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DMEA ~~DMA~~ Docket No. 2407

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To:	Code 700, Rm. 4640	Date	3-5-52
To:	Ops. Comm	Date	4-7-52 ~~4/4/52~~
To:	Mr. Mittendorf	Date	
To:	Mails & Files	Date	
To:	Ellis Docket	Date	
To:	Op Com	Date	7-18-52
To:		Date	
To:		Date	
To:		Date	
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FILE COPY
SURNAME:

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

APRIL 18 1952

Mr. Herbert C. Sanderson
Consumnes Development Co.
2901 Capitol Ave.
Sacramento, California

Re: Docket No. DMEA-2407 (Copper)
Consumnes Copper Mine
El Dorado County, California

Dear Mr. Sanderson:

Your application for an exploration contract on your property in El Dorado County, California, has been given careful study and consideration by the engineers of this Agency and other interested Government Agencies.

In the light of that information it appears that the mineralization is too weak and uncontrolled by geological structures to be favorable for the deposition of significant ore deposits. Therefore, we regret to advise you that your application is denied.

If at any time in the future you obtain additional information that would alter our decision we would be pleased to have you submit it to this Agency.

Sincerely yours,

(signed) FRANK E. JOHNSON

Acting Administrator

APPROVED:

Member, Bureau of Mines

Member, Geological Survey

EWEllis/gla 7-16-52

cc to: Adm. Reading File
Operating Committee
Docket
Messrs. C.H.Johnson, Rm. 3621
Ned Nelson, Rm. 4216 GSA
Ellis
DMEA Field Team, Region III (2)

7/15/52 gla

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

July 14, 1952

Memorandum

To: E. W. Ellis

From: C. H. Johnson, Bureau of Mines

Subject: DMEA - 2407 Consumers Development Company, Consumers Copper mine, El Dorado County, California

I have reviewed the report by Robertson and Tatlock, dated June 13, 1952, on the above-named prospect. They recommend denial because the ore is too lean and the orebodies too small to justify exploration.

Before accepting this decision, I should like to have an estimate by the examining engineers of the tonnage and grade of ore in the so-called Shoot 2, from Adit No. 2 to the surface, and the tonnage that would be added if it could be established that the shoot persisted to the 3rd level, this being a possibility that is suggested in the report (p. 4 "either the shoot pinches out or passes west of the winze as no sign of this shoot is found on level No. 3.") Any tonnage of 2.5 percent copper ore containing 0.1 ounce gold and 1.5 ounces of silver, sufficient to feed a small mill for a few years, would be worth knowing about at some future time. From the maps and sections I should think the body of "skarn rock" above the No. 2 Adit might contain 15,000 to 20,000 tons. If this could be built up to 40,000 or 50,000 it would begin to be interesting. It should not cost much to determine whether or not Shoot 2 has a substantial tonnage below the adit level.

C. H. Johnson

C. H. Johnson

DEPARTMENT OF THE INTERIOR
Bureau of Mines Materials
JUL 14 1952

Copy to - Mr. Nelson
Minerals Division
C. H. Johnson
Base Metals
Files

7/10/gla. SD

IN REPLY REFER TO:

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

July 7, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 10 1952

Memorandum

To: Mr. E. Wm. Ellis

From: N. E. Nelson

Subject: DMEA-2407, Consumnes Development Company, El Dorado County, California.

The reports by W. P. Irwin, J. F. Robertson and D. B. Tatlock sustain the recommendation-denial of the application.

Orebodies in a setting such as outlined are usually elusive and expensive to follow. Samples 4, 5, and 6, suggest a center of mineralization, but the grade is not promising. Probably no point of attack better than this would be found by other exploration.

N. E. Nelson

N. E. Nelson
Geologist

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

July 7, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 10 1952

Memorandum

To: Mr. E. Wm. Ellis

From: N. E. Nelson

Subject: DMEA-2407, Consumnes Development Company, El Dorado County, California.

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N. E. Nelson

N. E. Nelson
Geologist

7/8/52 gla

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

Office of
Executive Officer
DMEA Field Team
Region III

1012 Flood Building
870 Market Street
San Francisco, 2, Calif.

June 24, 1952

Memorandum

To: Frank E. Johnson, Chairman, Operating Committee, DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-2407 (Copper) Consumnes Development Company, El Dorado County, California

Reference is to your subject letter, dated April 8, requesting a field examination of the Consumnes Development Company's copper mine in El Dorado County, California.

The property was examined on April 24 by W. P. Irwin, J. F. Robertson and D. B. Tatlock of the Geological Survey; and on May 13-15 Robertson and Tatlock revisited the property and mapped the surface and principal underground workings and took six samples.

Four copies of their report - DMEA 2407, Consumnes Development Company, El Dorado County, California (Copper) by J. F. Robertson and D. B. Tatlock, Geologists of the U. S. Geological Survey, dated June 12, 1952, are attached.

The examining geologists conclude that an exploration project at the Consumnes copper mine is not warranted, and it is recommended that no contract be negotiated with the applicant for a DMEA loan. Assays of samples from the mine are too low and mineralized rock from the ore shoots of that grade is not in sufficient quantity to justify mining.

The docket is being returned herewith.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 30 1952

Attachments

Copy to E. H. Bailey, USGS

4/30/52 glc

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA 2407, Consumnes Development Company

El Dorado County, California

(Copper)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 30 1952

J. F. Robertson, Geologist
D. B. Tatlock, Geologist
U. S. Geological Survey

June 12, 1952

Summary

The Consumnes Development Company, represented by Dr. H. C. Sanderson of Sacramento, California submitted on February 26, 1952 to Defense Minerals Exploration Administration an application requesting government participation in a $75,000 exploration program at the Consumnes Copper mine. The applicant's proposals for exploration included diamond drilling and drifting, but details were vague regarding actual work to be done. Therefore, Mr. F. J. Wiebelt of the Bureau of Mines was requested to review the exploration work desired, with the object of revising the application. He ascertained that the ore structures were not well enough known to plan an exploration program, and he recommended that a geological map of the mine be prepared to determine whether or not an exploration project was warranted.

In response to a request from DMEA, W. P. Irwin, J. F. Robertson, and D. B. Tatlock of the Geological Survey visited the Consumnes Copper mine on April 24, 1952, accompanied by Dr. Sanderson and Mr. J. D. Gillespie of the Consumnes Developement Company, and Mr. O. C. Brink. A surface map of the property was begun, but this work was interrupted by wet weather and adverse road conditions. Roberston and Tatlock revisited the property during May 13 to 15, and mapped the surface and principal underground workings, and took six samples of ore.

An exploration project at the Consumnes Copper mine is not warranted, and it is recommended that no contract be negotiated with the applicant for a DMEA loan. Various exploration proposals were discussed with the applicant at the mine, but they are not presented because the assays of samples from the mine are too low and mineralized rock of that grade from the ore shoots is not in sufficient quantity to justify mining.

Introduction

The Consumnes Copper Mine is 13½ miles southeast of Placerville in El Dorado County, California, and is east of the Mother Lode Belt. It is on the southwest side of the Middle Fork Consumnes River at an altitude of about 2000 feet, in Sections 24 and 25, T. 9 N., R. 12 E., Placerville quadrangle. Note the difference in spelling between the name given the mine, "Consumnes" and the name of the river by which it occurs "Cosumnes". The name of the mine as well as that of the river, probably has had a variety of spellings and may be referred to with alternate spellings.

The mine is 23 miles by automobile from Placerville through Fairplay; 19 miles to Fairplay are over secondary paved roads and graded dirt roads, and the 4 miles from Fairplay to the mine are poorly maintained dirt road. The last 2 miles to the mine are impassible in wet weather, and would have to be improved for year around use. The nearest railroad shipping point is Placerville.

The consumnes Copper mine is owned by Mr. Clifford Smith of Fairplay. Mr. O. C. Brink acquired a lease and option agreement on the

property in April 1951. In turn, he sub-leased the mine in November, 1951 to a group of individuals that formed the Consumnes Development Company. The main workings have been reopened to the lowest level, but little new development work has been done, and in recent times no ore has been taken out.

The property was mined before 1910 for gold ore that is rumored to have assayed as high as $6 per ton. The gold was extracted from the copper sulfides by first roasting and then milling. Copper ore is reported to have been shipped to various smelters, but records of production are not known.

Workings

The main workings of the mine include two surface adits; No. 1 adit is about 90 feet vertically above No. 2. An inclined winze below the second adit connects with the lowest level, No. 3. No. 1 adit, at 2043 feet altitude, is partially caved at the portal, has 110 feet of workings and inclined raise 12 feet long. Adit No. 2 trends westward 130 feet, and has a 35 foot crosscut. A room 30x49'x17' is cut at the end of this adit, from which a two compartment winze, 146 feet deep and inclined at 69 degrees, connects with level No. 3. One compartment of the winze is served by an electric hoist; the other compartment is used for a manway. Level No. 3 has 560 feet of workings.

An adit 235 feet north of adit No. 2 is mostly caved and was not mapped. Another short adit about 600 feet to north of adit No. 2 and near the river was examined, but was not included in this investigation.

Geology

The mine area is underlain by marble and biotite schist that are in contact on the west with a large mass of granodiorite. The marble is continuously exposed east of the mine on the opposite bank of the Consumnes river, and together with the granodiorite, outlines the larger structural features. It appears to be interbedded with fine to medium grained biotite schist, although no contacts between these rocks were observed. The marble is massive and bedding is obliterated by recrystallization, but the outcrop trend is northerly.

The granodiorite contact transects the schist, striking northeast in the southwestern part of the mine area. It turns in the north central part of the area to strike north along the west boundary of the marble bed. Immediately north of the map the northeast trend of the contact is resumed and the bed of marble is truncated by the intrusive. The intrusive contact, where observed, dips vertical or nearly so.

Foliation of the schist strikes from north to N.35°E. and dips consistently 75 degrees to east. Composition of schist is rather uniform except for a narrow zone of migmatite at the granodiorite contact. No bedding structures are discernible in the schist.

A contact zone of metamorphic skarn rock occurs between the marble and granodiorite. However, skarn occurs at one locality as a lense within the granodiorite mass, several feet from a schist contact, but at least 200

feet away from any marble. The skarn rock consists of coarse grained garnet, epidote, hornblende, calcite, and quartz, mixed heterogeneously with clumps of biotite schist, calc-silicate (?) hornfels, white quartz, marble, granodiorite, and biotite feldspar pegmatite.

Ore

Ore minerals are confined to the skarn rock. For this reason, where encountered the skarn rock is considered to form a shoot of potential ore. Two mineralized zones recognized in the mine can be correlated with the surface exposures of skarn rock.

The ore minerals are chalcopyrite, bornite, and molybdenite, intimately associated in scattered bunches and blebs of irregular size and shape. Molybdenite also occurs in seams and fractures 1/8 inch or less wide within the skarn rock. Although pyrite occurs sparingly in schist none was found in the skarn rock. Oxidation of sulfides is slight with malachite, azurite, and limonite being restricted in distribution to a depth about 150 feet below the surface. Examination of near surface occurences of molybdenite with an ultra-violet lamp disclosed a minor amount of fluorescent powellite ($CaMoO_4$). Chalcopyrite and bornite occur within a few feet of the surface, but sulfide enrichment is very weak judging by the apparent absence of chalcocite in underground exposures.

Shoot 1

One surface exposure of skarn rock in the north central part of the map area forms a zone 10 feet wide and 125 feet long between marble and granodiorite. There is no evidence to suggest extension of this zone southward from the exposure. However, it may extend northward an additional 275 feet to the river edge as suggested by fragments of skarn float in the soil cover. Mineralized skarn is also exposed in the short adit near the river located just north of the map area.

It is improbable that the skarn rock forms a continuous zone 400 feet long because on level No. 3 150 feet below the surface exposure, the skarn rock occurs as irregular pods associated with marble. Therefore, a continuous ore shoot cannot be projected with any degree of certainty either vertically or laterally and any inferred ore would be highly speculative.

Shoot 2

The surface exposure of skarn rock in granodiorite in the west central part of the area is the top of another ore shoot. This zone is outlined by exposure on the surface and in the workings of adits Nos. 1 and 2. Section ABC shows the geologic relations but only parts of the shoot are shown. Roughly it is a wedge or pipe-like body plunging 75° at about N.60° E. and measuring approximately 30 by 50 feet in dimensions at the surface.

It is bounded in part and cut by faults, and appears to steepen and taper to a point with depth. Adit No. 1 taps this shoot 50 to 80 feet below the outcrop. It exposes a 20 foot wide mass of mineralized skarn rock, separated from the enclosing granodiorite on three sides by steeply dipping southwesterly trending faults. The faults, in upward projection, coincide with the boundaries of the exposed skarn rock on the surface. In a westward direction the vertical fault appears to cut off the skarn rock at its intersection with the fault to the south. In downward projection the faults indicate a narrowing of the shoot.

The mineralized mass of skarn rock in adit No. 2 is irregular in outline, measuring about 40 feet along its major, northwest-trending axis. It is separated from the surrounding granodiorite by sharply defined steeply dipping boundaries, except on the south side where it is bounded by a northwest trending fault that dips 42° NE. The footwall side of this fault is in unmineralized granodiorite. The upward extension of the shoot is limited to a connection with the exposures in adit no. 1 and on the surface. The skarn rock is exposed down the winze below adit no. 2 for about 50 feet, but either the shoot pinches out or passes west of the winze as no sign of this shoot is found on level no. 3.

Sampling

Six samples of mineralized skarn rock were taken, the first three from level No. 3 and the last three from adit no. 2. The sample localities are shown on the underground maps, and below are listed the assay results. The samples averaged about 10 pounds each, and were assayed by the Hydrometallurgical and Ore-Testing Branch of the Bureau of Mines at Reno, Nevada.

Sample No.	Length (H)	%,Cu	%,Mo	Oz Au/T	Oz Ag/T
1	5	0.41	0.50	0.005	0.20
2	5	0.76	0.05	0.005	0.40
3	5	0.28	0.35	0.005	0.20
4	5	2.04	0.10	0.05	1.25
5	5	2.42	0.25	0.015	1.45
6 Spot	4' dia	3.09	0.05	0.22	2.00

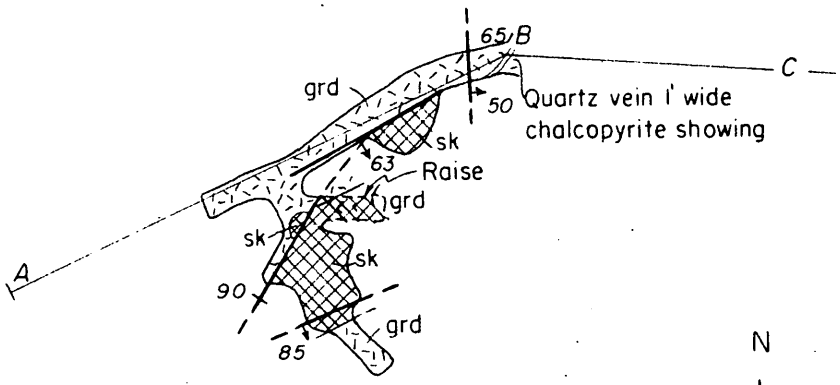
No systematic sampling could be carried out because of the irregular distribution of skarn rock; however, the samples are believed to be representative.

Conclusions

An exploration project at the Consumnes Copper mine is not warranted and it is recommended that no contract be negotitated with the applicant for a DMEA loan. Various exploration proposals were discussed with the applicant at the mine, but they are not presented because the assays of samples from the mine are too low and mineralized rock of that grade from the ore shoots is not in sufficient quantity to justify mining.

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA-2407
(COPPER)



LEVEL 1

N

EXPLANATION

grd
Granodiorite

sch
Biotite schist

sk
Skarn rock containing chalcopyrite and molybdenite

Contact, showing dip
(Dashed where approximately located)

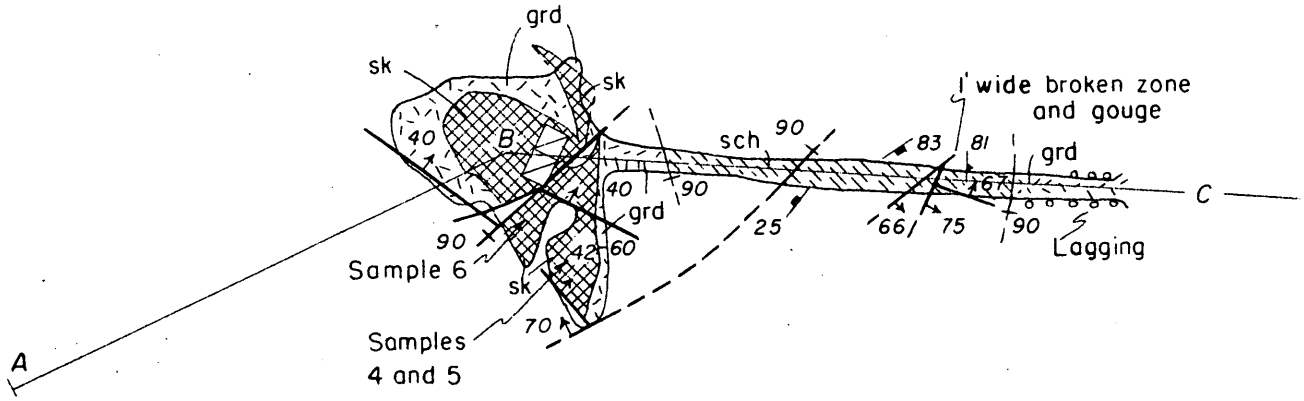
Vertical contact

Fault, showing dip
(Dashed where approximately located)

Vertical fault

Strike and dip of joints

Winze inclined 69° to SE.
146' from head to floor
of level 3



LEVEL 2

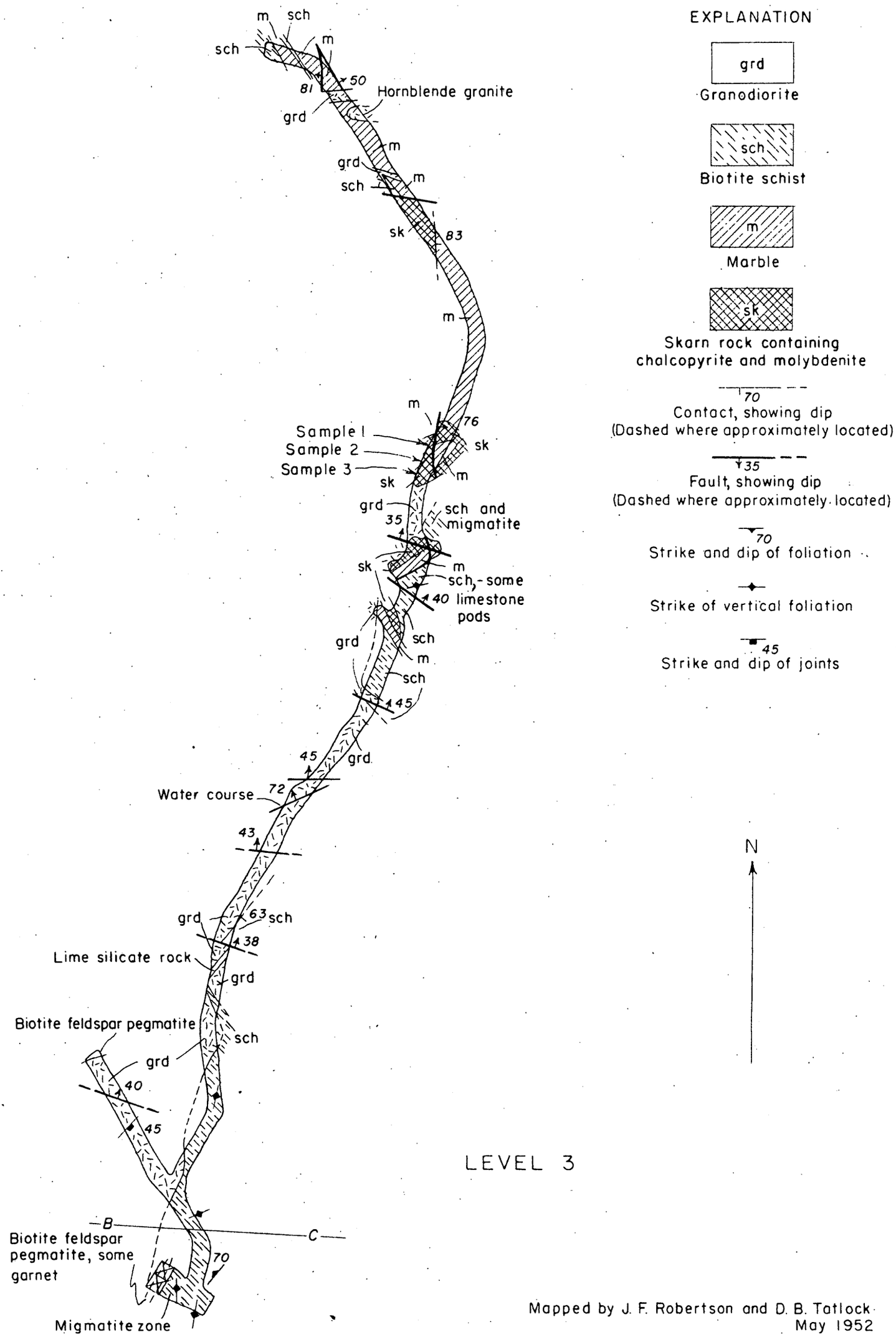
Mapped by J. F. Robertson and D. B. Tatlock
May 1952

CONSUMNES COPPER MINE, EL DORADO COUNTY, CALIFORNIA

40 0 40 80 FEET

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA-2407
(COPPER)



Mapped by J. F. Robertson and D. B. Tatlock
May 1952

CONSUMNES COPPER MINE, EL DORADO COUNTY, CALIFORNIA

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA 2407, Consumnes Development Company

El Dorado County, California

(Copper)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 30 1952

J. F. Robertson, Geologist
D. B. Tatlock, Geologist
U. S. Geological Survey

June 12, 1952

Reviewed by
DMEA OPERATING COMMITTEE
2-7-52
(date)

Summary

The Consumnes Development Company, represented by Dr. H. C. Sanderson of Sacramento, California submitted on February 26, 1952 to Defense Minerals Exploration Administration an application requesting government participation in a $75,000 exploration program at the Consumnes Copper mine. The applicant's proposals for exploration included diamond drilling and drifting, but details were vague regarding actual work to be done. Therefore, Mr. F. J. Wiebelt of the Bureau of Mines was requested to review the exploration work desired, with the object of revising the application. He ascertained that the ore structures were not well enough known to plan an exploration program, and he recommended that a geological map of the mine be prepared to determine whether or not an exploration project was warranted.

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The mine is 23 miles by automobile from Placerville through Fairplay; 19 miles to Fairplay are over secondary paved roads and graded dirt roads, and the 4 miles from Fairplay to the mine are poorly maintained dirt road. The last 2 miles to the mine are impassible in wet weather, and would have to be improved for year around use. The nearest railroad shipping point is Placerville.

The consumnes Copper mine is owned by Mr. Clifford Smith of Fairplay. Mr. O. C. Brink acquired a lease and option agreement on the

property in [illegible] 1[illegible]. [illegible], [illegible] [illegible] November, 1[illegible] [illegible] property [illegible] from the [illegible] Development Company. The [illegible] [illegible] the lowest level, but little development work has been done, and [illegible] has been [illegible] out.

The property was [illegible] 1[illegible] [illegible] to have assayed [illegible] per ton. [illegible] the extraction of the copper silicate [illegible] reaching [illegible] tailings. Copper [illegible] to have been shipped to [illegible] smelter, but records of [illegible] are [illegible].

Workings

The main workings of the mine consist of surface adits; No. 1 adit is about 90 feet vertically above No. 3. An 1 [illegible] below the second adit connects with the lowest level, No. 2. No. 1 adit, at [illegible] feet altitude, is partially [illegible] at the portal, but [illegible] feet of workings are [illegible] in 12 feet long. Adit No. 2 is approximately 130 feet, and has a [illegible] foot crosscut. A raise 30 by 17' is cut at the end of this [illegible], from which a two compartment winze, 2[illegible] feet deep and inclined at 60 degrees, connects with level No. 3. [illegible] one compartment of the winze is served by an electric hoist; the other compartment is used as a manway. Level No. 3 has 500 feet of workings.

In adit 130 feet [illegible] of adit No. 1 is [illegible] cross cut [illegible] adit about [illegible] feet [illegible] of adit No. 1 and [illegible] the two are equal, but were not included in this investigation.

Geology

The mine area is underlain by marl and diabase schist that are in contact on the west with a large area of granite gneiss. The sample is so thoroughly exposed east of the mine on the opposite side of the Chemung river, and by their with the granite gneiss, outlines the larger structural features. It appears to be interbedded with diabase to medium grained diabase schist, although no contacts between these two have been observed. The marls are massive and bedding is indistinct by superficial [illegible], but the strata trend northerly.

The granite gneiss at the mine is an old, striking [illegible] in the northwestern part of the mine area. It forms the high central part of the area to strike north along the east [illegible] of the marls. Immediately north of the mine the [illegible] trend of the contact is [illegible] of the marl and the [illegible] in the other [illegible].

[illegible] of the [illegible] [illegible]

[illegible] contact [illegible] the marls [illegible] calcareous. However, [illegible] the [illegible] in a belt within [illegible] area, [illegible] contact, [illegible] 270

feet away from any marble. The skarn rock consists of coarse grained garnet, epidote, hornblende, calcite, and quartz, mixed heterogeneo sly with clumps of biotite schist, chlo-silicate (?) hornfels, white quartz, marble, granodiorite, and biotite feldspar pegmatite.

Ore

Ore minerals are confined to the skarn rock. For this reason, where encountered the skarn rock is considered to form a shoot of potential ore. Two mineralized zones recognized in the mine can be correlated with the surface exposures of skarn rock.

The ore minerals are chalcopyrite, bornite, and molybdenite, intimately associated in scattered bunches and blebs of irregular size and shape. Molybdenite also occurs in seams and fractures 1/8 inch or less wide within the skarn rock. Although pyrite occurs sparingly in schist none was found in the skarn rock. Oxidation of sulfides is slight with malachite, azurite, and limonite being restricted in distribution to a depth about 150 feet below the surface. Examination of near surface occurences of molybdenite with an ultra-violet lamp disclosed a minor amount of fluorescent powellite ($CaMoO_4$). Chalcopyrite and bornite occur within a few feet of the surface, but sulfide enrichment is very weak judging by the apparent absence of chalcocite in underground exposures.

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It is improbable that the skarn rock forms a continuous zone 400 feet long because on level No. 3 150 feet below the surface exposure the skarn rock occurs as irregular pods associated with marble. Therefore, a continuous ore shoot cannot be projected with any degree of certainty either vertically or laterally and any inferred ore would be highly speculative.

Shoot 2

The surface exposure of skarn rock in granodiorite in the west central part of the area is the top of another ore shoot. This zone is outlined by exposure on the surface and in the workings of adits Nos. 1 and 2. Section ABC shows the geologic relations but only parts of the shoot are s own. Roughly it is a wedge or pipe-like body plunging 75° at about N 60° E, and measuring approximately 30 by 50 feet in dimensions at the surface.

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The mineralized mass of skarn rock in adit No. 2 is irregular in outline, measuring about 40 feet along its major, northwest-trending axis. It is separated from the surrounding granodiorite by sharply defined steeply dipping boundaris, except on the south side where it is bounded by a northwest trending fault that dips 42° NE. The footwall side of this fault is in unmineralized granodiorite. The upward extension of the shoot is limited to a connection with the exposures in adit no. 1 and on the surface. The skarn rock is exposed down the winze below adit no. 2 for about 50 feet, but either the shoot pinches out or passes west of the winze as no sign of this shoot is found on level no. 3.

Sampling

Six samples of mineralized skarn rock were taken, the first three from level No. 3 and the last three from adit no. 2. The sample localities are shown on the underground maps, and below are listed the assay results. The samples averaged about 10 pounds each, and were assayed by the Hydrometallurgical and Ore-Testing Branch of the Bureau of Mines at Reno, Nevada.

Sample No.	Length (H)	%,Cu	%,Mo	Oz Au/T	Oz Ag/T
1	5	0.41	0.50	0.005	0.20
2	5	0.76	0.05	0.005	0.40
3	5	0.28	0.35	0.005	0.20
4	5	2.04	0.10	0.05	1.25
5	5	2.42	0.25	0.015	1.45
6 Spot	4' dia	3.09	0.05	0.22	2.00

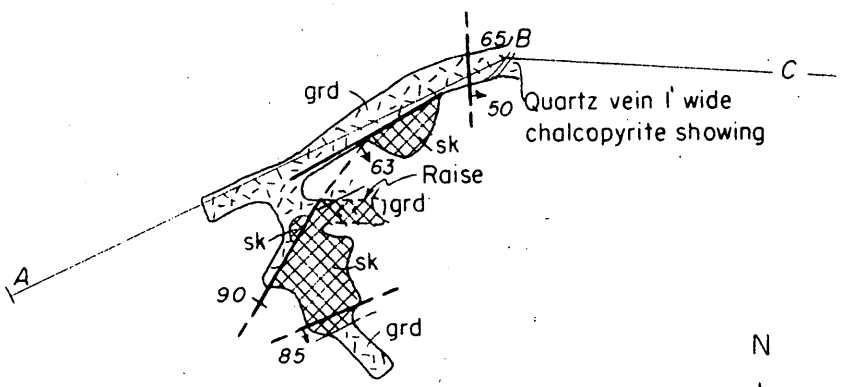
No systematic sampling could be carried out because of the irregular distribution of skarn rock; however, the samples are believed to be representative.

Conclusions

An exploration project at the Consumnes Copper mine is not warranted and it is recommended that no contract be negotitated with the applicant for a DMEA loan. Various exploration proposals were discussed with the applicant at the mine, but they are not presented because the assays of samples from the mine are too low and mineralized rock of that grade from the ore shoots is not in sufficient quantity to justify mining.

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA-2407
(COPPER)



LEVEL 1

N

EXPLANATION

grd
Granodiorite

sch
Biotite schist

sk
Skarn rock containing chalcopyrite and molybdenite

Contact, showing dip
(Dashed where approximately located)

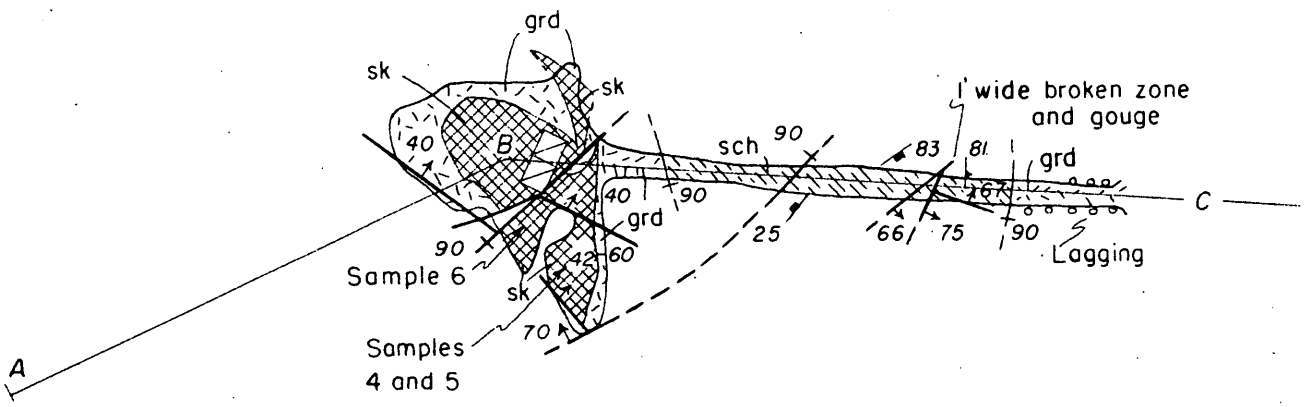
Vertical contact

Fault, showing dip
(Dashed where approximately located)

Vertical fault

Strike and dip of joints

Winze inclined 69° to SE.
146' from head to floor
of level 3

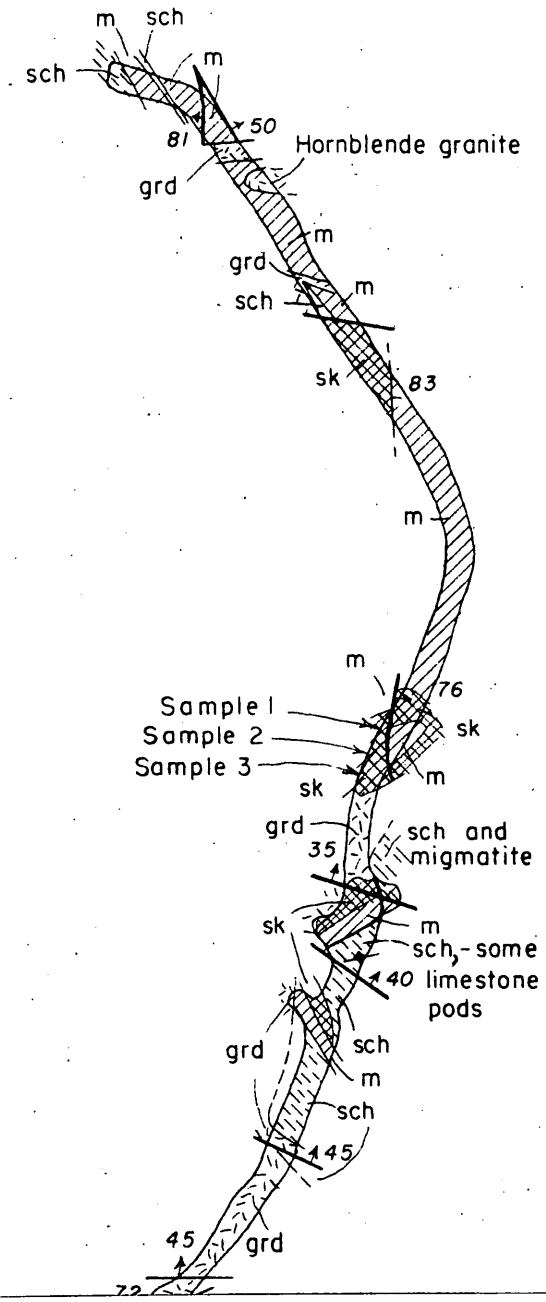


LEVEL 2

Mapped by J. F. Robertson and D. B. Tatlock
May 1952

CONSUMNES COPPER MINE, EL DORADO COUNTY, CALIFORNIA

40 0 40 80 FEET



EXPLANATION

grd
Granodiorite

sch
Biotite schist

m
Marble

sk
Skarn rock containing chalcopyrite and molybdenite

70
Contact, showing dip
(Dashed where approximately located)

35
Fault, showing dip
(Dashed where approximately located)

70
Strike and dip of foliation

Strike of vertical foliation

45
Strike and dip of joints

FILE COPY
700 SURNAME:

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

AIR MAIL

APR 8 1952

Mr. H. C. Miller
Executive Officer, Region III
DMEA Field Team
1012 Flood Building
870 Market Street
San Francisco 2, California

Re: Docket No. DMEA-2407 (Copper)
Consumnes Development Company
El Dorado County, California

Dear Mr. Miller:

This is your authority to make a field examination of the captioned Applicant's property, commonly known as Consumnes Copper Mine located in the Fair Play Mining District, El Dorado County, California.

The applicant has not furnished sufficient information to justify the expenditure of $75,000.00 in an exploration program of this magnitude. The proposed exploration project is based almost entirely on old maps and reports on the property. These reports are not accompanied by substantiating assay results or maps and must be considered as unduly optimistic. Because of the apparent faulting of the vein above the lower level it will be advisable for the engineers to pay particular attention to the geology of the mine.

We are enclosing with this letter the following instruments, which should be returned to the applicant (as requested) after the field engineers have studied them.

1 only Plat of the claim of Consumnes Copper Mining Co.
1 " Map of present workings of Consumnes Copper Mining Co.
1 " Photostat of Report by Dr. Milton . Franklin
1 " Photostat of Report by Paul F. Cronin, E.M.
1 " Copy of Report by D. Brewster Boyden

You will note that the applicant holds a sub-lease with a greatly inflated purchase price, to the first lessee and an overriding royalty. If the report of the field team is favorable the applicant should obtain subordination agreements from both the owner and first lessee of the property.

To permit the applicant sufficient time to unwater the lower level of the mine he should be advised well in advance of the date on which the Field Team will start the examination.

HFKeller/jem 4/1/52
cc to; Adm. Reading File
Docket
Messrs.C.H.Johnson
Ned. Nelson,42160S
Ellis Keller
Opr. Comm.
Field Team, Reg. III

Sincerely yours,
(signed) FRANK E. JOHNSON
Chairman, Operating Committee
Defense Minerals Exploration Administration

Enclosures
APPROVED: C H Johnson (JB)
~~Member, Bureau of Mines~~
~~Member, Geological Survey~~ T. P. Thayer (JB)

FILE COPY
700 SURNAME:

HFKeller
Ellis
Hayes
H.C. Johnson

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

APR 8 1952

Mr. Herbert C. Sanderson
Consumnes Development Co.
2801 Capitol Avenue
Sacramento, California

Re: Docket No. DMA-2407 (Copper)
El Dorado County, California

Dear Mr. Sanderson:

Your application for assistance in exploring your property in El Dorado County, California, under the above captioned docket number, has been reviewed by the Rare and Miscellaneous Metals Division of the Defense Minerals Exploration Administration and has been referred to Mr. H. C. Miller, Executive Officer, Region III, Field Team, 1012 Flood Building, 870 Market Street, San Francisco 2, California, for a field examination.

The Regional Office will contact you at the earliest opportunity in regard to your project.

Sincerely yours,

C. O. Mittendorf (for) cc 4/8

Acting Administrator
Defense Minerals Exploration
Administration

HFKeller/jem
4/1/52
cc to: Adm. Reading File
Docket
Messrs. C.H.Johnson, Rm. 3621
Ned Nelson, Rm. 4216 GS
Ellis
Keller
Field Team, Region III (2)

3/27/52 gh

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

March 26, 1952

Memorandum

To: E. W. Ellis, DMEA

From: C. H. Johnson, Bureau of Mines

Subject: DMEA 2407 (Copper), Consumnes Development Company, c/o H. C. Sanderson, Sacramento, California, Consumnes Copper Mine, El Dorado County, California

After a review of the above application, I believe a field team examination would be desirable. The applicant has not furnished adequate justification for the proposed $75,000 exploration project and even if the property has considerable merit, it seems doubtful that his program is the best that could be worked up. However, the old reports furnished by him indicate that some good copper ore was found on the property and since the mine is readily accessible and is now open to inspection for the first time in a good many years, I believe it would be desirable to have a look at it.

You probably have noted that the applicant holds a sub-lease paying an over-riding royalty and a greatly inflated purchase price to the first lessee. Accordingly, two subordination agreements would be needed.

If the field team examination is made, the applicant should be given sufficient advanced notice to have the bottom level bailed out. In the event a field examination is made, the reports submitted by applicant should be sent to the Field Team, even though there is only one copy.

The application is returned herewith.

C. H. Johnson

C. H. Johnson

Attachment

Copy to Mr. Nelson, USGS
Minerals Division
Base Metals Branch
Files

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

Office of
Executive Officer
DMEA Field Team
Region III

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

March 21, 1952

Memorandum

To: Defense Minerals Exploration Administration, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Application for Aid for an Exploration Project (Copper), Consumnes Development Company, c/o H. C. Sanderson, 2901 Capitol Avenue, Room 105, Sacramento, California -DMEA-2402

Reference is made to my subject memorandum dated February 29, 1952, with which we transmitted three copies of an application for an exploration loan by the captioned applicant.

Our mining engineers discussed the proposed program with the applicant and convinced him that all of this program could not be considered exploration. An exclusive exploration program will therefore be worked out, but before proceeding further with processing the application our mining engineers recommend that a geologic examination be made of the property. Accordingly, we have requested the Geological Survey to make such a study.

Along with the three copies of the application which we sent to you, the applicant included a single blueprint map of some old workings at the property and a report by a Mr. Franklin. This map and report, I believe, would be helpful to the geologists in their examination of the property, and it is requested that they be "loaned" to us with the promise of their return to you when they have served our purpose.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 25 1952

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

Copy to E. H. Bailey, USGS

3/10/52 gla

IN REPLY REFER TO:

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

March 6, 1952

Memorandum

To: Mr. E. Wm. Ellis

From: Ned E. Nelson

Subject: DMEA-2407. Consumnes Development Company
Copper Hill Mine, Amador, California

Summary

Too little information regarding this old property is furnished by the applicant and available published reports. Perhaps the applicants have worth while information, but do not appreciate its value to distant reviewers. From the data available a field team examination is not warranted.

Comment

"Copper in California" 1948, and Aubury in "Copper Resources of California", 1908, mention this property. Apparently it is a very old property upon which no recent work has been done. The above publications give no maps and the origin and authenticity of the map accompanying the application cannot be checked. If the workings shown are recent more information should have been given in the application. As is, except for one assay (3.39% copper), there is too little to support the application. Perhaps the application is based on something more than theory and one copper assay and if so, such should be furnished, especially as to the possible tungsten in a skarn zone.

N. E. Nelson

Ned E. Nelson
Geologist

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

March 6, 1952

Memorandum

To: Mr. E. Wm. Ellis

From: Ned E. Nelson

Subject: DMEA-2407. Consummes Development Company
Copper Hill Mine, Amador, California

Summary

Too little information regarding this old property is furnished by the applicant and available published reports. Perhaps the applicants have worth while information, but do not appreciate its value to distant reviewers. From the data available a field team examination is not warranted.

Comment

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N. E. Nelson

Ned E. Nelson
Geologist

EXPLORATION

Subject: DMEA-2407
Re: Exploration Loan
Consumnes Copper Mine
March 5, 1952

Mr. Herbert C. Sanderson
Consumnes Development Co.
2901 Capitol Ave.
Sacremento, California

My dear Mr. Sanderson:

This will acknowledge receipt of your application dated February 26, 1952 for a loan under the Defense Production Act of 1950.

Your application was assigned Docket Number DMEA-2407 and referred to the Rare and Miscellaneous Metals Division.

Kindly refer to DMEA-2407 in any future correspondence relating to your application.

Sincerely yours,

ROBERT E. ADAMS

Robert E. Adams
Acting Administrative Officer

7862

OFFICE OF THE ADMINISTRATOR

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

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

Office of
Executive Officer
DMEA Field Team
Region III

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 4 1952

February 29, 1952

Memorandum

To: Defense Minerals Exploration Administration, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Application for Aid for an Exploration Project (Copper), Consumnes Development Company, c/o H. C. Sanderson, 2901 Capitol Avenue, Room 105, Sacramento, California.

Attached are three copies of subject application, dated February 27, 1952, of which four copies were received in this office on February 28.

Six copies of Landlord's Subordination Agreement also are attached as are three copies of "Assignment of Interest in Mining Agreement,"one copy (all that was received) of a report by D. Brewster Boyden, mining engineer, and three copies of a map of present workings of the Consumnes Copper Mine.

The applicant is far from complete and it is apparent that the applicant has included more in his application than properly belongs under exploration.

One copy of the applicant's MF-103 form,"Assignment of Interest in Mining Agreement", and map of present workings are being retained in this office, and our engineers are being instructed to prepare a mutually acceptable exploration program with the applicant after which a field examination will be made if felt necessary.

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

Attachments

Copy to A. C. Johnson, Reno, Nevada
E. H. Bailey, USGS

Office of
Executive Officer
DMEA Field Team
Region III

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

February 28, 1952

Consumers

Mr. Herbert C. Sanderson
Consumens Development Co.
Room 105, 2901 Capitol Avenue
Sacramento, California

Dear Mr. Sanderson:

Reference is made to your letter dated February 26, requesting approval for including a rental value of equipment owned by you in the cost of an exploration project.

The use of equipment owned by you and used on an exploration project can be charged to the cost of such a project. What we will need is an itemized list of the equipment and its current value. We then allow you a depreciation or use factor which, per month, is equal to 1/60th of the current value of the equipment. When a contract is let, our engineers will check the values you placed on your equipment. No approval is needed at this time to include a depreciation allowance in your exploration loan application.

Sincerely yours,

H. C. MILLER

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

HCMiller:ejs

Files
Chron

Refer to	Noted	Date
Answered	[illegible]	2/28

CONSUMENS DEVELOPMENT COMPANY
c/o H. C. Sanderson
Room 105, 2901 Capitol Ave.
Sacramento, California

February 26, 1952

Defense Minerals Administration
1012 Flood Bldg.
San Francisco, California

Gentlemen:

Forms MF-103 and MF-100 have been completed and filed with your office. We note in the instructions that approval from D.M.A. is necessary for the value of rental equipment.

This letter is a request for such approval for value of rental equipment which we own and have itemized in Form MF-103.

Very sincerely yours,

Herbert C. Sanderson

HERBERT C. SANDERSON

HCS:lw

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED

FEB 27 AM 8:40

SAN FRANCISCO, CALIFORNIA

Refer to	Noted	Date
Answered	HCSW	2/28

CONSUMENS DEVELOPMENT COMPANY
c/o H. C. Sanderson
Room 105, 2901 Capitol Ave.
Sacramento, California

February 26, 1952

Defense Minerals Administration
1012 Flood Bldg.
San Francisco, California

Gentlemen:

MF-103 request for assistance in exploration has been filed with your office.

We are very much interested in commencing diamond drilling operations so that we do not lose valuable time in attempting to locate the ore body.

If approval of MF-103 is granted, may we apply the cost of the proposed diamond drilling to the project?

Very sincerely yours,

Herbert C Sanderson

HERBERT C. SANDERSON

HCS:lw

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED

JUN 19 AM 8:13

SAN FRANCISCO, CALIFORNIA

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED

FEB 27 AM 9:11

SAN FRANCISCO, CALIFORNIA

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.
DMEA-2407

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

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

Not To Be Filled in by Applicant

Docket No. DMEA-2407
Metal or Mineral
Date Received 6-30-52
Amount $
Participation (Government %)

Name and address of applicant: Consumnes Development Co. 2901 Capitol Ave, Sacramento California. % H. C. Sanderson

Date Feb 26 1952

If you have already filed MF-100, give date filed Feb 27, type of assistance requested EXPLORATION + LATER DEVELOPMENT

DMA Docket Number (if available)

INSTRUCTIONS

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

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

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

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

   NOTE: (1) If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*c*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

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

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

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

   See attached sheet.

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

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

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

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

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

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

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

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

   (*a*) Rented

   (*b*) Purchased

   (*c*) Furnished by you

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

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

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

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

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

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

CERTIFICATION

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

Consumnes Devolopment Co.
(Name of company)

By Herbert C. Sanderson
(Signature of authorized official)

Feb 26 1957
(Date)

Secretary-Treasurer
(Title)

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—64067-2

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED

Form MF-103

1. (a) Lot 38, Section 24 and 25. Township 9 North. Range 12 East. M.D.B.M., commonly known as Consumers Copper Mine. Contains 41.35 acres more or less, located in Fair Play District.

   (c) Same as (a) above.

2. (a) Copper, molybdenum, lead, zinc, tungsten.

   (b) See enclosed map and photostatic copy of geologist's examination and appraisal as well as recommendations of former years. Please return copies of map and reports.

3. (a) Explore the footwall side of the tunnel by diamond drilling and cross cutting same area. Explore ore body in tunnel with a raise. Retimber the shaft. Install fresh air system. Cost $75,000.

   (b) Can start diamond drilling immediately if cost can be applied to the exploration requested. Completion time 1 year.

4. See attached maps and plan.

5. Buildings - 2 cabins. $200.00 for repairs.
   Installations - Complete hoist room, retimbering, cleaning waste and ore pocket. Complete gallows frame. Cost $2,000.

6. Buildings - None
   Fixtures - None

7. (a) Rent - Diamond drill heads ---------- $ 500.00
   (b) Purchase - Compressor air 210 cu ft (used)--- 5,275.00
   Diamond drill (used) ---------- 2,500.00
   Blower and blower pipes (used) --- 600.00
   Jack hammer (new) ---------- 385.00
   Stoper (used) ---------- 375.00
   Drill steel (new) ---------- 500.00
   1 truck 3 x 6 (army surplus) ----- 2,500.00
   2 ore cars (used) ---------- 200.00
   Electric hoist (used) ---------- 1,850.00
   Skip (used) ---------- 250.00
   Generator 50 K.W.--(used) -------- 4,500.00
   (c) D 8 Cat @ $13.50 per hr.---------- 6,750.00
   Generator 15 K.W.---------- 2,700.00
   10 H.P. Electric pump ---------- 450.00
   Tractor & low bed ---------- 2,700.00
   1 pick-up truck 3/4 ton ---------- 2,400.00

8. 1 miner ---------- $ 1.67 hr
   1 mucker ---------- 1.37 hr
   1 supervisor ---------- 750.00 mo
   1 diamond drill operator 3.25 hr
   1 hoist man ---------- 1.67 hr

Work 5 days per week, 8 hours per day, 12 months. No overtime.

Form HP-103

9. Timber ---------- $[illegible],000.00
Rail (used) ---------- 300.00
Fuel ---------- 6,650.00
Powder, caps, fuses, ---------- 4,300.00
drill bits ---------- 250.00
Picks & shovels ---------- 150.00
Rubber clothing, hats ---------- 75.00
Carbide ---------- 200.00
Air hose ---------- 500.00
Electric cable ---------- 350.00
Cable (hoisting) ---------- 100.00

Assaying ---------- 1,500.00
Accounting ---------- 2,000.00
Taxes ---------- 1,200.00
Insurance ---------- 1,700.00

10 (a) $10,000 plus the rental value of our own equipment

(b) For diamond drilling the ore body.

Exploration with cuts and drifts to be performed on the diamond drilling results. Can perform with 75% allowance for tungsten. Variant type of ore probably has a commercial tungsten content.

11- Estimated time of diamond drilling at 21 days. Completion of any extensive drifts would take about one year. Drifts in ore could be milled, above figures on a one year estimate.

COPY

ASSIGNMENT OF INTEREST IN MINING AGREEMENT

THIS MEMORANDUM OF AGREEMENT made and entered into this 1 day of November, 1951, by and between OSCAR C. BAINE, of Stockton, California, hereinafter called FIRST PARTY, and HERB ST C. SAMPERSON, DAN O. KILROY and MAX L. SILVATOR of Sacramento, California, and J. D. GILLESPIE of Auburn, California, hereinafter called Second Parties,

W I T N E S S E T H:

For and in consideration of the mutual terms and conditions herein contained, the parties hereto agree as follows:

1. First Party hereby sells, assigns and transfers unto Second Parties, all of his right, title and interest in and to that certain Agreement, a copy of which is attached hereto marked Exhibit "A", and made a part hereof by reference.

2. Second Parties hereby agree to pay to First Party the sum of ONE HUNDRED TEN THOUSAND ($110,000.00) DOLLARS, of which amount TWENTY FIVE THOUSAND ($25,000.00) DOLLARS shall go to pay the payments provided for in said Agreement, Exhibit "A", and EIGHTY FIVE THOUSAND ($85,000.00) DOLLARS, of which shall be the property of First Party. Said ONE HUNDRED TEN THOUSAND ($110,000.00) DOLLARS to be paid from a royalty of eleven (11%) per cent of the gross receipts of the production of any minerals produced from the property covered by said Agreement, Exhibit "A", by Second Parties, less any hauling and smelting charges, said royalties to be paid in the manner, and at the time provided for in said Agreement, Exhibit "A", with the exception that it shall be paid to First Party who shall see that said CLIFFORD SMITH and JOYCE SMITH, his wife, mentioned in said Exhibit "A" shall receive the proportions of said royalties that they are entitled to under said Agreement, Exhibit "A".

3. Second Parties agree to perform all of the terms and conditions required to be performed under said AGREEMENT, Exhibit "A", and agree to perform them in the time provided for therein. If Second Parties should fail to so perform the conditions of the Agreement, Exhibit "A", or any of the terms and conditions of this Assignment Agreement, then and in that event, the Agreement, Exhibit "A" shall revert to and become the property of First Party. In this connection, Second Parties shall not assign, transfer or sublet any of their interest under said Agreement, Exhibit "A" without first obtaining the prior written permission and consent of First Party thereto.

4. Second Parties agree to perform not less than sixty (60), eight (8) hour, two (2) men shifts per month of work upon said property beginning on the 1st day of December, 1951, and continuing regularly thereafter during the term of said Agreement, Exhibit "A". In connection therewith, Second Parties agree to commence to retimber the shaft upon the property described in Agreement, Exhibit "A" beginning December 1, 1951, and shall have two men working thereon. They shall continue to retimber the shaft and shall commence on or before January 1, 1952, to dewater and pump out such shaft, and shall continuously dewater and pump out said shaft and keep the same free of water continuously thereafter during the term of this Agreement and of the Agreement, Exhibit "A".

5. It is understood that First Party has obtained an oral extension of the terms and conditions of the Agreement, Exhibit "A", so far as the work required thereunder is concerned, and that said work is not to be commenced until December 1, 1951; however, First Party agrees to obtain a written extension of such Agreement and have it available on or before December 1, 1951.

6. Commencing as of June 1, 1952, First Party shall have the option of receiving from Second Parties, either a minimum monthly advance on account of royalties in the sum of ONE HUNDRED ($100.00) DOLLARS per month, or the

right to work at his choosing for Second Parties in the operation and development of the property covered by Agreement, Exhibit "A" at a wage to be mutually agreed upon by the parties beginning June 1, 1952.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first above written.

OSCAR BRINK First Party

HERBERT C. SANDERSON

DAN O. KILROY

MAX L. SALVATOR

J. D. GILLESPIE

Second Parties.

COPY

EXHIBIT "A"

TIME EXTENSION AGREEMENT

According to the option and lease agreement we entered into with you on April 20, 1951, concerning property known as Consumans Copper Mine located in El Dorado Co., California, your work requirements of 60 shifts per month were to be started on July 20, 1951. As you have asked for an extension of time regarding the working clause, we do hereby grant you an extension of 90 days, beginning August 1, 1951, extending through October 31, 1951; the working clause of the original option set forth in paragraph 4.

Clifford Smith

Joyce Smith

COPY

MINING AGREEMENT

THIS AGREEMENT, made and executed this 20th day of April, 1951, by and between CLIFFORD SMITH and JOYCE SMITH, his wife, both of Fairplay via Somerset, California, hereinafter called first party (the singular term being used to include the plural), and OSCAR C. BRINK, of 3538 Mission Road, Stockton, California, hereinafter called second party,

WITNESSETH:

WHEREAS, said first party is the owner and in the possession of all those certain lots, pieces or parcels of land, situate, lying and being in the County of El Dorado, State of California, and particularly described as follows, to-wit:

> Lot 38 in Secs. 24 and 25, T. 9 N., R. 12 E., M.D.B. & M., commonly known as the CONSUMERS COPPER MINE, containing 41.35 acres, more or less.

AND WHEREAS, said second party is desirous of entering into and upon said property and premises for the purpose of mining, developing and working the same, with the privilege and option of purchasing the same, upon the terms hereinafter stated;

NOW, THEREFORE, the said parties hereto, in consideration of the premises and of the mutual covenants, promises and agreements hereinafter contained, to hereby covenant and agree, the one with the other, as follows:

1. Said first party hereby covenants, promises and agrees that upon the payment to first party of the total sum of $25,000.00, on or before five (5) years from the date hereof, in royalties as hereinafter provided and/or cash, first party will make, execute and deliver a good and sufficient deed granting and conveying unto second party, his heirs and assigns forever, all of the property and premises above described, free and clear of encumbrances, but subject to any and all easements for existing roads, ditches, telephone lines, power lines, and other easements thereover and any and all reservations contained in any U.S. patent to said premises.

2. IT IS AGREED that second party shall, after ninety (90) days from the date hereof and thence ensuing during the life of this agreement, have the right, privilege and easement of entering into and upon and taking possession of such parts and portions of the above described premises and property as is necessary to the enjoyment of the mining rights and privileges hereunder given pending the purchase of said premises and property, and may prospect, mine, work, operate and develop the same for the copper, gold and other precious metals therein, and may have the right to erect buildings, hoisting plants, sluice boxes, mills, flumes, dumps and also the right to install machinery and to construct and maintain and use pipe lines, power lines, ditches, roads and trails, as the same may be required in the mining operations to be conducted in, upon and under said property, it being understood and agreed, however, that during the first ninety (90) days from the date hereof second party shall have the right to enter into and upon said premises and property above described for the purpose of prospecting the same and taking samples to determine whether or not any copper, gold or other minerals exist therein and the extent thereof.

3. It is agreed that second party shall have the right to mill or otherwise reduce the ores from said premises or to ship the same to some responsible smelting company made known to first party for the purpose of obtaining the copper, gold and other precious metals and values therefrom, the proceeds, as soon as determined, to be divided and paid to one respective parties hereto in the manner as follows: Five per cent (5%) C.S. J.S. O.C.B. of the proceeds from copper, gold and all precious metals recovered from ores from said premises shall be paid to first party and ninety five per cent (95%) C.S. J.S. O.C.B. thereof shall be paid to second party.

In the payment and division of the proceeds as above mentioned, it is agreed that the same shall be based upon mill or smelter recovery of said copper, gold or other precious metals with deductions only for the cost of transportation

from mine to mill, smelter or other final recovery plant in the event the same is not located upon the above premises, and costs of treatment in such mill, smelter or other final recovery plant and that the proceeds payable as above mentioned to first party will be paid to Bank of Amador, at Jackson, California, for the account or credit of first party.

4. It is agreed that second party shall commence the active work of mining and developing said property within ninety (90) days from the date of this agreement and will thereafter continuously mine and develop said property during the life of this agreement by doing and performing monthly not less than sixty (60) shifts of mining work, except when interrupted by act of God, strikes, riots, picketing or lockouts, and in such event reasonable diligence will be used by second party to remove the cause of interruption and resume work at the earliest possible date.

5. Second party agrees to keep all workmen fully insured under and in compliance with the Workmen's Compensation Insurance and Safety Act of California during operations hereunder and to comply also with all other laws, rules and regulations, both State and Federal, governing mining operations and to conduct all work hereunder in accordance with good mining standards and methods and to promptly pay all bills for labor performed and for equipment, materials, supplies, electric energy, water and/or utility furnished on said lands during the term hereof and to keep said lands free and clear of all labor, mechanics' and other liens and to that end will keep posted on said lands where any work is being performed, or equipment, materials, supplies or utilities furnished, such notice or notices of non-responsibility on behalf of first party as said first party may desire and furnish to second party, it being agreed, however, that first party also reserves the right during the life of this agreement to post and keep posted a notice or notices of non-responsibility of first party and of said premises for any work or labor performed or for

materials furnished to be used in conn ction with mining operations hereunder in or upon said premises.

6. It is agreed that during the life of this agreement said second party shall keep full, true and correct books of account, statements, vouchers, mint returns and receipts at an office in El Dorado County pertaining to mining operations conducted hereunder, and particularly showing the amount of ores reduced and the gross proceeds of copper, gold and other precious metals derived therefrom and the number of shifts worked per day with the names of the men employed, and said first party or the authorized agent or representative of first party shall at all reasonable times have free access to all parts and portions of the property and premises, real and personal, and to the mill or other works where the ores extracted from said property and premises are being worked, milled or reduced, for the purpose of examination and inspection, and shall be entitled to take samples of ores and to examine all books of accounts, statements, vouchers and mint returns and receipts pertaining to said mining operations agreed to be kept as above mentioned.

7. It is agreed that all mining machinery, tools, appliances and equipment, cars, car tracks and rails, shall be removable at all times during the life of this agreement by second party, but that all buildings of any kind that may be placed in or upon said premises during mining operations hereunder shall be deemed fixtures to said real property and premises and become a part thereof and belong to first party, in the event of the termination of this agreement without purchase of said real property and premises, provided, however, that second party shall not be entitled to exercise any of the rights of removal under this paragraph until all sums due and owing to first party under any of the terms and provisions hereof shall have first been fully paid.

8. It is agreed that second party, during the life of this agreement, shall pay all taxes, prior to delinquency, that shall be levied or become due

and payable upon any improvements or opersonal property placed upon said mining property and premises by second party and also upon said mining property and premises hereby leased, inclusive of the current taxes for 1951-1952, which are now in lien upon said property but not yet assessed or levied.

9. It is agreed that the terms and conditions of this agreement, insofar as the second party shall be required to operate, mine and develop said premises and property, or to pay said purchase price, is optional with said second party, who shall have the right at any time to discontinue and cease said work hereunder, whereupon said first party shall be entitled to resume possession of said premises, free and clear of any and all claims hereunder.

10. It is agreed that in the event second party terminates or abandons this agreement as herein provided he will execute and deliver to first party a duly executed quitclaim deed fully releasing the property from the effects of this agreement, it being expressly agreed that in the event such quitclaim deed is not furnished and first party is required to institute a quiet title action to release the property from the effects of this agreement that second party will be liable to first party for the entire costs and expense of such action.

11. It is agreed that all ores and rock obtained from said property and premises and the products or concentrates therefrom shall be kept separate and apart from those obtained from other, if any, properties by second party in the shipment and treatment thereof for the purpose of obtaining the copper and other precious metals therefrom.

12. It is agreed that time is of the essence of this agreement and of each and all of the payments to be made and of each and all of the terms, provisions and conditions hereof and in the event that second party shall at all time fail to perform or carry out any of the terms, conditions and agreements herein imposed upon second party or make any of the payments provided herein within thirty (30) days after notice in writing from first party to perform as herein provided and required, mailed to second party at 3538 Mission Street, Stockton, California, then this agreement shall immediately cease, end and terminate at the option of first party, and all further rights of said second party in and to said premises hereunder shall at once and immediately become terminated and all payments theretofore made hereunder shall be retained by first party as the property of first party and said first party shall have the right to immediately enter into and upon said premises and remove all persons therefrom and take immediate and exclusive possession thereof and any and all mining and other machinery and equipment of every kind or nature placed in and upon said property or used thereon during operations hereunder shall upon forfeiture, surrender, terminate or abandonment of this mining agreement, be removed within sixty (60) days thereafter, as hereinabove provided, and if not so removed the same shall then be and become a fixture and part and parcel of the real property and belong to said first party.

13. It is agreed that first party reserves the right to the use and possession of said premises for stock grazing purposes and other uses not in conflict with the rights hereunder given to second party, it being understood, however, that such possession by first party shall not interfere in any manner with mining operations carried on hereunder by second party and all other rights and privileges hereunder given to second party.

14. It is agreed that the term hereof shall commence on the date of this agreement and end at the expiration of five (5) years from the date hereof, provided, however, that it is further understood and agreed that in the event second party faithfully performs the terms of this agreement and pays to first party in cash and/or royalties within the said period of five (5) years from the date hereof the sum of $12,500.00, said second party shall be entitled to extend the term of this agreement for an additional period of five (5) years upon the same terms and conditions herein stated and without any increase in the total purchase price to be paid as hereinabove recited.

15. It is agreed that either of the parties hereto may forthwith cause a search of the title to said premises to be made at an early date and a title report to be issued in respect thereto and in the event that it appears from said title report that there are defects in said title which should be cleared then first party agrees to institute such proceedings as are necessary to clear said title and second party agrees to advance the costs incurred in procuring said title report and in clearing the defects in said title and first party agrees that second party shall be entitled to reimbursement for such advanced costs out of the first royalties which shall become payable to first party hereunder.

16. It is agreed that first party includes with the above described mining premises any and all water rights and ditches appurtenant thereto which first party may own or have any interest therein and upon payment in full of said purchase price aforesaid they will include in such conveyance all of their right, title and interest in and to any and all water rights and ditches appurtenant to said above described land and premises.

17. This agreement is executed in duplicate, runs in favor of and is

binding upon the heirs, representatives and assigns of the respective parties hereto.

IN WITNESS WHEREOF, the parties hereto and to a duplicate hereof set their hands and seals the day and year first hereinabove written.

Clifford Smith

Joyce Smith
First Party

Oscar C. Brink
Second Party

STATE OF CALIFORNIA)
COUNTY OF CALAVERAS) ss.

On this 20th day of April, 1951, before me, the undersigned Notary Public in and for said County and State, residing therein, duly commissioned and sworn, personally appeared CLIFFORD SMITH and JOYCE SMITH, his wife, and OSCAR C. BRINK, known to me to be the persons described in and whose names are subscribed to the within instrument, and they acknowledged to me that they executed the same.

WITNESS MY HAND AND OFFICIAL SEAL on the date in this certificate first above written.

Virgil M. Airola
Notary Public in and for the County
and State aforesaid.

COPY

Y

[illegible] day

[illegible]

[illegible]

[illegible]

[illegible]

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[illegible]

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[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

COPY

3. Second parties agree to perform all the terms and conditions required to be performed under said lease, Exhibit "B", and agree to perform same in the time provided for therein. If second parties should fail to so perform the conditions of the agreement, Exhibit "B", or any of the terms or conditions of this agreement, then and in that event, the agreement, Exhibit "B" shall revert to and become the property of first party. In this connection, second parties shall not assign, transfer or sublet any of their interest under said agreement, Exhibit "B" without first obtaining the prior written permission or consent of first party thereto.

4. Second parties agree to perform not less than sixty (60), eight (8) hour, two (2) man shifts per month of work upon said property beginning on the 1st day of December, 1951, and continuing regularly thereafter during the term of said agreement, Exhibit "B". In connection therewith, second parties agree to commence to retimber the shaft upon the property mentioned in agreement, Exhibit "B" on or before December 1, 1951, [illegible] [illegible] thereon. [illegible] retimber the shaft [illegible] until [illegible] on or before January 1, 1952, [illegible] shall [illegible] [illegible] [illegible] [illegible] [illegible] the agreement, Exhibit "B".

5. It is understood that first party has [illegible] an oral extension of [illegible] conditions [illegible] agreement, Exhibit "B", [illegible] the work required thereunder [illegible] to be completed until [illegible] 1, 19[illegible], however, [illegible] in [illegible] extension of such agreement [illegible] on or before December 1, 1951.

6. [illegible] June 1, 19[illegible], [illegible] option of [illegible] [illegible] ($100.00) [illegible] per month, [illegible]

-2-

right to [illegible] this choosing for [illegible] in the operation and [illegible] of the property covered by [illegible], and it [illegible] at [illegible] to be mutually agreed upon by the parties beginning June 1, 19[illegible].

In [illegible], the parties must have [illegible] of this agreement the day and year first above written.

[illegible] Party

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] Parties.

COPY

[illegible] option [illegible] entered into with you on [illegible] 20, 1951, [illegible] property [illegible] copper [illegible] located in [illegible] County, [illegible], pursuant to minimum of 60 [illegible] hereunto were to be at rate of [illegible] per foot. [illegible] you have made for an extension of time [illegible] hereby grant you an extension of 30 days, [illegible] paragraph 1, 1951, [illegible] fourth subpar. 1, 1951; [illegible] the option set forth in paragraph 2.

[illegible] Smith

[illegible] Smith

COPY

[illegible], [illegible] this [illegible] day of April, 1[illegible], by and between [illegible], hereinafter called first party (the singular form being used be [illegible] the plural), [illegible], of [illegible] county, [illegible], hereinafter called second party,

[illegible]

[illegible], said first party is the owner and in the possession of all the [illegible] in [illegible], [illegible] or [illegible], [illegible], and being in the county of [illegible], State of California, and particularly described as follows, to-wit:

> Lot 28 in [illegible], [illegible], [illegible], [illegible], [illegible], [illegible], [illegible], [illegible], containing 61.35 acres, more or less.

[illegible], said second party is desirous of entering into and upon said property and premises for the purpose of mining, developing and working the same, and has proved to said [illegible] purchasing the same, upon the terms hereinafter stated;

[illegible], [illegible], the said parties hereto, in consideration of the premises and of the mutual covenants, conditions and agreements hereinafter [illegible], do hereby covenant and agree, each with the other, as follows:

1. [illegible] first party hereby covenants, promises and agrees [illegible] upon the payment to first party of the total sum of $10,000.00, on or before five (5) years from the date hereof, in equal [illegible] hereinafter provided and/or such, first party will sell, convey and deliver a good and sufficient deed [illegible] and convey unto second party, his heirs and assigns forever, all [illegible] the property and premises above described, free and clear of all liens, but subject to any and all encumbrances, easements, rights, [illegible] lines, power lines, and other encumbrances thereover and any and all reservations and [illegible] in any deed pursuant to said purchase.

COPY

[illegible] 1. [illegible] second party shall, after ninety (90) days from the hereof [illegible] during the life of this agreement, have the right, privilege and [illegible] upon and taking possession of such parts and portions of the above described premises and property as is necessary in the judgment of the mining rights and privileges hereinafter [illegible] in the [illegible] to said premises and property, and may prospect, mine, work, operate and develop the same for the copper, gold and other precious metals therein, and may have the right to erect buildings, hoisting works, sluice boxes, mills, flumes, dumps and also the right to install machinery and to construct and [illegible] the pipe lines, power lines, ditches, roads and trails, and the same may be required in the mining operations to be conducted in, upon and under said property. In being understood, however, that during the first ninety (90) days from the date hereof second party shall have the right to enter into and upon said premises and property have [illegible] the purpose of prospecting the same and [illegible] and whether or not any copper, gold or other minerals exist therein and the extent thereof.

2. It is agreed by the second party that it have the right to mill or otherwise reduce the ores from said premises or to ship the same to some responsible smelting company or to return to first party for the purpose of obtaining the copper, gold and other precious metals therefrom, the proceeds, as hereinafter, to be divided pro rata to the respective parties hereto in the manner as follows: Two dollars ($2) [illegible] of the proceeds from copper, gold and all precious metals derived from ores from said premises shall be paid to first party and ninety five percent (95%) [illegible] shall be paid to second party.

In the payment and division of the proceeds as above mentioned, it is agreed that the [illegible] shall be based upon mill or smelter returns. If any copper, gold or other precious metals be found in quantities only or the cost of transportation

from time to time, in their or other [illegible] recovery plant in the event the same is not located upon the above premises, and costs of treatment in such [illegible], [illegible] or other [illegible] recovery plant and then the proceeds payable on above mentioned [illegible] first party will be paid to [illegible] in [illegible], at [illegible], [illegible] for the account or credit of first party.

4. It is agreed that second party shall commence the active work of drilling and developing said property within ninety (90) days from the date of this agreement and will thereafter continuously and diligently develop said property during the term of this agreement by drilling, [illegible] or deepening diligently and loss than ninety (90) calendar days, except when interrupted by act of God, strikes, riots, picketing or lockouts, and in such event reasonable diligence will be used by second party to resume the work of drilling or deepening operations work as the earliest possible date.

5. Second party agrees to keep said premises fully insured under and in compliance with the orders, rules and regulations of the [illegible] and safety of all [illegible] during operations hereunder and to comply with all other laws, rules and regulations, both State and Federal, governing mining operations and to conduct all work hereunder in accordance with good mining practice and methods and to promptly pay all bills for labor performed and for equipment, materials, supplies, electric energy, water and/or utility furnished on said lands during the term hereof and to keep said lands free and clear of all liens, mechanics and other liens and to that end will keep posted on said premises any work done or equipment, materials, supplies or utilities furnished, such notice of notices of non-responsibility on behalf of first party as said first party may require and furnish to second party, it being agreed, however, that first party does reserve the right during the life of this agreement to post and keep posted such notice or notices of non-responsibility of first party and of said premises for any work or labor performed or for

[illegible] in [illegible] good faith [illegible] operations hereunder in or upon said premises.

6. It is agreed that during the life of this agreement said second party shall keep full, true and correct books of account, statements, vouchers, mine returns and receipts [illegible] in a [illegible] manner pertaining to mining operations hereunder, and particularly showing the amount of ores raised and the gross proceeds of copper, gold and other products obtained therefrom and the number of miners employed, and said first party or the duly authorized agent or representative of first party shall at all reasonable times have free access to all parts and portions of the property and premises, real and personal, and to the mill or other works where the ores so raised from said property and products are being worked, milled or reduced, for the purpose of examination and inspection, and shall be entitled to make extracts or copies of all books of account, statements, vouchers and mine returns and receipts pertaining to said mining operations upon the terms as above mentioned.

7. It is agreed that [illegible] machinery, tools, [illegible] equipment, [illegible] or [illegible] shall be removable at all times during the life of this agreement by said party, but that all buildings of any kind that may be placed in or upon said premises during this operations hereunder shall be deemed fixtures to said real property and premises and become a part thereof and belong to first party, in the event of the cancellation of this agreement, all at said real property and premises, provided, however, that said party shall not be entitled to exercise the rights of removal in this paragraph until all [illegible] by first party under any of the terms and provisions hereof shall have first been fully paid.

8. It is agreed that said second party, during the life of this agreement, shall pay all taxes, prior to delinquency, which shall be levied or assessed due

[illegible] upon any improvements or [illegible] property [illegible] said [illegible] property [illegible] by [illegible] party [illegible] upon said mining property [illegible] 1951-1955, [illegible] in lien upon said property but not got assessed or levied.

9. It is agreed that the [illegible] conditions [illegible] program, [illegible] party shall be required to [illegible] develop said [illegible] property, or to pay said [illegible] in [illegible] with said [illegible] party, [illegible] shall have the right to [illegible] discontinue and [illegible] back hereon or, thereupon said first party shall be entitled to resume possession of said premises, [illegible] and all [illegible] hereunder.

10. It is agreed that in the event said party [illegible] or [illegible] this agreement as herein provided, he will execute and deliver to first party a duly [illegible] quitclaim deed fully [illegible] the property from the effects of this agreement, [illegible] in the event such quitclaim deed is not furnished, said first party is required to institute a quiet title action to release the property from the effects of this agreement but [illegible] will be liable to said first party for the entire costs and expenses of such action.

11. It is [illegible] all [illegible] rock obtained from said property and [illegible] the [illegible] or [illegible] shall be kept separate and apart from all other rock obtained from other, [illegible], properties by second party in the [illegible] and [illegible] thereof for the purpose of [illegible] the copper and other precious metals therein.

16. It is agreed that time is the essence of this agreement and of each and all of the payments to be made and each and all of the terms, provisions and conditions hereof and in the event that second party shall at all times fail or refuse or delay any of said terms, conditions and requirements herein imposed upon second party or fail to pay any of the payments herein provided within thirty (30) days after notice in writing from first party to perform as herein provided or shall be required, and fail to second party at first party's option, or first, assignees, or their agents, shall immediately cease, and and terminate at the option of first party, and all further rights of said second party in and to said premises hereunder shall at once and immediately become terminated and all payments theretofore made hereunder shall be retained by first party as the property of first party and first party shall have the right to immediately enter into and upon said premises and remove all persons therefrom and take immediate and exclusive possession thereof and any and all mining and other machinery and equipment of every kind or nature placed in and upon said premises or used thereon during said operations hereunder shall upon forfeiture, surrender, termination or expiration of this mining agreement, be removed within sixty (60) days thereafter, as hereinabove provided, and if not so removed the same shall then be the absolute property and tool of the real property and belong to said first party.

17. It is agreed that first party reserves the right to the use and possession of said premises for roads, grazing, agricultural and other purposes in conflict with the rights hereunder from said second party, it being understood, however, that such possession by first party shall not interfere in any manner with mining operations carried on hereunder by second party and all other rights and privileges hereunder given to second party.

16. It is agreed that the term hereof shall commence on the date of this agreement and continue for a period of five (5) years from the date hereof, provided, however, that it is further understood and agreed that in the event second party fulfills all terms of this agreement and pays to first party in cash and/or royalties within the said period of five (5) years from the date hereof the sum of $15,000.00, said second party shall be entitled to extend the term of this agreement for an additional period of five (5) years upon the same terms and conditions herein set forth and without any increase in the total purchase price to be paid as herein above recited.

19. It is agreed that either of the said parties hereto may forthwith or at any time after the title to said lease has been cleared at an early date and a title report has been made in accordance herewith in the event that it appears from said title report that there exists in said title defects which should be cleared than first party agrees to institute such proceedings as are necessary to clear said title and second party agrees to advance the costs incurred in procuring said title report and in clearing the defects in said title and first party agrees that so much of said costs shall be entitled to reimbursement out of the advance costs or out of the first royalties which shall become payable to first party hereunder.

18. It is agreed that first party includes with the above described leasing premises any and all water rights and fixtures appurtenant thereto which first party may own or have any interest therein and upon payment in full of said purchase price aforesaid they will include in said conveyance all of said water rights, fixtures and appurtenances and all water or gas wells and fixtures appurtenant to said above described land and premises.

17. This agreement is executed in duplicate, each in favor of and is

binding upon [illegible] heirs, [illegible] respective [illegible] the respective parties hereto.

IN [illegible], the parties hereto have hereunto set their hands and seals the day and year first hereinabove written.

[illegible] Smith

[illegible] Smith
[illegible]

[illegible] R. [illegible]
[illegible]

[illegible])
[illegible]) ss.

On this [illegible] day of April, 19[illegible], before me, the undersigned Notary Public in and for said County and State, personally appeared [illegible], his wife, and [illegible], known to me to be the persons described in and who executed the subscribed to the within instrument, and they acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

[illegible]
Notary Public in and for said County
and State aforesaid.

COPY

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

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

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

Not To Be Filled in by Applicant

Docket No. DMEA-2407
Metal or Mineral
Date Received 3-4-52
Amount $
Participation (Government %)

Name and address of applicant: Consumnes Development Co. % H.C. Sanderson, 2901 Capitol Rm. 105, Sacramento Calif.

Date Feb 26 1952

If you have already filed MF-100, give date filed Feb 27 1952, type of assistance requested Exploration & later development

DMA Docket Number (if available)

INSTRUCTIONS

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

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

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

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

   NOTE: (1) If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*c*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 4 1952

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

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

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

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

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

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

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

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

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

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

   (*a*) Rented

   (*b*) Purchased

   (*c*) Furnished by you

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

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

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

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

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

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

CERTIFICATION

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

See attached sheet.	By Herbert C Sanderson
(Name of company)	(Signature of authorized official)
Feb 26, 1952	Secretary & Treasurer.
(Date)	(Title)

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—64067-2

Form -100

1. (a) [illegible], Section 24 and 25. Township 9 North. Range 18 East. [illegible], commonly known as Commercial Copper Mine. [illegible] 41.[illegible] acres [illegible] lease, located in [illegible] Mining District.

   (b) [illegible] (a) above.

2. (a) Copper, molybdenum, lead, zinc, tungsten.

   (b) [illegible] map [illegible] geologist's [illegible] and [illegible] recommendations [illegible] years. [illegible] map and reports.

3. (a) [illegible] tunnel by [illegible] drilling [illegible] cross-cutting [illegible] iron. [illegible] in tunnel with [illegible]. [illegible] tunnel. [illegible] system. Cost $76,000.

   (b) [illegible] immediately [illegible] applied [illegible] exploration [illegible] used. Completion [illegible] 1 year.

4. [illegible] diamond [illegible] drill.

5. Buildings - 3 cabins. [illegible] for repairs.
   Miscellaneous - [illegible] hoist [illegible], rockbuster, [illegible], [illegible] and [illegible] ore pocket. [illegible] pickers [illegible]. Cost $2,000.

6. Buildings - None
   Fixtures - None

7. (a) [illegible] - [illegible] drill heads ---------- 500.00
   (b) Machine - Compressor air 210 cu ft (used) --- 6,175.00
   Diamond drill (used) - ---------- 2,000.00
   Blower and blower pipes (used) --- 800.00
   [illegible] hoist (new) ---------- 386.00
   [illegible] (used) ---------- 775.00
   Drill steel (new) ---------- 600.00
   1 [illegible] (clay [illegible]) ---- 1,000.00
   [illegible] (used) ---------- [illegible]
   [illegible] hoist (used) ---------- 1,000.00
   [illegible] (used) ---------- [illegible]
   [illegible] for [illegible] (used) ---------- 4,000.00
   (c) [illegible] at 12.00 per hr. ---------- 6,750.00
   [illegible] ---------- 1,700.00
   10 [illegible] electric [illegible] ---------- 450.00
   [illegible] & [illegible] ---------- 2,700.00
   1 [illegible] pick-up truck 1/2 ton ---------- 1,400.00

8. 1 miner ---------- 1.07 hr
   1 miner ---------- 1.07 hr
   1 [illegible] ---------- 7.00 hr
   1 diamond drill operator 1.00 hr
   1 helper ---------- 1.07 hr

   [illegible] days per week, 8 hours per day, 12 months. No overtime.

COPY

Form [illegible]-103

9. Timber	[illegible]
Oil (use)	[illegible]
Steel	6,000.00
Motor, [illegible]	[illegible]
Drill bits	[illegible]
Drill rods	100.00
Timber [illegible]	700.00
Cordwood	[illegible]
Air hose	[illegible]
Powder [illegible]	500.00
Fuse (Detcord)	[illegible]
Blasting	[illegible]
Maintenance	[illegible]
Shop	1,000.00
Insurance	1,700.00

10(a) $10000 plus the rental value of our own equipment.

(b) For diamond drilling the ore body.

Exploration cuts and drifts to be performed on the diamond drilling results. Can perform ± 75% allowance for tungsten. Vein type of ore probably has a commercial tungsten content.

11- Estimated time of diamond drilling at 21 days. Completion of any extensive drifts would take about one year. Drifts in ore could be milled. Above figures on a one year estimate.

Y

[illegible]

[illegible] made and entered into this 1 day of November, 1951, by and between [illegible], of [illegible], California, hereinafter called FIRST PARTY, and [illegible], [illegible] and [illegible] of Sacramento, California, and [illegible] of Auburn, California, hereinafter called Second Parties,

[illegible]

For and in consideration of the mutual terms and conditions herein contained, the parties hereto agree as follows:

1. First Party hereby sells, assigns and transfers unto Second Parties, all of his right, title and interest in and to that certain Agreement, a copy of which is attached hereto marked Exhibit "A", and made a part hereof by reference.

2. Second Parties hereby agree to pay to First Party the sum of [illegible] ($110,000.00) DOLLARS, of which amount [illegible] ($35,000.00) [illegible] shall be to pay the payments provided for in said Agreement, Exhibit "A", and [illegible] ($35,000.00) DOLLARS, of which shall be the property of First Party. Said [illegible] ($110,000.00) [illegible] to be paid from a royalty of eleven (11%) per cent of the gross receipts of the production of any minerals produced from the property covered by said Agreement, Exhibit "A", by Second Parties, less any hauling and smelting charges, said royalties to be paid in the manner, and at the time provided for in said Agreement, Exhibit "A", with the exception that it shall be paid to First Party who shall see that said [illegible] and [illegible], his wife, mentioned in said Exhibit "A" shall receive the proportions of said royalties that they are entitled to under said Agreement, Exhibit "A".

3. Second Parties agree to perform all of the terms and conditions required to be performed under said AGREEMENT, Exhibit "A", and agree to perform them in the time provided for therein. If Second Parties should fail to so perform the conditions of the Agreement, Exhibit "A", or any of the terms and conditions of this Assignment Agreement, then and in that event, the Agreement, Exhibit "A" shall revert to and become the property of First Party. In this connection, Second Parties shall not assign, transfer or sublet any of their interest under said Agreement, Exhibit "A" without first obtaining the prior written permission and consent of First Party thereto.

4. Second Parties agree to perform not less than sixty (60), eight (8) hour, two (2) man shifts per month of work upon said property beginning on the 1st day of December, 1951, and continuing regularly thereafter during the term of said Agreement, Exhibit "A". In connection therewith, Second Parties agree to commence to timber the shaft upon the property described in Agreement, Exhibit "A" beginning December 1, 1951, and shall have two men working thereon. They shall continue to timber the shaft and shall commence on or before January 1, 1952, to operate an air pump out such shaft, and shall continuously dewater and pump out said shaft and keep the same free of water continuously thereafter during the term of this Agreement and of the Agreement, Exhibit "A".

5. It is understood that First Party has obtained an oral extension of the terms and conditions of the Agreement, Exhibit "A", so far as the work required thereunder is concerned, and that said work is not to be commenced until December 1, 1951; however, First Party agrees to obtain a written extension of such Agreement and have it available on or before December 1, 1951.

6. Commencing as of June 1, 1951, First Party shall have the option of receiving from Second Parties, either a minimum monthly advance on account of royalties in the sum of One Hundred ($100.00) Dollars per month, or the

right to work at his choosing for Second Parties in the operation and development of the property covered by Agreement, Exhibit "A" at a wage to be mutually agreed upon by the parties beginning June 1, 1952.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first above written.

COPY

OSCAR BAILK — First Party

HERBERT S. SAMPSON

JOHN V. MILROY

[illegible] L. [illegible]

J. J. GIFFORD

Second Parties.

EXHIBIT "A"

THE EXTENSION AGREEMENT

According to the option and lease agreement we entered into with you on April 20, 1951, concerning property known as Consuming Copper Mine located in El Dorado Co., California, your work requirements of 60 shifts per month were to be started on July 20, 1951. As you have asked for an extention of time regarding the working clause, we do hereby grant you an extension of 90 days, beginning August 1, 1951, extending through October 31, 1951; the working clause of the original option set forth in paragraph 4.

Clifford Smith

Joyce Smith

COPY

2. IT IS AGREED that second party shall, after ninety (90) days from the date hereof and thence onwards during the life of this agreement, have the right, privilege and easement of entering into and upon and taking possession of such parts and portions of the above described premises and property as is necessary to the enjoyment of the mining rights and privileges hereunder given pending the purchase of said premises and property, and may prospect, mine, work, operate and develop the same for the copper, gold and other precious metals therein, and may have the right to erect buildings, hoisting planes, sluice boxes, mills, flumes, dumps and also the right to install machinery and to construct and maintain and use pipe lines, power lines, ditches, roads and trails, as the same may be required in the mining operations to be conducted in, upon and under said property, it being understood and agreed, however, that during the first ninety (90) days from the date hereof second party shall have the right to enter into and upon said premises and property above described for the purpose of prospecting the same and taking samples to determine whether or not any copper, gold or other minerals exist therein and the extent thereof.

3. It is agreed that second party shall have the right to mill or otherwise reduce the ores from said premises or to ship the same to some responsible smelting company made known to first party for the purpose of obtaining the copper, gold and other precious metals and values therefrom, the proceeds, as soon as determined, to be divided and paid to the respective parties hereto in the manner as follows: Five per cent (5%) S.S. J.S. O.C.B. of the proceeds from copper, gold and all precious metals recovered from ores from said premises shall be paid to first party and ninety five per cent (95%) S.S. J.S. O.C.B. thereof shall be paid to second party.

In the payment and division of the proceeds as above mentioned, it is agreed that the same shall be based upon mill or smelter recovery of said copper, gold or other precious metals with deductions only for the cost of transportation

from mine to mill, smelter or other final recovery plant in the event the same is not located upon the above premises, and costs of treatment in such mill, smelter or other final recovery plant and that the proceeds payable as above mentioned to first party will be paid to Bank of Amador, at Jackson, California, for the account or credit of first party.

4. It is agreed that second party shall commence the active work of mining and developing said property within ninety (90) days from the date of this agreement and will thereafter continuously mine and develop said property during the life of this agreement by doing and performing monthly not less than sixty (60) shifts of mining work, except when interrupted by act of God, strikes, riots, picketing or lockouts, and in such event reasonable diligence will be used by second party to remove the cause of interruption and resume work at the earliest possible date.

5. Second party agrees to keep all workmen fully insured under and in compliance with the Workmen's Compensation Insurance and Safety Act of California during operations hereunder and to comply also with all other laws, rules and regulations, both State and Federal, governing mining operations and to conduct all work hereunder in accordance with good mining standards and methods and to promptly pay all bills for labor performed and for equipment, materials, supplies, electric energy, water and/or utility furnished on said lands during the term hereof and to keep said lands free and clear of all labor, mechanics' and other liens and to that end will keep posted on said lands where any work is being performed, or equipment, materials, supplies or utilities furnished, such notice or notices of non-responsibility on behalf of first party as said first party may desire and furnish to second party, it being agreed, however, that first party also reserves the right during the life of this agreement to post and keep posted a notice or notices of non-responsibility of first party and of said premises for any work or labor performed or for

materials furnished to be used in connection with mining operations hereunder in or upon said premises.

6. It is agreed that during the life of this agreement said second party shall keep full, true and correct books of account, statements, vouchers, mint returns and receipts at an office in El Dorado County pertaining to mining operations conducted hereunder, and particularly showing the amount of ores reduced and the gross proceeds of copper, gold and other precious metals derived therefrom and the number of shifts worked per day with the names of the men employed, and said first party or the authorized agent or representative of first party shall at all reasonable times have free access to all parts and portions of the property and premises, real and personal, and to the mill or other works where the ores extracted from said property and premises are being worked, milled or reduced, for the purpose of examination and inspection, and shall be entitled to take samples of ores and to examine all books of accounts, statements, vouchers and mint returns and receipts pertaining to said mining operations agreed to be kept as above mentioned.

7. It is agreed that all mining machinery, tools, appliances and equipment, cars, car tracks and rails, shall be removable at all times during the life of this agreement by second party, but that all buildings of any kind that may be placed in or upon said premises during mining operations hereunder shall be deemed fixtures to said real property and premises and become a part thereof and belong to first party, in the event of the termination of this agreement without purchase of said real property and premises, provided, however, that second party shall not be entitled to exercise any of the rights of removal under this paragraph until all sums due and owing to first party under any of the terms and provisions hereof shall have first been fully paid.

8. It is agreed that second party, during the life of this agreement, shall pay all taxes, prior to delinquency, that shall be levied or become due

and payable upon any improvements or personal property placed upon said mining property and premises by second party and also upon said mining property and premises hereby leased, inclusive of the current taxes for 1951-1952, which are now in lien upon said property but not yet assessed or levied.

9. It is agreed that the terms and conditions of this agreement, insofar as the second party shall be required to operate, mine and develop said premises and property, or to pay said purchase price, is optional with said second party, who shall have the right at any time to discontinue and cease said work hereunder, whereupon said first party shall be entitled to resume possession of said premises, free and clear of any and all claims hereunder.

10. It is agreed that in the event second party terminates or abandons this agreement as herein provided he will execute and deliver to first party a duly executed quitclaim deed fully releasing the property from the effects of this agreement, it being expressly agreed that in the event such quitclaim deed is not furnished and first party is required to institute a quiet title action to release the property from the effects of this agreement that second party will be liable to first party for the entire costs and expense of such action.

11. It is agreed that all ores and rock obtained from said property and premises and the products or concentrates therefrom shall be kept separate and apart from those obtained from other, if any, properties by second party in the shipment and treatment thereof for the purpose of obtaining the copper and other precious metals therefrom.

COPY

12. It is agreed that time is of the essence of this agreement and of each and all of the payments to be made and of each and all of the terms, provisions and conditions hereof and in the event that second party shall at all time fail to perform or carry out any of the terms, conditions and agreements herein imposed upon second party or make any of the payments provided herein within thirty (30) days after notice in writing from first party to perform as herein provided and required, mailed to second party at 5838 Mission Street, Stockton, California, then this agreement shall immediately cease, and and terminate at the option of first party, and all further rights of said second party in and to said premises hereunder shall at once and immediately become terminated and all payments theretofore made hereunder shall be retained by first party as the property of first party and said first party shall have the right to immediately enter into and upon said premises and remove all persons therefrom and take immediate and exclusive possession thereof and any and all mining and other machinery and equipment of every kind or nature placed in and upon said property or used thereon during operations hereunder shall upon forfeiture, surrender, terminate or abandonment of this mining agreement, be removed within sixty (60) days thereafter, as hereinabove provided, and if not so removed the same shall then be and become a fixture and part and parcel of the real property and belong to said first party.

13. It is agreed that first party reserves the right to the use and possession of said premises for stock grazing purposes and other uses not in conflict with the rights hereunder given to second party, it being understood, however, that such possession by first party shall not interfere in any manner with mining operations carried on hereunder by second party and all other rights and privileges hereunder given to second party.

COPY

14. It is agreed that the term hereof shall commence on the date of this agreement and end at the expiration of five (5) years from the date hereof, provided, however, that it is further understood and agreed that in the event second party faithfully performs the terms of this agreement and pays to first party in cash and/or royalties within the said period of five (5) years from the date hereof the sum of $12,500.00, said second party shall be entitled to extend the term of this agreement for an additional period of five (5) years upon the same terms and conditions herein stated and without any increase in the total purchase price to be paid as hereinabove recited.

15. It is agreed that either of the parties hereto may forthwith cause a search of the title to said premises to be made at an early date and a title report to be issued in respect thereto and in the event that it appears from said title report that there are defects in said title which should be cleared then first party agrees to institute such proceedings as are necessary to clear said title and second party agrees to advance the costs incurred in procuring said title report and in clearing the defects in said title and first party agrees that second party shall be entitled to reimbursement for such advanced costs out of the first royalties which shall become payable to first party hereunder.

16. It is agreed that first party includes with the above described mining premises any and all water rights and ditches appurtenant thereto which first party may own or have any interest therein and upon payment in full of said purchase price aforesaid they will include in such conveyance all of their right, title and interest in and to any and all water rights and ditches appurtenant to said above described land and premises.

17. This agreement is executed in duplicate, runs in favor of and is

binding upon the heirs, representatives and assigns of the respective parties hereto.

IN WITNESS WHEREOF, the parties hereto and to a duplicate hereof set their hands and seals the day and year first hereinabove written.

Clifford Smith

Joyce Smith
First Party

Oscar C. Brink
Second Party

STATE OF CALIFORNIA)
COUNTY OF CALAVERAS) ss.

On this 20th day of April, 1961, before me, the undersigned Notary Public in and for said County and State, residing therein, duly commissioned and sworn, personally appeared CLIFFORD SMITH and JOYCE SMITH, his wife, and OSCAR C. BRINK, known to me to be the persons described in and whose names are subscribed to the within instrument, and they acknowledged to me that they executed the same.

WITNESS MY HAND AND OFFICIAL SEAL on the date in this certificate first above written.

Virgil H. Airola
Notary Public in and for the County
and State aforesaid.

COPY

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

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

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

Not To Be Filled in by Applicant

Docket No. DMEA-2407
Metal or Mineral
Date Received 3-4-52
Amount $
Participation (Government %)

Name and address of applicant: Communities Development
c/o H.C. Sanderson
2901 Capitol Ave
Rm 105
Sacramento, Calif

Date Feb 26 1952

If you have already filed MF-100, give date filed Feb 27 1952 type of assistance requested Exploration + later development

DMA Docket Number (if available)

INSTRUCTIONS

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

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

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

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

   NOTE: (1) If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*c*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 4 1952

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

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

16—64067-2

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

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

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

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

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

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

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

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

   (*a*) Rented

   (*b*) Purchased

   (*c*) Furnished by you

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

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

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

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

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

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

CERTIFICATION

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

Geneva Development Co.
(Name of company)

By Herbert C. Sanderson
(Signature of authorized official)

Feb 26 1952
(Date)

Secretary-Treasurer.
(Title)

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—64067-2

Form [illegible]-103

1. (a) Lot 38, Section 24 and 25. Township 9 North. Range 12 East. [illegible], commonly known as Continental Copper Mine. Contains 41.38 acres more or less, located in Fair Play District.

   (b) Same as (a) above.

2. (a) Copper, molybdenum, lead, zinc, tungsten.

   (b) See enclosed map and photostatic copy of geologist's examination and appraisal as well as recommendations of former years. Please return copies of map and reports.

3. (a) Explore the footwall side of the tunnel by diamond drilling and cross cutting same area. Explore ore body in tunnel with a raise. Retimber the shaft. Install fresh air system. Cost $75,000.

   (b) Can start diamond drilling immediately if cost can be applied to this exploration requested. Completion time 1 year.

4. See attached maps and plan.

5. Buildings - 2 cabins. $200.00 for repairs.
   Installations - Complete hoist room, retimbering, cleaning waste and ore pocket. Complete gallows frame. Cost $2,000.

6. Buildings - None
   Fixtures - None

7. (a) Rent - Diamond drill hoods ---------- $ 500.00
   (b) Purchase - Compressor air 210 cu ft (used) --- 5,275.00
   Diamond drill (used) - ---------- 2,500.00
   Blower and blower pipes (used) --- 800.00
   Jack hammer (new) ---------- 385.00
   Stoper (used) ---------- 375.00
   Drill steel (new) ---------- 500.00
   1 truck 3 x 6 (army surplus) ---- 2,500.00
   2 ore cars (used) ---------- 2[illegible].00
   Electric hoist (used) ---------- 1,850.00
   Skip (used) ---------- 2[illegible]0.00
   Generator 50 K.W. (used) -------- 4,500.00
   (c) D 8 cat @ $15.50 per hr. ---------- 6,750.00
   Generator 15 K.W. ---------- 2,700.00
   10 H.P. electric pump ---------- 450.00
   Trailer & low bed ---------- 2,700.00
   1 pick-up truck 3/4 ton ---------- 2,400.00
   $41,135.00

8. 1 miner ---------- 1.67 hr
   1 miner ---------- 1.67 hr
   1 supervisor ---------- 750.00 mo
   1 diamond drill operator 1.25 hr
   1 hoist man ---------- 1.67 hr

Work 5 days per week, 8 hours per day, 12 months. No overtime.

Form [illegible]-103

9. Timber ---------- [illegible],000.00
Oil (used) ---------- 300.00
Fuel ---------- 6,000.00
Powder, caps, fuses, drill bits ---------- 2,300.00
Picks & shovels ---------- 250.00
Rubber clothing, hats ---------- 150.00
Carbide ---------- 700.00
Air hose ---------- 200.00
Electric cable ---------- 500.00
Cable (hoisting) ---------- 350.00
Surveying ---------- 100.00
Accounting ---------- 1,500.00
Taxes ---------- 2,000.00
Insurance ---------- 1,200.00
1,700.00
21,275.00

10 (a) $10,000 plus the rental value of our own equipment.
(b) For diamond drilling the ore body.
Exploration with cuts + drifts to be performed on the diamond drilling results. Can perform with 75% allowance for tungsten. Garnet type of ore probably has a commercial tungsten content.

11- Estimated time of diamond drilling at 21 days. Completion of any extensive drifts would take about one year. Drifts in ore could be milled. Above figures on a one year estimate.

Y

[illegible]

[illegible] made and entered into this 1 day of [illegible], 1951, by and between [illegible], [illegible], California, hereinafter called FIRST PARTY, and [illegible], [illegible] and [illegible] of Sacramento, California, and [illegible] of [illegible], California, hereinafter called SECOND PARTIES,

WITNESSETH

That and in consideration of the mutual terms and conditions herein contained, the parties hereto agree as follows:

1. First Party hereby sells, assigns and transfers unto Second Parties, all of his right, title and interest in and to that certain agreement, a copy of which is attached hereto marked "Exhibit [illegible]", and made a part hereof by reference.

2. Second Parties hereby agree to pay to First Party the sum of [illegible] ($100,000.00) [illegible], of which amount TWENTY [illegible] ($20,000.00) [illegible] shall be to carry the payments provided for in said agreement, "Exhibit [illegible]", and [illegible] ($80,000.00) [illegible], of which shall be the property of First Party. Said [illegible] ($110,000.00) [illegible] shall be paid from a royalty of eleven (11%) per cent of the gross receipts of the production of any minerals [illegible] the property covered by said agreement, "Exhibit [illegible]", by Second Parties, less any hauling and shipping charges, said royalties to be paid in the manner, and at the time provided for in said agreement, "Exhibit [illegible]", with the exception that it shall be paid to First Party who shall see that said [illegible] and [illegible], as title, mentioned in said "Exhibit [illegible]" shall receive the proportions of said royalties they are entitled to under said agreement, "Exhibit [illegible]".

3. Second parties agree to perform all the terms and conditions required to be performed on or said [illegible], Exhibit "A", and agree to perform them in the time provided for therein. If Second Parties shall fail to so perform the conditions of the agreement, Exhibit "A", or any of the terms and conditions of this amendment agreement, then and in that event, the agreement, Exhibit "A" shall revert to and become the property of First Party. In this connection, Second Parties shall not assign, transfer or sublet any of their interest under said agreement, Exhibit "A" without first obtaining the prior written permission and consent of First Party thereto.

4. Second Parties agree to perform not less than sixty (60), eight (8) hour, five (5) man shifts per month of work upon said property beginning on the 1st day of December, 1951, and continuing regularly thereafter during the term of said agreement, Exhibit "A". In connection therewith, Second Parties agree to commence to retimber the shaft upon the property described in agreement, Exhibit "A" beginning December 1, 1951, and shall have two men working thereon. They shall continue to retimber the shaft and shall commence on or before January 1, 1952, to open up the map vein and shaft, and shall continue only thereafter [illegible] the agreement, Exhibit "A".

5. It is understood that First Party has waived any formal extension of the terms and conditions of the agreement, Exhibit "A", as set forth in the work required thereunder is concerned, and that said work is not to be continued until December 1, 1951; however, First Party agrees to obtain a written extension of said agreement which is available on or before December 1, 1951.

6. [illegible] June 1, 1951, Second Party shall have the option of terminating Part [illegible] Section, upon a minimum royalty advance on account of royalties in the sum of [illegible] (100.00) [illegible] per month, or the

right to work at his choosing for second parties in the operation and development of the property covered by agreement, exhibit " " attached hereto to be mutually agreed upon by the parties beginning June 1, 19[illegible].

IN [illegible] WHEREOF, the parties hereto have executed this agreement the day and year first above written.

[illegible] First Party

[illegible]

[illegible]

[illegible]

[illegible]

Second Parties.

COPY

"EXHIBIT 9"

[illegible]

According to the option and lease agreement we entered into with you on April 20, 1951, concerning property known as Centennial Copper Mine located in El Paso Co., Colorado, your work requirements of 60 shifts per month were to be started on July 20, 1951. As you have asked for an extension of time regarding the working clause, we do hereby grant you an extension of 30 days, beginning August 1, 1951, extending through October 31, 1951; the working clause of the original option set forth in paragraph 4.

Clifford Smith

George Smith

COPY

[illegible] AGREEMENT

[illegible], made and executed this [illegible] day of April, 1961, by and between [illegible] and [illegible], his wife, both of Fairplay via [illegible], California, hereinafter called first party (the singular term being used to include the plural), and [illegible] C. [illegible], of 3338 [illegible] Road, Stockton, California, hereinafter called second party.

WITNESSETH:

WHEREAS, said first party is the owner and in the possession of all those certain lots, plots or parcels of land, situate, lying and being in the County of El Dorado, State of California, and particularly described as follows, to-wit:

> Lot 38 in Secs. 24 and 25, T. 9 N., R. 12 E., M.D.B. & M., commonly known as the [illegible], containing 41.35 acres, more or less.

WHEREAS, said second party is desirous of entering into and upon said property and premises for the purpose of mining, developing and working the same, with the privilege and option of purchasing the same, upon the terms hereinafter stated;

NOW, THEREFORE, the said parties hereto, in consideration of the premises and of the mutual covenants, promises and agreements hereinafter contained, do hereby covenant and agree, the one with the other, as follows:

1. Said first party hereby covenants, promises and agrees that upon the payment to first party of the total sum of $25,000.00, on or before five (5) years from the date hereof, in royalties as hereinafter provided and/or cash, first party will make, execute and deliver a good and sufficient deed granting and conveying unto second party, his heirs and assigns forever, all of the property and premises above described, free and clear of encumbrances, but subject to any and all easements for existing roads, ditches, telephone lines, power lines, and other easements thereover and any and all reservations contained in any U.S. patent to said premises.

COPY

2. It is agreed that second party shall, after ninety (90) days from the date hereof and thereafter during the life of this agreement, have the right, privilege and consent of entering into and upon and taking possession of such areas and portions of the above described premises and property as is necessary to the enjoyment of the mining rights and privileges hereunder given pending the purchase of said premises and property, and may prospect, mine, work, operate and develop the same for the copper, gold and other precious metals therein, and may have the right to erect buildings, hoisting plants, sluice boxes, mills, flumes, dumps and also the right to install machinery and to construct and maintain and use pipe lines, power lines, ditches, roads and trails, as the same may be required in the mining operations to be conducted in, upon and under said property, it being understood and agreed, however, that during the first ninety (90) days from the date hereof second party shall have the right to enter into and upon said premises and property above described for the purpose of prospecting the same and taking samples to determine whether or not any copper, gold or other minerals exist therein and the extent thereof.

3. It is agreed that second party shall have the right to mill or otherwise reduce the ores from said premises or to ship the same to some responsible smelting company made known to first party for the purpose of obtaining the copper, gold and other precious metals and values therefrom, the proceeds, as soon as determined, to be divided and paid to the respective parties hereto in the manner as follows: Five per cent (5%) [illegible] of the proceeds from copper, gold and all precious metals recovered from ores from said premises shall be paid to first party and ninety five per cent (95%) [illegible] thereof shall be paid to second party.

In the payment and division of the proceeds as above mentioned, it is agreed that the same shall be based upon mill or smelter recovery of said copper, gold or other precious metals with deductions only for the cost of transportation

from mine to mill, smelter or other final recovery plant in the event the same is not located upon the above premises, and costs of treatment in such mill, smelter or other final recovery plant and that the proceeds payable as above mentioned to first party will be paid to Bank of Amador, at Jackson, California, for the account or credit of first party.

4. It is agreed that second party shall commence the active work of mining and developing said property within ninety (90) days from the date of this agreement and will thereafter continuously carry on development and property during the life of this agreement by doing and performing monthly not less than sixty (60) shifts of mining work, except when interrupted by act of God, strikes, riots, picketing or lockouts, and in such event reasonable diligence will be used by second party to remove the cause of interruption and resume work at the earliest possible date.

5. Second party agrees to keep all workmen fully insured under and in compliance with the Workmen's Compensation Insurance and Safety Act of California during operations hereunder and to comply also with all other laws, rules and regulations, both State and Federal, governing mining operations and to conduct all work hereunder in accordance with good mining standards and methods and to promptly pay all bills for labor performed and for equipment, materials, supplies, electric energy, water and/or utility furnished on said lands during the term hereof and to keep said lands free and clear of all labor, mechanics' and other liens and to that end will keep posted on said lands where any work is being performed, or equipment, materials, supplies or utilities furnished, such notice or notices of non-responsibility on behalf of first party as said first party may desire and furnish to second party, it being agreed, however, that first party also reserves the right during the life of this agreement to post and keep posted a notice or notices of non-responsibility of first party and of said premises for any work or labor performed or for

materials furnished to be used in connection with mining operations hereunder in or upon said premises.

6. It is agreed that during the life of this agreement said second party shall keep full, true and correct books of account, statements, vouchers, mint returns and receipts at an office in El Dorado County pertaining to mining operations conducted hereunder, and particularly showing the amount of ores reduced and the gross proceeds of copper, gold and other precious metals derived therefrom and the number of shifts worked per day with the names of the men employed, and said first party or the authorized agent or representative of first party shall at all reasonable times have free access to all parts and portions of the property and premises, real and personal, and to the mill or other works where the ores extracted from said property and premises are being worked, milled or reduced, for the purpose of examination and inspection, and shall be entitled to take samples of ores and to examine all books of accounts, statements, vouchers and mint returns and receipts pertaining to said mining operations agreed to be kept as above mentioned.

7. It is agreed that all mining machinery, tools, appliances and equipment, cars, car tracks and rails, shall be removable at all times during the life of this agreement by second party, but that all buildings of any kind that may be placed in or upon said premises during mining operations hereunder shall be deemed fixtures to said real property and premises and become a part thereof and belong to first party, in the event of the termination of this agreement without purchase of said real property and premises, provided, however, that second party shall not be entitled to exercise any of the rights of removal under this paragraph until all sums due and owing to first party under any of the terms and provisions hereof shall have first been fully paid.

8. It is agreed that second party, during the life of this agreement, shall pay all taxes, prior to delinquency, that shall be levied or become due

and payable upon any improvements or operational property placed upon said mining property and premises by said party and also upon said mining property and premises hereby leased, inclusive of the current taxes for 1951-1952, which are now in lien upon said property but not yet assessed or levied.

9. It is agreed that the terms and conditions of this agreement, insofar as the second party shall be required to operate, mine and develop said premises and property, or to pay said purchase price, is optional with said second party, who shall have the right at any time to discontinue and cease said work hereunder, whereupon said first party shall be entitled to resume possession of said premises, free and clear of any and all claims hereunder.

10. It is agreed that in the event second party terminates or abandons this agreement as herein provided he will execute and deliver to first party a duly executed quitclaim deed fully releasing the property from the effects of this agreement, it being expressly agreed that in the event such quitclaim deed is not furnished and first party is required to institute a quiet title action to release the property from the effects of this agreement that second party will be liable to first party for the entire costs and expense of such action.

11. It is agreed that all ores and rock obtained from said property and premises and the products or concentrates therefrom shall be kept separate and apart from those obtained from other, if any, properties by second party in the shipment and treatment thereof for the purpose of obtaining the copper and other precious metals therefrom.

COPY

12. It is agreed that time is of the essence of this agreement and of each and all of the payments to be made and of each and all of the terms, provisions and conditions hereof and in the event that second party shall at all time fail to perform or carry out any of the terms, conditions and agreements herein imposed upon second party or make any of the payments provided herein within thirty (30) days after notice in writing from first party to perform as herein provided and required, mailed to second party at 3838 Mission Street, Stockton, California, then this agreement shall immediately cease, and and terminate at the option of first party, and all further rights of said second party in and to said premises hereunder shall at once and immediately become terminated and all payments theretofore made hereunder shall be retained by first party as the property of first party and said first party shall have the right to immediately enter into and upon said premises and remove all persons therefrom and take immediate and exclusive possession thereof and any and all mining and other machinery and equipment of every kind or nature placed in and upon said property or used thereon during operations hereunder shall upon forfeiture, surrender, terminate or abandonment of this mining agreement, be removed within sixty (60) days thereafter, as hereinabove provided, and if not so removed the same shall then be and become a fixture and part and parcel of the real property and belong to said first party.

13. It is agreed that first party reserves the right to the use and possession of said premises for stock grazing purposes and other uses not in conflict with the rights hereunder given to second party, it being understood, however, that such possession by first party shall not interfere in any manner with mining operations carried on hereunder by second party and all other rights and privileges hereunder given to second party.

COPY

14. It is agreed that the term hereof shall commence on the date of this agreement and end at the expiration of five (5) years from the date hereof, provided, however, that it is further understood and agreed that in the event second party faithfully performs the terms of this agreement and pays to first party in cash and/or royalties within the said period of five (5) years from the date hereof the sum of $12,500.00, said second party shall be entitled to extend the term of this agreement for an additional period of five (5) years upon the same terms and conditions herein stated and without any increase in the total purchase price to be paid as hereinabove recited.

15. It is agreed that either of the parties hereto may forthwith cause a search of the title to said premises to be made at an early date and a title report to be issued in respect thereto and in the event that it appears from said title report that there are defects in said title which should be cleared then first party agrees to institute such proceedings as are necessary to clear said title and second party agrees to advance the costs incurred in procuring said title report and in clearing the defects in said title and first party agrees that second party shall be entitled to reimbursement for such advanced costs out of the first royalties which shall become payable to first party hereunder.

16. It is agreed that first party includes with the above described mining premises any and all water rights and ditches appurtenant thereto which first party may own or have any interest therein and upon payment in full of said purchase price aforesaid they will include in such conveyance all of their right, title and interest in and to any and all water rights and ditches appurtenant to said above described land and premises.

17. This agreement is executed in duplicate, same in favor of and is

binding upon the heirs, representatives and assigns of the respective parties hereto.

IN WITNESS WHEREOF, the parties hereto and to a duplicate hereof set their hands and seals the day and year first hereinabove written.

Clifford Smith

Joyce Smith
First Party

Oscar C. Brink
Second Party

STATE OF CALIFORNIA }
COUNTY OF RIVERSIDE } ss.

On this 20th day of April, 1961, before me, the undersigned Notary Public in and for said County and State, residing therein, duly commissioned and sworn, personally appeared CLIFFORD SMITH and JOYCE SMITH, his wife, and OSCAR C. BRINK, known to me to be the persons described in and who so names are subscribed to the within instrument, and they acknowledged to me that they executed the same.

IN WITNESS WHEREOF I HAVE hereunto set my hand and affixed my official seal on the date in this certificate first above written.

Virgil H. Nicola
Notary Public in and for the County and State aforesaid.

COPY

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

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

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

Not To Be Filled in by Applicant

Docket No. DMEA-2407
Metal or Mineral
Date Received 3-4-52
Amount $
Participation (Government %)

Name and address of applicant: % H. C. Sanderson
Consumnes Development Co.
Rm 105 2901 Capitol Ave.
Sacramento Calif.

Date Feb 26th 1952
% H. C. Sanderson

If you have already filed MF-100, give date filed FEB 27, type of assistance requested EXPLORATION & LATER DEVELOPMENT

DMA Docket Number (if available)

INSTRUCTIONS

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

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

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

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

   NOTE: (1) If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*c*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 4 1952

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

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

   See attached sheet.

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

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

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

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

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

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

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

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

   (*a*) Rented

   (*b*) Purchased

   (*c*) Furnished by you

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

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

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

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

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

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

CERTIFICATION

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

Consumnes Development Co.
(Name of company)

By Herbert C Sanderson
(Signature of authorized official)

Feb 26, 1952.
(Date)

Secretary + Treasurer
(Title)

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—64067-2

Form MF-103

1. (a) Lot 38, Section 24 and 25. Township 9 North. Range 12 East. M.D.B.M., commonly known as Consumnes Copper Mine. Contains 41.35 acres more or less, located in Fair Play District.

   (c) Same as (a) above.

2. (a) Copper, molybdenum, lead, zinc, tungsten.

   (b) See enclosed map and photostatic copy of geologist's examination and appraisal as well as recommendations of former years. Please return copies of map and reports.

3. (a) Explore the footwall side of the tunnel by diamond drilling and cross cutting same area. Explore ore body in tunnel with a raise. Retimber the shaft. Install fresh air system. Cost $75,000.

   (b) Can start diamond drilling immediately if cost can be applied to the exploration requested. Completion time 1 year.

4. See attached maps and plan.

5. Buildings - 2 cabins. $200.00 for repairs.
   Installations - Complete hoist room, retimbering, cleaning waste and ore pocket. Complete gallows frame. Cost $2,000.

6. Buildings - None
   Fixtures - None

7. (a) Rent - Diamond drill heads ---------- $ 500.00
   (b) Purchase - Compressor air 210 cu ft (used)--- 5,275.00
   Diamond drill (used) ---------- 2,500.00
   Blower and blower pipes (used) --- 800.00
   Jack hammer (new) ---------- 385.00
   Stoper (used) ---------- 375.00
   Drill steel (new) ---------- 500.00
   1 truck 6 x 6 (Army surplus) ----- 2,500.00
   2 ore cars (used) ---------- 200.00
   Electric hoist (used) ---------- 1,850.00
   Skip (used) ---------- 250.00
   Generator 50 K.W.--(used) -------- 4,500.00
   (c) D 8 Cat @ $13.50 per hr.---------- 6,750.00
   Generator 15 K.W.---------- 2,700.00
   10 H.P. Electric pump ---------- 450.00
   Tractor & low bed ---------- 2,700.00
   1 pick-up truck 3/4 ton ---------- 2,400.00

8. 1 miner ---------- $ 1.67 hr
   1 mucker ---------- 1.37 hr
   1 supervisor ---------- 750.00 mo
   1 diamond drill operator 2.25 hr
   1 hoist man ---------- 1.67 hr

   Work 5 days per week, 8 hours per day, 12 months. No overtime.

Form MF-103

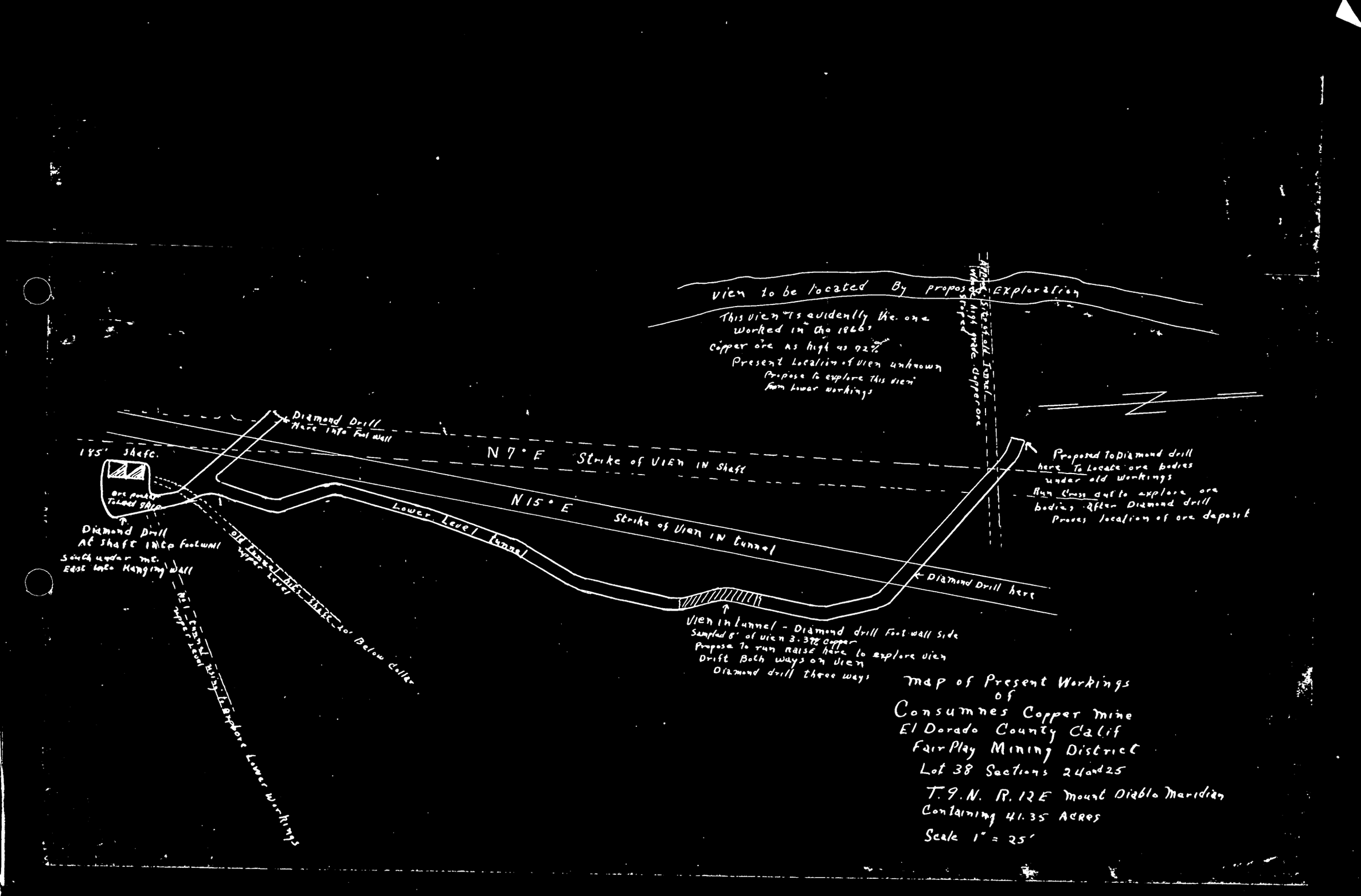
9. Timber ---------- $2,000.00
Rails (used) ---------- 300.00
Fuel ---------- 6,650.00
Powder, caps, fuses,---------- 4,300.00
drill bits ---------- 250.00
Picks & shovels ---------- 150.00
Rubber clothing, hats ------- 75.00
Carbide ---------- 200.00
Air hose ---------- 500.00
Electric cable ---------- 350.00
Cable (hoisting) ---------- 100.00

Assaying ---------- 1,500.00
Accounting ---------- 2,000.00
Taxes ---------- 1,200.00
Insurance ---------- 1,700.00

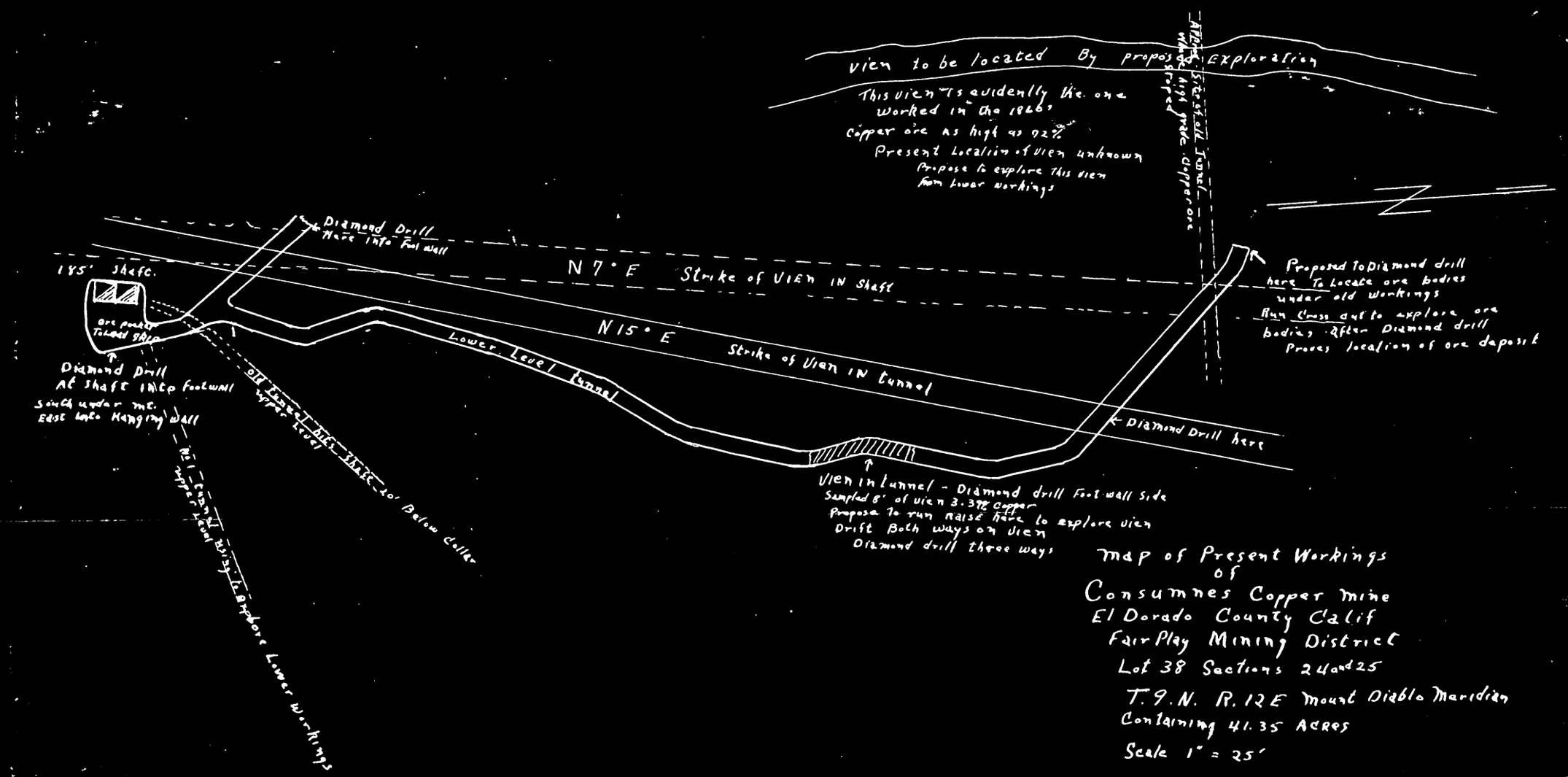
10(a) $10,000 plus the rental value of our own equipment.

10(b) For Diamond drilling the ore body.
Exploration with cuts and drifts to be performed with diamond drilling results. Can perform with 75% allowance for tungsten. Garnet type of ore probably has a commercial tungsten content.

11- Estimated time of diamond drilling at 21 days. Completetion of any extensive drifts would consume about one year. Drifts in ore could be milled. Above figures on a one year estimate



Map of Present Workings
of
Consumnes Copper mine
El Dorado County Calif
Fair Play Mining District
Lot 38 Sections 24 and 25
T. 9. N. R. 12 E Mount Diablo Meridian
Containing 41.35 Acres
Scale 1" = 25'



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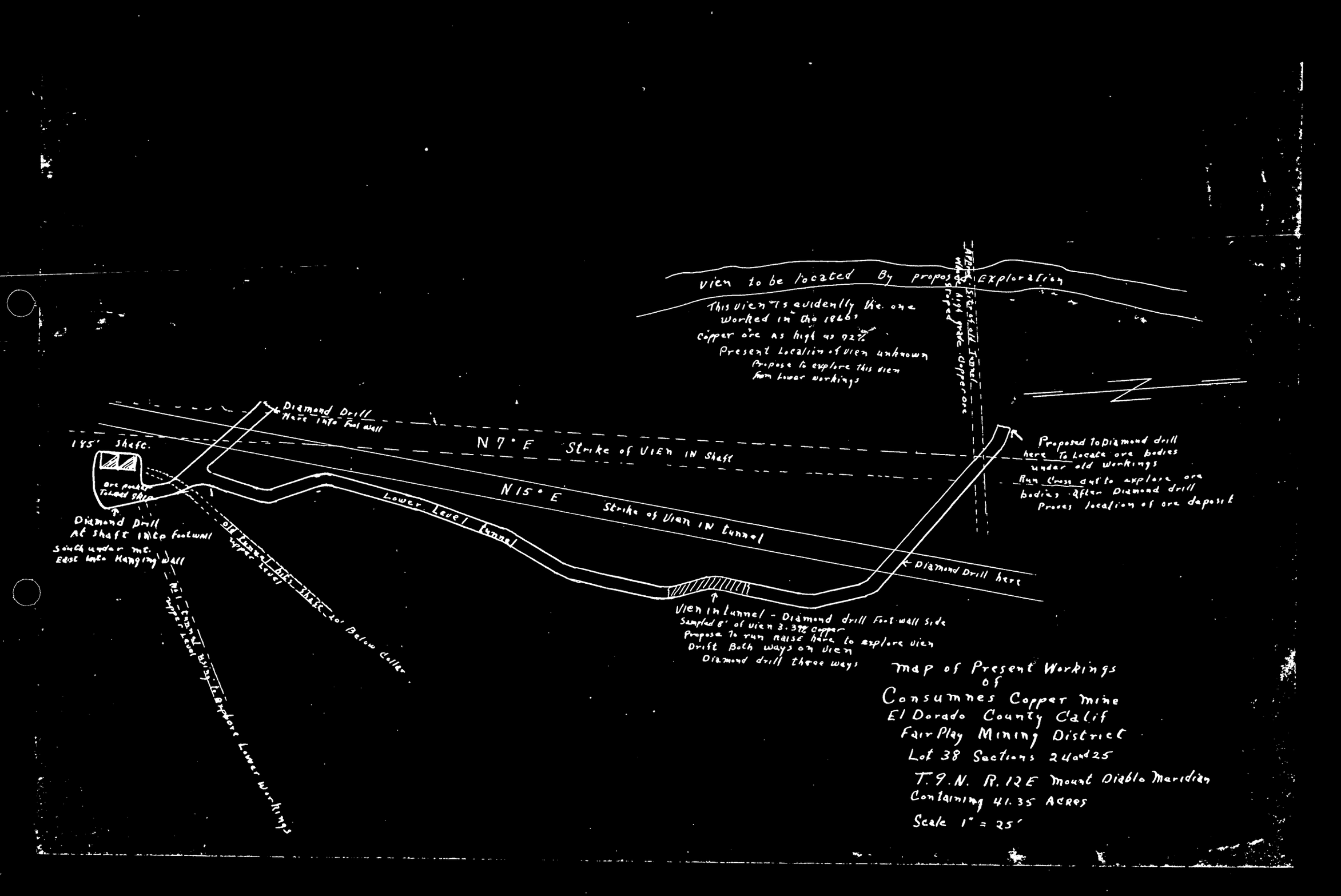
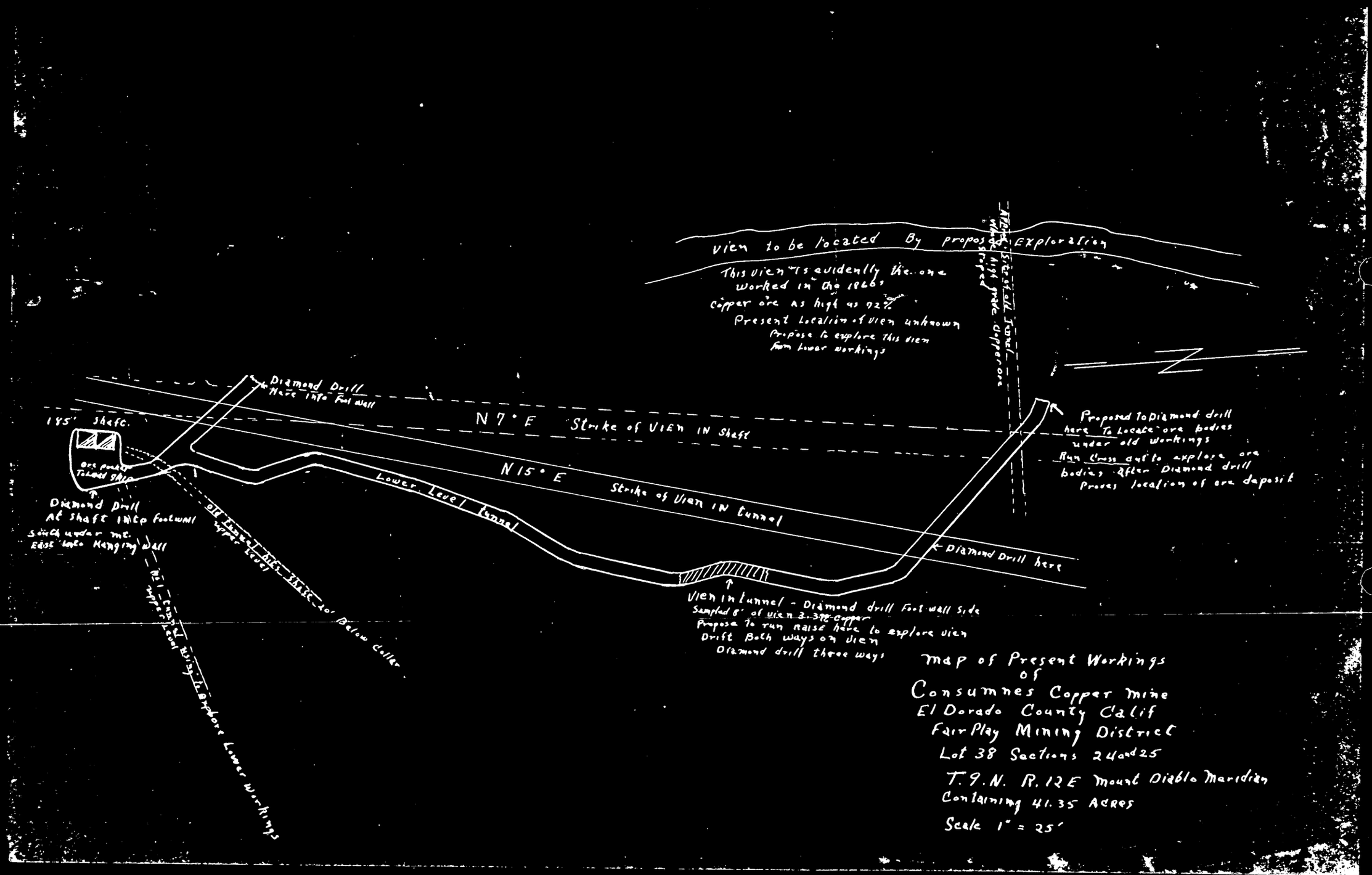

Vien to be located By proposed Exploration
This vien is evidently the one worked in the 1860's
copper ore as high as 92%
Present Location of vien unknown
Propose to explore this vien from Lower workings
Vien to be located By proposed Exploration
Diamond Drill Here into Foot wall
185' Shaft.
ore pocket Tuned Stope
N 7° E Strike of VIEN IN Shaft
N 15° E Strike of Vien IN tunnel
Lower Level tunnel
Diamond Drill At Shaft into Footwall
South under mt.
East into Hanging wall
Old Tunnel Air Shaft Upper level
Raise to Below Collar
Diamond Drill here
Vien in tunnel - Diamond drill Foot wall Side
Sampled 6' of vien 3.38% Copper
Propose to run Raise here to explore vien
Drift Both ways on vien
Diamond drill three ways
Proposed to Diamond drill here To Locate ore bodies under old workings
Run Cross cut to explore ore bodies After Diamond drill Proves location of ore deposit
Map of Present Workings
of
Consumnes Copper mine
El Dorado County Calif
Fair Play Mining District
Lot 38 Sections 24 and 25
T. 9. N. R. 12 E Mount Diablo Meridian
Containing 41.35 Acres
Scale 1" = 25'



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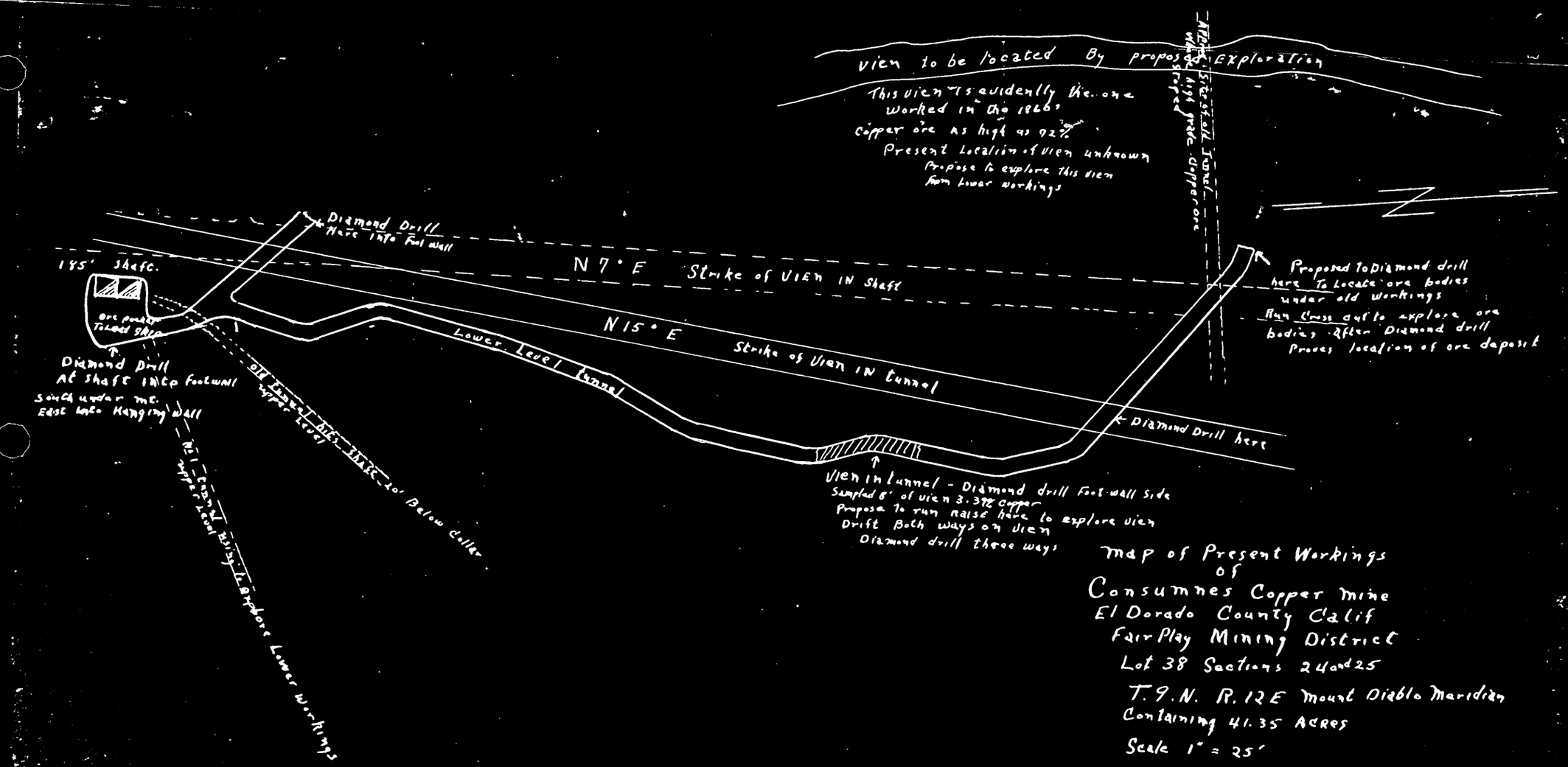

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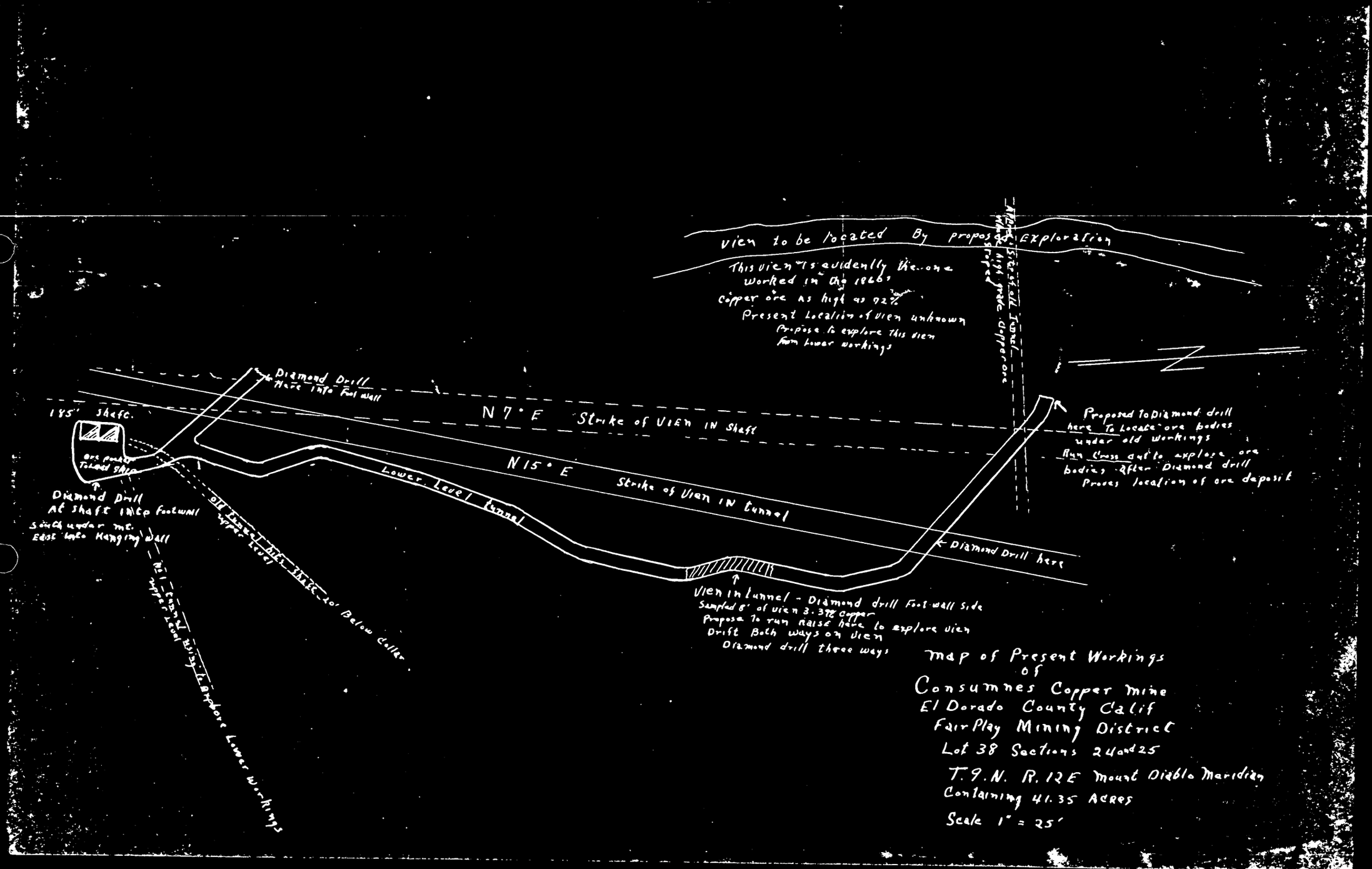

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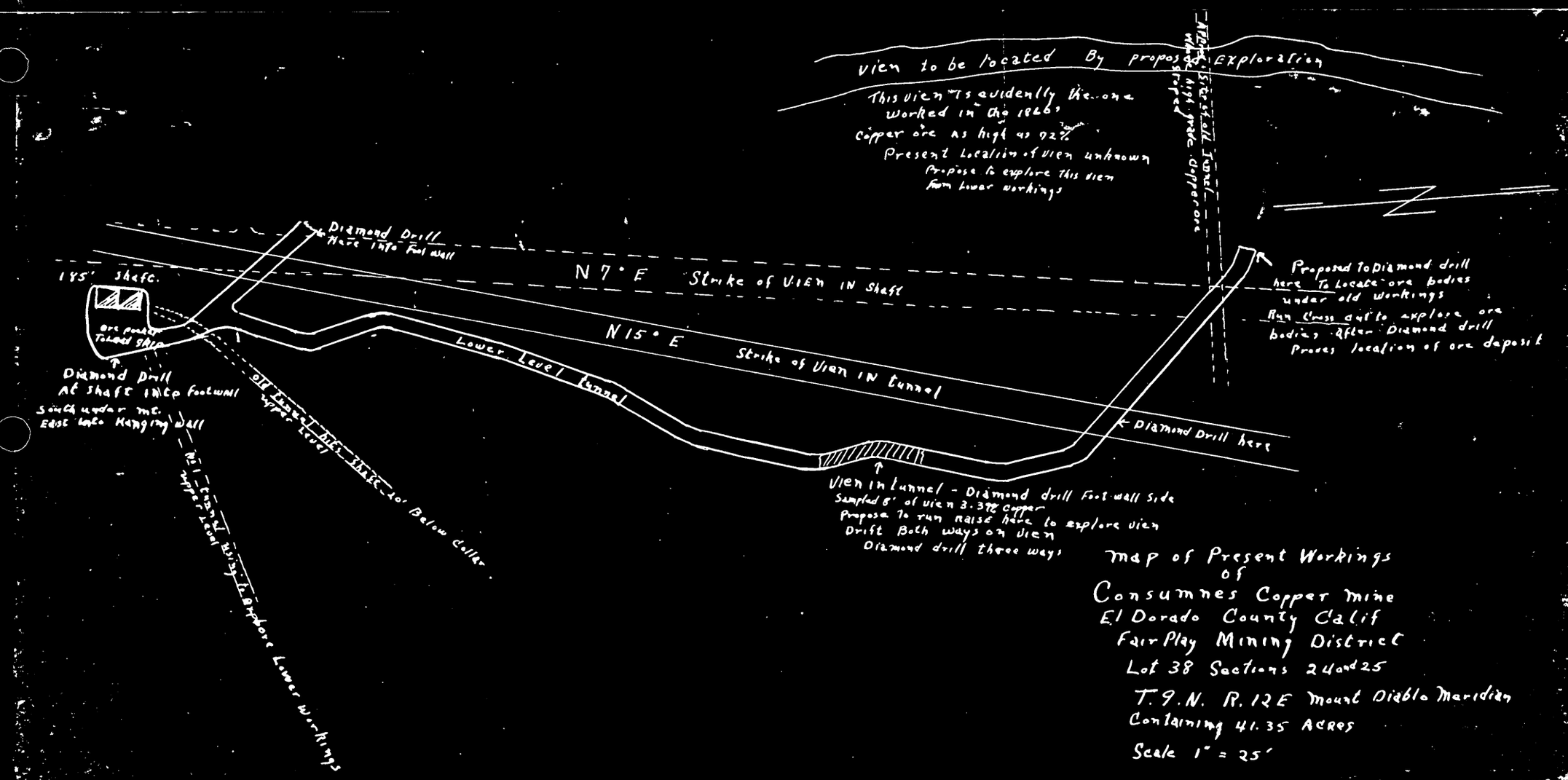

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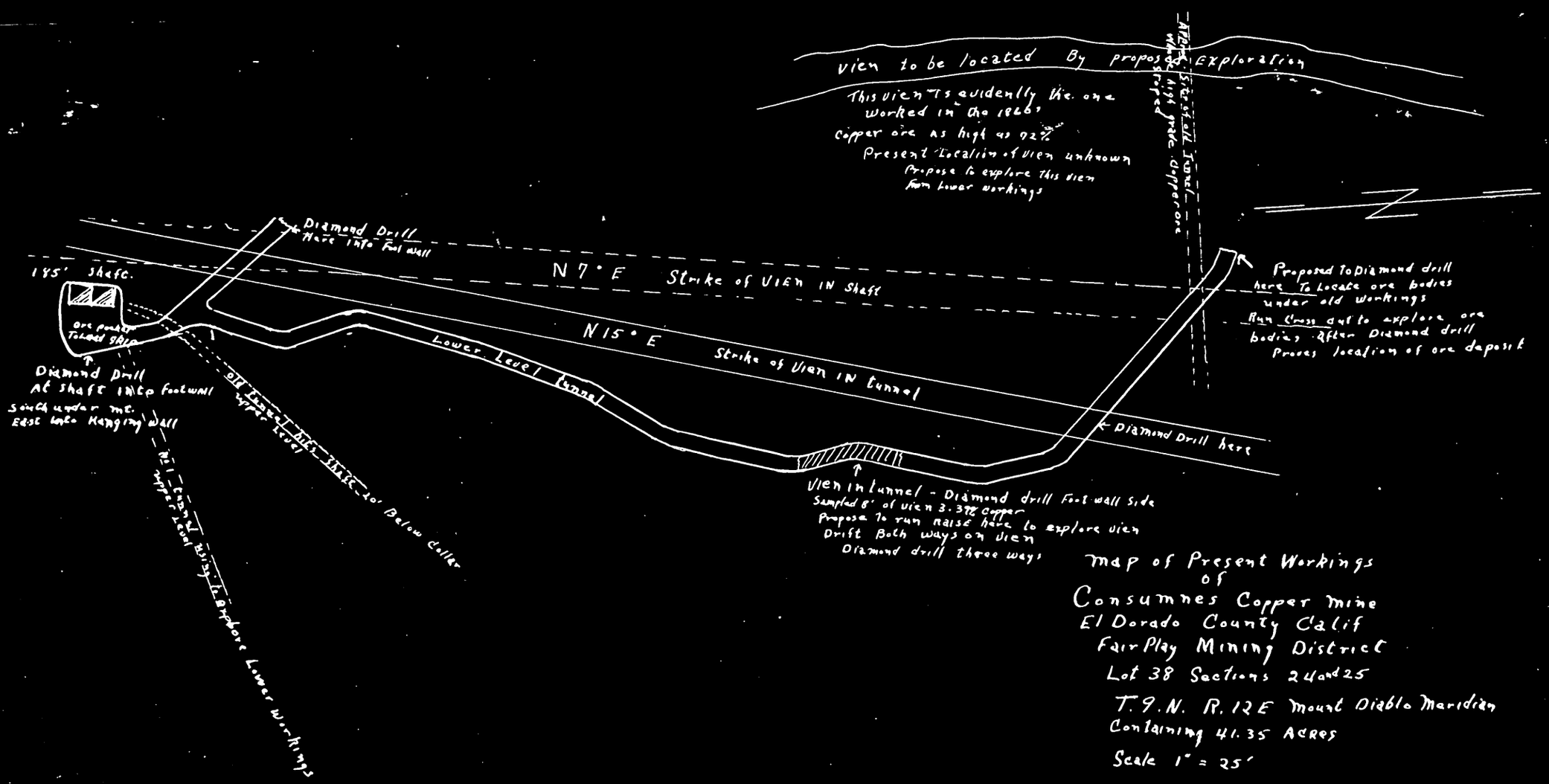

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Lot 38 Sections 24 and 25
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of said Cosumnes Copper Mine, as represented by yellow shading in the following plat.

Plat

of the claim of the

Cosumnes Copper Mining Company,

upon the

Cosumnes Copper Mine
Fairplay Mining District,
El Dorado County,
California.

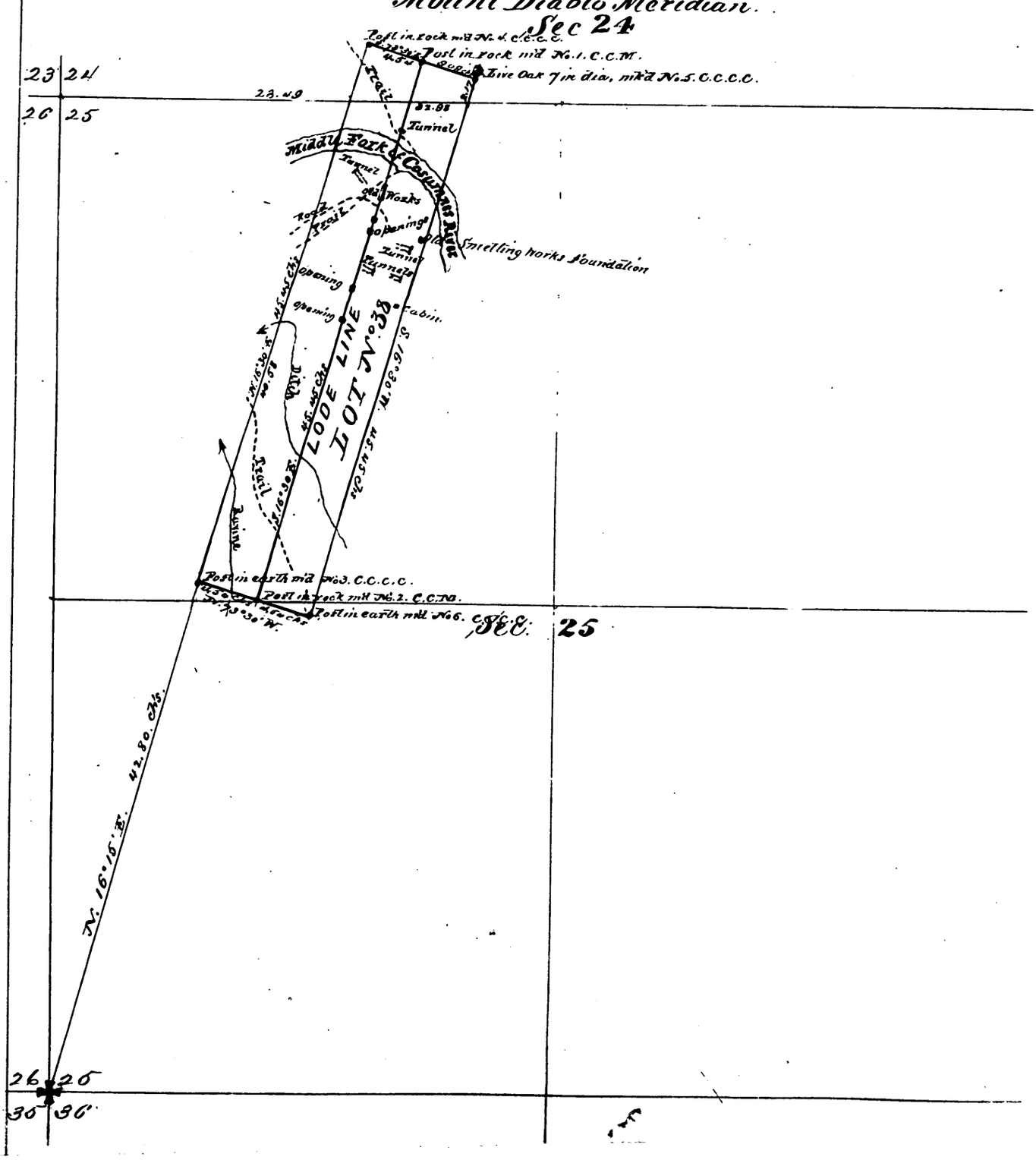
Containing 41.35 Acres.

Scale 10 chs. to an inch.

Var. 16°30' E.

T 9. N. R 12 E.

Mount Diablo Meridian.



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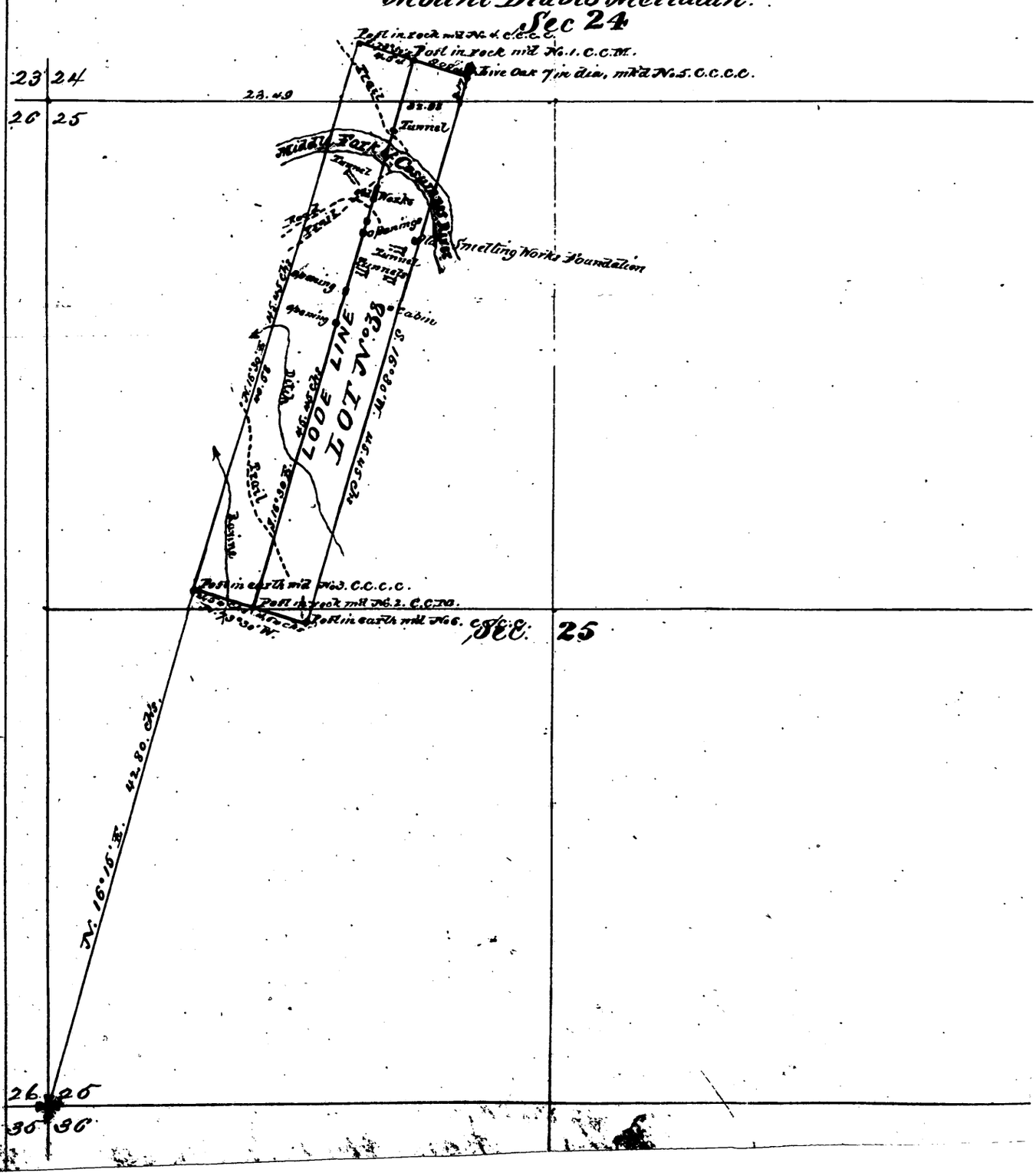

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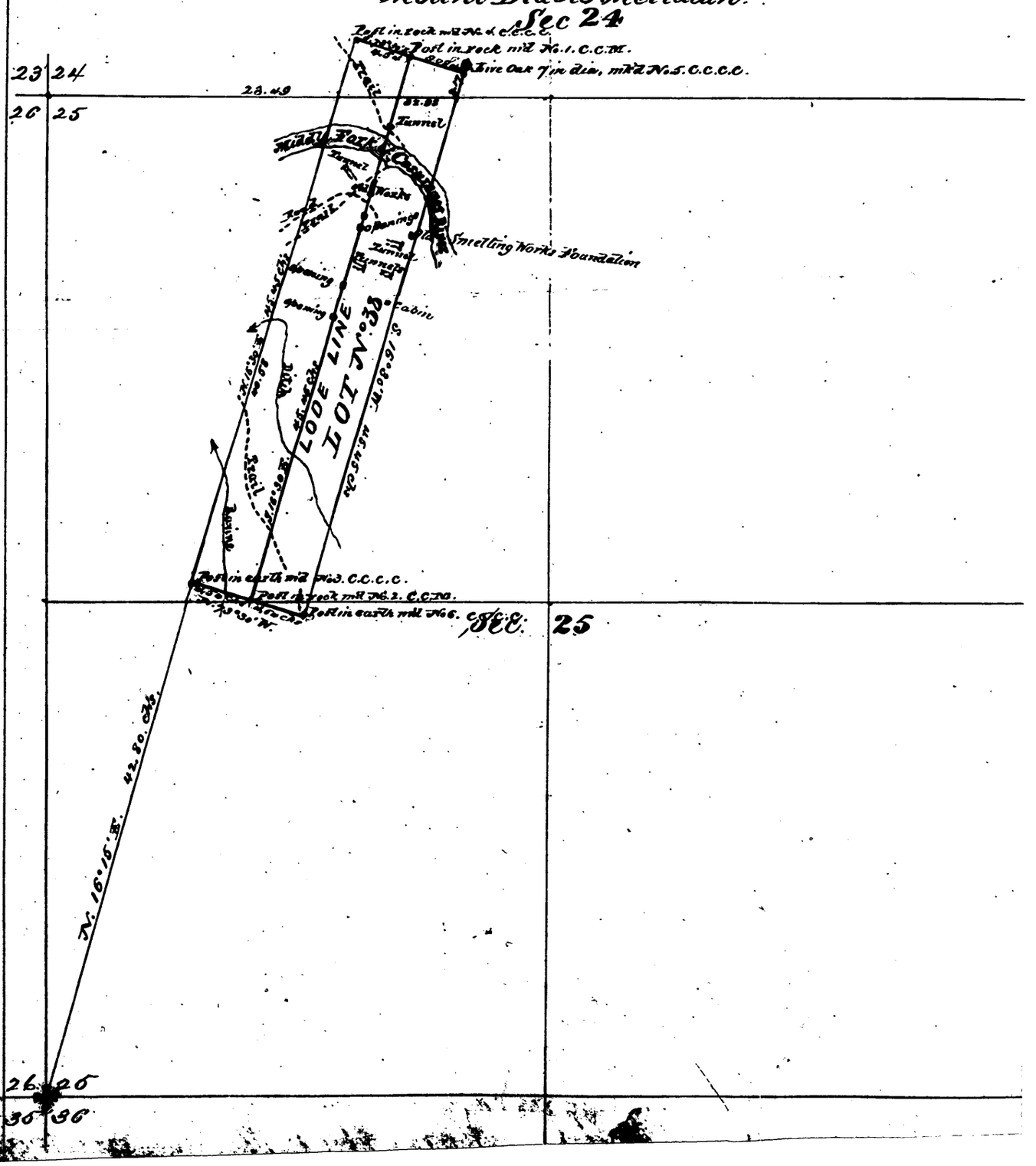

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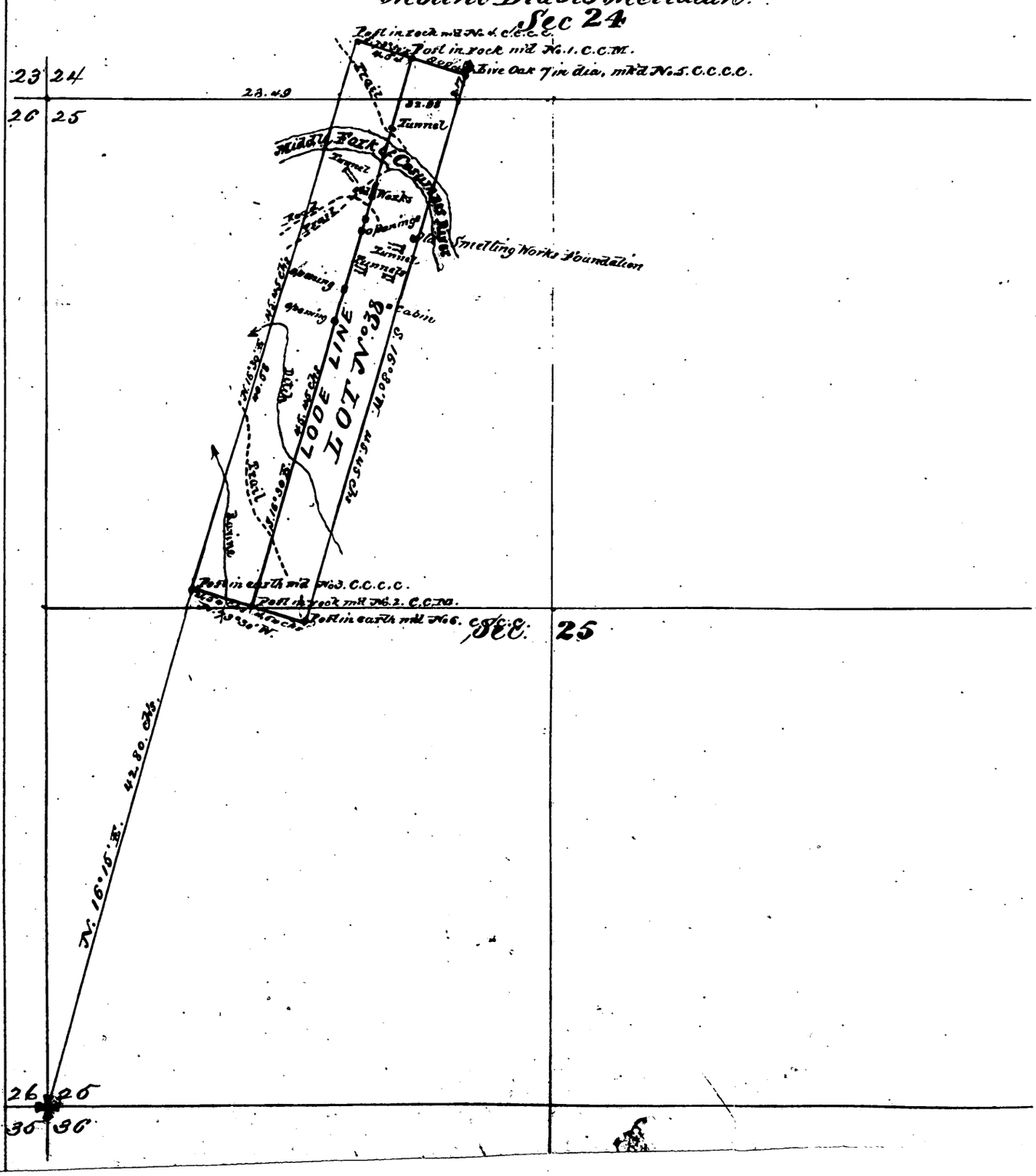

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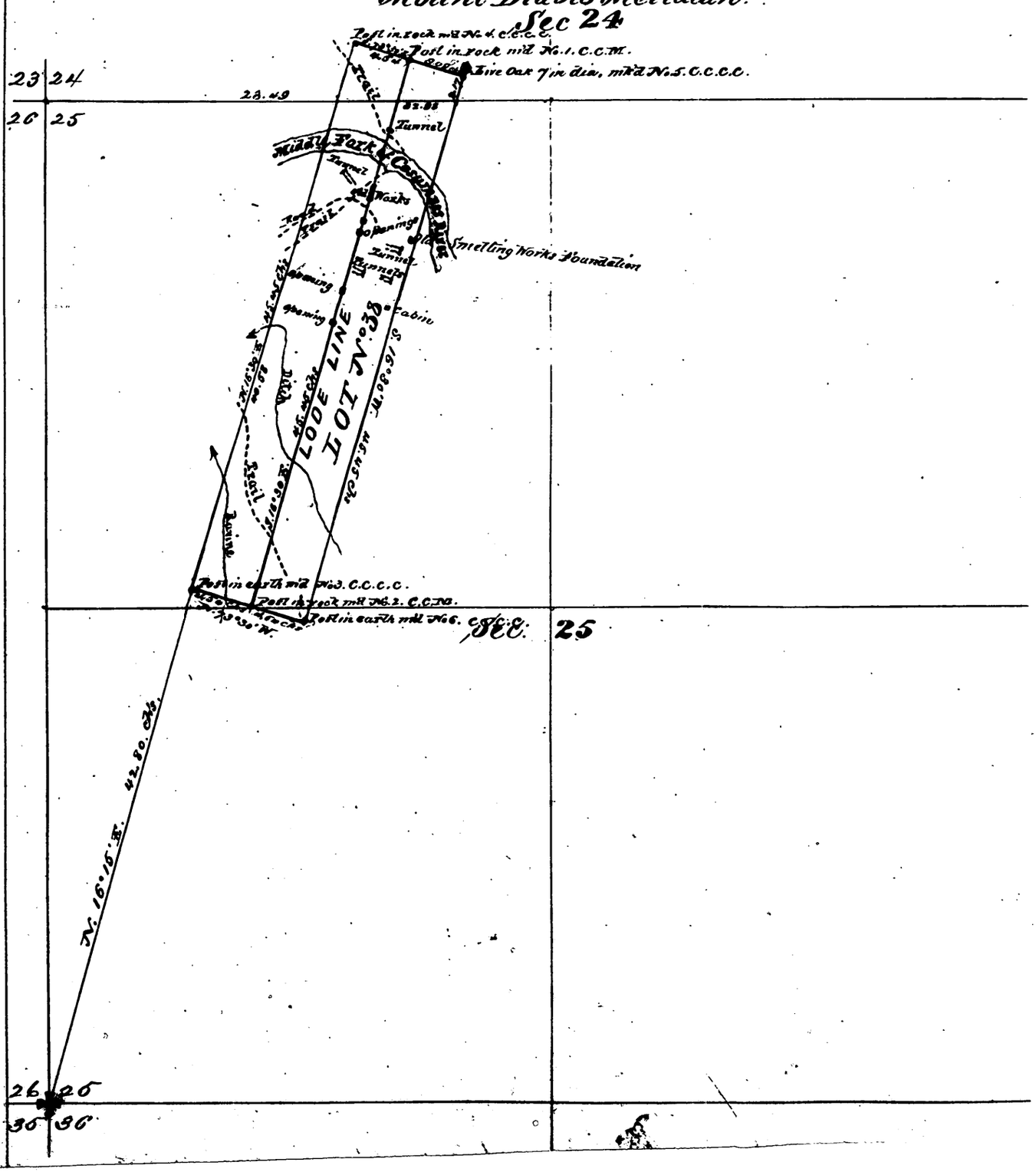

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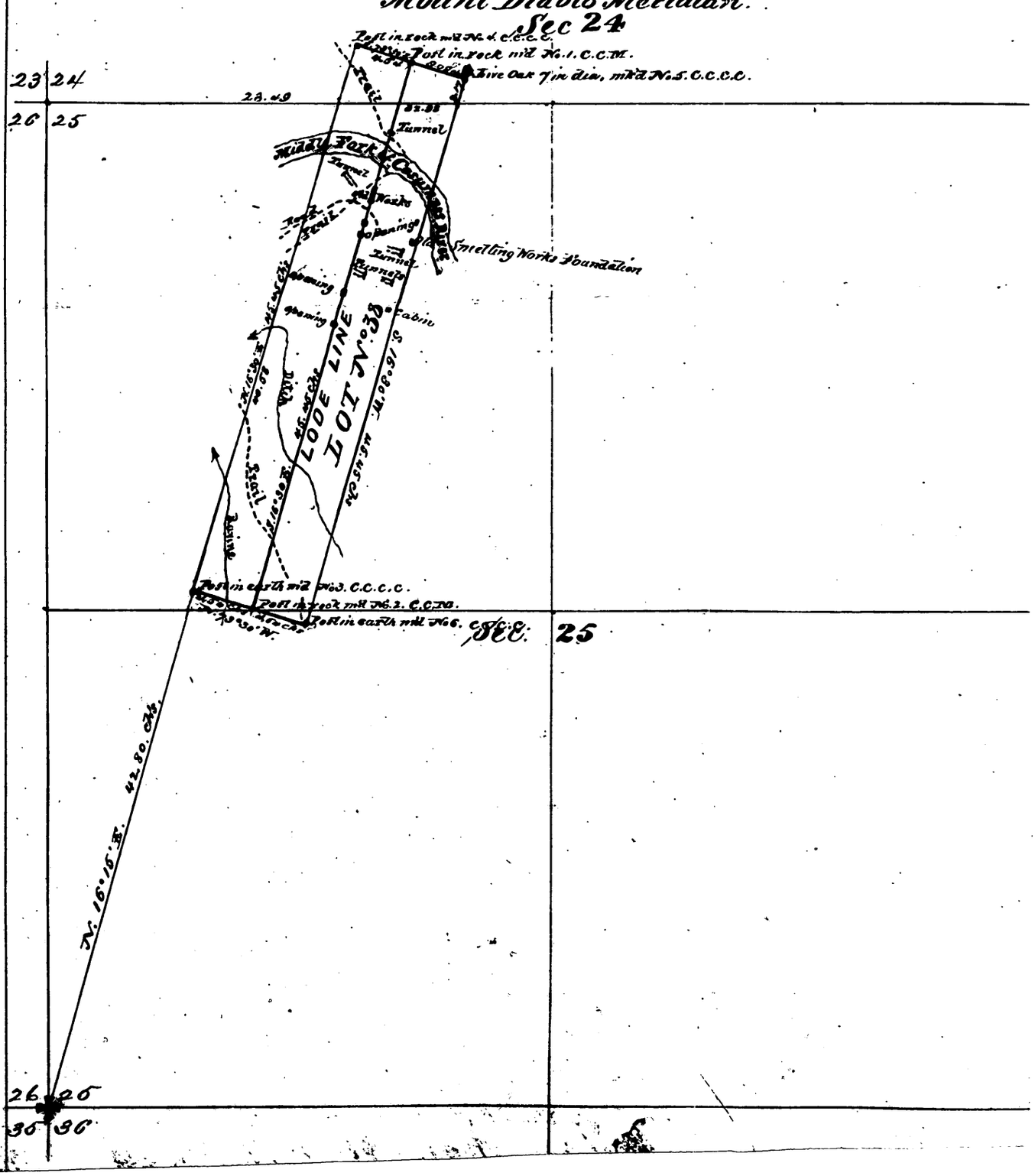

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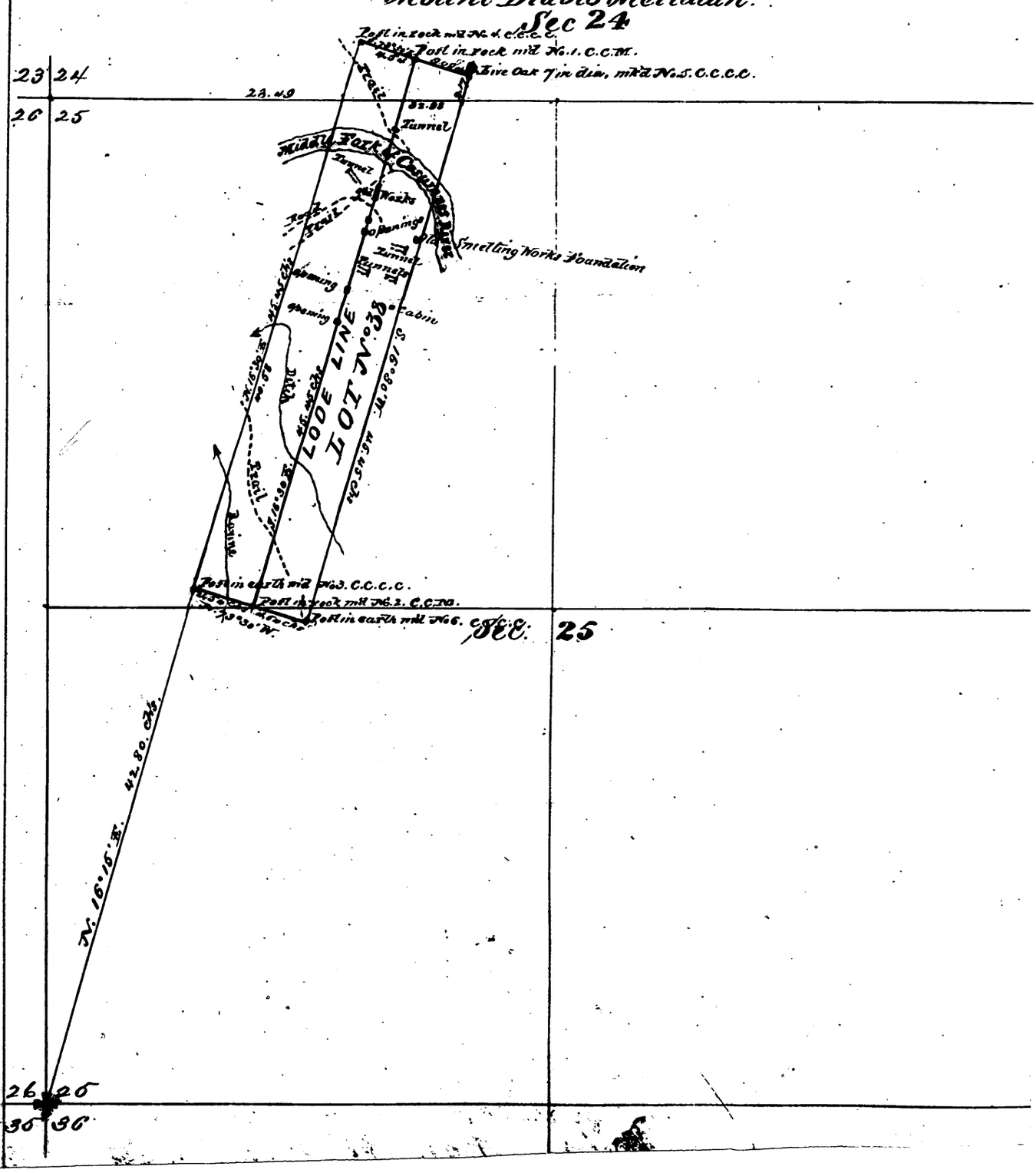

C
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Y

ASSIGNMENT OF INTEREST IN MINING AGREEMENT

THIS MEMORANDUM OF AGREEMENT made and entered into this 1 day of November, 1951, by and between OSCAR C. BRINK, of Stockton, California, hereinafter called FIRST PARTY, and HERBERT C. SANDERSON, DAN O. KILROY and MAX L. SALVATOR of Sacramento, California, and J. D. GILLESPIE of Auburn, California, hereinafter called Second Parties,

W I T N E S S E T H:

For and in consideration of the mutual terms and conditions herein contained, the parties hereto agree as follows:

1. First Party hereby sells, assigns and transfers unto Second Parties, all of his right, title and interest in and to that certain Agreement, a copy of which is attached hereto marked Exhibit "A", and made a part hereof by reference.

2. Second Parties hereby agree to pay to First Party the sum of ONE HUNDRED TEN THOUSAND ($110,000.00) DOLLARS, of which amount TWENTY FIVE THOUSAND ($25,000.00) DOLLARS shall go to pay the payments provided for in said Agreement, Exhibit "A", and EIGHTY FIVE THOUSAND ($85,000.00) DOLLARS, of which shall be the property of First Party. Said ONE HUNDRED TEN THOUSAND ($110,000.00) DOLLARS to be paid from a royalty of eleven (11%) per cent of the gross receipts of the production of any minerals produced from the property covered by said Agreement, Exhibit "A", by Second Parties, less any hauling and smelting charges, said royalties to be paid in the manner, and at the time provided for in said Agreement, Exhibit "A", with the exception that it shall be paid to First Party who shall see that said CLIFFORD SMITH and JOYCE SMITH, his wife, mentioned in said Exhibit "A" shall receive the proportions of said royalties that they are entitled to under said Agreement, Exhibit "A".

3. Second Parties agree to perform all of the terms and conditions required to be performed under said AGREEMENT, Exhibit "A", and agree to perform them in the time provided for therein. If Second Parties should fail to so perform the conditions of the Agreement, Exhibit "A", or any of the terms and conditions of this Assignment Agreement, then and in that event, the Agreement, Exhibit "A" shall revert to and become the property of First Party. In this connection, Second Parties shall not assign, transfer or sublet any of their interest under said Agreement, Exhibit "A" without first obtaining the prior written permission and consent of First Party thereto.

4. Second Parties agree to perform not less than sixty (60), eight (8) hour, two (2) men shifts per month of work upon said property beginning on the 1st day of December, 1951, and continuing regularly thereafter during the term of said Agreement, Exhibit "A". In connection therewith, Second Parties agree to commence to retimber the shaft upon the property described in Agreement, Exhibit "A" beginning December 1, 1951, and shall have two men working thereon. They shall continue to retimber the shaft and shall commence on or before January 1, 1952, to dewater and pump out such shaft, and shall continuously dewater and pump out said shaft and keep the same free of water continuously thereafter during the term of this Agreement and of the Agreement, Exhibit "A".

5. It is understood that First Party has obtained an oral extension of the terms and conditions of the Agreement, Exhibit "A", so far as the work required thereunder is concerned, and that said work is not to be commenced until December 1, 1951; however, First Party agrees to obtain a written extension of such Agreement and have it available on or before December 1, 1951.

6. Commencing as of June 1, 1952, First Party shall have the option of receiving from Second Parties, either a minimum monthly advance on account of royalties in the sum of ONE HUNDRED ($100.00) DOLLARS per month, or the

right to work at his choosing for Second Parties in the operation and development of the property covered by Agreement, Exhibit "A" at a wage to be mutually agreed upon by the parties beginning June 1, 1952.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first above written.

OSCAR BRINK First Party

HERBERT C. SANDERSON

DAN O. KILROY

MAX L. SALVATOR

J. D. GILLESPIE

Second Parties.

EXHIBIT "A"

TIME EXTENSION AGREEMENT

According to the option and lease agreement we entered into with you on April 20, 1951, concerning property known as Consumens Copper Mine located in El Dorado Co., California, your work requirements of 60 shifts per month were to be started on July 20, 1951. As you have asked for an extension of time regarding the working clause, we do hereby grant you an extension of 90 days, beginning August 1, 1951, extending through October 31, 1951; the working clause of the original option set forth in paragraph #4.

Clifford Smith

Joyce Smith

MINING AGREEMENT

THIS AGREEMENT, made and executed this 20th day of April, 1951, by and between CLIFFORD SMITH and JOYCE SMITH, his wife, both of Pairplay via Somerset, California, hereinafter called first party (the singular term being used to include the plural), and OSCAR C. BRINK, of 3538 Mission Road, Stockton, California, hereinafter called second party,

WITNESSETH:

WHEREAS, said first party is the owner and in the possession of all those certain lots, pieces or parcels of land, situate, lying and being in the County of El Dorado, State of California, and particularly described as follows, to-wit:

> Lot 38 in Secs. 24 and 25, T. 9 N., R. 12 E., M.D.B. & M., commonly known as the CONSUMNES COPPER MINE, containing 41.35 acres, more or less.

AND WHEREAS, said second party is desirous of entering into and upon said property and premises for the purpose of mining, developing and working the same, with the privilege and option of purchasing the same, upon the terms hereinafter stated;

NOW, THEREFORE, the said parties hereto, in consideration of the premises and of the mutual covenants, promises and agreements hereinafter contained, to hereby covenant and agree, the one with the other, as follows:

1. Said first party hereby covenants, promises and agrees that upon the payment to first party of the total sum of $25,000.00, on or before five (5) years from the date hereof, in royalties as hereinafter provided and/or cash, first party will make, execute and deliver a good and sufficient deed granting and conveying unto second party, his heirs and assigns forever, all of the property and premises above described, free and clear of encumbrances, but subject to any and all easements for existing roads, ditches, telephone lines, power lines, and other easements thereover and any and all reservations contained in any U.S. patent to said premises.

2. IT IS AGREED that second party shall, after ninety (90) days from the date hereof and thence ensuing during the life of this agreement, have the right, privilege and easement of entering into and upon and taking possession of such parts and portions of the above described premises and property as is necessary to the enjoyment of the mining rights and privileges hereunder given pending the purchase of said premises and property, and may prospect, mine, work, operate and develop the same for the copper, gold and other precious metals therein, and may have the right to erect buildings, hoisting plants, sluice boxes, mills, flumes, dumps and also the right to install machinery and to construct and maintain and use pipe lines, power lines, ditches, roads and trails, as the same may be required in the mining operations to be conducted in, upon and under said property, it being understood and agreed, however, that during the first ninety (90) days from the date hereof second party shall have the right to enter into and upon said premises and property above described for the purpose of prospecting the same and taking samples to determine whether or not any copper, gold or other minerals exist therein and the extent thereof.

3. It is agreed that second party shall have the right to mill or otherwise reduce the ores from said premises or to ship the same to some responsible smelting company made known to first party for the purpose of obtaining the copper, gold and other precious metals and values therefrom, the proceeds, as soon as determined, to be divided and paid to one respective parties hereto in the manner as follows: Five per cent (5%) C.S. J.S. O.C.B. of the proceeds from copper, gold and all precious metals recovered from ores from said premises shall be paid to first party and ninety five per cent (95%) C.S. J.S. O.C.B. thereof shall be paid to second party.

In the payment and division of the proceeds as above mentioned, it is agreed that the same shall be based upon mill or smelter recovery of said copper, gold or other precious metals with deductions only for the cost of transportation

from mine to mill, smelter or other final recovery plant in the event the same is not located upon the above premises, and costs of treatment in such mill, smelter or other final recovery plant and that the proceeds payable as above mentioned to first party will be paid to Bank of Amador, at Jackson, California, for the account or credit of first party.

4. It is agreed that second party shall commence the active work of mining and developing said property within ninety (90) days from the date of this agreement and will thereafter continuously mine and develop said property during the life of this agreement by doing and performing monthly not less than sixty (60) shifts of mining work, except when interrupted by act of God, strikes, riots, picketing or lockouts, and in such event reasonable diligence will be used by second party to remove the cause of interruption and resume work at the earliest possible date.

5. Second party agrees to keep all workmen fully insured under and in compliance with the Workmen's Compensation Insurance and Safety Act of California during operations hereunder and to comply also with all other laws, rules and regulations, both State and Federal, governing mining operations and to conduct all work hereunder in accordance with good mining standards and methods and to promptly pay all bills for labor performed and for equipment, materials, supplies, electric energy, water and/or utility furnished on said lands during the term hereof and to keep said lands free and clear of all labor, mechanics' and other liens and to that end will keep posted on said lands where any work is being performed, or equipment, materials, supplies or utilities furnished, such notice or notices of non-responsibility on behalf of first party as said first party may desire and furnish to second party, it being agreed, however, that first party also reserves the right during the life of this agreement to post and keep posted a notice or notices of non-responsibility of first party and of said premises for any work or labor performed or for

materials furnished to be used in connection with mining operations hereunder in or upon said premises.

6. It is agreed that during the life of this agreement said second party shall keep full, true and correct books of account, statements, vouchers, mint returns and receipts at an office in El Dorado County pertaining to mining operations conducted hereunder, and particularly showing the amount of ores reduced and the gross proceeds of copper, gold and other precious metals derived therefrom and the number of shifts worked per day with the names of the men employed, and said first party or the authorized agent or representative of first party shall at all reasonable times have free access to all parts and portions of the property and premises, real and personal, and to the mill or other works where the ores extracted from said property and premises are being worked, milled or reduced, for the purpose of examination and inspection, and shall be entitled to take samples of ores and to examine all books of accounts, statements, vouchers and mint returns and receipts pertaining to said mining operations agreed to be kept as above mentioned.

7. It is agreed that all mining machinery, tools, appliances and equipment, cars, car tracks and rails, shall be removable at all times during the life of this agreement by second party, but that all buildings of any kind that may be placed in or upon said premises during mining operations hereunder shall be deemed fixtures to said real property and premises and become a part thereof and belong to first party, in the event of the termination of this agreement without purchase of said real property and premises, provided, however, that second party shall not be entitled to exercise any of the rights of removal under this paragraph until all sums due and owing to first party under any of the terms and provisions hereof shall have first been fully paid.

8. It is agreed that second party, during the life of this agreement, shall pay all taxes, prior to delinquency, that shall be levied or become due

and payable upon any improvements or opersonal property placed upon said mining property and premises by second party and also upon said mining property and premises hereby leased, inclusive of the current taxes for 1951-1952, which are now in lien upon said property but not yet assessed or levied.

9. It is agreed that the terms and conditions of this agreement, insofar as the second party shall be required to operate, mine and develop said premises and property, or to pay said purchase price, is optional with said second party, who shall have the right at any time to discontinue and cease said work hereunder, whereupon said first party shall be entitled to resume possession of said premises, free and clear of any and all claims hereunder.

10. It is agreed that in the event second party terminates or abandons this agreement as herein provided he will execute and deliver to first party a duly executed quitclaim deed fully releasing the property from the effects of this agreement, it being expressly agreed that in the event such quitclaim deed is not furnished and first party is required to institute a quiet title action to release the property from the effects of this agreement that second party will be liable to first party for the entire costs and expense of such action.

11. It is agreed that all ores and rock obtained from said property and premises and the products or concentrates therefrom shall be kept separate and apart from those obtained from other, if any, properties by second party in the shipment and treatment thereof for the purpose of obtaining the copper and other precious metals therefrom.

12. It is agreed that time is of the essence of this agreement and of each and all of the payments to be made and of each and all of the terms, provisions and conditions hereof and in the event that second party shall at all time fail to perform or carry out any of the terms, conditions and agreements herein imposed upon second party or make any of the payments provided herein within thirty (30) days after notice in writing from first party to perform as herein provided and required, mailed to second party at 3538 Mission Street, Stockton, California, then this agreement shall immediately cease, end and terminate at the option of first party, and all further rights of said second party in and to said premises hereunder shall at once and immediately become terminated and all payments theretofore made hereunder shall be retained by first party as the property of first party and said first party shall have the right to immediately enter into and upon said premises and remove all persons therefrom and take immediate and exclusive possession thereof and any and all mining and other machinery and equipment of every kind or nature placed in and upon said property or used thereon during operations hereunder shall upon forfeiture, surrender, terminate or abandonment of this mining agreement, be removed within sixty (60) days thereafter, as hereinabove provided, and if not so removed the same shall then be and become a fixture and part and parcel of the real property and belong to said first party.

13. It is agreed that first party reserves the right to the use and possession of said premises for stock grazing purposes and other uses not in conflict with the rights hereunder given to second party, it being understood, however, that such possession by first party shall not interfere in any manner with mining operations carried on hereunder by second party and all other rights and privileges hereunder given to second party.

14. It is agreed that the term hereof shall commence on the date of this agreement and end at the expiration of five (5) years from the date hereof, provided, however, that it is further understood and agreed that in the event second party faithfully performs the terms of this agreement and pays to first party in cash and/or royalties within the said period of five (5) years from the date hereof the sum of $12,500.00, said second party shall be entitled to extend the term of this agreement for an additional period of five (5) years upon the same terms and conditions herein stated and without any increase in the total purchase price to be paid as hereinabove recited.

15. It is agreed that either of the parties hereto may forthwith cause a search of the title to said premises to be made at an early date and a title report to be issued in respect thereto and in the event that it appears from said title report that there are defects in said title which should be cleared then first party agrees to institute such proceedings as are necessary to clear said title and second party agrees to advance the costs incurred in procuring said title report and in clearing the defects in said title and first party agrees that second party shall be entitled to reimbursement for such advanced costs out of the first royalties which shall become payable to first party hereunder.

16. It is agreed that first party includes with the above described mining premises any and all water rights and ditches appurtenant thereto which first party may own or have any interest therein and upon payment in full of said purchase price aforesaid they will include in such conveyance all of their right, title and interest in and to any and all water rights and ditches appurtenant to said above described land and premises.

17. This agreement is executed in duplicate, runs in favor of and is

binding upon the heirs, representatives and assigns of the respective parties hereto.

IN WITNESS WHEREOF, the parties hereto and to a duplicate hereof set their hands and seals the day and year first hereinabove written.

Clifford Smith

Joyce Smith
First Party

Oscar C. Brink
Second Party

STATE OF CALIFORNIA)
) ss.
COUNTY OF CALAVERAS)

On this 20th day of April, 1951, before me, the undersigned Notary Public in and for said County and State, residing therein, duly commissioned and sworn, personally appeared CLIFFORD SMITH and JOYCE SMITH, his wife, and OSCAR C. BRINK, known to me to be the persons described in and whose names are subscribed to the within instrument, and they acknowledged to me that they executed the same.

WITNESS MY HAND AND OFFICIAL SEAL on the date in this certificate first above written.

Virgil M. Airola
Notary Public in and for the County
and State aforesaid.

MF-202

LANDLORD'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of El Dorado, State of California, described in a certain Exploration Project Contract dated Feb 20, 1952, between Consumnes Development Co, the Lessee of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated April 20 1951, does by these presents subordinate all of his right, title, and interest under the provisions of said lease to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said lease; and

The undersigned further agrees that if said leasehold interest should be surrendered or if said lease should terminate at any time prior to the expiration of the rights of the United States of America under said Exploration Project Contract, the undersigned shall assume and does hereby assume all of the obligations of the Lessee under said Exploration Project Contract to make repayment to the United States of America according to the terms of said contract; and

The undersigned agrees to commit no act, nor assert any claim under judicial process or otherwise that may contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract.

This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

Dated this 18th day of Feb, 1952

Clifford Smith
Joyce Smith

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 4 1952

U. S. GOVERNMENT PRINTING OFFICE 16—64582-1

Oscar C Brink

MF-202

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The undersigned further agrees that if said leasehold interest should be surrendered or if said lease should terminate at any time prior to the expiration of the rights of the United States of America under said Exploration Project Contract, the undersigned shall assume and does hereby assume all of the obligations of the Lessee under said Exploration Project Contract to make repayment to the United States of America according to the terms of said contract; and

The undersigned agrees to commit no act, nor assert any claim under judicial process or otherwise that may contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract.

This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

Dated this 18th day of Feb, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 4 1952

Clifford Smith

Joyce Smith

U. S. GOVERNMENT PRINTING OFFICE 16—64582-1

Oscar C Brink

MF-202

LANDLORD'S SUBORDINATION AGREEMENT

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The average ore, however, then found in this mine could not stand the heavy expense of such a trip, and after gouging out the rich surface ores for such shipments this method of treatment was abandoned and the property lay idle for years.

In the following letter one of the original locators of the claims tells therein of the discovery:

Orosi, Calif., Sept. 4, 1904.

Cosumnes Mining Co., San Francisco, Calif.

Gentlemen: In looking over the Sunday paper I noticed the name, Cosumnes Mine, located in El Dorado County. What gave it particular interest to me was the fact that my partner and I were among the original locators of the Cosumnes Mine. I have not been there in more than 40 years. The discovery was made very near the surface of the ground and was very rich. We worked it some, but as we were all inexperienced in handling sulphide ores, most of us sold our interest very cheap. I am convinced that you have the making of a very valuable property. Please send me further information concerning the property. Sincerely, A. J. BUMP.

In the California State Mining Bureau, located in the Ferry Building at the foot of Market Street, San Francisco, will be found the record giving the history of this mine and a list of the various metals found in its ores. The mine is first mentioned in the *Thirteenth Biennial Report of the State Mineralogist of California*, on page 58, issued in 1896, as follows:

EL DORADO COUNTY

Cosumnes Copper Mining Company's Mine

It is on the middle fork of the Cosumnes River, 4 miles east of Fair Play, at 1950′ elevation, and comprises 4 claims, two of which are patented. The vein, from 10 to 17′ wide, strikes north and south, and dips vertically between granite on the west and mica schist on the east. Beyond the mica wall is a belt of marble 500′ across. There is a 200-foot tunnel, slightly caved at the entrance, which is being reopened. The vein carries "peacock" ore, malachite, copper-glance, molybdenite, also galena and other sulphurets. The general average of the ore is about 15% copper; choice specimens are said to yield 19 ounces silver, $6 gold, and 50 to 52% copper per ton.

Again in Bulletin No. 50, on page 214, issued by the State Mineralogist in 1908, this property, the character of the ore and ore body is described in the following language: This property lies off the Copper Belt east of the Mother Lode, in section 25, township 9 north, range 12 east, and was opened in very early times. The vein courses east of north and west of south, and is mineralized limestone and amphibolite schist. The ore is sulphide, green and blue carbonate, oxide, silicate and peacock.

In Bulletin No. 91, Issued in 1923

Under the title of *Minerals in California*, in which a complete history of all the minerals found in California is listed, the following is to be found in the Cosumnes Mine:

Page 19—Native Copper, with Bornite.
Page 31—Molybdenite, broad foliated flakes.
Page 37—Chalcocite, associated with Bornite.
Page 51—Bornite, massive.
Page 54—Chalcopyrite, good specimens.
Page 126—Calcite, good crystals.
Page 153—Orthoclase, large white crystals.
Page 158—Diopside, occurs in good crystals.
Page 165—Hornblende, large cleavage masses of Black Hornblende.
Page 172—Grossularite, large crystals.
Page 186—Epidote, fine large crystals.
Page 188—Axinite, small clove brown crystals.

The above record, with the known gold and silver values in the ore body in this property, has attracted a great deal of attention from mining prospectors in recent years, and many opportunities offered for the leasing, bonding and sale of the property.

In 1902 the property was acquired and came under the management of the present owner through a deal with John Thiesen, a former Sheriff and County Treasurer of El Dorado County, wherein the mine is situated.

During the succeeding 4 or 5 years about 1000 feet of development work was done, and several thousand tons of ore extracted from the various tunnels, shaft and drifts. The ore is very heavy and very refractory, containing a garnet gangue, with the same specific gravity as the values. Many tons of the ore was shipped to Salt Lake, Denver, Boston, and New York in an effort to find a way to concentrate the ore for shipment, but nothing reliable and practical was found.

During recent years they have developed an oil selective flotation process by which they can now separate the values and recover them from ores of this character.

A sample of this gangue was sent to Ricketts & Banks, in New York, who were one of the leading firms of assayers, and their certificate shows the following result:

Sample of Mineral Gangue

Mineral resembling Garnet selected as free as practicable. Marked from associated Calcite and Bornite.

Silica	37.00%
Alumina	17.60
Iron Protoxide (Feo)	11.57
Manganese Protoxide (M.N.O.)	0.64
Lime (C.A.O.)	29.92
Magnesia (M.G.O.)	0.46
Carbonic Acid (Co^2)	2.25
Copper	.48
Loss and undetermined	.08
	100.00%

Specific gravity, 3.37%.
Note the mineral is a lime Alumina Garnet.
New York, Aug. 7,'09. Ricketts & Banks.
Certificate of Analysis No. 32525.

The property consists of two patented claims, designated by the Government records as Lot 38, in sections 24-25, township 9 north, range 12 east, M.D.M., with a total length of 3000 feet by 600 feet wide. Located in the Fair Play Mining District, about 20 miles southeast from Placerville and 2½ miles from the town of Fair Play. A water right for 2000 miner's inches from the Cosumnes River, which flows through the property for about 1000 feet, will furnish all the water needed for power and domestic purposes.

The mining is all in solid rock and very little timbering will be needed, but there is an ample supply of White Oak, Black Oak, Manzanita, Fir, Pine, Spruce, and Sugar Pine for all ordinary purposes.

In April, 1909, Dr. Milton Franklin, connected with the Power and Mining Engineering Department of the General Electric Company in Schenectady, New York, made a thorough examination of the Cosumnes Mining Property and made a lengthy, detailed report, which is too long to be given in full here, but his identification of the property and a description of the ore body with his recommendation follows:

Schenectady, N. Y., April 8, 1909.

Gentlemen: On Thursday and Friday, March 18th and 19th, I examined the Cosumnes Mine, as per your request, situated near Fair Play, in El Dorado County, California.

The property is situated on the east belt of the Mother Lode in sections 24-25, township 9 north, range 12 east, M.D.M., on the middle fork of the Cosumnes River, near the Amador County line, three miles from the town of Fair Play. * * * The property consists of two fully patented claims, of 3000 feet by 600 feet. * * *

The vein is a dyke, dipping about 65′ to 70′ to the east, and striking about 6′ to the west of north, and to the east of south. The vein matter is a mineralized amphibolite schist and limestone, and at places is replaced by porphyry, which is traversed by mineralized quartzite stringers. The hanging wall consists of syenite of granite. The rock is massive, showing no stratification, except near the vein, where it runs into syenitic granite and contains mica and some hornblende. The foot wall is stratified quartzite followed by limestone, which in turn gives place to a thick stratum of marble, which extends to the limit of the claims. The vein is from 30′ to 40′ wide and apparently carries mineral very evenly distributed throughout the greater part of its extent.

The present development consists of 4 tunnels, a shaft 185 feet, and a 500-foot drift from bottom of shaft. The largest tunnel is about 130 feet long. There is a station at the end of this tunnel 30x30x20 feet *in ore*. These tunnels all crosscut the ore body. From the station the double compartment shaft is sunk 185 feet all in ore, and at the bottom of this shaft is the drift of about 500 feet. The ore body is virtually untouched and the amount of ore available, should the vein continue unbroken, will be in the neighborhood of from 4,000,000 to 6,000,000 tons. No regular mining other than development work has been carried on at the mine by the present management.

The work and development on the mine to put it into condition to ship should amount to not more than $10,000.

I believe that if the amount stated was spent judiciously and in accordance with a carefully considered plan by a competent managing engineer that it should make the mine a profitable shipper, and I can fully recommend its purchase. Yours respectfully,

DR. MILTON W. FRANKLIN, *Consulting Engineer.*

DR. MILTON W. FRANKLIN
Power & Mining Eng. Dept.
General Electric Co. Schenectady, N. Y.

Mr. D. Brewster Boyden, a prominent Mining Engineer of 415 North Chandler Street, Monterey Park, Calif., for years a director of the San Diego Chamber of Mines, is perhaps more familiar with the history and outlook for this mine than any other person.

Mr. Boyden spent a year living near this property, while engaged in developing another property, and made an intensive study of the Cosumnes Mine, making during that time three separate examinations of the property.

Report dated Aug. 2nd 1932.

Topography

The Fair Play Mining District is on the west slope of the Sierra Nevada Mountains, about twenty miles west of the crest. The middle fork of the Cosumnes River runs through the middle portion of the district. The river canyon is in reality a deep gorge about 1500 feet deep. The slope rises at an angle of about 60 degrees. The river runs nearly due east and west when passing the mine. The north slope is sparcely wooded, while the south slope with a northerly exposure is heavily wooded. The forest shows no signs of snow slides. The gently sloping lava-covered plateau that controls the upland topography has been trenched by deep canyons of the westward flowing streams. The region is thus a succession of flat-topped ridges, that have a very gentle westward slope, and are separated by steep walled canyons.

Timber

The forest on the property will supply ample timber for all mine purposes, but lumbering would be done under some difficulty owing to the deep slopes. The trees are of second growth, many of from 8 to 12 inches in diameter. The larger trees are of sugar pine, yellow pine, and spruce with some live oak. A local saw-mill near Fair Play now sells rough sawed lumber for $20 per thousand feet.

Climate

The District has hot, rainless summers, with temperatures during the day of 85 to 90 degrees F, and at night dropping to 56 degrees F. The winters are not cold, a temperature of zero Fahrenheit is almost unknown. The snowfall is heavy about six miles north of Fair Play, but in the vicinity of the town and near the mine the highways are usually open all winter.

Water

The Fair Play district has very little water, the few wells are scarcely sufficient for domestic use and to water stock. However, the mine is in a much more favorable position, since the Middle Fork is never dry. At the present time the river is about three feet deep and fully 30 feet wide. Since the grade is steep the current is swift. The Cosumnes Mine owns a water right for 2000 miners' inches of water from the river. This would be ample for both power and domestic purposes.

Buildings and Equipment

There is no mill, and all the surface and mine equipment has been removed at some time. There are two small cabins, and a combination bunk house and mess hall about 20x30 feet in very good condition. The roof should have new covering.

Mine Workings

The mine workings open just above the level of a rocky terrace which covers about 3 acres on the south side of the river, just below the bend. This point is locally known as Rocky Bar. The terrace is about 15 feet above the level of the river, and shows no signs that it has been overflowed in recent times. The mine dump extends down stream, but the larger portion has been washed down stream. The vein strikes 6 min. west of north, and there are bold outcroppings for 500 feet up the hillside. It dips 65 deg. east. There are four tunnels, the prinicpal work has been done through the most easterly one known as the No. 1 Tunnel. These tunnels are said to be in more than a hundred feet each; the No. 1 is in about 130 feet, where a station has been cut 30x30x20 feet, and a double compartment shaft sunk for 185 feet. From the bottom of this shaft a drift was run for about 500 feet; presumably to cut the surface croppings at depth on which the other 3 tunnels were run. The failure to develop ore in the drift may be due to the presence of a reverse fault, and careful work here may disclose the sought for ore bodies. The No. 1 tunnel is in ore, and the ore goes down almost to the bottom of the incline shaft. This tunnel was driven on the footwall, in granite, and requires very little timbering. The shaft is also in good shape but contains some water. Since the workings make but very little water, it is possible that pumps could be dispensed with, and the sump could be bailed out with a water-skip. All the workings are 5x7 feet and were driven in a miner-like manner. The three westerly tunnels are caved at the mouth.

Geology

The rock formation is granite on the west of the vein or footwall side, and schist and limestone (marble) on the east or hanging wall side. This great batholith of limestone lying to the east of the vein forms the vein wall at times where it shows a replacement with large lenses of sulphide copper ore. This formation is very favorable for the deposition of rich deposits of copper, and is similar to the lime contact at Bingham, Utah, and at Tombstone, Arizona. Some of these lenses in the Cosumnes Mine are wider than the vein and extend out into the lime and schist formations, as at the end of the No. 1 tunnel the station is all in ore, 30x30x20 feet. The copper occurs in the form of sulphides such as chalcoprite, bornite, and chalcocite running from 5% in the brangle to large masses of several tons weight. The gangue is garnetiferous together with lime and schist. Except for the lime formation, the contact of granite and schist is the same as the Mother Lode formation in other mines in the county. A large portion of the vein matter is gold quartz with values of milling grade which could be stoped separately. In some places this quartz runs $12 per ton, and in some of the work quartz was found that carried wire gold. The main vein varies in width but the strong croppings shows it to be persistent on the strike and it will undoubtedly go to great depth.

Vein Structure

The vein is a true fissure vein with well defined foot and hanging walls. The strike is 6 min. east of north, and dips 65 deg. east. There are bold outcrops up the slope from the river of more than 500 feet. The foot wall is granite, and the hanging wall is usually schist or schist with limestone. The width of the vein varies from 10 to 17 feet, and where broadened by lenses of copper sulphide it becomes 30 feet wide. In my opinion fully one-third of the vein material is quartz with values in gold of milling grade. At other portions of the vein the ore is a high grade copper sulphide with a garnet and lime gangue. In some portions of the vein molybdenum sulphide occurs in amounts of 5%, sometimes alone, sometimes associated with copper sulphide.

Ore Values

The copper sulphides occur in amounts of from 5% up to large masses of several tons weight in the large lenses. With the sulphide ores the gold and silver values are higher as the copper becomes richer; one result shows 0.31 oz. gold, 20 oz. silver, and 16% copper.

Where the vein is largely quartz the values are of milling grade, from $2.00 up to $12.00 per ton.

Metallurgical Treatment

A method of milling the ore, or of treatment of the ore is outside the scope of this report. It should be stated, however, that since the values in gold and silver are free milling that the methods now in use at the Empire-Star Mines at Grass Valley could be adapted to this ore. The ore should be sorted so that the copper content of the mill quartz is under 2%. The rich copper and molybdenum ore could be stopped and milled separately. Floatation would, of course, be an important part of any process used for treating this complex ore.

Development Work

Only such work should be done now as will enhance the value of the mine. That is, a small amount of development work will prove the extent and size of the known ore bodies. A station should be cut in the shaft at the ore shoot, and a drift run to get the extent of the ore body there. An upraise should be made in the No. 1 tunnel beyond the shaft, and carried well toward the surface to prove the ore body above the tunnel level. This would provide two exits to the mine as required by law, and also give better ventilation. This upraise would be about 150 feet long if carried to the surface croppings of the vein. The drift should be re-examined to determine if there had been a reverse fault.

While this work was being done, some of the ore removed could be treated in a small test mill or pilot mill to determine the best method of recovery.

This development work could be carried forward with 5 men using hand drills, accomplishing 100 feet of work per month at a cost for labor and materials not to exceed $1000 per month.

Cost of Reopening the Mine

The reopening of the mine necessitates a decision as to whether it is best to purchase expensive machinery and to use machine drills with a large air compressor, or to purchase only a small gasoline hoist, and to use hand drilling.

I recommend the latter course, since it requires less expense. While a man with a hand drill will do usually only half as much footage as a man with a machine in the same time, he will do the work at a much less cost per foot. The saving in powder alone will be nearly 25%. Hand drilling is always advisable when operating in a small way.

Giant powder 40% now costs about $7.65 for 50 lbs. at Plymouth. However, with a contract for any considerable quantity, it will be possible to get it very much cheaper at Jackson from merchants that bring it in in car load lots.

The present wage scale for hard rock miners is $4.00 to $4.50 for machine men and timbermen; and from $3.50 to $4.00 for helpers. The variation in each case depends upon the nature of the ground to be worked. Mine timber in size suitable for stulls runs 5 cents per running foot.

Estimate of Cost

The expense of the purchase of a small gasoline hoist and engine, together with the necessary mine supplies will not exceed $2500 for the first month, and thereafter the expense should not be more than $1000 per month. Then stoping could be begun and a small mill built.

While the statements herein are not guaranteed, they are believed to be true, and they have been obtained either by direct investigation or from sources which are deemed to be reliable.

PAUL B. CRONIN, E. M.

The above report by

Paul B. Cronin
Mining and Chemical Engineer
Examinations - Processes - Reports

REPORT OF THE CONSUMNES MINE. By D. Brewster Boyden, Mining Engineer. Date not shown.

The mine was first worked in the year 1856 and is mentioned in a number of State Reports, portions of which I quote as follows: Bulletin No.50, Sept.,1908, The Copper Resources of California, Page 31. "Langley's State Register for 1859 says, in part, regarding the copper resources of the State. Ore of exceeding richness has also found founs in different localities of El Dorado County, and a vein on the Consumnes River has yielded over 70% of pure metal. Thereis a vein of copper on the Middle fork of the Consumnes River, Mountian Township, El Dorado County, now being worked by machinery propelled by water. The mill has three stamps attached, and has so far yielded a handsome return to the owners." (the last reference is believed to be the old Consumnes Mine of that County,) which was opened chiefly as a gold mine".

Third and Fourth Report, 1883-1884, page 223. Quartz mines yield per ton of gold only (from notes of by John S. Mittell), Concumnes Mine $11 per ton.

Report XIII, 1895 page 58; "Consumnes Copper Mining Co.'s Mine. It is on the Middle Fork of the Consumnes River, 4 miles east of Fair Play, at an elevation of 1950' and comprises four claims, two of which are patented. The vein, from 10' to 17' wide, strikes north and south and dips vertically between granite on the west and mica schist on the east. Beyond the mica schist wall is a bed of marble 500' across. There is a tunnel slightly caved at the entrance which is/being RE opened. The vein carries peacock ore, malachite, copper-glance, molybdenite, also galena and other sulpherets. The general average of the ore is about 15% copper. Choice specimens are said to yield 19 oz. silver, $6 gold and 50-52% copper per ton.

Bulletin No. 50 page 214 states, " The was opened in very early times. The vein courses east of north and west of south, and is mineralized limestone and amphibolite schist. The ore is sulphide, green and blue carbonate, oxide, silicate and peacoco, with reported value of over 4% copper. One tunnel, 100 feet long, cuts the vein for 30 feet. A winze is sunk in the tunnel 30 feet, all in ore. Ore is reported to carry values in gold and silver, besides copper. Water flume 1½ miles long, giving a head of 26 feet, driving a four foot wheel.".

The property has been worked from time to time milling the gold-bearing ore and shipping the rich copper. It has produced bunches of native copper (some of which are on display in the Ferry Building office of the Mining Bureau), also large slabs of molybdenite and wire vein gold. Work was discontinued about 30 years ago.

The deposit occurs along the east side of a large Grandiorite area in contact with limestone and amphibolite schist, and is shown on the Placerville Quadrangle of the Geological Map by Waldemar Lindgren. Its amphibolite-schist formationis the same as numerous mines in Amador County, whichare found occuring along the edge of this Granodiorite Magma. The hillside of the ricer canyon, at foot of which the mine is located, rises at an angle of 55 feet, which gives exceptional height to stopes that can be opened from the main drift-in develops 145 feet of backs to the surface.

The south tunnel has a winze about 180 feet deep with a drift on the vein 500 feet long, exposing an ore body in places 40 feet wide. The sulphide comes to the surface in the limestone and the ore is sutiable for milling by selective flotation. There is at all times of the year sufficient water in the river for mill power. An abundance of timber is found on the property. A good road from Fair Play passes within 75 feet of the lower tunnel.

I lived for a year within six miles of the mine, and during that time made three examinations. I know that with modern mining methods, which were unkown when this mine was last worked, its operation will be highly profitible.

D. Brewster Boyden, Mining Engineer.

1 cop

of said Cosumnes Copper Mine, as represented by yell shading in the following plat.

Plat

of the claim of the

Cosumnes Copper Mining Company,

upon the

Cosumnes Copper Mine
Fairplay Mining District,
El Dorado County,
California.

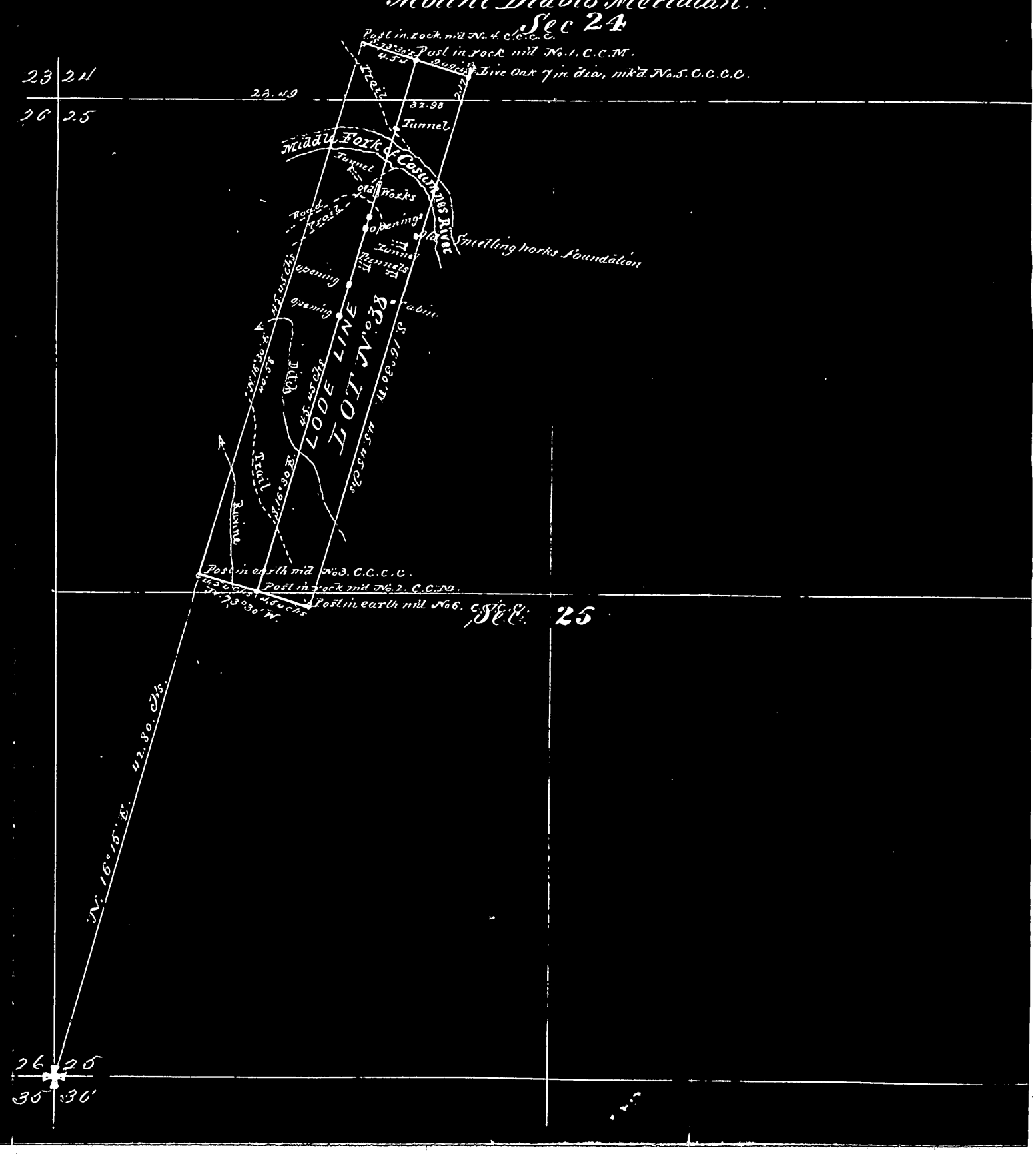
containing 41.35 Acres.

Scale 10 chs. to an inch.

Var. 16°30' E.

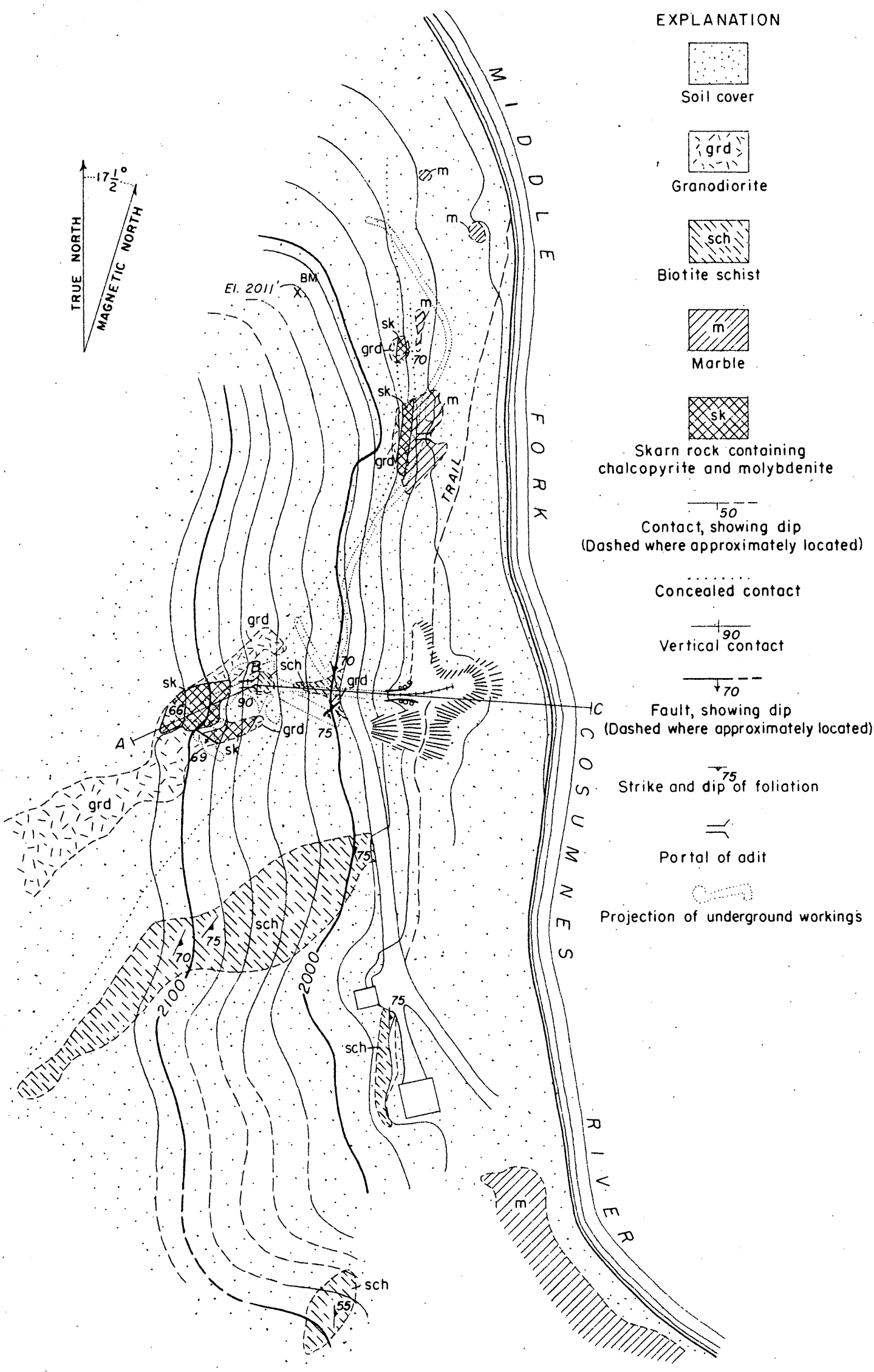
T 9. N. R 12 E.

Mount Diablo Meridian.



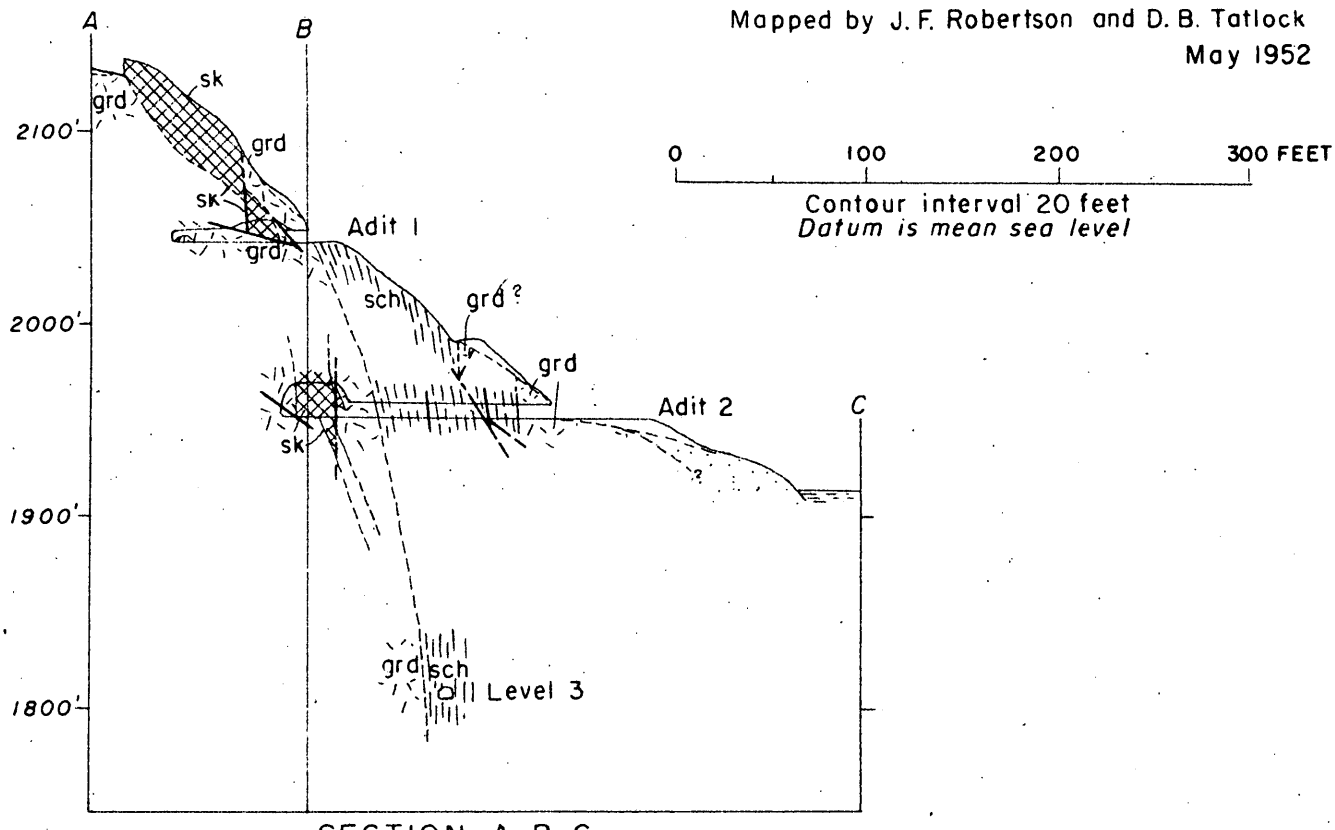
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA-2407
(COPPER)



SURFACE MAP

Mapped by J. F. Robertson and D. B. Tatlock
May 1952

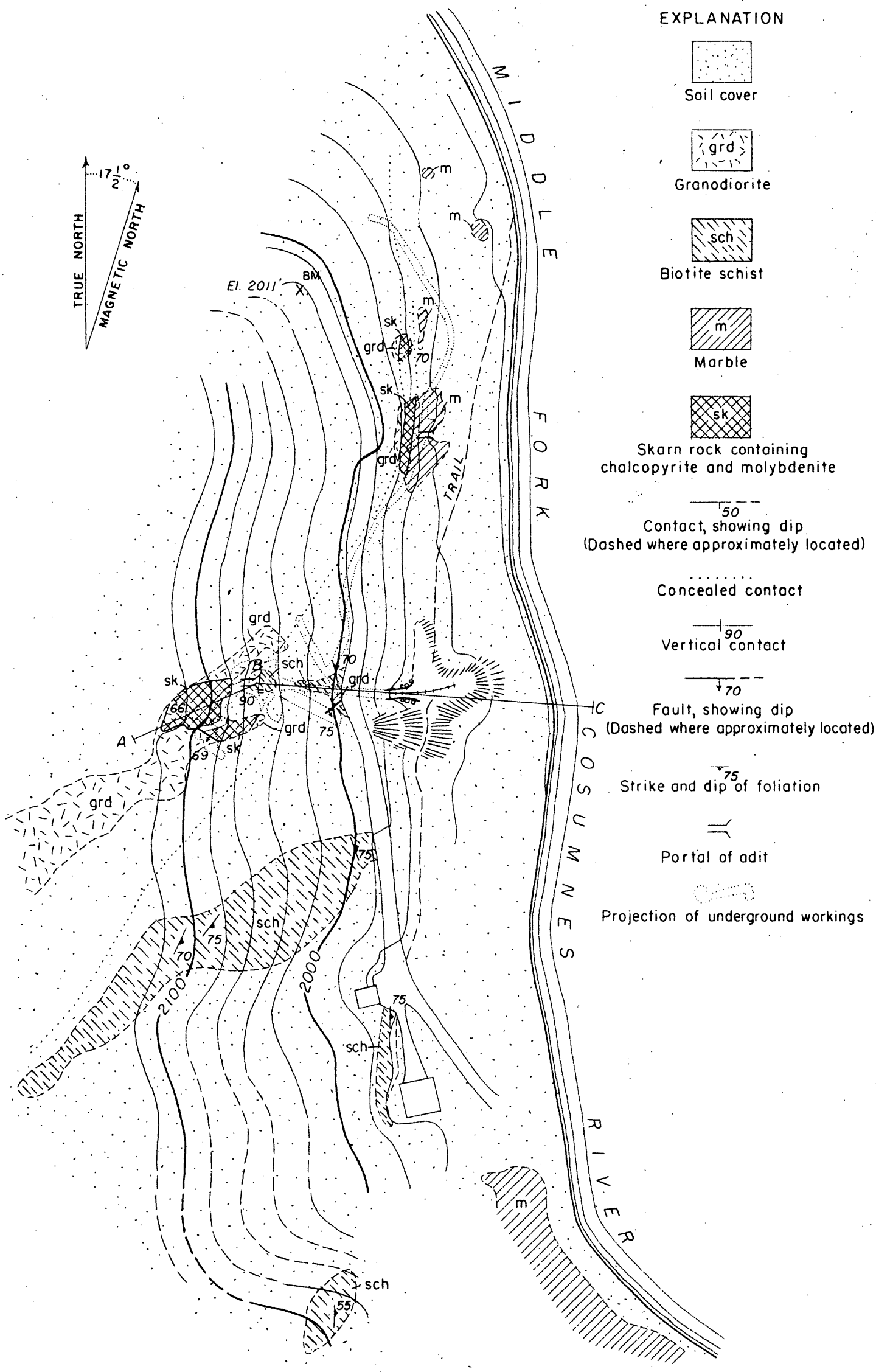


SECTION A-B-C

CONSUMNES COPPER MINE, EL DORADO COUNTY, CALIFORNIA

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA-2407
(COPPER)



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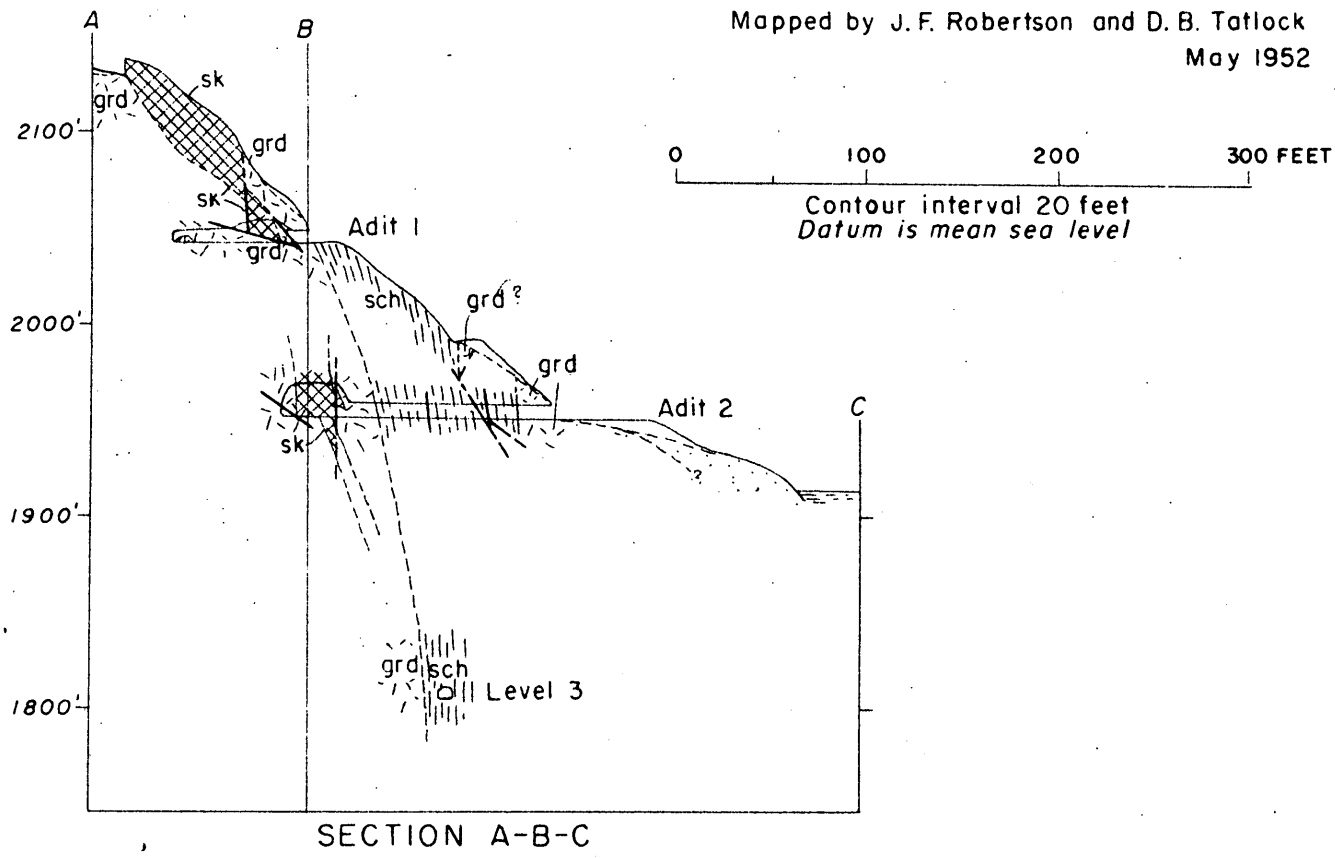
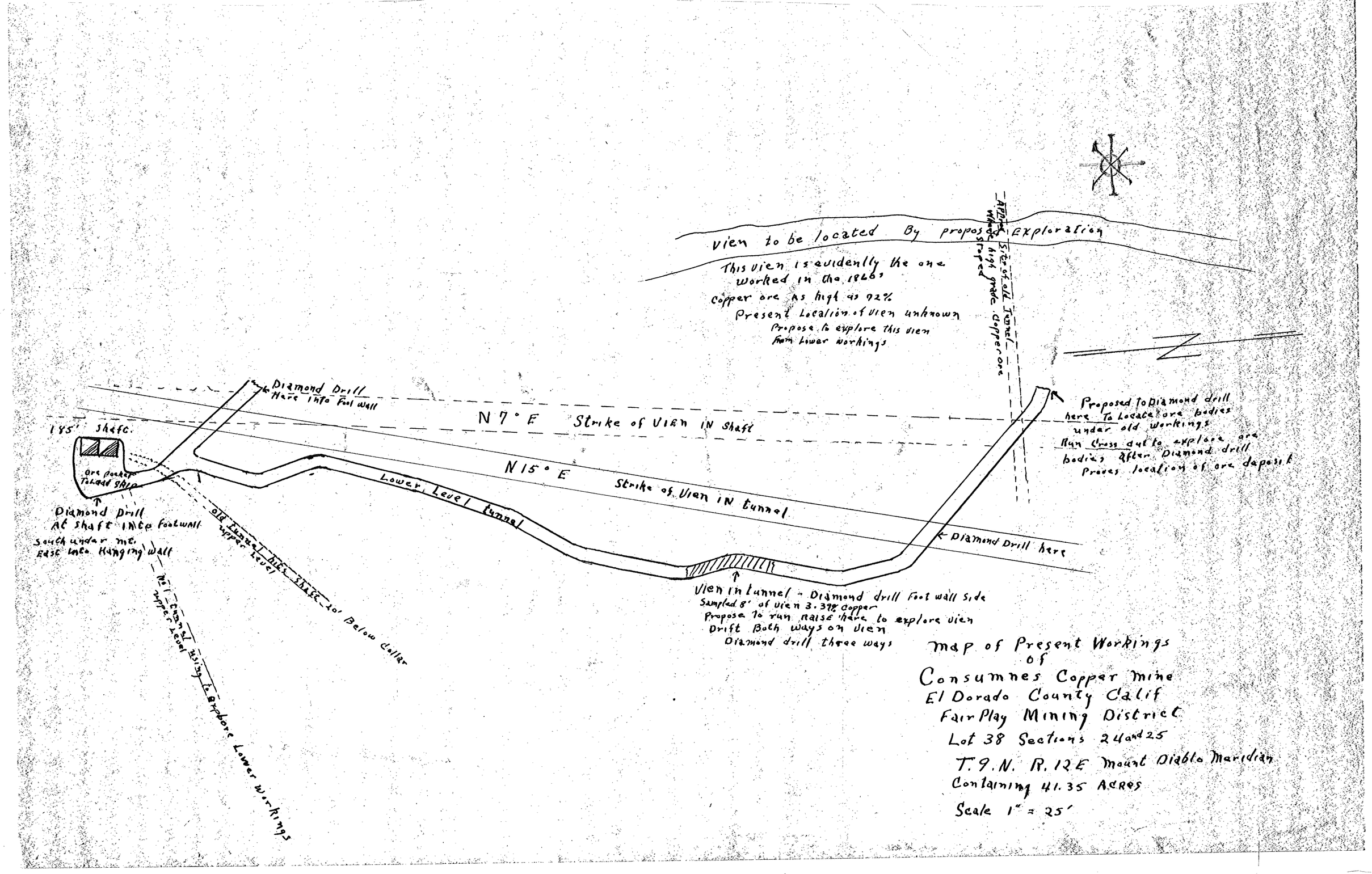


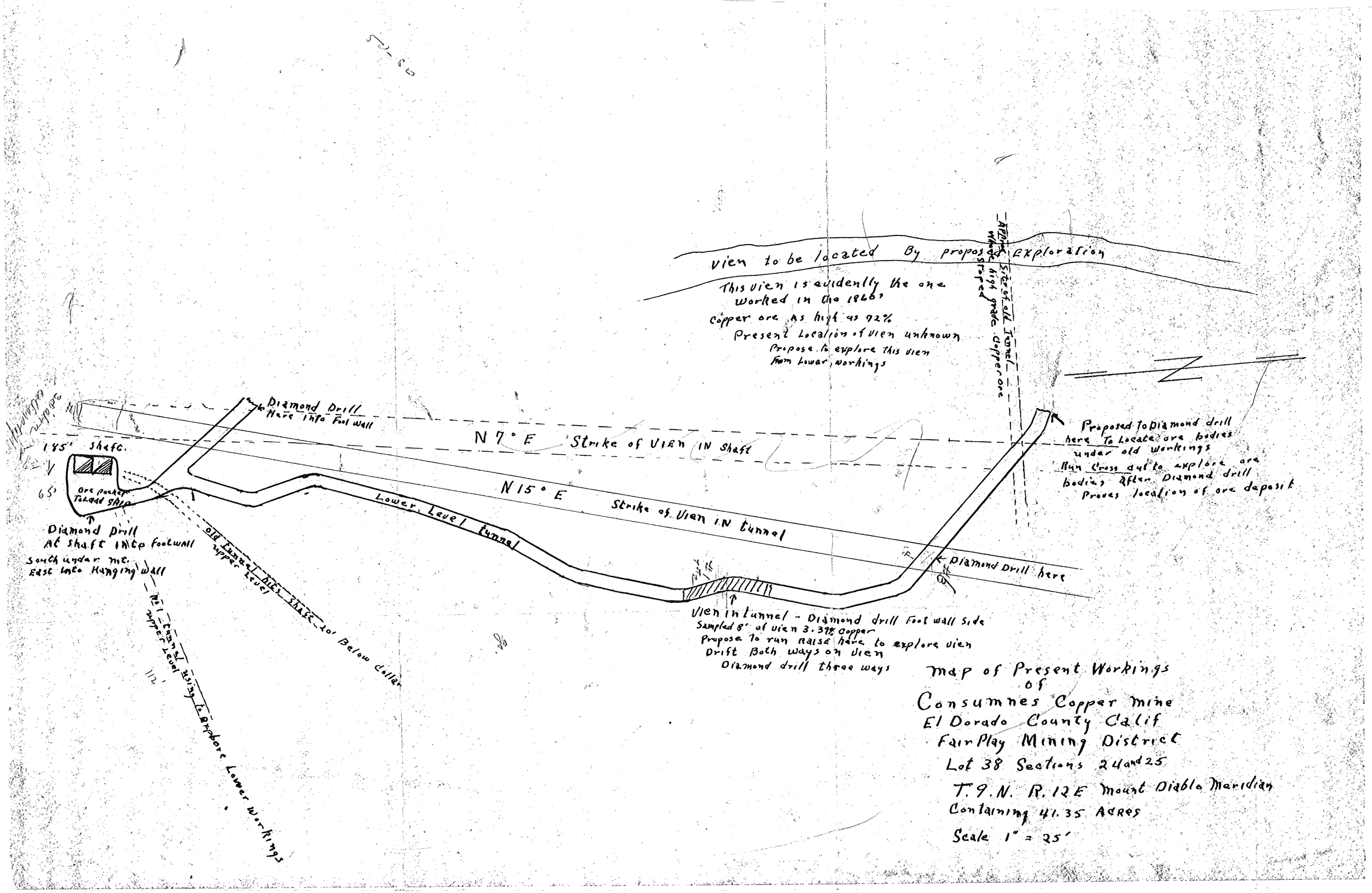
SECTION A-B-C

CONSUMNES COPPER MINE, EL DORADO COUNTY, CALIFORNIA

DMEA-2407
CONSUMNES DEVELOP-
MENT CO.



Map of Present Workings of
Consumnes Copper mine
El Dorado County Calif
Fair Play Mining District
Lot 38 Sections 24 and 25
T. 9. N. R. 12 E Mount Diablo Meridian
Containing 41.35 Acres
Scale 1" = 25'



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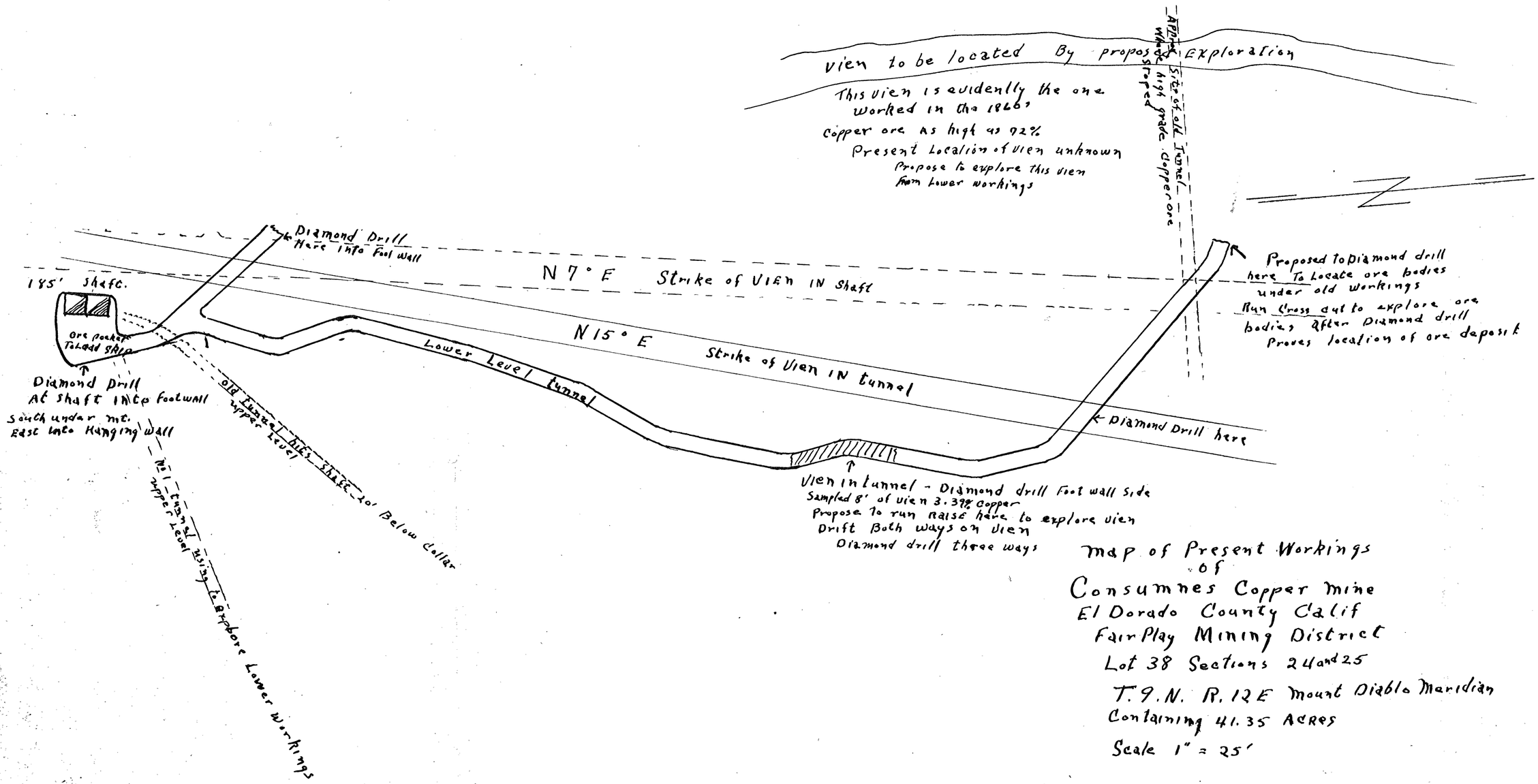

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