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DEFENSE MINERALS ADMINISTRATION
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DMA Docket No. 3426

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OCT 27 1954

Mr. Fred E. Miller
1070 Lincoln Avenue
San Jose, California

Re: Docket No. DMEA 3426 - Tungsten
Washington Claim
Madera County, California

Dear Mr. Miller:

Your application for aid for an exploration project and other data available to us in Washington relating to the above-noted property have been carefully reviewed.

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

Careful study of all our information, although noting small amounts of tungsten mineralization on your property, indicates to us that the probability of disclosing minable ore reserves by your proposed program is not sufficiently promising to justify Government participation. We regret to advise you, under the circumstances, that your application for exploration assistance is denied.

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

Sincerely yours,

C. O. Mittendorf

Administrator

TLChapman:foc
10-25-54
cc to: Docket
Code 400
Adm. Reading File
Operating Comm.
FT. REG. III
R. W. Geehan, USBM
Thor H. Kiilsgaard, USGS

OCT 27 1954

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Denial of application for exploration assistance in the amount of $17,470.00
Docket No. DMEA 3426 - Tungsten (Washington Mining Claim)
Fred E. Miller
Madera County, California

The denial of the subject application by this Division is based on the following information:

1. The applicant requested exploration assistance in the amount of $17,470.00 to explore for tungsten on the Washington Mining claim, Madera County, California.

2. The mineralized area of the Washington claim is along a contact between metamorphic and igneous rocks. Scheelite bearing tactite occurs in a small embayment of marble in grano-diorite. The tactite area of this deposit is relatively small and the limits are already exposed.

3. Sufficient work has been done to indicate the size and grade of possible ore bodies. This work shows a measured reserve of 100 tons of 0.5 percent WO_3, an indicated reserve of 200 tons of 0.4 percent WO_3, and 200 tons of inferred ore averaging 0.3 percent WO_3. There is no evidence to indicate that ore bodies of a higher grade or larger size will be found on other parts of the claim.

4. To mine the above noted grade of ore it would be necessary to have a mill on the property and there is little possibility of developing sufficient tonnage to warrant a mill.

5. The Field Team and the Commodity Divisions of the Geological survey and the Bureau of Mines recommend that the application be denied.

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

RARx
TLCHAPMEN:foc
10-25-54
cc to: Docket
Code 400
Adm. Reading File
Operating Comm.

IN REPLY REFER TO:

400

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

October 20, 1954

Re: DMEA-3426
Fred E. Miller
(Washington Claim)
Madera Co., Calif.
$17,470 - Tungsten

Memorandum

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

From: E. L. Newcomb, U. S. Geological Survey

Subject: Review of field examination report

The Field Team has recommended the applicant's request for exploration assistance be denied.

Sufficient work has been done on the Washington claim to indicate the tungsten-bearing tactite zone is abruptly cut off by granodiorite at both ends of its strike length and downdip.

Results of field examiners' sampling indicated the average grade of the deposit is 0.4% WO_3 and 0.4% copper. A small tonnage of ore could be produced (100-300 tons) from this deposit, but the geologic structural relationship between the small tactite zone and the enclosing granodiorite makes further exploration infeasible.

I recommend this application be denied.

E. L. Newcomb

ELNewcomb:hlm
G-10/20/54

Copy to: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
R. W. Geehan, 3513

IN REPLY REFER TO:

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

October 20, 1954

Re: DMEA-3426
Fred E. Miller
(Washington Claim)
Madera Co., Calif.
$17,470 - Tungsten

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I recommend this application be denied.

E. L. Newcomb

ELNewcomb:hlm
G-10/20/54

Copy to: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
R. W. Geehan, 3513

IN REPLY REFER TO:

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

October 20, 1954

Re: DMEA-342
Fred E. Miller
(Washington Claim)
Madera Co., Calif.
$17,470 - Tungsten

Memorandum

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

From: E. L. Newcomb, U. S. Geological Survey

Subject: Review of field examination report

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I recommend this application be denied.

E. L. Newcomb

ELNewcomb:hlm
G-10/20/54

Copy to: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
R. W. Geehan, 3513

400

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 4 1954

420 Custom House
555 Battery Street
San Francisco 11, Calif.

September 28, 1954

Memorandum

To: George C. Selfridge, Chairman, Operating Committee, DMEA
Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA-3426 - Tungsten
Fred E. Miller
Washington Mining Claim
Madera County, California

Reference is made to your letter dated August 6, 1953 (should have been 1954), requesting a field examination of the subject property.

A joint examination was made on August 24 and 25, 1954, and attached are four copies of a report entitled "DMEA-3426, Washington Mining Claim, Madera County, California (Tungsten)," by W. T. Benson, Mining Engineer, U. S. Bureau of Mines, and H. K. Stager, Geologist, U. S. Geological Survey, dated September 16, 1954.

According to the examining engineer and geologist, the dimensions of the scheelite bearing tactite body are already exposed, the structures limiting the size of the ore body are obvious, and the average grade of the material is determined. The average grade of the deposit is about 0.4% WO_3 and about 0.4% Cu. There is no evidence to indicate that bodies of higher grade ore will be found elsewhere on the property. They have recommended that Government assistance under DMEA program is not warranted. Mr. Roscoe Smith and I concur with their recommendations.

H. C. MILLER

H. C. Miller
Executive Officer
DMEA Field Team, Region III

Attachment

Reviewed by
DMEA OPERATING COMMITTEE
10-8-54
(date)

Copy to: Roscoe Smith, USGS
A. C. Johnson, Reno

Defense Minerals Administration
RECEIVED
OCT 4 1954

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA-3426, Washington Mining Claim

Madera County, California

(Tungsten)

W. T. Benson, Mining Engineer
U. S. Bureau of Mines

H. K. Stager, Geologist
U. S. Geological Survey

September 16, 1954

Reviewed by
DMEA OPERATING COMMITTEE
10-8-54
(date)

BUREAU OF MINES
Defense Minerals Administration
RECEIVED
OCT 4 1954

EXAMINATION REPORT

Docket No.: DMEA-3426 (Tungsten)

Name and address of applicant: Fred E. Miller,
1070 Lincoln Avenue
San Jose, Calif.

Name and location of property: Washington Mining Claim
Madera County, California

SUMMARY

Mr. Fred E. Miller, 1070 Lincoln Avenue, San Jose, California, applied to the Defense Minerals Exploration Administration, for Government assistance to explore for tungsten on the Washington Mining Claim, situated on the east fork of the Chowchilla River, Chowchilla Mining District, Madera County, California, about 19 miles southeast of Mariposa.

A field examination was requested by the Executive Officer, DMEA Field Team, Region III, to determine whether the tungsten showings on the property were sufficient to justify the project proposed by the applicant. Accordingly, a field examination was made August 24 and 25, 1954 by an engineer of the Bureau of Mines and a geologist of the Geological Survey.

The applicant proposes to explore the deposit by deepening the existing shaft 100 feet and then drifting and crosscutting 100 feet to determine the dimensions of the ore body. Total cost of the project is estimated at $17,470.

As a result of the examination, it was determined that the dimensions of the scheelite-bearing tactite body are already exposed, that the structures limiting the size of the ore body are obvious, and that the average grade of the material are determined. There is no evidence to indicate that ore bodies of higher grade or larger size will be found elsewhere on the property. It is, therefore, recommended that Government assistance under the DMEA program be denied.

INTRODUCTION

In connection with an application for exploration assistance, docket DMEA-3426, the Washington tungsten prospect was examined August 24 and 25, 1954 by an engineer of the Bureau of Mines and a geologist of the Geological Survey for the purpose of inspecting development openings that pertained to F. E. Miller's application for aid in exploring showings of tungsten that are being developed on the Washington Mining Claim.

DESCRIPTION OF PROPERTY

Property holdings comprise one unpatented lode mining claim, known as the Washington Mining Claim, situated on the east fork of the Chowchilla River, Chowchilla Mining District, SE 1/4 of sec. 21, T 6 S., R. 20 E., Madera County, Calif., about 19 miles southeast of Mariposa and 80 miles north of Fresno, Calif., the supply and shipping point on the Santa Fe and Southern Pacific Railroads.

ACCESSIBILITY

The property is accessible from either Mariposa or Raymond, by dirt, partially graded and improved roads. From either town, the last 10 miles of road is rough and poorly maintained.

HISTORY

The Washington Mining Claim was located 50 years ago as a gold discovery. There is no record that any gold has been produced from the property.

Prior to 1942, the California State Bureau of Mines reports that 100 units of WO_3 had been produced from this mine. In 1943 and 1944, Roscoe Patterson, owner of the claim, shipped two lots; one of 15 tons that assayed 4.2 percent WO_3 and one of 20 tons that assayed 2.1 percent WO_3. More recently, Henry Bennett, milled 50 tons on the property. The amount of tungsten recovered was not available.

Mr. Miller acquired the property on a lease arrangement in March 1954. Since then he has deepened the shaft to a depth of 25 feet. From this working, about 50 tons have been stockpiled on the dump that contained 0.28 percent WO_3 and 0.33 percent copper. No work was being done on the property at the time the field examination was made.

PHYSICAL FEATURES

The claim is located on the east fork of the Chowchilla River in an area of moderately steep topography at an altitude of about 1700 feet. The climate of the low foothill country of the west slope of the Sierra-Nevada is

typical of the San Joaquin Valley immediately to the west, with long, hot summers and moderate winters. Precipitation occurs usually as rain during the winter months. Water for domestic use is supplied from a small spring south of the property. For mining and milling use, an ample supply is available in the river which courses through the property. Oak with occasional pine together with heavy patches of small shrubs constitute the vegetation on the property. None of the vegetation is suitable for mining use.

Transmitted electric power is not available. For power generation, fuel oil is supplied in drums by truck from either Raymond or Mariposa, about 19 miles northwest.

COMPETENCY OF APPLICANT

Mr. Miller, according to his statement, has had considerable experience as a miner, and should be competent to supervise exploratory operations.

HOUSING FACILITIES

Two houses and two tents on the property are sufficient to accommodate a crew of 8 to 10 men.

EQUIPMENT

Equipment on the property comprises two portable compressors of 60 and 210 cubic foot capacity, compression drills with accessory attachments and a small assortment of hand tools.

DEVELOPMENT

Development openings on the property comprise a 25-foot shaft from which a 7-foot crosscut has been driven in an easterly direction off the bottom of the shaft.

GEOLOGY

The Washington claim is along a contact between metamorphic and igneous rocks. Scheelite-bearing tactite occurs in a small embayment of marble in granodiorite. This deposit has been previously described by Krauskopf.[1/]

The eastern half of the claim is underlain by granodiorite. It is a light-gray, medium-grained rock containing quartz, feldspar, hornblende, and biotite.

In the northern part of the claim, the contact between granodiorite and metamorphic rocks strikes N. 35° W., is nearly vertical, and truncates the bedding and schistosity in the metamorphic rocks. Near the center of the Washington claim, the contact turns sharply southwest.

The metamorphic rocks strike N. 80° E., dip 80° SE and consist of schist, quartzite, and hornfels, with locally thin beds of marble. A bed of gray, coarsely-crystalline marble enclosed in a shallow embayment in the granodiorite, where the contact shifts from NW to SW, has been metamorphosed to a quartz-garnet-epidote tactite. It is within this small tactite

1/ Krauskopf, Konrad B., 1953, Tungsten Deposits of Madera, Fresno, and Tulare Counties, Calif.: Calif. Div. Mines Special Report 35, p. 75.

body that the tungsten deposit occurs.

ORE DEPOSITS

The tungsten deposit is a scheelite-bearing body of tactite about 40 feet long, 10 feet wide, and 25 feet deep that strikes N. 50° E., dips steeply SE, and is cut off at both ends and down dip by granodiorite (fig. 2). The ore minerals are scheelite and chalcopyrite.

Fine- to coarse-grained scheelite occurs throughout the tactite body. The average grade of the deposit is about 0.4 percent WO_3 and 0.4 percent Cu. The richest concentration of scheelite is along the granodiorite contact at the northeast edge of the body, where crystals of scheelite as much as one inch in cross section occur in a zone of tactite composed of quartz, garnet, epidote, wollastonite, pyrrhotite, and chalcopyrite.

SAMPLING

In order to determine the approximate grade of the ore, a series of six samples were taken of material in the stockpiles and from underground openings. Details regarding them are as follows:

Sample No.	%, WO_3	%, Cu	Description
1709	0.08	0.40	Chip and grab of 15 tons ore in pile by forge.
1710	0.28	0.33	Grab of fines in 50 ton stockpile at shaft.
1711	0.13	0.35	Chip of large boulders in 50-ton stockpile.
1712	0.01	0.67	Cut across 7 feet west side of shaft, 3 feet from bottom.
1713	0.38	0.37	Cut across 5 feet south side of shaft, 3 feet from bottom.
1714	0.49	0.35	Cut across 5 feet south side of east crosscut.

ORE RESERVES

Measured ore reserves on the Washington claim total about 100 tons with an average grade of 0.5 percent WO_3. These reserves are in a block of ground 5 feet wide, 10 feet long, and 25 feet deep between the shaft and the granodiorite contact to the northeast.

Indicated ore reserves are 200 tons of ore with an average grade of 0.4 percent WO_3 (estimated by lamping) in a block 10 feet square and 25 feet deep beneath the small open cut 20 feet southwest of the shaft.

In the block of ground 10 feet wide, 20 feet long, and 25 feet deep between the shaft and the open cut a reserve of 200 tons of ore with an average grade of 0.3 percent WO_3 (estimated by lamping) is inferred.

EXPLORATION

The applicant proposes to explore the deposit by deepening the existing shaft 100 feet and then drifting and crosscutting 100 feet to determine the dimensions of the ore body. Total cost of the project is estimated at $17,470.

The proposed program is unwarranted. The dimensions of the tactite body are already exposed, the structures limiting the size of the ore body are obvious, and the average grade of the material has been determined.

There is no evidence to indicate that ore bodies of higher grade or larger size will be found on other parts of the claim.

CONCLUSIONS AND RECOMMENDATIONS

The tungsten deposit on the Washington claim is small in size and of low grade. Geologic conditions are not favorable for the discovery of deposits of tungsten ore in the ground to be explored by the proposed program. There is no evidence to indicate that ore bodies of higher grade or larger size will be found on other parts of the claim. It is recommended that Government assistance under the DMEA program be denied.

CODE 400

400

AUG 6 1954

Mr. H. C. Miller, Executive Officer
DMEA Field Team, Region III
420 Custom House
555 Battery Street
San Francisco 11, California

Re: Docket No. DMEA 3428 - Tungsten
Fred E. Miller
Washington claim
Madera County, California

Dear Mr. Miller:

The subject application for exploration assistance is being referred to your office for a field examination of the property.

Two copies of a memorandum dated July 29, 1954, by E. L. Newcomb, Geological Survey, are enclosed for your information.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Enclosures

APPROVED:

J. H. Hedges

Member, Bureau of Mines

s/ E. L. Newcomb

Member, Geological Survey

cc: Docket
FT, Reg. 3
Code 400
Oper. Committee
Adm. Reading File
R. W. Geehan, USBM
~~XXXXXXXXXXXXXXXXX~~
E. L. Newcomb, USGS

JHopkins/ls
8/4/54

400

AUG 6 1954

Mr. Fred L. Miller
1070 Lincoln Avenue
San Jose, California

Re: Docket No. DMEA 3426 - Tungsten
Washington claim
Madera County, California

Dear Mr. Miller:

The above-docketed application for exploration assistance for tungsten has been reviewed by the Iron and Ferro-Alloys Division of the Defense Minerals Exploration Administration, and referred to Mr. H. C. Miller, Executive Officer, DMEA Field Team, Region III, 420 Custom House, 555 Battery Street, San Francisco 11, California, for a field examination of the property.

Any assistance that you can render the members of the Field Team will be appreciated.

Sincerely yours,

C. O. Mittendorf

Administrator

cc: Docket
FT, Reg. 3
Code 400
Adm. Read. File
Oper. Comm.
R. W. Geehan, USBM
E. L. Newcomb, USGS

JHopkins/ls
8/4/54

IN REPLY REFER TO:

400

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

Defense Min

July 29, 1954 JUL 30 1954

Memorandum

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

From: E. L. Newcomb, U. S. Geological Survey

Subject: Review of application

Re: DMEA-3426, Washington Claim
Madera County, California
$17,470 -- Tungsten

The applicant proposes to deepen his present prospect shaft 100 feet and to drift 100 feet in a mineralized tactite -- limestone contact zone. Crosscutting or diamond drilling would be done on the new level to determine width of the ore zone.

Present workings consist of a 25 foot shaft with a 7 foot stub drift at the bottom. Applicant reports the workings are in ore which averages 0.5-0.75 percent WO_3. Past production is reported to have been about 150 units of WO_3.

An unpublished Survey report on the Tungsten deposits in Madera County, California (1942) contains a brief description of a Washington mine. However as the applicant's claim and the Washington mine appear to be in different Sections (21 and 28, respectively), this description is not suitable for a fair appraisal of the applicant's proposal.

In 1942 the total reserves in the Washington mine were estimated to be about 30 tons of ore containing 70 units of WO_3. However, the applicant's reported production far exceeds this early reserve estimate if applicable to his property.

As our information is very limited and apparently not appropriate to the applicant's claim, I recommend the application be referred to the Field Team for their examination and recommendation.

ELNewcomb:hlm
G-7/29/54

E. L. Newcomb

Copy to: Director's Reading, 4212
Branch Reading, 4212
DMEA (3)
Docket file
R. W. Geehan

400

DOCKET
SURNAME

Chapman
Martin
Geehan
Kiilsgaard
Hedges
Selfridge
Stephenson

OCT 27 1954

Mr. Fred E. Miller
1070 Lincoln Avenue
San Jose, California

Re: Docket No. DMEA No. 3426 - Tungsten
Washington Claim
Madera County, California

Dear Mr. Miller:

Your application for aid for an exploration project and other data available to us in Washington relating to the above-noted property have been carefully reviewed.

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

Careful study of all our information, although noting small amounts of tungsten mineralization on your property, indicates to us that the probability of disclosing minable ore reserves by your proposed program is not sufficiently promising to justify Government participation. We regret to advise you, under the circumstances, that your application for exploration assistance is denied.

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

Sincerely yours,

C. O. Mittendorf

Administrator

10-25-54
TLChapman:foc
cc to: Docket
Code 400
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Operating Comm.
FT. REG. III
R. W. Geehan, USBM
Thor H. Kiilsgaard, USGS

R.C.S.

400

DOCKET
SURNAME
Chapman
Martin
Guhan

OCT 27 1954

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Denial of application for exploration assistance in the amount of $17,470.00
Docket No. DMEA 3426 - Tungsten (Washington Mining Claim)
Fred E. Miller
Madera County, California

The denial of the subject application by this Division is based on the following information:

1. The applicant requested exploration assistance in the amount of $17,470.00 to explore for tungsten on the Washington Mining claim, Madera County, California.

2. The mineralized area of the Washington claim is along a contact between metamorphic and igneous rocks. Scheelite bearing tactite occurs in a small embayment of marble in grano-diorite. The tactite area of this deposit is relatively small and the limits are already exposed.

3. Sufficient work has been done to indicate the size and grade of possible ore bodies. This work shows a measured reserve of 100 tons of 0.5 percent WO_3, an indicated reserve of 200 tons of 0.4 percent WO_3, and 200 tons of inferred ore averaging 0.3 percent WO_3. There is no evidence to indicate that ore bodies of a higher grade or larger size will be found on other parts of the claim.

4. To mine the above noted grade of ore it would be necessary to have a mill on the property and there is little possibility of developing sufficient tonnage to warrant a mill.

5. The Field Team and the Commodity Divisions of the Geological survey and the Bureau of Mines recommend that the application be denied.

RARx
TLCHAPMEN:foc
10-25-54
cc to: Docket
Code 400
Adm. Reading File
Operating Comm.

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

R.C.G.

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

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Denial of application for exploration assistance in the amount of $17,470.00
Docket No. DMEA 3426 - Tungsten (Washington Mining Claim)
Fred E. Miller
Madera County, California

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5. The Field Team and the Commodity Divisions of the Geological survey and the Bureau of Mines recommend that the application be denied.

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

Docket

IN REPLY REFER TO:

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

Defense Minerals Administration
RECEIVED
OCT 21 1954

October 20, 1954

Re: DMEA-3426
Fred E. Miller
(Washington Claim)
Madera Co., Calif.
$17,470 - Tungsten

WSM

Memorandum

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

From: E. L. Newcomb, U. S. Geological Survey

Subject: Review of field examination report

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Sufficient work has been done on the Washington claim to indicate the tungsten-bearing tactite zone is abruptly cut off by granodiorite at both ends of its strike length and downdip.

Results of field examiners' sampling indicated the average grade of the deposit is 0.4% WO_3 and 0.4% copper. A small tonnage of ore could be produced (100-300 tons) from this deposit, but the geologic structural relationship between the small tactite zone and the enclosing granodiorite makes further exploration infeasible.

I recommend this application be denied.

E. L. Newcomb

E. L. Newcomb

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

Defense Minerals Administration
RECEIVED
OCT - 4 1954

420 Custom House
555 Battery Street
San Francisco 11, Calif.

September 28, 1954

Memorandum

To: George C. Selfridge, Chairman, Operating Committee, DMEA
Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA-3426 - Tungsten
Fred E. Miller
Washington Mining Claim
Madera County, California

Reference is made to your letter dated August 6, 1953 (should have been 1954), requesting a field examination of the subject property.

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According to the examining engineer and geologist, the dimensions of the scheelite bearing tactite body are already exposed, the structures limiting the size of the ore body are obvious, and the average grade of the material is determined. The average grade of the deposit is about 0.4% WO_3 and about 0.4% Cu. There is no evidence to indicate that bodies of higher grade ore will be found elsewhere on the property. They have recommended that Government assistance under DMEA program is not warranted. Mr. Roscoe Smith and I concur with their recommendations.

H. C. Miller
Executive Officer
DMEA Field Team, Region III

10-8-54

Attachment

Reviewed by
DMEA OPERATING COMMITTEE
10-8-54
(date)

Copy to: Roscoe Smith, USGS
A. C. Johnson, Reno

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA-3426, Washington Mining Claim

Madera County, California

(Tungsten)

W. T. Benson, Mining Engineer
U. S. Bureau of Mines

H. K. Stager, Geologist
U. S. Geological Survey

September 16, 1954

Reviewed by
DMEA OPERATING COMMITTEE
10-8-54
(date)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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EXAMINATION REPORT

DOcket No.: DMEA-3426 (Tungsten)

Name and address of applicant: Fred E. Miller,
1070 Lincoln Avenue
San Jose, Calif.

Name and location of property: Washington Mining Claim
Madera County, California

SUMMARY

Mr. Fred E. Miller, 1070 Lincoln Avenue, San Jose, California, applied to the Defense Minerals Exploration Administration, for Government assistance to explore for tungsten on the Washington Mining Claim, situated on the east fork of the Chowchilla River, Chowchilla Mining District, Madera County, California, about 19 miles southeast of Mariposa.

A field examination was requested by the Executive Officer, DMEA Field Team, Region III, to determine whether the tungsten showings on the property were sufficient to justify the project proposed by the applicant. Accordingly, a field examination was made August 24 and 25, 1954 by an engineer of the Bureau of Mines and a geologist of the Geological Survey.

The applicant proposes to explore the deposit by deepening the existing shaft 100 feet and then drifting and crosscutting 100 feet to determine the dimensions of the ore body. Total cost of the project is estimated at $17,470.

As a result of the examination, it was determined that the dimensions of the scheelite-bearing tactite body are already exposed, that the structures limiting the size of the ore body are obvious, and that the average grade of the material are determined. There is no evidence to indicate that ore bodies of higher grade or larger size will be found elsewhere on the property. It is, therefore, recommended that Government assistance under the DMEA program be denied.

INTRODUCTION

In connection with an application for exploration assistance, docket DMEA-3426, the Washington tungsten prospect was examined August 24 and 25, 1954 by an engineer of the Bureau of Mines and a geologist of the Geological Survey for the purpose of inspecting development openings that pertained to F. E. Miller's application for aid in exploring showings of tungsten that are being developed on the Washington Mining Claim.

DESCRIPTION OF PROPERTY

Property holdings comprise one unpatented lode mining claim, known as the Washington Mining Claim, situated on the east fork of the Chowchilla River, Chowchilla Mining District, SE 1/4 of sec. 21, T 6 S., R. 20 E., Madera County, Calif., about 19 miles southeast of Mariposa and 80 miles north of Fresno, Calif., the supply and shipping point on the Santa Fe and Southern Pacific Railroads.

ACCESSIBILITY

The property is accessible from either Mariposa or Raymond, by dirt, partially graded and improved roads. From either town, the last 10 miles of road is rough and poorly maintained.

HISTORY

The Washington Mining Claim was located 50 years ago as a gold discovery. There is no record that any gold has been produced from the property.

Prior to 1942, the California State Bureau of Mines reports that 100 units of WO_3 had been produced from this mine. In 1943 and 1944, Roscoe Patterson, owner of the claim, shipped two lots; one of 15 tons that assayed 4.2 percent WO_3 and one of 20 tons that assayed 2.1 percent WO_3. More recently, Henry Bennett, milled 50 tons on the property. The amount of tungsten recovered was not available.

Mr. Miller acquired the property on a lease arrangement in March 1954. Since then he has deepened the shaft to a depth of 25 feet. From this working, about 50 tons have been stockpiled on the dump that contained 0.28 percent WO_3 and 0.33 percent copper. No work was being done on the property at the time the field examination was made.

PHYSICAL FEATURES

The claim is located on the east fork of the Chowchilla River in an area of moderately steep topography at an altitude of about 1700 feet. The climate of the low foothill country of the west slope of the Sierra-Nevada is

typical of the San Joaquin Valley immediately to the west, with long, hot summers and moderate winters. Precipitation occurs usually as rain during the winter months. Water for domestic use is supplied from a small spring south of the property. For mining and milling use, an ample supply is available in the river which courses through the property. Oak with occasional pine together with heavy patches of small shrubs constitute the vegetation on the property. None of the vegetation is suitable for mining use.

Transmitted electric power is not available. For power generation, fuel oil is supplied in drums by truck from either Raymond or Mariposa, about 19 miles northwest.

COMPETENCY OF APPLICANT

Mr. Miller, according to his statement, has had considerable experience as a miner, and should be competent to supervise exploratory operations.

HOUSING FACILITIES

Two houses and two tents on the property are sufficient to accommodate a crew of 8 to 10 men.

EQUIPMENT

Equipment on the property comprises two portable compressors of 60 and 210 cubic foot capacity, compression drills with accessory attachments and a small assortment of hand tools.

DEVELOPMENT

Development openings on the property comprise a 25-foot shaft from which a 7-foot crosscut has been driven in an easterly direction off the bottom of the shaft.

GEOLOGY

The Washington claim is along a contact between metamorphic and igneous rocks. Scheelite-bearing tactite occurs in a small embayment of marble in granodiorite. This deposit has been previously described by Krauskopf.[1/]

The eastern half of the claim is underlain by granodiorite. It is a light-gray, medium-grained rock containing quartz, feldspar, hornblende, and biotite.

In the northern part of the claim, the contact between granodiorite and metamorphic rocks strikes N. 35° W., is nearly vertical, and truncates the bedding and schistosity in the metamorphic rocks. Near the center of the Washington claim, the contact turns sharply southwest.

The metamorphic rocks strike N. 80° E., dip 80° SE and consist of schist, quartzite, and hornfels, with locally thin beds of marble. A bed of gray, coarsely-crystalline marble enclosed in a shallow embayment in the granodiorite, where the contact shifts from NW to SW, has been metamorphosed to a quartz-garnet-epidote tactite. It is within this small tactite

1/ Krauskopf, Konrad B., 1953, Tungsten Deposits of Madera, Fresno, and Tulare Counties, Calif.: Calif. Div. Mines Special Report 35, p. 75.

body that the tungsten deposit occurs.

ORE DEPOSITS

The tungsten deposit is a scheelite-bearing body of tactite about 40 feet long, 10 feet wide, and 25 feet deep that strikes N. 50° E., dips steeply SE, and is cut off at both ends and down dip by granodiorite (fig. 2). The ore minerals are scheelite and chalcopyrite.

Fine- to coarse-grained scheelite occurs throughout the tactite body. The average grade of the deposit is about 0.4 percent WO_3 and 0.4 percent Cu. The richest concentration of scheelite is along the granodiorite contact at the northeast edge of the body, where crystals of scheelite as much as one inch in cross section occur in a zone of tactite composed of quartz, garnet, epidote, wollastonite, pyrrhotite, and chalcopyrite.

SAMPLING

In order to determine the approximate grade of the ore, a series of six samples were taken of material in the stockpiles and from underground openings. Details regarding them are as follows:

Sample No.	%, WO_3	%, Cu	Description
1709	0.08	0.40	Chip and grab of 15 tons ore in pile by forge.
1710	0.28	0.33	Grab of fines in 50 ton stockpile at shaft.
1711	0.13	0.35	Chip of large boulders in 50-ton stockpile.
1712	0.01	0.67	Cut across 7 feet west side of shaft, 3 feet from bottom.
1713	0.38	0.37	Cut across 5 feet south side of shaft, 3 feet from bottom.
1714	0.49	0.35	Cut across 5 feet south side of east crosscut.

ORE RESERVES

Measured ore reserves on the Washington claim total about 100 tons with an average grade of 0.5 percent WO_3. These reserves are in a block of ground 5 feet wide, 10 feet long, and 25 feet deep between the shaft and the granodiorite contact to the northeast.

Indicated ore reserves are 200 tons of ore with an average grade of 0.4 percent WO_3 (estimated by lamping) in a block 10 feet square and 25 feet deep beneath the small open cut 20 feet southwest of the shaft.

In the block of ground 10 feet wide, 20 feet long, and 25 feet deep between the shaft and the open cut a reserve of 200 tons of ore with an average grade of 0.3 percent WO_3 (estimated by lamping) is inferred.

EXPLORATION

The applicant proposes to explore the deposit by deepening the existing shaft 100 feet and then drifting and crosscutting 100 feet to determine the dimensions of the ore body. Total cost of the project is estimated at $17,470.

The proposed program is unwarranted. The dimensions of the tactite body are already exposed, the structures limiting the size of the ore body are obvious, and the average grade of the material has been determined.

There is no evidence to indicate that ore bodies of higher grade or larger size will be found on other parts of the claim.

CONCLUSIONS AND RECOMMENDATIONS

The tungsten deposit on the Washington claim is small in size and of low grade. Geologic conditions are not favorable for the discovery of deposits of tungsten ore in the ground to be explored by the proposed program. There is no evidence to indicate that ore bodies of higher grade or larger size will be found on other parts of the claim. It is recommended that Government assistance under the DMEA program be denied.

400

DOCKET
Surname:

Hopkins
Martin
Geehan
Hodges
Newcomb
Selfridge

AUG 3 1954

Mr. Fred B. Miller
1070 Lincoln Avenue
San Jose, California

Re: Docket No. DMEA 3426 - Tungsten
Washington claim
Madera County, California

WSM

Dear Mr. Miller:

The above-docketed application for exploration assistance for tungsten has been reviewed by the Iron and Ferro-Alloys Division of the Defense Minerals Exploration Administration, and referred to Mr. H. C. Miller, Executive Officer, DMEA Field Team, Region III, 420 Custom House, 555 Battery Street, San Francisco 11, California, for a field examination of the property.

Any assistance that you can render the members of the Field Team will be appreciated.

Sincerely yours,

C. O. Mittendorf

Administrator

cc: Docket
FT, Reg. 3
Code 400
Adm. Read. File
Oper. Comm.
R. W. Geehan, USBM
E. L. Newcomb, USGS

JHopkins/ls
8/4/54

R.C.S.

DOCKET
Surname:

Hopkins
Martin
Hughes
Selfridge

400

AUG 6 1954

Mr. H. C. Miller, Executive Officer
DMEA Field Team, Region III
420 Custom House
555 Battery Street
San Francisco 11, California

Re: Docket No. DMEA 3426 - Tungsten
Fred H. Miller
Washington claim
Madera County, California

Dear Mr. Miller:

The subject application for exploration assistance is being referred to your office for a field examination of the property.

Two copies of a memorandum dated July 29, 1954, by E. L. Newcomb, Geological Survey, are enclosed for your information.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (JHB)

Enclosures

APPROVED:

J. H. Hedges

Member, Bureau of Mines (JHB)

s/ E. L. Newcomb

Member, Geological Survey (JHB)

cc: Docket
FT, Reg. 3
Code 400
Oper. Committee
Adm. Reading File
R. W. Geehan, USBM
~~XXXXXXXXXXXXXXXX~~
E. L. Newcomb, USGS

JHopkins/ls
8/4/54

R.C.S.

Newcomb

IN REPLY REFER TO:

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 30 1954

July 29, 1954

Memorandum

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

From: E. L. Newcomb, U. S. Geological Survey

Subject: Review of application

Re: DMEA-3426, Washington Claim
Madera County, California
$17,470 -- Tungsten

The applicant proposes to deepen his present prospect shaft 100 feet and to drift 100 feet in a mineralized tactite -- limestone contact zone. Crosscutting or diamond drilling would be done on the new level to determine width of the ore zone.

Present workings consist of a 25 foot shaft with a 7 foot stub drift at the bottom. Applicant reports the workings are in ore which averages 0.5-0.75 percent WO_3. Past production is reported to have been about 150 units of WO_3.

An unpublished Survey report on the Tungsten deposits in Madera County, California (1942) contains a brief description of a Washington mine. However as the applicant's claim and the Washington mine appear to be in different Sections (21 and 28, respectively), this description is not suitable for a fair appraisal of the applicant's proposal.

In 1942 the total reserves in the Washington mine were estimated to be about 30 tons of ore containing 70 units of WO_3. However, the applicant's reported production far exceeds this early reserve estimate if applicable to his property.

As our information is very limited and apparently not appropriate to the applicant's claim, I recommend the application be referred to the Field Team for their examination and recommendation.

E. L. Newcomb

E. L. Newcomb

Copy ret[illegible]

July 28, 1954

Mr. Fred E. Miller
1070 Lincoln Ave.
San Jose, Calif.

Subject: DMEA-3426
Re: Exploration Assistance
Washington Mining Claims

Dear Sir:

The receipt of your application dated July 24, 1954 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-3426 and referred to the Iron and Ferro Alloys Division.

Kindly refer to in any future correspondence relating to your application.

Sincerely yours,

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. 3426
Metal or Mineral Tungsten
Date Received
Estimated Cost $17,470
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: Fred E. Miller
1070 Lincoln Avenue
San Jose, California

(*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 WASHINGTON MINING CLAIM (1) Situated in the NE¼ of S21 T6S - R.20E. MDB & M. as recorded on July 15th, 1931 in Vol. 86 Page 190 in Official Records of Madera County, California.

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

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise
5 yr. lease and as long thereafter as producing, not to exceed 25 years.

(*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. Copy of lease attached.

(*e*) If you own the land, describe any liens or encumbrances on it Leasehold
no encumbrances

(*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*) State the mineral or minerals for which you wish to explore Tungsten - Scheelite

(*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 10 days and be completed within 9 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)? Yes

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

[X] Money [X] Use of equipment owned by you [X] 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 July 24, 1954

Fred. E. Miller
(Applicant)

By

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

4. (a) The present exploration operations consist of a shaft that has been sunk to a depth of 25 feet and a drift at the bottom in 7 feet. The vein at the surface was stripped for a distance of 25 feet North & South and 15 to 20 feet Easterly and Westerly and the ore shipped to 2 different Custom Mills. One shipment of approximately 25 tons returned 2.1% WO_3; 12 tons returned 4.2% WO_3; or roughly 100 units WO_3.

Since 1942 Lessee mined and milled approximately 50 units WO_3 up to January 1, 1954.

Since I have taken the lease on above mine, I have taken out approximately 120 tons ore from the shaft and drift which will average 3/4 of 1% WO_3, from shaft and drift.

Some gobs of ore in vein will assay much higher.

This ore is on the dump and can be sampled easily.

The present mine workings now consist of a 4 ft. x 8 ft. shaft 25 ft. deep and drift at bottom of shaft 7 ft. all in ore that will average between 1/2 to 3/4 of 1% WO_3.

Facilities for production now consist of a compressor hoist and all necessary small tools, a 2-man windlass for hoisting ore, two cabins, two tents.

My interest is 100% having the above described Leasehold. The mine is accessable for examination without any difficulty. Road to mine, workings are clear and no water.

4. (b) Up to 1942 the State Bureau of Mines reports up to 100 units of WO_3 has been produced from this mine. Since 1942 approximately 50 units have been mined and milled.. At present we have roughly 120 tons of ore on the dump that will average between 1/2 and 3/4 of 1% WO_3 and some of course much higher.

F. E. Miller
1070 Lincoln Ave
San Jose, Calif

This is the average of the entire amount of material we mined without sorting, if sorted could be held up to 1% WO_3.

Our present operations will produce about 3 or 4 tons ore per shift. No ore blocked, but lamps with mineral lite on 4 sides of the shaft and in the drift.

We have no true walls so far, so the size of the vein cannot be determined without further exploration.

4. (c) The vein appears in limestone with granite contact near. The tactite is metamorphic, composed of silicon dioxide, brown garnet, white calcite, chalcopyrite, iron sulphite, and cream-colored scheelite, according to the State Bureau of Mines determination.

This property has the general characteristics of making a producing mine which will be a genuine contributiion to the defense effort in producing a very necessary metal.

4. (d) A year round dirt road to the mine from Raymond, California, 20 miles and from Mariposa, California 18 miles, about 80 miles from Fresno, California, about 10 miles of dirt road.

4. (e) Manpower is available in vicinity local, men living near. Material and supplies can be purchased in Mariposa and nearby sawmills, not over 18 miles haul. Equipment can be obtained in Fresno, California; San Francisco, California; or Sacramento, California.

Mine is situated on the bank of East fork of ChowChilla River, a year round stream, water plentiful. P. G. & E. power line is 2 1/2 miles from property. Millsite on property.

F. E. Miller
1070 Lincoln Ave
San Jose, Calif

5. (b) The proposed work will consist of sinking shaft at present location on down 100 feet on the vein and drifting 50 feet each way and cross cutting at intervals to determine width of ore body, or diamond drilling.*

5. (d) The applicant and supervisor, F. E. Miller, of the proposed project started mining with his father in 1910 in Leadville, Colorado, at the age of 16, worked with him underground, and on the surface until 1916. Employed by the Empire Zinc Co. at Gilman, Colorado, as mucker; machine operator and timber-man in the Iron Mask Mine for 2 years; and as machine operator and timber man for the same Company at the Black Iron Mine at Red Cliff, Colorado, for 2 years.

Employed at the Empire Zinc Co. Lead and Zinc Concentrating Mill for 2 1/2 years as table man, roosters, crushers man.

Employed at the Douglas Mountain Copper Mining Co., Rock Springs, Wyo. for 1 1/2 years operating rock drill and timbering.

From 1935 owned and operated Gold Mine and mill near Needle, California; did some tungsten milling also, until 1941.

Supervised Bulldozer work at Santa Cruz in 1949, filling and leveling city lots.

5 (b)* Also dozing off dirt bank and leveling the area adjacent to shaft to make room for Tool Room, head house & truck turn.

F. E. MILLER
1070 LINCOLN AVE
SAN JOSE, CALIF

6. (a) Estimate of Costs. Independent contracts.

Bulldozer work - 32 hrs. @$10.00 per hr.	$320.00
Erecting Headframe over shaft Furnish Labor and Materials	400.00
Erecting headhouse and tool room Furnish Labor and Material	250.00
Sinking shaft 100 feet from present depth. 4' x 7' in clear. Fully timbered with shaft sets and lagging, ladders, with landing at 20 ft. intervals. Furnish all labor, equipment, and materials at $100.00 per foot.	10,000.00
Driving drifts and Crosscuts 100 ft. 4' x 6 1/2' in clear Furnish all Labor, Equipment, and Material @ $35.00 per foot.	3,500.00
6. (b) Engineering Consultant 24 days @ $50.00 per day	1,200.00
Geological Consultant 24 days @ $50.00 per day	1,200.00
6. (c) Furnished by Independent Contractor	
6. (d) Furnished by Independent Contractor	
6. (e) None	
6. (f) Independent Contract. See 6 (a)	
6. (g) Analytical Work	500.00
Accounting	100.00
6 (h) Independent Contract	
	$17470.00

F. E. Miller
1070 Lincoln Ave
San Jose, Calif

7. (b) The applicant owns all equipment necessary to complete the Independent Contracts, Compressor, Hoist, all necessary tools, Rock drill, Hose, steel, bits, which are now at the property and is willing to take the contracts as so stated above, with exception of Bulldozer work, but will supervise same, take all responsibility, and personally supervise all work and furnish money necessary to make up for any cash required for his contribution to the project.

F. E. Miller
1070 Lincoln Ave
San Jose, Calif

F.E. Miller
1070 Lincoln Ave
San Jose,
Calif

A G R E E M E N T

THIS LEASE AND AGREEMENT, MADE on this 10th day of February, 1954, by and between ROSCOE L. PATTERSON AND JOSEPHINE PATTERSON and ISAAC M. LIPSON and VILLA LIPSON, all of Visalia, California; known hereinafter as the LESSORS, and F. E. MILLER, of San Jose, California; known hereinafter as the LESSEE,

W I T N E S S E T H:

THAT FOR AND IN consideration of One ($1.00) Dollar paid by the Lessee to the Lessors and for a further consideration of the covenants, agreements, and mutual obligations hereinafter mentioned, the said LESSORS do by these presents lease unto the said LESSEE, for five years, ending February 10, 1959, or as long thereafter as LESSEE fully complies with this lease, and said mining operations continue to be profitable, not to exceed twenty five (25) years; the following described mining claim situated in the Chowchilla Mining District, in Madera County, State of California, to-wit:

> The Washington Mining Claim as recorded in the records of the Recorder's Office in Madera County, State of California, and any and all claims held in whole or in part by the LESSORS adjoining the Washington Mining Claim.

THE SAID LESSEE shall have the privilege, and the same is hereby granted to him, his agents, employees, and representatives, to enter upon the said above described mining claim and every part thereof, and to work and operate the same, extract, reduce, ship and sell, or to reduce, treat, ship, and sell, the ores and values contained in said mine.

If ore is taken from the property for milling purposes the Lessee and the Lessors shall agree on the mill, where the ore is to be milled, and at all times the mill must be satisfactory to both Lessors and Lessee.

The said Lessee shall begin the work of opening up the said property within twenty (20) days after this instrument is duly executed by all parties, and thenceforth during the life of this lease, shall make shaft or drift of at least ten (10) feet per month or the equivalent to one hundred twenty (120) feet per year of actual shaft or tunnel work, provided that no Act of God prevents operation by the Lessee. The said labor to be employed in the operation and development of said premises, in the actual digging, drilling, blasting, operating machinery, etc., for the taking out of ore on said property.

Should said claim show where it can be developed to a faster degree, and to such an extent to be profitable to employ more men, then, and in that event, the said Lessee agrees to employ as many men as necessary for the development and operation of and for the taking out, blocking out, cutting drifts, making shaft or cross cuts for the purpose of developing said claim and taking ore therefrom, milling or reducing and delivery of said ore from said claim.

The Lessee further agrees that he will mine, deliver to the mill or smelter or reduction plant, mill, extract, reduce, treat, smelt or any other treatment necessary to extract the most

values from any ore on said property and that he will properly do the job miner-fashion for the recovery of any and all ores which show they can be mined profitable, contained in said rock, but, the Lessee has the right to sell and deliver the ore to the Metals Reserve Stockpile, if he so desires.

The Lessee hereby agrees that he will sell the ores or values taken from said Washington Mining Claim at the highest possible price obtainable.

The Lessee further agrees that he will extract or cause to be extracted as nearly as possible all mineral values contained in said ore or rock taken from said mine or mines, which can be done profitably.

The Lessee further agrees that if said ore is shipped for milling from said property for the recovery of one or more values contained therein and there should be other values contained in the tailings the interests of the Lessors shall remain in the said tailings until the values are taken therefrom and all settlement has been made with the Lessors.

Any and all work done in and upon said premises during the life of this lease, shall be done in a workmanlike manner, miner fashion, with the view to the proper preservation of said property and compatible with economic mining.

At all times during the life of this instrument, the said Lessors, their agents, or employees, may enter upon and into said property and all parts thereof for the purpose of inspection, sampling and with a view to ascertaining whether or not the terms and conditions of this agreement are being fulfilled and carried out.

At all times during the life of this instrument the Lessors, their agents, or employees, may and have the right to inspection or receive information from any smelter, or treatment

plant where ore may be shipped or milled or for the inspection of ore or concentrates on or off said premises, and may take samples at any time.

From and out of the values obtained from said ores from said premises, the said Lessee shall pay to said Lessors Eleven (11%) per cent of Tungsten, Gold or other values, of the gross proceeds. Said royalty payment shall be made by Lessee to said Lessors on or before the first (1st) day of each calendar month, for all money received during the preceding calendar month for values extracted from said premises. With each monthly royalty payment, said Lessee shall deliver to said Lessors a copy of the original settlement sheets, showing certified net weight, and amount received for the value covered by each such settlement. The Eleven (11%) per cent royalty shall be based upon the United States Mint, the Metals Reserve, or the smelter or the treatment plant returns, for ore or concentrates shipped from said premises without deduction for treating, smelting, milling, delivery or receiving or other service rendered.

The said Lessee shall keep books of account, showing the amount of ore or values shipped, sold or otherwise disposed of from said premises, and the amount of money received from the sale thereof, and said books of account shall be open at all reasonable times to the inspection of the lessors or their representatives. The lessee shall and he does hereby agree to notify the lessors within ninety-six (96) hours after any concentrates, ore or values are removed or taken from said property, giving the amount, where taken, and shall notify the lessors within ninety-six (96) hours of the moving of any and all concentrates or ore from one place to another. The Lessee shall notify the Lessors, the name and address of any and all purchasers of concentrates or ores taken from said property and the amount received for same.

No lien or mortgage of any nature shall be placed against more than eighty-nine (89%) per cent of the ores in or on said property, and any lien or mortgage of any nature must be so written that in the event of the Lessee terminating the lease, or violating the lease that the lien will be cancelled and not remain a cloud upon said property or ores therein. Should the lessee mortgage or place a lien of any nature against his percentage, then and in that event, the mortgage or lien shall become null and void if and when for any reason this lease is terminated.

The said Lessee shall do no act or thing which will cause mechanics' or other liens to be placed upon or against said premises, and said Lessors shall have the right at all times during the life of this lease of posting, and of keeping posted, in a conspicuous place, or conspicuous places, upon said premises, a notice, or notices, in writing or otherwise, of the nonliability and non-responsibility of the said Lessors, or of said demised premises, for any indebtedness for labor, materials, or at all, which may be created by said Lessee in working and operating said premises, or which may arise in any manner by reason of the exercise by the said Lessee of the rights herein granted to them. And, the said Lessee shall hold the said Lessors free from, and shall protect them against any loss, damage, or liability, which may result to any third person by reason of the exercise by said Lessee of any of the rights herein granted to them.

The title to all improvements, materials, equipment, and supplies and property of every nature which may be placed by the said lessee upon or within the above described premises, other than timbers, bracing, etc., placed in or on said mine for the preservation of said property, shall remain with the said Lessee, and in the event of abandonment or termination of this lease, the said Lessee shall have thirty (30) days after the

abandonment or termination of this lease, to remove the said improvements (other than as stated above) equipment and other personal property from the said premises. But such removal shall not take place unless and until the said Lessee shall have executed a quitclaim deed to the said Lessors, for cancelling this lease and removing any cloud which its execution may create upon the title of said lessors to the said premises.

The said Lessee shall insure and keep insured with the insurance department of the State of California, or with some qualified insurance company, all employees which, during the life of the agreement, may be employed by the said Lessee upon or within the said premises.

Upon any violation of the condition, covenants, and agreements hereinabove set forth, the said Lessors shall give the Lessee written notice of such violation by registered mail, addressed to his last known address, and if the default referred to in such written notice is not cured by the Lessee within fifteen (15) days after such a notice is served upon the said Lessee, then at the option of the said Lessors this instrument shall expire, and the said Lessors, their agents, employees, and representatives may thereupon enter said premises and every part thereof, and dispossess the said Lessee, his employees, agents and representatives, and should this happen, then the Lessee hereby agrees that he will give the Lessors a quitclaim deed for cancelling this lease and removing any cloud which its execution may have created upon the title of said property, except that the said Lessee shall thereafter have thirty (30) days in which to remove any property which he may have placed upon the said premises.

This lease and agreement shall be binding upon and its benefits insure to the parties hereto and their respective

heirs, executors, administrators and assigns.

TIME IS THE ESSENCE OF THIS AGREEMENT, AND OF EVERY PART THEREOF.

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

Roscoe L. Patterson

Josephine Patterson

Isaac M. Lipson

Villa Lipson

LESSORS,

F. E. Miller

LESSEE.

STATE OF CALIFORNIA)
(ss.
County of Tulare)

On this 25 day of February, 1954, before me, the undersigned, a Notary Public, in and for said County, personally appeared ROSCOE L. PATTERSON and JOSEPHINE PATTERSON and ISAAC M. LIPSON and VILLA LIPSON, known to me to be the persons whose names are subscribed to the within instrument, and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal in the County of Tulare, the day and year in this certificate first above written.

(S) J. M. Killingbeck
Notary Public in and for the County of Tulare, State of California.

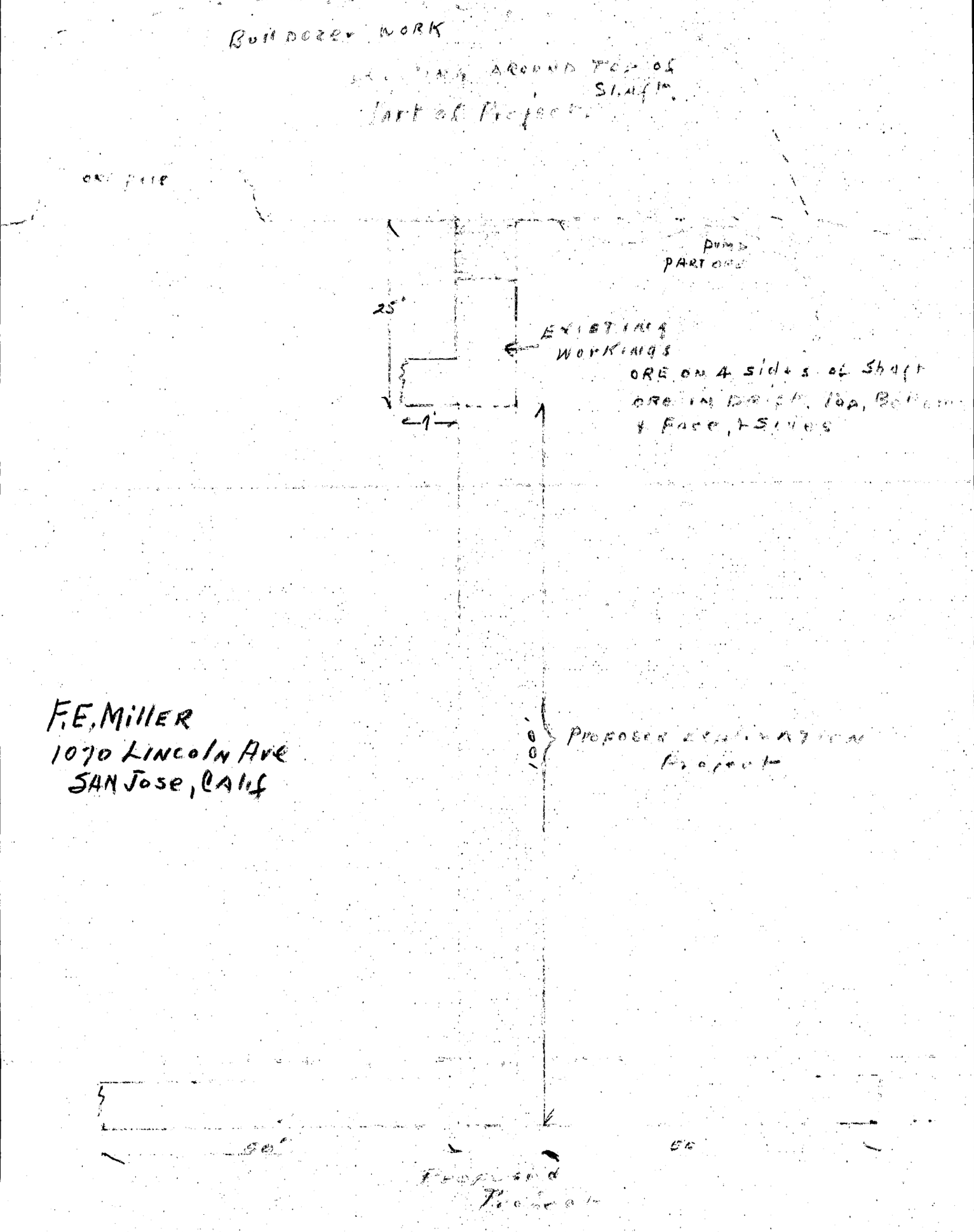
STATE OF CALIFORNIA)
(ss.
County of Santa Clara)

On this 6 day of March, 1954, before me, the undersigned, a Notary Public in and for the County of Santa Clara, State of California, residing therein, duly commissioned and sworn, personally appeared F. E. MILLER, known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same.

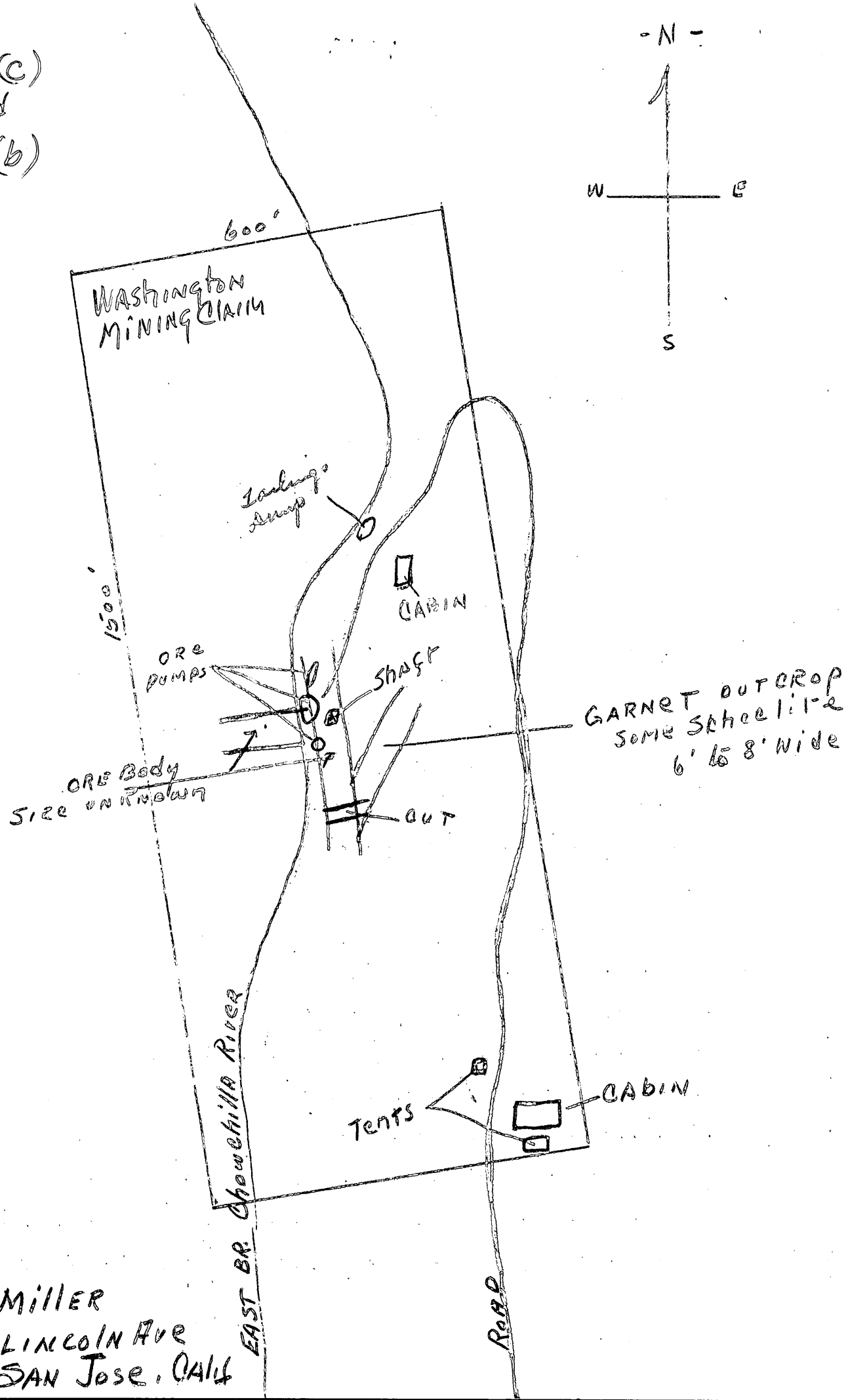
IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, in the County of Santa Clara, the day and year in this certificate first above written.

(S) Norman J. Bush
Notary Public in and for the County of Santa Clara, State of California.
My Commission expires Jan. 24, 1955.

5 - (b)

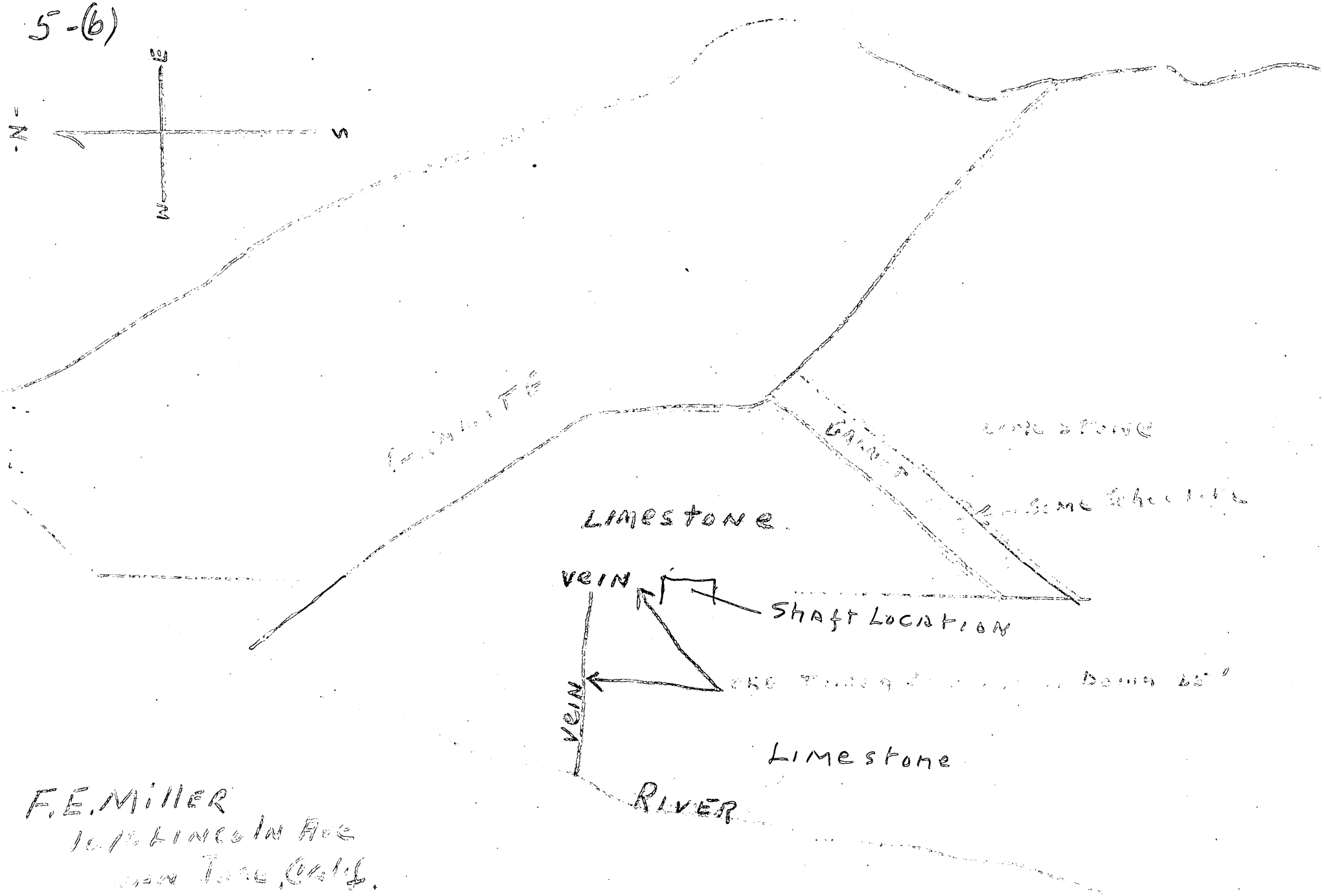

Bulldozer work
around top of
Shaft
Part of Project
ore pile
pump
PART ORE
25'
EXISTING
WORKINGS
ORE ON 4 sides of Shaft
ore in Drift, Roof, Bottom
& Face, + Sides
1'
F.E. Miller
1070 Lincoln Ave
San Jose, Calif
Proposed Excavation
Project
50'
50
Proposed
Project

4-(c)
and
5-(b)

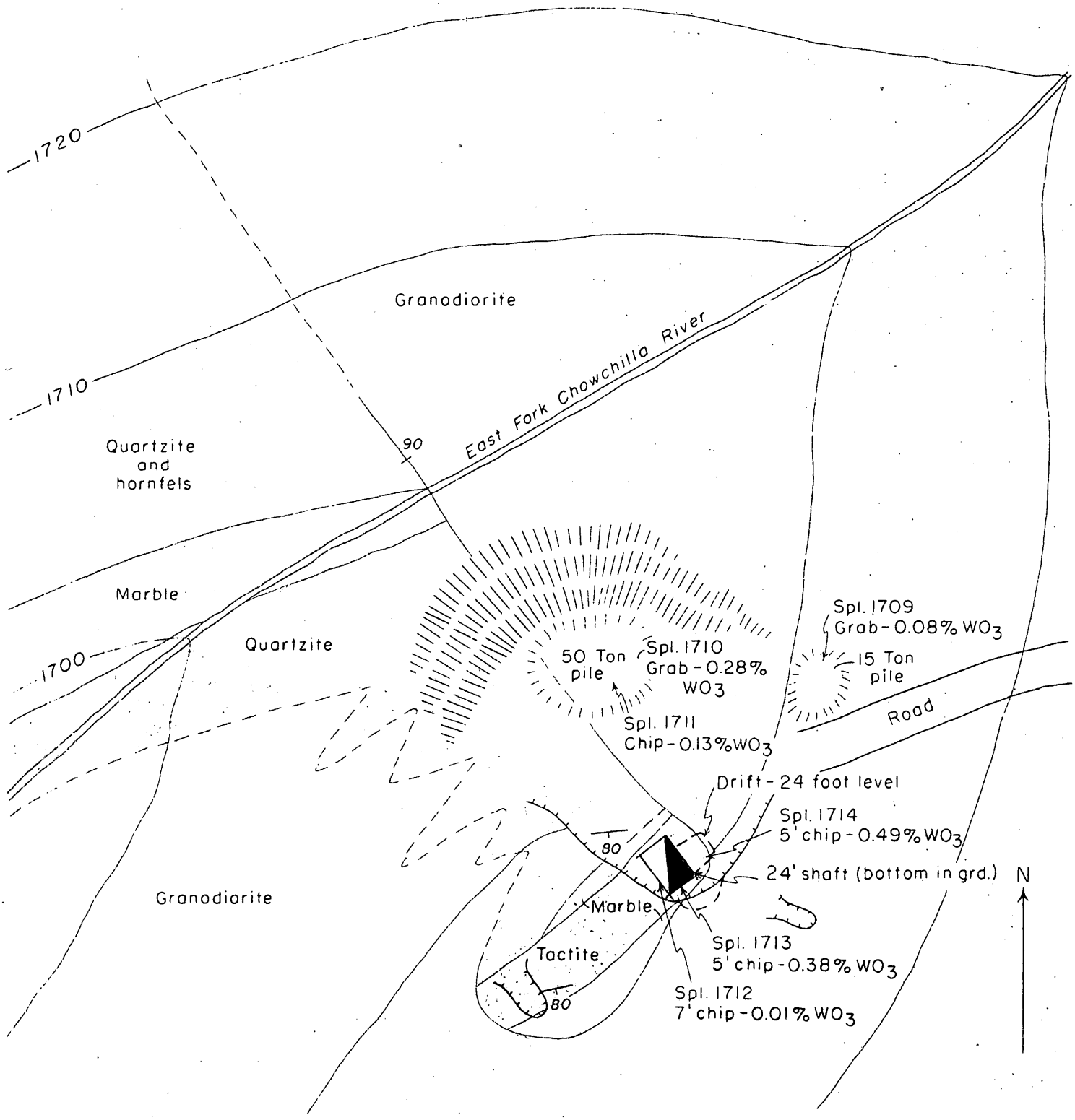


F.E. Miller
1070 LINCOLN AVE
SAN JOSE, CALIF

4(c)
AND
5-(b)



F.E. Miller
Lincoln Ave
Iowa Falls, Iowa.

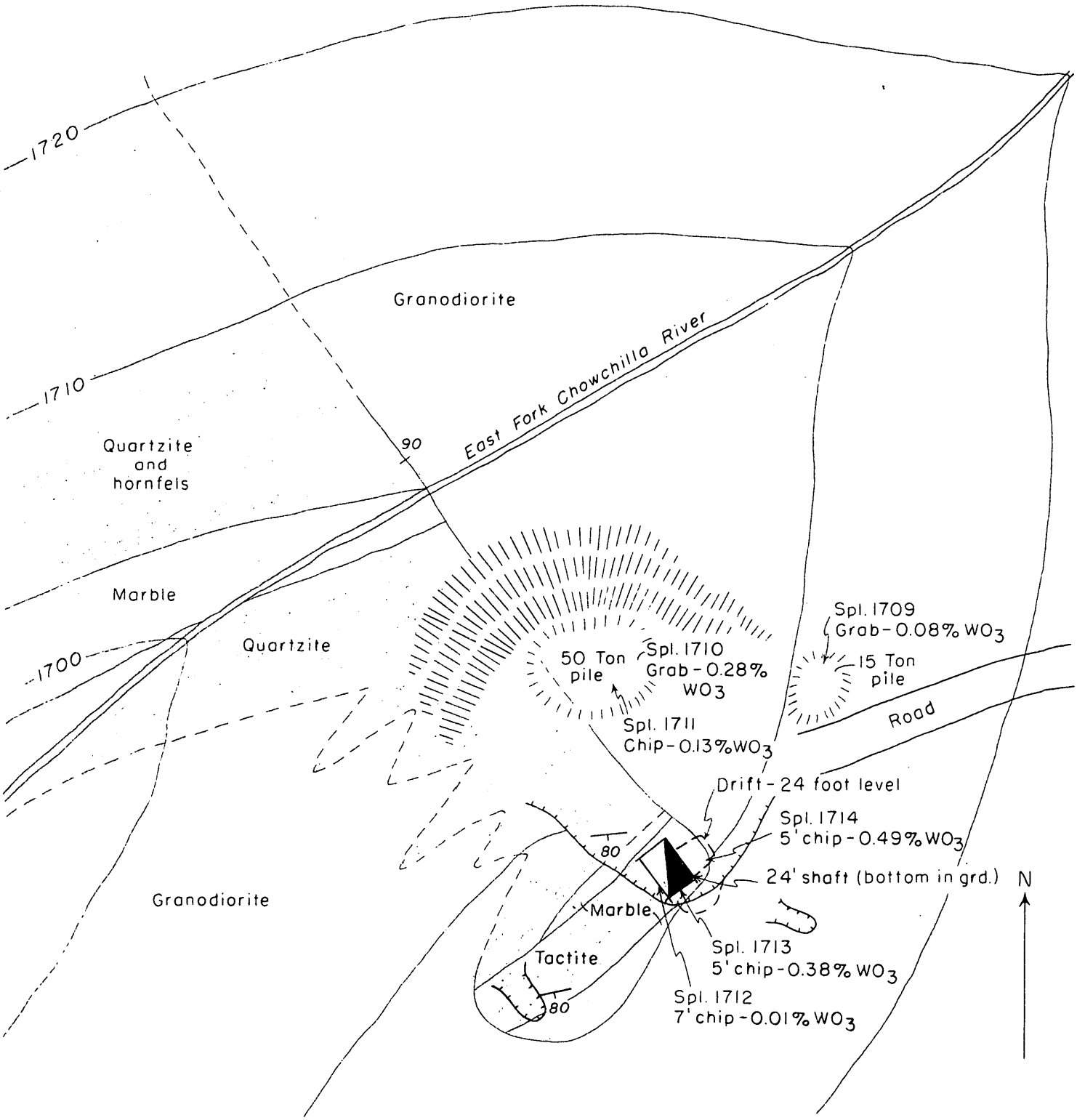


GEOLOGIC SKETCH MAP OF WASHINGTON TUNGSTEN PROSPECT,
MADERA COUNTY, CALIFORNIA

20 0 20 40 FEET

Datum approximate

FIGURE 2



GEOLOGIC SKETCH MAP OF WASHINGTON TUNGSTEN PROSPECT, MADERA COUNTY, CALIFORNIA

20 0 20 40 FEET

Datum approximate

FIGURE 2

SPOKA WASH
JY 21 7 PM
1954

CENTS 15
1954

Contract Administration and Audit Division
Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D. C.