registered and postage prepaid and addressed as follows:

To the First Parties:

To the Second Parties:

The address to which any notice may be given to either party may be changed upon written notice given by such party to the other as herein provided.

Section 17: This lease may be terminated by the Second Parties, if not in default, upon giving sixty days' written notice to the First Parties of their intention to surrender the same and by delivering to the First Parties a good and sufficient quitclaim deed restoring the demised premises to the First Parties free and clear of this lease and any lien or clouds occasioned thereby. In the event of such termina tion, Second Parties shall thereafter be released from any further obligations accruing under the terms of this lease. No such cancellation or termination shall relieve Second Parties, however, from any obligation accruing prior to the effective date of such termination.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands the day and year first above written.

Louis Baer

Betty G. Baer

Marcus Rudnick

Marsha Rudnick

Edwin L. O'Reilly

Elvira M. O'Reilly

Weston L. O'Reilly

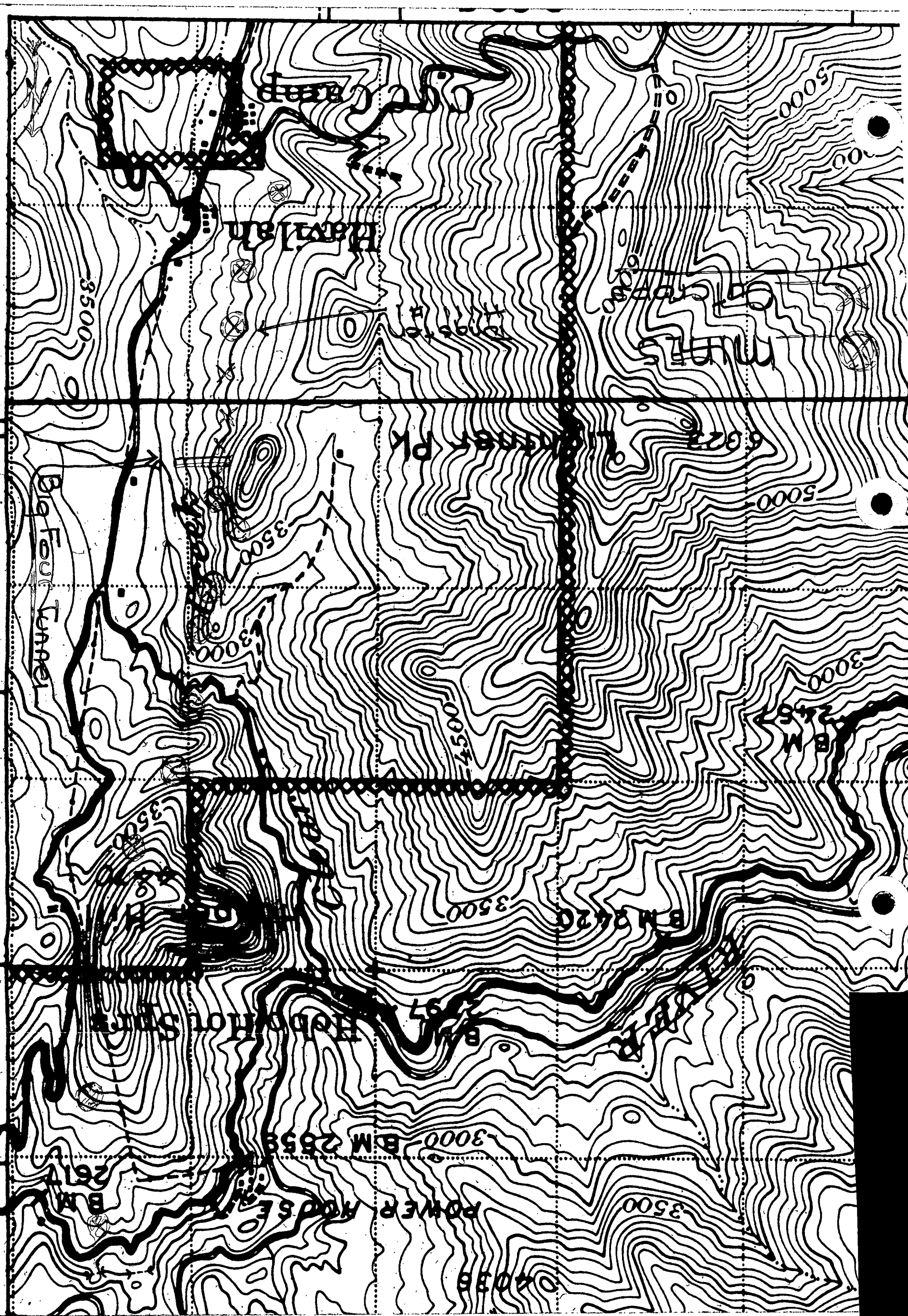
Leland T. O'Reilly

LESSORS
OR
FIRST PARTIES

E. G. Johnson

G. A. Hiel, Jr.

Lessees
of
Second Parties


Big Foot Canyon
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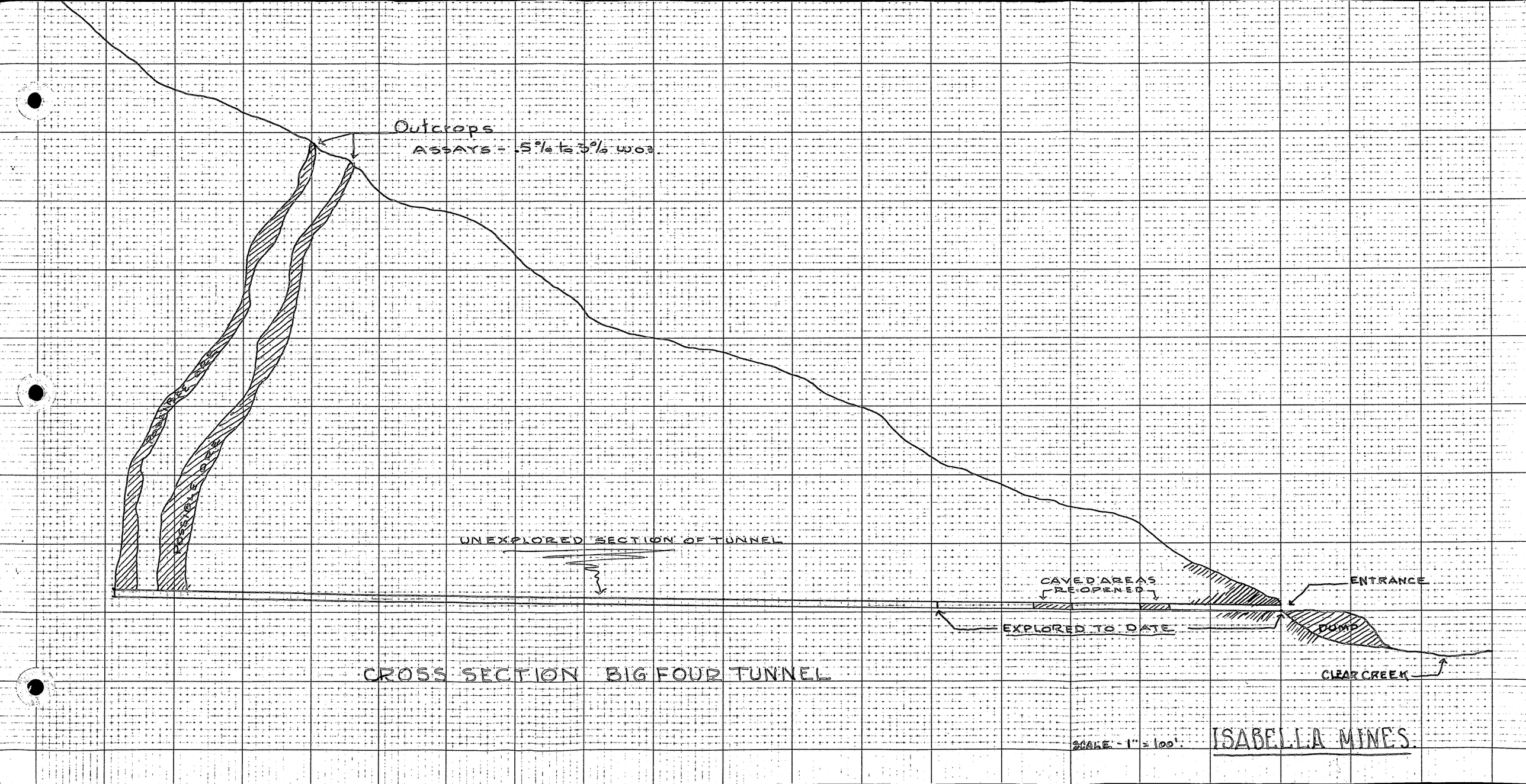
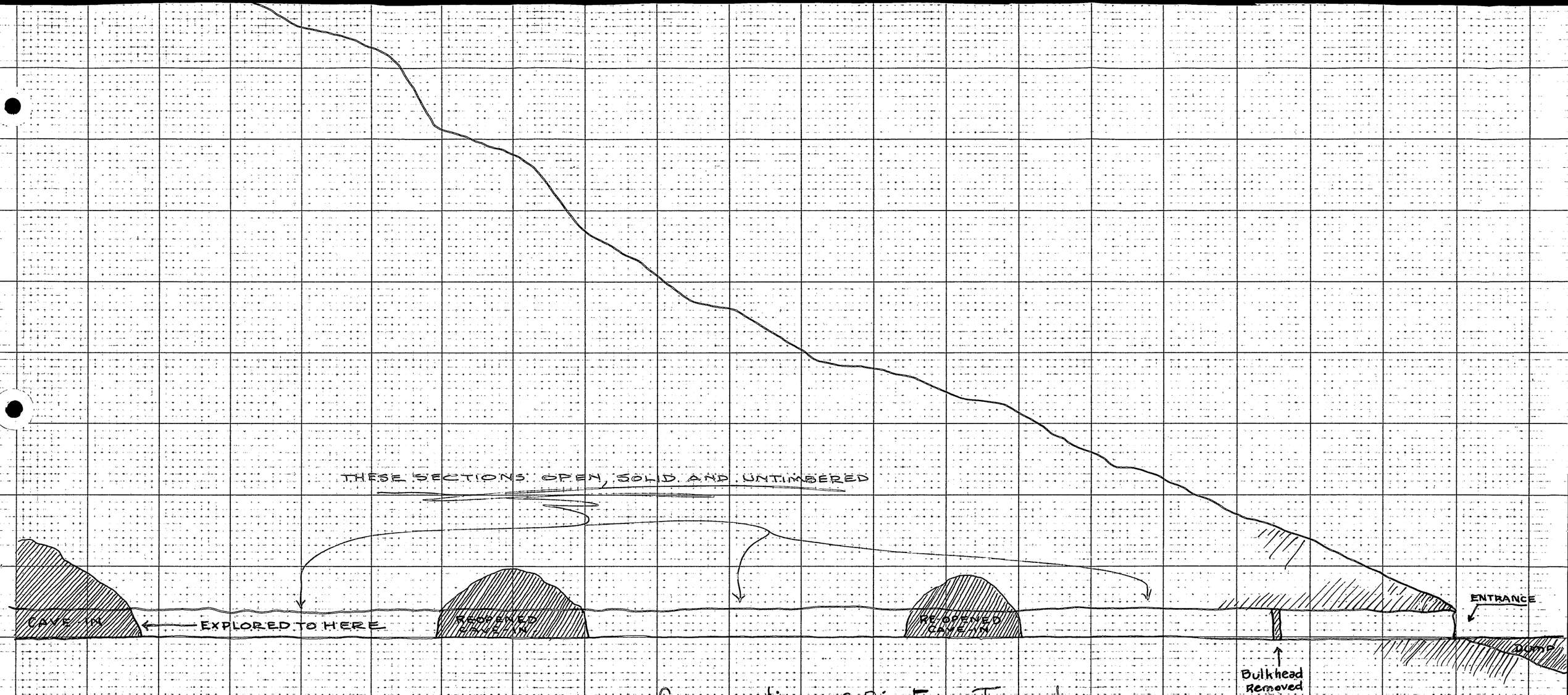
BM 2455
BM 2617
BM 2658
Hobo Hot Springs
Power Rocks
Hallilah
Cow Camp


Outcrops
ASSAYS - .5% to 3% WO3
POSSIBLE ORE
POSSIBLE ORE
UNEXPLORED SECTION OF TUNNEL
CAVED AREAS
RE-OPENED
ENTRANCE
EXPLORED TO DATE
DUMP
CLEAR CREEK
CROSS SECTION BIG FOUR TUNNEL
SCALE - 1" = 100'.
ISABELLA MINES.



Cross section of Big Four Tunnel
Explored to date.

Scale - 1" = 25'

ISABELLA MINES

Mr. D. G. Chessman
Isabella Mines
Suite 510
629 S. Hill Street
Los Angeles 14, California

Subject: DMEA-2649
Re: Exploration Assistance
Big Four Tunnel
August 13, 1952

My dear Mr. Chessman:

The receipt of your application dated August 8, 1952, for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-2649 and referred to the Iron and Ferro-Alloys Division.

Kindly refer to DMEA-2649 in any future correspondence relating to your application.

Sincerely yours,

ROBERT E. ADAMS

Robert E. Adams
Chief, Operation's Control
and Statistics Division

Requested
Minimum $31,773.50
Maximum 40,303.50

25451

DEFENSE MINERALS EXPLORATION ADMINISTRATION --
U.S. DEPARTMENT OF THE INTERIOR
WASHINGTON 25, D.C.

Gentlemen:

We desire to obtain aid from the Government as outlined and authorized by D.M.E.A. Order 1.

Attached hereto are four forms - MF-103 - filled in and signed. In addition thereto are explanatory notes and descriptive maps.

It is hoped that sufficient data to support our request for aid is contained in MF-103, and that the Administrator will authorize a contract with us.

Respectfully yours,

ISABELLA MINES

D. G. Chessman, General Partner

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
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-2649
Metal or Mineral
Date Received 8-12-52
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: Isabella Mines,
Suite 510
629 S. Hill St.
Los Angeles 14, Calif.

(*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

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

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise

(*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

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

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

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

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

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

5. *The exploration project.*—(*a*) [redacted]e the mineral or minerals for which you wi[redacted] explore .....

.....

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within ..... days and be completed within ..... months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in [redacted] estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)?

(*b*) How do you propose to furnish your share of the costs?

☒ Money ☐ 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 August 8, 195[redacted]2

Isabella Mines
(Applicant)

By [signature]

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

1. (a) Isabella Mines
   (b) A limited partnership State of California
   (c) Inapplicable
   (d)

(a)	(b)
E. G. Johnson Bodfish Kern County California	General Partner
D. G. Chessman 7387 Woodrow Wilson Hollywood 46, Calif.	General Partner
Lillian Jackson Reliable Glass Ware 208 S. Spring St. Los Angeles, Calif.	Limited Partner
M. T. Sugarman 110 N. Rossmore Los Angeles, Calif.	Limited Partner
Aubrey Gifford Bodfish, Kern County California	Limited Partner

3. (a) E. 1/2 of the S.E. 1/4 and the S.E. 1/4 of the N.E. 1/4 of Section 34, and the West 1/2 of Section 35 of Township 27 South Range 32 East M.D.B.M., Kern County, California.

   (b) Big Four Tunnel.

   (c) Property is held under Mineral Lease.

   (d) Copy attached - Owner's subrogation agreement will be furnished.

   (e) Not applicable.

   (f) Not applicable.

4. (a) Situated in the beautiful Clear Creek valley, one and a half miles north of the ghost town of Havilah, California, and on land owned by the Bar Nothing Cattle Ranch, is the Big Four Tunnel.

   Havilah (from the Bible, meaning "Land of Gold") was the center of a gold mining area, and before Bakersfield, was the County-Seat of Kern County, California.

In 1905 a group of railroad men, of the Big Four Brotherhood of Trainmen, headed by L. S. Hough of Los Angeles, combined to finance the driving a 3 or 4 thousand foot tunnel westward from Clear Creek into the base of the mountain, in the hopes of crosscutting the Rand gold vein (which runs north and south) at a depth of about 1300 ft.

From 1905 into 1907, a 5 ft. x 9 ft. tunnel was driven, without crosscuts or stopes, for a distance of 1700 ft. westward. Owing to the panic of 1907, work was discontinued on the tunnel at this distance. The former superintendent, now 78 years of age, lives on his ranch in the Walker Basin, 14 miles from the tunnel, and is the source of much information about the property.

In 1918 a portion of the tunnel, that had been timbered 300 feet from the portal, caved in. At that time the rail from the portal to the cave-in was removed.

Thirty years ago the rancher owning the property installed a concrete bulkhead 60 ft. in the drift, to impound the water the tunnel made and use the tunnel as a reservoir to water cattle.

Owing to the size of the tunnel, a large dump of about 8000 tons of rock was generated.

In 1942 it was discovered that the tail end of the dump contained Epidote and Tactite carrying Scheelite; and a considerable quantity of the Epidote was cobbled from the dump and milled at the Tungsten chief mill at Havilah.

In 1950, Earl Johnson, one of the General Partners of Isabella Mines, sampled the dump and got assays from 2/10% WO_3 to 1½% WO_3, for picked samples. The only evidence of Scheelite on the dump is contained in several hundred tons on the tail end of the dump. 95% of the dump is barren; only the last few hundred tons removed from the tunnel contain Scheelite.

Early in 1951, Mr. Johnson secured a mining lease from the Bar Nothing Ranch owners on 440 acres of their property. This lease covers property running one mile north and south along the strike of the veins, and 3/4 of a mile east and west.

As can be seen from the attached maps, there is a known Scheelite-bearing zone for a distance of seven miles north and south, with practically continuous outcroppings for half a mile across the top of the area penetrated by the tunnel.

During the late summer of 1951, the Isabella Mines group started to re-open the Big Four Tunnel. The entrance was cleared and bulkhead removed. From the bulkhead, for a

distance of 90 feet, the drift was found to be open and in perfect condition. The rock was hard, and no timber had ever been used.

Here, 150 feet from the entrance, at an area that had originally been timbered, it was found that the timbers had been rotted and it was caved.

For a distance of 40 ft., the distance the early-day timber continued, the tunnel was caved. This section was cleaned out and temporary timbering was done. Then a solid open section of tunnel was entered. This extended for 110 feet, then another cave-in was reached; this also had been originally timbered.

During the clearing and retimbering of this caved section of 50 feet, the old rail and air duct was uncovered. Beyond this cave-in, the rail was found to be in place and in good condition, and the tunnel again was in perfect untimbered condition for another 110 feet. Here again, at a distance of about 475 feet from the portal, was another caved section.

Work was discontinued on the tunnel, and the Weldon Tungsten mill was purchased and rebuilt from a twenty-ton to a 50-ton mill, and all available money and crew was used in production and milling of ore from a small outcrop one mile south and on the same vein strike as the outcrop above the tunnel.

This is on a claim known as Tungsten Hill #1. Over $20,000.00 worth of Scheelite Concentrate has been produced from this small working; and a premium grade concentrate, cleaning to 65% and 70% WO_3 without penalty impurities, sold to the Molybdenum Corp. of America, through C. W. Jones of Bishop, California, and the Sun Valley Tungsten Co., of Sun Valley, California.

The recovery of Scheelite Concentrate from this property was 3/4%, and a comparison of the ore on the dump of the tunnel, with the ore produced from Tungsten Hill #1, shows an identical material with the exception that the Scheelite crystals on the dump are nearly twice the size as the crystals from Tungsten Hill #1. The outcroppings above the Big Four Tunnel are the same material as the outcrop on which the Tungsten Hill #1 was sunk.

David Baker, of Fresno, and George Blondsky, of Los Angeles, both eminent mining engineers, have examined this property, and it is the opinion of both that considering the large quantity of Scheelite-bearing ore on the dump, produced from only a crosscut drift, that a 50 to 150 foot Scheelite zone lies at the back of the tunnel. This fact, coupled with the geology of the hill, and the outcrops above the end of the tunnel, with over 800 feet of backs, caused them to recommend that the drift be re-opened at "all costs."

The very wet winter of 51-52 caused slides that partially

covered the entrance to the tunnel, allowing water to back up in the drift to a depth of two feet -- but an examination of the property could be readily made to verify all of the findings outlined here. A geological and engineering examination can readily be made to establish the feasibility of re-opening the entire tunnel and exploring the extent of the Scheelite deposits.

(b) Inapplicable.

(c) Endlining the Tungsten Hill #1 Claim -- on the south -- is the Tungsten Hill mine. During the early 1940's, this property produced about 700 units of Scheelite Concentrate. From this property to the Prosperity Mine, north two miles and crossing the Big Four Tunnel, several strong quartz veins run, with a strike of North 12° East and with a varying slight E. or W. dip.

Scheelite occurs in Quarts, Epidote and Tactite, which occurs on contact of Dolomite and Granite.

A 1907 report of the California State Division of Mines says of the Big Four Tunnel, "The drift cuts 4 Quartz veins of 7 to 25 ft. in width, having a N.W. S.E. strike with a slight dip East. The hanging walls are Granite Phorphry, the foot wall, limestone and schist. These veins are 350 ft. to 1,350 ft. at greatest depth below outcrop."

(d) The Big Four Tunnel entrance is about 600 feet from the paved highway, connecting Havilah and Bodfish. It is about the same level as the highway. The road to the entrance is accessible all year to trucks, but a small bridge should cross Clear Creek to allow cars to cross in the Spring, during high water.

The distance to Bodfish is 6 miles, Isabella 8 miles, Kernville 14 miles, Weldon 18 miles, and Bakersfield 50 miles -- all overpaved highways.

Nearest residence points are Havilah 2 miles, and the Bodfish Isabella area about 7 miles.

Isabella is the site of the New Isabella dam, being constructed to control the waters of the Kern river.

(e) Manpower is available in the area. Material and supplies are available at Kernville and Bakersfield.

Water is available from the tunnel and from Clear Creek, running in front of the tunnel entrance.

Southern California Edison Power line runs along the highway 600 feet from the mouth of the tunnel. Due to the cost of transformers and power line the proposed exploration project would use diesel power for air and power.

5. (a) Scheelite is the mineral to be explored for.

(b) It is proposed to:

Retimber the adit entrance, install new rail and ties to connect with the rail now in place, retie that rail, and install air blower and air ducts.

Purchase a mucking machine and a compressor large enough to supply air for the mucker and three air hammers.

Install air pipe to service these machines, clean out all muck and debris and properly retimber the heavy ground to the distance already explored.

At this point, to spile through the unopened, caved ground, timber it properly and to open any other caved ground encountered until the entire length of the tunnel is open for exploration.

Based on:

1. The similar characteristics of the ore on the dump and the outcrop above the tunnel.

2. The similarity of the ore produced from the Tungsten Hill #1 to the ore on the dump.

3. The practically unbroken seven mile mineralized zone.

4. The unrefutable evidence on the dump of Scheelite bearing ore produced from a depth of nearly 1000 feet below the surface.

5. The large tonnage of Scheelite bearing ore produced from crosscutting veins.

6. Evidence obtained from the Superintendent in charge of the original work.

It is reasonable to expect that sizable bodies of commercial quality ore will be encountered in the area somewhere between 1500 ft. and 1700 ft. from the portal.

When the tunnel is reopened for inspection, it is proposed to drift north and south on the vein or veins a distance of 50 feet each way. It is also proposed to explore with a 50 foot raise on one of the veins.

(c) The exploratory work will start immediately on the granting of an exploration contract and be completed within 6 months' time.

(d) Earl Grant Johnson, age 50. Grew up in Oregon mine country,

working for his father. High School and one year business college. Worked at Inspiration Mine, Miami, Arizona, from 19 to 21; building and construction business in Los Angeles age 31;-- took 3 years night school Mineralogy. Chrystallorgraphy and Economic Geology; prospected and mined as hobby from 31 to 41; 41 mined Chromite in Northern California; 46 - placer mining in Trinity County, California; 47 to 49, operated Jack Pot Gold Mine and Mill near Havilah, California; 49 and 50, prospected for Tungsten; 51, studying Tungsten mills and Tungsten operations around Bishop and Fresno, California; presently in charge of mining and milling for Isabella Mines as General Partner.

D. G. Chessman, age 54. - Two years mining in Alaska - 1914-15; 17 - 18, officer pilot British R.F.C.; 19-20, operated Desert Forwarding Co. and many mines during Tonopah Divide boom; owned Reville Lead Mine, Nevada, 1920-27; automobile business Los Angeles 27, 28, 29; operated Golden Ace Mine, Arrowhead Mine; owned California Aircraft Co., Commercial Aircraft Co., Vice President Continental Airlines. 1930-33 - Building and Mortgage business, Los Angeles; 1934-41 - Business consultant and appraiser for Federal Court, Southern District, California; 1939-51, dewatered and retimbered and reopened Red Rock Mine, Yavapai County, Arizona; 42-44, civilian in charge of purchasing for Army Air-Force, Western District (11 Western States). 44-46, business consultant for 12 aircraft parts firms in Washington and Dayton, Ohio; 46-50, surplus property purchasing and sales for self.

Both General Partners named will be on the operation in a supervisory capacity with organization of highest qualified personnel.

6. (a) Independent contracts are not considered to be economical in this type of work.

(b) In estimating labor and supervision in this project, there are three stages of the operation - 1. work to be done to the point already explored; 2. work to be done reopening the remaining 1200 ft. of drift; 3. drifting and raising on the ore bodies.

Estimates of the first and third stages can be made with reasonable accuracy because of cost experience in the district and knowledge of the work to be accomplished.

The second stage can be estimated on a maximum and minimum basis, because the extent of caved sections is unknown.

Based on the experience gained in the first 500 feet of drift, and finding that only the portions which were originally timbered had caved, and the information from the former Superintendent that timbering had only been used in three sections, it is possible to assume that only 50 to 100 feet of additional caved ground will be encountered. Therefore, 100 feet could be used as a minimum figure. As a maximum

figure an estimated 400 feet of caved ground should be considered, although an examination of the dump shows that progressively harder rock was removed from the original workings as greater depth from the surface was gained. In either case the setup work and equipment costs would remain the same, only the labor, supervision, insurance and material costs would vary.

Labor - Stage 1.

Clearing entrance, timbering portal, laying rail, installing air ducts and air line.

Mucking out and timbering 100 feet of heavy ground

Work would be done on 3 8-hour shifts daily, and a 5-day work week. 4 men would be used on two shifts and 3 men on the third shift, with one supervisor on the job. The 4-man crews would each consist of one miner, one timber man, and two helpers; the 3-man shift would be one miner and two helpers.

It is estimated this work would require 12 days to complete.

2 Timber men	@	$2.25	per hr.	192 hrs.=	$432.00
3 Miners	@	2.00	" "	288 hrs.=	576.00
6 Muckers	@	1.75	" "	576 hrs.=	1008.00
1 Supervisor	@	2.50	" "	96 hrs.=	240.00
				1,152 hrs.	$2256.00

Direct labor cost for first stage -- $2,256.00

Labor - 2nd Stage.

This consists of spiling through, mucking out, and retimbering all caved areas, installing air duct, lights and air lines, retieing rails in place.

1. Minimum basis, 100 ft. of mucking and retimbering:

   12 men - as above. 15 days = $2,620.00
   Direct labor cost, second stage minimum - $2,620.00

2. Maximum basis 400 ft. of mucking and retimbering:

   12 men, as above. 40 days = $7,520.00
   Direct labor cost, second stage maximum - $7,520.00

Third Stage of Operation:

50 ft. drift north
50 ft. drift south
50 ft. raise

100 ft. of drift work, laying track, and installing airducts, at $20.00 a ft. $2,000.00

50 exploratory non-working raise @ $12.00 per ft. $ 600.00

1. Total direct labor:

Minimum ..... $ 7,476.00
Maximum 12,376.00

(c) Timber

Minimum	7,000 ft.	@ $125.00 per M.	$ 875.00
Maximum	16,000 ft.	@ $125.00 per M.	$2,000.00

Logging

Minimum	5,000 ft.	@ $110.00 per M.	$ 550.00
Maximum	12,500 ft.	@ $110.00 per M.	$1,375.00

Ties

3000 ft. @ $100.00 $ 300.00

Rail

6 tons 20# rail @ $125.00 $ 750.00

Spikes and Plates $ 125.00

Air Duct

1850 ft. of 14" 20 gauge galv. @ .45¢ per ft $832.50

Air Line Pipe & Fittings

1800 ft. @ 60¢ average $1,080.00

Fuels

Gasoline, diesel and lube. oil $ 800.00

Oxygen Masks

2 - at $300.00 each $ 600.00

First-aid and Mine Safety Equipment $ 200.00

(d)	Air Blower and engine			$ 500.00
	Mechanical loader			3,000.00
	Compressor			5,000.00
	Electric generator panel board & wire			800.00
	3 ore cars @ $200.00			600.00
	2 Jack hammers, 1 stoper, steel, bits and hose			1,800.00
	Gasoline driven chain saw			375.00
(e)	None			
(f)	Change room and office 12'x20' = 240' x $6.00 per ft. labor and material			$1,440.00
(g)	Accounting 6 mo. @ $125.00			
	Lease rental 6 mo. @ $200.00 month			
	Insurance - Minimum		$1,000.00	
	Maximum		1,600.00	$1,600.00
	Payroll Tax			
	Minimum		$ 220.00	
	Maximum			
	Sampling and assay			$ 500.00
(h)	Contingencies			
	Minimum	$1,000.00		
	Maximum	2,000.00		$2,000.00

RECAPITULATION

Minimum Basis:

(b)	Labor	
	Stage one	$2,256.00
	Stage two	2,620.00
	Stage three	2,600.00
		$7,476.00
(c)	Material and Supplies	
	Timber	$ 875.00
	Logging	550.00
	Ties	300.00
	Rail, Spikes & Plates	875.00
	Air Duct	832.50
	Air Line Pipe & Fittings	1,080.00
	Fuel	800.00
	Oxygen Masks	600.00
	First-aid Equipment	200.00
		$6,112.50
(d)	Operating Equipment	
	Air Blower Engine	$ 500.00
	Mechanical Loader	3,000.00
	Compressor	5,000.00
	Electric Generator	800.00
	3 Ore Cars	600.00
	Compressed Air Equipment	1,800.00
	Gasoline Chain Saw	375.00
		$12,075.00
(e)	None	
(f)	New buildings	
	Change room and office	$ 1,440.00
(g)	Miscellaneous	
	Accounting	$ 750.00
	Lease Rental	1,200.00
	Insurance	1,000.00
	Payroll Taxes	220.00
	Sampling & Assaying	500.00
		$3,670.00
(h)	Contingencies	1,000.00

Minimum Basis Total $31,773.50

RECAPITULATION

Maximum Basis:

(b)	Labor	
	Stage one	$2,256.00
	Stage two	7,520.00
	Stage three	2,600.00
		$12,376.00
(c)	Material & Supplies	
	Timber	$ 2,000.00
	Logging	1,375.00
	Ties	300.00
	Rail, Spikes & Plates	875.00
	Air Duct	832.50
	Air Line Pipe & Fittings	1,080.00
	Fuel	800.00
	Oxygen Masks	600.00
	First Aid Equipment	200.00
		$8,062.50
(d)	Operating Equipment	
	Air Blower and Engine	$ 500.00
	Mechanical Loader	3,000.00
	Comptessor (air)	5,000.00
	Electric Generator	800.00
	Ore Cars	600.00
	Compressed Air Equipment	1,800.00
	Gasoline Chain Saw	375.00
		$12,075.00
(e)	None	
(f)	New buildings	
	Change room & Office	$ 1,440.00
(g)	Miscellaneous	
	Accounting	$ 750.00
	Lease Rental	1,200.00
	Insurance	1,600.00
	Payroll Taxes	300.00
	Sampling & Assaying	500.00
		$ 4,350.00
(h)	Contingencies	$ 2,000.00

Maximum Basis Total $40,303.50

7.

(a) Yes
(b) Money

MINING LEASE

THIS LEASE AGREEMENT, made and entered into this _____ day of April, 1951, by and between LOUIS BAER and BETTY G. BAER, husband and wife, MARCUS RUDNICK and MARSHA RUDNICK, husband and wife, EDWIN L. O'REILLY and ELVIRA M. O'REILLY, husband and wife, WESTON L. O'REILLY and LELAND T. O'REILLY, hereinafter referred to as First Parties or Lessors, and E. G. JOHNSON and G. A. RIEL, JR., hereinafter referred to as Second Parties or Lessees,

W I T N E S S E T H:

First Parties do hereby lease, let and demise unto the Second Parties, and Second Parties do hereby lease, hire and take from the First Parties, all of First Parties' right, title and interest in and to the minerals within and underlying the following described real property in the County of Kern, State of California, to wit:

> The east half of the southwest quarter, and the southwest quarter of the northwest quarter of Section 34, and the west half of Section 35, all in Township 27 South, Range 32 East, M. D. B. & M., Kern County, California.
>
> SUBJECT to existing conditions, restrictions, reservations, easements and rights of way. EXCEPTING AND EXCLUDING HEREFROM, however, all of First Parties' right, title and interest in and to any oil, gas, hydrocarbon substances and minerals, other than scheelite or other tungsten bearing ores. FURTHER EXCEPTING AND EXCLUDING herefrom the exclusive right to use the surface of said lands, and all waters heretofore developed thereon and that may hereafter

be developed by First Parties, for the purpose of grazing and watering livestock thereon.

for the purpose of mining tungsten only, and for the term and upon and subject to each and all of the conditions, provisions and agreements hereinafter set forth, to each and all of which the First Parties and the Second Parties jointly and severally herewith respectively covenant and agree:

Section 1: The term of this lease shall be for a period of five years from and after the date hereof, and so long thereafter as minerals are produced therefrom in paying quantities or development work for the purpose of extraction of the same is being carried on and the rentals hereinafter provided are paid.

Section 2: Second Parties shall have the right to prospect for and extract scheelite and other tungsten bearing ores upon and from said property, and to make such tunnels or excavations, and erect or install such improvements and equipment as may be necessary or incidental for the foregoing purposes, and to construct and maintain such roads as may be incidental thereto, and may use existing roads and tunnels therom of First Parties for said purposes. Second Parties may likewise develop and use such water as they develop for mining purposes.

Section 3: Second Parties agree to use only such portion of the surface of said property as is reasonably necessary for their mining purposes, and agree to construct and locate surface roadways, improvements and excavations at such place or places, and in such manner, as First Parties' agent in writing may designate, and Second Parties further agree to conduct their operations on said property to

avoid so far as possible any interference with First Parties' grazing operations or damage to First Parties' grazing lands. Second Parties, at their own expense, agree to fence any and all excavations upon request therefor from the First Parties, and Second Parties further agree to keep gates closed in First Parties fences, and not to make any openings in First Parties fences without First Parties' prior written consent.

Section 4: Second Parties agree to pay to First Parties in lawful money of the United States of America, at Bakersfield, California, or at such other place as First Parties may from time to time in writing designate, as rental, a sum equal to one-tenth (1/10) of the gross proceeds of all tungsten bearing minerals taken and sold from said land, payable within ten days after the receipt by the Second Parties, or within ten days after the same is credited to their account, whichever is the earlier. "Gross proceeds" shall mean the total proceeds from the sale of such minerals produced, without deduction of transportation costs, milling costs, or other costs therefrom. Immediately upon extraction from the ground, ten per cent (10%) of all such minerals shall forthwith vest in and become the property of the First Parties, and First Parties may, if they so elect, take and receive their proportionate share of such minerals extracted. In the event First Parties elect to take their share of the minerals in kind, Second Parties agree to deliver the same to First Parties at such point and in such condition as Second Parties sell their share of such minerals extracted.

Section 5: In the event, commencing with the month of December, 1951, First Parties do not receive from their share of such minerals

produced, sums equalling or exceeding Two Hundred Dollars ($200.00) per month, then in that event Second Parties agree to pay to the First Parties each month thereafter, a sum equalling the difference between the moneys First Parties have received from the minerals produced, and the sum of Two Hundred Dollars ($200.00) per month, so that there will be paid, commencing with the month of December, 1951, and each month thereafter during the term of this lease, a minimum of Two Hundred Dollars ($200.00) per month, regardless of the amount of such ore mined and extracted. Said monthly payments shall be made on or before the tenth day of the succeeding month, for the preceding month commencing January 10, 1952.

Section 6: Second Parties agree to do all mining work on said properties in a good and minerlike fashion, so as to take out the greatest amount of ore practicable, with due regard to the safety, development and preservation of the same as a workable mine, and to mill the ore extracted in accordance with good mining practices. Second Parties further agree, each year during the term of this lease, to do or cause to be done not less than one hundred (100) man days of work in prospecting or mining activities upon the demised premises. Second Parties acknowledge that they are familiar with the condition of the demised premises and all existing tunnels theron, and agree to accept the same in their present condition, and further agree that the First Parties shall not be called upon to make any alterations, additions or repairs to the demised premises or any portion thereof. All labor, materials, machinery, equipment, supplies, and other costs required, used or incurred by the Second Parties in Second Parties' operations hereunder, shall be at the sole cost and expense of the Second Parties, and Second Parties shall promptly pay all claims for any obligations

incurred by Second Parties or arising out of Second Parties' operations hereunder, and Second Parties shall keep the demised premises free and clear of any mechanics' liens or claims of liens of any kind, nature or description arising out of or connected with Second Parties'operations. Second Parties further agree to pay all taxes levied and assessed upon Second Parties' improvements, equipment and personal property and ore located upon the demised premises, and in addition Second Parties agree to pay nine-tenths (9/10) of the taxes levied and assessed upon the mineral rights during the continuance of this lease, and First Parties agree to pay the remainder of the taxes levied and assessed upon the demised real property and taxes levied and assessed upon First Parties' personal property located thereon.

Section 7: Second Parties further covenant and agree to keep full, complete and accurate books and records of their mining operations upon the demised premises and sales of minerals therefrom, and to render monthly summaries thereof to First Parties. Second Parties further agree to make surveys of work done by them both above or under the ground, and to furnish First Parties with copies of all surveys or maps made by the Second Parties, and to further furnish to First Parties copies of all assays or other information or tests made concerning Second Parties' operations hereunder. First Parties or their duly designated agent shall at all reasonable times have access to the books and records kept by Second Parties, and to make copies thereof, and First Parties shall have the right to enter and visit all parts of the demised premises and workings of the Second Parties for the purpose of taking assay samples and observing whether or not the terms of this lease are being fully and faithfully complied with by the Second Parties, and for the further purpose of posting and keeping posted notices of non-responsibility.

Section 8: Second Parties further agree to comply with all laws of the County of Kern, State of California, and the United States, relating to or governing Second Parties' operations hereunder,and Second Parties further agree, at their own expense,

To carry workmens' compensation covering all employees of the Second Parties engaged in their operations hereunder. Second Parties further agree to indemnify and hold First Parties harmless of and from claims for damages or injuries to persons or property occasioned by Second Parties' operations hereunder, and Second Parties agree to procure and maintain in full force and effect public liability insurance in an amount of not less that $100,000.00 for the injuries to one person, and $200,000.00 for injuries to more than one person in any one accident, in a company or companies acceptable to First Parties, and First Parties shall be named as a party insured in said policies. Second Parties further agree to procure and maintain in force property damage insurance in an amount of not less than $10,000.00 insuring the contingent liability of the First Parties for damage to property resulting from Second Parties' operations hereunder. Second Parties agree to procure a certificate or certificates from the insurance company or companies issuing the above mentioned insurance, that the same is in full force and effect, and that the carrier will not cancel, alter or modify said insurance without first giving First Parties ten days' written notice of their intention so to do. In the event Second Parties fail to procure any such insurance at any time during the term hereof, then First Parties may procure the same, pay the premiums thereon, and said premiums so paid shall be considered to be due as additional royalties accruing hereunder and shall be repaid to First Parties upon demand.

Section 9: Second Parties' interest hereunder shall not be assignable in whole or in part, nor shall the same be sublet either in whole or in part without the prior written consent of the First Parties first had and obtained, and any attemped assignment or subletting of the same or any interest therein without such prior written consent, shall be grounds, at the option of the First Parties, for the immediate termination and cancellation of this lease.

Section 10: Upon any termination of this lease, providing the Second Parties are not in default, the Second Parties shall have the right to remove their equipment and improvements placed upon the demised premises, within sixty days after such termination, Providing the same can be removed without injury to the demised premises, and providing further the removal thereof will not leave the tunnel or improvements in a dangerous condition. Any improvements or equipment Second Parties fail to remove within sixty days after termination, shall be and become the property of the First Parties without the payment of any compensation therefor.

Section 11: Second Parties further agree that they will locate in the name of the First Parties any veins of ore intersected by operations in the Big Four Tunnel on or off of the demised premises which are subject to location, and First Parties' right, title and interest in and to said locations when so made, and the minerals therein, shall be and become a portion of the demised premises subject to this lease.

Section 11 A. First Parties hereby further license the Second Parties to enter upon the North half and also the Southeast quarter of Section 2, Township 28 South, Range 32 East, M.D.B. & M., County of Kern for the purpose of prospecting for minerals and Second Parties hereby agree to locate in the name of First Parties any and all loads or veins of ore located thereon by them, which are subject to location, and thereafter First Parties' right, title and interest therein shall be subject to this lease.

Section 11 B. First Parties further except and reserve from this lease the right to grant easements for roadways and the right to grant others the right to use a millsite over and upon Section 35 in Township 27 South, Range 32 East, M.D.B. & M. in the County of Kern.

Section 12: It is further understood and agreed that this lease is made and intended to cover mining only for tungsten bearing ores, and that Second Parties shall have no right to mine and remove other minerals from the demised premises unless a further agreement is reached between the parties therefor.

Section 13: In the event Second Parties default in the performance of the covenants and conditions herein contained on their part to be performed, or fail to pay the royalties or rental payments herein provided, at the time specified, and in the event Second Parties fail to remedy said default within thirty days after receiving written notice so to do, then in that event First Parties may at their option terminate this lease and First Parties shall thereupon be entitled to immediate possession thereof and to re-enter the same and remove all persons therefrom.

Section 14: Each and all of the terms, conditions and provisions in this lease contained on the part of the Second Parties to be kept and performed are hereby declared to be express conditions subsequent as well as express covenants by the Second Parties, and in case default be made by the Second Parties in the keeping or performance of any of such terms or conditions or provisions, or in the event of any of the following (each of which is hereby expressly declared to be a default on the part of the Second Parties) to wit: (a) the filing of any petition in bankruptcy by or against the Second Parties: (b) the filing of any other petition or the taking of any proceeding or the seeking of any refief under Section 75 or any other section or provision of the Bankruptcy Act as it now exists; or may hereafter be amended or supplemented: (c) the filing of any petition for the appointment of a receiver of Second Parties' assets or any part thereof: (d) the making of any

assignment by Second Parties for the benefit of creditors; or (e) the taking advantage by the Second Parties of any insolvency law; - then the First Parties may at their election and in addition to any other remedy they may have either under this lease or in law or in equity, declare this lease terminated and re-enter the demised premises and remove all persons therefrom, and in any such event the First Parties shall be entitled to retain any and all ore upon the demised premises that has not then been milled, and the Second Parties shall have no right or interest therein or thereto, nor shall the Second Parties be entitled to any compensation therefor or on account thereof.

Section 15: The Second Parties shall pay all cost and expenses (including attorney's fees in a reasonable amount) incurred by the First Parties in bringing any action to enforce any of the terms and conditions of this lease, or any action to dispossess the Second Parties or to recover possession of the demised premises, irrespective of whether such action shall be brought to final judgment or not.

Section 16: Any Notice which may be given either party to the other under or in regard to this lease shall be deemed to have been given when made in writing and deposited in a sealed envelope in the United States mail, registered and postage prepaid and addressed as follows:

To the First Parties:

To the Second Parties:

The address to which any notice may be given to either party may be changed upon written notice given by such party to the other as herein provided.

Section 17: This lease may be terminated by the Second Parties, if not in default, upon giving sixty days' written notice to the First Parties of their intention to surrender the same and by delivering to the First Parties a good and sufficient quitclaim deed restoring the demised premises to the First Parties free and clear of this lease and any lien or clouds occasioned thereby. In the event of such termina tion, Second Parties shall thereafter be released from any further obligations accruing under the terms of this lease. No such cancellation or termination shall relieve Second Parties, however, from any obligation accruing prior to the effective date of such termination.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands the day and year first above written.

Louis Baer

Betty G. Baer

Marcus Rudnick

Marsha Rudnick

Edwin L. O'Reilly

Elvira M. O'Reilly

Weston L. O'Reilly

Leland T. O'Reilly

LESSORS
OR
FIRST PARTIES

E. G. Johnson

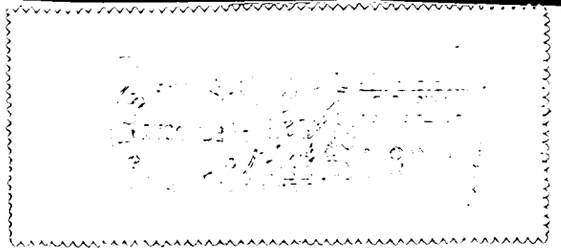
G. A. Riel, Jr.

Lessees
of
Second Parties

From;

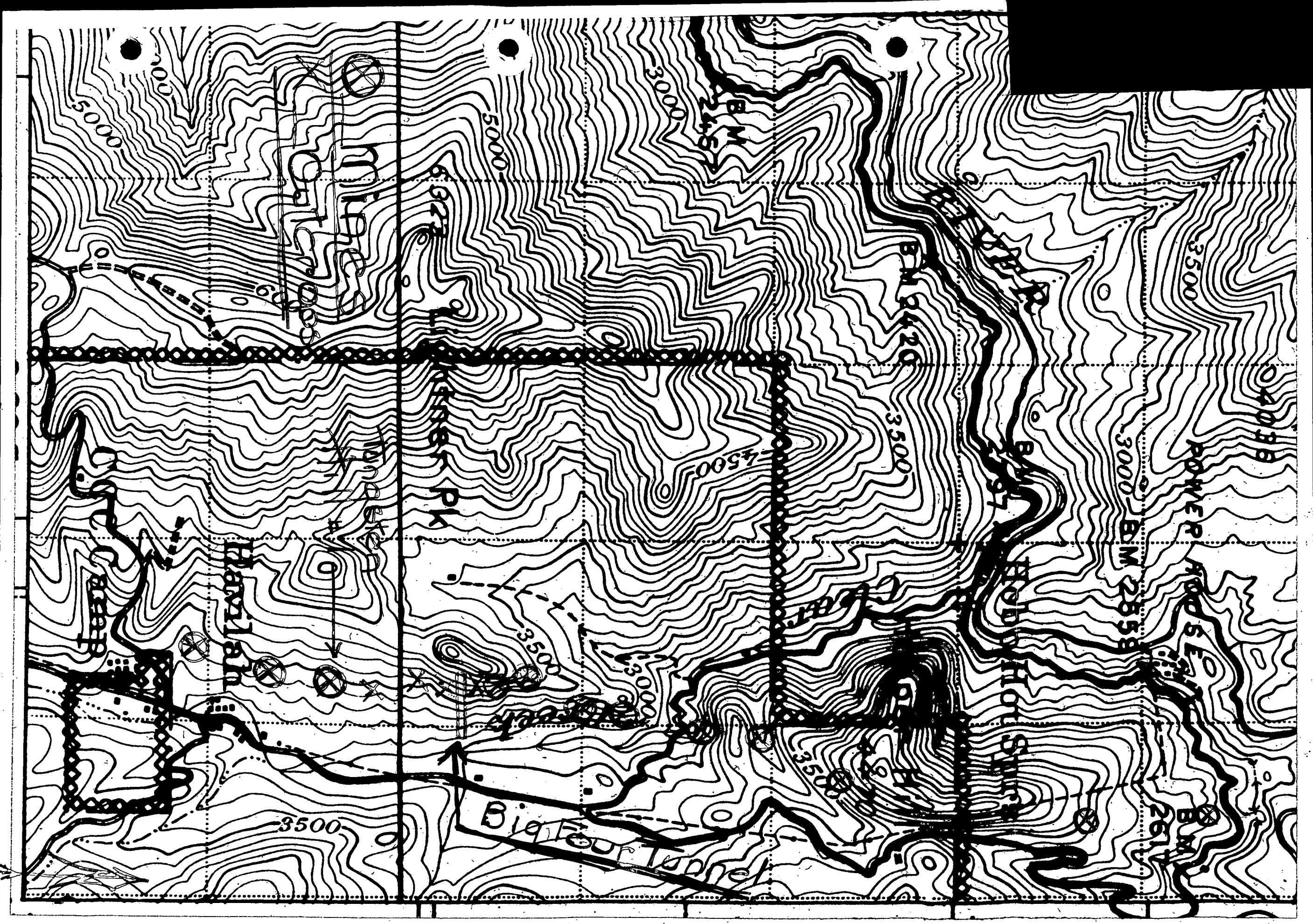
ISABELLA MINES.
629 So, Hill St. Suite 510.
LOS ANGELES, CALIFORNIA.

SPECIAL DELIVERY
AIR MAIL



THE DEFENSE MINERALS EXPLORATION
ADMINISTRATION.
DEPARTMENT OF THE INTERIOR.

WASHINGTON 25, D. C.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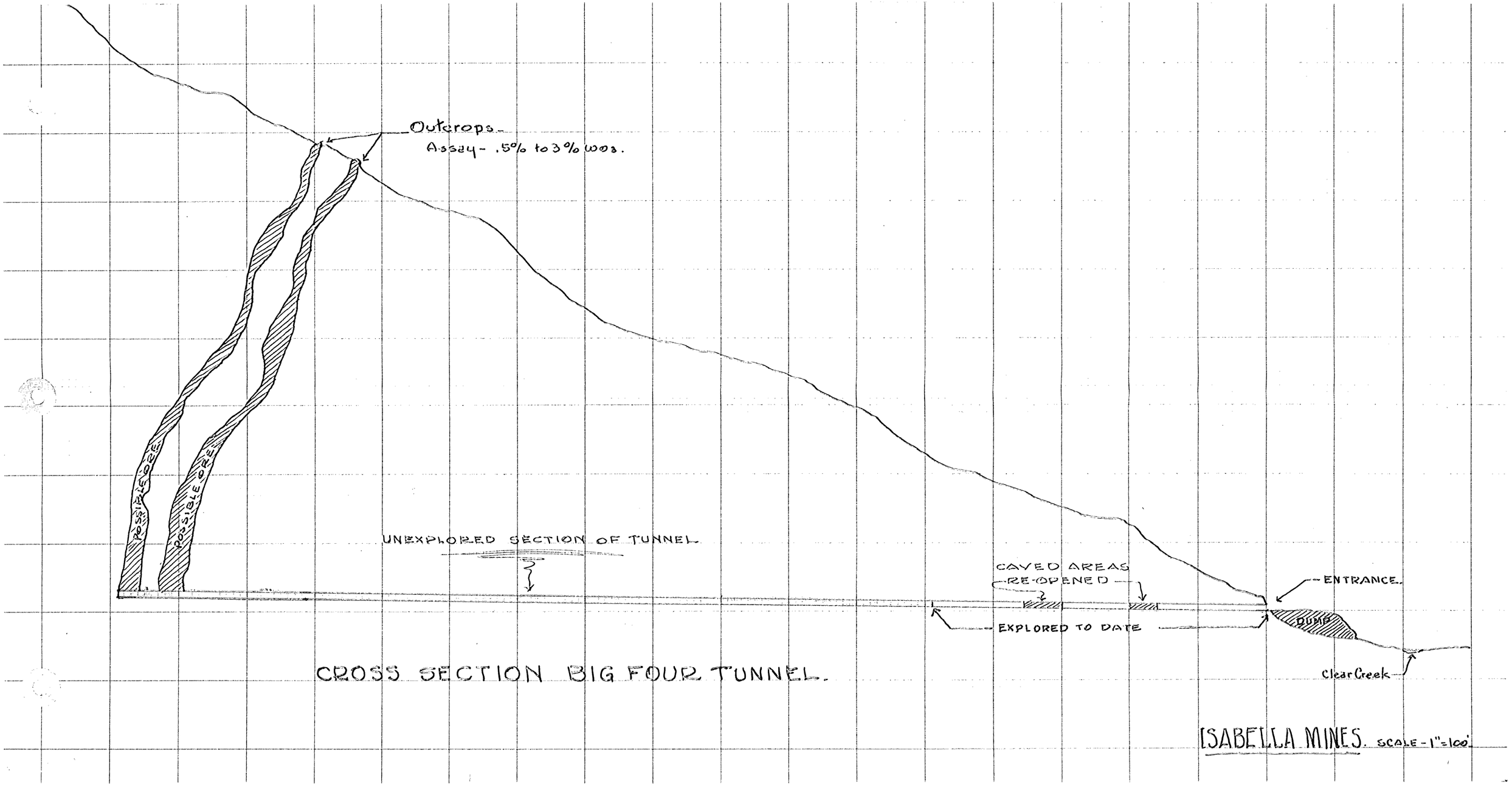
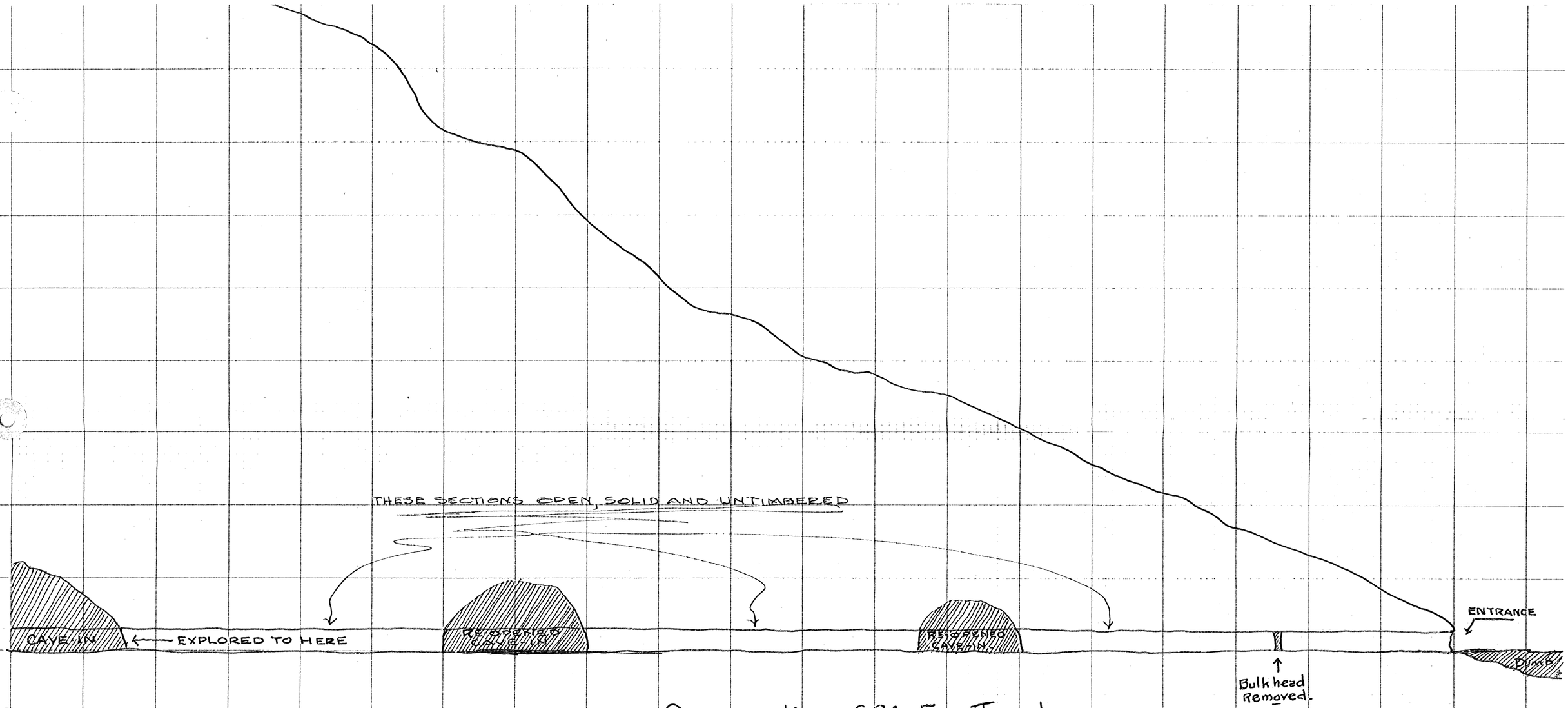
Big Four Tunnel

Contour Map.


Outcrops.
Assay - .5% to 3% WO3.
POSSIBLE ORE
POSSIBLE ORE
UNEXPLORED SECTION OF TUNNEL
CAVED AREAS
RE-OPENED
ENTRANCE.
EXPLORED TO DATE
DUMP
Clear Creek
CROSS SECTION BIG FOUR TUNNEL.
ISABELLA MINES. SCALE - 1" = 100'



Cross section of Big Four Tunnel
Explored to date
Scale = 1" = 25' -

ISABELLA MINES.